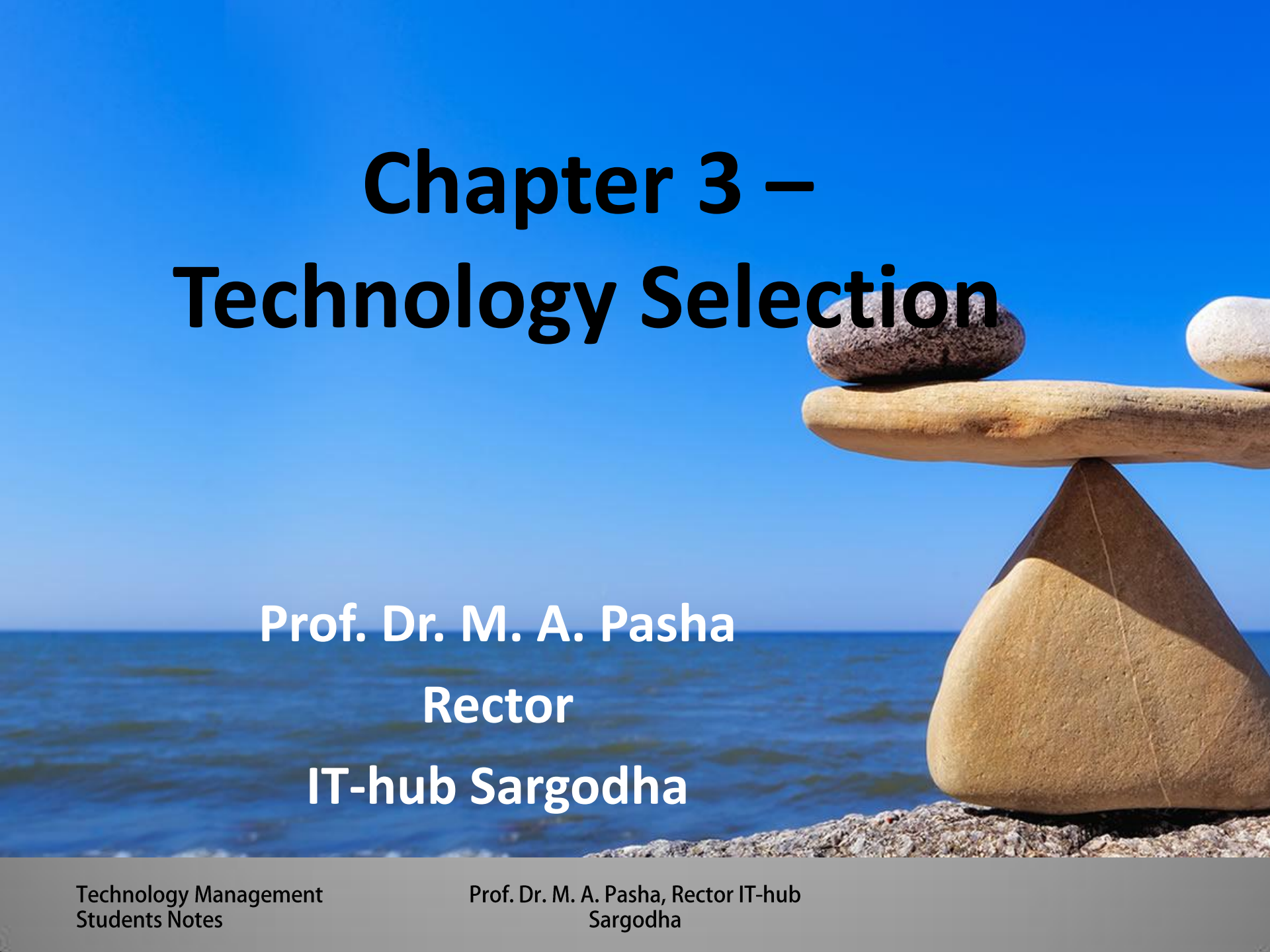


# Chapter 3 – Technology Selection

A photograph of a stack of balanced stones on a rocky shore. The stack consists of a large, light-colored, triangular stone at the base, a flat, light-colored stone in the middle, and a smaller, dark, rounded stone on top. Another similar stone is visible to the right. The background shows a calm blue ocean under a clear blue sky.

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# TS -Introduction

- Selection is an important process of TM.
- It involves the selection of those technologies that are chosen to help organizations to achieve their ultimate goals.

# TS –Introduction (Cont.)

There are many sub-processes which make the Technology Selection process more effective and fruitful. These sub-processes include:

- Scenario analysis
- Portfolio analysis
- Expert Judgment
- Decision criteria
- Financial analysis

# Scenario Analysis

- The process of estimating the expected value of a portfolio after a given period of time, assuming specific changes in the values of the portfolio's securities or key factors take place, such as a change in the interest rate. Scenario analysis is commonly used to estimate changes to a portfolio's value in response to an unfavorable event, and may be used to examine a theoretical worst-case scenario.

# Portfolio Analysis

- A systematic way to analyze the products and services that make up an organization's business portfolio.
- Two most common measures used in a portfolio analysis are
  1. market growth rate
  2. relative market share

# Expert Judgment

- A technique in which judgment is made based upon a specific set of criteria and/or expertise that has been acquired in a specific knowledge area, or product area, a particular discipline, an industry, etc.

# Decision Criteria

- It define what's important or relevant in resolving a problem, or making a decision.

# Financial Analysis

- It is the process of evaluating businesses, projects, budgets and other finance-related entities to determine their performance and suitability.
- Typically, financial analysis is used to analyze whether an entity is stable, solvent, liquid or profitable enough to warrant a monetary investment.
- When looking at a specific company, a financial analyst conducts analysis by focusing on the income statement, balance sheet and cash flow statement.



# Basis of Technology Selection

- Technology Selection is crucial for the organization as it is a long term investment
- It requires to make accurate decisions with regards to the selection of correct technologies
- The selection of technology must be based on quantitative, qualitative, intangible and tangible criteria .

# Tangible Factors of Technology Selection

- Capital Investment
- Unit Cost
- Operating Cost
- Maintenance Cost
- Cost of Network Management System
- Cost of Support Services

# Intangible Factors of Technology Selection

- Technical & Operational factors
- Technical features/characteristics
- System reliability/Availability
- System performance
- System capacity
- Upgradability on HW and SW
- System redundancy
- Future technology development
- Fault diagnosis capabilities
- System security features
- Ease of operations

- Performance monitoring capabilities
- Billing flexibility
- Compliance with standards
- Vendors factors
- Quality of support services
- Supplier's problem solving capability
- Supplier's expertise
- Delivery lead time
- Vendor's experience
- Vendor's reputation

# Technology Selection Criteria

A successful technology selection process includes *the following steps*:

- Identify criteria that will differentiate vendors and solutions
- Define requirements that focus on the specific needs of the center and IT for this project
- Determine appropriate vendors to consider based on high-level requirements
- Document the requirements in appropriate vendor communication
- Evaluate options through targeted due diligence, using the criteria that matter to you, ensuring an apples-to-apples comparison
- Bring the team to consensus on the “best” vendor and solution

# Defining Selection Criteria

**In addition to basic feature/functionality, Selection Criteria must consider:**

- Ease of use
- The ability to deliver and support the solution
- Platform infrastructure
- Application integration
- Implementation processes and resources
- Training and knowledge transfer approaches
- Support after sale

# Defining Selection Criteria (Cont.)

Following questions must be answered:

- Does the architecture meet your technology requirements?
- Do the vendor has experience integrating new technology with your existing system?
- Do the vendor has experience in delivering solutions in your industry, or of similar size and scope?
- What are the qualifications of the resources to implement and support the system?
- Do the vendor has a proven track record of delivering a solution on time, without scope creep (and surprise costs)?
- How do they handle knowledge transfer?

# Requirements Document

- A requirements document is a structured list of questions or a formal RFP. It seeks targeted information that controls what you gather from each vendor and facilitates side-by-side comparisons. It must cover following aspects:
  - Functional Requirements
  - Technical Requirements
  - Implementation Approach
  - Support
  - Vendor's Qualifications and Experience
  - Pricing

# Functional Requirements

- Provide your list of requirements. Ask vendors to confirm their ability to deliver or note exceptions.
- Focus on the really important items/functionalities
- Ask about
  - Type of licenses
  - Number of supervisor and reporting resources,
  - Number of inbound and outbound trunks,
  - Licenses for testing and training,
  - After sale services,
  - Etc.



# Technical Requirements

- Clearly define your technical requirements, including platform, software and hardware.
- Specify your areas of special interest such as reliability, resiliency, scalability, integration and security.
- Ask vendors about their preferred platform or other special requirements as it may require to upgrade existing infrastructure or special hardware which could impact your overall project costs.

# Implementation Approach

**Some important areas of consideration:**

- Approach for discovery, project management, collaboration, etc.
- Timelines for each major phase, including design, development, testing and cutover
- Roles and responsibilities for vendors and for the organization
- Testing types, plans, tools and resources
- Training of various sorts, including: classroom, on-site, train-the-trainer, knowledge transfer

# Support

- **Not just 24/7 support.**
- **Find out**
  - **What are the service level commitments?**
  - **What are the warranties, upgrade processes and perhaps even their release history and roadmap?**

# Vendor Fit

**Gather important documents/information about the prospective partners'**

- financials and contracts**
- experience and fit (projects of similar size, vertical, solutions, etc.) and the all-important references.**
- if vendors are bringing partners into the mix (for products or services), this section should require information on them, as well.**

# Pricing

- Provide vendors with a spreadsheet for them to complete to drive an apples-to-apples comparison of hardware, software, implementation and support services.
- Ask for base pricing and discount levels to find out how serious they are about seeking your business.

# Pricing (Cont.)

**Ask for:**

- **Separate pricing for each product or service category**
- **Separate pricing for each location**
- **For each location and product/service category include:**
  - **Hardware included and what the buyer must provide**
  - **Software licenses by site, server, or agent (specifying concurrent or named)—include quantities, price for each, the extended price, any discount applied and total price**
  - **Implementation professional services**
  - **Maintenance fees—percentage of list price or bid price per year**
- **Any options for which pricing was requested in the RFP broken out in the same categories as above**

# Identifying Appropriate Partners

- There's a world of choice in products, services and sourcing options. If you want to select the right solution and vendor, start with the right candidates.
- Where distributors are the delivery channel, the company selling, implementing and supporting the solution can be as important as the hardware and software. Take time to find the right ones with the right experience

# Gather Information and Compare Vendors

- Create a matrix using your evaluation criteria and defined requirements. The matrix should include columns for pros, cons, issues and questions. This format makes it easy to glean what is relevant from the responses.
- Evaluate vendors by checking references and holding vendor presentations. Provide the vendors with a detailed agenda that identifies what you want them to cover during their presentations.
- Map pricing to components to ensure that you are comparing apples to apples.
- Short list the vendors.



# Making Final Selection

- Determine the vendor that most nearly meets all requirements.
- Follow the original criteria to create a common decision.
- Build a scoring template/tool that allows each team member to score the vendors on the differentiators.
- The developed tool must eliminate the emotions often attached to solutions or vendors
- Make consensus so that all stakeholders own and support the final decision.

# Thanks You