



# Top CIO Challenges that Contribute to Enterprise Application Failure

IDG Survey  
Reveals Top  
Three Drivers of  
Project Failure



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## To better address project failure rates,

IDG Research, in partnership with iRise, sought to uncover and define the contributing factors of project failure through a survey targeting enterprise-level CIOs and IT decision makers from across North America. This paper details the key research findings.

IT project failure is an accepted cost center in enterprise application development. This failure rate is often a planned expense written off long before development ever begins. The road to successful application development is plagued by projects with persistent delays, cost overruns, and missing or unintended features that do not meet user expectations. Yet, in today's marketplace, process-enabling software and customer-facing applications serve as competitive differentiators, and various business units increasingly rely on IT to deliver them. This is clearly demonstrated in this recent research in which nearly 80% of respondents indicate that rolling out enterprise applications is a priority in their organizations. Similarly, executives are focused on mobility and the need to build applications for mobile devices, with 75% of executives rating mobility a moderate, high, or critical priority within their organizations.

While the demand for software projects has grown, and IT's role has taken on greater importance, their corresponding budgets have remained flat. CIOs are expected to deliver an increasing number of projects that transform the business—and do so on time, on budget, and according to end-user expectations—with the same amount of resources.

With so much riding on the success of today's software projects, it is critical that IT organizations reduce the frequency of project failures and transform their departments from cost centers into revenue generators that positively impact the bottom line. As identified in the research, CIOs have three primary challenges that must be addressed:

- business alignment
- project prioritization
- delivery of mobile applications on time while still meeting high user expectations

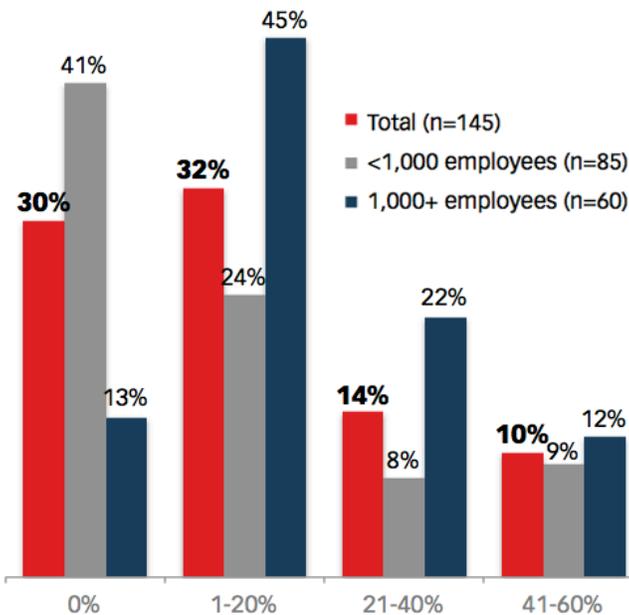
Understanding the root cause of these concerns and transforming the software development life cycle (SDLC) accordingly can help IT organizations focus on top-priority applications, communicate better with stakeholders, and deliver better software applications faster.

## Key Research Findings

- **Most organizations are dealing with late projects, difficulties staying within budget, and end-user satisfaction.** Overall, about 27% of projects are delivered late, 21% are over budget, and 16% fail to meet end-user expectations.

## FIGURE A BUDGET BUSTERS

Approximately 21% of software development projects are over budget.



SOURCE: IDG Research Services

Nearly half of those surveyed say that at least 50% of their software development projects fail; that is, they are either late, over budget, do not meet expectations, or require rework.

— IDG Research

- **Why do projects fail? In many cases, it starts at the beginning.** Fifty-seven percent of respondents say that inaccurate requirements gathering contributes to software projects that fail at their organizations. Forty-six percent cite poor collaboration between teams, and 37% say there's no way to validate the needs of the business.
- **A substantial number of software development projects require rework.** On average, respondents report about 32% of software development projects at their organizations require rework, and an average of 20% of their software development budgets is allocated to rework.
- **Only about 1 in 5 projects receive functional usability testing.** Why no usability testing? Fifty-five of respondents percent cite lack of time, 46% cite lack of resources, and about 40% say they have no process in place.

## CHALLENGE #1: Business Alignment

IT's alignment with the business is the challenge that is top of mind for today's CIOs. Everything starts with communication and proper alignment with the business. Without it, software project specifications are not communicated effectively, leading to failure in terms of schedule, budget, and end-user expectations. In fact, it is the reason why half of software projects fail. So what sits in the way of IT/business alignment? Plenty.

Lack of clarity regarding stakeholder needs, an inability to assert IT as a partner, the complexity of applications, and managing multiple stakeholders all make it difficult for IT to execute on business objectives. But the biggest obstacle is inaccurate and changing requirements during the SDLC. In fact, 57% of our survey respondents say inaccurate requirements gathering contributes to software projects that fail at their organizations. Forty-six percent cite poor collaboration between teams, and 37% say there's no way to validate the needs of the business.

Lack of clarity arises due to inaccurate requirements, and inaccurate requirements occur because stakeholders simply don't know what they want or how to communicate it. Stakeholders often "know it when they see it," but the existing requirements definition process doesn't allow them to see requirements in action until it is too late. Instead, stakeholders must wait until much later in the development process before

they are able to effectively get their hands on the application to test it out and provide feedback regarding how their vision has been translated into reality. As a result, business requirements are oftentimes inaccurate or entirely missed. Fixing requirements during late stage user acceptance testing leads to costly rework and delays in deployment that negatively affect budget and timelines.

The cost of fixing application requirements increases exponentially as you move further along the software development process. A missed requirement identified in the early stages of the process can be corrected with considerably less cost and time, but as you get closer to the final phases of development a missed requirement has a cascading effect on the delivery and the cost of fixing it. **Figure B** shows the relative cost of correcting a requirement at different stages of the development process.

To make matters worse, this costly rework has a trickle-down effect, impacting other initiatives. Budget and schedule overruns mean that resources have to be reallocated and other projects suffer. And when critical projects suffer, the whole business suffers. When a “fail fast” model is embraced within the culture, development ultimately saves time, resources, and dollars.

### CHALLENGE #2: Project Prioritization

The second challenge that concerns CIOs is the need to prioritize the project timeline and determine which applications are business critical. It is not uncommon for a CIO of a large enterprise to prioritize hundreds of projects—internal and customer facing, mobile, and more traditional software projects. Deciding which of those to prioritize is a challenge,

at best. To further complicate matters, CIOs have no way to vet bad ideas early or make educated decisions in terms of scoping and planning.

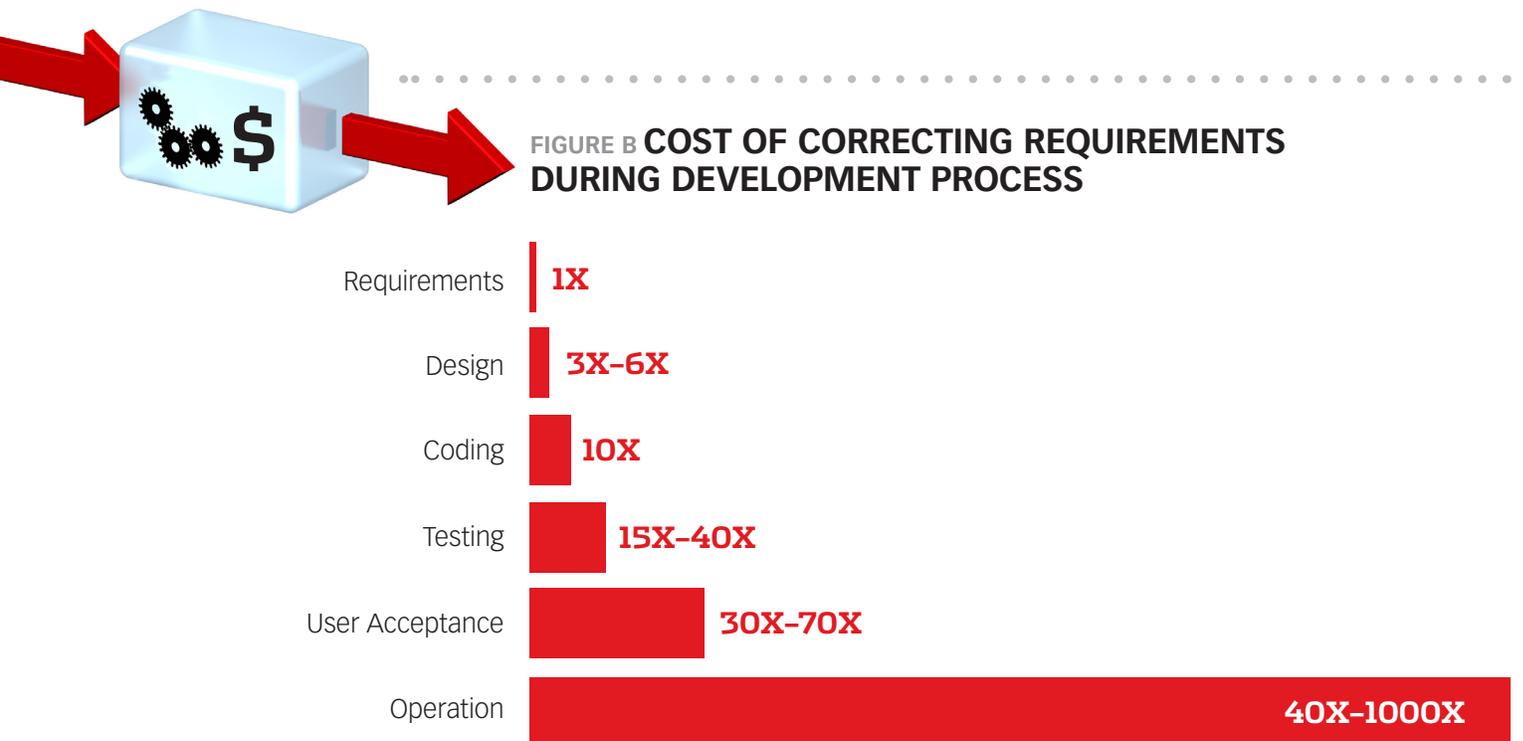
Case in point: Participants in the IDG Research survey were asked to provide details about the percentage of their software development projects that are late, over budget, do not meet user expectations, or require rework. Projects falling into one or more of these categories are considered failures. Nearly half of those surveyed report that at least 50% of their software development projects fail; that is, they are either late, over budget, do not meet expectations, or require rework.

By facilitating better communication, IT and business can translate requirements faster and with more accuracy to prioritize the project pipeline. CIOs can in turn minimize risks, react quickly to market changes, and get more projects out the door faster with improved adoption.

### CHALLENGE #3: Mobile Application Development

Finally, mobile application development is a growing challenge for CIOs. Forty-two percent of survey respondents say mobile application development is a high or critical priority. But while 60% say usability is a key priority in execution, 40% say they have no process in place for functional usability testing.

That is a problem, because user experience is a major contributor to adoption, cited as such by 42% of respondents from larger organizations. With the consumerization of IT and the increase in mobile computing, the user is much more critical to the development process. Ten years ago, a poor user experience wouldn't doom a project. As long as the application did what it



**FIGURE B COST OF CORRECTING REQUIREMENTS DURING DEVELOPMENT PROCESS**

Experiencing an application both visually and interactively during the early stages allows users to see requirements in action and make necessary changes before costly and time-consuming development begins.

was supposed to do, the project was considered a success. The same can't be said for today's application development projects. Internal and external users of applications have very high expectations for usability and functionality. Simply accomplishing an objective is no longer enough. Now user experience and ease of use are also critical for success.

## Solution

Addressing these challenges—alignment with the business, prioritizing the project pipeline, and mobile application development—is fundamental to reducing the risk of project failure. Projects must be built to the proper requirements, reducing—and even eliminating—rework for faster time to market. Business and IT must communicate clearly from the start, and teams must keep user experience in mind throughout development. Furthermore, as software projects grow increasingly complex and teams become more decentralized, it is critical that organizations have a software development process that addresses the need for better communication and realistic simulations in order to increase efficiency and adoption.

Static documents and wireframes are not adequate ways to communicate the functionality and user experience with modern applications. These tools exacerbate the challenges that lead to project failures. Instead, organizations need an enterprise platform designed to support nearly every aspect of the application development process to transform the way teams define and build software. It must be a central communication platform that creates a common framework from which all team members can collaborate to drive all phases of the SDLC and requirements management, from concept to launch.



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## Introduction to iRise



The iRise Enterprise Platform gives business and IT an effective way to communicate and collaboratively design and build applications, allowing organizations to create realistic simulations to visualize their applications up front. This allows users to interact, provide accurate feedback, and validate requirements earlier in the SDLC—all before a single piece of code is written. iRise serves the needs of the entire business. All stakeholders—from the business analysts (BAs) translating the needs of the business to the designers, developers, and user experience teams testing the application—are involved from the very onset of the development process.

With the ability to visually simulate applications early on (within minutes, not months) and interact with the simulations in high fidelity, iRise makes it easier for CIOs to prioritize early in the software development process, before more expensive development costs are incurred. Experiencing an application visually, with the ability to test and interact during the early stages, allows users to see requirements in action and make necessary changes in real time before the development process begins. Organizations using the iRise visualization platform, have realized dramatic results in their software applications projects, including:

- Reduce rework by up to 90%
- Shorten delivery cycles by up to 49%
- 20% to 50% reduction in application development cost

iRise makes it easier for teams to get application usability acceptance early on in the development process. Instead of going through several rounds of development and testing to get mobile applications correct, iRise allows teams to experience the application on a mobile device before the application is developed. Even better, other stakeholders such as BAs, project managers, and designers can build the mobile prototypes, do the testing, and then hand over a visual spec to development, saving precious time.

The iRise platform gives stakeholders carte blanche to bring their applications to life—easily and simply. As a result, there is clarity around requirements, expectations are effectively communicated, costly rework is eliminated, and projects meet user expectations, enabling IT organizations to respond faster to the needs of the business.

To learn more about how iRise can help your organization deliver successful software development projects, call **(800) 556-0399** or visit us online at <http://info.irise.com/cio>.