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Learning within and across projects: A comparison of frames

Abstract
In a world of global markets and fast changing competitive environments organizations need to embrace flexibility and adaptability in response to these environmental challenges. One organizational response to these conditions is that the classical functional structures of organizations are now more and more complemented by temporal organizations or projects. Projects are used to accomplish a diverse and often complex set of organizational goals or changes that would otherwise be less obtainable by the organization, or, that would overstrain the ability of the permanent organization to achieve successful outcomes. The diverse raft of projects that organizations do pursue can comprise projects such as new product development, technical construction, through to organizational change projects. Within all this project variety, learning processes that support knowledge generation and dispersion offers a means of improving the flexibility and adaptability of individuals and the organization to these environmental challenges. A central characteristic of projects is their predetermined temporal nature, which presents a number of phenomena constructed differently from that found in traditional organizational systems e.g. specificity of focus on project objectives, micro-political dynamics, internal and external relationships dynamics, learning requirements, information coordination, and, there is the development of individuals and the organization's ability to contribute to the future competitive ability of the whole organization. With the ongoing development of individual and organizational learning being an increasingly central source of sustainability and competitiveness, it is important to develop a better understanding of the learning phenomena associated with projects. Numerous publications and practitioners confirm that a winning combination of project work and learning from experiences is hard to find. As Karen Ayas states, "learning does not happen naturally, it is a complex process that needs to be managed. It requires deliberate attention, commitment and continuous investment of resources " (Ayas 1998). Despite this opportunity, members of project teams do not actively recognize and engage a deliberate 'learning focus' within or across the management of their project activities. As such, they tend to not establish systems or frameworks to actively facilitate and optimize their learning within or between projects. The goal of this paper is to introduce and compare two frames for project learning. The frames explored illuminate learning within projects (Intra-Project Learning) and learning between projects (Inter-Project Learning). The comparison of the frames leads to a conclusion that in spite of the different focus, both frames ought to be considered and managed in a conjoined manner. Nevertheless, the distinction between the two frames enables an organization to identify ways to progressively generate, share and imbed new knowledge, for the benefit of both the projects and the permanent organization. The empirical case study research supporting this paper has been conducted in industrial organizations in both Australia and Sweden.

Keywords
frames, learning, across, comparison, projects, within

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Learning within and across projects
- a comparison of frames –

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Abstract

In a world of global markets and fast changing competitive environments organizations need to embrace flexibility and adaptability in response to these environmental challenges. One organizational response to these conditions is that the classical functional structures of organizations are now more and more complemented by temporal organizations or projects. Projects are used to accomplish a diverse and often complex set of organizational goals or changes that would otherwise be less obtainable by the organization, or, that would overstrain the ability of the permanent organization to achieve successful outcomes. The diverse raft of projects that organizations do pursue can comprise projects such as new product development, technical construction, through to organizational change projects. Within all this project variety, learning processes that support knowledge generation and dispersion offers a means of improving the flexibility and adaptability of individuals and the organization to these environmental challenges.

A central characteristic of projects is their predetermined temporal nature, which presents a number of phenomena constructed differently from that found in traditional organizational systems e.g. specificity of focus on project objectives, micro-political dynamics, internal and external relationships dynamics, learning requirements, information coordination, and, there is the development of individuals and the organization's ability to contribute to the future competitive ability of the whole organization.

With the ongoing development of individual and organizational learning being an increasingly central source of sustainability and competitiveness, it is important to develop a better understanding of the learning phenomena associated with projects. Numerous publications and practitioners confirm that a winning combination of project work and learning from experiences is hard to find. As Karen Ayas states, *"learning does not happen naturally, it is a complex process that needs to be managed. It requires deliberate attention, commitment and continuous investment of resources"* (Ayas 1998). Despite this opportunity, members of project teams do not actively recognize and engage a deliberate 'learning focus' within or across the management of their project activities. As such, they tend to not establish systems or frameworks to actively facilitate and optimize their learning within or between projects.

The goal of this paper is to introduce and compare two frames for project learning. The frames explored illuminate learning within projects (Intra-Project Learning) and learning between projects (Inter-Project Learning). The comparison of the frames leads to a conclusion that in spite of the different focus, both frames ought to be considered and managed in a conjoined manner. Nevertheless, the distinction between the two frames enables an organization to identify ways to progressively generate, share and imbed new knowledge, for the benefit of both the projects and the permanent organization. The empirical case study research supporting this paper has been conducted in industrial organizations in both Australia and Sweden.

Keywords: *Project Management, Intra-Project Learning, Inter-Project Learning, Learning, Knowledge Management*

Introduction

In today's business world of global markets and fast changing competitive environments, organizations need to place an emphasis on 'customizing' their products and be prepared to operate in somewhat complex and chaotic conditions. When organizations interact with their environment, they encounter challenges, changes and problems (Hedberg 1981). In order to cope with these in a flexible and adaptive way, some organizations engage in organizational learning. As a project is seen as a temporary organization, organizational learning is an important area to discuss in a project context. The definitions of Organizational Learning however are legion, for some examples see (Argyris 1977 p.116; Fiol and Lyles 1985 p.803-806) (Kim 1993 p.43) or (Stata 1989 p.64).

Organizational learning is useful when it can be assumed that one of the genuine goals of an organization is long-term survival, as is discussed by authors such as Fiol and Lyles (1985). At the same time, an organization consists of individuals, who, according to behavioral evidence, *"often take actions based on theories that are unrecognized, unstated, untested and often wrong"* (Wruck and Jensen 1994 p.252). If these theories can become stated and explicit, planned learning could prove to be more efficient than ad hoc learning (Nobeoka 1995), based on a theory with a scientific background. Consequently, Organizational Learning in an appropriate framework could also help to improve decision making and reduce the chances that political power or fear will hinder effective decision making. Without Organizational Learning, mistakes will be repeated and achievements will be lost, or as the philosopher George Santayana put it: *"Those who cannot remember the past are condemned to repeat it."* (Juran 1989 p.136). Repeating the mistakes of the past can be expensive in a time when learning and the rate of learning for both individuals and organizations may be the only sustainable source of competitive advantage (Senge 1993; Stata 1989).

Importantly also, Mumford refers to influences of the learning environment on individual learning. "*The learning organization depends absolutely on the skills, approaches and commitment of individuals to their own learning. Clearly, however, the individual learner can be helped or hindered by the organization in which he or she works; the environment may not be absolutely fundamental but it can be a powerful influence, which ought to be properly defined and directed. In that sense attention to 'the learning organization as environment' is certainly desirable*" (Mumford 1994 p.77).

The goal of this paper is to make a contribution to the field of project management theory and practice by introducing and comparing two frames for project learning. In the following section the importance of focusing on learning within the project context is briefly elaborated upon, and is followed by a presentation of the two frames. The first frame identifies dimensions, which need to be addressed to influence inter-project learning and the second frame, identifies a number of dimensions important for intra-project learning.

The Importance of Learning within and between Projects

Projects are used to accomplish a diverse and often complex set of organizational goals or changes that would otherwise be less obtainable by the traditional functional organization. In addition to achieving such a broad range of business goals, *"A project may be seen as a 'vehicle' enabling a manager to undertake a journey resulting in both learning and practical benefit to the business" (Smith and Dodds 1997 p.8)*. The degree, to which this learning identity within projects develops, varies between project type and, indeed the intent to access the learning opportunities.

Similarly, given the growth of projects and project teams within organizations, they also represent an opportunity to learn between or across different projects. In larger organizations at any point of time there are a number of projects going on – different organizational change projects, a variety of product or service development projects and others, including their subprojects and subproject teams. More than often these projects have antecedents and will have follow-up projects in the future. Considering the amount of work and creativity invested in all these projects it seems natural that over time an improvement of project management practices and results should occur (Antoni 2000).

Starkey makes reference to learning structures, and suggests that the *"current theories of the learning organization have several gaps that will need filling, in particular concerning the implementation of learning processes and structures and the underlying psychodynamic nature of organizations"* (Starkey 1998 p.1). In a similar vein, Karen Ayas states, *"learning does not happen naturally, it is a complex process that needs to be managed. It requires deliberate attention, commitment and continuous investment of resources"* (Ayas 1998 p.90).

To maximize the goal of long-term organizational competitiveness through being flexible and adaptable, necessarily requires both Intra- and Inter-Project learning to be deliberately managed and improved. However that may not currently be the case in many organizations (Bartezzaghi et al. 1997; Björkegren 1999; Huber 1991; Kreiner 1992; Packendorff 1995).

Hence, the Intra- and Inter-Project learning structures and processes, require the attention and design efforts of the project team members and the permanent organization to structurally improve knowledge creation and diffusion within these domains. The importance of this action is not solely for the long-term competitiveness of the organization but also for the shorter-term immediate project goals.

Therefore, it is important to ask: What 'learning framework' may enable the team members to pursue a learning objective? What learning frame dimensions need to be addressed by the project team members in pursuing the learning objective both

within and across projects? Indeed, are there common enablers or common impediments within those dimensions that impact the project learning?

Frameworks

It may be true that significant learning can be achieved from situations where perceived success has been elusive – provided that reflection is part of the process and then the incorporation of those reflections into the frameworks and routines of the mental models of the players actually occurs. However, at what cost does this learning evolve? It is 'after the event' and is a negative influence on the immediate project task objectives. That cost is often realized in terms of project cost, time overruns, quality issues and with major impacts on the project team member's career aspirations.

Therefore, a structured approach to nurturing learning within and across projects in a pro-active fashion, removing the impediments and supporting the enablers for learning to be explicit and diffused amongst project team members would seem to offer more beneficial approaches. These benefits can consist of personal knowledge growth, more creative contribution towards immediate project outcomes, the transfer and translation of project learning into future project activities and, it may also serve as a means to promote organizational learning approaches outside the immediate project environment.

The first frame identifies what dimensions need to be addressed to support Inter-Project learning and the second frame, identifies what dimensions support Intra-Project learning. These frames have been developed from two in-depth case studies that were investigated by the authors in both Australia and Sweden. As will be evident, the project cases are quite diverse. Moreover, the research in both countries was focused on 'learning in projects' but from the different perspectives – 'intra' and 'inter'. This diversity of research perspective and project types offers a unique comparative insight into how project team members may need to frame their approach to the 'project learning opportunities' within and across projects.

Inter-Project Learning framework

The framework below consists of a number of dimensions, which are derived from the case study in combination with literature study. It comprises five dimensions, namely *Knowledge Dissemination – codified and personalized, Relationship to permanent organization, Understanding for time, Awareness of project change and ambiguity, and Uniqueness and Similarities.*

Knowledge Dissemination – codified and personalized

Inter-Project learning can take two basic ways (Hansen et al. 1999), one via codified, explicit knowledge, spread to the functional organization and other projects and another one via personalized knowledge with a potentially higher tacit content, which is disseminated among the members of the project organization and the permanent organization.

Codified knowledge dissemination describes learning via means that are detached from the individual and the specific context with an explicit character and can be transferred freely in time and space, independent of the social position of the individual. Codification is a matter of condensing experience in a code more independent of the individual with the original experience and to order this experience systematically. Examples would be documents, manuals, guidelines, reports, databases, process orientation, etc. IPL via codification relies on the codification of knowledge as the prime trigger for learning. *"We have control over everything that the other project does, so that we don't inherit problems from them and we constantly check the database where they store their problems."* (Project Manager)

Personalized knowledge dissemination focuses on the role of the individual in the inter-project learning process and aims at making experience personal or individual, while simultaneously providing the prerequisites to enable the members of the organization to share their experience with each other. Personalization is dependent on the individual as a means of transporting experience, which can thus be of a more tacit character than codified knowledge. Basically, personalization is not based on documented information, but instead on the bringing together of people with knowledge with those in need of that specific knowledge, and has an individual and a group component. Personalization means of managing IPL are more dependent on factors such as schedule overlaps so that people can meet, geographical distance for people to meet physically and can experience difficulties with social distance regarding different levels of hierarchy. Examples would be personnel rotation, meeting intensity, education, forums, personal networks, co-location and 'learning space' arenas. *"I regularly invite some project managers to a pub and chose to call the meetings 'G3' as we are dealing with big projects. ...if you want a meaningful exchange between projects you take the closest of kin - so that we have common questions."* (Project

Manager). However, these two classes are not mutually exclusive, but provide a useful distinction for understanding the IPL activities.

Relationship to permanent organization

The *relationship of the project to the permanent organization* is central to Inter-Project learning, as it has the ability to bridge the temporal distance which can lie between comparable projects. The interaction between the project and – in particular – the *functional organization* is important. Modularity is one example of how to capture lessons learned from a project and to enhance and codify Inter-Project learning. If the good (meaning both product and service) can be constructed from a number of modules, the flexibility of the delivery increases substantially compared to a once-in-a-lifetime approach. At the same time, experience from earlier development efforts on just that module is transferred effectively via its reusability. While not 'in use' the module is typically 'owned' by the function where it was first conceived. Thus the functional organization represents the classic, Tayloristic way of organizing a company and, in the functions, the excellence of specialized knowledge can be fostered and preserved (Daft 2000). Also the permanent organization has functions which are regarded as locations of professional competence, whereas the project is a beneficiary of this professional competence by combining relevant disciplines in a project team, i.e. it profits from the competence built up somewhere else.

Understanding for time

Understanding for time is a central problem for Inter-Project Learning. A project organization is of a short-term and time-focused nature compared to the parent organization. Unfortunately, this leads to a number of problems. The project team members may experience motivation problems if the deadline is abstract and remote, whilst at the same time there are no incentives for finishing early (Leach 1999). One could also say that a project forces a single time perception upon its members. A permanent organization has an unlimited time horizon and is normally assumed to have a genuine interest in a perpetuated existence. A project, has the beginning and end of its existence given, and time thus becomes sequentiated and linear for the duration of the project (Lundin and Söderholm 1995) and for the project team members. The temporary organization 'project' has a limited life and there is usually no intention of making it permanent, i.e. the project does not have a 'tomorrow' but the parental organization does. Consequently, it can make sense for the permanent organization to learn, but it is more difficult to see a natural incentive for the project, which is often seen as a unique event. Furthermore, any organization and especially project organizations tend to reduce their information load by limiting their time perspective (Cyert and March 1992) which in turn hinders learning from and between projects. *"Well, everyone has 24 hours, it is a matter of prioritization. For me in my project it* (to write reports on the experiences made in the project) *is not* (a priority) *but for the company it is probably worth it."* (Project Manager).

Awareness of project change and ambiguity

Awareness of project change and ambiguity in goal setting influence the ability for Inter-Project learning as they – in combination with the perception of uniqueness – determine the extent of learning which the involved personnel will embark upon. A project contract, which normally contains the deliverable specification, scope of work, data list, funding authorization and schedule (Barkley and Saylor 1994), provides an idea of a stable setting for the project in which the project team can strive for success. Unfortunately, project goals are not necessarily of a stable nature, but can be rather unstable. One aspect of the project during its lifetime is that the specification for the deliverable may change during the course of the project, the so-called mission creep (Pinto 1997) where, for example, the customer changes his mind, technological progress requires upgrades, or the political situation changes. This influences the ability to extract lessons learned from the project.

Uniqueness and Similarities

Uniqueness and Similarities - For Inter-Project learning to be possible, a critical point is to recognize similarities between projects, which can be difficult since a characteristic of projects is a certain degree of uniqueness. A central prerequisite for Inter-Project Learning is a certain degree of *repetitiveness* between the projects, since the similarity of aspects allows construction and refinement of procedures in projects, whereas total uniqueness of a project hinders learning (Lundin and Söderholm 1995; Partington 1996). Problems of understanding this are sometimes reflected in the attitude of project team members and, this complicates the transfer of experience between projects as exemplified in the quotation below. *"Corporatization, standard-project-process. That sounds so boring. I don't want us to do some series production "do like this and everything will be fine". Then you can take a secretary for that job. It's no challenge to do exactly the same. You shouldn't reinvent the wheel, but that's something else."* (Subproject Manager).

The Intra-Project Learning Framework

The framework below consists of a number of dimensions, which have been conceptualized by the researcher as learning relationships, learning mandate and environment, cognitive styles, knowledge management and pyramid of authority (Sense, 2001). The definitions provided, unless cited, have been developed by the researcher as part of an action research activity and have relevance in that particular context. The five dimensions that form the framework consist of the following:

Learning Relationships

The definition of this dimension is: '*The relationship a person has with other person/s from which they acquire/impart knowledge or skill to increase their capacity to take effective project action.*'

This dimension specifically targets the learning aspects of the relationships that a project team member will have with other project team members and with those outside the immediate team but within the project environment. It requires the project team member to explicitly address both the physical and psychological barriers, and enablers for learning, within these relationships.

Critical in building this learning relationship with people involved in the project is to expose difficult issues about the relationship that will need to be explicitly addressed by the team. Such issues revolve around preparedness to reveal insecurities about one's role and abilities; to make explicit reflection on 'self impact' – 'What's in it for me?'; and to recognise the active changes they may need to make to promote the development of their learning relationships.

An example from this case study is a comment made by one of the project team members during an interview question on the self-protective barriers that existed in their learning relationships:

"We should be in the plywood business given the amount of veneer abundant in the working party process!"

Cognitive Style

"Cognitive style is a person's preferred way of gathering, processing and evaluating information. It influences how people scan their environment for information, how they organize and interpret this information and how they integrate it into the mental model and subjective theories that guide their actions" (Hayes & Allison, 1998, p 850).

This dimension requires the project team member to explicitly evaluate their own style, the other team member styles and the impacts resulting from these styles coming together in this temporal unit called the project team. The players would also evaluate whether the team has a predominant style that groups them together e.g. engineers will often present a more homogeneous cognitive style than a truly interdisciplinary team.

In addition, the project team members should then assess whether their cognitive styles align to the perceived learning demands of the project, as it currently exists. In project environments, the information processing demands are usually high and quite variable, dependant in large part on the project type and on the project phase. This variability in information processing demand places a high responsibility on the project team member to understand their own cognitive style and to question what are the information processing demands of their project role. Further, they need to identify and evaluate any mismatch and then take corrective action. Not to address this factor will impede project learning at an operational level, but will also impede the opportunity for the team members to modify their subjective mental models.

To highlight these challenges to an individual cognitive style, below is a quote from one of the project team members in this case study regarding his unenthusiastic perspective on exploring the non-rational aspects of the organizational change project, compared to the rational aspects of structures, patterns and process:

"I am not a non-rational person and therefore why do I need to swim in the non-rational world?"

Knowledge Management

The definition for this dimension is: '*the way a project team manages knowledge transfer within and external to the project team.*'

This dimension targets the way the project team manages knowledge dispersion and should be viewed in a conjoined manner with the cognitive styles dimension. It addresses how the team formally and informally manage the knowledge transfer within the team and between the team and other project stakeholders outside the immediate project team. It also addresses how the approaches align to the cognitive styles of the players involved and whether the structures for the physical and operational support systems, support knowledge dissemination and exchange. Moreover, it also asks the project team to consider how does the size and mix of the project team hinder or support knowledge creation and management.
Particular attention should be paid to personalization versus codification strategies (Hansen et al. 1999). These strategies are often blended in a project context, but often there is one dominating way to share knowledge within the project. Within the case, a team member reflected on his mismatch of cognitive style and their knowledge management practices:

"Sometimes I don't know that I have been given a lesson……"

Learning Mandate & Learning Environment Support

The definition for this dimension is: '*The explicit/implicit instruction/authorization given to a project team member to pursue learning within the project and the ongoing support in all its forms, provided by the project sponsor and/or the organization to realize that goal.*'

This dimension involves the project team members explicitly assessing the organizational support that they have in pursuing their learning within the project. This dimension encompasses the physical, and the organizational and political systems support for project learning activity e.g. time release to participate in forums to assist learning and physical resources such as rooms made available.

The quote below from one team member highlights a reflection he had regarding what they might do to challenge people to pursue their own learning and about a process of learning from mistakes:

"Challenging people to learn... we need to put more thought into how that actually works. Getting everybody to understand what we should do in the future. The thing about learning from mistakes is that we haven't got the processes - so there is no fear of making mistakes at this level"

Pyramid of Authority

Collective or assigned pyramid of authority: *The project teams' collective authority within the organization influencing the team's political approach to their collective learning. This authority can be perceived by the project team and can be either a summation of the individual authorities in relation to the project, or can be assigned to the project team by the organization to aid the project success.*

This dimension causes the project team members to explicitly identify the political issues impacting their project and their learning potential, and to recognize the individual and collective 'authority' that they bring together into the project forum As described by Frame (1994), authority can be multi-faced e.g. technical authority, formal authority, bureaucratic authority, crisis authority. Different project team members will bring a varying combination of these authorities to the team and the explicit recognition of those cumulative authorities constructs a picture of the ability for that individual or team to assume an influential or accommodating political approach to their own learning opportunities. That 'authority' will also influence how they pursue the myriad of other aspects of the project process – not least of all will be project leadership.

Failure to not recognize this dimension and explicitly address it, will mean both formal and informal learning will most likely be opportunistic and adaptive rather than deliberate and purposeful.

The following statement made by one of the project team members is a reflection on the culture of the organization and, highlights a negative impact, the perceptions of authority has on learning and knowledge exchange in the project team environment:

"We only listen to the 'authority' is the culture in here! There are two things – the 'authority' itself saying you can't challenge me and the other is that no one will listen to you unless you are the 'authority'. Expertise authority being unassailable is a lost organization ownership opportunity."

Comparison of the Frameworks for Intra- and Inter-Project Learning

For reasons of illustration, the following text highlights only those dimensions from either frame, which demonstrate some strong similarity in characteristics. As evident, there are two groupings, which are exemplars of such strong similarity. In turn, this 'commonality' of these dimensions, may readily assist in developing a learning focus and application that transcends both learning within and across projects, since the same or similar dimension would be familiar too, and addressed by a project team in both frames.

Intra – Knowledge Management and Inter – Knowledge Dissemination

As detailed in the descriptions above, these two dimensions of Knowledge management and Knowledge dissemination have a wide overlap and both make reference to Personalization and Codification strategies. Important to learning is the way knowledge is relationally created and shared with those within and external to the project team. Importantly also, is attempting to align the knowledge management approaches to the cognitive styles of the project team participants to improve that chances for absorption of the available information.

The project team needs to identify a knowledge management approach that identifies with the type of project undertaken and the culture of the permanent organization to enable for both inter and Intra-Project learning. Personalization aspects, which are likely to be present in most cases of inter and Intra-Project learning activities, will provide continuity of experience in the transition phases between learning within the project and learning between projects. Codification aspects support knowledge transfer of a more explicit character in communication within the project and, facilitates for future projects to profit from experiences of earlier projects if e.g. the individuals involved are no longer with the company. The dimensions of Knowledge Management/dissemination in both frames are close and therefore, for enabling both intra and inter-Project learning, this dimension needs to be addressed.

Inter – Relationship to permanent organization and Intra – Learning Relationships & Environment

To achieve results in Inter-Project learning it is often necessary to involve the permanent, functional organization as both a way of storing knowledge as well as spreading and transferring it. The project may learn lessons valuable for future projects, but how to preserve that knowledge until then? Improvements and new experience from the past project are fixed and kept for future use in the organization. At the inter-project level, there may be a long time span between past experience and the improved application of the solution in a future project. Documents and routines as well as personnel do not exist in thin air between projects but need attachment to a functional or process organization that has a more permanent time horizon than a project, that represents a 'bracket in time' (Kreiner, 1995).

Learning relationships describe the application of that reasoning on a personalized and within-project basis. The interaction of the project team members' first enables/lays the foundation for the knowledge to come into existence which then, might be transferred to subsequent projects. Learning relationships between people within the organization that are non-existent, poorly maintained or simply opportunistic will negatively impact the ability to bridge that temporal gap between projects. 'Bridging' will necessarily involve peoples input and more often than not, person to person contacts to facilitate understanding and seek external inputs to the project. This is vitally important to supporting a relationship between the project and the permanent organization and directly between projects.

The learning environment support is connected to the 'relationship to the permanent organization' dimension in that, bridging that gap can only occur when the physical, organizational and political support structures are in place to enable and facilitate the learning exchange. This may not simply be facilitating intermediary exchange from one project to the organization and then to the next project, but also directly between projects and their teams. Failure to provide those essentials will only stifle learning creation and diffusion.

Therefore, it can be concluded that the permanent organization relations to the project and, the Intra-project learning relationships and environment dimensions, complement each other, with Inter-Project learning dependant upon the existence of Intra-Project learning.

Conclusions

The illustrative comparison of the two frames leads to the conclusion that in spite of the different focus, both frames ought to be considered and managed in a conjoined manner. At first sight, the different goals and management contexts of both frames seem to create a bed for conflict. Success in a project is not necessarily identical with success in the permanent organization, unless a system-wide perspective is applied. Adopting a system wide perspective enables the organization to realize the synergetic effects possible if Intra-Project learning activities are complemented by systematic Inter-Project learning, thus reducing costly 'reinventions of the wheel'. Thus the distinction and the joint management of the two frames enables an organization to identify ways to progressively generate, share and imbed new knowledge, for the benefit of both the projects and the permanent organization.

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