



Albert Hamilton
Senior Consultant and Professor,
National Centre for Project
Management, Middlesex
University, London, UK

Managing projects: the role of a project support office

A. Hamilton BSc, CEng, FICE, FIMechE, FIEI, FAPM

The management of project work is an increasing challenge to most organisations. Projects are becoming the fundamental internal building blocks that organisation and business entities use to satisfy their missions, strategies and outputs. Project management, as a management discipline, is not generally understood nor is it commonly practised at strategic level by public sector organisations that commonly handle a mix of project work and non-project work. This paper explains the increasing recognition of projects as vehicles for creating internal change alongside, in the public sector, the provision of new products to satisfy social need. The paper also introduces the concept of the project support office. This type of support facility offers a visible entity for organisational reform and a means to establish a balanced working ethos between project work and, the often predominant, non-project work. Although project support facilities have been established in some organisations, their benefits are anecdotal and little information has been published that would clearly confirm the advantages. Launching a research programme that would investigate project delivery performance by organisations with such facilities is thus a matter of great importance and urgency.

I. PROJECT WORK AND NON-PROJECT WORK

Projects, and their management, need to be viewed within the broad context from creating organisational change to individual projects that provide outcomes, referred to in this paper as products. In other words, the two types of *project work* normally encountered, and specifically in relation to the public sector organisation, are

- (a) creating *change* within an organisation
- (b) creating *products* that the customer (society) wants.

At the outset it is worth explaining a few terms used within the project management industry that help in understanding the concept of structural support facilities for projects. A *projects portfolio* is a collection of programmes and projects that may not have a common business or organisational objective. On the other hand, a *programme* is a collection of projects normally having a common objective. Individual *projects* are increasingly the vehicles through which an organisation's strategy is implemented, and through which it creates products.

Experience of organisational failures raises questions about the value of projects and their management. However, failure can often be linked to the selection of projects that do not support the organisation's mission statement, or failed projects whose funding levels could not reasonably be justified when compared with the expected benefits.¹

A model (see Fig. 1) helps in understanding the linkage between (what the author refers to as) *management by projects* (MBP) and *project management* (PM). The processes that MBP and PM use are ostensibly the same, so in effect the terms are not different. Use of the terminology simply clarifies whether strategies or tactics are the related topic and whether a project is internal or external. If a project is internal and is to create some aspect of change within the performing organisation, the process is referred to as management by projects. Accordingly, if a project is to create something that the performing organisation produces for a client or customer, the process is referred to as project management.

Usually, but not uniquely, top management increasingly creates organisational change with middle management support through initiating internal projects. The MBP approach is what progressive organisations refer to as the operational process for achieving their strategic objectives and goals. Many other organisations, particularly those in the public sector, are believed to be much less mature. The recognition of this position is relatively recent. Very few of these organisations have reached a level of maturity where their planned work and work in progress can be considered as a projects portfolio.

External projects utilise PM processes with teams being staffed by personnel normally from the lower tiers of the organisation, although some middle-ranking personnel may be engaged on certain projects. Top management's relationship with clients and customers would normally be of an 'overseeing' nature, getting involved only when necessary.

An organisation considering the adoption of a PM ethos should approach it with great care. The PM process requires the use of additional resources and this can create strains on the traditional roles and relationships within an organisation. Project management is best considered when the benefits derived from its use clearly outweigh any additional costs; in most cases this is more than likely to be the case.

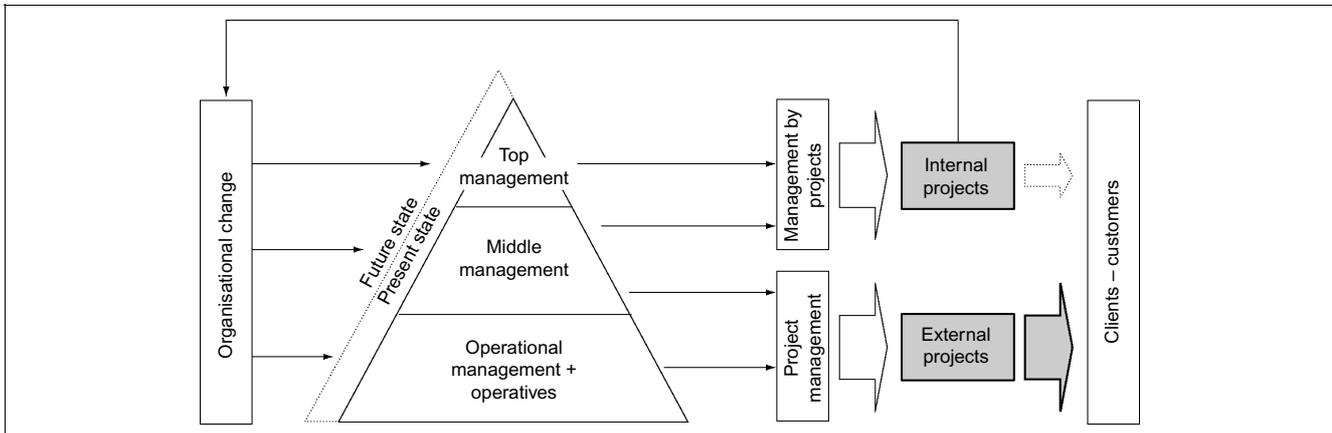


Fig. 1. A framework for projects and their management

Many organisations handling projects are invariably engaged in non-project work of some sort or other. In most public sector organisations this is the predominant type of work but, as a percentage of total work, it is decreasing while the percentage of work identified as project work is on the increase. Non-project work refers to continuous effort in which work is ongoing, has little or no uncertainty attached to it, and varies little hour by hour or day by day. For instance, in a local authority the provision of various social services would be classified as non-project work. However, an element of this same organisation's effort would be spent on project work such as the design and implementation of a new passenger bus network.

2. REFORMING THE ORGANISATION STRUCTURE TO HANDLE PROJECTS

In many organisations where PM is of growing significance, there is likely to be a need to reform the organisation. Based on the author's experience, an effective way of achieving reform is to establish a team of specialists whose mission and focus is projects and their management. Assigning these resources to a specialist unit, or units, provides a basis for inculcating reform. The structure of these units and how they operate will depend on the PM maturity of the organisation, the proportion of project work and non-project work, and how strategic issues are traditionally resolved.

An organisation's structure needs to have a decision-making process that takes into account environmental forces, strategic choices and technological factors. A well-designed organisation structure eases the flow of information and decision making, clarifies authority and responsibility, and creates the desired levels of coordination between departments.²

The three key factors in defining an organisation structure are³

- formal reporting relationships, including the number of levels in the hierarchy and the span of control of managers
- grouping together individuals into departments, along with the grouping of departments into the total organisation
- effective systems for communication, coordination and integration of effort across departments.

These three factors apply to both vertical and horizontal aspects of organising. Vertical linkages are used to coordinate activities between the top and bottom of an organisation. Organisations

may use any of a variety of structural devices to achieve vertical linkages, including hierarchical referral, rules and procedures, plans and schedules, positions or levels added to the hierarchy, and formal management information systems. Horizontal linkages refer to the amount of communication and coordination spanning horizontally across organisational departments.

An essential horizontal linkage device used when undertaking project work is achieved through a designated management role for an individual staff member. An individual called a project manager (Fig. 2) has the responsibility for coordinating project work across several departments. The human resource within departments assigned to work on projects, shown as solid circles in Fig. 2, would report to one, or more, of the designated project managers. This form of integration works very well regardless of whether a project is internal or external.

How this horizontal linkage is accepted into an existing organisation depends upon the grouping approach being used. There are four main organisation structures, each having strengths and weaknesses.

- Functional structure*—the activities are grouped together by common function from the bottom to the top of the organisation.
- Product structure*—sometimes this is called a divisional structure because divisions are organised according to individual services, projects or whatever the organisation produces.

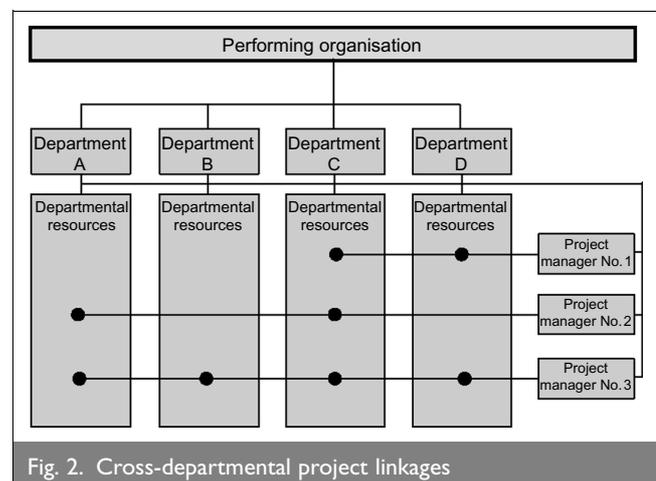


Fig. 2. Cross-departmental project linkages

- (c) *Hybrid structure*—this refers to many real-life organisations that are multi-focused, combining characteristics of both functional and product structures or geography and product structure, and so on.
- (d) *Matrix structure*—the unique characteristic of the matrix structure is that both product and functional structures are implemented simultaneously.

There is an unmistakable trend in international organisations towards using PM with project teams as the building blocks through which products are delivered.⁴ In other words, the trend is towards viewing an organisation horizontally and wholly integrated to deliver projects that are for external customers and/or internal sponsors. As organisations engaged in project work experiment with a 'projects' approach, what top management frequently find missing is the instinctive knowledge on how to create a PM organisation culture. Without a project support focus, companies and public bodies frequently experience enormous energy spent by project teams in non-productive ways and in directions often divergent to the organisation's interests. If left unattended, such misdirection frequently leads to confusion, inefficiency and even demoralisation in the performing entity.

Based on a recent survey⁴ of companies and public bodies in the UK and USA, the PM approach is effective when the following three prerequisites are satisfied.

- (a) Personnel engaged in projects understand and are proficient in using the tools and techniques of PM.
- (b) Teams are the organisational building blocks through which business is conducted.
- (c) Organisation support is provided to project teams.

Reform of a large public body with over 900 employees in California began in 1997 by implementing a PM method of delivering capital improvement projects. This was a dramatic shift from the hierarchical and generally ineffective approach that had been previously used.⁵ A matrix structure, similar to that shown in Fig. 2, with a PM method of delivery and project managers having total responsibility for budget, schedule and the specified quality, replaced the previous functional structure that had placed emphasis on technical expertise. However, departments were held responsible for specific quality activities that were needed to produce the finished product. Part of the shift towards a PM approach to delivering projects required new/revised processes to be used by the organisation to perform the project delivery tasks and assess performance.

Despite the inherent difficulties of a matrix structure, senior management felt that, without dedicated project managers, the PM process would be weakened and might result in reduced authority of the project manager, project decision making needlessly performed at inappropriate levels and an increase in executive meddling in projects. The result of the reform was improved portfolio, programme and project delivery.

3. AN OFFICE DEDICATED TO SERVING PROJECT MANAGEMENT NEEDS

Bringing PM into most organisations is traditionally approached through the launch of broad-based training courses. These

one-dimensional approaches frequently fail or are shown to be highly inadequate because what is needed is a combination of processes, skills transfer, enabling tools, as well as organisation structural adjustment and agents of change.

An organisation working on creating balance between its normal non-project work and its project work should typically concentrate on achieving PM maturity. The author's findings are that maturity, in PM terms, is reached when

- (a) top management provides appropriate status for projects within the organisation
- (b) the organisational structure reflects whatever is needed to take project decisions and successfully deliver projects
- (c) project managers are provided with the responsibility and authority to manage
- (d) the tools and techniques needed to manage projects are provided
- (e) the organisation invests in skills transfer to its project teams.

To reach maturity, a top management decision needs to be taken that initiates the reform, or in some extreme cases the transformation, of an organisation. Top management support is necessary for reform but not sufficient for all but the smallest organisations. The process of reform, although usually starting at the top by virtue of executive sponsorship or buy-in, needs to be applied much lower in the organisation and specifically at project team and project team support staff levels.

A particularly effective way of incorporating reform of how projects are to be managed is to create a physical entity; this is commonly referred to as a project support office (PSO).⁶ Establishing a support facility and the services that entity performs can be determined by factors such as the size of the organisation, the type and volume of projects handled by the organisation and the level of PM understanding and application. Although agreement is yet to be reached on a standard range of services provided by a PSO, a literature search does indicate the following service categories⁷

- (a) developing and maintaining PM standards and methods
- (b) developing and maintaining project historical archives
- (c) providing project administration support
- (d) providing human resource/staffing assistance
- (e) providing PM consulting and mentoring
- (f) providing or arranging PM training.

Support offices for projects may exist at any of three levels in an organisation. At the lowest organisational level is a project office (PO), which is sometimes established when an individual project is large, complex or of high risk. POs provide support to individual projects on such PM functions as planning, scheduling, auditing, control, status reporting, risk assessment, value engineering and so on. At a higher level is the PSO and this often operates as project support to a business unit or at departmental level. At this level, multi-project coordination, resource management and working-ethos change are likely to be some of the additional functions of the PSO. At the highest organisational level, a project management office (PMO) may be created that operates at a strategic, as well as at a tactical, level and would have a role in prioritising projects. Such prioritisation could include cost-benefit goals, societal need strategies, project

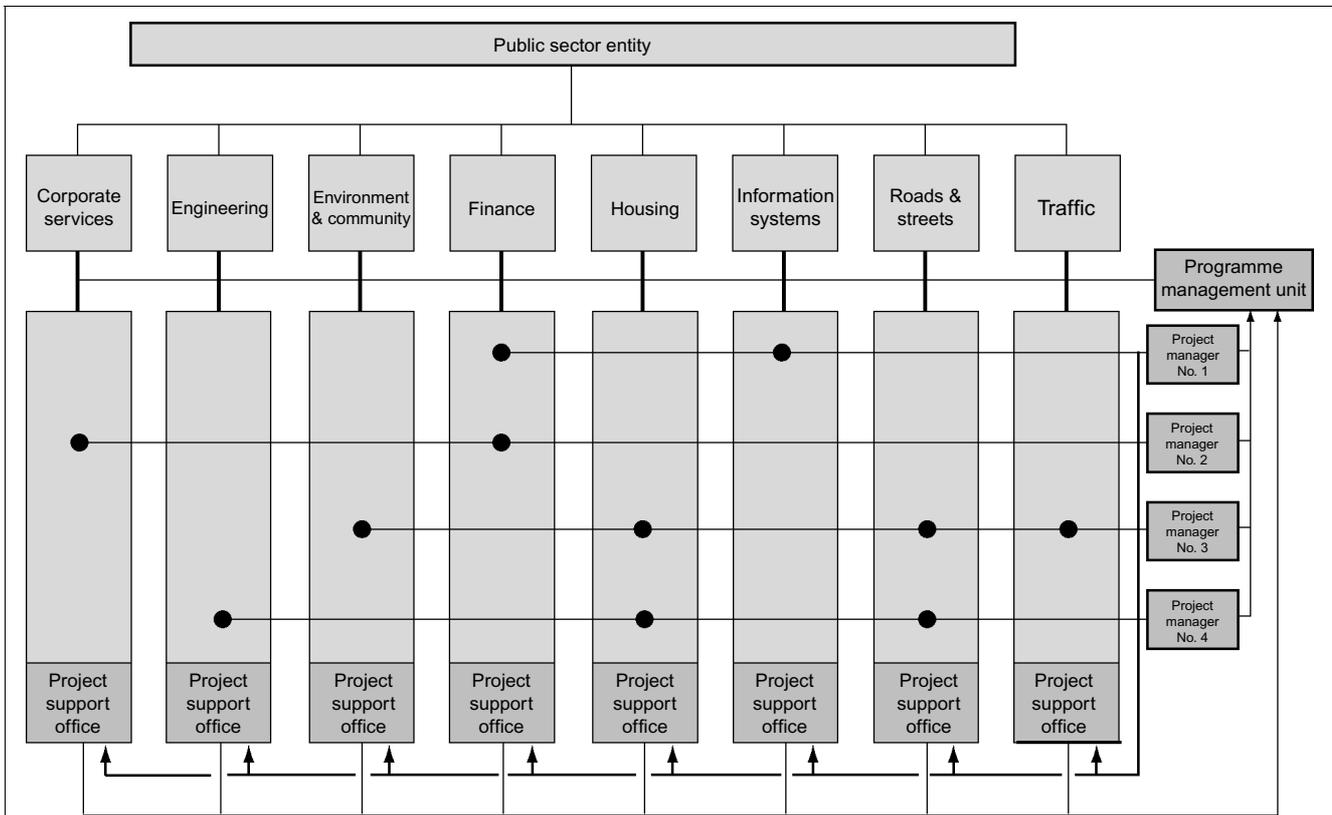


Fig. 3. Project management offices at departmental and strategic levels

human resource expansion, logistical expansion for project work, IT management upgrades, etc.

It is critical that the appropriate level, or levels, be chosen by an organisation so as to avoid wasted effort and wasted establishment cost by initiating a PMO, PSO or PO that is either too advanced or too simplistic for the organisation's needs.

4. A RECENT CASE OF IMPLEMENTING A PMO

The capital works budget of a particular large local government organisation within the British Isles increased by almost five times over a four-year period at a time when there was an unrelated high turnover of staff. The initial focus for reform was on the engineering corps. The reform concentrated on the PM process but the MBP process was included for certain departments.

The local authority entity under discussion is function based and hierarchical with a number of departmental heads, called the management group, reporting to a chief executive. This would not be untypical of most UK local authorities.

It was concluded that projects and their management should be given a greater awareness and visibility within the organisation. To do this, what was called a programme management unit (PMU) was established that reported to the top management group. In addition, a PSO was established in each of the departments that were involved in projects (Fig. 3).

The PMU, led by an external PM specialist (the author), was established for the short term; the ongoing need for the PMU was to be reviewed on an ongoing basis. Each of the principal

departments engaged in projects had a PSO that was staffed using in-house resources. The assigned personnel were coached through the approved PM approach and were then monitored by the PMU for an initial period of six months.

Each departmental PSO reported to the PMU on matters pertaining to the PM reform process. The PSOs were expected to plan, operate and report on activities as set out in a Manual of Procedures for PSOs. The role of each PSO was to provide a support function to the related department's projects as defined in a charter between the PMU and each PSO. The primary role of the PSO was the transference of skills to project teams and team members. Skills transfer to individuals working on projects was conceived as the foundation for the organisation's PM reform.

It can be discerned (Fig. 3) that project managers had a communications responsibility to the PMU and the associated project sponsor. Each project manager was required to obtain PM support from the appropriate PSO. For example, project managers No. 1 and No. 2 are shown as handling internal projects, examples being 'direct labour payment system', 'organisation-wide financial system'. Project managers 3 and 4 are shown responsible for external projects such as 'mixed residential/retail/business park development', 'road realignment'.

4.1. Associated support services

The services provided by the PMU and the PSOs were ostensibly linked to the adopted project development life-cycle models. The capital works life cycle is shown in Fig. 4(a). Other life cycles were used for internal projects that had different numbers of stages and different stage names. However, there were similarities

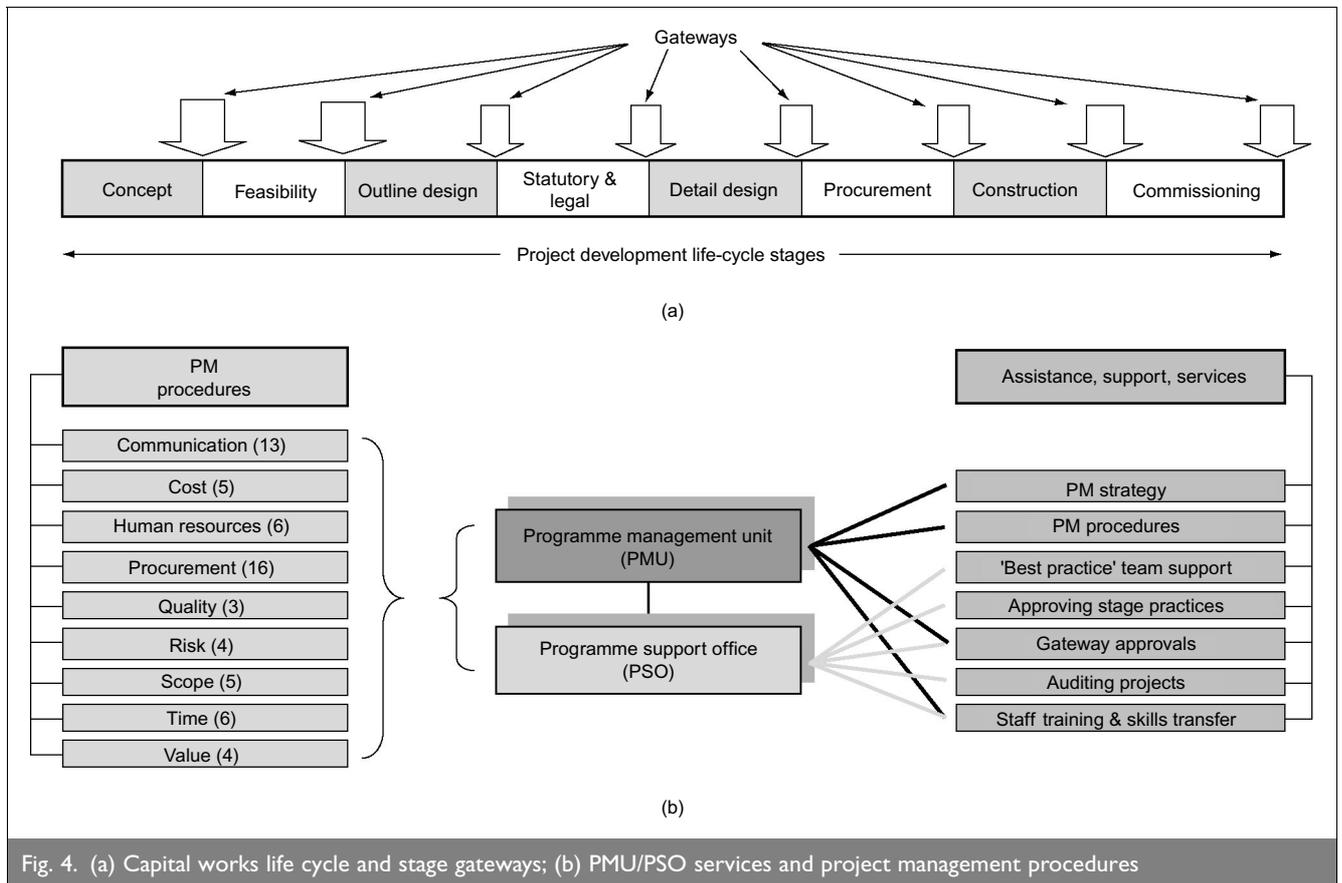


Fig. 4. (a) Capital works life cycle and stage gateways; (b) PMU/PSO services and project management procedures

in these life cycles in that at the end of each stage there was a gateway and a definable deliverable at each gateway.

Underpinning the reform of projects and their management was a standard procedural approach.⁸ A set of 62 procedures was developed for this particular organisation to provide the working standards and practices for project teams. The structure of the organisation's Project Management Handbook that contained the procedures is shown on the left-hand side of Fig. 4(b). The procedures were sectioned into knowledge areas ranging from communication to value. The numbers of procedures within each knowledge area are shown in parentheses. The procedures were developed by the PMU within its responsibility for PM strategy and PM procedures. As indicated on the right-hand side of Fig. 4(b), the other primary PSO services consisted of the following.

- (a) *Best practice team support.* Facilitating various project workshops, providing advice on Handbook procedure interpretation and application, providing assistance in the planning and control of projects, and helping in any aspect of a project's management was the central thrust of PSO support. The emphasis was not to do the work but to provide mentoring and tutoring to the teams so that they could do the work and learn from the experience.
- (b) *Approving stage practices.* A main element of project team monitoring was checking and ensuring that between gates and during any stage, a project was being managed using the most appropriate procedures. This required a PSO to be proactive by continually checking the progress of applicable work actions that were current and having numerous informal discussions with teams so as to avoid project rework.
- (c) *Gateway approvals.* The PMU on very large projects, and the PSO on all other projects, was responsible for checking a

project at each gateway and ensuring that the management aspects satisfied both process and delivery requirements. The PMU and a PSO had the authority to stop a project proceeding if PM procedures were not being fully satisfied.

- (d) *Auditing projects.* Each PSO was responsible for the periodic auditing of projects. Two PSO personnel with experience of such work undertook all auditing at least once in every stage of a project's development life cycle. It was a PSO duty to ensure that project teams and, when appropriate, external teams, addressed all recommendations contained in an audit report.
- (e) *Staff training and skills transfer.* Structured training for relevant departmental staff engaged on project-related work was an essential aspect of the reform process. Staff training in the PM processes and application of Handbook procedures was a PMU duty.

A function of the PMU and each PSO was to assess individual ability and to identify persons who could be offered the opportunity to progress through various training levels to project manager certification and beyond. Training of staff was provided to progress the most able personnel through four levels of competency.⁹ The highest competency level was 'expert'; this equated to a certified project manager capable of handling most types and sizes of projects and having the ability to mentor and train other project managers.

5. CONCLUSIONS

In most organisations the functional structure and the traditional management approach to non-project work has been in use for decades and is well established. The difficulty facing a 'new form' of management intervention, such as PM, is the struggle to achieve something approaching equity between project work and

non-project work. It is not easy to break down traditional mind-sets nor to change the working ethos within well-established organisations. Significant factors in creating the momentum to establish equity are the commitment and enthusiasm of top management and the interest and belief of staff members to become involved. These factors alone, however, are not sufficient. Aspirations and behaviour need to be channelled through a physical entity that becomes the visible focus for organisational reform.

The concept of a PSO (or PMO or PO) providing PM expertise and support to those engaged in project work is an option that is becoming increasingly popular. The author, among others, has found that the establishment of a PSO is a very effective way of creating change. Changing from the traditional approach of managing non-project work to the more commonly encountered mix of non-project work and project work is a natural reaction to the changing environment found today in most organisations, public and private.

The level of PM maturity achieved by the performing organisation generally determines the range of services that a PSO needs to provide to raise maturity and create the necessary change. The range can be extensive and span from strategic change initiatives for the organisation to tactical support for individual projects. In the same way that one function of a PSO is the monitoring of projects and project teams on an ongoing basis, so it should be an expected, and accepted, protocol that top management regularly monitors PSO activities.

In proving the effectiveness of the PSO concept a significant question that arises is how to measure performance and effectiveness. Research is needed on organisations that have introduced a PSO, or are planning to introduce project support

facilities. The results of this research will help in the process of determining the impact of PSOs and the value they have in changing traditional organisations to become more effective managers of project portfolios.

REFERENCES

1. CLELAND D. I. and KING W. R. The role of the projects in the implementation of business strategy. In *Project Management Handbook*, 2nd edn. Van Nostrand-Reinhold, New York, 1988, pp. 129–139.
2. HELLREIGEL D., SLOCUM J. W. and WOODMAN R. W. *Organisational Behaviour*, 6th edn. West Publishing, Minnesota, 1992.
3. DAFT R. L. *Organisation Theory and Design*, 4th edn. West Publishing, Minnesota, 1992.
4. JOHNS T. G. On creating organisational support for the project management method. *International Journal of Project Management*, 1999, 17, No. 1, 47–53.
5. KUPRENAS J. A., MADJIDI F. and SMITH B. M. Implementation of project management in public engineering organisation. *Journal of Management in Engineering*, 1999, 15, No. 3, 69–77.
6. MARSH D. E. *The project & programme support office handbook, Volume 1—Foundation*. Project Manager Today Publications, Hook, Hants, 2002.
7. DAI C. X. and WELLS W. G. An exploration of project management office features and their relationship to project performance. *International Journal of Project Management*, 2004, 22, No. 7, 523–532.
8. HAMILTON A. *Handbook of Project Management Procedures*. Thomas Telford, London, 2004.
9. HAMILTON A. Project management reform: a public body case study. *Proceedings of the Institution of Civil Engineers, Municipal Engineer*, 2004, 157, No. 3, 199–207.

What do you think?

To comment on this paper, please email up to 500 words to the editor at journals@ice.org.uk

Proceedings journals rely entirely on contributions sent in by civil engineers and related professionals, academics and students. Papers should be 2000–5000 words long, with adequate illustrations and references. Please visit www.thomastelford.com/journals for author guidelines and further details.