

Project Business Analysis

PMG 461 – MGM 461

Lecture 4

Understanding Business Systems

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What we will cover

1. Tools for documenting current business situation
2. Soft systems methodology (SSD) and Business Activity

Modeling (BAM)

Introduction



Business analysts aim to improve problematic business situations/systems.



Business Analysts elicit requirements from stakeholders using various qualitative and quantitative techniques



After eliciting requirements, Business analysts need to understand existing situations and stakeholders' perspectives.

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Tools for Documenting Current Business Situation



Business Needs Log

- Documents high-level business requirements and findings for a known problem.
- Further detailed analysis of requirements will be needed.
- It might include:
 - Key business aims
 - High-level requirements
 - Issues to be addressed

Business Need	Source	Comment
The application must work on web, iPhone and android	Business development manager	Customers may need to access the application from different devices
Discounts can be given for orders above 5,000	Sales Manager	Only valid for orders for retail customers, corporate customers are different

Rich Pictures

- Provides a visual overview of the entire business situation.
- Rich pictures encompass all aspects of a business system while Modeling (e.g., data or process modeling) focuses on specific aspects.
- No fixed notation; allows the use of relevant and useful symbols or annotations.

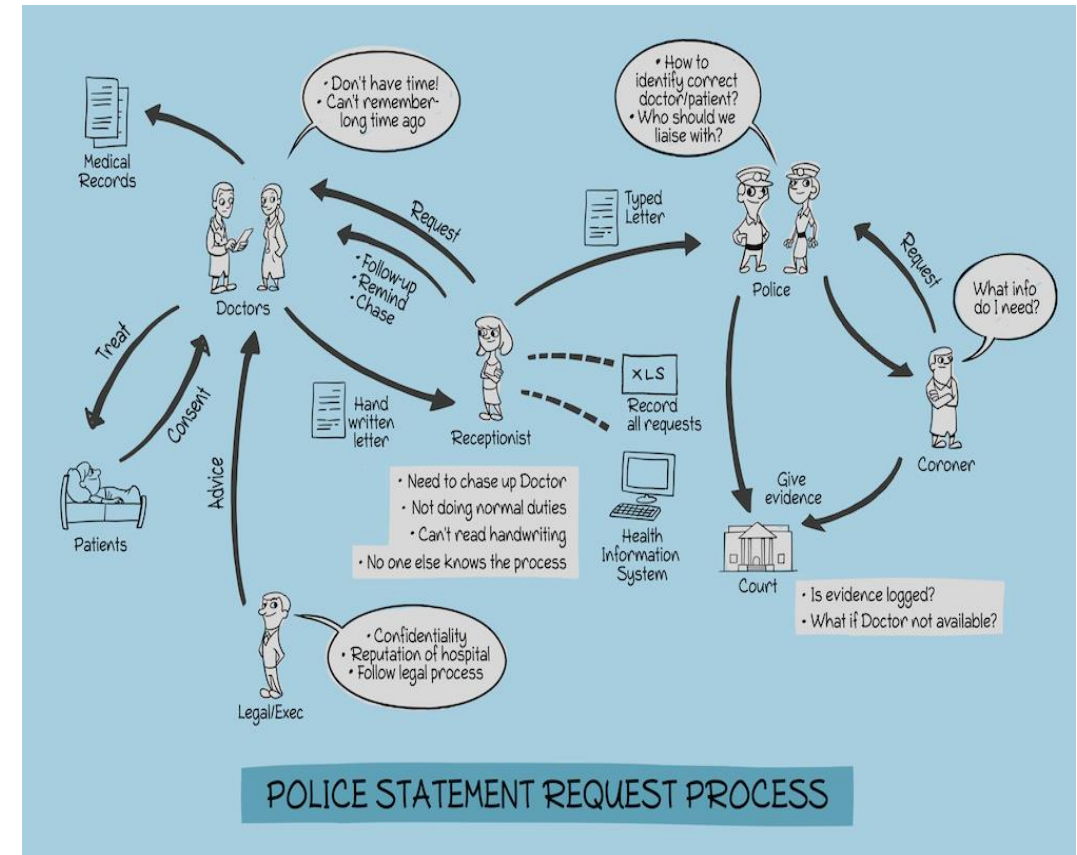
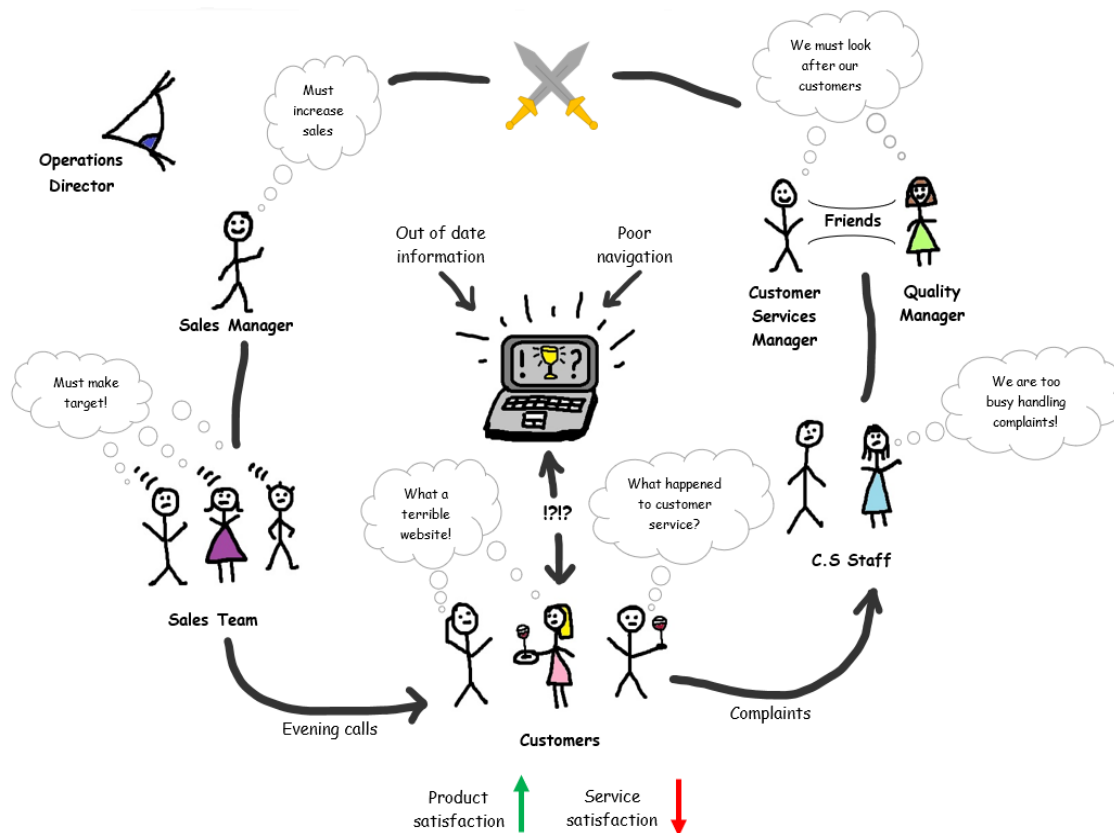
Rich Pictures

Key Features:

- Problems may stem from people rather than process or IT.
- Captures cultural aspects, human dynamics, process flows, and information usage.
- Traditional models may overlook human and cultural factors.
- Addresses differing viewpoints, misunderstandings, stress, interpersonal issues, dissatisfaction, and resource challenges.

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Rich Pictures

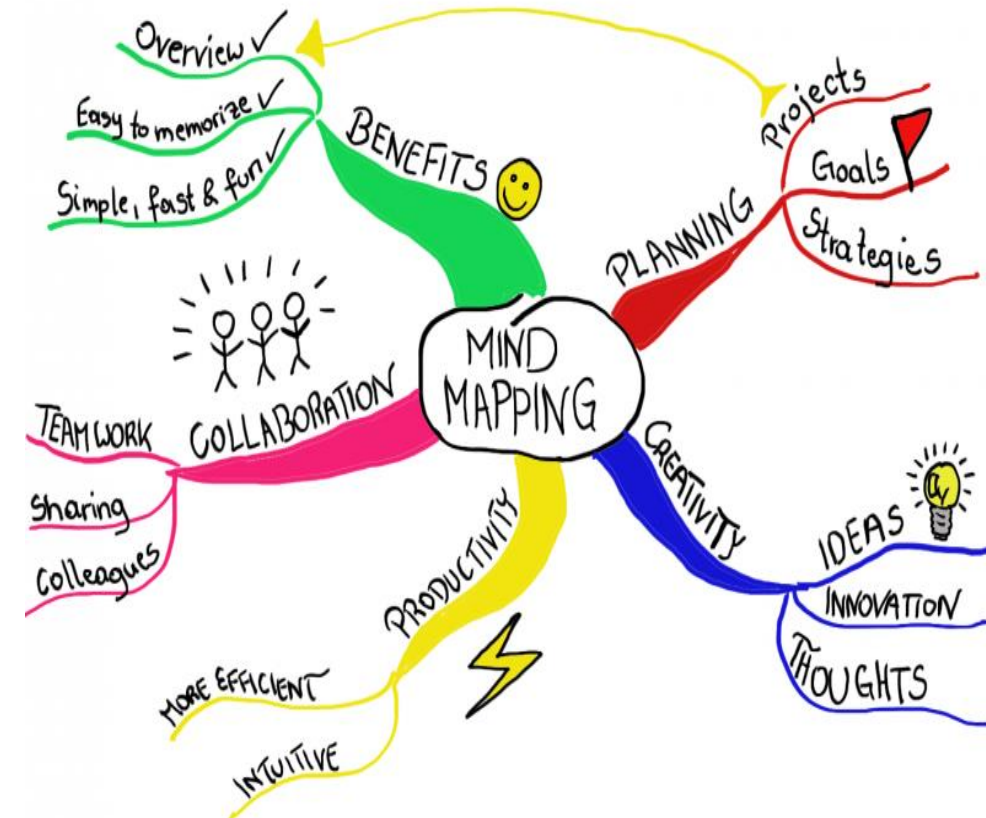


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Mind maps

- Tool for summarizing extensive information visually in a structured and organized manner that highlights connections between different ideas and topics.
- Works well independently and in conjunction with rich pictures.
- Helps analysts organizing their thinking.
- Construction Method:
 - Business system or problem at the center of the diagram.
 - Main elements represented as the first-level branches.
 - Each branch labeled briefly to indicate specific areas or issues.



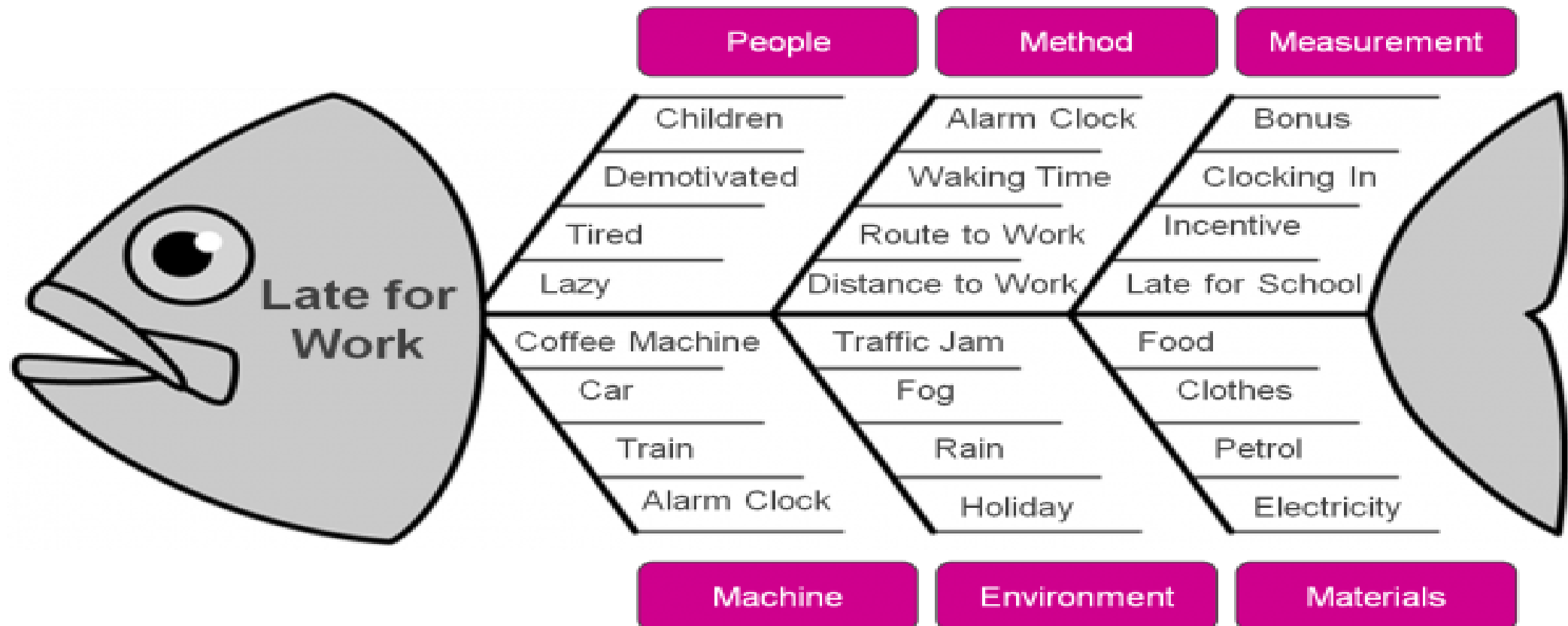
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Fishbone Analysis (or cause-and-effect diagram)

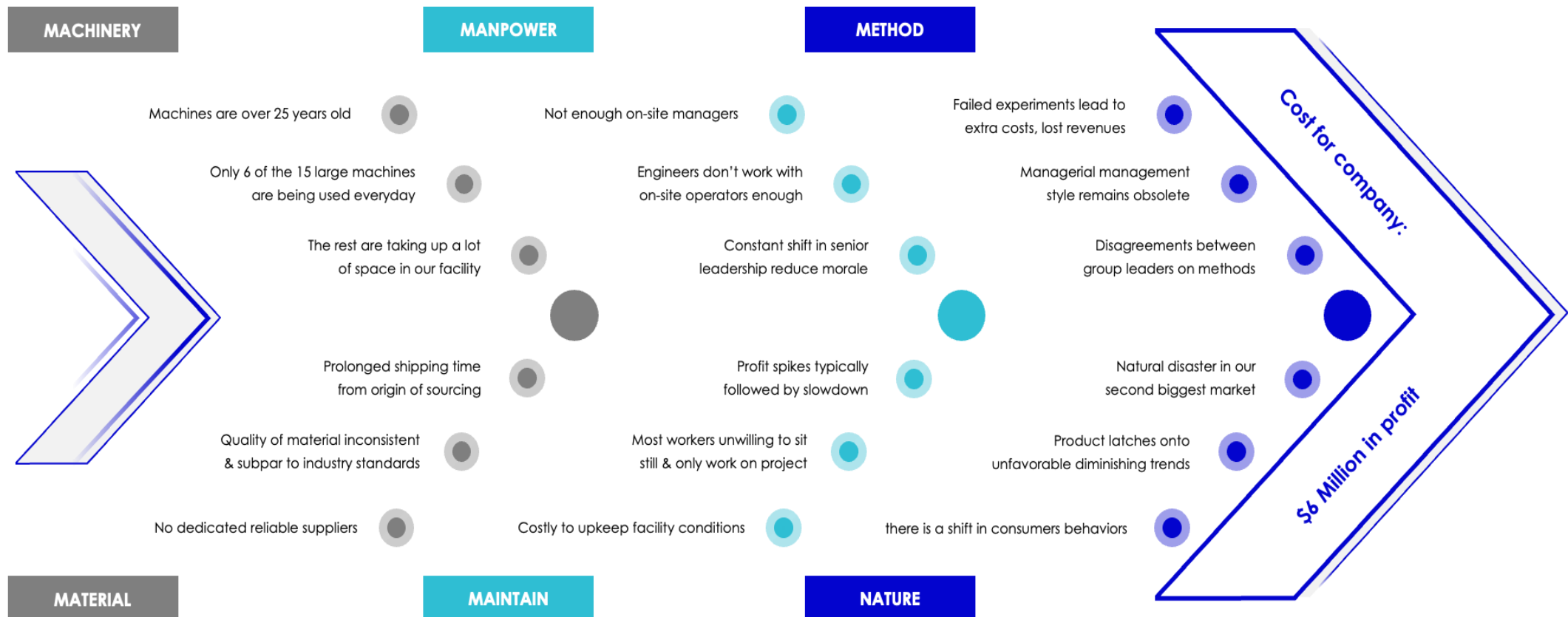
- A problem analysis technique used to identify the root-cause of problems.
- Name of the problem is put at the head of the fish.
- Spines suggest possible areas for causes of the problem as:
 - The 4Ms: Manpower, Machines, materials, and methods
 - Six Ps: People, place, process, product, performance measure, and physical evidence
- Usually done in workshops
- Some data gathering might be needed to confirm the root-cause

Fishbone Analysis Example Employees Late for Work



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Fishbone Analysis Example: Increasing cost of operations in a company



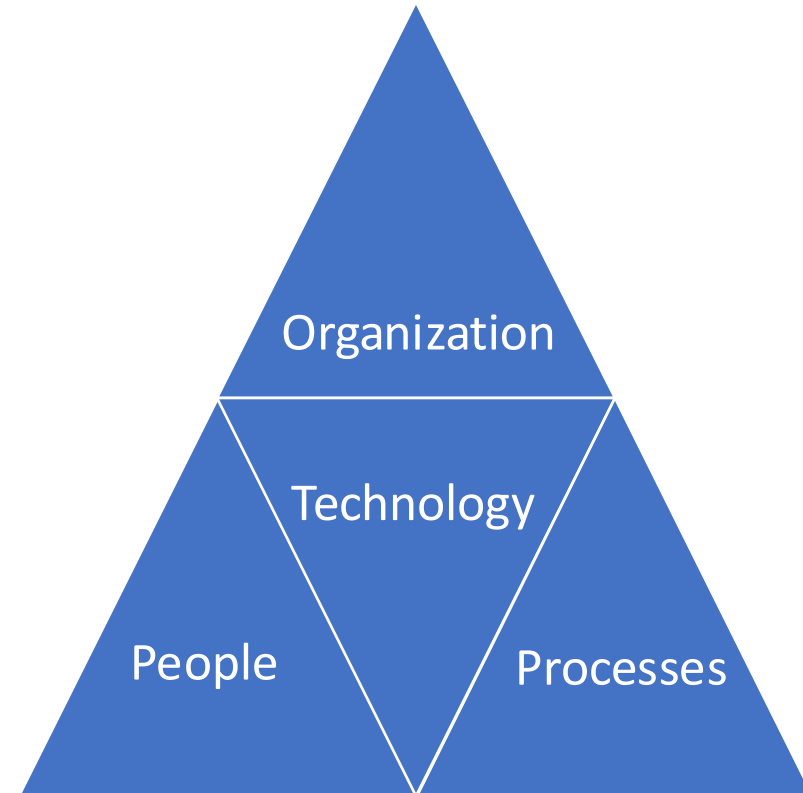
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Soft Systems Methodology (SSD) and Business Activity Models (BAM)



The four views of a Business System

Business System A set of business components working together in order to achieve a defined purpose. The components of a system include people, IT systems, processes and equipment.



Business Perspectives

- Importance of examining stakeholders' views in detail.
- Different views, needs, and priorities must be understood before defining a new business system or improving the current one.
- Business analysts consider the broader organizational context and reasons for its operations.
- Business analysis aligns with organizational core values and beliefs expressed in Mission, objectives, strategy, and tactics (MOST)

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Example: Pen Manufacturer

- Business analysts consider the broader organizational context and align solutions to organizational core values expressed through the MOST model (Mission, Objectives, Strategy, Tactics).

Manufacturer 1

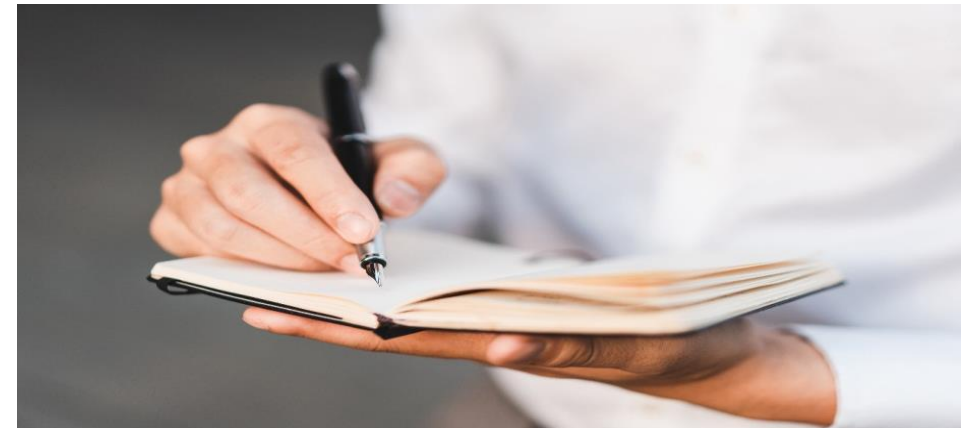
Bulk sales of low cost, moderate
Quality pens to commercial customers

Emphasis on efficient production

**Manufacturer 2**

Luxury pens for design-conscious buyers.

Emphasis on design, branding. and marketing



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Soft Systems Methodology (SSM)

Developed by Peter Checkland to address complex, ambiguous business situations.

Explores the 'why' and 'what' of organizational situations.

SSM views business situations as systems and emphasizes a 'soft' approach in contrast with hard systems thinking.

Soft Systems Methodology (SSM)

Root Definitions (business perspectives) help identify different stakeholder views.

Speculation about different world views to create conceptual systems.

Opportunities for improvement identified by comparing possible systems with the existing situation.

Consensus models are developed through overlap analysis, leading to a desired future system.

Emergent Properties

- Systems with all components working together have emergent properties.
- Business analysts must be aware of emergent properties in recommended business changes.
- Example: A car's ability to travel is an emergent property requiring various components to work together.

CATWOE Framework (1 / 3)

- Framework helps define and analyze business perspectives.
- Identifying beliefs through (World view).

C = Customer:

- The recipient of the system's end product or service
- The primary beneficiary of the transformation process.

A = Actor:

- Individuals responsible for executing business activities within the defined scope.
- Represents job roles within the organization or external entities like business partners.

CATWOE Framework (2 / 3)

T = Transformation:

- The central activity within the system.
- Involves core business processes transforming inputs into valuable outputs for the customer.

W = World View:

- Represents an individual's beliefs about the organization's purpose and actions.
- Defines the perspective on why the organization exists and its intended activities.

CATWOE Framework (3 / 3)

O = Owner:

- The person or group with the authority to make significant decisions about the business system.
- Capable of altering the system's direction or even causing its cessation.

E = Environment:

- The external conditions and rules governing the system.
- Factors beyond the owner's control, considered as given; includes PESTLE analysis insights and fixed internal business policies.

Root Definition (CATWOE Example)

- Root definition (business perspective) is developed as a sentence that ties the CATWOE elements together.

The branch is a system controlled by the bank chief executive (O), where bank tellers, back office staff and branch management (A) provide branch customers (C) who require personal service with bank counter services such as cash deposit and withdrawal, answering account enquiries and setting up standing orders, in order to satisfy their banking needs (T) within constraints imposed by government policies on banking regulation, the global banking crisis, increasing use of online services, increasing electronic funds transfer and increased regulation by financial regulators (E).

Business Activity Models (BAM)

- A Business Activity Model (BAM) is a conceptual model that depicts the expected business activities necessary for a successful transformation based on a specific business perspective. It is distinct from models of organizational business processes. The BAM is developed by considering the business perspective and requires analytical ability and creative thought.

Business Activity Models (BAM)

- Facilitate understanding of organizational goals and generate discussions about changes.
- Useful in resolving differences and aligning stakeholders.
- A BAM is not a model of organizational business processes but a conceptual model.
- It shows expected business activities needed for successful transformation.
- Developed based on a specific business perspective.

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Activity Types



Planning Activities:

Define resource requirements and performance metrics

Customer Service Example

Define Recruitment and training needs



Enabling Activities

Obtain and deploy resources and facilities

Recruiting and training



Doing Activities

Directly related to achieving the transformation

Serving Customers



Monitoring Activities

Collect metrics to check performance against targets

Follow up on customer service results



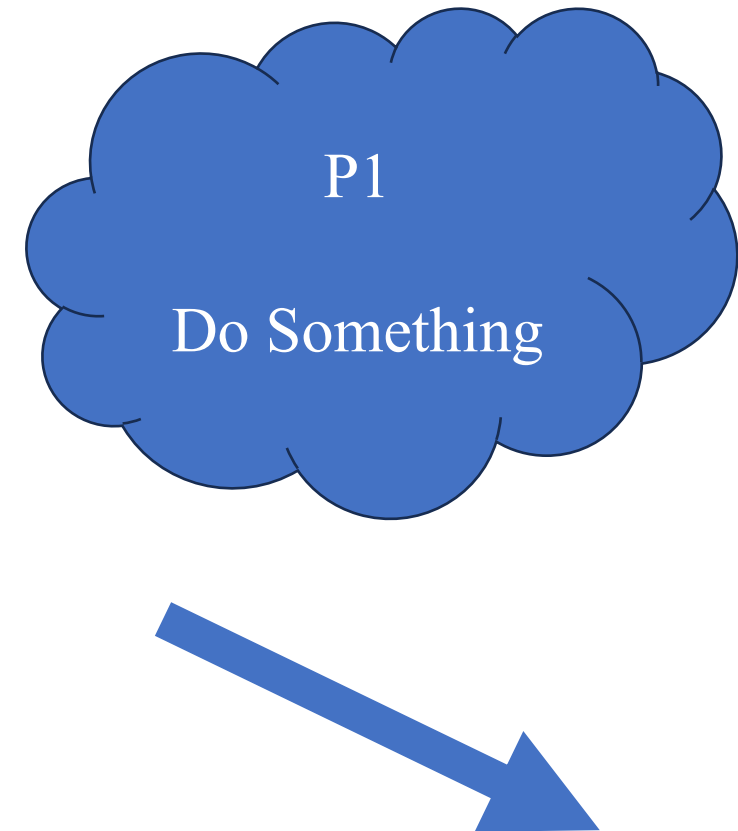
Control Activities

Act based on monitoring results to improve performance.

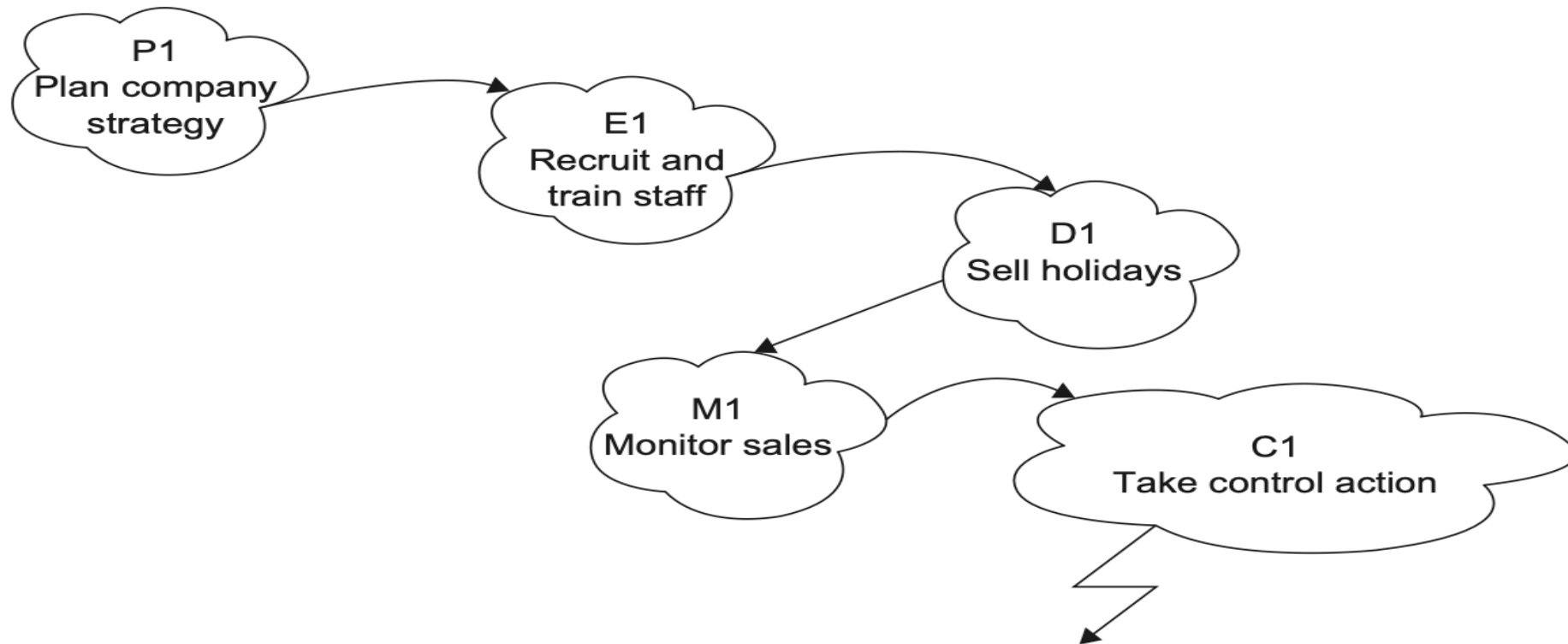
Corrective actions for ex. Hire more people

Dependencies and Modelling Notation

- No universally agreed notation for creating BAMs.
- Soft systems specialists may use 'cloud' symbols or ellipses.
- Business activities labeled with an identifier and imperative verb-noun title.
- Dependencies between activities represented by arrows.



BAM Example

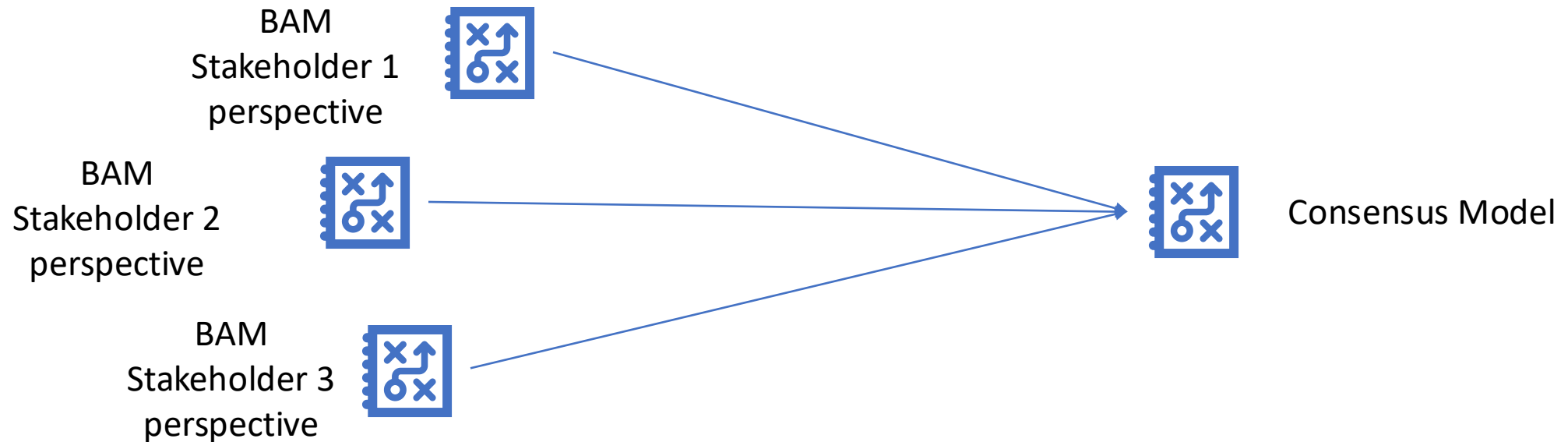


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Principles of Developing a BAM

- One BAM for **EACH** business perspective.
- Subsequent consensus model by overlaying individual BAMs.
- A tool for business analysis and improvement identification.
- Not concerned with who performs activities or where they occur.



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Developing a BAM

Identify main
doing activities
based on the
business
perspective.

Look for
enabling and
planning
activities.

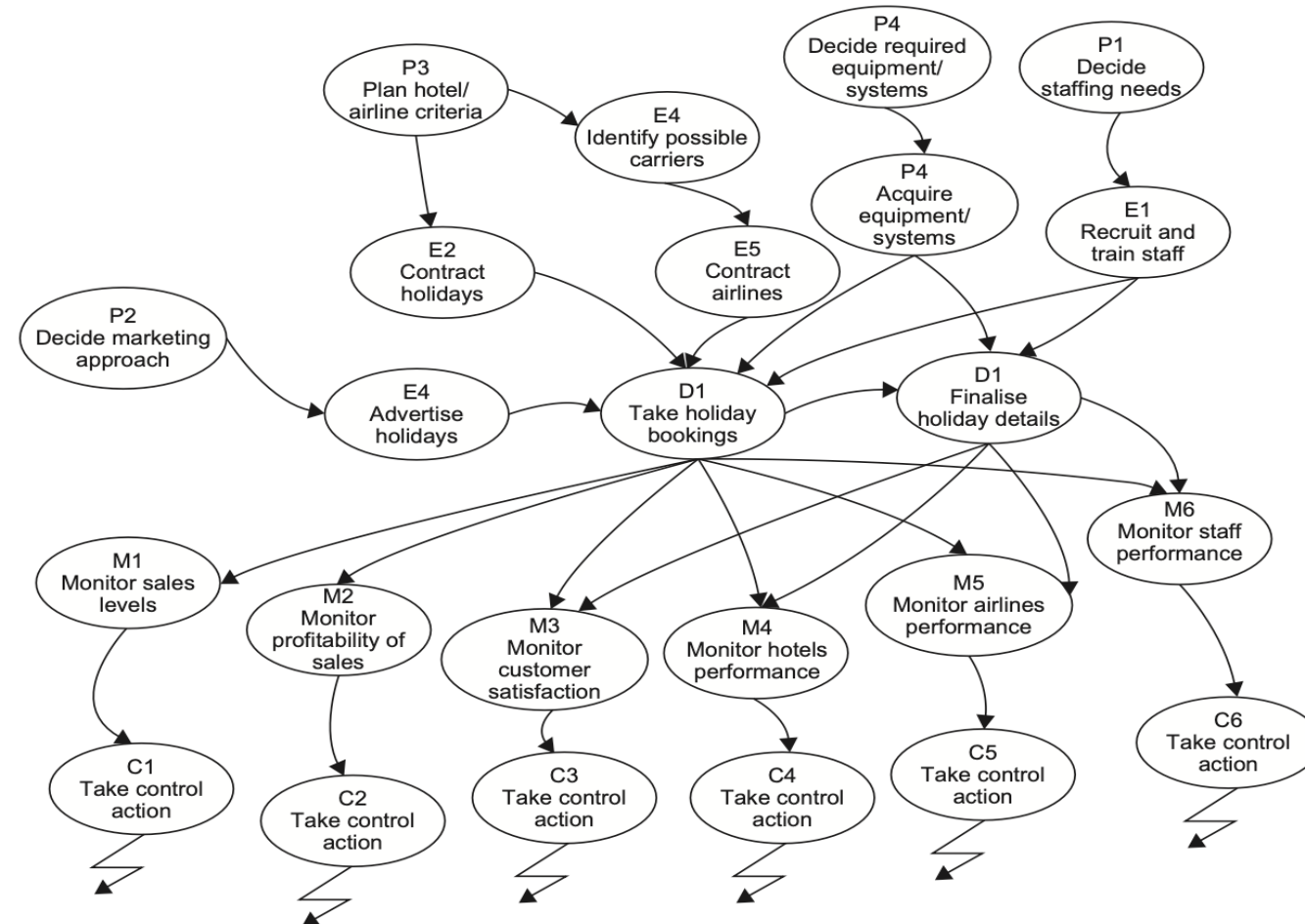
Add monitoring
and control
activities.

Consider
environmental
constraints.

Add
dependency
arrows between
activities.

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BAM Example



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Consensus Model Development

- Derived from individual stakeholder BAMs.
- Resolving conflicts between individual BAMs to create a consensus model.
- Done in a Workshop environment facilitating discussion, agreement, and development of a unified BAM.
- Three ways to reach consensus:

**Global**

Uses neutral model (for ex. Best practice, benchmark,..)

**100%**

All participants agree on a model

**Accommodation**

Compromise between participants

Business Events

- Business events trigger activities in response.
- Three types of business events:



External

Example

Customer makes a request



Internal decision points

Management take a decision based on results

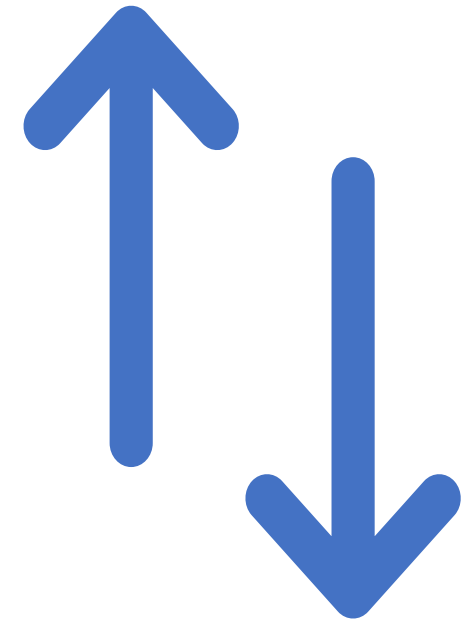


Scheduled events

End of day or end of month process

Business Rules

- **Business rules**: are the rules governing performing the activity.
- Include:
 - Constraints: restrict how and activity is performed (ex. Laws/regulations)
 - Operational guidance: dictate how activities should be performed (ex. How to calculate discount, or how to move stock items)
- Business rules should be documented to support BAM



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Critical Success Factors (CSFs) and Key Performance Indicators (KPIs)

- **CSFs:**

- Highlight essential areas for success and are the things that the organization must excel in.
- They provide insights into planning, enabling, and doing activities needed.
- For ex.: Excellent Customer Service, or maintaining low cost of production



Critical Success Factors (CSFs) and Key Performance Indicators (KPIs)

- **KPIs:**

- Highlight the things an organization measures to find out how well it is doing.
- Identified in planning activities and checked in monitoring activities.



Validating a Business Activity Model

- Checklist for completeness and internal consistency.
- Ensures:
 - Objectives and purpose must be explicit.
 - Connectivity of activities.
 - Measures of performance and monitoring/control mechanisms.
 - Decision-making procedures, boundary definition, and resource management.
 - Systems hierarchy and scope of control activities.

- BAM used in Gap-Analysis to identify high-level business problems and issues.
- Compares theoretical model with current organizational reality.
- Highlights areas of satisfaction, opportunities for improvement, and identifies missing activities.

Key Points

- Visual Tools Enhance Understanding: Rich pictures, fishbone diagrams, and mind maps provide visual representations that aid in comprehending complex business situations, fostering holistic insights.
- Structured Documentation Matters: Business needs logs systematically capture and prioritize requirements, ensuring clear communication, traceability, and effective change management.
- Perspective Diversity is Key: CATWOE framework and business activity models emphasize considering diverse stakeholder perspectives, providing a comprehensive view that aids in decision-making and root cause analysis.

Key Points

- Flexibility in Modeling: Techniques like rich pictures and mind maps offer unstructured, flexible approaches, allowing analysts to 'brain dump' information and adapt models as more insights emerge.
- Gap Analysis Guides Improvement: Business activity models serve as powerful tools for gap analysis, highlighting discrepancies between theoretical models and actual organizational situations, uncovering areas for business improvement.

For Discussion Panel and Next Lecture:

- Reading, Chapters 6 and 8 from textbook
“Business Analysis” by James Cadle, Malcolm Eva, Keith Hindle, Debra Paul, 2nd edition

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For Discussion Panel and
Next Lecture





Thank You