

# Business Process Models for Process Management



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# Aim

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- To discuss the **representations** that can be incorporated in **process models** so they are useful to the different **activities** that deal with them.

# Intervention Activities

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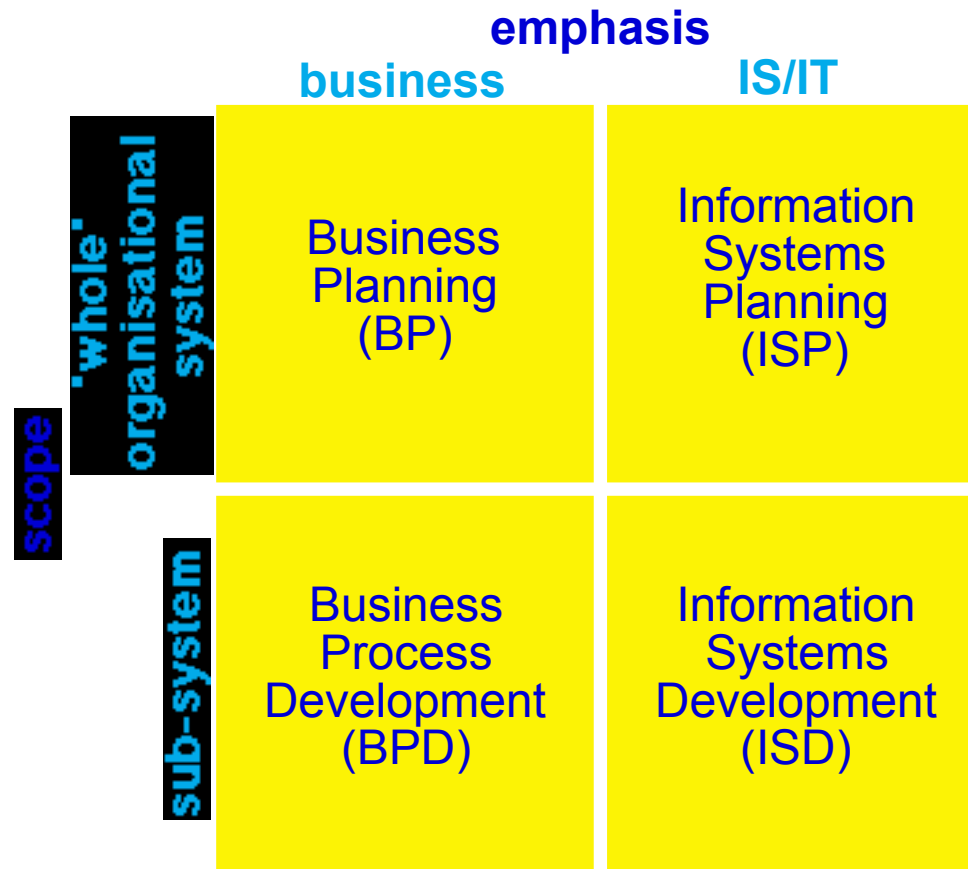


- Which activities?
- Those referred to as intervention activities because they introduce **change** in organisations with the purpose of improving the way organizations carry out their business.

# Theoretical Framework



An integrated view for intervention activities



Intervention activities have different scope and emphasis

# Organisational Knowledge



	<b>BP</b>	<b>ISP</b>	<b>BPD</b>	<b>ISD</b>
(a) Environment	<b>P</b>			
(b) Organisation (global view)	<b>P</b> <b>C</b>	<b>P</b>	<b>P</b>	
(c) Organisation (detailed view)			<b>P</b> <b>C</b>	<b>P</b>
(d) Information system (global view)		<b>P</b> <b>C</b>		<b>P</b>
(e) Information system (detailed view)				<b>P</b> <b>C</b>

**P** - perceived      **C** - created

# Organisational Knowledge

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- Organisational knowledge is **shared** by different intervention activities;
- There is a **logical sequence** for the conduction of intervention activities in organisations; the perceptive effort of an intervention activity can be diminished if the knowledge systematised and produced in a preceding intervention activity is available

# Sharing Organisational Knowledge

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- Approaches and methods for the different intervention activities use different languages and make use of different types of **representation techniques** that correspond to different **organisational views**.

# Business Processes

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- Different organisational views

- Zachman framework

Zachman, J.A. e J.F. Sowa, "Extending and formalizing the framework for information systems architecture", IBM Systems Journal, 31, 3 (1992), 590-616.

- One organisational view:

**a business process view**



# Process Management

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- The **managerial** activity concerned with the **efficiency** and **effectiveness** of these business processes is called process management.
- Process management demands process models.
- To be incorporated in these process models, three types of representations are considered

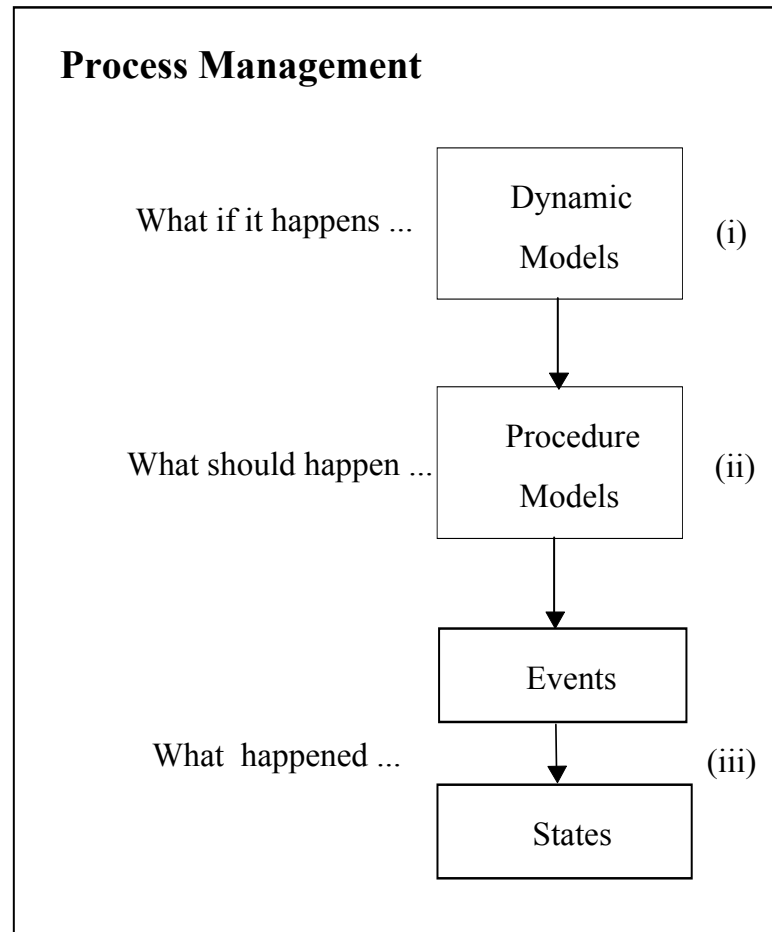
# Types of Representations

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- **(i)** representations of the management models
- **(ii)** representations of the processes, addressing structural, functional, informational or behavioural perspectives
- **(iii)** representations of data about process execution

# Process Management



# Management Models

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- Dynamic Models
  - Spreadsheets?
    - » complex, time consuming and difficult to maintain;
    - » snapshot views of a process

# Management Models

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- Systems Thinking/Systems Dynamics

The art and science of making reliable inferences about behaviour by developing an increasingly deep understanding of underlying structure

# Management Models

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- Influence Diagrams/Causal Loop Diagrams
- System Dynamics Models
  - » stocks
  - » flows
  - » feedback linkages

# Process Models

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- Four perspectives
  - **functional**: what *activities* are being performed
  - **organisational**: *where* and by *whom* are activities performed
  - **informational**: which data *entities* are involved
  - **behavioural**: *when* activities are performed

# Events and States

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- Database with space and temporal coordinates
- Workflow models (audit trails)



# Techniques



Techniques	Perspectives				Nature		
	Functional	Informational	Organisational	Behavioural	What if it happens	What should happen	What happened
Influence Diagrams				X	X		
System Dynamics	X	X		X	X		
Flowcharts	X			X		X	
DFD (Data Flow Diagrams)	X	X				X	
BAM (Business Activity Maps)	X	X		X		X	
ER, IDEF1X		X					
IDEF0	X		X			X	
Object Model		X	X			X	
Interaction Diagrams	X			X		X	
Action Workflow Loops	X		X			X	
RAD (Role Activity Diagrams)	X		X	X		X	
State Transition Diagrams	X			X		X	
Database Models		X					X
Workflow Models	X	X	X	X		X	X

# Organisation “memory”

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- Processes/Process Management:
  - a reducing vision
- Identification of different types of knowledge
- A repository system - an integrated and articulated system of all views/perspectives

# Memory

