

C-SUITE MANAGEMENT SERIES – SEGMENT 6

What You Missed In School – Challenges of “When Not If” / Functionality Tradeoffs / Workload Hump Theory

As a continuation of our discussion of risk in Segment 5 of this C-Suite Management Series (Strategy Development - Predicting and Controlling Risk Versus Texas Hold 'em), I want to explore three areas of major risk for the C-Suite.

From a conceptual perspective, I have sometimes received an initial reaction from people of - “this is just common sense”. However, what I have discovered over the years is that these three areas of risk are almost never properly understood, presented, addressed, and therefore, controlled.

Consequently, after further discussion and a proper review of opportunities and tools to eliminate and mitigate these risks, the “this is just common sense” becomes “WOW, I can see the benefits to what you are presenting”.

Functionality Tradeoffs

Illustration - An organization was captivated by the availability of customer self-service bot technology as a way to reduce cost, improve staff efficiency, and streamline the customer experience. Upon implementation, sales dropped. Through further analysis they realized that while one segment of their customer base found the use of this technology acceptable and even desirable, there was also a major demographic of their customer base that preferred human versus technological interaction and moved their business to competitors.

In Change Science this is referred to as a Functionality Tradeoff where there is a selection between two alternative functionalities which are interconnected in such a way that you cannot obtain the functionality of one alternative without sacrificing the functionality of the other alternative.

Functionality Tradeoffs can be very common for organizations when the strategic initiative includes the selection and implementation of new enterprise software systems. It is not unusual for the setup of these systems to require the selection of a specific software configuration that provides a desired functionality to one department but sacrifices or creates major issues in the functionality the software will provide to another department.

For those of you that are familiar with a manufacturing environment, you might have experienced the situation where a new software system is selected to support an expanded functionality for Operations. Unfortunately, the configuration of the bill-of-material within this new software to support the functionality for Operations is not consistent with the configuration necessary to support the functionality required by Engineering. However, the capability of the software only allows for a single configuration and therefore, only the desired functionality of one of the departments can prevail.

While it might be hard to imagine, I have seen numerous times where a situation like this Operations/Engineering functionality tradeoff is not fully understood or discovered until after the system has been acquired and major progress on the implementation has already taken place.

This has left the organization in the tough position of either walking away from the software, incurring major unexpected cost to modify the software, or as in this case, modifying an enormous amount of Engineering data in order to support the configuration required by Operations.

It is important that the C-Suite recognize the risk associated with Functionality Tradeoffs and make sure the organization incorporate the efforts required to determine and properly mitigate these risks.

- The best place to initiate these efforts is within the Disconnect Analysis described in Segment 5 of this Series. Incorporation within the Disconnect Analysis allows the organization to discover potential Functionality Tradeoffs and to determine if any differentiators exist between alternative strategies and implementations under consideration.
- Feedback Loops are a valuable tool when looking for potential Functionality Tradeoffs. They allow for a targeted downward flow of information regarding the strategic alternatives under consideration and the upward flow of actual conditions and issues (including potential Functionality Tradeoffs). It is important to realize that there is often an untapped existing staff knowledge of potential Functionality Tradeoffs. Unfortunately, this knowledge gets lost within the selection process methodology used and a lack of a broader efficient incorporation of necessary feedback.
- The key to remember is that both the Disconnect Analysis and Feedback Loops rely on a knowledge and understanding of the major requirements for each strategic alternative under consideration. It is these requirements when compared to actual existing conditions that will in turn determine the amount of implementation effort and the potential for Functionality Tradeoffs.

Energy/Effort/Capability Hump Theory

Illustration - An organization determined that a major upgrade in the enterprise system was required to support future growth. They selected a popular vendor's hardware and enterprise software system after an extensive review of alternative packages in the marketplace. The organization also decided to utilize the selected vendors implementation methodology along with their system configuration and implementation consulting expertise. It was estimated that the implementation would take between 15 and 24 months to complete.

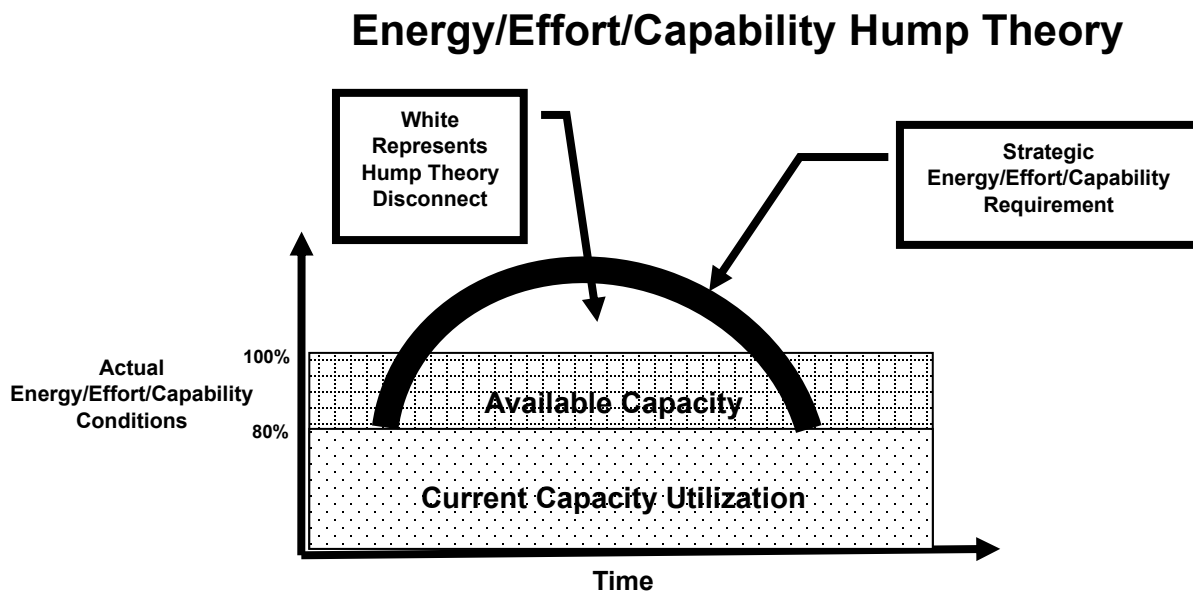
Under the recommendation and direction of the vendors consultants, the organization committed staff to the project on an as needed basis. I was brought in because after more than two years, the initiative was overbudget, behind schedule, and failing to provide any sort of realistic benefit with no clear completion date in sight.

There was a total miscalculation of the level of human resource commitment, both in time and capability. They failed to recognize that given the existing workloads of the staff, and the continually fluctuating demands of the implementation, the staff became overwhelmed creating not only issues with the implementation, but also with the organizations ability to satisfy day-to-day customer service requirements. In addition, while the consultants could provide the expertise relative to the system they were providing, it still required internal expertise that just did not exist.

What this organization was experiencing was what I refer to as the Energy/Effort/Capability Hump Theory Disconnect. I refer to it as a hump theory because the execution of a strategic initiative has a level of staff time, effort, and capability associated with it to be successful. Given that day-to-day operations also requires an ongoing level of staff time, effort, and capability, the implementation methodology being used creates a “hump” in the amount of available time, effort and capability during the execution of the initiative.

If, after taking into consideration the demands of day-to-day operations, there is insufficient available time, effort and capability to support the execution of the strategic initiative, a Disconnect is created.

The good news is, through the use of the concepts discussed in this C-Suite Management Series, we were able to complete the execution of the strategic initiative in less than four months by determining the essential requirements, properly staffing the project, and creating a balanced incorporation of strategic execution with day-to-day operational staff commitments.



It must be recognized that while it is obvious the execution of a strategic initiative requires staff time, effort, and capability, that is NOT the C-Suite challenge. The challenge is in the quantification, monitoring, control, and balancing of these requirements with the ongoing day-to-day requirements of operations.

- Receiving a detail implementation plan that stretches over months if not years is at best of limited value. Especially to the C-Suite and especially if the focus is more on the successful implementation of a specific software or operational system. Again, **C-Suite success is when their desired objective is accomplished in a timely manner. It is not when a selected methodology is implemented but with limited to no accomplishment of the desired objective.**
- The real primary value is in a clear understanding of all the Disconnects that exist and what it will take to eliminate those Disconnects. Therefore, the commitments of staff time, effort, and capability can be directly associated specific Disconnects. This provides

the C-Suite with a straightforward easy to understand picture of the what it will take and why. In addition, it provides the organization with a significantly superior structure for managing the exact timing of these resources and an improved ability for the coordination with day-to-day operational requirements.

- The ability to reach the C-Suite objectives in a timely and efficient manner are even further magnified when this Resource to Disconnect structure is combined with an organization that has the Blending Of Strategic Initiatives With Day-To-Day Operations introduced in Segment 2 of this Series. The Blending and Feedback Loops inherently provide the capability to manage, monitor, and control any Energy/Effort/Capability Hump Theory Disconnects that might exist.
- Finally, as we will see in the next section on the challenges associated with “When Not If”, the Resource to Disconnect analysis discussed here is a critical element in supporting a dynamic priority and strategic execution methodology.

“WHEN NOT IF” Challenge

Illustration - An organization knew with a high degree of certainty a major customer was going to substantially increase their demand for product. In order to support this increase in demand the organization determined they would need to significantly increase capacity and availability of working capital. Unfortunately, the product was a new highly engineered product that would be phasing out an existing product. These dynamics led to a situation of uncertainty regarding the size and timing of the initial launch of the demand. What I like to refer to from a C-Suite perspective as the “WHEN NOT IF” challenge.

It is a major challenge because it requires the commitment of a great deal of capital and resources without knowing exactly when the actual sales will be available to create the necessary cashflow to support these commitments.

I was brought in because the organization miscalculated the WHEN and found themselves struggling financially. Even though special private equity capital and debt arrangements were established in advance to support this growth, the organization found itself in a position of lacking necessary working capital caused by the premature execution of the initiatives required to support this growth. Note that an issue regarding the failure of the IF taking place was very minimal. In fact, total first year sales grew by over 70% after the ultimate launch of this product.

Through the use of the concepts discussed in this C-Suite Management Series, we were able to immediately restore profitability, stabilize the relationship with the bank, successfully meet the demands of the customer product launch, and ultimately provide a successful exit strategy for the private equity group.

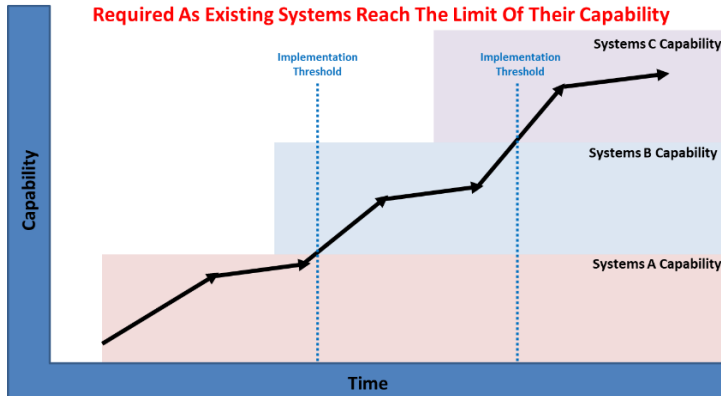
The “When Not If” challenge is actually very common and can be a major contributor to an organization’s inability to survive due to a lack of sufficient capital. A review of the literature indicates that a vast majority of business failures can be traced to a lack of cash or poor cash management.

Additionally, the “When Not If” challenge is not just in fast growth senecios. It is also a common result of the natural maturing of an organization over time, or even more common, the mistiming of the execution of a major strategic initiative.

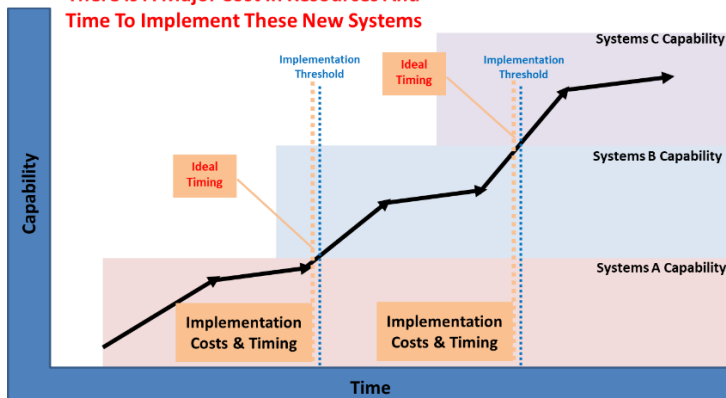
Even if an organization grows at a reasonable rate, it will reach points in the life cycle where existing systems, capacities, and operational structures start to max out, become antiquated, and need to be replaced. However, if the strategic initiatives and associated resources are expended prematurely, the organization can run into major financial difficulties just like the organization highlighted in the above illustration.

On the other hand, if the strategic initiatives are executed too late, the organization can have difficulty in meeting customer requirements which can also lead to limitations on growth or even worse, financial difficulties due to a loss of customers.

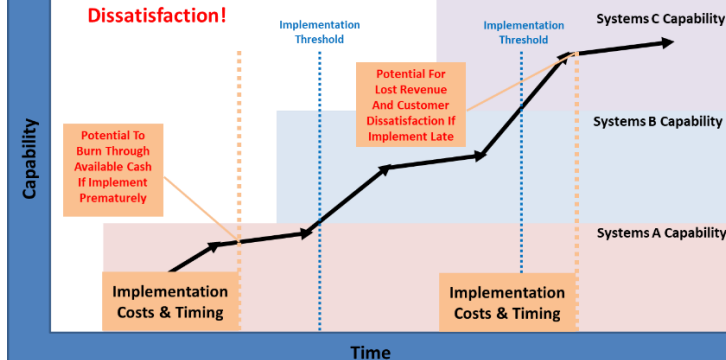
As An Organization Grows, New Procedures, Processes, And Systems Are Required As Existing Systems Reach The Limit Of Their Capability



There Is A Major Cost In Resources And Time To Implement These New Systems



- **Premature Implementation Of New Systems = Potential To Unnecessarily Burn Through Available Cash!**
- **A Late Implementation = Potential For Lost Revenues And Customer Dissatisfaction!**



So, what concepts and tools are available to assist the C-Suite in effectively tackling “When Not If” challenges? I want to start this discussion with the following illustration.

Illustration – An organization was a major player in the manufacturing and sale of urethane load wheels. These wheels were of various sizes and configurations and were manufactured by pouring liquid urethane into a mold that held a metal hub which was coated with a bonding agent. The mold was composed of multiple pieces of tooling assembled together to create the exact size and configuration of the end product. To complicate things, many of the tooling pieces used to assemble the required mold for a given end product were not unique to that product but instead, could be used in the assembly of multiple molds for multiple end products.

Therefore, given a) that on any given day there was demand for multiple end products in multiple quantities, b) the bonding agent applied to the metal hubs took 24 hours to cure and had to then be used within 48 hours before it was no longer viable, c) there were a finite number of any given tooling which in turn limited the number and quantity of different molds/end products that could be produced in any given time period, and d) not only were there differences in the molds but different customers could also require different types of urethane, **the ability to effectively schedule and meet customer shipping requirements was incredibly complex and almost impossible to comprehend.**

However, the actual manufacturing process had been automated and consisted of a continuous circular flow production line. A scheduled end product was manufactured by 1) the mold was assembled based upon the required pieces of tooling and a hub inserted into the mold, 2) the assembled mold traveled along a moving belt to a holding area for the urethane pouring machine where it was then filled, 3) after filling the mold traveled into a curing oven where the urethane cured as it traveled in the oven along the belt, 4) the cure final product emerged from the oven where it was manually demolded with the finished product placed on a finished goods rack, and 5) the disassemble mold tooling pieces travel back to the 1st mold assembly station to either be immediately used again or removed for future use.

It should be noted that every time the urethane pouring machine stopped pouring, it had to be purged of any urethane remaining in the pour tube (which represented waste) before the next mold could be filled. Therefore, the ability to continually fill molds without stopping represented a significant cost saving opportunity.

There was significant growth in demand for these products and I was tasked with determining how the organization could improve production efficiency and take advantage of any cost reduction opportunities (such as a reduction in the waste incurred due to the purging at the urethane pour station).

The solution lied in creating an ability to DYNAMICALLY determine what product was most critical to produce when, in what quantities, and in a continuous flow to meet on time delivery while maximizing throughput with effective tool utilization. In other words, an objective was established that the urethane pouring machine would continuously run at a known flow rate (thereby minimizing waste). Therefore, incoming customer orders could be analyzed based upon the pour time required to complete the orders (matching a condition to a requirement) and which also then determined tooling requirements for each order.

We could then use the pour time and tooling requirements data (i.e., requirements) to dynamically populate time slots (i.e., match actual conditions to the requirements) on the

production line. These populated time slots balanced the line to support a continuous flow, avoided any conflicts between products that utilized overlapping tooling, but would still fulfill on time delivery.

Bottom-line, throughput was increased by more than 10 times and waste was reduced by more than 90%, all without the need to add any additional equipment or tooling.

I use this illustration because it represents an extremely complex scheduling and execution challenge that was solved through the use of dynamic versus linear scheduling and execution. It clearly reinforces that even though the execution of a strategic initiative can be complex, a clear understanding of assumptions, requirements, conditions, and disconnects, along with a Dynamic Scheduling and Execution Methodology represent a superior way to obtain success.

Resource To Disconnect Analysis and Dynamic Scheduling

In Segment 8 to this C-Suite Management Series (Putting It All Together – Dynamic Execution), I explore the Dynamic Execution Methodology in more detail. However, this represents a good opportunity to introduce Resource To Disconnect Analysis and Dynamic Scheduling.

To once again state the obvious, not all requirements associated with a strategic initiative are equal. Some are foundational and need to exist before certain other requirements can be obtained. The development of some requirements can occur simultaneously and of course the amount of time, effort, capability, and resources between establishing the various requirements can vary significantly.

In a traditional execution methodology, you create a plan, launch it and plow your way through it until completion in what I like to refer to as a linear fashion. It tends to assume that adequate financial, staff, and other resources are automatically available when needed and ignores other dynamics that might be taking place. It is more of a laser like focus on just sequentially completing the implementation plan on the pre-established timeline.

The alternative I prefer begins with the Disconnect Analysis that details what specific requirements are missing from the conditions that currently exist.

These Disconnects are then further analyzed to determine specific time, effort, capability and other resource requirements for each Disconnect along with significance, interrelationships, and potential positioning along the sequence of the execution.

This analysis becomes the basis to **Dynamically Schedule** the execution of strategic initiatives which in turn:

1. Provides a clear understanding regarding the availability and timing of required resources. Similar to the Urethane Illustration above, this approach is creating an ability to DYNAMICALLY determine what strategic initiatives are the most critical to focus on and when, using what resources, and in a continuous flow that provides the desired objectives when actually needed. All while minimizing any disruptions to operations.
2. Addresses the pitfalls in a “When Not If” execution through selective execution of Disconnects that prepare for rapid deployment once the “When” is finally determined. Therefore, critical resources can be controlled and preserved until they are absolutely needed. Note that this approach helps recognize how certain major Disconnects can be

broken down into smaller efforts that create the ability to still have a rapid deployment while again, preserving critical resources.

3. Creates an ability to simultaneously execute multiple strategic initiatives while effectively shifting priorities and resources based upon any changing dynamics that are taking place.
4. Creates an ability to leverage off of the structure of Feedback Loop assumption and condition monitoring allowing the capability to quickly adjust the execution process, priorities, or strategic direction.

While it might appear that this methodology represents a lot of effort and will slow the execution down, it in fact is just the opposite and execution time can actually be significantly reduced. For example, these concepts and methodologies allowed an organization to fully implement and execute a year end launch of a complete top to bottom organization wide new enterprise system in less than 4 months. This was accomplished even though experts indicated it would take a minimum of 12 to 18 months. In addition, even though there was a complete transition to new financial and operating systems, there was no disruption to day-to-day operational activities or customer deliveries during the execution or after the launch and the financials were closed timely and with absolutely no audit journal entries.

In another example, by using these concepts an organization was able to move their manufacturing and warehousing capabilities between existing and new facilities in a single weekend all the time maintaining on time delivery and customer support. They were able to do in two days what many said would take months to do and would represent the potential for a major disruption in day-to-day operations.