

# COMP2332: Enterprise Healthcare Business Process Modelling

## Business Process Modelling

Time: **Tuesday+ Thursday: 12:50-14:05**

Location: **Masri110**

Section: **1**

**HiCure**

Excellence in Health Informatics Integrated Curricula

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# Business Process Modelling

- Introduction & Fundamentals
- Motivation
- BP: Life Cycle
- BP: Components
- BP modelling languages

# Business Process Modelling: What?

- Business process modelling (BPM) is:  
the activity of representing processes of an enterprise, so that the current process may be analysed and improved.
- BPM is performed to improve process efficiency and quality, typically by business analysts & managers
- Process improvements may or may not involve IT, but IT is a common driver behind modelling a business process.

# BPM: For What?

- Business models are an excellent communication tool
- Business professionals can model alternative options
- Business models are key element for designing physical IT architectures
- Helps to utilise IT for improving business outputs
- BPM seeks to improve an organisation's process flow to be
  - more effective,
  - more efficient and
  - capable of adapting to changing business needs
- BPM is employed to reduce:
  - miscommunication between stakeholders
  - human error in process design and
  - define clear roles for stakeholders for each of the business processes.

# BPM: Why?

- Business process modelling helps organisations:
  - To become more process-oriented
  - To optimise business processes using process change management (i.e. long term planning, execution & control of processes)
  - To document and manage processes continuously
  - To simulate processes before enacting them
    - e.g. using Monte Carlo simulation & Discrete Event Simulation

# BPM: Why?

- Enables to answer key organisational questions :
  - Which steps are really **necessary**?
  - **Who** should do them (i.e. defining Roles)?
  - Should they be kept **in house** or **outsourced**?
  - **How** they should be done?
  - What **capabilities** are needed?
  - What **results** do we expect and how will they be monitored?
- Without clear business processes, answers are often vague and different for different organisations

# BPM: Benefits

- Formalize existing processes
- Identify needed **improvements**
- Facilitate **automated**, efficient process flow
- Reduce **time** by automating tasks
- Increase **productivity**, decrease wasting **resources**
- Helps to solve difficult **problems**
- Simplify regulations and compliance issues.

# Motivation: Why Process modelling?

## What...

- Does it represent a process that can eventually work in real-life?
- How is all information interconnected?
- How do we know which are the process requirements and responsibilities?
- How can we be sure an activity flow is correctly defined?
- How important an activity is and how is it efficiently executed?

## How?

- Takes into account all parameters and simulates all alternatives
- Depicts and models the correlations
- Describes the resources needed with appropriate roles assigned
- Incorporates the business rules, the legal framework requirements and all supportive information to explain why everything is happening
- Defines priorities and intelligently routes the “traffic”



# BPM is Important, because

- For Economical reasons
  - Competition
  - Cost reduction
  - Merge/Acquisition
  - Performance
- For better IT decisions
  - Decentralized/centralized
  - Web services/BPML
  - Integration
  - Multiple platform

# BPM Key objectives

- To describe business processes and business data.
- To model business processes beyond just functional boundaries and company boundaries
- To reveal inefficiencies in existing organisational process structure
- To define clear definition of responsibilities

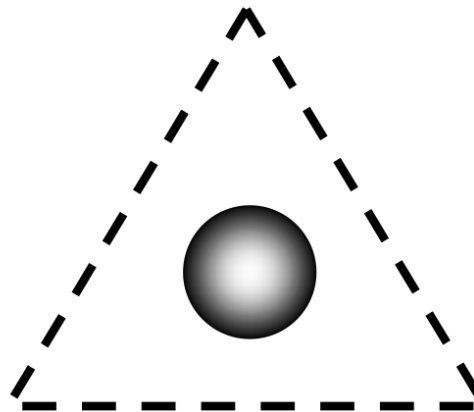
=> Achieve transparency of business processes

# BPM Key objectives



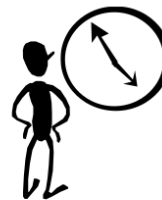
## Quality

- Aligning added-value with the client's interests
- Lowering the incidence of mistakes



## Costs

- Avoidance of nonproductive activities
- Optimize resources usage



## Time

- Reduction of waiting times
- Reduce delivery time
- Time to market