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and opportunities to improve*
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Giuseppe Arcidiacono, PMP, CGEIT, CISM, CISA, CRISC.

ABSTRACT

This paper aims to study the causes that lead to failure in IT projects by analyzing some of the most interesting statistics retrieved in the current literature around the world.

The analysis aims to highlight the weaknesses and opportunities to improve with the objective to give practitioners some suggestions and tips in order to raise projects' success rate.

For every source, the present document reports in a table the weakness identified by the original researcher together with considerations, and tied opportunities emerged from his/her work.

INTRODUCTION

In a publication issued in 2009, International Data Corporation states that Project Management is the main cause (with a weight of 54%) leading to the following disaster scenario: almost 25% of IT projects experience outright failure, 50% of projects require material rework and 20%/25% of them do not provide Return On Investment (ROI).

The other factors that influence the success or failure of a project are:

- Activities defining and controlling the IT project Business (21%)

- Aspects of the project dealing with project funding, internal rate of return and business data People (14%)

- The team that carries out the IT project Method (8%)

- The dimension involving approach, procedures and tools Technical (3%)

Despite its long tradition in IT field, Project Management has not achieved an appropriate degree of maturity so that the most part of challenges are directly associated with how a project is managed through all phases of its lifecycle.

The present paper aims to analyze some scientific articles, papers and books talking about this issue in order to obtain a big picture and give to practitioner some tips and suggestions.

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The seven reasons of Joseph Gulla

The IT leader of Alazar Press and former executive IT specialist at IBM, Joseph Gulla highlights on http://www.ibmsystemsmag.com/ seven reasons involved in project failures tied to a same number of opportunity to improve.

His opinion is reported in the following table:

WEAKNESS	CONSIDERATIONS AND OPPORTUNITIES
Poor Project Planning and Direction	Improving project planning and direction is one of the key factors in IT project success. This requires a method made up of rules, processes and tools for project planning and management, supported by a software tool. It's important to remember the Four Ps—pilot, phase, parallel and plunge —and, certainly, don't plunge under any circumstance. A vital part of planning is to assign the right people to the right task and make clear assignments to team members, with defined goals and responsibilities. When assignments don't work out, adjust roles as necessary.
Insufficient Communication	Objective status reports, frequent contact with sponsors and business users, and involvement of such external parties as the hardware vendor are crucial to avoiding the communication breakdowns that can derail IT projects. Simple actions matter, such as organized agendas, minutes, action items and information-push emails. Agendas force the project manager running the meeting to organize the time and supply preliminary materials. The thinking and preparation that goes into creating the agenda are more important than the agenda itself. Also, mix up the way the message is delivered, especially for executive reviews. Using the same status presentation repeatedly might be an efficient method, but it could also be missing necessary diversity to keep executives interested in the story behind the status.
Ineffective Management	Sidestep this pitfall by proactively managing changing objectives, goals and risks, coordinating efforts between the technology and finance departments, and measuring performance. Implement a straightforward change-management process with estimating and approval steps. This should be a lightweight process, but one that also allows management to understand the impact of changing requirements on the project. Utilize a risk-management assessment tool to uncover risks that must be addressed during and after the project. Enlist a finance representative on the team and formalize a business case.

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	Lastly, identify discrete performance measurements, like planned and actual task starts and completes, and include them in the status reporting
Failure to Align With Constituents and Stakeholders	Building understanding and trust with constituents and stakeholders is essential to a successful outcome, particularly when these groups are in different organizations and might have varied measurements and motivations. For greater alignment, target specific initiatives to ensure interlock and communication with stakeholders. This can be done through input-gathering meetings, communication to push information and activities to get sign-offs on work products. Early in the IT project, it's useful to have at least one face-to-face meeting with key stakeholders and team members. A well-planned kickoff meeting, where relationships are developed, will support the project in later months.
Ineffective Involvement of Executive Management	The participation of an executive sponsor in key operational working sessions is crucial to establish priorities. Project kickoff is the best first meeting, but it doesn't end there. Executive involvement must be targeted for specific status meetings to monitor project progress, particularly in meetings where go/no-go decisions must be solicited.
Lack of Soft Skills or the Ability to Adapt	To prevent a situation in which team members lack the necessary skills for the project, utilize a mentoring approach for less-experienced employees. Also, include required education in the overall project schedule. Actively recruit skilled personnel through internal and external routes like jobs systems. A good outcome will not result without sufficiently skilled people.
Poor or Missing Methodology and Tools	Successful projects are based on a methodology or framework that includes project-management tools. This approach can increase accuracy and save time by automating activities like task tracking. Maintaining a simple, organic methodology can have significant payback on a project. It should include the following: • Set up an electronic project notebook. • Establish written objectives for the project. • Work with the technical lead to establish tasks within phases. • Ask team members to estimate the time and number of tasks required.

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	• Create a formal project plan and manage to it, including basic change control. • Proactively solve problems that may arise.

FINAL CONSIDERATIONS
Improving the success rate of IT projects is possible by putting significantly more focus on general-management activities. It can be daunting at the onset of a project to know the odds indicate major retoolings or even outright failure. But with accurate planning, defined goals, clear assignments and effective communication, proactive managers can overcome those odds to master even the most challenging project. Simply knowing where potential pitfalls lie can help prevent backlogs and costly delays in the future

The "State of Project Management"'s results

The 'The State of Project Management' annual survey published by "Wellingtone Project Management" and the "Association for Project Management (APM) Project Management Office (PMO) Specific Interest Group (SIG)" report that many IT project managers do not apply a Consistent Project Management Approach; that is a strong indicator of project management maturity.

The survey aims to answer to doubts like as "are all projects of a similar size & scale run in a similar way, or is the approach driven by the selected Project Manager?".

For this reason, participants were asked a series of questions about the application of consistent methods and their frequency of use.

The most evident problems emerged from participants answers are the following:

WEAKNESS	CONSIDERATIONS AND OPPORTUNITIES
Over 34% of projects schedules are not baselined	Baselining should occur at the end of the Planning Stage as part of approval to proceed. Actual progress can then be tracked against the baseline plan. PMs should not only know where they are in the plan, but also where they are compared to where they should be
25% of PMs never or sometimes prepare a standard scoping document.	Effective scope management requires good and clear communication, as this ensures that members on the team understand the scope of the project while agreeing on how the project goals will be met. Scope management helps avoid the challenges that a project might face with bloating scope and an unruly requirements list. Project scope clearly sets out what is or is not included in the project, and controls what gets added or removed as the

	project is executed. Scope management establishes control mechanisms to address factors that may result in changes during the project life-cycle. Without defining the project scope, the cost or time that the project will take up cannot be estimated. At times, due to a lack of communication, scope may need to change. This directly affects the cost and disturbs the schedule of the project, causing losses.
25% of PMs never or sometimes engage in project risk management.	Risk management plans contribute to project success by establishing a list of internal and external risks. This plan typically includes the identified risks, probability of occurrence, potential impact and proposed actions. Low risk events usually have little or no impact on cost, schedule or performance. Moderate risk causes some increase in cost, disruption of schedule or degradation of performance. High risk events are likely to cause a significant increase in the budget, disruption of the schedule or performance problems.
FINAL CONSIDERATIONS	
The significant numbers emerged from survey demonstrate that even across professionally qualified experienced PMs there is significant room for improvement.	

PMI's 2016 "Pulse of the Profession"

In the PMI's 2016 "Pulse of the Profession" it is shown that, compared to previous year:

- Fewer projects are being completed within budget or meeting original goals and business intent;
- More projects are actually failing and creating significant monetary loss for their organizations.

WEAKNESS	CONSIDERATIONS AND OPPORTUNITIES
According to the cited work, For every $1 billion invested in the United States, $122 million was wasted due to lacking project performance	Organizations that place a high priority on creating a culture that recognizes its importance as a driver of better project performance report 71 percent of projects meeting original goals and business intent versus 52 percent that place a low priority on it.

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Doomed From the Start?

The study, entitled "Doomed From the Start? Why a Majority of Business and IT Teams Anticipate Their Software Development Projects Will Fail" examines why teams continue to struggle to meet the business expectations for their projects. It surveys participants on such topics as requirements definition, accountability, and measuring project success.

"There is no question that the overall survey results shows that our single biggest performance improvement opportunity is to have a more business-centric approach to requirements," states Geneca President & CEO, Joel Basgall. "Unfortunately, poor requirements definition practices have become so common that they're almost tolerated. The gloomy results of this survey really drive this home."

Interestingly, survey responses from IT professionals and their business counterparts are fairly similar, indicating that both groups have many of the same concerns with regard to their projects.

WEAKNESS	CONSIDERATIONS AND OPPORTUNITIES
Lack of confidence in project success: 75% of respondents admit that their projects are either always or usually "doomed right from the start."	The perception is that challenges start at the beginning of a project and reflect difficulty in defining project success. This carries forward to IT and has impact throughout the rest of the project
Rework wariness: 80% admit they spend at least half their time on rework.	Extensive rework usually occurs when an organization devalues the need for full and complete requirements capture. This mindset usually leads to increasingly expensive fixes throughout the project because requirements are not properly defined and accounted for up front. Other factors leading to rework include a lack of commitment by the business to the details of what they need. There may also be a lack of consensus on requirements from all the areas of the organization that touch the solution.
Business involvement is inconsistent or results in confusion: 78% feel the business is usually or always out of sync with project requirements and business stakeholders need to be more involved and engaged in the requirements process.	Unfortunately, in some organizations, requirements definition is considered exclusively an IT responsibility, rather than a joint responsibility with the business. Sometimes confusion results when the business stakeholders believe they are talking about the same thing and do not realize they're actually in disagreement. When this disparate information is given to IT, the outcomes are almost always disappointing. This ambiguity

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	contributes to the problem of confusing business input
Fuzzy business objectives: Only 55% feel that the business objectives of their projects are clear to them.	Too often business objective are too broad (like such "I want to launch this product in Q4" or "I expect this kind of return") and do not always take into account the "on the ground" realities of how business actually works. As a result, commitments get made without knowing how feasible it is to actually get the job done
Confusion around roles and accountabilities: The greatest barriers to success are seen as confusion around team roles and responsibilities by 38% and as a lack of common vision on project success criteria by 31%	Most IT organization can find room to improve practices in this area. While most of the project team knows who is providing requirements and writing specs, a bigger challenge is to identify who is accountable to clarify objectives and create alignment. On most projects, it is the role of the Business to own the bigger picture and address the business problems. It is IT's responsibility is to implement and execute on the problems. Opportunities realized or opportunities lost are often linked directly to the level of commitment to clarity around these roles.
Requirements definition processes do not reflect business need: Less than 20% describe the requirements process as the articulation of business need.	Project success necessitates an upfront requirements definition process that reflects a common vision of what the business needs built, the process activities and business scenarios to make that vision a reality, and specifications that translate what business users need to do their job into something that can be built by the team.
Lack of complete agreement when projects are done: Only 23% state they are always in agreement when a project is truly done.	The root cause is ambiguity and confusion around project expectations. It also reflects a lack of metrics that communicate progress and realized value in terms the business understands and appreciates. This can be resolved by consistently measuring progress based on delivered business value rather than technical components

FINAL CONSIDERATIONS

"Although most software projects begin with high expectations, this research reminds us that problems usually lurk below the surface right from the start," states Basgall. "The key is to understand what we are seeing and what to do about it."

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Disturbing Reality of Today's PMOs

In the webinar on the **Disturbing Reality of Today's PMOs,** KeyedIn Solutions' team ties project failure to the Program Management Offices' difficulties in today's enterprise. In particular the webinar reported some of the following shocking statistics and reasons (retrieved from several, authoritative source) why Program Management Offices fail:

Problem	Source
75% of project management offices close within 3 years	PMI 2015 Annual report (http://media.corporate-ir.net/media_files/IROL/14/146476/files/pdf/PMI_2015AR_CompleteAnnualReport-r.pdf)
Since 2008, the correlated PMO implementation failure rate is over 50%	Gartner Project Manager 2014 (http://www.gartner.com/imagesrv/summits/docs/na/program-management/PPM-2014-Trip-Report.pdf)
Only a third of all projects were successfully completed on time and on budget over the past year	Standish Group's CHAOS report (https://www.versionone.com/assets/img/files/CHAOSManifesto2013.pdf)
68% of stakeholders perceive their PMOs to be bureaucratic	2013 Gartner PPM Summit (http://www.gartner.com/imagesrv/summits/docs/emea/program-management/PPM-2013-Brochure.pdf)
Only 40% of projects met schedule, budget and quality goals	MAKING CHANGE WORK - IBM Change Management Survey of 1500 execs (https://www-07.ibm.com/au/pdf/making_change_work.pdf)
FINAL CONSIDERATIONS	

One of the overriding issues fueling these poor stats is the fact that in many organizations, there is a wide gap between what the PMO is doing and what the business expects. This misalignment has serious consequences for both the PMO and the business. As pointed out by the first two bullets, the failure rate is very high with about half of all PMOs closed within 3 years or considered implementation failure.

And as Gartner points out, backed up by many other industry statistics, there is not a lot of good news when it comes to how the PMO and Project teams are considered by the rest of the organization. An amazing 68% of stakeholders perceive their PMOs to be bureaucratic and only

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40% of projects met their goals when it comes to schedule, budget and quality.

For many, this misalignment is caused through a lack of adequate tools, as well as the 4 fundamental pillars that drive program success – resources, money, deliverables and benefits.

Conclusions

IT Project failure rate is still too high and Project Management seems to be the root cause. This paper would highlight that there is no consensus among practitioners about the reasons leading Project Management to cause project failure but that, at the same time, it is important to understand that failures are strictly tied to opportunities to learn and improve.
Each failure should be investigated and lessons drawn for future projects' executions. Knowledge about failure will strengthen an organization's project management execution and practice.

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Giuseppe Arcidiacono, PMP, CISM, CISA, CGEIT, CRISC is an Italian Computer Engineer, member of PMI and ISACA. Graduated with honours from the University of Calabria, Giuseppe holds two post-graduate master's degrees in "Public Management" and in "Governance, Audit and Control System for Public and Private Organizations".

He holds the following international certification:
- PMP – Project Management Professional – PMI (Project Management Institute);
- CISA – Certified Information System Auditor – ISACA;
- CISM – Certified Information Security Manager – ISACA;
- CGEIT – Ceritified in Governance of Enterprise IT;
- CRISC – Certified in Risk and Information Systems Control.

Giuseppe has working in Project Management since 2003 and is specialized in European Commission Project Management Framework based on PCM (Project Cycle Management). Giuseppe is author of several scientific articles about Governance of IT (GEIT), Information Security Management and Audit, and Project Management published in prestigious international Journals and Blogs.

Since 2008 Giuseppe is the Head of IT Department in ARCEA, Agenzia della Regione Calabria per le Erogazioni in Agricoltura (http://www.arcea.it), an European Commission Accredited Paying Agency (pursuant to Commission Regulation (EC) No 885/2006). He has worked as IT Auditor, IT Risk Practioner and CEO – consultant for many Italian enterprises. Previously, Giuseppe worked as IT Project Manager in several international IT projects.

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