ALTERNATIVE APPROACHES TO PROGRAMME MANAGEMENT

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The paper describes different approaches to the grouping of projects. It suggests that there may be circumstances in which traditional hierarchical management structures may not act to improve performance and suggests criteria by which selection between alternative approaches might be guided.

Definitions of "Programme"

Most companies that make use of project management disciplines eventually develop some form of higher-level project grouping. These go by a variety of names: Meta-Project, Super Project, Multi-Project or, increasingly, Programme. Often the term is used informally, but the concept is potentially rich in organisational implications.

BT's project management guidelines define a "programme" as:

> *A group of related projects which together achieve a common purpose in support of the strategic aims of the business.*[1]

This utilitarian definition is necessarily something of a compromise and, significantly, omits any implication of coordinated *management* of the programme. This reflects what is probably the reality for many programmes, that they emerge as purely nominal umbrella groupings of mainly pre-existing projects which are managed quite independently. The programme is, at most, a convenient heading for aggregate reporting or very high-level overview purposes and is more meaningful to the observer than to the participants. This structure may be termed a "loose" programme model (*Figure 1*).

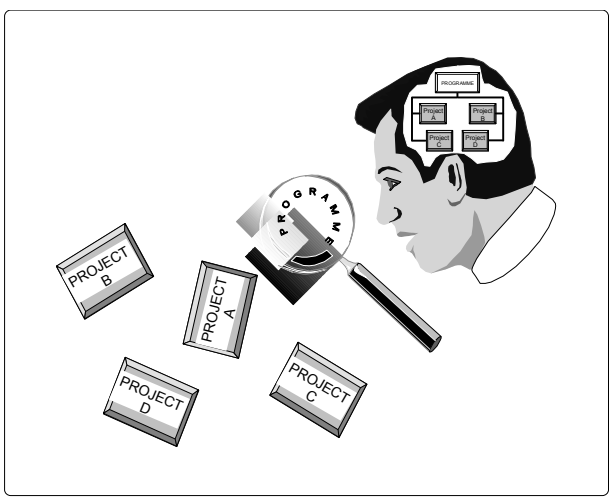

Figure 1: Loose programme model

An alternative definition of a programme, from D C Ferns [2], is:

> *A group of projects that are managed in a coordinated way to gain benefits that would not be possible were the projects to be managed independently.*

This is a much stronger view of a programme in which the element of coordinated central management is implicit. Indeed, the implication is that a programme does not exist at all without this essential factor; the programme as an entity is nothing more than the product of the activity of programme management. This programme structure may be defined as a "strong" model (*Figure 2*):

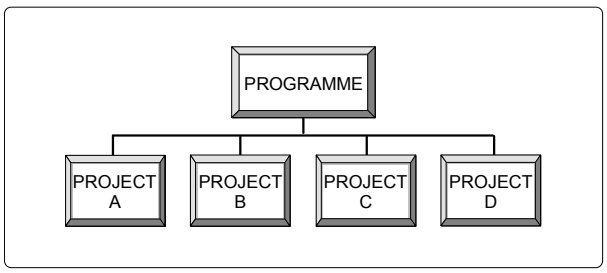

Figure 2: Strong programme model

It should be understood that neither model necessarily says anything about the chronology of programme formation. In either case the starting point may be a high-level strategic objective from which a programme mission statement can be formulated. From this mission statement various projects are defined which will contribute to achievement of the objective. In this case the programme ownership is clear to all and the strong model is likely to be the default structure until or unless the authority is relinquished through a failure to exercise it (or through deliberate "rebellion").

Alternatively, the start could equally well be the recognition that there are a number of projects planned or in progress which appear to have something in common and might, with benefit, be organised into a programme. A programme *theme* is identified after (some of) the projects have been defined. In this case the loose model is likely to be the default and conversion to a strong-type programme structure will involve establishing authority, either through persuasion or through positional power.

Also implicit in the wording of Ferns' definition is the idea that the programme structure should add value. If there are no additional benefits to be gained by structuring work in this way then why do it?

It is possible, of course, to view the loose model as a damaged version of the strong model; a failed attempt to establish "strong"-type programme control. An illustration of this which may be recognisable in a number of organisations is the example of quality improvement work, which typically involves individual projects taking place within operational units. It is not unusual for a central function (eg Personnel, Quality or Headquarters) to have an interest in all such work and, perhaps, to claim ownership of the projects as part of a quality improvement "programme". However, for the participants the imperatives of line managers' objectives or improved empirical performance figures are more significant than the interest shown by the central function, which finds it impossible in practice to impose its authority on the individual projects. At best it can only monitor what goes on and report in summary form to its own principals. It would be naive to suppose that this hypothetical example is not frequently to be observed in practice.

Viewed as a continuum, the strong model represents the upper quartile of control over projects, whilst the loose model represents a point near to the lower extreme (zero control and no observation would mark the lower end-point of such a continuum).

An alternative viewpoint emerges from current thinking about learning organisations and empowerment [3]. The possibility exists of enhancing the loose model by providing the project managers with easy access to information about the objectives, progress and deliverables of other projects. In this way they are effectively empowered to make sound decisions about their own projects even without explicit direction from the centre. Thus "loose" becomes "open" (*Figure 3*) – a much more positive concept.

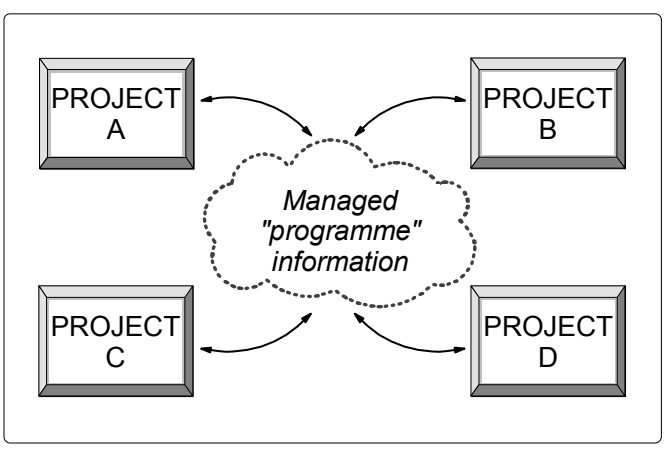

Figure 3: Open programme model

Whilst such an enhancement cannot provide the central control that is a core feature of the strong model, it can make the inclusion of individual projects into a programme structure appear less threatening because ownership remains with the project stakeholders. In this way the basic loose model becomes positively desirable, in appropriate circumstances, with the potential to deliver added benefits of improved information flow.

Selection criteria for programme management approaches

There are therefore several considerations that determine whether the open model or the strong model represents the more advantageous way of organising a given range of work activities. These considerations fall into the two basic evaluation categories of *desirable* and *feasible*. The strong model would be desirable if added benefits would accrue from applying programme management, if the benefits of structured control outweigh the potential loss of spontaneity and if the "political fall-out" can be handled without significant damage. It would be feasible if the authority exists to take overall control, if the will exists to exercise such control, if the stakeholders will accept the authority *in practice* (which cannot by any means be assumed) and if ownership issues can be resolved at an acceptable cost.

These are serious questions for the monitoring and control of project (ie, change) activity in a company. Little benefit will be gained from addressing the function of monitoring and reporting, with or without active intervention to improve the effectiveness of programme delivery, if it is assumed that programme management is by the strong model when in reality the loose model is more accurate. Different strategies are required.

Implementation of the strong model will require the satisfaction of two preconditions: the first is that the added benefits to be derived from the coordinated management of the constituent projects are clearly identifiable. Administrative (and especially accounting) convenience may be one such benefit but it is an extremely weak one which is unlikely to command the whole-hearted commitment of all the *project* stakeholders such as the project management team, the customers for the project deliverables and the owners of the immediate project objectives. For this it is essential that more or better project deliverables can be seen to result from submission to the discipline of programme management.

The second precondition is that the authority to manage the programme is clearly vested in a designated Programme Manager or programme control body, is recognised and accepted by the various project managers and by the functional organisation, and is actively exercised.

Although simply expressed, this precondition often represents a major change in the way work is organised in companies; a significant movement towards matrix management, since project managers and their functional line managers would have to accept that the project "belonged" to the Programme, not to the line.

Bartlett and Ghoshal [4] have suggested that the successful introduction of matrix operation requires a significant change of attitude (elsewhere referred to as a "metanoia" or "mind-shift") amongst managers. This psychological change facilitates the adoption of new processes and practices (physiologies) which, in turn, lead to the adoption of new organisational forms (anatomies). This is not a speedy process and, like other attempts at cultural change needs to be approached with due regard to the feelings, needs and concerns of all those involved. It must also be recognised that success is not guaranteed. Kerzner & Cleland [5] refer to the "schizophrenic management structure" of one of their case-study companies, and report that at another "the matrix approach fragmented both people and resources, and diffused authority to the point that managers could not carry out their programme responsibilities".

It should be added that the problems associated with matrix forms of organisation are most notably observed in companies whose underlying management structures are traditional and the project approach to work is something of a minority activity. Companies which have the matrix as the underlying structure, where individuals report to line management for "pastoral" purposes but work is assigned on a subcontracting basis and performance is assessed by the "service purchaser" (eg, a project manager) the organisational form can be much less problematical (see Kerzner & Cleland [5]).

Frequently, the implementation of this kind of programme model requires total control of the programme budget to be assigned to the Programme Manager or programme control body, with the contributing departments working under internal contracts for agreed transferred charges. This can involve overcoming daunting barriers of traditional practice, established accounting systems, and positional power. Where the costs, however measured, of overcoming the difficulties are disproportionate to the benefits or where the benefits are in any case questionable, an open programme structure may be a more attractive way of giving focus and management attention to the projects concerned.

Support needs of the open programme structure

Some organisation and resource is essential if an open model is to be implemented. Sound business case procedures, the application of a minimum set of reporting requirements and the knowledge that the information will be scrutinised and used by senior managers are necessary safeguards, and these prerequisites imply considerable commitment by those senior managers. The mechanism for collecting and supplying project information must be adequately resourced and must be seen to have the support of all relevant stakeholders, especially at a senior level. It must also be sensitive to changing needs and possibilities, so that it not only keeps pace with the requirements of its users but also provides them occasionally with unexpected, "windfall" benefits.

Project managers, like other independent-minded professionals, are not always quick to comply with the demands of structures and processes which cannot readily be seen to contribute to their perceptions of key priorities. Whether or not individual project managers, free from the coercive characteristics of "strong"-type programme control, will regard themselves as participants in a coordinated "open" programme will depend to a large extent on the perceived balance of benefits and threats to themselves and their projects. For the project manager, benefits are likely to be concerned with the time, cost and quality objectives of their particular project, and with resourcing issues. The major threats will be towards autonomy and visible responsibility (and possibly to resourcing). To influence this perception towards the positive is a key task of those managing the information exchange system.

Recognition of inter-relationships

In addressing the design of the information exchange it is important to recognise the different kinds of relationship that a given project-type work activity (*pwa*) may have with other *pwa's*. A *pwa* may be called a Programme, a Project, a Sub-Project, a Work Package, or any of many other designations that are commonly used in project management. These designations may superficially imply some kind of externally-referenced hierarchical positioning, but this is not necessarily governed by any objective benchmarking. Such designations are only meaningful as comparators with other *pwa's* which are in some way related, and in indicating appropriate routes for consultation and decision-making. Those responsible for the performance of *pwa's* may be called project managers, whatever the hierarchical position of the *pwa* they manage. This recognition of the *self-similarity* or fractal nature of *pwa's* – distinctions between them are purely functions of scale and scale is wholly relative – focuses attention on the importance of the relationships between *pwa's* as the main element in improved effectiveness of delivery. These relationships may be vertical, horizontal or transverse (*Figure 4*).

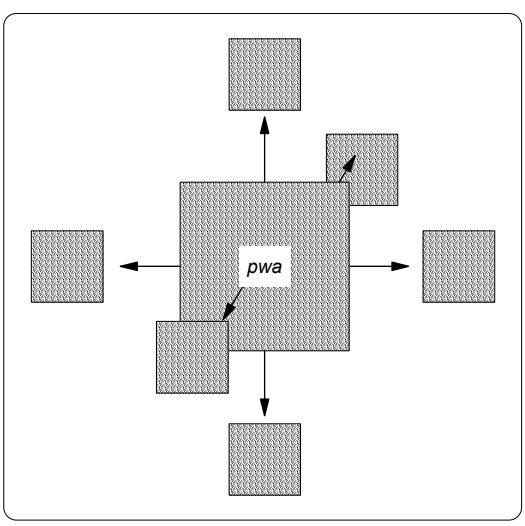

Figure 4: pwa Relationships

The first relationship, which is an implicit feature of the strong programme model, is the vertical hierarchy.

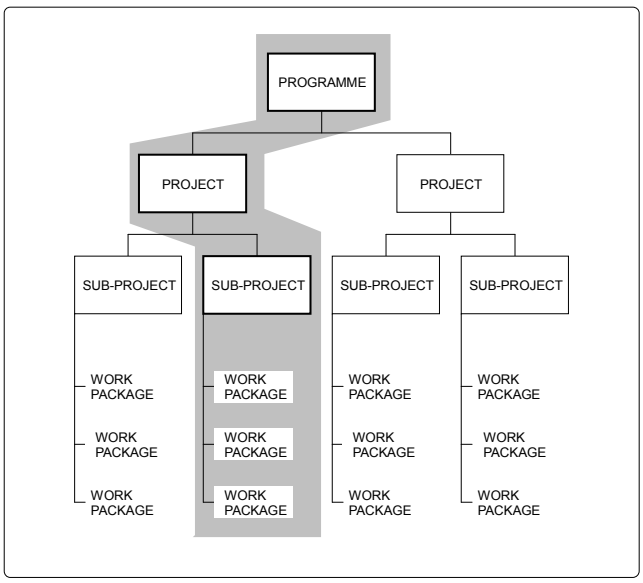

Figure 5: Vertical programme hierarchy

In vertical *pwa* relationships the hierarchical structure is evident, and reporting and escalation routes are clear.

The second form of *pwa* relationship, the horizontal (*Figure 6*), exists regardless of the strength of the vertical structure, and even if no vertical structure exists. It is formed from the interactions between *pwa's*, which are affected by, and often depend upon, each others' outputs.

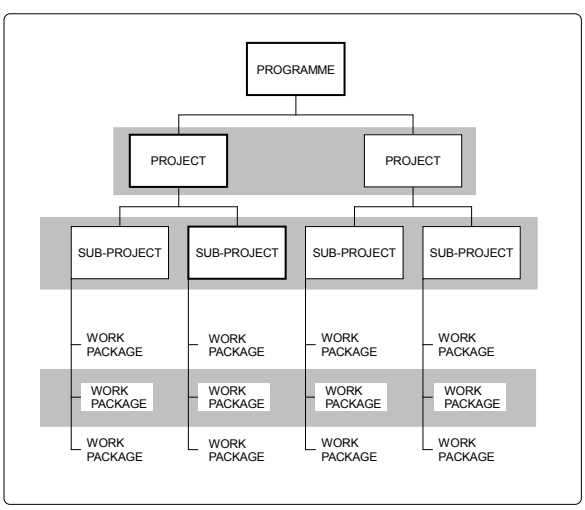

Figure 6: Horizontal relationships

This is the principle upon which project management and control techniques such as critical path analysis are based. These techniques make the assumption that each *pwa* is part of a greater entity. In other words, that the vertical structure is clear. Where this assumption is true, and the horizontal *pwa* relationships exist within a strong vertical structure, the authority of the higher levels acts to regulate the horizontal transactions and to resolve conflicts. In many cases, though, the horizontal relationships are incidental, or the authority of the vertical structure is weak or not exercised. In these cases the individual *pwa* managers have to resort to their own arrangements for regulating interactions. The success they have in doing so will depend upon a combination of their own commitment – the will to act cooperatively – and the information available to them. No amount of goodwill or cooperative intent will overcome an absence of information to identify relevant associated *pwa's* and the nature of the interactions.

The third form of relationship is between an individual *pwa* and other work, including *pwa's*, being performed by the same organisational unit. This may be termed the transverse relationship form and has two sub-types. An *alpha* transverse relationship involves the grouping of similar *pwa's* from different hierarchies, for administrative convenience or to gain savings by reducing duplication. This

form will be familiar to specialists who accept work from a variety of sources. Complications arise when the people within the specialist unit fail to recognise that they have several different *pwa's*, each with its "owner" elsewhere. It is not uncommon for such groupings to be treated as though they were second-level components within a single *pwa*, owned by the functional unit. In this way the original structures are seriously weakened and frequently lost altogether.

A *beta* transverse relationship involves the assimilation of a *pwa* into the operational or "business as usual" work of a functional unit (*Figure 7*). The potential difficulty for the true "owner" of the *pwa* is the same as with the *alpha* type, ie, that the people working on the *pwa* mistakenly regard it as an element of their other work. Again, any hierarchical structure is seriously damaged and may be lost completely.

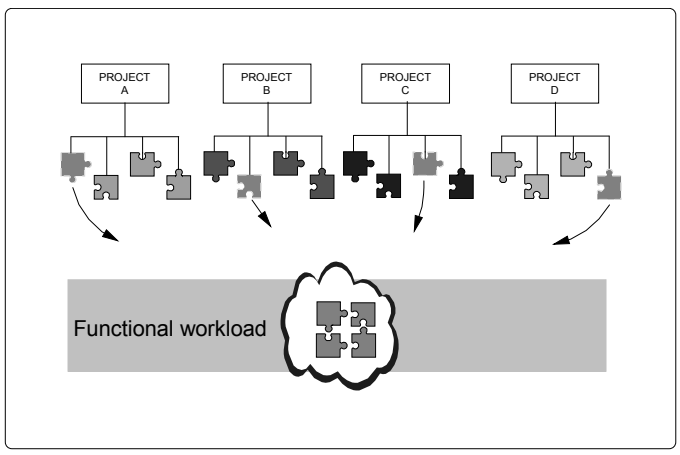

Figure 7: Assimilation of pwa's into functional workloads

Any given *pwa* may therefore be placed at one of the interstices of a three- dimensional matrix consisting of vertical, horizontal and transverse alignments (*Figure 8*):

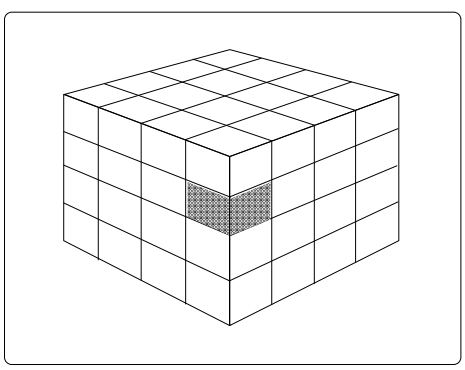

Figure 8: pwa Relationship matrix

Difficulties of managing work and performance where the supplier is not directly under the functional control of the "owner" of the *pwa* occur in any of the above three relationship forms. They are endemic in matrix systems of organisational structure. Such systems, to work at all, rely upon effective subcontracting, which, as Robins [6] has pointed out, may mean either the supply of labour to the *pwa* or the assignment of the *pwa* to the sub-contractor. Conflicts are especially likely to arise in transverse relationships, particularly *beta* transverse forms, where individuals must try to balance the demands of operational work against those of the *pwa* "owner". These conflicts may become personal where an individual perceives that irreconcilable demands are being imposed by project and functional superiors. It is a primary responsibility of both management chains to alleviate these tensions in order to allow the individual employee to perform optimally.

To alleviate such conflicts the free flow of information is essential, so that the priority of each item of work (whether *pwa* or business as usual) contending for resource and attention can be assessed against a wider organisational setting. If these contentions can be resolved before entering into an explicit subcontracting arrangement then such an arrangement stands a much better chance of being honoured. The reliability of such arrangements is a prerequisite for matrix operation.

Conclusions

However desirable a clear programme structure may appear to be, project work is unlikely to be successfully managed in this way without the active involvement of very senior people to maintain the authority structure. This will not necessarily occur and cannot in any case necessarily be assumed to be beneficial. Where no clear, actively exercised authority structure exists, and often where it does exist, more benefit may arise from providing the participants with non-directive information about their own and other people's project-type work activities (*pwa's*) to empower them to make decisions in the company's interest.

The terminology of Programme – Project – Sub-Project – Work Package etc is in any case subjective: all levels of *pwa* display similar characteristics (self similarity). Information provided to those involved about the positioning of their work in relation to the work of others is likely to be valuable in most cases and facilitates effective subcontracting, which is essential for the successful provision of specialist services and effort within a company. Failure to honour subcontracting commitments brings matrix systems into disrepute; any action to reduce the incidence of this will be beneficial.

The effective interchange of information requires the commitment of resource and the active ongoing support of senior people: to be successful it needs to be seen as a chosen way of handling programmes in the company. Not only do appropriate technology and skills need to be put in place to handle the mechanics of the information exchange, but the free input of information must be seen to have the active support of all concerned. This means that information must be treated as a resource, not a weapon. Care is needed to avoid negative associations.

References:

[1] BT (Internal Document) *Project Management Handbook* BT Programme Office UK (1994)

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[6] Robins, M J "Effective project management in a matrix-management environment" *Int. J. Project Manage*. Vol 11 No 1, (Feb 1993) pp11-14

