

Classical theory

Informatics, Kai A. Simon

- **Division of labour**
- **Productivity limits**
- **Authority and motivation**
- **Hierarchy of authority**

Forms of labour division

Informatics, Kai A. Simon

Each worker performs the whole task



Each worker performs 25% of the whole task



Productivity limits

Informatics, Kai A. Simon

- **Why stop at 5, or 10?**
 - Extent of the market
- **3 limitations are considered basic**
 - Physical
 - Technological
 - Cognitive
- **Complexity due to interrelated subtasks**

Authority and motivation

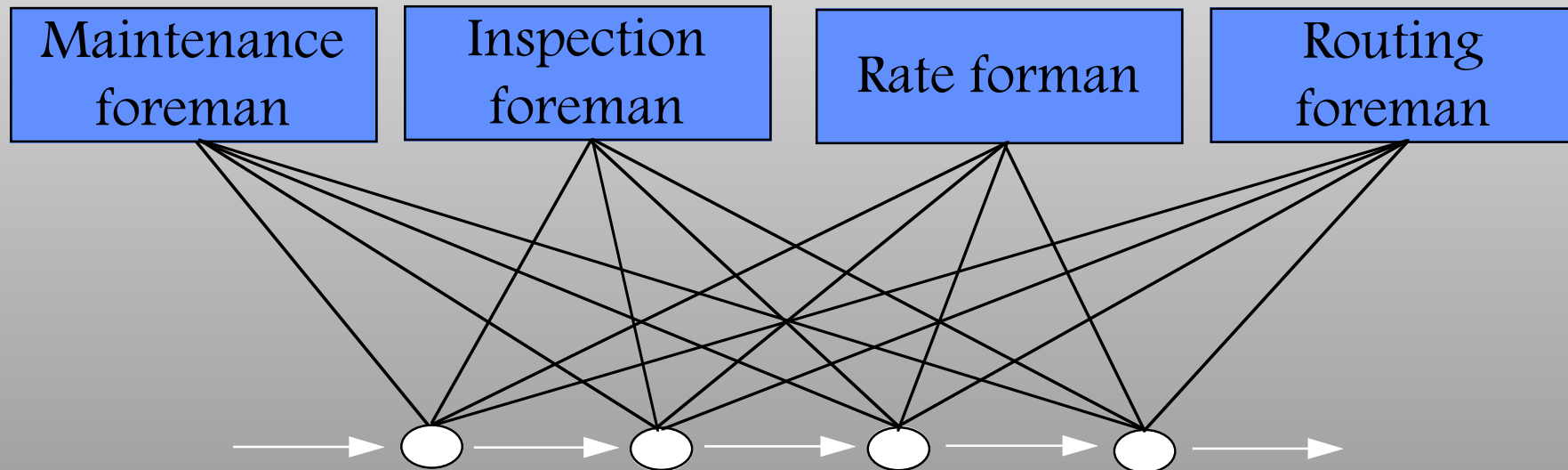
Informatics, Kai A. Simon

- **Pre-industrial identification with work**
 - Surnames
- **Motivation in the industrial era**
 - Financial incentives
 - Piece-rate pay
 - Applied authority as “motivation”
 - Rewards and punishment

Hierarchy of authority

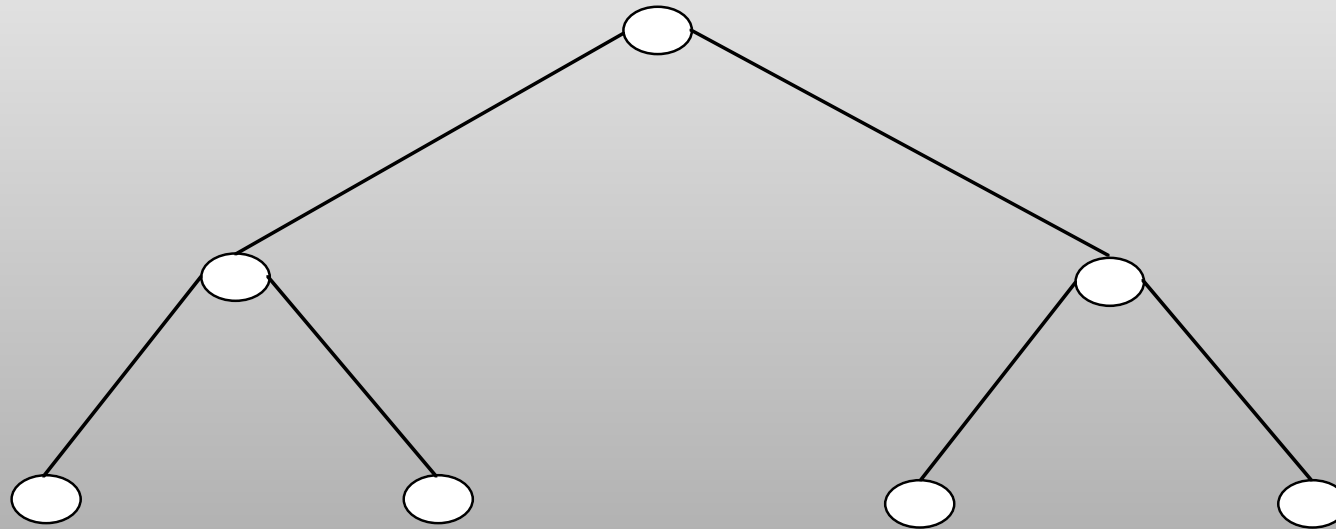
Informatics, Kai A. Simon

Taylor's functional foremanship



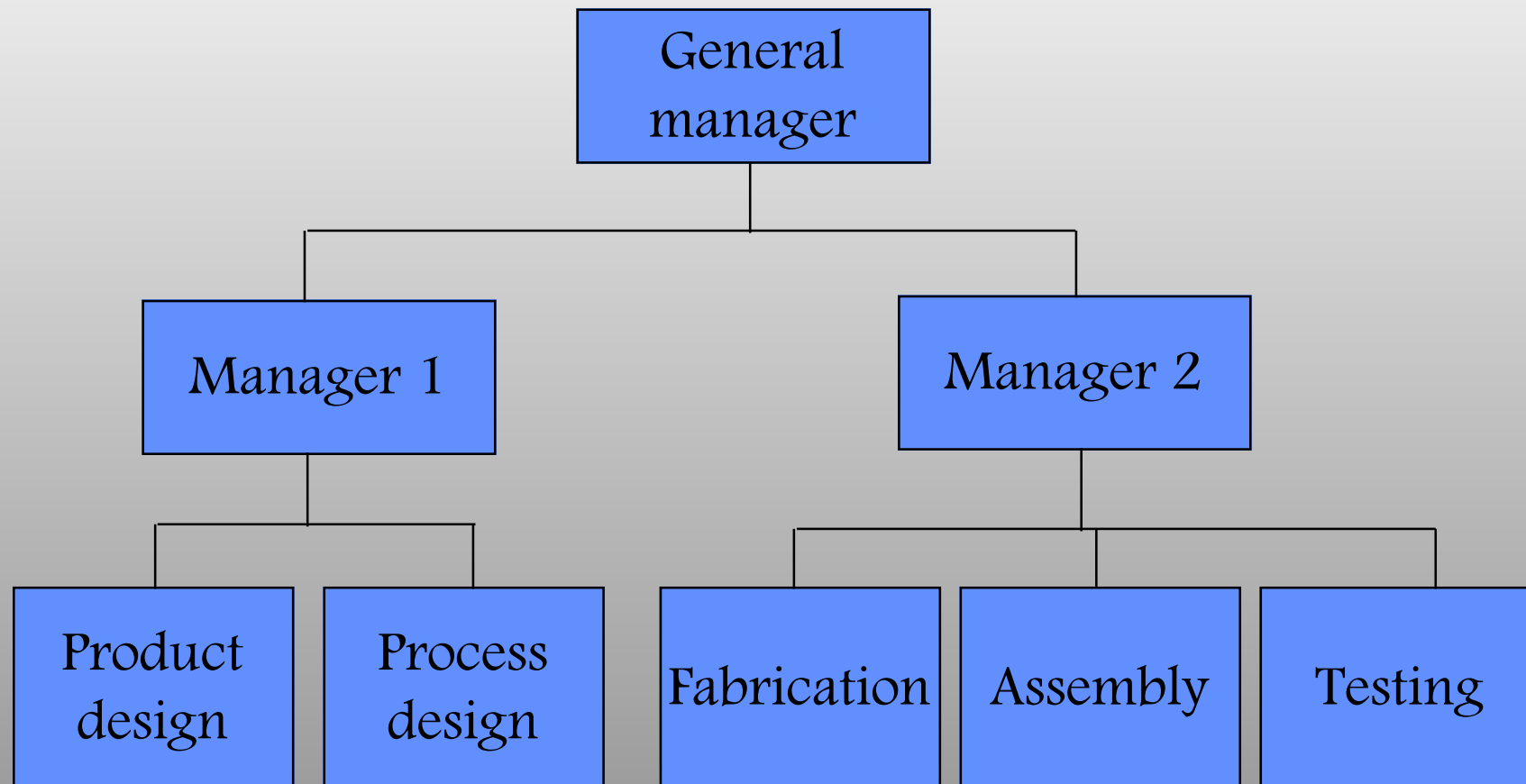
The scalar principle

Informatics, Kai A. Simon



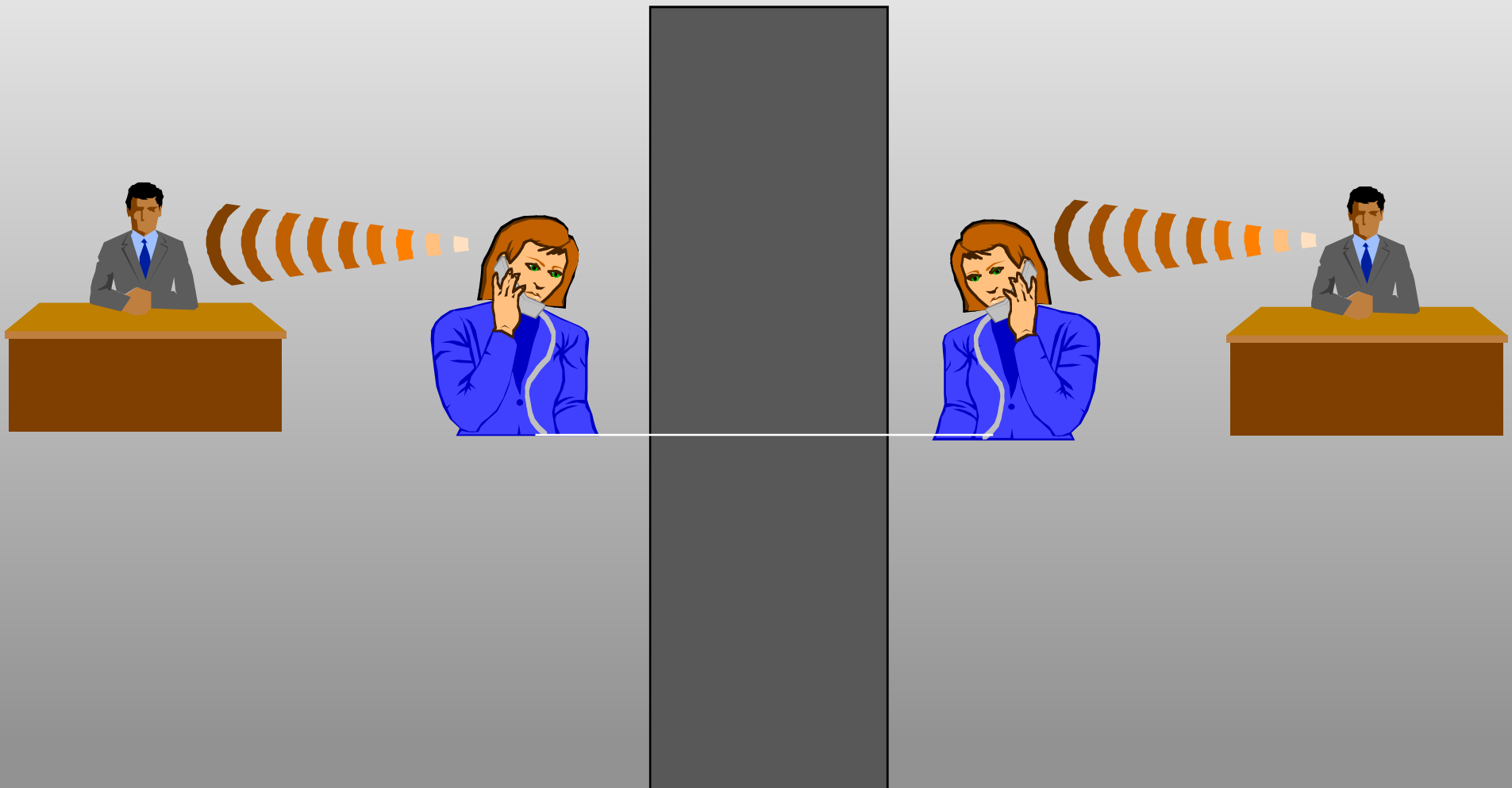
The hierarchical organization

Informatics, Kai A. Simon



Use of IT: Example phone

Informatics, Kai A. Simon



IT application domains

Informatics, Kai A. Simon

- **Improve communication within the existing organization**
- **Do what you do, but faster**
- **Automation of routine tasks**
- **Workflow management**
- **Reduce transaction costs and time**

Pathologies of hierarchies

Informatics, Kai A. Simon

- **Economic efficiency as ultimate criterion**
- **Conceptual closure**
 - **Goals are known**
 - **Tasks are repetitive**
 - **Output “somehow” disappears**
 - **Uniform resources always available**
- **“The individual bureaucrat cannot squirm out of the apparatus in which he is harnessed ...”**

Alternative design strategies

Informatics, Kai A. Simon

- **Reduction of complexity**
 - Manage environment
 - Utilize slack resources
 - Create self-contained tasks
- **Increasing organizational capabilities**
 - Improve communication
 - Create lateral relations

Environmental management

Informatics, Kai A. Simon

- **Modify environment**
 - Integration, cooperation
- **Response to environmental demands**
 - Competitive response, PR
- **Maneuvering**
 - Adapt strategy, reconsider domain
- **Increased costs**

Slack resources

Informatics, Kai A. Simon

- **Add resources to bottle-neck**
- **Reduce performance level**
- **Reduce exceptions and overload**
- **Increases costs**

Self-contained tasks

Informatics, Kai A. Simon

- **Reduce functional task design**
- **Provide group with all resources required**
- **Change the way of fragmentation**
- **Authority structure shifts**
 - From input, resource, skill
 - To Output, objective
- **Reduces requirements for coordination among specialized functions**

Improve communication

Informatics, Kai A. Simon

- **Improve information processing capabilities**
- **Investment in various technologies or manpower**
- **Increased costs for information processing capacities**
- **Increase information flow at planning time, reduce number of exceptions**

Lateral relations

Informatics, Kai A. Simon

- **Cutting lines of authority**
- **Different levels**
 - Two people
 - Matrix organization
- **Move level of decision making**
- **Integrating role**
 - Project/product manager

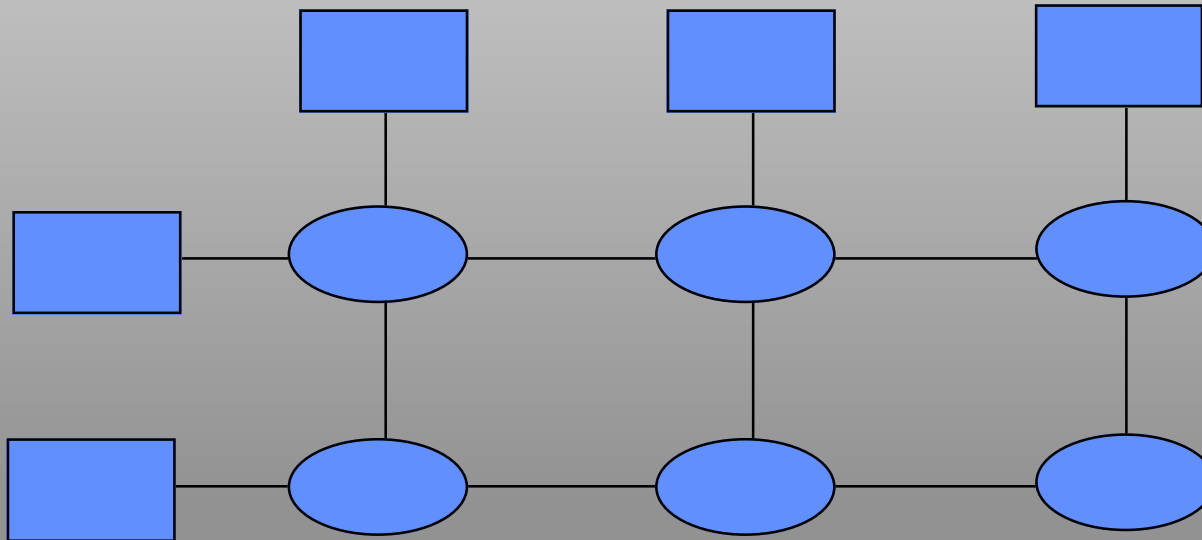
Levels of lateral relations

Informatics, Kai A. Simon

Person to person



Matrix organization



IT potentials

Informatics, Kai A. Simon

- **Collection and distribution of environmental information**
 - SIS
 - External networks
- **Group support**
 - Groupware, Teamware
- **Reduce need for slack resources**
 - Enhanced communication
 - Automation of routine tasks