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Course 15. Enterprise Management in Digital Economy

Module 3: Strategic analysis tools and its use to capture the competitive advantage in digital economy

Tomasz Nitkiewicz (CUT)

with

Andrei Szuder (UPB), Uttapol Smutkupt (CMU), Jorge Cunha (Uminho)

Curriculum Development

of Master's Degree Program in

Industrial Engineering for Thailand Sustainable Smart Industry

Module 1: Strategic analysis tools and its use to capture the competitive advantage in digital economy

List of topics

    A. Business model canvas: capturing the key of digital business

    B. Mapping the value streams: visualizing the flows and relationships

    C. Decision support with strategic analysis tools: business at strategic crossroads
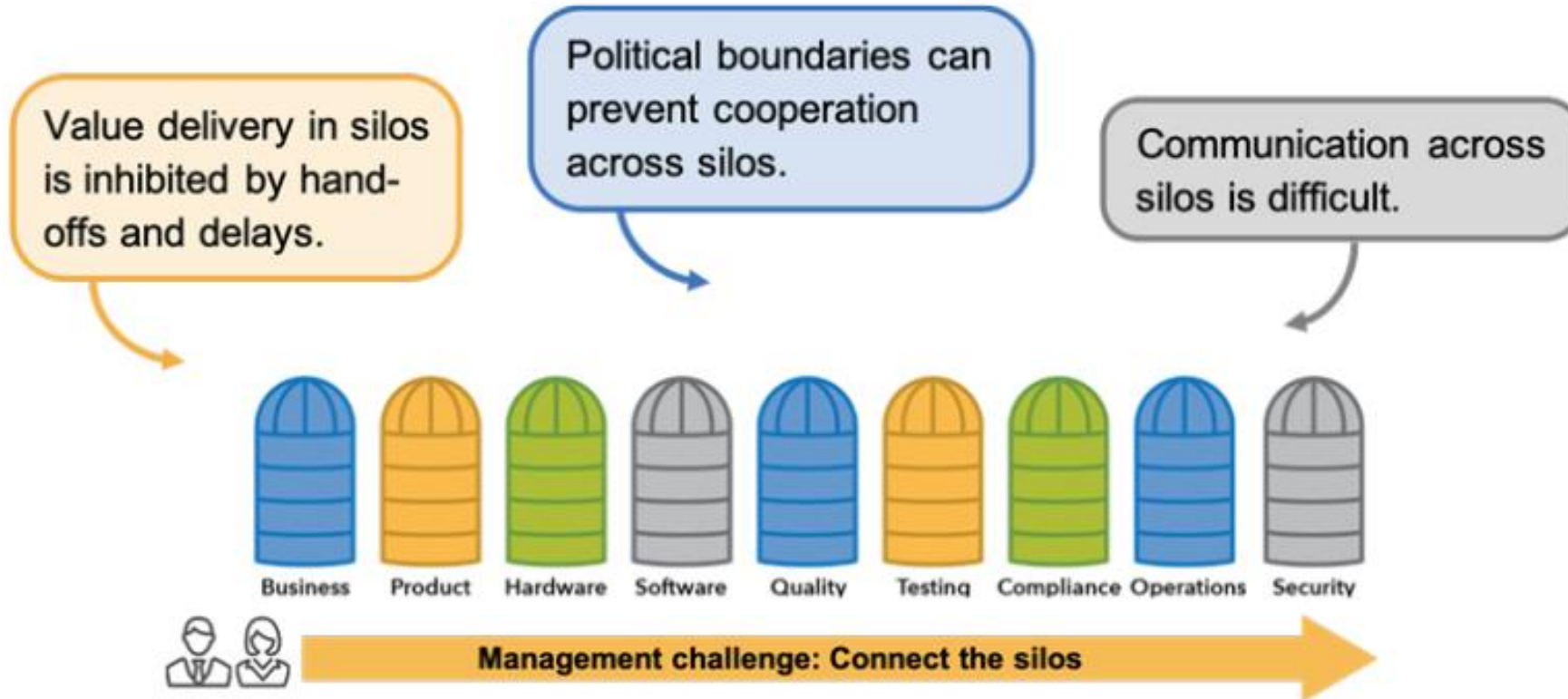
Value Streams represent the series of steps that an organization uses to implement solutions that provide a continuous flow of value to a customer. The first step is to deal with organizational structure of functional silos, which causes number of challanges:

- Value delivery is inhibited by hand-offs and delays
- Adopting Customer-Centricity is problematic because of organizational boundaries
- Systems are designed to optimize the work in silos, not the value delivered
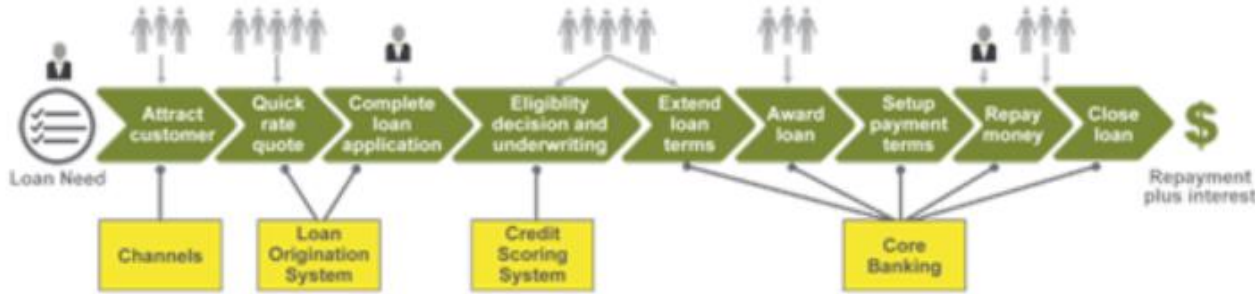
Operational Value Streams

Contains the steps and the *people* who deliver end-user value using the business solutions created by the development value streams
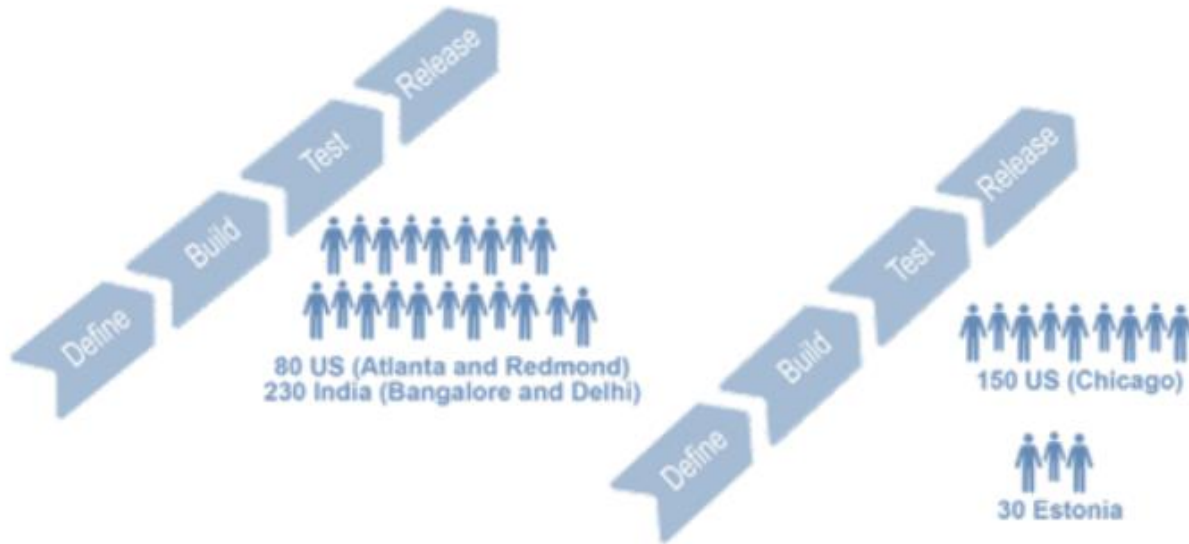
Development Value Streams

Contains the steps and the *people who develop* the business solutions used by *operational value streams*

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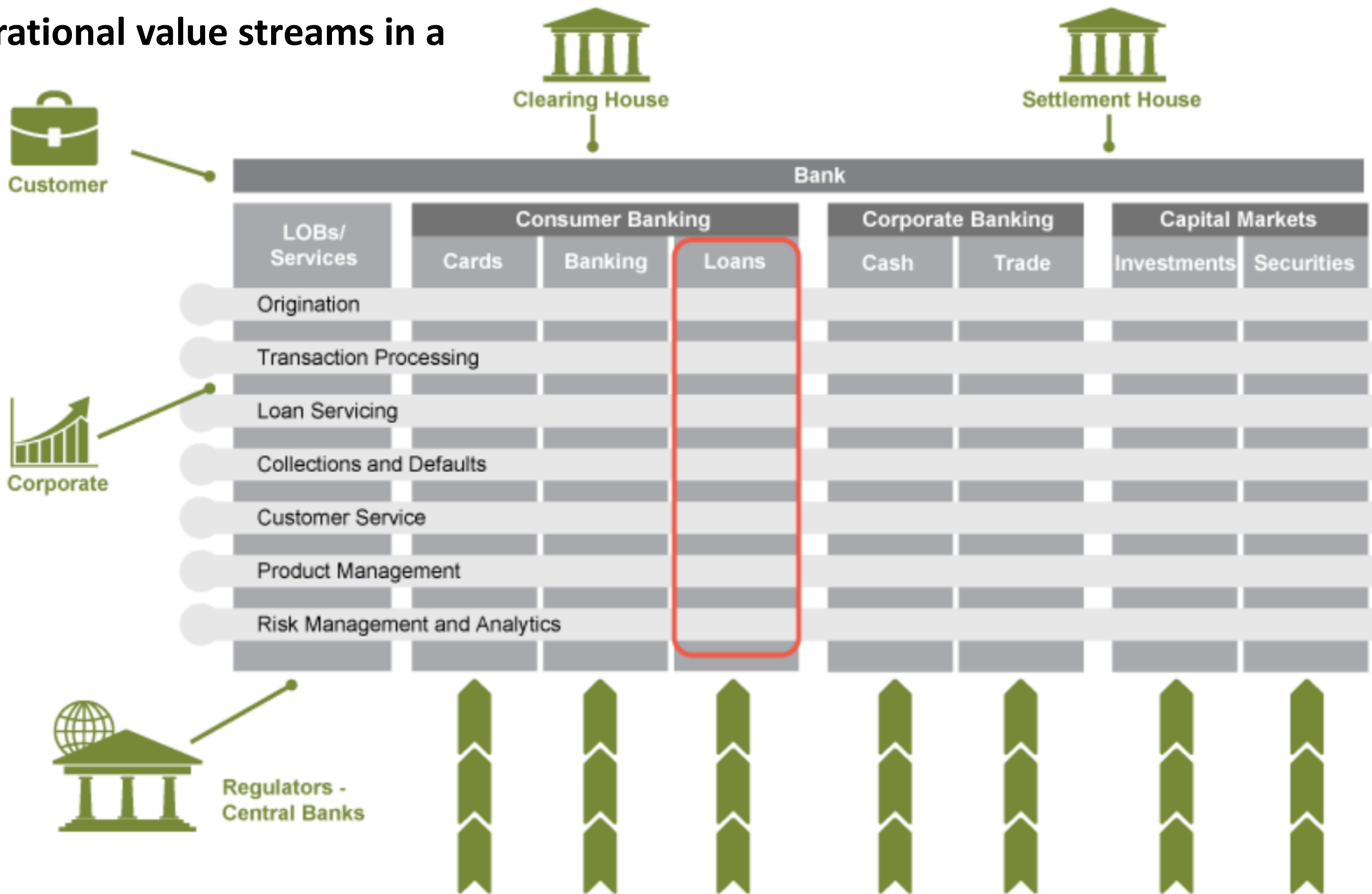
Identification of value streams

Many streams are just the products, services, or solutions that the company sells. In the larger enterprise, value flows through various applications, systems, and services—across many parts of the distributed organization—to both internal and external customers.

General questions	• What are the larger software, system, or solution-based objectives that differentiate the business in the market? • How do external customers describe or perceive the flow of value they receive? • What current initiatives have a significant number of developers and testers working together now?
Questions for the independent software vendor	• What products, systems, services, applications, or solutions does the enterprise sell?
Questions for builders of embedded and cyber-physical systems	• What products and systems does the enterprise sell? What are the larger subsystems or components? What key system operational capabilities are being enabled? • What critical Nonfunctional Requirements (NFRs) are being implemented or enhanced?
Questions for IT	• What key business processes are enabled? • What internal departments are supported? • What internal or external customers do those departments serve? How do those departments describe the value they receive from IT? • What key process, cost, KPI, or business improvement initiatives are targeted?

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Example of operational value streams in a bank

Customer

Clearing House

Settlement House

Bank

LOBs/ Services	Consumer Banking			Corporate Banking		Capital Markets	
	Cards	Banking	Loans	Cash	Trade	Investments	Securities
Origination							
Transaction Processing							
Loan Servicing							
Collections and Defaults							
Customer Service							
Product Management							
Risk Management and Analytics							

Corporate

Regulators - Central Banks

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The flow of value is triggered by the customer searching for and finding the bank's loan offerings and rates, and is fulfilled when the customer repays the loan with interest. The steps and the engagement of customer and staff that performs them are marked below.

Loan Need → Attract customer → Quick rate quote → Complete loan application → Eligibility decision and underwriting → Extend loan terms → Award loan → Setup payment terms → Repay money → Close loan → $ Repayment plus interest

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The reason to organize value streams is to accelerate the time to value (or market), by optimizing the flow of value through the system as a whole. Value stream approach offers the following benefits :
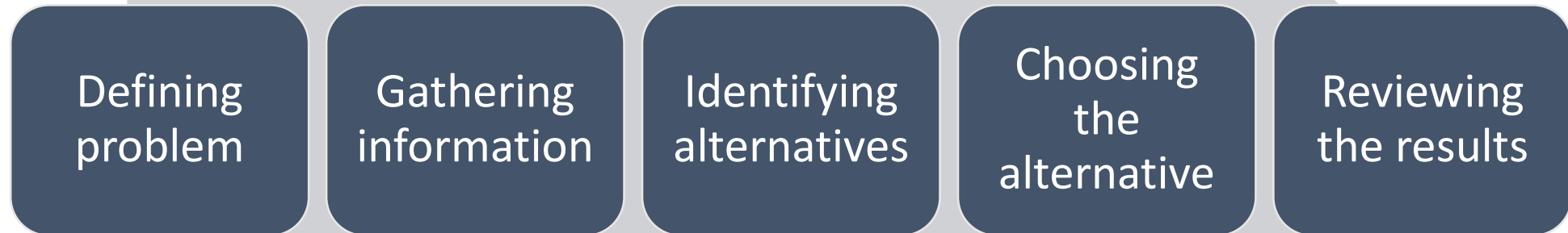
- Fewer handoffs and delays, allowing the teams to work with smaller batch sizes
- Enables long-lived, stable teams that focus on delivering value, instead of projects, which focus on task completion
- Allows faster learning and shorter time-to-market
- Contributes to higher quality and more productivity
- Supports leaner development and budgeting methods

M3: Decision support with strategic analysis tools
Support of decision-making process
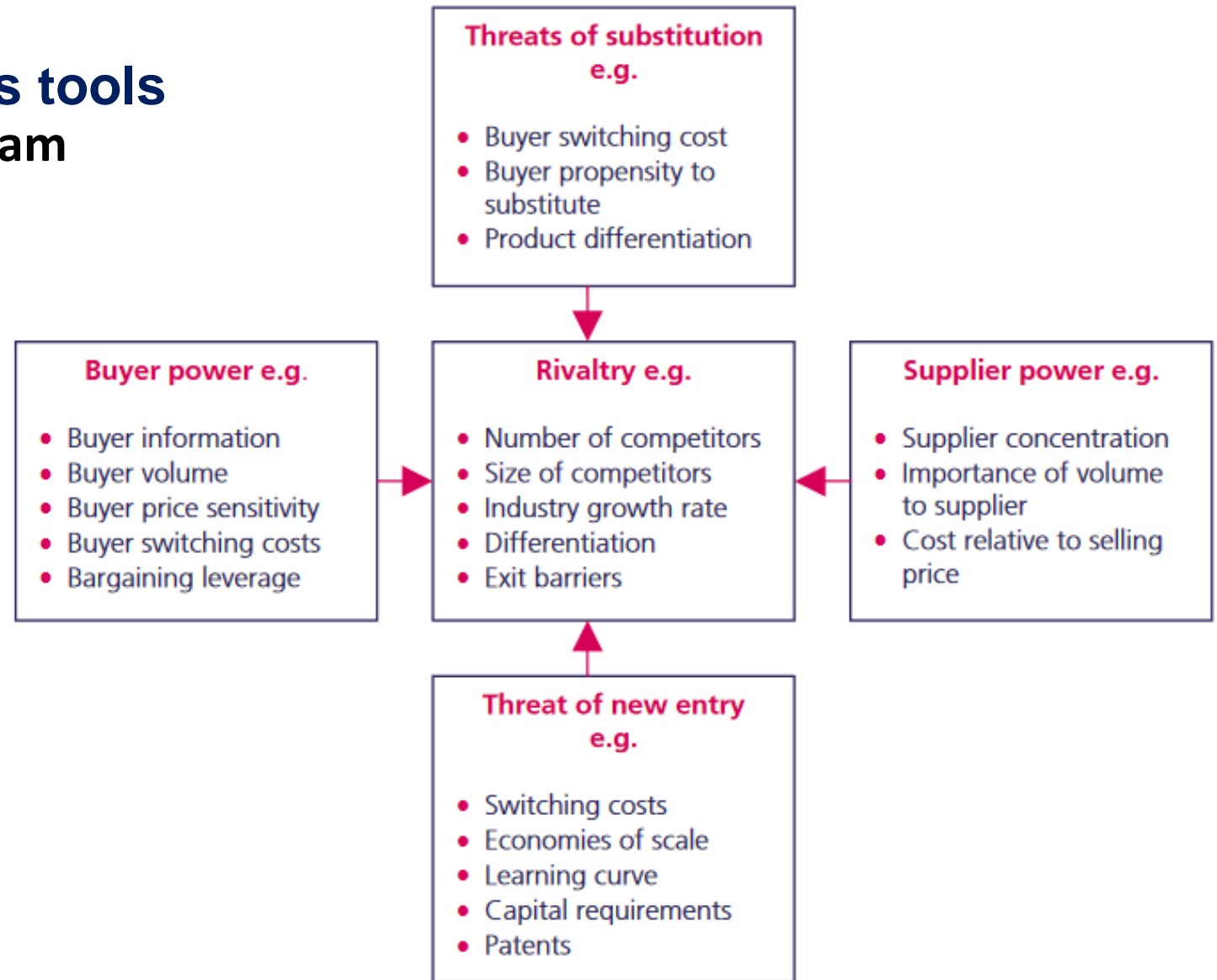
DECISION-MAKING PROCESS

Defining problem	Gathering information	Identifying alternatives	Choosing the alternative	Reviewing the results

EXAMPLES OF SUPPORT TOOLS

5 WHY Ishikawa Diagram	Pareto Analysis Control lists PEST 5 Forces	Brainstorming QFD Stakeholder analysis Feasibility study	CBA SWOT Marginal analysis	Financial analysis Life cycle assessment

Threats of substitution e.g.

- Buyer switching cost
- Buyer propensity to substitute
- Product differentiation

Buyer power e.g.

- Buyer information
- Buyer volume
- Buyer price sensitivity
- Buyer switching costs
- Bargaining leverage

Rivaltry e.g.

- Number of competitors
- Size of competitors
- Industry growth rate
- Differentiation
- Exit barriers

Supplier power e.g.

- Supplier concentration
- Importance of volume to supplier
- Cost relative to selling price

Threat of new entry e.g.

- Switching costs
- Economies of scale
- Learning curve
- Capital requirements
- Patents