



## SURVEY

### Impact of Training on Project Success, 2011

Cushing Anderson

#### IDC OPINION

CIOs and IT managers routinely monitor and justify every investment they make. And they must make every effort to ensure each project succeeds and produces quantifiable benefits no matter how complex the deployment. During challenging economic periods when pressure increases to produce more with less, IT managers may see training programs as a place to cut costs. But cutting training will backfire. IDC research shows an undeniably tight link between training, team skill, and project success:

- Projects that met most or all of their objectives provided each team member with 40% more training than projects that failed or only partly succeeded.
- Projects allocating more than 6% of the project budget to training were significantly more successful than projects where 3% or less of the budget went to training.



## IN THIS STUDY

This study documents the importance of training to IT team success. As corporations continue to rely on sophisticated technology, IT departments must invest in continuous training and education so team members are well versed in the latest technological solutions. Data from across the industry — both survey based and from interviews — indicates that training directly contributes to project success. Better-educated teams perform their jobs with greater success than IT teams that haven't had the opportunity to take training classes.

---

## Methodology

In May 2011, IDC surveyed IT managers responsible for more than 515 projects. The surveys focused on uncovering the relationship between training and IT project success.

IT managers were asked questions related to their team's achievement of its significant goals and ability to meet major milestones. That information was plotted against the team's skill, the team's training budget, and the number of hours of training provided to team members.

*Note: Numbers in this document may not be exact due to rounding.*

---

## SITUATION OVERVIEW

### Operational Productivity Versus Implementation Success

Without doubt, well-trained teams improve IT performance. Previous IDC research found well-trained teams in information security and high-availability disciplines, for instance, were 10% more productive and could account for \$70,000 worth of improvement annually for a seven person team. Well-trained teams tend to focus on higher value-added activities such as planning, refining processes, and improving infrastructures. In fact, IDC has demonstrated the significant impact of certification on IT performance — and specifically concluded that each new certification increases team performance (see *Impact of Training: Functional Excellence Leads to Operational Productivity*, IDC #215762, December 2008).

Productivity increases gained during an economic downturn or recovery are especially valuable. In difficult economic conditions, organizations thoroughly weigh costs and opportunities associated with every project. IT managers responsible for new projects and initiatives must use all tools at their disposal to ensure their projects meet the corporate and IT objectives. IT executives simultaneously manage several factors that can affect team performance, particularly:

- Technology performance
- Quality of the project plan

- ☒ Clarity and effectiveness of communications
- ☒ Support provided by the technology vendor/consultant
- ☒ Budget and other resources
- ☒ Skill, dedication, and experience of the project team

Nearly 30% of IT managers attribute most project success to a combination of the project team's skill and dedication (see Figure 1).

**FIGURE 1**

**Factors with the Most Impact on Project Success**



n = 515

Notes:

"Other" includes executive sponsorship/support, skill of the consultants/systems integrators, accuracy of project scope, support provided by vendor or consultant, and effective risk management (each with 6% or less).

Respondents are IT managers responsible for 515 IT projects.

Source: IDC's *Training Impact on Projects Survey*, 2011

**Characteristics of Project Success**

Critical priorities for enterprises and individual lines of business include controlling costs, meeting growth requirements, and managing risk. IT's ability to help the enterprise successfully address these priorities largely depends on the team's IT talent, its skills, and the training it receives. IT project teams most likely to achieve their project objectives appear to have two common characteristics:

- ☒ First, successful organizations include certifications as a component of their IT staff development programs. While not a guarantee of success, certifications represent rigorously developed and meaningful bodies of knowledge. When teams are certified on relevant technologies — especially those being implemented within an organization for the first time — their likelihood of success increases.

- ☒ And second, successful organizations ensure relevant development opportunities are available to IT professionals worldwide. Implementation projects typically involve multiple locations and multiple functional teams. Increasingly, IT projects span geographic boundaries. When key activities take place in "remote" locations, the team members performing those activities require skills to complete their portion of the project — while it may be more difficult to provide those professionals with the skills they need, it remains essential to project success that training be delivered. Failure to properly train "remote" assets increases the likelihood that a project will miss its key milestones.

### ***IT Project Success Hinges on Training and Skills***

Even though managers believe skill and dedication of the project team is the biggest contributor to successful projects, IT managers attempt to control other factors more aggressively. They continually seek ways to cost effectively reduce risks to IT projects by carefully selecting the most appropriate technologies, hiring the most affordable and experienced consultants, and using sophisticated management practices to ensure functional success. These tactics are employed to extract the greatest value from technology investments.

Despite this attention, IT team talent often goes overlooked as *the* critical element of IT project success. An IT organization's level of embedded skill will affect project outcome regardless of technology complexity. Analysis suggests the likelihood of project success is proportional to the skill level of the team working on it. Stated bluntly, the risk of a project failing to meet its objectives rises when the project team does not have the skills to do the job.

Empirical data backs this conclusion; team skill has the most significant impact on achieving project objectives. Research consistently shows well-trained teams deliver more benefit from IT technology investments than undertrained teams. This increased performance ties directly to an IT organization's contribution to project success.

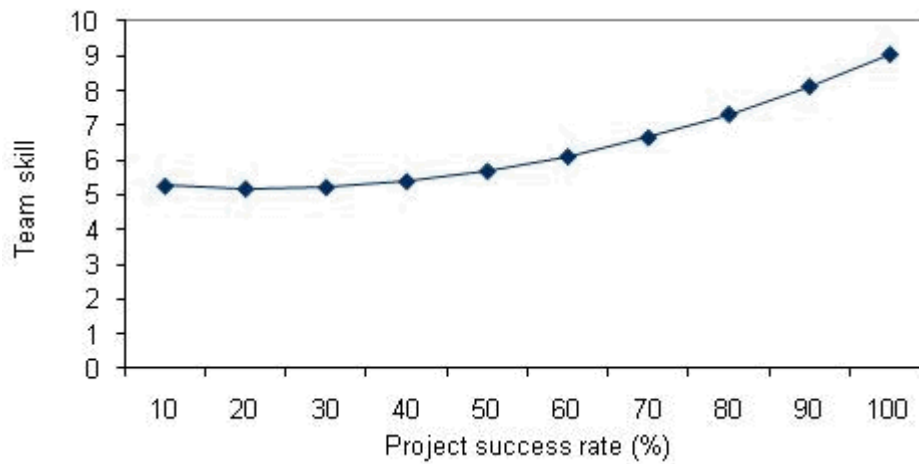
IT contribution has its roots in three important variables that IT managers must leverage to increase project success:

- ☒ The overall skill level of project teams
- ☒ The percentage of project budget spent on training
- ☒ The number of hours of training per team member

A strong correlation exists between these three variables and project outcome (see Figures 2–4). In fact, managers of IT projects that meet most or all of their objectives provided each team member with 40% more training than teams that achieve little or only some success. But the amount of training doesn't need to be massive; when preparing for a project, teams receiving 40 hours of training per member met their significant project objectives three times as often as teams that received 30 hours of training or less.

**FIGURE 2**

Relationship Between Team Skill and Project Success



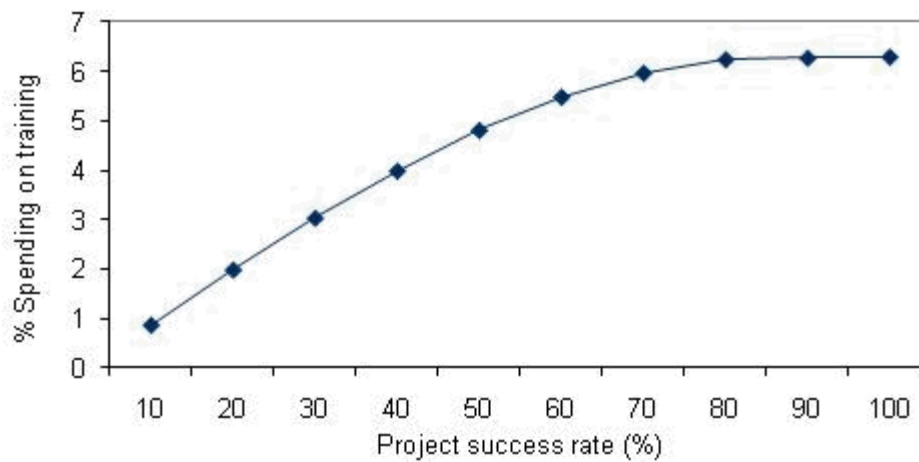
n = 515

Note: Respondents are IT managers responsible for 515 IT projects.

Source: IDC's *Training Impact on Projects Survey*, 2011

**FIGURE 3**

Relationship Between Training Spending and Project Success



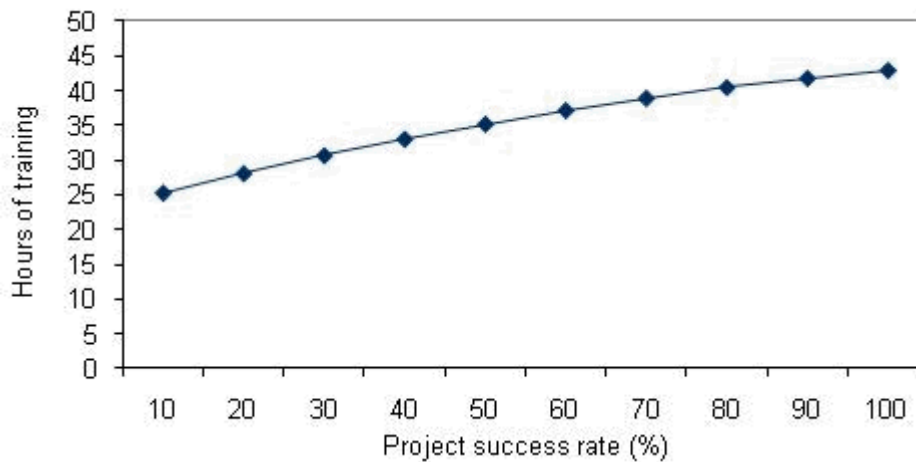
n = 515

Note: Respondents are IT managers responsible for 515 IT projects.

Source: IDC's *Training Impact on Projects Survey*, 2011

**FIGURE 4**

Relationship Between Number of Hours of Training and Project Success



n = 515

Note: Respondents are IT managers responsible for 515 IT projects.

Source: IDC's *Training Impact on Projects Survey*, 2011

### ***Skilled Teams Leverage Technology More Effectively***

Risk is inherent in every business venture and IT activity; increasing team skill and employing successful practices reduce risk and contribute to successful implementations. However, several factors inhibit organizations from realizing their efforts to reduce risk. These factors include changing technologies, changing processes, and changing staff. Each of these factors contributes to decreased organizational performance and increased risk.

Consistently applying standard business practices can contribute to lower risk; standard practices help reduce variation and increase the reliability of installed systems. Organizations that use consistent procedures and reliable systems reduce company exposure to risk. "Best practices" are often built into significant and mature technologies — they are designed to promote the use of labor-saving or risk-reducing activities.

Organizations spend considerable amounts of time and money implementing new technologies to help increase performance and decrease risk. However, with surprising frequency, organizations attempt to fit new technologies into existing processes. This tactic reduces the received benefit from their technology investment because they can't take advantage of built-in best practices. And it increases the inherent business risk associated with change.

Sometimes organizations change their business practices independently of a new technology. These process changes may be new guidelines for backups, new security policies, or even new interoperability criteria for business applications. If the

change is completely and thoroughly implemented, organizations should expect to see some form of benefit — either a reduction in cost of storage, increased network security, or more consistent interoperability. But IT teams will increase risk and reduce benefit to the extent that those practices and policies are not effectively communicated and implemented.

Organizational turnover also erodes team performance. Staff turnover, including promotions, departures, and layoffs, weakens the capability to perform the practices organizations establish to increase standardization and decrease risk. This is because individuals who change roles often have accumulated knowledge and understanding about their previous tasks and responsibilities that they can't effectively convey to their replacement. Often, replacements (either internal transfers or new hires) are functionally less competent or experienced than their predecessors.

This "knowledge leakage" adds complexity to IT management's job and suggests that to ensure consistent high performance, IT teams must establish and maintain a robust training program to ensure:

- ☒ Teams know how to use the deployed technology
- ☒ Teams thoroughly understood and adhered to new procedures
- ☒ New team members have sufficient skills to perform their assigned tasks

For example, Table 1 shows the results of research in 2007 demonstrating the impact of well-trained teams on specific operational performance objectives related to four areas: backup and recovery, archiving and retrieval, endpoint security, and client management. With these illustrations, the difference in performance between trained and untrained IT professionals is obvious. Other IDC research describes examples in other IT functional domains (see *Impact of Training: Functional Excellence Leads to Operational Productivity*, IDC #215762, December 2008).

**TABLE 1**

## Comparison of Well-Trained and Undertrained Teams by Functional Area

Functional Area	Impact
<b>Backup and recovery</b>	
1	Backup jobs are successfully completed without failure almost 60% more often.
2	Restore requests are completed within 1 hour of request nearly 75% more often.
3	Restore requests are completed within 24 hours of request more than twice as often.
4	File retrieval events are satisfied by the end user without IT intervention 85% more often.
5	Server backups are administrated/monitored/controlled centrally more than twice as often.
<b>Archiving and retrieval</b>	
1	Compliance with legal and regulatory requirements for archiving email and other content is achieved more than twice as often.
2	Email and document storage volume is covered by archival processes 60% more often.
3	Email content is centrally managed 60%+ more often.
4	Archive retrieval requests are completed within 1 hour nine times more often.
5	Archive retrieval requests are completed within 24 hours 60%+ more often.
<b>Endpoint security</b>	
1	PCs are protected from viruses, spyware, and adware in accordance with IT policies twice as often.
2	Virus, spyware, and adware infections are automatically detected and repaired more than twice as often.
<b>Client management</b>	
1	Client/servers with current backups of system images are available for restoration more than three times more often.
2	User data, settings, and profiles are automatically transferred during system upgrade more than five times more often.

Source: IDC's *Performance Impact Study*, 2007

## FUTURE OUTLOOK

While traditional projects may appear safe and less complex, the IT industry in 2011 is impacted by three key events: a deep global recession and recovery, a radical IT industry transformation focusing on virtualization and "cloud-based services," and a dramatic increase in demand for mobile applications. These forces, interacting with each other, highlight examples of the skills and risks IT managers and project sponsors face:

- ☒ **Global IT spending growth was cut in half between 2008 and 2009.** While the budgets have recovered in 2010 and 2011, it is imperative that projects selected for implementation meet project objectives successfully.
- ☒ **Emerging market growth will outperform the broader technology market.** This suggests that IT projects in emerging countries will be increasingly important to technology strategies. Projects will increasingly be centered in areas where skills have not been traditionally available, so project managers' intention to rely on existing skills will likely fail.
- ☒ **The IT industry's expansion to "the cloud" will accelerate.** This implies new challenges to application deployment and risks to enterprise operations and data. Skills will need to be developed to appropriately take advantage of this evolving platform.
- ☒ **The struggling offline economy will drive more shoppers to the online economy.** As enterprises increasingly use the online marketplace as a customer-facing strategy, the reliability and security of those platforms become more important. This implies IT and customer service skills will need to evolve to ensure the online experience positively reflects the company brand, and projects designed to support or encourage this migration will be increasingly important to enterprise success.
- ☒ **The crumbling of the "business/personal" wall in IT will accelerate — as the economy and the "2.0" culture drive consumer and business technology together.** As organizations adopt (or restrict) Web 2.0 technologies or social networking applications, traditional IT skills become less relevant.

## ESSENTIAL GUIDANCE

Training represents one concrete step IT managers can take to assure project teams possess the skills necessary to reduce failure risk, decrease costs, and increase project effectiveness.

Without specific capabilities within their IT teams, organizations may delay adopting emerging technologies or even more basic changes such as migrating to new operating systems or installing new applications.

Complementary project management skills also contribute to implementation success. These include how to identify and schedule project resources, produce critical path planning, and create project flow charts to help evaluate project progress.

Training that includes reviews of case studies using realistic, project-based methods produces results that align with business objectives.

To pull together elements that reduce cost, grow revenue, and lower risk, IT management must address technology and skills challenges, including:

- ☒ Supporting complex IT infrastructures that align with business strategy and IT efficiency, including cloud computing, social media, and Web 2.0 initiatives
- ☒ Managing IT services to the enterprise, such as enabling access to company services through the Internet and increasing use of SaaS and cloud infrastructures
- ☒ Reducing complexity for internal and external users while assuring enterprise-wide security, availability, and scalability of applications, data, and services or creating IT as a utility
- ☒ Supporting nontraditional uses of technology such as increased analytic and information access requests, green IT, and technology in emerging markets that require a change in the base skills of the IT organization

IT teams must establish and maintain a robust training program to ensure:

- ☒ Teams know how to use the deployed technology
- ☒ Teams thoroughly understood and adhered to new procedures
- ☒ New team members have sufficient skills to perform their assigned tasks

Team talent cannot keep pace with changes in technology without continuous training. Training and metric-based certifications are necessary to maintain an IT team's high level of performance. Just as crack military units continually drill and rehearse to hone their skills, IT personnel must train so they can balance on technology's cutting edge without getting cut.

## LEARN MORE

---

### Related Research

- ☒ *Worldwide and U.S. IT Education and Training Services 2011–2015 Forecast* (IDC #227521, April 2011)
- ☒ *Market Analysis Perspective: US/Worldwide IT Education and Certification — 2010 Difficult Year with Opportunities* (IDC #227122, February 2011)
- ☒ *IDC MarketScape: Worldwide IT Education and Training 2011 Vendor Analysis* (IDC #226469, January 2011)
- ☒ *Worldwide and U.S. IT Education and Training Services 2010–2014 Forecast Update* (IDC #225601, November 2010)

- ☒ *Worldwide and U.S. Corporate eLearning 2010–2014 Forecast: Changing Patterns of Consumption* (IDC #224504, August 2010)
- ☒ *SAP's Landscape Transformation Offering: Service Productization with a Focus on Business Benefits* (IDC #224442, August 2010)
- ☒ *CMO Advisory Best Practices Series: Talent Management in the Marketing Function* (IDC #224210, July 2010)
- ☒ *Impact of Training: Functional Excellence Leads to Operational Productivity* (IDC #215762, December 2008)

---

## **Synopsis**

This IDC study documents the importance of training to IT team success. CIOs and IT make every effort to ensure each project succeeds and produces quantifiable benefits. During difficult economic periods when pressure increases to produce more with less, it is most important that IT managers don't underestimate the impact the skill of their project team has on project success. IDC research shows a tight link between training, team skill, and project success. This document illustrates that link and provides examples of how trained project teams are better than undertrained teams at leveraging the built-in features and functions of a technology or tool.

"IT managers often seek to reduce risk of project failure, decrease implementation costs, and increase project effectiveness. Focusing on the skill of the project team can be an effective way to help achieve these goals," Cushing Anderson, program vice president, IT Education and Certification research.

---

## **Copyright Notice**

This IDC research document was published as part of an IDC continuous intelligence service, providing written research, analyst interactions, telebriefings, and conferences. Visit [www.idc.com](http://www.idc.com) to learn more about IDC subscription and consulting services. To view a list of IDC offices worldwide, visit [www.idc.com/offices](http://www.idc.com/offices). Please contact the IDC Hotline at 800.343.4952, ext. 7988 (or +1.508.988.7988) or [sales@idc.com](mailto:sales@idc.com) for information on applying the price of this document toward the purchase of an IDC service or for information on additional copies or Web rights.

Copyright 2011 IDC. Reproduction is forbidden unless authorized. All rights reserved.