



ORIGINAL RESEARCH PAPER

Management

Paradigm of IT Critical Success Factors with Integrated Strategic Planning: Future scenario

KEY WORDS:

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ABSTRACT

"Tomorrow always arrives. It is always different. And even the mightiest company is in trouble if it has not worked on the future. Being surprised by what happens is a risk that even the largest and richest company cannot afford, and even the smallest business need not run". -Peter Drucker

Although the purpose of strategic planning is straightforward—to outline where an organization wants to go and how it's going to get there—its nature is complex and dynamic. Two techniques, the critical success factor (CSF) method and future scenario planning, can augment strategic planning efforts by illuminating an organization's present situation and potential future. This report explores the value of enhancing typical strategic planning techniques with the CSF method and scenario-based planning and presents an integrated framework for helping organizations understand the broad range of interrelated elements that influence strategy development.

Critical success factors are defined as the handful of key areas where an organization must perform well on a consistent basis to achieve its mission. CSFs can be derived through a document review and analysis of the goals and objectives of key management personnel, as well as interviews with those individuals about their specific domain and the barriers they encounter in achieving their goals and objectives.

Future scenarios allow organizations to explore multiple potential futures and generate robust strategies and early warning signs to understand how the future is unfolding. Where a vision articulates a "preferred future," future scenarios describe how an organization might achieve its mission in different circumstances or environments. Organizations identify a *focal issue* or major decision the organization faces and the *critical uncertainties* in the macro environment, such as social, economic, political, environmental, and technical forces. Scenarios are developed based on combinations of these forces and robust strategies are identified to address multiple futures. Finally, indicators are identified to help understand how the future is affecting the organization's decisions. Several organizations in using an integrated framework over the past four years. The report synthesizes documented theory and research in strategic planning, CSFs, and scenarios and provides insights and lessons regarding the value and limitations of the integrated strategic planning framework. The report includes considerations for applying this approach in the context of strategic planning for information technology. Suggestions for future work include

1 Introduction

Industry executives and analysts often mistakenly talk about strategy as if it were some kind of chess match. But in chess, you have just two opponents, each with identical resources, and with luck playing a minimal role. The real world is much more like a poker game, with multiple players trying to make the best of whatever hand fortune has dealt them. —David Moschella

1.1 Purpose and Structure of this Report

This report explores the value of enhancing typical strategic planning with the critical success factor (CSF) method and future scenarios. It synthesizes documented theory and research in strategic planning, CSFs, and future scenarios, and proposes an information framework for enhanced strategic planning.

1.1.2. Objective & Scope

- Exploring the use of IT or security scenarios in unit-level planning and organizational strategic planning
- Creating an integrated strategic planning process to support the integrated framework
- Connecting CSFs and scenarios directly to one another in the monitoring stages of an integrated strategic planning process.

1.2 Background

In 2005, the SEI began exploring the idea of pairing the CSF method with future scenarios in a strategic planning context. The SEI had previously used these techniques independently of one another in multiple engagements. In 2006 the SEI created an initial framework for integrating the information generated by these two techniques with information typically required for strategic planning. The initial pilot resulted in the development of a 10-year information technology (IT) strategic plan. Additional pilots have been conducted using pieces of the framework to develop one- to five-year organizational strategic plans.

1.3 The Strategic Planning Landscape

Strategic plans outline an organization's intended approach for achieving its mission. There are many ways to conduct strategic

planning, most of which result in a plan or set of plans that articulate organizational goals and a high-level strategy for achieving them. CSFs and future scenarios both have extensive histories with operational and strategic planning. The CSF method results in an identified set of organizational critical success factors that represent key performance areas that are essential for the organization to accomplish its mission. Scenario planning explores multiple potential futures and generates multiple robust strategies (not complete strategic plans) and a set of early-warning signs that help an organization understand how the future is unfolding. In addition, both CSFs and scenarios provide processes that help an organization establish strong ways of thinking, communicating, and making decisions. Neither method, however, constitutes a strategic planning effort, results in a strategy or strategic plan per se, or has a direct, explicit interface with strategic planning.

2 Strategic Planning

In strategy it is important to see distant things as if they were close and to take a distanced view of close things.

—Miyamoto Musashi, samurai warrior

2.1 Strategic Planning

Strategic planning is the process of defining an organization's plans for achieving its mission. Strategic planning is not only an important foundation for executing work; it also sets the stage for enterprise architecture, process improvement, risk management, portfolio management, and any other enterprise-wide initiatives. There are many documented approaches to strategic planning. These high-level elements are described below:

The What: These are descriptions of what the organization does and what it aspires to achieve—its organizational targets—including its goals, objectives, and quantitative performance measures.

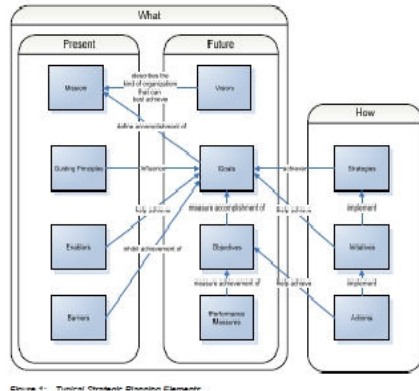
The Present: The present situation, or current environment, is typically described in terms of the organization's mission, guiding principles (or values), organizational strengths (or enablers), and

organizational barriers (weaknesses or challenges).

The Future: The desired future is described by the organizational vision and targets.

The How: The preferred route to achieving the organizational goals, objectives, and mission is communicated as a strategy or as strategic goals.

Figure 1 shows the typical strategic plan elements and their relationships to one another.



2.2 Strategic Planning Elements

A well-documented strategic plan is critically important for organizing thinking and communicating thoughts. Strategic plans include elements that describe an organization’s present state, aspirations, intentions for the future, and approach for going forward. Understanding these elements and their relationship to one another supports not only strategic thinking and planning, but also the effective use of CSFs and future scenarios in strategic planning efforts.

Performance measures describe performance targets relevant to each objective.

“Voice of the customer: Earn customers’ business in a marketplace where they have choices by providing them with world- class quality at competitive prices.

“Voice of the employee: Foster an inclusive and welcoming workplace consistent with the values of fairness, opportunity, safety, and security; where everyone is given the knowledge, tools, education, and encouragement to be successful; and where everyone is recognized for and takes pride in his/her participation in customer and Postal Service success.

“Voice of the business: Generate financial performance that assures the commercial viability of the Postal Service as a provider in a changing, competitive marketplace and to generate positive cash flow to finance high-yield investments for the future while providing competitively- priced products and services.”

3 Critical Success Factors

The toughest thing about success is that you’ve got to keep on being a success.

—Irving Berlin

Critical success factors were introduced by John F. Rockart and the MIT Sloan School of Management in 1979 as a way to help senior executives define their information needs for the purpose of managing their organizations [Rockart 1979]. Rockart traced his CSF work to its conceptual antecedent, “success factors,” introduced by D. Ronald Daniel in 1961. Daniel had discussed the problem of inadequate management information for setting objectives, shaping strategies, making decisions, and measuring results against goals.

3.1 CSF Characteristics

It is important to understand the characteristics of CSFs. Some key characteristics are summarized here: CSF hierarchy, types, uniqueness, and stability over time.

3.1.2 CSF Uniqueness

Caralli puts significant focus on understanding the CSFs that are unique to an industry, organization, or manager. But CSFs are not necessarily unique to the organization, division, operational unit, or individual to whom they apply. Rockart focused on the CSFs at the managerial level, along with department- or organizational-level CSFs (though he continued to acknowledge industry- level CSFs). He also noted that CSFs could be non-unique (shared across the industry) or uniquely linked to internal and external sources other than the industry.

3.1.3 CSF Stability Over Time

Although CSFs may remain fairly constant over time, at least in the sense of a strategic planning period, from Rockart and Bullen’s perspective, CSFs change “as the industry’s environment changes, as the company’s position within an industry changes, or as particular problems or opportunities arise” [Bullen 1981]. standard measures that can be applied across all divisions of an organization. There can be some migration between CSFs and specific goals, particularly when a CSF reflects a challenge or problem (temporal CSFs). A “performance gap” in a particular operational area may cause a CSF to be elevated into a fix-oriented goal. Alternately, a goal, once achieved, may migrate to a CSF for sustainment.

3.2 The Critical Success Factor Method

Rockart introduced a two-phased, interview-based method that began with a discussion of an executive’s goals and the underlying CSFs, followed by the development of CSF measures. Caralli offers a five-step method:

- Define scope
- Collect data
- Analyze data
- Derive CSFs
- Analyze CSFs

This method provides a way of deriving CSFs through a document review and analysis of the goals and objectives of key management personnel, as well as interviews with those individuals about their specific domain and the barriers they encounter in achieving their goals and objectives. The collected information is formed into statements that represent the activities

4. Future Scenarios

It is only when you’re forbidden to talk about the future that you suddenly realize how much the future normally occupies the present, how much daily life is usually spent making plans and attempting to control the future. Never mind that you have no control over it. The idea of the future is our greatest entertainment, amusement, and time-killer. Take it away and there is only the past...

—Erica Jong

4.1 The Future Scenario Method

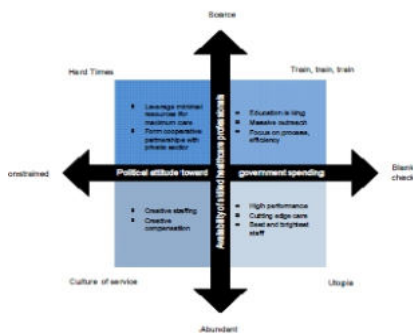
Global Business Network, a leader in scenario-based planning, uses a group-exercise approach to scenario work. Van der Heijden describes an interview-based method much like the one described for eliciting CSFs. Ogilvy and Schwartz provide a good description of the scenario-planning method [Ogilvy 2004]. In either case, the basic method for developing future scenarios uses these major steps:

1. *Identify a focal issue* or major decision the organization faces. To ensure that the scenarios will be relevant to the organization’s business environment, the organization begins by identifying an issue or decision that matters to the organization. In this fashion, the organization conducts the work “from the inside out.” A focal issue can be broad (what will characterize our business environment in 10 years?) or more narrow (should we introduce a new product line?).
2. *Identify the driving forces* in the macro environment that influence the key factors.: Common areas of consideration are social, economic, political, environmental, and technical forces. Research into areas such as new markets, technology trends, political factors, and economic forces is appropriate.

This step can be difficult if the organization is not used to doing anticipatory thinking. Figure 2 provides an example of driving forces for government health care.



3. Identify the *critical uncertainties* relevant to the focal issue.: The organization ranks each key factor and driving force based on its importance to the focal issue or decision and the degree of uncertainty surrounding it. The goal is to identify the factors and forces that are the most important and the most uncertain. above Figure provides an example of critical uncertainties for government health care.
4. Select *scenario logics*. Possible futures are identified by examining critical uncertainties. Critical uncertainties can be examined along a *spectrum* (a single axis), a *matrix* (two axes), or a *volume* (three axes). The goal is to create just a few scenarios whose eventuality will make a difference to decision makers.
5. Flesh out the *scenarios*. Each scenario is then expanded into a narrative that addresses the critical uncertainties. The resulting scenarios represent very different, but plausible, futures that are relevant to the focal issue. The goal in fleshing out the scenarios is to describe each future in such a way that its limits are explored and understood. Each narrative should be compelling and thought provoking.
4. Identify implications and *robust strategies*. The organization considers how the focal issue or decision will look across the various scenarios. Which decisions or strategies will work well across multiple scenarios? Strategies that serve well in multiple, varied futures are considered robust. Figure 3 shows scenarios for government health care with possible implications for each scenario.



7. Identif, indicators.

Indicators are early warning signs that a particular scenario is or is not unfolding. Indicators can help an organization understand how the future affects its strategies and decisions. The logical coherence built into a scenario allows the implications of important indicators to be drawn back out of the scenarios; the scenarios can translate the behavior of an indicator into organization- or industry-specific implications. Once scenario planning is complete, the scenario insights can be used to develop full organizational strategies.

4.3 General Limitations of Scenario Planning

John Schoemaker's "Twenty Common Pitfalls in Scenario Planning" highlights common difficulties with scenario planning. He divides the issues into two categories: process pitfalls and content pitfalls. One of the pitfalls Schoemaker describes is the failure to link scenarios into the planning process. "The scenario process should not be an isolated activity, unconnected to other organizational decision-making processes. Ideally, scenario planning should be tied into the existing planning and budgeting process. However, the transition from using scenarios as thinking frameworks and intellectual lenses to using them for project evaluation requires careful management."

5 Integrating Critical Success Factors and Future Scenarios with Strategic Planning

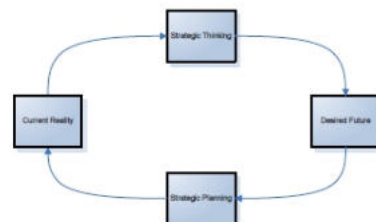
It all comes down to the ability to go up and down the ladder of abstraction, and being able to see both the big picture and the operational implications.

—Loizos Heracleous

5.1 Strategic Thinking

A common criticism of strategic planning is that it is overly involved with extrapolation of the past and present and can create the illusion of certainty regarding the future [Heracleous 1998]. A good strategic planning process does more than produce a tangible output (a documented plan); it supports ongoing strategic thinking, discussion, and behavior. In a good strategic process the strategic plan provides a dynamic map for an organization's considered movement through time and sets the stage for enterprise architecture and organizational improvement efforts.

Strategic thinking focuses on finding and developing organizational opportunities and creating dialogue about the organization's direction. Strategic thinking is creative, divergent, and synthetic while strategic planning is conventional, convergent, and analytical [Liedtka 1998]. When strategic thinking is employed, the planning process itself provides critical value—but strategic planning is still required for effective strategic work. If nothing else, the divergent results of strategic thinking must be made operational through convergent strategic planning Jeanne Liedtka provides a thoughtful analysis of the essential differences between traditional strategic planning and strategic thinking. She explains that strategic thinking involves five elements: a systems perspective, a focus on intention, a focus on time, a focus on opportunity, and hypothesis testing. She presents a framework for creating a strategic process that continually examines the tension between aligning to a plan and fostering change and adaptability presents a framework that links strategic thinking to the articulation of options, and strategic planning to the generation of actions [Conway 2004]. Figure 4 shows a high-level strategic planning process that allows a balance between strategic thinking and strategic planning.



CSFs and scenarios are stand-alone methods that support strategic planning and strategic thinking. the ultimate purpose of scenario planning as helping an organization find a good and unique fit with its ever-changing environment r makes a very useful distinction between learning scenarios, those that serve as tentative hypotheses to be explored and tested through discussion and research, and decision scenarios, those that are to be tested against to determine which strategies will serve well in various futures. Both the scenario planning method and the CSF method support strategic decision-making by strengthening the ability to make good, information-based decisions. Expanding the breadth and depth of knowledge and thought that are available for making strategic decisions can only strengthen the decisions and strategies themselves.

5.2 The Strategy Paradox

The strategy paradox is a consequence of the conflict between operational commitment and strategic uncertainty. In *The Strategy Paradox*, Michael E. Raynor provides this definition of the strategy paradox: "The strategy paradox arises from the need to commit in the face of unavoidable uncertainty. The solution to the paradox is to separate the management of commitments from the management of uncertainty. Since uncertainty increases with the time horizon under consideration, the basis for the allocation of decision making is the time horizon for which different levels of the hierarchy are responsible: the corporate office, responsible for the longest item horizon, must focus on managing uncertainty, while operating managers must focus on delivering on commitments"

5.3 Integrating Critical Success Factors and Future Scenarios with Strategic Planning

CSFs and scenarios each augment important pieces of the typical strategic planning landscape. CSFs articulate operational activities that support the mission and reveal information to be monitored over time. Scenarios lead to strategic conversations and uncover potential futures for which an organization can monitor. CSFs and scenarios, although they produce tangible results, also provide processes that help an organization establish strong ways of thinking, communicating, and making decisions. Figure 5 shows the schematic way in which CSFs and scenarios integrate with the typical strategic plan elements.

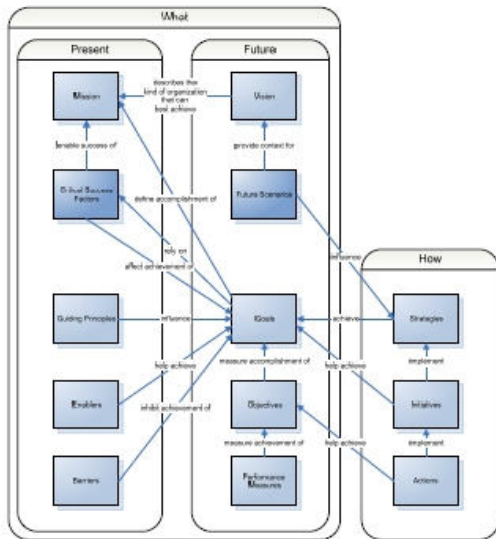


Figure 5: Critical Success Factors and Future Scenarios with Typical Strategic Planning Elements

Implementation of a strategic plan, coupled with review and maintenance of the strategy to ensure that it stays relevant over time, are critical components of strategic planning not covered in this paper. Both the critical success factor method and the scenario planning method stress the importance of maintenance and provide fitting maintenance techniques.

5.3.1 Critical Success Factors and Strategic Planning

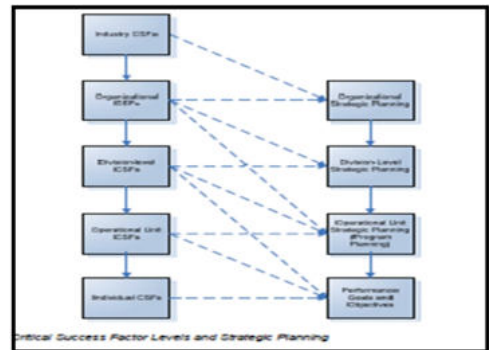
For Bullen and Rockart, CSFs are made explicit for the purpose of setting priorities and allocating resources, especially management attention. They state that CSFs add value to the planning process by exposing those variables that will most affect success or failure in pursuit of organizational or managerial goals. CSFs describe the operational necessities of the present state. CSFs are "a logical and necessary input into the corporate strategic planning process" developed to excel in those areas where high performance is critical, and CSFs are a logical input to the strategic planning process. (In fact, they assert that CSFs are a necessary input to the strategic planning process.) But CSFs do not provide sufficient input to strategy development. The CSF method must be integrated with a fully defined strategic-planning method that includes a situation analysis component, a visioning component,

and a goal-setting component. CSFs fit naturally with planning because they allow an organization to define—at any point in time—the factors that are crucial to the organization's success during the planning period.

CSFs to three levels of planning:

- Industry CSFs to strategic planning
- Organizational- and division-level CSFs to program planning
- Individual CSFs to action planning

In practice, particularly in today's environments, there is cross-wise relevance between the various levels of CSFs and the various levels of planning. With the addition of division-level and operational-unit-level (e.g., IT or security) strategic plans, along with operational-level CSFs are similarly critical to the associated level-specific plans. Figure 6 shows the relationships between CSF levels and strategic planning levels.



5.3.2 Critical Success Factors and Typical Strategic Planning Elements

This section distinguishes CSFs from other strategy elements and clarifies the relationships between CSFs and other elements.

5.3.2.1 General Relationships

CSFs have direct relationships to an organization's mission and goals. Like other strategic planning elements that affect strategy indirectly, CSFs affect strategy through their effect on the organization's achievement of its goals and their ability to enable the success of the mission

5.3.2.2 CSFs and Measures

In an early contribution to the work on critical success factors and management control systems Anthony et al. emphasized that the development of timely, concise measurements was crucial to monitoring identified CSFs [Anthony 1972]. Although not all documented CSF method descriptions include developing CSF measures, measures were also a fundamental part of Rockart's original CSF method. Rockart writes, "Critical success factors are areas of activity that should receive constant and careful attention from management. The current status of performance in each area should be continually measured, and that information should be made available". Critical success factors can establish a set of performance measures that directly link operational issues to the mission.

5.3.3 Future Scenarios and Strategic Planning

The future-focused element of most strategic planning approaches is a description of a desired future, or organizational vision. Because external forces shape the future environment in many ways that are beyond the organization's influence, an analysis of multiple futures greatly increases the value of future analysis. When scenario planning is used, future scenarios describe multiple and plausible futures subject to external forces. Future scenarios are inherently linked to planning and decision-making, but their role in setting strategy is not elementary. Scenarios facilitate the identification of large-scale uncertainties or forces that push the future in different directions. A robust strategy is one that will play out well across several possible futures. Strategies that make sense in only one or a small number of precise futures represent a gamble.

In addition to supporting strategic decision-making, scenarios provide good context for developing an organizational vision, which articulates ways in which the organizational mission might be achieved. While multiple scenarios are explored and maintained, the visioning process ultimately yields a single shared vision. The relationships between future scenarios and strategic planning elements. Scenario planning is a technique suited for executives at the highest level of an organization. Senior executives are best equipped for long-range planning and managing uncertainty. Along those lines, future scenarios can seed risk-management efforts by highlighting the negative effects of uncertainty. They can act as the opportunistic counterpart to enterprise risk management. The warning signs identified in a future scenario effort might also be used to inform risk management efforts.

5.4 Linking CSFs and Scenarios

While there is no critical dependency between CSFs and future scenarios, the former can be useful when formulating the latter. CSFs can provide an organizationally tailored filter for highlighting certain scenario drivers. engagement with a major federal government agency, the SEI used CSFs to expand the characterization of situational drivers. We found that organizational CSFs had particular relevance to economic and political issues (or drivers), and IT CSFs were generally focused on technological issues. Depending on the nature of an organization's business or planning scope, there could be other relationships between CSFs and scenario drivers worth exploring.

6 Special Considerations for IT Strategy

Information technology and business are becoming inextricably interwoven. I don't think anybody can talk meaningfully about one without talking about the other.

—Bill Gates

6.1 IT Strategic Planning

In his book *An Introduction to Enterprise Architecture*, Scott Bernard identifies IT as a commodity—a resource for organizational and mission-specific requirements [Bernard 2005]. In addition to being viewed as a resource for an organization, IT is commonly viewed as an enabler of the non-functional requirements, or quality attributes, of a system (e.g., reliability, availability, usability). IT provides an integral support function to an organization, contributing directly to the efficient and effective achievement of the organizational mission [Caralli 2004]. Before IT, information systems (IS) existed without technological support. Although IT is the current enabler of IS, IS is part of a much larger domain of information and communication that will continue to evolve in response to technological innovation and societal change. John Ward and Joe Peppard make a distinction between IS and IT that is relevant to understanding IT strategy. IS represents the information and systems that support the overall strategy of the organization. An IS strategy, then, represents the organizational information and systems demand. IT, on the other hand, represents the technology that supports the information needs, or technology supply. Note that IS demands can be met by means other than IT (i.e., by human processes or other non-technical solutions). An IT strategy outlines how technologies will support the organization's information demand and overall business strategy IT Strategy refers to a global level of thinking about IT and its integration with the rest of an organization. Enterprise architecture concepts focus on the importance of aligning IT strategies to both cross-cutting (organization-wide) and mission-specific requirements. The ultimate goal of IT strategic planning, according to Gunasekaran and Garets, is to provide a broad and stable vision of how IT contributes to the long-term success of the organization.

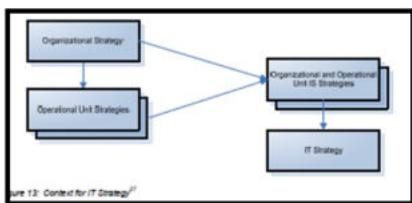


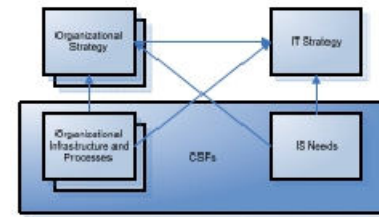
FIG:7

6.2 IT Critical Success Factors

Caralli notes that “operational unit CSFs tend to be less influenced by the organization's industry and more focused on the contributions necessary to support the organization's strategic goals and mission.” He points out that the success of an enabling group, or resource, like security or IT, relies heavily on an understanding of higher level CSFs for their own level-specific strategic planning. A good IT strategic plan must include an understanding not only of its own CSFs, but of the CSFs for the divisions of the organization it supports, as well as the higher-level organizational CSFs. In fact, Caralli states that the success for an enabling program can be a reflection of how it contributes to the organization's highest-level CSFs IT organizations often create strategies that fail to answer certain basic questions such as :

- What should be supported? What is the priority?
- What kind of support is needed?
- What happens if the organization is not supported?
- What parts of the organization need to be involved? What if I don't have direct control over them?
- How will success be measured?
- Caralli proposes that organizational CSFs can provide answers to these questions because
- They represent the field of vision of top management.
- They reflect the business drivers of the organization.
- They reflect the goals of the organization.
- They provide a unifying effect by articulating a common purpose.
- They can provide a measure for success in demonstrating contribution to the organizational mission.

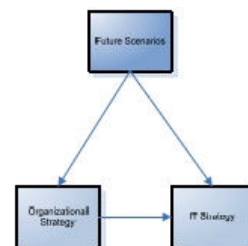
IT organizations tend to function as operational units adjacent to the lines of business, which add value not by producing direct products or revenue, but by enabling or enhancing the way work is accomplished. IT organizations typically address non-functional aspects of organizational plans; they address how work is done—making things faster, more efficient, more reliable, and cheaper. It is important, and difficult, to develop IT strategies that align with organizational goals and directly support the mission. As with organizational strategies, IT strategies can benefit greatly from paying attention to CSFs. Fig.8 given below:



ritical Success Factors and IT Strategy⁹

6.3 IT Future Scenarios

The key to an IT strategy is that it explains how information technology will align with and support an organization's overall business strategy and reflects a global level of thinking about IT and its integration with the rest of the organization. For this reason, organizational scenarios can be used to explore IT options. It may also be fruitful to develop IT-specific scenarios, in alignment with organizational scenarios. The SEI has not yet explored this area, in Fig.9 shown below,



7. Findings

Strategic planning is best viewed as a way to support strategic decision-making. The CSF method as a way of identifying the information needs of organizational decisionmakers. Both the scenario planning method and the CSF method support strategic decision-making by strengthening the ability to make good, information-based decisions, which strengthens the decisions and strategies themselves. In fact, all planning methods (strategic planning, the critical success factor method, and scenario Planning) have this limitation and cannot guarantee success. And so, scenarios are not a means to a strategy, but a means to a strategic conversation, which should lead to smart strategic decision-making. While neither CSFs, scenarios, nor strategic planning itself guarantee the development of an explicitly correct strategy, they provide information that supports good decision-making. Both the critical success factor method and the scenario planning method are well-defined approaches. It is important to remember that care must be taken with both methods to produce valid and useful results. When the methods are used together and integrated with a strategic planning method, even greater care must be taken to ensure that the integrity of the various methods is maintained and the results are valid. Nonetheless, a substantially enriched strategic thinking process can be attained.

7.1 Suggestions: Future Work

CSFs and scenario planning are excellent techniques for managing operational commitments and managing the uncertain future. Combining these techniques in a strategic planning effort have demonstrated viability and produced a strategic planning framework. The following additional tasks would enrich the current work:

- Explore the use of IT or security scenarios. Because of the value scenarios bring to decision making, IT, security, or other operational-level scenarios are likely assets in unit-level planning (IT strategy or security strategy) and organizational strategic planning.
- Create an integrated strategic planning process. The strategic planning framework described in this document has established a way to integrate the data created by a strategic planning process, the CSF method, and scenario planning. This work also showed that a typical strategic planning process could be enhanced by augmenting it with the CSF and scenario methods; however, an integrated process remains undefined. This integration will vary with different strategic planning approaches, but the integration need not be complicated, only explicit. A robust strategic planning process/methodology that includes strategic thinking, regular reviews, and a solid documentation approach is strongly indicated. Future work should support the codification, use, and refinement of a strategic thinking and planning process.

8 Conclusions

The trouble with our times is that the future is not what it used to be.

—Paul Valéry, French poet

Critical success factors and future scenarios are useful augmentations to strategic-planning efforts. They illuminate an organization's present situation and potential future, respectively, and contribute to a robust strategic planning framework. The enhanced strategic planning framework connects elements of each methodology and improves the depth of strategic analysis and thinking. When the CSF method and scenarios are used together and integrated with a strategic-planning method, they also expose the value of an overarching strategic-thinking and strategy-development process. The information framework for augmented strategic planning presented in this paper serves as an umbrella for enterprise architecture and organizational improvement efforts. A complete set of strategic planning information assets is not hard to build and can stand in for a robust process. Once information assets are developed they can be easily updated and maintained and can open up energy in the organization for improving processes for strategic planning. A fully enhanced strategic planning process, depicted in below Figure 10 can be adopted over multiple strategic planning cycles.

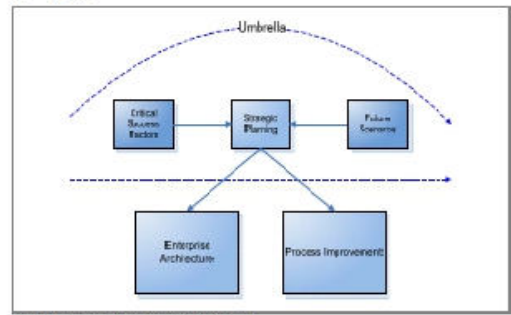


Figure 10: Enhanced Strategic Planning in Context

**Appendix
CSF Interviews**

The interview process, like the CSF method, is simple and can be used much more broadly than for developing CSFs alone. To interviewing individuals was to collect individual CSFs that could be viewed as a group, wherein consistently referenced ideas could be extracted and refined into a set of organizational CSFs. The CSF-style executive interviews can be used to elicit other insightful information, including goals, guiding principles, barriers, visions, measures, and more. Information beyond the scope of CSFs can be collected via these interviews either explicitly or by accident. Open-ended questions like those used in the CSF method elicit free-form data that can be off topic—and useful, or not. When recognized, the expansion of an interview question or answer can yield exceptionally useful information; alternately, it can muddy an already challenging pool of information.

Scenario Output

Ideas flow quickly and furiously in scenario planning when things go well. Capturing the proceedings and results of a scenario workshop is invaluable. Considerable effort should also be anticipated for post-processing—the scenarios must be written down to be useful. A special effort should be made to capture the stories that come out of the workshop, as these are the essence of the scenarios.

References

1. Lomash Sukul & Mishra P.K.(2003) Business policy and Strategic Management, Vikas Publishing House, New Delhi
2. Thomas L. Wheelen and Hunger J. David (2002) Concepts in Strategic Management and Business Policy, Pearson Education Asia, New Delhi.
3. Thompson & Strickland (2003), Strategic Management: Concepts and Cases Tata McGraw Hill: New Delhi
4. Kachru Upendra (2005), Strategic Management -Concepts and Cases, Excel Books, New Delhi
5. . Anthony, Robert N.; Dearden, John; & Vancil, Richard F. Management Control Systems. Homewood, Illinois: R. D. Irwin, 1972. 147-158.
6. Bernard, Scott A. An Introduction to Enterprise Architecture. 2nd ed. Bloomington: Author-House, 2005.
7. Boynton, Andrew C. & Zmud, Robert W. "An Assessment of Critical Success Factors." Sloan Management Review 25(1984): 17-27.
8. Bullen, Christine V. & Rockart, John F. "A Primer on Critical Success Factors." Center for Information Systems Research, Sloan School of Management, Massachusetts Institute of Technology, 1981.
9. Caralli, Richard A. The Critical Success Factor Method: Establishing a Foundation for Enterprise Security Management (CMU/SEI-2004-TR-010). Software Engineering Institute, Carnegie Mellon University, 2004.
10. Cassidy, Anita. A Practical Guide to Information Systems Strategic Planning. 2nd ed. Boca Raton, Florida: Auerbach Publications, 2006.
11. Conway, M. "Scenario Planning: An Innovative Approach to Strategy Development." Swinburne University of Technology, 2004.
12. Daniel, D. Ronald. "Management Information Crisis," Harvard Business Review, Sept.-Oct. (1961).
13. Dobbins, James H. & Donnelly, Richard G. "Summary Research Report on Critical Success Factors in Federal Government Program Management." Acquisition Review Quarterly (1998): 61-82.
14. Fahey, Liam & Randall, Robert, eds. Learning from the Future. John Wiley & Sons, 1997.
15. Fogg, Davis C. Team-Based Strategic Planning: A Complete Guide to Structuring, Facilitating, and Implementing the Process. New York: AMACOM/American Management Association, 1994.
16. Gregory, Erika; Harris, Gerald; & Ogilvy, Jay. "After the Scenarios, Then What? Strategic Conversation,
17. Heracleous, Ioizos. Strategy and Organization: Realizing Strategic Management. Cambridge University Press, 2003.
18. Leadership Strategies, Inc. "Strategic Planning: The Drivers Model." Leadership Strategies 30 (2007).
19. Porter, Michael E. "What is Strategy?" Harvard Business Review, November-December (1996): 61-78.
20. Management journals like Vikalpa of IIM
21. IIMB Management Review or Global CEO or visit websites like India infoline.com
22. www.sei.cmu.edu/library/abstracts/reports/04tr010.cfm