Crafting Clever Choices:

Curiosity, Connections, and Creating Value

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Abstract

This paper explores the integration of Decision Analysis (DA) frameworks with the KEEN 3Cs (Curiosity, Connections, and Creating Value) to enhance decision-making processes. Utilizing resources from the Decision Professionals library and the KEEN framework, this study highlights the application of these methodologies in a manufacturing startup context. The paper also discusses the practical implementation of these concepts in an undergraduate course, APEN 441, at Wichita State University, where students developed a Three Statement Financial Model as part of a semester-long project.

Keywords: Decision Analysis, KEEN 3Cs, Creating Value, Startup

1.0 Introduction

Decision Analysis (DA) and the KEEN 3Cs (Curiosity, Connections, and Creating Value) are essential frameworks for making informed and effective decisions. This paper examines these concepts through their practical application in a manufacturing startup context. The study is based on a project from the undergraduate course APEN 441, Analysis of Decision Processes, at Wichita State University.

2.0 Methods

The methods section outlines the integration of DA and the KEEN 3Cs in the decision-making process for a manufacturing startup. The project involved creating a Three Statement Financial Model, using the DecisionPedia resources from the Decision Professionals library, to guide the decision-making process.

2.1 *KEEN 3Cs Framework*

The KEEN 3Cs framework enhances the decision-making process by adding an entrepreneurial perspective. The three pillars—Curiosity, Connections, and Creating Value—encourage an integrated approach to problem-solving [1].

Curiosity involves fostering an environment where continuous exploration and questioning are encouraged. This mindset drives individuals to seek deeper understanding and innovative solutions. In the context of a manufacturing startup, curiosity prompts teams to investigate new technologies, processes, and market opportunities that can lead to competitive advantages.

Connections emphasize the importance of building and leveraging relationships to enhance decision-making. By connecting with industry experts, peers, and stakeholders, decision-makers can gather diverse perspectives and insights that enrich the decision-making process. For a manufacturing startup, this could mean collaborating with suppliers, customers, and other industry players to gain valuable knowledge and resources.

Creating Value focuses on delivering tangible benefits to stakeholders. This principle ensures that decisions are not only technically sound but also economically viable and socially responsible. In a manufacturing startup, creating value might involve developing products that meet customer needs, optimizing production processes to reduce costs, or implementing sustainable practices that appeal to environmentally conscious consumers.

2.2 Decision Analysis Framework from DecisionPedia

The DecisionPedia resource from the Decision Professionals library provides a structured approach to Decision Analysis, which includes:

Framing the Decision Context involves clearly defining the problem or decision to be made. This step sets the stage for the entire decision-making process by establishing a clear understanding of what needs to be resolved.

Generating Alternatives requires brainstorming a wide range of possible solutions. This step ensures that all potential options are considered, increasing the likelihood of finding the best possible solution.

Gathering Information involves collecting relevant and reliable data to inform the decision. Accurate and comprehensive information is critical for making informed choices.

Evaluating Values and Trade-offs requires understanding the values and preferences of stakeholders and the trade-offs involved in different decision options. This step ensures that decisions align with stakeholder priorities and constraints.

Reasoning Logically ensures that the decision-making process is logically sound. This involves using appropriate analytical tools and methods to evaluate options and predict outcomes.

Commitment to Action is about securing the commitment to implement the decision. This step is crucial for ensuring that decisions are translated into effective actions.

3.0 Results

The results section discusses the practical application and benefits of integrating DA and KEEN 3Cs in the undergraduate course APEN 441.

3.1 Application in APEN 441

In the Spring 2024 semester, about 20 students in teams of 2-4 used the DecisionPedia resources to develop a Three Statement Financial Model. This project aimed to guide decision-making for a manufacturing startup. The integration of the KEEN 3Cs framework encouraged students to explore innovative solutions, build connections with industry experts, and focus on creating value through their decisions.

3.2 Creating Value in a Manufacturing Startup

The use of DA frameworks from DecisionPedia, combined with the KEEN 3Cs, enabled students to make well-informed decisions that created value for the hypothetical manufacturing startup. By systematically evaluating uncertainties and incorporating stakeholder values, the teams developed robust financial models that highlighted potential risks and opportunities, leading to more effective decision-making.

4.0 Summary

Integrating Decision Analysis with the KEEN 3Cs framework significantly enhances the decision-making process. The structured approach provided by DecisionPedia ensures well-informed and robust decisions, while the KEEN 3Cs add an entrepreneurial dimension that focuses on creating value. The practical application of these methodologies in the APEN 441 course at Wichita State University demonstrates their effectiveness in preparing students for real-world decision-making challenges.

References

[1] KEEN Framework. Available: https://engineeringunleashed.com/

{2} DecisionPedia. Decision Professionals. Available: https://www.decisionprofessionals.com//library/DecisionPedia

Biographical Information

Adam Carlton Lynch received the BS and MS degrees in Industrial and Systems Engineering from the University of Southern California. He received his Master of International Management from the Thunderbird School of Management (part of ASU). He completed a PhD in Industrial, Systems, and Manufacturing Engineering (ISME) from Wichita State University (WSU). Dr. Lynch has 30 years of industry experience, particularly aerospace. Dr. Lynch serves as an Associate Teaching Professor in the Applied Engineering department and Adjunct in ISME at WSU. His research interests include Engineering Education, Leadership, Mentoring and Lean Six Sigma.