Chapter 4: Managing IT

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Introduction

- IT is transforming from a technology provider to a strategic partner. So, IT management has three facets: -
  - (1) Technology,
  - (2) Business, and
  - (3) Management

- IT Management includes: -
  - IT risk management,
  - IT resource management,
  - IT personnel management,
  - Measurement of IT,
  - Impact Analysis,
  - System management,
  - Process and Transaction management,
  - Technology management etc.

Role of IT Management

- Selection of Technology
- Financial Management
- IT- related resource management
- Positioning of IT
- Managing IT issues
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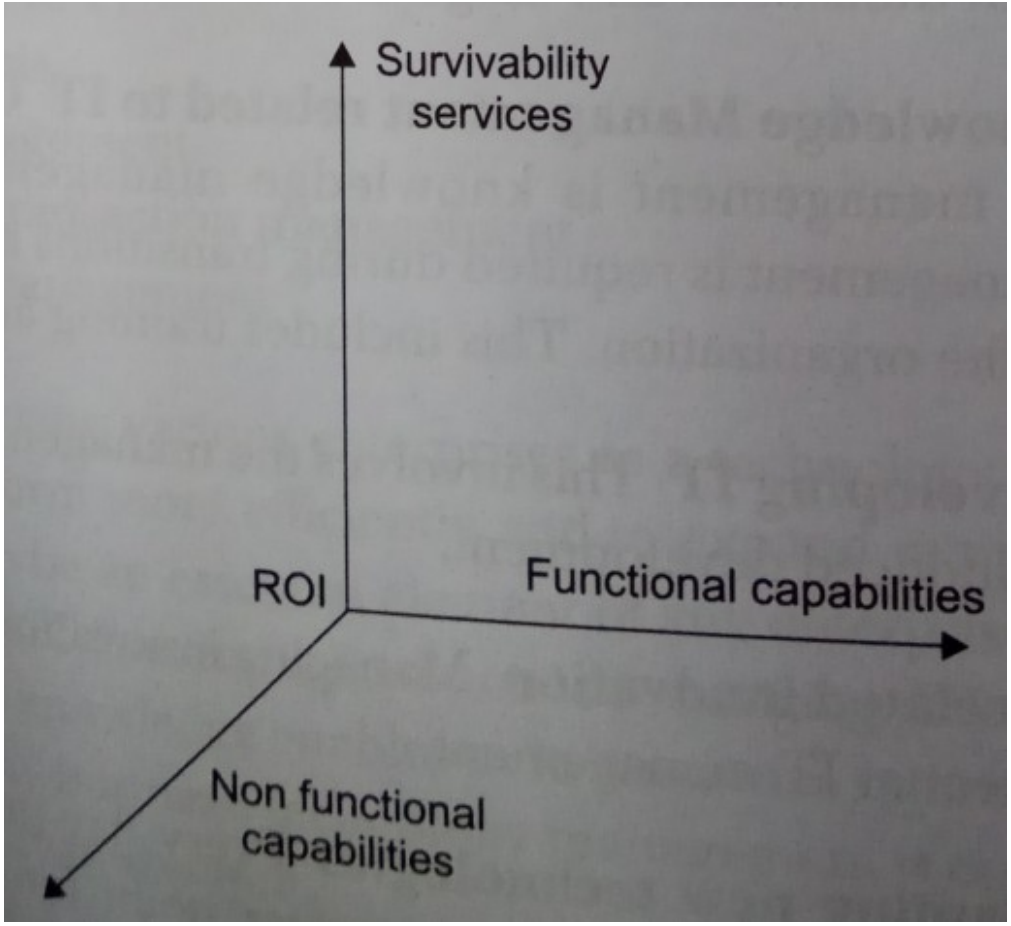
- Knowledge management related to IT
- Developing IT
- IT-related innovation
- Adapting new technologies
- Getting maximum benefits out of IT

Stages of IT Life-Cycle

- Identification of need for IT and related technologies
- Technology selection
- Adapting IT
- Building and implementing IT
- Innovations for future and maximizing benefits
- Growth and maturity of IT
- Use and maximization of IT
- IT integration
- Understanding limitations of existing IT and technologies in the next context
- Transition to new technology

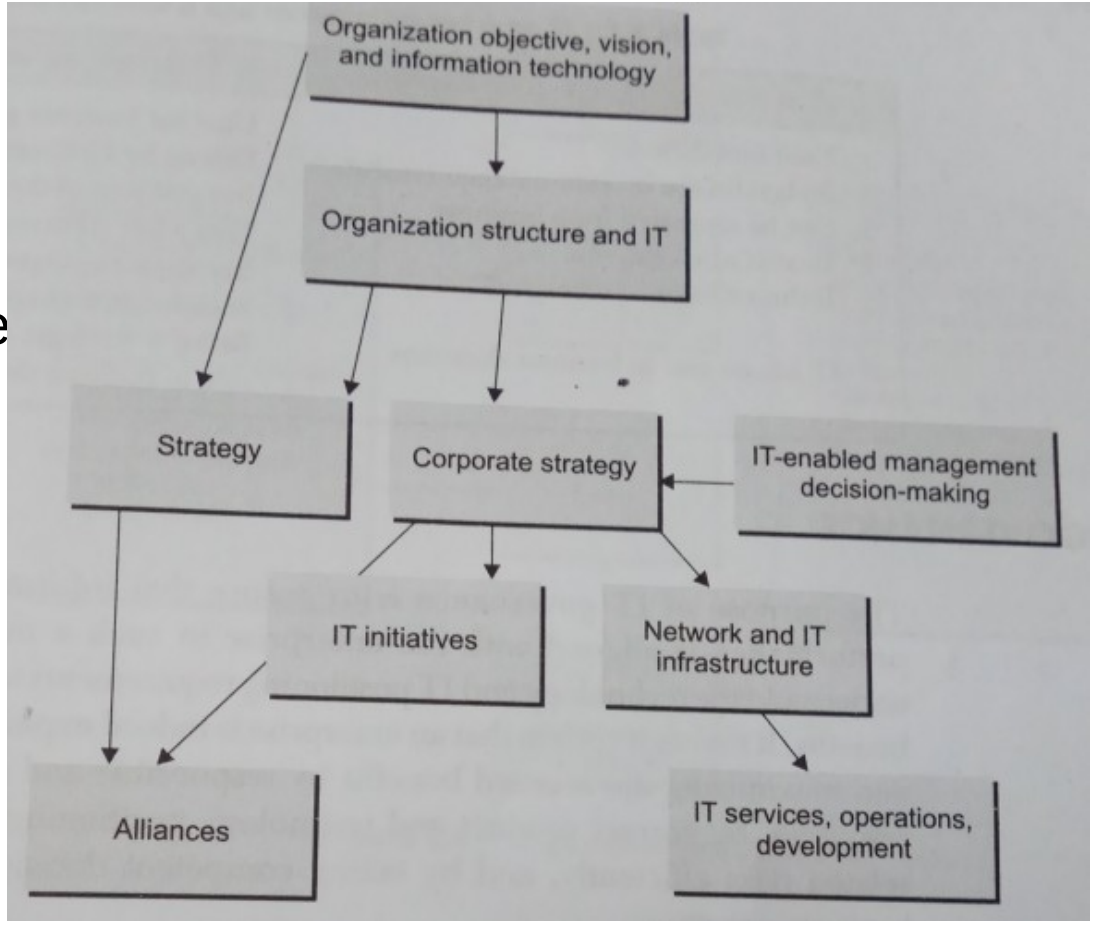
Technology Evaluation Parameters

- Stand-alone technology assessment
- Suitability assessment
- Compatibility study
- Survivability study
- Return on Investment (RoI)
- Growth and futuristic issues



IT Management Framework

- Factored into: -
  - Corporate strategy
  - IT-enabled decision making
  - IT and organizational structure
  - IT initiatives
  - IT infrastructure
  - IT services
  - Alliances



IT : a Service Provider vs. a Strategic Partner

IT as a Service Provider	***IT as a Strategic Partner***
Used for efficiency	Used for business growth
Budget driven by external requirements	Driven by business strategy
Can be separated from business	Integral part of the business
Treated as an expense	Treated as an investment
Technical experts manage IT	Business managers with technical knowledge manage IT
No role in business decisions	Has a role in business decisions

IT Governance

- IT governance ensures that IT performance is aligned with the enterprise in such a way that it can understand the technology and IT positioning requirements to obtain maximum benefits.
- It also ascertain that an enterprise is taking benefits
  - By appropriate use of resources
  - By correct technology positioning
  - By managing IT related risks
  - By taking competent decisions to achieve business objectives.

Framework of IT Governance

- The “learn” and “compare” functions act as prime moves, which can be identified along : -
  - Dealing with present scenario
  - Futuristic arrangements
  - Auditing
  - Setting and analyzing objectives
- IT governance includes: -
  - Overview and direction of IT
  - Built-in strategic road map
  - Strategic interrelationship between IT and business
  - Roles of IT for fulfilling strategic objectives

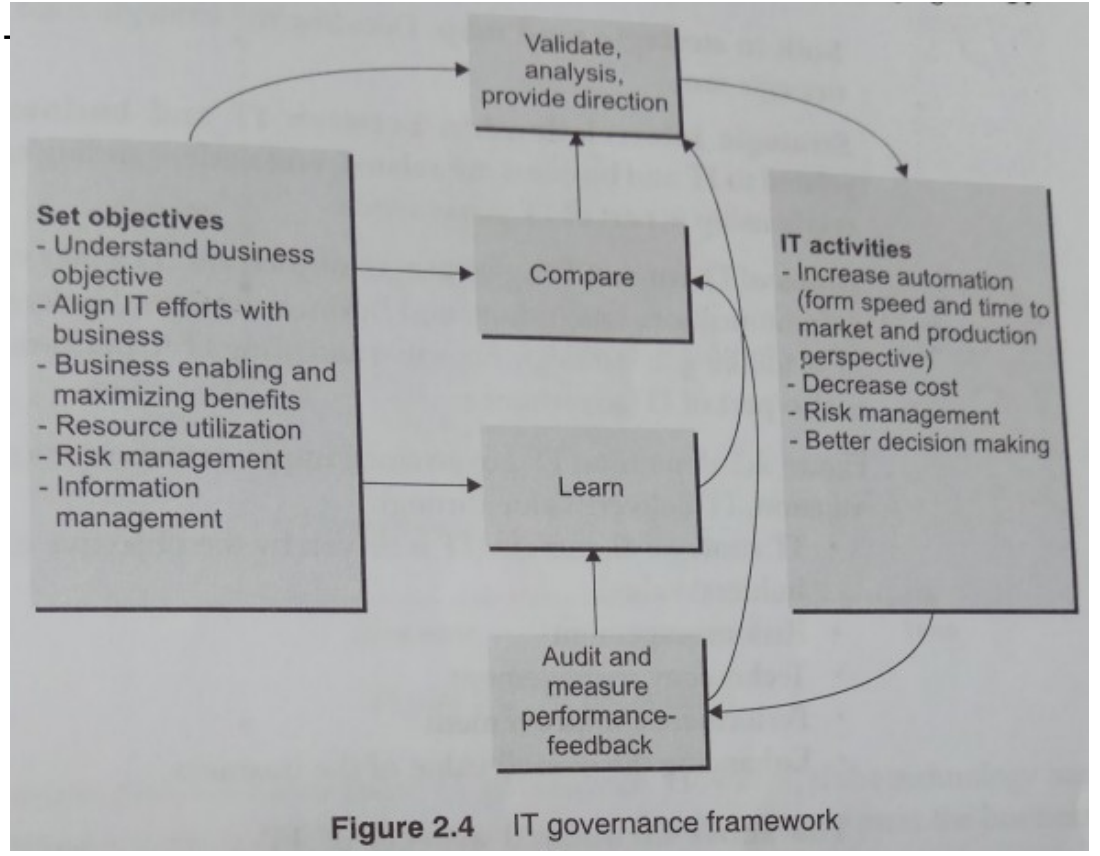


Figure 2.4 IT governance framework

IT Governance Implementation

- IT delivers value through: -
  - IT strategic alignment
  - Risk management
  - Technology management
  - Performance improvement
  - Enhancing the overall value of the business

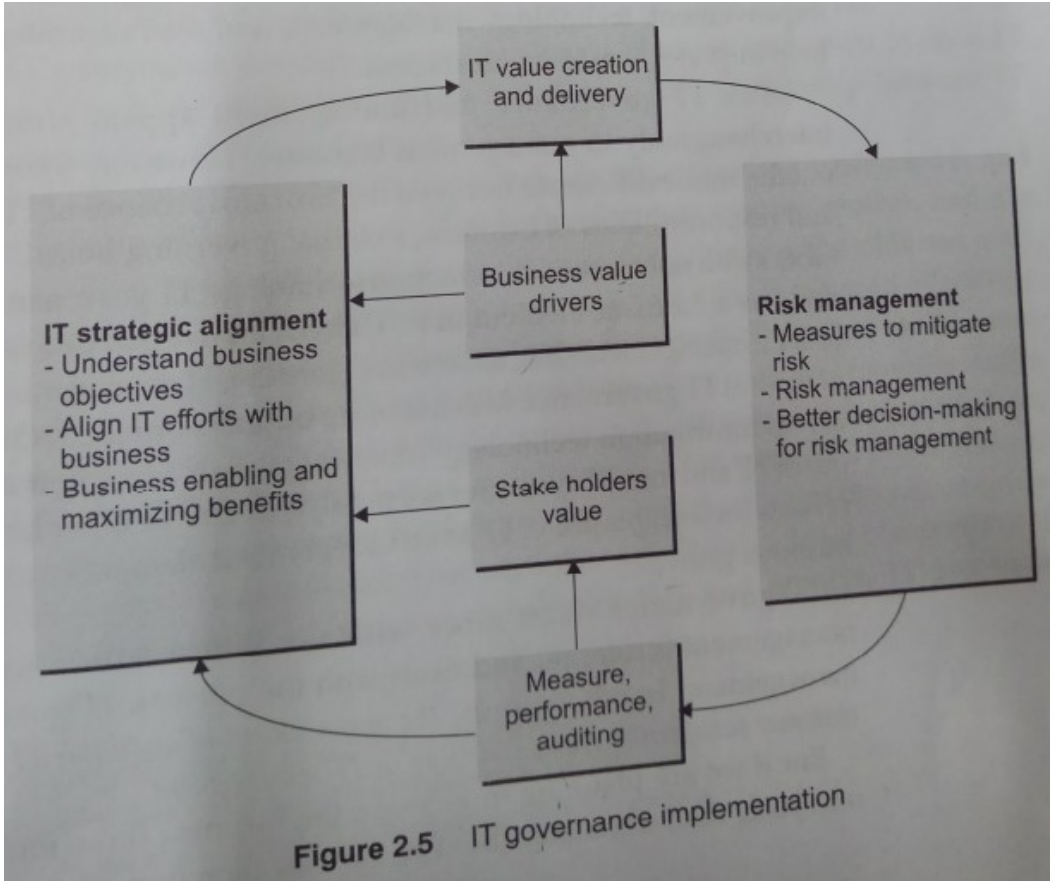


Figure 2.5 IT governance implementation

IT Gov. overlaps IT Mgmt.

- The roles of IT governance and IT management are somewhat overlapping.
- IT governance is more external and has futuristic element in it, whereas IT management is more internal and business oriented.
- IT governance sits very close to business objectives and needs to drive IT based on these objectives.

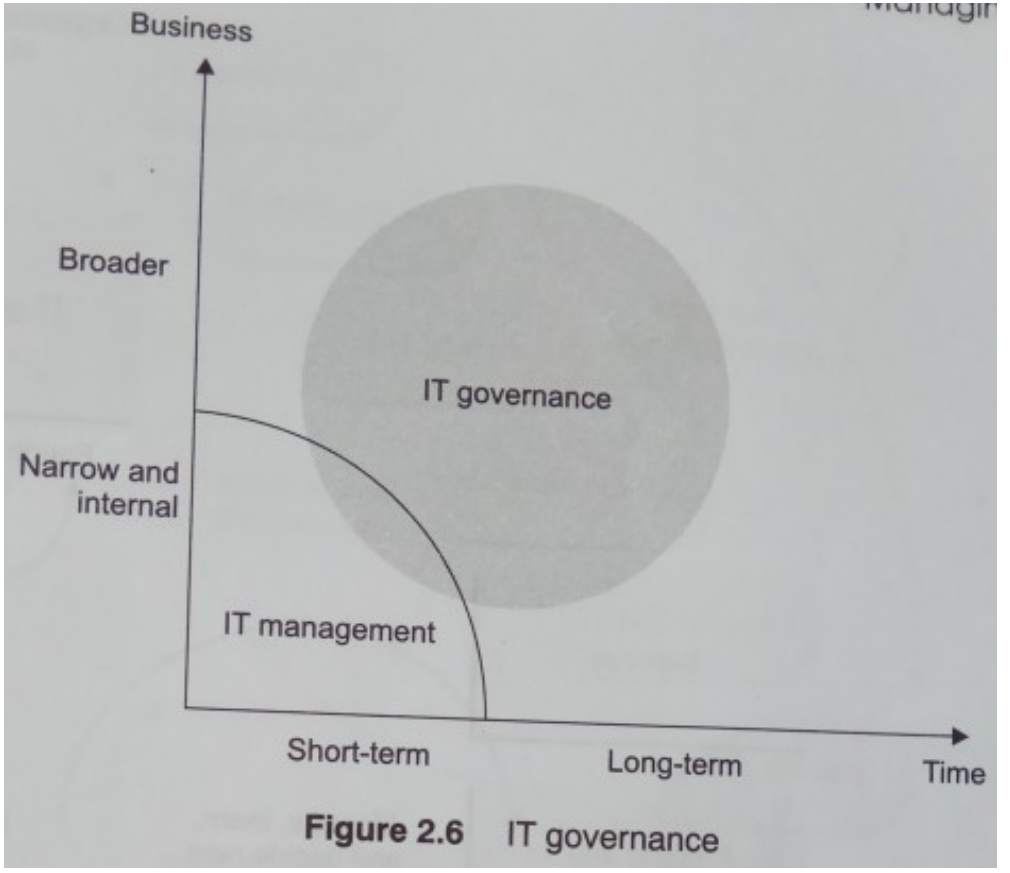


Figure 2.6 IT governance

Rel^{n} bet^{n} IT Gov. and IT Mgmt.

- Effective IT governance results from understanding business, IT and their relationships.
- IT governance keeps IT and business together to improve performance of the business processes, projects, IT itself and infrastructure, along with resources withing the organization.

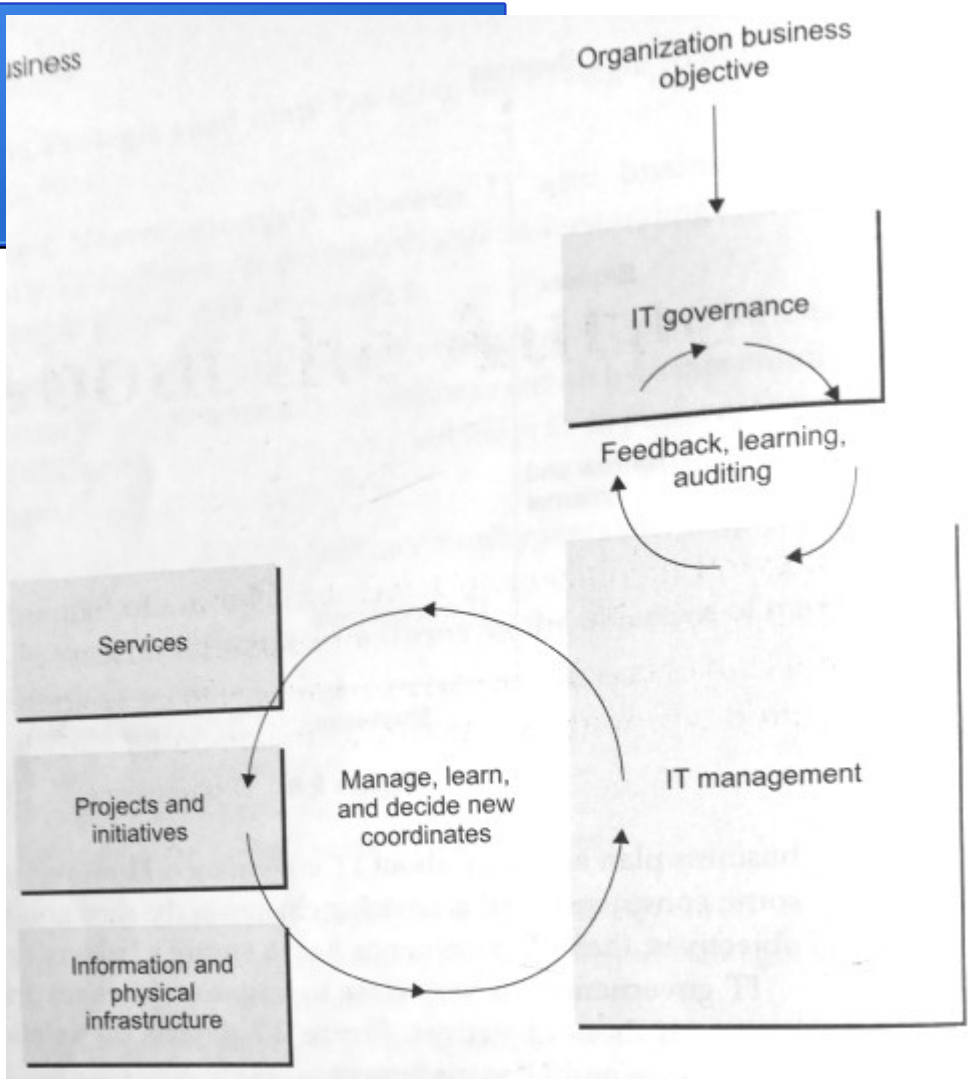


Figure 2.7 Relationship between IT governance and IT management

IT Governance and Strategy

- IT government strategy should be established with the backing of the top management, which
  - Clarifies who owns the IT resources
  - With whom rests the ultimate responsibility
- The proper IT governance strategy ensures that the senior management retains control and responsibility for the IT operations of the organization.
- IT governance deals with overall control, communication and execution.
- Technical architecture needs to be designed taking into account the soft and hard aspects.
- Technical architects / experts must be involved in the development of business strategy; they may involve in the system development process and also in various technology and product decisions.

Roles of IT Governance

- In many cases, it was found that there was a gap between what IT was supposed to do and what it was doing.
- Roles of IT are, but not limited to, the following: -
  - Monitoring and measurement of IT
  - Process improvement
  - Change Management
  - Planning IT
  - Opportunities and expansion
  - Selection of project, sub-projects, and options
  - Issue identification and prioritization for action
  - Measurement
  - Project scope planning and expansion
  - Learning

Technology Management Process

- A technology life cycle includes the following: -
  - Conceptualization
  - Innovation and Discovery
  - Proof of Concept
  - Proficiency and Maturity
  - Maintenance and Support
  - Technology decline
  - Extinct

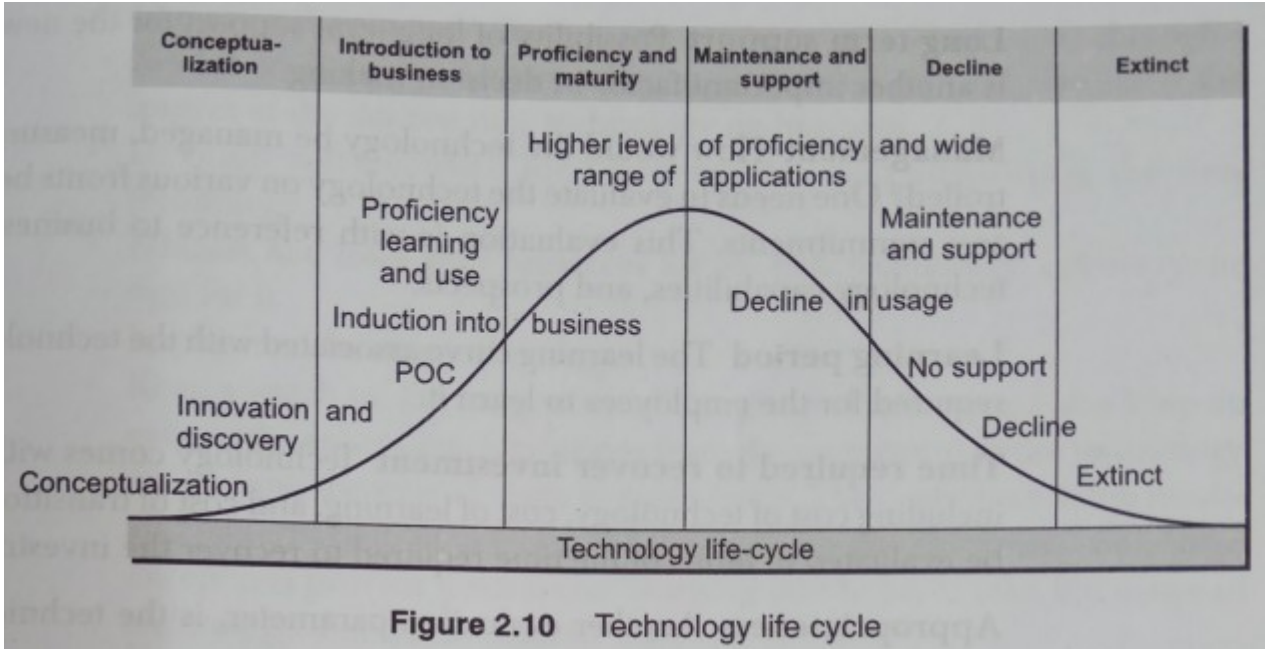


Figure 2.10 Technology life cycle

Steps in Technology Management

- There is a need for careful assessment of the requirements before going in for a new technology.
  - Know the gap between the technology you have and that you would like to have.
  - Identify the technology that meets your requirements.
  - Develop a framework for implementing and supporting the new technology
  - Educate and train your resources
  - Implement the new technology
  - Keep a watch on the integration of the new technology.

Evaluating New Technology

- Some of the aspects that are considered before deciding on the suitable technology: -
  - Value and benefits
  - Stability and consistent value creation
  - Interfaces and adaptability
  - Long-term support
  - Management
  - Learning period
  - Time required to recover investment
  - Appropriateness
  - Position among the available options
  - Integration efforts
  - Technical fitness

Assessment of Existing Technology

- The following parameters are considered for assessment of the existing technology: -
  - Issues
  - Need of new technology
  - Gaps
  - Business-based analysis
  - Need of replacement
  - Impact

Identification and Selection of New Technology

- Technology selection is based on the following: -
  - Business requirements
  - Present technology limitations
  - Business compatibility
  - Technology future
  - Technical compliance

Strategic Aspects of IT

- Following are the strategic aspects of IT: -
  - IT for positioning the product
  - IT as a strategic tool for development
  - IT as a business enabler
  - IT for differentiation
  - IT for penetration
  - IT for quality
  - IT for cost-effectiveness
  - IT positioning within and outside the company
  - IT to manage knowledge
  - IT strategy to balance IT and business objectives
- Positioning the company for change includes
  - Understanding of the need for a change
  - Identifying the technology for the future
  - Arrange company resources for the change
  - Building technical capabilities
- The preparedness for such a transformation includes
  - Making the organization ready for change
  - Keeping track of the after-effects
  - Understanding and adapting to change

IT and Business alignment

- Three frameworks are dealt here: -
  - IT-Business (Isolated) framework
  - Embedded framework
  - Hybrid framework
- IT business alignment is influenced by : -
  - Acceptance of new technology
  - Learning new technology
  - Creation of visibility
  - Execution
  - Optimization
  - Learning from experience and outcomes

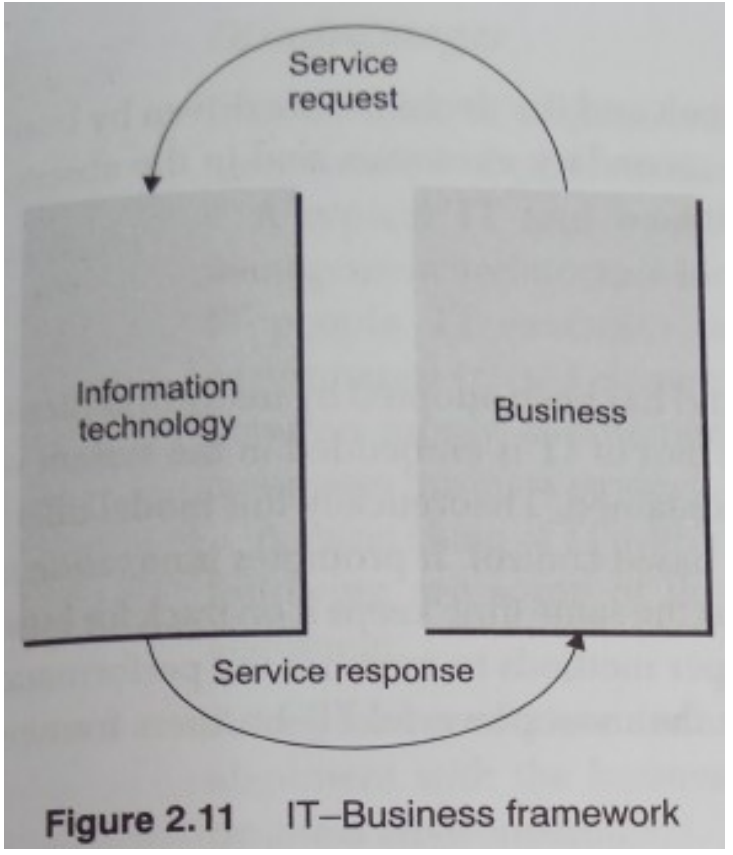


Figure 2.11 IT–Business framework

IT and Business alignment (contd.)

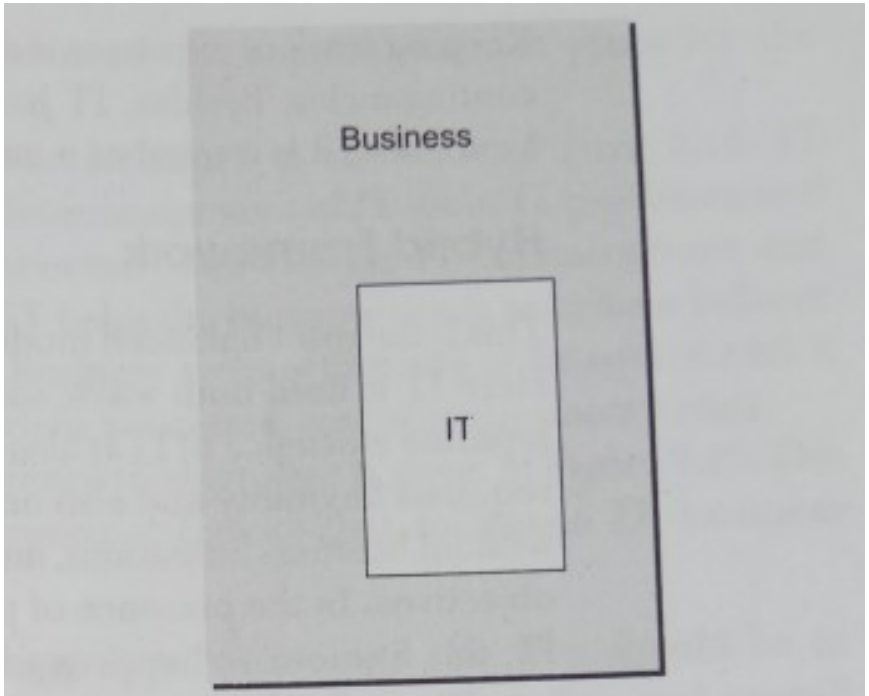


Figure 2.12 IT–Business embedded framework

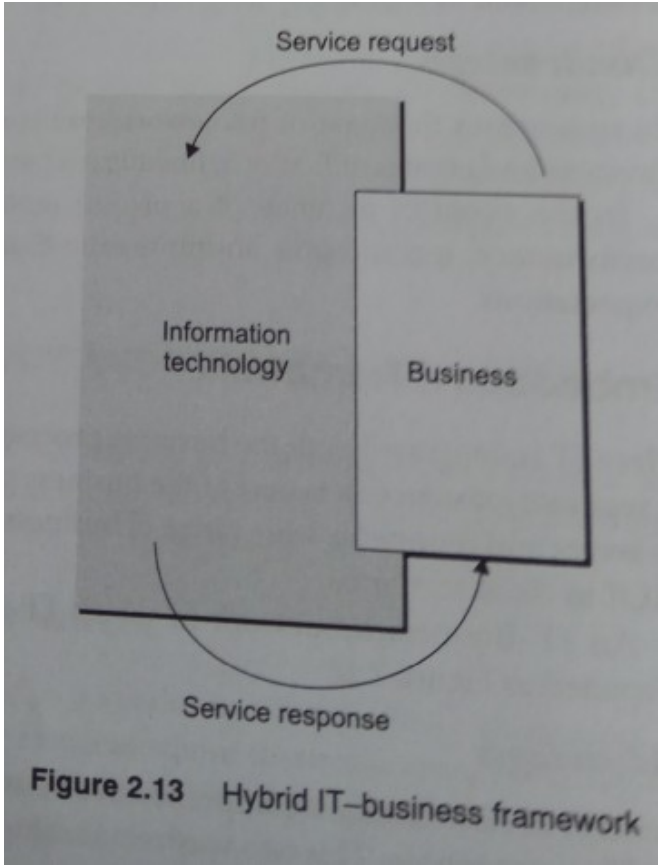


Figure 2.13 Hybrid IT–business framework

IT-Business Architecture

- IT-Business architecture has three parts: -
  - Business architecture
    - comprises business strategy, people, processes and other business inputs.
  - IT execution architecture
    - has various IT infrastructure and performance-related elements.
  - IT management architecture
    - includes management of IT tools, IT processes and IT people

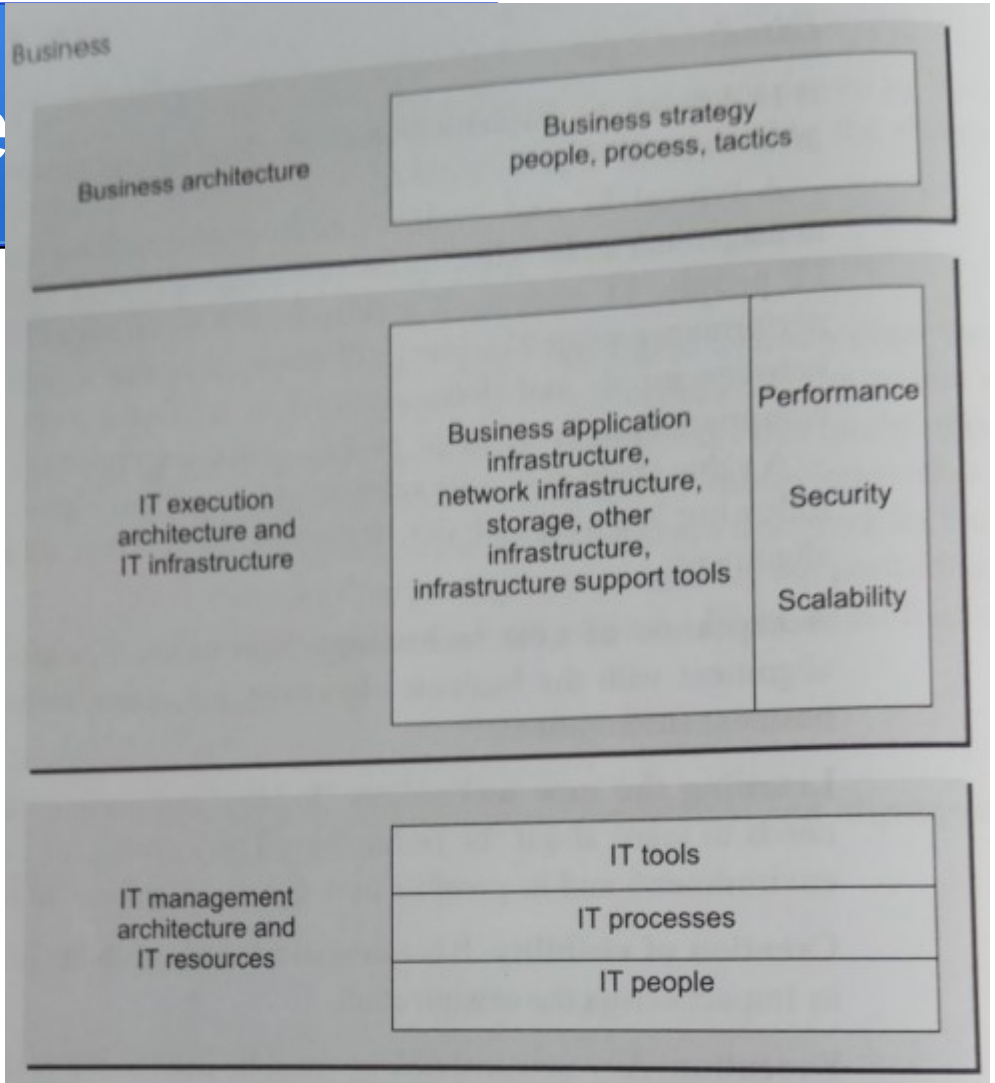


Figure 2.14 Business and IT architecture

Implementing IT

- The success of implementation is determined by: -
  - Cost effectiveness
  - Cost-benefit study
  - Technical compliance for a particular function
  - User satisfaction
  - Performance
  - Impact of the system
  - Accomplishment of the objectives

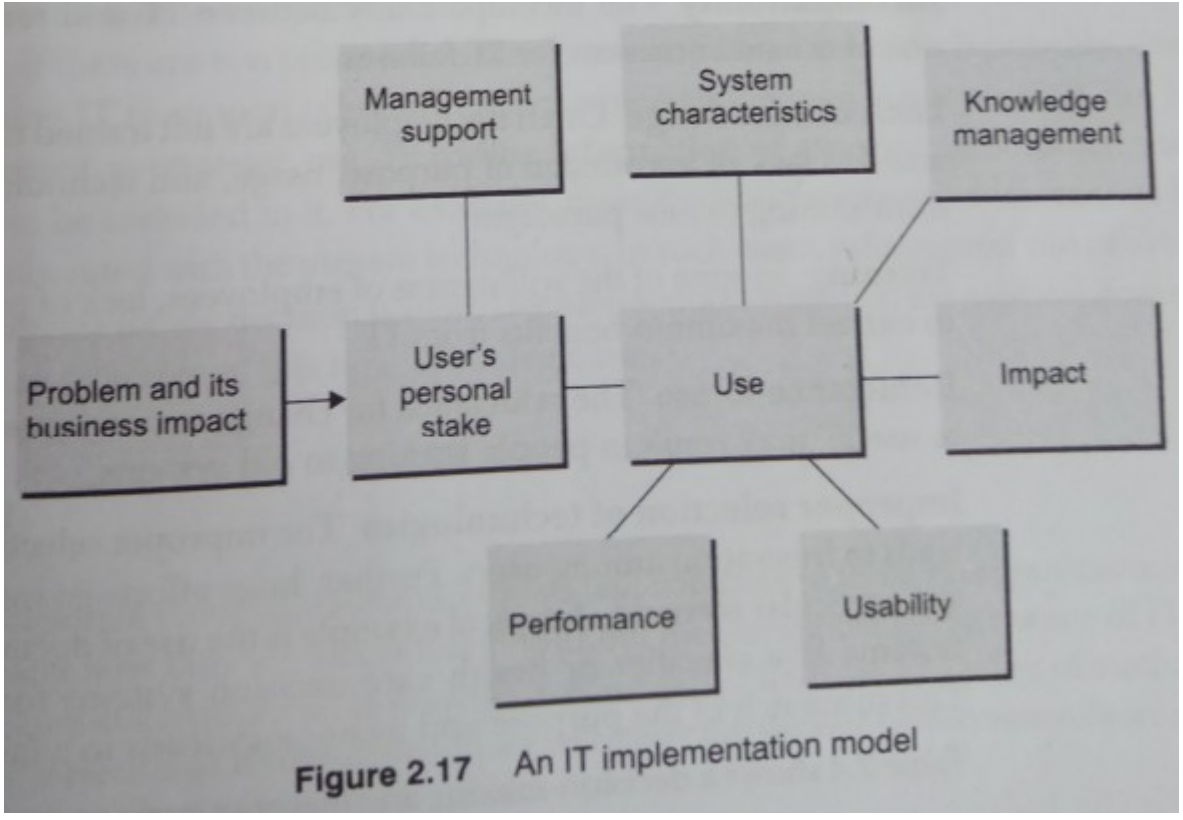


Figure 2.17 An IT implementation model

IT Design

- IT design has roles at every stage of IT management – from the introduction of IT to enhancement and usage during various stages.
- Initial work on design, analysis, and prototyping form the basis for deciding which of the outlined visions for future IT implementation and usage best meets the business goals and user needs for IT support in their work.

- IT design project may be impeded by: -
  - Hight complexity
  - Changing requirements
  - Conflicts of interest
  - High situation dependence

Exploiting IT Capabilities

- In many cases, IT is under-utilized or the organization fails to exploit IT capabilities due to the following reasons: -
  - Incompatibility
  - Lack of knowledge
  - Training
  - Reluctance to use
  - Improper selection of technologies
- Using IT in a Strategic manner
  - IT should be positioned within the organization, in such a manner that maximum benefit could be derived from it, without having any negative impact on other processes.

Measuring IT

- There are a number of methods for measuring IT, Balance Score Card (BSC) is one of them.
- The main indicators of IT performane are: -
  - Impact of IT in various areas
  - Return of investment (RoI)
  - Initiatives, and return on them in future
- Some of the benefits of IT measurements are: -
  - Process improvement
  - Speed of delivery
  - Availability of information

Balance Score Card (BSC)

- Different perspectives of BSC are: -
  - Corporate contribution
  - Customer orientation
  - Operational excellence
  - Future orientation

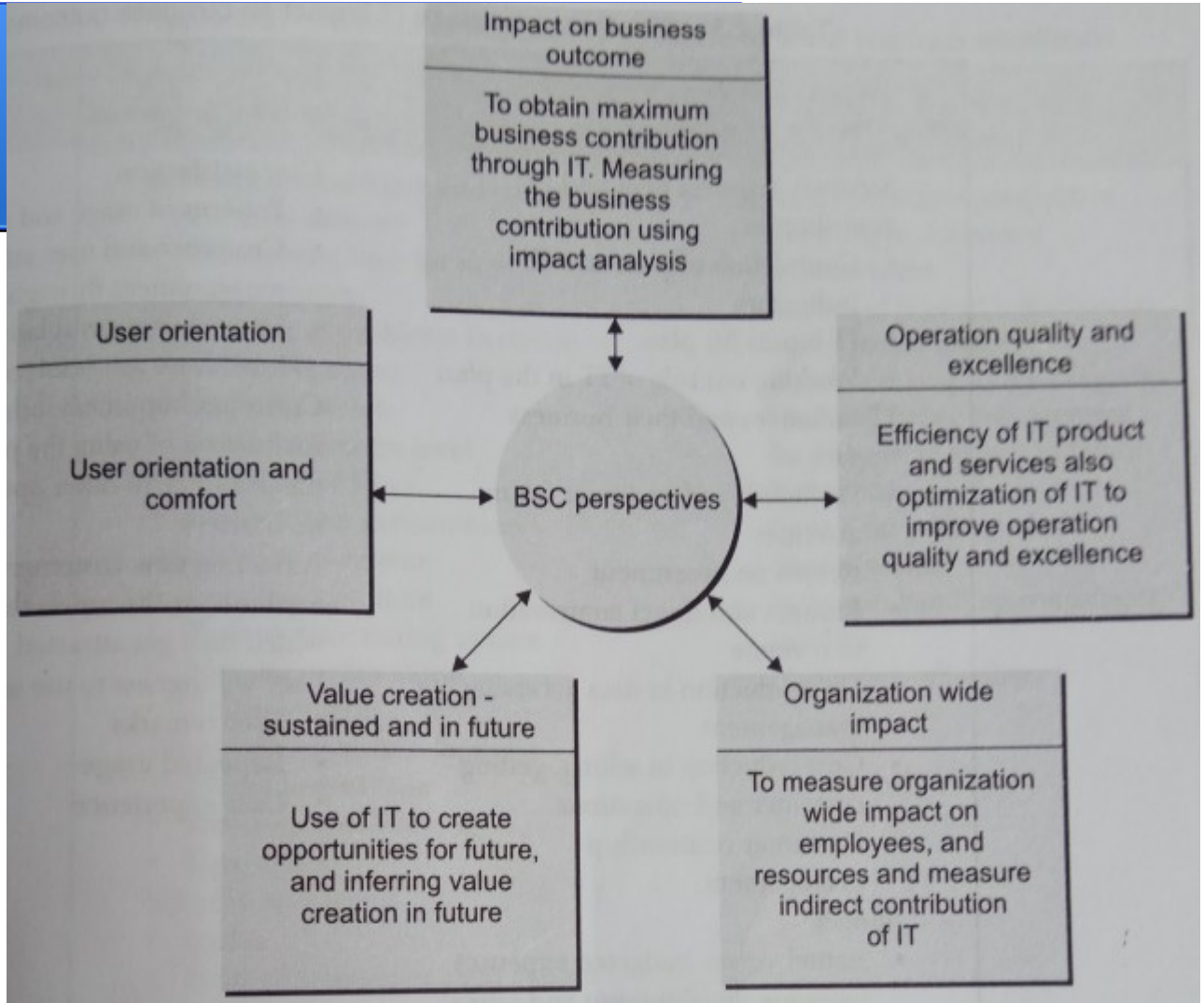


Figure 2.18 Balanced score card perspectives

IT-BSC

- IT-BSC is used for measuring business contribution and the positioning of IT and IT perspectives.
- The relationship between IT and business can be more explicitly expressed through a cascade of BSCs.
- IT-BSC is a fusion of IT and business measurement models, where IT department BSD and IT operational BSC are defined as enablers.

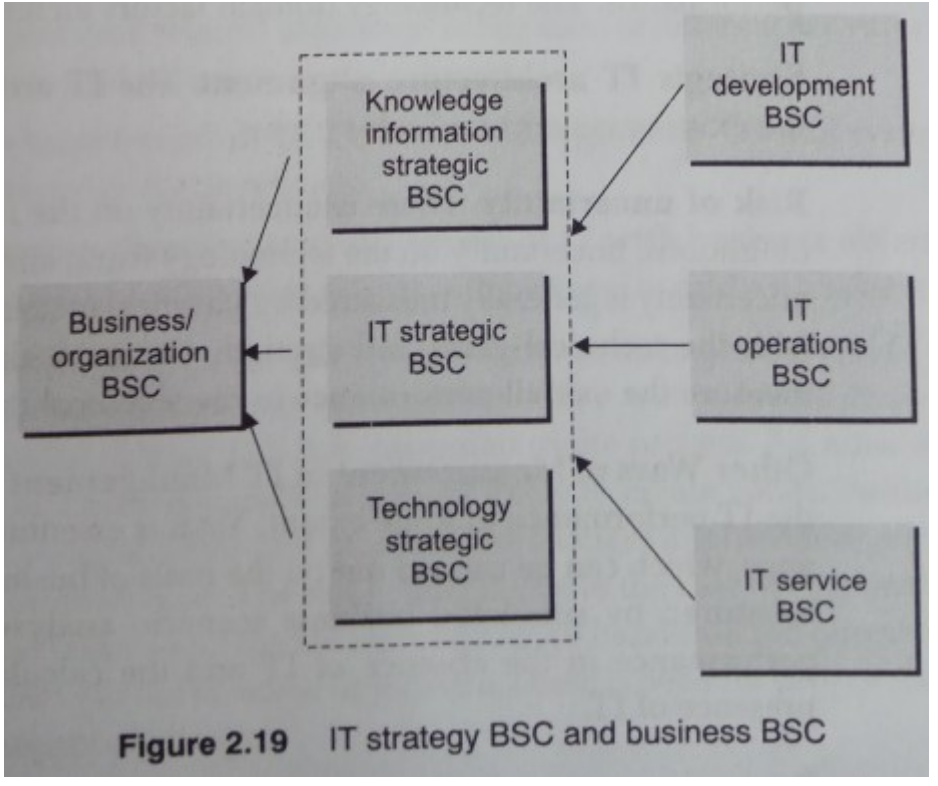


Figure 2.19 IT strategy BSC and business BSC

Compiled from

- Parag Kulkarni & Pradip K Chande, IT Strategy for Business