

# CPA Common Final Examination

## BOARD OF EXAMINERS' REPORT

### PART B — The Day 1 Report

May 2022 and May 2023 Examinations



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*See Part A for full report on the May 2023 Day 2 and Day 3 simulations and marking guides.*



## **THE BOARD OF EXAMINERS' REPORT ON THE MAY 2023 COMMON FINAL EXAMINATION**

### **OBJECTIVES OF THE REPORT**

The objective of this report is to explain the Common Final Examination (CFE) process and to assist the profession in improving the performance of candidates on the CFE.

The report sets out the responsibilities of the Board of Examiners, the methods used for guide setting and marking the CFE, and the results of the marking process. The report also includes recommendations to candidates from the Board of Examiners.

The May 2023 CFE Report is presented in two parts: Part A is the Day 2 and Day 3 report and Part B is the Day 1 report.

The appendices provide more detailed information on the design, guide setting, and marking of the CFE, as well as the board's expectations of candidates on the simulations. Readers are cautioned that the marking guides were developed for the entry-level candidate and that, therefore, all the complexities of a real-life situation may not be fully reflected in the content. The CFE report is not an authoritative source of GAAP.

### **RESPONSIBILITIES OF THE BOARD OF EXAMINERS**

The Board of Examiners (BOE or the board) comprises a chair, two vice-chairs, and sixteen members appointed by the provincial bodies.

The board's responsibilities, as set out in its terms of reference, include the following:

- Setting the CFE in accordance with the *CPA Competency Map* (the *Map*) and other directions from the Professional Education Management Committee;
- Submitting the CFE and the marking guides to the provincial bodies for review;
- Marking the candidates' responses and recommending to the provincial bodies the pass or fail standing that should be given to each candidate; and
- Reporting annually on the CFE to various CPA committees and the provincial bodies, in such form and detail and at such time as is satisfactory to them.

The chair is responsible for the supervision of the evaluation process. A CFE subcommittee, made up of nine members of the board, is actively involved in the preparation of the CFE simulations, the preliminary marking guides, and the setting of the initial passing profile. The members of that subcommittee participate in the Preliminary Evaluation Centre where the marking guides are tested against candidate responses and finalized, and in the start-up of the marking centre. The BOE chair and vice-chair provide oversight throughout the entire marking process, consulting with subcommittee members as required. The full board is responsible for equating the difficulty of the examination to prior years' examinations and establishing the passing standard.

## **THE CFE**

### **Preparation and Structure of the CFE**

The board staff works in conjunction with authors to ensure that simulations presented to the board achieve the overall intent and design objectives set by the board, while adhering to the competencies and the proficiency levels specified in the *Map*.

The full board provides guidance as to the content and nature of simulations to be included on the examination. The CFE subcommittee reviews and refines these simulations that make up the three-paper evaluation set.

### **Nature of the Simulations**

The CFE comprises a set of simulations that are both essential and effective in evaluating the candidates' readiness to enter the profession:

**Day 1** – The first paper is a four-hour examination consisting of a single simulation that is linked to the Capstone 1 group case. There are two versions of the linked cases, unless special circumstances require that a third version be provided. Version 1 is linked to the most current Capstone case and is written by first time writers and by repeat writers who chose to attempt the new case rather than Version 2 of the previous Capstone case. Version 2 (and Version 3, if applicable) is written by repeat writers and candidates who deferred and are writing Version 2 (and Version 3, if applicable) as their first attempt. The versions of the exams are calibrated to ensure the difficulty of all versions is comparable. For the May 2023 CFE, a Version 1 and a Version 2 were offered. The Version 2 case relates to CTI, for which a Version 1 was offered in May 2022.



**Day 2** – The second paper is a five-hour case, with four different roles and requirements. Additional information tailored to each role is provided in four separate appendices.

**Day 3** – The third paper is a four-hour paper, consisting of three multi-competency area simulations.

### **Assessment Opportunities**

The board applies competency-based marking procedures that enable it to decide which candidates demonstrate readiness to enter the profession.

Assessment Opportunities are designed to answer the question, “What would a competent CPA do in these circumstances?” To attain a pass standing, candidates must address the issues in the simulations that are considered significant.

**Appendix A** contains a comprehensive description of the evaluation process.

### **Marking Guides**

Marking centre leaders and assistant leaders provide valuable input during the testing and setting of the marking guides, before live marking begins. The vice-chair, selected member(s) of the CFE subcommittee and senior evaluations staff hold meetings with the leaders and their assistants during both the guide-setting and the marking processes. See **Appendices B to F** for the CTI Day 1 simulations and related capstone case, CTI marking guides, and CTI sample responses. **Appendix G** contains the marking results by assessment opportunity, and **Appendix H** contains the BOE comments. A copy of the Day 1 V1 (KTI), Day 2 and Day 3 simulations can be found in **Part A** of the CFE Report.

**Day 1** – The marking guide is designed to assess the candidate on the stages of the CPA Way: 1) situational analysis; 2) analysis of the major issues; 3) conclusions and advice; and 4) communication. Based on these four summative assessments, the candidate’s response is then holistically judged to be either a passing or a failing response.

**Day 2 and Day 3** – Marking guides are prepared for each simulation. Besides identifying the Assessment Opportunities, each marking guide includes carefully defined levels of performance to assist markers in evaluating a candidate’s competence relative to the expectations set out by the board when developing the passing profile for a competent CPA.

Five categories of performance are given for each Assessment Opportunity. The candidate's performance must be ranked in one of the five categories:

- Not Addressed
- Nominal Competence
- Reaching Competence
- Competent
- Competent with Distinction

### **Setting the Passing Standard**

The board chair and vice-chair in charge of the examination monitor the live marking. Near the completion of the marking process, the CFE subcommittee satisfies itself that the markers applied the marking guides as intended by the board.

In determining which candidates pass the CFE, a candidate is judged in relation to the board's pre-established expectations of an entry-level chartered professional accountant. Any changes to the initial profile that were made throughout guide-setting and the marking centre are ratified by the full board. In setting the passing profile, the board considers the following:

- The competency area requirements described in the *Map*
- The level of difficulty of each simulation (set using a scale: Easy, Easy to Average, Average, Average to Hard, or Hard)
- The level of difficulty of each Assessment Opportunity (set using a scale: Easy, Easy to Average, Average, Average to Hard, or Hard)
- The design and application of the marking guides
- Comments from leaders and assistant leaders regarding any marking difficulties encountered or any time constraints noted
- Possible ambiguity of wording or of translation
- Input on critical decision factors from an independent board (i.e., those BOE members not on the CFE subcommittee and therefore not directly involved) who review the fair pass package

### **The Decision Model**

The purpose of the CFE is to assess whether candidates possess the competencies required of an entry-level CPA through a written evaluation that is common to all CPAs. Each day of the CFE is unique and is designed specifically to assess different skills:

- Day 1 is linked to the Capstone 1 group case work. It assesses the candidates' ability to demonstrate professional skills. It is independent from Day 2 and Day 3.

- Day 2 assesses technical **depth** in one of four unique roles (that reflect the four CPA elective choices) and provides **depth** and **breadth test** opportunities in the common core competency areas of Financial Reporting and/or Management Accounting. Candidates pre-select one role and respond from that role's perspective.
- Day 3 supplements the **depth** and **breadth** tests in the common core areas of Financial Reporting and/or Management Accounting, and also provides **breadth** test opportunities for all other common core competency areas.

Candidates must pass all three days in order to qualify for entry to the profession. Those seeking licensure must obtain depth in Financial Reporting and in the Assurance Role.

### Day 1

Day 1 is assessed independently from Day 2 and Day 3. A pass or fail decision is made based on a holistic assessment of the candidates' performance in applying the CPA Way to demonstrate essential professional skills.

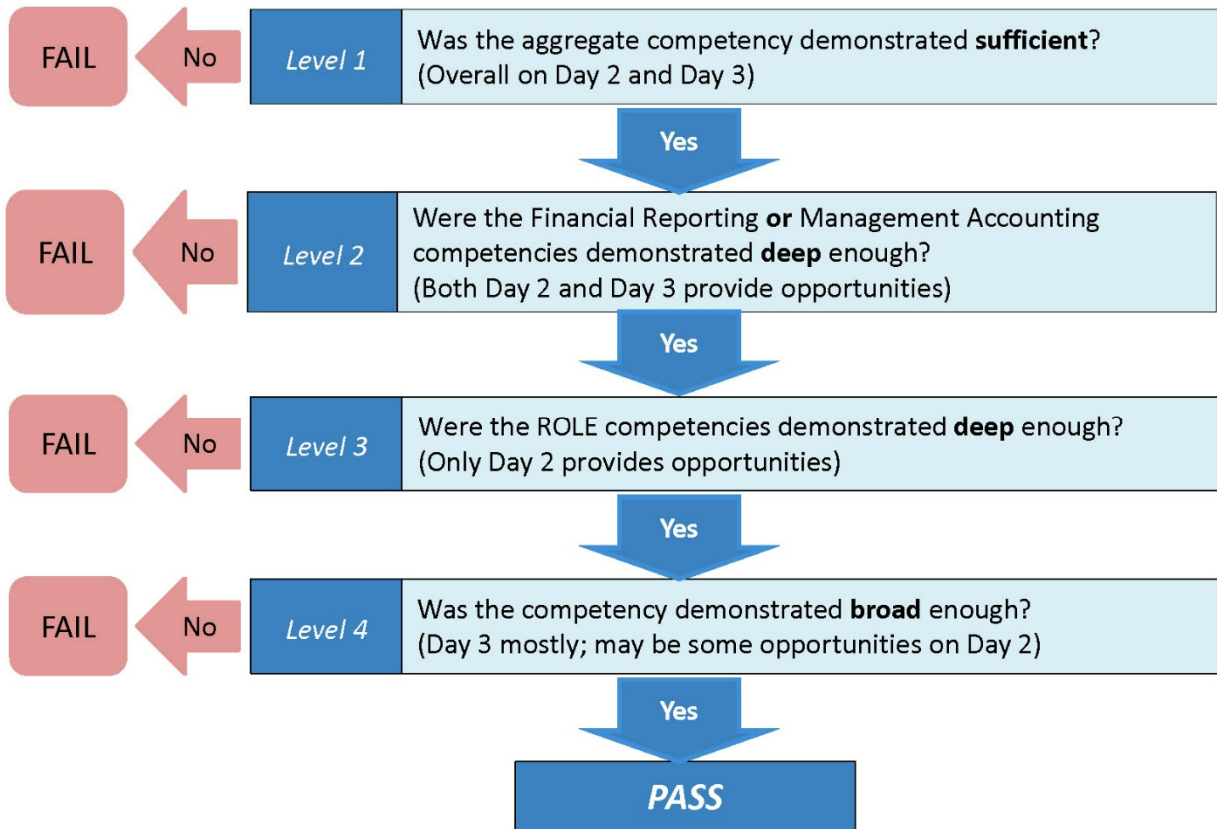
### Day 2 and Day 3

The decision model used by the board is presented in Exhibit I. Four key decision points, or levels, are applied in reaching a pass or fail decision, as follows:

1. The response must be **sufficient**; i.e., the candidate must demonstrate competence in the Assessment Opportunities presented on Day 2 and Day 3 (Level 1).
2. The response must demonstrate **depth** in the common core area of Financial Reporting or Management Accounting (Level 2).
3. The response must demonstrate **depth** in the pre-selected elective role (Level 3).
4. The response must demonstrate **breadth** across all competency areas of the *Map*, at a core level, by not having avoided a particular technical competency area (Level 4).

The BOE is responsible for equating the results from one examination to another to ensure that candidates have an equal chance of passing whichever examination they write. The BOE uses the factors listed above under setting the passing standard, in order to equate the examinations.

**EXHIBIT I**  
**DAY 2 AND 3 PASS/FAIL ASSESSMENT MODEL**



## **Approving the Results**

The CFE subcommittee reviews and approves the marking results for each simulation. Day 1 is assessed separately from Day 2 and Day 3.

**Day 1** – The CFE subcommittee discusses the profiles for both the marginally passing and marginally failing candidates to confirm that the board's pre-established passing profile has been appropriately applied by the markers.

**Day 2 and Day 3** – As part of the development process, the CFE subcommittee sets preliminary requirements for the three levels (tests of depth and breadth) being assessed on the Day 2 and Day 3 simulations. After the marking is completed, the board reviews and finalizes those requirements. The board establishes the Level 1 (sufficiency) requirement for the combined Day 2 and Day 3 simulations.

During the approval process, the board continues to consider whether the results could be affected by any inconsistency in the evaluation or the board's processes.

## **Reporting**

In reaching its decision, the board determines which candidates pass on a national basis only, without regard to provincial origin or language. Similarly, the detailed comments are based on analyses of the performance of all candidates.

The board reports the following information by candidate number:

- Overall pass/fail standing and pass/fail standing for each of Day 1 and of Day 2 and Day 3 combined.
- A pass/fail standing for Day 1.
- A pass/fail standing for Level 1, Sufficiency. A decile ranking is provided for failing candidates.
- A pass/fail standing for Level 2, Depth in Financial Reporting or Management Accounting.
- A pass/fail standing for Level 3, Depth in Role.
- A pass/fail standing for Level 4, Breadth in all technical competency areas.

## **Thank You**

All board members wish to express their warm and sincere appreciation for the outstanding energy, support, and commitment of the Board of Examiners staff members whose dedication and talent contributed in large measure to the achievement of our objectives and the fulfilment of our responsibilities.

We also wish to acknowledge the contributions made by the provincial reviewers, markers, authors, translators, and editors. The commitment, energy, and skill demonstrated by all the markers were outstanding, resulting in the sound application of marking procedures and producing an appropriate evaluation of the candidates. Everyone's commitment to the quality and fairness of the process is appreciated.

Jonathan Vandal, CPA  
Chair  
Board of Examiners

## A MESSAGE TO CANDIDATES

***To attain a pass standing, candidates needed to achieve a “Pass” on Day 1, and on Day 2 and Day 3 combined, demonstrate sufficient competence in all areas, and meet the two depth standards and the breadth standards.***

### Introduction

The May 2023 CFE Report, Part A and Part B combined, presents detailed information on all candidates' performance for all the examination cases, except for the Day 1 linked case, KTI Version 1. Detailed commentary on the performance of candidates on the KTI cases (Version 1 and Version 2) will only be available after KTI Version 2 is written in May 2024. The simulations, marking guides, marking results, and Board of Examiners' (BOE) comments on the Day 2/Day 3 portion of the examination are found in Part A of the CFE Report. Similar information on Day 1 CTI simulations (Version 1 and Version 2) can be found in Part B of the CFE Report.

The intent of this message from the BOE is to help candidates improve their performance on future CFEs by drawing their attention to the most common detracting characteristics observed in candidate responses to the May 2023 CFE. The BOE's comments are based on the feedback of the marking teams, who see the entire candidate population, and reflect the broad themes noted by the markers that apply to all candidates who wrote this sitting of the CFE. More detailed AO-by-AO commentary on candidates' performance can be found in the BOE's comments in Appendix F of Part A, or Appendix H of Part B, of the CFE Report.

### Nature of the CFE

The design of the CFE is such that each day of the examination allows candidates to demonstrate a different skill set. Day 1 allows candidates to demonstrate their high-level professional skills, such as analysis that is relevant and critical to strategic decision-making, professional judgment, and ability to synthesize information. Day 2 allows candidates to demonstrate their technical competence in the common Financial Reporting and Management Accounting competencies and in their chosen role, which is tied to one of the four elective areas. Day 2 typically, but not always, directs candidates to the work to be done and is not designed to be time constrained, allowing candidates to demonstrate depth. Day 3 allows candidates to further demonstrate depth and breadth in the common Financial Reporting and Management Accounting competencies, and provides multiple opportunities to demonstrate breadth in all the other core technical competency areas. Day 3 is typically time constrained, requiring candidates to prioritize the issues and manage the amount of time spent on each issue. Both Day 2 and Day 3 require candidates to integrate the information found in the simulation in order to demonstrate competence. All three days require candidates to clearly communicate their thought process.

## **Strengths and Weaknesses**

### Time management

The Day 1 simulation was not time constrained in any way and, generally, the amount of time that candidates devoted to their situational analysis and their issue analysis was appropriate. Most candidates were able to address all the strategic alternatives presented, spending more time on the alternatives that required more analysis and discussion.

The Day 2 simulation was also not designed to be time constrained; however, candidates appeared to struggle with addressing all requireds appropriately in the time provided. There was evidence of time constraint across all roles, with candidate responses generally being much shorter in total length than would be expected, considering that they were given five hours to respond. In addition, candidate responses to the later AOs were briefer compared to the AOs at the beginning of their response. Candidates generally spent an appropriate amount of time responding to the common section requireds, but appeared to spend much less time than would be expected on the role section requireds.

On Day 3, while it is designed to be time constrained, and required time management on the part of the candidates to ensure that all three simulations were completed within the four hours allotted, candidates struggled more than expected with time management. There was evidence of some candidates spending too much time on Simulation 1 to the detriment of Simulations 2 and 3, which had a higher-than-normal percentage of candidates with “Not Addressed” AOs than on a typical Day 3 simulation. Day 3, Simulation 1 was the longest of the three simulations and had seven AOs to address within the allotted 90 minutes, requiring strong time management skills. If candidates went over the suggested time on Simulation 1, they would have had difficulty making that time up. Responses on Day 3 were also generally shorter in total length than expected.

There was also a higher “Not Addressed” percentage across the entire exam, with candidates frequently not attempting all the AOs. For example, many candidates skipped Day 2 Assurance role, AO#7 (Forward contract), Day 2 Finance role, AO#12 (RoboCarton asset value), Day 2 Finance role, AO#13 (Short-term financing), Day 2 Taxation role, AO#7 (Accounting issues), Day 3, Simulation 2, AO#3 (Taxation – Carryover balances), and Day 3, Simulation 3, AO#4 (Financial reporting – Lawsuit and wire fraud). These AOs ranged from being rated Average to Hard by the BOE. It is unclear whether this behaviour is due to the time constraints noted above, or due to candidates avoiding topics that they are not comfortable addressing.

Candidates are reminded that the CFE has a minimum sufficiency score that must be obtained, separate from the requirements that are set for the depth and breadth tests. The BOE continues to encourage candidates to take time to identify the relevant issues and attempt a discussion of all the requireds, since their sufficiency score is affected by AOs they do not attempt. The BOE also encourages candidates to plan their time appropriately, and to continue to use the suggested times on each simulation as a guide, to help manage the time spent per AO.



### Unrelated discussions

Although not a pervasive issue, some candidates inserted discussions that were not relevant, because of either misinterpreting or misreading the requireds or neglecting to consider the specifics presented in the simulation. This often appeared to be the result of applying a templated approach and failing to consider the differences in the facts presented compared to similar issues tested on past exams. These candidates appeared to be trying to fit the answers from their practice exams into the current year's exam, rather than addressing the case facts as presented. The following are some examples of where candidates either misinterpreted the requireds or provided irrelevant discussions.

On the Day 2 Assurance role, AO#8 (Audit plan), some candidates provided an audit approach discussion as part of their audit plan, when the case specifically noted that only the risk of material misstatement and materiality needed to be addressed.

On Day 3, Simulation 1, AO#4 (SWOT analysis), some candidates provided a qualitative analysis of the expansion, and a recommendation on whether HG should proceed with the expansion plan, even though the required specifically stated that only a SWOT analysis was required, and there were no other requests to comment on whether HG should proceed with the expansion plan.

On Day 3, Simulation 1, AO#6 (Audit procedures), some candidates seemed confused about what to do with the information provided in Appendix IV on HG's processes, which was intended to help candidates design audit procedures. Although the requirement was clearly to provide audit procedures over specific areas, some candidates provided a control weakness discussion over the processes provided, in addition to providing the audit procedures requested, which was not required.

The BOE reminds candidates that, while it is good to practice writing cases and know different approaches to use, they should not automatically assume that the task is the same as in previous years. As in real life, the facts presented are unique to each case, and require integration of the pertinent case facts, to fully understand what the relevant issues are for a particular case and to decide what form of analysis is appropriate. Rarely is an issue identical to a prior one. Before beginning their response, candidates are encouraged to pause and take the time necessary to ensure that they have clearly identified what issues and analyses are most relevant, based on the set of circumstances presented.

### Technical ability

The BOE continues to note a trend of declining technical abilities. The pattern the BOE has seen over the past few CFEs has continued, with candidates generally avoiding more complex topics. In addition, while candidates performed well on some of the more familiar, straightforward topics, there were also familiar topics where candidates struggled.

Candidates generally performed well on the very straightforward AOs, including: Day 2 Common, AO#1 (Cost allocations), Day 2 Common, AO#2 (Customer quote), Day 2 Common, AO#3 (Cash budget), Day 2 Performance Management role, AO#7 (Suppliers – quantitative), Day 2 Performance Management role, AO#8 (Suppliers – qualitative), Day 2 Performance Management role, AO#10 (Recycling – qualitative), Day 2 Taxation role, AO#8 (Taxable income and taxes payable), Day 2 Taxation role, AO#11 (QBS and T4), and Day 3, Simulation 2, AO#4 (Minimum price).

However, the BOE noted significant weaknesses across multiple competencies in the candidates' technical knowledge, in both more straightforward and harder topics.

There was a particular weakness in financial reporting. For example, on Day 2 Common, AO#5 (Intangible assets), candidates had trouble demonstrating their understanding of the intangible asset definition criteria, particularly with the control criterion. On Day 2 Assurance role, AO#7 (Forward contract), although the BOE recognizes that this is a harder topic, candidates struggled to even identify the relevant guidance that would be applicable to the transaction. On Day 3, Simulation 2, AO#1 (Lease), candidates struggled with how to analyze whether there was a bargain purchase option. On Day 3, Simulation 3, AO#4 (Lawsuit and wire fraud), candidates struggled with identifying that ASPE was relevant in this case, or when they did, they struggled with the correct accounting treatment of the damaged sled.

Candidates also showed technical weakness across the other competencies. For example, on Day 2 Performance Management role, AO#12 (Pricing – bundled services), most candidates compared the two pricing approaches based on revenues, as opposed to contribution margins, a critical error. On Day 2 Taxation role, AO#13 (Sale and leaseback), many candidates applied a capital loss on the building against the capital gain on the land, which is not appropriate. On Day 3, Simulation 1, AO#3 (Payback), most candidates did not calculate the payback period correctly, which was a relatively straightforward calculation.

Candidates should expect to see a variety of issues of varying difficulty. The BOE encourages candidates to be balanced in studying, and to ensure that they have a sufficient level of technical knowledge in all competency areas.

Inability to explain the implications of issues identified or to provide sufficient detail

Candidates on the May 2023 exam seemed to struggle with explaining the implications of the issues they identified, or with providing sufficient detail for the points they raised. For example, on Day 2 Assurance role, AO#10 (Internal controls), candidates struggled to explain the implications of the internal control weaknesses identified. On Day 2 Assurance role, AO#11 (Manual journal entries), candidates identified some of the items in the manual journal entries that suggested a concern, but were often unable to discuss how it would suggest a risk to the financial statements. On Day 2 Taxation role, AO#7 (Accounting issues), candidates frequently failed to provide much discussion, simply stating that the accounting adjustment would increase/decrease income and taxes, either without attempting to explain the tax concepts involved, or only providing very brief descriptions without explaining their conclusions. On Day 2 Taxation role, AO#9 (GST/HST return), candidates were unable to provide sufficient explanations for the errors present in the draft GST/HST return. On Day 2 Taxation role, AO#12 (Personal services business), although many candidates identified that the personal services business rules would apply, they struggled to correctly explain the implications, or the mechanisms behind their conclusions. On Day 3, Simulation 1, AO#2 (Revenue recognition), candidates were able to provide IFRS 15 guidance and apply some case facts, but the level of discussion of how the case facts applied lacked depth. On Day 3, Simulation 1, AO#5 (Audit versus compilation), candidates struggled to explain some of the differences in the two types of engagement, and many did not attempt to discuss the implication of the change in engagement for the client. On Day 3, Simulation 1, AO#7 (Sole proprietorship versus incorporation), most candidates provided some basic points on the differences between the two options, but only provided generic discussions without explaining how it would work for HG specifically. On Day 3, Simulation 3, AO#2 (Spending versus mission), many candidates provided suggestions that were too general to be helpful, without further explanation.

The role of the CPA is often to advise clients, either on the application of standards and tax rules or on why, and how, to proceed with certain business decisions. Without a clear explanation, a client would have incomplete information. In the case of responses to CFE simulations, the BOE is interested in understanding the logic used and is looking for evidence of the analysis and professional judgment that was applied in reaching a conclusion. Therefore, it is important for candidates to answer the questions “Why?” or “So what?” when making any point using case facts, and to include the answer in the response. Identifying an issue without explaining the implication, or jumping to the conclusion without first presenting the analysis supporting that conclusion, is insufficient. The BOE is looking for a clearly articulated response.

Failure to consider the specific context of the simulations and to integrate relevant case facts

Consistent with previous CFEs, candidates seemed to struggle with applying the specific context of the simulation to their response, or with integrating relevant case facts into their analysis. For example, on Day 2 Performance Management role, AO#9 (Recycling – quantitative), candidates struggled with understanding the Refill IT option, not demonstrating a full understanding of the business model behind the proposal. On Day 2 Performance Management role, AO#13 (Strategic direction and governance), candidates approached the analysis of the strategic options on an item-by-item basis, rather than analyzing the proposals as a whole and attempting to link the proposals to elements of UBI's environment. Also on this AO, candidates often made points that were very generic related to the composition of the Board of Directors, and did not make links to UBI's environment or context. On Day 3, Simulation 1, AO#1 (Variances), candidates had difficulty applying the variance formulas they had presented to the data provided, and their interpretations of the variance analysis were often generic and not tied to the specific case facts presented to them. On Day 3, Simulation 3, AO#3 (Enterprise risks), most candidates did not provide additional risks that were not on the template, despite being explicitly asked to do so. In addition, candidates often did not focus on the bigger picture, focusing on minor details instead of the bigger issues, such as commenting on the controls on the Excel spreadsheet rather than on the cyber security threats for the company. Many candidates also failed to realize that some of the risks presented in the template would clearly be different for CBA compared to another company.

The BOE emphasizes that the ability to adapt to unique scenarios and integrate information from various parts of the case are important skills for an entry-level CPA. Candidates should ensure that they have a good understanding of the specific context for any requests before addressing them, and ensure that any analyses incorporate elements that are specific to the case that is presented.

Pre-populated financial information

For the first time on the May 2023 exam, any financial information presented in the case that had 10 lines or more was provided to candidates electronically in the exam writing software. The BOE was pleased to see that many candidates took advantage of this and leveraged what was already provided to save time and/or provide a more structured response. For example, many candidates used the pre-populated information provided to structure their response for Day 2 Common, AO#1 (Cost allocations), to efficiently allocate each cost and sum up the cost categories.

*For more detailed commentary, see Appendix F of Part A of the CFE Report.*

**Additional Comments Specific to Day 1 – KTI (Version 1)**

Most candidates dedicated the first section of their response to a relevant situational analysis. Most used this information later in their response, making relevant links back to the company's global situation when analyzing the specific strategic issues that were presented, and within their conclusions. However, the links that weak candidates made were typically to the more obvious case facts that related to KTI's key success factors, mission, and vision, rather than being tied to the more important factors, which generally varied for each strategic issue.

Beyond the specific objectives to increase the company's operating margin to 12% by 2028 and to increase the company's revenue by 10% annually, all of KTI's private-label contracts were set to expire in the near term. Given that these contracts comprised approximately 70% of the company's sales, this was an imperative issue for candidates to address through their response. In addition, KTI only had \$4 million of cash available for strategic investment, with no access to further bank financing. Candidates were expected to integrate these crucial elements of the company's broader situation within their qualitative and quantitative analyses of each strategic alternative.

For each of the strategic options available to KTI, candidates were expected to conclude and recommend a course of action that was consistent with their analyses. Within their conclusions, candidates were expected to address how the company's supply of raw materials and constrained cash position would be impacted if each of the strategic options was accepted. They were also expected to provide an overall conclusion that was consistent with their analyses and that addressed the two main entity-level issues: the allocation of raw materials, and how best to allocate the company's limited cash availability.

There were five strategic options to be analyzed both qualitatively and quantitatively in this case: whether to accept the contract proposal from BFI, which would require KTI's entire supply of raw materials; whether to acquire a 40% ownership interest in Hilly, a Sri Lankan tea farm; whether to partner with Leaf, a cannabis retailer; whether to utilize the company's newly-granted patent to develop a product line of theanine-infused tea beverages; and whether to enter into a US sales agreement with FFF, a well-known American grocery chain.

Within the analysis of the major issues, three main factors differentiated strong responses from weak responses. First, a strong response identified and provided an in-depth discussion of the most important decision factors for each issue. Weak candidates tended to list case facts, often failing to explain why those elements were important and how they affected the decision-making process. Second, strong candidates provided valuable quantitative analyses to help support their recommendations (such as by linking their calculations to the stated objectives of KTI). On the other hand, weak candidates' quantitative analyses were often unstructured and unclear and, therefore, challenging to follow. Many failed to perform the correct calculation to assess the decision. These candidates often struggled to explain how the results of their quantitative analyses affected the decision at hand. Third, strong candidates routinely linked their analysis of each option to the two prevalent entity-level issues presented in the case: the supply of raw materials and the cash constraint. Strong candidates incorporated these aspects into their discussion of each strategic option, whereas weak candidates either missed making these links altogether or provided a superficial discussion by listing pros or cons, sometimes in contradictory ways from option to option, and failing to adequately highlight the importance of these aspects to the decision. Strong candidates typically incorporated both entity-level issues to some extent and usually prioritized their strategic recommendations, explaining why one option should be pursued over another, drawing on the entity-level decision factors. Weak candidates tended to only perform an issue-by-issue analysis without stepping back to consider the broader perspective and without integrating the key entity-level issues into their conclusions. As a result, they failed to make important links between the various aspects of each alternative. For example, weak candidates failed to consider whether KTI would be able to adequately satisfy the BFI contract's minimum supply requirements, or the impact of the exclusivity feature on the other available strategic options.

Most candidates approached their response in a coherent and organized fashion. Only a few candidates struggled to effectively communicate their ideas. These candidates tended to use poor sentence structure, confusing syntax, and an unorganized approach to their response.

### **Additional Comments Specific to Day 1 – CTI (Version 2)**

Similar to KTI Version 1, most candidates dedicated the first section of their response to a relevant situational analysis. Most used this information later in their response, making relevant links back to the company's global situation when analyzing the specific strategic issues that were presented, and within their conclusions.

One of the most significant changes since Capstone 1 was that Solange was hired as CTI's CEO, and was recently granted performance share units (PSUs) to incentivize her to stay with CTI. Solange had also detailed a new set of key performance indicators (KPIs) she created that the company's division leads were expected to follow when recommending future projects. Candidates were expected to integrate the crucial elements of the company's broader situation, including consideration of the PSUs and KPIs, into their analysis.

There were three strategic options that candidates were expected to analyze both qualitatively and quantitatively: whether to acquire Kolepare, a doll manufacturer and wholesaler of organic materials; whether to invest in the building block board game; and whether to invest in the development of a math game software. In addition, candidates were expected to discuss the governance issues related to Solange's PSUs.

Similar to KTI Version 1, strong candidates recognized and discussed the most important decision factors for each issue, provided valuable quantitative analysis, and linked their analysis to the significant entity-level issues presented in the case. Strong candidates tended to incorporate the impact of each strategic option on Solange's PSUs, and considered the apparent bias that Solange had towards certain investment options, throughout each of their issue-by-issue discussions and within their conclusions and overall recommendations.

Weak candidates generally did not identify and discuss in depth the most relevant aspects of each strategic option presented as part of their analysis. Rather than discuss the more pertinent implications, weak candidates' analyses tended to focus on the minor considerations. For example, for the development of the new math game software, weak candidates tended to focus their analysis on the fit with the mission, vision, and core values, rather than on the several significant risks associated with the investment. Weak candidates also had a difficult time providing a balanced discussion, and instead tended to highlight each investment option's strengths without providing an equally robust discussion of the risks or weaknesses of each option. Weak candidates also often did not step back and consider the entity-level issues within their analysis of the options. For example, many weak candidates had a difficult time recognizing the governance issues related to Solange's PSUs, and when they did, their analysis was often brief.

As was the case with KTI Version 1, only a few candidates struggled to effectively communicate their ideas. These candidates tended to use poor sentence structure, confusing syntax, and an unorganized approach to their response.

**APPENDIX A**

**EXAMINATION DESIGN, MARKING GUIDE DEVELOPMENT, AND MARKING  
OF THE COMMON FINAL EXAMINATION**



## CFE Design

Day 1 is one four-hour case that is linked to the Capstone 1 case, which is worked on in groups for eight weeks prior to the CFE. When writing the Day 1 case, candidates are allowed access to their Capstone 1 case but not their group's answer or any sample response. The Day 1 case is designed to assess the enabling (professional) skills. Candidates are directed to target a "board room and senior management" level of discussion, with high-level analytics and a strategic focus. There are typically two versions of the Day 1 case. Candidates pre-select the version they will write.

Day 2 is one case designed to be completed by an average candidate in three and one half hours that candidates are given five hours to respond. The extra one and one half hour gives candidates time to filter and find the information that they need to answer *their* role requirements from within the common information presented. Day 2 is designed to assess the technical competencies in **depth** (Level 2 and Level 3). Candidates pre-select a role (Assurance, Finance, Taxation, or Performance Management). All candidates work with the same case — it has a common section and four sets of appendices containing additional information applicable to each of the four unique roles. The required tasks, regardless of the role, are clearly directed unless there is an undirected/enabling issue in the case that the board expects candidates to identify on their own. Day 2 evaluates the competencies listed in the *CPA Competency Map* mostly in the elective area and in common Financial Reporting and/or Management Accounting areas in **depth** and **breadth**. The role **depth** test (Level 2) may also include coverage of other competency areas from the common core.

Day 3 is a four-hour examination containing a mix of small cases (70 to 90 minutes each<sup>1</sup>) that evaluate the common core competencies only. The Day 3 cases provide additional opportunities for **depth** in Financial Reporting and Management Accounting and provide **breadth** opportunities for all the other technical competency areas. Cases are time constrained, and they are designed to cover different competency areas within each case. A higher level of integration and judgment is required on Day 3 of the CFE than in the core modules, although the technical competencies are tested at the common core level of expectation.

The assessment opportunities on the Day 2 case are given mark values such that each of Day 2 and Day 3 are weighted equally.

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<sup>1</sup> The CFE Blueprint allows anywhere between 45 to 90 minutes. The May 2023 CFE ranged from 70 to 90 minutes.

## **The Development of Marking Guides and the Provincial Review Centre**

Prior to the Common Final Examination booklets being published, provincial reviewers, appointed by each region, meet to examine the simulations and the preliminary marking guides. The provincial reviewers' comments are then considered by the board when it finalizes the examination set and again when the leaders and assistant leaders review the marking guides in the context of actual responses at the Preliminary Evaluation Centre.

### **The May 2023 CFE Marking Centre**

The May 2023 CFE Evaluation Centre was run 100% remotely. From the marker applications received, approximately 120 individuals were chosen to participate in the May 2023 CFE marking centre. The criteria for selection included marking experience, motivation, academic achievement, work experience, personal references, and regional representation. The marking was supervised by the CPA Canada CFE full-time board staff, with oversight by the CFE subcommittee vice-chair, and the chair of the BOE.

The Day 1 Version 1 linked case (KTI V1) was marked by a team of 11 people from June 19 to 30, 2023. The Day 1 Version 2 linked case (CTI V2) was marked by a team of three people from June 6 to 12, 2023.

The Day 2 Common assessment opportunities were marked separately from the role assessment opportunities by a team of 21 people from June 18 to 29, 2023. Day 2 Assurance was marked by a team of 18 people from June 18 to 30, 2023. Day 2 Performance Management was marked by a team of 14 people from June 19 to 29, 2023. Day 2 Finance was marked by a team of four people from June 10 to 15, 2023. Day 2 Taxation was marked by a team of three people from June 5 to 9, 2023. All three Day 3 cases were marked from June 20 to July 4, 2023. The Day 3 simulations were marked by a total of 45 people.

In advance of the marking centre, the members of the CFE subcommittee, staff, leaders, and assistant leaders participated in a three- to six-day preliminary evaluation centre (PEC). Participants reviewed the marking guides, applied them to randomly selected candidate responses, and made necessary revisions to the marking guidelines, taking into account the comments on the marking guides received from provincial reviewers.

The larger teams followed a set marking centre schedule, which included a start-up phase to train the markers. During the start-up phase, the leaders and assistant leaders presented the marking guides to their teams, while staff and the BOE vice-chair monitored the discussions. The teams undertook a two-phase test-marking procedure prior to actual marking. Phase one consisted of marking guide familiarization, during which markers applied the marking guide to copies of candidates' responses and collectively reviewed their results. Phase one thus ensured that all markers understood the issues in the marking guide and the basis on which to apply each expectation level. Phase two consisted of an expanded test marking of several responses to establish marker congruence.

After the training and test-marking phases, and only when marker congruence was achieved, live marking commenced. All larger teams had a leader, and anywhere from one to two assistant leaders, and had both French-speaking and English-speaking markers. Each team had one or more markers who marked in both languages.

For smaller teams, all markers attended PEC, and moved directly from PEC to live marking. These teams had a leader, and two to three experienced senior markers, of which two were bilingual and marked all the French papers. These bilingual markers started in English and switched to marking in French once their marking was assessed as being consistent with the team. The bilingual markers arbitrated the French papers by discussing where there were differences in their markings.

The board strives for the highest possible marking consistency and quality control. Leaders and assistant leaders, therefore, devoted much of their time to cross-marking and other monitoring activities. Control papers were fed into the system daily to check marker consistency. Markers' statistics were reviewed to ensure that marking remained consistent throughout the centre. Based on analysis of the statistics, leaders reviewed and, if necessary, re-marked papers to ensure that the assessment opportunities were marked fairly for all candidates. Bilingual markers marked papers in both languages, and their results were compared to ensure that the marking was consistent in both languages. Additional audits were performed at the end of marking on any of the larger differences between markers.

### **Borderline Marking (Day 1)**

Each candidate's paper was marked once. All candidates' responses that were assessed as clear fail, marginal fail, and marginal pass were marked a second time by the team leader, an assistant team leader or a senior marker. Clear pass results were also audited to ensure accuracy of marking.

### **Double Marking (Day 2)**

Each candidate's Day 2 paper was marked independently by two different markers. If the two initial markings differed on any assessment opportunity, an arbitrator (the leader, the assistant leader, or a senior marker) compared the two initial markings and determined the final assessment.

As an added measure to ensure that markers were consistently applying the marking guide, a two-day rule exists, which results in the second round of marking not beginning until two days have elapsed since the first marking. Adherence to this rule ensures that any movement in the application of the marking guides due to marker interpretations during the first two days of live marking are stabilized before the second marking and arbitration process begin.

### **Borderline Marking (Day 3)**

Day 3 was marked using a borderline model. All Day 3 responses were marked once and then the Day 2 and Day 3 results were combined. All failing candidates who passed the Day 2 role test, had their Day 3 response marked a second time by an independent marker, and any differences between the first and second markings were arbitrated by a leader or senior marker.

### **Subsequent Request for Remark of Results and Request for Performance Analysis**

Failing candidates may request a remark of their examination results and/or a detailed personalized performance analysis for either Day 1, or Day 2 and Day 3, or for all three days for a fee.

In an effort to provide failing candidates with more timely feedback, the Board of Examiners is providing an automated feedback report for Day 1 of the CFE. The report is automatically generated using the marking data collected for each response rather than being based on a personalized review of the response. It is therefore being provided at no cost to all failing candidates. This report is intended to allow for the identification of the key deficiencies in the candidate's Day 1 response, which then allows the candidate to decide whether to request the more detailed, and personalized performance analysis report noted above, for a fee.

### Review and Remarking Approach

Great care is exercised in the original marking and tabulating of the papers and results. The following review and marking procedures are applied to all three papers constituting the Common Final Examination.

Under the supervision of the chair of the Board of Examiners, as well as CPA Canada CFE staff, the responses are reviewed by the leaders and assistant leaders who did the original marking. The leaders and assistant leaders read the responses and compare them to the marking guides used at the marking centre. In reviewing candidates' results, two aspects are considered. First, it must be determined that the basis of marking the papers has been consistent with that accorded other candidates who wrote the examination. Second, all responses reviewed are subjected to a careful check to ensure the markers have indicated that consideration has been given to all material submitted by the candidate.

The results are tabulated, and a decision made regarding whether any candidates have been treated unfairly and should be granted a pass on the examination.

The results are then forwarded to the provincial bodies for notification of the candidates.

**APPENDIX B**

**CAPSTONE 1  
CTI BACKGROUND CASE**

## Capstone 1

### Creative Toys Inc. — Case (FOR REFERENCE ONLY)

It is April 10, 2022, and you are working as a CPA with Hilton Consulting Group LLP (HCG). You have been assigned to develop a report for the board of directors (board) and management of Creative Toys Inc. (CTI).

CTI has asked HCG to help with strategic analysis and to set a new direction for the company. Based on past years' results, the board is concerned about declining sales and profits. The four directors have conflicting views on how the company should grow, and they would like you to analyze and address CTI's many strategic and operational issues.

You have been provided with the following information to review and analyze (all dollar values are in Canadian dollars unless specifically stated otherwise).

#### **Creative Toys Inc.**

CTI is a privately held Canadian company that manufactures and distributes a variety of children's board games, puzzles, and dolls, with sales primarily in Canada and the United States. The company was started in 1987 by Carolyn and Peter De Vogue (husband and wife). In 1999, the ownership of the company was transferred to their two children, Lorraine and Krystal De Vogue. In 2010, a friend of the family, Thomas Whitaker, purchased shares in the company. Thomas owns a chain of specialty toy stores in eastern Canada and the eastern United States. In 2014, long-time employees of the game/puzzle division were given the opportunity to purchase shares in the company with cash earned from bonuses. Currently, Lorraine and Krystal each own 35% of CTI, a group of 10 employees owns 15% (1.5% each), and Thomas owns the remaining 15%.

#### **Industry information**

##### *Description and size*

The toy, doll, and game (toy) manufacturing industry in Canada includes the manufacture of electronic toys, non-electronic games and puzzles, dolls and action figures, model and craft kits, and so on. This industry does not include the production of video or computer games and software, including applications (apps) for phones and tablets, which form part of the entertainment and games software industry.<sup>1</sup> The

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<sup>1</sup> Dun & Bradstreet, Toy & Game Manufacturing Industry Profile (2019), <http://www.firstresearch.com/industry-research/Toy-and-Game-Manufacturing.html>

Canadian toy manufacturing industry had total revenue of approximately \$235 million in 2019.<sup>2</sup> During the past few years, revenues in the industry have been very volatile; for example, they increased 8.4% in 2013 and decreased 17.7% in 2017, with an overall decrease of 2.2% between 2015 and 2019.<sup>3</sup> The bankruptcy of Toys “R” Us in the United States, the largest toy retailer in North America before bankruptcy, contributed significantly to the large reductions in revenues, since many Canadian manufacturers export to the United States. The closures of Toys “R” Us stores affected manufacturers such as Mattel, which laid off 2,200 of its 28,000 employees in 2018.<sup>4</sup>

Of the total industry revenues for Canadian manufacturers, exports account for 73.3% of total sales, retailers 24.4%, and wholesalers 2.3%.<sup>5</sup> Exports, as a percentage of the industry’s total sales, have increased over the past few years, with exports being primarily to the United States (65.2%), Mexico (10%), and China (4.3%). This growth in exports has been primarily driven by a cheaper Canadian dollar, resulting in prices that are more affordable internationally. In addition, the growth of the Chinese middle class has resulted in higher export sales to China.<sup>6</sup>

### *Products*

Canadian manufacturers’ revenue by product type is as follows:<sup>7</sup>

<b>Product segment</b>	<b>Percentage of revenue</b>
Non-electronic toys	69.9%
Electronic toys (excluding video games)	17.8%
Model and craft kits	5.2%
Baby carriages and children’s vehicles	4.1%
Dolls and action figures	3.0%
Total	100.0%

As the above table shows, Canadian manufacturers tend to produce and sell the more traditional, non-electronic toy products as opposed to the more recently developed electronic toys, mainly because offshore producers can manufacture these new products at a much lower cost and selling price, and meet the current demand.

<sup>2</sup> IBISWorld Industry Report, Game Over: Competitive Pressures from Imports Will Force Operators to Exit the Industry; Toy, Doll & Game Manufacturing in Canada (March 2019),

<https://www.ibisworld.com/canada/market-research-reports/toy-doll-game-manufacturing-industry/>

<sup>3</sup> Ibid.

<sup>4</sup> Mario Ismailanji, IBIS World Industry Report 33993CA, Building Blocks: Despite an Appreciating Dollar, the Industry Will Rebound and Grow Marginally; Toy, Doll & Game Manufacturing in Canada (December 2017), [www.ibisworld.com](http://www.ibisworld.com)

<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

<sup>7</sup> Ibid.



Canadian manufacturers generally focus on producing items that require less labour and less energy input, because these items cost more in Canada.<sup>8</sup>

Toys that are seen as educational tend to have longer product lives and are slightly more insulated from competition and industry pressures, and they require fewer continued marketing resources overall to be successful.

### Non-electronic toys

Non-electronic toys include puzzles, board games, card games, and building sets. Historically, these have been labour intensive to manufacture and require significant investment in automation to keep production costs low. These products are threatened by “age compression,” where increasingly younger children move away from these toys to more entertaining and complex electronics. These products have a high degree of consumer recognition, since they were used by parents when they were children, and they are important to development of problem-solving and critical thinking skills.

### Electronic toys (excluding video games)

Electronic toys include hand-held electronic games, electronic pets, radio-controlled toy cars, internet plug and play games, and electronic learning games. Demand for these toys is increasing, but Canadian manufacturers’ share of the industry has been declining because of increased production by offshore companies, who have lower wage costs. Age compression is increasing demand for these toys but is offset by high selling prices, which reduce demand. This is a newer market segment resulting from an increase in general electronic use. Child-rearing experts are advising parents to reduce their children’s time spent on electronics (both electronic toys and video games), which can lead to obesity and poor sleep habits, and get back to traditional toys.<sup>9</sup>

### Model and craft kits

Model and craft kits include model cars, planes, and rockets as well as science and craft kits, art supplies, and colouring books. This segment has stable demand from parent and grandparent buyers. The cost of these products is generally low, and therefore, products are affordable during recessions.

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<sup>8</sup> Ismailanji, 2017.

<sup>9</sup> Nathaniel Leach, Play By Rules: Revenue Will Grow Slowly as Competition from Online Retailers Mounts; Hobby and Toy Stores in Canada, IBISWorld Industry Report 45112CA (November 2017), [www.ibisworld.com](http://www.ibisworld.com)

### Baby carriages and children's vehicles

This category includes toy baby carriages, strollers, and cribs, as well as children's ride-on toys and vehicles such as tricycles (except bicycles). Demand for these toys has declined due to an aging population.

### Dolls and action figures

Dolls and action figures include dolls as well as their parts and accessories, plus action figures. These toys have demonstrated stable demand, since they are often tied to licensing of Disney and other movie or TV characters. As new characters are introduced, demand for these products increases.

### *Toy retailers*

Companies in the toy manufacturing industry sell their products primarily to retailers. The two main retailers selling toys in Canada are Walmart and Toys "R" Us,<sup>10</sup> and others include Giant Tiger, Canadian Tire, Indigo Books and Music, and Amazon. Toy retailers include traditional department stores, big-box and discount stores, online stores, toy and hobby retailers, and other speciality stores, as well as other non-traditional toy retailers, such as book and grocery stores. To be successful, it is critical that manufacturers have a recognizable brand name to attract retailers who allow manufacturers to obtain and retain shelf space.

During the past few years, demand from department stores has declined on an annualized basis by 0.1%, and the demand from toy and hobby retailers has increased 2% annually. In contrast to mass merchandisers, some specialty stores, such as Mastermind Toys, which sells educational toys at a higher than average price point, have continued to grow and expand over the past few years,<sup>11</sup> translating into continued growing demand for toy products. In addition, online sales (such as through Amazon and eBay) have increased at an annualized rate of 13% between 2015 and 2019.<sup>12</sup>

Since many consumers are increasingly buying toys online, through retailers such as Amazon and eBay, storefront retailers have had to adapt their strategies to attract buyers. For example, Toys "R" Us is making shopping more "experiential" by improving its customer service, hosting children's hands-on activities, and providing interactive play areas in its stores.<sup>13</sup> Similarly, Indigo Books and Music has expanded its store space to include toys and is attracting consumers by having in-store

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<sup>10</sup> Holly Shaw, "Toys R Us Canada Wants You to Know It Is Alive and Well – and Ready for a Makeover," *Financial Post*, June 27, 2018, <https://business.financialpost.com/news/retail-marketing/toys-r-us-canada-wants-you-to-know-it-is-alive-and-well-and-not-going-anywhere-anytime-soon>

<sup>11</sup> Leach, 2017.

<sup>12</sup> Ibid.

<sup>13</sup> Shaw, 2018.

readings and activities, and it has opened American Girl doll boutiques that provide hair styling for the dolls.<sup>14</sup>

Due to the significant amount that major retailers spend on marketing, it is valuable to manufacturers to have their brands shown and featured in the stores, as it will translate to more demand for their products; therefore, strong and long-term relationships with retailers can lead to increased success in this industry. As well, to counteract concentration risk of selling to only a few customers, having a diverse range and large number of retail customers is key to success in the industry. While shelf space is important to increase brand recognition and demand, manufacturers also see these retail stores as opportunities to test their products, learn how they are received by consumers and, from this, learn how to sell in online distribution channels.<sup>15</sup> Many manufacturers are also thinking of alternative ways to distribute and sell their products, outside traditional retailers. For example, Build-a-Bear Workshop now has kiosks in movie theatres and on cruise ships. Its strategy is to be a “brand that has lots of other business streams.”<sup>16</sup>

To reduce overall costs in the supply chain, the majority of retailers have moved to buying directly from the manufacturer, thereby decreasing sales to wholesalers. One of the benefits of selling directly to retailers is that manufacturers can get direct feedback on consumers’ reactions to new products and better manage their own inventories as well as retailers’ inventories.<sup>17</sup>

### *Retail toy market globally*

Globally, North America is the largest region for toy sales, while Asia is the fastest-growing region.<sup>18</sup> Over the last few years, countries such as Mexico, Brazil, the United States, and Canada have experienced continued growth in sales. In contrast, the European market has been struggling, for instance experiencing a 1% decline in growth during 2018. The Asian market grew by 21% between 2015 and 2019. The global toy industry has been growing steadily since 2012, as has global spending per child, and the global toy market is forecasted to reach \$99 billion by the end of 2022.<sup>19</sup>

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<sup>14</sup> Ibid.

<sup>15</sup> Shaw, 2018.

<sup>16</sup> Gladys Kong, “Toys ‘R’ Us Shopper Data Insights Can Give Toy Market and Retailers an Advantage,” *CIO*, April 25, 2018, <https://www.cio.com/article/3269311/toys-r-us-shopper-data-insights-can-give-toy-makers-and-retailers-an-advantage.html>

<sup>17</sup> Ismailanji, 2017.

<sup>18</sup> NPD Group, Toy Sales Across Key Global Markets Grew by 4 Percent in the First Half of 2018, Reports NPD, August 14, 2018, <https://www.npd.com/wps/portal/npd/us/news/press-releases/2018/toy-sales-across-key-global-markets-grew-by-4-percent-in-the-first-half-of-2018-reports-mpd/>

<sup>19</sup> Ibid.

Recent global sales growth for some major categories was as follows:<sup>20</sup>

<b>Toy type</b>	<b>Global sales growth</b>
Dolls	+9%
Action figures	+8%
Youth electronics	+1%
Arts and crafts	0%
Games and puzzles	-1%
All other toys	-2%
Building sets	-4%
Infant/toddler/preschool toys	-5%
Outdoor and sports toys	-6%
Vehicles	-9%
Plush toys	-10%

These growth trends are expected to continue for the next few years. There are currently a few successful well-known brands in the doll category, such as Barbie, L.O.L. Surprise!, and American Girl, that control a large portion of the market share. These doll manufacturers offer a full range of clothing and accessories for their dolls, which makes them the first choice for parents. The growth in the doll category has been primarily due to the increased sales of L.O.L. Surprise! and Barbie dolls, through continued expanded product offerings and marketing efforts.<sup>21</sup>

Toys can also become collectible items, which are purchased by consumers who hold on to them for their increased future value (such as the original Barbie or G.I. Joe action figures). The collectible segment saw global sales growth of 26% and now makes up 11% of all global toy sales, with the L.O.L. Surprise! dolls leading the global sales of collectibles.<sup>22</sup> Given the appeal of collectibles and the continued growth in demand, many manufacturers have decided to actively participate in this collectible segment and produce toys geared at becoming collectible items.

### *Competitors*

The top four competitors in the toy manufacturing industry in Canada represent 50% of the total sales. The major competitor is Mattel, with brands such as Barbie, Fisher-Price, and Hot Wheels. Mattel historically has represented over 40% of the industry's revenues. As a large player, Mattel continues to achieve more economies of scale and efficient operating costs, making it difficult for smaller manufacturers to remain competitive and profitable. This will likely result in many smaller operators closing

<sup>20</sup> NPD Group, Global Toy Sales Declined 2% in 2018, Reports the NPD Group, February 11, 2019, <https://www.npd.com/wps/portal/npd/us/news/press-releases/2019/global-toy-sales-declined-by-2-percent-in-2018-reports-the-npd-group/>

<sup>21</sup> NPD Group, 2019.

<sup>22</sup> NPD Group, 2018.

their businesses, with annualized decreases in the number of establishments expected to be 1.3% for the next few years.<sup>23</sup>

Mergers and consolidations are expected to continue to reduce costs, forcing operators who can no longer compete to either leave the industry or outsource product to offshore countries with lower labour costs. Many of the smaller competitors survive by serving small, local geographic markets or niche markets and by selling to local stores and using word of mouth for advertising.<sup>24</sup>

Canadian toy manufacturers also face fierce competition from imports of toy products, which have continued to increase, with predictions that imports will represent 97.7% of the total demand for toy products within the next few years. Imports are primarily from China (76.7%), the United States (7.1%), and Mexico (7.0%). The import percentage is so high because import input costs are significantly lower than the input costs for Canadian manufacturers for wages, electricity, and rentals, resulting in lower selling prices for the imported products. In order to compete, many Canadian manufacturers have outsourced part or all of their production to lower-cost countries in Asia.<sup>25</sup> Strong relationships with suppliers are key in order for manufacturers to obtain high-quality and price-competitive raw materials.

Competition in this industry is very fierce, and differentiation is based on price and product variety.<sup>26</sup> Keys to success include the following:

- **Price:** The cost and selling price of the imported products are lower than Canadian-made products, increasing their appeal to both consumers and retailers. This has forced Canadian manufacturers to reduce labour costs and to move to more technologically advanced and capital-intensive methods that are cheaper on an overall per-unit basis.
- **Product variety:** Manufacturers should have a diverse product line of both traditional and electronic products, and work to have long-term relationships with their retailers, who want to work with manufacturers that can provide a wide range of products. This can be beneficial to both parties, as retailers can reduce their costs by dealing with fewer suppliers, and in turn retailers will give the manufacturer more shelf space to show their products.

In order to ensure success, companies need to be innovative, with a constant supply of new ideas in the design and development stage, to support the ability to regularly release new products to the market, providing a constant level of demand and a predictable pattern to use for forecasting of sales and production.

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<sup>23</sup> Ismailanji, 2017.

<sup>24</sup> Ibid.

<sup>25</sup> Ismailanji, 2017.

<sup>26</sup> Ibid.

New entrants into this industry face many barriers, including the following:<sup>27</sup>

- Initial costs to build a brand name, create new innovative designs and products, and protect intellectual property and trademarks.
- Access to skilled labour with the experience and technical knowledge required in the industry. Many of the skilled employees are now retiring, causing a skill shortage that may require higher costs to replace.

### *Licensing*

One option for toy manufacturers is to license an entertainment brand, such as a character from a movie or a television series, a sports star, or a famous personality, and to use that brand in developing its toy products. The right licence can give a manufacturer's product more retail shelf space and consumer awareness, and result in a higher likelihood that it is purchased on impulse.<sup>28</sup> However, licensing arrangements are expensive, often charging an upfront fee and an ongoing royalty fee on guaranteed sales. The risk for the manufacturer is that sales of the branded product will not be high enough to cover these fees. For a successful licensing arrangement, the character being branded should have a high level of popularity and a long lifecycle, and be adaptable to toys.<sup>29</sup>

Licensed toys tend to appeal more to younger children, with toys representing 28% of all licensed products sold to children aged 2-5. As children age, this percentage decreases, with toys representing only 9% of all licensed products sold to children aged 13-14.<sup>30</sup>

To reduce licensing costs, some successful manufacturers are producing toys and their own television content to increase awareness. For example, *PAW Patrol*, produced by Spin Master, was created as both a toy and a TV series. Spin Master's entertainment division now has five successful shows, which it has been able to license out to other companies and earn royalty income.<sup>31</sup> In the United States, 31% of the total traditional toys and games sold are licensed.<sup>32</sup> Licensed toy sales are

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<sup>27</sup> Ibid.

<sup>28</sup> Lutz Muller, "Toy Licenses: How Important Are They?" *Seeking Alpha*, January 13, 2014, <https://seekingalpha.com/article/2268293-toy-licenses-how-important-are-they>

<sup>29</sup> Steve Reece, "5 Features of Successful Licenses For Toys..." *Toy Industry Journal*, February 26, 2016, <http://www.toyindustryjournal.com/?p=277>

<sup>30</sup> NPD Group, Toys and Technology Drive Licensed Sales for Kids in the U.S., NPD Finds, June 20, 2017, <https://www.npd.com/wps/portal/npd/us/news/press-releases/2017/toys-and-technology-drive-licensed-sales-for-kids-in-the-us-npd-finds/>

<sup>31</sup> Courtney Shea, "How Spin Master Conquered the Lucrative International Toy Market," *Canadian Business*, September 13, 2018, <https://www.canadianbusiness.com/lists-and-rankings/growth-500/how-spin-master-conquered-the-lucrative-international-toy-market/>

<sup>32</sup> Muller, 2014.

expected to grow 14% over the next few years, with the regions of North America, western Europe, and Asia representing the majority of sales and growth.<sup>33</sup>

### *Health and safety regulations*

There are strict regulations for health and safety that toy manufacturers must adhere to. Non-compliance with these regulations can result in ruined reputations, decreased sales, loss of customer loyalty, and product recalls. The Canada Consumer Product Safety Act (CCPSA) and the Toys Regulations set out the guidance for mandatory safety requirements that apply to children's toys and related products manufactured in, advertised in, imported into, or sold in Canada. The Toys Regulations address a wide range of mechanical, flammability, toxicological, electrical, thermal, and other hazards associated with children's toys, and also set out specific test methods and criteria to be followed.<sup>34</sup>

### *Product life and predictions*

The product life of a specific toy can be very short, and it is very rare for a product to be able to maintain its success for more than a few years, due to how fast children's interests change.<sup>35</sup> A product that was in high demand last year will not necessarily be in high demand this year, as toy fads come and go very quickly.

One of the biggest challenges facing toy manufacturers is to be able to predict what the demand for their products will be. Since a majority of the sales are made in the late part of the calendar year (during the holiday buying season), manufacturers must have the right amount of the right product at the right time.<sup>36</sup> If a manufacturer is lucky enough to have a top-selling toy for the year, then it has to ensure that there is sufficient inventory on hand to meet this high demand. The ability for manufacturers to quickly adapt their production schedules and inventory levels to respond to these changes and surges in demand is critical to success in the industry. There have been many examples in the past where stores have run out of a popular toy because the manufacturers were unable to keep up with the demand. This is particularly true for the smaller manufacturers that do not have the capacity to cope with a suddenly successful toy that is in high demand.

To help consumers make toy buying decisions, there are websites that review, test and rate toys, as well as make predictions on what the most popular toys will be. For

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<sup>33</sup> Matt Hudak, "The Three Regions That Will Lead Licensed Toy Growth," *Euromonitor International*, 2017, <https://blog.euromonitor.com/three-regions-will-lead-licensed-toy-growth/>

<sup>34</sup> Government of Canada, Industry Guide to Health Canada's Safety Requirements for Children's Toys and Related Products, <https://www.canada.ca/en/health-canada/services/consumer-product-safety/reports-publications/industry-professionals/industry-guide-safety-requirements-children-toys-related-products-summary/guidance-document.html>

<sup>35</sup> Steve Kupferman, "Toy Story," *Pivot CPA Magazine*, June 2019, page 35.

<sup>36</sup> Chris Hartmann, "No Toying Around: Forecasting at The Lego Group," *SAS Voices*, February 13, 2015, <https://blogs.sas.com/content/sascom/2015/02/13/no-toying-around-forecasting-at-the-lego-group/>



example, BestReviews ([www.bestreviews.com/best-toys](http://www.bestreviews.com/best-toys)) researches, analyzes, and tests products and recommends its best picks. Toys4Minds ([www.toys4minds.com](http://www.toys4minds.com)) provides extensive reviews and information on a variety of toys in different categories, and makes predictions for the Christmas buying season. Similarly, ToyBuzz ([www.toybuzz.org/top-toys-for-christmas](http://www.toybuzz.org/top-toys-for-christmas)) gives out its top awards for toys and its buying list for the holidays. Therefore, if a manufacturer's product is highlighted as a top pick in any year, this will significantly increase its sales.

To counter these risks, manufacturers want to also have some “evergreen” products in their portfolio that can evolve as consumers' tastes change, resulting in more stable revenues over time.<sup>37</sup> In addition, innovation is very important to the sustainability of a toy manufacturer. As stated by Ben Gadbois, Spin Master's chief operating officer, when speaking of value in his company: “The value gets driven with great innovation. If great innovation doesn't come, nothing else will happen in the company. Everything else that we do has to really empower the creative process.”<sup>38</sup>

To better predict sales of products, companies are turning to using more sophisticated data analytics to remain updated about their target consumers' buying habits. For example, Spin Master can monitor its inventories, shipments, and sales in real time, so that it can continuously update its market data. With this level of sophisticated monitoring, the company can immediately identify when a fad starts to wane and the product needs to be updated or replaced.<sup>39</sup>

#### *Recent developments impacting the toy manufacturing industry*

- Manufacturers are using more organic materials and simple, classic designs to meet the demands of the consumer.
- The aging Canadian population results in fewer children and a shrinking demand for toys.
- Age compression: as children (up to 12 years old) become more proficient with tablets and smartphones at younger and younger ages, they are losing interest in traditional toys and games at earlier ages, causing the demand for non-electronic toys to shrink and the demand for electronic products to increase. Therefore, manufacturers are now offering high-tech (electronic) versions and video game formats of their traditional board games or building blocks to appeal to these consumers.
- Marketing campaigns are increasingly tied to issues of the day.

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<sup>37</sup> Kupferman, 2019, page 36.

<sup>38</sup> Ibid., page 38.

<sup>39</sup> Ibid., page 39.



- Sales of Barbie dolls were up 24% in 2017, driven by Mattel’s marketing campaign of “you can be anything,” supporting female empowerment. At the same time, American Girl’s sales declined 21% in a single quarter.<sup>40</sup>
- Traditional toys are increasingly being licensed. This trend is driven by the greater availability of entertainment characters due to increased movies and streaming content, as well as by an increased demand for collectibles.
- Research and development (R&D) processes are accelerated. The product cycle for design, selection, and marketing is much shorter than before. Spin Master uses a 36-month brand innovation pipeline to ensure that new products are constantly being developed to eliminate revenue volatility.<sup>41</sup>

### *General risks in the toy manufacturing industry*

- Product risk: Manufacturers must successfully identify and satisfy consumer preferences by designing the “right” toy that will appeal to the consumer at the right time. Toy fads are unpredictable, and therefore a manufacturer needs to have a variety of products for different ages.<sup>42</sup>
- Seasonal risk: The toy industry is very seasonal, with the majority of sales occurring from September to December. In addition, sales of travel-related toys increase in the summer when families are vacationing, and indoor toy sales increase in the winter. If there is insufficient inventory to meet demand, or production is interrupted during the periods of higher demand, there is a higher risk of lost revenues.
- Customer concentration risk: Since the retail market is dominated by only a few large retailers, manufacturers sell a large percentage of their product to only a few customers. If there is any negative change in a customer relationship, it is difficult to replace this lost customer and revenues could decline significantly. A diverse range and large number of customers reduces this risk.
- Health and safety risk and compliance risk: Toys must be manufactured to comply with strict health and safety regulations. If a product is found to be hazardous in any way, sales will decline.
- Exchange rate risk: The value of the Canadian dollar relative to other currencies impacts the amount of exports by manufacturers and imports by their retail customers, which in turn affect net revenues generated by the Canadian manufacturer. If the Canadian dollar relative to other foreign currencies stays depressed, exports from manufacturers will increase.
- Political risk: Since Canadian manufacturers export a significant amount of products, and import penetration is high with Canadian retailers, trade pacts can

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<sup>40</sup> Lisa Fickenscher, “Female Empowerment Drives Barbie Sales,” *NY Post*, April 26, 2018, <https://nypost.com/2018/04/26/female-empowerment-powers-barbie-sales/>

<sup>41</sup> Shea, 2018.

<sup>42</sup> Mattel, Inc., 2018 Annual Report, <https://mattel.gcs-web.com/static-files/d231da34-60d7-44f0-83df-933c52b5d688>

have a significant impact on Canadian manufacturers' sales. Trade agreements such as the USMCA agreement between the United States, Mexico, and Canada will impact manufacturers.<sup>43</sup> If agreements significantly reduce duties on imported products, this further lowers the cost of imported toys and Canadian manufacturers will be negatively affected. Similarly, if agreements increase duties on Canadian exported toys, this will also negatively impact Canadian manufacturers trying to export their products.

- Reputational risk: If toys do not function as promised or are found to be hazardous and a recall is required, this will negatively impact the reputation of the manufacturer, which can lead to decreased sales.
- Technology risk: Technology changes impact the nature of the toys and manufacturing processes used. As technology changes, toy manufacturers must start to produce toys that are digital and use up-to-date technology. To keep operating costs low, manufacturers must continuously upgrade to utilize more technologically sophisticated equipment.

### **Company background**

CTI's initial success came from the creation of Know It or Lose It, a very popular board game geared toward adults, developed by Peter De Vogue, that was based on knowing facts and solving mathematical puzzles. During the period from 1987 to 2001, the company expanded the board game into variations designed for children between the ages of 10 and 13. CTI won awards for these games in 1990, 1994, and 2002. CTI considered purchasing licences for characters, but Peter strongly opposed moving in this direction because he did not want CTI's name associated with any one particular movie or TV series character. He wanted the CTI brand to stand on its own.

Lorraine and Krystal De Vogue took over ownership and management of CTI from their parents in 1999, when Carolyn and Peter decided to retire. The sisters realized CTI needed to look outside the company for new innovative products, and opened the company's doors to small inventors who had created new board games and puzzles they wanted to sell. CTI's main criterion for proceeding with the production of a new game or puzzle was that the product needed to be educational, for instance, supporting the development of creative thinking or enhancing knowledge in some manner. Over the next 10 years, the two sisters increased the size of the company by purchasing the rights to new products that appealed to children aged 8-10, and increased CTI's geographic scope of sales. CTI was nominated for the best board game award in 2005 and 2007, and won the award in 2010.

In 2010, a friend of the family, Thomas Whitaker, approached Lorraine and Krystal about investing in CTI. Thomas owns a chain of specialty toy stores, Play Ed Toys Corporation (PET), and believed there could be several synergies between the two companies whereby he could promote CTI products in his stores and give consumer

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<sup>43</sup> Ismailanji, 2017.

feedback on products, and CTI could sell to his stores at a preferred price. Thomas initially purchased 10% ownership in CTI, which later increased to 15%.

In 2011, at Thomas's suggestion, the shareholders decided to bring creative talent inside the company and hired skilled employees for its R&D department. Over the years, this department grew and created new products for ages 8 and up, in addition to upgrades for its teen and adult games. In 2013, CTI won an award for the best wood puzzle of the year.

In 2014, a bonus program was instituted that paid bonuses to all employees based on a percentage of corporate earnings and seniority in the company. It also allowed employees with more than 15 years' tenure to use their cash bonuses to buy shares in the company. Krystal and Lorraine believe that employee involvement is vital to success of the company.

In 2015, although sales of Know It or Lose It continued to be stable, sales of the other board games and puzzles started to decline. The shareholders decided to expand into different sectors, and Thomas suggested the purchase of Sook's Dolls Limited (SDL). Thomas was very familiar with SDL, since his stores had sold its dolls for many years, particularly Sookie, which was a very popular doll for children aged 5-7, made using a simple and classic design for a soft material doll. Sookie is produced using 100% organic materials and is manufactured by Greenhaven Manufacturing Inc. (Greenhaven), a preferred vendor in Saskatchewan, allowing the doll to be premium priced in the market. Demand for the dolls in the PET stores came primarily from consumers wanting dolls made in North America, rather than foreign imports, and that were produced using organic materials. The owner of SDL was a hands-on manager, but due to a prolonged illness the company started to flounder, and sales dropped. Thomas believed that with some investment in innovation and marketing, sales could be significantly improved and lost sales recaptured. Since the owner was anxious to sell, Thomas thought that CTI could purchase the company at a bargain price. Consequently, late in 2018, CTI purchased SDL for \$2,000,000, enabling CTI to expand its product offerings to include a doll targeted at a younger-aged market. To date, SDL is still a separate corporate entity that is consolidated as a wholly owned subsidiary.

In 2017, the company decided to also use organic materials in its board games and puzzles in an attempt to differentiate CTI from its competitors. Although raw material costs increased with these modifications, the company was able to price its product at a premium to cover these additional costs.

For the year ended December 31, 2021, the company had sales of \$25,900,000, of which 60% were made in the United States. Net earnings for the company were approximately \$1,000,000. In earlier years, the company's net earnings had been as high as \$3,000,000.

## Company overview

The company is split into two divisions: the game/puzzle division and the doll division. The game/puzzle division manufactures its educational board games and puzzles in-house. The original Know It or Lose It game and its variations remain as CTI's most successful product. CTI has products within this division targeted at children aged 8-9, children aged 10-12, teens aged 13-17, and adults. The teen products have never been very successful, even though every year the company has come out with five or six new creations. All the games and puzzles are manufactured in CTI-owned facilities in Ontario and Quebec, and CTI believes that manufacturing these products in-house in Canada gives it more control over production scheduling and quality control. The strategy for the game/puzzle division is to continue to create variations of the original Know It or Lose It and create or update other games and puzzles that will appeal to the other target categories. These products are sold in both the United States and Canada.

In the doll division, the dolls are targeted at children aged 5-7, but seem to be most popular with girls within that age category, and continue to be manufactured in Saskatchewan by Greenhaven, the company's preferred vendor. There have been no improvements made to the dolls since the acquisition. The company has tried to increase the geographic scope of sales to include the United States, but to date, the dolls are sold only in Canada, except for sales to PET, which has some stores in the eastern United States. CTI's experience related to developing and manufacturing dolls is limited, and most senior management has no prior experience with this product category.

CTI has one R&D department that designs and tests all new products. It takes CTI about 48 months to develop a product from conception to market. CTI currently has enough products in the development process to enable it to release at least five new or updated games or puzzles in the market each year, but it does not have any new dolls or doll modifications currently in development. In the past few years, all new or updated product releases have failed to appeal to the masses, and the company has not won any product awards since 2013.

Consistent with Peter's original philosophy, the company has never paid for character licences for any of its toys. The CTI brand is still well recognized and associated with Know It or Lose It and its other board games and puzzles. CTI has maintained the SDL branding for the dolls.

Integration of the doll division with the rest of the company has not been successful. There is significant resentment between the two divisions for several reasons. First, the employee-shareholders are all from the game/puzzle division and want the scarce resources allocated to their own division rather than the doll division and therefore vote accordingly at the board level. Second, there are significant cultural differences between the divisions that are causing tensions. The doll division's employees are used to a centralized corporate structure, with a very hands-on owner who interacted

regularly with the doll division's manager and made decisions quickly. The division manager now reports to Krystal, who does not have time to be involved in the day-to-day decisions related to this division. Third, the doll division employees feel that their voices are not heard and that they are considered less important by other employees and management. The conflict between the two divisions has resulted in lower morale and reduced operating efficiencies.

The company is at a crossroads, since sales and profits have been declining since 2019, and the shareholders have different ideas about the direction the company should go. Krystal and the employee-shareholders want to keep the company focused on educational board games and puzzles and think that CTI made a mistake by acquiring SDL. Lorraine and Thomas want to expand the company into several different sectors. They believe the only way to be successful is to expand with a diversified product line.

### **Corporate vision, mission, and values**

CTI's vision and mission statements and core values, approved by the board in 2017, are as follows:

*Vision statement: Make toys that are enduring, educational, and fun for all ages and are made from only organic materials.*

*Mission statement: We create innovative and educational toys that encourage creativity and critical thinking in a fun manner and can be enjoyed by all members of the family.*

CTI has four main core values, which are to:

1. Manufacture and deliver safe, high-quality educational toys and games to our customers.
2. Continuously innovate so that our products are top-rated in the industry and are regularly recognized for this excellence by winning awards.
3. Create a culture where everyone is respected and listened to, and takes pride in their work.
4. Manufacture our products using organic and sustainable materials, as much as possible.

CTI also has a code of conduct and ethics written in 2007, which emphasizes honesty, moral integrity, and ethical behaviour. All employees and directors are required to read and sign the code of conduct and ethics when they are hired. There is no training provided, and the code of conduct and ethics has not been updated since it was first written. Employees and directors can report any ethical issue to the vice president (VP) human resources and legal on a totally confidential basis with no threat of retaliation.

## Future plans and objectives

In early 2022, the board set the following objectives:

- increase net sales by 25% by 2025
- increase operating income to \$3,000,000 annually by 2025
- broaden the customer target market for CTI's products
- increase CTI's geographic scope and sell in new areas

## Company structure

The board of directors consists of Lorraine, Krystal, Thomas, and one director representing the employee-shareholders, which is currently Steven Zhang. The board meets every two months. At the meeting, the board discusses topics related to financial reports, unresolved production issues, new corporate policies, and election of the officers. No dividends have been paid since the company's inception. There are no formal board committees.

The 10 employee-shareholders have decided amongst themselves to vote as a group, since this gives them the most power for decision-making. They all own an equal number of shares, and have all signed a voting trust agreement that transfers the votes of their shares to a voting trustee — currently, Steven Zhang. Under the terms and conditions of the agreement, the voting trustee is the group's board representative who must come back to the group to discuss options before casting the final vote on major decisions. The group together decides how Steven's vote should be cast. This position is nominated annually, although Steven has held the position for the past five years.

## Management team

CTI's corporate management team is made up of the following individuals:

*Thomas Whitaker — chair of the board*

Thomas is the sole shareholder of PET, which he started 20 years ago. PET specializes in educational toys for children aged 0-15 and has about 60 retail outlets in eastern Canada and the eastern United States. PET is a current customer of CTI, representing about 7% of CTI's sales. Thomas has strengths in marketing and analyzing consumer toy buying behaviour. From the data collected from his retail outlets, he can provide feedback to CTI about what consumers do and do not like about its products. Thomas provides similar information to all PET's suppliers. Thomas has been CTI's board chair for the past seven years, ever since the sisters decided that a non-family member should hold this position to avoid family conflicts impacting the decisions and operations of the company. With his experience and vast

industry knowledge, combined with his ability to stay calm and understand all sides of an argument, Thomas has proven to be very successful in this role.

Thomas believes diversity of products that appeal to a broad range of consumers is critical for success. He wants to see CTI branch out more aggressively, both in product sectors and geographically. Being from the retail side of the industry, he understands that retailers are looking to buy from a smaller number of suppliers that can provide a wide range of products. He believes that the SDL acquisition has been mismanaged and, with some significant changes, can become a highly profitable division.

*Lorraine De Vogue — chief executive officer (CEO)*

Lorraine has a business degree from a well-known university. Since her father believed in learning the business from the ground up, she has worked in all departments of the company at some point. Lorraine's strengths are working with the financial information and preparing budgets and forecasts. She keeps a close eye on operating costs and has been instrumental in finding ways to reduce costs to offset declining sales.

Lorraine believes that the company has to become more aggressive in the range of its products and geographic distribution and to decide on a clear strategic direction. Lorraine feels most of the company's success to date has been opportunistic and not well planned or based on market research and analysis. She wants this to change and wants the company to build its brand identity and decide on a strategic direction and then plan how to get there. Lorraine wants CTI to invest in new product categories and in products for age groups it does not currently serve, as well as to expand the company's global reach.

*Krystal De Vogue — VP human resources and legal*

Krystal has a law degree, and similar to Lorraine, has worked in all areas of the business. Her strengths are in corporate and human resource policy. She deals with any human resource issue that arises, as well as employee remuneration, benefits, and bonus plans. It was Krystal's idea to implement the share purchase plan, giving long-term employees ownership in the company. Being owners has motivated these employee-shareholders to contribute ideas on new products and cost savings and efficiencies. Krystal also oversees the doll division, with its manager (Anna Simponi) reporting directly to her. At the time of the acquisition, Krystal was given the responsibility of merging the two companies, and therefore the manager of the doll division reports to her.

Krystal agrees that the company needs to decide on a strategic direction, but she wants to keep it focused on educational toys and continue to strengthen the CTI brand name, which should be recognized for educational toys. She believes the market for educational toys is stable and sustainable and not susceptible to fads.

However, she believes continuous innovation is important, to keep the company current and its products in demand, and she is anxious for the company to have some top-rated products, being recognized for its innovation and creativity by winning awards. She thinks the company should expand with new products aimed at age categories CTI already serves, keeping education as the primary focus.

*Steven Zhang — VP manufacturing and distribution*

Steven has been with the company since 1996, where he started as a shift worker on the production line. He worked his way up to management and now has responsibility for all CTI manufacturing and distribution facilities, as well as CTI's quality control division. Steven is a hands-on manager, and will often be seen on the plant floor, speaking to employees and helping to resolve production issues. Under his management, quality has improved, and accidents have declined. He is well liked as a manager, and employees feel comfortable speaking to him.

Steven wants the company to focus on what it does best — creating and manufacturing games and puzzles. He would like to see the manufacturing facilities expand to produce other games. He believes the CTI brand is linked to games and puzzles and that any new products should have a similar look and feel, although it might be different than what is currently made or might appeal to a new age category.

*Shelley Weinstein — VP marketing and branding*

Shelley has worked for CTI since 2010. Shelley's experience is in advertising; she worked on advertising campaigns for movies, video games, and sportswear for 15 years before moving to CTI's advertising group. She has held the VP role for the past four years. At CTI, Shelley is responsible for all internet content and marketing materials. She works closely with Lorraine and Thomas on all marketing messages and promotions.

*Richard Natarajan — chief financial officer (CFO)*

Richard has an MBA and has worked at CTI since 2007, where he started in the accounting office and progressed his way to CFO in 2017. Before joining CTI, Richard worked for a large CPA accounting firm. At CTI, Richard is responsible for all the financial and accounting personnel and preparation of financial reports and budgets. He works closely with Lorraine and the other VPs to prepare and monitor monthly and annual budgets.

*Anna Simponi — manager, doll division*

Anna was the manager of the doll division in SDL at the time of the acquisition, and she continues in this role. She has worked at SDL for the past 20 years, and therefore is very familiar with its business and operations. She currently manages all the administrative and marketing employees that work in this division. Anna is also



responsible for managing the vendor relationship with Greenhaven for the manufacturing of the division's products. She prepares the production schedule for Greenhaven and works with the supplier to resolve any issues.

Before the sale, Anna had just finished preparing a business case to sell the Sookie dolls online and add a whole new line of accessories and clothing for these dolls. Anna and the other managers at SDL felt that this would be a natural progression for the dolls, given that this was consistent with other doll manufacturers' strategy. The company had also received many comments from consumers asking when this might happen. However, due to the owner's illness, these new lines were never pursued. Although Anna had brought this plan to Krystal's attention several times over the past three years, Krystal's response was always "now is not the right time."

*Andrew Wang — VP research and development*

Andrew has been with CTI since 1999. He has an engineering degree, and before working at CTI, he worked at a large multinational toy manufacturer in its product development division. Andrew is responsible for all the R&D work done in the company. He hires and manages his own staff, as well as all the projects in development. He, along with his staff, perform all research on new products and product ideas, deciding on which ideas to initially pursue, continue to develop, or reject.

An organization chart is provided in Appendix I.

## **Human resources**

The company (including both divisions) has 180 employees, most of whom work full time. The average salary for the non-management employees is \$33,000, and most employees work 35 hours per week.

Almost all of CTI's employees work in manufacturing for the game/puzzle division. Since all doll production is outsourced, the doll division has only 14 employees, who work in administration, marketing, and distribution.

Hourly wage rates paid to the non-management employees average \$18 per hour with only the government-mandated employee benefits<sup>44</sup> paid in addition to vacation pay. For management and R&D employees, additional benefits for dental and medical are provided. Vacation time for all employees increases the longer the employee works for CTI, starting with two weeks' vacation annually for the first five years, three weeks' annual vacation for the next five years, and four weeks' annual vacation for employment longer than 10 years. The company has a low attrition rate compared to other local companies, since the work is stable and generally pays higher than the minimum wage for its manufacturing jobs.

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<sup>44</sup> The government-mandated benefits are Employment Insurance, Canada Pension Plan or the Quebec Pension Plan, and Workers' Compensation Board or Workplace Safety and Insurance Board.

Wages and benefits expense allocation on the income statement is as follows:

<b>Item</b>	<b>Amount</b>
Cost of goods sold	\$3,616,800
R&D	611,250
Marketing and advertising	328,100
Distribution	245,350
Administration	1,245,500
<b>Total</b>	<b>\$6,047,000</b>

## **Company operations**

### *Sales*

CTI sells to small and large multinational toy retailers, including specialty toy and hobby stores and department stores, who in turn sell the products either in their physical stores or online. CTI does not sell directly to end consumers. No single customer represents more than 10% of sales. Most current customers have supported CTI's products for many years. CTI does not sell to any non-traditional toy retailers, such as bookstores, big-box discount retailers, grocery stores, or drugstores. Currently, CTI guarantees to ship within six days of receiving a customer order. Customers have 30 days to return any unopened product for a full refund.

Each customer is assigned to a specific company sales representative who is responsible for taking and managing the orders and dealing with any issues that might arise. The sales reps are partially compensated through bonuses tied to meeting sales targets, so the higher the sales, the higher their bonuses. There are no long-term customer contracts, as each order is placed by the retailer as needed. Credit terms vary: large retailers have 90 days to pay, and smaller retailers are required to pay in 45 days. Retail sales are seasonal, with average sales by calendar quarter as follows: Quarter 1 — 15%; Quarter 2 — 20%; Quarter 3 — 25%; Quarter 4 — 40%.

Historically, the company has sold a significant portion of its games and puzzles to U.S. customers, and in 2021, U.S. sales represented 60% of CTI's total sales. This was down from 71% in 2020 and 75% in 2019. To date, all doll sales have been in Canada.

The company has had to keep its selling prices relatively unchanged over the past three years due to increased competition and pressure from retailers. Although sales volumes of Know It or Lose It have remained stable, sales volumes of its other successful games and puzzles have fallen, as these appear to be nearing the end of their product life cycles.

CTI's games and puzzles are premium priced, since they are made in Canada from organic materials and are educational. They currently sell at an average price of

\$13.00 per unit. The dolls are also priced higher than average, as they are made in Canada and solely from organic materials; they sell for an average of \$8.00 per unit. Because of recent bad publicity surrounding some foreign production facilities and their use of substandard and toxic materials, CTI's products are designed to appeal to concerned end consumers who want to buy only Canadian-made products. These consumers are looking for high-quality, long-lasting products that are manufactured under strict quality control testing, and are reassured by the "Made in Canada" label. These consumers are also environmentally conscious and therefore are attracted to products sustainably made from organic materials.

### *Manufacturing*

#### Game/puzzle division

CTI manufactures its games and puzzles in its Canadian manufacturing facilities. The products are manufactured primarily using organic wood, cardboard, and paper materials that are readily available from a variety of suppliers, although these raw materials may fluctuate in price depending on the prevailing commodity prices. The company does not currently use organic materials in all of its packaging. CTI's suppliers are very reliable, and the company has long-term contracts with many of them to set the prices for terms averaging three years. The production process includes cutting, painting, stamping, printing, packaging, and final assembly. A production schedule is followed based on projected sales, and raw materials are purchased at least two months in advance. The company uses a perpetual inventory system to track inventories.

Currently the plants operate at approximately 65% capacity, and total maximum operational capacity is 2,500,000 units. However, only 1,646,154 games and puzzles were sold in 2021. The plants run on shifts from 6 a.m. to midnight, daily. The average variable manufacturing cost per unit is \$4.51, and the total annual fixed manufacturing costs for the game/puzzle division is \$5,600,000.

Even though sales are seasonal, CTI manufactures its products at a consistent rate during the year. This keeps staff employed full time throughout the year and ensures that experienced staff members are employed and utilized all the time. Inventory levels are higher just before the third and fourth quarter, when the majority of sales are made. As retailers have moved to reduce their inventories on hand, CTI has had to increase its inventories, since shipments are now made closer to the retailers' anticipated sales dates. In addition, if a new product generates a lot of demand by winning awards or becoming a fad for that year, retailers will want to immediately replenish their store inventories, which will require significant increase in production to meet this immediate demand. In these types of situations, CTI will temporarily run 24-hour shifts to meet this unexpected demand.

CTI maintains a team of qualified quality control staff members that are regularly trained to ensure they are current on industry regulations for safety. Before

production, new designs are tested and reviewed by this group, and changes in design are made as required. Quality control checks are performed during and after production on critical components of the finished products, and samples of products are tested at the end of every production run. To date, the company has never had to recall any of its products.

### Doll division

The dolls are manufactured by Greenhaven, a third-party manufacturer located in Saskatchewan. CTI has a five-year agreement with this supplier, which expires in December 2022. The agreement stipulates what the minimum production requirements are, that raw organic materials must be purchased from a list of approved suppliers, and that the price paid to Greenhaven will be determined on a cost-plus basis. The dolls are primarily made from organic textiles, but plastic is used for packaging. Once completed, the finished product is shipped and stored in one of CTI's warehouses, which is situated nearby.

Greenhaven has annual capacity to produce 750,000 Sookie dolls; however, only 556,250 Sookie dolls were sold in 2021. The variable cost per unit is \$3.98 (paid to Greenhaven) and the total fixed costs for CTI were \$675,000, per the agreement with Greenhaven.

Quality control is dictated in the manufacturing agreement and outlines the procedures that Greenhaven should be following on a regular basis. In addition, CTI periodically asks the supplier to send finished products, which are tested in-house by CTI quality control staff. To date, all product tested has met CTI's strict quality control standards.

### *Property, plant, and equipment*

CTI owns its land, buildings, and equipment. The company has two manufacturing facilities, one in Ontario and one in Quebec, where the games and puzzles are produced. It also has two warehouses, each located adjacent to a manufacturing facility. Its head office is in Kingston, Ontario, which also houses the R&D department.

There is also a small warehouse in Saskatchewan for excess doll inventory on hand. The warehouse was acquired as part of the SDL acquisition.

Item	(in \$'000s)	Depreciation policy
Land	450	—
Building	11,425	Straight-line over 40 years
Machinery and equipment	9,595	Straight-line over 5-10 years
Total	<u>21,470</u>	—

Over the past two years, CTI has invested approximately \$4,400,000 in automation upgrades in the two manufacturing plants, in an effort to reduce operating costs and maintain profit margins. For the past three years, CTI has put off any spending on capital improvements to its warehouses and buildings. This has now become critical, and CTI will be required to spend approximately \$3,000,000 annually for the next three years to update its current infrastructure and equipment.

### *Marketing and advertising*

CTI spends its marketing and advertising dollars on print and online advertisements, trade show costs, and maintaining and updating its website. The website has two parts: one is a customer portal available to current retailer customers only where stores can pay invoices and place orders. The other portion of the website is available to end consumers. This provides a history of the company, a list of products, a description of each product and product ratings, and a tool to find a retailer carrying CTI's products. A contact phone number and email address are provided for interested retailers.

Recently, the company has been improving its social media presence with Facebook and Twitter accounts. It is the marketing department's responsibility to use these accounts to send messages about new products or news about the company. Generally, CTI does not use these accounts to comment on industry issues.

Some retailers also provide limited advertising for CTI products in their sales flyers, although this has been declining in recent years. PET does not include all CTI products in its product listing on the company website.

### *Distribution expenses*

Distribution expenses include warehousing costs and shipping and handling costs between the plant and warehouses. Items are shipped "Freight on Board (FOB) – Origin," meaning that the buyer is responsible for arranging the transportation and incurring the shipping costs. The buyer takes ownership of the products at the point of shipment from the CTI warehouse.

### *Research and development*

The R&D department is responsible for all design, prototyping, and testing for new or improved products. The department decides which products it will dedicate its resources to, typically in isolation from other departments. The costs of the department include salaries, equipment, and any materials used in product development.

Most of the R&D staff have worked with CTI for many years, and their skills and experience primarily relate to board game and puzzle development. As turnover is low in the department, only two new employees have been hired in the past 10 years.

When SDL was acquired, any product development staff that came from SDL left within the first year and were not replaced.

### *Data analytics*

The company gathers very little in the way of data analytics. It has some customer data, but relies on Thomas to provide information on consumer buying habits. Lorraine has been considering plans to change this process, as she wants CTI to have access to the right information, to make the right decisions. As a starting point, CTI has sourced some information from its trade association (Appendix IX) and the related data contained in the separate Excel workbook (labelled “Association\_DataFile”).

### **Financial reporting**

CTI prepares its financial statements using ASPE. CTI’s bank, New Haven Bank (NHB), requires audited annual financial statements, which have been prepared by Freedman & Co. LLP (Freedman) for the past 20 years. The audit for 2021 was completed in March 2022. CTI’s financial statements are provided in Appendix II. Industry benchmarks are provided in Appendix III.

### **Banking and financing**

CTI has one line of credit and one long-term debt outstanding, as described below:

1. Line of credit with NHB: The line of credit is secured with a general security agreement and has a maximum allowable credit limit of \$3,000,000. The line of credit bears interest at prime plus 2% (prime is currently 2.95%). Interest is payable monthly. The line of credit renews annually in October, at which time the terms and conditions are reviewed for any changes. There are two covenants: the quick ratio must not fall below 1.2, and the EBITDA-to-interest coverage ratio (EBITDA / Interest) cannot fall below 2.8.
2. Mortgage payable: The mortgage payable was arranged with NHB in late December 2018. The mortgage is amortized over a 20-year period but matures in December 2025. The mortgage is secured by the property, plant, and equipment and bears interest at 9%, compounded monthly. Monthly combined payments of principal and interest of \$113,591 are required.

The company has identified two alternative sources of capital for any new long-term investments. The terms and conditions proposed for each alternative are provided in Appendix IV.

The company does not use derivatives to hedge its exposure to U.S. dollars or to hedge its exposure to materials.

## Board meeting dialogue

The board met on April 8, 2022. Before the meeting, a briefing was distributed to the board members on the four new projects that had been discussed at earlier meetings: enter into a sales contract with Discount Pete's Inc. (DPI) (Appendix V); sell SDL, the doll division (Appendix VI); invest in electronic games (Appendix VII); and enter into a character licensing agreement (Appendix VIII).

The meeting's agenda was as follows:

1. Consider the four proposed strategic alternatives.
2. Discuss any other business.

Excerpts from the discussions that took place are detailed below.

**Thomas:** As you know, CTI has not had acceptable financial results for a few years now, and it is time to make significant changes to our direction, before it is too late. Let's discuss each of these alternatives and determine which are the best strategic choices for CTI. Lorraine, do you want to go first?

**Lorraine:** Yes, I am very excited about my discussions with DPI, the big-box discount retailer that we are all familiar with. I was finally able to get a face-to-face meeting with DPI's purchasing agent, Samuel Forbes. The meeting was very successful, and just yesterday, I received a draft of the terms and conditions that would be in our contract. We are very lucky to have made it this far in the negotiation process, since most companies often wait years to actually get a meeting. Samuel is very interested in building a relationship with CTI because DPI is expanding its toy line to include well-known and premium products, such as ours.

**Steven:** This is a wonderful idea and the other employee-shareholders I represent support this initiative. The contractual commitment with DPI results in a substantial increase in volume of sales, particularly for the game/puzzle division. We could add a third shift to increase our production volumes, if it is needed to meet our other customers' demand.

**Thomas:** I am very concerned about selling to a discount retailer. I know in the past that when one of PET's suppliers started to sell with a discount retailer, I decided not to carry their products anymore in my PET stores because I cannot compete with their prices. I am sure that we will lose some of our existing customers if we go this route. It is very likely that DPI will sell at a lower price in order to undercut the smaller, local specialty toy stores.

**Lorraine:** I don't think this will happen, or if it does, it will be minor. In order to meet DPI's required purchase volumes, we will have to lose some customers anyways. But DPI has many retail outlets where we do not currently sell, so this will expand our geographic reach into new areas across Canada and the United States.

**Krystal:** This arrangement will destroy our brand name. I want to build up our reputation as a premium educational toy company, and selling to DPI will ruin our name as a premium brand. I agree with Thomas that we will lose some, if not many, of our retail customers, and this will likely lead to a reduction in our end-use consumers.

**Thomas:** Many of these retailers have been long-term customers that we could rely on for steady sales volumes. If we pursued the DPI agreement, we might have to go and tell these loyal customers that we cannot meet their demand requirements. This will destroy our reputation with our customers and make it more difficult to gain new customers to replace the ones we lose.

**Steven:** I think you are overreacting — these customers have been with us for a while, and I don't see why they would drop us if they can sell our product. But this DPI contract will mean that we can operate more efficiently, since our production volumes will be higher. And the two-year contract gives us some stability for proper production planning. If it doesn't work out, we can always give notice.

**Krystal:** There are a lot of contractual terms that I think are onerous for us and very beneficial for DPI. I have only had a quick read of the conditions, but it seems they are going to have a lot of control to dictate how we do business. Will Greenhaven even agree to these required audits? If not, we will have to find another doll supplier, which may be very difficult.

**Lorraine:** I am sure we can come to some agreement on these conditions. I found Samuel to be very agreeable and easy to communicate with.

**Thomas:** This is not consistent with what I have heard from other suppliers. I have two suppliers that used to sell to DPI but found DPI too aggressive and demanding in their requirements, and DPI was not willing to compromise on any issue. DPI knows there are many suppliers that want DPI contracts, and therefore they can stipulate their terms and wield their buying power. These two suppliers decided to terminate their contracts early, paying the penalties, and have both mentioned that they never regretted this decision.

**Lorraine:** These are good points to consider. Let's move on to the doll division then. Krystal, you have some ideas about what we can do here.

**Krystal:** My personal opinion is that we should sell the doll division. As you know, we purchased this division in 2018 and we have now given it more than three years to improve, and its performance has worsened each year. The division is pulling the rest of the company down. The cultural differences are significant and Anna, the manager, does not listen to anything that she is told to do. I think she is part of the problem as to why we haven't been able to integrate the SDL administrative employees with our own. I don't know how many times she has come to me with her



business plan even though I have told her that it is not the right time for these changes!

**Thomas:** I really believe in SDL, as I have from the start, and if we invest to develop the accessories line, this could become a successful division. Based on some very rough estimates, if we invest approximately \$1,000,000 into the division, we could see earnings before interest, taxes, depreciation, and amortization (EBITDA) increase by at least 50% in a few years through selling more dolls and accessories. I know there is a lot more information needed for this, but let's keep the company for now and over the next six months gather the detailed information that we need.

**Lorraine:** I agree with Thomas. We need to stay diversified. This is ultimately a great product, and by updating the marketing for today's kids and adding the accessories line, this division could be very successful. I have not had time to analyze any of the divisional information yet, but I know Anna is gathering the information needed for us to make an informed decision.

**Steven:** The employee-shareholders feel that we should sell the doll division. We are a game/puzzle company, and we should stick with what we know best. That is what we are known for. Let's not dilute our brand name by expanding into other product categories. We could use the money from this sale to expand our current game and puzzle product lines, offer them in other formats, or buy some of the really great innovations that are out there.

**Krystal:** And how are dolls educational? We should stick to educational toys and use the proceeds on the sale of the doll division to invest in other types of educational toys.

**Lorraine:** If we spent a small amount of R&D resources on this, we could make these dolls educational in some way. We also must consider whether selling the doll division will impact the proposed contract with DPI.

**Thomas:** In the PET stores, parents come in looking for specific dolls to purchase, already convinced by our competitors to buy other dolls. They are just not aware of the Sookie doll prior to coming in, and have already made up their minds when entering the store.

**Steven:** I think the Greenhaven contract is coming up for renewal soon, isn't it? If so, this is a great time to sell. The new owners can then either renegotiate with Greenhaven or do their own in-house manufacturing. I have never liked our reliance on this single supplier either.

**Lorraine:** What about exporting these dolls to countries like Mexico and China and increasing our geographic scope? Demand for toys is increasing in these areas, and the dolls could be easily adapted for those markets. As you know, we have been

unable to adapt the board games to these countries due to language and knowledge differences.

**Thomas:** I was also thinking that we could have workshops in stores to have children dress up their dolls in some way. I have had other doll suppliers come to my stores with these Saturday morning workshops, and their sales have rocketed. Why couldn't we do the same and try to expand our market to stores we do not currently sell at? This could help further increase sales with very little investment.

**Lorraine:** That is a great idea!!

**Krystal:** I think these ideas may have worked if we implemented them sooner, but it's time to cut our losses and sell the division.

**Lorraine:** We have been focused on stopping CTI's declining sales and improving our costs, and now, before it is too late, we should turn our attention to the doll division. I think with the right approach, we can make this division successful; and I think our reputation might be tarnished if we sell too quickly. It will look like we don't know what we are doing.

**Thomas:** Is there a current buyer out there? I know Krystal you did the research, but are doll companies actually selling? And if we do sell, what would the income tax implications be for us?

**Krystal:** Yes, doll companies are actually selling right now, and the multiple is quite high because the demand for dolls is growing. The large manufacturers are on an acquisition spree, so I am sure we could sell quickly and at a good price.

**Lorraine:** But if we gave it another year or two and improved the division's earnings, we could sell it for even more. I am also concerned that we will no longer be able to share occupancy and distribution costs between the two divisions, so without SDL, the costs allocated to the game/puzzle division will rise, and it will be less profitable.

**Krystal:** I know that the purchase of SDL did not sit well with the marketing and advertising employees and they have done nothing but complain about the doll division employees since. The SDL employees have not been happy either. I think regardless of whether we keep SDL or not, we should determine what went wrong with the purchase and how we can improve on this in the future, to better manage change.

**Thomas:** One final comment and then let's move on. We do have some customers that buy only our dolls, so we would lose these customers with the sale of the doll division. Steven, I think you have another idea.

**Steven:** I am really excited about this new idea. Chloe Wong, a sister of one our employees, has been working with me on a business plan to develop electronic

versions of our existing games and puzzles. This would be an expansion outside CTI's current industry, as this would be the development of app-based video game software (as opposed to self-contained hand-held electronic games).

For many years, I have said that the R&D department has spent too much effort simply coming up with new versions of the same game, resulting in CTI having very few brand new and innovative games to add to our product list. That is why our sales are declining. Chloe's idea is to create electronic versions of the Know It or Lose It game, but with a twist. Players would earn trophies or badges, which would keep them motivated to continue playing. Players could play either by themselves or against other players. Initially, the app would be developed for the female gamer aged 34-64; and then versions would be changed as we adapted the game for other groups, including a youth market.

**Lorraine:** I really like the idea. Finally, we can capitalize on this game in a completely new way. And since we own the rights to the game, we won't have to pay royalty fees to anyone. We can also change the look and feel of the game with lots of new features, graphics, and so on, and make it really appealing — something we cannot easily do in the traditional board game.

**Thomas:** I am not so convinced this is the way to go. We don't know anything about video games — either developing or marketing them. We will have to hire all new employees for this expertise. How do we know Chloe is capable of the job, and does she even know how to manage people? What would we do if Chloe left partway through this development stage?

**Steven:** I have checked her references and they are all excellent. True, she has never managed an entire development team before, but if you meet her, I think you will see that she does have leadership skills and is passionate about what she does.

**Krystal:** I worry that we will lose sales of our traditional games and puzzles if the electronic versions are sold.

**Steven:** I don't agree. I think this is a new market for us. The traditional products are meant to be played by more than two people and by families. The video game could be played by an individual. I think the products will be different enough so that sales will not be lost. In fact, sales of the traditional games may even increase if the name becomes more recognizable.

**Lorraine:** Once we have an electronics division, we can have other games, besides Know It or Lose It, converted to electronic video game forms. We can also attract new ideas from young outside developers like we used to. When we used outside consultants many years ago, we had more products in the development stage and more successes than we currently do with our own solely in-house R&D department.

**Krystal:** I am not sure about the proposed revenue models. The projections look almost too good if you ask me. But since I know very little about the video game industry, I am really uncomfortable supporting this investment. One thing I do know is that this market is very competitive and constant innovation and creativity will be required for ongoing success. I worry that we will put all this money in and then have only a few years of success with little payback. I would like to see some more research done on the video game publisher industry, as well as the video game market, to further support this initiative, before we decide to proceed.

**Lorraine:** Agreed. We will need to see more research on the target market for video games and specifics on our competition in the video game publishing industry, since this is outside our current area of expertise. However, I think if we have the right people in the division who are in tune with the market, we should be able to keep current and innovate at the rate we need to. I honestly don't see that we have a choice but to move into this electronic age.

**Thomas:** This investment is too risky. I would rather see us invest in our doll and game/puzzle divisions, where the market is stable.

**Krystal:** I am also concerned about cultural differences. I have heard that developers work all kinds of hours and need a different environment to work in than the one we currently have.

**Steven:** We should let Chloe manage this. There is an advantage here, since her sister already works for us. Chloe already understands the current culture and we can help her manage any issues that might arise. One final advantage of the video game format that I forgot to mention is that as the games are played, we can get immediate feedback from the gamers as to what they want and what they would like to see. In this way, improvements will be made based on the users' suggestions rather than trying to guess what might work. We could even take these suggestions and also improve the traditional games. All round, a win-win situation!

**Thomas:** I have a final idea that I think is really exciting. In my PET stores in the United States, and starting now in Canada, I have noticed that many of the toys being sold are branded with the characters from a new hit TV series called *Starlight and Thunder*, a witchcraft fantasy series that is all the craze. I contacted Fresh Stars Inc. (FSI), the creator of this series, to discuss how licensing might work for the characters in this series. After I told them the type of games we manufacture, they were very interested, since they were familiar with our Know It or Lose It game. They drafted up some proposed terms and conditions, and their representatives also worked with me to prepare some projections, using historical data they had. What is interesting is that by getting in relatively early with this licensing arrangement, the upfront fees are lower than they would be later on. I think this will increase our sales even more than the conservative projections that we have prepared.

**Lorraine:** I really do not like this idea. The upfront payment seems a bit high, and we still have minimum royalty payments that must be made annually, regardless of our actual sales.

**Thomas:** But if we don't do something different, our sales are going to continue to decline. And this series has been very successful in both Canada and the United States. Have you watched the show?

**Lorraine:** Yes, I have, and I am not sure we want our products tied to these characters. Right now, they don't seem too bad, but we have no control over what the writers will do with the characters. We would be tied to a five-year arrangement, so what would we do if we didn't like the direction that the TV show took?

**Steven:** I don't think the writers will change the characters very much. My son and daughter love the show, and they are in the age range that this game would be designed for. The characters are all smart and creative, as they try to get out of different situations, and these are exactly the traits that we try to develop with our games. I really like the idea and think it is a great fit.

**Krystal:** I am totally against the idea. Our father was strongly against character licensing and I would like to uphold his wishes in this matter. I don't want to tie our brand to characters that we have no control over. What happens if another great hit comes along before the five years are up? You know how fickle children can be with their idols.

**Lorraine:** I agree with Krystal. The proposed agreement does not give us any opportunity to withdraw for any reason.

**Thomas:** I have done some research on how long these crazes tend to last, and even though they can become sensations overnight, it can generally take some years to die down. And maybe FSI will come out with another hit that we could then transfer our licence agreement to — I know they have had hits in the past and will likely continue to do so in the future.

**Krystal:** Did you increase the selling price in your forecasts to include a premium?

**Thomas:** No, FSI advised us against this. They said that the game should be sold at the regular price it would normally sell at. The licensing will instead increase the number of units sold.

**Steven:** I think it is really good fit. I have some ideas on how we can modify the game to use this series and the characters, which I can discuss with the R&D department. This branding will give some focus to our R&D group and motivate them to be more innovative and creative.

**Lorraine:** This is too risky for us to pursue. There are a lot of other terms in the agreement that I think are quite onerous on us, such as all of the approvals that are required and how much effort and resources will we have to put into this before a product gets final approval. Although we would set a budget based on cost estimates, it may be grossly understated.

**Krystal:** It would be beneficial to have more information on character licensing arrangements, including common factors to consider in making this decision and pitfalls to watch out for.

**Thomas:** I agree. Okay, I think we have addressed all our concerns about this investment. There are some operational issues we need to discuss before we adjourn.

**Lorraine:** Given that sales have been declining and we are thinking of selling the doll division, we need to determine whether the goodwill for SDL on our consolidated balance sheet has been impaired and whether a loss should be recognized in 2022, assuming we don't sell SDL. I think we have all of the information gathered to do this; we just need to know the amount of what the impairment loss might be.

**Steven:** With respect to that sale, my understanding is that if we have a capital gain, we can pay out capital dividends on a tax-free basis. I would like to understand more about these types of dividends and how much might be received. I know the other employees and I would really like to receive some dividends from CTI, since we never have.

**Krystal:** Another item I would like to have some guidance on is implementing a full corporate social responsibility (CSR) policy at the company. As you know, the company started this by moving to use organic materials where possible in our products. But I think we are now ready to take the next step to implement a full CSR mandate across the entire company and have this become a fixture in the culture of the company. I would like some guidance on what steps need to be taken to ensure that this would be a successful CSR program. I really believe that this is a natural step for a toy company such as ours, which is trying to make life better for children through toys. We can now make it better from an environmental perspective also. I need some specific guidance on what we might look at to be more environmentally responsible across the company and how we could incentivize employees to adopt this mindset.

**Thomas:** I think that is a terrific idea, Krystal. One item I have become concerned about is our inventory levels. I know that we have some unique issues, but I would like to understand what it costs CTI to hold the inventory and what steps we could take to reduce the levels. In addition, how much could we save in finance costs if CTI's holding period of inventory was at least the industry average? I'm also wondering, with all the strategic expansion opportunities that we are considering, whether it might be a good idea to improve our performance measurement system

overall. I think we should ask HCG to provide a framework we could use for performance management and the key metrics that should be tracked.

**Steven:** More importantly, what is going on with the R&D department? I am really concerned that we are simply throwing our money away with no new successful products in quite a few years. And yet, this department is vitally important! I think we need some help in determining what, if anything, is wrong and what it takes to have a successful R&D department.

**Lorraine:** I was going to bring up the same issue, since Andrew, our VP for this department, came to me asking what could be done. I have another issue I would like to discuss that relates to using data analytics. As you know, I have attended a variety of seminars on collecting and using data analytics. I would like us to look at using data analytics to help us better plan our production schedules. By accumulating data gathered about prices and sales volume, including peak periods of demand, CTI could have better market research to determine what new production development should focus on. Currently, this data is collected at the retail level, so we need to see what data our trade association was able to provide and how we might use this data to predict R&D and production schedules. I think we should hire HCG to assess the four strategic proposals and provide us with a recommendation, as well as help us with these data analytics, and address the operational issues we mentioned, along with any other concerns they notice.

**Thomas:** I think that those are both great ideas — to implement some data analytics and to obtain some assistance from HCG.

**Lorraine:** Yes, and since data analysis will become a greater part of our decision-making process, I would also like HCG to identify areas of concern related to data acquisition and privacy, and to discuss some best practices that CTI could consider implementing.

**Krystal:** I agree! Before we leave today, there is one more issue that just arose yesterday. In my discussions with Anna, I found out that Greenhaven had used a product for manufacturing the dolls from a supplier that was not on our approved list. Apparently, Greenhaven ordered too late from our normal suppliers, who were not able to ship the materials in time, and therefore, they had to go with another supplier so that production would not be stopped. They thought that the material they purchased was organic, but later found out that it did not meet our specifications for organic materials because it also contained some non-organic material. In total, 150,000 dolls have been manufactured with the wrong materials. About 100,000 of these have already been shipped to retailers, but I have not yet been able to determine if they are still in inventory or have been sold to final customers. We discovered this issue when CTI performed some periodic quality control testing in our own labs. The CTI staff requested that a test sample of 10 dolls be sent to us, and during this testing, it was noticed that the material used to make the dolls was different.

**Steven:** How did this happen? I thought we had all kinds of policies in place to prevent something like this.

**Krystal:** We do. There were all sorts of policies and processes that were not followed. First of all, the procedure should have been for Greenhaven to immediately contact us when they realized they would be short on material and ask what we wanted done. We should also have approved the new supplier. I also cannot understand how Greenhaven's own quality control missed this. And finally, they never informed us of any of these changes or issues. All of this will have to be investigated to see what changes we might need to make. The more urgent question is: what do we do now? Thankfully, there is not a safety or health issue, but we have advertised that these dolls are organic and now these ones are not. I don't think the average consumer will be able to notice any difference. But....

**Thomas:** This is a serious matter and one we definitely need some help with. Let's ask HCG to outline what we need to consider in deciding what action to take on this matter, if any.

One more thing. It is likely that CTI is going to require some additional financing. In my discussions with the bank, they are reluctant to extend us any more credit given the poor financial results lately. However, I am prepared to invest up to \$8,000,000 for the purchase of either common shares or preferred shares. I have already spoken to Lorraine about this, so she is aware that I have made this offer.

**Lorraine:** Although I am not very keen on this, these are the only alternatives that we have right now. In forecasting what our results might be, we can decide how much and what type of financing we will accept.

HCG can address all the issues that have been discussed at this meeting, including financing, and incorporate this analysis into their report.

**Krystal:** I agree. We have been very pleased with the work that HCG has done for us in the past on other financial, tax, and strategy matters. I will make the motion that we hire HCG to review these proposals, financing alternatives, and the other issues identified and provide us with a comprehensive report.

All in favour. Motion carried.



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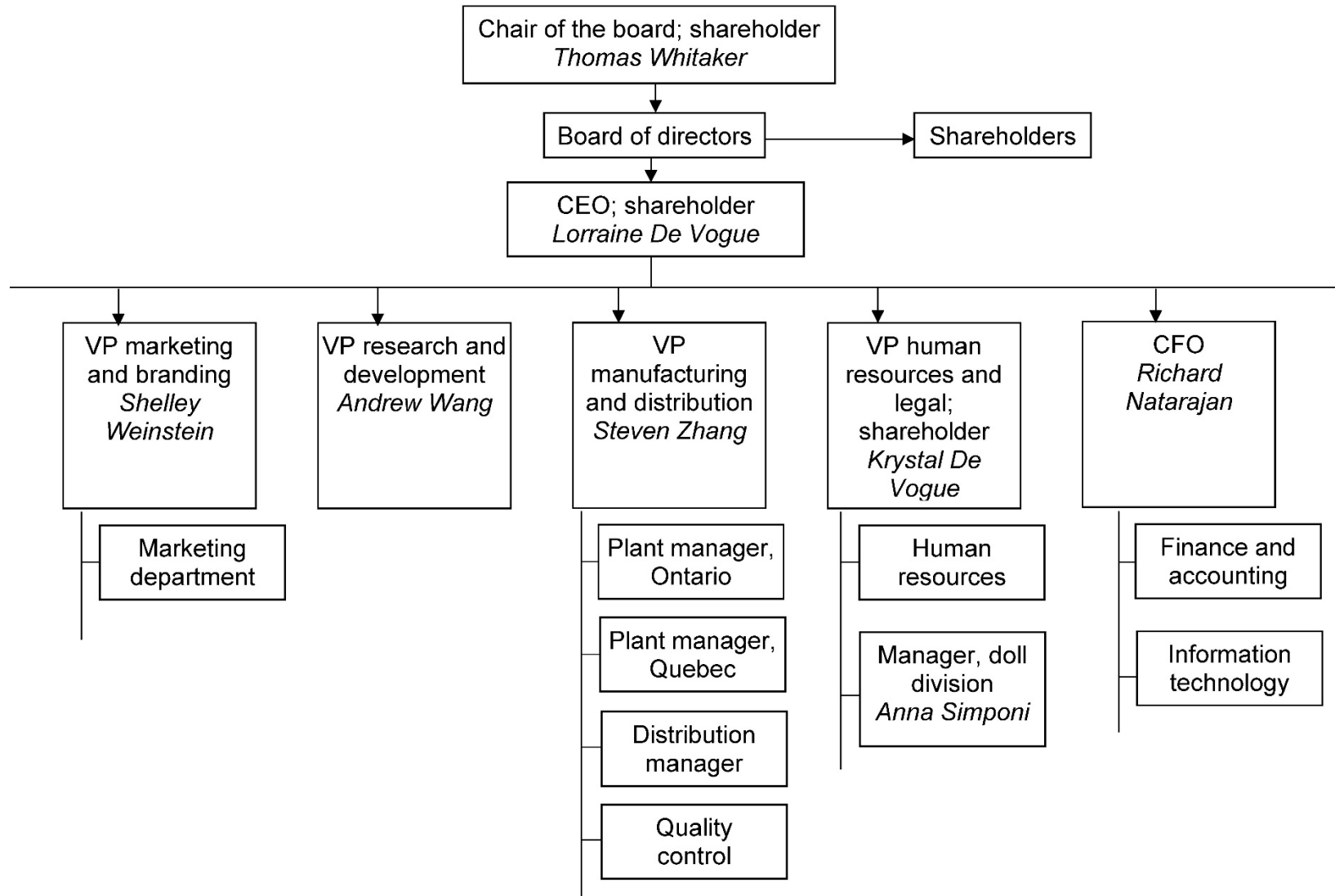
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**APPENDIX I  
ORGANIZATIONAL CHART**



**APPENDIX II**  
**FINANCIAL STATEMENTS**

Prepared by Richard Natarajan

**Creative Toys Inc.**  
**Consolidated income statement**  
For the years ended December 31  
(under ASPE)  
(in C\$'000s)

	<b>AUDITED</b> <b>2021</b> \$	<b>AUDITED</b> <b>2020</b> \$	<b>AUDITED</b> <b>2019</b> \$
Net sales	25,850	26,525	27,450
Cost of goods sold	15,913	16,695	17,303
Gross profit	<u>9,937</u>	<u>9,830</u>	<u>10,147</u>
Expenses			
Marketing and advertising	579	615	698
Research and development	1,094	1,030	1,018
Depreciation and amortization	1,350	1,130	890
Distribution costs	608	590	573
Occupancy costs	899	840	818
Administrative and general expenses	3,122	2,885	2,735
Total expenses	<u>7,652</u>	<u>7,090</u>	<u>6,732</u>
Operating income	2,285	2,740	3,415
Net foreign exchange gains (losses)	(205)	(302)	52
Interest expense — line of credit	(84)	(73)	(51)
Interest expense — mortgage	<u>(1,080)</u>	<u>(1,104)</u>	<u>(1,127)</u>
Income before taxes	916	1,261	2,289
Income taxes	<u>(238)</u>	<u>(328)</u>	<u>(595)</u>
Net earnings	<u><u>678</u></u>	<u><u>933</u></u>	<u><u>1,694</u></u>

**APPENDIX II (continued)**  
**FINANCIAL STATEMENTS**

Prepared by Richard Natarajan

**Creative Toys Inc.**  
**Consolidated statement of retained earnings**  
For the years ended December 31  
(under ASPE)  
(in C\$'000s)

	<b>AUDITED</b> <b>2021</b>	<b>AUDITED</b> <b>2020</b>	<b>AUDITED</b> <b>2019</b>
	<b>\$</b>	<b>\$</b>	<b>\$</b>
Balance — beginning of year	10,557	9,624	7,930
Net earnings	678	933	1,694
Balance — end of year	<u>11,235</u>	<u>10,557</u>	<u>9,624</u>

<b>Property, plant, and equipment</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>
Opening balance	20,705	19,518	20,108
Capital additions	2,115	2,317	300
Depreciation and amortization	(1,350)	(1,130)	(890)
Closing balance	<u>21,470</u>	<u>20,705</u>	<u>19,518</u>

**APPENDIX II (continued)**  
**FINANCIAL STATEMENTS**  
Prepared by Richard Natarajan

**Creative Toys Inc.**  
**Consolidated balance sheet**  
As at December 31  
(under ASPE)  
(in C\$'000s)

	<b>AUDITED</b>	<b>AUDITED</b>	<b>AUDITED</b>
	<b>2021</b>	<b>2020</b>	<b>2019</b>
	<b>\$</b>	<b>\$</b>	<b>\$</b>
<b>Assets</b>			
<b>Current assets</b>			
Cash and cash equivalents	363	688	1,228
Trade receivables	7,325	7,408	7,275
Inventories	3,731	3,492	3,322
Prepaid expenses	365	413	393
Total current assets	<u>11,784</u>	<u>12,001</u>	<u>12,218</u>
Property, plant, and equipment — net	21,470	20,705	19,518
Goodwill — SDL	450	450	450
Total assets	<u><u>33,704</u></u>	<u><u>33,156</u></u>	<u><u>32,186</u></u>
<b>Liabilities</b>			
<b>Current liabilities</b>			
Line of credit	1,703	1,513	1,420
Trade payables and accrued liabilities	3,826	4,113	4,197
Income taxes payable	15	23	118
Current portion — mortgage	309	283	259
Total current liabilities	<u>5,853</u>	<u>5,932</u>	<u>5,994</u>
Future income taxes	1,048	825	520
Long-term debt — mortgage	11,538	11,847	12,130
Total liabilities	<u>18,439</u>	<u>18,604</u>	<u>18,644</u>
<b>Shareholders' equity</b>			
Share capital (2,000,000 shares outstanding at December 31, 2021)	4,030	3,995	3,918
Retained earnings	11,235	10,557	9,624
Total shareholders' equity	<u>15,265</u>	<u>14,552</u>	<u>13,542</u>
Total liabilities and shareholders' equity	<u><u>33,704</u></u>	<u><u>33,156</u></u>	<u><u>32,186</u></u>

**APPENDIX II (continued)**  
**FINANCIAL STATEMENTS**

Prepared by Richard Natarajan

**Creative Toys Inc.**  
**Consolidated cash flow statement**  
For the years ended December 31  
(under ASPE)  
(in C\$'000s)

	<b>AUDITED</b>	<b>AUDITED</b>
	<b>2021</b>	<b>2020</b>
	<b>\$</b>	<b>\$</b>
Operating activities		
Net profit	678	933
Depreciation and amortization	1,350	1,130
Change in future income taxes	223	305
Change in working capital balances		
Accounts receivable	83	(133)
Inventories	(239)	(170)
Prepaid expenses	48	(20)
Trade payables and accrued liabilities	(287)	(84)
Income taxes payable	(8)	(95)
Cash flows from operating activities	<u>1,848</u>	<u>1,866</u>
Investing activities		
Investment in property, plant, and equipment	<u>(2,115)</u>	<u>(2,317)</u>
Financing activities		
Repayment mortgage payable	(283)	(259)
Increase in line of credit	190	93
Shares issued under bonus plan	35	77
Cash flows from financing activities	<u>(58)</u>	<u>(89)</u>
Change in cash and cash equivalents	(325)	(540)
Opening cash and cash equivalents	688	1,228
Closing cash and cash equivalents	<u><u>363</u></u>	<u><u>688</u></u>

**APPENDIX III**  
**INDUSTRY BENCHMARKS**  
Prepared by Richard Natarajan

<b>Industry benchmarks</b>	<b>Industry average</b>
Current ratio	2.0
Cash ratio	0.5
Days in receivable	70.0
Days in inventory	65.0
Total debt-to-equity	1.2
Total debt-to-assets	0.6
Return on equity	12.0%
Gross profit margin	42.0%
Operating margin	12.5%
Profit margin	6.0%
Marketing as a percentage of sales	2.8%
R&D as a percentage of sales	4.0%

**APPENDIX IV**  
**FINANCING ALTERNATIVES**  
Prepared by Lorraine De Vogue

**Thomas has provided two alternative financing proposals:**

*1. Purchase common shares*

Thomas is willing to invest up to \$8,000,000 in the company by purchasing 1,000,000 common shares at \$8.00 per share. As with all common shares, these will remain outstanding until repurchased by the company. At the time of repurchase, the fair value per share will be determined.

*2. Purchase preferred shares*

Thomas is willing to invest up to \$8,000,000 in preferred shares. These preferred shares will have a cumulative dividend of 10%. In addition, they will have a mandatory redemption of \$1,000,000 per year, beginning in 2026. All unpaid dividends must be paid before the final redemption payment is made in 2033.

If the full amount of \$8,000,000 is not needed, the repayments will be pro-rated accordingly. The preferred shares can be redeemed early if dividend payments are current.



**APPENDIX V**  
**DPI SALES CONTRACT PROPOSAL**  
Prepared by Lorraine De Vogue

The following is an excerpt of the draft sales contract, provided by DPI:

**Term**

- The initial contract will be for two years, commencing July 1, 2022, and expiring June 30, 2024. This contract may be extended for another two years, if agreed to by both parties.
- DPI may terminate the contract with 30 days notice without penalty. CTI may terminate the contract with 90 days notice with payment of a penalty. The contract can be terminated immediately if CTI is found to be in non-compliance with any of the agreed upon terms and conditions, except as otherwise stated in the agreement.

**Purchase commitments**

- DPI agrees to purchase a minimum volume per year of 875,000 units of games and puzzles, at an average selling price of \$10.00 per unit. The maximum annual volume will not exceed 1,500,000 units during the term of this contract, unless otherwise agreed to by both parties.
- DPI agrees to purchase a minimum of 375,000 units of Sookie dolls for \$6.00 per unit. The maximum annual volume will not exceed 500,000 units during the term of this contract, unless otherwise agreed to by both parties.
- CTI must be able to ship within 48 hours of receiving an order from DPI. If the items cannot be shipped within the specified time frame, the order will be cancelled, and it will reduce the minimum volumes that DPI commits to.
- DPI will be able to set the selling price of all products purchased from CTI.
- DPI has the right to return product for a full refund if not sold within four months.
- CTI will be responsible for shipping the product to DPI's stores and for shipping any returns back to its own warehouses.
  - Note: This cost is estimated to be \$0.25 per unit for games/puzzles and \$0.18 per unit for dolls.

**Supplier requirements**

- CTI must list its annual financial information with Lutz and Booth Inc., a credit rating agency.
- CTI must ensure that each product has a Universal Product Code (UPC) printed on the packaging.
- CTI must comply with all product health and safety requirements and any additional DPI regulations related to the product.

**APPENDIX V (continued)**  
**DPI SALES CONTRACT PROPOSAL**  
Prepared by Lorraine De Vogue

- DPI may require CTI to change its packaging periodically to comply with DPI specifications. Any costs for packing machine modifications will be CTI's responsibility.
- CTI will assign two people to be responsible for the DPI account. These two representatives will be able to deal with any issues that might arise between DPI and CTI.
- CTI will meet all DPI's commitments before servicing any other customers.

#### Facility manufacturing standards

- CTI must comply with DPI's facility manufacturing standards, which include proper training, responsible sourcing, fair treatment of all employees including fair wages, and adherence to all other regulatory requirements for health and safety.
  - CTI must agree to a factory audit, allowing DPI qualified personnel access to the manufacturing plant upon request. This includes any facilities where items are manufactured by preferred vendors (such as Greenhaven).
  - CTI will be responsible for disclosing and scheduling audits for all facilities in which CTI products are manufactured.
  - CTI must manufacture product only in facilities that have been authorized by DPI; failure to do so could result in immediate termination of the agreement.
  - If CTI is found to be in non-compliance with any of DPI's standards, depending on the nature, CPI will have up to 15 days to rectify the issue to DPI's satisfaction, otherwise the contract will be terminated.

#### Other items

- DPI guarantees it will include CTI products in its advertising at least twice during each year of the contract.
- DPI agrees to list CTI products on the company's online sales site with in-depth descriptions to promote consumer awareness.
- DPI will pay invoices within 90 days from the date the goods are received.

**APPENDIX VI  
SALE OF SDL**

Prepared by Krystal De Vogue

SDL and CTI have shared a few expenses across the two companies. Richard and I have calculated the impact to each division if the costs can no longer be shared. The table below summarizes this information:

(in C\$'000s)	Current combined costs for the two divisions	Costs to SDL if it is operating independently of CTI	Costs if CTI is on its own (for only the game/puzzle division)	Explanations
Distribution costs	608	150	547	SDL currently benefits from CTI's volume discounts with freight companies. It would no longer be eligible for such discounts operating on its own.
Occupancy costs	899	210	850	SDL currently operates out of CTI's administrative offices, using existing excess space. To operate on its own, it would require its own offices at a higher cost than its existing cost allocation.
Total	1,507	360	1,397	

In 2021, SDL had a flood in the warehouse due to a leaky pipe. Although there was no damage to any of the finished goods inventory, some raw materials and packaging had to be replaced. There were some costs related to the cleanup and damaged goods that were not covered by insurance, which were included in cost of goods sold. If it was not for the flood-related costs, SDL's gross profit would have been in line with historical rates in the range of 37% to 38%.

Richard researched recent sales of shares of comparable companies and has determined that the appropriate multiple to use on normalized EBITDA for the doll industry is in the range of 5.7 to 5.9 for valuation purposes.

The intercompany loan to CTI will be included in the sale. The terms of the sale will require that this loan be repaid within six months of closing.

There have been no significant changes overall to SDL's net assets since December 31, 2021, to now.

As per discussions with Richard, an income tax rate of 49.67% is applicable to taxable capital gains arising from the sale of SDL shares.

**APPENDIX VI (continued)****SALE OF SDL**

Prepared by Krystal De Vogue

**Sook's Dolls Ltd.****Income statement**

For the year ended December 31

(under ASPE)

(in C\$'000s)

	<b>AUDITED</b>
	<b>2021</b>
	<b>\$</b>
Net sales	4,450
Cost of goods sold	2,889
Gross profit	<u>1,561</u>
Expenses	
Marketing and advertising	95
Depreciation and amortization	110
Distribution costs	122
Occupancy costs	103
Administrative and general expenses	303
Total expenses	<u>733</u>
Income before taxes	828
Income taxes	<u>(215)</u>
Net earnings	<u><u>613</u></u>

**APPENDIX VI (continued)****SALE OF SDL**

Prepared by Krystal De Vogue

**Sook's Dolls Ltd.****Balance sheet**

As at December 31

(under ASPE)

(in C\$'000s)

	<b>AUDITED</b>
	<b>2021</b>
	<b>\$</b>
<b>Assets</b>	
<b>Current assets</b>	
Cash and cash equivalents	13
Trade receivables	1,290
Inventories	892
Prepaid expenses	30
Total current assets	<u>2,225</u>
Property, plant, and equipment — net	
Land	100
Warehouse building	2,111
Equipment	1,788
Total assets	<u><u>6,224</u></u>
<b>Liabilities</b>	
<b>Current liabilities</b>	
Trade payables and accrued liabilities	1,087
Due to CTI — intercompany loan	1,000
Income taxes payable	13
Total current liabilities	<u>2,100</u>
Future income taxes	205
Total liabilities	<u><u>2,305</u></u>
<b>Shareholders' equity</b>	
Share capital (100,000 shares outstanding)	378
Retained earnings	3,541
Total shareholders' equity	<u>3,919</u>
Total liabilities and shareholders' equity	<u><u>6,224</u></u>

Note: The book values of these assets on SDL's records are the same as the amounts used for consolidation purposes. The only consolidation entries related to the consolidation of SDL that impact the consolidated assets and liabilities are goodwill arising from the acquisition and the intercompany loan.

## APPENDIX VII ELECTRONICS DIVISION PROPOSAL

Prepared by Steven Zhang

Chloe Wong currently works for a large technology company as a computer software engineer, a position she has held for the last six years. She is interested in developing her own video game software and heading up an electronics division at CTI that would be devoted to this.

Chloe is very familiar with the Know It or Lose It board game, and as an avid puzzle gamer herself has many ideas on how the traditional game could be adapted for mobile devices, such as smartphones and tablets. Chloe suggests the games be sold through the Apple App Store and Google Play and be available all over the world. The games would be marketed as strategy video games.

The electronic version would initially be targeted for the female gamer aged 34-64. This is a large and growing market, and the video game version is expected to appeal to this demographic. Once the initial electronic versions have been developed, they can be easily adapted to the younger female market aged 18-34 and the teen market aged 13-17. This expansion has been anticipated in the revenue forecasts.

Assuming development starts by June 2022, product should be ready for sale in 2023. There is currently a skills shortage in this industry. Chloe already has some thoughts about the specific people she would like to have work in this division, and believes she can attract these people to become employees or consultants for CTI at lower than market rates, since she has a personal connection with them.

Chloe's forecast of revenues and costs is as follows:

Note 1	2023	2024	2025	2026	2027	2028 to 2031
Average number of units sold per day	4,000	8,500	10,000	12,500	13,000	14,000
Average revenue per unit to CTI	\$2.00	\$2.05	\$2.10	\$2.15	\$2.20	\$2.20
R&D	1,600	1,700	18% revenue	18% revenue	18% revenue	18% revenue
Wages (Note 2)	1,400	+8%	+8%	+8%	+8%	+8%
Marketing and advertising	1,280	1,200	11% revenue	11% revenue	11% revenue	11% revenue
General and administration (Note 3)	1,000	+2%	+2%	+2%	+2%	+2%
Ongoing capital expenditures for equipment (Note 4)	-	500	800	1,000	1,000	1,000 (none in 2031)

**APPENDIX VII (continued)**  
**ELECTRONICS DIVISION PROPOSAL**  
Prepared by Steven Zhang

Note 1: Costs are expressed in C\$'000s.

Note 2: Wages are expected to grow at 8% annually, beginning in 2024, due to skills shortage in the market, competition for skilled employees, and need to retain employees once hired.

Note 3: General and administrative costs are expected to increase with inflation (2%), beginning in 2024.

Note 4: Initial capital costs will be \$2,000,000 to purchase the assets needed for the division, primarily computer hardware and systems software. Beginning in 2024, until 2030, other capital purchases will be required primarily to keep up to date with technology changes. However, it is difficult to forecast the market beyond 2031. All capital purchases are primarily Class 50 for capital cost allowance purposes and are expected to be depreciated straight-line over two years for accounting purposes, except for initial capital costs, which will be depreciated straight-line over four years.

An additional \$5,000,000 (after tax) will be needed for R&D, including research wages and other expenses during the remaining months of 2022.

One issue that has not yet been resolved is how to monetize the application. If CTI publishes with Apple and Google, then CTI pays a yearly fee of \$99 to each platform to access their developer programs (already included in the costs above). CTI will eventually have to decide on how the app will be monetized, with the following options available:

1. Customers pay up front with a one-time fee with no additional features offered.
2. The download is free, but then users can purchase additional features to enhance the game.
3. Combination of the two above: pay a smaller amount for the download and then also pay for enhancements.

Chloe suggests that how the app is paid for will depend on the nature of the electronic version and how it works. It is still too early to determine this. In the forecast, the pay up front model has been used.

As per discussions with Richard, an income tax rate of 26% and a discount rate of 12% will be used for the analysis.

## **APPENDIX VIII CHARACTER LICENSING PROPOSAL**

Prepared by Thomas Whitaker

CTI would modify and adapt variations of its Know It or Lose It games and puzzles to incorporate information and the characters from the hit TV series *Starlight and Thunder*. The game would be modified annually to keep up to date with changes in the show. The modifications would be made to products currently geared to children in the 10-13 years old age category. Historically CTI has not been successful in selling to this age group.

The following is an excerpt from the draft licensing agreement, provided by FSI.

Terms and conditions:

- This agreement will be for five years, January 1, 2023, to December 31, 2027. On maturity, it may be renewed for another five years, if agreed to by both parties. If renewed, an additional upfront fee will be required for the second term.
- The agreement allows CTI to develop, design, manufacture, distribute, advertise, market, and sell the licensed games and puzzles. The licensed games and puzzles are restricted to those specified and listed in the final signed licensing agreement. CTI is permitted to reproduce FSI property and use FSI trademarks on and in connection with the licensed games and puzzles, and related packaging, displays, and promotional material as set out in the agreement. FSI will make readily available such materials, subject to confidentiality provisions.
- If CTI wishes to extend the licence of these rights to a third-party manufacturer, FSI must provide its consent, and FSI will enter into a separate agreement with the third-party manufacturer.
- CTI does not have the right to use these trademarks on any products other than those specifically detailed in this agreement.
- CTI agrees that it will not sell any FSI licensed product at a discounted price or dump obsolete inventory that has the FSI licensed trademark, as this will impact the reputation of FSI.
- FSI will approve all initial licensed products, including, but not limited to, the initial concepts, design documents, prototypes and manufacturing samples, artwork, packaging, flyers, and all marketing materials. In the event that the products are updated or changed in any manner, FSI must provide its approval of all changes.
- At all times, FSI maintains ownership of the trademarks that have been licensed under this agreement.



**APPENDIX VIII (continued)**  
**CHARACTER LICENSING PROPOSAL**  
Prepared by Thomas Whitaker

Payments and audits:

- CTI agrees to pay FSI a total upfront licensing fee of C\$2,000,000, due and payable upon signing of this agreement. The same fee would be payable for a second term.
- FSI will charge a royalty of 18% on sales of all licensed product. Minimum guaranteed sales level on which the royalty fee must be paid is C\$4,000,000 annually. If CTI does not achieve this level of sales, the minimum royalty fee must still be paid.
- The royalty payment will be due by direct bank transfer 15 days following the month in which the sales were recognized by CTI.
- Within 15 days of the last day of each month, CTI will prepare and submit a Royalty Sales Report Form (in the format prescribed in this agreement), which will detail the total sales of each type of licensed product for the month and the calculation of the royalty fees due and payable.
- Upon FSI's request, CTI will make available all data and information required to substantiate the amounts provided in the Royalty Sales Report Form.
- FSI or an independent CPA of its choosing may conduct audits of the information provided by CTI to FSI related to sales of licensed products. Reasonable notice will be given of these upcoming audits, and they will not occur more frequently than once every calendar year. If it is found that the royalty fees have been understated, CTI will immediately pay the difference. These payments will be subject to interest charges and penalties, as determined by FSI on a case-by-case basis.

Quality assurance:

- CTI agrees that it will ensure that the form, quality, and standard of all materials used to produce the licensed products will conform to FSI specifications, as detailed in this agreement, and to the samples that were approved by FSI. Any changes made to these items, or the materials used to produce these items, will require approval by FSI.
- CTI will comply with all laws and regulations relevant to the licensed products (for example, health and safety regulatory requirements).
- FSI has the right to inspect the licensed products at any time to ensure compliance with all terms of the agreement.

**APPENDIX VIII (continued)**  
**CHARACTER LICENSING PROPOSAL**

Prepared by Thomas Whitaker

This licence agreement can be terminated by FSI at any time for any instance of non-compliance by CTI. CTI is not permitted to terminate the agreement.

I have compiled the following projections, based on discussions with Steven, Lorraine, and FSI.

The projected sales for licensed products were prepared from discussions with FSI representatives, using their assumptions on how many units could be sold if the product is licensed. Projections for products without licensing are based on historical data for the past few years.

(in C\$'000s)	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>
Projected sales without character licensing	4,280	4,065	3,950	3,775	3,700
Projected sales with character licensing	6,500	7,500	7,800	7,800	7,800

Variable costs for products with character licensing would be the same as those without licensing, with the exception of the royalty fee and additional packaging costs of 11% of revenue. Additional annual compliance costs related to the agreement will be \$100,000 per year throughout the five years. Any annual modifications would be included in the company's current R&D costs.

CTI will also have additional initial costs to modify and update the traditional games and puzzles that will be licensed. These costs will include R&D, prototype preparation, modifications as required by FSI, legal fees for reviewing the agreement, and other incidentals. The costs will total \$500,000 (after tax). These costs will be paid during the remaining months of 2022.

Richard has indicated that an appropriate discount rate to use for this analysis is 12% and the income tax rate is 26%.

## APPENDIX IX TRADE ASSOCIATION DATA OVERVIEW

Prepared by Lorraine De Vogue

CTI is a member of the International Association of Toy Retailers and Manufacturers (IATRM), an entity whose mandate is to advance the interests of the toy industry through effective advocacy, communication, and education. IATRM has collected data on the toy industry for more than 30 years. The association has been responsive to growing trends in recreation, and now captures data related to electronic entertainment and software, as well as toys.

As a starting point for its analysis of emerging trends in toys, including geographic regions, CTI requested that IATRM send “whatever” information they have on the “top five” products in 2021, related to both the toy and the entertainment and game software industries.

The information is provided in the accompanying Excel document “Association\_Datafile.” The dataset provided includes five years’ worth of monthly sales data for the most popular products in 2021.

IATRM also provided a brief description of each product from the manufacturers’ websites:

<b>Retail category</b>	<b>Toy</b>	<b>Manufacturer’s description</b>
Arts and crafts	Slime!	Slime! helps children develop motor skills and enhance eye-hand coordination! Your children will love <i>Slime!</i> while engaging in fun, sensory play!
Games and puzzles	Banker’s Quest Board Game	Young adults will love this game! Not only a bunch of fun, it teaches players how to work strategically to generate wealth in an economy built on real estate.
Dolls	GlamGirl/GlamGuy	This line of dolls portrays eight- to twelve-year-olds of a variety of ethnicities, time periods of origin, faiths, and social classes. A vast array of accessories are available. Early versions are fast becoming collectible items!
Entertainment and games software	GeoTreasures	A smartphone app that combines gaming with the real world. The game uses location tracking and mapping technology to create an “augmented reality” where players find, trade, and sell “treasures” in real locations. In-app purchases can give players real-time advantages.
Infant/toddler/preschool toys	Twinkle Twinkle Infant Monitor	This unit offers remote monitoring for parents, a room temperature display, and soft lullabies at the push of a button. Its extended range and long-lived battery make it an essential part of childcare!

IATRM advised that the data had been scraped from several sources, and the association has not purged the dataset for duplicates or data outliers or anomalies. This will be the responsibility of the team performing the analysis.

As presented, the data is unappealing to us, CTI's management team; it's difficult to spot trends or identify any potential opportunities. We need HCG to assess the data provided and turn it into "useful" information for discussion at the next management meeting. Wherever possible, HCG should use visualizations to help us understand the information contained in the dataset. I have been told by IATRM that this may require the use of pivot tables to break down the information.

Below is a summary of some of the areas that we would like HCG to focus its analysis on:

- Relative performance of each product for the past five years (or since introduced).
- Sales trends of each product over both time and region for the past five years (or since introduced), including any predictions of sales behaviour in 2022 and 2023.
- Periods of increased sales activity (if applicable), since this could help determine production schedules.

**APPENDIX C**

**THE COMMON FINAL EXAMINATION  
DAY 1 CTI VERSION 1 BOOKLET – MAY 25, 2022**

**COMMON FINAL EXAMINATION**  
**MAY 25, 2022 – DAY 1**

**Case (CTI-Version 1)**

**(Suggested time: 240 minutes)**

It is August 8, 2024, and Martin Ferringer, your boss at Hilton Consulting Group LLP (HCG), tells you that the firm has another consulting engagement with Creative Toys Incorporated (CTI).

Martin recently met with CTI's Board of Directors, all of whom have been directors since 2022. After recalling the defective dolls, CTI sold the doll division in 2022. CTI turned down the Discount Pete's Inc. (DPI) contract offer and did not proceed with the character licensing arrangement.

In June 2022, Thomas invested \$4 million for 500,000 common shares, with the same terms as first proposed, and now owns 32% of CTI's outstanding shares. Thomas sold his chain of retail stores last year and is devoting more of his efforts to increasing the profits of CTI.

Also in June 2022, an electronics division was established, and Chloe Wong was hired as the vice-president of the division. Chloe originally planned to hire full-time employees but was unable to attract many good candidates. Instead, the division has relied on consultants for new game development and for the maintenance work required to keep the software functioning properly and up to date.

The electronics division's first video game, *Know It Live Online (KILO)*, was released in December 2022. When first released, *KILO* was similar to the *Know It or Lose It* board game; however, because initial sales were low, the game was redesigned to increase player engagement. Sales quickly increased and, to date, *KILO*'s performance has surpassed CTI's expectations. Most crucial to *KILO*'s success was the introduction of treasure boxes, which players can both purchase and earn. The contents of a treasure box are unknown until it is opened. Most boxes contain an assortment of items of different value, such as free plays, unlocked levels, hint cards, and the chance to win more treasure boxes. In addition, whereas the initial video game targeted female gamers aged 34 to 64, the redesigned version targets a wider audience of all genders, from age 18 to 64. Even though most of the educational aspects were removed in the redesign, resulting in the current format having little resemblance to the original board game, *KILO* is still marketed as being educational. Apart from one prototype video game, *BATNIX – Back to Nature (BATNIX)*, the electronics division currently has no new video games in development.

In August 2022, Nina Petrov was hired to replace Andrew Wang as the vice-president of the research and development (R&D) department for the game/puzzle division. Nina spends significant time analyzing trends in the market, which has resulted in the design of more innovative board games. Nina hired experienced and innovative developers, and there has been a considerable improvement in productivity and morale within the R&D department.

In 2023, CTI's game/puzzle division released a new board game targeting teens from 13 to 16 years of age, which was well received, and its sales are increasing. In addition, the team is excited about the creation of a brand-new board game targeted at the adult market, which, based on initial reviews, could win board game of the year in 2024. In addition, the *Know It or Lose It* traditional board game continues to be a best seller. CTI's reputation for providing quality board games and puzzles remains strong, allowing the company to continue to sell its products at premium prices.

In 2022, CTI's board updated its vision and mission statements as follows:

Vision statement: *To make exceptional games and puzzles for all ages that are enduring, fun, and educational and that encourage critical thinking.*

Mission statement: *We create innovative educational games and puzzles that encourage creativity and critical thinking and that can be enjoyed by all ages. We strive to develop award-winning products made from sustainable materials.*

A corporate social responsibility code of conduct was adopted and a core value was added: *To have an ethical regard for our stakeholders (such as customers, employees, and the community), as well as for the environment, in all our actions and business decisions.*

CTI's board is committed to expanding its targeted age segments and to growing its sales and profits. To help in determining CTI's future direction, each division was asked to make a presentation to the board outlining proposals for investment. HCG has been hired by CTI to review the proposals, assess their strategic fit, and raise any significant issues related to the proposals. Martin attended these presentations. He shared his notes with you and asks you to prepare a report for CTI's board that considers each investment option, as well as the company's overall strategic direction.

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**APPENDIX I**  
**EXCERPTS FROM THE INTERNAL MANAGEMENT REPORT**

*Creative Toys Incorporated*  
*For the six-month period from January 1 to June 30, 2024*  
*(in thousands of Canadian dollars)*

	<b>Game/Puzzle Division</b>	<b>Electronics Division</b>	<b>Total</b>
Net sales (Note 1)	\$ 11,770	\$ 4,120	\$ 15,890
Cost of goods sold (Note 2)	6,792	0	6,792
Gross margin	4,978	4,120	9,098
<i>Gross margin percentage</i>	<i>42%</i>	<i>100%</i>	<i>57%</i>
<b>Expenses</b>			
Marketing and advertising	230	620	850
Research and development	560	0	560
Consultant fees (programmers) (Note 2)	0	1,510	1,510
Depreciation and amortization	590	420	1,010
Distribution costs	306	40	346
Occupancy costs	435	200	635
Administrative and general expenses	1,430	510	1,940
Total expenses	3,551	3,300	6,851
Net profit margin	\$ 1,427	\$ 820	\$ 2,247
<i>Net profit margin percentage</i>	<i>12%</i>	<i>20%</i>	<i>14%</i>

**Notes:**

1. Net sales of the electronics division are solely from *KILO*: \$2,380,000 from product sales and \$1,740,000 from the sale of treasure boxes.
2. There is no cost of goods sold in the electronics division. Instead, there are programming costs. Once a video game is developed, its only ongoing costs relate to maintenance, updates, and any upgrades that are made.

**Additional information**

- Sales from *KILO*, in its current form, are expected to increase by 5% a year in each of the next four years.
- The prime rate has continued to increase and is currently 4.25%.

## APPENDIX II INTERNAL MEMO – INDUSTRY UPDATE

The toy industry, which includes board games, is expected to grow at 3% over each of the next three years. Given a resurgence of popularity, board games are seeing an even higher growth rate. A significant part of this growth is due to growing public awareness of the potentially harmful effects of screen time. Another growing market segment is board games that are specifically designed for seniors, to improve mental dexterity and slow down memory loss.

In 2023, the toy of the year was a board game based on a new popular TV series for children aged 7 to 10 years old. In addition to character licensing arrangements, manufacturers are paying influencers and celebrities to endorse, promote, and differentiate their products. Currently, about 2% of toys have a celebrity or influencer endorsement. This trend is expected to increase to 10% by 2029.

Like board games, video games have also outpaced the overall growth rate of the toy industry and are gaining momentum in all age categories. Even video games directed specifically towards seniors have seen growth in recent periods. Given this shift, more and more competitors continue to enter the video game market. A growing trend among toy companies is to purchase video game companies in order to take advantage of the growth. Consequently, and as predicted, there is an increasing shortage of game developers, which has caused their average wages to increase by 9% annually over each of the last two years, with similar increases expected for 2024 and potentially beyond. Staff turnover is also becoming an issue for many video game companies, as developers tend to quit once their company's games lose popularity. Since gamers are attracted to the newest releases, many video games gain and lose popularity quickly.

Experts still contend that children and teenagers should spend more time with educational products that help to develop creative and critical thinking. In late 2022, an important research study concluded that the more time young people spend on computers, the slower their mental abilities develop. This has sparked a growing trend among parents to have their children play with traditional, non-electronic games. Also, in January 2024, another research study indicated that screen time had even greater negative impacts than were found in the 2022 study. The 2024 study specifically mentioned that the treasure boxes in CTI's video game, *KILO*, resembled casino games.

**APPENDIX III**  
**GAME/PUZZLE DIVISION – PRESENTATION AND DISCUSSION**

*(Presented by Nina Petrov)*

**Agenda**

1. R&D Department
2. Purchase of Sengames Inc.
3. Chess Prodigy Endorsement

- 1 -

**R D Department**

- CTI's R&D team is performing above expectations.
- The lead time from conception to market is 30 months, which is now in line with our strongest competitors.
- The team is completing the development of a new board game targeted at adults; production will start in September 2024.
- Three other new board games are in various phases of development; each game has an educational component.

- 2 -

**Purchase of Sengames Inc.**

- Owned by Irene Brownstone, Sengames Inc. (Sengames) develops and manufactures non-electronic brain training games and puzzles for the over-60-years-old market.
- Games are developed with input from doctors and are designed to increase brain activity in order to slow down memory loss and dementia.
- Reviews have been positive and assert that these games are innovative and unique when compared to competitors' products.
- Sengames sells mainly through bookstores.
- The asking price for Sengames is \$4,450,000.
- Sengames currently contracts 100% of its manufacturing to a single supplier.
- In the past two years, similar companies have sold for 4 times EBITDA. Irene provided an income statement (Appendix IV).

**APPENDIX III (continued)**  
**GAME/PUZZLE DIVISION – PRESENTATION AND DISCUSSION**

– 3 –

**Chess Prodigy Endorsement**

- Marly Hopkins is a chess prodigy who has won chess championships worldwide and, at 14 years of age, is the youngest Canadian grandmaster ever.
- She is attracting international attention and is a great role model for young people.
- Marly grew up playing *Know It or Lose It* and developed a love of board games before moving to chess.
- Marly publicly advocates for limited screen time for children and will not allow her name to be associated with addictive video games. CTI has proposed an endorsement deal to Marly for existing and future products. The proposal is for Marly to endorse CTI's games and puzzles designed for 8- to 13-year-old children. We estimate that this represents approximately 70% of the division's customers.
- The endorsement will cost \$3 million upfront for an initial five-year contract and should result in a 30% increase in sales on endorsed products. A gross margin percentage of 44% and distribution costs of 2.6% of sales are expected on the increased sales.

**Discussion**

Lorraine: I like the idea of purchasing Sengames. It gets us into the seniors' market, which is growing.

Krystal: I have known Irene for a long time, and she is committed to helping seniors as they age. She believes that CTI can improve the performance of Sengames in two ways: first, by bringing production in-house and thereby lowering production costs, and second, through a more effective marketing campaign.

Thomas: We should only invest if the returns are similar to the electronics division; otherwise, we are wasting our limited investment dollars. Although the seniors' market is growing, we know nothing about it.

Lorraine: Thomas, you used to say just the opposite. I do not think it is wise to reject this opportunity so quickly. Expanding into a new market would be a great way to diversify and grow CTI.

Steven: I agree, Lorraine. I have seen Sengame's puzzles and games and they are impressive. If we choose to produce them in-house, \$500,000 would be required to modify our existing machines. With this upgrade, I think we may be able to reduce the cost of goods sold and, therefore, increase Sengames' current gross margin.

**APPENDIX III (continued)**  
**GAME/PUZZLE DIVISION – PRESENTATION AND DISCUSSION**

- Krystal: There are probably additional synergies.
- Steven: Sengames has patents that may also provide CTI with some unique and interesting features that could be used to improve some of our existing games and, therefore, increase sales. Sengames has valued these patents at \$4 million. They may be quite valuable to us.
- Thomas: All of this sounds very time-consuming and expensive. The products look interesting, but it is an unproven market. CTI would be far better off focusing on a proven winner, *KILO*.
- Lorraine: You could be right, Thomas, but we cannot ignore the game and puzzle division simply because *KILO* is doing extremely well. We need to explore all available opportunities.
- Krystal: You are right, Lorraine. Irene has agreed to work for CTI if we purchase Sengames. She has a good sense of the seniors' market and would be a great asset to our R&D department. We would be lucky to have her.
- Thomas: Sengames appears to have a completely different business model than ours, and we do not know how well Irene will fit in. It does not make sense to pursue this acquisition given all that we currently have going on. It would just be a distraction, and a costly one!
- Lorraine: Perhaps. Let's move on to the Marly endorsement. I am excited because this gives us a unique marketing opportunity. With her endorsement, I would expect enthusiasm for our products and the reputation of our brand to increase significantly.
- Krystal: I agree, but Marly has not yet agreed to the endorsement deal. She and her agent have expressed concern over *KILO* and the recent mention of its negative impacts in news reports. Before Marly will agree to the deal, we would have to return *KILO* to its original version and agree to reinvest 80% of the profits made through her endorsements into CTI's traditional games and puzzles, and not video games.

**APPENDIX III (continued)**  
**GAME/PUZZLE DIVISION – PRESENTATION AND DISCUSSION**

- Thomas: This sounds completely unacceptable. First, *KILO* is a major success—we would be crazy to downgrade it to the old version. Remember, *KILO* did not sell well in its original format. And second, a forced 80% reinvestment away from video games? We cannot let an outsider dictate our strategy. We need to drastically renegotiate the terms if we are seriously considering this deal.
- Steven: Thomas might be right. Based on my research, the amount being asked for is at the high end of recent endorsements for children’s games.
- Krystal: Maybe, but Marly fits perfectly with the image we are trying to portray and can help strengthen our brand. Also, an association with her will help counter the negative news reports concerning *KILO*.
- Thomas: I think you are all making too much of the negative publicity. Sales of *KILO* have never been stronger!
- Krystal: But Thomas, this could impact the rest of our business and our reputation.
- Thomas: I agree, but we should do what is best for CTI. *KILO* is the obvious choice in that respect. In fact, given the explosive growth in the video game market, we should focus our investment dollars solely on that area of development.
- Krystal: CTI was built on educational board games and puzzles. It seems like a short-sighted decision to abandon that foundation. It is what drove us to start CTI.
- Steven: Let us get back on track. What else will Marly give us, beyond the use of her name? Would she also be willing to test and endorse future products?
- Lorraine: Yes, we discussed that. She would be willing to comment on new games and puzzles and to be part of our marketing materials. She may even be willing to consider endorsing various video games, as long as they are socially responsible. Of course, she first wants to test and approve the products that she will endorse. Her feedback could help us improve our products.

**APPENDIX IV**  
**FINANCIAL INFORMATION FOR SENGAMES INC.**

*(Prepared by Irene Brownstone)*

*Sengames Inc.*

*Income Statement*

*For the year ended December 31, 2023*

Sales	\$ 3,700,000
Cost of goods sold – Note 1	(2,594,000)
Gross profit	<u>1,106,000</u>
<i>Gross profit percentage</i>	<u>30%</u>
Other costs	
Distribution	75,000
Marketing	120,000
Administration	420,000
	<u>615,000</u>
Earnings before interest, taxes, depreciation and amortization (EBITDA)	\$ 491,000
<i>EBITDA margin percentage</i>	<u>13%</u>

Note 1 – Sengames contracts out all manufacturing of its products.

**APPENDIX V**  
**ELECTRONICS DIVISION – PRESENTATION AND DISCUSSION**  
*(Presented by Chloe Wong)*

**Agenda**

1. Upgrade of *KILO*
2. *BATNIX*

– 1 –

**Upgrade of *KILO***

- *KILO*'s popularity continues to increase, and there is a further opportunity for the game's expansion.
- The upgrade will allow players to play together in large, international games via the internet.
- Treasure boxes and cash prizes will be awarded to the winners.
- The initial upgrade is expected to cost \$5 million, with the following projections:

Year	Sales	Net Profit	Net Profit Margin
2024	\$8,240,000	\$1,812,800	22%
2025	\$12,360,000	\$3,708,000	30%
2026	\$12,978,000	\$4,023,180	31%
2027	\$13,626,900	\$4,769,415	35%
2028	\$14,308,245	\$4,721,721	33%

– 2 –

***BATNIX***

- *BATNIX* is a prototype for a children's mobile video game that promotes less sedentary screen time and more outdoor activities.
- Targeted to children aged 10 to 14, *BATNIX* can be played individually or as a group.
- The game requires creative thinking, and children learn about climate and local nature.
- There is currently a small but growing niche market with an estimated yearly market size, in Canada and the U.S., of about 8 million families who want mobile video games that increase the activity of children.
- *BATNIX* is expected to capture approximately 10% of the overall market.
- The game will be subscription based and will cost \$4.75 per year.
- Annually, variable costs are expected to be \$0.85 per game, and fixed costs for salaries, occupancy, and administration are estimated at \$2,150,000.
- The initial investment for *BATNIX*'s development is estimated at \$4 million.



**APPENDIX V (continued)**  
**ELECTRONICS DIVISION – PRESENTATION AND DISCUSSION**

**Discussion**

Krystal: Thanks, Chloe—that is a lot to consider. However, you failed to mention *KILO*'s negative publicity and the issues that recent research has uncovered. When we redeveloped *KILO*, we did not intend the game to have any harmful consequences. I feel we need to question whether it is responsible to continue offering *KILO* in its current form.

Thomas: Krystal, be reasonable. *KILO* generated a profit of over \$800,000 in the last six months, and there is plenty of room for growth. Besides, *KILO*'s customers do not seem bothered by the research, and it is up to parents to limit screen time, not us. We should build on the success of *KILO* and expand it, like Chloe suggested. We have a true winner here, and we must capitalize on it!

Lorraine: Thomas, I understand your viewpoint. But aren't you concerned about the other areas of our business?

Thomas: Since *KILO* is becoming more popular by the day, we will more than make up for any decline in sales that our other products sustain, especially once the upgrade has been completed. Also, we can afford to lose some sales in the game and puzzle division. In fact, we should move away from old-fashioned board games in order to allocate our investment dollars towards video games like *KILO*.

Steven: A shift in our focus would reduce CTI's reliance on retailers, which is a consideration. Krystal, I know this is a challenge for you, but Thomas is right—the industry is trending towards video games, and *KILO* has the potential to truly take off. If we change CTI's strategic focus, there is an opportunity for CTI to develop additional games with similar growth potential to *KILO*.

Krystal: First, CTI may make a fortune with the *KILO* upgrade, but it does not feel right. And second, a shift in our focus from traditional games and puzzles to video games sounds dangerous—we built our business on board games like *Know It or Lose It*.

Thomas: Krystal, I appreciate your viewpoint, but, in business, it ultimately comes down to what is best for the company financially. Not only is *KILO* a true winner, but a shift in strategic focus is likely to further increase the profits of CTI.

**APPENDIX V (continued)**  
**ELECTRONICS DIVISION – PRESENTATION AND DISCUSSION**

Lorraine: I am not convinced, Thomas. How long will *KILO*'s success last? And have you considered the long-term implications of this change in direction?

Thomas: Yes, I have. With the profits from *KILO*, we could invest in all sorts of other opportunities.

Steven: Indeed, the profits from *KILO* could be used to fund the development of additional video games.

Krystal: I believe that we should downgrade *KILO* back to its original form and grow its sales in a more responsible way. I also do not agree that a change in CTI's direction away from educational board games and puzzles and towards video games is appropriate.

Lorraine: I truly do not know which direction to take.

I asked Chloe to estimate how much it would cost to downgrade *KILO* and what impact that would have on its current sales. She estimates the downgrade would only cost about \$50,000. However, *KILO* sales would likely fall by an initial 50%, and revenue from treasure boxes would disappear completely, since that feature was reported to be the most harmful.

Krystal: Let us discuss *BATNIX*. This game is perfect for tapping into the socially responsible technology market, which could grow quickly. Combining a video game with outdoor activities seems like a perfect way to access this growing market.

Steven: *BATNIX* does look promising. There would be less competition compared to what *KILO* currently must contend with. Honestly, I do not know what is best at this point.

Lorraine: I am also undecided. And we still need to determine how to finance all of these proposals. New Haven Bank (NHB) has offered us a new \$5 million loan. I have also summarized how much funding is available (Appendix VI).

Thomas: The market for *BATNIX* might be an attractive one in the future, but we have limited investment dollars. I have \$8 million to invest in preferred shares of CTI. However, given its almost guaranteed success, I will only provide more financing to CTI if we continue to upgrade *KILO*.

## APPENDIX VI FINANCING PROPOSALS AND AVAILABLE CASH

### Financing Options

#### Preferred shares

Preferred shares, for up to \$8 million, would be issued to Thomas. The non-cumulative dividend is 4%. There is a mandatory redemption of \$500,000 per year, beginning in 2028; because of the redemption, this will be recognized as debt on the financial statements.

#### New bank loan

Due to increases in the market value of CTI's land and buildings, NHB is willing to offer a variable-rate loan of up to \$5 million, secured on the land and buildings, that ranks lower than the mortgage payable. Annual interest is prime plus 2.75% and is payable monthly. The principal is due in 2031.

Board decision: Total new debt is not to exceed \$8 million.

### Current Sources of Cash

The maximum amount of the line of credit with NHB is \$5 million, of which \$2 million has been drawn.

Total cash available is as follows:

Cash on hand	\$ 800,000
NHB line of credit – amount available	\$3,000,000

**APPENDIX D**

**DAY 1 (CTI VERSION 1) – MAY 25, 2022  
MARKING GUIDE AND SAMPLE CANDIDATE RESPONSE**

**MARKING GUIDE  
CREATIVE TOYS INCORPORATED (CTI)  
VERSION 1**

**Summative Assessment #1 (Situational Analysis)**

For Summative Assessment #1, the candidate must be assessed for reasonableness of attempt:

**Yes** – The candidate used a reasonable situational analysis when analyzing the major issues facing CTI.

**Unsure** – The candidate attempted to use a reasonable situational analysis when analyzing the major issues facing CTI.

**No** – The candidate clearly did not use a reasonable situational analysis when analyzing the major issues facing CTI.

***Based on the 2020 CPA Competency Map:***

***Technical Competency***

*2.3.2 Evaluates the entity's internal and external environment and its impact on strategy development*

***Enabling Competencies***

*1.4.1 Performs work carefully, thoroughly and competently in accordance with relevant technical and professional standards*

*2.1.3 Identifies the strategic impact of internal decisions and external influences on project plans and initiatives*

*5.1.3 Develops and uses knowledge of the organization, industry and stakeholders*

*6.1.1 Identifies and articulates issues within areas of work responsibility*

*6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems*

*6.1.3 Demonstrates skepticism, objectivity, due care and persistence when identifying issues*

*The candidate is expected to complete an appropriate situational analysis.*

*The focus should be on describing the factors that have changed since Capstone 1 that will affect the decisions at hand. Recapping parts of the mission/vision and relevant KSFs, and presenting relevant elements of the SWOT, is appropriate.*

*The candidate should draw upon their situational analysis when analyzing the major issues facing CTI (Sengames, the Marly endorsement, upgrade of KILO, development of BATNIX, and overall strategic direction of the company).*

### **New Mission and Vision Statement**

CTI's new vision statement is: *"To make exceptional games and puzzles for all ages that are enduring, fun, and educational and that encourage critical thinking."*

CTI's new vision statement is quite similar to its prior vision statement; however, the new vision statement now highlights the need for exceptional games that encourage critical thinking.

CTI's new mission statement is: *"We create innovative educational games and puzzles that encourage creativity and critical thinking and that can be enjoyed by all ages. We strive to develop award-winning products made from sustainable materials."*

CTI's new mission statement is also quite similar to its prior mission statement; however, the new mission statement now highlights the focus on producing award-winning products that can be enjoyed by all ages (rather than by all members of the family).

### **New Corporate Social Responsibility Code of Conduct**

Since Capstone 1, CTI adopted a new corporate social responsibility code of conduct. The company also adopted a new core value, which promotes the ethical regard for each stakeholder of the company. The core value specifically identifies customers, employees, and the community as important stakeholders, as well as the environment.

### **Board Objectives**

The Board of Directors wants to focus on expanding the company's targeted age segments of the population while also growing the company's sales and profits.

## Quantitative Assessment

Both of CTI's divisions (game/puzzle and electronics) appear to be profitable. The net profit margin percentage of the electronics division is currently stronger when compared to the game/puzzle division. One reason for this is that video games do not have cost of goods sold or distribution costs. Despite this, the game/puzzle division still contributes a greater portion of CTI's overall net profit relative to the electronics division.

## SWOT Analysis

### Strengths:

- The new electronics division takes advantage of the growing trend in the popularity of video games.
- Thomas is spending more time with CTI now that he has sold his retail company. Given Thomas's experience within the industry, his additional focus on CTI should help the company meet the board's objectives.
- The R&D department of the game/puzzle division currently has three board games in development that emphasize education; based on initial reviews of one of the games, it is apparently in contention for being voted "board game of the year."
- Sales of Know It or Lose It are still strong as the game's popularity has continued.
- *KILO*, CTI's first video game, has been a big success and has experienced rapid growth and strong profits.
- The redesigned version of *KILO* has an expanded target market; rather than only female gamers aged 34 to 64, the redesigned version targets both females and males aged 18 to 64.
- CTI's R&D department has improved its performance in recent years; since Nina Petrov was hired, morale and performance have improved.
- CTI's reputation for providing quality board games and puzzles remains strong; this allows CTI to sell its products at premium prices.
- CTI has a focus and mandate to offer products that are made of organic and sustainable materials; there is a growing market for these types of products.

### Weaknesses:

- CTI does not have any character-licensing agreements for its products; licensing is a growing trend and helps companies generate brand awareness.
- CTI has not been able to hire any full-time programmers to help with development of the company's video games; as demand for programmers is increasing, this could become costly.

- There are currently no new video games in development.
- CTI is currently marketing *KILO* as an educational product despite most of the educational aspects of the game having been removed when it was redesigned into its current form.
- There is a divergence of viewpoints on CTI's board; Thomas would like to invest in *KILO* whereas Krystal is more partial to educational products such as *BATNIX*. This split within the board could cause future conflict.

#### Opportunities:

- The toy industry, and board games specifically, are currently in a growth stage. Board games have experienced a resurgence of popularity that appears tied to recent research that indicates that screen time may be harmful.
- There is a growing demand for board games targeting older people, designed to help improve conditions such as dementia and memory loss.
- There is an opportunity to purchase Sengames, a company that has found success developing products targeted toward the seniors' market. This potential purchase would also include several patents (although what the current value of those patents would be to CTI is uncertain).
- There is a growing trend within the toy industry for manufacturers to procure character-licensing agreements as well as celebrity endorsements; there is an opportunity to follow this trend by signing Marly, the teenage chess prodigy.
- Expert opinion suggests that young people should spend more time playing educational games; CTI is well positioned to take advantage of this advice.
- The demand for video games continues to increase and outpace the growth of traditional games and toys within all age categories; given CTI's reputation for providing quality board games and its experience in building *KILO*, the company could use CTI's brand and experience to take advantage of this growth.
- CTI has the opportunity to build a socially responsible video game, *BATNIX*. Moreover, there appears to be a growing niche market for these types of products.
- There is an opportunity to invest further in *KILO*. An upgrade would connect players via the Internet, and the sales projection for the upgraded version appears very attractive.

#### Threats:

- A number of research studies have indicated that screen time and other aspects of certain types of computer software, such as *KILO*'s treasure boxes, are harmful to the users. CTI's *KILO* was specifically mentioned in one of the studies. This finding could hurt *KILO*'s sales, and could also harm CTI's reputation as a company that provides educational products to its customers.
- As interest rates are rising, if CTI decides to take the variable-rate loan from the bank, and rates continue to rise, the debt may become more expensive.



- Competition within the video game market is growing as more companies try to take advantage of the industry's growth.
- Given the growth of the video game market, there has been a shortage of capable programmers who are able to produce/maintain these products. Given that CTI's electronics division currently relies on consultants, the company may struggle to find the labour required to build new products and/or maintain existing products.
- Many video games gain and lose popularity quickly as customers move on to the latest releases; because customer interest in the product might be short-lived, this increases the risk of allocating investment funds to video game development.

### **Summative Assessment #2 (Analyzes the Major Issues)**

For Summative Assessment #2, the candidate must be assessed for reasonableness of attempt:

**Yes** – The candidate sufficiently completed a reasonable assessment of the major issues facing CTI.

**Unsure** – The candidate attempted to complete a reasonable assessment of the major issues facing CTI.

**No** – The candidate clearly did not complete a reasonable assessment of the major issues facing CTI.

#### **Technical Competencies**

*2.1.5 Explains implications of current trends, emerging issues and technologies in strategy and governance*

*2.3.1 Evaluates the entity's strategic objectives and related performance measures*

*2.3.3 Evaluates strategic alternatives*

#### **Enabling Competencies**

*1.3.2 Recognizes bias, uncertainty and ambiguity in the information and assumptions that underlie assigned work*

*1.4.2 Critically reviews own work to ensure its quality*

*2.1.1 Applies knowledge of the organization's competitive environment and strategic direction when performing assigned work*

*2.2.1 Assists in identifying and monitoring risks within areas of work responsibility*

*5.1.1 Applies general business knowledge to enhance work performed*

*5.1.2 Recognizes the interrelationships among departmental and functional areas within the organization*

*6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives*

This summative assessment is based on Assessment Opportunities #2 to #6.

**Assessment Opportunity #2 (Strategic Issue #1 – Sengames)**

*The candidate is expected to complete both a quantitative and qualitative assessment of acquiring Sengames Incorporated, a non-electronic game development and manufacturing company.*

*Quantitative: The candidate should perform a preliminary calculation of the value of Sengames, including consideration of the total investment required (i.e., including the additional capital investment required). The candidate should compare the value of the company, using both Sengames’ existing EBITDA and CTI’s estimated EBITDA with proposed changes, estimating the impact on profits and sales.*

*Qualitative: The candidate should assess whether this investment meets CTI’s objectives—to expand the company’s targeted age segments, and to grow sales and profits. The candidate should discuss the fit with CTI’s strategy, vision and mission, and core values. The candidate should discuss the risks and opportunities related to this acquisition.*

*Conclusion: The candidate should consider both the quantitative and qualitative analyses when drawing conclusions and making recommendations.*

**Quantitative Analysis**

Asking price	\$4,450,000
Industry comparable transaction multiplier	4 × EBITDA
Sengames 2023 EBITDA	\$491,000
Implied value of Sengames	\$1,964,000
Asking price over implied value	\$2,486,000

Based on the information provided, Sengames appears to be overpriced by nearly \$2.5 million. Before making this investment, it is strongly advised that CTI determine the reason for this difference.

One possible explanation is the patents, to which Sengames has attributed \$4 million in value. As the information provided is simply the value that Sengames has attributed to these assets, we do not currently know the actual value of the patents. Before an investment decision can be made, CTI needs to determine the actual value of these

patents. It is possible that the patents are worth what Sengames claims, and therefore, it is also possible that the asking price is not as excessive as it first appears. Before a reasonable determination of value can be made, CTI needs to perform a careful amount of due diligence on the patents that Sengames possesses.

Finally, CTI could also choose to modify its existing machinery in order to bring production in-house, and therefore potentially lower the production costs of the Sengames products. This equipment upgrade is projected to cost \$500,000, and may help reduce cost of goods sold to the point where these products would earn a higher margin. If the equipment upgrade did result in an improved gross margin, the profitability of Sengames would increase, and the implied value of Sengames would also increase. Therefore, CTI needs to attempt to quantify what the net result of the potential equipment upgrade would be on Sengames' profitability before an investment decision can be made.

### **Qualitative Analysis**

#### Pros:

- The review of Sengames' current products has been positive; the products were reported to be superior relative to the other available games targeted for seniors.
- CTI's board has the objective of expanding the company's targeted age segments; as CTI currently does not have any products made for the seniors' market, this option would help satisfy this objective and would also help reduce CTI's concentration risk.
- There is currently a resurgence in the popularity of board games; this trend could help boost the sales and popularity of the games offered by Sengames.
- There is also growth within the board game segment that targets the cognitive health of seniors; Sengames appears to be well positioned to take advantage of this trend.
- Sengames potentially has valuable intellectual property that CTI might be able to use to innovate its current products or to develop new innovative products.
- Video games made for seniors have seen growth in recent periods; CTI might be able to take advantage of this trend by combining the experience/existing games of Sengames to produce video games specifically targeted for seniors.
- Sengames' games are developed with the input of doctors, with the intention of helping seniors improve memory and slow the effects of dementia; this direction aligns well with CTI's mission, vision, and new core value, which promotes the ethical regard for the company's stakeholders.
- Irene's attitude toward the health of her customers appears to align with CTI's stated mission, vision, and values. This will increase the likelihood that the purchase of Sengames will fit well with CTI's existing values.
- The performance of Sengames could be improved if CTI brings the production process in-house, and if CTI can improve the marketing function for these products.

- There may be unforeseen synergies between CTI and Sengames that could help improve the results of this investment, as well as the company overall (e.g., the administration expense of the two entities may be lower once they are combined).
- Irene would be willing to work for CTI after the purchase is made; Irene appears to have an abundance of experience that could help CTI develop new, popular products.

Cons:

- Sengames' products currently sell mainly through bookstores; this distribution method is costly and may involve complicated logistics.
- CTI does not have any experience within the seniors' market; therefore, there is more risk involved in the investment because CTI would be purchasing a company that it might not completely understand.
- Thomas mentioned that this is an unproven market, although he fails to explain why. CTI should perform a market analysis to ensure that the purchase of Sengames makes sense.
- Thomas mentioned that Sengames has a totally different business model compared to CTI's. Although no additional information was provided, CTI should be sure that the acquisition of Sengames would not act to disrupt CTI's existing business.
- Thomas also mentioned that Irene might not be a good fit for CTI. If that is the case, it could be far more challenging to successfully integrate Sengames into CTI's existing business after the acquisition is made.
- CTI's R&D department may be overwhelmed with too many projects if CTI purchases Sengames. CTI should ensure that it has the capacity to handle the effort involved in making the Sengames investment a success.
- At this point, CTI does not know the market value of Sengames' patents; this makes assessing the fairness of the sales price much more challenging.

## Conclusion

The Sengames investment option appears to be an attractive one. With this purchase, CTI would satisfy the board's objectives to grow CTI's sales and widen the company's targeted age segments. As well, this market appears to be growing, and CTI would be well positioned to take advantage of that growth if it were to invest in Sengames. Sengames and CTI appear to have a similar attitude toward ethical and educational products; for this reason, I recommend that CTI pursue this option further.

However, before the investment is made, CTI needs to determine a realistic and accurate value for Sengames. The current asking price appears high. However, Sengames' patents may indeed be quite valuable to CTI and the asking price may therefore be justified. Further research is required before a decision can be made.

If CTI can negotiate a reasonable asking price for Sengames, based on further due diligence, I recommend that this investment be made.

### Assessment Opportunity #3 (Strategic Issue #2 – Marly Hopkins Endorsement)

*The candidate is expected to complete both a quantitative and qualitative assessment of having Marly Hopkins, the chess prodigy, endorse some of CTI's products.*

*Quantitative: The candidate should perform a preliminary calculation that assesses the sales and profits that could be added as a result of this endorsement.*

*Qualitative: The candidate should assess whether this investment meets the board's objectives of increasing the company's targeted age segments, and growing sales and profits. The candidate should also discuss the fit with CTI's strategy, vision and mission, and core values, and the risks and opportunities related to this endorsement.*

*Conclusion: The candidate should consider both the quantitative and qualitative analyses when drawing conclusions and making recommendations.*

**Quantitative Analysis**

Initial expense		\$ 3,000,000	<i>For a five-year endorsement deal</i>
Current sales of game/puzzle division		23,540,000	<i>Annualized</i>
Segment that Marly will influence	70%	\$ 16,478,000	
Increase in sales expected	30%	\$ 4,943,400	
Gross profit	44%	\$ 2,175,096	
Less distribution costs	2.6%	<u>(128,528)</u>	
		\$ 2,046,568	
Less annual amortization of contract		<u>600,000</u>	<i>\$3,000,000/ five-year term</i>
Net increase in profit before tax		1,446,568	
Tax	26%	<u>376,108</u>	
Average annual increase in profit after tax		<u>\$ 1,070,460</u>	

Although Steven mentioned that the amount Marly is requesting is at the high end of similar endorsement deals, the current proposal still appears as though it would help increase CTI's profit. The proposal therefore meets one of the board's objectives. However, this analysis does not include the potential loss of profits that would result from KILO's downgrade—a term within Marly's current endorsement proposal. If Marly is unwilling to negotiate the downgrade of KILO out of her contract, CTI needs to ensure that the effect of KILO's downgrade is included within this quantitative analysis (this calculation is provided below, in KILO's quantitative analysis section).

In addition, the above analysis does not consider any further value that CTI may derive from the Marly endorsement deal. For instance, Marly might begin to endorse CTI's video games, which could have significant value for the company. Marly will also consider testing, and providing CTI with feedback on, new products and product upgrades; that advice could also prove to be very valuable.

Nevertheless, CTI should still attempt to negotiate with Marly to ensure that the company is not overpaying for her endorsement.

### **Qualitative Analysis**

#### Pros:

- More and more companies within the toy industry are using celebrity endorsements to market and differentiate their products. CTI could follow this trend and use Marly to help promote its products.
- At 14 years of age, Marly is the youngest Canadian chess grandmaster ever, and has a great reputation; her celebrity endorsement would help promote and differentiate CTI's brand.
- Marly is familiar with CTI's products; she grew up playing Know It or Lose It before she moved to playing chess. This familiarity may make Marly an ideal person to promote CTI's products.
- Marly's attitude toward harmful video games aligns with the recent research that has emerged, as well as with CTI's stated mission, vision, and core values; she appears to be a great fit for CTI and CTI's products.
- Marly's influence would impact approximately 70% of the game/puzzle division's customers; this would help ensure that this endorsement deal has a big impact on sales growth.
- An association with Marly might help CTI mitigate any damage that has been caused by the negative research that has been released.
- Marly said she would consider endorsing CTI's video games as long as those games are socially responsible (*integration – this would fit well with BATNIX but not KILO*).
- Marly may be willing to help with the development and alterations of CTI's products; her input may prove valuable and could result in better products.

#### Cons:

- Marly wants CTI to revert *KILO* back to its original format, with an educational component, which could be costly to CTI. *KILO* has been a financial success and the potential losses that the company might suffer if CTI reverts the game back to its original format may overshadow the financial benefit that would result from signing Marly.
- CTI would also need to allocate 80% of the profits related to Marly's endorsement back toward traditional games and puzzles. This restriction would limit CTI's ability to allocate its investment dollars as it sees fit. 80% seems very high; CTI should strongly consider negotiating this percentage down (if not having the clause removed entirely).
- Marly is only 14 years old and it may be a challenge to work with her (through her agent), especially when she appears to have strong opinions about where CTI should allocate its focus/investment dollars.

- The deal appears to be more expensive relative to similar endorsement deals that have been signed. CTI should attempt to negotiate the cost of the contract down toward a level that is more in line with the rest of the industry.

### Renegotiate

Some of the stipulations in Marly's proposed endorsement contract seem unreasonable. For example, the 80% reinvestment requirement should be either negotiated down or eliminated altogether before CTI makes the agreement. In addition, if research indicates that CTI is overpaying, the company should also try to negotiate the price of the contract down. Finally, signing a 14-year-old to a five-year contract may not be wise. Marly's celebrity status and image may change over this period, which may eliminate CTI's ability to effectively promote the company's products through this endorsement. It is recommended that the structure of the contract be changed so that CTI would pay Marly on an annual basis (instead of an upfront lump sum), and that the contract could be terminated if Marly's image no longer fits with CTI's desired marketing image. This change would also help CTI manage its short-term cash flows.

### **Conclusion**

Marly and CTI appear to share similar values and should fit well together. Based on both the quantitative and qualitative aspects of this deal, I recommend that CTI proceed with the Marly endorsement, subject to contract changes. Before CTI signs the deal, the company should renegotiate with Marly relative to the discussion provided above.

### **Assessment Opportunity #4 (Strategic Issue #3 – Upgrade or downgrade KILO)**

*The candidate is expected to complete a quantitative and qualitative assessment of whether CTI should upgrade or downgrade KILO.*

*Quantitative: The candidate should perform a preliminary calculation that assesses the impact on profitability that both the potential upgrade and downgrade of KILO would cause in CTI's electronics division.*

*Qualitative: For each of the upgrade and downgrade options, the candidate should assess whether this investment meets the board's objectives of increasing the company's targeted age segments, and growing sales and profits. The candidate should also discuss the fit with CTI's strategy, vision and mission, and core values, and the risks and opportunities related to this decision.*

*Conclusion: The candidate should consider both the quantitative and qualitative analyses when drawing conclusions and making recommendations.*



### Upgrade *KILO* – Quantitative Analysis

Initial cost of upgrade \$5,000,000

#### Net Profit Comparison for *KILO*

Year	Profit – No Upgrade	Profit with Upgrade	Variance
2024	\$1,640,000	\$1,812,800	\$ 172,800
2025	\$1,722,000	\$3,708,000	1,986,000
2026	\$1,808,100	\$4,023,180	2,215,080
2027	\$1,898,505	\$4,769,415	2,870,910
2028	\$1,993,430	\$4,721,721	2,728,291
			<u>\$9,973,081</u>

Based on the information provided, it appears that the *KILO* upgrade would provide a sizeable return. For a \$5 million initial cost, *KILO*'s total net profit would increase by nearly \$10 million over the next four years. If the information provided proves to be accurate, the upgrade of *KILO* would be a lucrative investment for CTI.

However, CTI should recognize that this forecast may be overly optimistic, especially when it comes to future sales. It is estimated that the revenue of *KILO* will increase by 5% per year; however, as the popularity of video games can rise and fall quickly, the expectation that *KILO*'s popularity will continue to increase may not be realistic. In fact, if *KILO* experiences a sharp drop in popularity, these projections may prove to be very inaccurate.

### Upgrade *KILO* – Qualitative Analysis

#### Pros:

- To date, sales of *KILO* have surpassed expectations and there appears room to grow. One of the board's stated objectives is to grow the profits of CTI. *KILO* has helped drive growth, and can continue to do so, especially if the upgrade is as successful as Thomas thinks it will be.
- The treasure boxes seem to be a very powerful tool to help drive *KILO*'s earnings; since this feature was introduced, sales of *KILO* have significantly increased.
- The new version of *KILO* targets a wider age segment of the population; this satisfies one of the board's stated objectives.

- *KILO*'s performance has never been stronger and appears to be building momentum. The upgrade to *KILO* might help drive this growth beyond the company's expectations.
- The expansion of *KILO* will connect players via the Internet for large, international games; this type of expansion may greatly increase the market and scope of *KILO*.
- The users of *KILO* do not seem to be overly concerned with the research studies, as the popularity of the game continues to grow. This could provide CTI with more confidence that the upgraded version of the game will be successful.
- The proceeds from the success of *KILO* could be used to invest and grow other areas of CTI's business.

Cons:

- The game is still being advertised as educational; however, since the upgrade and introduction of treasure boxes, the game has lost most, if not all, of its educational aspects. It does not appear that CTI's marketing of the game is truthful; this violates CTI's new social code of conduct, which promotes an ethical regard for all the company's stakeholders.
- CTI relies on outside consultants to maintain the game; due to competition from other video game producers, these consultants are becoming more expensive and less available. This reliance on outside consultants could be costly and may result in the inability to properly update and maintain the game (if viable consultants are not readily available to maintain the product).
- *KILO* was specifically mentioned in recent research studies that concluded that the game's treasure boxes are harmful to the game's users, as this feature resembles casino games; this type of publicity could harm the sales/popularity of *KILO*.
- If CTI chooses to upgrade *KILO*, the Marly endorsement option would most likely not be available (*integration*). Marly would almost certainly refuse to have her name associated with *KILO*, given the game's poor reputation in terms of health and wellness. Marly may refuse to work with CTI at all, given a *KILO* upgrade.
- The negative research that has been released about *KILO* may harm other areas of CTI, such as the game/puzzle division. As *KILO* appears to violate many aspects of CTI's stated mission, vision, and core values, CTI's reputation as a producer of educational products may be harmed.
- The popularity of video games can rise and fall quickly; *KILO* is currently in a big growth phase, but it is also possible that the game could suddenly and quickly lose popularity. Given this trend, a further investment in *KILO* could be riskier than it appears.

### Downgrade *KILO* – Quantitative Analysis

Initial cost of downgrade	\$ 50,000
Current sales of <i>KILO</i> (annualized)	
Sales revenue	4,760,000
Treasure box revenue	3,480,000
	8,240,000
Revised revenue after downgrade	
Initial fall in sales revenue	50%
Sales revenue	2,380,000
Treasure box revenue	0
	\$ 2,380,000

Downgrading *KILO* would reduce the game’s revenue by approximately 70%. If these projections are accurate, *KILO* would still be expected to earn nearly \$2.4 million in revenue per year; however, it is not clear whether that amount alone would cover the expenses of the electronics division.

Based on the initial discussions with Marly, she may be willing to endorse the game once it has been restored to its original form. One aspect of this projection that is missing is the potential boost in sales that would result from Marly’s potential endorsement of the video game once it has been downgraded (*integration*).

### Downgrade *KILO* – Qualitative Analysis

#### Pros:

- Downgrading *KILO* to its original form would once again align the game with CTI’s stated mission, vision, and core values.
- Downgrading *KILO* may signify to CTI’s customers that the company is acting in the best interests of its customers; this may help boost brand loyalty and increase sales.
- Downgrading *KILO* would make an endorsement from Marly possible, which could help boost sales.
- Given that the current form of *KILO* does not resemble the original Know It or Lose It game, people who are interested in playing a video game version of the original game cannot do so. The downgrade would once again provide fans of Know It or Lose It with a video game version of the original game.
- Downgrading *KILO* would help protect the company’s reputation as a producer of educational and ethical games.

Cons:

- Thomas seems very much against the downgrade; if CTI decides to downgrade *KILO*, Thomas could be upset, and could refuse to provide CTI with more financing.
- In its current form, *KILO* appears to be a big success; to downgrade it now would stop the game's current momentum, and could upset *KILO*'s current user base.

**Conclusion**

The current version of *KILO* violates CTI's stated mission, vision, and core values. It has no educational value and may even be causing harm to its users. This type of product is significantly different when compared to the way that CTI built its business. If CTI decides to upgrade *KILO*, CTI should reclassify the game as non-educational and alter its mission/vision/values to reflect this change in philosophy. Further, although it appears that the upgrade of *KILO* would be a major financial success, that option is not without risk. *KILO*'s popularity could fall quickly, especially with the research that has been recently released.

The downgrade of *KILO* would ensure that the product fits with the company's stated intentions. Although the downgrade has an upfront cost and would result in lost sales, it is recommended that CTI proceed with the downgrade, to ensure that the company's reputation and performance are not harmed.

**Assessment Opportunity #5 (Strategic Issue #4 – Develop *BATNIX*)**

*The candidate is expected to complete both a quantitative and qualitative assessment of whether to develop *BATNIX*.*

*Quantitative: The candidate should calculate the potential earnings of *BATNIX*.*

*Qualitative: The candidate should assess whether this investment meets the objectives of increasing the company's targeted age segments, and growing sales and profits. The candidate should discuss the fit with CTI's strategy, vision and mission, and core values, and should also discuss the risks and opportunities related to the investment.*

*Conclusion: The candidate should consider both the quantitative and qualitative analyses when drawing conclusions and making recommendations.*

### Quantitative Analysis

Initial cost to develop <i>BATNIX</i>	\$	4,000,000	
Total market size		8,000,000	
Expected market capture		10%	
Expected volume of sales		<u>800,000</u>	
Annual income projection:			
Sales	\$	3,800,000	× \$4.75 per sale
Variable expenses	\$	(680,000)	× \$0.85 per sale
Fixed costs	\$	<u>(2,150,000)</u>	
Income before tax	\$	970,000	
Profit margin			26%

Based on the estimates provided, *BATNIX* would require just over four years before the initial investment was paid back to the company. Depending on how long *BATNIX* can sustain its sales, this investment could be a profitable one.

This projection does not incorporate any boost in sales that would occur if Marly endorses the video game (the likelihood of which is far higher with *BATNIX* than with *KILO*, given the educational aspects of *BATNIX*). However, this projection also does not contemplate the time required to develop *BATNIX* and how that development time may affect the financial attractiveness of this option. For example, will this type of game still be popular by the time it is eventually released? With the information provided, it is not possible to say. This, and other unknown variables, increases the risk of this investment. Prior to making an investment decision, CTI should do its utmost to uncover and assess the impact that any currently unknown variable may have on the viability of this game.

### Qualitative Analysis

#### Pros:

- Experts contend that young people should spend more time with educational products that help develop creative and critical thinking; given the information that has been provided about *BATNIX*, it appears that the game aligns with the recommendations of these experts.

- Marly mentioned that she may help promote CTI's video games if the games were socially responsible. Given the proposed elements of *BATNIX*, Marly might be willing to help promote the game, which could help increase sales (*integration*).
- *BATNIX* promotes less sedentary screen time and more outdoor activities; therefore, this option takes advantage of the growing popularity of video games as well as the growing push toward socially responsible products.
- As *BATNIX* seems to promote healthy habits, the game aligns well with CTI's stated mission, vision, and core values.
- The game can be played individually or as a group; this flexibility will allow the game to be played in a few different ways and could help bolster the game's popularity.
- The game is educational and promotes creative thinking and physical activity; this aligns with the growing market for healthy video games.
- As the market for *BATNIX* is a niche market, there should be less competition relative to the market that *KILO* is involved in.

Cons:

- Although growing, the market for video games such as *BATNIX* is small compared to the market for *KILO*; given the limited investment dollars, it might make more financial sense to invest in *KILO*'s upgrade.
- Thomas will not finance the development of *BATNIX* but he will finance *KILO*'s upgrade. Therefore, if CTI chooses to develop *BATNIX*, the more expensive option of financing through the bank will need to be taken.
- One of the board's objectives is to expand the age segments for which the company has products; as CTI already has products that target *BATNIX*'s proposed target age group, this option would not help satisfy this objective.
- Finding qualified programmers to help with the development of *BATNIX* could be a challenge, given the industry's current shortage of these experts. This risk is increased when considering how long it may take to develop *BATNIX* before it is ready to be marketed. Given that the popularity of video games tends to decrease quickly, it may not be realistic to assume that *BATNIX* will remain popular long enough for this project to be a profitable one.
- It is uncertain whether this game will be popular once it is released. It is possible that the game will not be well received and that the product's sales will not match the provided expectation. *KILO*, on the other hand, has already been well received by the market, and is therefore less risky in that respect.
- Although *BATNIX* seems to be more socially responsible relative to *KILO*, *BATNIX* still involves young people using screens. The 2022 research study indicated that screen time was harmful. CTI must consider whether this aspect of *BATNIX* aligns with the company's new corporate social responsibility code of conduct.

## Conclusion

*BATNIX* appears to fit well with CTI's stated mission, vision, and core values. As well, the market for *BATNIX* is far less competitive relative to the market that *KILO* competes in. Given that *BATNIX* would compete within a niche market, it may be less likely that the popularity of *BATNIX* will rise and fall quickly. That being said, the economic benefit of *BATNIX* is projected to be lower than *KILO*'s upgrade and it is unclear whether the development process will result in a popular game. Therefore, there are significant risks involved in choosing this project. Before CTI makes this investment, further research should be completed to try and gain confidence that there will be a market for this game once it is ready for release. However, if CTI can gain confidence that there will be a market for the game, *BATNIX* appears to be profitable and it fits well with the company's values. By investing in *BATNIX*, CTI would take advantage of the growth in the video game market while also staying true to the company's roots as an educational and ethical company. It is therefore recommended that CTI proceed with the development of *BATNIX*, once the proper risk analysis has been completed.

**Assessment Opportunity #6 (Strategic Issue #5 – Switch CTI's strategic focus from board games to video games such as *KILO*?)**

*The candidate is expected to complete a qualitative assessment of whether CTI should shift the strategic focus of the company.*

## Qualitative Analysis

### Workers:

- Game/puzzle division – Nina staffed the R&D department with experienced and innovative developers. In addition, her department has experienced a significant increase in productivity and morale. Based on Nina's presentation, the R&D department has improved the lead time of products and has multiple board games in the development phase.
- Electronics division – Chloe intended to build a team of employee programmers who would develop the games for the electronics division but was unsuccessful, apparently due to the high demand for programmers. *KILO* had to be developed by outside consultants. Moreover, all maintenance procedures for *KILO* and any other piece of software that the division produces will require the assistance of outside consultants.

New product development:

- Game/puzzle division – The division currently has three products in development, one of which may, based on initial review, win the game of the year award. Given the exposure the game would receive, that award could help drive sales.
- Electronics division – There are currently no new video games in development, although the company plans to potentially upgrade *KILO* or begin the development of *BATNIX*. Therefore, currently, the entire electronics division is reliant on the continued performance of *KILO*.

Distribution:

- Game/puzzle division – The division must partially rely on toy shops and other retail shops for distributing CTI's products; this process is more expensive and cumbersome relative to the electronics division.
- Electronics division – These games are delivered electronically, which makes it far easier and less expensive to distribute these products.

Reputation:

- Game/puzzle division – Given the continued success of Know It or Lose It, CTI's reputation for providing quality board games and puzzles remains strong; therefore, CTI can sell its products at a premium.
- Electronics division – *KILO* has begun to attract negative media attention that appears to be driven by recent research, which concluded that some elements of electronic games, such as CTI's treasure boxes, are harmful to users.

Industry trends / consumer preferences:

- Game/puzzle division – There has been a recent resurgence in the popularity of board games as people learn about the potentially harmful effects of too much screen time. Some parents are also choosing to give their children more traditional toys, such as board games, given the research that has indicated the potential harmful effects of screen time / treasure boxes.
- Electronics division – The growth of video games has outpaced traditional games and has gained momentum in all age categories. Even though there has been negative research surrounding certain elements of software, the growth of this industry segment is still strong and will likely outpace that of the traditional game market.



Competition:

- Game/puzzle division – This division competes in a market that is far more mature than the electronics division; as such, the traditional game/puzzle market appears to be attracting fewer competitors relative to the video game market.
- Electronics division – Competition within the video game industry is growing as more companies try to take advantage of the growth that this market is experiencing. This has led to a shortage of game developers, which will likely make it more and more costly to develop games. In addition, many video games gain and lose popularity quickly as customers move on to the latest releases; this increases the risk of developing a video game. *BATNIX*, however, would compete within a niche market, which may mean that fewer competitors enter that particular space.

Adherence to CTI's mission, vision, and core values:

- Game/puzzle division – The division and its products align very well with CTI's stated mission, vision, and core values. The division also has a number of games in development that promote education; this will help ensure that CTI retains its reputation as a producer of educational products.
- Electronics division – *KILO* does not appear to align with the company's mission, vision, or core values, since it has deviated from the path that CTI has taken since its inception, that of being a company that promotes education. Unless the company decides to develop video games that align with the company's core values, taking this new path away from CTI's traditional board games and allocating the company's investment dollars toward video games such as *KILO* would mean that CTI abandons the momentum it has built as an educational toy maker.

Profitability:

- Game/puzzle division – Currently, this division earns a higher level of income relative to the electronics division, but the profit margin of the division is less than that of the electronics division. However, the profitability of the division could be improved with the addition of Marly, as well as through the sale of the games and puzzles that the division has in development. In addition, the profitability of this division may be more stable, given CTI's strong reputation and the lesser competition in this market.
- Electronics division – The profitability of this division exceeds the game/puzzle division and is projected to go even higher if CTI upgrades *KILO*.

## Thomas

Thomas appears to be very focused on increasing CTI's profits, even if that means that CTI deviates from its mission, vision, and core values. This approach could prove to be very risky for CTI's continued long-term success.

CTI adopted a corporate social responsibility code of conduct and a core value that states its commitment to its stakeholders; it appears that *KILO*, in its current form as well as in its upgraded version, would violate this commitment. This is because new research indicates the potential harmful effects of the game. Therefore, if CTI continues to offer *KILO* in its current or upgraded form, the company would be violating the board's stated intentions. Regardless of CTI's investment choices and chosen strategy, the board should discuss this apparent difference of intention and settle on an agreed direction.

## **Conclusion**

If CTI decides to shift its focus, CTI will need to alter its mission and vision statements, and revise its core values, as the shift suggested by Thomas would appear to violate them. A shift toward *KILO*-like video games would also increase risk in a few crucial areas, such as in CTI's access to competent workers, its reputation, and competition.

Although CTI's first foray into video games has been highly profitable, it is unclear whether that increase in profitability would be sustainable, given the nature of the video game market, or whether it would be duplicated with other video games. As mentioned, the popularity of some video games rises and falls quickly. If CTI decides to shift its focus, it is possible that the company will lose its strong reputation, and then also suffer from a rapid drop in the popularity of its only video game, *KILO*. Therefore, this suggested shift in focus appears to represent a large increase in risk for CTI.

At this point, it is recommended that CTI adhere to its stated mission, vision, and core values. A shift in focus is not recommended.

### Summative Assessment #3 (Conclude and Advise)

For Summative Assessment #3, the candidate must be assessed for reasonableness of attempt:

**Yes** – The candidate provided reasonable conclusions for each major issue.

**Unsure** – The candidate attempted to provide reasonable conclusions for each major issue.

**No** – The candidate clearly did not provide reasonable conclusions for each major issue.

#### **Enabling Competencies**

6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

6.3.2 Articulates limitations to recommendations

6.3.3 Applies decision criteria to choose among viable alternatives

6.3.4 Ensures that decision criteria do not conflict with professional ethics and values

*The candidate is expected to present an overall conclusion that integrates each strategic option in a coherent and logical way. The candidate is expected to draw logical conclusions and recommend the strategic direction that CTI should take. The conclusion should integrate the analysis of all five major issues (the purchase of Sengames, Marly's endorsement deal, upgrade or downgrade of KILO, potential development of BATNIX, and the potential strategic shift in focus from board games to video games such as KILO). The candidate is expected to take into consideration the financing requirements of their recommendations.*

*The recommendations should be strategic in nature and display good professional judgment and logic. Suggesting that further information is required is acceptable where justified and consistent with the analysis.*

*As there is no one correct answer, a variety of recommendations could be provided. The recommendations should be consistent with each other (e.g., recommending the Marly endorsement while also recommending an upgrade of KILO does not make logical sense).*

*The following conclusion is based on the perspective that CTI would be best to adhere to its original mission, vision, and core values.*

Overall, CTI should make investments that align with its stated mission, vision, and values. CTI should continue to invest in the game/puzzle division, and to not focus solely on the growth and development of the electronics division, as Thomas has suggested. To shift the company's focus to the development of video games, and away from the development of traditional games and puzzles, would likely increase the company's risk profile, given the factors discussed above. CTI is mainly known, and has a strong reputation, as a producer of educational products. To deviate from this direction and pursue entertainment-based video games would force CTI to abandon the strategy that has been at the heart of the business thus far. In addition, the video game market appears to be quite risky in that there are many competitors, some products gain and lose popularity quickly, and the labour required to build and maintain video games has become scarce. Moreover, the electronics division currently has no other products in development, other than *BATNIX*, whereas the game/puzzle division has a number of products in development (one of which may win the game of the year award).

In line with this recommendation, CTI should move forward with the endorsement of Marly (if Marly is willing to renegotiate some aspects of the endorsement deal), and development of *BATNIX*. CTI should also downgrade *KILO* to its original form so that the game aligns with the company's stated mission, vision, and core values. With this recommendation, CTI will initially lose sales on *KILO*; however, that sacrifice will allow CTI to remain true to the company's roots and could greatly benefit the company's reputation. In addition, with the endorsement of Marly, CTI's sales are expected to increase.

The purchase of Sengames aligns with the stated mission, vision, and core values; however, at this time, CTI should not move forward with the investment because it appears to be overpriced. CTI may want to conduct further due diligence on Sengames, and specifically on the patents that Sengames owns, in order to determine what the actual value of Sengames is to CTI. Without knowing the value of the patents, it is impossible to provide a reasonable recommendation.

With this recommendation, any financing from Thomas will not be available. Therefore, CTI will need to obtain the \$5 million that NHB has offered. After the recommended investments are made, the company will be left with \$1.75 million in available cash resources. However, as discussed above, CTI should renegotiate with Marly so that the cash payments made to her happen over the life of the agreement rather than as an upfront payment. This will help ease CTI's cash flow concerns, and will help reduce the chance that CTI runs into cash shortages in the future.

Cash available without *KILO* upgrade:

Cash on hand	\$	800,000
NHB line of credit (amount available)		3,000,000
New NHB loan		5,000,000
		8,800,000
Marly endorsement		(3,000,000)
<i>KILO</i> downgrade		(50,000)
<i>BATNIX</i>		(4,000,000)
		(4,050,000)
Cash remaining	\$	1,750,000

**Summative Assessment #4 (Communication Hurdle)**

For Summative Assessment #4, the candidate must be assessed for reasonableness of attempt:

**Yes** – The candidate adequately communicated their response.

**No** – The candidate clearly did not communicate their response adequately.

Insufficient communication in a candidate’s response would generally include some of the following:

- The response is difficult to understand.
- The reader needs to re-read sections several times in order to gain an understanding.
- It is not clear what point the candidate is trying to make.
- The quantitative analysis does not make sense because of illogical ordering or a lack of labelling.
- There is an excessive amount of spelling and grammatical errors.
- The language used is unprofessional.

### Summative Assessment #5 (Overall Assessment)

For Summative Assessment #5, the candidate must be assessed in one of the following, based on their overall performance:

**Clear Pass** – Overall, the candidate provided an adequate response, clearly meeting the minimum standards for each of the summative assessments.

**Marginal Pass** – Overall, the candidate provided an adequate response, with some errors or areas of omission, but including the underlying key concepts.

**Marginal Fail** – Overall, the candidate provided an attempt at a response, with several errors or an incomplete analysis.

**Clear Fail** – Overall, the candidate did not provide an adequate response because the response was deficient in multiple areas.

To be assessed a Pass, the candidate is expected to perform adequately in all the summative assessments and demonstrate that they addressed issues of importance in a cohesive, professional manner.

In making their overall assessment, markers were asked to consider the following:

1. Did the candidate step back and see the bigger picture, and then address the broader issues identified?
2. Did the candidate prioritize the issues by discussing the major and minor issues in appropriate depth?
3. Did the candidate use both quantitative (when available) and qualitative information to support their discussions and conclusions?
4. Did the candidate use the appropriate tools to perform quantitative analysis?
5. Did the candidate use sufficient case facts (current case and Capstone 1 case) about the external and internal environment to support their discussions?
6. Did the candidate communicate their ideas clearly, integrating and synthesizing the information?

## **SAMPLE RESPONSE – CTI VERSION 1**

***Below is an actual passing candidate response.***

### Creative Toys

- Mission statement – We create innovate educational games and puzzles that encourage creativity and critical thinking and that can be enjoyed by all ages. We strive to develop awards winning products made form sustainable materials
- Vision statement – To make exceptional games and puzzles for all ages that are enduring, fun and educational and that encourage critical thinking

#### Key success factors

1. Have strong brand in order to obtain and retain shelf space
2. Strong relationships with vendors in order to source high quality materials at a reasonable price
3. Strong relationship with retailers in order to have products feature in the stores
4. Diverse customer group in order to decrease customer concentration
5. Diverse range of product in order to reach all age demographics
6. Agile production schedule in order to meet inventory levels, and customer demands
7. Continue to focus on innovation in order to meet customer ever changing tastes, and to be able to forecast revenue and production
8. Improve production process with a focus on decreasing Manuel labour, and improve technology advancements for efficiently and decrease costs.

#### Core values

1. Manufacture and delivery products safe and high quality products to the customers
2. Manufacture products using organic and sustainable materials
3. Create a culture where employees are respected and listen too
4. Continuously innovate in order to achieve awards for brand recognition
5. ADD – have an ethical regard for our stakeholders as well as the environment in all our actions and business decisions

#### Financial analysis

- The company improved its cash position since 2021, however the amount of 800k its not significant
- Company does not want to exceed debt of 8M
- Thomas owns 32% of CTI and invested 4M
- Company sold doll division
- Assuming still loan covenant of 1.2 on quick ratio and 2.8 EBITDA to Interest

## Goals

- Increase sales by 25% by 2025
- Operating income of 3M by 2025
- Increase customer target market
- Increase CTI geographic scope
- ADD ASSUMPTION – Improve bank covenant ratios.

## Constraints

### Qualitative

- The company does not have any fulltime program developers only hiring ones on contract or part time contract
- Electronic games for kids have negative publicity

### Quantitative

- The companies cash on hand of 800k
- Companies only has 3M of room on their line of credit, and interest rates continue to go up

## SWOT

### Strength

- Thomas has sold his PET retail stores, and is now focusing efforts on CTI with such an expert in the industry, there can be more strategic decisions being made.
- CTI has a number of board games in the developing that will have strong demand, and even one that could win an award
- CTI continues to use high quality organic materials which allows them to charge premium prices
- CTI continues to focus on educational toys in their board game division, and these products have a longer product life cycle.
- R&D divisions has greater improved their lead time for developing games
- The electronic division sales have done better than expected

### Weakness

- The company has no full time developers, and only hire consultants at the moment, which means there a high probability of turnover amongst the develop staff which increase the risk work could be delayed
- CTI age demographic of 8 – 13 makes up 70% of the sales for the division which is a significant concentration, and a risk if CTI does not develop any quality products for that demographic



### Opportunities

- Board games have seen a resurgence, and with the new aligned R&D division, the company can introduce more quality games, and increase sales.
- The current trend is for celebrities to endorse board's games, and CTI has the opportunity to follow the trend in order to increase sales.
- Research indicates that video games are not good for kid's development and some parents want kids to push to play with traditional toys, and this is an opportunity for CTI to continue to sell their board game and game division products.
- CTI can purchase Sengames games and expand further in the electronic games market for the elderly

### Threats

- There has been a great demand for video development, the industry wage is significantly going up, and there is a change there could be a shortage, or wages go up so high CTI video game division is not profitable.
- There is knowledge coming out in the marketplace that video games for children is bad for brain development, this could work against any of future games the company wants to develop.
- There is more toy manufacturing investing in video games that is making the market more competitive

### Issue

- We are going to evaluate if purchasing SENGAMES is a good venture for CTI to invest into

### Analysis

- Assessment – We are assessing if CTI should purchase Sengames and expand into the 60+ age demographic for dementia games

### Quantitative

- The asking price for SEG would be significant in comparison to what the current market price is.
- Please see exhibit
- The FMV of SEG would be 2M, and the company is asking for 4.5M
- There would be a goodwill of amount of approx. 2.4M which is substantial, and the company would not have the cash flow, cash or credit in order to purchase the company

## Qualitative

### Pro Purchase

- One of the key success factors is for the company to reduce their customer concentration, and this would allow CTI to expand into a new age demographic of older generations
- This would also increase and diversify not just customers but also the company's product ranges, which should in turn improve revenue.
- There is an opportunity for CTI to develop strong relationship with bookstores where SEG products are sold. This would be a good opportunity for CTI to start developing strong relationship with these bookstore retailers to sell some of their board game products, which would be cross-selling products. This is also a key success factor as CTI could feature more of its board game toys in the bookstores.
- SENGAMES aligns with CTI mission and vision strategy of providing educational tools to have brain and learning development no matter the age group.
- SEG has valuable patent, which could allow CTI to use to develop other board games, which is a key success factor and core value, as in continuously innovate new games in order to have products in the pipeline to meet customer demands and win awards.

### Con Purchase

- The company would be very restricted on finance's if they were to purchase SEG as CTI's line of credit would be maxed out, and their cash account would be minimal, restricting any other plans to improve production or sales.
- The company wants to continue to create a culture of respect among its employees, however Thomas does not seem to think Irene would be a good fit in CTI, which could cause tension, and a bad work environment, and the history shows CTI does not have a good track record of integration of new companies into CTI
- Acquiring the company, and bringing production in house increases with the company's track record of bad integration, increases the risk of cost overruns, which is an area of focus on as they need to continue to decrease their production costs.
- Our current R&D division has no experience with developing games for this age demographic, which could cause errors, time delays, cost overruns, and tension and CTI wants to continue to save on costs, and create an environment where everyone is feeling respected.

### Conclusion

- This is a very good option for the expanding into a new demographic and into new retailers, however due to the asking price being significantly higher and the cash and line of credit restraints CTI should not purchase this venture unless they can improve their cash position and buy SEG at a cheaper price.

## Issue

- We will be discussing the chess prodigy endorsement

## Analysis

- Assessment – CTI wants to endorse Marley whom is a chess champion that aligns with their current vision and mission; however, Marley has certain demands that could hinder CTI operations

## Quantitative

- The NPV of the endorsement would be -1.5M, with sales increase of 30% for 5 years and a GM of 44%
- There would be an opportunity cost of restoring the electronic game division back to its original version, which means the company would lose all the revenue from the treasure chests and 50% of sales on the KILO game.
- Please see exhibit, however the NPV calc over 5 years and the incremental revenue would both be negative.

## Qualitative

### Pro Endorsement

- This would help increase the company's brand recognition which would help them establish greater shelf space for toys which is a key success factor, along with improving their chances of rewards for their board games
- Marley really aligns with the company's mission and vision statement of providing educational toys, to the younger demographic and increase the core division's sales at the same time.
- Marley would be willing to test and endorse future products, which would provide the company with great feedback, which would assist the R&D department, in creating future games with a greater chance of winning rewards,
- Feedback from Marley could allow games to get to the market faster in order to meet customer demands and assist in improving forecasting for production, and revenue
- Endorsement from Marley allows the company to forecast revenue more reliably as there would be a 30% increase over the forecast and, cashflow over the next few years that allows the company to forecast and be able to focus on the long-term strategic direction.

### Con Endorsement

- This would put more concentration on customer sales to one age demographic, which goes away from one of CTI's key success factors.
- This would decrease their range of product concentrating moving away from video games into a more concentrated board game

- This option would have the company borrow more money for the upfront costs and would put the loan covenants at risk of breach for the bank to call the loan.
- Currently Marley aligns with the company's mission and vision however, they would have no control over Marley, and there is significant risk that a scandal or bad publicity or even no longer being a chess champion in the future would negatively affect the company's long-term sales over the forecast of 5 years.

#### Conclusion

- At this time, the industry trend is for parents to push kids to have less screen time, however the electronic game KILO demographic is geared towards 18 – 64 which is not kids related, and if Marley was to endorse the company would lose out on average 3M in revenue year one, but would have 30% in sales on the board game division. Due to having to run all future development around Marley and her team, which is not in the best interest of the CTI, as one of the companies core values is to look out for the stakeholders and this would not align with that core value as Marley would seem to have a lot of say on decisions.
- There would be a significant loss in incremental income and NPV if the company were to take on the venture. The company should not proceed with this option.

#### Issue

- We are reviewing if the company should do an upgrade on KILO

#### Analysis

- Assessment – We are reviewing if CTI should upgrade the KILO game in order to increase its revenue and net income over the next 5 years

#### Quantitative

- The increase in revenue is substantial over the 5-year period, we would assume the company would take loan option or the PS option In order to fund this venture
- The Loan would have mandatory payments on a monthly basis however, they the expense would be deductible against net income for tax purposes, however the total amount would be callable in 2031 which could hinder the companies cashflow that year
- The PS option would start paying non-cumulative dividends out 2028.
- Please see exhibit

## Qualitative

### Pro upgrade

- This option improves the company's cash flows, where the company can pay down debt, consider providing dividends to its shareholders, and even purchase even higher quality material or production equipment for the board game division premium products
- This option would align with the core value of taking into account internal stakeholders where the company would be more profitable for the company to focus on paying dividends to shareholders, increase staff wages, and spend money on environmental improvements
- This option would allow CTI to continue to diversify their customer base, continuing to expand into different demographic of age range instead of focusing solely on 13 – 18 age group.
- Would help achieve target goals of 3M profit and 25% growth

### Con upgrade

- KILO does not align with the company's vision and mission, and industry news is games have harmful affects that could damage CTI's brand and decrease companies board game division sales
- There is threat that electronic developer's wages are going up, and this would work contradictory against the company focusing on production process and decreasing costs. This could come a time where the division is a lot less profitable due to wage increases
- There is a huge divide among senior leadership on this strategy, and this could create a divided culture where not everyone is listened too or heard
- Focusing on upgrading KILO will take time, focus, and resources away from their core business of board games. Thomas event stated the company could afford to lose some sales in the board game division. If the company gets away from their core division, and focus solely on electronic games they will once again be moving towards customer concentration of customers whom just play video games.

### Conclusion

- We here believe, the company should move forward despite the risk of reputation damage. The return on investment would be significant, which would allow CTI to generate higher cash flows, which would allow the company to use these funds for other part of the business, and further expansion for the company into other educational games.

## Issue

- We are going to discuss the BANTIX expansion venture

## Analysis

- The industry trends are changing for the parents, and CTI has an option of developing a game to promote kids going outside significantly more. We must review if this option is beneficial to CTI

## Quantitative

- This option would generate approx. net income of 1M per year, and would take 4 years for the company to receiving a return on their investment.
- We would assume the company would issue preferred share of 4M in order to cover the costs to implement this strategy with dividend payments not starting until 2028.
- The venture is profitable from a net income standpoint, however the company would need to issue share would could hinder the company's cashflows with also taking out a 5M line of credit use for KILO upgrade

## Qualitative

### Pro Bantix

- This would allow the company to capture a completely new demographic of kids going outside, and this trend is becoming popular. This would allow the company to diversify its customers for active kids
- 70% of the board game division sales are in the 8 – 13 years old, there is a great opportunity for cross selling products amongst the two divisions, as the age groups are very similar.
- This would be another product that could generate great brand awareness for CTI in order for them to improve sales on their board game division
- This option is a great compliment to their vision, and mission statement teaching kids about nature, and climate. Associating climate change into the app would also compliment the environmental aspect of the business.
- There is limited competition in the industry thus allowing CTI to capture a majority of the market without having to spend significant costs.

### Con Bantix

- This option would significantly increase the companies fixed costs, which creates risk that it could become an unprofitable venture if the forecast is not accurate or the right number of units are not sold. The company would need improved cash flow in order to service the new debts and dividends payments which puts the company at risk of insolvency if the project is not profitable
- There is developer constraint within the game industry, and hiring new developers in order create this game could take focus away from KILO or take

focus away from their foundation of the board games division such as procurement of materials and improving the production process.

- This option could continue the expansion away from the core of the business of board games, and could shift the company's strategy and resources into a very competitive market of electronic games.
- The age demographic of the game is quite small of 10 – 14 years, which means there is less market to capture which increases the risk of the product being less profitable or increasing customer concentration.

#### Conclusion

- At this time, The Company should pursue this option, as it would be excellent compliment to upgrade to KILO, and we believe the bad publicity in KILO would be offset by the good publicity in Bantix
- This option would also allow you to gain a new demographic of customers, whom are more active, and this segment is becoming more and more popular
- The downside of the investment would be the fact you would not see a return on the investment for four years, however we believe it would be a great compliment to KILO and the board game division.

#### Overall Conclusion

- First off, we would like to address the shift in strategy for CTI. We do not believe it would be in the best interest for the company to shift away from board games and solely into electronics games. This would reintroduce customer concentration concerns, along with go against the companies vision and mission statement. Board games is currently the core of the business, and is what CTI is known for, and along with a resurgence in board games sales, and a new structured R&D department we believe board games sales will increase for CTI along with a couple of the games in develop have a chance to win rewards which will help the companies brand.

Below we would like to talk to you about the option

#### Sengames

- i) We believe this option would be a fantastic compliment for the CTI, which would allow the company to expand into a new age demographic and possible increase sales with board game division if we can cross sell products to the bookstore retailers. Unfortunately, the market is unproven at this time, and the amount Irene is asking for the company is double what he fair market value is. At this time, we should decline the option due to the fact it is way overprice even considering the intangible asset the company would bring in for development reasons.

### Endorsement

- ii) Marley would be a great addition to CTI family; however, the NPV of the venture is negative due to the loss of sales opportunity in the KILO game from Marley demand. Marley would be a good ambassador for the company however celebrities fall in and out of popularity fast, and we feel most projects would need to be run by the Marley team for approval which is what we believe the venture should be declined.

### Upgrade KILO

- iii) We understand the game has been getting bad publicity, however the game is geared towards adults ages 18 to 64, and the company could put a disclaimer on the app as well. This option provides a great return on investment, and would provide increased cash flow for the company to pay down debt and use these funds for greater development in the board game division and decreasing costs there. CTI would need to come up with a strategy in order to capture program developers, as this is a significant risk in the industry with wages going up. With the increased NPV, there is an opportunity for the company to offer higher programmer salaries in order to get a few on fulltime. Project should be accepted.

### Bantix

- iv) Bantix would be an experimental electronic game that could capture a new developing demographic and would expand CTI customer demographic in active children. We understand that the return on investment would not happen for a couple of years; however we believe this venture would have a lot of good publicity that would counteract any bad publicity for the upgrade in KILO. This venture would also align with educational and critical thinking games that promote helping the environment. We believe due to this we should proceed with this venture.

### Summary

- Sengame- Decline
- Marley Endorsement – Decline
- KILO upgrade accept
- Bantix – accept



We taking on the last two ventures, there will be a significant increase in debt from 3M to 8M, which is the limit of the shareholders debt amount. We have to take into consideration that there is risk of interest rates continuing to go up, however we believe this will be offset by the cash flows from the KILO upgrade. The interest expense on the new loan would be 337k per year, which could hinder our bank loan covenants; however, there is the option to issue preferred shares for this venture and the Bantix venture. The total upfront cost of both investments is going to be 9M, which is substantial amount of money, and the best structure between the loan and PS would be the one that does not break loan covenants and cost the least to the company.

The company accountant department is going to needs to focus on cashflow for the next few years in order for the company to be able to service its debt, vendors and issues any dividends.

<b>Upgrade KILO with Line of Credit option</b>						
	Year 0	2024	2025	2026	2027	2028
Revenue		8,240,000.00	12,360,000.00	12,978,000.00	13,626,900.00	14,308,345.00
Capital Costs	(5,000,000.00)					
Interest cost		(337,500.00)	(337,500.00)	(337,500.00)	(337,500.00)	(337,500.00)
<b>NI</b>		<b>1,812,800.00</b>	<b>3,708,000.00</b>	<b>4,023,180.00</b>	<b>4,769,415.00</b>	<b>4,721,721.00</b>
	(5,000,000.00)	1,475,300.00	3,370,500.00	3,685,680.00	4,431,915.00	4,384,221.00
Interest	0.0675					
Year 0	(5,000,000.00)					
Year 1 - 5	\$13,945,079.26					
	8,945,079.26					

<b>Upgrade KILO with Dividend</b>						
	Year 0	2024	2025	2026	2027	2028
Revenue		8,240,000.00	12,360,000.00	12,978,000.00	13,626,900.00	14,308,345.00
Capital Costs	(5,000,000.00)					
Interest cost			-	-	-	(500,000.00)
<b>NI</b>		<b>1,812,800.00</b>	<b>3,708,000.00</b>	<b>4,023,180.00</b>	<b>4,769,415.00</b>	<b>4,721,721.00</b>
	(5,000,000.00)	1,812,800.00	3,708,000.00	4,023,180.00	4,769,415.00	4,221,721.00
Interest	0.0675					
Year 0	(5,000,000.00)					
Year 1 - 5	\$14,977,521.38					
	9,977,521.38					

**Sengames**

Sales	3,700,000.00
COGS	2,594,000.00
<hr/>	
GM	1,106,000.00
Other Costs	
Distribution	75,000.00
Marketing	120,000.00
Administration	420,000.00
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	615,000.00
NI	491,000.00
EBITDA	491,000.00
Multiplier	4.00
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Price	1,964,000.00
Asking Price	4,450,000.00
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	(2,486,000.00)
Additional Cost for production	(500,000.00)
<hr/>	
	(2,986,000.00)

**Marley**

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Upfront cost	(3,000,000.00)					
Down grade	(50,000.00)					
Profit		3,558,956.00	3,558,956.00	3,558,956.00	3,558,956.00	3,558,956.00
Opportunity Cost of moving game to original version		(2,930,000.00)	(3,076,500.00)	(3,230,325.00)	(3,391,841.25)	(3,561,433.31)
	(3,050,000.00)	628,956.00	482,456.00	328,631.00	167,114.75	(2,477.31)
Interest	0.0425					
Year 0	(3,050,000.00)					
Year 1 - 5	\$1,476,764.16					
NPV	(1,573,235.84)					
Incremental Revenue Year 1	(2,471,044.00)					
Net Sales	11,770,000.00	15,301,000.00				
GM	5,178,800.00	6,732,440.00				
Marketing	230,000.00	230,000.00				
R&D	560,000.00	560,000.00				
Amort	590,000.00	590,000.00				
Distribution Cost	306,000.00	313,956.00				
Occupancy cost	435,000.00	435,000.00				
Admin	1,430,000.00	1,430,000.00				
	3,551,000.00	3,558,956.00				

Assumption: original version of Game is excluding Treasure chests at year 1 of 1.7M with an annual growth rate of 5% and excluding 50% of regular sales

Batnix

Target group 10 -14	
Size	8,000,000
Capture	0.1
Revenue Per	4.75
Variable Cost	0.85
Fixed costs	2,150,000
Upfront Costs	4,000,000

BANTEX market size	800,000.00
Revenue Per	4.75
Variable Cost	0.85
	<u>3.90</u>

BANTEX market size	800,000.00
	<u>3,120,000.00</u>
Fixed costs	2,150,000.00
Incremental Revenue	970,000.00

Upfront Costs	4,000,000.00
Incremental Revenue	<u>970,000.00</u>

4.12 To break even

Assumption PS issued is 4M

**APPENDIX E**

**THE COMMON FINAL EXAMINATION  
DAY 1 CTI VERSION 2 BOOKLET – MAY 30, 2023**

**COMMON FINAL EXAMINATION  
MAY 30, 2023 – DAY 1**

**Case (CTI-Version 2)**

**(Suggested time: 240 minutes)**

It is May 7, 2024, and Martin Ferring, your boss at Hilton Consulting Group LLP (HCG), tells you that the firm has another consulting engagement with Creative Toys Inc. (CTI). Martin recently met with the Board of Directors (the board) for an update. In 2023, Thomas invested \$6 million in preferred shares, with the conditions that he first proposed except that the dividends are non-cumulative. In October 2023, Lorraine was appointed chair of the board, replacing Thomas, who stayed on as a director. Also in October 2023, Solange Johannsen, who previously worked at a large global toy company and led its successful entry into the video game sector, was hired as the CEO. Solange is considered a visionary who motivates others to embrace her innovations.

CTI declined the agreement with Discount Pete's Inc. (DPI) and still does not sell its games and puzzles to non-traditional retailers, such as bookstores and gift stores or online retailers. Sales of Know It or Lose It have declined significantly as the product nears the end of its life cycle. CTI turned to character licensing arrangements for some of its games and puzzles. CTI's character-licensed products significantly outsell its non-character-licensed products.

CTI did not sell Sook's Dolls Limited (SDL), and the deficient Sookie dolls were recalled in 2022. On January 1, 2023, CTI replaced Greenhaven with Kolepare Inc. (Kolepare) as its doll manufacturer. The quality of the end products has since consistently exceeded expectations. During 2023, CTI introduced a clothing line for the Sookie dolls. The clothing line is sold online directly to consumers, resulting in higher gross margins for these clothing products and an ability to gather feedback from consumers. The dolls are still sold only through retailers. SDL has recently received some attention from retailers in the U.S. seeking to add more organic toys to their product lines.

In June 2023, changes were made to the R&D department. Cale Baxter replaced Andrew Wang as the department head, and many of the previous R&D employees were also replaced. CTI's board instructed Cale to hire employees with experience in doll design to ensure that SDL's potential growth was not ignored.

In early 2023, CTI opened an electronics division, and CTI's first video game, based on Know It or Lose It, called Smarts to Win, was released online, directly to consumers. The release was successful, targeting female gamers aged 34 to 64. However, the division has floundered since the departure of Chloe in June 2023. In November 2023, Solange hired Aleck Morrell, who was instrumental in developing three top sellers in the video game market before he was hired. The division continues to develop new video games, but none have gone to market yet.

CTI's mission and vision remain unchanged. However, at a December 2023 board meeting, the first of CTI's core values was revised to: manufacture and deliver safe, high-quality educational toys and games *that persist over time*. The board made this revision to emphasize the importance of developing products that have a long life cycle.

In preparation for the next board meeting, Solange asked each division to develop at least one strategic proposal that aligns with CTI's vision. Thomas was unable to attend the board meeting where the presentations were discussed. CTI has asked HCG to review the strategic proposals presented and to develop a response and action plan for the board to consider. Martin asks you to prepare the report and to bring to his attention any other issues you notice. For this engagement, please ignore any tax implications within your analysis and recommendations.



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**APPENDIX I**  
**EXCERPTS FROM INTERNAL SEGMENTED INCOME STATEMENTS**

*Creative Toys Inc.*  
*From January 1 to December 31, 2023*  
*(in thousands of Canadian dollars)*

	<b>Games/ Puzzles</b>	<b>Dolls</b>	<b>Electronics</b>	<b>Total</b>
Net sales	\$ 21,700	\$ 6,640	\$ 5,130	\$ 33,470
Cost of goods sold (Note 1)	14,300	4,130	0	18,430
Gross profit	7,400	2,510	5,130	15,040
<i>Gross profit %</i>	<i>34.1%</i>	<i>37.8%</i>	<i>100%</i>	<i>44.9%</i>
<b>Expenses</b>				
Marketing and advertising	420	110	910	1,440
Research and development	750	220	0	970
In-house programmers' and developers' wages	0	0	2,450	2,450
Depreciation and amortization	910	200	840	1,950
Distribution costs	510	160	50	720
Occupancy costs	860	190	200	1,250
Administrative and general	2,250	410	450	3,110
Total expenses	5,700	1,290	4,900	11,890
Net income before taxes	<u>\$ 1,700</u>	<u>\$ 1,220</u>	<u>\$ 230</u>	<u>\$ 3,150</u>
<i>Net income %</i>	<i>7.8%</i>	<i>18.4%</i>	<i>4.5%</i>	<i>9.4%</i>

Note 1: There is no cost of goods sold related to the electronics division, given that the games are played online. Once a game has been developed, the only ongoing costs relate to any required maintenance and/or upgrades.

**APPENDIX II**  
**PERFORMANCE SHARE UNIT INCENTIVE**

On April 1, 2024, the board granted Solange performance share units (PSUs) to incentivize her to stay with CTI. The actual number of PSUs received will be determined on March 31, 2025, and will range from 0 to 300,000 PSUs, based on reaching the performance measures detailed below. For each individual performance measure achieved, Solange will receive the number of PSUs indicated. If she reaches or exceeds the target for all three performance measures, she will receive 150% (300,000) of the number of PSUs indicated.

If Solange is still employed by CTI on March 31, 2027, she will receive common shares equal to the number of PSUs she was awarded.

The PSUs are based on the following three performance categories:

<b>Performance Measures</b>	<b>Target</b>	<b>Number of PSUs</b>
Return on invested capital (Note 1)	12%	100,000
Number of annual product sales and/or software downloads	1 million	50,000
Number of new products (including offshoots) per year	6	50,000

Note 1: Return on invested capital (ROIC) is calculated as follows:

Annual net income before interest and taxes divided by net assets (where net assets = total assets minus total liabilities associated with the investment)

### **APPENDIX III INTERNAL MEMO – INDUSTRY UPDATE**

The retail toy market's annual sales are expected to increase slightly, between 1% and 1.5%, for the next three years. Traditional games and puzzles now represent 10% of the industry's sales. The trend of character licensing is bigger than ever, and only games and puzzles that are character licensed have seen growth. The doll segment, and related accessories, remains strong and is expected to grow by 8% annually. Educational toy retailers are losing market share to the large online retailers and to book and gift retailers. Due to their high volume of sales, online retailers are forcing their suppliers to lower their prices by as much as 20% or they will not sell their products.

Customers are more price sensitive but are still willing to pay a premium for character-licensed toys and for products made from organic materials. This is partially due to the recent scandal in which three companies were found to be using materials that caused allergic reactions and skin rashes in children. As a result, there is an increased consumer demand for toys certified as being made from organic materials only. There are expectations that these products' sales will increase significantly in 2024, 2025, and beyond. CTI's 2022 recall of the Sookie dolls worked in its favour. The public believes they can trust CTI's products, which has contributed to increased sales of Sookie dolls and is expected to increase the sales of CTI's other games and puzzles.

Sales of video games are expected to increase by 10% annually, although sales prices are falling due to increased competition. The larger toy manufacturers have moved into video games to diversify their products. Increasingly, video games are being targeted to young children, now as young as five years old. Schools are embracing educational video games to help with learning in the classroom, particularly for the primary grades. Studies have found that children using games designed to develop math and spelling skills, along with critical thinking, perform better in these subject areas.

Currently, the prime interest rate is climbing (it is at 3.8% today) and the Canadian dollar is strong. Per capita disposable income is expected to increase by 2% annually.

## **APPENDIX IV NEW KEY PERFORMANCE INDICATORS**

To: Division Leads  
From: Solange Johannsen, CEO  
Date: May 3, 2024

Subject: New Key Performance Indicators (KPIs)

As CTI moves into the future, we must look at innovative and creative ways to measure our success. I have designed the following KPIs for 2024 and 2025 to maximize the company's growth potential:

- Number of annual product sales or software downloads (including upgrades)
- Number of times the game is played in a month by a player
- Number of new products, including offshoots
- Product revenues
- Time to market (from product conception to market release — for both new products and product upgrades)

Because we have only \$3 million to invest in 2024, we need to invest it wisely. For each of your strategic proposals, I want to understand how it helps attain each of the KPIs and what its projected ROIC, as defined by the board, will be. To make the options comparable, given that they may have different development times and costs, please use 2025 projections to calculate the ROIC. I will recommend to the board the proposal with the best results for the most KPIs.

Keep in mind that CTI's board only agreed to use character-licensed products to maintain its income until a replacement for Know It or Lose It is found. Although these character-licensed products have proven quite successful, CTI's success is directly linked to the reputation of the characters. The board has asked us to reduce this dependency on license contracts, if possible, as it is viewed as a high-risk strategy.

I look forward to hearing new, bold, and innovative ideas!

**APPENDIX V**  
**DOLL DIVISION – PRESENTATION AND DISCUSSION**

*Presented by Anna Simponi, Manager*

– 1 –

**Purchase of Kolepare**

- We can purchase all the outstanding common shares of Kolepare for \$4 million (\$1 million in upfront cash and \$3 million as debt, at an attractive rate to CTI).
- Kolepare is a doll manufacturer and wholesaler of organic materials.
- Based on information received from Kolepare:
  - Kolepare’s manufacturing plant is currently at 63% utilization.
  - Kolepare’s 2023 revenues are:
    - 60% from CTI, for manufacturing dolls and from the sale of organic materials.
    - 40% from the sale of organic materials to other manufacturers, on which the margins are similar to the sales Kolepare made to CTI.
  - Net income before taxes for 2023 was \$650,000.
- If we purchase Kolepare, synergies from cost savings are expected to be 15% of CTI’s total administrative and general expenses and \$125,000 of Kolepare’s administrative expenses. Combining the two companies could also save approximately \$300,000 in operating expenses.
- To ensure a smooth transition, the two owners (one is the plant manager and the other is the office manager/accountant) have agreed to stay on for one year.

– 2 –

**Purchase of Kolepare – KPIs**

- Number of annual product sales or software downloads – Not applicable
- Number of times the game is played in a month by a player – Not applicable
- Number of new products, including offshoots – Not applicable
- Product revenues – Kolepare’s total revenue was \$10 million in 2023.
- Time to market – Not applicable
- 2025 ROIC, based on a full year of ownership:
  - Income before interest and taxes = assumed same as 2023 net income before taxes
  - Increase in net assets = \$1 million
  - ROIC =  $\$650,000 \div \$1 \text{ million} = 65\%$

**APPENDIX V (continued)**  
**DOLL DIVISION – PRESENTATION AND DISCUSSION**

*Presented by Anna Simponi, Manager*

**Discussion:**

Solange: I do not see anything new. I am disappointed — the doll division seems to be looking towards the past instead of the future. I thought I had made it clear that I wanted innovative ideas.

Lorraine: I disagree. With this deal, CTI will become a supplier of organic materials, which would boost our revenues while cutting our costs. We could also use Kolepare's excess capacity to introduce new Sookie products. Bringing the manufacturing in-house gives us total control over quality.

Steven: I also think this is a good idea. A common multiplier on net income before taxes for this industry is 5, which means Kolepare is valued at \$3.25 million.

Krystal: That valuation does not consider the additional synergies.

Solange: Regardless, I am against this investment, given that it meets very few of our KPIs.

Lorraine: I am having trouble with some of your new KPIs, as I do not know how they apply to an investment like this. This acquisition is a necessary first step before SDL can expand into U.S. and international markets, where demand for this type of product is growing. In the past, we would have looked at a payback period, which for this investment is an attractive 3.5 years.

Krystal: I agree with Lorraine. We would also have looked at the impact on gross profit margins. Given the synergies involved with this acquisition, our gross profit margins would improve in both the games and puzzles division and the doll division.

**APPENDIX VI**  
**GAMES AND PUZZLES DIVISION – PRESENTATION AND DISCUSSION**

*Presented by Steven Zhang, VP manufacturing and distribution*

– 1 –

**Building Block Board Game**

- In this board game, players are given building blocks, and they gain or lose blocks as they move their game piece around the board. Players build different structures using the building blocks, and each structure earns a different number of points. The player with the most points at the end of the game is the winner.
- It combines creativity and critical thinking and is fun for the entire family (can be played by two or more players, from ages five and up).
- R&D has worked for one year on this project and now needs \$1.5 million for equipment, which will last 10 years.
- Market entry will be by late 2024, in time for holiday shopping.
- The selling price per game will be \$20.
- Volumes expected are 50,000 in 2024, 250,000 in 2025, and 280,000 in 2026.
- Variable costs will be 67%.
- The game will be made from 100% organic materials.
- This could potentially be character licensed, which would increase profits by another 5%.

– 2 –

**Building Block Board Game – KPIs**

- Number of annual product sales or software downloads – 250,000 in 2025
- Number of times the game is played in a month by a player – 4 times (maybe once per week?)
- Number of new products, including offshoots – 1
- Product revenues – \$5 million in 2025
- Time to market – Approximately 1.5 years in total
- 2025 ROIC:
  - Not yet calculated



**APPENDIX VI (continued)**  
**GAMES AND PUZZLES DIVISION – PRESENTATION AND DISCUSSION**

*Presented by Steven Zhang, VP manufacturing and distribution*

**Discussion:**

Steven: I think this could be an award-winning board game. When the R&D department tested the board game with a focus group of parents, it got great reviews. The parents loved the critical thinking involved in the game. We can use the focus group's feedback to improve the game further.

Also, to keep our per-unit costs down in the games and puzzles division, we need to keep our production levels up at the manufacturing facilities. Given the lost sales from Know It or Lose It, we need new products to fill the excess capacity. That is the only way we will be able to keep our sales prices at a competitive level.

Solange: This is one of the best ideas I have seen in a while; however, as simply a board game, this option only meets some of our KPIs. Maybe it would perform better as a video game instead? It seems like it could be easily converted.

Krystal: I love the board game idea — there is nothing else like it on the market. If we want an innovative product that combines critical thinking with creativity, this is it.

Lorraine: A few designers from R&D said this game could become CTI's next evergreen product.

Solange: As we have a limited amount of capital, it should be invested where the best payoff is, and according to the presentation, this product does not offer any potential offshoots. Rather than spend our available cash on capital equipment upgrades, I would prefer to take this idea and develop a video game for some time next year.

Lorraine: I think the payback period and gross profit margin analysis are better tools for analyzing this type of investment. The payback period is approximately 2 years, which is short for our business, and the gross profit margin is 33%.

Steven: I'm sorry, Solange, but I disagree. We have a game we think will be well received by the market and, based on payback and margins, should be invested in, and you want to put it off? This game has the potential to sell for years to come.

**APPENDIX VI (continued)**  
**GAMES AND PUZZLES DIVISION – PRESENTATION AND DISCUSSION**

*Presented by Steven Zhang, VP manufacturing and distribution*

Solange: We need to get the biggest impact we can on our new KPIs, and this game does not achieve that. Wait until you see the educational video game the electronics division has proposed!

Krystal: We could invest in the board game now, and then develop a video game version once the game has developed a fan base. We should think about it.

**APPENDIX VII  
ELECTRONICS DIVISION – PRESENTATION AND DISCUSSION**

*Presented by Aleck Morrell, Manager*

– 1 –

**Math Game Software**

- Allison Zhu, a primary teacher with a master’s degree in mathematics, has approached CTI to finish developing a math game software program, which is 65% complete, and then license it to schools.
- The game’s content will match the current math curricula for grades 1 to 3.
- This is a single-player game.
- The game should be ready for a January 2025 launch.
- Two versions of the game software are required: a desktop version for use at school and a mobile version for use at home.
- Schools will receive the desktop version for free and are not expected to pay for upgrades.
- The mobile home version will:
  - be a free initial download for the basic software; and
  - cost \$1.10 to upgrade for additional functionalities and levels of difficulty.
- Allison wants a 10% royalty on all revenue; in return, CTI has the right to use all parts of the software.
- Allison also requires 5% of all revenue to be donated to a scholarship fund that helps promote children’s education.

– 2 –

**Math Game Software – Pilot Project**

- The pilot project will involve three local primary schools.
- CTI will donate all of the required computers to each school.
- Based on a successful pilot project, additional schools are expected to sign up.
- Required upfront costs for an initial pilot project are as follows:
  - \$1.6 million – To finish developing the game software (desktop and mobile versions)
  - \$500,000 – To provide computers to the three schools

**APPENDIX VII (continued)**  
**ELECTRONICS DIVISION – PRESENTATION AND DISCUSSION**

*Presented by Aleck Morrell, Manager*

– 3 –	
<b>Math Game Software – Financial Analysis</b>	
Total initial free downloads (2025)	400,000
Upgrade purchases (2025):	
• 65% of home users will purchase 6 upgrades	1,560,000
• 30% will purchase 4 upgrades	480,000
• 5% will purchase 2 upgrades	40,000
	2,080,000
Selling price per upgrade	× \$1.10
Total annual revenues	\$ 2,288,000
Less: 10% royalty to Allison	(228,800)
Less: 5% scholarship donation	(114,400)
Net revenues	1,944,800
Ongoing programming costs	(1,500,000)
Net income before taxes	\$ 444,800

Note: The required upfront costs for this project have not been included in the above analysis.

– 4 –	
<b>Math Game Software – KPIs</b>	
• Number of annual product sales or mobile downloads – 400,000 free downloads; 2.08 million downloads for upgrades	
• Number of times the game is played in a month by a player – Each day × 30 days per month	
• Number of new products, including offshoots – A new product for each grade (1, 2, and 3) and two offshoots per grade; total = 9 new products	
• Product revenues – \$1,944,800 (net revenues after royalties)	
• Time to market – May 2024 to January 2025 (8 months)	
• 2025 ROIC:	
– Increase in net income before interest and taxes = \$444,800	
– Increase in net assets = \$1.6 million	
– ROIC = \$444,800 ÷ \$1.6 million = 28%	

**APPENDIX VII (continued)**  
**ELECTRONICS DIVISION – PRESENTATION AND DISCUSSION**

*Presented by Aleck Morrell, Manager*

**Discussion:**

Solange: I cannot think of a better way to expand our electronics division and build trust for all of our products.

Krystal: There are already several math game software programs available for children, developed and marketed by well-known companies. What makes this one different?

Solange: It was specifically developed with the schools' actual math curricula in mind, so whatever is taught in school will be reinforced by the game. The other available math games do not do this. On top of that, the game was designed to be fun as well as educational.

Krystal: Have you seen it or tried it yet?

Solange: No, because the game is not complete, but our electronics division is very optimistic about it.

Lorraine: Having the schools announce that we have provided the computers and software for free would give CTI great publicity.

Steven: What happens if the schools decide not to support the game? Is the decision made by each school board and then the schools?

Solange: If the schools do not support us, we can market the product directly to parents. We will just have to include some marketing expenses in our projections.

Krystal: You mean no marketing costs have been included in the forecast? Is this going to sell itself?

Solange: Yes! We will simply arrange for the teachers to give handouts to the students, explaining that a free download is available. Since we are making a 5% donation on all revenue earned, the schools will want to promote the mobile home version.

Lorraine: The payback period appears to be around 4.5 years. Since the game is in English, we will need to develop a French version. And because curricula vary significantly from one school board to the next, there will be substantial development costs. Are the cost estimates provided high enough?

**APPENDIX VII (continued)**  
**ELECTRONICS DIVISION – PRESENTATION AND DISCUSSION**

*Presented by Aleck Morrell, Manager*

Solange: That is why we have an R&D department. If needed, we can reallocate the R&D staff to research the differences between various school curricula.

Lorraine: Our R&D team was never intended to be used in that way. Shouldn't they be focused instead on developing new board games, puzzles, and dolls?

Solange: R&D should be used in a way that creates the most value for CTI.

Krystal: You are also counting on a lot of upgrades being purchased.

Solange: I expect the game software to receive many accolades for its innovation and contribution to the community at large. I have launched similar products before and know what I am doing. Look at how well this option performs relative to our new KPIs. After the launch of our math game, a significant number of offshoots could follow. And once the success of this pilot project is confirmed, we will start developing similar software for all the other subjects in elementary school and beyond!

Finally, think of the exposure that CTI's electronics division will gain. Launching this game software will reinforce our reputation as a provider of quality educational products. This investment will surely help CTI's growth going forward.

**APPENDIX F**

**DAY 1 (CTI VERSION 2) – MAY 30, 2023  
MARKING GUIDE AND SAMPLE CANDIDATE RESPONSE**

**MARKING GUIDE  
CREATIVE TOYS INCORPORATED (CTI)  
VERSION 2**

**Summative Assessment #1 (Situational Analysis)**

For Summative Assessment #1, the candidate must be assessed for reasonableness of attempt:

**Yes** – The candidate used a reasonable situational analysis when analyzing the major issues facing CTI.

**Unsure** – The candidate attempted to use a reasonable situational analysis when analyzing the major issues facing CTI.

**No** – The candidate clearly did not use a reasonable situational analysis when analyzing the major issues facing CTI.

***Based on the 2022 CPA Competency Map:***

***Technical Competencies***

*2.3.2 Evaluates the entity's internal and external environment and its impact on strategy development*

***Enabling Competencies***

*1.4.1 Performs work carefully, thoroughly and competently in accordance with relevant technical and professional standards*

*2.1.3 Identifies the strategic impact of internal decisions and external influences on project plans and initiatives*

*5.1.3 Develops and uses knowledge of the organization, industry, and stakeholders*

*6.1.1 Identifies and articulates issues within areas of work responsibility*

*6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems*

*6.1.3 Demonstrates skepticism, objectivity, due care and persistence when identifying issues*



*The candidate is expected to complete an appropriate situational analysis.*

*The focus should be on describing the factors that have changed since Capstone 1 that will affect the decisions at hand. Recapping parts of the mission/vision and relevant KSFs, and presenting relevant elements of the SWOT, is appropriate.*

*The candidate should draw upon their situational analysis when analyzing the major issues facing CTI (purchase of the outstanding shares of Kolepare, investment in the building-block game, investment in development of new math software, and governance issues re: Solange’s new bonus plan).*

*Candidates should recognize that the KPIs set by Solange are based on the performance goals the board set for her (which allows her to obtain PSUs, convertible into shares in approximately three years).*

To maintain its profitability, CTI decided to use character licensing for its products. It did so to replace lost sales on its flagship game, Know It or Lose It, which is coming to the end of its product life cycle. CTI now has a dependency on character-licensed products. As it cannot be predicted how long a specific character license will generate profits, this is a higher-risk strategy. The Board of Directors therefore wants to reduce reliance on character-licensed products. The other key issue is that CTI’s flagship product appears to be at the end of its life cycle. If not replaced, there are significant implications on CTI’s production costs and overall bottom line.

Solange was hired in October 2023 to modernize the company and expand into the growth areas of the industry; in particular, she seems partial to growing CTI’s electronics division. In April 2024, Solange was issued PSUs that will be converted to common shares in 2027 if she meets or exceeds the targets set for her by the board. It appears that Solange’s choice of KPIs have been heavily influenced by the PSUs that she was granted during the year; she appears highly motivated to achieve these targets.

## **Mission/Vision and Corporate Values**

### Vision and mission

CTI’s vision and mission statements remain as follows:

Vision statement: *“To make toys that are enduring, educational, and fun for all ages and are made from only organic materials.”*

Mission statement: “*We create innovative and educational toys that encourage creativity and critical thinking in a fun manner and can be enjoyed by all members of the family.*”

### Core values

In December 2023, the board updated CTI’s first core value to: “manufacture and deliver safe, high-quality educational toys and games *that persist over time.*”

This revision illustrates the importance of creating products that have a long life cycle, similar to Know It or Lose It. Although that game is currently nearing the end of its life cycle, it was a major success for CTI for many years.

Therefore, CTI’s current core values are to:

1. manufacture and deliver safe, high-quality educational toys and games that persist over time.
2. continuously innovate so that our products are top-rated in the industry and are regularly recognized for this excellence by winning awards.
3. create a culture in which everyone is respected and listened to, and takes pride in their work.
4. manufacture our products, using organic and sustainable materials as much as possible.

CTI also has a code of conduct and a code of ethics.

### **Board Objectives**

- The board specifically requested that Cale Baxter, the R&D department’s new division head, hire employees who have experience in doll design. This will ensure that SDL’s potential growth is not ignored by R&D.
- From the board’s revision of the company’s first core value, it is clear that it wants to emphasize the importance of developing products that have a long life cycle.
- The board granted Solange the PSUs with the intention of retaining her as CEO of the company.

### **New KPIs Developed by Solange**

1. Number of annual product sales or software downloads (including upgrades)
2. Number of times the game is played in a month by a player
3. Number of new products, including offshoots
4. Product revenues
5. Time to market (from product conception to market release—for both new products and product upgrades)

Solange also wants to understand the impact on the return on invested capital (ROIC), which is calculated as follows (as defined by the board):

Annual net income before interest and taxes divided by net assets (where net assets = total assets minus total liabilities associated with the investment).

Solange has stated the following goals: create bold and innovative products; meet as many of the stated KPIs as possible; and reduce the company’s reliance on character licensing.

### Financial Statement Analysis

The traditional games and puzzles division may be beginning to struggle. Character-licensed sales continue to outpace the sales of the company’s traditional games, such as Know It or Lose It.

The doll division is doing well, with its new clothing line and the increase in the doll market sales industry. Also, due to a recent scandal involving three companies that made children’s toys with materials that caused some children to experience allergic reactions and skin rashes, there is an increased market for toys comprised of organic materials. This increased demand could help further the expansion and growth of the doll division.

The electronics division has been floundering since Chloe left. Because it has only developed and marketed a single video game (SMARTS), its profit margin is very low. However, with the hiring of Aleck Morrell, and with Solange’s influence, this may change.

CTI has \$3 million available to invest in the current year (2024). This constraint needs to be considered, along with any possible synergies between the alternatives.

### Common Shares

	Capstone 1 / Day 1	
	Number of Shares	% Voting
Lorraine De Vogue	700,000	35%
Krystal De Vogue	700,000	35%
Thomas Whitaker	300,000	15%
10 employees in the board game division	30,000 each 300,000 in total	1.5% each; 15% in total
Total	2,000,000	100%

Lorraine and Krystal still have 35% each, and therefore together have majority. On April 1, 2024, in an effort to retain Solange, CTI granted her performance share units (PSUs); if she meets or exceeds all the performance targets by March 31, 2025, CTI could issue up to 300,000 common shares to Solange in March 2027. This gives her incentive to meet these targets.

If Solange achieves the targets for all three performance measures, she will be issued 300,000 common shares. This will give her an equal number of shares relative to the employee group, but still less than the number of shares owned individually by Lorraine and Krystal. Solange therefore has a lot of incentive for meeting all three performance targets.

Preferred shares were issued to Thomas for \$6 million, with the same terms and conditions as in Capstone 1, except that they are non-cumulative. These preferred shares have an annual dividend of 10%, non-cumulative. In addition, they have a mandatory redemption of \$1 million per year, beginning in 2025.

The non-cumulative preferred shares owned by Thomas do not require an annual dividend payment, but the company will be required to pay \$1 million to redeem shares each year; however, this will not start until 2025. Therefore, in 2024 and 2025, there are no obligations related to these preferred shares.

*While the candidate is not expected to recap KSFs or do a SWOT in detail, they may draw upon these various elements in their Day 1 case analysis.*

## **KSFs**

CTI has moved into producing software; the KSFs of this new division are similar to the games and puzzles division.

<p><b>Traditional Toy Industry (for dolls, games and puzzles)</b></p>	<p><b>Analysis</b></p>
<p>A recognizable brand name that helps to get and retain shelf space.</p>	<p>Since Cap 1, SDL’s brand seems to have received positive attention, given the company’s decision to recall the flawed Sookie dolls.</p> <p>However, sales of Know It or Lose It have declined, but this appears to be due to the product reaching the end of its life cycle and not because CTI’s brand has become less recognizable.</p>
<p>Strong relationships with suppliers, to obtain high-quality and price-competitive raw materials.</p>	<p>This is true for its organic materials from Kolepare (the new supplier). CTI currently buys all its organic material supplies for its games and dolls from them.</p>
<p>A diverse range and number of customers, to reduce concentration risk of selling to only a few customers.</p>	<p>With the decline of the DPI agreement from Cap 1, CTI does not sell to discount retailers. CTI still only sells its games and puzzles primarily to educational toy retailers, toy retailers, and department stores. It does not sell to non-traditional retailers such as book and gift stores, or online (online retailers are gaining market share).</p> <p>Dolls are still only sold through retailers; however, clothes are sold online.</p>
<p>The toy market is volatile and driven by customer preferences, which can change rapidly. Therefore, CTI must be able to quickly change its production and inventory, to respond to these quick changes in demand.</p>	<p>Given the drop in sales of Know It or Lose It, CTI has more capacity at its manufacturing facility. Although this drop in sales has hurt CTI’s bottom line, it has also allowed CTI to presumably become more flexible relative to which products it decides to manufacture and sell.</p>
<p>R&amp;D pipeline – To be successful, CTI needs to be innovative, with a pipeline of new products that can provide a predictable pattern, to use for forecasting sales and production.</p>	<p>In Cap 1, CTI had a weak games and puzzles R&amp;D department. However, R&amp;D now has a new department head and new employees that are working hard on new prototypes.</p>

Video Games	Analysis
Establishment of a brand name.	The first game released by CTI (SMARTS) is successful.
Ability to manage and maintain strong relationships with external developers, to ensure that products are constantly updated and innovated.	Under new department leadership, significant improvements have been seen and the programmers have been working on developing new video games and upgrades, although none have yet made it to market.
Ability to quickly adopt new technology.	There is no data on this yet.
Development of new products – Frequently release new games and make new products that are unique and exceptional; otherwise, sales may quickly decline once customers get tired of the same game.	With the change in department management to Aleck, CTI does not yet know whether the company will be able to quickly develop innovative products; however, Solange has confidence in his ability.
Attraction and retention of a highly skilled workforce.	Aleck has been hired as department head for the electronics division, and seems to have the confidence of Solange.

**Strengths**

- CTI has entered into character-license agreements that have been successful, with licensed products outselling other products. This has allowed the company to maintain sales.
- The doll division has become more successful; this has been helped, in part, by the new clothing line, which has been selling well.
- SDL’s clothing line is sold online directly to consumers. This allows for easier access to its consumers, and CTI can collect feedback on these products, allowing for quicker product changes. SMARTS, CTI’s first video game, is also sold online directly to the end consumers. This also allows the company to get immediate feedback.
- The release of SMARTS, a video game that targets female gamers, was successful. This indicates that CTI’s brand appears to be acceptable to customers in the video game market.
- Sales of the traditional game, Know It or Lose It, have fallen significantly. It appears that this game, which was successful for a long time, has reached the end of its life cycle. The company developed SMARTS to replace it, which might allow CTI to build on the original game’s success.
- The R&D department appears to have been improved, and now has employees who are experienced in doll design.

- Solange has experience in motivating directors and employees to embrace her vision. Having a focused CEO should help the company move forward in its desired direction.
- The new contract manufacturer and supplier for the doll division, Kolepare, has worked out well, and the quality of the end products has been consistently excellent, and has exceeded all expectations.
- Aleck Morrell, who is now VP of the electronics division, was instrumental in developing three top sellers in the video game market. The company therefore has a highly experienced and skilled person to lead the growth of the new electronics division.
- Due to recalling the deficient Sookie dolls, and by ensuring that the materials used in its products are made from the organic materials as advertised, CTI has grown its reputation for being trustworthy. This has helped increase SDL's sales.

### **Weaknesses**

- CTI continues to sell its games and puzzles and dolls primarily to the multinational toy retailers, specialty toy and games stores, and department stores. It does not sell to any of the non-traditional retailers, such as book and gift, and online retailers. Only the doll clothing line and the SMARTS video game are sold online directly to customers.
- Sales of the traditional game, Know It or Lose It, have fallen significantly. It appears that this game has run its course; if CTI wants another flagship game, the company will have to replace it.
- CTI was forced to turn to character licensing for its products, which is a higher-risk strategy, given that CTI's reputation is now directly tied to these characters. CTI needs new products, to attract customers and increase sales, or will continue to rely on the right character licenses in order to continue generating sales.
- Chloe left the company right after the release of the successful SMARTS game. This has left the electronics department floundering. To date, no other products from the electronics division have made it to market.

### **Opportunities**

- Per capita disposable income is expected to increase by 2% annually. Sales of games, dolls, and video games are positively correlated with disposable income. Therefore, if disposable income increases, sales of these products should also increase.
- Due to dolls making a comeback, the toy segment for dolls (and related accessories) is expected to see growth rates of 8% annually. Therefore, the demand for SDL's products should increase.

- Character-licensed games and puzzles continue to see significant growth. If it can continue to license its products with popular characters, CTI should be able to increase its sales. This opportunity is linked to picking the right character for licensing, and knowing when to terminate the arrangement (before the character loses their popularity).
- Toy sales by book and gift retailers are increasing (with sales by educational toy retailers decreasing). CTI could diversify its sales channels.
- There is an increasing demand for toys made from organic materials. Sales of toys that are certified as being made only from organic materials are expected to increase significantly in 2024, 2025, and beyond.
- Customers have become increasingly price sensitive for toys but are willing to pay a premium for character-licensed toys and products made from organic materials. As CTI sells both character-licensed products and products made from organic materials, it should be able to continue to charge a premium and achieve higher gross margins.
- Sales of video games are expected to increase by 10% annually. There is a demand for video games for younger children, starting as young as five years old. With this increased demand, and with the right product, sales of educational video games developed by CTI could capture some of this projected growth.
- Schools are embracing educational video games to help with learning in the classroom, particularly for the primary grades. Some studies have found that children using games to develop math and spelling skills, and critical thinking, have done better in these subjects. Because it has some competency in designing traditional games that call for critical thinking, this could be a new market for CTI.

### **Threats**

- The prime rate is increasing, which increases CTI's cost of borrowing.
- The retail toy market is expected to have revenue growth over the next three years of between 1% and 1.5% annually, which is a low growth rate. To outperform this projection, CTI will need popular new products, new sales channels, or ways to take market share away from its competitors.
- Traditional games and puzzles now represent 10% of the total industry sales; this is down from 2020, when they represented 11.6%. With a declining percentage of the market, this means that consumers are turning to other types of toys, such as video games. Unless it has new and innovative products to sell, this may further reduce CTI's sales of its games and puzzles.
- If a character loses its popularity with consumers, sales of related licensed products will fall. If CTI has agreements for licensing this character, the risk is that it will be left with inventory that will not sell.
- Due to increased competition, the selling prices for video games have continued to fall. With declining selling prices, the potential profit for any video game that CTI brings to market may be reduced.



- The large toy manufacturers have moved into video games in order to diversify their products. This means that there are more competitors in the video games industry, which will cause more products to be developed and brought to the market. This may result in CTI being able to sell less than the company originally anticipated.

### **Summative Assessment #2 – Analyzes the Major Issues**

For Summative Assessment #2, the candidate must be assessed for reasonableness of attempt:

**Yes** – The candidate sufficiently completed a reasonable assessment of the major issues facing CTI.

**Unsure** – The candidate attempted to complete a reasonable assessment of the major issues facing CTI.

**No** – The candidate clearly did not complete a reasonable assessment of the major issues facing CTI.

#### **Technical Competencies**

*2.1.5 Explains implications of current trends, emerging issues and technologies in strategy and governance*

*2.3.1 Evaluates the entity's strategic objectives and related performance measures*

*2.3.3 Evaluates strategic alternatives*

#### **Enabling Competencies**

*1.3.2 Recognizes bias, uncertainty and ambiguity in the information and assumptions that underlie assigned work*

*1.4.2 Critically reviews own work to ensure its quality*

*2.1.1 Applies knowledge of the organization's competitive environment and strategic direction when performing assigned work*

*2.2.1 Assists in identifying and monitoring risks within areas of work responsibility*

*5.1.1 Applies general business knowledge to enhance work performed*

*5.1.2 Recognizes the interrelationships among departmental and functional areas within the organization*

*6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives*

This summative assessment is based on Assessment Opportunities #2 to #6.

**Assessment Opportunity #2 (Strategic Issue #1 – Purchase the outstanding shares of Kolepare Inc.)**

*The candidate is expected to complete both a qualitative and quantitative assessment of whether to purchase the shares of Kolepare Inc., the company that manufactures CTI’s dolls and supplies all of CTI’s organic materials (fabric, buttons, etc.).*

*Quantitative: The candidate should do some preliminary calculations on the value of the shares, and consider the value of the synergies, and how this compares to the price being offered and the market valuation of the company. The candidate could also recalculate the ROIC, as it did not consider the synergies presented.*

*Qualitative: The candidate should assess whether this investment meets the new KPIs, and discuss the fit with CTI’s strategy, vision and mission, and core values, and the overall risks and opportunities related to this acquisition.*

*Conclusion: The candidate should consider both the quantitative and qualitative analyses when drawing conclusions and making recommendations.*

Kolepare’s owners have offered to sell all the outstanding common shares to CTI for \$4 million. Currently, CTI has a very good working relationship with Kolepare, its supplier of organic material.

**Quantitative Analysis**

Total admin expense (2023)	\$ 3,110,000
Price reduction if own Kolepare	15%
Admin savings for CTI	\$ 466,500
Admin savings for Kolepare	125,000
Combined savings in operating expenses	300,000
Net earnings before taxes for external customers	260,000
Total added profits before tax	\$ 1,151,500
Valuation based on added net earnings for CTI	\$ 1,151,500
Multiple	5
Value of company to Kolepare	\$ 5,757,500

The offer price of \$4 million is higher than the valuation of Kolepare of \$3.25 million (stated by Steven as 5 times net earnings before tax of \$650,000). If the base value of Kolepare to CTI (the net increase in profits before taxes) is calculated, the value of Kolepare to CTI is closer to \$5.8 million. Therefore, an offer price of \$4 million is reasonable when including the value of the synergies of the proposal offer to CTI. Nevertheless, based on the market valuation, CTI should still counter with a lower price than \$4 million.

Therefore, to check the conclusions in the presentation:

- Product revenues – Revenues will increase by approximately \$4 million, based on Kolepare’s 2023 sales of organic materials to other customers (\$10 million total revenue in 2023 × 40% of Kolepare’s revenue, being from customers other than CTI); this represents a new line of business for CTI.
- Depending on when the purchase takes place in 2024, there may be some amount of profit earned, but since the purchase date is not known, this cannot yet be assessed.
- ROIC for 2025 accounts for a full year of ownership:

Increase in operating income before interest and taxes = \$650,000

Increase in net assets = \$1 million (asking price of \$4 million less \$3 million of debt)

Return on invested capital =  $\$650,000 \div \$1,000,000 = 65\%$ ; however, if we include the net impact on profits before taxes for CTI, the return on invested capital is:  $\$1,151,500 \div \$1,000,000 = 115\%$ .

Lorraine and Krystal believe that the indicators that have been used in the past are better measures for evaluating this type of investment: a payback period of 3.5 years (which Lorraine states is good); and gross profit margin improvements (which, as Krystal mentioned, would result from the cost savings associated with the synergies of the acquisition). Based on these indicators, the alternative should be accepted.

### Other KPIs

Through Kolepare, CTI will be selling organic materials, which represents an entirely new sales product for the company. Since CTI will acquire new customers (manufacturers), this increases the number of product sales per year, which is stated in Anna Simponi’s presentation as not applicable, and increases the number of new products, which is also stated as not applicable.

Although there is an upfront cost of \$4 million, the owners of Kolepare are willing to take back a note payable for \$3 million (at an attractive interest rate, as well), which means that CTI must only invest \$1 million of the \$3 million the company has in available investment capital.

## Qualitative Analysis

### Mission/vision and core values:

- The acquisition not only allows CTI to continue to use organic material, but to also directly control the manufacturing quality of its products. This acquisition fits with its vision of using organic material where possible.
- Because Kolepare, along with manufacturing dolls, is also a supplier of organic materials, the acquisition does not fully align with the company's stated mission and vision. Nowhere in CTI's current mission or vision is the sale of organic materials mentioned.
- The acquisition helps CTI meet its #1 core value: to manufacture and deliver *safe, high quality*, educational toys and games that persist over time. This will ensure that quality is maintained at the highest level.
- The acquisition helps CTI meet its #4 core value: to manufacture our products, using organic and sustainable materials as much as possible.

### Risks:

- CTI has no experience in supplying organic materials. That side of Kolepare's business would be an entirely new venture for CTI. This may necessitate hiring employees who have more experience.
- CTI has also relied on third parties to manufacture SDL's Sookie dolls. Bringing the manufacturing function in-house gives CTI the control on quality; however, it will now also be responsible for the quality of the Sookie dolls, which could be challenging, as CTI has never performed this function before.
- The two aforementioned risks are somewhat mitigated by the fact that the current owners of Kolepare have agreed to remain with the company for one year.
- Due diligence will have to be completed, to ensure that the information provided by Kolepare's owners is accurate, particularly with respect to the breakdown of revenues, and earnings between CTI and other customers.
- There may be other liabilities or contingent liabilities. With a purchase of shares, any unrecorded liabilities will be assumed by CTI and could cost the company significant amounts in the future. These will have to be investigated further through due diligence procedures.
- Existing customer or supplier contracts may not have favourable rates for the future. All these contracts should be reviewed, to ensure that they are transferable and acceptable.
- Unless Kolepare has long-term sales arrangements with them, the existing customers may not stay. We will need more information. (If the product remains of the same quality/price, etc., there is less risk of them leaving).

Opportunities:

- Having the owners stay on for a year to help with the transition may allow CTI to learn more about the sourcing of organic materials.
- The owners staying on for a year should provide comfort to the employees/ help with retention.
- The demand for products using organic materials is increasing; therefore, the demand for Kolepare's product sales to other customers should increase.
- The sale of dolls (and related accessories) is expected to see growth rates of 8% annually, due to dolls making a comeback. Therefore, there should be an increased demand for Sookie dolls, and having control of the manufacturing and sourcing of organic materials will ensure that CTI can meet this demand.
- With the increase in sales of dolls, there should be an increase in the sale of clothing accessories for the dolls, and therefore an increased need for organic materials. Through CTI's ownership of Kolepare, SDL will have access to these materials at a lower price.
- Kolepare's manufacturing plant is currently operating at 63% of its capacity. Therefore, the plant would be able to accommodate an increase in the production of Sookie dolls if the division start to sell more products.
- SDL does not currently sell Sookie dolls online (although the recently introduced clothing line for Sookie dolls does sell online). There is a clear opportunity for SDL to begin to sell Sookie dolls online, and the acquisition of Kolepare would help CTI realize that opportunity. A move to online sales may help capture a growing international interest in SDL's product line. CTI also appears to have the manufacturing capacity to increase production of Sookie dolls, if demand increases significantly.

**Integration**

- This acquisition will only result in higher net profits if CTI continues to manufacture its dolls, and traditional puzzles and games. If sales decline due to changes in the industry or due to CTI not investing in new product development in the traditional divisions, the requirement for organic materials will decline. Therefore, to make this a good investment, CTI ideally continues to invest in its traditional games and puzzles division (such as the building-block proposal).
- If CTI decides to focus on the products of the electronics division for the company's future growth, this investment will not generate the returns anticipated and the funds should be spent elsewhere.

## Conclusion

As this proposal does not meet many of Solange’s new KPIs, the investment would not be pursued. However, these KPIs may not be suitable in evaluating this type of investment, as pointed out by Krystal and Lorraine. Lorraine, Krystal, and Steven all suggest that—if using a payback period and the impact on gross profit margins—this alternative is an acceptable one.

The success of this proposal, and at the same time, its biggest risk, is that it depends on maintaining and growing the current level of sales of Kolepare. Given that CTI has no experience in supplying organic material, the company may struggle to maintain the current performance of Kolepare.

### **Assessment Opportunity #3 (Strategic Issue #2 – Investment in the building-block game)**

*The candidate is expected to complete both a quantitative and qualitative assessment of the building-block board game proposal.*

*Quantitative: The candidate should determine the ROIC of the game.*

*Qualitative: The candidate should assess whether this investment meets the KPIs, and discuss the fit with CTI’s strategy, vision and mission, and core values, and the risks and opportunities related to the board game proposal.*

*Conclusion: The candidate should consider both the quantitative and qualitative analyses when drawing conclusions and making recommendations.*

The proposal is to make a further investment in a new product, a building-block board game, which can be played by all those aged five and up. In board-game format, it is a family game that requires creativity and critical thinking in using the building blocks, and is designed to be played by two or more people.

## Quantitative Analysis

Once the \$1.5 million investment into capital equipment has been made on the building-block game and the game begins to sell, CTI expects the following performance:

	<b>2024</b>	<b>2025</b>	<b>2026</b>
Volumes sold	50,000	250,000	280,000
Selling price per game	\$20	\$20	\$20
Total revenues	\$ 1,000,000	\$ 5,000,000	\$ 5,600,000
Variable costs	67% (670,000)	(3,350,000)	(3,752,000)
Less depreciation (\$1,500,000 ÷ 10)	(150,000)	(150,000)	(150,000)
EBIT	<u>\$ 180,000</u>	<u>\$ 1,500,000</u>	<u>\$ 1,698,000</u>

Sales are projected to be \$1 million in 2024, \$5 million in 2025, and \$5.6 million by 2026. In 2025, the increase in net income before interest and taxes = \$1.5 million.

ROIC in 2025 = 100% (\$1.5 million EBIT in 2025 ÷ \$1.5 million of capital expenditures), which will improve CTI's total ROIC with this investment.

## Qualitative Analysis

### Other KPIs

One of the new KPIs is to increase the number of new, innovative products. The building-block board game is a new and innovative product. However, the game could also be released as a video game that would use the same ideas as the board game; this would be considered an "offshoot."

Lorraine believes that the past indicators would be more useful in assessing this investment:

- Payback period is approximately 2 years, which is acceptable (short for CTI's business)
- Gross profit margins of 33%, which is slightly below the current gross profit margin of 34.1%

Mission/vision and core values:

- The board game fits with the vision and mission to create a game that is fun and encourages critical thinking for all ages using organic materials.
- The board game fits with:
  - core value #1 – to manufacture and deliver safe, high quality, educational toys and games that persist over time.
  - core value #4 – to manufacture our products, using organic and sustainable materials as much as possible. Because the board game is made from 100% organic materials, this is met.

Risks:

- Since this is a very different/new game, it might not be as well received as it was with the focus group, which would result in actual sales being lower than anticipated, as well as a lower ROIC, lower profits, and higher payback period.
- Character-licensed toys and games tend to be selling, whereas the market for other games and puzzles is declining. Since this new board game is not licensed with a character, the projected sales may not materialize. (The product could potentially be character licensed, but the board wants to reduce dependency on licensed products.)
- The volume of games and puzzles produced is declining, creating excess manufacturing capacity. If a new board game is not produced, production will decline further, making unit production costs higher, and margins lower for the games and puzzles division.
- As she thinks there are better uses for the available capital, Solange wants to hold off on this investment this year. The risk of waiting a year is that another competitor gets to market first with a similar product.

Opportunities:

- A focus group of parents provided positive reviews of the game, and the parents loved the critical thinking involved in the game. Therefore, there appears to be interest in this type of game. If successful and well received by the market, the new board game would allow CTI to reduce its reliance on character-licensed products, including the need for a character to support this product.
- The board game can be played by children as young as five years old; therefore, this product offering would expand CTI's targeted age market.
- Members of the R&D group mentioned that the building-block game could be CTI's next evergreen product. If that turns out to be the case, CTI's performance would improve for many years to come as a result of producing and offering this product for sale.
- The demand for games made from organic materials has increased, and the new board game would be made from high quality, organic materials; this could help elevate the popularity and sales of the game.



- With the development of the board game, there is an opportunity to produce a video game version next year, which could increase revenues significantly. By releasing the traditional game, CTI can determine what is liked or not liked about the game, and design an improved video game version.
- Lorraine mentioned that this game has the potential to become CTI's next evergreen product (after Know It or Lose It). This potential would help satisfy the board's objective of creating and producing products that persist over time.

### **Integration**

- CTI should consider investing in both the building-block board game and the Kolepare investment, as the new board game will have even higher profits if the Kolepare acquisition is made. The combination of the acquisition of Kolepare with an investment in the building-block game would use a total of \$2.5 million (\$1 million after the Kolepare owners' loan + \$1.5 million additional costs for the building-block game = \$2.5 million), which is within the limit of current cash available.
- Manufacturing the building-block game would help keep CTI's manufacturing facility operating at a reasonable level. If manufacturing levels continue to drop, CTI's per-unit cost will increase, and profits will decline for the games and puzzles division. This may have an impact on production of other traditional games and puzzles.

### **Conclusion**

The building-block board game requires \$1.5 million in upfront capital and will result in higher revenues and profits, assuming that projections can be realized. Although the KPIs set out by Solange are very low, the payback period and gross profit margin analysis would suggest that the company should consider this investment. There is an opportunity to develop a video game version of the product using feedback received on the board game, which could significantly increase revenues in the future.

The risk is that the volume of sales is lower than projected due to market and industry forces. It will not be character-licensed, so sales may again be lower than expected. However, some of the directors believe that this is a great, innovative game that could win an award, and members of the R&D team believe that it could become CTI's next evergreen product. Finally, the building-block board game will allow the manufacturing facility to operate closer to capacity, which will keep the unit costs in the division from increasing, and prevent margins from declining in the games and puzzles division.

**Assessment Opportunity #4 (Strategic Issue #3 – Invest in the development of new math game software)**

*The candidate is expected to complete both a quantitative and qualitative assessment of the proposal to invest in development of new math game software.*

*Quantitative: The candidate should discuss the implications on profits of expensing all the development costs. The candidate is also expected to assess the reasonability of the projection provided. The candidate can also compare the quantitative merit of this investment from the perspective of Solange’s KPIs versus the measures (payback period, gross profit margin) that CTI’s board mentioned as helpful metrics.*

*Qualitative: The candidate should assess whether this investment meets the KPIs. They should discuss the fit with CTI’s strategy, vision and mission, and core values, and the risks and opportunities related to this investment.*

*Conclusion: The candidate should consider both the quantitative and qualitative analyses when drawing conclusions and making recommendations.*

The investment proposal pertains to a math “game” software program that has been developed by Allison Zhu. The math game software follows the school math curriculum for grades 1 to 3, and is currently 65% developed. Allison wants to receive a royalty of 10% on each sale and in exchange, CTI will get the right to use all parts of the program. Further, Allison wants 5% of each sale to go to the school that the child attends.

**Quantitative Analysis**

This alternative will require \$2.1 million in upfront costs: \$1.6 million for development costs and \$500,000 to purchase computers that will be donated to those schools that participate in the software’s pilot project. As per the presentation, the assets associated with this game will equal \$1.6 million (or the final development costs required to complete the game). Therefore, if the projections provided by Aleck Morrell are accurate, the project’s ROIC would equal approximately 28%. However, if the entire investment amount of \$2.1 million is considered, the project’s expected return would equal approximately 21%.

In 2025, net profits before tax are estimated to be \$444,800.

## KPIs

The math software appears attractive relative to the KPI measurements for number of downloads, number of times played in the month by a player, and number of offshoots.

- Number of annual product sales or mobile downloads – By 2025, these are expected to equal a total of 2.48 million (400,000 free downloads + 2.08 million upgrade downloads). It is important to note, however, that these are merely projections, and given the uncertainties discussed in more detail below, this outcome is far from certain.
- Number of times the game is played in a month by a player – Aleck has projected this measure to equal once per day. Although this is attractive, it is difficult to determine whether this projection is accurate.
- Number of new products and offshoots – A new product for each grade (1, 2, and 3) and two offshoots per grade; total = 9 new products. Further, Solange mentioned that, if the pilot project is successful, CTI will begin to develop similar pieces of software for all the other subjects in elementary school. Therefore, if the initial game is adopted by schools and students, there would be a big opportunity for CTI to expand the product into other subject areas, and potentially, other grades.
- Total net revenues will increase by \$1,944,800 in 2025 (after Allison's royalty and the payments to schools).

## Conclusion on quantitative analysis / additional considerations

Using the historical assessments that the shareholders previously used:

- The payback period is 4.7 years ( $\$2.1 \text{ million in upfront costs} \div \$444,800 \text{ projected EBIT}$ ).
- The gross profit margin is 23% ( $\$444,800 \div \$1,944,800$ ), which exceeds the 4.5% current margin of the electronics division. However, it is unclear whether there will be more annual costs associated with this game. The only expense item included in the projection pertains to the costs associated with ongoing programming for the game. Before making an investment decision, CTI should verify whether Aleck's projection is complete.
- No marketing has been included in the costs. If marketing costs are required, the profits will be less than forecast.

## Qualitative Analysis

### Mission/vision and core values:

- The math software and game meet the company's mission and vision, in that the game was mentioned as being both fun and one that encourages critical thinking. However, the game is a one-player game meant for children, and therefore somewhat violates the mission and vision, in that it is not meant for the whole family or for people of all ages.
- The game is also reported to be innovative, given that it aligns with the current/actual math curriculum. This is apparently different from what competitors do, making the math game innovative.

### Risks:

- The success of the math software is dependent on acceptance by several different school boards first, and then by the schools. Even if the pilot projects work, the game may not achieve acceptance by all the schools or school boards.
- If there is no acceptance by the schools, CTI will have to market the product directly to parents for home use in order to compete with the other, similar math programs (these costs have not been included in Aleck's current forecast). Currently, there are several similar math programs designed for children that have been developed and marketed by well-known companies in the business. If CTI's program is not found to be any better, the game may not meet its revenue expectations.
- CTI's programs may not be able to compete with these other programs; this result could occur for several reasons. If CTI's math software is unable to compete, it is unlikely to be profitable.
- Revenue is only generated by parents buying the upgrades, and the projections are based on many upgrades being sold. The risk is that far fewer upgrades will be sold than is currently being projected.
- Because school curriculums vary by province (and by state, if CTI decides to expand the scope of the product and enter the US), there will be ongoing development costs. Also, a French version must be developed; these additional expenses have not been included in Aleck's forecast.
- As the curriculum changes, the software will have to be updated as well. There is the risk of not always being able to keep up with all the changes in the curriculum, or of not being able to make the changes quickly enough to keep the software current/relevant. There is a budget for ongoing programming costs, but it may not be sufficient.
- CTI will have to maintain both the desktop software and the mobile home version. This may require more development cost than is forecast.
- There is little time between now and the expected date that the game will be fully developed and ready for sale (with a January 2025 launch date, there is less than eight

months left to finish the games development). There is the risk that the games development will take longer than expected.

- Solange mentioned that, if the research component of the project (given changing/different school curriculums) requires more effort than anticipated, CTI's R&D department may be called upon to fill that research void. As Lorraine mentioned, CTI's R&D department is meant to be used for product development across all three of CTI's divisions.

#### Opportunities:

- If accepted in the schools, parents will want to have a math game that matches what is covered in the school and reinforces what the child is learning. This will provide incentive for the parents to download the app.
- If the product is successful, CTI's electronics division would attract a lot of new attention and many new customers. A successful launch of the math game could create an opportunity for CTI to expand into other subjects and grades.
- Use of the software and mobile home version may increase CTI's reputation and build its brand, especially with the school acknowledging the donation of the software and computers.
- As 5% of each sale will be donated to a scholarship fund that promotes children's education, the school will have a greater incentive to market the mobile home version.
- Schools have decided to embrace educational video games to help with learning in the classroom, particularly for the younger grades. Some studies have found that children exposed to educational video games that develop math and spelling skills, along with critical thinking, have done better in these subjects. These new trends in the industry create an opportunity for CTI; it appears that schools will be receptive to this idea and that parents will likely embrace the home version.

#### **Integration**

The resources required for this investment equal \$2.1 million of the \$3 million of available investment capital. Therefore, if this new product is developed, there will not be enough for investment in any of the other proposals. Since the company is losing sales of Know It or Lose It, this may lead to a reduction in the use of the manufacturing capacity for CTI's traditional games. This could create a spiraling scenario, whereby retailers reduce their orders of products, employees in the games and puzzles division are laid off, and profits from the games and puzzles division fall significantly. If CTI decides on this direction, there may be significant future repercussions for the games and puzzles division, which has been the company's core business since its inception.

## Conclusion

This proposal aligns quite well with the mission and vision of the company (although it does not appear that it can be played by the entire family), and with industry trends. It is educational and fun. The KPIs for users and upgrades and offshoots are very good. Assuming that the projections are realistic, the profit margins, both before and after tax, are also high. However, some costs may be underestimated and the revenue figures may be too optimistic. The biggest risk is that the different school boards or schools do not adopt the program. If this is the case, the company will have to market the software directly to parents within a market that may already be saturated with other competitors' products—and these competitors are well-known, and likely to have the resources to increase their advertising.

### Assessment Opportunity #5 (Strategic Issue #4 – Governance and PSU/KPI issue)

*The candidate is expected to recognize that the PSUs granted to Solange are motivating her to move in a certain direction. They should understand that Solange specifically formulated the KPIs in order to achieve the targets required to obtain the maximum PSUs (leading to share ownership). The candidate should recognize that, in using these KPIs, CTI could be accepting the wrong proposals for value creation for the shareholders, and that the KPIs are not best suited for assessing whether to make certain types of investments. The candidate could go on to recommend changes to the measures.*

*Note that, since this issue is about Solange, the following information should be presented to Lorraine, Krystal, Steven, and Thomas (who was absent from the meeting).*

Solange is the new CEO (hired in October 2024), and she set new KPIs in 2024. They appear to have been designed to align with the targets that the board set for her PSUs. The incentive bonus is structured in such a way that Solange will acquire more and more PSUs as the company achieves certain milestones. However, it is questionable whether the new KPIs will help CTI develop and create exceptional products that persist over time, which is the ultimate intention of the board. For example, relative to the proposed investment in the math software, schools can download and upgrade the software for free; therefore, the KPI related to the number of downloads/upgrades will not necessarily equal an increase in value for CTI. Further, the KPI related to the number of times a game is played in a month by a player does not measure anything related to how the product is performing relative to increasing CTI's value for its shareholders. A game could be played each and every day, but if the player was able to download and use the product for free, this high frequency of usage would not equal an increase in value. These two measures give an indication of volumes, and not sales (which also depend on the selling price) or profits (which also depend on costs).

Another element in her PSU target is return on invested capital (ROIC). Solange asks that the impact on the ROIC be presented for each option. However, in this case, the ROIC defines invested capital on what has been capitalized to assets, and not the total amount spent upfront. Therefore, if many of an alternative's costs are expensed through the income statement, this measure will not necessarily capture the actual performance of the alternative.

When using Solange's new KPIs to assess which proposal should be accepted, the proposal with the highest number for each of KPIs #1, #2 and #3 (from the list) is the math software proposal. Based on those measures, the math software appears to be the clear choice. However, relative to the ROIC measure, the math program performs the worst out of the three available investment options (23% versus 115% for the Kolepare option, and 100% for the building-block game option). Nevertheless, based on the parameters set by Solange and her KPIs, the math software investment would be made. However, this increases revenues and profits by the lowest amounts. Finally, the payback period for the math software investment is the longest out of each of the three available options. In contrast, if the Kolepare purchase and the building-block board game proposals are accepted, this will result in the higher revenues and gross profit margins.

Using Solange's KPIs could result in poor investment decisions for CTI because investing all the available capital in educational video games will be detrimental to ongoing profits of the games and puzzles division, as sales of Know It or Lose It are declining. To ensure that the manufacturing capacity is utilized and unit costs do not significantly increase, this loss in sales needs to be replaced by some other tangible product. An investment in the games and puzzles division will help reduce the likelihood that this occurs.

The original board members—Lorraine, Krystal, and Steven—reverted to using more traditional financial measures (payback period and gross profit margins) to help them assess the various alternatives. These measures tie directly to creating value, and are valid for the traditional products such as board games, puzzles, and dolls. In all cases, the alternatives related to the traditional products' performance are much worse relative to the KPIs for users, offshoots, and number of times the product is used, but are acceptable based on the payback period and gross profit margin analysis.

Therefore, there is a conflict as to the appropriate KPIs to use for CTI. Part of this conflict arises because Solange wants to change the type of products that CTI produces, and the success of these electronic products generally has to be evaluated on different KPIs than on CTI's past traditional products. There will have to be discussions as to what measures would be appropriate, and Thomas may be the suitable person to arbitrate between Solange and the other shareholders, given that, as former chair of the board, Thomas may have the respect of all of the shareholders, and the skills to be in a position to lead a discussion and guide the company through this transition, since he is less involved in the company than the other shareholders. As he did not attend this shareholders meeting, he can present a more objective view of the measures.

### **Source of the Problem**

The measures used for Solange's PSUs are an issue. The board needs to recognize that the wrong measurement goals have been used for Solange's KPIs, which are motivated by her PSU targets, and are therefore motivating her in a direction that was likely not intended by the board. New or different PSUs may be warranted. But this would need to be negotiated with Solange. Thomas may also be able to help bridge the gap between the other board members' questions about the applicability of Solange's KPIs, and Solange's desire to keep the KPIs as they are. This is important because, at this time, there is an apparent conflict between the intentions of the board and the way that Solange has implanted her KPIs. In addition, some aspects of the current PSUs (especially the ROIC target) appear to be relatively easy to achieve in relation to the proposals presented. CTI's board may want to consider increasing the 12% ROIC measure to make it more difficult to achieve.

Instead, what KPIs should have been used? Many of the KPIs are important from a product development perspective, both currently and for the future. Since there is little investment to be capitalized for the electronics division, CTI instead needs to consider the net impact on profits of the initial development costs required.

What is missing from Solange's current KPI list is profit and cash flow measures, which are important for value creation, such as the ones mentioned by the original board members. Another potential KPI is one that measures how long it takes the company to recoup its initial investment in a project. Payback can be helpful when the payback periods are relatively short, which is the case for these proposals.



The KPIs should be changed so that they incentivize Solange and the rest of CTI to drive for investments that will create value for the shareholders.

For example, her measures could include:

1. return on total gross investment (not just the amount that has been capitalized).
2. number of new products and their offshoots—as this is an indication of innovation and success of the R&D department, which is important for sustainable growth, it can stay.
3. increase in annual net profit before taxes and interest.

In sum, the KPIs as set by Solange appear to be highly correlated with her PSUs, and this has created a potential problem with the way that CTI's funds will be invested. To ensure that the board's objectives are met, the KPIs and the PSUs should be revisited and potentially amended, to ensure that the company's best interests and Solange's directives are as aligned as possible.

### Summative Assessment #3 (Conclude and Advise)

For Summative Assessment #3, the candidate must be assessed for reasonableness of attempt:

**Yes** – The candidate provided reasonable conclusions for each major issue.

**Unsure** – The candidate attempted to provide reasonable conclusions for each major issue.

**No** – The candidate clearly did not provide reasonable conclusions for each major issue.

### **Enabling Competencies**

*6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions*

*6.3.2 Articulates limitations to recommendations*

*6.3.3 Applies decision criteria to choose among viable alternatives*

*6.3.4 Ensures that decision criteria do not conflict with professional ethics and values*

*The candidate is expected to provide a logical conclusion for all the issues (directed and non-directed) that is consistent with their analysis and integrated across the strategic issues. The candidate may provide a conclusion on an issue immediately after their analysis but should also present an overall conclusion, to provide a sense of completion to the report (a wrapping-up and prioritization of the recommendations).*

*The candidate could recommend a different direction as long as it aligns with their analysis. The recommendations should address the key concerns of the shareholders and display good professional judgment. Suggesting that further information is required is acceptable for some issues as long as it is justified and consistent with the analysis performed.*

*The candidate should draw logical conclusions and make a recommendation on the strategic direction that CTI should take. The candidate's analysis integrates the analysis for all the major issues (purchase of Kolepare, investment in building-block game, and investment in the math software).*

*With respect to the individual strategic options presented, candidates should rank the strategic alternatives they analyzed. This ranking should consider the main issues:*

- *How the alternative helps meet the KPIs and the board's targets.*
- *The level of risk: upfront investment required; fit with industry trends; ongoing investment required, etc. The candidate should also consider how Know It or Lose It coming to the end of its life cycle will impact the company's manufacturing capacity and profits, especially if it is not replaced by another tangible product. Does the proposal allow for future growth, overcome current weaknesses, etc.?*
- *Does it fit with the company's vision and mission statements and the company's updated core values?*

## **Recommendations on Specific Issues**

### From a governance perspective

Solange has been granted PSUs that appear to have her taking actions to achieve targets that may not directly increase value for the shareholders, and may actually harm the long-term growth of the company. Solange is known for being persuasive. These targets appear to be motivating her to move in a direction that the board likely did not intend. The PSUs need to be changed immediately; otherwise, the company will be compensating Solange for steering the company in a potentially damaging direction. Also, the PSUs grant Solange a large number of common shares in the company, which would give Solange greater influence in the future.

CTI's board developed the PSUs in order to assess and reward Solange's performance. Solange used these targets to create her list of KPIs, and subsequently provided those to the division managers. The investment proposal(s) with the highest measurements relative to the most KPIs will be accepted. However, important measures, some of which have been used in the past, such as increase in profit margins and payback period, are missing from the KPIs being used to evaluate the proposals. Using a different set of KPIs would result in different rankings of the proposals.

There is a financial constraint in that the maximum amount of cash available for the current year is \$3 million. Therefore, this limits the amount that can be invested.

In addition to the limited cash available, there are different synergies between some of the proposals. The Kolepare acquisition also impacts the costs associated with production of the building-block game, since it is made from organic materials.

#### Purchase Kolepare (\$1 million cash and \$3 million in debt)

This alternative supports the traditional products of the company. The profitability of the Kolepare acquisition is dependent on the continued manufacturing and sales of the dolls and traditional games being produced that use organic materials. This acquisition will only pay off with higher net profits if the company continues to manufacture its dolls and traditional puzzles and games. If games and doll sales decline due to changes in the industry, or due to CTI not investing in new tangible product development, the need for organic materials will decline.

Therefore, to make the Kolepare acquisition profitable, the company ideally continues to invest in its traditional games and puzzles division (such as the building-block game proposal). In addition, with the sales of Know it or Lose It declining, there is excess manufacturing capacity. If other board games or puzzles are not produced, manufacturing production will decline, making the division's unit production costs higher and margins lower. If there are no new games manufactured, even less organic material will be needed. However, with an increasing demand for toys made with organic materials, this provides another source of revenue, from the sale of organic materials to other customers. CTI does not, however, have any experience in supplying materials, so there could a significant learning curve and lost performance, given CTI's entrance into this new line of business.

Building-block board game (\$1.5 million cash)

Investment in the building-block game supports the traditional products for the company. It helps maintain manufacturing capacity and keep unit costs in line. It is also a new and innovative product that is expected to be well received in the market. It will use half of the cash available, leaving \$1.5 million that can be used for other purposes. The risk is that the volume of sales could be lower due to market and industry forces. However, some of the directors believe that this is a great innovative game that could win an award. There is the opportunity for a video game version of the game, which could build on the tangible board game version. If the physical version of the game is completed and taken to market, CTI could get valuable feedback about the game, to make improvements before launching the video game version. As there is sufficient cash, this investment could be done in conjunction with the Kolepare purchase, and synergies could be increased. At this time, however, there are a limited number of offshoots for further development, and the number of users is projected to be much lower than the math software proposal. If this proposal is accepted, there are no resources left for the electronics division, which will send a negative message to this division and may cause programmers to leave.

Investment in the math software (\$2.1 million)

This investment is projected to result in a high number of users and offshoots for future products; however, this project also results in lower revenues and lower profits relative to the other two investment options that CTI is currently considering.

The video game market is projected to grow faster than the traditional games and doll market. If the company is serious about being in the video game market, this may be a great route to take, and it should enter the market sooner rather than later. There is the risk that these games will not be accepted or that the school boards and schools will not support the software, and higher marketing costs will be incurred. If the company decides not to accept this proposal, the programmers in the electronics department may become upset, and some may even leave the company.

If the investment in these educational video games is made, there will be no new games or puzzles developed and sold, and manufacturing production volumes will fall. The company will continue to be reliant on character-licensed products for its traditional products. Additionally, if production of games and puzzles decline, manufacturing costs will increase due to underutilization. This decision could significantly change the direction of the company.

#### Summative Assessment #4 (Communication Hurdle)

For Summative Assessment #4, the candidate must be assessed for reasonableness of attempt:

**Yes** – The candidate adequately communicated their response.

**No** – The candidate clearly did not adequately communicate their response.

Insufficient communication in a candidate's response would generally include some of the following:

- The response is difficult to understand.
- The reader needs to re-read sections several times in order to gain an understanding.
- It is not clear what point the candidate is trying to make.
- The quantitative analysis does not make sense because of illogical ordering or a lack of labelling.
- There is an excessive amount of spelling and grammatical errors.
- The language used is unprofessional.

#### Summative Assessment #5 (Overall Assessment)

For Summative Assessment #5, the candidate must be assessed in one of the following, based on their overall performance:

**Clear Pass** – Overall, the candidate provided an adequate response, clearly meeting the minimum standards for each of the summative assessments.

**Marginal Pass** – Overall, the candidate provided an adequate response, with some errors or areas of omission, but included the underlying key concepts.

**Marginal Fail** – Overall, the candidate provided an attempt at a response, with several errors or an incomplete analysis.

**Clear Fail** – Overall, the candidate did not provide an adequate response because the response was deficient in multiple areas.

To be assessed a Pass, the candidate is expected to perform adequately in all the summative assessments and demonstrate that they addressed issues of importance in a cohesive, professional manner.

In making their overall assessment, markers were asked to consider the following:

1. Did the candidate step back and see the bigger picture, and then address the broader issues identified?
2. Did the candidate prioritize the issues by discussing the major and minor issues in appropriate depth?
3. Did the candidate use both quantitative (when available) and qualitative information to support their discussions and conclusions?
4. Did the candidate use the appropriate tools to perform quantitative analysis?
5. Did the candidate use sufficient case facts (current case and Capstone 1 case) about the external and internal environment to support their discussions?
6. Did the candidate communicate their ideas clearly, integrating and synthesizing the information?

## **SAMPLE RESPONSE – CTI VERSION 2**

***Below is an actual passing candidate response.***

### **situational analysis**

#### External

- US seeking to add more organic toys to their product line
- character licensing products significantly oversell non-character licensing
- doll segment and related accessory growth strong
- customers willing to pay premium for character licensed toys and for products made from organic material
- CAD strong

#### Internal

dolls quality of products consistently exceeded expectations with Kolepare, new manufacturer

- sookie dolls have clothing line, which have higher gross margins and ability to gather feedback from customers since they're sold online
- decline in know it or lose it sales (end of its life cycle)
- experienced doll designed R&D employees hired
- electronics know it or lose it based game targeting female gamers 34-64
- division continues to develop new video games but none have gone to market
- public believes they can trust CTI products, which has increase sales of dolls and games/ puzzles

#### Mission/vision/core values

mission- innovative, and educational toys that encourage creativity and critical thinking in a fun manner enjoyed by all members of the family

vision- make toys that are enduring, educational, fun for all ages and made from organic material

Core values:

safe, high quality educational toys and game that persist over time - **develop products with a long life cycle**

- employees respected and listened to
- use organic and sustainable materials where possible

KSF/objectives/ goals

KSF

Product variety

strong retailer and supplier relationships

diverse and large number of retailer customers

innovation

ability to adjust inventory volumes based on changes in customer demand

strong brand to obtain and retain shelf space

focus on lowering labour cost and increased automation

Objectives for 2024 and 2025

- 12% increase in return on invested capital - using 2025 ROIC
- 1M product sales and or software downloads
- 6 new products per year (including offshoots)
- increase product revenues
- reduce dependency on license contracts
- low time to market from product conception to market release

financial analysis/ constraints

6M preferred shares invested by Thomas (non-cumulative dividends) of 10% i.e. 600K per year



3M available to invest in 20224

prime is 3.8%

financial analysis

electronics, while it has the highest gross profit%, has the lowest profit margin of 4.5%, largely due to the significant in-house programmers and developers that are required. Given the KSF in industry to lower wages, this could be problematic in the long run.

game/ puzzle sales account for 65% of sales, and therefore it is important that this division does well in order to support overall growth of the company.

### **Issue#1- purchase Kolepare (doll)**

Quantitative

adjust ROIC calculation for internal sales / transaactions

updated valuation compared with asking price of 4M

based on my analysis, updated value of Kolepare including the synergies is below asking price of 4M, and therefore should not be purchased.

updated ROIC is 68% which is a slight improvement, and would include exceed 12% ROIC for PSU

Qualitative

pros

-primarily organic materials are being used. Given that CTI mission includes manufacturing toys that are made from organic material, this is consistent with CTI mission strategy, which should help CTI grow ROIC, and profit margins (board objective)

- dolls quality of products consistently exceeded expectations with Kolepare, new manufacturer. the two owners have agreed to stay on for one year, so their knowledge could be transferred to CTI employees to ensure high quality continues. Indeed, having in house manufacturing could help magnify this existing strength. given that high quality products is a core value of CTI, this would help with their product sales,

- SDL can expand to US markets and international markets, where demand for this type of product is growing, which will help with the boards goal of expanding geographic reach

- new Sookie doll products could be produced using excess capacity. given that product variety is important, this could increase product revenues in the doll division (board objective), additionally, this could increase the number of new products (board objective) which should help drive sales and profitability

attractive payback period of 3.5 years will allow CTI to recover investment costs relatively quick, which is important given the limited CF they have

resulting games/puzzles gross profit margins improvement which is important to some of the board members and helps the company grow

cons

- there is some disagreement, but Solgagne does not perceive this proposal as innovative. Innovation is a KSF in the industry, and given the lack of differentiation the strategy creates, it may not provide the growth board is looking for -pg 10

- cost is 4M, and CTI only has 3M available for new proposals, so they would need additionally funding for this proposal. additionally, perusing this option would magnify existing cash flow constraints.

- many of the boards objectives are not helped by this proposal,. Number of products sales or software downloads (has potential to increase but based on projections doesnt show improvement). number of new products doesn't show improvement (again if they truley introduce new sookie products, this would improve, but it's not a guarentee that CTI would do so as it hasn't been included in the proposal.

recommendation

I recommend rejecting this proposal as the value of the company is below the 4M asking price. additionally, it will magnify CTI existing capital shortage constraints

## **Issue#2 - launch bulding block board game (internallhy developed) games/puzzles**

Quantitative

the investment should be perused because the ROIC is 26%, which is above the target of 12%. additionally, payback period is only 2 years, which is the lowest of the three proposals and loarraine believes to be an appropriate measurement

assumptions

given that the board's goal is to decrease dependence on licensing, i will assume there will be no character licensing 5% boost

## Qualitative

### pros

- US seeking to add more organic toys to their product line, therefore this could be an opportunity to grow sales and expand to the US market, which could help further grow product sales (board objective)
  - this proposal combines creativity and critical thinking, which is aligned with the mission statement of CTI and therefore will help improve product sales (board objective) - mission
- Building block board game has potential to be an award winning board game, which is consistent with CTI's core value of creating award winning toys, and therefore should help company increase product sales
- the game will be made from 100% organic material, which is consistent with CTI core value of using organic and sustainable materials where possible.
  - 5M increase in product revenues is significant, and contributes to overall growth of CTI, and is consistent with board's objective for increase product revenues
  - this game can be enjoyed by the entire family, which is consistent with vision of having games enjoyed by all ages (and mission of being fun for the whole family)
  - volumes consistently growing in 2026, suggesting strong life cycle of the product, which is a board objective

### cons

- the 5 % profits for the licensing would require character licensing, and the board would like to reduce dependency on license contracts, therefore if they were to opt for this character licensing it would not be consistent with their objectives
- only offers 1 new product to the market. given that product variety is a KSF in the industry, CTI growth in sales may be limited for this product in the long term.

### recommendation

i recommend proceeding with this option as it will have a strong ROIC and sales increase, and is a good fit with CTI mission and vision, and core values. also the capital investment of only 1.5M is affordable given CTI has 3M available for new projects

### Issue#3- math game software - 11: 51-12:15

#### Quantitative

- per Exhibit III, quantitatively, *CTI should proceed with this investment* since ROIC is 17%, which is greater than target of 12%, and profit margin is 19%, which is far above current electronics profit margin. additionally, product revenues are expected to increase by ~2M, which will help towards boards goal of increasing product revenues

- expected to increase number of new products by 9, which is more than any other proposal, which will help towards the board's goal of increasing the number of new products

- number of mobile downloads increases significantly by 400K aligned with boards objectives.

#### assumptions

development costs are likely understated in the 2025 projections. therefore ROIC % would be lower than calculation suggests.

- updated ROIC using with laptop investment included because it is part of the initial investment (and otherwise the number is biased)

- Solange is biased towards this proposal and likely inflating the numbers because it will help her achieve her performance bonus

#### Qualitative

##### pros

reputation as provider of quality educational products

this option is expected to generate great publicity, and given that strong brand is a key success factor in industry, this stronger brand image could help increase CTI product sales (board objective) in all divisions. additionally, CTI currently has a strong brand image since the public believes they can trust CTI products. this could therefore magnify an existing strength.

significant offshoots could follow

5% of the revenue going to donated scholarship fund that helps promote children's education, which is consistent with the component of CTI vision indicating that they want to promote education (make toys that are enduring, educational etc)

- studies have found that children using games designed to develop math and spelling skills along with critical thinking perform better in these subject areas. Math game software would help promote math curricula for grades 1-3. this is consistent with CTI core value of promoting education through their toys.

cons

- the game is not complete (only 65% complete), it's only a pilot project. therefore CTI may invest the required 2.1M into the project, and the projected sales may not materialize, which would be a waste of capital (and capital is limited to only 3M available currently.)
- currently, one of CTI's weaknesses is the low profitability of the electronics division as a result of magnify weakness of overspending on ongoing programming costs
- CTI vision includes being fun for all ages, and this product is only target at grades 1-3, therefore it is not consistent with CTI vision, and may therefore produce limited growth in the electronics department

recommendation

I recommend rejecting this proposal. while it does well when analyzed in comparison to the boards objectives, it is also highly risky, and only 65% completed, and therefore the projected sales and growth may not materialize

**other issues**

**Use of R&D department focus on development of new board games and puzzles.**

**incentive for solagne to push targets that get her higher payout**

lorraine doesnt agree with metrics used for kolepare investment

wants board game to be video game just for KPI

issue: solagne has a performance incentive that maximizes payout if she meets the following metrics requires 12% ROIC, 1M product sales. softward downloas and 6 new products

implication: Solagne has a bias to act in the best interest of maximizing her performance bonus, rather than helping CTI prosper. In some cases, CTI best interest is not aligned with Solagne's goal are of maximising her bonus, which is creating a conflict. For example, it appears that this has created disagreement over the KPIs that should be used to determine which proposals to accept. e.g. lorraine believes that payback period is a better metric to determine whether Kolepare should be accepted, and this is not one of the KPIs

recommendation

KPIs should be determined based on input from all of the board members, including Krystal and Loarraine and Thomas, so that decisions move CTI towards KPIs that are in the best interest of CTI, and not only Solagne. Solagne performance should also include payback period, to better align her incentives with the best interests of the company

advocating for video games

Use of R&D

issue: Sologne is advocating for use of R&D team to research the differences between various school curricula.

implication: given that R&D team experience is in board games, puzzles and dolls, it is highly likely that they will be inefficient in researching school curricula. this will lead to higher R&D costs and lower profits, (and may not produce higher revenues given R&D team's lack of experience in electronics and in school curricula in particular) one KSF in the industry is lowering labour costs, therefore this is likely to have a negative long term impact on CTI profits.

recommendation: if CTI chooses to pursue math game software proposal, then they should outsource the R&D component to a third party that specialises in this type of analysis. this will allow for more efficient use of resources and likely higher product revues (board objective) since more experience individuals will be performing the anyalysis

disagreement about metrics

payback period and profit margins

### **Overall conclusion**

the board has a number of objectives that it would like to meet, such as increasing anual product sales/ downloads, number of games played per month, number of new products, product revues, and time to market. The capital available for proposals is only 3M, meaning CTI is quite limited in terms of cash availale for capital investment. in addition, the preferred shares from thomas have a 10% (600K per year) dividend, which further limits cash. although fortunately dividends are non-cumulative, so this would allow the board to delay payment if they were cash constrained. The board would also like to limit reliance on character development. additionally the board would like products with a product life

In order to achieve its goals, I recommend that the board do the following in priority order:

- reject the proposal for Kolepare, as the price of 4M is unfair, and additionally CTI doesn't have enough cash available (only 3M) to pay for this. Also this will not help a number of the board's objectives.
- accept the proposal for building block board game. This proposal is only 1.5M, which is affordable. I recommend omitting the character licensing option, as this will better align with the board's goal of reducing reliance on character licensing. This option is also a good fit with CTI mission, vision and core values and will likely have a long product life given the consistent growth in demand from projections.
- reject the proposal for math game software. It is very high risk given that its success is based on a number of assumptions that may not come to fruition, and also not a very good fit with certain aspects of CTI vision.

As noted above, I also recommend amending Solange performance share unit incentive to include payback period and gross profit to better align with other board opinion on Key performance metrics

Financial analysis

games/puzzles	dolls	electronics
% sales o 65%	20%	15%

**Exhibit 1: purchase of Kolepare**

purpose: recalculate ROIC based on adjusted figures. recalculate valuation based on adjusted figures

lost rev

starting Net income before tax	650,000.0	
non internal revenue 40%	260,000.0	60% lost revenue since sales to CTI no longer counted
add: cost savings CTI	466.5	15%*3110 for all CTI general admin exp
cost savings Kolepare	125,000.0	
operating expenses	300,000.0	
updated net income before tax	685,466.5	A

ROIC 0.171366625 =A/1m

Net assets 1000000

updated valuation 3,427,332.50 5\* A industry multiplier of 5

purchase price les 572667.5

conclusion: do not buy as purchase price is above valuation



**Exhibit 2: Building block board game**

purpose: calculate net income before tax, and ROIC

assets	1500000	equipment investment needed			
		2024	2025	2026	games/puzzles margin
volumes	50000	50000	250000	280000	0.262673
sales	1000000	1000000	5000000	5600000	expenses 27% of sales, assume the same
price	20	20	20	20	
VC	13.4	13.4	13.4	13.4	
contribution margin/ unit	6.6	6.6	6.6	6.6	
CM (\$)	330,000	1,650,000	1,848,000		
gross profit %	0.33	0.33	0.33	0.33	
net income		390,000.00			assuming same as games/ puzzles division
payback	1.32	investment / CF in year 1 & 2			
ROIC (use 2025 pretax income)		0.26			

conclusion: payback occurs during year 2 and profit margin is 33%

ROIC of 26%, therefore the investment should be pursued

**Exhibit 3: Math Games software**

purpose: calculate updated ROIC and updated payback period

ROIC	net income before taxes	444,800.00	
	less: marketing	78,902.14	18% electronics marketing % of sales for CTI (assuming same for math game software)
	adjusted net income	365,897.86	
	net assets:	1,600,000.00	A
	Adjusted net assets to		
	account for computer costs	2,100,000.00	500K for computers +A
	adjusted ROIC	17%	
	payback	investment/ Net income before taxes	
		4.721223022	
	gross profit margin	100%	
	net profit margin	19%	

conclusion: proceed with investment as ROIC is greater than 12% and profit margin is 23%

**APPENDIX G**

**RESULTS BY SUMMATIVE ASSESSMENT OPPORTUNITY FOR  
DAY 1 VERSION 1 AND VERSION 2**

**Results by Summative Assessment Opportunity**

**Marking Results – Creative Toys Inc. Version 1**

<b>Indicator</b>	<b>Papers</b>	<b>Did not meet standard<sup>1</sup></b>	<b>Marginal<sup>1</sup></b>	<b>Yes, met standard</b>
Situational Analysis	1980	0.40	5.71	93.89
Analysis	1980	6.52	49.49	43.99
Conclude and Advise	1980	2.68	27.07	70.25
Communication	1980	0.00	0.05	99.95

**Marking Results – Creative Toys Inc. Version 2**

<b>Indicator</b>	<b>Papers</b>	<b>Did not meet standard<sup>1</sup></b>	<b>Marginal<sup>1</sup></b>	<b>Yes, met standard</b>
Situational Analysis	455	0.44	5.49	94.07
Analysis	455	8.57	60.44	30.99
Conclude and Advise	455	11.21	35.16	53.63
Communication	455	0.00	0.22	99.78

<sup>1</sup>Clearly failing papers (i.e., did not meet the standard) were marked twice. All marginally failing or marginally passing papers were marked a second time to determine which ones met the passing standard. A selection of papers that were close to the margin were also looked at by third marker. The clear pass papers were marked only once, however, they were audited.

**The BOE ensures that Version 2 difficulties are equated with Version 1. Any differences in the above statistics are attributable to the mix of candidates writing, which varies with each version.**

**APPENDIX H**

**BOARD OF EXAMINERS' COMMENTS ON DAY 1 SIMULATIONS  
VERSION 1 AND VERSION 2**

**BOARD OF EXAMINERS' COMMENTS ON DAY 1  
(CTI VERSION 1)**

<b>Paper/Simulation:</b>	Day 1 – Linked Case, CTI Version 1 (on May 2022 CFE)
<b>Estimated time to complete:</b>	240 minutes
<b>Simulation difficulty:</b>	Average
<b>Competency Map coverage:</b>	N/A; Enabling Skills

**Examiners' comments by Summative Assessment Opportunity (SO)**

**SO#1 (Situational Analysis)**

Candidates were expected to highlight the factors, both internal and external to CTI, that could have influenced the strategic decisions presented in the simulation. Since Capstone 1, candidates were informed that CTI had established an electronics division, which had released its first video game, KILO. Although initial sales were low, the game had become successful after CTI redesigned the game, increasing player engagement through the introduction of treasure boxes. Also, although KILO's redesign involved removing the education components of the game, it was still being advertised as educational. Since Capstone 1, CTI had also adopted a new corporate social responsibility code of conduct (CSR), which stated that the company would have an ethical regard for its stakeholders (such as its customers, employees, and the community) in all its actions and business decisions. CTI also had limited investment capital for making strategic investments, and candidates were expected to identify and abide by this constraint in their analysis and recommendations. Externally, CTI had opportunities for investment within both the company's game/puzzle and electronics divisions. Both of these markets were seeing significant growth beyond that of the toy industry. In addition, several research studies had indicated the potential harm of computer screen time on the development of young people's mental abilities; one study specifically mentioned KILO's treasure boxes as being similar to casino games. Internally, CTI had set the objectives of expanding the company's targeted age segments and of growing the company's sales and profits. In lieu of these objectives, CTI's board had to decide where to allocate the company's investment dollars between CTI's two divisions—game/puzzle and electronics. Despite the research studies, Thomas was adamantly in favour of KILO's upgrade whereas Krystal wanted to downgrade KILO back to its original form, which was aligned with CTI's mission, vision, values, and new CSR policy. Candidates were rewarded when they made relevant links between their situational analysis and their analysis of the strategic alternatives in SO#2, and recommendations in SO#3.

A majority of candidates provided a good summary of CTI's internal and external situation at the beginning of their response. Candidates typically included an updated SWOT analysis that highlighted the changes in the company's situation that had occurred since Capstone 1, and identified the board's main objectives to be considered in relation to the strategic options presented in the simulation. Most candidates identified CTI's limited investment capital in their situational analysis and the misalignment between CTI's new successful video game, KILO, and the company's mission, vision, values, and new CSR policy. Despite recognizing this, few candidates discussed the threat that the misalignment presented to CTI's game/puzzle division, which was founded, and focused, on producing educational products.

Strong candidates provided a situational analysis that both identified and discussed the implications of the major situational aspects presented in the simulation, such as the opportunity to invest in a quickly growing video game market and the threat of bad publicity stemming from KILO's treasure boxes. Strong candidates also recognized the constraining aspects of some of the strategic investment opportunities that CTI was considering (such as that the upgrade of KILO was impossible if CTI decided to pursue the endorsement deal with Marly Hopkins, given Marly's contract stipulations). Strong candidates also discussed CTI's limited investment capital in their situational analysis in greater depth, and linked this constraint to their discussion of each investment option. Strong candidates were also better able to discuss the ways in which the various strategic investment opportunities would integrate well together (for instance, if CTI downgraded KILO, Marly might endorse the video game, which could help improve its sales).

Weak candidates tended to simply list case facts related to the company's revised mission and vision statements and the various changes that had occurred within the industry, without identifying or discussing which of those items would have the most influence on their decision-making process. Weak candidates also had a tougher time linking their analysis of the issues back to the most relevant aspects of the situational analysis (such as the company's new CSR policy), and instead tended to make more superficial links, such as whether the Sengames investment opportunity would align with the key success factor of having a recognizable brand name. Weak candidates were also less likely to acknowledge and incorporate the ways in which the various strategic investment opportunities would, or would not, be possible when taken in combination (such as failing to recognize that Thomas would not invest more money into CTI if the KILO upgrade was declined).

## **SO#2 (Analysis of the Issues)**

Candidates were expected to analyze four strategic alternatives, both qualitatively and quantitatively. Candidates were also expected to identify and discuss CTI's overall strategic direction in lieu of the current misalignment between KILO and the company's mission, vision, and values, and the emerging opportunity to focus the company's investment capital on video games such as KILO rather than on the educational products that CTI had historically been known for.

### AO#2: Acquire Sengames from Irene Brownstone?

Candidates were asked to evaluate whether CTI should purchase Sengames Inc. (Sengames), a company that develops and manufactures non-electronic brain training games for people over the age of 60. Qualitatively, candidates were expected to discuss a variety of relevant advantages and disadvantages related to this decision, including some of the more significant decision factors, such as the potential synergies that may arise from the acquisition (such as by potentially leveraging Sengames' patents to enhance CTI's current product line, or by utilizing Irene's expertise to augment CTI's already successful R&D division). Candidates could have also recognized that integrating Sengames into CTI's existing business might present a challenge, similar to how the cultural differences between CTI and SDL posed a challenge to the company in Capstone 1. Quantitatively, candidates could have calculated Sengames' implied value using the EDITBA multiplier, and then compared that figure to the asking price for Sengames. Candidates could have also recognized that all the quantitative data that CTI had relative to Sengames was provided by Sengames, and therefore contained a risk of biases and inaccuracies (this was especially relevant for Sengames' income statement and the valuation of the patents).

Most candidates identified and discussed this strategic alternative to the required amount of depth. Most often discussed was how the acquisition of Sengames would meet the board's objective of expanding CTI's targeted age segments, and how Sengames aligned well with CTI's mission, vision, and values. Quantitatively, most candidates attempted to value Sengames and to then compare that valuation to the asking price for Sengames. Fewer candidates recognized that Sengames' income statement was prepared by Irene Brownstone, and therefore, those candidates failed to suggest that CTI would need to verify that data before an informed decision could be made.



Qualitatively, strong candidates highlighted the potential synergies that could result from the acquisition. For example, strong candidates discussed the potential for Irene and Sengames' intellectual property to strengthen CTI's R&D department. Strong candidates also pointed out that Sengames' patents could help improve CTI's existing product line, but that more due diligence was required, to determine the value of the patents. Weak candidates were more likely to focus their analysis on the apparent strengths of the acquisition, and would go on to recommend the purchase. However, these candidates often failed to recommend that CTI negotiate further with Sengames (given the apparently high purchase price) before the company was acquired.

Quantitatively, strong candidates performed a simple valuation calculation using the provided EBTIDA multiplier in conjunction with Sengames' income statement. These candidates recognized that the asking price for Sengames was much greater than its implied value. These candidates discussed the possibility that Sengames' patents were the cause of this discrepancy, and then emphasized the importance of conducting an independent evaluation of both the patents and Sengames as a whole before a decision was made. Weak candidates tended to take the income statement and the value of the patents at face value, and to conclude that CTI was getting a great deal on the acquisition. Weak candidates often based their recommendation to purchase Sengames on this flawed quantitative assessment. Weak candidates were also less likely to suggest performing further due diligence procedures before a decision was made.

AO#3: Pursue endorsement deal with the chess prodigy Marly Hopkins?

Candidates were expected to discuss whether CTI should pursue the endorsement of a young Canadian chess prodigy, Marly Hopkins. If Marly's public reputation remained strong throughout the duration of the proposed five-year contract, CTI's sales and brand visibility were likely to benefit. However, before Marly would sign the endorsement contract, CTI had to agree to downgrade KILO back to its original form (because only the original KILO video game aligned with Marly's values). Qualitatively, candidates were expected to discuss a variety of relevant advantages and disadvantages related to this decision, including some of the more significant decision factors, such as how the current terms of the Marly contract put CTI in an unfavourable strategic position and that a renegotiation was necessary before CTI moved forward with the endorsement deal. Quantitatively, candidates could have estimated the effect that Marly's endorsement would have on CTI's net sales and profit margin. Candidates could have also discussed how Marly's endorsement may affect the financial success of the other strategic investment options that CTI was considering (such as the potential for Marly to endorse BATNIX and therefore help boost the number of subscriptions for that potential development project).

Most candidates identified and discussed several qualitative considerations for this strategic investment option. Most commonly discussed was how the endorsement of Marly would help to confirm CTI as an educationally based company, in lieu of the negative attention that KILO had attracted. Most candidates made the important link between the alignment of Marly and her values with the mission, vision, values, and new CSR policy of CTI. Most candidates also recognized that the 80% mandatory reinvestment stipulation would put CTI into an unfavourable position relative to being able to make future investments in the company's video game division. Quantitatively, most candidates attempted to estimate the effect that the Marly endorsement would have on the net sales and profit margin of CTI; however, fewer candidates incorporated the necessary downgrade of KILO into their quantitative analysis. As a result, these candidates did not recognize that the current structure of the endorsement deal would result in a lower overall net sales and profit margin for CTI.

Qualitatively, strong candidates highlighted that the terms of the current endorsement contract needed to be renegotiated because, if signed as is, the deal would greatly restrict CTI's ability to allocate its investment capital. Strong candidates also recognized that paying Marly a \$3 million upfront fee could backfire on CTI if Marly's public perception declined during the five-year contract. Strong candidates recommended that CTI renegotiate: the fee structure of the contract, to make it less risky for CTI; the overall cost of the contract because it was high relative to similar endorsement deals that had been recently signed; and the mandatory 80% reinvestment back into games and puzzles. Weak candidates did not recognize the trade-off between obtaining Marly's endorsement and needing to downgrade KILO, and instead focused their analysis on less important decision factors such as Marly's endorsement not expanding CTI's targeted age segments.

Quantitatively, strong candidates provided a simple calculation that estimated the net effect that Marly's endorsement would have on CTI's income statement. Strong candidates also either incorporated the reduced revenue effect that would result from downgrading KILO directly into their calculation or described that effect as part of their quantitative discussion. Strong candidates also pointed out that the actual result of Marly's endorsement may be far different from the estimated amount. Weak candidates tended to provide calculations that were overly complicated or contained many errors (such as basing their calculation on only six months of the game/puzzle division's income rather than annualizing the division's net sales).

AO#4: Should CTI upgrade or downgrade KILO?

Candidates were expected to assess whether CTI would be better off upgrading KILO to allow players to play the game in large, international games via the Internet, or downgrading KILO back to its original form, which more properly aligned with CTI's current mission, vision, values, and new CSR policy. Relative to the upgrade, candidates could have recognized that this presented the risk that CTI would lose its reputation as being a company that focused on educational products. Candidates could have also questioned whether the estimated increase in sales that would result from KILO's upgrade was realistic, given the situational elements of the video game industry, such as the quickly fluctuating popularity of many video games. Relative to the downgrade, candidates could have recognized that, given the large loss of sales, the company's electronics department may no longer be profitable if CTI was unable to recuperate those losses through offering new and successful video games (which may be hard to achieve, given the increase in competition within the video game market). Quantitatively, candidates could have assessed the potential affect that either the upgrade or downgrade would have on CTI's sales and profits.

Most candidates made the important link between the current misalignment of KILO and the company's mission, vision, values, and new CSR policy. Most candidates also recognized that the proceeds from KILO's upgrade would allow CTI to invest in other opportunities. Quantitatively, most candidates quantified and discussed the significant return on investment that was projected to result from KILO's upgrade; however, most candidates failed to provide the incremental increase in sales and profits that would result from the upgrade of KILO when compared to the game's current sales and profits.

Qualitatively, strong candidates did a good job of recognizing the tradeoff between adhering to the company's mission, vision, values, and CSR policy and losing the significant profit that KILO was providing in its current form. Strong candidates highlighted that, if CTI decided to upgrade KILO, the company's other products (specifically those in the game/puzzle division) may lose sales because of CTI's potentially diminished reputation as a company that provides educational games that inspire critical thinking. Strong candidates also highlighted the situational elements of the video game industry, which could result in a lower-than-expected performance after KILO's upgrade. Weak candidates failed to highlight the current misalignment between KILO and CTI's mission, vision, values, and CSR policy as a major risk, and were more likely to recommend the upgrade of KILO without suggesting ways of mitigating this misalignment (such as by reintroducing some educational aspects of the game alongside the upgrade, or changing the way that CTI was currently advertising the product, given that the game was no longer considered educational).

Quantitatively, strong candidates provided a calculation for both the upgrade and the downgrade. These candidates recognized that CTI would lose a significant portion of the electronics division income if the game was downgraded, and that the upgrade would add a significant amount of income relative to KILO's current sales. Weak candidates often simply commented that, based on the information provided, the upgrade would be a profitable one without providing a calculation that more precisely assessed the quantitative strength of the upgrade. Weak candidates also failed to recognize that the actual results of the KILO upgrade could differ significantly from the projections that were provided, given the situational aspects of the video game industry that were presented in the simulation.

AO#5: Should CTI proceed with the development of the BATNIX mobile video game?

Candidates were expected to assess whether CTI should proceed with the development of a video game, BATNIX, which promoted less sedentary screen time and had the educational element of teaching young people about the climate and local nature. Qualitatively, candidates could have recognized that BATNIX was a better fit with CTI's current mission, vision, values, and new CSR policy relative to KILO, and that BATNIX represented a tradeoff between being able to take advantage of the growth in the video industry without abandoning the educational traditions of the company. Candidates could have also highlighted some of the situational risks that applied to BATNIX, such as the potential difficulty of securing the consultants required to develop the game. Quantitatively, candidates were expected to provide a simple profitability assessment of BATNIX, using the data provided.

Most candidates discussed the alignment of BATNIX with the company's mission, vision, values, and new CSR policy. Most candidates also recognized that BATNIX represented a way to take advantage of the growing niche market of families seeking mobile games that increased physical activity in children. Quantitatively, most candidates attempted to value the potential profitability of BATNIX, using the data provided; however, fewer candidates questioned whether the quantitative data for BATNIX was reasonable, given the situational aspects of the video game industry (such as how long it might take to develop the game, given the industry shortage of video game developers).

Qualitatively, strong candidates recognized the alignment of BATNIX with CTI's values but also pointed out that BATNIX would still promote the use of screens, which some parents were moving away from, given the research linking screen time and the slowed development of young people's mental abilities. Strong candidates also linked their qualitative discussions of BATNIX to the various risks of the video game industry, such as the increasing number of competitors that were entering the video game market. Weak candidates struggled to make links between the potential development of BATNIX and the wider video game industry. Rather, weaker candidates focused their qualitative analysis on the advantages of the opportunity (such as the game's alignment with CTI's values) without identifying and discussing many of the risks associated with the project.

Quantitatively, strong candidates provided a simple calculation to assess the potential profitability of BATNIX. Most commonly calculated was the payback period for BATNIX. Strong candidates would then discuss some of the uncertainties that could affect BATNIX's profit potential, such as a possibly shorter-than-expected period of time that BATNIX would remain popular, or whether it was realistic to assume that BATNIX would attract 10% of the overall niche market for this type of video game. Weak candidates struggled to effectively translate the data provided into a useful profitability calculation. One common error among weak candidates was to provide a breakeven analysis that did not include the proper inputs (for example, some candidates based this calculation on CTI receiving the entire niche market of eight million families rather than just 10% of those families, as the simulation stated).

AO#6: Switch CTI's strategic focus from board games to video games such as KILO?

Candidates were directed to comment on CTI's overall strategic direction. Relative to that specific request, candidates could have discussed the emerging opportunity to focus the company's investment capital on video games such as KILO rather than to remain focused on CTI's traditional products, which emphasized education and creativity. Candidates could have also recognized the current misalignment between KILO and the company's mission, vision, values, and new CSR policy. Candidates were not expected to provide CTI with a specific recommendation as to which strategic direction to choose; rather, the candidates could have recommended that CTI go in either direction as long as they provided a reasonable level of discussion and support for their recommendation.

Although most candidates recognized the need to discuss CTI's overall strategic direction, these discussions often lacked depth. Relative to the misalignment concern, most candidates recognized the issue as part of their analysis of AO#4, but did not link that discussion to CTI's overall strategic direction (such as by discussing how the misalignment might affect CTI's reputation and potentially harm the game/puzzle division, which was known for providing educational products). Relative to the decision of whether to shift CTI's strategic focus to developing more games such as KILO, most candidates did not provide a separate analysis to discuss the advantages and disadvantages of this option. Most candidates also failed to conclude on whether CTI should proceed with this change in focus.

Strong candidates both recognized the misalignment of KILO and CTI's values and tried to mitigate the issue through various recommendations, such as by changing the company's mission and vision, or by introducing an age restriction on KILO, to prevent young people from playing the game (if the KILO upgrade was recommended). Strong candidates also pointed out that it was unethical to promote KILO as being educational when that was not the reality, and suggested that, at the very least, CTI should change the way that KILO was being advertised. Other strong candidates provided a separate and fulsome discussion that compared the merits of changing strategic focus relative to holding true to the company's roots of providing educational products.

Weak candidates seldom provided a separate discussion of whether to switch the company's strategic focus, or ignored this proposal altogether. When this proposal was discussed by weak candidates, it was usually only included as a single pro or con in their analysis of the other strategic alternatives. Other weak candidates, rather than focusing on the merits of switching strategic direction, concentrated their discussion on Thomas and the fact that he was communicating too aggressively with the rest of the board. These governance-based discussions were less valuable than strategic-based discussions, because CTI's board was faced with the immediate decision of whether to change its direction. In addition, although weak candidates typically recognized the misalignment between KILO and its potential upgrade with CTI's values, these candidates typically went on to recommend the upgrade without offering any way to mitigate the misalignment.

### Overall

The focus of SO#2 was on the candidate's ability to recognize the advantages and disadvantages of each strategic alternative when weighed against the company's current mission, vision, values, and new CSR policy, and the potential new strategic focus on video games such as KILO. The strategic alternatives presented in the case contained tradeoffs between adhering to the company's traditional values and instead choosing to pursue opportunities that appeared to provide the greatest profit potential. Some strategic options also integrated well with each other (such as the endorsement deal with Marly and developing BATNIX), whereas other combinations did not work well together (such as upgrading KILO and the endorsement deal with Marly). Candidates were expected to identify at least some of these tradeoffs, and the integrative aspects between the various strategic alternatives that were presented in the simulation.

Most candidates addressed each of the four strategic investment alternatives available to CTI from both a qualitative and quantitative perspective. However, whereas strong candidates were able to provide an in-depth analysis for each of the four potential investments, weak candidates often spent too much time discussing AOs 2 and 3 and therefore left little time to fully address AOs 4, 5, and 6. As a result, weak candidates often had a poor breadth and depth of discussion for both the KILO upgrade/downgrade and the potential BATNIX investment. Another main differentiating factor between strong and weak candidates was the ability to identify and discuss in depth the most relevant decision factors. When compared to the weak candidates, strong candidates were more able to link their analysis of each AO to the wider situational elements that were present in the case. Strong candidates were also better able to identify and discuss the interconnections that existed between the investment opportunities (such as the potential boost to BATNIX's sales should Marly endorse CTI, given that Marly suggested that she might be willing to endorse socially responsible video games).

Most candidates attempted to analyze each strategic option from a quantitative perspective. Strong candidates made good use of their quantitative analyses by attempting to compare the potential profitability of each option while also considering the amount of risk and uncertainty involved in each investment. Weak candidates struggled to use the case facts in an effective way and routinely provided quantitative analyses that were overly complicated. Weak candidates also often failed to challenge the validity of the data provided, or to question the projections that were provided. Weak candidates also struggled to effectively discuss the relevance of their quantitative analyses, and how they contributed to the candidate's recommendations to pursue certain strategic alternatives.

### **SO#3 (Conclude and Advise)**

For each of the strategic options available to CTI, candidates were expected to provide recommendations that were consistent with their analyses. Candidates were also expected to recognize, and not violate, the company's limited access to more investment capital within their conclusions, and to provide investment recommendations that were possible based on the limitations outlined in the case (for example, upgrading KILO in its current form meant that Marly would not agree to the endorsement deal, and therefore, to recommend both of these options did not make logical sense). Some candidates provided reasonable ways to mitigate constraints they had identified, which was also acceptable. For example, candidates could demonstrate competence within SO#3 if they recommended both the Marly endorsement and the KILO upgrade, as long as the candidate also recommended upgrading KILO in a way that ensured it once again aligned with the company's values.

Most candidates demonstrated competence in SO#3 by providing investment recommendations that either aligned with the company's current mission, vision, values, and new CSR policy, or that aligned with a new strategic direction that the candidate discussed (such as by refocusing the company on video games such as KILO). Competence was also demonstrated when the candidate's conclusions/recommendations did not violate the constraints of the case without an accompanying discussion of how to mitigate those violations. Most candidates provided recommendations for each strategic alternative that was discussed, as well as an overall conclusion that summarized the candidate's investment approach.

Strong candidates provided recommendations for each of the strategic opportunities in a way that demonstrated their understanding of the current misalignment between KILO and the company's traditional values of education and creativity. Strong candidates typically provided investment recommendations that would once again align the company in a coherent and compatible direction. For example, some strong candidates provided recommendations that realigned CTI with its stated purpose, whereas other strong candidates gave recommendations that moved the company toward an emphasis on video games (these candidates would typically go on to suggest that CTI revisit and revise its mission, vision, and values to reflect this change in direction). Weak candidates tended to provide recommendations that would have been impossible for CTI to act on because of the constraints of the simulation.

For example, some weak candidates recommended pursuing all investments options because of the positive effect each one would have on the company's sales and profits (these candidates ignored the company's limited investment capital). Other weak candidates provided recommendations that were incompatible with each other (such as recommending pursuing the Marly endorsement and the upgrade of BATNIX by using the proceeds that could be collected from issuing Thomas \$8 million of preferred shares). Weak candidates routinely violated the constraints of the case without attempting to mitigate the violations.

#### **SO#4 (Communication)**

Most candidates approached their response in a coherent and organized fashion. Only a few candidates struggled to effectively communicate their ideas. These candidates tended to use poor sentence structure, confusing syntax, and an unorganized response approach.

#### **SO#5 (Overall Assessment)**

Overall, candidates were expected to meet the minimum acceptable standards in each of the four summative opportunities in order to obtain a "Pass" on the Day 1 linked case. Candidates also had to demonstrate a minimum level of numeracy skills.

For each major issue, candidates were expected to perform a sufficient level of analysis, and to then provide a recommendation that was consistent with their analyses and that did not violate the constraints presented in the case. The board sought evidence that candidates incorporated the important elements of Capstone 1, as well as the main elements of this simulation's situational analysis, into their analysis of the major issues. Candidates were also expected to provide a reasonable amount of discussion over CTI's overall strategic direction, with an emphasis placed on whether the company should move away from its traditional business of providing educational board games and instead focus its investment capital on video games such as KILO.



**BOARD OF EXAMINERS' COMMENTS ON DAY 1  
(CTI VERSION 2)**

**Paper/Simulation:** Day 1 – Linked Simulation, CTI V2 (on May 2023 CFE)

**Estimated time to complete:** 240 minutes

**Simulation difficulty:** Average

**Competency Map coverage:** N/A; Enabling Skills

**Examiners' comments by Summative Assessment Opportunity (SO)**

**SO#1 (Situational Analysis)**

Candidates were expected to highlight the factors, both internal and external to CTI, that could have influenced the strategic decisions presented in the simulation. Since Capstone 1, a major change had taken place at CTI: Solange Johannsen, who previously worked at a large global toy company and had experience in the video game sector, was hired as CTI's CEO. Candidates were also informed that CTI had revised its first core value to emphasize the importance of developing products with a long life cycle. Candidates were also informed that Solange was recently granted performance share units (PSUs), to incentivize her to stay with CTI. Depending on how well the company performed in relation to three performance categories, Solange would be granted a specified number of CTI's common shares. Next, candidates were provided with a memorandum from Solange that detailed a new set of key performance indicators (KPIs) she created that the company's division leads were to follow when choosing future projects for their respective divisions; therefore, candidates were expected to link their analysis within SO#2 to whether each strategic option would either help or hinder CTI's ability to achieve these performance indicators. To help CTI grow and evolve, CTI had several strategic opportunities to consider: the acquisition of Kolepare (a doll manufacturer and wholesaler of organic materials), the further investment in a board game (a building block board game), and the investment in a partially completed math software game that would be used to pilot a project within three local primary schools. It was also made clear that the company had only \$3 million to invest amongst these opportunities, so candidates were expected to limit their recommended spending to that amount. Candidates were rewarded when they made relevant links between their situational analysis and their analysis of the strategic alternatives in SO#2, and recommendations in SO#3.

Most candidates provided a good summary of CTI's internal and external situation at the beginning of their response. Candidates typically included an updated SWOT analysis that highlighted the changes in the company's situation that had occurred since Capstone 1, and identified the KPIs to be considered in relation to the strategic options presented in the simulation. Most candidates also recognized that CTI's flagship board game, Know It or Lose It, was nearing the end of its life cycle. Despite recognizing this, many candidates failed to link their analysis of the investment options in SO#2 to this important new element of CTI's situation. Given the importance of Know It or Lose It relative to CTI's overall success, it was crucial for CTI to find an alternative product to replace the lost sales of this board game.

Strong candidates provided a situational analysis that both identified and discussed the implications of the situational aspects presented in the simulation, with a better focus on the major considerations, such as the importance of choosing investments that had the highest probability of creating products with a long life cycle. Strong candidates also recognized the limited amount of capital available to invest in 2024, and would then go on to discuss within SO#2 whether each investment was possible, given this constraint. Strong candidates also routinely linked their analysis and discussion of each strategic option back to the company's KPIs (or another relevant performance metric, such as the investment's payback period or gross profit margin) and to key industry trends, such as the growing demand for toys made with organic materials.

Weak candidates tended to simply list CTI's mission, vision, and key success factors from Capstone 1, without highlighting which of those aspects would play an emphasized role in their analysis, based on the information provided in the simulation. Other weak candidates simply listed case facts related to the various changes that had occurred within the industry, without identifying or discussing which of those items would have the most influence on their decision-making process. Weak candidates also struggled to link their analysis of the strategic options to the most relevant situational elements presented in the simulation, and instead attempted to link their discussions to less relevant and more generic aspects of CTI's business and industry, such as discussing how each investment seemed to align with the company's mission and vision; given that all three strategic options aligned fairly well with the company's mission and vision, this type of analysis had less value in the decision-making process.

## **SO#2 (Analysis of the Issues)**

Candidates were expected to analyze three strategic alternatives, both qualitatively and quantitatively. Candidates were also expected to identify and discuss the potential governance issue related to Solange's PSUs, and how they appeared to be motivating her to move the company in a certain direction.

### AO#2: Acquire Kolepare?

Candidates were expected to analyze whether CTI should acquire a doll manufacturer and wholesaler of organic materials, Kolepare. Qualitatively, candidates were expected to discuss how the acquisition aligned with the growing consumer preference for toys made from organic materials. Candidates could have also discussed how CTI had no experience as a supplier of organic materials, and how that increased the risk of the acquisition. Quantitatively, candidates were expected to evaluate whether the purchase price of \$4 million was reasonable, given the valuation of Kolepare (which candidates were also expected to recalculate, given the synergies the acquisition provided to CTI). In addition, candidates were expected to discuss how well this acquisition performed against the various performance measures detailed in the simulation (such as Solange's KPIs or the investments payback period), in comparison to the other two strategic investment options that were available.

Most candidates recognized that the acquisition of Kolepare would help CTI ensure the quality of the company's dolls and board games that were manufactured, using Kolepare's organic materials. Most candidates also recognized that this acquisition fit quite well with CTI's mission, vision, and core values; however, fewer candidates highlighted that CTI had no experience as a wholesaler of organic materials, which could have added to the risk of the investment. Quantitatively, most candidates discussed whether the asking price of Kolepare was fair by attempting to quantify how the synergies between the two companies would affect the valuation of Kolepare in relation to CTI's existing business.

Strong candidates recognized and discussed how the acquisition of Kolepare would likely strengthen other aspects of CTI's business, given the synergies between the two companies. For example, strong candidates recognized that Kolepare's excess capacity at their manufacturing plant could be used by CTI to increase its production of Sookie dolls, and the newly introduced clothing line for Sookie dolls. Strong candidates also highlighted the potential synergy between the Kolepare acquisition and the opportunity to manufacture the new building block board game (given that the board game would be made from 100% organic materials). Quantitatively, strong candidates calculated a revised net income figure for the acquisition, using the data offered in Appendix V, which detailed the various cost savings that would result from the acquisition. These candidates then went on to discuss how well the potential acquisition would likely perform relative to the other two potential investment opportunities.

Weak candidates had a difficult time providing a balanced analysis, and tended to focus on the advantages of the acquisition. These candidates had a difficult time identifying and discussing the various risks and potential disadvantages of this strategic investment option. Weak candidates tended to focus their discussion on how well the acquisition fit with CTI's mission, vision, key success factors, and core values. Although this analysis was relevant, there were many other important decision factors that could have been discussed, such as the fact that the acquisition could expose CTI to other unrecorded liabilities, given that CTI would purchase all the outstanding shares of Kolepare. Many weak candidates failed to suggest that CTI perform robust due diligence procedures before a final decision could be reasonably made. Quantitatively, weak candidates had a difficult time calculating Kolepare's value to CTI, given the cost savings that would result. In addition, weak candidates also routinely failed to discuss how the result of their calculations affected their recommendation on whether or not to make the investment.

AO#3: Investment in the building block board game?

Candidates were expected to analyze whether CTI should invest in the equipment that would allow the company to manufacture and market an already-developed board game. Qualitatively, candidates were expected to recognize that the building block board game had the strong potential to replace the lost sales from CTI's previous bestselling board game, Know It or Lose It. This fact was especially important, given that CTI would also need to fill the excess capacity at its manufacturing facilities, given Know It or Lose It's drop in sales—something that the building block game would accomplish. Quantitatively, candidates were expected to calculate the potential earnings of the building block board game, and then use that figure to calculate the investment's return on invested capital (ROIC)—a metric that CTI had established as important. In addition, candidates were expected to discuss how well this investment was projected to perform in comparison to the other two strategic investment options that were available.

Most candidates recognized that the building block board game aligned well with the company's mission and vision, given that the game inspired critical thinking and because the game was made from 100% organic materials. Most candidates also recognized the potential to increase the publicity of the building block board game through the use of character licensing; however, fewer candidates discussed how CTI's board was keen to reduce the company's current dependency on character-licensed products. Quantitatively, most candidates attempted to quantify the projected earnings of the building block board game and calculate the investment's ROIC.

Strong candidates highlighted the potential of the building block board game to become CTI's next evergreen product, and linked that discussion to the company's desire to invest in products with a long life cycle. Strong candidates also recognized the lower risk associated with investing in this project, given that the game was already well into its development phase and had already received very positive reviews when it was tested with a focus group of parents. In addition, strong candidates recognized the potential for the building block board game to support CTI's electronics division if a video game version of the game was eventually released. Quantitatively, strong candidates went beyond discussing the game's ROIC by also discussing other relevant performance metrics, such as those mentioned by Lorraine—the game's payback period and gross profit margin. These candidates then went on to discuss how well this potential investment would likely perform relative to the other two available investment opportunities.

Weak candidates once again had a difficult time providing a balanced analysis, and tended to focus on the advantages of the investment. Weak candidates usually recognized the potential for the building block board game to become CTI's next evergreen product, but failed to emphasize this as especially important, given both the board's revised core value and the fact that Know It or Lose It was nearing the end of its life cycle. In other words, weaker candidates had a harder time linking their analysis to the broader entity-level issues that were presented in the simulation. Quantitatively, weak candidates usually attempted to quantify the projected earnings of the building block board game but would often fail to translate their calculation into the investment's projected ROIC. Weak candidates also routinely failed to compare the results of their calculations to the other investment opportunities that were available to the company.

#### AO#4: Invest in the development of new math game software?

Candidates were expected to analyze whether CTI should invest in the development of a math game software program that would then be piloted for use in three local primary schools. Qualitatively, candidates were expected to discuss how the success of the investment depended on factors that were outside of CTI's control, such as whether the game would ultimately be accepted in primary schools. Candidates could have also discussed how the competitive landscape already included several math game software programs that were developed and marketed by well-known companies. Quantitatively, candidates were expected to assess how well the investment was projected to perform, using either a revised ROIC (which considered the entire \$2.1 million investment), the investment's payback period, or the investment's gross profit margin.

Most candidates recognized that the math game would face tough competition if schools decided not to support the game. Most candidates also recognized that the pilot project would provide CTI with great publicity if the schools announced that CTI provided the computers and software for free; however, fewer candidates discussed the uncertainty of whether this would actually occur. Most candidates also recognized that the investment aligned well with CTI's mission, vision, and core values; however, fewer candidates discussed the uncertainty of whether the math game would persist over time, given that the game's quality had yet to be tested and verified. Quantitatively, most candidates compared the ROIC figure provided in the simulation (28%) to the performance target of 12% and concluded that the investment was attractive. Fewer candidates discussed the uncertainty of the earnings figure provided, given that several potential costs had yet to be included in the analysis (such as the potential marketing costs, and the costs associated with developing a French version of the game).

Strong candidates emphasized the risks associated with this investment, given that its success would ultimately depend on factors that CTI had little control over. Strong candidates also discussed how using the company's research and development department to research the curricula of various school boards could harm the company's other divisions, given that they would not receive as much attention from the research and development department. Strong candidates also highlighted the risk associated with investing in a product that had yet to be finished or tested by the company. Quantitatively, strong candidates calculated several performance metrics (such as a revised ROIC figure and the game's expected gross profit margin), and then compared those figures to the other investments that the company was considering. Strong candidates also suggested that further due diligence and financial analysis was important, given that there appeared to be several costs missing from the figures provided.

Weak candidates tended to focus their discussion on how well the investment appeared to align with CTI's mission, vision, and core values, and how the investment could provide the company with good publicity. Although these were important considerations, weak candidates tended not to recognize or discuss the several significant risks associated with the investment. Therefore, weaker candidates often provided an unbalanced qualitative analysis that made this investment appear more attractive than it actually was. Quantitatively, weak candidates did not acknowledge the apparent missing costs from the financial analysis that was provided. In addition, weaker candidates tended to base their quantitative analysis on the provided ROIC of 28%, rather than recalculate this figure using the entire investment cost.

AO#5: Governance issue related to Solange's PSUs

Although it was not explicitly stated in the simulation, there were hints in the board dialogue that the PSUs granted to Solange may have been motivating her to move the company in a certain direction. Solange's potential bias to choose certain investments was also apparent from the KPIs that she had provided to the division leads of CTI. Candidates were expected to pick up on these hints and discuss how the KPIs that Solange had chosen may not have been the best way to assess the various investment opportunities that CTI was considering. Candidates were also expected to provide recommendations on how either the KPIs or Solange's PSU structure could be revised to help solve the potential bias issue.

Most candidates struggled to provide an in-depth analysis and discussion for this potential governance issue. In many cases, candidates recognized that the KPIs may not be the best way to measure the attractiveness of each potential investment, but did not recognize that Solange's PSUs appeared to be the cause of the issue. Often candidates also failed to provide an in-depth recommendation for how either the KPIs or Solange's PSU structure could be amended, to potentially solve the issue.

Strong candidates recognized that Solange appeared to favour the math game software program investment, given that it likely would provide her with the greatest number of PSUs. These candidates went on to discuss how the KPIs may not be the best metrics to use to assess the potential strength of each new investment, and made recommendations on how to revise the metrics, or suggested different metrics that may be more appropriate (such as the investments' payback period or gross profit margin). Strong candidates also discussed how the structure of Solange's PSUs could be revised to help ensure that the PSUs motivated Solange to act in the best interest of CTI. For example, some strong candidates recommended that each division of CTI should have a specific PSU tailored to its function, so that Solange was motivated to improve all aspects of CTI's business.

Weak candidates had a difficult time recognizing the issue, and when they did, their analysis was often brief and limited to a discussion on how CTI's board members needed to work out their differences with Solange in order to ensure that the company was able to operate effectively. For the weak candidates who recognized that the KPIs may not be the best way to assess the potential investments, the recommendations provided were often limited to the suggestion to use other metrics, without providing specific reasons or specific potential alternative metrics. Many other weak candidates did not provide any kind of recommendation for how either the KPIs or PSU structure could be revised to help rectify the issue.

## Overall

The focus of SO#2 was on the candidate's ability to assess and compare each investment option's strengths and weaknesses in relation to the other available investment options. Given that CTI did not have enough investment capital to move forward with all three investment options, it was important for candidates to compare each option in order to determine which would provide CTI with the greatest potential benefit. Candidates were also expected to recognize the apparent bias that Solange had for choosing investments that would provide her with the greatest number of PSUs.

Most candidates addressed all of the strategic options available to CTI and did a good job of discussing how well each investment option fit with the company's mission, vision, and core values.

Within SO#2, there were four main differentiating factors between strong and weak candidates. First, strong candidates routinely provided a balanced qualitative discussion for each investment option whereas weak candidates routinely provided discussions that highlighted each investment option's strengths without an equally robust discussion of the risks or weaknesses of each investment option. Second, the links that weak candidates made to CTI's situational analysis were often limited to the company's mission, vision, and core values whereas strong candidates went beyond these more generic links and discussed the other relevant situational factors, such as the industry trends and the need to replace the lost sales from Know It or Lose It. Third, strong candidates compared the results of their quantitative analysis for each investment option to the other available investment options whereas weak candidates tended to analyze each investment option in isolation from the other available investment options. Finally, strong candidates were able to identify, discuss, and make recommendations for the apparent bias that Solange had toward certain investment options whereas weak candidates often failed to recognize and discuss this important issue.

### **SO#3 (Conclude and Advise)**

Candidates were expected to conclude on each issue analyzed, and to provide a final conclusion that integrated the entity-level considerations into a cohesive and logical recommendation. A logical overall recommendation was one that did not overspend relative to the company's available capital for investment. If a candidate's overall recommendation required more capital than was available, they were expected to address this shortfall and discuss how the company could obtain the necessary financing. Candidates were also expected to address how their recommended investments would satisfy the company's objectives in comparison to the other available investment opportunities.



Almost all candidates provided issue-by-issue conclusions. What differentiated the strong candidates from the weak candidates in SO#3 was the candidate's overall conclusion. Strong candidates were better able to link their recommendations to the various performance metrics that were highlighted as important, such as the KPIs or the other metrics that Lorraine and Krystal suggested (payback period and gross profit margin percentage). Strong candidates compared how each investment performed relative to these metrics, and then integrated those comparisons within their overall recommendation. Weak candidates tended to provide an overall recommendation that simply restated the recommendations they had made for each AO. These candidates failed to recognize how their individual recommendations would have affected the company at a broader level.

#### **SO#4 (Communication)**

Most candidates approached their response in a coherent and organized fashion. Only a few candidates struggled to effectively communicate their ideas. These candidates tended to use poor sentence structure, confusing syntax, and an unorganized response approach.

#### **SO#5 (Overall Assessment)**

Overall, candidates were expected to meet the minimum acceptable standards in each of the four summative opportunities in order to obtain a "Pass" on the Day 1 linked case. Candidates also had to demonstrate a minimum level of numeracy skills.

For each major issue, candidates were expected to provide a sufficient level of analysis, and then to provide a recommendation that was consistent with their analyses. Candidates were also expected to provide an overall recommendation that did not overspend relative to the company's available investment capital and that integrated the entity-level performance metrics to a reasonable degree. Candidates were also expected to provide a reasonable amount of discussion over Solange's apparent bias that was caused by the PSUs she was granted. Finally, the board sought evidence that candidates incorporated the important elements of Capstone 1, as well as the main elements of this simulation's situational analysis, into their analysis of the major issues.

**APPENDIX I**

**CPA COMMON FINAL EXAMINATION REFERENCE SCHEDULE**

**CPA COMMON FINAL EXAMINATION REFERENCE SCHEDULE**

**1. PRESENT VALUE OF TAX SHIELD FOR AMORTIZABLE ASSETS**

Present value of total tax shield from CCA for a new asset acquired after November 20, 2018, and before January 1, 2024, other than those eligible for immediate expensing.

$$= \frac{CdT}{(d+k)} \left( \frac{1+1.5k}{1+k} \right)$$

**Notation for above formula:**

C = net initial investment

T = corporate tax rate

k = discount rate or time value of money

d = maximum rate of capital cost allowance

**2. SELECTED PRESCRIBED AUTOMOBILE AMOUNTS**

	<b>2022</b>	<b>2023</b>
Maximum depreciable cost — Class 10.1	\$34,000 + sales tax	\$36,000 + sales tax
Maximum depreciable cost — Class 54	\$59,000 + sales tax	\$61,000 + sales tax
Maximum monthly deductible lease cost	\$900 + sales tax	\$950 + sales tax
Maximum monthly deductible interest cost	\$300	\$300
Operating cost benefit — employee	29¢ per km of personal use	33¢ per km of personal use
Non-taxable automobile allowance rates		
— first 5,000 kilometres	61¢ per km	68¢ per km
— balance	55¢ per km	62¢ per km

**3. INDIVIDUAL FEDERAL INCOME TAX RATES**

**For 2022**

<u>If taxable income is between</u>	<u>Tax on base amount</u>	<u>Tax on excess</u>
\$0 and \$50,197	\$0	15%
\$50,198 and \$100,392	\$7,530	20.5%
\$100,393 and \$155,625	\$17,820	26%
\$155,626 and \$221,708	\$32,180	29%
\$221,709 and any amount	\$51,344	33%

**For 2023**

<u>If taxable income is between</u>	<u>Tax on base amount</u>	<u>Tax on excess</u>
\$0 and \$53,359	\$0	15%
\$53,360 and \$106,717	\$8,004	20.5%
\$106,718 and \$165,430	\$18,942	26%
\$165,431 and \$235,675	\$34,208	29%
\$235,676 and any amount	\$54,579	33%

#### 4. SELECTED INDEXED AMOUNTS FOR PURPOSES OF COMPUTING INCOME TAX

Personal tax credits are a maximum of 15% of the following amounts:

	<b>2022</b>	<b>2023</b>
Basic personal amount, and spouse, common-law partner, or eligible dependant amount for individuals whose net income for the year is greater than or equal to the amount at which the 33% tax bracket begins	\$12,719	\$13,521
Basic personal amount, and spouse, common-law partner, or eligible dependant amount for individuals whose net income for the year is less than or equal to the amount at which the 29% tax bracket begins	14,398	15,000
Age amount if 65 or over in the year	7,898	8,396
Net income threshold for age amount	39,826	42,335
Canada employment amount	1,287	1,368
Disability amount	8,870	9,428
Canada caregiver amount for children under age 18, and addition to spouse, common-law partner, or eligible dependant amount with respect to the Canada caregiver amount	2,350	2,499
Canada caregiver amount for other infirm dependants age 18 or older (maximum amount)	7,525	7,999
Net income threshold for Canada caregiver amount	17,670	18,783
Adoption expense credit limit	17,131	18,210

Other indexed amounts are as follows:

	<b>2022</b>	<b>2023</b>
Medical expense tax credit — 3% of net income ceiling	\$2,479	\$2,635
Old age security repayment threshold	81,761	86,912
Annual TFSA dollar limit	6,000	6,500
RRSP dollar limit	29,210	30,780
Lifetime capital gains exemption on qualified small business corporation shares	913,630	971,190

#### 5. PRESCRIBED INTEREST RATES (base rates)

<u>Year</u>	<u>Jan. 1 – Mar. 31</u>	<u>Apr. 1 – June 30</u>	<u>July 1 – Sep. 30</u>	<u>Oct. 1 – Dec. 31</u>
2023	4	5		
2022	1	1	2	3
2021	1	1	1	1

This is the rate used for taxable benefits for employees and shareholders, low-interest loans, and other related-party transactions. The rate is 4 percentage points higher for late or deficient income tax payments and unremitted withholdings. The rate is 2 percentage points higher for tax refunds to taxpayers, with the exception of corporations, for which the base rate is used.

**6. MAXIMUM CAPITAL COST ALLOWANCE RATES FOR SELECTED CLASSES**

Class 1 .....	4%	for all buildings except those below
Class 1 .....	6%	for buildings acquired for first use after March 18, 2007, and $\geq 90\%$ of the square footage is used for non-residential activities
Class 1 .....	10%	for buildings acquired for first use after March 18, 2007, and $\geq 90\%$ of the square footage is used for manufacturing and processing activities
Class 8 .....	20%	
Class 10 .....	30%	
Class 10.1 .....	30%	
Class 12 .....	100%	
Class 13 .....	n/a	Straight-line over original lease period plus one renewal period (minimum 5 years and maximum 40 years)
Class 14 .....	n/a	Straight-line over length of life of property
Class 14.1 .....	5%	For property acquired after December 31, 2016
Class 17 .....	8%	
Class 29 .....	50%	Straight-line
Class 43 .....	30%	
Class 44 .....	25%	
Class 45 .....	45%	
Class 50 .....	55%	
Class 53 .....	50%	
Class 54 .....	30%	

The CPA certification program prepares future CPAs to meet the challenges that await them. For more information on the qualification process, the common final examination (CFE), and the specific education requirements for your jurisdiction, contact your provincial/regional CPA body.

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