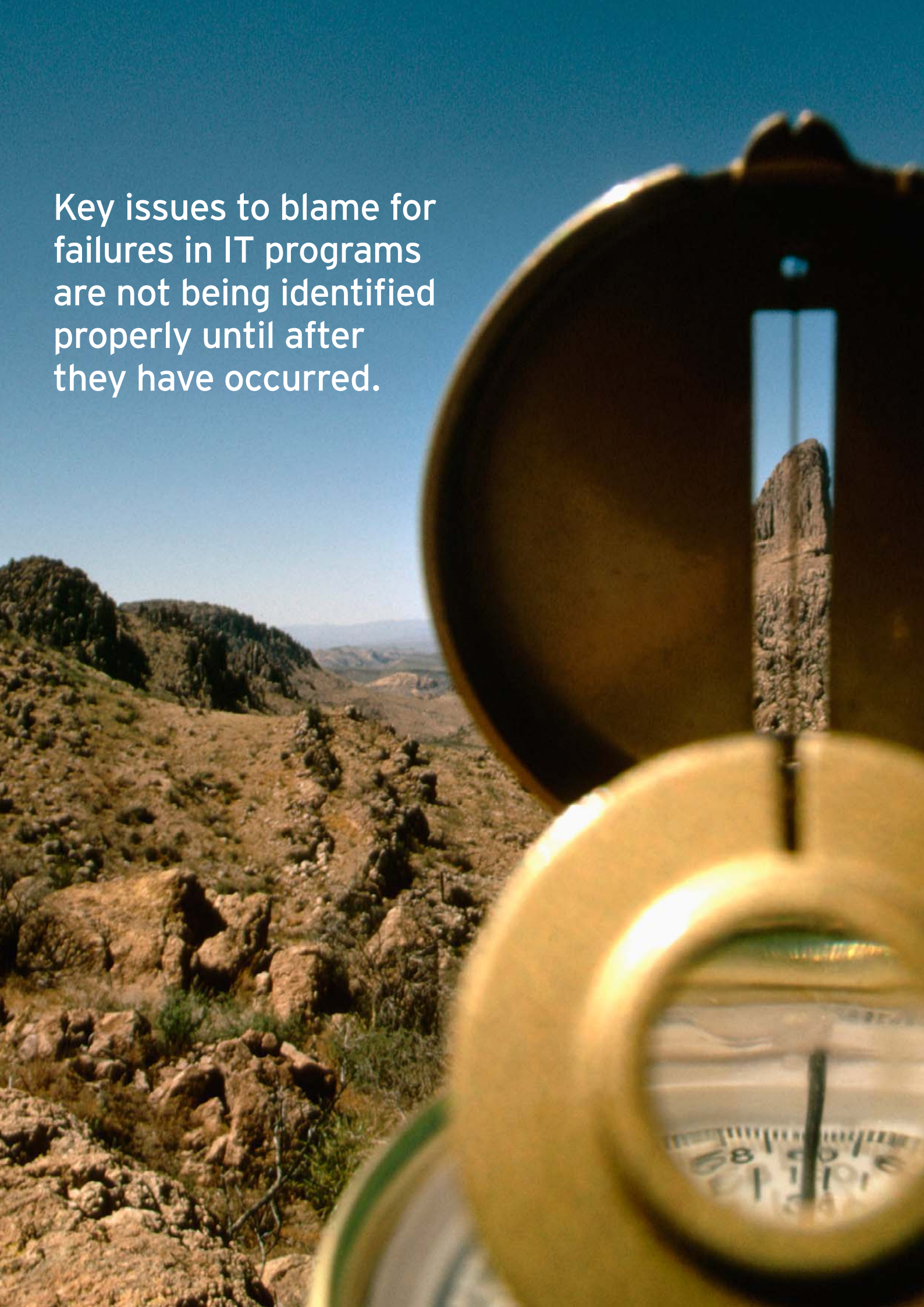



Insights on IT risk  
Business briefing  
September 2011

# Building confidence in IT programs

Facilitating success through  
program risk management

Key issues to blame for failures in IT programs are not being identified properly until after they have occurred.





## Success in IT programs translates to success in business

**We believe there has never been a better or more important time for organizations to review how they plan, execute and realize benefits from strategic IT programs.**

Organizations are looking to IT as a key enabler to help them realize business strategies, improve productivity and obtain a competitive advantage through product and service innovation. IT is a focal point for executives seeking to drive cost competitiveness and transformation agendas that have become part of the global economy over the past three years.

But even as IT investments are again set to increase significantly in the coming years, strategic IT program success rates are still underperforming and in need of attention by organizations looking to spend their hard-earned capital wisely. Strategic IT programs are clearly on the rise, but so are expectations. Organizations are realizing that they must respond to increasing pressure to improve the return on their program investments. Today's strategic IT programs are not only expected to be delivered on time and on budget, but also to deliver multiple, high-level business benefits.

Key issues to blame for failures in IT programs are often not identified properly until after they have occurred. By the time issues are identified (often in a crisis), it's too late for a positive outcome, and even the time for damage control is limited and sometimes missed altogether.

Organizations need to challenge the status quo and ask themselves how they can better manage risks around underperforming programs and improve performance rates to deliver sustained benefits. IT program risk management (PRM) can help to increase the success of strategic IT initiatives. IT PRM provides the means to better protect organizations from common IT program pitfalls and increase the likelihood of delivering successful program outcomes.

# While IT spending is increasing, program

## IT spending scheduled to increase

An upsurge in spending in IT projects and programs is expected. IT research and advisory firm, Gartner, has indicated that worldwide IT expenditure in 2011 is estimated at \$3.6 trillion, a 7.1% increase from 2010. Gartner predicts an increase in IT spending will be sustained at an average rate of 5.3% per year through 2015. Gartner also indicates that approximately 20% to 50% of a company's IT spending will be focused on programs and projects – depending on an organization's initiatives. In 2011, this represents an expected increase in spending of up to \$2.16 trillion on technology-enabled programs and projects.

In addition, Ernst & Young's 2011 report, *Turn risks and opportunities into results*, has identified investing in IT as a top-three priority (see Figure 1 below). In fact, across Europe, America and the Middle East, investing in IT is typically either the top or second-highest priority for executives.

A key driver for the increase in investment in IT is that organizations that have failed to invest in IT in the past few years have run the risk of not keeping pace with business demands for increased efficiency, improved performance and of legacy systems not being supported by software vendors as time progresses.

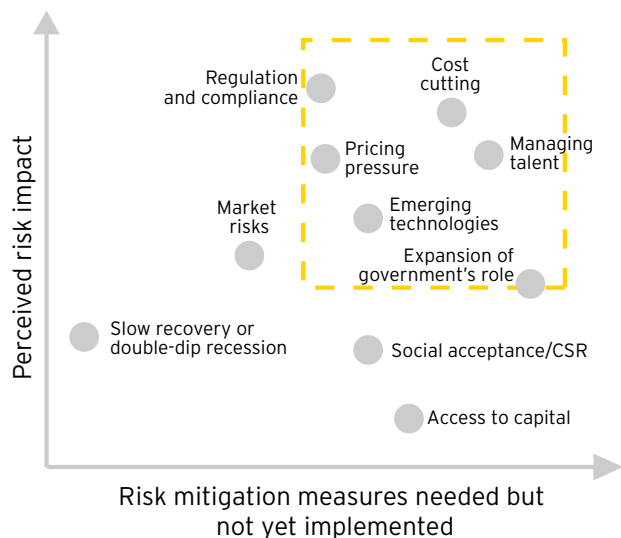
A recent Forrester Trends 2011 enterprise resource planning (ERP) report highlighted that companies are lagging in investing in ERP projects but will need to reinvest soon to keep up to date with upgrades and demand for ERP cloud services. Forrester reported that the "ERP software market was hit hard by the recession but rebounded last year. ... [Roughly] half the companies surveyed are running on product releases that are two releases behind current."

A second driver is the rapid uptake of new technologies, such as cloud computing and mobile technologies, which offer new ways of working and opportunities for efficiency and innovation. Organizations are increasingly competing on innovation in new products and services, with IT and emerging technologies seen as both a risk and opportunity for companies wishing to differentiate in the market and improve productivity and performance.

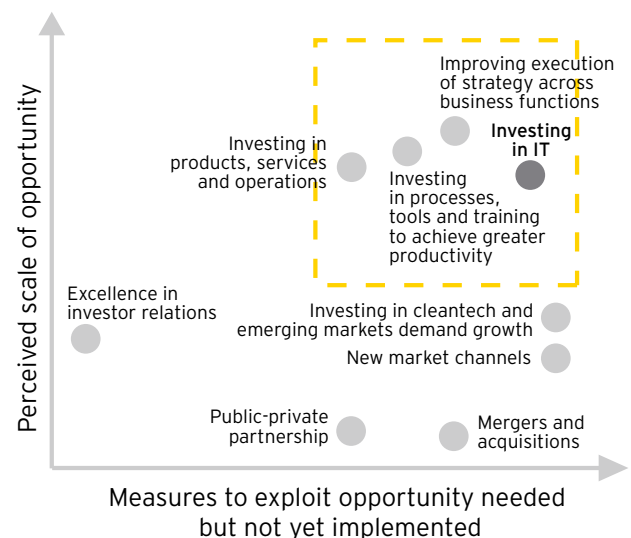
The research highlights that organizations have little choice but to invest continuously in IT and IT programs or suffer the consequences of an aging and underperforming application and infrastructure landscape, ultimately affecting competitiveness.

## Figure 1: Global risks and opportunities

### Top five global risks for 2011



### Top five global opportunities for 2011



Source: *Turning risks and opportunities into results*, Ernst & Young, 2011.

# success rates are not

## IT programs continue to underperform

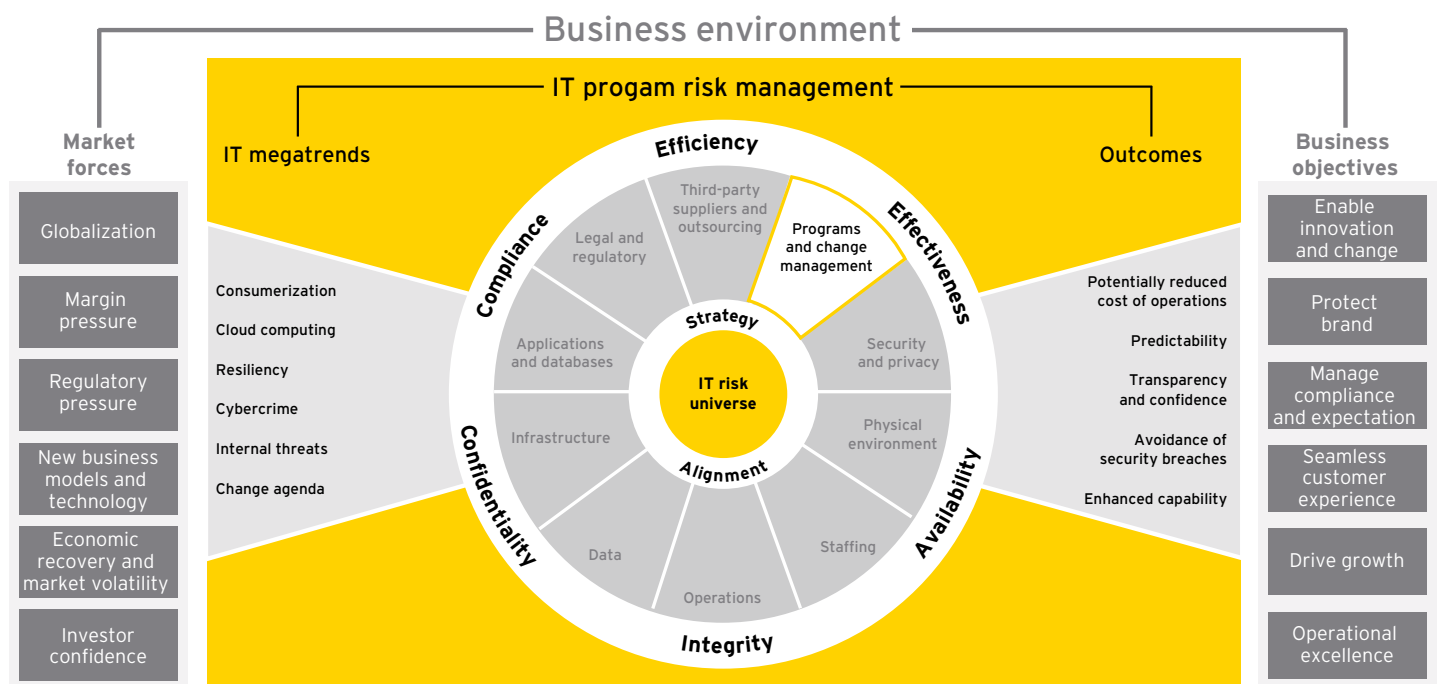
Across all industries, organizations continue poor performance in successfully delivering IT programs, achieving expected outcomes and sustaining benefits. Reports by Gartner show that IT program success rates vary between 30% and 50%, remaining relatively flat over the years. In addition, a PANORAMA study of 1,600 ERP projects in 2010 indicated that 70% of Tier I ERP clients fail to realize at least 50% of business benefits. In addition, 51% of current implementations, at the time of PANORAMA's survey, were at risk of going over budget.

While companies have invested significantly in increasing their knowledge and capabilities in program and project management, this is not visible in the success rates. In our opinion, the lack of improvement is mainly due to increased complexity in business processes and the emerging technology landscape. Organizations are still failing to properly adapt their program approaches to this increased complexity.

## IT program risk is a key megatrend to be addressed

An Ernst & Young report from 2011, *The evolving IT risk landscape*, identified programs and change management as the most significant megatrends in IT that need to be managed. The paper highlighted the risks related to IT programs next to several other risk categories such as cybercrime, cloud computing and consumerization.

Figure 2: IT risk universe



Source: *The evolving IT risk landscape*, Ernst & Young, June 2011

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## Delivering on the promise of IT is now a crucial differentiator for corporate competitiveness.

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### Program failure prevents benefits delivery

Effective program and project management capabilities are now one of the most crucial differentiators for competitiveness in the future market place. Given the focus in 2011 on investing in IT, getting strategic IT programs right could be the make-or-break difference between realizing business growth and staying afloat.

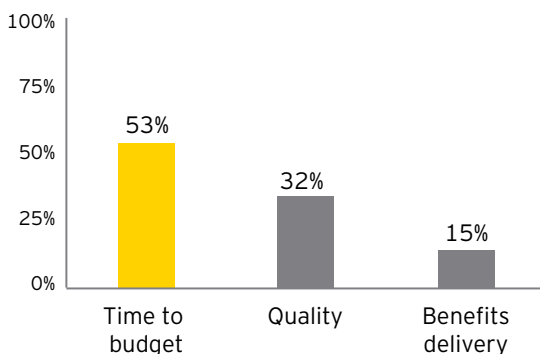
Strategic IT programs should deliver sustainable business benefits to create a competitive advantage. An Ernst & Young survey from 2008, *Managing programs for success*, found that only 8% of respondents viewed their company's ability to obtain business value from strategic programs as poor, while 33% would have liked to see some improvement in this area. One explanation for this may be that in the past, ensuring that programs deliver business value was a priority of only 15% of the companies. A majority of the respondents instead focused on the more traditional measures of success, namely delivering on time and within budget.

Encouragingly, the survey confirmed that a shift toward benefits-driven programs had begun. Of the companies who responded, 72% stated that the primary focus of the future will be to make sure that tangible business benefits and value are realized as a result of their strategic programs.

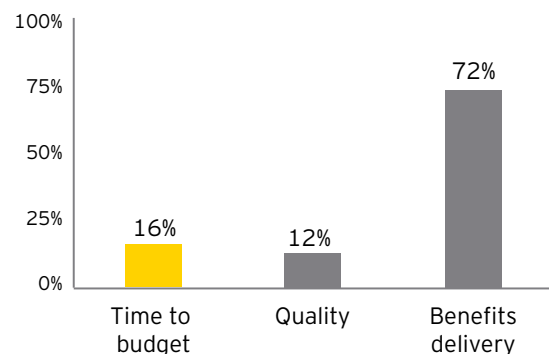
While the failure of strategic IT programs can leave companies exposed to significant increases in costs, reputational damage, loss of customers and disruption of day-to-day activities, we believe that in the future, organizations that fail to manage their strategic IT programs based on realizing business benefits and contributions to innovation and competitive advantage will find it increasingly difficult to be relevant to their workforce, customers and the broader market in which they operate. Indeed, delivering on the promise of IT is becoming a crucial differentiator for corporate competitiveness.

### Figure 3: Focus on strategic IT programs

Historical focus of respondents' strategic IT programs



Future focus of respondents' strategic IT programs



Source: *Managing programs for success*, Ernst & Young, 2008.





# The big picture: IT program risk universe

## There is not one single reason for IT program failure

In our experience, there are usually many factors that result in an IT program failing to deliver its intended objectives and benefits. There are typically a number of risks that, combined, result in

programs failing or underperforming. Management needs to be aware of the organization's specific IT program risk universe and implement strategies up front to manage the most likely risks to program success. The most common causes of complex IT program failures are:

### IT program/project risk universe

Vision and initiation	Planning	Execution	Business acceptance
<ul style="list-style-type: none"> <li>▶ Lack of management support for the program</li> <li>▶ Unresolved or uncertain project vision or strategy</li> <li>▶ Poorly defined business objectives</li> <li>▶ Poorly defined project scope and requirements analysis</li> <li>▶ Inadequate assessment of business impact or priority</li> <li>▶ Poorly defined critical success factors and risk assessment</li> <li>▶ Lack of complexity measurement</li> <li>▶ Unclear governance and decision framework</li> <li>▶ Lack of communication and user group involvement</li> </ul>	<ul style="list-style-type: none"> <li>▶ Aggressive schedule commitments restricting proper planning phase</li> <li>▶ Inappropriate skills, resources and processes in place</li> <li>▶ Inadequate understanding of complexities and accounting for factors necessary to succeed</li> <li>▶ Mismatched balance between time, cost, quality and benefit attainment</li> <li>▶ Ineffective prequalification process</li> <li>▶ Incomplete project charter</li> <li>▶ Poorly defined contractual terms and conditions</li> <li>▶ Lack of defining appropriate performance metrics</li> </ul>	<ul style="list-style-type: none"> <li>▶ Inadequate risk assessment, quantification and allocation of project risks</li> <li>▶ Incomplete or unrealistic cost information</li> <li>▶ Ineffective governance mechanisms and inconsistent decision framework</li> <li>▶ Inadequate representation of the "voice of the customer"</li> <li>▶ Shifting budget, scope and timetables</li> <li>▶ Lack of accountability</li> <li>▶ Adversarial team and supplier relationships</li> <li>▶ Lack of skills or resources in program and project management</li> </ul>	<ul style="list-style-type: none"> <li>▶ Lack of appropriate accountability and approvals</li> <li>▶ Ineffective deployment strategy</li> <li>▶ Ineffective change management</li> <li>▶ Unresolved problems and disputes</li> <li>▶ Incomplete operating and maintenance information</li> <li>▶ Insufficient user satisfaction</li> <li>▶ Scale and volume of defects (e.g., data, test)</li> <li>▶ Missing warranties and guarantees</li> <li>▶ No project go-live review</li> </ul>

### Measuring and monitoring

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>▶ Governance model fails to manage key project internal and external stakeholders</li> <li>▶ Ineffective project management systems</li> <li>▶ Ineffective project performance monitoring and reporting</li> <li>▶ Lack of continuity in project staff</li> <li>▶ Ineffective communication with stakeholders</li> <li>▶ Lack of situational awareness</li> </ul> | <ul style="list-style-type: none"> <li>▶ Ineffective control of change orders</li> <li>▶ Ineffective decision-making and resolution of issues</li> <li>▶ Poor quality management and assurance plans</li> <li>▶ Incomplete design information and changing design and scope requirements</li> <li>▶ Lack of a risk management framework</li> <li>▶ Lack of independent progress monitoring and executive reporting</li> <li>▶ Lack of tracking</li> </ul> |
|--|---|



## The holistic view: program risk implies enterprise risk

Increased IT program complexity not only makes program management more challenging, it is also a major driver of risk. Complex IT programs are associated with considerable uncertainty and ambiguity. As the degree of complexity increases, so does the inherent IT program risk, and therefore the need for diligent IT program governance, risk management and project control. In addition, the increasing importance of IT programs for reaching strategic goals implies that the whole business is put at risk when IT programs fail to deliver expected business benefits.

There is a direct relationship between program complexity and risk that needs to be assessed and managed throughout the program life cycle. The risk/complexity matrix (see Figure 4) outlines how, as the degree of complexity increases, so does the risk, and therefore, the need for greater governance, risk management and program controls to protect the broader enterprise also rises.

**Figure 4: Risk/complexity matrix**




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**The increasing importance of IT programs for reaching strategic goals implies that the whole business is put at risk when IT programs fail to deliver expected business benefits.**

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# Key ingredients for effective IT PRM

## Using IT PRM to build additional lines of defense

The poor historical performance of IT programs and the magnitude of the investments in IT can force organizations to take measures to enhance control and risk management over their strategic IT programs. A proven method of achieving this is to create multiple “lines of defense” against the threat of risk. Organizations are strengthening control by:

1. Appointing experienced risk managers and a risk committee to take charge of the management of end-to-end program risk – in addition to the traditional role that a project management office (PMO) undertakes to log and report project risks and issues.
2. Enhancing the role of internal audit, compliance and enterprise risk functions to provide assurance coverage where possible during the implementation of the program.
3. Appointing an external independent PRM provider who is charged with bringing experience not readily available inside the company or that other suppliers (e.g., system integrators) cannot provide due to conflicts of interest.

In essence, an independent IT PRM approach functions as an additional line of defense for major IT program initiatives. Defenses include:

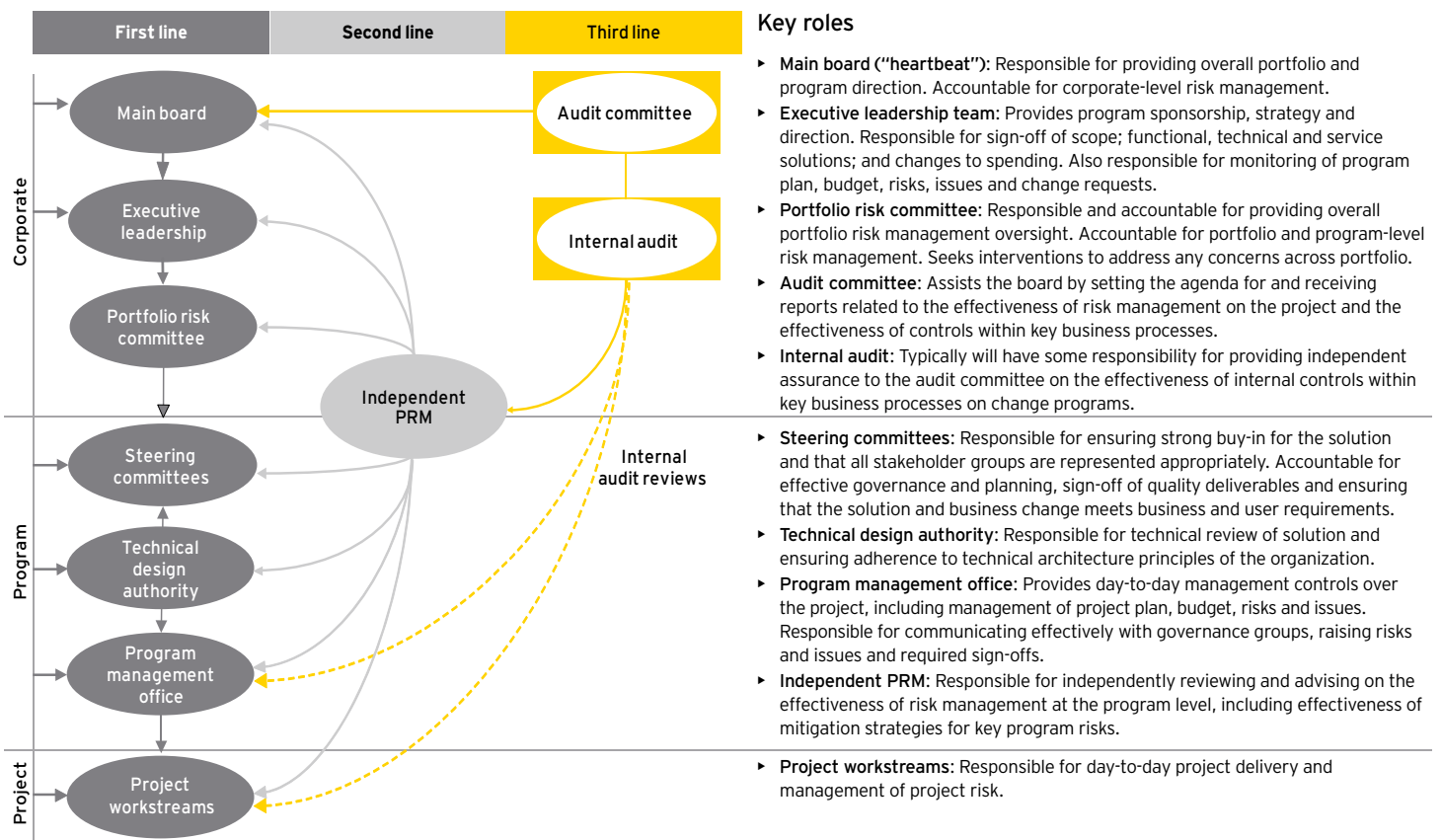
- ▶ **First line of defense** – the most crucial layer of risk management on a program. It typically includes the executive leadership team, program steering committee, program risk committee, technical design authority, the PMO, system integrators (SIs) and the various project workstream leaders.

- ▶ **Second line of defense** – the independent IT PRM role. It can be provided by one independent (mostly external) party, or it can include a combination of internal and external providers such as: an independent (external) program risk/quality assurance provider, operational risk and compliance functions, external auditors and even software providers.
- ▶ **Third line of defense** – typically includes the audit committee and internal audit function. Often seen as the last line of defense when it comes to detecting error and waste in organizational activities, these functions benefit from being able to rely on the outputs of a trusted independent party and brand. An independent IT PRM may even reduce the need for their oversight and control in program risk and assurance activities.

Independent IT PRM often communicates the program and project delivery teams’ activities to executive management (e.g., main board) and the stakeholders who operate in the third line of defense, such as the board’s audit committee and internal audit function.

The IT PRM function acts independently of the project delivery team (first line of defense). It often consists of those experienced with program risk for other companies, providing a “critical friend” to provide a fresh, independent perspective, and providing confidence-building assurance and review activities. The leader of the IT PRM function will typically also sit on the steering committee in an independent capacity to challenge and advise on program progress.

**Figure 5: Lines of defense**





# Building confidence in IT programs through

## Risk-based analysis, good information and deep perspective enable value delivery

Engaging the right IT PRM function is ultimately about building and sustaining the confidence of key stakeholders and having the right information at the right time to make well-informed decisions throughout your journey. Using a proprietary methodology, tools and templates to help embed an IT PRM function, companies are able to leverage our experience of major IT change earned working with the world's largest companies.

Clear, concise reporting within an IT PRM framework process is essential. Key stakeholders need information and findings so they can make fact-based decisions to mitigate risks and/or improve program outcomes. To address this, and based on a risk-based analysis of the most common success criteria for IT programs, we created the IT Program Confidence Wheel – a reporting tool to demonstrate an independent view of IT program confidence and a point-in-time view of the key risks and issues that may affect a successful outcome.

The IT Program Confidence Wheel contains seven confidence elements typically found on IT programs. A typical IT PRM assignment:

- ▶ Starts with an assessment of program governance and project management, and proceeds with:
  - ▶ Solution integrity
  - ▶ Data integrity
  - ▶ Business readiness
  - ▶ Support readiness
- ▶ Ends with a post go-live assessment

## Figure 6: Ernst & Young IT Program

### Sources of PRM

#### *In the program:*




- ▶ Risk manager
- ▶ Quality manager
- ▶ PMO



#### *Outside the program:*

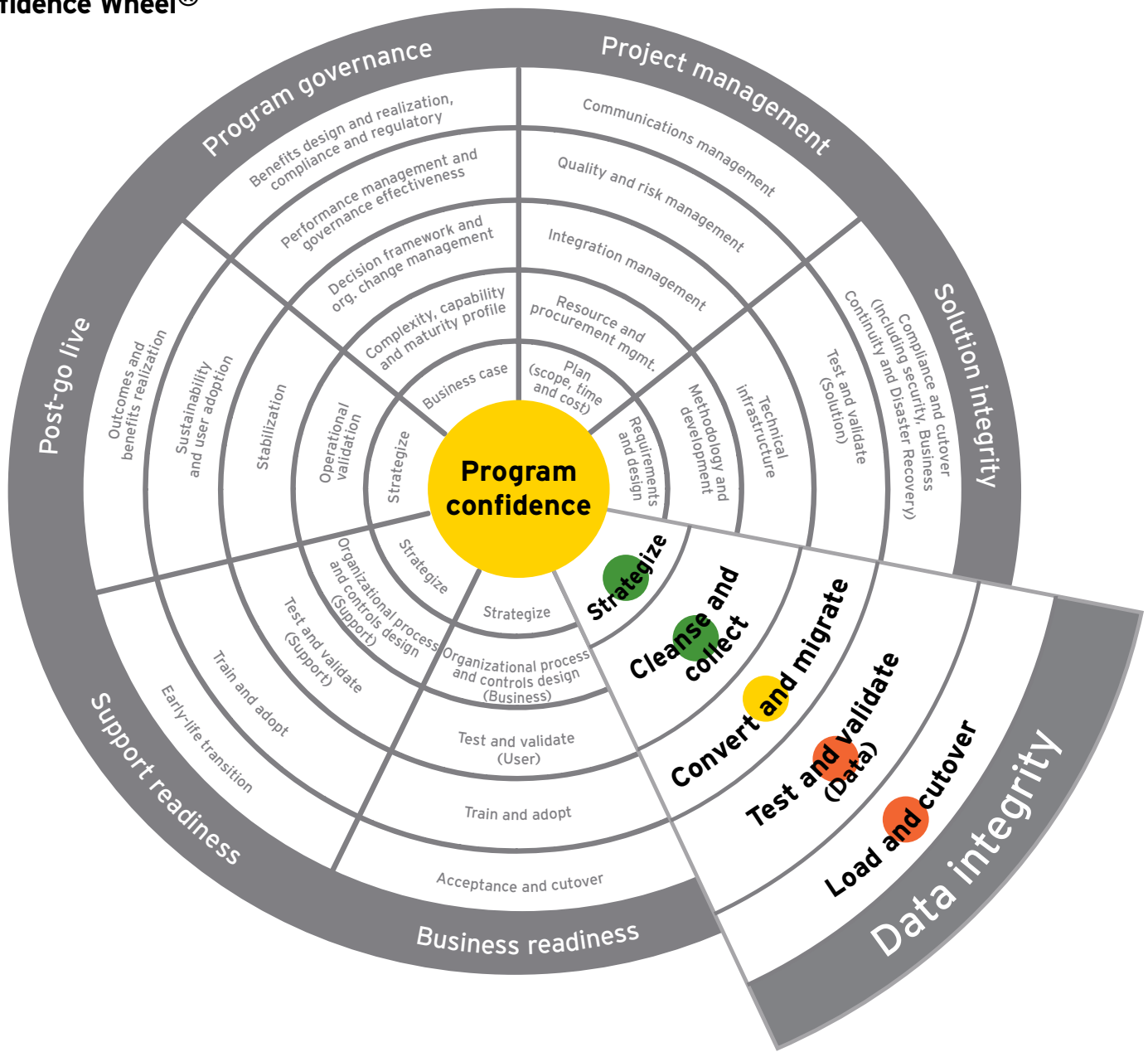
- ▶ Independent PRM
- ▶ Risk committee
- ▶ Internal auditors
- ▶ External auditors
- ▶ Compliance functions
- ▶ Software vendors



-  Immediate intervention required. High-risk area where the impact of not resolving the program is significant.
-  Close monitoring required. There is awareness of a material risk or issue, but appropriate remedial action is in place.
-  Normal monitoring required. Risk or issue appears managed at an appropriate level.

# IT PRM

## Confidence Wheel®





## The path to achieving IT program confidence

First, we focus on the maturity of program governance and project management (top two segments of IT Program Confidence Wheel). An objective assessment of these elements will help understand the maturity of the organizations current processes to deliver the program, taking into account the overall complexity of the program. The analysis provides the foundation for understanding the likelihood of a successful delivery of the program, and what issues may result if there are gaps in these two important program confidence areas. It is important to perform the initial assessment prior to the actual program kick-off to determine how ready the organization is to proceed with the initiative. By performing an initial “readiness to start” assessment, organizations increase the ability to correct any preplanning gaps and increase the ability to influence positive outcomes of the program. All elements of the IT Program Confidence Wheel are commonly assessed throughout the entire lifecycle of the program.

Second, the quality of the deliverables of the program (remaining five segments) are assessed, on an interim basis, as they are delivered throughout the life cycle of the program. In the IT Program Confidence Wheel, there are a number of layers, with the initial activities (e.g., strategy) toward the center. Each layer typically represents a key activity and/or deliverable on an IT program at a point in time. By assessing the activities within each

segment and layer at a given stage gate (e.g., end of design, end of build) we can assess the overall risk profile of the key confidence segment and therefore the overall program at a given point in time.

Our approach is simple and is based on the view that there is a path to achieving IT program confidence in each segment of the IT Program Confidence Wheel. For example, there is a path to achieving confidence in data integrity, which begins with having a robust strategy for data migration, then progresses to effective processes for “cleanse and collect,” “convert and migrate,” “testing and validation” and finishes with “load and cutover.” If all of these are achieving program KPIs and have been independently checked and verified to a high standard, then – subject to no material risks or issues – management can have confidence in a “go” decision on data integrity.

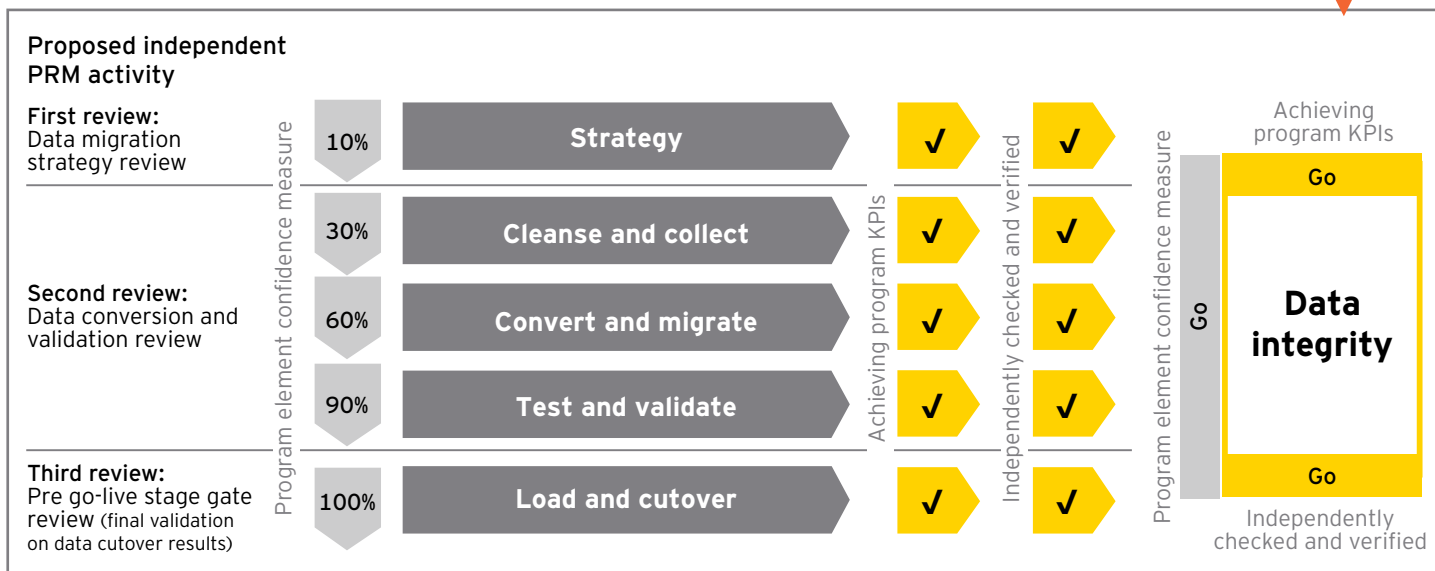
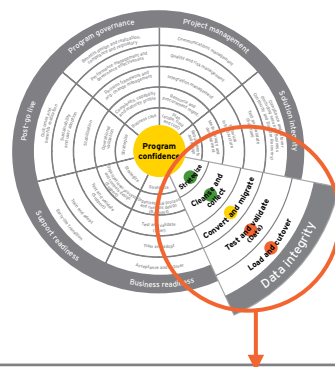
By managing the risks within each segment, an organization can “bank” confidence in each critical element of the program and, over time, progress toward a more transparent and confident view of risk. This informs management before it makes important “go/ no go” decisions. As the program progresses towards go-live, the number of critical risks and major issues should be declining, and the program can narrow its concerns to the issues that are most likely to impact a successful go-live (i.e., potential showstoppers).

IT PRM can play an important role in assessing the outstanding issues that may impact progression to the next stage or go-live and provide an independent perspective to management on the business impact of potentially reduced or accepting outstanding risks and issues.



## Figure 7: Achieving data integrity

Key question: Is the financial and business data to drive business processes and effective management information and reporting tested, proven and ready?



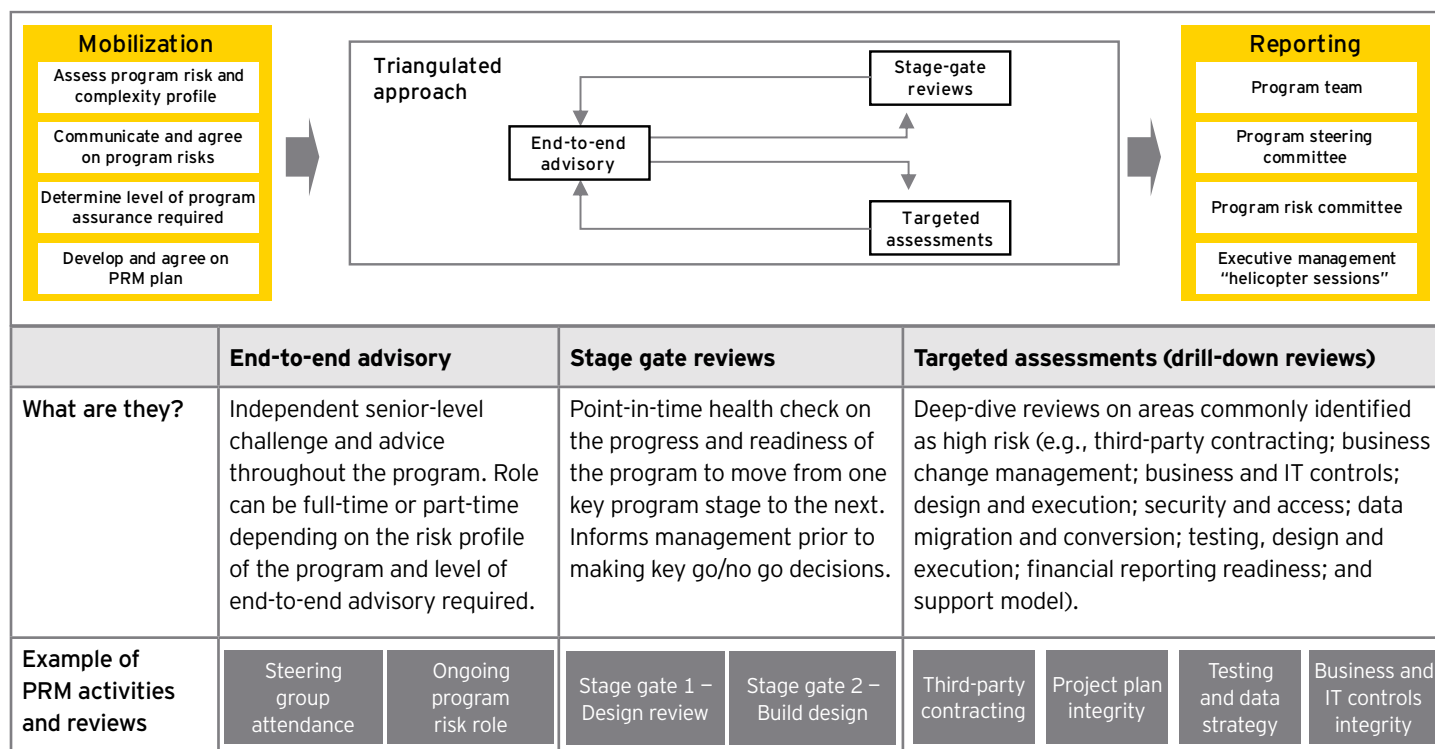


## Method of providing independent PRM

In order to establish a balanced view of independent PRM, we recommend a triangulated approach:

- 1. End-to-end advisory** – Independent senior-level challenge, advice and mitigation strategies for key risk areas throughout the program life cycle. The extent of the role depends on the program’s risk profile and the level of assurance required by the organization. It can range from steering committee attendance to full independent verification and validation services.
- 2. Stage-gate reviews** – Point-in-time “health check” performed at specific phases of a program and often conducted at key transition points between program phases. Typically used as an input to steering committee stage-gate decision-making and designed to inform management of major risks prior to making key go/no go decisions. For programs that are already in-flight (i.e., partially completed), an IT PRM role would typically start with a baseline stage-gate assessment that provides an overall assessment of a program’s health.
- 3. Targeted assessments** – Drill-down reviews of common high-risk areas (e.g., third-party contracting, business change, test strategy, data migration). Outputs provide confidence to management that high-risk areas have been independently checked and verified to follow leading practices.

**Figure 8: Ernst & Young’s approach to developing an IT PRM framework**



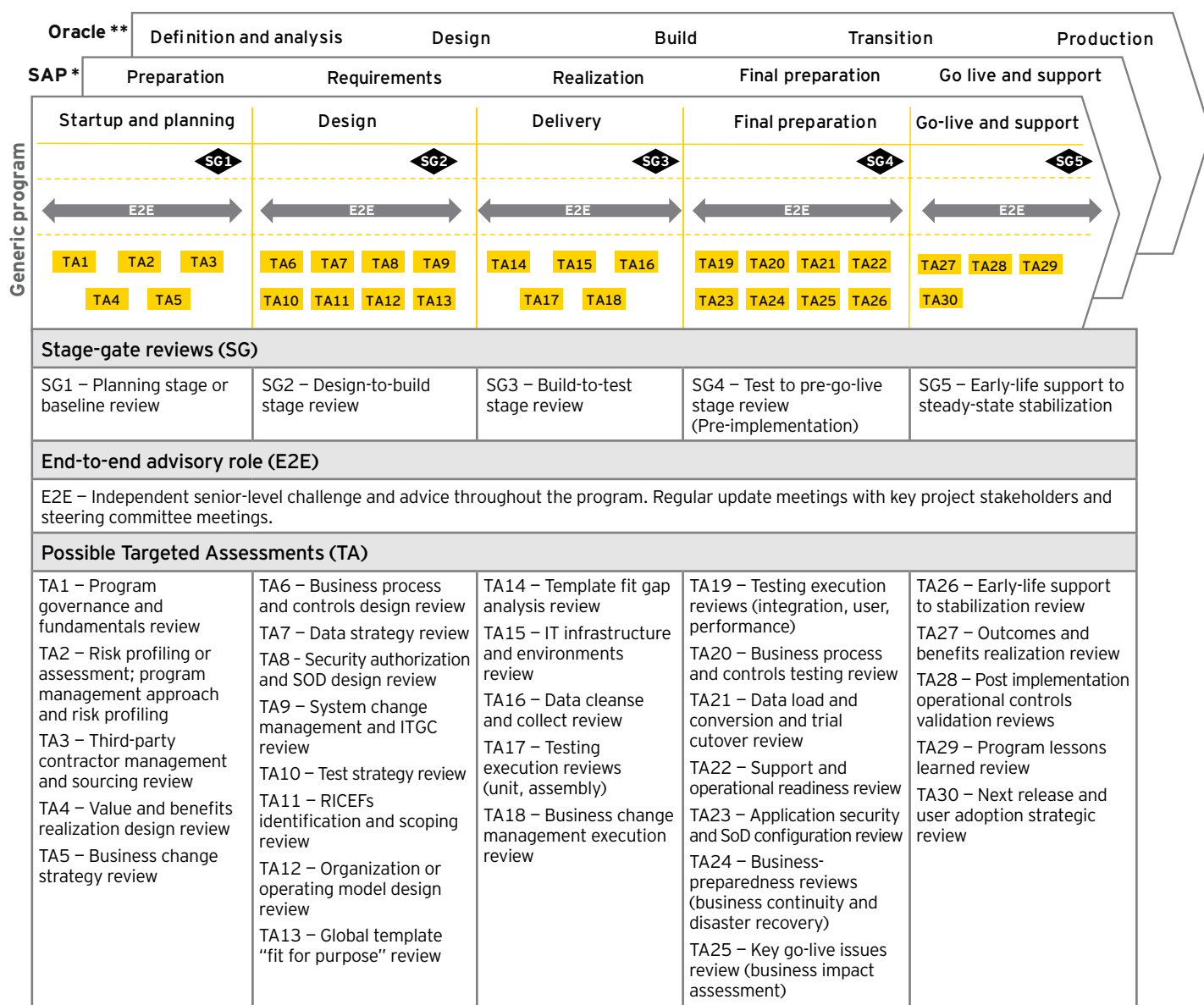


The output of a program risk assessment is an independent IT PRM framework. Ultimately, management's risk appetite will determine the level of program assurance required on any given program or project. A properly designed independent IT PRM framework (see Figure 9) provides management with the opportunity to implement

a series of stage-gate reviews, targeted assessments and end-to-end advisory meetings throughout the program's lifetime.

An independent IT PRM framework should be flexible enough to suit most program implementation models (e.g., ASAP methodology via SAP or AIM methodology via Oracle).

**Figure 9: Example of an independent IT PRM framework**



\* SAP ASAP methodology \*\*Oracle - AIM methodology, for example, can be used as required

# Questions to build program confidence

## The answers to key questions help build program confidence

There are many questions about key confidence elements of large IT programs that must be answered in order to build and sustain confidence in the program's ability to deliver. These questions are common to many large IT programs.

In the absence of an independent analysis of program risk, management's challenge is to determine how well it can trust the information that is being provided to it. The question asked increasingly by executives entrusted with IT programs is: who is checking and verifying that the information I am getting from the program team is complete, accurate and considers the key risk?

Confidence element	Key questions for IT programs
Program governance	Does the business case have integrity? How complex is the program and and is our organization capable of delivering? Are the right governance, change and decision-making processes in place, and are they performing effectively?
Project management	Are the right processes in place so the program is planned, managed and tracked effectively? Does our organization have the right resources and quality, risk and communication processes in place?
Solution integrity	Are the technology solution and its supporting infrastructure and interfaces tested, proven and ready?
Data integrity	Is the financial and business data to drive business processes and effective management information and reporting tested, proven and ready?
Business readiness	Are the new business operating models, processes and controls tested, approved and ready for deployment? Are the organization and its people trained and ready to use the new solution?
Support readiness	Are the support organization, processes and tools ready to support the new solution?
Post go-live activities	Are the activities to support post go-live and the sustainability and adoption of the solution in place and ready?

## IT PRM: high value at relatively low cost

Investments in PRM are typically quite small compared to the overall program budgets and business revenues put at risk. In our experience, independent IT PRM roles should account for approximately 2% to 6% of the overall program budget. Although this may vary depending on the project's risk profile, it is broadly in line with what we see in progressive organizations. While the costs are relatively low, the benefits of PRM are significant. These include:

- ▶ Increased confidence in the integrity of business case and projected benefits
- ▶ Increased likelihood that the program will be delivered on time, on budget and with projected benefits

- ▶ Improved visibility and transparency of program risks and performance
- ▶ Early identification of program-critical risks and issues
- ▶ Practical services to address problems as they arise
- ▶ More informed decision-making as a result of independent reporting
- ▶ Access to independent professional advice on leading program practices
- ▶ Enhanced management control of the program
- ▶ Potentially reduced or eliminated surprises



## Next steps

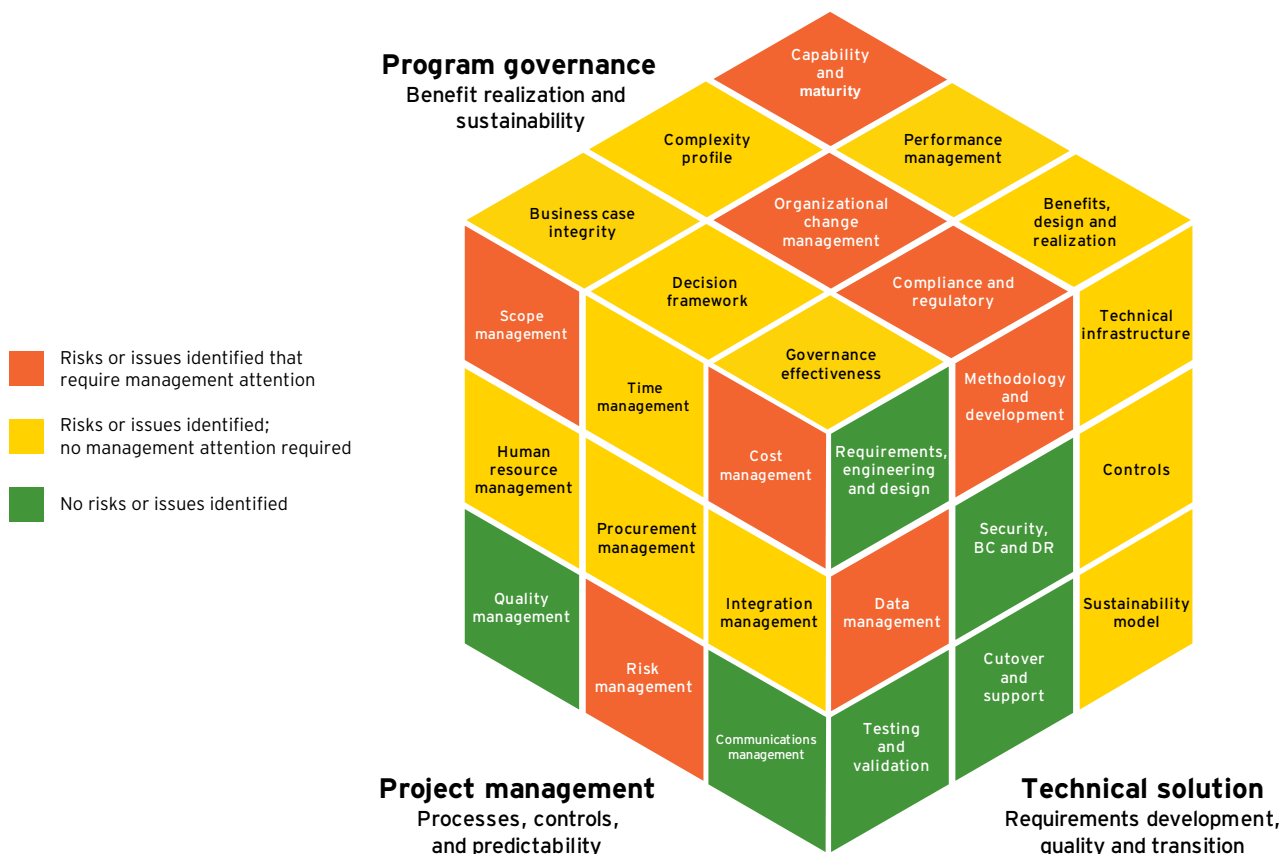
The assessment, as discussed in this paper, is the start of a journey focused on improving risk management in major change programs and projects. The results of the assessment can highlight a number of necessary next steps, including:

- ▶ Assistance in implementation of program risk management assessment for all key programs/projects for continuous monitoring
- ▶ Improvement of the program risk management tools and enablers
- ▶ Predictive analytics and root cause analysis and modeling of key relationships between key project factors
- ▶ Analysis to highlight hidden issues, risk and identification of the root cause of issues such as a detailed program schedule analysis

- ▶ Utilization of analytics simulations to predict program outcomes to undertake appropriate actions if necessary

To help better understand next steps, the graphic below – what we call “the cube” – is a detailed framework and facilitator. The cube focuses on three primary dimensions: program governance, project management and technical solution. This framework is an extension of the IT Program Confidence Wheel (shown on page 11). The two are mutually complementary although the cube is primarily used for complex or critical organization program initiatives and facilitates a full life-cycle approach.

**Figure 10: Program Risk Management Cube**



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IT is a key to allowing modern organizations to compete. It offers the opportunity to become closer to customers and more focused and faster in responses, and can redefine both the effectiveness and efficiency of operations. But as opportunity grows, so does risk. Effective IT Risk Management helps you to improve the competitive advantage of your IT operations, by making these operations more cost efficient and managing down the risks related to running your systems. Our 6,000 IT Risk professionals draw on extensive personal experience to give you fresh perspectives and open, objective advice – wherever you are in the world. We work with you to develop an integrated, holistic approach to your IT risk or to deal with a specific risk and information security issue. We understand that to achieve your potential you need tailored services as much as consistent methodologies. We work to give you the benefit of our broad sector experience, our deep subject-matter knowledge and the latest insights from our work worldwide. It's how Ernst & Young makes a difference.

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