OVERCOMING KNOWLEDGE-SHARING BARRIERS IN A PROJECT BASED ENVIRONMENT
CASE STUDY: PYRAMID URBAN DEVELOPMENT

PROJECT PERFORMANCE IMPROVEMENT (15356)
INDIVIDUAL ASSIGNMENT
REFLECTIVE PRACTICE

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Abstract

This research highlights some of the possible barriers that hinder knowledge transfer in a project environment with the purpose of offering a comprehensive and structured starting-point for an organisation to audit its current knowledge base and knowledge-sharing requirements. The first would be identifying what knowledge exists within or outside an organisation and where the knowledge resides. Thus, implicit forms of knowledge held by the team units and wider stakeholders will be recognised that provides the basis for effective decision-making and a stimulus for the desired social learning. The value of implicit forms of knowledge such as expert and tacit knowledge are highlighted within the case study. The approach that implies the collaborative knowledge sharing is adopted that acts as an enhancer by encouraging the engagement between the local community, the organisation and government, as key decision makers.

Keywords and Phrases: Knowledge Sharing, Communication, Community of Practice, Community Engagement, Occupational Communities

Introduction

An important part of managing knowledge is its transfer to locations where it is needed and can be used (Alavi & Leidner, 2001) the commercial success and competitive advantage of companies seems to lay increasingly in the application of knowledge and location of those parts of the organisation where knowledge sharing practices can assist in optimising business goals (Riege, 2005) to indicate how the knowledge can transfer in organisations Lesser and Prusak(1999) stated “every organization has informal networks of employees who work together — sharing knowledge, solving common problems and exchanging insights, stories and frustrations. When appropriately supported by the formal organization these “communities of practice,” as they are often called, play a critical role: they are the major building blocks in creating, sharing and applying organizational knowledge.”

Subsequent to this introduction, one of the largest development projects in Australia (all names are changed for confidentiality purposes) is described and the lessons learnt are largely analysed. Then the therapeutic approach offered and its influences on the performance improvement are discussed.

The case shows how best practice can be developed through knowledge-sharing facilitated by networks of relationships. Some relationships are external — between the company, its partners, suppliers, and local community. Other relationships are internal — between frontline managers and team members. The case study indicates how technical and non-technical barriers restrict the knowledge to collate and distribute for the mutual benefit of all stakeholders. Also, it shows that without proper knowledge sharing the consequences can be very costly both in monetary terms and stakeholders’ relationships.

The Project Background

This section presents an Australian case study of the planning of a new town called PYRAMID. This town is to play a significant role in helping to provide much-needed infrastructure and affordable housing as well as ease the population pressures from the capital city close to it.

PYRAMID New Town started life back in 2007, and then a 2000 hectare site created by one of the biggest donors in Australia’s Labour Party, D.H., which is still a part-owner of the project.
The development got off to a bad start when D.H. large-scale clearing of endangered trees and shrubs led to a state government investigation and a public outcry.

Then planning minister at the time struck a deal with D.H. on a revamped PYRAMID. The developer could have 7200 residential lots on 600 hectares as well as commercial and industrial land. In return, D.H. agreed to hand over land for conservation and a reserve for a rare plant listed as critically endangered. There was also an agreement that D.H. would hand over almost 6000 hectares of land as an environmental offset against the damage the development would cause to threatened vegetation species.

In 2009 Property Group (P.G.) has just been recognised an International Real Estate Federation award for a similar project, buys the significant stake from D.H., which retains a 29 per cent interest. Thus, P.G. role as a lobbyist appeared to pay off when PYRAMID was included in the final strategy but at a lowest rating of 91, last under the Department of Planning's assessment of possible development sites. Media reports P.G. conducting “intensive lobbying” of the then government on behalf of developers wanting to lift the draft Regional Strategy’s population target from 125,000 to 200,000 over 25 years.

P.G. has been the project manager for the development changed the project scope to the development was to consist of a mixed-use urban area, providing up to 7,500 dwellings and 200 hectares of employment land. It was also proposed to include over 5,600 hectares of conservation land, to be protected in perpetuity.

Development proposals and concept plan were approved relatively. SWAG, a group of concerned residents, lodges challenge against PYRAMID approvals alleging approvals was biased. In five years from that time the planned new town of PYRAMID has been rejected twice by the Land and Environment Court after successful challenges led by concerned residents and local environmental activists. P.G. was backed every time with a new proposal based on "available and appropriate options" as the P.G. CEO said.

“In the legal battle against the development the facts and evidence were very strong, and it was ultimately very difficult to defend," SWAG solicitor said. "A deed is done behind closed doors. A deal is struck, and there is no consultation, no transparency,"

PYRAMID and the Government paid tens of thousands of dollars as the legal costs incurred by SWAG.

Senior Department of Planning official also strongly criticised the PYRAMID project in internal communications with the department.

SWAG, was concerned that the project had not considered the precautionary principle and biodiversity principle and the primary proposal did not consider the requirements and complying with the State Environmental Planning Policy and bias in relation to the regional strategy.

SWAG and some others, said PYRAMID was too isolated from existing services, and its prospective 20,000 residents would overwhelm the existing old town, and it would be left a "ghost town". There were also concerns about the appropriateness of locating a large new population in an area that is not well serviced by public transport or other facilities.

‘The thing that troubles me about the site is not what we know about it, but what we don’t know,’ SWAG councillor said. ‘What is not shown on the old mine maps that most people concede are not reliable, and what has happened historically. The landfill that operated out there was a cowboy operation that had to be shut down; it’s anyone’s guess what’s out there.’
As reports demonstrate part of the site was home to the colliery, closed in 1975, and later a coal washery plant and an illegal waste dump for construction material. The investigation has found there is a large area of coal waste, responsible for leaching acid into nearby the region, spread across 20 hectares at the PYRAMID New Town site that is toxic to plants and threaten surface and groundwater. Resident activist and third-generation colliery workers said, “Part of that land is some of the most contaminated, polluted, undermined land in the region and it’s dangerous.” Former miner of the old colliery warned about the trees by telling a story “We started digging for coal in one area and found all the tree roots coming through from the surface.” He pointed out the site subsidence and said, “As the mine got older, it went deeper, and it was far more stable.”

P.G.’s environmental consultants found that “Based on the limited intrusive investigations, the extent of the contamination is unknown, and a further detailed investigation is recommended”. “Determining the precise location of mine workings on the eastern edge of the development and consult the board if they require remediation”. Another report by consultants HDB said, “The site consist of materials that are capable of generating contaminating chemicals and leachate and threaten the site ecology,” the report said.

Recently, after eight years, PYRAMID could get the first stage approval. P.G.’s CEO is excessively optimist. “PYRAMID would successfully manage its environmental responsibilities”, he said. Also, he claims that they have much time till the second approval to handle the PYRAMID site issues, and it is not so urgent. While SWAG councillor believe that “Stage one is where most of the developer’s income will come from, and it will be interesting to see if stage two proceeds in its current form, because it’s here where they need to start spending big money on remediation”. SWAG next step will be challenging the project on sustainability grounds.

**Lessons Learnt**

Despite the fact that the implementation of PYRAMID lacked and continued to lack strong regional policy and place management governance; as well as a holistic action plan for the town’s development but regarding P.G. attitude following lessons learnt revealed from the story.

The PYRAMID project has been consistently involved bad rumours. It is well known that once people have come to a wrong conclusion based on faulty information, they find it difficult to change their minds once they get correct information. The communication style should, of course, be engaging to allow the stakeholder to exchange and clarify information. (Turner, Müller, 2010) Rumours can quickly create a great problem than there actually is, and the media can exaggerate rumours by getting hold of them. It is not just a common reaction; it can be a kind of knowledge that we receive from the past and transform to the future.

Limited investigations and the lack of consultancy with other parties caused underestimating substantial risks, non-compliance of regulations and, in general, inaccurate feasibility studies. Making decisions based on this insufficient knowledge led to a loss of trust and had direct and indirect influences on the project process i.e. repeated costly errors and strong evidence against P.G.

Also, construction projects embody risk. One way of insuring against risk is reducing the probability of mischance by leveraging knowledge assets within the business without any additional costs. (Coaks et al., 2005) it is clear that the climate for change is supportive, and the P.G. Company was generally receptive to representing new proposals, however, the unplanned excessive cost of these changes indicates their inefficient change management strategy.
In designing such a large urban development—on a controversial site close to an existing rural area—one of the strategies should be to take advantage of local community tacit knowledge about the site history and desired future town character.

Project managers should be very aware of the value of having knowledge about knowledge and having access to the organization’s collective memory and storehouse of stories and cases that are representative of this knowledge. (PMI, 2015) The following were identified as facilitating factors for the sharing of knowledge: Management towards knowledge and leadership development. The barriers found were: the lack of systemic thinking and the absence of exchange between teams. (Melo et al., 2013)

Openness, or transparency— the widest possible sharing of information about what is happening in the organisation and why it is happening— is an important encourager of trust. Secrecy breeds distrust, the suspicion that those keeping secrets are planning something they do not want others to know about; transparency fosters trust, showing that others, and the organisation, in general, have nothing to hide, and suggesting that “we are all in this together.” (Ichijo et al., 2007)

In Project-Based Organisations, the main organisational units are the projects that often geographically dispersed. This issue causes the lack of communication links between projects and in effect hinders the knowledge transfer and learning process causing “learning closure” and lack of cross-project learning and communication (Hobday 2000) as occurred in PYRAMID. Refer to the final proposal amendments, the design process was thoroughly affected by P.G. internal and external communication problems cause inaccuracy in feasibility studies and design outcomes.

Communication among all project stakeholders is one of the main factors for the project success. It is a prerequisite of getting the things done in the right way and in the right time. Knowledge is power: sharing knowledge is reciprocal empowering amongst project stakeholders. Also, organisational culture and climate have been identified as major catalysts to knowledge creation and sharing.

The project long history (around eight years for approval) caused difficulties that intensively affected the project performance over time. Including: changing policies, changing key people in between stakeholders, P.G.’s labour turnover, missing the resources (storytellers and experts), subsidence and ongoing distribution of the pollution in the site.

The processual analysis of the critical organizational events shows that all these events can be explained regarding some types of knowledge needed to meet some specific requirements. These knowledge requirements are called organizational knowledge gaps. In filling these knowledge gaps, the solution can be to put in place a series of organizational knowledge processes which lead the organisation to interact with its alliance partners socially.

There can be many reasons for corruption occurred in such a project, from the lack of holistic legislation to lobbying to get approval. Regarding research, these deviations would be under control by adopting a strategy to empower individuals, communities, and governments through disseminating knowledge. So that, communication are best exploited to prevent corruption in each community.

The organisation should not be characterized by “information overload” and “knowledge deficit”. Organisation board should know what works, where and why. Thus, knowledge can be gathered, managed and used by the organization in the fight against biases.

Furthermore, the organisation should minimise the probability of mischance by promoting best practice and lessons learned. Eight years challenging for approval should have many lessons to learn and consider.
The Approach

In order to improve the PYRAMID project performance, employment of a hybrid approach with the focus on communities is suggested. Theories like Communities of Practice, Community Engagement, and Occupational Communities feed the cited approach.

Through Occupational Communities P.G. company can feel the knowledge gaps by knowledge sharing across inter-firm Boundaries. Organisations cannot rely exclusively on their internal competencies and capabilities; instead, in order to develop and maintain a competitive position they need to form alliances with external actors. These linkages provide access to complementary pools of knowledge and organizations participating in alliances can improve their operations, strategy, competencies and skills (Mowery et al., 1996; Inkpen and Dinur, 1998).

The occupational communities’ perspective see knowledge as continuously constituted through people’s interactions. (Van Maanen and Barley, 1984; Brown and Duguid, 1991; Lave and Wenger, 1991; Orr, 1996) In this context people learn and share knowledge not simply by demonstration or instruction; instead, they develop their knowledge about a particular practice through a process of socialization and through interaction with ‘old-timers’. The social nature of these processes appears to be of fundamental importance in order to understand how people belonging to different occupational communities are able to share and create knowledge, based on the common grounds and understanding they establish while working together both in their own organization and in collaboration with their alliance partners. (Haider et al., 2010)

Communities of Practice (CoP) as a second theory, are groups of people, often in organisations, who share a concern or a passion for something they do and learn how to improve as they interact regularly. CoPs help to share the tacit knowledge, including best practice and expertise. The third theory is Community Engagement (CE) theory that has been widely acknowledged as a process towards sharing decision-making and empowering people.

By inclusion of CE into CoP theory, the success of CoPs would be better improve. (Sung et al., 2013) Sung et al. (2013) presented the model comprising seven essential elements of CE:

- Belonging: the feeling of ownership and the emphasis on relationship building between the services and the community.
- Commitment: the degree of commitment to the project by the relevant stakeholders.
- Communication: the way in which the service communicated with the community, with an emphasis on a two-way process.
- A flexible approach: using a variety of methods that were employed to engage with the community and to work in partnership.
- Genuineness: authenticity or a true reflection of what was said to be.
- Relevance: the degree of relevance or benefits of the project to relevant stakeholders.
- Sustainability: the continuity of the project and the impact of the project on relevant stakeholders.

Chiu et al. (2006), based on Social Cognitive Theory and Social Capital theory, outline six key elements to understand virtual CoP for knowledge sharing: social interaction ties, trust, the norm of reciprocity, identification, shared language and shared vision. These elements, categorised into structural, relational and cognitive dimensions, plus personal and community-
related outcome expectations were tested to enhance both quantities of knowledge sharing and knowledge quality.

Comparing CE theory and CoP theory, it is argued that commitment is related to trust, structural dimensions are related to belonging, cognitive capital is related to relevance, and that together, all of these help improve knowledge sharing in CoPs.

Research has shown that high social interaction between stakeholders helps enhance the intensity, frequency, and breadth of knowledge exchanged (Larson 1992; Ring & Van de Van 1994).

**Improved Performance**

Apart from that, continuing the PYRAMID project considering the environmental issues is advisable or not, suggested approach would pave the way for a comprehensive investigation and reaching a satisfactory result.

Through adopting such an approach, hence all the project stakeholders will communicate each other in a very constructive manner. This collaboration will broaden the knowledge domain by providing the opportunity to share knowledge and removing the obstacles. The transparency resulting from this attitude will reinforce the trust and improve the interaction among relevant parties.

Community engagement processes can reconcile interests, constraints, action and build social capital. An intended outcome of these processes is to raise the understanding of the value of quality urban design and to empower communities to shape their respective urban futures. In this way, the community-design master planning process facilitates multi-stakeholder, trans-disciplinary collaboration and creativity. Therefore, the master plan that is to prepare shortly will clearly indicate all the critical issues and will shape the future residents desire.

In organisational scale, incorporation of the mentioned theories will prepare a supportive culture for knowledge sharing besides organisational learning. Within this environment, the likely risk and changes will be well managed, and the rework caused by replicative errors will be minimised.

**Conclusion**

This research aims to fill the gap in understanding the importance of knowledge transfer in supporting project success. “Organizations that value knowledge transfer and have developed good practices to support it report substantially better project outcomes than those that don’t value the discipline.” (PMI, 2015)


* The case study references did not mention for confidentiality purposes