J. Ward and J. Peppard, Strategic Planning for Information Systems, Third Edition, John Willey, 2002.

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Developing an IS/IT Strategy: Establishing Effective Processes

IS Strategy Definition

◆**IS Strategy Definition**

– "The process of identifying a portfolio of computer-based applications to be implemented, which is both highly aligned with corporate strategy and has the ability to create an advantage over competitors."

Aims for Adopting an IS/IT Strategy Process

◆ Alignment of IS/IT with the business where IS/IT contribute most

◆ Determination of priorities for investment

◆ Gaining competitive advantage from business opportunities created by using IS/IT

◆ Building a cost-effective, yet flexible technology infrastructure for the future

◆ Developing appropriate resources to deploy IS/IT successfully

The IS/IT Strategy Process: Some Definitional Clarity

◆ Similar concepts:
  – Strategic Planning for Information Systems
  – Strategic Information Systems Planning
  – Information Strategy Planning
  – Information Systems Strategy Planning
  – Information Systems Planning
  – Business Systems Planning

The IS/IT Strategy Process

IS/IT strategy process

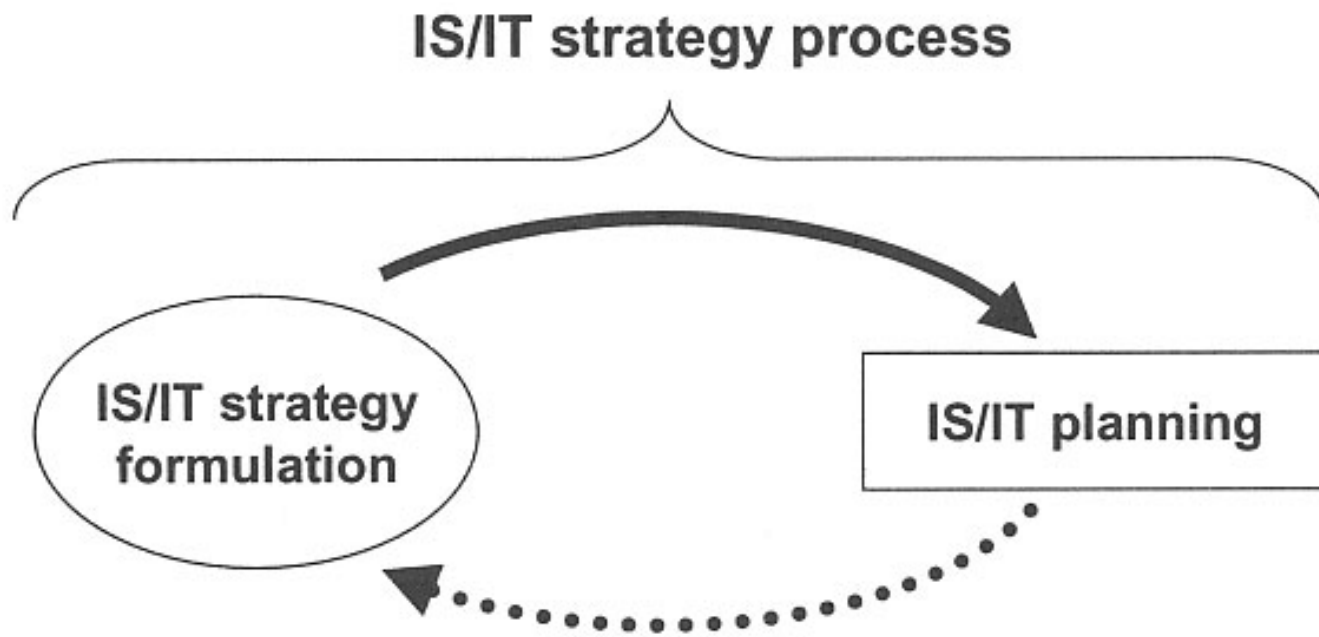IS/IT strategy formulation → IS/IT planning

Figure 3.1   IS/IT strategy process

The Evolution of IS/IT Strategy Process: From Technology Focus to Strategic Focus

The Evolution of IS/IT Strategy Process

◆ **Stage 1**
 – Typical early DP planning
 – Support applications built
 – Planning interfaces between applications developed separately

◆ **Stage 2**
 – Top down review of IS/IT in light of business dependence
 – Prioritised list of key operational applications for operations and MIS

◆ **Stage 3**
 – Centres around detailed IS/IT planning
 – Better balanced portfolio
 – More attention to key operational systems
 – Detailed 2-3-year plan

The Evolution of IS/IT Strategy Process (Cont.)

◆ **Stage 4**
– User-driven
– Start seeing new opportunities
– High potential opportunities driven by business

◆ **Stage 5**
– Most difficult stage to reach
– Linking IS/IT potential to the business Strategy
– Innovative ideas from Stage 4 need evaluation
– Strategic applications identified and agreed upon in context of business strategy

◆ Through stages 1-3 evolution is from isolated 'efficiency' applications to integrated 'effectiveness' systems and objectives for overt use of IS/IT not clear for competitive advantage

Approaches to IS/IT Strategy Development

Approaches to IS/IT Strategy Development

◆ If the organization is poor at formulating business strategy, it will have considerable difficulty development an IS/IT strategy.

◆ Approaches to IS/IT Strategy Development:
  – Business-led
  – Method Driven
  – Technological
  – Administrative

Approaches to IS/IT Strategy Development (Cont.)

◆ **Business Led**
  – Carried out by IT specialists, based on current business strategy
  – Define IS/IT investment plan

◆ **Method Driven**
  – Uses techniques to identify IS needs by analyzing business processes

◆ **Technological**
  – IT professionals use analytical models and tools to produce IT plans
  – The word 'architectures' may replace 'plan' or 'strategies'

Approaches to IS/IT Strategy Development (Cont.)

◆ Administrative

– Establish IT capital & expense budgets to achieve IT goals, based on prioritized list

– Analyze business plans at functional level

◆ Organizational

– Develop themes for IT investment based on business agreement of how IT can help achieve business objectives

– Agreed on by senior management team

Problems and Barriers

Problems and Barriers

◆IT Strategies fail due to:
- Failure to obtain top management support
- Resource constraints
- Incomplete implementation of strategy
- Excessive time frames
- Poor user-IT relationships

Problems and Barriers (Cont.)

◆ Reasons failure to obtain top management support
  – Top management did not understand how IS offered strategic advantages.
  – Top managers did not view information as a business resource
  – Top management demand to see a financial justification for investments
  – Top managers had become action oriented with short term focus

The Environment of The IS/IT Strategy

A Model of IS/IT Strategy
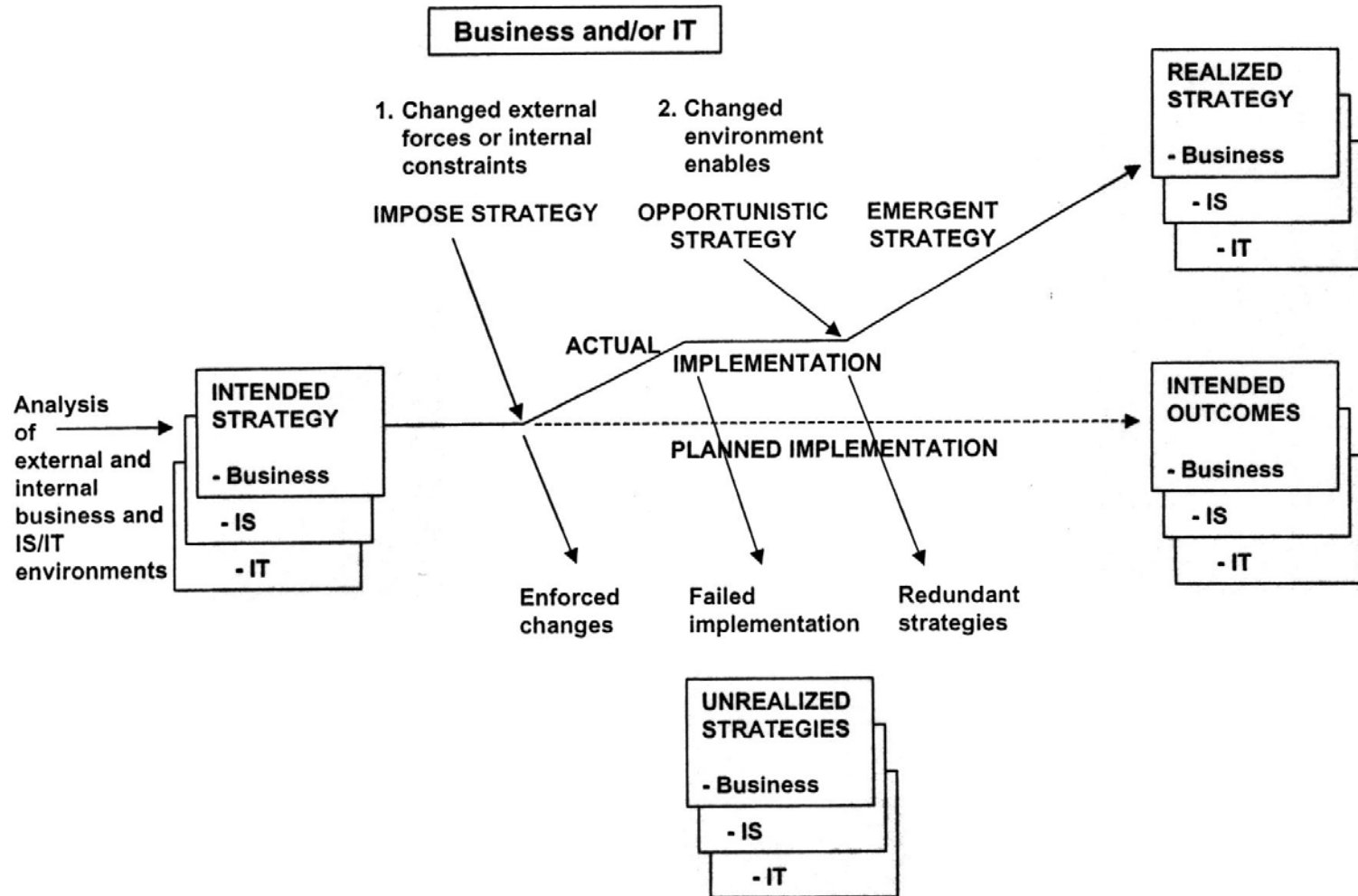
Establishing an IS/IT Process

A Continuous Process

◆ The strategies and plans are refreshed regularly according to:

– external forces,

– business needs and opportunities,

– the planning timetable,

– culture of organization, and

– the benefits delivered implementation of strategy

◆ Create mechanisms to deal with it

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A Learning Process

◆ Both IS specialists and business people are becoming more aware of business and technology issues, and learning issues

◆ Most importantly business & IS/IT alignment

Establishing Success Criteria

◆ **Implementation** IS/IT process concerned with IT development, e.g.
- – Object orientation
- – Relational database technology
- – HTML
- – Hardware specification

◆ **Objectives** are similar to those for the business e.g.
- – Improving customer service
- – Enhancing productivity

Establishing Success Criteria (Cont.)

◆ At the same time defining objectives for strategy process, it is helpful establishing criteria for how success will be measured

◆ It is impossible to give a general set of success factors for any strategy process

◆ Once success criteria measures are agreed. They can be reviewed regularly to ensure that they are being satisfied.

Establishing Success Criteria (Cont.)

◆ The primary objective of developing an IS strategy is to identify **a portfolio of applications** that will have a strategic impact on organization and increase its performance

◆ The purpose is to ensure that the best possible value can be delivered from IS/IT investments.

Establishing Success Criteria (Cont.)

◆ Definition and measure strategy impact and how to relate IS strategy formulation to organizational performance is difficult, because:

– Including the long lead time before benefits are realized

– Intangible nature of certain benefits

– Different purpose for engaging in an IS/IT strategy

Establishing Success Criteria (Cont.)

◆ **Some success dimensions:**
- Improved the contribution of IS/IT to the performance of the organization
- Extent of alignment of IT investment with the business strategy
- Gaining competitive advantage through deployment of IS/IT
- Identifying strategic applications
- Increasing top-management commitment
- Better forecasting of IT resource requirements
- Improved allocation of IT resources

Assessment of Current Organizational Environment

Assessment of Current Organizational Environment

◆ Broad overview of business
  – Long term mission
  – Goals
  – Vision for future
  – Strategy
  – And more…

◆ Effectiveness of IT, strengths and weaknesses of applications

◆ Current role of IT, and in comparison with external organizations in the same industry

◆ The view of management regarding IS/IT

◆ How IT strategies were developed in the past

Scope, Objectives and Expectations

Scope, Objectives and Expectations

◆ Establishing the process

- **Purpose** Confirmation of the IS/IT strategy process
- Current organizational environment **assessment**
- Determination the **scope**
- **Objectives** of the planning activities
- To ensure that business has clear **expectation** will emerge as a result

IS/IT Strategy Distinction

◆ There are confuses the supply (technology as a means of delivery) and demand (business needs expressed as information systems requirements)

◆ This is why it is critical to make the distinction between IS strategy and IT strategy.

◆ IS strategy deals with *what to do with information*

◆ IT strategy designates *how technology is to be applied* in the delivery of information

Business Unit Focus

Figure 3.6 IS/IT strategy in context
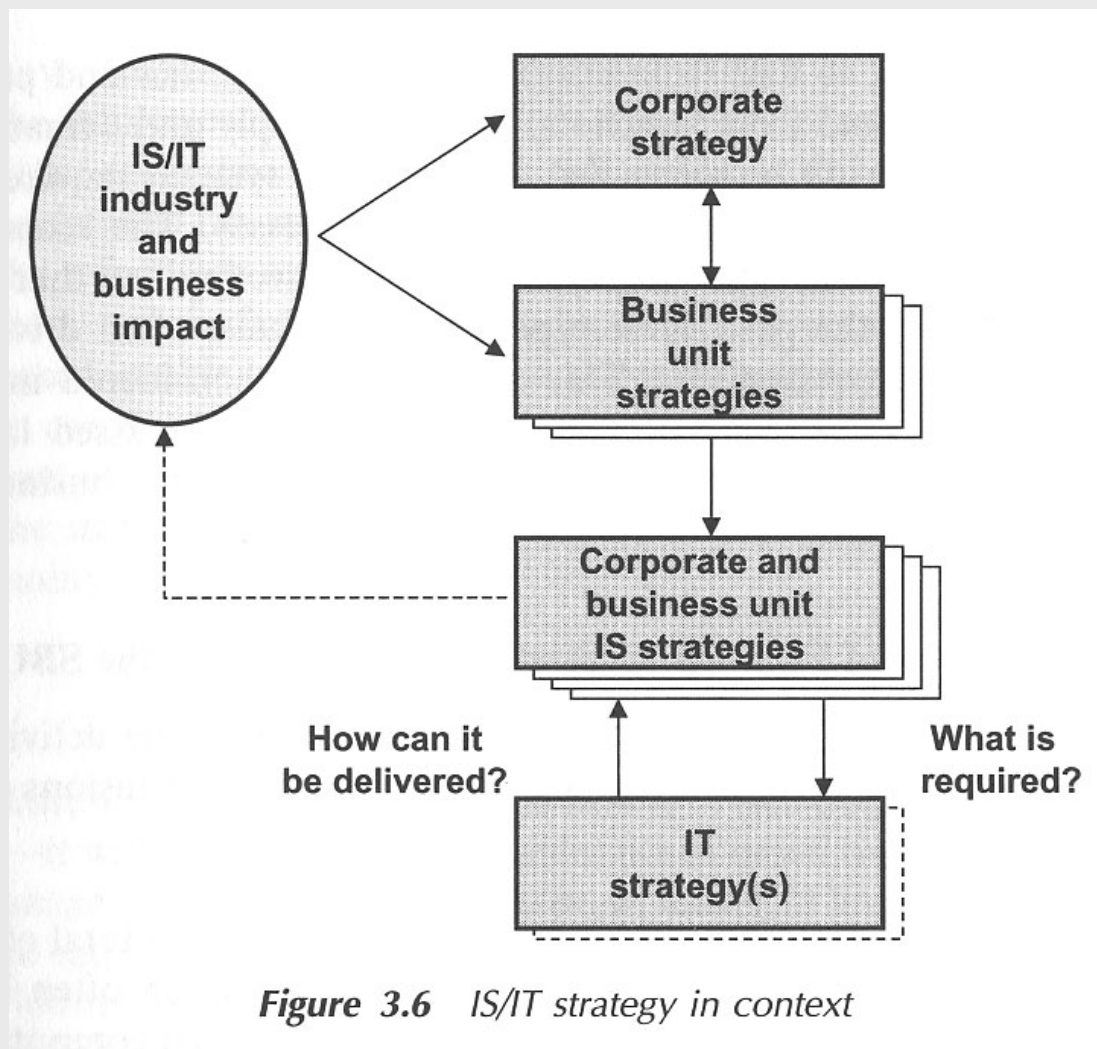
Business Unit Focus (Cont.)

◆ *IS strategy* must be planned at a Strategic Business Unit level

– Should be cross-referenced between units

◆ *IT strategy* more likely to be an enterprise level attempt

Starting point

◆ When choose a business unit:

  – Strong management commitment and involvement are assured;

  – Clear business plans and direction are known and available

  – The role of IS/IT is already respected

◆ In cases where an IS/IT strategy process is not established, it might be appropriate to scale down the scope of the exercise and the new techniques and processes of IS strategy formulation and planning can be exercised on a small scale

General Objectives

◆ Primarily derived from the business objectives and drivers for change, e.g.

- Identify current and future information needs

- Ensure that a sound information systems architecture is created

- Identify a portfolio of skills

- Determine an effective and achievable organization structure for the IS function

General Objectives

◆ Build a robust framework for long-term management of information, information systems and information technology and to:

  – Identify current and future information needs for the organization that align business and IS/IT strategies, objectives and functions

  – Equip IS function to be responsive to fast-changing business needs

  – Determine policies for management, creation, maintenance, control and accessibility of the corporate information resource

General Objectives (Cont.)

- – Reposition IS function more centrally
- – Ensure that a sound IS architecture is created
- – Identify portfolio of required skills
- – Build effective and achievable IS/IT organizational structure
- – Ensure outward looking IS/IT, not focused on internal technology issues
- – Clearly link aims of IS/IT to business needs & widely communicate those aims
- – Build acceptance of shared responsibility between IS/IT & business people for successful exploitation of information and technology

Expectations

- ◆ Influencing factors:
  - – The size of the business unit
  - – Current systems
  - – Organization's strategic processes
  - – Problems facing management team
- ◆ For instances:
  - – Gradual evolution of IS/IT strategy
  - – Gaining a competitive edge
  - – Justification of the IT budget
  - – How to select new technologies for the future
- ◆ Or the reverse of objectives and scope:
  - – No recommendations will be made concerning specific hardware and software products
  - – Overseas companies are outside the scope

An IS/IT Strategy Framework and Approach

IS/IT Strategy Framework
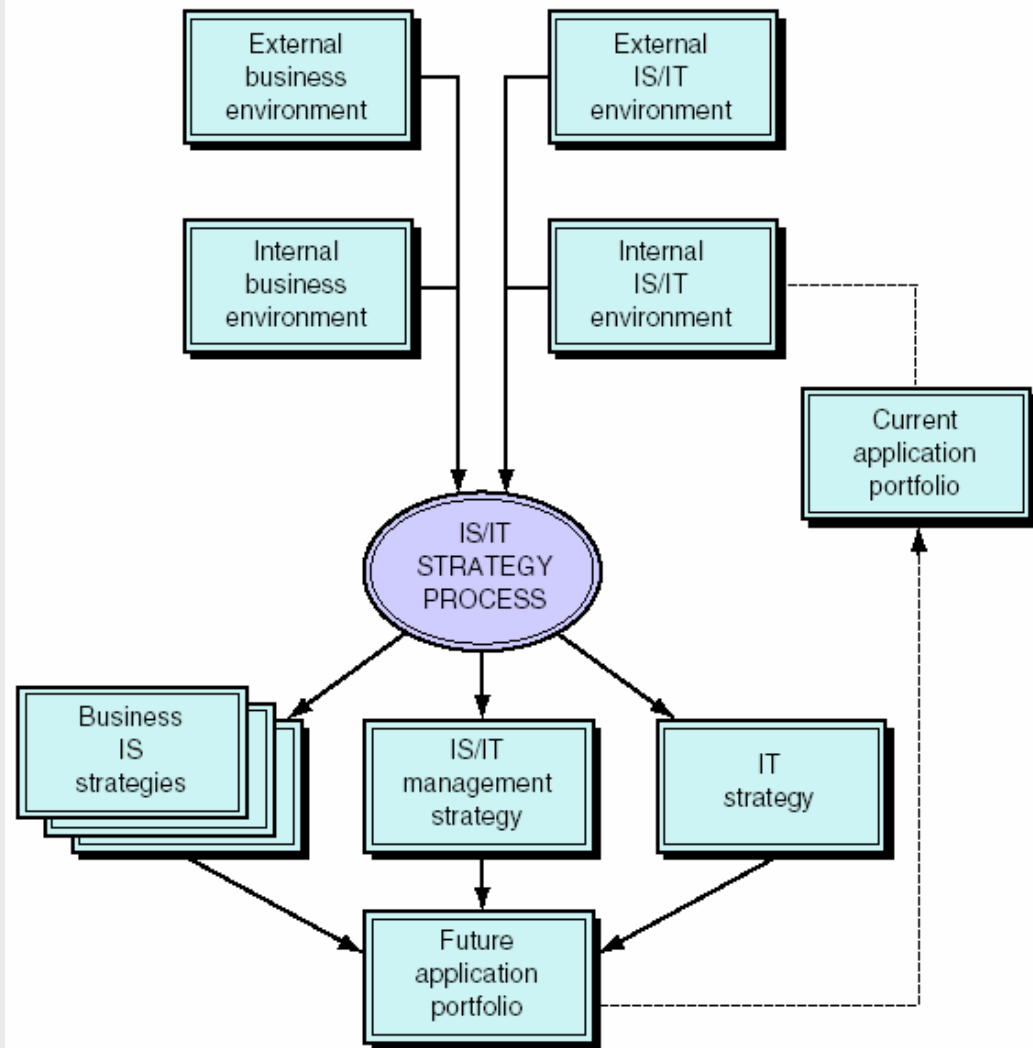
IS/IT Strategy Framework (Cont.)

◆ The strategy formulation and planning framework has three building blocks:

- – Inputs
- – Outputs
- – Essential activities

IS/IT Strategy Framework - **Inputs**

◆ **Internal business environment:** current strategy, objective, resources

◆ **External business environment:** economic, industrial and competitive climate

◆ **Internal IS/IT environment:** current IS/IT perspective in the business, portfolio

◆ **External IS/IT environment:** technology trends and opportunities

IS/IT Strategy Framework - **Outputs**

◆ **IS/IT management strategy:** Common and consistent policies and procedures for the corporate, IS/IT organization, investment and prioritization policies, vendor policies, human impact policies and education, IS accounting policies

◆ **Business IS strategy:** application portfolios and services needed by the corporate and strategic business units to achieve business objectives

◆ **IT strategy:** policies and procedures for technology and special resources

Selecting a Strategy Approach

◆ key characteristics of the approach chosen:

– Flexible, modular, and able to pick up deliverables from earlier or parallel activities

– Emphasis on deliverables

– Clear checkpoints

– Recognition of the interactive and cyclic nature of the process

– Recognition of the importance of the human side of the process

– Simple diagramming tools

IS/IT Strategy Formulation and Planning Process

◆ Initiate Strategy Process

◆ Understand the Current Situation and Interpret Business Needs

◆ Determine the business IS Strategy

◆ Define Information and Systems Architecture

◆ Formulate IT Supply Proposals

◆ Prepare migration plans and business case

Initiate Strategy Process

◆ The purpose, objectives, scope and deliverables are confirmed.

◆ The approach is determined

◆ Resources acquired such as automated tools

◆ Business participants are identifies and team assembled and, if necessary, trained.

◆ The steering and management mechanisms for the process are created

◆ Plan for the work, tasks, timing, roles and responsibilities, and checkpoint defined.

Understand the Current Situation and Interpret Business Needs

◆ Analysis of the business strategy, objectives, critical success factors, critical problems and process

◆ Evaluation of the current IS/IT operations, its systems, information provision, resources, organization, skills and services

◆ Analysis of the external and internal business environment

Determine the business IS Strategy

◆ The accumulated business IS demand is turned into recommendations for the deployment of IS/IT

◆ Conceptual information systems are consolidated and mapped onto an applications portfolio

Define Information and Systems Architecture

◆ This step takes the results of the analysis of processes and information needs

◆ It represents the future ideal in terms of process, information and systems

◆ It is necessary in order to plot a direction when developing migration plans

Deliverables from IS/IT Strategy Process

Deliverables from IS/IT Strategy Process

◆**Hard outputs:** Documents defining strategies and plans, and frequently include computer-based material in the form of dictionaries, matrices and information analysis models.

◆**Soft outputs:** relate to human factors such as skills, awareness and motivation.

Hard outputs

◆ The main purpose of the hard outputs is to document:

- The current situation

- The vision and rationale for what is being put into place- information, systems, technology, people

- The plans for how it is going to be achieved

Structure of Deliverables

◆**IS Strategy** containing statements of demand, Probably separate for each SBU

◆**IT Strategy** including supply elements

◆**IS/IT Management Strategy**

IS Strategy Contents

◆ Purpose of IS strategy

◆ Overview/summary of business strategy

◆ Argument for new IS opportunities and critical improvement areas

◆ Summary of opportunities/problem issues

◆ Review of current application

◆ Future application portfolio

◆ Issues arising from the IS strategy

Application Portfolio

◆ Categorized in terms of role in supporting current & future business strategy:

- Strategic
- High potential
- Key operational
- Support

IT Strategy Contents

◆ The prime purpose of IT strategy is to define how resources and technologies will be acquired, managed and developed to satisfy business IS strategies within management strategy framework.

◆ IT strategy address the following supply factors:
  – Application portfolio management
  – IS/IT organization
  – Managing application development
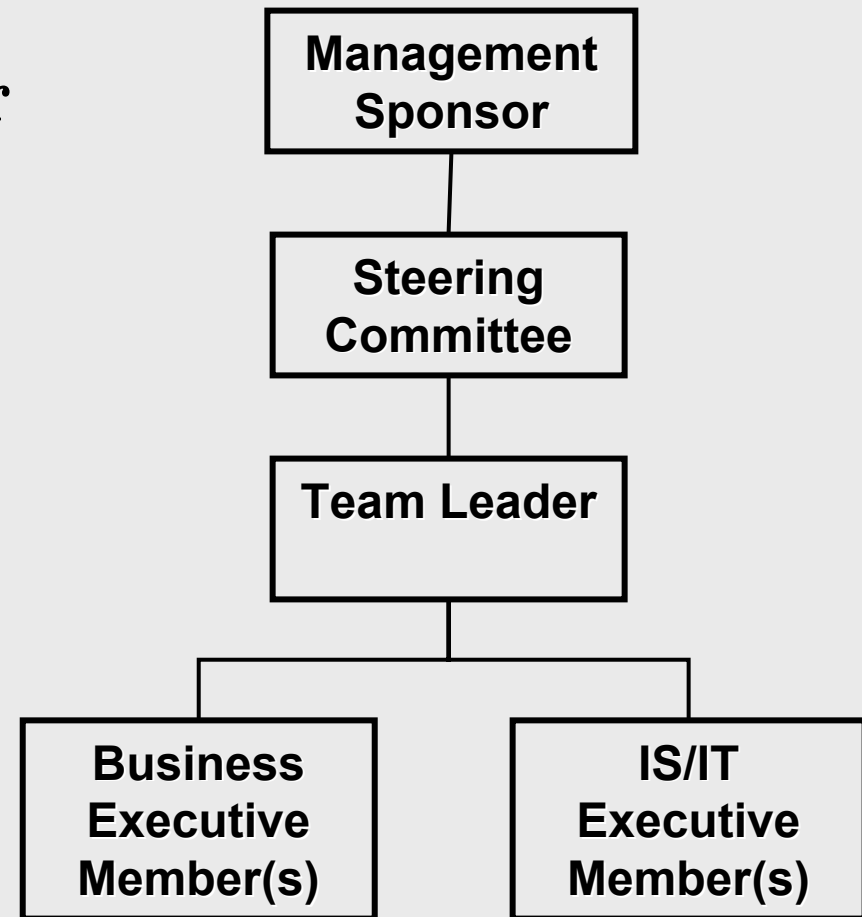 – Managing technology

IS/IT Management Strategy Contents

◆ IS/IT Management Strategy is particularly necessary where several strategic business units develop their own business IS strategy

◆ Some issues are addresses in management strategy:

– Investment and prioritization policies

– Venders policies

– Human impact policies, including education

– IS accounting policies

The Audience for the Strategy

◆ The audience should include:
- Senior management
- IS/IT management staff
- All participants in the planning activities
- Functional management and users
- Individuals in existing project teams

Strategy Process Team Structure

◆ Strategy Team Leader
- Full-time job
- Serious commitment

◆ Two other full-time members
- Drawn from user and IT communities

◆ Additional part-time members as necessary

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┌──────────────────┐
│   Management     │
│   Sponsor        │
└──────────────────┘
         │
┌──────────────────┐
│    Steering      │
│   Committee      │
└──────────────────┘
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│   Team Leader    │
└──────────────────┘
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    ┌────┴────┐
┌─────────┐  ┌─────────┐
│Business │  │  IS/IT  │
│Executive│  │Executive│
│Member(s)│  │Member(s)│
└─────────┘  └─────────┘
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Management Sponsor

◆ Preferably a director or senior executive of the organization should fulfill following functions:

– Chairing the steering committee and approving the budget and plan for any IS/IT proposals

– Assuring management participation and commitment

– Representing the interest and priorities of the planning process in the business

Steering Committee

◆ It may be necessary for this group to meet once every month, or simply to be present at the appropriate checkpoints

◆ Typical steering committee functions are:

– Providing strategic direction on requirements and priorities to the planning team

– Reviewing and approving plans

– Conducting checkpoint reviews

Team Composition

◆ Strategy team composition and skills:

- Broad knowledge of the business and its organizational objectives, management styles, culture, processes and people.

- Good communication skills.

- Ability and authority to make and implement plans and decisions

- Respect of management and staff.

- Experience of IS/IT strategy formulation and planning

Strategy Process Team Needs

◆ Automated tools
  – Word processing
  – Drawing tools to construct any necessary diagrams (e.g. matrices, flow diagrams and data models)

◆ Dedicated room

◆ Conference space as necessary

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The End