What is an Organization? 2

2.1 Forms of Organization

2.1.1 The Problem with Organization Charts

In order to provide further context, in this chapter I am going to consider some generic perspectives around the organization. This will include a brief analysis on types of structure (hierarchical versus flat organizations), the difference between management and leadership, and then some other cultural elements. We will then go on to consider organizational components that are particular to the IT function, before concluding the chapter with an analysis of the organizational life cycle.

However, in advance of these discussions I would like to make a general point about an 'organization' as it is generally perceived and depicted, i.e. through an 'organogram' or organization chart. These diagrams try to do two things. Firstly they are used to represent a management structure or chain of command; it should be possible for any individual to locate themselves within the chart and then trace the various lines of management right through to the single individual who sits atop the whole enterprise. Secondly, organograms are also used to depict job descriptions. Each box on the chart will – more often than not – be labelled with a job title as well as the name of the individual who holds that position. Thus we can see that Bill is an Analyst, Joe a Programmer, and so forth. These are the jobs they do and the role they perform in the company. On this basis we would not expect Joe to act as a Team Leader nor Andy – whose title is Programme Director – to work in an administration support capacity.

Of these two aims, organization charts succeed in terms of providing a view of the management hierarchy and – I must argue – fail completely in the definition of roles and responsibilities as we must now come to view them. As I have already suggested – and as we will continue to see throughout our discussions – there is a need for a new approach to the

IT organization not only in terms of structure but also with respect to role definition. The business demand for IT to be fast and flexible can hardly be met if Joe the Programmer is *organizationally* prevented from making an even more valuable contribution to the business as a direct result of how he is defined in the formal depiction of that organization. We need to make a distinction between line management and role; and within role, we need to be mindful of the real difference between job titles and the functions that an individual may carry out. Titles are too narrow, and dangerously restrictive and misleading. We need to think about a new way of defining actual functions and responsibilities either alongside or separate from the traditional line management/job title diagrams. (I will return to this theme in Chapter 6.)

2.1.2 Hierarchical vs. Flat

It can be readily argued that there is a clear relationship between organizational structure and the way in which the organization performs and behaves (e.g. Ward et al., 1990). Broadly speaking, there are two fundamental types of construct, each with its own consequential strengths and weaknesses.

The hierarchical organization is one that tends to possess many layers of management within which control, process and measurement are prevalent. There is a clear chain of command and escalation, and structures such as these resist flexibility not only inherently but also in terms of movement across functions. For individuals, "in hierarchical forms of organization … a degree of personal initiative is sacrificed in the interest of co-operation" (Day and Wendler, 1998). As we have already seen in our examination of new IT drivers, some elements of initiative – allied with flexibility and responsiveness – can be key to success. The hierarchical organization may suppress these qualities in people.

Flat structures, on the other hand, lend themselves more towards innovation and change; there is likely to be a far greater degree of cross-functional interaction at the cost of some elements of control, clarity and process. Rosabeth Moss Kanter (1943–) argued that, for many enterprises, "empowering strategies are necessary, leading to a flatter hierarchy, decentralized authority and autonomous work groups" (Boylan, 2001). Such strategies would indeed meet the demands placed upon the organization by some business goals, but the looseness of such structures – with some loss of control that this implies – is likely to mean that other drivers would be left unsatisfied: the accurate measurement of

Table 2.1. Organizational Forms

	Some strengths …	Some weaknesses …
Hierarchical	Control and command; measurement; process; clear accountability	Lack of flexibility, innovation, flair, and creativity; can be impersonal; does not encourage taking responsibility
Flat	Flexibility, innovation, communication	Potential confusion over ownership; lack of process and control; can lead to 'buck passing'
Matrix	Virtual team working; task or goal focus; potentially unlocks some very flexible skill-sets	Lack of clear accountability, responsibility and ownership; prioritization issues can arise for individuals
Multi-skilled	Good in an operational support environment; ideal for fire-fighting; can create dynamic teams	Focus may be poor; potentially leads to internal conflicts over seniority; responsibility and ownership can be problematic

ROI, for example, or the need to follow formal and rigid process and procedures when dealing with interfaces to operations outside of the parent environment.

It seems self-evident then that assertions for either hierarchical or flat organization structures within the IT function will guarantee little in terms of successful delivery. That there is a need for something more has already been recognized in the arguments for variant structures such as the 'matrix' model – flexible and ideal in a task- or goal-oriented environment – or the 'multi-skilled' organization, which is perhaps best suited to support-type operations. Table 2.1 summarizes the pros and cons of these structures.

Given the breadth of the responsibility of the modern day IT function, we can reasonably argue that for most a mix of all the above structural styles will be needed. Exact compositions will vary from environment to environment, being very much business goal dependent. Yet once again I must argue that the fundamental inadequacy of the organogram still remains, even if it is clearly composed of a recipe of the four structural styles outlined above.

2.1.3 Management vs. Leadership

There is another potential dichotomy which has a significant impact on both the structure and effectiveness of the IT function in any specific business environment, and this is based around the style of the department head. As with the default 'flat' or 'hierarchical' organizational structures, there is a parallel question to be asked in terms of management and leadership. Not only are these two clearly different aspects of executing functional responsibility, they can spawn specific types of organizational structures and styles of execution that may, or may not, prove to be successful.

Charles Handy (1932–), in his book *Gods of Management*, defined four basic styles of management (see Boylan, 2001):

- "Zeus" – which operates a power-oriented, non-bureaucratic management style
- "Apollo" – where the approach would tend to be ordered and structured, with clearly defined rules and hierarchies
- "Athena" – a problem-solving style with a focus on enterprise, achievement and teamwork
- "Dionysus" – a style based on individualism and the personality of the manager

We can readily see how these styles might map onto particular organizational structures. For example, in situations where the manager's style is akin to Zeus, they are likely to put in place a structure that reflects that approach; namely something hierarchical. This is probably true for Apollo too. Athena, on the other hand, is likely to favour a matrix structure, while Dionysus would almost certainly prefer a flat organization. It is not unreasonable to argue, therefore, that the shape of the IT organization (or, indeed, any organization) is likely to be driven to a significant extent by the managerial style of the person at its head; potentially this could prove to be a greater influence on it than the demands placed upon the function by business.

In a similar way to Handy, Henry Mintzberg (1939–) considered the 'managerial' from the perspective of the kinds of role that the manager needs to perform. From Mintzberg's perspective, there are three key managerial approaches which will effectively be demanded by commercial or business imperatives (see Boylan, 2001):

Table 2.2. *Management Roles vs. Management Types*

Types \ Roles	Interpersonal: figurehead, leader	Informational: monitoring, spokesperson	Decisional: entrepreneur, negotiator
Zeus: power-oriented, non-bureaucratic	✓		✗
Apollo: ordered/structured, rules and hierarchies		✓	✗
Athena: problem solving, teamwork	✗	✓	
Dionysus: individualism	✗		✓

- Interpersonal – where there is a clear need for a figurehead or leader

- Informational – where a monitoring and disseminating managerial style is required – effectively a spokesperson

- Decisional – when an entrepreneur is needed – someone who can handle disturbances and act as a negotiator

If we map these managerial approaches against Handy's management styles, the result is interesting (see Table 2.2).

This table suggests that it may not be easy to arrive at a happy marriage between style and required approach. A Zeus, for example, placed in an environment that demands a decisional and entrepreneurial approach to management, may struggle. If strong control is demanded, then having a Dionysus in charge is likely to be ineffective. If we then overlay these considerations with the suggestion that organizational structure may further compromise delivery against business objectives, we can see how much even general notions of 'management' can influence how organizational shape helps or hinders our ability to meet our objectives.

We might draw similar conclusions when considering leadership too. For many, management and leadership are one and the same thing; however people like John Adair (1934–) have argued that there is a real difference between managing and leading. For Adair, consideration of a team's performance suggests that 50% comes from 'self', and 50% from the way the team is led (see Boylan, 2001). Poor leadership can, therefore, severely compromise a team's ability to achieve 100% of its goals –

and for 'team' you can also read 'IT organization'. In these terms, what makes an effective leader? Perhaps, as Pearson (1992) suggests, it is more about personal attributes – such as drive, energy, vision, intelligence, mental and emotional health, and integrity – than about the way in which one goes about the job, i.e. the management style. A Dionysus-type manager placed in a decisional environment and working within a flat structure may seem an ideal combination; however, if the individual possesses little in the way of drive, energy, intelligence and so on, then their reign is likely to be less than successful.

On this basis, it might not be unreasonable of us to extend Adair's assertion and suggest that the overall success of the IT enterprise is dependent not only on self and leadership, but also on the managerial styles adopted allied with the approach needed. This could prove to be a highly complex matrix to draw out. If we overlay the implications of organizational structure onto this – either the defining of, or the impact from – we begin to get a sense of how complex this topic actually is; indeed, it is travelling ever further from a simplistic decision on hierarchical or flat structures.

2.1.4 Culture

The degree of success experienced in an IT organization may be governed by what is euphemistically termed 'culture'. For many, culture is something of an esoteric notion which can be easily discussed in generalities but which proves more difficult to actually define. People working within organizations talk about their culture – how good or bad it is, or how they have or need one – probably without being able to articulate exactly what they mean.

I would argue that there are worse ways of defining culture than by the combination of elements we have just been discussing, namely:

- The style of the overall manager (or, possibly, management team)
- The role the manager is required to play (interpersonal, informational, decisional)
- The quality of leadership (again for the overall manager or top team)
- Organizational shape

How it 'feels' to be working in a function will be largely defined by the combination of the above and how well the mix works. An Athena man-

ager with poor leadership qualities, working within a non-matrix organizational structure yet in need of a decisional approach, is likely to generate a significant number of conflicts and points of failure within the function.

When considering the need for a 'change in culture', employees will most often point to a revision in one or more of the above to effect their desired goal; perhaps a new manager, a change in structure, a new vision, and so on. Also influencing this culture within the IT function will be the culture of the entire enterprise – which will, after all, be a macro (enterprise-level) combination of the above. In organizations with a very clear ethos and a well-understood culture, it is very often the Chief Executive who sets the tone and, most likely, achieves a balance between the various elements to minimize negative conflict: "the resilient organizational culture has a strong sense of enterprise purpose that cascades down and across the enterprise" (Bell, 2002).

How important is this general notion of culture? Day (2001) suggests that "a leadership model in which organizational design, the quality of team interactions, and the distribution of energy in the firm may be far more important determinants of success than the soundness of this or that strategy". The argument is that culture may be more important than strategy. A poor culture (the composite defined by me, above) has a limited chance of successfully implementing a strategy, no matter how good it is; a strong, positive culture can probably make a success of any strategy, even if it has some weaknesses.

2.1.5 A Generic Perspective

We need to be aware of these notions of management, leadership and culture if we are to shape our IT organization in such a way as to maximize its chance of being effective. This is not to say that there is any kind of slavish formula or analysis that must be followed in order to gain all appropriate foreknowledge. However, an IT manager who is aware of not only their own personal style, but also the demands upon them as to leadership needs and the management role they must play, will be assisted in influencing the organizational structure they put together. It is perhaps self-evident that this will still be primarily driven by their own style – Zeus, Apollo and so forth – but it is undoubtedly better to create a structure from a position of understanding all the challenges ahead.

There are many similar factors that can offer an influence at a secondary or tertiary level; some of these we will cover in Chapter 6. One that may

be worth considering at this point relates to a generic perspective about individuals – if only to remind ourselves that the perfect combination of our four culture components actually guarantees nothing, given that the delivery elements of our ideal organization remain individuals with their associated vagaries.

The work of Douglas McGregor (1906–64) led to a hypothesis in relation to a simplified categorization of people (see Boylan, 2001). McGregor's individuals were split into two camps:

- Theory X – the negative view of human behaviour, where people need to be appropriately driven and managed in order to achieve their goals

- Theory Y – the positive view, where people naturally seek fulfilment, and need less rigorous control to deliver as required

Whether one totally subscribes to McGregor's basic theory or not, it is certainly possible to see elements of both X and Y – to varying degrees – in those with whom we interact on a daily basis. For a manager putting together his organization (both in terms of the naked structure and then filling that structure with appropriate resources) an appreciation of his staff at this most basic of levels can pay dividends. For example, a role may exist for an individual with a particular mix of technical skills to lead a virtual team on a Research and Development project. Of two candidates, Ben is clearly better technically; but the manager knows this person to be an X-type, unlike Max who, though technically slightly weaker, is much more self-reliant and self-starting. Who should he appoint? Probably Max. Without knowing Ben and Max well enough as people, Ben would be the clear choice. If Ben were chosen then it is still possible that man-managing him tightly could mitigate against the inefficient functions likely to result from this appointment, but this effectively results in additional overhead. The manager would need to be aware of this and plan/structure accordingly.

This is not such a far-fetched example. One might argue that managers fall broadly into two categories: the 'hands-off' and the 'hands-on'. If the former, the manager needs to be supported by Y-types whose styles also possess sufficient control and monitoring. Surrounding themselves with direct reports who were innovative Y-types but not process conscious would probably lead to a very loose and essentially ill-disciplined organization. One could draw similar examples of bad matches for the hands-on manager. Whatever the mix, the manager should also be aware of the

'lowest common denominator' factor, i.e. it is entirely possible that having one or more X-types within a group of people could potentially act as a drag on the overall team, and result in putting in place methods of management and control that had a negative effect on the majority of the team.

In concluding this particular section, I hope I have illustrated that there are a number of factors – mainly around individual styles, approaches and so on – to suggest that putting together a well-structured and effective IT organization is not simply about the shape of boxes on an organogram. As much as anything else it is about the people we choose to fill those boxes and the roles we ask them to play.

2.2 Organizational Components in IT

2.2.1 Operations

Having now considered some generic theoretical components in relation to organizational structure, it is prudent at this point to ensure that we have a suitable datum for the IT function in particular. After all, if we are going on to debate the format and shape of individual elements within the IT structure, we need to ensure that we have a common understanding of the blocks with which we are building – if only to abide by a consistency of terminology.

Take the Operations function for example. This is likely to be the most common element across all IT functions, yet may not be immediately recognizable to some through the name I have chosen to apply to it. So what do I mean by 'Operations'? In defining the general IT functions with which we will be concerned, I propose to firstly suggest some of the broad responsibilities within each area and then highlight some of the key elements or potential issues associated with the section from an organizational perspective. We will discuss potential future models for these functions later.

So when I talk about 'Operations' what do I mean? This is the unit whose responsibility is to maintain the well-being of the systems infrastructure for which the IT department is responsible. On this basis, things such as:

● Hardware maintenance and servicing (including personal computers)

● Capacity planning

- Network and communications infrastructure (including external connections)

- Operating system(s) maintenance, patching and upgrading

- Security

- Database management

- Some applications maintenance

Thus, the Operations function is critical to the day-to-day operation and maintenance of the overall systems environment. They do not – in the main – deliver any form of business-led change, however; change introduced by the Operations teams will, more often than not, remain invisible to the end user.

From an organizational perspective, we should consider the following influencing items:

- There will need to be an emphasis on controls and well-documented and managed procedures.

- Solid change control processes will be needed.

- Escalations paths should be clearly defined.

- Service-level agreements may be in force.

- Interaction with the end user base is likely to be limited.

- Operation is likely to be required $24 \times 7 \times 365$ (in some form or another).

- Appropriate hand-offs with other areas of the IT function will need to be in place (something that should be a default for all subfunctions).

Although not our primary concern at this point, it is worthwhile noting how even drawing up a simple list such as this can begin to help us define the kind of organization – and people – required for Operations to be successful. We can, for example, ask ourselves what kind of manager sits better at the top of such a department, a Dionysus or a Zeus? What kind of management style is likely to be required, informational or interpersonal? How might we be affected here in terms of the X- or Y-theory people balance? I suggest that such things are rarely considered.

2.2.2 Help Desk

Most commonly the help desk is a group of people who reside within the overall Operations area, given that their responsibility is, to some degree, the maintenance of the existing infrastructure (as we shall see). However, I have decided to recognize the help desk as a separate entity for the purposes of this argument, primarily on the basis that there are some additional areas of responsibility that quite obviously sets them apart.

So when we talk about the help desk, to what should we be referring?

- First point of call for Users/Customers with issues, questions, etc.
- Problem resolution for desktop-related productivity tools (e.g. acting as the first line telephone fix for queries around software such as the Microsoft Office suite)
- Problem ownership for issues which need to be resolved elsewhere (e.g. in Operations or Application Development)
- Systems administration functions (e.g. password control)
- Focal point for globally visible issues such as virus alerts and control

This list can be extended (or contracted), depending on the size of the overall enterprise and the IT function in particular. For example, in very large international companies the help desk is likely to remain physically remote from a large proportion of its user community, with interaction being almost entirely telephone-based. In smaller businesses, the help desk may also have the responsibility of physically visiting an individual machine (usually a PC) to effect call resolution in a hands-on manner (second-line fix).

Some of the organizational imperatives around the help desk function will be very similar to those already suggested for the Operations function; significantly, however, some will not:

- There will need to be some emphasis on controls and documented procedures.
- Change control processes will be needed (where appropriate).
- Escalation paths should be clearly defined.
- Service level agreements may be in force.

- Service may be required $24 \times 7 \times 365$ (though only in very large, perhaps multi-national organizations).

- Interaction with the end user base is a significant part of the job.

- Individuals taking ownership of issues is key.

- Personal characteristics (being helpful, positive, friendly, etc.) are likely to be as important as technical skills.

The last three points are one of the key reasons for recognizing that there may be some merit in pulling the help desk out of Operations to assist with our analysis. For example, the suggestions we might chose to make for the 'culture' of Operations (based on our four key components) will almost certainly not prove to be the best fit for a function such as the help desk where the culture must, by definition, be different.

2.2.3 Applications Development

In tackling the 'change' area of the systems function – as against the operational or service areas already considered – I intend to take a similar approach. Namely, in addressing the subject of Applications Development, I am going to separate out 'Business Engagement' and 'Project Management' on the basis that these – like the help desk – have discrete attributes that will benefit from explicit consideration. If we are to be successful in moving forwards in our attempts to define the 'best fit' IT organization for any given situation, then we should not risk losing critical front-line departmental functions or roles by attempting to submerge them into one large pot.

Of course the Applications Development area, even without engagement and project management aspects, is still a significant beast. Change can be delivered in anything from a simple PC database through to an enterprise-wide ERP or CRM (Customer Relationship Management) system. Despite this breadth, there will be a core number of responsibilities residing here:

- Delivery of software (business applications and associated processes) to effect some form of business change or operational enhancement

- Definition and agreement of business requirements

- Definition of systems needs based on defined business requirements

- Development, configuration or amendment of appropriate tools or packages to manufacture applications based on the given requirements

- Testing developed applications as 'fit for purpose' (quality control)

- Delivery of new or amended applications into a 'live' or production environment

- Support of live applications to maintain their 'fit for purpose' status

In environments where some of this work is contracted out, in addition to all of these still being valid there are extra management responsibilities with respect to the supplier of the development service. I intend to cover these under a broad definition of Business Engagement. Of course, we are going on to consider outsourcing in a little more detail later; for the moment perhaps we should just note that however we approach the organization of our own function in this area, we are likely to have more limited influence over the parallel activity in the supplier's business.

Our definition of Application Development focuses very much on the delivery aspects of the work undertaken: delivery of a definition of the requirements; the systems interpretation of those requirements; building and testing the solution; then in-life support. In many respects this pattern fits a general manufacturing and product management model. Organizationally there are many different opinions as to the ways in which the application environment can bet set up. Leaving this aside for the moment – and keeping in mind that we are talking about a form of manufacturing and product management model – then we might reasonably point to the following as being key factors in our definition of structure:

- There will need to be some emphasis on controls and documented procedures with respect to development approach.

- Change control processes will be needed (for applications both in-life and in development).

- Development is unlikely to be required $24 \times 7 \times 365$, although some provision for out-of-hours application support will probably be needed.

- Interaction with the end user base is likely to be a significant part of the job for a proportion of the function.

- Individuals will need to take ownership of the elements of the development or application for which they have responsibility.

- The function is likely to need a mix of positive personal characteristics and technical skills, depending on the role to be carried out.

- There will need to be a testing function (allied to quality control).

As we can immediately see, this portfolio is far more broad than that suggested for the operational areas of the IT function. The range of skills, styles and expertise required will vary considerably between 'front' and 'back' functions such as Business Analysts and Testers. For this reason it is harder to offer any immediate generalizations as to the need for a particular combination or culture which will fit the applications area exactly. We will return to this particular conundrum later.

2.2.4 Business Engagement

So where is the boundary between Business Engagement and Application Development? Indeed, we have already suggested in the section above that part of the remit of the applications function is the definition of business requirements, and what is this if not engagement with the business? For my part, I intend to classify this analysis activity as very much part of the manufacturing process. The engagement I now have in mind is that which is abstracted one level further up the IT food chain, i.e. with those managers and executives from whom support and funding for projects and programmes is needed, and with whom systems, strategies and priorities to drive the future direction of the IT function are agreed.

In many organizations such activity is an adjunct to the role of the project manager, if recognized at all. Where there is a tendency to work on a project-by-project basis, then the engagement that takes place at this level can often bypass anything that smacks of setting overall strategies and priorities. However, given the changing business environment to which we have already alluded, it seems reasonable to suggest that only through co-operative business-led objective setting can we really be certain that the direction IT is taking is the most appropriate.

Of course our new engagement models must also include businesses outside of the local parent. In adopting outsourcing strategies a new set of engagement demands are thrown in the IT manager's direction; and

the recognition of IT-specific interfaces with suppliers' and customers' own operations also suggests that we need to approach the general engagement subject in a less piecemeal fashion. Thus I would argue that for business engagement we are looking at:

● Working with the internal User community to define high-level business-driven IT strategies

● Working with the internal User community to prioritize and monitor IT projects and programmes based on business demand

● Acting in a consultative fashion to assist the business in solving commercial problems and challenges

● Actively managing outsourcing IT arrangements on behalf of the business

● Working collaboratively with suppliers and customers on e-business systems initiatives

● Generally representing the IT function on behalf of the enterprise

It is obvious that there are a mix of skills and organizational imperatives here that would not sit so well in our manufacturing development function. Of course, operations will have some of the kinds of supplier contact referred to above, and deciding where the responsibility for this kind of relationship management lies will be one of the many subtleties of putting together any IT structure.

So what are the key organizational nuances to be taken from the business engagement area?

● There will be a relatively limited need for controls and documented procedures (except in the area of SLA management with outsourcing suppliers).

● Fundamentally engagement is likely to be a 'core hours' activity.

● Interaction with those outside of the function is the raison d'être for this area.

● Individuals need to take ownership of relationships rather than systems, applications or technologies.

● The function will demand a certain range of personal characteristics as core competencies for the job.

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Once again, even with a simple list such as this, we can see that the kinds of individuals who would thrive amongst these challenges might be hard pressed to contribute effectively in some of the other IT subfunctions already examined. Business engagement, if it is to be done well and done effectively, needs a particular type of animal – supported by a set of cultural values appropriate to the role.

2.2.5 Project Management

The final substantial subfunction that I wish to consider here is that of Project Management. A little like business engagement, project management is often seen as part of the applications development process where individuals, related by specific knowledge of particular technologies, have enough of a skill-set or bent to be able to undertake a task-oriented management role. However, we should be clear that project management is as distinct an undertaking as engagement.

In addition to the uniqueness of the make-up of those who go to make good project managers, there are a number of other reasons why distinction is merited. We have already seen, for example, how more and more projects are likely to expand beyond the domestic function and user base. Particularly in the area of collaborative e-business initiatives there may be a fundamental need for 'integrated' project management, that is where individual managers looking after discrete and local projects need to come together to contribute to the management of the collective initiative. In these circumstances project managers need to be more than part-time or part-skilled. The picture is similar in situations where outsourcing agencies are responsible for the delivery of a particular project (which could, remember, be in the operations area as much as in applications). These projects will need good quality project management to ensure the best chance of success.

The brief of project managers must therefore include things such as:

- Project planning skills (including budgetary planning)
- Emphasis on controls and documented procedures with respect to project tracking and reporting
- Man-management skills at the task allocation level
- An understanding of risk and issue management
- Change control processes will be needed in relation to project plans

- Interaction with end users (or external agencies) is likely to be an important part of the job

- Individuals will need to take responsibility for the delivery of the entire project in accordance with the agreed schedules and budgets

- The role is likely to need a mix of appropriate personal characteristics (for example to ensure credibility with project sponsors) and technical skills

This mix is somewhat different again from those to which we have already alluded. More and more, organizations are coming to recognize that project management is a discipline rather than a skill, and explicit demands from employers for demonstration of this discipline (through recognized accreditation) are growing. In many companies project managers are being removed from any kind of line management role based around an application or technology and are being grouped in their own dedicated 'pool' for utilization across the whole IT spectrum.

For project managers to be organizationally effective, we need to recognize:

- There will need to be considerable emphasis on controls and documented procedures.

- Fundamentally this is likely to be a 'core hours' activity.

- Interaction will be with those both inside and outside the project area.

- Individuals will need to take ownership of projects and a variable mix of relationships, systems, applications and technologies (at the project level).

- The function will demand a defined range of personal characteristics as core competencies for the job.

- Change control processes will be needed (where appropriate).

- Management reporting and escalation paths should be clearly defined.

- The resources can be co-located with other subfunctions or as a discrete pool (they may also sit in a 'grey' area between IT and the business).

If one also considers the particular demands on project managers in setting up, managing and maintaining project-related organisms such as

Table 2.3. *'Cultural' Mix of IT Subfunctions*

	Management style				Management approach			Structure			
	Zeus	Apollo	Athena	Dionysus	Interpersonal	Informational	Decisional	Hierarchical	Flat	Matrix	Support
Operations	✓					✓		✓			
Help Desk		✓				✓					✓
Applications Development			✓				✓			✓	
Business Engagement				✓	✓				✓		
Project Management		✓					✓		✓		

steering groups or project boards, it is clear that we can argue that the entire combination differentiates itself from the other groupings we have thus far considered.

In order to illustrate this point (albeit in a somewhat crude fashion) Table 2.3 offers a suggested view of the five subfunctions we have just discussed against some of our core culture criteria.

Whilst not an exhaustive analysis, this generalized position does indeed show how such functions differ – and how we need to take these differences into account if we are going to ensure effective organizational planning.

2.2.6 The Silo Tendency

Before leaving this section on the organizational components of the IT function, there are two general and related issues which we need to discuss. These are not, perhaps, unique to IT (as opposed to any other department within an organization), however they do have the capability to derail any endeavour aimed at organizational change.

The first of these I have termed the 'silo tendency'. By this I mean the inclination for subfunctions within an IT organization to concentrate entirely on themselves when it comes to how they are comprised and act, how they define the culture by which they operate, and so on. Thus,

the operations function may see itself as being clearly separate from applications or project management, and move forward on that basis. As Foote et al. (2001) suggest, "these units have their own business plans, resources, channels, and customer relationships; status and power bases are built on the units and their products". Whilst this comment may have been aimed at larger entities, it can still apply to our subfunctions within IT. For example, there may be a number of groups within IT who need to engage with a particular business unit. If they pursue these engagements in a blinkered fashion, a number of things can arise:

- The customer has too many interfaces into IT.

- Duplication of roles can be created across the IT department.

- In areas such as engagement or project management, IT is likely both to be less effective and to fail to reap the benefits from a number of internal synergies, e.g. cross-silo knowledge transfer.

Such a tendency can have a significantly negative effect on the final shape of the IT organization if it is allowed not only to exist but also to prevail. Given some of the business drivers that are effectively being transferred into IT, one can argue that it is important that a holistic view of the systems organization is taken. Of course this becomes even more difficult if the current function is set solid. It is surely true that "radical change is difficult in established organizational units" (Nyström, 1996), and if radical change is required to effect the appropriate organizational changes needed, then internal IT silos will only get in the way.

2.2.7 The Introspective Tendency

The second observation is a tendency towards introspection. By that I mean that when the IT function is planning or preparing for a change to its internal organization, very often it will draw the blinds around itself and pursue an entirely self-absorbed focus. In many respects this is the silo mentality writ large. There are both inherent and implied dangers in this.

The inherent danger is that in the pursuit of a new 'ideal' model, the IT department will ignore not only the demands being placed upon it by the business but also the way in which the business itself is structured. The potential problem here is clear. When the IT manager takes the wraps off his new organization he may find that it is poorly aligned to the rest of the business – thereby making the key task of engagement more

difficult – and is not best structured to deliver against known commercial priorities and goals – thereby almost 'building in' failure. By its very nature reorganizing has to be an 'internal' exercise, but it should not be wholly so.

One way to mitigate against this is to canvass opinions from outside of IT in order to understand exactly what is expected by the function's customers and to recognize where current failings may exist. After all, it is perfectly possible to believe that a certain aspect of the organization is failing when in fact customer perception indicates the complete reverse. If at all possible, one should endeavour to follow the old maxim, 'if it isn't broken, don't fix it'.

The implied danger in this introspective tendency comes at the corporate level; namely where one or more functions outside of IT reorganizes itself without reference to any other. For the systems community this can mean that solid working relationships and processes are unnecessarily broken; that there is suddenly an expectation for IT to work in a completely different way; that new business demands (which drove the reorganization in Product Management, for example) are sprung on an IT function that now cannot meet them.

It is obvious that these kinds of challenges are political ones that need to be recognized at the level of corporate culture. By illustrating them, however, it does help us to demonstrate that reshaping an organization is most definitely a two-way street, and that the effects of a disastrous change will be felt outside the function too.

2.3 Organization Life Cycle

2.3.1 Recognizing the Atrophy Model

There are undoubtedly many people who are unsettled by change and overly influenced by the negative connotations it can bring with it. Perhaps this is particularly so in a function where – despite the fact that IT is essentially about enabling change – one might wish to argue that delivering a successful systems product is dependent upon providing an environment which is stable and managed by well-defined and known processes. There is, of course, much to be said for this argument. If one is aiming to improve quality standards, for example, this could be made considerably harder by continually changing build processes in the

'manufacturing' environment. The argument against change fails to recognize two things, however. The first of these comes in the shape of the new business drivers which, by their very nature of being more rapid, fluid and dynamic than ever before, cascade a need for almost continual change into the IT function. The second lies in the nature of organizations themselves.

Sturges and Brewerton (2002) have argued that patterns of reliability in engineering can be adapted to fit an organizational model. For example, when we buy a new car we can be certain that at some point in the future we will need to replace the tyres, the oil, the brake pads, and so on. They simply wear out. When we need to do so will depend upon a number factors, of course: how far and how fast we drive being key. Furthermore, whether these elements will need to be replaced systematically, coincidentally, or piecemeal may be partly down to chance; some we can fit within planned maintenance, others will just happen – a nail in a tyre, for example.

The argument follows that all organizations have a limited life span too. There is a 'natural cycle' of organizational development, maturity and decay, and that at the end of the cycle something needs to happen to prevent collapse and failure.

Figure 2.1 depicts this pattern. Following a period of development where the organization is defined, where new people are appointed and roles clarified, the structure settles down into its period of maturity. It begins to operate 'naturally', i.e. the organizational dynamics – such as 'culture' – take over and the structure simply 'functions'. (It is important to note here that the way the organization behaves may prove not to be along the lines intended. Once the structure is established it must take on a life of its own, driven by the needs, agendas, strengths and fallibilities of those individuals working within it.)

At some point, the organization will begin to function less well. Why might this be the case? Perhaps there are some key resources that leave the company, thereby changing skill-sets, culture and dynamics. In IT terms, there will be a continual stream of influences coming from outside the department, where new business initiatives – such as e-business – demand different ways of delivery. Whatever the cause, at some point organizational atrophy will set in.

As Sturges and Brewerton (2002) point out, "the goal of management is to achieve a state where people and technology make maximum contribution to the organization's accomplishment of its objectives with
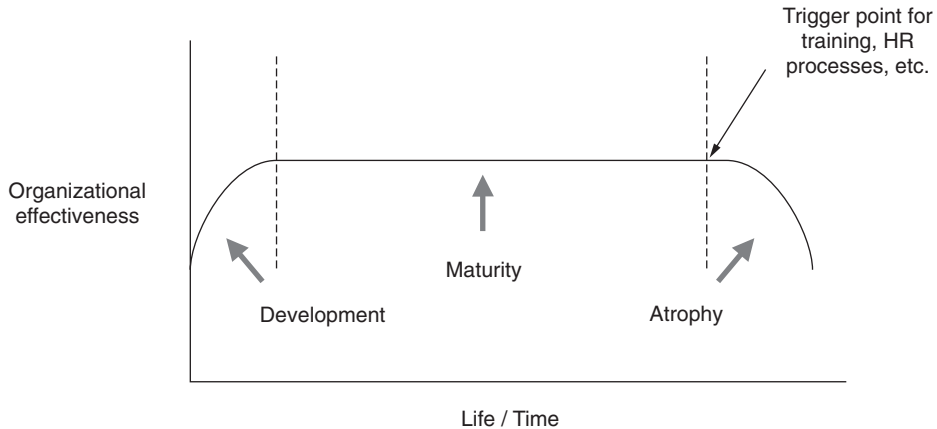
Figure 2.1. *Organizational Life Cycle*

minimum probability of failure of any specific organizational component". In effect, this means that on our atrophy model the 'maturity' line should be as high up the graph as possible (maximizing objectives) and there for as long as possible (minimizing failure). Essentially the objective is organizational effectiveness, i.e. getting it 'right'.

2.3.2 The Impact of Doing Nothing

It is entirely possible that one might choose to dismiss the atrophy argument perhaps on the grounds that when structural change comes it is usually driven from higher up the enterprise and that the IT department is often 'done to', i.e. it is outside of local control. If this were the case, then I would argue that we have an example of external influence triggering the next development cycle.

Perhaps one might fail to recognize that, whatever it may be called, changes in local structures actually fit the atrophy model; in this case I suspect that after a very limited amount of study one could effectively prove that it is most likely they do. Or perhaps one might choose to suggest that the entire function is in such a constant state of flux that it never leaves the 'development' phase. To counter this, we might suggest that this is a symptom of the maturity phase being incredibly short – and the organizational shape being 'wrong' in the first place.

Whichever view we possess, I would argue that there is no excuse for doing nothing. The atrophy argument seems to me to be a sound premiss that, as a generic theory, fits the cyclical development of the IT

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organization very well. Indeed, accepting it as such provides us with a useful template in terms of organizational planning. Of course one of the prerequisites of this working is our being able to identify the critical point on the curve, i.e. when we are making the transition from maturity to decay.

In order to achieve this, there will need to be a means of measuring the performance of the function as a whole. The use of metrics within IT is nothing new, and those that measure things such as system downtime, budget and timescale performance, productivity and so on – and which should already be in place – can prove the most useful. They are, after all, measures of organizational effectiveness, and the IT manager would want to see them move positively after the introduction of a structural change. Throughout the period of maturity, the aim should be to see at worst a level trend in terms of performance, though a slight increase would be ideal. It is when these trends turn towards the negative that one would get the first warning signs.

In Figure 2.1 I have suggested that at this point a number of HR-related activities might be undertaken: additional training, bonus incentives, and so forth. These are aimed at people as individuals rather than the structure as a whole. As such they may help to reverse the decline – particularly if the reversal is no more than a 'blip', which it might be – but will do nothing significant if the issue is that the shape of the organization no longer fits the demands being placed upon it.

It is in these circumstances that doing nothing ceases to be an option for the IT manager. If the structure of the function becomes fundamentally flawed then they will be faced with an ever-downward trend in terms of measured performance. Other attributes of the organization are likely to suffer too: perhaps the attrition rate begins to rise and morale begins to fall; perhaps IT's reputation begins to decline with more negative comment coming from the department's customers. Under such conditions doing nothing fails to recognize the imperative of the atrophy model. Once in decline the structure of the function must be reviewed.

2.3.3 Implications in an IT Environment

In asserting the atrophy model and applying it to the structure of an IT organization, my premiss is that when we have evidence of a decline in effectiveness we need to act and review the overall function. I am less concerned with the triggers that may have generated this recognition. We have already suggested a number of these:
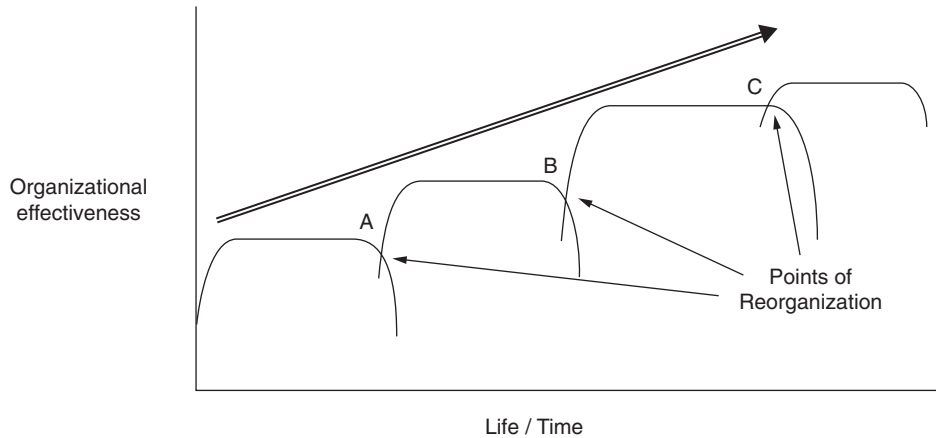
Figure 2.2. *Organizational Development*

- Restructuring drivers at the corporate level (not strictly atrophy based, though restructures in customer departments may well indicate that the IT function is about to fall into decline, e.g. alignment and engagement models may cease to be appropriate)

- Business demands require the IT function to deliver different things, attack new technologies, meet challenges around shortened timescales; in these cases the atrophy effects are likely to be cumulative

- Where there is real internal atrophy; for example, through the loss of key resources, or where particular 'cultural' mixes are failing to deliver

The potential result is shown in Figure 2.2.

Here we have an example of an IT function which, after establishing its initial structural model, goes through three cycles of reshaping. As suggested in the diagram, these organizational changes will not necessarily be uniform. The 'depth' of the curve on the graph suggests the degree of change in terms of how sweeping or radical it is, and perhaps how much of the function is affected. The length of the maturity element shows how long any structure remains effective. Thus we can see that change 'B' appears more wholesale and radical than the reshaping that occurred before it. On the other hand, change 'C' – in being relatively shallow – represents what may be a minor adjustment to the structure extant at that time.

You might look at such a representation with horror if you infer that I am arguing for nothing but constant flux. However, we need to remember that the *x*-axis is time and that the span represented in Figure 2.2 could be anything from two years to perhaps ten years. In these cases the atrophy theory obviously does not indicate a life of constant change within the IT community.

There is one final point to be taken from this argument. As I have suggested in Figure 2.2, the cumulative effect of our organizational changes is to improve the effectiveness of the entire function over time. Indeed, apart from addressing situations where there are explicit failures in the function, why else would we want to change organizational structures if it is not to improve the products delivered? Measures can, as referred to earlier, prove such increases in performance – and once proven, can provide a useful tool in getting business support for future changes if this is needed. On this basis – and in conclusion – the atrophy model of organizational change is in no way negative. It is a mechanism that allows the recognition of a very real phenomenon, and which can be turned into a tool for driving consistent and long-term business benefit.