Managing Supply of IT Services, Applications and Infrastructure

Introduction
• Within the range of IT services there has been a move to renting or buying applications rather than building systems
• ‘Service’ has greatest impact on business development through IS/IT
• Ever increasing reliance on external provision of IT services through outsourcing to improve IT economics and obtain skills, competencies and resources that cannot easily be provided in-house

Introduction
• Subcontracting of both commodity programming and specialist design and implementation skills common practice since 1970s
• IT consultants also employed in a variety of roles
• Since late 1980s role of IT function has changed from production mode to service mode

IT Service Strategy
• Production or construction implied designing and developing application S/W and delivering operational systems
• Adopting a service orientation implies a wider range of approaches (including delivery and support)
• Recognised in service level agreements (SLAs) for network uptime, response times and help-desk support for many years

IT Service Strategy
• Problems with understanding and measuring organisational benefits delivered from services – easier to measure deficiencies and costs
• Very little literature exists concerning development of ‘IT service strategies’
• Extant literature on service businesses can be used to help select appropriate service strategies

IT Service Strategy
• Using literature on customer services a more strategic and business-driven approach to IT service management can be defined
• Nature and business contribution of services needs to be understood before more objective decisions on sourcing can be made
Types of IT Service

- Classified according to:
  - Nature of service provided
  - How customers or clients utilise the service
  - Nature of services
    - Service user to some degree involved in delivery process and influences performance of the service
    - Measuring service primarily about measuring user perceptions of service delivered against expectations

Types of IT Service

- Nature of services
  - Services to a large extent produced and consumed simultaneously
  - Difficult to develop schedule of works due to uncertainty of demand
  - However ‘technical’ the service people and the role played are critical to the perceptions of the service received
  - Proficiency and efficiency are essential but SQ equally judged on personal interaction

Types of IT Service

- Nature of services
  - More user understanding of what is involved in service delivery the better the match between expected and delivered service
  - There is often a difference between user of IT service and who pays for it implying different perceptions of service value

Types of IT Service

- Classification of IT services
  - Process-based classification
    - Based on literature from services management
generic service model relevant to most IT services (see fig. 11.1 pg. 527)
    - Dimensions include: nature and extent of user-provider contact involved and degree to which the service is customised to each user or user interaction

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IS/IT Service Quality

- Extensive literature on approaches to defining and measuring SQ in services marketing literature
- Adapted for internal IS quality
- Establishing more effective and relevant ways of describing and measuring value derived users and the organisation a major challenge for future IS strategy development
- Users continually expect improvement - comes at a cost (see fig.11.5 and causes of gaps pg. 532)
The Gaps in IS service delivery (adapted from Parasuraman et al.)

Application Development and Provisioning Strategies

- Proportion of custom-built by large S/W development houses vs. purchased packages varies across industries (eg. 80% in financial services sector)
- Emergence of ASPs latest development in this area
- Trend likely to continue

Application Development and Provisioning Strategies

- Issues for application development
  - Providing new applications more quickly
  - More cost-effective production/acquisition of more types of applications
  - Increasing quality and reliability of S/W
  - Developing more customer-focused applications
  - Devising more flexible and adaptable applications
  - Providing efficient, seamless integration of business activities across different applications from the desktop
  - Ensuring maximum value gained from information assets

Aligning Development Approach to Applications Portfolio

- Strategic Applications (see fig. 11.7 pg. 543)
  - Speed of development and flexibility of design essential
  - Cost less important as ‘window of opportunity may be short-lived’
  - Likely to be complex or become more complex as functions are added incrementally and high risk
  - A dynamic systems development methodology incorporating prototyping most effective (eg. RAD tools)
  - Need for new business processes, competencies, operational and technical skills

Aligning Development Approach to Applications Portfolio

- Key operational applications
  - Generally ‘workhorse’ systems carrying out main operational processes (eg. Customer order entry and fulfilment)
  - Need to be efficient and robust and deliver cost-effective, problem-free use over extended period
  - Often require integration with other primary business processes
  - Often met by application packages or third party developers but making it work can often override localised objectives

Aligning Development Approach to Applications Portfolio

- High potential applications
  - Centres on R&D activity enabling new technology to be tried out to ascertain its potential or explore potential of a range of technology in relation to an innovative business idea
  - Clear terms of reference need to be or objectives should be established, but may need to be modified as knowledge is acquired
  - Required performance and reliability needs to be achieved before prototype becomes ‘operational’
Aligning Development Approach to Applications Portfolio

• Support applications
  – Most appropriate solution is to buy in sound standard proprietary packages that meet business requirements
  – Package should not be customised – business processes and procedures should be amended to fit the package
  – Not viable to allocate valuable skills and resources to develop support systems or future costs of modifying each new package release

Enterprise systems

• Enterprise systems cont.
• Issues accelerating adoption:
  – Y2K requirements
  – Replacement of non-integrated legacy systems
  – Increasing legislation and regulation (compliance issues)
  – Requirement for quick and effective moves into EC
  – Need for business expansion by rapid replication of existing business models

Strategies for Managing the IT Infrastructure

• Comprises
  – Physical infrastructure
    • Networks, HW and base SW products and services deployed to enable applications and general purpose use of technology to function successfully
  – Architectures
    • Describe physical infrastructure and show current and future configurations as well as models of physical infrastructure and where located
  – Policies and standards
    • Cover technology aspects to determine how infrastructure, acquisition, deployment and support are managed.

• Management processes
  – To ensure investments in infrastructure are coherently planned and justified and relationships with technology suppliers and outsourcers are appropriate for their role in enabling business strategy
  – Linking infrastructure with business strategy
    • Business objectives of technology management
      • Purpose is to provide appropriate set of technology, resources, processes and services to meet evolving needs of the business and ability to apply them effectively

• Linking infrastructure with business strategy
  – May not be possible to provide an ideal infrastructure at any given time
  – Can evolve at the rate demanded by business and IT plans or evolution of technology or economics of acquiring and using IT
  – Two enduring problems of IT infrastructure management:
    • Must be developed as base for future, uncertain use of applications rather than merely matching current business functionality (keeping ahead of needs)
    • It is difficult to define value derived from IT infrastructure (it is seen as a cost)
Strategies for Managing the IT Infrastructure

- Issues to be faced
  - Linking technology investments to business needs
  - Identifying technical opportunities
  - IT investments by others
  - Technical implications and ‘hype’
  - Business and technical awareness
  - How to make decisions about IT resources
  - Need for commonality and connectivity across IT infrastructure – determining ‘reach’ and ‘range’

Summary

- The theme of technology strategy should always reflect HOW IT can be deployed to add value to the business
- The organisation MUST be aware of HOW technology is being deployed and for WHAT purpose by others in the industry and even in other industries (along value chains)
- It is in the technology that the organisation is vulnerable to undue outside pressure from IT suppliers whose interests do not always coincide with those of the business
- The approach, role and skills of the IT specialist need to change as the role of technology becomes increasingly ubiquitous and its control becomes ever more decentralised