KERRY R. WILLS

# ASSESSING IT PROJECTS

## TO ENSURE SUCCESSFUL OUTCOMES




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# PREFACE

For two decades I have managed several large information technology (IT) programs totaling more than one billion US dollars in size, as well as assessed and remediated several troubled programs. Therefore, I have both received and conducted many project assessments and also have a deep empirical background in how to run technology projects and programs. Based on this experience, I decided to write this book on project assessments, taken from the perspective of a practitioner of project management.

I believe that successful information technology project delivery is a result of a well-organized project structure and the execution of the project using strong project management processes. Therefore, this book will focus mainly on the areas of project structure and project management, and less on the software delivery lifecycle (SDLC) process.

The intention is not for this book to be a formal model on how to perform IT audits, as there are plenty of industry standard materials and organizations that do this well. Rather, the intention is to focus on the content of the assessment which includes the main functions of project management and delivery (e.g. schedule management, resource management and program structure), and how to assess that they are structured and being used properly to ensure successful project outcomes.

This book is organized as a reference guide for assessing the key project management functions within a project. It also uses real world project management experience to identify important concepts to consider, themes to look for,

checklists which can be leveraged, and case studies from real assessments to demonstrate the main points.

On the cover of this book is a picture of a compass which I think is an appropriate metaphor for how this book is written and intended. The focus should not be on the markings on the compass, or how shiny it may be, but on how it is used and the direction in which it is pointing, to enable the user of it to meet their destination. Similarly, a project assessment is not about checking boxes and having the best framework for auditing but rather ensuring that the use of the assessment optimizes value, and ultimately enables the projects to be successful (and thus the title of this book).

## ABOUT THE AUTHOR

Kerry Wills has worked as a Consultant and a Project Manager for Fortune 500 corporations on multi-million dollar technology projects since 1995. During that time he has gained experience in several capacities; as a program manager, project manager, architect, developer, business analyst and tester. Having worked in each of these areas gives Kerry a deep understanding of all facets of an information technology project. Kerry has planned and executed several large programs, as well as assessed and remediated several troubled programs.

Kerry is a member of Mensa and has a unique perspective on project work, resulting in 11 patents, published work in project management journals and books, and speaking engagements at dozens of project management conferences and corporations around the world. Kerry has written two prior books focused on the evolving skills of project managers (*Essential Project Management Skills* in 2010) and on running programs using a consultative approach (*Applying Guiding Principles of Effective Program Delivery* in 2013).

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# CHAPTER 1: CONTEXT

Increasingly, corporations are investing more money into information technology (IT) solutions and projects. Forrester Research estimated that worldwide spending on information technology in 2013 topped two trillion US dollars (Forrester 2013). A significant amount of this spend will come in the form of IT projects and programs. The Standish Group estimates that we spend more than $250 billion each year on IT application development of around 175,000 projects (Standish, 2014).

In addition to the increased spend on technology, there are several other trends in the marketplace which should be recognized. *Figure 1.1* highlights some of these trends with their associated impacts on technology projects.

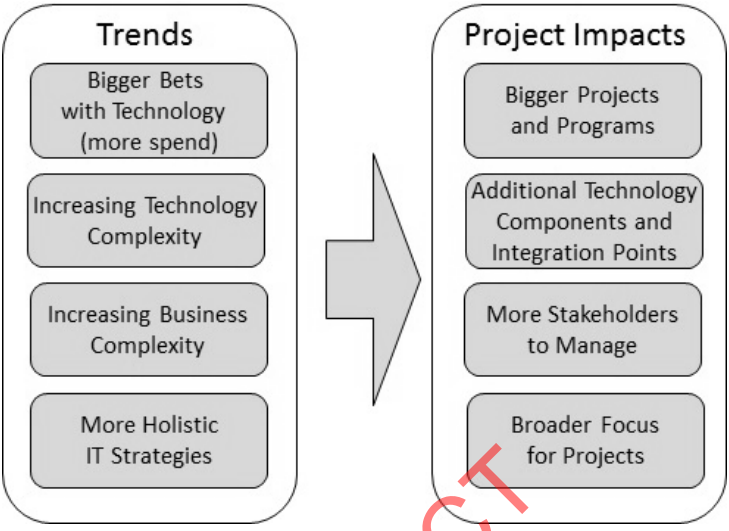


**Figure 1.1: Business and technology trends impacting projects**



*Market trends*

- Corporations are placing larger bets on technology investments and strategies, meaning they are spending significant amounts of money on technology solutions, products and projects. Even one decade ago, a program costing 25 million US dollars was considered "big", and now it is not uncommon for a corporation to be managing multiple programs that cost more than nine figures in US dollars, and that span more than three years in duration. Technology can be used as a strategic advantage for corporations, and so technology projects are getting more funding than ever before, for corporations to remain competitive in the marketplace.
- Technology is increasingly becoming more and more complicated with multiple tiered architectures, complex

infrastructure designs, many different integration points between applications, and thousands of customized and packaged solutions being introduced into the marketplace.

- Business trends also continue to evolve to more complicated organizations, processes and operating models. One example includes corporations becoming more specialized and tailored to customer's interests which means more deviations of business products which need to be configured to meet differing customer expectations.
- As corporations increase their spend on technology, they are also introducing larger and more holistic technology strategies, such as standardizing on specific technology assets, or looking for ways to rationalize large portfolios of technologies, infrastructure, applications and software products. There is also the increase in cyber attacks and security threats, requiring ever more complex and expensive security packages.

As these market trends evolve, they have implications on corporations and how they invest their money and manage their operations. These implications also then influence how technology projects get identified, managed and tracked.



*Impact of trends*

- Corporations making larger bets with technology results in an increasing size of programs, projects and workstreams. This now requires multiple project managers and resources to work across the different projects (such as end-to-end requirements, solution or testing leads). These projects also have interdependencies with each other which need to be planned out and managed.

- Increasing complexity of technology means there are now more applications, interfaces and products involved in the technology solutions. This additional complexity results in more technology components and assets that have to be planned for, designed, built, integrated and tested. Also, the increasing risk of cyber attacks means additional security technology is required in the solutions.
- Increasing business and organizational complexity results in more project stakeholders which need to be understood, managed and communicated to. It is not uncommon today for a project to have many stakeholders, from different organizations, that have different agendas and expectations.
- Broader technology strategies also impact projects by introducing additional considerations, such as designing solutions which may have to consider requirements beyond just the project. Another example is using enterprise standard technology solutions, which may not exactly meet the business requirements but are mandated.



Because of these trends and associated impacts, it is clear that projects are becoming larger, more complex, and more difficult to manage. As a result of this increasing complexity, project success rates remain very low. The Standish Group publishes a report of project success and failure every year based on comprehensive analysis, and the following metrics demonstrate the challenges (Standish 2014):

- 31% of projects will be cancelled before they get completed.
- 52.7% of projects will cost nearly double (189%) of their original financial estimates.

- Only 16% of projects get completed on time and on budget; with a rate of 9% for large corporations.
- Completed projects deliver on approximately 42% of the originally planned scope and features.

There are consequences to these project failures which can go beyond delayed schedules, incomplete scope and additional cost. Some of the impacts can include the following:

- A delayed capability which would enable a corporation to enter a new market, deploy a new business product, or have a competitive advantage in their industry.
- A delay to critical infrastructure which could impact corporation operations and possibly security as well.
- An impact to a customer-facing capability which would, in turn, result in an impact to customer satisfaction, loyalty and brand reputation.
- Possible compliance risks and penalties associated with missing key government mandated milestones.
- Any of the above items could impact the corporation reputation in the marketplace, as well as the stock price and stockholder confidence.

With corporations investing more money into technology projects and success remaining low, with significant implications, it is critical to ensure that the projects meet their objectives and commitments. One way of doing this is to perform an assessment, or audit, of projects at key points during their schedule, to look for trends, gaps or challenges, and to take some action to minimize, or mitigate, the risks.

This book was written with the intent of identifying and structuring how to perform an IT project assessment, along with some important concepts to consider. The book is organized into five main sections:

1. *Approach* – this first section will identify the types of assessment that can be conducted, and then outline the approach for conducting an assessment, with the key steps in the process. This section will also identify the differences between a project and program assessment, as well as key considerations based on the experiences of the author, having conducted and received many project assessments.
2. *Plan* – this section reviews the activities and considerations required to plan for the assessment, including determining which approach to take, developing the assessment plan, preparing the inventories of questions and documents, and planning for any logistics required to conduct the assessment.
3. *Collect information* – the third section details out how to collect key project information from interviews and document reviews. The information is organized into several functional areas of managing projects including finance management, scope management and schedule management. Each function will be described, along with key questions to ask during the interviews, and documents to look for. There will also be considerations, and a case study for each area, to provide a real world context.
4. *Assess and recommend* – this fourth section focuses on what to do once the relevant project information is gathered and gets assessed. This includes looking for consistent themes, key considerations to be aware of,

identifying challenges and gaps, and then providing a set of practical recommendations to mitigate, or address, the risks, challenges and themes which have been identified.

5. *Package and present* – the last section of the book highlights the best ways to package the assessment for different stakeholders, and then present the findings in a way that conveys the key messages of the assessment. It also provides some examples of how to package the findings, based on different audiences or stakeholders.

The book also contains a summary section which highlights the key points from the book, as well as providing some checklists which can be used in conducting assessments. These include a list of common IT roles, interview questions by role, and key focus areas for project document reviews.

The targeted audience for this book is professionals who are assessing projects, such as internal auditors, framework auditors, project assessors or external consultants. This book can also be used for project managers looking for a comprehensive view of key artifacts and an approach for managing projects, or as a means of preparing for an assessment of their project. This information can be used to assess projects reactively but can also be used proactively, as a checklist of considerations and activities to plan, and manage, a project. Note that this book assumes that there is proficiency in project management principles of the person/team performing the assessment, and therefore does not go into details for each project management topic.

# CHAPTER 2: ASSESSMENT APPROACH

In order to optimize the process and maximize the outcomes of a project assessment, it is important to take a methodical and deliberate approach to the review. This chapter will identify several types of project assessments, and then detail out the key steps performed during an assessment. The chapter will also distinguish between project and program assessments, and provide some insights around key lessons to consider when determining the project assessment approach.



## 2.1 Types of assessments

There are several types of information technology project assessments which can be conducted. *Table 2.1* identifies and describes the most common types of project audits or assessment with their associated focus areas, and identification of what type of resource is typically conducting the assessment.

**Table 2.1: Assessment types and their characteristics**

| Type | Description | Focus | Assessor |
|---|---|---|---|
| Project Audit | Larger initiatives with high cost or significant benefits being assessed for risk. May be part of a corporation risk management | Focused on delivery risks, adherence to corporation standards and controls. | Generally performed by an internal audit organization within the corporation where the project is being |

| | | | |
|---|---|---|---|
| | approach. | | delivered. |
| Software Delivery Lifecycle (SDLC) Assessment or Phase Gate | In some SDLC frameworks there are audits, or gates, where a project needs to confirm compliance before moving on to the next phase. Can also be done at the end of the project for lessons learned. | Adherence to software delivery lifecycle standards, or completion of one phase before moving to the next. | Generally performed by internal SDLC framework team. |
| Troubled Project Assessment | Requested by senior management to assess projects which have significant risks and issues. | Understanding risk and problem areas, with the intention of providing recommendations to remediate. | Generally performed by external resources (e.g. consultants) that have large project experience. |
| Post Implementation Review | Facilitate and document lessons learned after a project has been completed. | Lessons learned and best practices which can be used to augment future projects and the corporation frameworks. | Generally performed by the standard framework team. |
| Readiness Assessment | Review high level requirements and plan to determine if the project should be funded. | Scope, cost and schedule for an initiative. | Could be performed by audit, consultants, or a portfolio review team. |



While there are different types of assessments, the approach for each of these types of project assessment is roughly the same. The content of the themes and recommendations, as

well as the packaging, may be different, however, since these types each have slightly different objectives and audiences. Note that the word "assessment" will be used going forward in the book as a general representation of all of these types, and where there are differences they will be called out.

## 2.2 Approach

At the highest level, conducting a technology assessment requires four basic steps which are outlined in *Figure 2.1*. The assessment needs to be planned out, followed by a period of collecting key project information from various sources. Following this, the assessment team analyzes the information and determines some recommendations. Finally, the assessment is packaged, and presented, to key stakeholders.



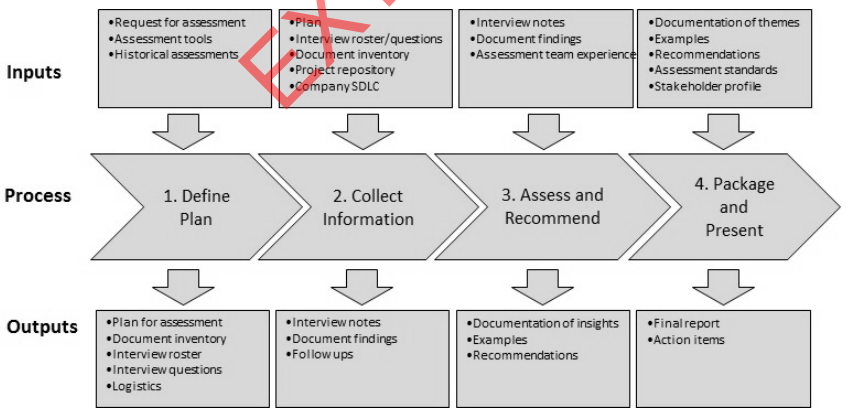


**Figure 2.1: Typical assessment approach**

1. *Define plan* – the first step in the assessment process is to determine the plan for the review. This is the pre-work before the assessment starts, and includes the planning around the approach to take, which team members to interview, what questions to ask during the interviews, what project documents to review, and any logistics required to perform the assessment.
   a. Inputs
      i. *Request for assessment* – usually an assessment is requested by a project stakeholder that has a specific set of objectives for the assessment (e.g. identify risks, confirm controls, etc.), or this could be a planned review as part of a standard delivery phase gate framework, or a corporation audit schedule.
      ii. *Assessment tools* – collection of any standard processes, templates, checklists or documents which will be used when conducting the assessment.
      iii. *Historical assessments* – any similar project assessments conducted which can be leveraged, or referenced, to develop the plans, questions or inventories.
   b. Process
      i. *Determine assessment approach* – document how the assessment will be conducted which could include using a scoring model, or focusing more on qualitative risks and gaps.
      ii. *Develop the plan* – this should include any preparation activities, steps required to collect information, the assessment and recommendation activities, as well as activities to prepare, and deliver, the report. The plan should include activity durations, dependencies, start and stop dates, and

the names of the people assigned to the activities.

iii. *Document the inventories* – the key to a successful assessment is in having the right information, so it is important to determine what information is needed. Inventories should be developed around what documents are needed, which people should be interviewed, and what questions to ask during the interviews.

iv. *Plan for the assessment* – logistics need to be considered and accounted for, such as areas to conduct the interviews, access to documents, email protocols, communications to team members, and scheduling a kick off meeting.

c. Outputs

i. *Plan for the project assessment* – this includes activities aligned to the determined assessment approach, with dates and resource names assigned to each.

ii. *Inventory of documents to review* – identifies which types of documents and evidence are needed to meet assessment objectives. These could be grouped by project function (e.g. schedule management, resources and vendors).

iii. *Roster of people to interview* – since project teams have different roles, the targeted roles and specific named resources should be documented (e.g. business analyst, tester and developer).

iv. *Inventory of questions to ask* – different project roles will have specific focus and insights and therefore require targeted questions, so questions should be organized by role.

v. Logistics including meeting locations, access to documents and communications.

2. *Collect information* – once the assessment begins, it is important to collect as much relevant information as possible to inform the analysis. There are two primary methods of collecting information; interviewing project team members and collecting project documents.
   a. Inputs
      i. *Assessment plan* – this will lay out the key steps and timelines to collect the information, with the associated team members performing the activities.
      ii. *Interview roster and questions* – collect information through interview questions tailored towards team members, and soliciting role-specific insight.
      iii. *Document inventory* – collect relevant information contained in project documents related to specific project functions and the objectives of the assessment.
      iv. *Project repository* – the primary source of documents maintained by the project team.
      v. *Corporation SDLC framework* – many corporations have standard frameworks that they use for application development. This will be valuable for understanding the delivery expectations of the corporation for activities, templates and roles.
   b. Process
      i. *Conduct interviews* – facilitating conversations with key project team members and stakeholders to gather insights, observations and perceptions regarding the project, and aligned to the objectives of the project assessment.
      ii. *Assess documents* – reviewing key project documents supporting various project functions.

c. Outputs
    i. *Interview notes* – key points, quotes and observations from the team member interviews.
    ii. *Document findings* – key findings, observations, and comments from the review of project documents.
    iii. *Follow ups* – as a result of interviews and document reviews, there will be action items which require attention. These should be used to iterate through this step of collecting information.

3. *Assess and recommend* – review the outcomes of the project information collection step, looking for trends, risks and areas of improvement. Then, determine practical recommendations and action items for improvement opportunities and the mitigations of risks.
    a. Inputs
        i. *Interview notes* – any key points, insights and perceptions identified by project team members.
        ii. *Document findings* – any relevant findings, facts, examples and evidence found in the project documents.
        iii. *Assessment team experience* – the assessment team should come with empirical backgrounds in project delivery and project assessments which can be used to determine recommendations based on their experience and history.
    b. Process
        i. *Assess inputs* – review the collected information and look for "themes" that span across project documents and interviews. It is also important to gather specific examples to support the themes which will be useful for packaging and presenting the assessment, and add to the credibility of the

review.

ii. *Identify gaps* – compare the discovered project information to corporation standards and the assessment objectives, to look for any gaps, challenges or risks.

iii. *Develop recommendations* – develop a set of actionable recommendations to remediate identified challenges, close gaps, and mitigate project delivery risks.

c. Outputs

i. *Documentation of themes, gaps and observations* – these are the aggregate insights and observations based on the assessment of information collected.

ii. *Examples* – specific points, facts, or project documents which support the findings.

iii. *Recommendations* – aligned to the identified gaps, risks and challenges, with the intention of improving the project delivery. These recommendations should be aligned to the objectives of the assessment.

4. *Package and present* – package the analysis, findings and recommendations, and then present them to key stakeholders.

a. Inputs

i. *Documentation of themes, gaps and observations* – the results of the information assessment.

ii. *Examples* – these could be documents, or facts, which substantiate the documented themes.

iii. *Recommendations* – any identified actions that the assessment team is proposing to address the noted risks and challenges.

iv. *Assessment standards* – any standard templates or processes required to package the assessment

report.

v. *Stakeholder profile* – an identification of the key stakeholders to be presented to and their profiles, which could inform the way that the report gets created and presented.

b. Process

i. *Package the report* – organize the assessment into the report which includes the findings, themes and recommendations. It can also include the approach taken, and a list of people interviewed and documents reviewed, as appendix materials.

ii. *Communication plan* – definition of the plan to communicate findings and recommendations.

iii. *Present* – reviewing the report with key stakeholders and senior management.

c. Outputs

i. *Final report out* – including supporting materials, summary and details.

ii. *Action plan* – listing of key actions, with names and dates associated to them. Actions may include follow ups on the assessment, and future reviews of progress.



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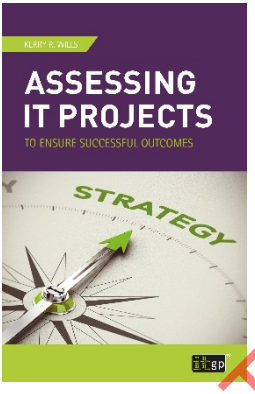
# Assessing IT Projects to Ensure Successful Outcomes






- A comprehensive reference guide that focuses on the assessment of IT projects.
- Interspersed with case studies based on the author's extensive experience delivering projects.
- Provides exhaustive guidance on structuring and conducting an IT project assessment, from planning to presentation.

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