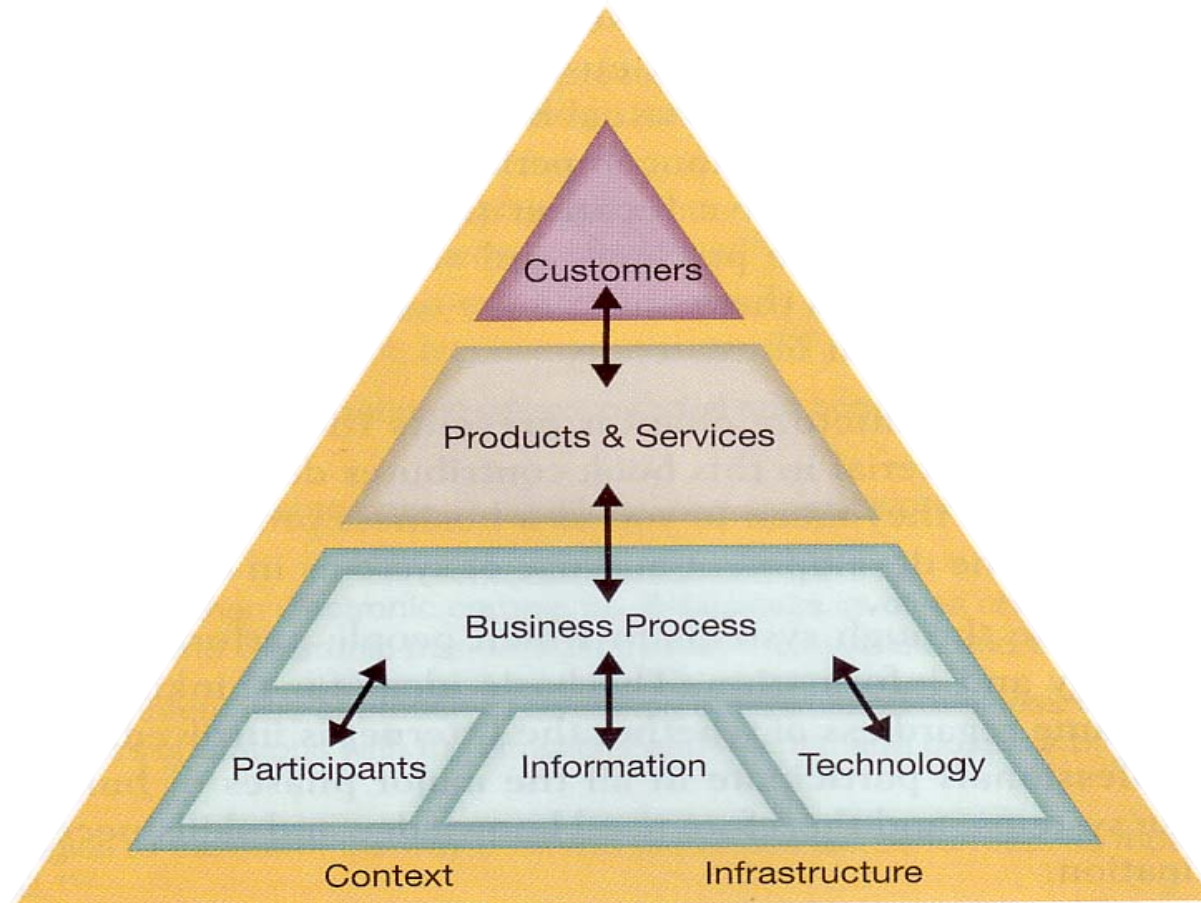# Business Process Modelling

Process

- There are many definitions of a business process. Here are some important characteristics of a process

- A process is a systematic set of activities
  - which manipulate or transport material or information
  - in order to accomplish a specific purpose or objective
  - creating value for a customer (internal or external)

- Most processes
  - require some sort of input and
  - use and/or consume resources and
  - produce some sort of output – a service or a product

Work-Centered Analysis

Exercise

- What are the possible uses of process models?

- From this derive: What would you want to represent in a process model?

- → Brainstorming

Possible uses of Process Models

Organisational Change

- documentation of the organisation

- re-organisation

- business re-engineering

- continuous process improvement

- quality management

- benchmarking

- knowledge management

- information management

Application Systems Design

- selecting standard software

- customizing software systems

- systems engineering

- software development

- workflow management

- simulation

Possible Purposes of Process Models

- Structure: Process Models drive communication
  - inside an organisation, helping to form a shared understanding
  - with suppliers, customer and/or partners up and down the value chain to agree on cooperation

- Performance: Process models provide a framework within which metrics have meaning, e.g. end-to-end cycle time and activity costs

- Execution: Interpreted by sophisticated software systems, executable process models carry the instruction for how work should happen, who should do it, links to information systems etc.

Organizing Work of enterprises

- Organisating work requires answers to questions such as
  - Which stes are *really* necessary
  - Who should do them?
  - Should they be kept in house of outsourced?
  - How should they be done?
  - What capabilities are needed?
  - What results do we expect and how will they be monitored?

- Without commonly agreed descriptions of the business process, answers to these questions are often vague

Modeling Issues

- The modeler is always making modeling decisions about the purpose of the model and the intended audience

- level of detail depends on the audience and the purpose
  - communication require less detail
  - for executable processes or simulation signification detail is required

- Content of the model
  - Organising work: → process structure
  - process improvement: → performance measures
  - process execution: → data structures, application interfaces, …
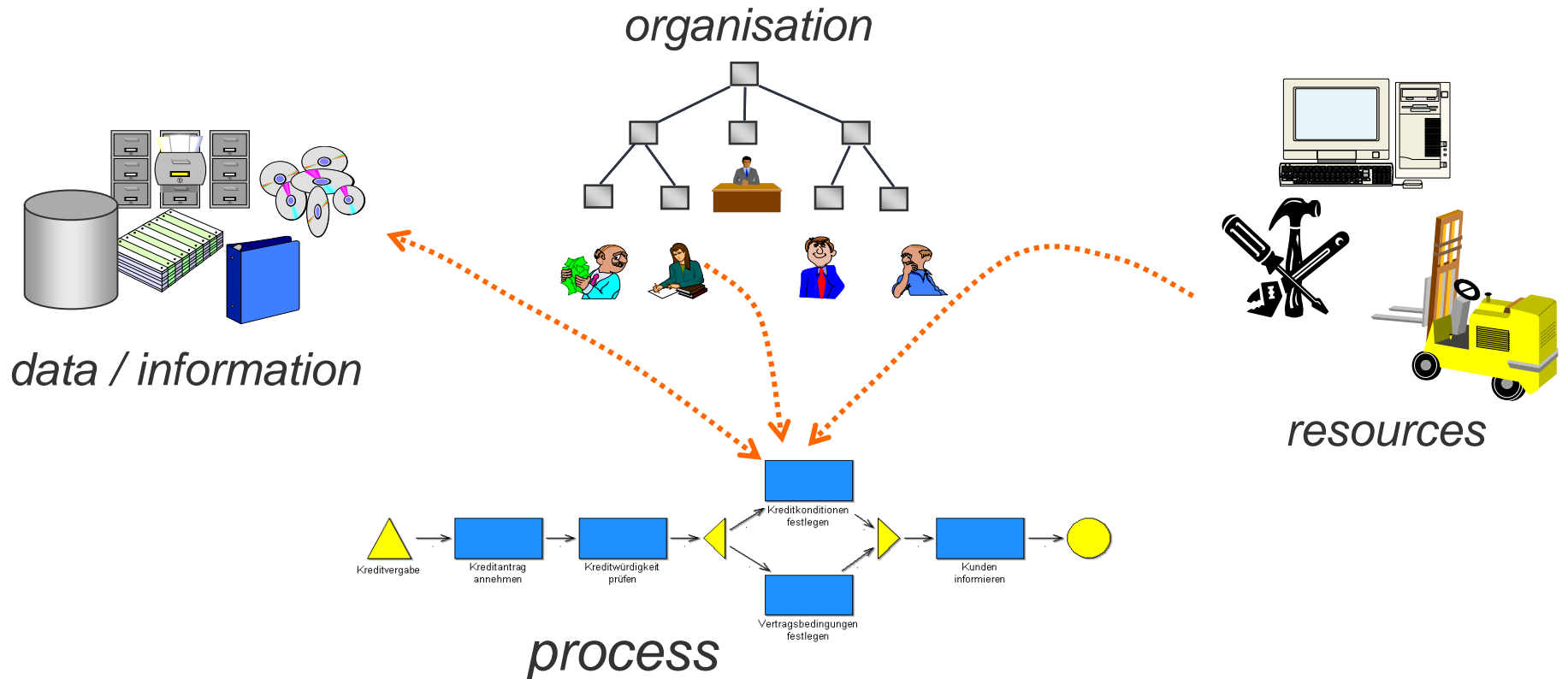
Process Models and Phases of Organisational Change

- People generally use process models to underpin their conversations, supporting communication and understanding
- Process models are usally created (discovered or captured) by looking into the business operations
- Potential inputs are goals, strategy and rules
- Some sort of analysis takes place before (re-)design.
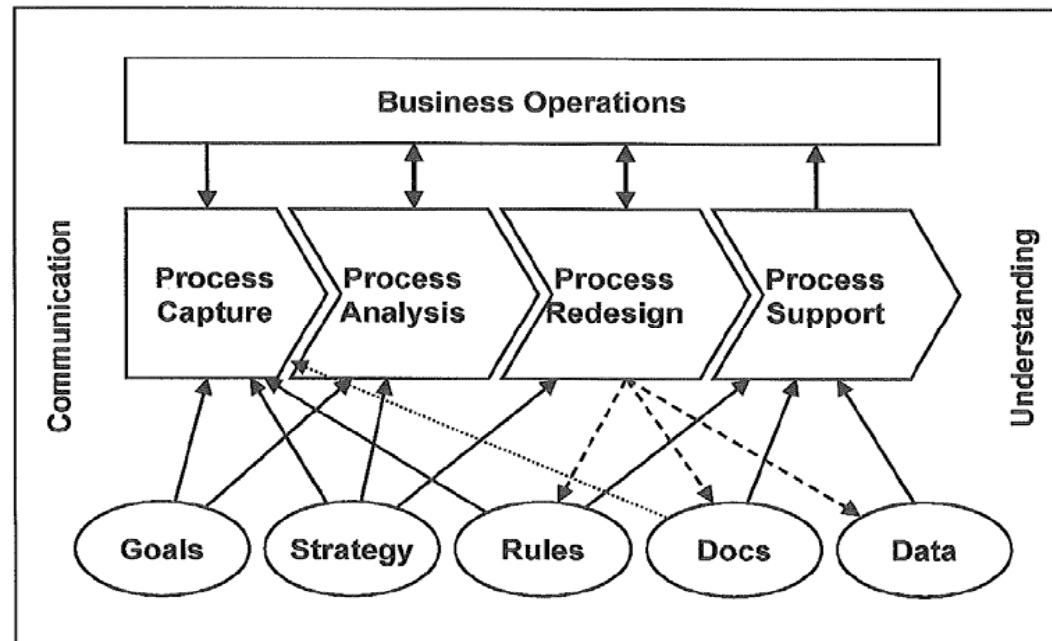
Process Models and their Relations

- Processes are related to other aspects of business

- Process Models must represent these relations, too.

organisation

data / information

resources

process

The BPMS*) - Paradigm

How do we make our money ?

How do we produce the products ?

How do we translate processes into action ?

How do we coordinate the activities?

How can we improve our business ?

Company

products

business processes

organisa-tion   people   IT / resources

workflow management information systems

index numbers

Market   Market

Strategic Decision

Re-Engineering

Resource Allocation

Execution

Performance Evaluation

*) BPMS - Business Process Management Systems - developed by Prof. Karagiannis, University of Vienna, BOC GmbH

Prof. Dr. Knut Hinkelmann   Business Processes