

Can project managers MOVE FREELY between different industries and OPERATE EFFECTIVELY?

Recent research suggests that the core project management skills are transferable and that a project manager should indeed be able to transfer to an unfamiliar industry. While it is by no means definitive, the research does provide a good basis for further study.

The research provides lessons for project managers who have not transferred from one industry to another but seek to do so.

A survey questionnaire asked project managers if they had changed the industry sector in which they operated. If the response was positive, they were asked to indicate whether they considered the core project management skills to be transferable. The project management skills chosen for the survey were the nine project management knowledge areas in the PMBOK (1996). These core project management skills are also proposed by the Australian Institute of Project Management (AIPM) as necessary components of any course in project management (Price 1997).

The questionnaire also asked the respondents to detail, in their own words, any problems they faced in transferring from one industry to another, in their role as project manager.

Due to time and budget constraints, the survey was limited to a sample of practicing project managers.

The questionnaire was sent to a sample of project managers (304), selected from the Australian Institute of Project Management (AIPM) Handbook (1997). The handbook does not list all project managers in Australia, and the author acknowledges the limitations and possible bias introduced by selecting project managers from the handbook.

An advantage of sample surveys over censuses is that they are cheaper and are easier to run. However, one main disadvantage is that the results contain sampling error, which is the difference in the

results obtained by using a sample of the population rather than the whole population.' (McLennan 1998). The breakdown of the respondents into their various industry categories are in Table 1.

Survey data analysis

When the figures are reviewed, the percentage of project managers who had changed industry and considered the core skills transferable is interesting when compared to the slightly higher number of respondents who had not changed industry, but also considered the core skills transferable. The difference in the responses can be seen by comparing Tables 2 and 3.

A common belief among respondents was the importance of having technical knowledge of a particular industry to operate effectively as a project manager. The point made by a number of respondents was that problems can occur in the area of terminology, when either a technical term, phrase or symbol has different meanings in different industries. The lack of familiarity with the terminology in an unfamiliar industry can pose difficulties. This problem was mentioned by both project managers who had changed industries and those who had not. However, in contrast to this, a number of respondents cited a lack of awareness of structuring business or manufacturing problems in a project-like manner, for example, the use of a Gantt chart to plot the critical path of a project. These respondents believed that project management techniques would indeed be relevant, but were not recognised or fully understood by senior management.

A number of the respondents who did not consider all nine of the core skills transferable, nominated only one or two as not transferable. Procurement, integration and quality management were the main areas nominated. The respondents considered that procurement management

would be among the least likely skill to be transferable, as each industry tends to have a formula or procedure for the selection and management of suppliers and/or sub-contractors.

Integration management was nominated as a problem area. Respondents believed that to successfully integrate the various components of a project, a reasonable level of knowledge of the industry would be necessary. Quality management was also nominated for the same reasons as integration management.

Survey results

The main issues raised by respondents were the hurdles that project managers are likely to face in seeking to transfer their skills from one industry to another. As can be seen by the relatively small percentages of respondents who cited the following possible impediments, the majority of the respondents did not envisage difficulties in transferring project management skills from one industry to another.

- **Senior management's lack of awareness of managing by project**

This was indicated by only 9 per cent of the respondents, citing instances of senior management's lack of project management approach, trying to short circuit the project life-cycle, or not relieving staff of their existing duties.

- **Organisational culture**

This was indicated by only 9 per cent of the respondents, citing instances of fellow staff members explaining their lack of project management approach, using common phrases such as 'but we've always done it this way'.

- **Technical credibility**

This was indicated by approximately 13 per cent of the respondents; once again, in the author's opinion, a relatively small percentage. Expressing their concern with

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comments such as, 'people will not respect you if you have no base knowledge of the industry'.

- **Inconsistency in terminology**

This was indicated by only 9 per cent of the respondents. A good example of this cited by one respondent was the use of the word 'plan'. In computer terms the word 'plan' is used to outline a method of achieving something, in construction it refers to a drawing.

- **Establishing a new network**

The word networking used here is in the context of: a chain of people; connected professionally (Oxford Dictionary 1994), ie. the project manager in construction who has a list of preferred trades (plumbers, electricians, etc) he can call upon. It is unlikely this network would be useful in managing a computer hardware upgrade.

Implications

The ability of those project managers who have successfully transferred from one industry to another compared to those that believe they could not, could be due to:

- confidence gained by those transferring to another industry after they have been successful
- better training in core skills by those who transferred
- a more adaptable attitude
- higher IQ
- an extroverted or positive personality.

With today's focus on flexibility and customer service, the ability of companies to respond to their clients' needs in a professional and adaptable manner is paramount. The results of the survey into the transferable nature of project management skills, and therefore adaptability and flexibility, has implications for both project managers and their employers or clients. The survey data suggests that the core project management skills are transferable across a wide variety of industries. This information is useful to both project managers and clients who use project management services. Having established a working relationship between a project manager and a client on one particular project with a particular focus, the client can engage the project manager to manage a project in another endeavour which

they may not have previously considered within the scope or expertise of the project manager.

Because of the increasing requirement of flexibility in industry, further study of those who do not transfer may be of interest to determine why they do not transfer or feel they are not likely to succeed should they transfer.

Recommendations

The results of the survey indicate a number of areas where the project management profession could assist its practitioners. One of these is by raising of awareness of the principles of managing by project among senior management. This might be facilitated by conducting workshops 'on site' and demonstrating the application of the core project management areas to senior management.

The issue raised of combating an organisational culture resistant to the idea of managing by project will only be overcome by involving the entire workforce and being able to demonstrate the advantages in this methodology.

A diverse intake of students into project management courses will help alleviate a number of concerns raised by the survey. For example, differences in terminology, and the process of studying the principle of managing by project with people from other industries will build a greater understanding of the different problems in those industries. Furthermore, a grasp of at least the basic terminology of those different industries will also lead to the sharing of knowledge in not only the intricacies of different industries, but also the networks needed to operate in them. The result of this cross fertilisation would be project managers who have the technical credibility to operate across a wide variety of situations and industries.

Establishment of workshops that bring together project managers from various industries would assist in this cross fertilisation process.

Table 1 demonstrates the long-term history of project managers in construction by their larger representation in the survey. This may suggest that institutions offering courses in generic project management should focus their attention on

recruiting students from the lesser represented industries.

Potential problems

Project managers transferring their skills to an unfamiliar industry will need to be open minded and aware of industry variations. The tendency to believe you know all about project management, albeit in a different industry, will need to be controlled. In particular, project managers should take care in:

- relationship management, in the context of any existing corporate or customer relations that have been managed in a certain style, the project manager will need to 'tread lightly' when first introducing the principle of managing by project
- procurement of resources, for example contract labour is procured in different ways in different industries. Construction labour is often packaged with materials and negotiated as a lump sum, whereas computer labour is often on an hourly rate basis
- quality and risk management can be industry specific, as systems to identify and manage both of these issues are developed 'in house' and over time
- client cost systems in the manufacturing industry will not necessarily be appropriate, or able to track and control costs as is desirable in a project context.

All the abovementioned issues are potential problems, and may not necessarily occur in their entirety or at all; it will depend on the project and the project manager.

Summary

The institutions currently teaching project management skills may consider including workshops to address the potential problems raised by this paper. By showing the potential problems likely to face project managers seeking to operate in a number of different industries project managers will be prepared and forearmed. A further consideration may be to devise project management terminology suitable for a wide variety of industries. ♦

TABLE 1**Breakdown of the respondents into their industry category**

Industry	Considered all 9 core skills transferable	Did not consider all 9 core skills transferable	Total
Construction	27	26	53
Government infrastructure	5	6	11
Defence	9	4	13
Not stipulated	5	4	9
Information Technology	7	2	9
Manufacturing	2	6	8
Telecommunications	1	5	6
Transport	3	1	4
Education	2	1	3
Engineering	1	1	2
Consulting (unknown)	1	1	2
Electronics	1		1
Energy	1		1
Ship building		1	1
Media		1	1
Health	1		1
Event organising		1	1
Property development	1		1
TOTALS	67	60	127

Table 1 details the breakdown of the respondents into their industry category, and whether or not they considered all the core skills transferable, regardless of whether or not they had changed industry.

Table 2 shows the number of respondents who believed the individual core skills to be transferable, broken down into those who have changed industry and those who have not.

The more positive attitude towards the transportable nature of the core skills was expressed by the project managers who have changed industries. As can be seen by the data in Table 2, an average of 87 per cent of those respondents who had changed industry considered the core skills transferable. Conversely, only 43 per cent of the respondents who had not changed industry considered the core skills transferable. This may suggest the need to educate project managers across all industries of the transferable nature of the core project management skills.

TABLE 2**Respondents who believed the individual core skills to be transferable**

Core Project Management Skills	Numbers of those who had changed industry	Expressed as a % of those who had changed industry	Numbers of those who had not changed industry	Expressed as a % of those who had not changed industry
Project Integration Management	49	82%	40	60%
Project Scope Management	57	95%	42	63%
Project Time Management	59	98%	47	70%
Project Cost Management	50	83%	44	66%
Project Quality Management	50	83%	43	64%
Project Human Resource Management	52	86%	41	61%
Project Communication Management	58	96%	46	69%
Project Risk Management	52	86%	42	63%
Project Procurement Management	47	78%	41	61%
Total Respondents	60		67	

TABLE 3**Respondents who did not believe the individual core skills transferable**

Core Project Management Skills	Numbers of those who had changed industry	Expressed as a % of those who had changed industry	Numbers of those who had not changed industry	Expressed as a % of those who had not changed industry
Project Integration Management	11	18%	27	40%
Project Scope Management	3	5%	25	37%
Project Time Management	1	2%	20	30%
Project Cost Management	10	17%	23	34%
Project Quality Management	10	17%	24	36%
Project Human Resource Management	8	14%	26	39%
Project Communication Management	2	4%	21	31%
Project Risk Management	8	14%	25	37%
Project Procurement Management	13	22%	26	39%
Total Respondents	60		67	

Table 3 shows the numbers of respondents who did not believe the individual core skills transferable, broken down into those who have changed industry and those who have not.

The more negative attitude towards the transportable nature of the core skills was expressed by the project managers who had not changed industries. Table 3 shows an average of 24 per cent of those respondents who had not changed industry considered the core skills not to be transferable. Conversely, only 12 per cent of the respondents who had changed industry considered the core skills not transferable. This again may suggest the need to educate project managers across all industries of the transferable nature of the core project management skills.