

## Celebrating IT Projects Success: A Multi-Domain Analysis

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### Abstract

*This paper proposes a multi-domain framework for defining information technology (IT) project success. There has been much discussion in the literature on the definition of project success but no consensus is emerging. A key problem is the multiplicity of expectations and perceptions of project performance. A reference framework for IT project success would support development of the discipline by providing a common language for communication and comparison as well as focusing on what stakeholders perceive as important. The framework builds on and extends criteria in the literature that relate to stakeholder interests. The framework contains five domains of success: process, project management, product, business and strategic. The domains are orthogonal and not for composing greater degrees of success. Assessing success in any one domain is independent of performance in other domains. Case examples illustrate application of the framework.*

### 1. Introduction

In the drive to formalize project management as a distinct discipline, there has been much discussion on the nature and definition of project success, but consensus is not emerging [53]. One stakeholder may judge a project as a success whereas another stakeholder may see it as a failure. This makes it difficult to categorize and compare projects because judgment is inconsistent. This paper aims to contribute to the development of the field, and resolve this problem, by proposing a multi-domain framework of project success that has wide application in practice.

IT projects are discrete and unique activities that serve as vehicles of multidimensional IT-based change. They have a checkered history of performance [21, 52]. However, it is not easy to develop a consistent view of the problem of project performance because of this multidimensionality. Empirical studies tend to use different definitions of project success, making comparison difficult. In the literature, *project success* can variously refer, for example, to “on time, within budget, to specification” completion; success of the product produced; or success in achieving the business

objectives of the project. Also, these measures are often contested, making it difficult to reach a uniform view of a project’s success [40]. A further complication is that perceptions vary with the stakeholder’s perspective and the time since project completion. Unlocking the issue of defining project success is critical for benchmarking projects, progressing IT project management research, and formalizing a knowledge base for the discipline.

Much work has already been done in researching project success. This research has focused on unlocking the drivers of project success rather than to establish a common framework for determining whether a project is a success. The framework proposed in this paper comprises five domains of performance to permit assessment of a project from multiple stakeholder perspectives at different times before and after project closeout. Three of these domains are commonly found in the research literature: project management, product and business. Another domain, strategy, suggests consideration of broader, future benefits. A final domain, process, which the project management literature does not discuss as a success criterion, supports learning and development.

The paper makes three main contributions. First, it formalizes two additional success domains, one conceptually closer to the project action (process) and the other further away (strategy). Second, it juxtaposes the domains into a multi-domain framework and assessment tool that has practical utility for classifying project outcomes. Third, it provides a rationale for using the framework that contributes to overcoming the problems associated with defining project success by aligning success determination to a common reference framework.

The paper proceeds as follows. Next, is a literature review to position the problem, identify success domains, and uncover gaps in the research-practice nexus. Following the review is a description of the multi-domain project success framework and an application of the framework uses project case studies as an illustration. The paper concludes with a discussion of the contribution and directions for future research.

## 2. Literature review

IT project management has a rich history [9, 25, 28, 61] but is still emerging as an independent discipline with its own theoretical foundation [26, 29, 41, 51]. In particular, it lacks a common measure of project success and failure.

In common parlance, managers plan and design projects to achieve a particular objective. Here, we explicitly recognize the bounded nature of projects by using PMI's PMBOK Guide definition of a project as a temporary endeavor undertaken to create a unique product, service or result[38]. In this paper, *IT projects* include infrastructure, information systems (IS), outsourcing, and related projects.

Since, based on this definition, a project is a means to an end rather than an end in itself, it is reasonable to want to know if the project is successful, whatever the end might have been. Herein lays a difficulty. The success of a project can be determined from the perspective of the means (the project itself) or the end (what it intended or expected to accomplish) depending on the interests of the stakeholder. Further, regardless of means or ends, expectations of what the project was to achieve and perceptions of whether it achieved them often vary among stakeholders. This makes determination of project success highly contingent upon the expectations and perceptions of different stakeholders, and when the assessment is made [15].

Most projects have multiple stakeholders with different views of the project's purpose and different expectations of what the project must achieve [27]. These stakeholders might include people who identified the need for the project, who fund the project, who stand to benefit from the project, who will receive the project and its outputs, compose the project team, and those who oversee the project. Each has a vested interest in the project's outcome, with different expectations and perceptions.

If we assume that a project is an end in itself, then its success can be determined at closeout. However, if it is a means to an end, then its outcome can only be measured at some time after the project completes. This permits the entry of other events and influences into the perception of project success, which may confound realistic reflection on the achievements of the original project.

To unlock this issue of defining project success, we review how the literature has approached the problem as input to proposing an integrated multi-domain project success framework as a way forward.

Project success has attracted much attention in the research and practice literature. Three main streams are found. The first and dominant stream aims to identify the *factors* that practice suggests are likely to

contribute to project success, project failure, or project risk [eg, 3, 50, 11, 33, 36, 42]. Typically, this literature produces prescriptive lists of critical success factors, failure factors or risk factors that project managers and governance bodies should take account of to ensure a positive project outcome. The value of this research stream is that it identifies important preconditions and drivers of project success, but it provides no explicit definition of project success itself, although the factors identified may indirectly point to relevant criteria.

The second stream focuses on *other contingency variables* that might impact project outcomes or require specific management intervention to mitigate any potential negative effects.<sup>1</sup> Some researchers call these variables "dimensions" of project success. They include project size [62], project type [49, 33], life cycle stage [34], project management complexity [45], and strategic versus operational mindsets [48, 42, 50]. The value of this research is that it identifies additional project variables that may have a critical impact on project success, depending on the context of the project and how the variables are managed. Again, however, this stream does not explicitly define measures of project success.

These two streams are often considered in conjunction with a third stream, whose main interest is in defining the *criteria* by which a project is judged to be a success or a failure. The three streams are interrelated in that the first two are concerned with how to achieve project success, while the third is concerned with the measures against which success is judged. Success criteria imply *domains* of performance that are important to different stakeholder groups. Knowing how success is defined is a necessary precursor to determining where and how project effort should be focused to meet performance goals; and knowing where to focus project effort is guided by an understanding of the drivers of project success and failure. Having a common definition of project success also facilitates agreement on whether, in the face of disparate interests and perspectives, success has been achieved. However, in the past, there has been an imbalance of attention in these streams of research. Research and practice have tended to focus on "how to do it right" (the first two streams) at the expense of agreeing what "right" is (the third stream).

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<sup>1</sup> This paper uses *contingency variables* in the sense of organizational contingency theory, not in the common sense context of project planning, of provisioning for uncertainty. Classical contingency theory argues that project performance is contingent upon congruence between a project's structure and its environment. That is, a project must be designed and managed according to its contextual circumstance. The variables identified by this research stream point to contexts in which different project designs and management actions may be necessary for the project to succeed.

Some researchers suggest that success criteria should be project-specific and therefore determined by stakeholders at the start of each project [eg, 2, 58, 30, 57]. This view has considerable merit because of the broad range of project types, project objectives, and other variables that can contribute to project outcomes. However, there is also a role for a common reference framework to enable project success to be discussed in a uniform way and to provide a standard benchmark by which project outcomes can be compared [35], especially within the IS/IT discipline.

Several surveys of project success research exist in the literature [eg, 10, 20, 22, 32, 46, 58] and Baccarini [2] summarizes the characteristics of project success criteria. The review above does not intend to be exhaustive in uncovering either the range or depth of contribution of the literature on this discussion. Rather, it focuses on identifying success domains that the literature suggests would present difficulties in practice if a definition of project success excludes them.

## 2.1. Project management success

The classic domain criterion in practice measures the immediate performance of a project against its main design parameters—schedule (time), budget (cost), scope, and/or quality—which the literature tends to call a measure of *project management success*. This criterion appears in the earliest discussion of projects in the management literature [19]. In the three-element form, the criterion is variously called the triple constraint, iron triangle, or three-legged stool of project management. Other variants include quality as a fourth element in the project diamond or four-legged stool. Scope is less clear than time or cost, referring to the extent to which a project completes the main deliverable against specification and whether it completes all intended activities and phases. Quality assessment is *post hoc* and against industry or subjective criteria. The conventional approach is that a post project review assesses performance “on time, within budget and to specification.” If each was achieved within a narrow range of tolerance then the project is deemed a success. This domain criterion is of particular interest to stakeholders with vested interests in the project vehicle itself, such as the project manager, team, and project governance stakeholders.

This classic domain criterion remains the most widely used measure of project success. Its main value is in offering a simple, direct measure of performance of a project and the project management expertise applied to complete the project within the bounds of the most immediate design parameters (time, cost, and scope). However, it has major limitations. Most critically, it focuses on the *means* rather than the *ends*

of the investment from the organizational perspective. It takes limited or no account (depending on how scope is defined and measured) of whether the main project deliverable fulfilled the purpose for which it was intended and whether the objectives of the project’s investors were achieved. For example, it is not unusual, especially in IT projects, for a project that is late, over budget and/or under-delivered against specifications to be declared a success, because it still delivered a benefit to the client/users and/or to the investing business. This highlights the need for two additional domain criteria recognized in the literature: measures of project deliverable or *product success* and *business success*.

## 2.2. Product success

Drawing on the IS literature, several researchers implicitly argue that project success is a function of the success of the information system that the project produces [eg, 4, 17, 16, 43, 44]. Completing the main project deliverable “to scope” (specification) may not be a valid or sufficient measure of project success if the client/end-user does not accept and use the deliverable and/or they do not achieve sufficient benefit. For IS deliverables, this success domain criterion might comprise measures of information quality, system quality, service quality, intention to use, actual use, user satisfaction, and net benefits [16]. Clients and users interests and expectations of a project do not fit the triple constraints. Clients / users require fitness for use and improvements in the nature and conditions of their work. A project can succeed in the *project management success* domain but fail to gain user acceptance or use of the system. The literature recognizes that this can occur, for example, when a system specification lacks adequate user input to its definition and/or when user requirements change due to evolving business circumstances.

This view of project success is fundamentally consistent with Pinto and Slevin’s [36] seminal model of project success and Kerzner’s [23] definition. Pinto and Slevin [36] modeled project success as comprising two components: success of the project itself, as indicated by time, cost, and performance sub-components, and client success, as reflected by use, satisfaction, and effectiveness of the project in benefiting intended users. Similarly, Kerzner [23] defined project success as completion within time, cost, and specifications (the traditional triple constraints), as well as with minimum or mutually agreed scope changes and client/user acceptance. Kerzner added two additional components: completion without disturbing the main workflow of the organization and without changing the corporate

culture. The intent of these additional components was not to argue that projects should not be vehicles of change within the organization but an acknowledgement that projects execute within an existing operational organizational context with established values and norms of behavior. This is consistent with the view of corporate stakeholders of a project as a change initiative within an organization.

### 2.3. Business success

In the case of the business success domain, de Wit [15] argued for distinguishing between project management success and project success. The former is determined by the triple constraints of time, cost, and quality, but the latter is a measure of the degree to which the project objectives are met and benefits accrue to the investing organization. Other researchers refer to this domain as the business or organizational objectives criterion [4, 47]. Describing these objectives as business or organizational objectives rather than project objectives begins to resolve the problem raised by de Wit [15] of multiple stakeholder objectives relating to a project. Fundamentally, project objectives relate to the goals in the project plan while business or organizational objectives relate to the goals in the business plan. Both reflect relevant domains.

Ultimately, businesses do not invest *per se* in a new IT system for the right system to be installed on time, within budget, to specification, and the satisfaction of users. Instead, they aim to solve a business problem in a timely, cost-efficient, and effective manner. If the project does not deliver an acceptable solution to that problem then investment stakeholders are likely to view the project as a failure. Naturally, the business success criterion also permits the perverse possibility encountered in practice of a project failing on project management and/or project deliverable criteria but still achieving business objectives in some acceptable way and, therefore, being considered a success in this domain. This reinforces the counterintuitive view that project management success and even project deliverable success are neither necessary nor sufficient for project success.

Not all researchers support this view of project management, product and business success domains. For example, discussing information systems failure, rather than success, Lyytinen and Hirschheim [27] argued for the notion of expectation failure, which they define as “the inability of an IS to meet a specific stakeholder group’s expectations” (p. 263). They argue for three types of failure. Process failure is when an information system does not meet time and cost constraints; interaction failure is when users do not adopt the information system; correspondence failure

is if the system does not match original goals. They define stakeholders as “all those claimants inside and outside the organization who have a vested interest in the problem and its solution” (p. 261). Lyytinen and Hirschheim view failure (success) as the embodiment of a perceived situation, and stakeholder perception/expectation is a superset of the other three domains. This view is inconsistent with a definition of project success based on a single criterion, but it is consistent with a multi-domain project success framework that permits multiple stakeholder interests with different domains of perception and at different timeframes as proposed in this paper. It is also consistent with de Wit’s [15] view that stakeholders have many different objectives of a project. This leads us to a fourth success criterion.

### 2.4. Strategic success

De Wit’s [15] concerns about multiple stakeholder objectives are further partially addressed by criteria that assess project success beyond direct organizational benefits. These include benefits that favorably position the organization for future opportunities [47], and benefits that accrue to the stakeholder community beyond the investing organization [1]. In the proposed framework, these considerations fall within in the *strategic success* domain. External stakeholders such as investors, analysts, industry peers, competitors, or the general public recognize success in this domain.

Strategic success is particularly relevant to IS projects [60]. In the 1980s, the concept of strategic information systems emerged around the use of information systems to gain competitive advantage and other strategic benefits [37]. While the strategic information systems literature identifies alignment with business strategy as necessary [eg, 8, 55, 56, 14], it also recognizes that achieving strategic IS more than simply a matter of design or intent [18, 59]. Strategic success depends on the system’s effectiveness in the marketplace, and is dependent on the perceptions of competitors and other industry stakeholders external to the investing firm.

Take, as an example, the classic case of American Airlines’ SABRE airline reservation system. Through most of its history, SABRE dominated the US airline industry, setting a benchmark for adopters and competitors, alike [12, 13]. Indeed, it is reputed that SABRE became more profitable for American Airlines than the airline business itself. But it was the airline industry that acknowledged SABRE’s *strategic success*, not just American Airlines executives.

Typically, few projects achieve strategic success. This domain captures the perceptions of a broader community of stakeholders than those in the investing

organization, and a broad range of benefits. It is the ultimate confirmation that a project delivered an outstanding end result.

## 2.5. Process success

While process is a key consideration in systems and software engineering, the IT project management literature does not recognize it explicitly as a success criterion. A process domain would respond to the importance of technical and managerial processes required at different times throughout the project life cycle. Consistent with the aims of quality management, this domain would provide a basis of focus on continuous improvement of critical discipline-specific in-project processes.

The systems and software engineering literature has a strong interest in the processes that underpin successful IS development and deployment. For example, software process improvement is a key component of software quality accreditation [7]. Key related processes include software development methodologies, configuration management, risk management, change management and quality control within the context of project and technical governance mechanisms. Most post-project reviews include consideration of these processes in determining project success. Reviews typically consider whether the managers chose the right processes and applied them effectively, and whether the processes were appropriately aligned and integrated to achieve the project objectives.

A related dimension to process is service. Not all IT projects deliver an IS product; some provide a service. In such cases, the appropriateness and effectiveness of the service process used in the project can be assessed. Consideration of service delivery has a strong base in IS/IT operations but is underdeveloped in IT project management. Practice-based IT services management frameworks such as ITIL have attracted increasing adoption in organizational IT functions and, in research, information systems effectiveness is captured by SERVQUAL as a measure of service quality [24]. These approaches, however, have not yet applied directly to IT projects.

There is a need, therefore, for a project success domain criterion to focus attention and learning on critical in-project processes. The absence of such a criterion makes it difficult, for example, for a stakeholder outside of the project to know whether a project was late because of poor schedule management or some other embedded process within the project. Finer-grained analysis of within-project performance would enable identification of process weaknesses and

failures that need to be improved to enhance future project outcomes.

## 2.6. The time factor

The above literature-based analysis has focused mainly on identifying different project stakeholder perspectives. However, these perspectives also correlate with time; that is, with when the assessment is made. For example, if the assessment is made immediately after project closeout, there is little more in extant project success definitions than the traditional triple constraint criterion upon which to base the determination. After the passage of time, however, assessment becomes possible in the domains of the other interests and perspectives. It is not until the project deliverables have fully passed to the client or users that project impacts can be assessed [36].

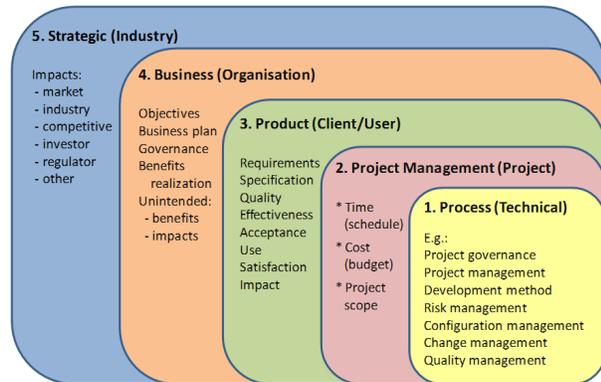
Viewed alternatively as a financial investment, a “successful” project may show increasing returns on investment over time, so perceived value and success may increase with time. As with any investment, the derived value (return on investment) can be assessed at multiple points in time after the initial investment and at multiple domains of analysis (that is, from different perspectives). This is particularly the case for IT infrastructure projects where subsequent IT-based business projects capture the benefits over time [39].

This view contrasts with the current tendency to determine project performance at only one point in time (hence the argument to delay the assessment until the most appropriate time). This approach creates the dilemma that if project performance is determined at one point in time, which point is “best”? Determining this point has been the preoccupation of much of the literature on project success. The proposed multi-domain framework, which we now consider, overcomes this dilemma.

## 3. Multi-domain project success framework

Juxtaposing these five domains together in an integrated framework enables success determination at different times during the project and after project closeout, and from different stakeholder perspectives (Figure 1). In the figure, each domain represents a particular performance milestone from a particular stakeholder perspective (in brackets after the domain name). Performance in each domain can be formally or informally assessed at each milestone. Table 1 lists empirical indicators that can aid in making assessments. The Project Management, Product and Business Domains (2 to 4) are commonly found in the literature. The Strategic Domain (5) is implied by some researchers but made explicit in this framework, while

the Process Domain (1), which the IT project management literature does not currently identify as a criterion, provides a measure of technical performance to promote learning and development in the design and execution of projects.



**Figure 1. Multi-domain project success framework**

**Table 1. Domain summary descriptions**

Domain Descriptions	Empirical Indicators
<b>1. Process</b> Technical and managerial processes, methods, tools and techniques used to complete the project.	Processes were: <ul style="list-style-type: none"> <li>• Fit for the purpose</li> <li>• Aligned with project objectives</li> <li>• Integrated (as appropriate)</li> <li>• Effectively implemented</li> </ul>
<b>2. Project Management</b> The project objectives or design parameters.	<ul style="list-style-type: none"> <li>• Schedule met</li> <li>• Budget not exceeded</li> <li>• Project scope achieved</li> </ul>
<b>3. Product</b> Main project deliverable(s). E.g., it might be a newly developed system, an installed system, an infrastructure upgrade or a service of some kind.	<ul style="list-style-type: none"> <li>• Specifications met</li> <li>• Requirements met</li> <li>• Client/user expectations met</li> <li>• Client/user acceptance</li> <li>• Product/system used</li> <li>• Client/user satisfied</li> <li>• Client/user benefits realized</li> </ul>
<b>4. Business</b> The business objectives that motivated the investment.	<ul style="list-style-type: none"> <li>• Objectives met</li> <li>• Business case validated</li> <li>• Business benefits realized</li> </ul>
<b>5. Strategic</b> The intended or unintended business advantage gained from the project investment.	<ul style="list-style-type: none"> <li>• Business development enabled</li> <li>• External stakeholder/competitor recognition</li> <li>• Competitive response generated</li> </ul>

This approach enables success determination and periodic re-evaluation as benefits accrue from the project over time. It enables stakeholders to map success to perceptions of derived value from the project as benefits accrue. Based on the framework, project success is defined by multiple domains of achievement at any point of reflection. This makes it possible, even non-controversial, for a project to fail in one domain but succeed in another. Each domain is briefly described, following.

*1. Process Domain.* IT project management has generic and project-specific practices that are critical to successfully completing a project. Determination of success in this domain can occur during and/or at the end of the project. It considers the appropriateness of the processes the managers used, their alignment with the project's purpose, and their integration and effectiveness in contributing to the project outcomes. As with the other domains, analysis here provides feedback to the project team and organization for learning and improvement for subsequent projects.

*2. Project Management Domain.* This is the traditional project success criterion, determined at closeout against key project design parameters such as project schedule, budget, quality and/or scope. Scope in this domain refers to project scope, not product scope (the latter is a component of the next domain).

*3. Product Domain.* This domain considers the success of the major deliverable from the project. Clearly, what this is will vary with the project discipline and the specific project (e.g., an information system, a new data network, or some form of service deliverable). It includes measures relating to the deliverable itself (such as its match to requirements, specifications, and quality expectations) and to client/user satisfaction (such as product acceptance, use, and effectiveness).

*4. Business Domain.* Success in this domain is accounted as accrual of positive net benefits to the organization from the project. It may also include an assessment of the organizational contribution to the project's outcome. Consequently, measures will typically include the degree to which the project met the objectives that motivated the investment approval (which are usually specified in the business plan), and whether the expected benefits were realized. They may also include consideration of the effectiveness and contribution of corporate governance to the project. Finally, assessing net benefits will also include any unintended benefits and negative impacts that arose from the investment.

*5. Strategic Domain.* In this domain, organizational benefits are assessed by external stakeholders such as investors, competitors, industry analysts, or regulators, rather than company insiders. Success in this domain derives from net improvements in industry position, business growth and development, competitive advantage, and/or other strategic gain. Strategic success may be planned or emergent.

## 4. Applying the framework in practice

Constructively using the framework in practice is a simple matter of following a few guidelines. Case examples illustrate its use.

## 4.1. Guidelines

In applying the project success framework in practice, five simple guidelines apply.

First, project success is determined in each domain as time passes from project closeout.

Second, domains are independent. A project may succeed in one domain but “fail” (or, more correctly, not succeed) in one or more other domains. For example, it is possible to succeed in the Business Domain (4) but not be successful in Process, Project Management or Product Domains (1 to 3). Project success in one domain implies nothing about performance in other domains.

Third, project success is determined by the highest domain, numerically, achieved at any point in time. Therefore, the project in the previous example succeeded at the Business Domain level (4), regardless of the failures at the lower three domains.

Fourth, project success eventually becomes historic as the project’s deliverables become obsolete. The timeframes during which this occurs will vary for each project and deliverable.

Finally, project “failure” in one or more domains is an indicator of the possible need for organizational learning and development in that domain, to avoid repetition in subsequent projects.

While the framework offers great utility over previous approaches to defining project success, there is no panacea for differences of opinion arising between individuals on whether a project is successful or not. Success in a particular domain may still be a matter of majority opinion. However, consistent with advice from the literature, each project can mitigate this problem by predefining performance criteria for each domain in project and business plans, for later assessment of outcomes. If these performance criteria are defined in a manner that is consistent with the domain descriptions in Table 1, project outcomes can then be meaningfully compared.

## 4.1. Case examples

Three classic Australian examples of IT projects illustrate application of the project success framework.

First, **Sydney Water’s Customer Information and Billing System (CIBS) Project** [31] was intended to improve service to customers, fill gaps in existing systems, and provide business efficiencies. It was to integrate with 12 existing internal systems and 60 external party interfaces. The system was expected to cost \$38 million. Due to concerns about delays, excessive costs (the estimate had blown out to \$135 million), and failure to reach acceptable standards, the

project was terminated a year after it was due at a loss of \$61 million. A government audit review found deficiencies in project governance; project planning and specifications; communication with users; contract administration, and; risk management.

Assessed against Figure 2, the project clearly failed in both the Process and Project Management domains (Domains 1 and 2).

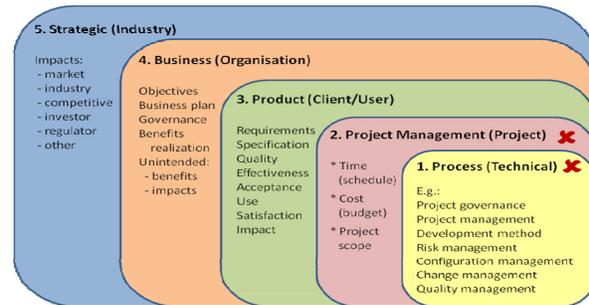


Figure 2. CIBS project outcomes

Second, a **Department of Motor Vehicles (DMV) Licensing and Registration System (LARS) Project** was to execute in 18 months at a cost of \$29 million [5]. The system design was innovative and required integration of new technologies. Three years late, LARS implemented the final modules with a total project cost of \$80 million. On implementation, pandemonium ensued, resulting in public outcry. The system was slow and regularly locked up, customer data records were inaccurate or missing, enforcement of policies was inappropriate, and customer queues were intolerable. Over the following months and years, the DMV gradually resolved the problems.

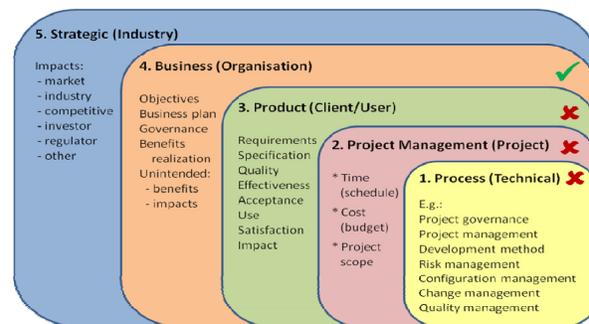


Figure 3. LARS project outcomes

Curiously, while the project failed in Domains 1 to 3 (Process, Project Management, and Product), the DMV received an industry award for excellence for LARS because it achieved the major business objective – savings of \$20 million per year in operating costs. This project outcome is mapped in Figure 3.

Finally, **Commonwealth Bank of Australia’s (CBA’s) CommSee Project** built an IT platform to

enable a \$1.4 billion business transformation [55, 54]. The strategy was to ‘excel in customer service’, which required new technology delivering a 'single view of client' across business units, products and channels. The \$200 million IT project component challenged established conceptions of how systems should be developed and delivered in the bank but the final result was a great commercial success.

Even though many challenges were experienced in the Process and Project Management Domains, the CommSee project was ultimately viewed as a success in all five domains (Figure 4). In particular, it achieved exceptional performance in the Strategic Domain, with CBA recognized in global rankings among the world’s safest and most profitable banks.

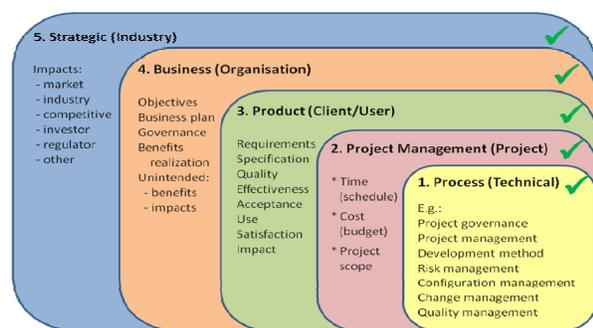


Figure 4. CommSee project outcomes

## 5. Discussion

This paper contributes an integrated project success framework that unites and augments current disparate perspectives in a consistent way, providing a uniform reference for assessing and comparing IT project performance outcomes. Furthermore, the framework aims to support the theoretical formalization of project management as a discipline by highlighting key dimensions of projects that stakeholders have viewed as being important to them. Much of the current focus of project management research and practice has been limited to prescriptions for achieving success in what we have called the Project Management Domain (i.e., from project inception through to closeout), yet project stakeholders indicate broader interests in projects as a vehicle for delivering change and new capabilities.

The paper has limitations. The proposal is conceptual, developed from a review of the literature and illustrated empirically with three case examples. The relevance and completeness of the criteria in the framework and the framework’s practical utility must be tested by application to many projects over time. Also, the paper does not discuss the details of assessment measures and techniques within each domain as they are likely specific to each organisation.

Finally, generalization of the framework requires validation. Ultimately it is project stakeholders who will determine the value of the framework.

The paper has implications for research and practice. The paper extends the current body of knowledge on project management by providing a way to integrate current thinking on the definition of project success. It also extends this thinking by explicating two additional project success criteria. This integration points to a broader scope of relevance of projects than that defined by the traditional project life cycle. The perceptions of stakeholders suggest that they value outcomes attributable to the original project well beyond closeout. Consequently, future research could investigate the role of projects and project management in satisfying stakeholder expectations and perceptions beyond the narrow confines of “on time, within budget, and to specification” performance.

For practice, the framework enables different project interests, perspectives and outcomes to be normalized in parallel rather than in competition with each other. It decouples the Process and Project Management Domains from the post-project benefits that subsequently flow to stakeholders from the Product, Business, and Strategy Domains. This enables celebration of success in each domain as well as targeted identification of project capabilities needing improvement. “Failure” in one domain may be equally if not more beneficial than success if that failure points to a need for improvement. The critical importance of any failures comes into relief for the next major project. The outcome of each successive project is fundamentally zero-based, save for the experiential learning in delivering projects that an organization accumulates over time [6].

## 6. Conclusion

This paper has argued that IT project management as a formal discipline would benefit from a unifying representation of project success. Such a contribution would help focus research attention on aspects of projects and project management that are important to stakeholders. It would also facilitate communication and comparison through a common language of project success. Acknowledging the realities of practice, this reference framework would have to accommodate multiple expectations and perceptions that arise from different stakeholder perspectives at different positions of interest and time. The multi-domain framework of project success developed in this paper aims to fulfill these objectives.

Organizations are increasingly using IT projects to drive improvement and progress. As the discipline of project management matures, this trend is likely to

continue. Common ways of thinking and communicating are necessary supports this need.

The challenge of this paper for practice is to recognize and celebrate success in a way that is meaningful to others, aided by the proposed framework, while progressively improving project management capabilities. The challenge for research is how to respond to the wider community of project stakeholders whose interests lie beyond the project life cycle as currently conceived.

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## 12. References

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