



Use Strategic Scenario Planning to Identify Major Risks

Given the enormous range of risks to manage¹, how can we identify the high-impact and most uncertain (i.e., most surprising if they occur) risks? How can we devise strategies to manage or even capitalize on them? One approach that has proven itself quite effective is scenario planning. To understand our Strategic Scenario Generation (SSG) process, we begin with our idea about the nature of the future.

The SSG Orientation to the Future

Our orientation as we conduct SSG is that the future isn't predetermined, it's contingent on what we, others and Nature do. We abandon the idea of a most likely ("single point") future. Rather, we say the future is shaped by actions of various participants going forward. We adopt the idea of creating the best future we can.

Structural changes, for example in technology or markets, offer advantage to those who knowingly cause or exploit them. Sometimes we talk about "changing the rules of the game". Similarly, competitive power derives from insight into dynamics shaping an industry, not a forecast.

Scenario planning is a process in which a senior team in the firm is formed and is led by an outside consultant. This is to minimize the likelihood that the existing paradigms (mental models and assumptions) in the firm will replicate themselves and result in no fresh thinking. We usually conduct SSG over a two to three day period, and require preparation by the management team as explained by the SSG leader.

SSG Benefits

SSG enables decision makers to deal with critical but uncertain future outcomes. SSG makes the entire team co-creators of the strategy, and thus enhances commitment. Finally, the strategies generated by SSG process helps manage the dynamics of change.

What are Scenarios?

A scenario is a description of a possible future situation in which the firm may operate. This description is a narrative about how the most important factors affecting the firm will interoperate and what their effects could be. This narrative is written in a compelling way, so that it fully engages management's thinking and creativity. Fully engaged managers are required to craft strategies to maximize gains and mitigate losses as described by the scenario.

Strategy Generation

Of course, there will be many possible scenarios for the future state of the firm's environment. The SSG is used to generate 2 to 4 such scenarios, each different in important ways. The managers then decide on the states they want to create or avoid, and devise strategies to do so. Most importantly in the risk management context, scenarios identify major risks to manage, and even have the potential to identify those risks that emerge from situations one "doesn't know one doesn't know" about.

The generation of scenarios is done in a systematic process, which includes identifying factors whose future values will drive the firm's environment. A simple example of a factor affecting an electronics equipment manufacturer would be the technology of small displays for hand held consumer products. What resolution and ease of viewing for long periods of time could emerge? The possibilities will affect a huge

¹ See our companion paper "Risk Taxonomy" for an enumeration of a wide variety of risks

range of design and cost assumptions. An example of a risk associated with this factor is the availability of those displays being limited because of consolidations in the display industry.

Results

The SSG results in a set of scenarios in narrative form, a set of identified risks and desired future states, and a set of strategies to implement to achieve the desired states.

Denial

No amount of Strategic Scenario Generation can insulate managers from destructive forms of the dreaded Denial of Reality. A recent case in point is Microsoft Corp.'s denial of the Linux threat. Of course, this denial caused delay in acting. Now Microsoft has been fighting Linux as if it is just another software application. It appears that they still haven't generated an effective strategy to deal with Linux's Open Source business model. On the other hand, Microsoft's arch rivals have capitalized on Open Source to win against Microsoft.

Manage the Major Risks

Having identified risks through the scenario process, managers need to act to reduce, control or gain from those particular potential adverse conditions. But they also need to prioritize the risks to manage.

Risk management for technology companies further requires general knowledge of risk management as well as domain knowledge of the technology.

Prioritize risks to manage

The highest priority risks should be those for which the firm is initially least capable of managing and with the highest expected cost should they occur. The lowest priority risks are those with a low expected cost and strong existing ability to manage them. The low priority risks are part of routine maintenance.

As the firm builds competence in the high priority risks, management control is increased.

Examples of Some Risk Management Strategies

The task facing risk managers is to mitigate the severity to the firm of an adverse outcome on their firm, as well as to increase potential gains. While risk management entails a full range of creative thinking and many potential methods, here are examples of three major generic ways to manage risk.

Integrate risk management with strategic planning.

At the most basic level, companies must incorporate their risk management capabilities, such as better business intelligence and scenario planning, in the strategic planning process.

Hedge (transfer risk to a counterparty)

For technology companies, exposure to severe risks due to customer operations is far larger than those due to financial or other internal operations, but the former are rarely managed pro-actively due to several reasons: lack of a standard quantitative framework to measure the impact of such risks, lack of established metrics, processes and organizations to manage such risks, and in some cases, lack of suitable traded or other instruments to transfer the risks to other parties.

Hedging Demand Risks

An example of a demand risks due to a low probability event that a customer will demand a large investment in a product and then fail to order it can be 'transferred' to customers by requiring them to commit to orders before the development of the product commences. Of course, in many industries, and especially in high tech, customers have substantial bargaining power and resist such transfers.

However, a variety of mechanisms have been created to mitigate some of this demand risk. For example, customers will often pay some “Non-Recurring Engineering” fees towards the development of a new chip design.

Another example (see “Strategic Marketing IP Risk-Stuck in the Middle” above) involves a chip firm acquiring a technology license to build a new chip for a client who refuses to accept any risk sharing. In this case, the chip supplier can buy an option to receive the licensed technology, such that the option is exercised only upon signing a contract with the intended customer.

Diversify (transfer risk to a set of similar alternatives)

Diversification was formalized as a risk management tool by financial theorists who showed how a diverse portfolio of stocks can give a higher return for the same risk as choosing a single stock. The idea has much intuitive and common sense appeal.

Diversify Strategic Marketing Risk

Strategic marketing risks can be mitigated by developing multiple products for similar markets. This is essentially an approach in which a “portfolio” of products is built and the market decides the most successful.

Diversify R&D Design Risk

Similarly, R&D risks can be diversified by having multiple teams independently work to solve similar technology or design goals.