

MANAGEMENT OF TECHNOLOGY

TECHNOLOGY ABSORPTION & DEPLOYMENT

by

Puteri Fadzline bt Muhamad Tamyaz
Faculty of Industrial Management
fadzline@ump.edu.my

Chapter Outline

- Technology Absorption
- Influencing Factors
- Deployment Strategies
- Summary



Lesson Outcome

- Understand how companies absorb technology
- Explain the factors influencing inward technology transfer
- Craft deployment strategies for new technology



Technology Absorption

- Absorptive capability is when information is able to be understood and utilized by the firm
- Technology will be absorbed if it is fully understood so that it is in a position to be further optimized and upgraded
- Having In-house R&D will increase the ability of the firm to absorb, To assimilate and apply the external tech



Influencing Factors

Growth and Quality Concerns

Communication

Knowledge Management

Financial Discipline

Good Management



Influencing Factors:

Growth and Quality Concerns

- Growth and quality accomplishments require cross-functional team work.
- Therefore, integration of corporate strategy with R&D strategy is the starting point.
- The level of integration of R&D activity can be a decisive factor in absorption



Influencing Factors:

Communication

Integrated absorption guides the communication strategy---- individual and group learning to organizational learning to individual and group learning

Elements in communication:

- Nurture technological gatekeeper--- effective scanning.
- Nurture boundary spanners--- understand, translate and disseminate knowledge



Influencing Factors:

Knowledge Management

- Knowledge is a strategic input for technological innovations
- Tacit knowledge involves information that is often used but cannot be articulated or externalized, and hence cannot be easily diffused
- Explicit knowledge is knowledge that is easily transmitted to other companies through codes



Influencing Factors:

Financial Discipline

- The assimilation phase is done by the person who invest in utilizing the technology
- Financial capabilities is to provide resources. Successful firms possess prudent financial analysts.
- They establish clear directives for resources allocation and utilization



Influencing Factors:

Good Management

- Promote explicit acceptance by all or part of the organization.
- Develop good infrastructure, i.e. facilities, equipment and personnel.
- Establish transfer team



Deployment Strategies

- Good deployment increases the confidence of consumers to the product and unlikely to switch to another brand or product
- Bad deployment can cause excellent innovations to crash



Key Elements of Deployment Strategies

Strategic Launch Timing

Licensing

Compatibility

Pricing

Distribution and Marketing (Promotion)



Key Elements of Deployment Strategies: Strategic Launch Timing

Considerations include:

- To embrace cannibalization at the right time
- To take the opportunity from seasons
- Product positioning from the previous tech
- Increase capacity in production



Key Elements of Deployment Strategies: Licensing

Opening the technology through licensing speeds the adoption in two ways:

- Better promotion on the tech
- Tech will be much supported by goods developers



Key Elements of Deployment Strategies: Compatibility

Decision must be made on whether the tech is compatible with previous generations of its own technology



Key Elements of Deployment Strategies: Pricing

Pricing will determine how the firm can position its product in the market, how long will it be adopted and the cash flow of the firm

Skimming price----initially high, then systematically reduced over time

Penetration price----initially a low introductory price. In short run, may loss; long run, profits flow.



Key Elements of Deployment Strategies: Promotion

- Direct and indirect to users
- Four strategies:
 - Alliances with distributors
 - Bundling relationships
 - Contracts and sponsorship
 - Guarantee and consignment
- Promotion: personal and non-personal



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