

## **Series on Categorizing Projects and Programs<sup>1</sup>**

### **Program/Project Types**

*By Alan Stretton*

#### **ABSTRACT**

This is the third of a series of four working/discussion papers on categorizing projects and programs. The context of these papers is overall categorizations as they have appeared in the literature. These currently vary widely, and this series is concerned with exploring possibilities for bringing them closer together. The aim is to stimulate discussion and to encourage feedback, which might hopefully lead to the development of more widely acceptable and accepted categorizations.

The first paper (Stretton 2014f) focused on project categorizations, and the second (Stretton 2014g) on program categorizations. In both cases existing categorizations were found to be a mixture of industrial/ social sectors (Application Sectors) in which programs/projects are undertaken (e.g. aerospace, defence), and types of programs/projects (Program/ Project Types) which are undertaken in many, if not most, of these Application Sectors (e.g. IT projects, R&D projects).

In each case the components of the categorizations were re-allocated into Application Sectors and Program/Project Types, and presented as a matrix illustrating the intersections between them. It was evident that some of the Program/Project Types were much more immediately relevant to some Application Sectors than to others. It would appear to be potentially useful to establish the nature and importance of such relevancies, and thence, hopefully, develop a better understanding of how individual Program/Project Types can benefit through sharing inter-Application-Sector data.

It was further identified that programs and projects shared five key Program/ Project Types. It was also noted that the listings of Application Sectors and Program/Project Types found so far are very incomplete. This series is somewhat more concerned with categorizations of Program/Project Types, and this third paper will discuss these further, and extend the listing of these Types.

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<sup>1</sup> This series of articles on the categorization of projects and programs is by Alan Stretton, PhD (Hon), Life Fellow of AIPM (Australia), a pioneer in the field of professional project management and one of the most widely recognized voices in the practice of program and project management. Long retired, Alan is still accepting some of the most challenging research and writing assignments; he is a frequent contributor to the **PM World Journal**. See his author profile at the end of the article.

## INTRODUCTION

In the first two papers of this series we identified five “key” Program/Project Types:

- Organization/business change
- Engineering/construction
- ICT systems
- Product/service development
- Research & development

This paper will first look at these in a little more detail, before going on to discuss other Program/Project Types.

## TYPE-SPECIFIC MATERIALS ON KEY PROGRAM/ PROJECT TYPES?

Some Program/Project Types already have substantial type-specific guidelines, but few of these have been consolidated. Some others have comparatively little type-specific material. Let us look a bit more closely at the “key” Program/ Project Types.

### **Organizational/business change programs/projects**

Organizational change programs have been a primary concern of The Office of Government Commerce’s “*Managing Successful Programmes*” since its first edition in 1999, through the fourth edition (OGC 2011) – although it also claims wider applicability. The Project Management Institute’s “*The Standard for Program Management*” (PMI 2013) also has elements which are directly concerned with organizational change, although it basically claims virtually universal applicability. There are very substantial differences in their approaches, and few indications that a more unified approach specifically on managing organizational change programs/projects is likely to be undertaken any time soon.

Perhaps this is not so surprising, in view of the many different sub-categories that may be classified as organizational change programs/projects. For example, Archibald & Prado 2014 have the following listing in the project context.

#### ***Business & organizational change projects***

Acquisition / merger  
Management process improvement  
New business venture  
Organization restructuring  
Legal proceeding

In the program context, the following case examples are given in Figure 3-1-1 in Japan’s P2M (PMAJ 2008).

### **Organizational change programs**

Corporate M&A;  
Corporate alliance;  
Restructuring;  
Spin-off of a division;  
Shutdown of factories/branches;  
Reorganization / privatization of government ministries

There is a wide variety of sub-categories in the above, and there may well be more. It is reasonable to assume that different managerial approaches would be required for at least some of these sub-categories. In these circumstances, there appear to be real opportunities for further developing some sub-category-specific materials which are applicable over multiple Application Sectors.

### **Engineering/construction programs/projects**

Engineering/construction programs/projects have traditionally been amongst the most widely discussed Program/Project Types in the literature. As noted in the first paper of this series, the well-known goals-and-methods matrix of Turner & Cochrane 1993 has *engineering* nominated as the prototypical example of what they describe as Type 1 projects – i.e. projects for which the goals to be achieved and the methods of achieving them are well defined at the outset of the project. The majority of published works on project management have been particularly concerned with Type 1 projects.

### **ICT programs/projects**

Information and communications technology has been used as a descriptor to cover quite a wide range of related programs/projects. These include

IT change initiatives	}	
Software development	}	Maylor et al 2006
Computers/software/data processing	}	
Information technology	}	Archibald & Prado 2014
Information systems (software)	}	
Information and communications technology (ICT)	}	P2M (PMAJ 2008)

Perhaps the most notable thing about information technology projects is that they rank very high on lists of actual PM usage, both in the study reported by Maylor et al 2006, and PM application/industries represented by the 439,677 members (as of February 2014) of PMI, as presented by Archibald & Prado 2014.

There are substantial materials in the literature on some aspects of ICT – e.g. White 2014 – but these still appear to be somewhat fragmented. This may well be an opportunity area for further consolidation.

## **Product/service development programs/projects**

The following types of new product (and service) development projects have been nominated by Archibald & Prado 2014.

### ***Product and service development projects***

- Information technology hardware
- Industrial product / process
- Consumer product / process
- Pharmaceutical product / process
- Service (financial, other)

In the program context, P2M had the following case examples

### ***Product development***

- High-tech industrial products
- Drug development
- New variety of seeds
- Package software

These are a wide variety of product/service development programs/projects, which, at first glance, do not appear to have all that much in common. Some areas such as pharmaceuticals have been well covered in the literature, whilst some have not. A relatively recent contribution to the general topic comes from Smith 2010.

## **Research and development programs/projects**

Research and development programs/projects may well vary so widely over different application sectors (and possibly also within certain application sectors) for there to be sufficient common features from which to develop a specifically R&D program/project set of guidelines.

In the project context, Archibald & Prado 2014 nominate the following.

### ***Research & development projects***

- Environmental
- Industrial
- Economic development
- Medical
- Scientific

On a somewhat grander scale, P2M has the following descriptor and case examples.

### ***Large scale research & development***

- Space development
- Nuclear fusion research
- Human genome research
- High-tech military equipment development
- Global environmental research

It would be difficult to be optimistic about finding a lot of common ground re the management of such a diverse range of R&D Program/Project Types. A useful general contribution on R&D project management is Lambert 2006.

We now move from these five key program/project types to look at other program/project types.

## **OTHER PROGRAM/PROJECT TYPES**

One other Program/Project Type emerged from discussions about P2M listings in the second paper, namely *marketing/service* programs, which we will discuss shortly. There are obviously many other Program/Project Types as well, and I thought a starting point for finding these would be to look for other program/project services in addition to marketing.

This led me to Pells 2011, whose Figure 7 – Project Management Industry Classification System – has many components under 5. Professional Services:

- Education services
- Health & medical services
- Engineering & construction services
- Employment & human resources services
- Accounting & business services
- IT services
- Financial services
- Management services
- Retail, wholesale & selling services
- Environmental services
- Security services
- Other professional services

We have already discussed engineering/construction and IT programs/projects, but I will follow the other components from Pells' listing after first discussing marketing/services.

### **Marketing/service programs/projects**

This was a Program Type identified in Japan's P2M (PMAJ 2008) in the second paper of this series. There is not much material in the literature about the provision of marketing/service programs or projects, although I have been discussing the importance of a marketing perspective on project management for years.

A recent contribution by Yanocha 2014 discusses the incorporation of fundamental project management practices into marketing operations. These would be applicable over a wide range of Application Sectors, and therefore this is categorised as a Program/Project Type.

### **Educational services programs/projects**

Education appears to be an area where there is potential for interpretation either as an Application Sector, or as a Program/Project Type.

In the amended P2M Application Sectors listed in Figure 2-2 in the second paper, the components of 10a. *Education* were *University reform; education reform*. These examples clearly put P2M's *Education* into the Application Sector category.

However, many, if not most, organizations, irrespective of which sector they operate in, have *education programs and projects* for their own people. In this case *education* would clearly be classified as a Program/Project Type. This would also apply to the provision of education programs/projects to other organizations. Here, *education* needs a qualifying descriptor added, to avoid confusion in categorization. I am proposing to add the word *services* to *education*, followed by *programs/projects*, as shown in the heading to this section, to describe *education* in its Program/Project Type context.

### **Health & medical services**

There is, of course, a healthcare industry, which many categorizations include as a program/project Application Sector. My old employer, Lend Lease, was quite prominent in providing program/project services to this sector, but these were basically engineering/construction services – in our case with an extra focus on helping insiders to determine their real healthcare needs, and in specifying the program/project requirements to best satisfy these needs.

However, I don't believe health and medical services would qualify as a Program/Project Type, as they are predominantly delivered within the healthcare industry itself, rather than being spread over a number of Application Sectors.

### **Employment & human resources services programs/projects**

This appears to be a distinctive Program/Project Type, as these services are commonly delivered as de facto programs or projects, and are undertaken in many, if not most, Application Sectors.

### **Accounting & business services programs/projects**

I am not at all familiar with this area, but assume that accounting and business services have similar characteristics to employment and human resources services, and would therefore qualify to be categorized as a Program/Project Type.

### **Financial services programs/projects**

When we come to *financial services*, we once again have potential for two interpretations. On the one hand, we have *financial services programs/projects*, which would be categorized as a Program/Project Type – e.g. by Dumas 2014.

On the other hand, there is a *financial services industry*, which would then be categorized as an Application Sector. *Financial services* therefore needs a qualifying descriptor added, to avoid confusion in categorizing it – hence the title *financial services programs/projects* in the heading of this section, to confirm its place as a Program/Project Type.

### **Management services programs/projects**

In the program/project context, this would appear to cover the provision of program/project management services. These would include program/project consulting services, which is such an important sector of the industry – but also the provision of such services by other sectors of the program/project management industry. Provision of these services operates over most Application Sectors, and this is one of the more prominent Program/Project Types.

### **Retail, wholesale & selling services programs/projects**

Retail and wholesale cover very distinctive Application Sectors. Their services do intersect with program/project procurement activities in a wide range of other Application Sectors, but I am not sure that they are delivered on program/project bases. Perhaps some of them are, in which case they would qualify as a Program/Project Type.

Selling is part of the broader field of marketing, and we have already seen that marketing services have been identified as a Program-Type by P2M (PMAJ 2008). Therefore selling services are similarly included.

### **Environmental services**

The environment is definitely an Application Sector, in which several Program/Project Types can be involved. It is also noted that it is a component of P2M's *Social Infrastructure* application area.

### **Security services programs/projects**

Security would appear to come into the dual interpretation category. It could be seen as an Application Sector, in the sense conveyed by P2M's *Security Systems*, which is a component of its broader *Community* application area.

On the other hand, security services may well be applied as programs/projects over a range of Application Sectors, and in these circumstances *security services programs/projects* would qualify as a Program/Project Type.

### **Other potential services programs/projects**

Turner 1993:459 has the following four components under his section “service industry” (whilst specifically pointing out that his industry listings did not claim to be exhaustive)

- Finance and insurance
- Communications
- Property
- Training and education

This potentially adds three more types to the service industry category, namely insurance, communications, and property. If these services were delivered in the form of programs or projects, they would also qualify for inclusion.

No doubt others potential services programs/projects could be added. However, it is beyond the scope of this series of papers to try and present an exhaustive list of Program/Project Types (nor of Application Sectors). This series is primarily concerned with trying to identify the various ways in which programs and projects have been categorized in the literature, and with endeavouring to establish connections between them. The fourth paper will round out both the former and the latter.

The main purpose of this particular discussion on other Program/Project Types has been to stimulate discussions which might lead to a more consolidated listing of Program/ Project Types, and to the development of more validated information on how to undertake them more effectively over their relevant ranges of Application Sectors.

### **PROGRAM/PROJECT TYPES IDENTIFIED TO DATE**

We started with the following “key” Program/Project Types:

- Organization/business change
- Engineering/construction
- ICT systems
- Product/service development
- Research & development

To these we added the following program/project types identified above:

- Marketing/service programs/projects
- Educational services programs/projects
- Employment & human resources services programs/projects
- Accounting & business services programs/projects
- Financial services programs/projects
- Retail, wholesale & selling services programs/projects
- Security services programs/projects

As already indicated, there are undoubtedly many others that can be added to this list. However, as far as I can tell, the above listings of Program/ Project Types are reasonably representative.

## **SUMMARY/CONCLUSIONS**

The key issue that I am trying to establish in this paper is that there are very many types of programs/projects (Program/Project Types) – more than have been developed above – and that these are independent of the Application Sectors in which they may operate.

It appears to me to be important to the program/project industry that a clear distinction is made between Application Sectors in which programs/projects are undertaken, and the Program/Project Types that operate over more than one Application Sector.

The three papers to date have been primarily concerned with suggesting the need for much more attention being paid to identifying and developing appropriate materials on Program/Project Types, rather than on Application Sectors per se, which all too often appear unhelpful as primary categorizations.

The final paper in this series will introduce other ways of categorizing programs/projects, and will suggest a way of amalgamating these with the Program/Project Type / Application Sector matrices developed in the first two papers in this series.

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## About the Author



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**Alan Stretton** is one of the pioneers of modern project management. He is currently a member of the Faculty Corps for the University of Management & Technology (UMT), USA. In 2006 he retired from a position as Adjunct Professor of Project Management in the Faculty of Design, Architecture and Building at the University of Technology, Sydney (UTS), Australia, which he joined in 1988 to develop and deliver a Master of Project Management program. Prior to joining UTS, Mr. Stretton worked in the building and construction industries in Australia, New Zealand and the USA for some 38 years, which included the project management of construction, R&D, introduction of information and control systems, internal management education programs and organizational change projects. He has degrees in Civil Engineering (BE, Tasmania) and Mathematics (MA, Oxford), and an honorary PhD in strategy, programme and project management (ESC, Lille, France). Alan was Chairman of the Standards (PMBOK) Committee of the Project Management Institute (PMI®) from late 1989 to early 1992. He held a similar position with the Australian Institute of Project Management (AIPM), and was elected a Life Fellow of AIPM in 1996. He was a member of the Core Working Group in the development of the Australian National Competency Standards for Project Management. He has published over 140 professional articles and papers. Alan can be contacted at [alanailene@bigpond.com.au](mailto:alanailene@bigpond.com.au).

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## About the Author