



## The IT Leaders Quest For Fast Flow

### White Paper

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## The Industry Language Switch

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As a speaker, author and long-time advocate of IT best practice models, I can't help but notice the radical transformation within the last year on the hot topics, hallway conversations and industry buzzwords that have captured the CIO's attention. It's like someone threw a switch and reversed the polarity of the industry's focus from common themes such as high availability, robust process and business resilience to an obsession with increasing speed. I've seen this across the entire IT ecosystem, whether you see it in articles published on tech news sites, in IT conference agendas or in vendor product marketing pitches.

In fact, just four years ago when I was asked to speak and write about a relevant industry subject, the trending senior IT leadership topics would have included "buzz" words such as strategic alignment, service levels, risk, compliance and maturity. Today, the language has dramatically shifted to words such as agility, flexibility, performance and speed to market. Borrowing from the Lean IT lexicon, which forms the basis of both the Agile and DevOps movements, the industry has embarked on what can now be best described as the ultimate "**quest for fast flow**," or continuous flow, the term used to describe a process with optimized output and little waste.

## The Risk Gap For IT Provision

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As senior IT leaders, we need to understand the drivers for this radical and rapid change. As I've been reflecting on this drastic language shift, it's become clear to me that we are seeing the collective effect of factors such as the following:

- A continued and accelerated rate of business demand for IT services, with businesses moving toward service automation and a mobile app economy
- Consumer-driven expectations for "on-demand", "streaming" and "instant on" access to content, features and services
- Disruptive competitors that are entering the market with free "built on the web" business models, without the costs and complexities of legacy applications
- The increasing percentage of unplanned work stemming from the growing technical debt and fragility of legacy systems that have been ignored too long
- The inability of current, fragmented and silo-oriented departments, processes and systems to keep pace with growing customer demand
- The drive to reduce operational "lights-on" costs to free up capacity for innovation
- The growing frustration of customers related to the current speed of delivery they experience related to projects and requests

These factors as well as many others, represent the perfect storm of growing IT complexity, causing a "speed to market gap" for IT service organizations that need to quickly scale and meet business demands.



This need for increased business velocity is in my opinion, the primary driver of the radical language shift. The ironic aspect of this shift is that the external market pressures we're facing are in some sense, a phenomenon the IT industry has helped to create.

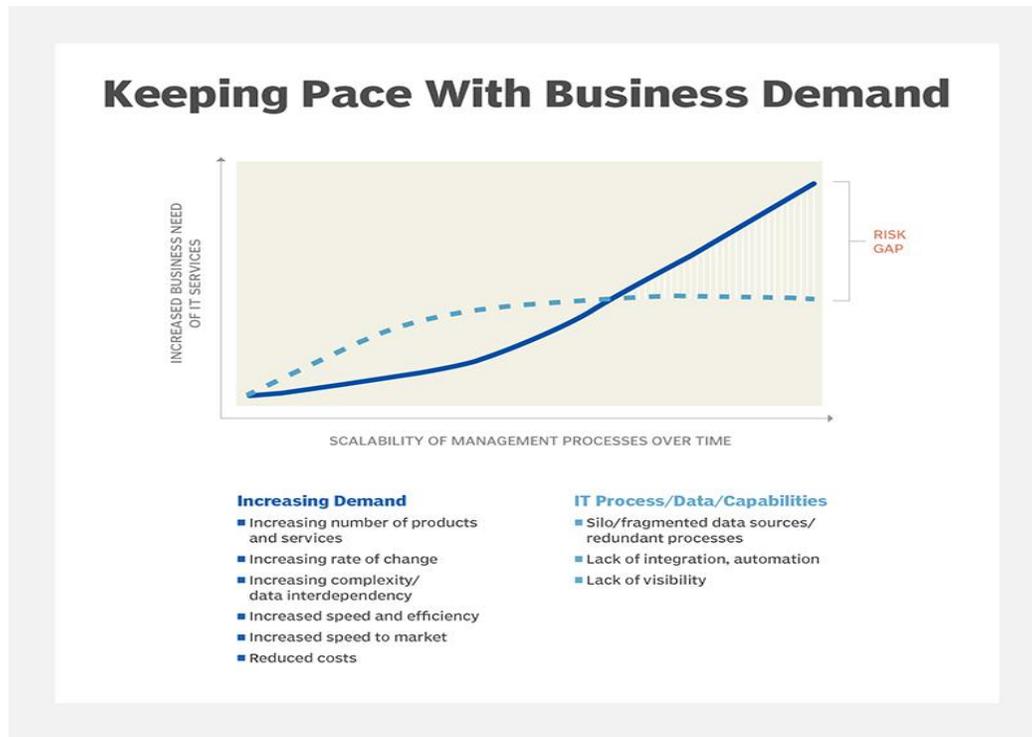


Figure 1: Risk Gap

The increasing risk gap between the speed of demand and supply (Figure 1), and the growing trend for business units to fund or purchase their own IT services (aka: shadow IT), are changing the focus on what we do and how we deliver value to the business. It has broken down the barriers to change the industry-wide understanding that “What has gotten us this far, will not take us further!”

Companies, IT leaders and IT staff are beginning to recognize that it's time to put away their political agendas and silo-based thinking in order to simplify, standardize, modernize, accelerate and automate the “plan-build-run” value streams (a Lean IT phrase for the concept of turning project requirements into finished products). They are acknowledging the need to “Lean out” the way they get things done, and reduce the complexity of their current processes, architectures, tools and organizational structures.



In essence, they're on a “**quest for fast flow**” by turning to Lean and Agile frameworks and principles that help to deliver more high-value work faster by reducing waste, minimizing variation and redundancy, and consolidating and simplifying - improving flow, by doing less!

## The Rise Of The Accelerators: Lean, Agile & DevOps – Better, Faster, Cheaper

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From a historical perspective, the pressure to move faster is not new or recent to IT software development and engineering teams. Growing product backlogs, challenges with collecting requirements, inter and cross team collaboration issues and the growth of unplanned work gave rise to the Agile software development movement in the late 1990s and early 2000s.

To address the issue of improving the flow of software development, early Agile adopters turned to Lean IT practices working in small batches, quality at the source, reducing cycle-time through value stream optimization, and the formation of cross-functional development teams to reduce waste, create team cohesion and improve productivity. The adoption of Lean IT practices for software development was to address the core issues of meeting supply and demand, and this approach led to Agile software development with the intended effect of increasing the flow and velocity of completed work.

Agile product development is now arguably the fastest growing project management approach for software based projects. However, the success of Agile also had the unintended impact of creating bottlenecks further downstream in the IT value chain where the hand off to production occurs.

## DevOps As A Reaction To Agile's Initial Narrow Development Scope

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Another key principle of Lean, related to improving the flow of work is the concept of work in progress (WIP) optimization. This means, that for any work step to flow efficiently, the pace of work needs to be carefully managed to ensure that the work step or task does not become overburdened, ensuring time for unplanned tasks and to allow for continual improvement.

This principle is also illustrated by the theory of constraints (TOC), that illustrates any system of work will have its maximum speed governed by its limiting constraint or bottleneck. Combine this with the principle when you overburden any individual task in a workflow, it will have a negative impact by stressing out the overburdened task, and slowing it down to a potential full stop due to failure.



Unfortunately, this was exactly what happened when Agile accelerated the flow of work for “plan, build” but did not include the move to production and the “run” elements of the value system.

In retrospect, it becomes clear that by accelerating the flow of development without taking into account the step of moving to production, the narrow focus of Agile methods caused a downstream work backlog and flow issue with the change and release management deployment and provisioning steps into production. These unintended consequences resulted in increased backlogs, longer release cycles, undetected errors and increased unplanned work. Not exactly the “**fast flow**” objectives we were aiming for with Agile development! Consequently, it was from the IT teams in the trenches of release engineering overwhelmed by a growing backlog of work, that we heard the first early call of the DevOps movement.

From the initial call of “Why Can’t Dev and Ops Work Together?” which focused on the move to production processes, the DevOps movement has continued to grow in scope, including subject area practices and automation strategies that are laser focused on the “**quest for fast flow.**”

For senior IT leaders to truly understand what the industry means by the word DevOps, they need to know the history, and that DevOps is a framework that combines multiple acceleration techniques all working collectively to increase quality while simultaneously increasing speed and reducing costs.

To understand what DevOps is, it is important to understand that the term includes:

- Lean (Value stream, WIP, work visualization, waste removal and flow)
- Agile development
- Continuous delivery (a combination of Lean, Agile and automation)
- Cross-functional teaming structures including both Dev and Ops stakeholders
- Continuous integration and software configuration management
- Automated tool chains for build, test, deploy, and provision
- And surprise... IT Service Management (ITSM)

Understanding the drivers behind the Agile and DevOps movements and their mutual alignment with Lean practices, it’s not surprising that all three of these subject areas are what I call “**The Three Accelerators**” – (**Lean IT, Agile and DevOps**) that have become the new popular subjects in the IT industry.

However, we have forgotten one important question: “What are we accelerating?”



## More Than Just The Process

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It's important that we go back to a key point made at the beginning of this white paper to understand that all of these acceleration practices, tools and techniques are focused on speeding up the processes involved in taking demand and turning it into supply. Overall, it's about speeding up the work we have always done (ITSM, project management and software development), the elements representing enterprise IT capabilities and processes that enable us to manage the end-to-end IT supply chain.

The core problem is that we culturally and structurally do not view it as a supply chain, but as a list of silo capabilities. Metaphorically we are so focused on the trees (technologies, assets, domains) that we are not able to perceive the full extent of the forest (enterprise architectures, cross-functional processes and services).

## Organizational Structures & Enterprise Value Streams

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A key contributor to the challenge of flow we face today, is that our current organizational structures, performance management systems, activity-focused metrics and point solution tools are all oriented to optimize vertical technology towers, while the enterprise IT demand and supply value stream crosses these vertical silo's horizontally. So much so that our current structures, systems and metrics actively work against the **“quest for fast flow.”**

The structural change that both Agile and DevOps have applied to address the issue is the use of cross-functional and self-managing teams. Lean IT practices lead with the concept of using temporary Kaizen problem solving teams and a focus on customer experience/flow metrics such as lead time and cycle time.

Agile built on the Kaizen problem-solving team model by establishing Scrum teams for project-based work, and DevOps has further expanded on the concept by creating permanent product oriented teams, including stakeholders from groups outside of development teams who accept responsibility for the service outcomes.

With the popularity of DevOps we are seeing the intentional integration of both development and operational objectives and the recognition that value is created through an enterprise value system of capabilities and processes that receive demand on one side and deliver products and services out the other side.

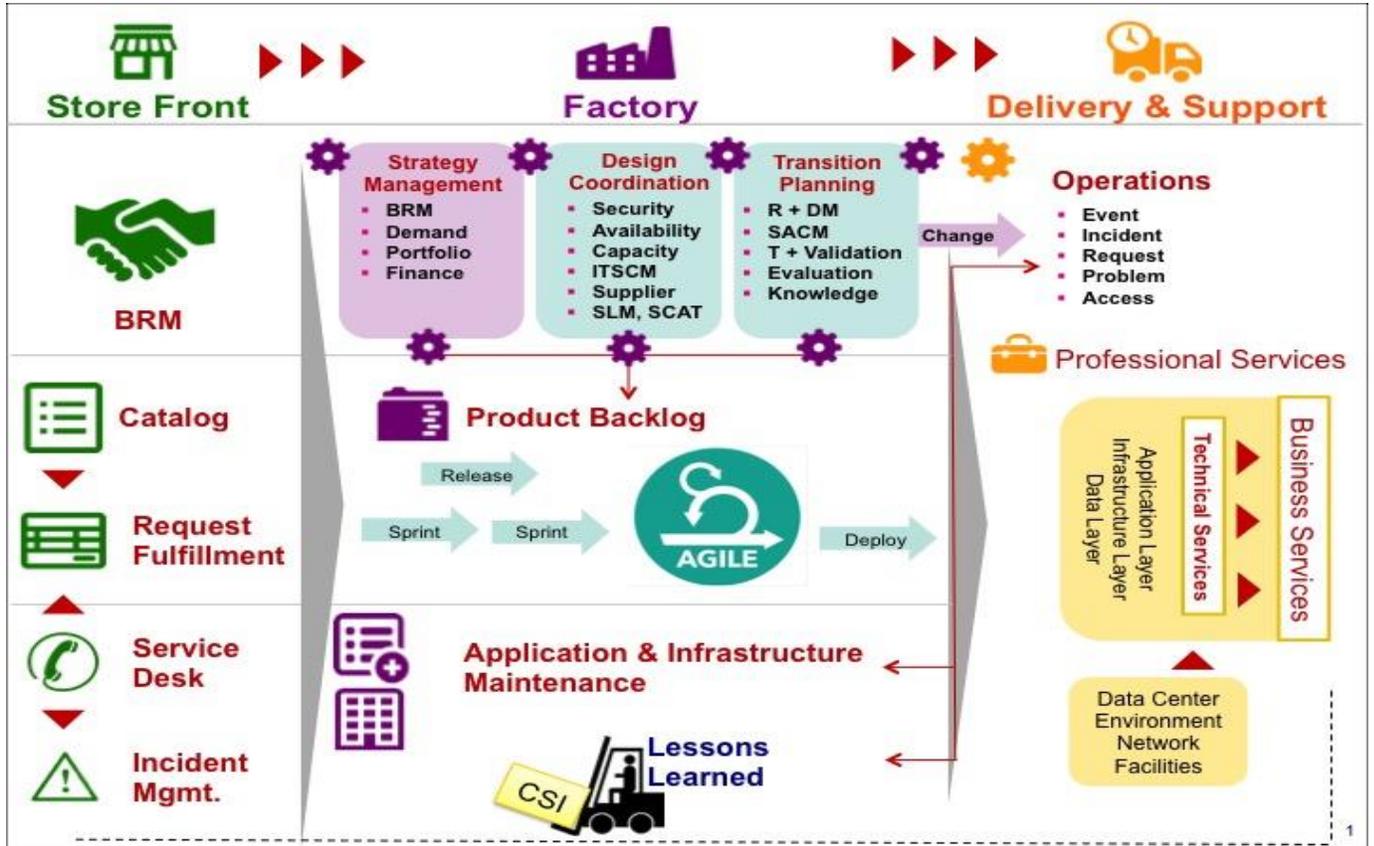


Figure 2: ITSM & Agile Development Processes As A Enterprise Value Stream.

What IT leaders need to understand is that in order to successfully deliver on the “quest for fast flow,” it’s critical to focus on both the practices of acceleration (Lean, Agile, DevOps) with respect to the processes of the “plan-build-run” IT value streams. (Figure 2.0)



## Final Thoughts & Recommendations

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As someone who has observed these trends and the radical vocabulary switch focused on fast flow, it is encouraging to see that the IT industry is finally waking up to the fact that localized (or silo'd) optimization is not going to take us where we need to go, or allow us to deal with the speed imbalance of demand and supply.

Leading with Lean and Agile principles means we recognize that IT value streams have to be considered from a systemic perspective and that sub-or-partial optimization will be more harmful than helpful to the overall velocity of your IT value system.

As IT leaders, considering their “**quest for fast flow**” (speed of service delivery), it’s important to understand there are many critical success factors to enable this objective.

The following are seven actionable steps you can take to speed up the flow of value to the business:

1. **Get Lean:** Regardless of your starting point (Agile, DevOps, project management or ITSM), learn about the principles of Lean IT to understand the foundation of value streams in improving quality, increasing speed and reducing costs.
2. **Develop A Product / Service Mindset:** Focus on outcomes vs. tasks, technologies or assets to build a collective sense of accountability for flow.
3. **Understand Systems Thinking:** Study the full set of integrated processes in the IT value system to improve system-based flow.
4. **Be Agile:** Work in smaller work packages and improve the frequency of feedback loops to create higher velocity and releasable product iterations to improve flow and manage work in progress.
5. **Be Transparent:** Leverage Lean’s visual management system (Kanban boards) to understand the flow of work and to identify bottlenecks
6. **Create Cross-Functional Teams:** Reduce silo-based behaviors, reduce wait time created by handoff’s and cover essential skill gaps.
7. **Reduce Variability & Automate Standard Work:** Reduce process and tool variability, complexity and increase standard work to support increased automation.



## About Pink Elephant

We Lead The Way!

A premier global training, consulting and conference service provider, Pink Elephant has an undisputed reputation for leading the way. We're proud of our pioneering and innovative spirit, which has enabled us to introduce and spearhead many revolutionary concepts and programs since our inception forty years ago.

## About The Author



Troy leads Pink Elephant's Product Research, Innovation practices for North America and Asia. Troy is considered by many to be one of the world's foremost ITIL<sup>®</sup> and ITSM experts. A passionate and experienced Executive Consultant, Troy is always willing to use his rich and extensive background to share what he knows, and is always on the hunt for more knowledge.

Troy always has his finger on the industry's pulse – if there's a question about what the latest trends in ITSM, Lean, Business Relationship Management or Organizational Change Management are, he has the answer! Troy is a frequent speaker at ITSM events, a contributing author for several books focused on ITSM and Lean IT concepts, and his blog is one of the industry's most popular and informative.

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