The State of Software Development | 2014
Key Findings from the 2014 IT Leadership Survey

Executive Summary

IT leaders are facing an ever-increasing breadth of responsibility across the organization as IT applications become more critical to business success.

With software / application lifecycle management so critical to business value creation, Blueprint wanted to better understand the issues and topics that top the agenda for IT leaders going into 2014. To that end, we conducted the 2014 IT Leadership Survey in October 2013. 166 IT leaders shared their perspective on a host of questions.

In this report, we share our findings and our recommendations on how to address key challenges that IT leaders identified.

Below we present some of the key highlights from the survey.

• **Old habits die hard.** Despite the fact that IT is under immense pressure to innovate and integrate emerging technologies into their operations, they're still plagued by delivery issues. 70% of survey respondents rank “improving IT software project delivery” among their top three priorities for 2014.

• **IT applications are critical to business success.** IT is inextricably linked to business success today, and not just by way of playing a supporting role. 82% of IT leaders consider the applications their group delivers to be important, very important or critical to the competitiveness of the business.

• **Projects are mostly late and over-budget.** As the profile of IT projects rise higher and higher, several red flags within the software development lifecycle are present. Only 11% of IT leaders said IT projects ‘regularly’ meet their original budget. What’s more, 59% say their projects are typically delivered late.

• **Rework remains a pervasive problem.** 33% of IT leaders report they waste at least 25% of their project budgets on rework. This is a tremendous resource drain that hinders IT’s ability to deliver business value.

• **Compliance criteria is important for IT projects.** Almost 100% of respondents say that IT projects need to be in compliance to some degree with either industry regulatory requirements or internal policies.

• **Project teams lack a common understanding of business objectives.** Only 31% of IT leaders say their teams regularly have a common understanding of a project’s business objectives. 69% of teams do not.
Key Findings: Top IT Priorities in 2014

As an IT leader, you will have a lengthy list of objectives to accomplish in 2014. Over the past twelve months, IT organizations have been in the spotlight as lines of business and executives scrutinize IT’s ability to enable innovation, especially as it relates to mobile computing, big data, cloud computing and social media.

Our survey results indicate that IT leaders want, and need, to make improvements that enable better performance in the software development lifecycle (SDLC). 70% of IT leaders rank improving software project delivery as a top three priority for the year ahead.

Given the size of this group, it’s obvious that the software development lifecycle at most organizations is suffering significant pain points.

Later in this report, we’ll look at how IT leaders can start to address these pain points in 2014.

Figure 1: Top Three Priorities for IT in 2014

Where does ‘improving IT software project delivery’ rank in your priorities?

- **Top priority**: 13%
- **Top three**: 57%
- **Top ten**: 21%
- **Lower**: 9%

70% of IT leaders rank improving IT software project delivery within their top three priorities for 2014.
What Needs Are Driving the Urgency for Better Software Delivery?

1) Business Needs
Corporations are increasingly depending on business applications for success, and IT leaders recognize the key role applications play in helping their companies do this. 82% of survey respondents consider the applications their group delivers to be important, very important or critical to the competitiveness of their business.

The reality, however, is that applications frequently fall short of meeting business needs. 43% of IT leaders report that delivered applications meet business stakeholder expectations “sometimes,” “not often,” or “very rarely.”

Figure 2: IT Leaders Recognize Importance of Applications to Business Success
How important are the applications delivered by your IT group to the competitiveness of your business in the marketplace?

- Not important: 3%
- Somewhat important: 16%
- Important: 27%
- Very important: 26%
- Critical: 29%

82% of IT leaders consider the applications their group delivers to be important, very important or critical to the competitiveness of the business.

Figure 3: Too Often, Applications Don’t Meet Business Needs
To what extent do applications delivered by IT meet business stakeholder expectations?

- Very rarely (Less than 0-20% of the time): 2%
- Not often (20-40% of the time): 5%
- Sometimes (40-60% of the time): 36%
- Often (60-80% of the time): 40%
- Regularly (80-100% of the time): 17%

43% of IT leaders report that delivered applications meet business stakeholder expectations “sometimes,” “not often,” or “very rarely.”
The good news is that IT leaders recognize these project delivery shortcomings and are focused on solving them. Doing a better job of delivering applications ranked as the number one priority in the SDLC among IT leaders for 2014.

**Figure 4: IT Leaders Want to Do a Better Job of Delivering Applications that Meet Business Needs in 2014**

Which of the following best describes your top priority in the software/application development lifecycle for 2014?

- Increase standardization, consistency and reuse: 20%
- Do a better job of delivering applications that meet business needs: 31%
- Reduce wasted time and effort in development cycle: 12%
- Improve overall quality of delivered applications: 15%
- Reduce enterprise compliance risk: 3%
- Deliver faster, and achieve faster time to market: 17%
- Other: 2%

31% of IT leaders say doing a better job of delivering applications that meet business needs is the top priority for 2014.
2) IT Improvement Needs

IT leaders believe that having a greater ability to deliver software projects that met all original expectations would translate into business benefits.

72% of respondents report that it would be extremely or very impactful if projects were delivered on time, on budget and with all expected features. This illustrates a big gap between the status quo and the desired performance level, meaning IT leaders have an immediate opportunity to capitalize on this.

The next area of concern is that IT organizations are not able to deliver effective business applications with high degree of predictability. Only 11% of IT leaders report that their IT projects regularly meet original budgets. In addition, 59% of IT leaders say their projects are delivered late.

Figure 5: The Appetite for Improving SDLC is High

How impactful would it be to your business if IT software projects met ALL original expectations (i.e. application delivered on time, on budget, with all expected features, etc.)?

- Not impactful: 2%
- Somewhat impactful: 11%
- Impactful: 16%
- Very impactful: 42%
- Extremely impactful: 30%

72% of IT leaders say that it would be extremely or very impactful if projects were delivered on time, on budget and with all expected features.

Figure 6: Very Few IT Projects Regularly Meet their Original Budgets

How often do projects meet their original budgets in your organization?

- Very rarely (Less than 0-20% of the time): 10%
- Not often (20-40% of the time): 14%
- Sometimes (40-60% of the time): 33%
- Often (60-80% of the time): 32%
- Regularly (80-100% of the time): 11%

Only 11% of IT leaders report that their IT projects regularly meet original budgets.
3) Revenue Needs
In addition to serving as competitive differentiators, applications also serve as revenue generators—either directly, in the case of customer-facing applications, or indirectly, in the case of business process enablers. For this reason, it is imperative that time and resources dedicated to building these applications are optimized. Waste and delay in the SDLC negatively impacts the organization’s ability to bring in additional revenue.

4) Compliance Needs
Another important challenge facing IT leaders today is compliance. Increasingly, delivered applications must comply with stringent regulatory requirements and/or internal policies independent of the development methodology used (e.g., waterfall or agile). The issue of compliance is pervasive. More than 80% of IT leaders identify compliance with industry regulatory requirements or internal policies as an important factor today.
Key Takeaways:
How to Address 4 Major Pain Points and Improve IT Software Project Delivery

Takeaway #1: Reduce Rework

The first pain point to consider is the amount of rework generated during the SDLC.

33% of IT leaders report that at least 25% of project budgets are consumed by rework. Such high levels of wasted resources greatly hinders IT’s ability to deliver business value.

Rework drains precious IT resources away from other potential projects, reducing the number of projects IT can deliver. It also causes delay, which impacts time to market and creates project backlog, ultimately resulting in lost revenue opportunities.

Rework happens when teams misunderstand requirements, or when errors in requirements aren’t caught early enough in SDLC. A significant amount of rework can be eliminated by enabling more effective communication. This is something IT leaders will need to pay close attention to. Our survey results indicate that the importance of effective communication is not on every leader’s radar.
20% of IT leaders consider team communication and collaboration on software projects to be ineffective or not very effective. More alarming, however, is that 51% of IT leaders label the effectiveness of their team’s communication/collaboration as “sufficiently effective.” Realizing the cause-effect relationship between communication/collaboration and rework (and considering 33% of IT leaders have over 25% rework on their projects) it is disconcerting to see so many IT leaders describe team communication/collaboration as “sufficiently effective.”

Figure 10: Collaboration and Communication on IT Projects is Suspect

How would you characterize the effectiveness of team communication and collaboration on your software projects?

- Ineffective: 2%
- Not very effective: 18%
- Sufficiently effective: 51%
- Very effective: 22%
- Extremely effective: 7%

20% of IT leaders consider team communication and collaboration to be ineffective, or not very effective. Alarming, 51% consider it sufficiently effective.

Only half of the IT leaders responding to our survey consider the effectiveness of team communication on software projects to be “sufficiently” effective. With more than 25% of a project budgets wasted on rework, however, living with “sufficient” communication and collaboration is setting the bar too low.

Another major cause of rework is a lack of business stakeholder engagement in projects. All too often, key people simply don’t engage, leaving other team members to carry on on the project with missing or incorrect information. 81% of IT leaders say that stakeholders are not involved on a continuous basis or to the depth needed by the project team.

It’s often only much later in the SDLC, when the developed application can be demonstrated, that key stakeholders may take a renewed interest and clarify business needs.
Successful software projects cannot occur in a vacuum. In order to develop applications that meet business needs, IT must have adequate involvement of all stakeholders, with consistent, effective communication and collaboration throughout each project.

**Takeaway #2: Stop Reinventing the Wheel**

One-third of our survey respondents report that they are running 25 to 50 projects at any given time. Despite their current number of projects, IT organizations have surprisingly low levels of requirements reuse. Only 15% of IT leaders report that requirements are reused more than 60% of the time. That leaves 85% of IT organizations that are reinventing the wheel to some degree from one project to the next.
Reusing requirements means allowing teams to reuse all the work that is derived from them, including existing designs, code and tests. This translates into substantial time and cost savings. Given the high degree of subject matter focus in IT groups (for example, a bank’s IT organization has deep experience in developing banking applications) it stands to reason that there is significant reuse opportunity lying dormant, ready to be tapped.

For reuse to happen, IT leaders agree there must be a degree of consistency and standardization with how requirements are defined across projects. (56% identify this as being as critical or very important). Leaders who want to reduce rework will need to look more closely at how requirements are defined and managed and identify areas for improvement.

**Takeaway #3: Function as a Team**

Software development is a “team sport,” and all players need a common understanding of each project’s business goals. This is another key area of opportunity for IT leaders. A mere 31% of our survey respondents said their teams regularly have a common understanding of the business goals. 69% of teams do not.

![Figure 13: Many Team Members Do Not Understand the Business Objectives of the IT Projects They’re Working On](image)

It's essential that team members understand the business objectives of their projects because these objectives serve to guide every team member’s daily decisions. Without this guidance, decisions won’t always align with the objectives, which makes costly, wasteful rework a certainty later in the SDLC.

**Takeaway #4: Empower Your Business Analyst**

As the key individual responsible for defining and managing the requirements, the Business Analyst can play a central role in reducing rework, increasing reuse and fostering a common understanding of business objectives across teams. In order to do this, however, the Business Analyst must be armed with the appropriate resources to do their requirements work.

How does one empower Business Analysts to succeed in their role? By removing the enormous burden of labor-intensive clerical work.

73% of IT leaders say their Business Analysts spend 20-60% of their time on clerical tasks. These tasks include writing and managing requirements documents and revisions, manually managing traceability in spreadsheets, and other administrative work. This leaves only a portion of time available for critical-thinking and analysis of the requirements being produced. The sheer volume of clerical work prevents Business Analysts from making higher-value strategic contribution to the requirements process.
73% of our survey respondents report that Microsoft Office tools are used to define and manage requirements. These general office automation tools are not designed for critical requirements work such as tracking and ensuring compliance, reusing requirements, collaboration, abstracting requirements, or creating simulations.

In some cases, Business Analysts use ancillary features in tools designed for other practitioners like developers or testers. However, without a purpose-build requirements solution, Business Analysts simply “make do” with what they have, and spend most of their energy trying to overcome the crippling volume of manual tasks that rudimentary documents and spreadsheets require.

In addition to requiring more effort on the Business Analyst’s part, these tools introduce errors because there isn’t one centralized, single source of the truth or a history of changes. The tongue-in-cheek analogy is that one wouldn’t ask a carpenter to build a house with a hand mixer and rolling pin, so how can one expect a Business Analyst to do excellent requirements work while similarly ill-equipped?

**Conclusion**

In order to support innovation through IT project delivery, IT leaders must address four key pain points that impact the SDLC. When there’s a great amount of rework, minimal reuse, a lack of team engagement and the improper use of tools, projects suffer. They come in over budget, late, past their delivery date and lacking in business value. Without exception, these problems originate in the earliest stages of the software development lifecycle. IT leaders who trace each problem back far enough to its true source will find themselves looking at the requirements. It’s here, at the very beginning of the SDLC where IT leaders must concentrate their efforts on improving software project delivery—that critical initiative that has found its way into the top priorities for IT leaders for 2014.
Appendix A: Methodology & Demographics

For this survey, Blueprint conducted an online survey of 166 IT industry professionals in North America and Europe to evaluate priorities, challenges, conditions and performance factors relating to the software / application development lifecycle. The study was conducted at organizations across a breadth of industries, with the largest percentage of responses from companies in financial, healthcare, technology, insurance and communications. The majority of survey respondents are IT leaders including President / C-Level, VP, Director, and Program/Project Manager. The online study was completed in November 2013.

![Job Title Distribution](image1)

![Company Size Distribution](image2)

About Blueprint

Founded in 2004, Blueprint develops requirements definition and management (RDM) software. With its best-in-class RDM solution, Blueprint helps companies get complex software and IT project requirements right from the start. Blueprint solves many of the time-consuming, costly, and error-prone elements of defining requirements, ensuring that mission critical projects are completed on time and budget. Headquartered in Toronto, Ontario, Blueprint has global sales, operations and partner presence. Visit http://www.blueprintsys.com.