

WISDOM to work by:

1. *The business layer strategy overcomes growth barrier 1.*
2. *Divide and conquer. Separate all technology into three layers.*
3. *The layers are infrastructure, back office applications, and customer facing applications.*
4. *The business strategy drives the IT strategy.*
5. *First identify the layers and the technologies within.*
6. *Next assess strengths and weaknesses by layer.*
7. *Then write strategic statements by layer.*

I. INTRODUCTION

This approach, executed properly, is guaranteed to get the business past the IS challenges encountered at the first barrier. Please reference appendix 2.1 for an overview of the strategy and tactics required for this approach. The business should use the strategy and tactics appropriate for the size of the business at this point in time. The strategy and tactics will serve the business well until it reaches the next barrier. By the way, if there was a way to avoid the next barrier, I would prescribe it as well. I do not feel that a way exists. The resources and funding that are available for supporting technology in most SMBs will not allow the business to totally avoid the next barrier. However, using this approach, the business may minimize the negative impact.

The work to be done by the business at this stage is to develop the strategic IS direction using the business layer approach. The business layer approach entails categorizing the technology solutions into one of three layers and addressing each of these layers in a different strategic way. Once the layers are defined and the strategy is set the business will develop a series of projects to align the technologies within the layers...thereby executing the tactics. All of this will be described in a narrative form below with very little need for charts and graphs. The IS department must also realign the IS manpower resources in order to be successful. The prescribed model will enable the business to move the IS resource from a reactive technology-centric group to a proactive business-centric team focused on customers. Here are the steps in the business layer approach.

II. STRATEGY

A. Assessment

It is a natural beginning to first formally document where both the business and the IS department reside today. The IS department needs to have a baseline from which to execute and measure their progress. These exercises need to be formal and structured but not exhaustive or comprehensive. Speed of delivery is critical.

B. Business Assessment

Before the business can define where the IS resource must go, the IS department must know where the business is going. Before the business can define where the business is going, we must know where the business resides today. Usually the business leadership and most of the business employees can supply a coherent view of where the business resides today. The critical exercise is to look at the state of the business today in terms of problems, limitations, and inhibitors brought on by IS. While most but not all of these will be technology related, the ones that are can be addressed by this exercise.

1. Technology Challenges

This exercise is the simple step of defining the problems and issues surrounding technology and the business. This can be as formal as a narrative in a published report or as informal as a series of bullet points in an email. What is critical is to document the problems all in one location so that business leadership can assure that they are addressed and resolved by the resulting strategy. The identified issues will need discussion, refinement, and publication for all to see. Remember the business is not finding fault with the IS team. These breakdowns are normal, natural, and unavoidable. The IS department, when engaged, must put egos aside and clearly assist in defining the problems so they can be addressed. These definitions should be stated in the context of what business functions are impacted. Here are a couple of sample problem statements that can be used to define the technology challenges:

- External email stops functioning at least once a week. We have no idea that it is broken because we cannot detect the absence of getting external email. We depend upon email for customer orders and the exchange of photographic proofs. If we mishandle or ignore orders, we not only jeopardize that specific order but the ongoing client relationship.
- The interface between our web orders and our web fulfillment is manual. There are numerous manual steps that must be executed to fill an order and these steps are subject to human intervention and failure. Also, since all of the tracking is manual, we are constantly losing track of inventory and must do weekly physical inventory counts to keep inventory in stock.

- The accounting server reboots itself at least once a day. This has been going on for several weeks. When it reboots we lose whatever transactions we were working on and sometimes previous transactions. It takes up to an hour to reconfirm what we did and whether the transactions were processed. The IS group can only tell us it is a hardware glitch; they can't seem to fix it.

2. Business Direction

Next the IS department must know the business plans. This is the step that reinforces the critical need to resolve the technology problems. It will also provide the IS leadership with the business vision. The business leadership and the IS leadership need to conduct a reasonable—and likely prolonged—dialogue to communicate where the company is headed. The questions below should foster some initial discussion. An SMB that has done some formal planning should be able to readily provide this information.

- What businesses are we going to continue to be in? What are the identified lines of business? Should we expect changes in our current direction?
- What is the market like? What is the revenue potential in the marketplace? What is our market share and how are we perceived in the marketplace?
- What are the company goals as far as revenues (dollars), profitability (margins, profits, EBITA in dollars) and resulting number of employees (size)?
- How are we going to grow (approach)? Are we going to grow through acquisitions, franchising, geographic expansion, or centralized growth?
- What locations are we planning to be in and where might these locations be or how might they be chosen? Geographically, where are we going to do business?
- Do we have goals of sales or production facilities in other locations or states? Where are specific facilities anticipated to be located?

C. Technology Assessment

Now that the business has documented the company status and business direction in relationship to the IS department, the next challenge is to align IS with the business and, using the guiding principles and tactics given below, chart the course for IS.

1. Identifying the Layers

The strategy requires that the business takes a different view—a fresh look, if you will—at the business and the associated technologies used to support the business. First classify each of the existing technologies into one of the categories below. There are several ways to get started with this exercise. The business could start with a broad list of all technologies. They could take a department by department view and list the technologies used by each department. (This may provide additional value later as well.) Last, the business could also use some of the samples I give below and expound on them. Please reference appendix 2.2 for a pictorial representation of this exercise.

a. Base Layer – Infrastructure

This is the base layer of technology that consists of the underlying infrastructure on which all other functionality is built. It is the foundation. It includes things like local and wide area networks, telephone systems, work stations or PC desktops, processors and servers, printers, and other miscellaneous hardware. This layer is a surprisingly common layer that will not differ much from SMB to SMB.

b. Middle Layer – Back Office

This is the middle layer of technology that is critical to the day-to-day running of the company and provides the applications and functionality that nearly all SMBs cannot live without. It resides and functions on top of the infrastructure layer. It consists of applications that provide managerial support, administrative support, and office systems. It includes accounting packages, financial packages, human resource systems, email capabilities, voice mail functionality, document faxing and handling, and most other internal software and application systems. This layer is also a surprisingly common layer that will not differ much from SMB to SMB.

c. Top Layer – Products and Services

This is the top layer of technology. It is what makes each business unique. It is specific to the business and enables the business to do what it does to make money. It is the customer facing and customer servicing systems and solutions that support existing clients or enable the business to secure new clients.

d. Summary

Using this approach the business will now have an exhaustive list of all technology solutions. It is important not to get hung up on technologies or systems that may seem to fall into one layer or another. The business should slot the system based on best guesses and move on. What might be a back office technology for one business could very well be a customer facing technology for another. By definition, if it touches the customer in a meaningful way then you can classify it as a customer facing technology. Remember that these layers build from the bottom to the top as in any form of construction. As a general rule the business can classify the layers in terms of whether they provide core functionality or a competitive edge to the business. The guideline to use is to buy or outsource for core functionality and build or in source for a competitive edge. In most cases the business should clearly outsource (as much as possible) the technology infrastructure and back office systems and in source customer facing products and services. It is critical that the business cultivate the internal IS staff to focus on customers.

2. Assessment by Layer

Now the business must match the technology problems or issues identified in the business assessment to the technology layers. Some problems will fit into multiple layers and should be duplicated in each location so as not to be missed. Flag these with an indicator showing the entire problem is not in a single layer. Matching up the identified problems with the individual layers will enable the business to see where the problems should be addressed and what strategy should be used to address them. Each layer will have a different strategy.

a. Base Layer

In the infrastructure layer, the business leadership needs to task the IS leadership with providing a narrative describing what the technology does for the business. This can be very basic but should be couched in business terms. Use the identified technology problems and issues to expand on the documentation for the identified technologies. In order to address issues the IS department and the business must have the technologies clearly defined and charted. Expand the layer chart to include these problems and issues.

b. Middle Layer

In the second, or back office layer, the business and IS leadership should perform the same descriptive and slotting exercises. Here the business leadership needs to use the IS leadership to document whether it has been buying or building solutions. IS leadership should also document as much information as possible about each component including, but not limited to, the following:

- the date the application was implemented
- the amount of maintenance and support required
- vendor relationships and support provided
- versions available versus version installed
- interfaces and interactions with other applications
- how committed or dedicated the business is to these legacy applications

c. Top Layer

In the third, or customer facing layer, the business needs to use the IS leadership to perform the same descriptive and slotting exercises. In addition to the issues, document the following for all customer facing applications:

- status regarding purchased or home-grown
- stability of the application
- functionality, including weaknesses of the application
- maintenance and support issues
- competitive issues with the application within the marketplace
- general feeling about the application by the business

These are the systems and applications the business should be focusing on and they should be stable, scalable, and robust. Most likely these systems are in the same troublesome state as the previous two layers.

d. Summary

The business now has a “state of the business” report and a “state of the IS department” report that will be used to define a strategy and map a direction.

D. Strategic Statements

Using the reports from the three layers above, the business (with the assistance of IS) can now generate a basic strategy for each layer that will allow it to fast-track progress. The business and IS leadership can jointly translate the strategy into tactics by identifying the projects that will be executed to remedy the existing problems and propel the business in the required direction. The business leadership will now be able to address some problems in each area immediately by running some concurrent projects. However, it will ultimately require that the business and IS leadership implement and solve in the infrastructure layer first, followed by the administrative layer, then the customer facing layer. Remember, this is about construction and the business must build from the bottom to the top.

Let's review a few sample strategic statements.

1. Base Layer

- **Local Area Network** - Our local area network will connect all internal users to all existing and future technologies based on need. The network will approach five nines (.99999) in availability and will be robust enough to handle any internal data traffic or file transfers. The network will be secure and hardened.
- **Desktops** - Our desktops will have a minimum configuration based on user needs that will be defined during subsequent meetings. We will replace desktops every three years and laptops every two years. We will have a standard desktop configuration which will not be modified without the consent of the head of IS. No external software will be loaded without written permission and documented business need. Every desktop will have the standard Microsoft operating system and office suite, and will be fully licensed.

2. Middle Layer

- **Accounting System** - Our accounting system will be a purchased package that will not be modified. It will be configured and enhanced only by the vendor. It will meet all of our published requirements. It will interface seamlessly with our commission system and our warehouse management system. It will allow us to proactively manage the business and provide extensive ad hoc reporting capability.

- **Commission System** - Our commission system will be a purchased package that will not be modified. It will be configured and enhanced only by the vendor. It will handle our unique commission split structure and allow for four levels of hierarchy within the sales force. It will provide for interfaces to the sales and lead tracking systems as well as the payroll component of our benefits package system. If the package will not support a specific commission structure, we will not pay in that manner. We will find other ways to accomplish the same compensation.

3. Top Layer

- **Call Center and Agent Call Handling** - Our call center will be constructed using only state-of-the-art components and industry leading vendors. Our call center will allow for voice conversations and web chats. It will offer skills-based routing and the ability to record and capture every call including the system data component. It will provide standard daily reporting which will be defined in subsequent meetings.
- **Customer Printing** - We will print any document for any customer at any time. We will print color as well as black. We will print on any size paper. We will attempt to provide twenty-four-hour turnaround on reasonable volumes. We will allow our customers to submit print data in any form and will convert it to our standard print format. We will make it easy for our customers to engage us.

III. Summary

This approach offers a truly unique view of the business and allows the business to begin construction of IS infrastructure and solutions from the ground up. This is powerful stuff!