This paper talks about how to create a Strategic Knowledge Map (SKM or Map). This is a new approach for improving the success of organizations or “firms.” Here, we will cover:

- What an SKM is
- Approaches to creating SKMs
- Determining and improving the usefulness of your SKM
- How an SKM supports success

The unique and innovative views of SKMs in this paper are based on how we understand the structure of these Maps. With that perspective, we’ll talk about how you can improve the effectiveness of your SKM, especially when supported by a “Certified SKM Coach.”

**What is an SKM?**

We begin with the broader view where knowledge is considered a strategic asset[^1]. More specifically, we are talking about the kind of knowledge that supports planning and decision making[^2]. A Strategic Knowledge Map (SKM) is a graphic representation of how a firm understands the workings of its world. The Map is a diagram—a visualization of your decision-making options, limitations, opportunities, and anticipated outcomes.

In the past, firms made simple maps when creating “values statements,” “corporate vision,” “mission statements,” and “goals and objectives.” Each of those serves as a kind of Map to help guide the organization.

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[^1]: An organization might be a business, non-profit, government agency, startup, or community coalition. In this article, we’ll simply refer to all these organizations as “firms,” because so many are run like a business.
The ability to create useful Maps took a giant leap forward with the classic book, *Structure of decision: The cognitive maps of political elites*. For some background of knowledge mapping, see Wexler. More recently, however, others have argued that the process has not proved as effective as expected. Some have even said that common mapping methods such as SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) should be abandoned.

The present paper suggests a new approach to Strategic Knowledge Mapping based on our consulting experience and studies into the structure of knowledge. Our approach is different from the usual strategic planning methods in two rather important ways:

First, a Strategic Knowledge Map is a tool that you can (and should) use on a regular basis to coordinate activities within and between firms. Too often, firms relying on commonly used methods end up with strategic plans that are ignored, or are not useful for collaboration.

Second, new methods make it possible to evaluate a Strategic Knowledge Map for both its internal logical strength as well as its basis in factual data. This means you can assess your Map to discover its strengths, weaknesses, and opportunities for improvement.

This approach to evaluating Maps is something that could not be done previously. These new methods are important because they let you improve your Map with scientific objectivity.

In dealing with the complexity of human behavior, it is easy to fall into the trap of believing that a Map is “good” – even when it is not. The failure of firms, and the services they provide, can often be traced to the use of poor Maps.

Maps must be based on data and the logics connecting the data. If they are not, then they are more likely to fail. This is a common error in the business world. It also is true in our personal lives.

We have all heard arguments that sounded logical at the time, but later events proved them to be wrong. Without getting into details, many of our teenage misadventures began with assumptions that seemed good at the time!

Common wisdom tells us that that we should learn from our mistakes. With a good Map, we have a way to learn – even before mistakes are made.

The next figure shows a simple and partial outline of the ASK MATT process.
How to Make a Good Strategic Knowledge Map (SKM)

To create a good Map, one that is specific to your situation, an important first step is to surface your strategic knowledge. The process begins with personal interviews and/or conversations in teams. In each case, participants identify a range of concepts. These concepts reflect things that are key to the firm’s success. The next step is to find the casual relationships between the concepts.

Conducting careful interviews is important because that allows the firm to find the tacit (hidden) knowledge of the experts. Having broad participation is also important. This is because knowledge is often in silos—fragmented between departments.

Let’s consider a metaphorical example of making a better Map. Imagine that you are driving along and realize that you are just a little bit lost. Eventually, you pull over to buy a Map. Strangely, the only store you can find is a toy store…and the only Map is in the form of a jigsaw puzzle. You have all the pieces, but each piece shows only a disconnected part of the whole picture. Some pieces show cities, others roads, still more pieces have lakes and mountains on them.

Until you put all the pieces together, your Map will not be very useful.

Leaders face this kind of situation every day: They find pieces of data from many sources. Pieces may include industry reports, workshops, colleagues, etc. Yet, the knowledge is not linked together to form a complete Map. Sure, there are gurus who will sell you a Map. But that kind of Map is usually based on academic research or a well-funded good-luck story. That Map is never about where you are and where you want to go. So, it is rarely worth the price on the cover.

A more useful approach is to have a Strategic Knowledge Map Coach work with teams and individuals to surface their knowledge. Then, they work to integrate the knowledge and create a shared understanding. Next, the SKM Coach helps to evaluate the shared understanding using Integrative Propositional Analysis (IPA).

IPA is a six-step process for analyzing the structure of Strategic Knowledge Maps.[11-13]

A Map’s structure is based on two key aspects (for a more detailed description, please see our white paper titled, “The Science of Conceptual Systems: Its History and Usefulness for Improved Decision-Making and Organizational Success”).

One aspect is “Complexity.” Quite simply, this is the number of concepts that are included as part of the SKM. Complexity is a measure of the breadth of your SKM. Having an SKM with greater breadth suggests that the firm is considering more things in its internal and external environment.
Strategic Knowledge Mapping (SKM)

Having this high level of information is useful; however, it comes with costs. First, monitoring so many things is difficult and expensive. Second, the additional data may not be useful if you are measuring the wrong things. The additional data may actually cause more confusion instead of leading to better decisions.

With new insights into the structure of the Map you don’t need to keep track of so many things. That’s good news because tracking is often difficult and expensive. Instead, you can focus on measuring a limited number of “linchpins” for your system.

The second key aspect of your Map is its “Systemicity.” Systemicity is a measure of the depth of understanding. In a sense, it tells us which concepts are well explained.

Metaphorically, your Map will have a higher Complexity if it has more cities. Your Map will have a higher Systemicity when it has more roads connecting the cities. The cities are where you want to go (these include both the activities and the goals of a firm). On that Map, the roads show your options for improving your activities and reaching those goals.

Using SKM to Increase Success

By understanding the Complexity and Systemicity of your SKM, you can better assess how well you understand your business world. This will indicate your potential for success. When you evaluate your Map it will fit into one of four quadrants based on its Complexity and Systemicity.

Briefly, the four quadrants show how useful a Map is likely to be for leading your firm. Maps in Quadrant #1 will not be every useful for navigation. Maps in Quadrant #2 will be useful only in simple, stable, situations. The Maps in Quadrant #3 will require a great deal of time and effort to develop and maintain. In contrast, the Maps in Quadrant #4 will be the most useful for steering your firm to success.

Most firms have Strategic Knowledge Maps with a low level of Complexity and a low level of Systemicity. This is typical for most strategic plans, mission statements, values statements, and policies.

Despite the great efforts taken to craft mission statements, they generally end up in Quadrant #1 because they only give the appearance of knowledge. They are not really useful for navigation. This may be why so many people don’t pay attention to strategic plans (and similar Maps). They intuitively understand that they have been given only a small piece of a larger puzzle. So, that Map is not really useful. Maps in Quadrant #1 show few locations and few roads to take the firms where they want to go.

Some firms work in very stable industries. Utilities and firms specializing in commodities are classic examples. Other firms work in a very narrow niche – where they have a very high level of expertise.

Complexity is the “breadth” of understanding.
Systemicity is the “depth” of understanding.

Generally, if a Map has more causal connections, it will be more Systemic.
These kinds of firms, and their leaders, often have a very deep understanding of very few things. This kind of understanding is reflected in Quadrant #2. For Maps in Quadrant #2, the knowledge is mostly tacit. That is to say, it is mainly intuitive. Therefore, communicating that knowledge to others is difficult. This causes problems if a leader is attempting to grow the firm.

Naturally, people work well together when the expertise is spread evenly across the firm. However, as the firm attempts to grow, bringing on new people who have the same understanding becomes increasingly difficult. Quadrant #2 is also a kind of knowledge trap, because the appearance of understanding is very strong. However, that understanding is limited to a very narrow domain. Metaphorically, most people find it easy to walk through their own living room in the dark. Yet, they would not try to navigate a strange house blindfolded!

In a firm, everything seems to be running very smoothly until surprised by a large disruption. People in a Quadrant #2 firm are caught unprepared. “No one could have predicted that this would happen,” they say.

In Quadrant #3, larger firms spend a great deal of time, effort, and money on creating Maps to improve their ability to predict the future. Some suggest that the CEO should spend 10% of his or her time on data analysis[14].

Metaphorically, their Maps show many dots, but few roads. Connecting the dots is very difficult. This is a second kind of knowledge trap. Here, the firm struggles to gain more and more data. However, the

### Four Quadrants of Map Usefulness

<table>
<thead>
<tr>
<th>Quadrant #1</th>
<th>Quadrant #2</th>
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<tbody>
<tr>
<td><strong>Most firms are here</strong></td>
<td><strong>Many utilities and commodities are here</strong></td>
</tr>
<tr>
<td>• May have short term success</td>
<td>• May have medium term success</td>
</tr>
<tr>
<td>• Many unanticipated consequences</td>
<td>• Narrow focus</td>
</tr>
<tr>
<td>• Typical mission statements are here</td>
<td>• Easier to coordinate, difficult to adapt</td>
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</table>

<table>
<thead>
<tr>
<th>Quadrant #3</th>
<th>Quadrant #4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Many very large firms are here</strong></td>
<td><strong>Few firms are here</strong></td>
</tr>
<tr>
<td>• May have medium term success</td>
<td>• Long term success is more likely</td>
</tr>
<tr>
<td>• Difficult to gather and interpret data</td>
<td>• Few unanticipated consequences</td>
</tr>
<tr>
<td>• More difficult to coordinate</td>
<td>• Easier to coordinate and adapt</td>
</tr>
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*Note: Quadrant #1 and Quadrant #3 are high complexity, low systemicity. Quadrant #2 and Quadrant #4 are low complexity, high systemicity.*
more bits of data that are brought in, the less useful the Map becomes. The information becomes lost in its own fog – data smog. To make sense of all that data, larger firms hire ranks of analysts. So, progress here is possible, but it comes at a high cost.

The ideal, or meta-level goal, for every firm is to develop a Strategic Knowledge Map that is both Complex and Systemic. In Quadrant #4, the Map has many locations and many roads for reaching the destinations. A more complex Map may seem to be more confusing, but when those dots are connected by many roads, there are at least two important benefits.

First, a more Complex Map allows leaders to identify key points for monitoring changes in the business environment. These key indicators help the firm predict and prepare for change.

Second, a more Complex Map will show “leverage points” for achieving goals. Leverage points show where small efforts can lead to large results\textsuperscript{[15]}. While many leverage points are obvious, some are counterintuitive. For example, finding the intersection between multiple positive reinforcing loops can indicate a “sweet spot” for supporting growth in multiple areas of the firm.

Another key benefit of a Quadrant #4 Map is that it supports communication and coordination between departments.

Moving from Quadrant #1 to Quadrant #4 is a relatively simple process when you use a Certified SKM Coach. With a Coach, firms can avoid falling into the “traps” of Quadrant #2 and Quadrant #3. A good SKM Coach can develop custom paths to developing more effective Maps. Generally, three approaches are useful for developing more effective SKMs.

- **Leverage points** are places within a firm where a small change in one thing can produce large changes in many things.

**Approaches to Creating Effective SKMs**

The first approach is a straight-forward analysis of the firm’s existing Map. Using IPA, such projects typically take less than a week—perhaps as little as one day—depending on the Complexity of the existing plan.

A report will identify which Quadrant the Map is currently in. Also, a good report will identify more specific strengths, weaknesses, and opportunities to improve a firm’s Map. Finally, Coaches can help leaders use that knowledge to chart a new course for helping the firm develop a Quadrant #4 Map, without getting lost in Quadrant #2 or Quadrant #3.

The second approach is a good starting point where no formal Map exists. The Coach interviews key individuals for their insights and understandings and combines those results to create a Map.
Then, (as in the first approach) the results are analyzed. This method is primarily about finding the hidden knowledge of the firm and crystalizing it into a formal Map. When the hidden knowledge is made visible, the leadership team can address the strengths and weaknesses of the Map.

A good Strategic Knowledge Map Coach can facilitate a conversation to optimize the Map. The leadership team can then use the Map to discover new opportunities and find the best paths to reach their goals. That conversation is also followed by a report which includes recommendations and paths for improvement.

Using this kind of integrated Map, participants can more easily create strategic goals and identify leverage points for achieving higher goals with lower costs. This approach aims at creating a more effective Map to guide efforts toward synergy and success. Also, the larger scale process is the most useful approach for improving communication, collaboration, and shared understanding. People learn how to work more effectively together for greater synergy. They also gain the ability to move their Map more rapidly towards Quadrant #4, so they can maximize their chances for success.

Summary and Conclusion

Older approaches to mapping strategic knowledge such as business plans and strategic plans have typically resulted in poor Maps. These Maps may seem useful. However, studies have shown that they tend to lead us astray.

The new methods shown here, with the help of a Certified SKM Coach, provide a powerful new approach to understanding what we understand. By using IPA to evaluate Maps, a good SKM Coach can help you assess the quality of your existing Maps and create better Maps. This, in turn, enables firms to find greater success and avoid unanticipated negative consequences.
REFERENCES


