

Information, Organization, and Management

Prof. Dr. Martin Hepp
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<http://www.heppnetz.de/teaching/img/>

Textbook: Wigand/Picot/Reichwald: *Information, Organization and Management*, John Wiley & Sons, 1997

About the instructor: Martin Hepp

- Professor of General Management and E-Business at the University of the German Federal Armed Forces, Munich, Germany.
- Ph.D. in Management Information Systems, Bayerische Julius-Maximilians-Universität, Würzburg, Germany (2003); M.B.A., ditto, Würzburg, Germany (1999)



See <http://www.heppnetz.de> for current papers and presentations.

Course Overview

- This class will introduce the fundamental economic effects and theories that explain the diffusion of Electronic Business, especially new institutional economics, and map these to core concepts of management science.

Learning Goal

The overall learning goal of the course is an in-depth understanding of the interplay of

- economics,
- communication and information research, management science,
- applied computer science,
- the underlying social and technical processes, and
- their implications for business and management.

Logistics

- **Lecture**

- Mondays, 13:15 - 14:45, room 0221, building 36

- **Exam**

- Topics are relevant for the comprehensive diploma exam ("Diplomhauptprüfung").

Office Hours and Contact

- By appointment only
- Building 36, Room 2232 (Secretary: Ms Lindner)

mhepp@computer.org

Learning Resources

- **Strongly recommended textbooks**
 - Rolf Wigand, Arnold Picot, Ralf Reichwald: Information, Organization and Management, 458 pp., John Wiley & Sons, 1997 (ISBN: 0471964549).
 - Arnold Picot / Ralf Reichwald / Rolf Wigand: Die Grenzenlose Unternehmung. Information, Organisation und Management. 5th edition, Gabler, 2003.



PDF available for purchase at
http://www.ciando.com/shop/book/index.cfm/fuseaction/show_book/bok_id/2812/cat_id/0/cat_nav/0

Learning Resources (2)

- Course Web page
 - <http://www.heppnetz.de/teaching/img/>
- All slides will be put on-line the night before the lecture
- Some materials may be password protected
 - User:
 - Password:

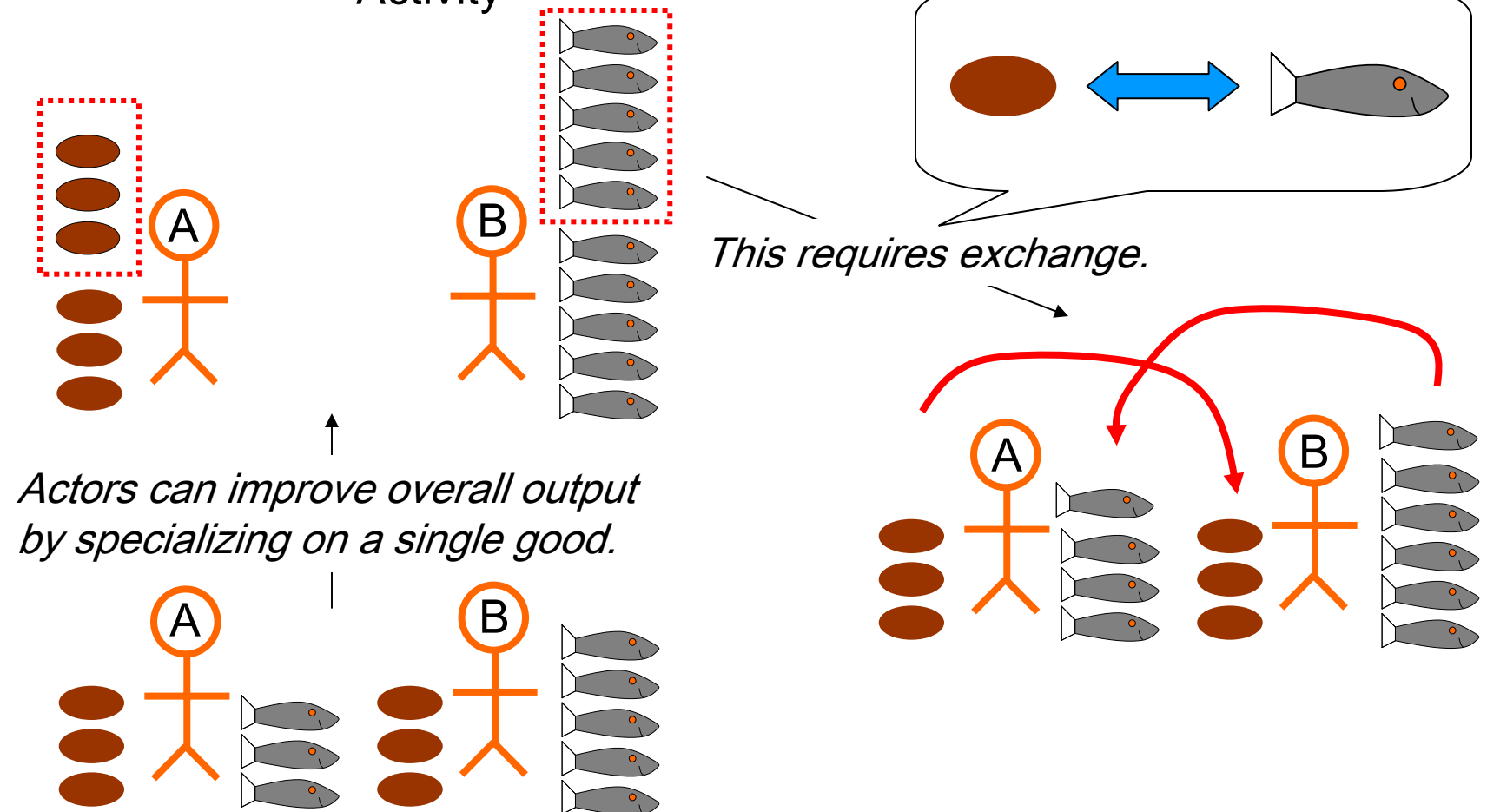
Attendance Policy

- I need you 😊
- This is a graduate course; **the exam will cover materials presented in class**, not just what's on the slides or in the textbook!

Unit 1: Overview

- Exchange and Coordination
- Division of Labor
- Computer-supported Coordination of Economic Activity
- Management
- Implications of Information and Communication Technology

Exchange and Coordination of Economic Activity



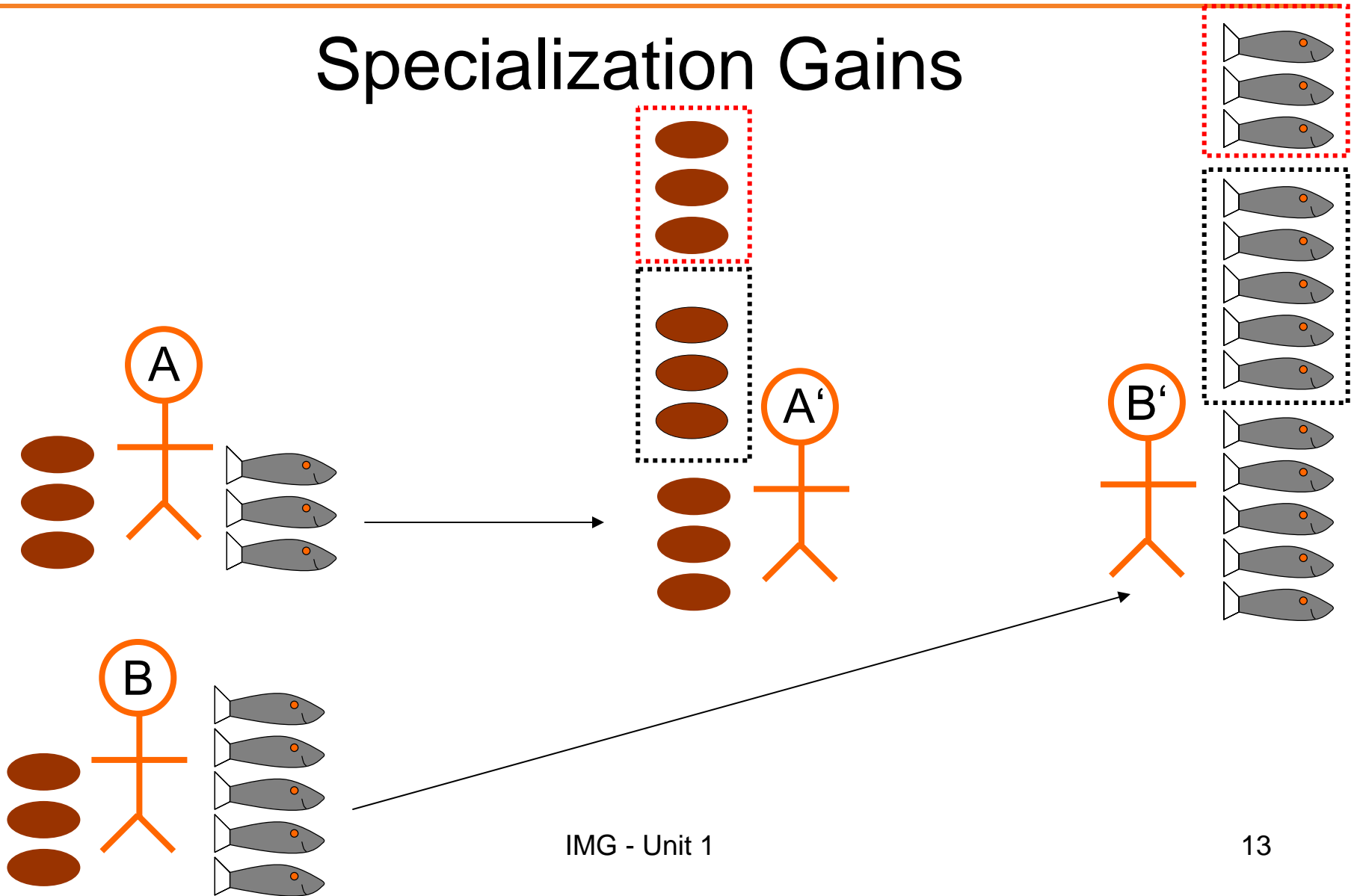
Division of Labor and Productivity

The greatest improvement in the productive powers of labor, ... seem to have been the effects of the division of labor.... To take an example, therefore, the trade of the pin-maker; *a workman not educated to this business,* nor acquainted with the use of the machinery employed in it, *could scarce, perhaps, with his utmost industry, make one pin in a day,* and certainly could not make twenty. But in the way in which this business is now carried on, not only the whole work is a peculiar trade, but *it is divided into a number of branches,* of which the greater part are likewise peculiar trades. One man draws out the wire, another straightens it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving, the head; to make the head requires two or three distinct operations; to put it on is a peculiar business, to whiten the pins is another; it is even a trade by itself to put them into the paper; and the important business of making a pin is, in this manner, *divided into about eighteen distinct operations,* which, in some factories, are all performed by distinct hands, though in others the same man will sometimes perform two or three of them.



Adam Smith:
The Wealth of Nations, 1776

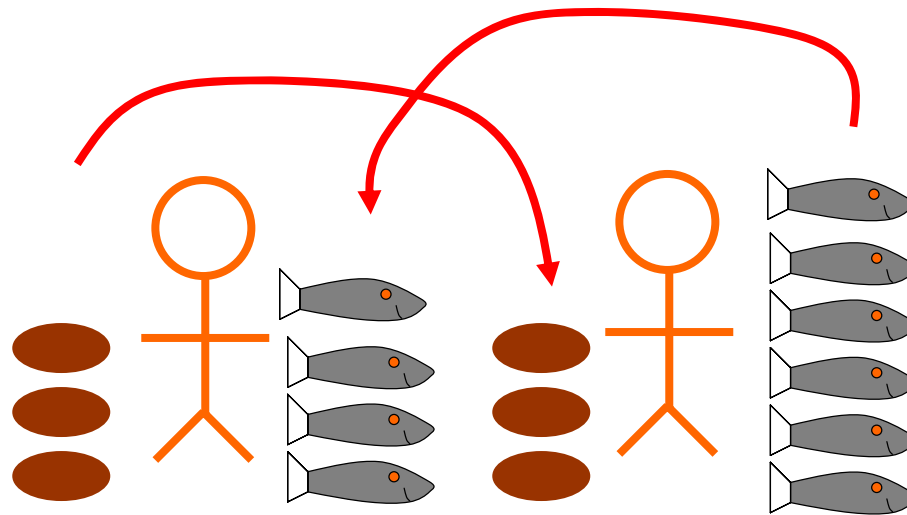
Specialization Gains



Coordination of Economic Activity

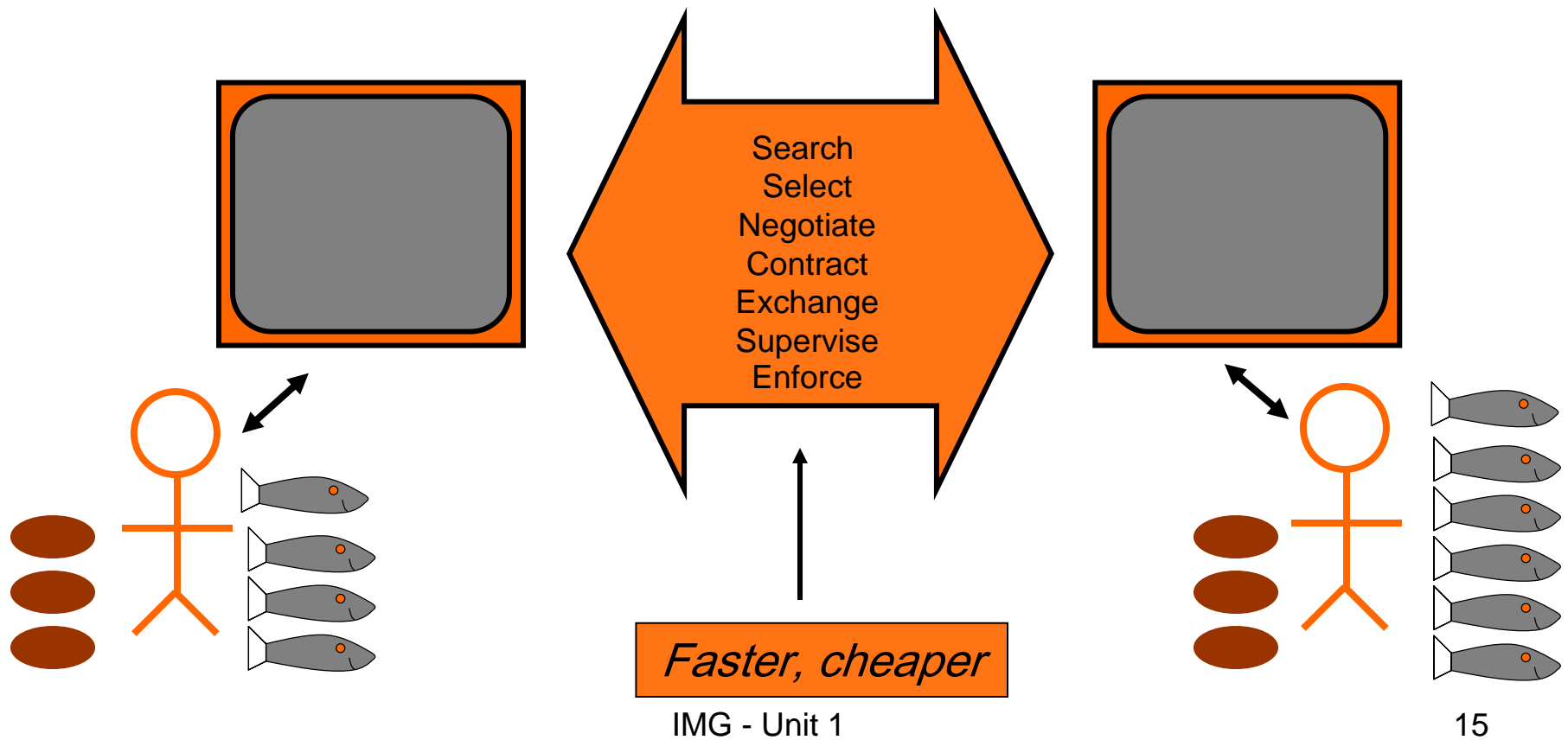


search – select – negotiate – set-up contract – exchange – supervise - enforce

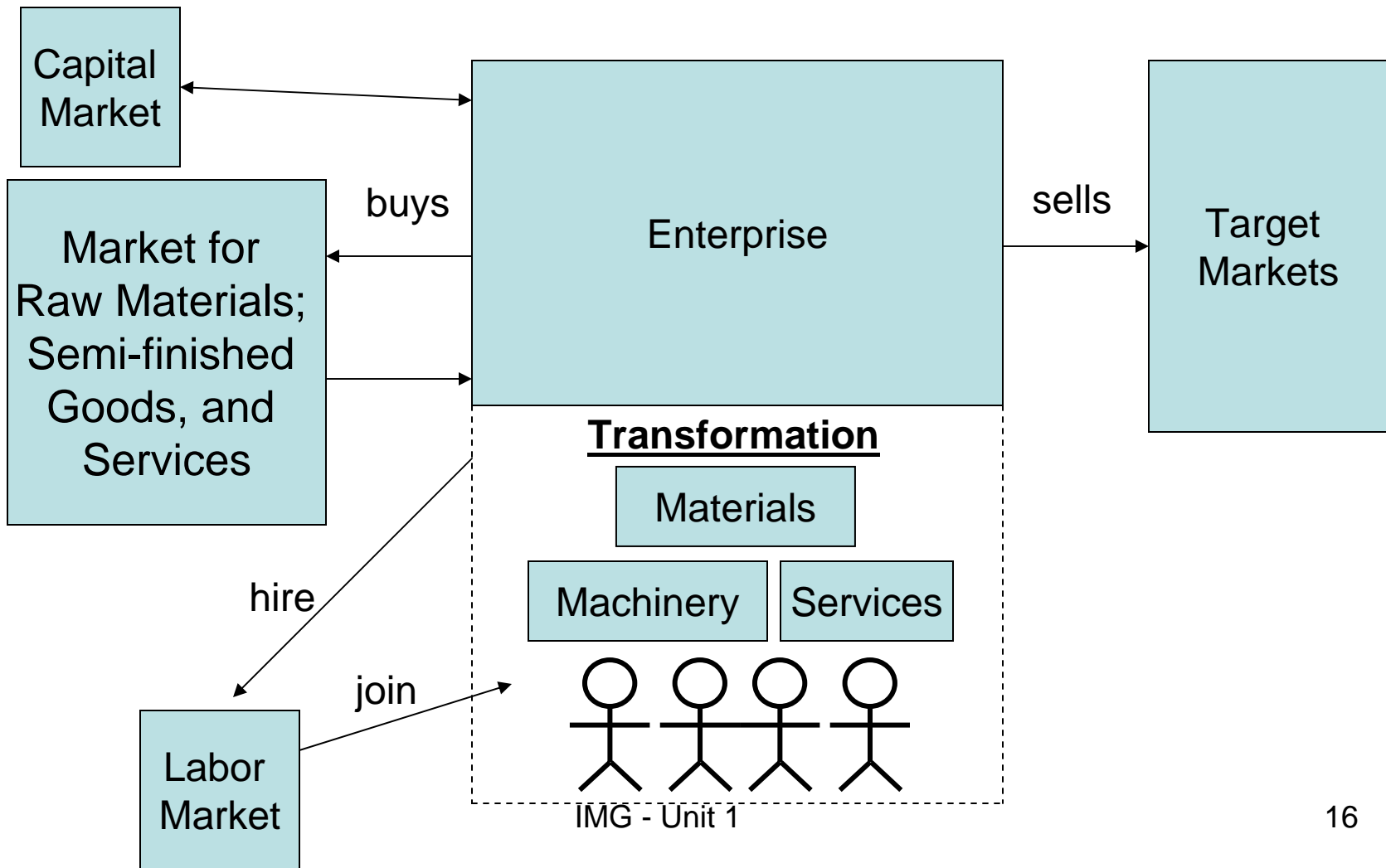


Tasks in their own rights that consume resources, too!

Computer-supported Coordination of Economic Activity



The Core Challenge of Any Enterprise



Management

- “The process of and/or the personnel leading and directing all or part of an organization (often a business) through the deployment and manipulation of resources (human, financial, material, intellectual or intangible).” [1]

[1] <http://en.wikipedia.org/wiki/Management>

Decision-Making and Coordination

What shall be produced?

Which quantities shall be produced?

Which input factors shall we use?

How much capital will we need?

Who shall do what, how, and when?

What price shall we sell at?

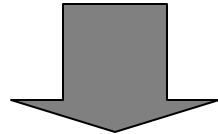
Make or Buy?

- **Buy:** Call Pizza Service and order one pizza.
 - **Coordination by the market**
- **Make:** Hire somebody. Have him/her grow wheat. Have the wheat grinded. Grow tomatoes. Grow olives. Make olive oil. (...). Have him or her make a pizza.
 - **Coordination by order and hierarchy**

Impact of ICT on Coordination

Pre-Web Era:

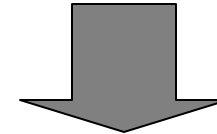
- Yellow Pages
- Telephone
- Fax
- Mail
- Trade shows



High Overhead
Slow

WWW-supported:

- Electronic Marketplaces
- E-Mail
- ICQ / Chat
- Voice-over-IP (Skype,...)
- Wikis



Less Overhead
Faster

Thank you!

The slides of today's class will be available
at <http://www.heppnetz.de/teaching/img/>
shortly.