

Summary Report

Project Status Overview

May 19, 2021

Product Quality Enhancement

Improving the quality of our top selling widget by increasing the reliability of the parts used to make it.



Project Manager:
Angela Murdock



Project Type:
Support



Status:
Active



Project Phase:
Executing

Background



About TrueProject

TrueProject Team is a compact solution that identifies current and potential project problems, their root causes, and level of significance. TrueProject Team is delivered by TrueProject, a Strategic Project Intelligence solution. It leverages TrueProject's assessment process and extensive best practices bodies of knowledge to collect and analyze all the information necessary to drive success.



In-depth Research

TrueProject Team utilizes TrueProject's Best Practice Repository. These best practices serve as a core component, that when combined with its patented reflexive question engine and control room processes, form the foundation of TrueProject's ability to provide early warning to otherwise hidden project problems. This capability with the statistical evaluation of thousands of projects, helps to ensure increased project success for TrueProject organizational users.

Scope of this Analysis



Project Risk

Evaluation of the status of your project from a portfolio-based approach. Utilizing three main project types, Strategic, Key Operational, and Support, allows organizations to assess risks and incorporate better management practices to the project. TrueProject's Project Risk assessment was formulated and based upon John Ward's extensive research into failed Information Technology projects. Throughout his research, he came across a study completed by David Bentley to identify the different number of major risk factor categories. In this, he found that there was a list of specific factors that contributed to project failure. This list of key success factors he created were based on time, quality, and cost parameters. There was evidence that over 50% of the failed IT projects they observed did not have any of these three parameters.



Early Warning Signs

Timely, objective, actionable information to avoid project failure. Institutionalizing Early Warning Signs allows you to preserve funding by identifying failed projects while they are still developing. TrueProject's Early Warning Signs was formulated and based off the studies that information systems research scientist, educator, and expert witness Leon A. Kappelman had conducted. In his article "Early Warning Signs of IT Project Failure: The Dominant Dozen," he had developed a hierarchy of Early Warning Signs and used it to breakdown the factors and categories that affect the outcomes of any project. As seen in the chart below, Kappelman had separated the Early Warning Signs into two types of indicators, four IT Project Failure Categories and 12 Early Warning Signs of IT Project Failure.



Team & Project Pulse

Gathers data from all stakeholders for early visibility of potential project problems. It analyzes management, quality control, associated risks, team morale, and underlying capabilities. TrueProject's Pulse Assessment was based upon research conducted by the Public Health Foundation and the Iceberg of Ignorance phenomenon. Studies have found that in an organization, executives know the least about project status and development. It has been recorded that regarding project problems, executives only know 4%, middle management only knows 9%, supervisors know 74%, and staff knows the entire 100%. This lack of communication unintentionally creates negative spin for an organization, preventing it from succeeding on time, on budget, and with the expected deliverables.

Summary



Observations:

- 13 out of 15 (87%) assigned to the assessment participated. Two people surveyed did not respond to the assessment questions.
- 1 KPI, People Issues, has a green health score.
- 18 KPIs are flagged as warnings; 9 yellow and 9 orange
- 2 KPIs, Project Size and Requirements Stability, flagged as red.
- Looking at the KPIs by people vs process groups, it appears that [make statement].
- Baseline (presumably the original) has been exceeded, with the estimate at close being 70K over the original estimate.
- What started to be a 5-month project appears to be taking several years.

Participation	
87%	
Team Role	Rate
Bus Analyst	100%
Project Manager	100%
Project Office	100%
Sponsor	100%
Team Member	75%

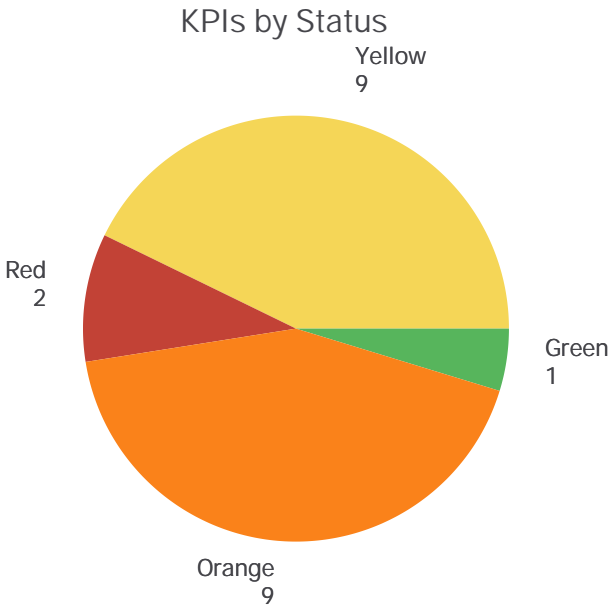
Overall Health	
73	
KPI Color	KPI Color Count
Orange	9
Yellow	9
Red	2
Green	1

Cost	
0	
On Budget	
Baseline Cost	\$85,000
Spend to Date	\$78,000
Estimate at Close	\$85,000

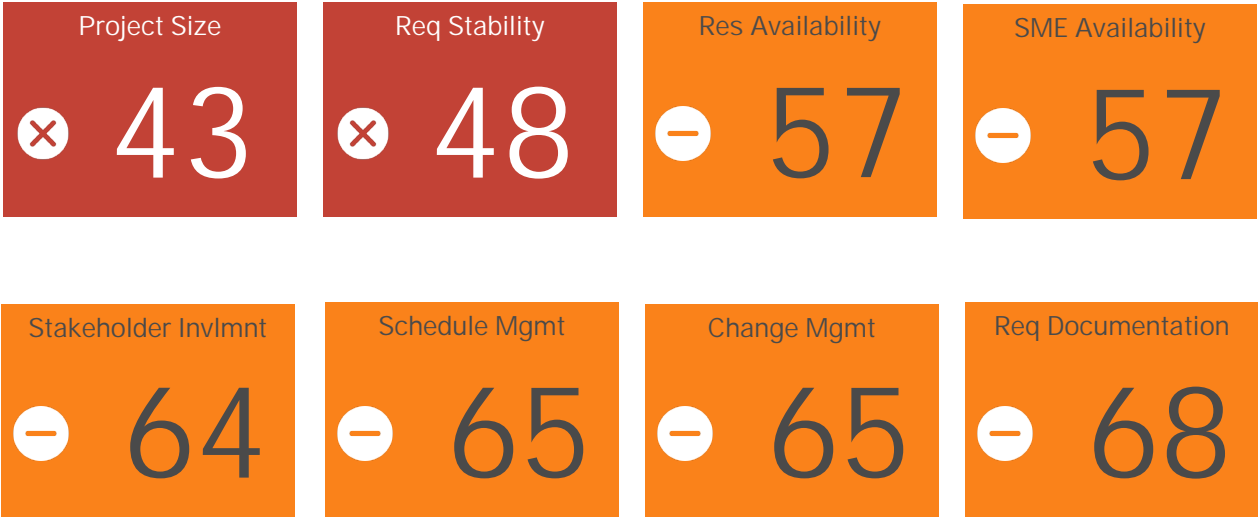
Schedule	
365	
Days Behind	
Baseline Start	02/11/17
Actual Start	02/11/17
Baseline Finish	07/31/19
Expected Finish	07/30/20

Health Overview

Increasing complexity in projects and rapid changes make the governance of projects highly challenging. The assessment covers a broad scope of potential factors that can cause a project to fail. The assessment includes an evaluation of the risks associated with the project, the early warning signs of project failure, and the pulse of the project and its team. This tri-fold view provides your team with a deep look into the underlying causes of project failure lurking beneath the surface.

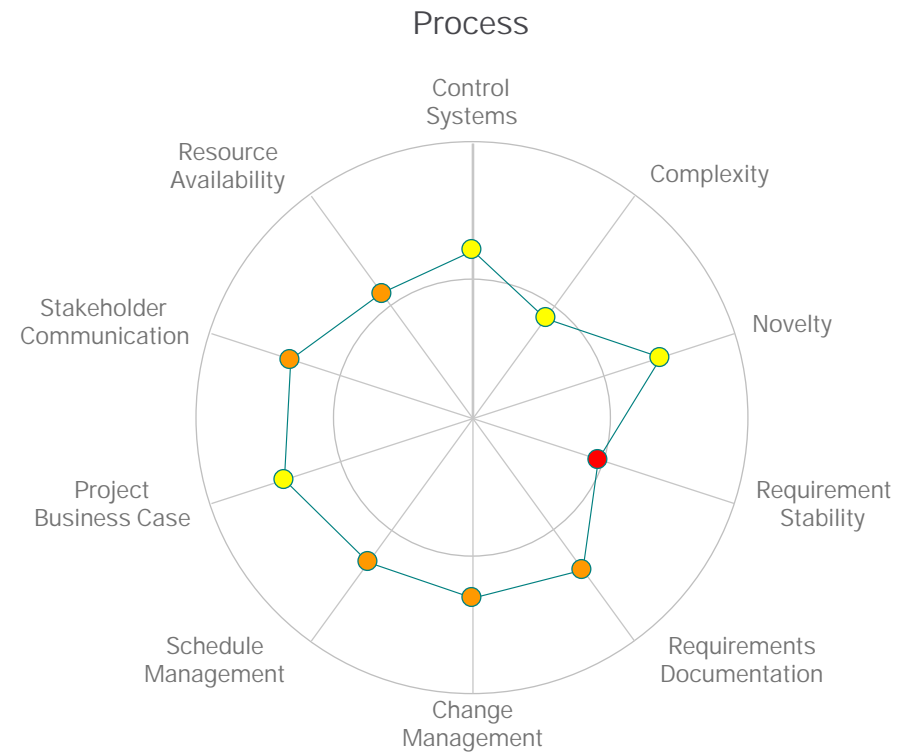
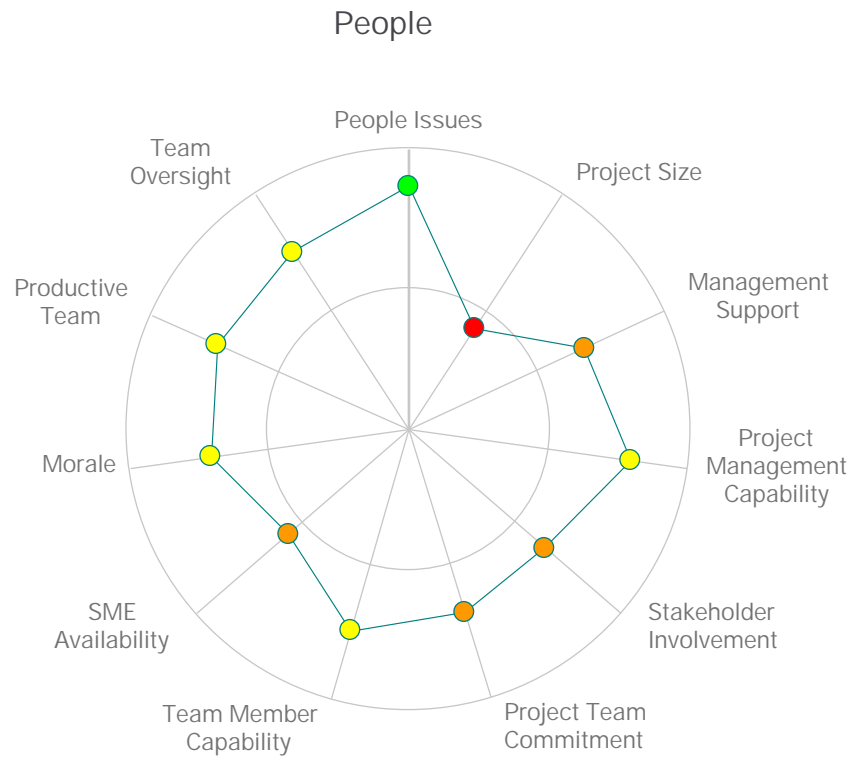


Worst Performing KPIs



Key Performance Indicators

Key performance Indicators are a measure used to evaluate the success of an organization, its employees etc. to meet objectives for performance. There are 21 KPI's that are broken down into two groups, people and process. A questionnaire collects team feedback about their awareness of the objective aspects of your project.



Team Comments

The general feedback from your team provides deeper analysis of your project status. Direct feedback from the project team helps raise problems management never even knew about. It is important to see what the project team really thinks.



Observations:

- Comment quality is good. Both praise and concerns were specific.
- Michael Andrews was recognized twice for providing expertise and innovation.
- Some common themes were visible during review. These groups can be helpful when discussing the results of this assessment with the project team and stakeholders and should be kept in mind when reading further.
- Requirements challenges include decision being made from discrete data and lacking understanding of the requirements for hinge quality and testing.
- Customer team and project teams separated both physically and by goals/requirements
- Challenge of having multiple stakeholders include divisions with

Question Text	Person		Team Comment
The following individual performed admirably and deserves recognition because:	Angela	Murdock	There were multiple sponsors from several divisions in the company. Ralph Potts, a co-sponsor representing the Quality Control Division, was very supportive when Upper Management was needed to make a decision. When Michael Andrews, Lead Process Engineer, joined the team in the middle of the project, several ideas were generated to help improve the process with new testing methods and manufacturing equipment.
	Allan	Grant	Mary Randolph because she is very involved on the maintenance side. Gets things done as quickly as she can within the time constraints we allow. Michael Andrews has been very helpful from the engineering side with giving us data on how to achieve a strong hinge and setting up the new testing with the flaw detector.
	Marion	Graham	Angela Murdock
	Kenny	Weeks	Mary Randolph always met deadlines with installs and planned maintenance work needed for the project.
	Ralph	Potts	Angela Murdock - Has kept the team focused and on track.
Use the following field for any comments you would like to make regarding the team or the project at this time.	Angela	Murdock	The overall team worked well together. The challenge was there were multiple divisions involved with different priorities that were not always aligned. Project and process ownership was not always clearly defined. When important decisions needed to be made by Sponsors, all divisions had to agree, but those who were not actively involved were hesitant. As Project Manager, it was difficult to initiate the project when the directive from Sponsors was to Fix it"" with no available KPI to start with or compare the success to. We started the project just by putting out fires while being pressured on how long will it take. The intent of a 6 sigma DMAIC project, which this was defined, is to be a structured, problem solving system that finds the root cause and makes a long term improvement.

Question Text	Person		Team Comment
Use the following field for any comments you would like to make regarding the team or the project at this time.	John	Campbell	I believe the team lacks a sense of urgency. Some of which is dependent on external resources.
	Ralph	Potts	This project has been a difficult one to take to completion. It is a tribute to the team members that we have all stayed the course.
	Henry	Edgar	I was not fully part of the team. I attended few team meetings that were well conducted, received the minutes, and led the technology division where this project is reporting to.
Please comment on why the people performing the work and the people the work is being performed for function in separate groups and do not work closely together.	Angela	Murdock	Multiple divisions with different priorities are involved.
	Ralph	Potts	The groups are in two separate facilities.
Please explain why more than 10% of the staff of the organization will be involved in the project.	Angela	Murdock	This does not apply.
Please comment on why more than 15 people are likely to be involved in the project.	Angela	Murdock	Because multiple divisions are required to complete the many tasks of this project.
Please explain why the project is likely to last more than 6 months.	Susan	Raymond	This enhancement project has been going on for years and I think the group has done some really good work. Also, the bar has been raised on the quality side since this project was started.
	Angela	Murdock	Because of the multiple divisions involved and all of the process improvements that need to be made.
	John	Campbell	It already has elapsed 6 months. Some of the challenges to my understanding is: 1. Develop a method to test with high confidence. 2. Getting the machine capable of running at extreme temperatures defined as required.
	Rodney	McCracken	Solution seems very analytical and difficult to measure. The problem has existed a long time for this reason.
Please explain why only some testing or verification will be carried out prior to implementation of the project.	Rodney	McCracken	It is very difficult to truly measure good and bad product. They will test what they know how to test but I say some testing because I wish there was a better method. The Quality Control Division is trying to come up with a better method of testing.
Please explain why no budget has been set.	Susan	Raymond	I am not aware of a budget for this project?
	Angela	Murdock	The project to fix the process was not given any set budget. Budgets were made as needed.

Question Text	Person		Team Comment
Please explain why no budget has been set.	John	Campbell	The original scope was based on adjusted machine parameters as we were capable in the past.
	Rodney	McCracken	The project has been going on for so long I do not know or believe a budget plan was developed early on or perhaps without a solution we did not know what we would be budgeting for.
Please comment on why the team has the authority to define and implement new business practices.	Ralph	Potts	Members of the team are Management Representatives.
	Henry	Edgar	The team owns the project and its success, hence has the authority to define and implement new business practices, within the 6sigma DMAC framework
Please explain why the business function covered by this project is highly complex.	Angela	Murdock	Multiple divisions that have different budgets, priorities, and management.
	Ralph	Potts	The part quality that is under review is used in a critical application.
Please explain why this project involves several complex interactions and coordinations between other business areas.	Angela	Murdock	Multiple divisions that have different budgets, priorities, and management.
Please comment on why you believe the technology employed on this project is highly complex.	Angela	Murdock	We are attempting to install Acme Corporation's first extreme temperature control unit, onto a machine that has limited space and old programming.
	Allan	Grant	It has taken some time and money to develop what we think is the correct process to build a strong, rust-resistant hinge. The process is complex to achieve.
Please explain why the business function to be covered is poorly documented and likely to change.	Rodney	McCracken	Process and decisions are being made from very discrete data which is very debatable and does not lend it self well to finding defects, etc.
Please enter any feedback below about how this assessment can be improved.	Angela	Murdock	This was a good assessment, that should be asked at the beginning of a project. Questions were very difficult to answer due to the challenges and length of my project. Many questions were in the present tense, which I would want to agree to answer(or stronger), but at the start and middle of the project would disagree (or stronger) I would sometime answer Neither Agree or Disagree for that reason.
	John	Campbell	Some of the questions are very difficult to relate to this specific project. Unfortunately I don't think we have a good understanding of the ultimate requirements for hinge quality along with solid test methodologies.

Question Text	Person		Team Comment
Please enter any feedback below about how this assessment can be improved.	Henry	Edgar	Because this project is a six sigma project and has been running for few years, and I have been somewhat involved as the technology lead rather a full member of the team, it may be valuable to start the survey with questions related to my involvement level and time/timing

Participation

The amount of people responding to an assessment determines the validity of the project status. Without an enough percentage of responses, the scores cannot be relied upon as heavily. An individual walking around and asking questions would receive 100% participation.



Observations:

- Good level of participation. Participation from Sponsors and Project Management is an indicator of commitment.
- The two non-submissions were from Team Members; 6 out of 8 responded.

Team Role	Person		Sent Date	Completed Date	Assessment Completed
Business Analyst	Henry	Edgar	5/13/2021	5/16/2021	✓
	Ralph	Potts	5/13/2021	5/16/2021	✓
Project Manager	Angela	Murdock	5/13/2021	5/16/2021	✓
Project Office	Donald	Brouillette	5/13/2021	5/16/2021	✓
Sponsor	John	Campbell	5/13/2021	5/16/2021	✓
	Rodney	McCracken	5/13/2021	5/16/2021	✓
	Susan	Raymond	5/13/2021	5/16/2021	✓
Team Member	Frances	Case	5/13/2021		✗
	Marion	Graham	5/13/2021	5/16/2021	✓
	Allan	Grant	5/13/2021	5/16/2021	✓
	Donald	Grout	5/13/2021	5/16/2021	✓
	Mary	Randolph	5/13/2021	5/16/2021	✓
	Julie	Tinoco	5/13/2021	5/16/2021	✓
	Robert	Tripp	5/13/2021		✗
	Kenny	Weeks	5/13/2021	5/16/2021	✓

Conclusion



Observations:

- SMEs are important for clearing project obstacles. Likely these relate to obtaining the right experts for address hinge quality issues and dealing with the problem constraints (old programming and limited space). In an effort to support the team, people will do their best, though there are points where they need to get outside assistance. Involve the SME with the team as teams ultimately deliver the best quality decisions.
- There seems to be some fragmentation amongst stakeholders; this is natural given each can have different responsibilities and goals. There may be no clear and common understanding of the project goals and requirements, and that requirements documentation hasn't been well established. Consolidating the requirements can reduce the risks associated with Requirements Stability and Stakeholder Involvement.
- There is a 6-Sigma team that may be empowered "on paper". Unresolved conflicts in requirements may indicate that this team is being hindered from exerting its authorization.
- The project is taking too long, especially if this is a 6-Sigma project. Typically, they begin with an Ishikawa analysis to identify possible process issues, and then methodically determine which continuous improvements to pursue, with each being treated as its own project. Reorganizing into projects with a target team size of 5-7 team members can reduce the risks associated with Project Size. It may also reduce the perception of resource being reassigned and can reduce the Resource Availability KPI risks.

Actionable Insights

Communicate - Project Manager present overall findings to the team.

Re-organize project / get control of requirements - Review the project charter (PM, Sponsors, 6-Sigma team), document the business case and the benefits expected to be realized. If new projects are spun off, establish a program and budget for each. This also provides an opportunity to implement Earned Value Management.

Empower the team – Charge the team with implementing new business practices and give them the authority to do so.

Establish a stakeholder register - Ensure involvement amongst other stakeholders (including the sponsors, project team, suppliers, customers). Having a broad picture of who is involved may help identify SMEs that can overcome challenges that are in everybody's best interest to see resolved. Clarify the demand for specific SME resources and their availability. A good solution regarding the right skill and experience mix for a role may reduce reassignments.

Work flow - Establish work streams for specific projects or intermediary deliverables that will allow for resources to remain committed to their assignments. Associate specific benefits to be realized. This can help instill a sense of urgency to meeting targets and producing results.

Glossary

Project Types

Key Operational	You already have a business function operating, for example a billing system that requires an upgrade. The key focus is quality risks, followed by cost and time. The system must continue to operate at current or lower support levels after hand-over. A properly managed development project will ensure that all costs are incurred prior to hand-over and that no unnecessary costs are incurred.
Strategic	These relate to assignments designed to satisfy a business need and are often on a short timescale. The focus is on reducing/removing time-based risks first, then quality, then cost. There is no point in perfecting a system if it misses the business opportunity. Tactical projects can incur large costs post-delivery if it is necessary to capture designs in retrospect and fix features that are manually supported during implementation.
Support	Projects of this type are second- or third-line business activities. Cost is the focus since these applications are often not generating revenue. The business should not invest in a supporting activity that does not provide enough return.

Phases

Executing	This is the phase where deliverables are developed and completed. This often feels like the meat of the project since a lot is happening during this time, like status reports and meetings, development updates, and performance reports. A "kick-off" meeting usually marks the start of the Project Execution phase where the teams involved are informed of their responsibilities.
Initiating	<p>This is the start of the project, and the goal of this phase is to define the project at a broad level. This phase usually begins with a business case. This is when you will research whether the project is feasible and if it should be undertaken. If feasibility testing needs to be done, this is the stage of the project in which that will be completed.</p> <p>Important stakeholders will do their due diligence to help decide if the project is a "go." If it is given the green light, you will need to create a project charter or a project initiation document (PID) that outlines the purpose and requirements of the project. It should include business needs, stakeholders, and the business case. Note: There are plenty of PID templates that adhere to PMBOK® Guide guidelines available online that you can download to help you get started.</p>

Planning	<p>This phase is key to successful project management and focuses on developing a roadmap that everyone will follow. This phase typically begins with setting goals</p> <p>During this phase, the scope of the project is defined, and a project management plan is developed. It involves identifying the cost, quality, available resources, and a realistic timetable. The project plans also include establishing baselines or performance measures. These are generated using the scope, schedule and cost of a project. A baseline is essential to determine if a project is on track.</p>
Monitoring	<p>This phase is all about measuring project progression and performance and ensuring that everything happening aligns with the project management plan. Project managers will use key performance indicators (KPIs) to determine if the project is on track.</p>
Planning	<p>This phase represents the completed project. Once the project is complete, PMs still have a few tasks to complete. They will need to create a project punchlist of things that didn't get accomplished during the project and work with team members to complete them. Perform a final project budget and prepare a final project report. Finally, they will need to collect all project documents and deliverables and store them in a single place.</p>

Roles

Project Manager	<p>The Project Manager is the person assigned by the performing organization to lead the team that is responsible for achieving the project objectives.</p>
Project Office	<p>The project office is typically, but not always, the head of the business unit receiving the product, and bears business responsibility for successful project implementation. The project office may often act as a "champion" to the project, in partnership with the sponsor.</p>
Sponsor	<p>Sponsor is a person or group who provides resources and support for the project, program, or portfolio and is accountable for enabling success.</p>
Business Analyst	<p>Business Analysts are stakeholders who receive the business product of the project. They are involved in requirements definition and testing. They ensure objectives solve problems and add value to the product and the organization.</p>
Team Member	<p>Team Members are individuals who support the project manager in performing the work of the project to achieve its objectives.</p>

Key Performance Indicators

Change Management	In any project, change is inevitable. Many aspects may change throughout the duration of the project such as, competitors, regulations, business processes, technology, and management. Since change is inevitable, there needs to be a process to manage the changes. At the beginning of a project, the team can declare that their requirements are frozen, but there will still be change in the real world.
Complexity	The more complex the problem the more difficult it is to ensure a good solution. Complexity can arise in both the business and the technology and this is usually compounded by the number of different business functions who need the new system and the number of other systems with which it must be integrated or interface. More complex require a greater level of attention to detail to ensure success. Being aware of the complexity level involved with a project allows your team to understand the challenge ahead and approach it with the correct mindset.
Control Systems	Control of the project is a set of factors which describe how rigidly the time, quality and cost aspects of the project are to be controlled in terms of milestones standards, methodology, budgets and change management processes. In order to succeed, Strategic projects require a degree of flexibility in how things are done in order to achieve early delivery of the system, whereas for Key Operational systems quality should not be compromised for expediency. Support systems deliver mainly economic benefits, so managing expenditure is important, but timing of delivery is less critical - economic benefits are always available.
Management Support	Management must support any project undertaken by their organization. Managers provide vital resources for the success of projects. Employees and middle managers tend to focus their efforts and resources on activities that management deems most important. Management ensures that a project is moving in the right direction. Their lack of support greatly increases the probability of a project failure. Management must support a project in order to reduce spin and focus employees on the highest priority work.
Morale	Morale is the general feeling of the team members. Team's functionality is dependent on their morale. Teams need regular check ups to ensure they are healthy and effectively performing their project tasks.
Novelty	Novelty concerns both the amount of business change needed to obtain the benefits and the novelty of the technical solution proposed. If both apply the risks become very high but, in many cases, other than Support systems, change or technical novelty are an essential ingredient if the benefits are to be obtained. Novel projects don't have as much direct correlation to the business. The more novel a project, the less sense it makes for your organization to implement it. Understanding the level of novelty helps leaders make more informed decisions about resource allocation towards different projects.

People Issues	People Issues relate to obtaining the appropriate commitment and involvement of senior management. Ensuring the project team includes the right mix of business and technical skills, and that the communication between business users and system deliverers is effective. Weaknesses in any of these areas can cause misunderstandings at the earliest stages of projects which lead to major problems later. Misunderstanding and inconsistencies among the project team cause problems because the team does not have the resources to effectively deliver the project. People who do not understand the goals, their roles, or others involved are not able to work effectively causing spin.
Productive Team	The productive team is formed by employees who care for and are engaged with the project. A productive team is formed when team members are competent enough to work independently toward the team goal. Each member of a team is accountable for their own tasks. A project team that is not engaged or productive will have trouble delivering a project on time and budget.
Project Business Case	A documented business case is made to understand the reasoning for the project and needed resources. A project with an entailed business case will receive the necessary resources and management attention. A project business case must be made clear in order to receive necessary resources and attention. A clear business case allows there to be top management support and project success criteria.
Project Management Capability	The Project Manager coordinates efforts and leads a project. Project Management Capability measures his/her ability to effectively lead the project team and plan the out the necessary activities for the project to be successful. A weak project manager severely hinders a project's ability to be successful. Poor planning and leadership result in unnecessary work being completed. Projects with spin typically fail to meet budget, schedule, and/or scope.
Project Size	Large projects are more difficult to manage than small ones. Since large projects are normally expected to deliver large benefits the consequences of failure are far more significant. Size can be best expressed as the number of total man years' work required, but the problem is compounded by both the number of different individuals involved and the elapsed time taken - more things change over a longer time period including the project personnel. Larger project cost more time and more resources thus having a bigger impact on the organization as whole. The impact of failure on a large project can cause loss of jobs, loss of organizational credibility, and even organizational shut down. Larger projects have more risk associated with them and need to be treated with more attention.
Project Team Commitment	Committed project team members work to deliver the promised project scope that is high quality, on time, and budget. Project team member's commitment is crucial to complete the work and make decisions to deliver the promised project scope.
Resource Availability	Resources for the planned project are needed to carry out a project. The resources must be available in order to carry out the planned project. If the resources are unavailable, the project cannot be completed. When project resources are reassigned to another project, the resources will not be utilized in a productive manner.

Requirements Documentation	Functional, performance and reliability requirements must be documented for the team to understand the scope of a project. Projects need success criteria to be defined in a document for the team to deliver success. A team's lack of documents will result in stakeholders withdrawing their resources for the project. The project must have defined success criteria for everyone to understand their roles in a project and to succeed.
Requirements Stability	Well-documented and defined requirements are key for a successful project. Changing requirements make it difficult for the project team make progress as time will inevitably be wasted working towards requirements that do not stick. More stability means that the team can work toward consist goals and achieve success more efficiently. The more certain the future is, the easier it is to ensure the system will deliver the benefits. By careful definition of the project scope, certainty can be increased by tackling more stable areas and leaving others for later. However, other aspects of the business may be changing which could have a direct or indirect effect on the system.
Schedule Management	A schedule that entails the tasks for the project from beginning to end is necessary to deliver a project on time. Managing a schedule allows the team to determine what steps need to be completed and the time required for each step. A schedule must be created and managed throughout a project's entirety to estimate completion time and delays. If the project begins late, planned resources will not be received on time and other delays will occur.
SME Availability	Subject matter experts guide the project team and resource their requirements. SMEs provide the knowledge about business processes, data, timing, objectives and rules. When SMEs are unavailable, the project team does not have the knowledge to carry out a project. It is crucial that SMEs are available to dedicate time on a project for the team to receive information regarding their work.
Stakeholder Communication	A significant project has multiple stakeholders to discuss the resources needed for a project. Throughout a project, change will occur which needs to be communicated to stakeholders in order to receive appropriate resources for the project. Lack of communication with stakeholders' results in the project team being pulled in multiple directions. This will affect the project success criteria needed to complete the project and deliver on time and on budget.
Stakeholder Involvement	Any significant project has stakeholders to contribute resources towards the project's success or failure. Stakeholders who are engaged in a project provide the requirements to deliver within the established scope on time and on budget. An inactive stakeholder leads to others being disengaged which causes difficulty for the project manager. The project manager needs stakeholders to participate and provide necessary resources for project success.
Team Member Capability	Project team members are the ones to exert work into a project and make choices. It is the team members responsibility to understand the project's promised scope in order to successfully deliver the project. Insufficient capability from team members will result in a project being late, over budget, and not delivered within the promised scope.

Team Oversight

The team is responsible for making sure project tasks are completed efficiently and correctly. Oversight includes the review, monitoring and supervision of project tasks that are to be completed. Team oversight is a governance role that is utilized to reduce project risk and improve the overall outcome of the project.

References

Early Warning Signs

Reasons Why Projects Fail. (n.d.). Retrieved November 8, 2019.

Identifying Early Warning Signs in Complex Projects. (n.d.). Retrieved November 8, 2019.

Ward, L. R. (2014, August 18). Recognising 5 Early Project Warning Signs. Retrieved November 8, 2019.

Team and Project Pulse

Arcidiacono, G. (2017, February). Comparative research about high failure rate of IT projects and opportunities to improve. Retrieved November 8, 2019.

The High Cost of Low Performance. (2016). Retrieved November 8, 2019.

Levinson, M. (2010, June 23). IT Project Management: 10 Less-Considered Keys to Success. Retrieved November 8, 2019.

Driving Business Performance. (2017). Retrieved November 8, 2019.

Project Risk

Ward, John. (1992). Assessing and Managing the Risks of IS/IT Investment. Retrieved November 8, 2019

Lavanya, N. & Malarvizhi, T. (2008). Risk analysis and management: a vital key to effective project management. Retrieved November 8, 2019

Kestel, J. W. (2007). Risk assessments—developing the right assessment for your organization. Retrieved November 8, 2019.