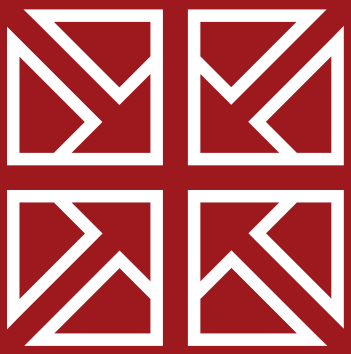
The Cornerstone for Winning



How to Get Strategic Alignment

IT REVOLUTION
DevOps Enterprise Forum 2017

The Cornerstone for Winning

How to Get Strategic Alignment

IT REVOLUTION
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The Cornerstone for Winning:
How to Get Strategic Alignment

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PREFACE

In April of this year, we at IT Revolution had the pleasure of hosting technology leaders and experts from across the DevOps Enterprise community at the DevOps Enterprise Forum event in Portland, Oregon. The Forum's ongoing goal is to create written guidance to overcome the top obstacles facing the DevOps Enterprise community.

Each year at the Forum, the topics covered have included organizational culture and change management, architecture and technical practices, metrics, integrating and achieving information security and compliance objectives, creating business cases for automated testing, organizational design, and many more.

For the first two years, we organized the participants into large teams that worked on a small number of broad topics. However, this year, we shifted our approach in two ways—first, we invited a core group of past participants to propose topics they would like to work on and second, we asked them to narrow their topics so that they could have "nearly shippable" artifacts by the end of the second day. The result was more teams working on more problems with more written guidance.

After the Forum concluded, the groups spent the next eight weeks working together to complete and refine the work they started together. The results can be found in this year's collection of Forum papers. I hope you will agree that the smaller teams and reduced scope of the guidance benefits both the teams as well as the reader.

IT Revolution is proud to share the outcomes of the hard work, dedication, and collaboration of the amazing group of people from the 2017 DevOps Enterprise Forum. Our hope is that you will gain valuable insight into DevOps as a practice.

—Gene Kim
June 2017
Portland, Oregon

Do fewer things better.

—widely attributed to **Dharmesh Shah**

INTRODUCTION

Most organizations have challenges with optimizing for the delivery of business outcomes. Technology delivery takes too long, costs too much and often ends up missing the mark when it finally makes it to production. Often it can be unclear why this is happening and blame is cast in all directions. This paper is intended to provide guidance and a framework for organizations to use to determine the highest business priority and maximum allowable WIP (work in process) to improve speed to market, optimizing delivery of business outcomes and to create strategic alignment between business and technology.

The Scenario

Imagine you're sitting in a steering committee and you've missed yet another milestone. As you look around the room, there are plenty of people to blame, including yourself. Everyone at the table has twenty competing priorities—twenty competing priorities times twenty people. Teams are being pulled in multiple directions, unable to focus on any one initiative. The CEO, who is about to report to the board, is demanding answers. Instead of addressing the elephant in the room (i.e., there are too many initiatives, everyone is dancing around it), the VP of IT Operations says, "We had to roll out the latest Microsoft security patches, plus we're still fixing stuff from the last release."

The VP of Dev says, "I had three of my key people resign three weeks ago and we still haven't had time to recruit and backfill. Also, my developers are complaining about too many meetings, not enough time to work, and too many daily interruptions from out-of-band requests."

The VP of Product Management says, "Our customers have been waiting for this feature—we're going to lose [Big Customer] to [Major Competitor] because we have a major feature gap."

The CEO says, "I need to have confidence in our ability to deliver this by the next board meeting. I want to see an action plan by the end of the week."

The scenario above is all too common and not an ideal way to prioritize work. What if there was a more systematic way to get strategic alignment across your organization so you could predictably deliver when you say you're going to?

THE PROBLEM

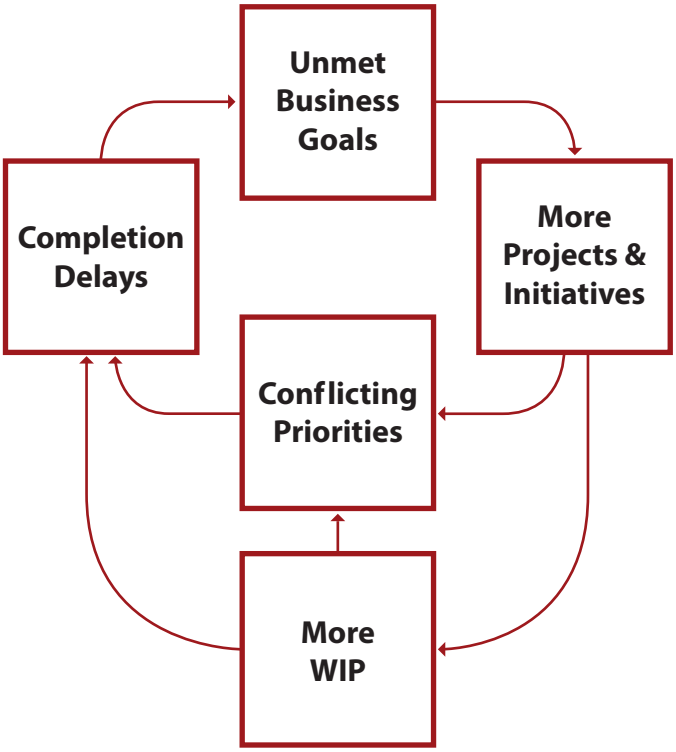

Fig. 1: The Vicious Cycle

Most of our businesses have a long list of projects or initiatives that, when completed, should enable the business to increase and sustain its appeal to the market. Some of these are major initiatives and some are enhancements to existing products. All of these require the attention of the technology organization. When too much work is in process at any given point in time, it leads directly to conflicting priorities and bad multitasking, which in turn causes delays and errors. And, it becomes tougher and tougher to meet the needs of the business. (See Figure 1: The Vicious Cycle). Add the demand on the technology organization to ensure the stability of the existing software and hardware utilized by the organization and its customers, and the vicious cycle is not just vicious, it's nasty. (See Figure 2: The Vicious Cycle with Consequences.)

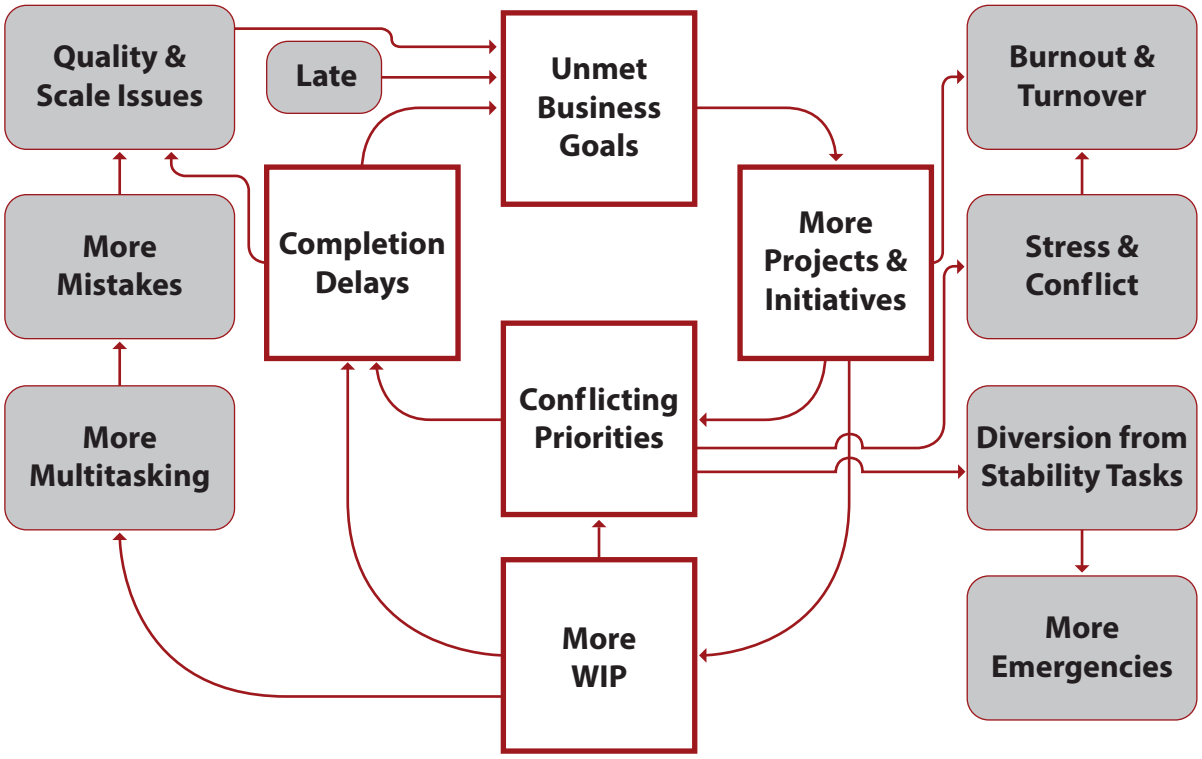

Fig. 2: The Vicious Cycle with Consquences

Before we can find the solution to the vicious cycle, we first need to understand the conflict that perpetuates it. If we don't solve that conflict, we run the risk of taking actions that will simply put us "on the other side" of the conflict, and soon enough find the business back in the same scenario.

Nobody would disagree that management of the business and the tech organization have the same ultimate objective—to enable the business to meet its growth and financial goals. In order to make this happen, various strategies and tactics are put in place to make the business more appealing to the market, so that it can keep the customers it has and gain new ones. To accomplish this, new software and/or hardware technologies must be developed and launched. In an ever changing, ever more competitive world, the pressure is on to develop and launch more and more new technology solutions.

On the other hand, at any given point in time, the tech organization has a finite amount of capacity. In order to complete the work they have to do—faster and more reliably—the cry goes out for reducing the load. "If only the organization would impose fewer of these projects and initiatives, we could get something done and done well."

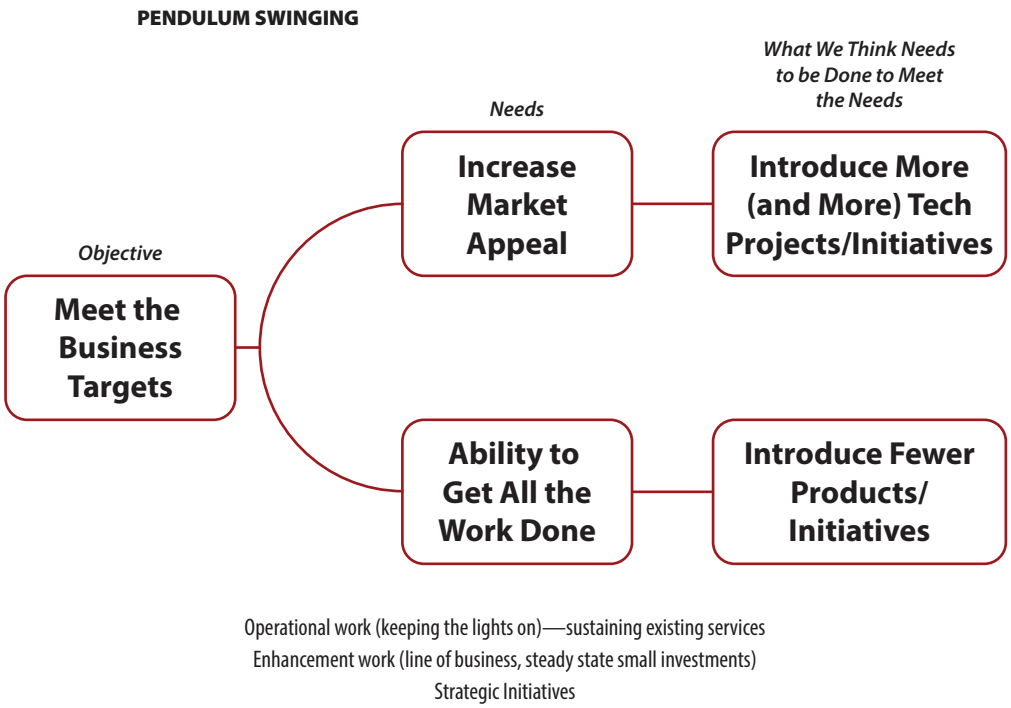

Fig. 3: The Conflict

The key to eliminating this conflict is to understand that the speed and accuracy with which work gets completed is highly dependent on the amount of work that is in process. When work-in-process (WIP) is regulated to promote flow, more work gets completed faster, and typically with higher quality. In *Standing on the Shoulders of Giants*, Dr. Eliyahu Goldratt provides an illustration which he refers to as "The U-Curve" to help guide the right-sizing of work in process.[1] On the left side of the curve, we typically do not allow enough time for work to get done. Imagine that you live ten miles from your office. If you leave home ten minutes before you need to be at a meeting, chances are pretty high that you will not arrive to the meeting in time.

On the right side of the curve, we have the opposite situation, which is the situation that most of our organizations are in. In our desire to meet our commitments, and with the experience of having so much to do that nearly everything takes longer than expected, we provide too much of a time buffer,[2] and queuing theory takes over. More and more work piles up and waits, and we find ourselves in the vicious cycle described earlier.

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[1] Dr. Eliyahu Goldratt, *Standing on the Shoulders of Giants: Production Concepts versus Production Applications: The Hitachi Tool Engineering Example*, https://www.goldrattconsulting.com/webfiles/fck/files/Standing-on-the-Shoulders-of-Giants.pdf

[2] Buffer time: The amount of time that is in addition to the expected "hands on" time that is needed to accommodate for the variations in both the amount of time it actually takes to do a task and the amount of time it takes to wait for an otherwise occupied resource or team member.

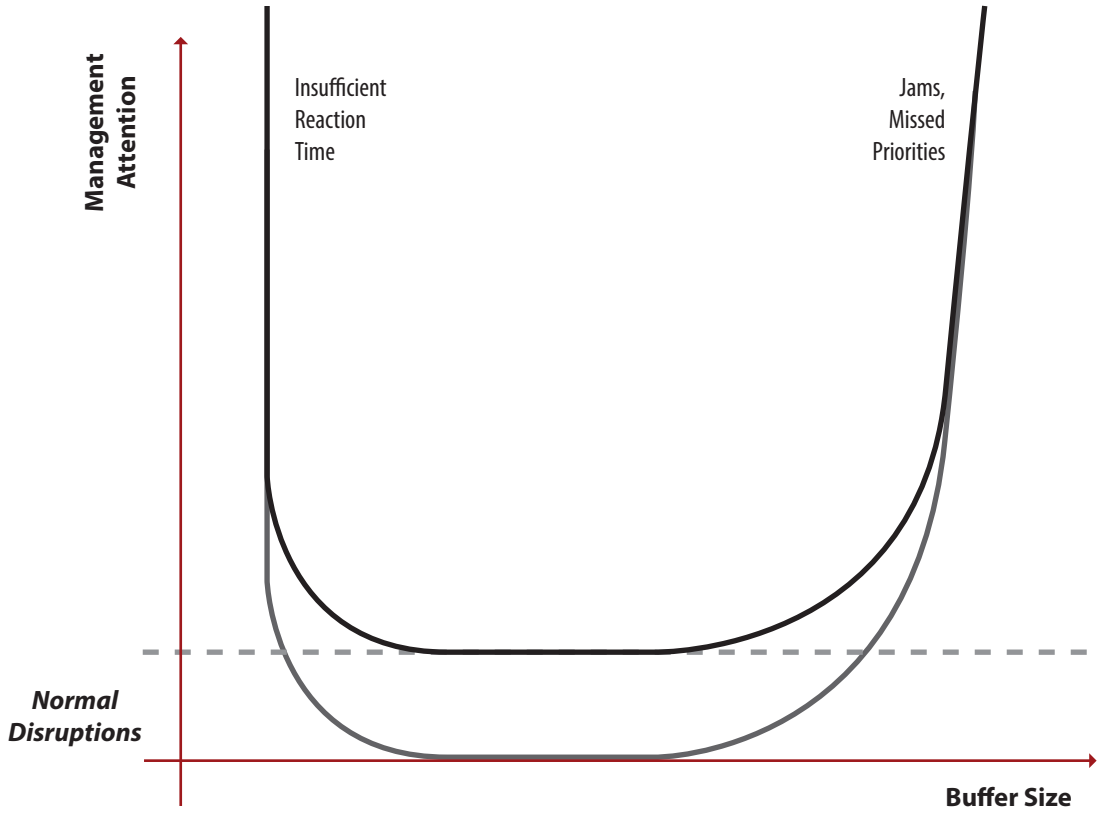

Fig. 4: The U-Curve

Reproduced from Dr. Eliyahu Goldratt's *Standing on the Shoulders of Giants*

In this more typical circumstance, the key is to do the opposite of what we are otherwise compelled to do: instead of adding more time, we must actually reduce buffer time. The way to do this is to freeze (stop work) on some of the active work in process in order to bring the total amount of work in process from the right side of the U-curve to somewhere on the plateau. Doing this will reduce queues and speed up the work overall. Then, release the work that was frozen along with new work into the system at about the same pace as work is leaving the system. There are a number of approaches to determine new, shorter project/initiative durations, stagger release according to capacity and flow, and manage execution to deliver reliably that will not be addressed in this paper.

DIRECTION OF THE SOLUTION

With the understanding that limiting work in process is the key to satisfying both of the business needs—more new technology solutions to increase and sustain market appeal, and enabling the tech organization to get all of its work done and done well—the direction for the solution emerges. We have identified three key elements of the solution:

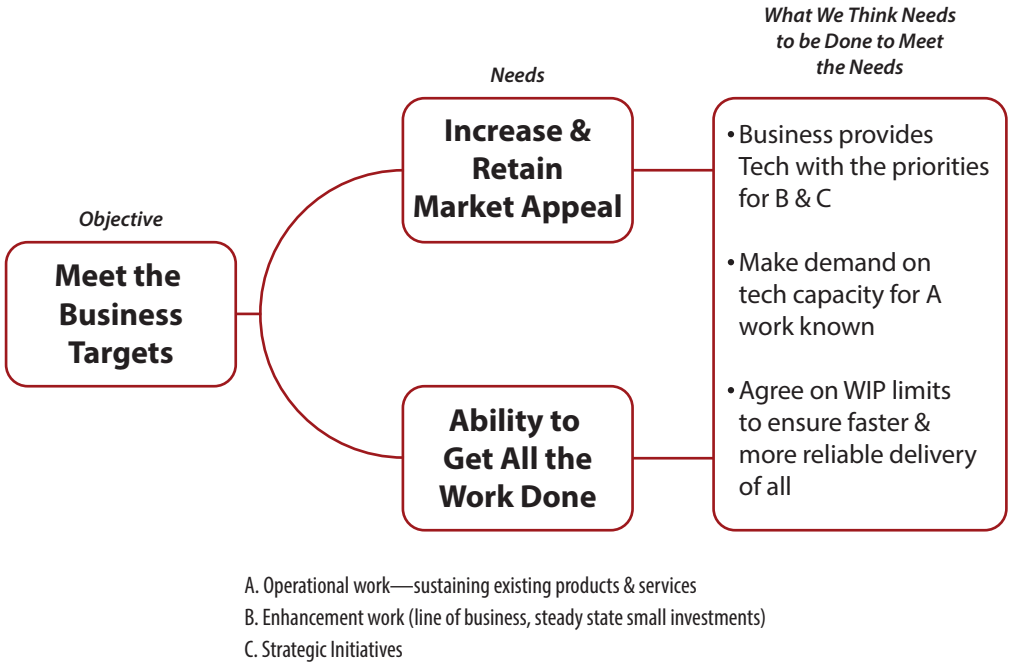

Fig. 5: Eliminating the Conflict

1: Identify the Top Business Priorities

The business needs to provide a list to the tech organization identifying which of the projects and initiatives—whether they are enhancements to existing lines of business, such asadditional features on an existing app, or a major investment initiative, such as moving the business onto the cloud—are most important to complete now.

By agreeing on a very few top priority projects and initiatives that the tech organization must focus on delivering first, the way is paved for faster flow to completion of what matters

most. Management should then put in place a process for regularly reviewing the queue of unreleased work and identifying the top priorities to be released next from the queue into work-in-process.

The tech organization must follow through with the operational policies and processes to ensure the faster flow to completion with focus on the highest priorities first.

Remember: There can be many priorities, but there is only ONE highest priority.

Examples

Veresh Sita, CIO at Alaska Air, explained how Alaska realigned its priorities to accomplish its mission of being the sixty-second airline at the 2016 ChefConf. You can watch his keynote on YouTube: https://www.youtube.com/watch?v=mGJkhuRlvTo.

Creating a Decision-Making Culture

Many organizations suffer from a poor decision-making culture. Individuals need to be empowered to make day-to-day decisions while executives ratify strategic decisions and reconcile competing priorities. At one company, the CEO implemented a weekly executive meeting with the sole purpose of making decisions. This accomplished two things: it got all executives aligned on the company's priorities and created a forum and structure for decisions to be made. Another company had a similar process, whereby an "alignment body" made decisions in order to eliminate side-door prioritizing and reduce unplanned work. They meet every week and aligned priorities to their strategic pillars.

2: Make Demand for Operational Stability Work Visible

It is not uncommon for 50% of the demand on tech organizations to be operational in nature. The list is long and varied: installing the latest operating system upgrade, deploying security updates, installing and updating servers, database administration, software deployments, auditing, troubleshooting user issues, general maintenance, etc.

If enough time is not set aside to allow for this work to be completed, which comes in both planned and unplanned forms, the entire system can ultimately destabilize. And nobody wants a "system down" situation.

Therefore, it is imperative that both business and tech leadership acknowledge that the total work in process consists of the projects/initiatives AND the operational stability work. It is this total work that must be set on the plateau of the Dr. Goldratt's U-Curve. Capacity

not required for the ongoing operational stability work is the capacity available for project/initiative work.

Just as business leadership defines the highest priorities for the business initiatives/projects, tech leadership (often in conjunction with business leadership) will need to define the highest priorities for operational stability work and ensure that the highest operational priorities are getting the needed attention first.

3: Agree on WIP Limits

By focusing first and foremost on the highest priorities, the tech organization will be doing a form of virtual WIP reduction. It will be important, though, to reach an agreement on actual WIP and project lead time reduction, and define the amount of work-in-process that the system should have (somewhere along the plateau of the U-Curve).

Most importantly, though, is the need for management to ensure that "priority creep" does not occur. If the volume of priorities increase, the vicious spiral is not far behind.

WHAT NOW?

Reaching strategic alignment between the business and its tech organization contains three simple elements: decide on the priorities, understand the load, and limit the work-in-process. But simple is not necessarily easy.

Imagine you are the leader of a business whose technology launches often take longer than originally planned. You live in a world where you really don't know what will be completed when, and you have a market and a board to answer to. Or, you are not fully confident in the ability of each of the new solutions in the pipeline to truly "Wow" the market. How confident will you be to just say yes to a request to limit the number of projects/initiatives being worked at the same time?

Imagine you lead the professional team that is typically working in the beginning stages of a new product. When the work-in-process is limited, it is almost certain that some or all of your team will be without anything to do for some period of time. What will happen then?

Imagine that you are the VP responsible for a new product that is not on the business's top priority list. You really want that product to get to market, and now you are more unsure than ever when it will be completed (maybe even started). What do you do?

Tips for Getting Started

To focus means deciding what not to do much more than it means "doing." Setting the top priorities means only a few projects/initiatives need attention, and many more do not. It's one thing to understand logically: work will flow much faster and more will get completed in a lower WIP environment than in a "let it all flow at once" environment.

Rather than start with an attempt to identify and prioritize every job, project, initiative, ticket, or other form of work, we recommend that top management identify the single highest priority project/initiative. (It is much easier and faster, and far more practical for the top management to identify what is most important than it is to spend time in meetings trying to reach consensus on what is the 57th priority project.) Criteria for this highest priority typically includes items with the highest cost of delay and the highest expected ROI. But other criteria may also include where the project/initiative is currently in the process and

how much trouble it is presently in. (If a project is very important for the business but is in trouble from a time-to-completion perspective, then it may be a good project to mark as highest priority).

This project/initiative then becomes THE ONE that takes precedence over all others. It is truly treated as the highest priority. When tasks for this project/initiative become available to teams, the tasks get to jump to the head of the queue for that team. Some teams may even be required to divert work in order to "swarm" tasks for the high priority project/initiative. This swarm brings all hands on deck in order to shorten the total duration time to complete for the project/initiative. This approach is often used as a first step. By driving the organization to focus first on the most important project/initiative, the remaining work is essentially under virtual freeze as the most important work takes precedence and flows through to completion.

The top leader demonstrates his/her conviction to the priority of the project/initiative by the actions he/she takes and words he/she uses: checking in with regularity, asking what obstacles need any intervention or help from him/her to overcome, etc.

During this time, it must be made clear to all other team leaders that they will not be held accountable for delays in other projects while their team swarms the high priority project/initiative (other than true emergencies). Leadership air cover is essential for alignment across the organizational hierarchy.

As the organization experiences much faster completion of this highest priority, discussions can then be held to understand and appreciate the reasons for its success. Some may say "Yes, of course it succeeded—everything else was set aside!" Rather than accepting such a statement as a valid reason to keep status quo, it can be used as a trigger to begin the process of the entire organization developing an appreciation for reducing WIP in order to get more done faster.[3]

When it becomes time to formally reduce WIP and set more systematic mechanisms for releasing new work, operational leaders will need to determine how to best utilize those who periodically have nothing to work on. This can be anything from doing preparations for upcoming products to helping other projects complete tasks faster to taking a rest. In any event, it is also crucial to not punish anybody for working fast enough to fully empty their queue!

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[3] For an example of what can be achieved when WIP is reduced, check out these examples from Omron, who reduced their WIP from 427 to 25 projects (https://drive.google.com/open?id=0ByLknC-UkV0JcDgwdGNmR3lBUzQ; https://drive.google.com/open?id=0ByLknC-UkV0JT19lc2FuZ0JyVmM).

How Do You Know You're Done?

Now imagine you are in that same steering committee you spoke of at the opening of this paper. The CEO communicated that this initiative is the top priority and takes precedence over any other work. Teams have been redeployed to optimize for the delivery of this single priority. The VP of Ops and the VP of Dev have presented their team capacity, allocated by "keep the lights on" (KTLO) operational work, enhancements, and strategic initiatives. The organization is on track to deliver the customer feature to maintain competitiveness and relevancy in the market. As a senior leadership team, you can now make informed decisions about the next priority.

CONCLUSION

Leadership needs to reach agreement on the top priorities in order to meet business goals. There can be many projects that leaders want, but there can only be one highest priority. In order to get leadership agreement, a prioritization and decision-making framework is essential.

This must be led by the top. Grassroots efforts often dwindle without leadership championship. Acknowledgment and agreement on the dangers of working on too many things at the same time signals a healthy organization. To improve speed and predictability, implement a framework to determine the highest business priority and max allowable work-in-process.

Resources

Amdocs clip: https://youtu.be/AabEPxVL4XA.

Link to presentation on large consumer products company: https://drive.google.com/file/d/0ByLknC-UkV0JT19lc2FuZ0JyVmM/view?usp=sharing.

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