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# A Hitchhiker's Guide To Process-Driven Business Transformation And Application Delivery

by Clay Richardson and Dave West  
for Business Process Professionals

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# A Hitchhiker's Guide To Process-Driven Business Transformation And Application Delivery

Don't Panic! Combine BPM And Agile Approaches To Conquer A Brave New World

by Clay Richardson and Dave West

with Mike Gilpin, Mike Gualtieri, and Alissa Anderson

## EXECUTIVE SUMMARY

Business innovation increasingly comes from the application of technology. Forrester labels this phenomenon as the transformation from IT to business technology (BT). At the heart of this transformation is a customer-centric focus that reshapes business processes and the application delivery capabilities needed to implement them. But business transformation efforts often fall flat because business process professionals and application delivery professionals are working at cross purposes. To succeed, you must share a common approach: Express business requirements and customer value as business processes and use Agile methods to rapidly deliver both business process and application change. The result? Replacing incongruous flailing with harmonious, purposeful collaboration between business process pros and application delivery pros. Your business and customers will benefit greatly.

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## NOTES & RESOURCES

Forrester interviewed 6 vendor and user companies, including Pfizer, Sapient, SRP, the US Department of Transportation, and Virtusa.

### Related Research Documents

["Transforming Application Delivery"](#)  
February 3, 2011

["Lean: The New Business Technology Imperative"](#)  
September 29, 2009

["Use Lean Discovery To Accelerate The Return On Your BPM Investment"](#)  
July 14, 2009

## TRANSFORMATION REQUIRES BUSINESS PROCESS AND APP DELIVERY HARMONY

In this topsy-turvy world of fierce competition, ever-increasing customer expectations, and rapidly changing regulations, your business must transform or risk becoming a wayward ship in rough seas. In the past, firms approached business transformation by throwing packaged applications and custom solutions at business problems. While this worked to change the company's internal technology landscape, it did little to create an adaptable technology environment that could quickly adjust to the needs of the business.

The CIO of a large retail chain described the changing role of software: "Five years ago, software was just a commodity. Yes, it ran the business, but so did power and telephone systems. Today, with the advent of RFID and mobile technology, that has changed. We have to deliver business processes in very different ways to set us apart from our competition." This CIO is describing the realities of business technology and transformation, but getting to that new reality requires navigating through a number of challenges that business process and application delivery pros must overcome.

### Process Becomes The Primary Driver Of Business Transformation

At its core, business transformation means making sweeping changes to how an organization offers and executes its core business capabilities. Firms that execute business transformation initiatives turn to critical business processes as the lever to drive large-scale change. This central focus on business processes:

- **Transforms siloed business processes into end-to-end business activities.** When the global economy hit the skids in the autumn of 2008, firms scrambled to adjust their operations to the new reality. Unfortunately, many firms had buried critical processes within functional silos that proved too rigid to quickly adapt to new opportunities and threats. In contrast, firms that were able to quickly adapt and thrive during the recession had organized their operations around end-to-end business processes — providing visibility into and control of business processes across functional silos. This approach allowed them to rapidly change course and adapt existing processes to the new circumstances.
- **Eliminates critical barriers between business and technology teams.** When business teams set out to tackle critical business challenges, they typically speak in terms of key performance indicators, outcomes, and objectives. However, when technical teams set out to tackle critical business problems, they often speak in terms of features, reusability, and milestones. When these teams come together to address business problems, the disconnect between their different worldviews often causes issues, such as over 60% of solution features going unused.<sup>1</sup> Some teams are turning to business processes to bridge business and technology teams, as both teams understand processes and can use process models as a common point of reference.

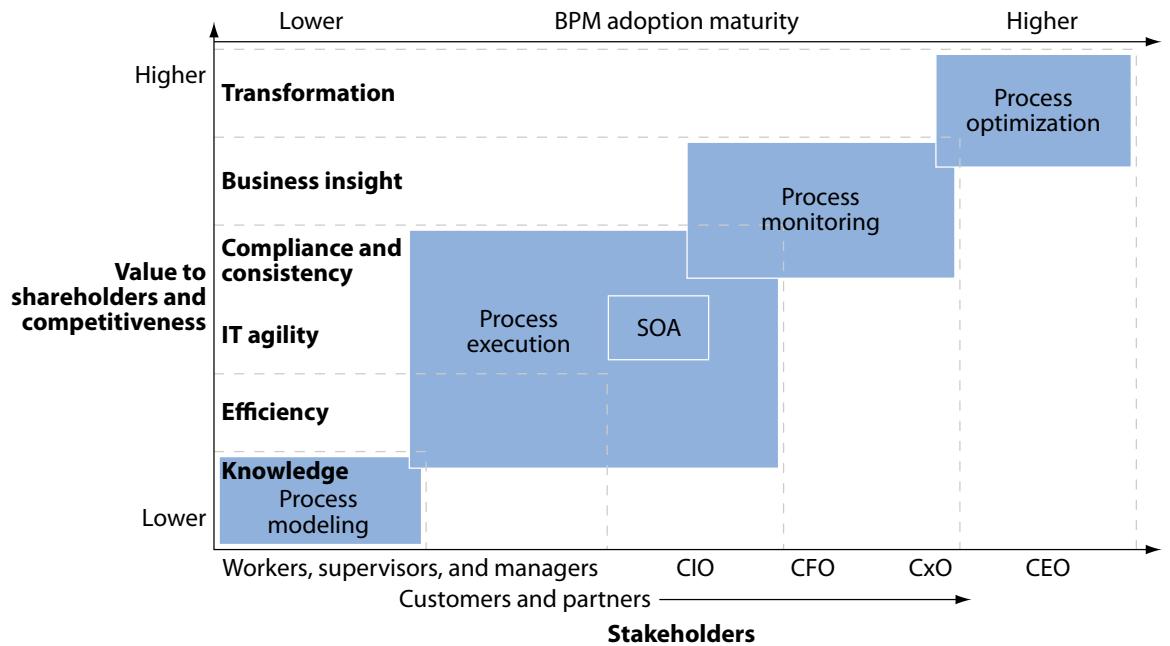
- **Provides business managers with greater visibility to make better decisions.** While packaged applications and custom-developed solutions provide executives and managers with the ability to automate and control critical functions, these approaches often give only limited visibility into the health and performance of mission critical business processes. Today, many executives complain that the lack of visibility into business systems hampers real-time decision-making. Leading firms turn to business process management (BPM) to visualize end-to-end processes, which in turn feeds real-time analytics and supports faster decision-making (see Figure 1).<sup>2</sup>

### The “Mess Of Many” Forces A Rethink Of Application Delivery Models

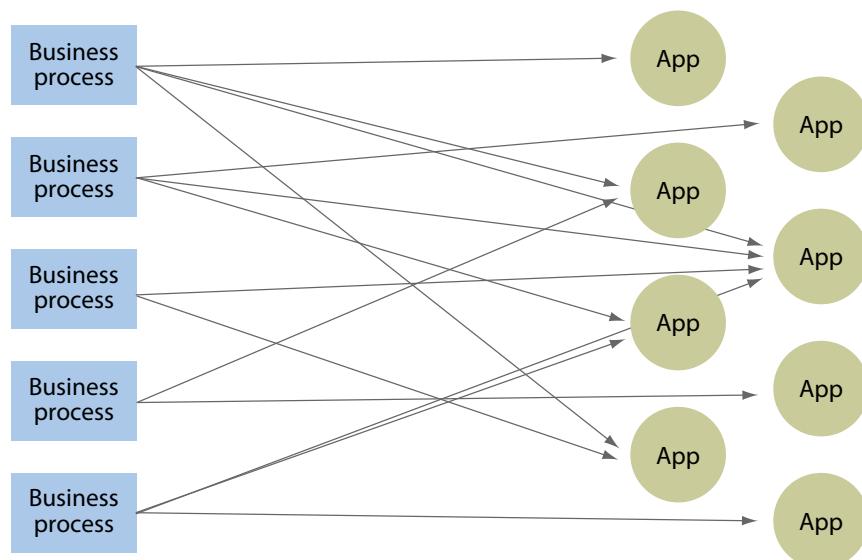
Legacy systems still run most large organizations. Unfortunately, legacy systems are often hard to change, inflexible, and cost more and more money to maintain. As systems evolve, they tend to become integrated into more and more business processes. The result? The mess of many (see Figure 2). Applications become so complex and intermingled that making changes is time-consuming and risky. An application development manager at a large financial services company describes the mess of many as “a death march that we cannot stop.” As a result:

- **Planning processes are overly complex.** Heavy dependencies across systems and business processes make it much harder to plan change. Project plans cascade dependencies onto other project plans, resulting in still more project plans. One slippage in any project brings the whole house of cards down.
- **Non-discretionary spending grows.** Discretionary spending accounts for all projects and changes, excluding maintenance and support, that will deliver increased value to the business. As systems become more complex, the cost of ownership increases. However, overall IT budgets remain static, requiring IT management to seek cost savings to cover the shortfall — but savings are hard to sustain. As savings become harder to find, the increased cost of ownership reduces funds for discretionary spending. The result? The business can't deliver the new products or services it needs to remain competitive.
- **Releases are too infrequent.** As doctors pledge to “First, do no harm,” operations professionals prefer to change systems only when they know they will do no harm. The mess of many means that it is very hard for anyone to know what harm will come from making a change, driving long testing cycles and reducing operations’ appetite to risk releasing software more frequently.
- **The business becomes frustrated with IT.** As costs increase, projects take longer, and planning processes become more complex, IT loses credibility. The business increasingly looks elsewhere to satisfy its pent-up demand. A VP of development described this lack of trust: “The business thinks of us as expensive and slow. That has led to new technology projects being delivered by third parties working directly with the business.”

**Figure 1** Business Executives And Managers Demand Greater Visibility



**Figure 2** The Mess Of Many Makes Change Slower And More Difficult



## ESTABLISH A PROCESS-DRIVEN CULTURE ACROSS BUSINESS PROCESS AND APP DELIVERY

To revolutionize transformation, business process and application delivery pros must come together to deliver faster-changing and more flexible solutions for the business. But these two roles often struggle to find common ground, reducing their combined impact on business transformation efforts. So how can business process and application delivery teams establish effective models for collaboration? First, these roles must embrace a shared model that uses business processes to drive the definition and delivery of agile business solutions.

### Embrace Business Processes As A Shared Language Across Business And IT

When it comes to defining strategy, capturing requirements, and delivering solutions, most organizations are stuck with outdated and outmoded approaches that create large volumes of requirements documents and custom code. And when it comes time to change solutions, teams must search through endless pages of requirements documentation and a mind-numbing number of lines of code to figure out how to implement the change. These outdated approaches also cause painful and costly miscommunication between business process and application delivery teams. To establish processes as a common language for process transformation, teams should:

- **Drive business strategy using customer-centric process frameworks.** The customer values whatever the customer thinks is worth paying for — so if the customer won't pay for something, it is waste that you should eliminate. Business process and application delivery pros must understand customers to develop a shared view of how best to drive transformation across the enterprise.<sup>3</sup>
- **Replace requirements gathering with process modeling.** Most stakeholders and developers rarely read long requirements documents. Yet teams continue to use document thickness as a key measure of requirements quality and completeness. This practice has become the ball and chain shackled to the ankle of process discovery teams, slowing momentum as teams try to escape from the process discovery phase into process development. Many application development and process improvement teams are replacing traditional requirements gathering and documentation with process modeling to capture and scope key business features.
- **Use processes to drive model-driven development.** Instead of developing solutions based entirely on custom code, application delivery teams should move toward model-driven development approaches using visual modeling to build business solutions (see Figure 3). This approach enables app delivery teams to represent solutions in a way the business understands while providing a more flexible approach for business change. Most process-based, model-driven development environments — such as BPM suites — allow developers to build solutions using standard process modeling notations such as business process modeling notation (BPMN) and business process execution language (BPEL).<sup>4</sup>

**Figure 3** Key Roles Must Embrace Model-Driven Approaches

Role	Driving question	Model-driven approach
Business architect	What is our strategy, mission, and vision for achieving critical goals?	Capability maps, value chain analysis, value stream analysis
Process architect	How should we prioritize process improvement opportunities to achieve critical goals?	Value stream analysis, value chain analysis
Process analyst	What improvements does a specific process need?	Business process modeling notation (BPMN), activity role diagrams
Process developer	How do I represent a model that the business can understand and execute?	Business process execution language (BPEL), business rules

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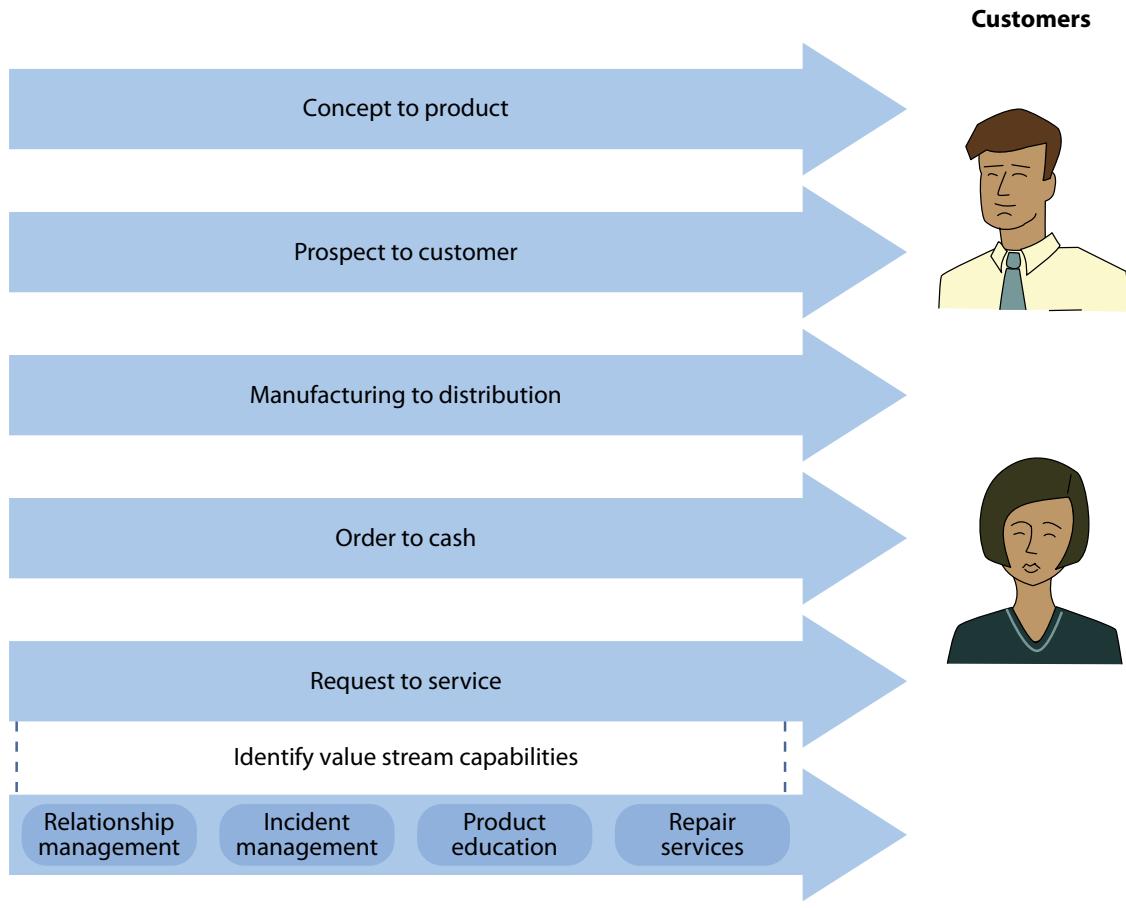
Source: Forrester Research, Inc.

### Follow Value Streams To Focus On What Really Matters: Your Customers

While many business process and application delivery teams understand the value of customer-centric thinking, only a small handful adopts techniques that both roles can use to drive meaningful business transformation. The most useful technique is value streams.<sup>5</sup> A value stream is an end-to-end collection of activities that deliver customer value (see Figure 4). Value streams focus teams on understanding and improving enterprise interactions and business processes that connect to customer value. To analyze value streams, business process and application delivery teams should:

- **Focus on improving outcomes, not solutions.** Business people often complain that IT only cares about delivering technical solutions. And IT often complains that the business only asks for technical solutions. For example, one IT professional we spoke with pointed out, “The business typically comes to us with a solution already mapped out in their heads. They don’t give us an opportunity to understand the business problem before defining a solution.” Business process and application delivery pros should use value streams as a way to keep everyone focused on the end result: solving the customer’s current problem.
- **Scope value creation, not features.** In many cases, teams bog down defining features for business processes and new applications. But rarely does anyone raise his or her hand to ask, “How does this feature create value?” As a standard exercise, business process and application delivery pros must ask themselves and stakeholders which features deliver the greatest value and which features add little or no value.
- **Keep conversations centered on shared goals and objectives.** Change management is one of the greatest challenges facing business process and application delivery pros. Many teams experience frustration when they try to get process owners, business stakeholders, and business users to agree on a common direction. Business process and application development teams should leverage value stream analysis to move conversations beyond siloed thinking and get cross-functional groups to better understand their shared goals and how their processes deliver value to customers.

**Figure 4** Value Streams Drive Greater Customer Focus



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Source: Forrester Research, Inc.

## INJECT AGILE PRINCIPLES INTO ALL ASPECTS OF THE IT AND BUSINESS ENGAGEMENT

Agile methods are increasingly popular with application development teams (see Figure 5). Teams are seeking faster delivery, increased quality, and — more importantly — an improved relationship with business stakeholders. Agile methods encourage cross-functional teams that are aligned with the business and measured on business results rather than project outcomes. No longer can intermediaries hoard relationships with the business to gain position and power; instead, business process pros mentor and coach both business and technology groups to work effectively together.

### Extend Agile Concepts To Business Process Professionals

Regardless of process methodology, all business process projects go through the same steps: understanding the problem, defining a solution, building and testing that solution, and then rolling it out. The difference with Agile is that it encourages practices that break the problem into

smaller batches, helping teams avoid time-consuming handoffs while encouraging more frequent collaboration (see Figure 6). Agile methods allow teams to be more flexible and responsive to change. To apply Agile principles to their problems, business process pros should:

- **Break problems down into smaller ones.** Manageable batch sizes are a crucial element for project success. Traditional waterfall approaches define the project as one big chunk of work, leading the team to sequentially model all the processes and document all the requirements, and only then move on to development. Agile methods break problems down into chewable chunks that teams can implement, evaluate, and test in a short interval called a sprint that lasts from one to six weeks. Fast iterations help teams find misunderstandings or mistakes earlier, speeding course corrections and reducing waste.
- **Build cross-functional teams.** Handoffs slow down the delivery process — avoid them! Agile approaches encourage teams to be colocated and work as one. A team should include everyone who is heavily engaged in the project and critical to its delivery. A cross-functional team, for example, should include a business architect, project manager, subject matter experts (SMEs), developers, testers, and business analysts. Teams should be small and nimble; break large projects broken down into smaller chunks to enable teams to focus on a subset of the business domain.
- **Meet daily to discuss progress.** Without frequent communication and status reporting, teams often become disconnected. The Agile “Scrum” method prescribes a daily 15-minute team meeting to answer and discuss three questions: “What did you do yesterday?”, “What are you doing today?”, and “What is stopping you?”<sup>6</sup> These short daily progress meetings bring issues and risks to the surface so they can be resolved before they start to slow down the delivery process.

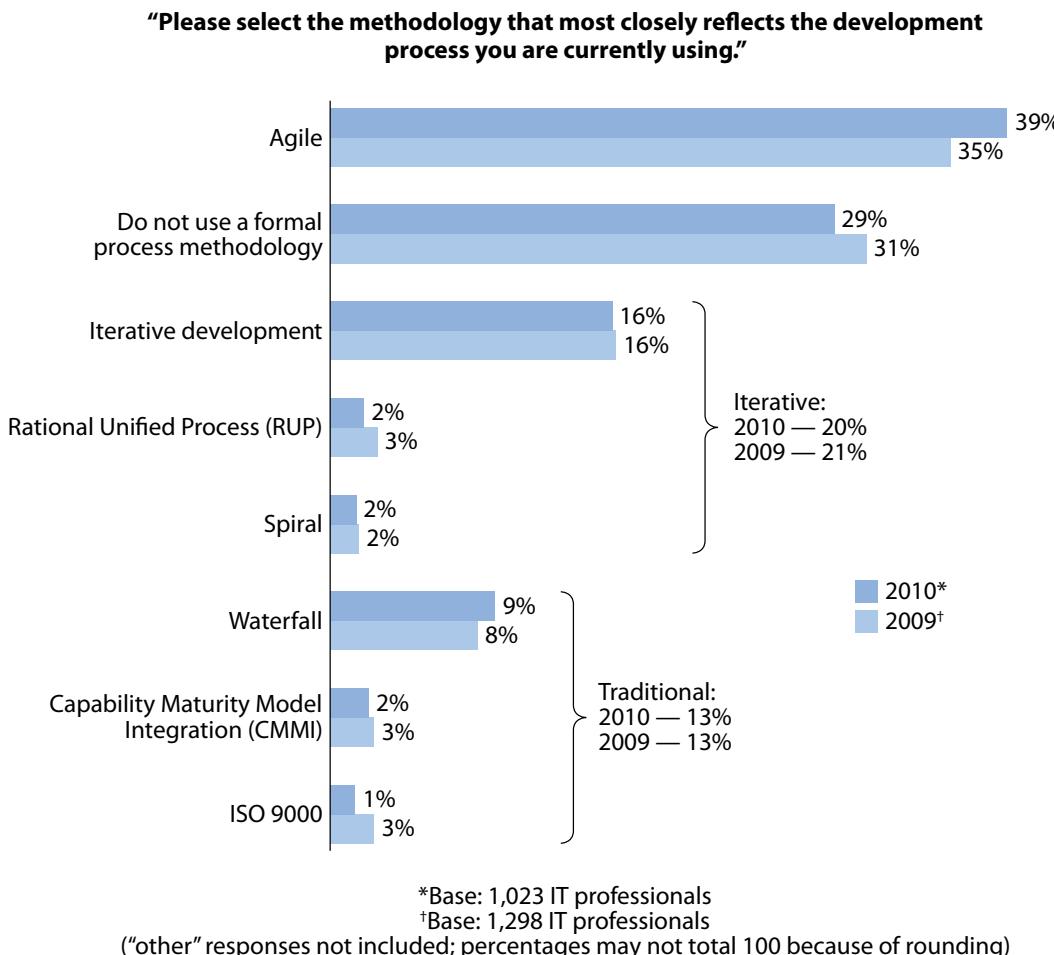
“On most projects I never really knew what the rest of the team was doing. On our first Agile project, I learned a lot about the other team members and their work. This allowed me to change my tasks but also contribute to the other members of the team. It was also much more fun and more like a team sport.” (Business analyst on an Agile team)

- **Insist on transparency.** Daily meetings provide a mechanism to encourage communication, but without a clear set of measures and objectives it is impossible to determine if the team is moving in the right direction. Agile measurement practices equip the team with dashboards that focus on progress, productivity, and quality. And techniques such as Kanban extend traditional Agile approaches, providing a clear way to visualize the flow and progress of delivery efforts and giving business stakeholders a better perspective on and insight into the project than basic Scrum approaches alone.
- **Deliver working software frequently, but keep the end in mind.** Each iteration of the Agile development process should incrementally deliver usable functionality to the business. But teams should remain focused on the final goal rather than fixating on interim deliverables. In

this way, Agile approaches enable business and IT to better understand one another's meaning. It also speeds delivery of process change, as after each increment, teams ask, "Can we go live with this?" and, more importantly, "What do we need to add to allow this to go live?"

- **Measure the team on business outcomes rather than project results.** Getting the right documents done or delivering on time and on budget is important, but without resulting business success, the project does not add any value. Measure the team's ultimate success not on project metrics but on business results. For example, introducing a new business process to enable better customer collaboration should have clear business goals, and the team should be empowered to focus its work on delivering those goals.

**Figure 5 Agile Adoption Continues To Grow**



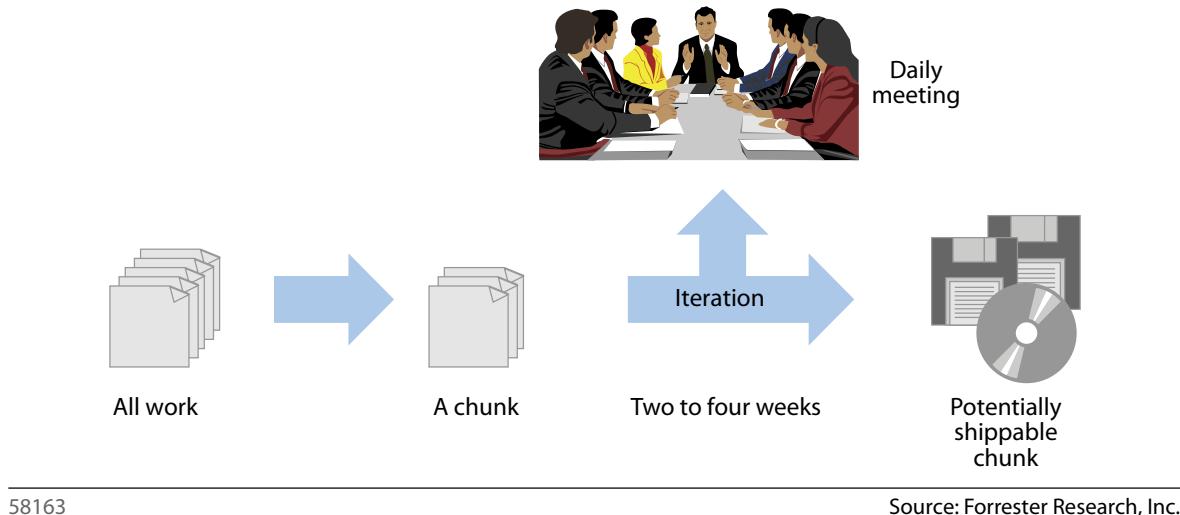
\*Source: Forrester/Dr. Dobb's Global Developer Technographics® Survey, Q3 2010

†Source: Forrester/Dr. Dobb's Global Developer Technographics® Survey, Q3 2009

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Source: Forrester Research, Inc.

**Figure 6 A Simple Agile Approach**



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Source: Forrester Research, Inc.

### Provide Guardrails To Guide The Entire Workforce

Without clear governance, Agile approaches can quickly descend into chaos. However, too much governance causes flexibility to suffer. It is important for business process and application delivery pros to balance the needs of governance with the needs of business agility. It is therefore crucial to establish process guardrails to avoid chaos but not limit the flexibility that Agile methods afford. Sensible guardrails require:

- **Coaching and peer review.** Coaching combined with peer review allows practitioners to work with some autonomy while ensuring their work does not put the whole project at risk. Augment traditional group reviews and signoffs with much more frequent inspection and review. The result is an organization that resembles a master/apprentice model, with masters helping ensure governance of the work while other masters mentor them in turn.
- **Intent-based checklists and controls.** People play a crucial role in Lean governance models, but you still need controls to ensure the system is working. These controls should not focus on particular activities or documents but instead on the team demonstrating that it has met a particular governance objective. For example, traditional governance asks for a scope document based on a standard template. Lean governance also includes a step to ensure that the team has considered the scope; but instead of requiring a particular document, the guideline describes the objective and provides examples of how to provide proof. For scope, a process model, prototype, or visual mockup might be sufficient to ensure compliance. The objective of Lean governance is to focus the team on using the right tool to solve the problem. The governance steps provide guidance for the team on what problems they need to solve.

- **Teamwide visibility.** All team members should have visibility into the progress and status of all work. Many teams use dashboards for this purpose. Techniques such as Kanban can help to visualize the progress of work as it passes through particular stages, including review, testing, and production readiness.<sup>7</sup> Without clear visualization, it is often impossible to see the true state of a project.
- **Automation wherever practical.** Automation tools can reduce the burdens that manual guardrails may impose on a team. The top priority for automation is a tool that tracks the backlog and status of work. Once the team has implemented a work backlog tracking tool, add connection points to tools for related disciplines such as BPM, requirements management, software change and configuration management (SCCM), defect management, test management, and deployment, allowing traceability across the full life cycle. The integrated management approach to the process of delivering applications is called application life-cycle management (ALM).<sup>8</sup>

## RECOMMENDATIONS

### MERGE BUSINESS PROCESS AND AGILE APPLICATION DEVELOPMENT

Many teams are under the illusion that business transformation will move them from point A to point B. However, point B is not the destination; it is a brief stop on a never-ending journey. The rapid pace of change means that real business transformation is about creating an environment that supports continuous and rapid change with the certainty that new circumstances will arise. In Douglas Adams' classic tome *The Hitchhiker's Guide To The Galaxy*, the answer to the great question of life, the universe, and everything is 42.<sup>9</sup> For business transformation, the answer is much more actionable: Business process and application delivery pros must maintain a steadfast focus on customer needs and implement adaptable business processes to satisfy them by:

- **Assessing existing applications and business processes for mess-of-many scenarios.** Teams should perform an honest audit of their existing applications to see if layers of complexity have built up across systems and processes that obscure the original intent of the business solution. If you're unable to map an end-to-end process tied to specific systems, then chances are high that you have a mess-of-many scenario that you need to unravel.
- **Cross-pollinating process design and Agile delivery approaches.** Business process and application delivery teams share a common thread: continuous improvement. Business process teams embrace continuous improvement approaches that focus on business processes; application delivery teams focus on continuous improvement approaches that focus on Agile delivery. Teams should spend time introducing one another to the core principles and practices driving their approaches so everyone is on the same page. In the end, these two approaches — process and Agile — should come together to form the cornerstone for delivering rapid transformation.

- **Establishing guardrails to stay on track.** Teams need a defined structure to support effective collaboration and consensus among all stakeholders. Business process and application delivery pros must establish communities of practice and provide fit-for-purpose tools that empower workers while keeping corporate assets and information safe.

## SUPPLEMENTAL MATERIAL

### Companies Interviewed For This Document

Pfizer	US Department of Transportation
Sapient	Virtusa
SRP	

## ENDNOTES

- <sup>1</sup> Source: Craig Larman, *Agile & Iterative Development: A Manager's Guide*, Addison-Wesley Professionals, 2003.
- <sup>2</sup> To capitalize on the transformational power of BPM, develop and implement a plan that advances your BPM capabilities. Specifically, move from process automation to address (in increasing order of value) IT agility, process compliance and consistency, process insight, and, ultimately, business transformation. Information and knowledge managers who use BPM software should follow Forrester's maturity model to help advance their thinking about BPM benefits and deployment goals. See the October 6, 2008, "Drive BPM Initiatives To Higher Business Value" report.
- <sup>3</sup> We assembled some of our top analysts on this subject and put them to the test in a no-holds-barred roundtable discussion. The truth is that you must embrace Lean from all perspectives — people, process, and technology — and focus as much on adding value as on eliminating waste. See the September 29, 2009, "Lean: The New Business Technology Imperative" report.
- <sup>4</sup> Forrester evaluated 11 leading business process management (BPM) suite vendors against 148 criteria reflecting the requirements of business process professionals running large-scale BPM programs. We found that Pegasystems and Appian lead the pack with the best overall combination of modeling, design, and development features for business and technical roles driving process improvement. See the August 24, 2010, "The Forrester Wave™: Business Process Management Suites, Q3 2010" report.
- <sup>5</sup> Source: Ralph Whittle and Conrad B. Myrick, *Enterprise Business Architecture: The Formal Link between Strategy and Results*, Auerbach, 2005.
- <sup>6</sup> Scrum is a lightweight Agile project management method that describes a set of practices for enabling teams to more effectively work, connect with the business and mitigate risks. Source: Scrum.org (<http://www.scrum.org/scrumguides>).
- <sup>7</sup> Agile methods continue to grow in popularity, but dogmatic adoption can lead to teams applying Agile in contexts where it doesn't work. Kanban, a technique taken from Lean Manufacturing, provides application development professionals with a way to improve flow, optimize batch size, and ensure execution success

in situations where pure Agile does not work. It also can augment Agile projects that involve more than one team, providing clear signposts to enable cross-team success. See the March 25, 2011, "Why Kanban Matters" report.

<sup>8</sup> Forrester defines application life-cycle management as the marriage of business management to software engineering made possible by the use of tools that facilitate the integration of different disciplines. See the October 19, 2010, "The Time Is Right For ALM 2.0+" report.

<sup>9</sup> Source: Douglas Adams, *The Hitchhiker's Guide to the Galaxy*, Harmony Books, 1979.

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