INNOVATION RESEARCH INTERCHANGE

Accelerating Value Creation

Innovative Roadmapping: Strategic Planning Insights Featuring Campbell Soup Company

SUMMARY

Strategic roadmapping and foresighting are integral processes for organizational planning, enabling effective goal alignment, resource allocation, and uncertainty navigation. Agility and stakeholder engagement are crucial, with the need for clear communication and real-time data management to foster collaboration and informed decision-making. Generative AI enhances these processes by rapidly analyzing data sets, aiding in analysis, pattern recognition, and trend identification to increase decision-making speed and problem-solving efficiency. The profile of Campbell Soup Company exemplifies best practices in these areas, showcasing how a legacy company has successfully prioritized new product initiatives and strategic resource allocation through specialized foresighting and trend analysis.

Key Takeaways

- **Integral Processes for Organizational Planning:** Strategic roadmapping and foresighting are intertwined processes crucial for organizational planning, enabling organizations to align goals, allocate resources, and navigate uncertainties effectively.
- **Agility as a Key Component:** An ability to pivot quickly is a crucial element of any roadmap, particularly those looking in longer time ranges, and should be incorporated into all decision-making processes.

- **Stakeholder Engagement:** Effective stakeholder engagement is crucial, requiring clear communication of objectives, goals, and benefits. This inclusive approach fosters a collaborative environment and instills a sense of ownership among stakeholders.
- **Structured Process and Data Accessibility:** Data must be managed effectively with a real-time focus, variations between actual and expected accounted for, and accessibility, allowing key stakeholders to view performance metrics as they take shape.
- **Technology as Transformation:** Generative AI plays a strong role in both roadmapping and foresighting by providing aid with analysis, pattern recognition, and trend identification. Data sets can be analyzed rapidly, which in turn can increase the speed of decision making and problem solving.

Introduction

Strategic roadmapping is the process of taking trends, technologies, and weak signals identified in forward-looking processes, including foresighting, and creating a plan to address them, whether it is creating an entirely new product or service, acquiring an innovative technology, or making incremental changes. Companies looking to translate trends into actionable strategies face challenges primarily due to the amount of uncertainty inherent in looking to the future.

The following report outlines best practices summarized from IRI (Innovation Research Interchange) research into this area spanning the last 50 years. The accompanying best in class profile of Campbell Soup Company shows how a legacy company has been able to develop its skills in this area to become a leader in internal foresighting and trend analysis. Campbell has achieved tremendous success with this internal process as the company has prioritized new product initiatives, allocated resources strategically, and enhanced decision-making using specialized teams (Kent, 2013). The research summary combined with currently applied best in class practices from Campbell will provide actionable insights for companies interested in developing or refining their strategic roadmapping and foresighting capabilities.

For the purposes of this report, the terms strategic roadmapping and foresighting will be used throughout with acknowledgement that the meanings of both terms have evolved over time and that different terms can account for similar processes.

Strategic Roadmapping and Foresighting

Strategic roadmapping and foresighting are intertwined processes crucial for organizational planning. Strategic roadmapping entails visually mapping an organization's goals and initiatives over a medium to long-term horizon, aligning activities with objectives and facilitating resource allocation (Gonega, Phaal, 2022). It encompasses clear timelines, defined goals, and specific initiatives. Foresighting focuses on predicting outcomes and trends, supporting day-to-day decision-making and resource allocation based on external variables (Lucky, 1999). The combination of these approaches forms a framework, allowing organizations to navigate uncertainties and make informed decisions.

An Academic Perspective as Background: Best Practices from Stanford Business School

A strategic roadmap needs to reflect the maturity of the organization or product and outline key objectives along with clear strategies. Before creating any tools, Stanford Business School students learn that deeply understanding problems is vital for achieving goals (Huang, 2023). Objectives should be straightforward and demonstrate that company goals take precedence over product objectives. These basic lessons highlight the sequential and direct approach of effective roadmapping and emphasize the significance of adhering to proper steps and milestones. The roadmap presented below serves as a fundamental exercise for students, equipping them for their future roles as executives and offering lessons that can be applied at the corporate level (Huang, 2023).

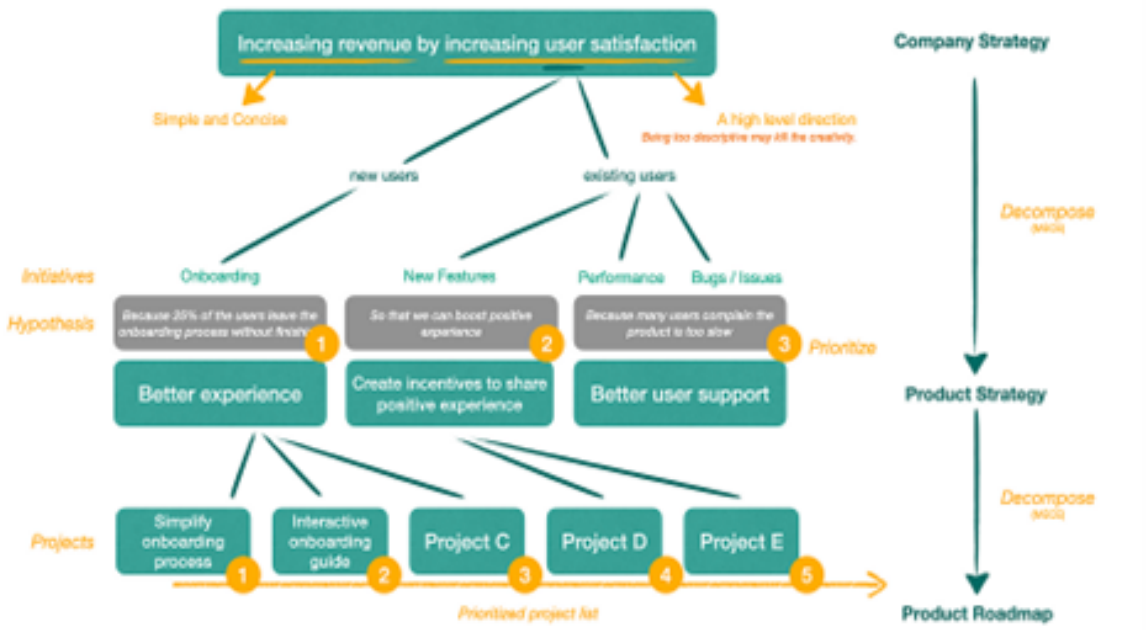

Figure 1: Adapted from the Medium (Stanford Business School reprint), Jean Huang (2023). Copyright (2023).

Strategic Roadmapping and Foresighting: IRI Best Practices

Best practices were derived and consolidated from the IRI Research Technology Management Journal (RTM). A key theme through this analysis is the importance of agility being built into all business processes- especially those that are heavily impacted by externalities. In addition, roadmapping and foresighting are systematic processes with decision making building off thorough internal and external review and projections. The following are best practices based on IRI research and peer-reviewed studies in RTM:

Setting Aims and Approach

Setting aims and approaches in roadmapping and foresighting is vital as it provides a clear sense of purpose, aligns the roadmap with organizational goals, and aids in resource allocation and prioritization (Hirose, Phaal, et al., 2022). It is critical to assess and reach agreement on the organization's needs, particularly regarding new product development. Consensus ensures that all projections are focused, well-supported, and capable of navigating uncertainties. It is important to remember that while roadmapping and foresighting can be outward-focused, successful implementation of these tools is contingent upon a thorough internal evaluation of gaps, goals, and areas that need improvement (Cosner, Hynds, et al, 2007).

Engaging Stakeholders

Effective stakeholder engagement involves garnering support from a significant number of individuals to comprehend the impacts and benefits of roadmapping. However, be advised that achieving mass agreement and perspective alignment can be challenging (Hirose, Phaal, et al., 2022). Engaging stakeholders in this process involves clear communication of objectives and benefits and highlighting the tangible benefits derived from it. Actively seeking feedback, addressing concerns, and providing training and support contributes to a collaborative and inclusive environment and fosters a sense of ownership among stakeholders.

Structuring the Roadmapping or Foresighting Process

Developing an appropriate structure requires the identification and organization of all relevant issues that must be considered and analyzed. It is crucial to define a suitable structure in terms of both macro and micro level indicators that represent all key perspectives appropriately.

The figure below represents a list created by an IRI member before their strategic roadmapping process began (Cosner, Hynds, et al, 2007). The organization realized how many focus areas needed to be addressed and then equated those areas to a different maturity level. In this case, maturity was defined by comparing internal practices to widely accepted industry standards or best practices improvement (Cosner, Hynds, et al, 2007). The exercise highlighted a notable observation: as the project team delved into the planning process, the organization's approach became very comprehensive while the team's goals became more specific.

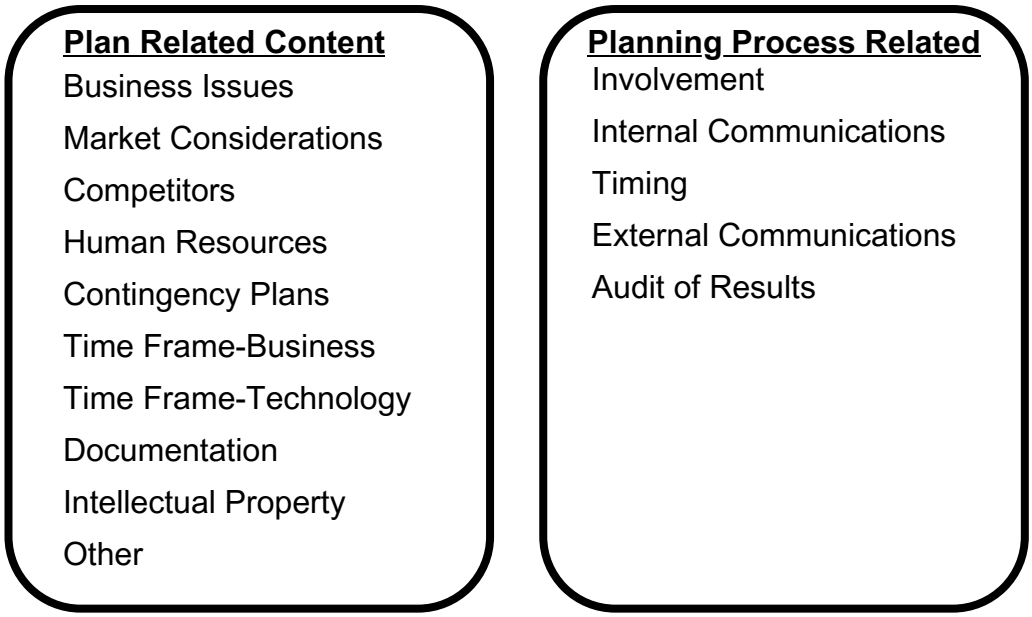

Figure 2: Adapted from Research Technology Management, by Cosner, Hynds, et al. (2007) pg. 37. (Copyright 2007).

Deciding the physical layout and focus of a roadmap or foresighting tool is contingent upon what key decisions an organization is trying to make. It is important to note that a technology focus will be mapped and aligned differently than a strategic planning focus (Cosner, Hynds, et al, 2007). Individual roadmaps and foresighting tools around marketing, innovation, projects, and customers will offer detailed plans and strategies for specific business functions and if combined, will collectively contribute to a comprehensive approach to organizational planning and development (Hirose, Phaal, et al., 2022). For instance, the company profiled achieved significant success by using a modified balanced scorecard. This adaptation allowed them to translate the complexity of identified trends and drivers into clarified objectives and key performance indicators development (Hirose, Phaal, et al., 2022). The final product effectively demonstrated the convergence or divergence of trends and drivers with identified performance metrics, leading to actionable process changes.

I***ntegrity of Roadmapping and Foresighting Data***

The information that is input into the road map or foresighting initiative, whether a process step or numerical, must be reflective of the identified process goals and objectives. Specifically, numerical data inputs should be in real-time and account for variations between actual and expected. Data outputs must reflect macro level indicators with support from the micro level metrics in which the organization has an interest. Key stakeholders across departments are more concerned with outcomes rather than more minor details (Whalen, 2007). As a result, leadership should establish agreed-upon metrics at the project onset to guide decision-making, and these metrics should remain consistent once data is input, given that both roadmapping and foresighting build upon previously input data. Data should be accessible in real time so that obstacles or poor performance can be identified quickly, and course corrections put in place.

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Generative AI

Generative AI plays a transformative role in both processes as sophisticated algorithms and data analytics allow for the rapid analysis of large datasets, pattern recognition, and trend identification (Kent, 2023). In addition, historical data can be combined with predictive analytics to assess future trends and outcomes. Generative AI assists with scenario planning by simulating various scenarios and assessing their potential impact thereby aiding organizations in developing resilient strategies. It is this data-driven and proactive approach that makes generative AI extremely helpful in making roadmapping and foresighting processes more responsive and robust.

Agility in the Process

Agility is a key component of effective roadmapping and foresighting processes. The table below represents the roadmapping process for a profiled company that improved their entire roadmapping process to incorporate more agility and room for error from 2014-2021. (Hirose, Phaal, et al., 2022). Of note is the incorporation of more system integration into the process combined with the introduction of a digital platform that made use of an agile approach to support the potential need to pivot and course correct as determined (Hirose, Phaal, et al., 2022). Agility allowed the organization to account for further stakeholder involvement to facilitate several types of innovation thereby broadening the internal project portfolio as an added benefit. The need for agility was a key lesson learned as the roadmap was introduced, tested, and adapted.

Stage	Initiation 2014-2015	Development 2016-2017	Integration 2017-2021
Focus	Clarifying problems and identifying opportunities	Overcoming geographical constraints and roadmapping customization with virtual settings	Developing a global view from roadmapping and increasing efficiency and effectiveness
Activities	Internal evaluation and assessment to identify issues and share within the organization's technology organization to improve capabilities to further accelerate innovation Small-scale pilot of roadmapping	Large-scale pilot roadmapping across all regions Toolkit platform design and development with relevant tools and techniques Virtual communication platform design and development	Standardized process for roadmapping through system integration Digital platform with agile approach Stakeholder involvement to facilitate several types of innovation

Figure 3: *Adapted from Research Technology Management, by Hirose, Phaal, et al. (2022) pg. 37. (Copyright 2007).*

Campbell Soup Company Profile

Intellectual curiosity is the foundation for a successful foresighting process.

Kyle Kent*, R&D Director – Technical Solutions, Campbell*

Campbell is a well-known American company that specializes in food and beverages. Founded in 1869, and known for creating condensed soup, the company has expanded its product line to include other food and beverage categories, such as snacks, sauces, and beverages (Kent, 2023).

Campbell is preparing for the future landscape of the industry and evolving consumer trends over the next 5-10 years through a shift from long-term research to a more agile development style. Internally, Campbell has an agile development team that will evaluate every new platform or product that is proposed. It has also created an Insights Engine that employs an AI-based tool which scans 300 billion data points annually and drives macro trends into business divisions for pipeline development (Kent, 2023). Foresighting is a pivotal activity at Campbell, which is driven by acknowledgment of the complexity, uncertainty, and speed of change that characterizes the industry (Kent, 2023). This approach is a departure from previous methods as instead of just looking at business opportunities, the team at Campbell evaluates its supply chain, existing technology, and R&D function to work faster and smarter (Kent, 2023). Foresight at Campbell is about creating plausible futures based on data and science while incorporating competitor analysis to actively avoid surprises and critical errors. Strategic planning at the company involves making data-driven decisions while taking feasible steps toward the future.

The Process

An example of the foresighting process at Campbell is an exploration taken of the cultivated meat market, which is considered a more sustainable product than regular beef or chicken (Kent, 2023). The cost of cultivated meat production is high, and it is hard to discern how this product would be received in Campbell's existing products. The analysis process undertaken at Campbell is outlined in the figure below:

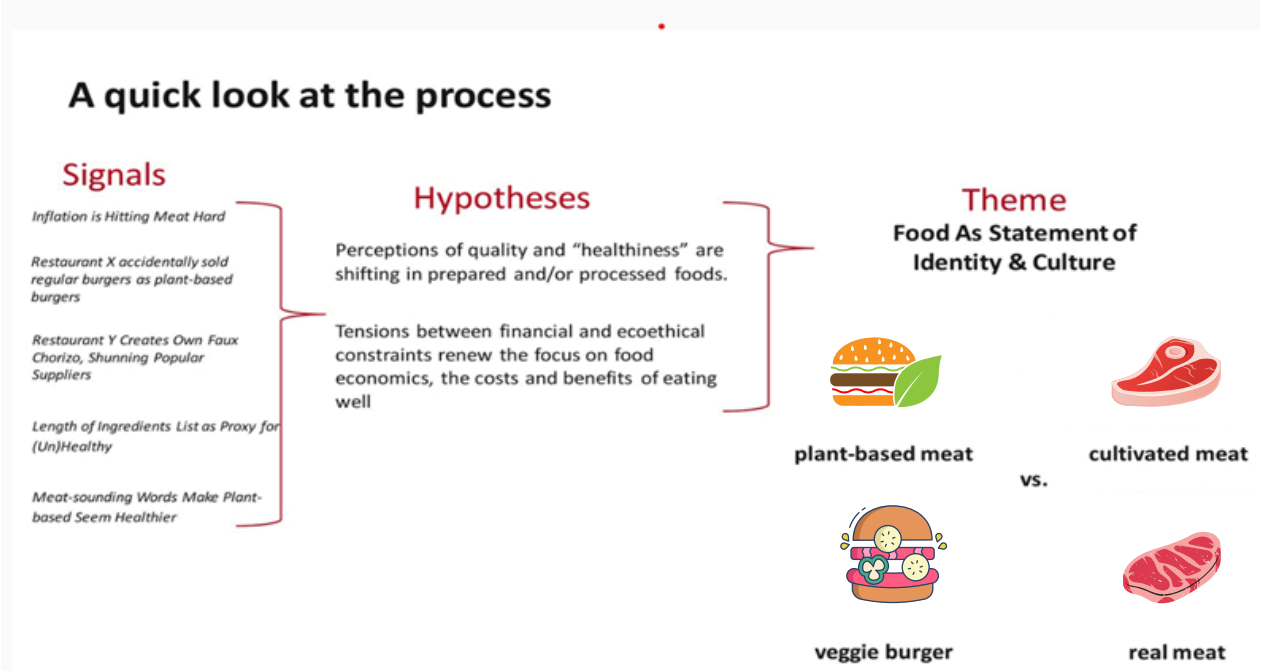

Figure 4: *Adapted from Innovation Foresight with Campbell Presentation, Kyle Kent (2023). Copyright (2023)*

Of note is how hypotheses are formed from market signals and then subsequently analyzed using consumer preference data and economic metrics. It is crucial that new products have market staying power and can avoid climate risks, particularly related to crops grown in specific regions.

Finally, Campbell is actively exploring the integration of biometrics into foresighting in anticipation of a future where devices can give individualized health information and align meals with those health indicators. The company is also starting with small data sets to connect generative AI tools to foresighting with an aim toward summarizing content and tracking sustainability trends effectively (Kent, 2023). The Insights Engine is actively exploring the use of generative AI for their trend and technology assessments and is currently leveraging advanced analytics and natural language processing to provide insight that they weave into actionable intelligence. (Kent, 2023). This proactive approach ensures the company's readiness for the unforeseen 20 percent of trends that may emerge in the future, demonstrating a commitment to staying ahead in an ever-evolving market landscape (Kent, 2023).

Conclusions

Strategic roadmapping and foresighting are crucial in ensuring organizational stability and minimizing uncertainty. Companies must be prepared to respond to a global market that is always changing and in flux. In addition to the economic marketplace, product lines are faced with challenges related to climate change, global strife, technological advancement, and ever-changing consumer preferences. Preparation and agility are the two key factors in ensuring longevity and many tools can be employed that can help increase an organization’s readiness. Companies should consider creating dedicated teams that specialize in roadmapping and foresighting because adapting to constant and inevitable change is imperative. The companies with the most staying power have the most agility and inherent power to embrace and adapt to change.

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