Business Process Models for Process Management

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Aim

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

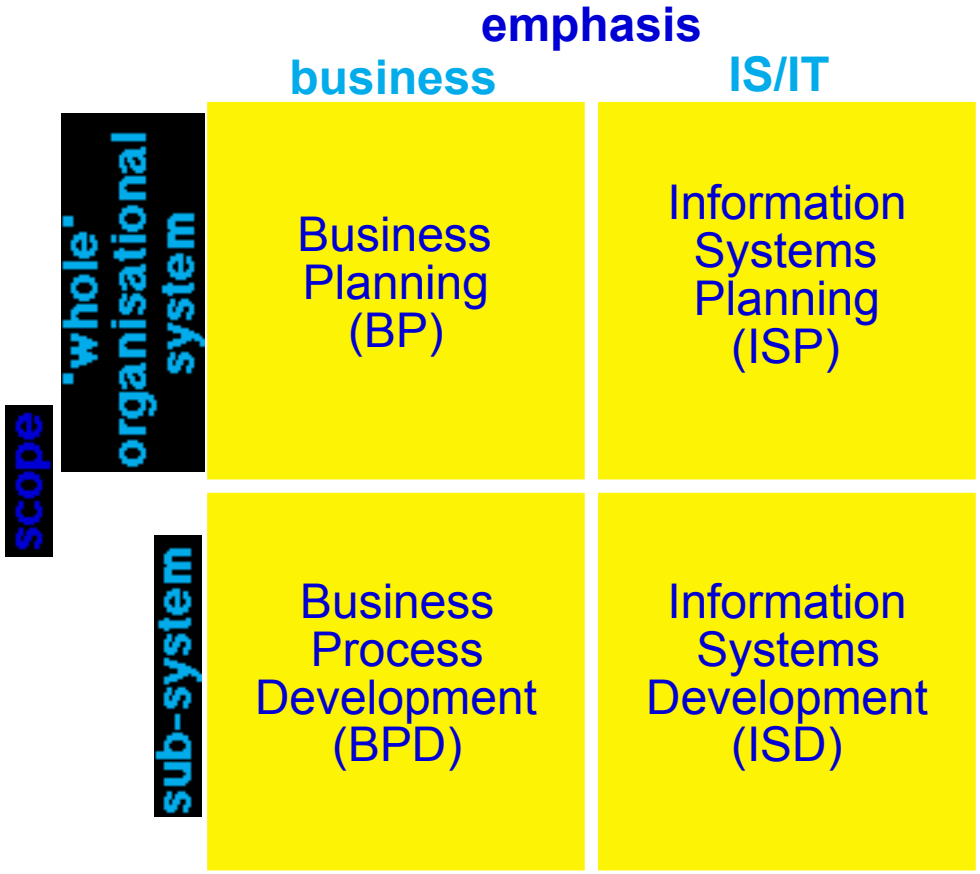
Intervention Activities

- 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

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

P - perceived **C** - created

Organisational Knowledge

- 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

- 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

- 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

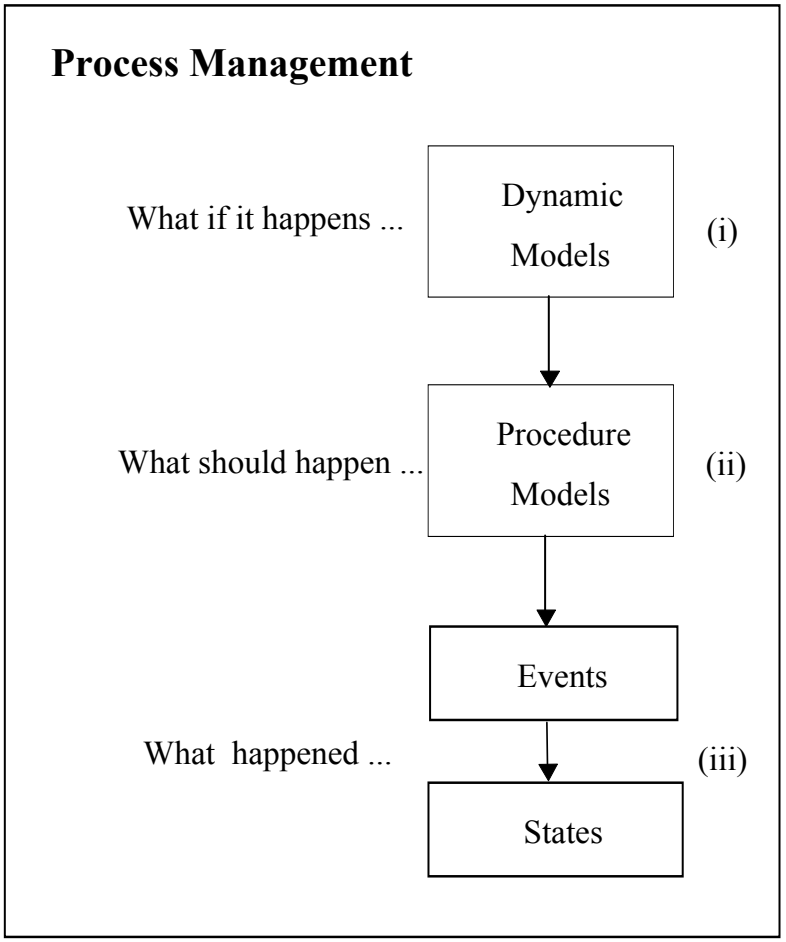
Process Management

- The **managerial** activity concerned with the **efficiency** and **efectiveness** 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

- **(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

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

Management Models

- 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

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

Process Models

- 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

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

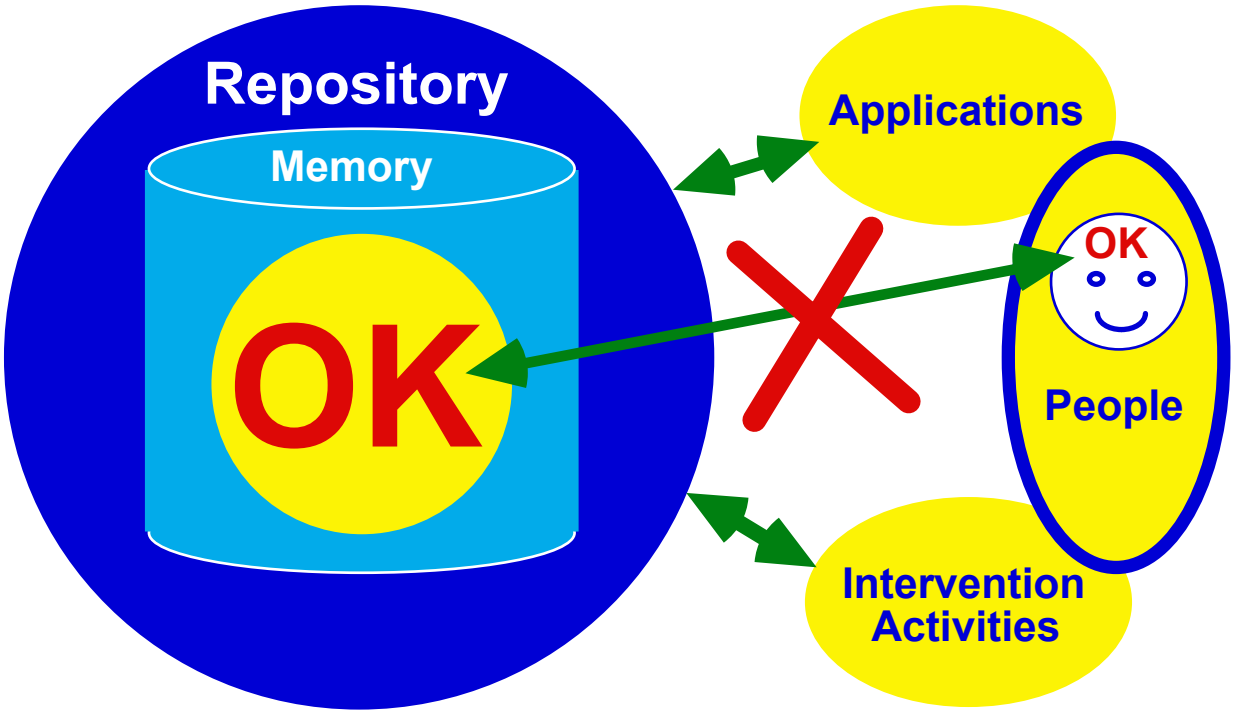
Techniques

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”

- 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


Repository
Memory
OK
Applications
OK
People
Intervention
Activities