# The Future of Work and Processes

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*MIT*
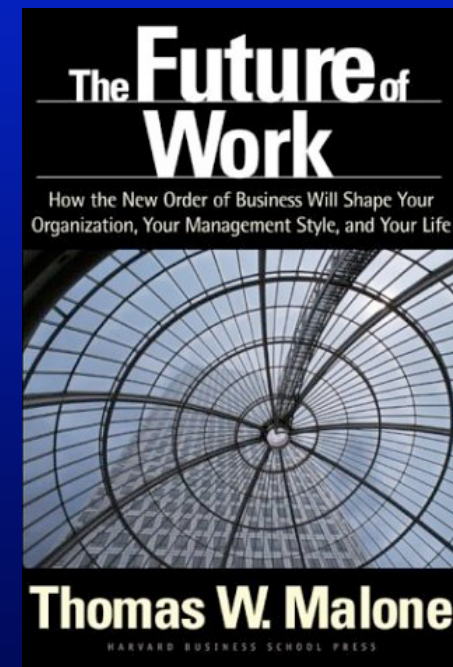
# The bottom line

We are in the early stages of an increase in human freedom in business . . .

. . . that may be as important as the change to democracies has been for governments.

# Why is this happening?

- **For the first time in history, we can now have the economic benefits of large organizations…**

  – economies of scale and knowledge

- **…without giving up the human benefits of small ones**

  – freedom, creativity, motivation, and flexibility.

# Why is this happening? (cont.)

- **This change is enabled by new technologies.**

  – Lower communication costs mean many people have enough information to make more decisions for themselves.

- **But the change is driven by human values.**

  – People use their freedom to get more of whatever they want.

# Example: eBay

- **On-line auctions for all kinds of products**

  – Toys, cars, antiques, real estate, computers, …

- **$3.3B revenue in 2004**

- **Over 56 million active buyers and sellers**

  – 430,000 people make their living from selling on eBay

  – If they were all employees, eBay would be one of the 5 largest private employers in the US!
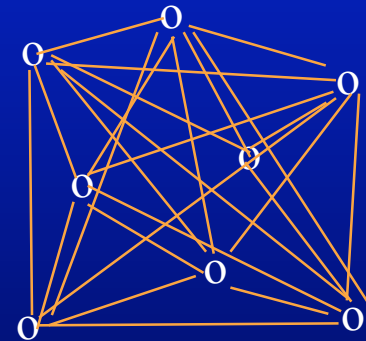
# Societies through history

**Bands**
**(Decentralized,**
**Unconnected)**

**Kingdoms**
**(Centralized)**
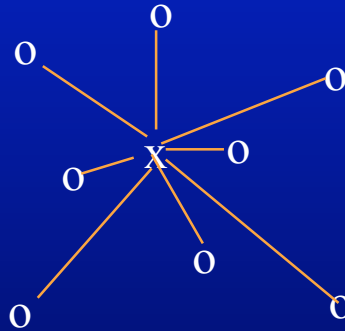
**Democracies**
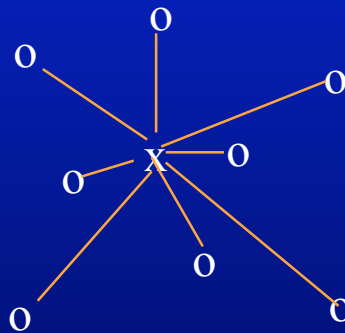**(Decentralized,**
**Connected)**

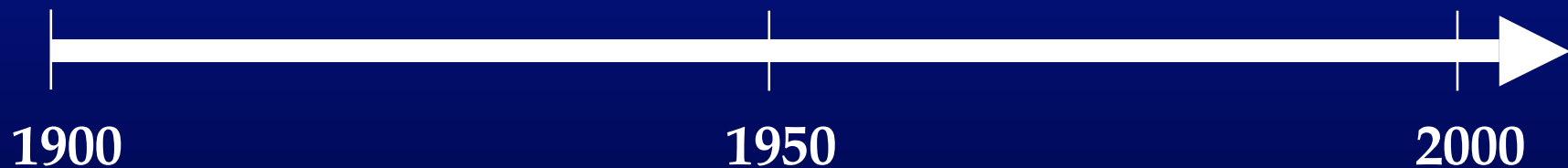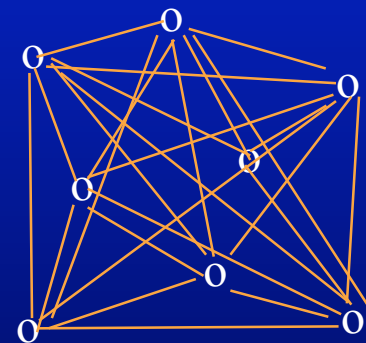# Businesses in the 20th century

Small, local
businesses

Large,
centralized
corporations

Empowerment,
Outsourcing,
Networked organizations

1900

1950

2000

# How many people can fit at the center of an organization?
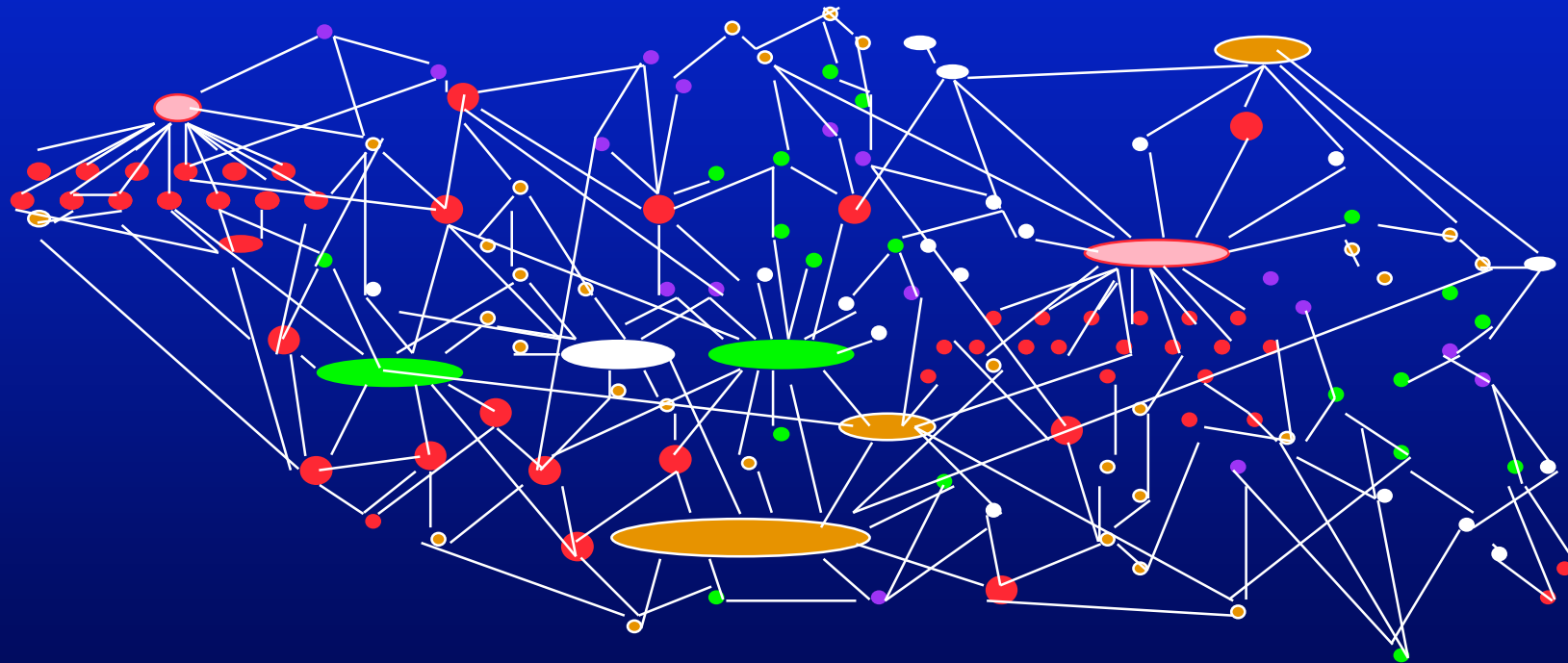
# The decentralization continuum

**Centralized hierarchies**

**Loose hierarchies**

**Democracies**

**Markets**

Centralized ←——————————————————→ Decentralized

# Loose hierarchies

# Example: AES Corp.

- **Worlds largest global electrical power producer**

  – 2004 revenue $9.5B. 30,000 employees in 27 countries.

- **Guiding principles**

  – Fairness, integrity, social responsibility, fun

- **Dennis Bakke (co-founder) says:**

  – "We never set out to be the most efficient or most powerful or richest company in the world—only the most fun."

# AES Corp. – Extensive delegation

- One of the best ways to have fun is to have responsibility for things that matter

- Very new and low-level employees have huge responsibility

  - maintenance workers manage investment fund

  - plant technicians purchase major equipment

  - entry level analysts and engineers manage billion dollar acquisitions

# AES Corp. – How does it work?

- **Very careful about hiring**

- **You don't need approval, but you have to ask for advice**
  - **Extensive use of email**

- **Managers' role:**

  - **Give advice, when asked**

  - **Set up structure and pick who to make decisions**

  - **Key role in compensation**

# Democracies

# Example –
# Mondragon Cooperative Corp.

- 150 worker-owned cooperatives in Spain

- 2003: $11.9B revenue, 68,000 employees

- Mostly manufacturing, but includes bank, supermarket chain, consulting firm

# Mondragon organizational structure

- Members of each cooperative elect "Governing Council" to hire and fire Managing Director, distribute profits, etc.

- General Assemblies twice a year

- Equivalent structures for 22 industry groups and whole corporation

- Corporation doesn't own subsidiaries; individual cooperatives own the corporation.

# Mondragon lessons

- Most workers are owners

- One person, one vote.

- Complex multi-level democratic structure

- Workers are motivated as owners and decision-makers

# Markets

# Scenario:
# The E-Lance Economy

- 1 - 10 people per firm

- Temporary combinations for various projects

- Examples

  - Making films
  - Construction

# Intel Scenario: Internal market for manufacturing capacity

- Plant managers sell "futures" for products they could produce at specific times in the future

- Sales people buy "futures" for products they could sell to external customers

- Prices fluctuate as knowledge of future supply and demand changes

- Prices determine which products actually get produced in the factories and who gets to sell them

# Question

- **How much of the intelligence of people throughout an organization can we use in a decentralized organization?**

**Video courtesy of**

**Cinematrix**
**Interactive Entertainment Systems, Inc.**

**tel: 415-662-2274 , email: info@cinematrix.com**

# How can we understand all this?

If the boundaries between organizations are blurring. . .

If products, tasks, and organizations are all temporary. . .

If everyone makes their own decisions. . .

. . . How can we think about the organization of work?

What will replace organization charts?

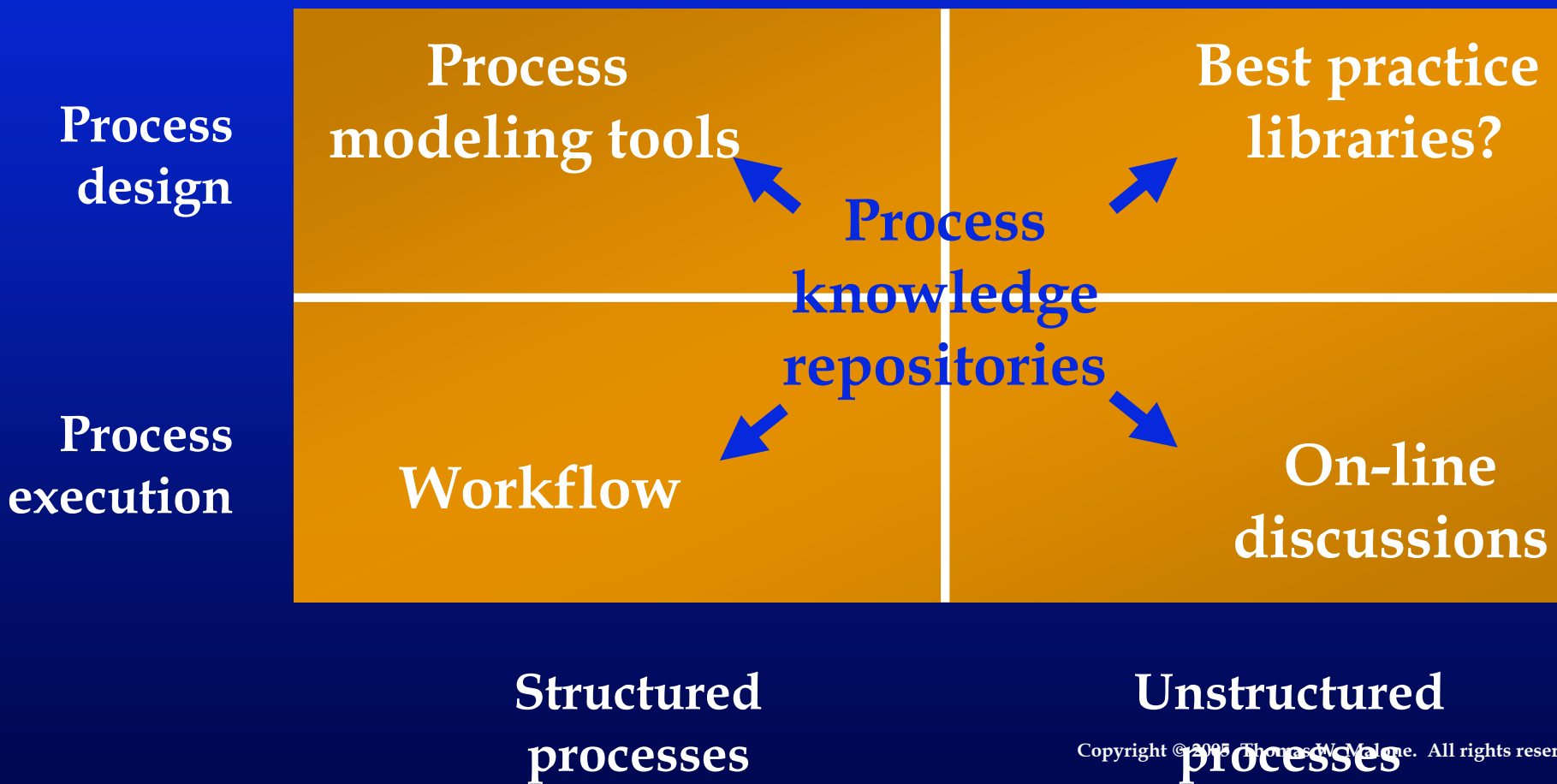# Processes are key

- **Processes (not structures) are the key building blocks for new organizations.**

# A slogan for process management

We need to give as much attention to

managing *processes*


as we have in the past to

managing *products*.

**What kinds of software tools do we need?**

|  | **Structured processes** | **Unstructured processes** |
|---|---|---|
| **Process design** | Process modeling tools | Best practice libraries? |
| **Process execution** | Workflow | On-line discussions |

Process knowledge repositories

# Needed:
# Process Knowledge Repositories

- **Consistent, easy-to-use collections of knowledge about activities, their variations, and interrelationships**

- **Used for multiple purposes**

# Example:
# MIT Process Handbook

- **Software**

  - Repository engine, web server, editing tools

- **Contents**

  - Over 5000 processes and activities

    » Generic business models and activity types, case examples, on-line discussion forums

# Sample uses

- **Process modeling**

- **Sharing best practices and benchmarking**

- **Software design and generation**

- **…**

- **Inventing new business ideas**

# What kinds of conceptual tools do we need?

## Deep structure

Underlying "meaning" of a process

– Goals

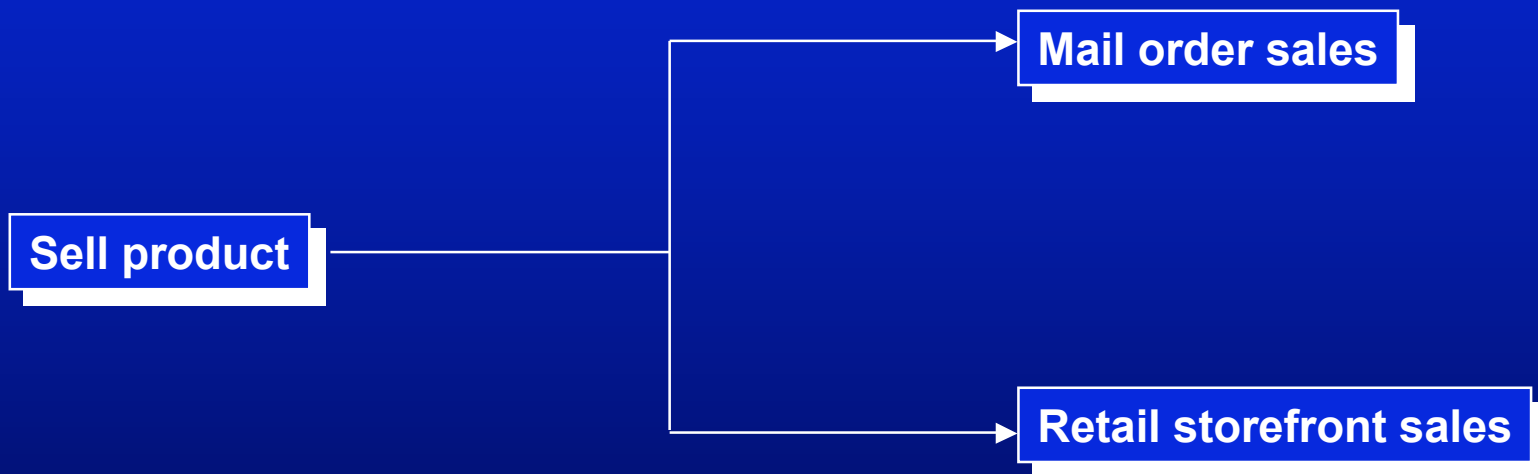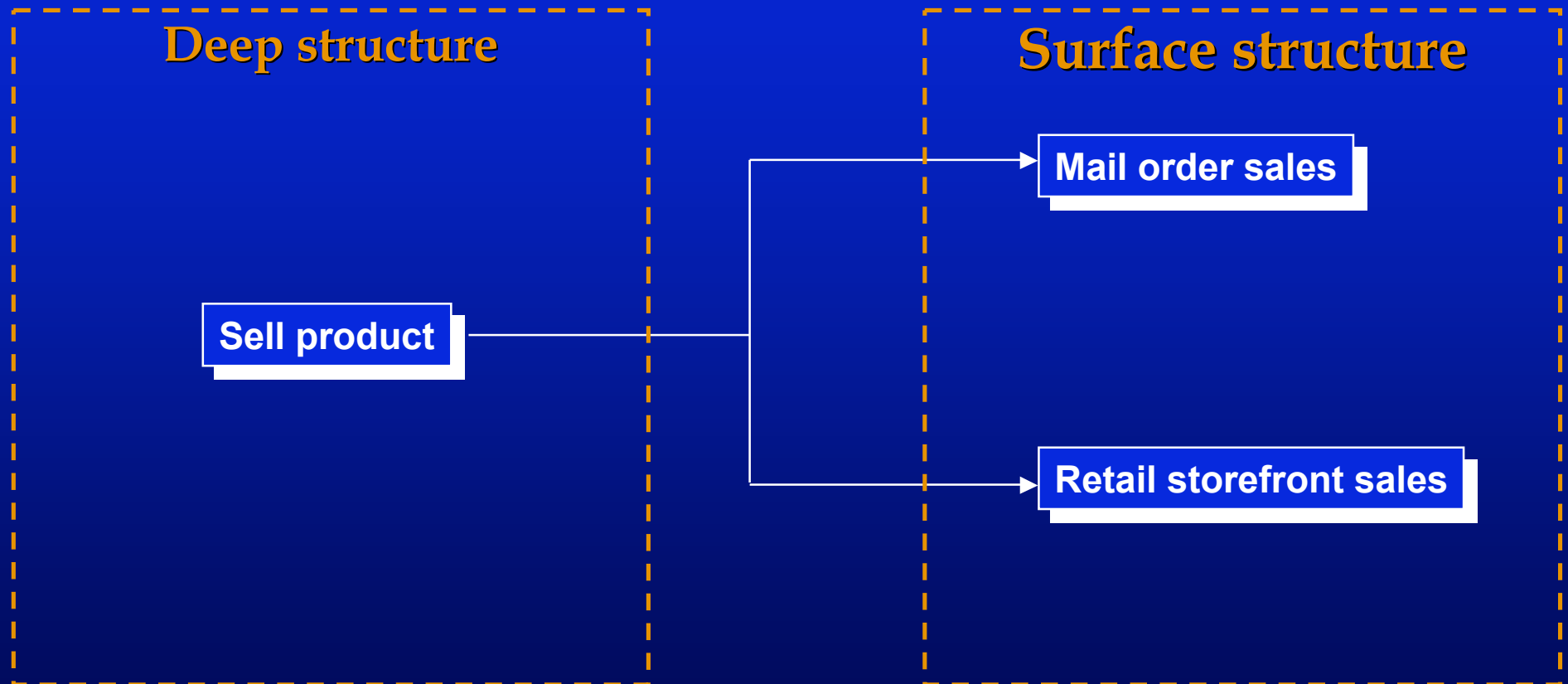– Core activities

– Constraints

– ...

## Surface structure

Details of how a process occurs in a particular situation

– Who

– When

– Where

– How
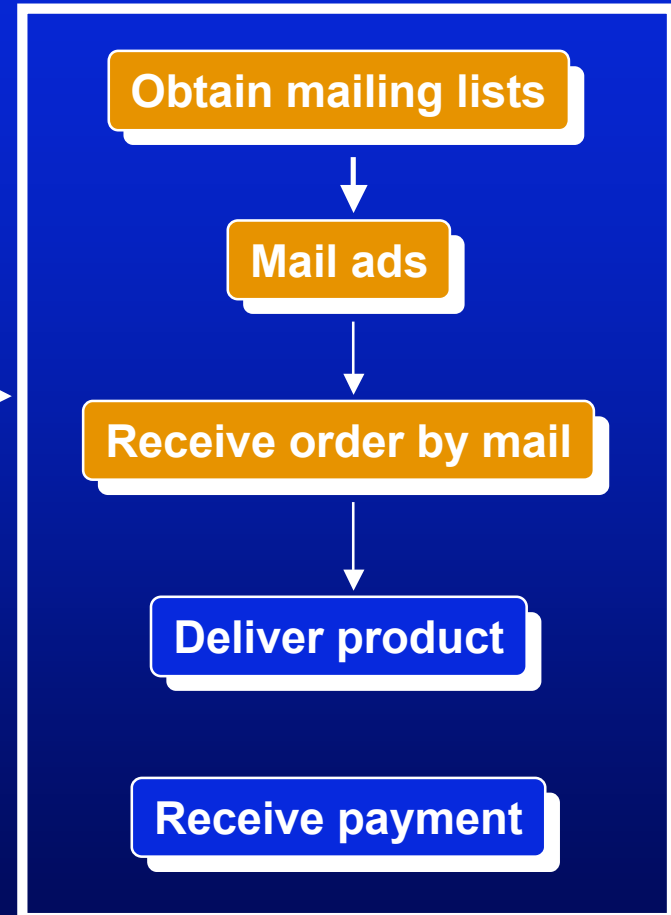
– ...

# Specialization of processes

Sell product

Mail order sales

Retail storefront sales

# Specialization of processes

Deep structure

Surface structure

Sell product

Mail order sales

Retail storefront sales

# Sell product

- **Identify prospects**
- **Inform prospects**
- **Obtain order**
- **Deliver product**
- **Receive payment**

# Retail store sales

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**Clerk waits on customer**

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**Stock shelves**

**Customer pays at register**

# Mail order sales

### Sell product

**Obtain mailing lists**

**Mail ads**

**Receive order by mail**

**Deliver product**

**Receive payment**

## Sell product

**Identify prospects**

**Inform prospects**

**Obtain order**

**Deliver product**

**Receive payment**

# Retail store sales

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**Clerk waits on customer**

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**Stock shelves**

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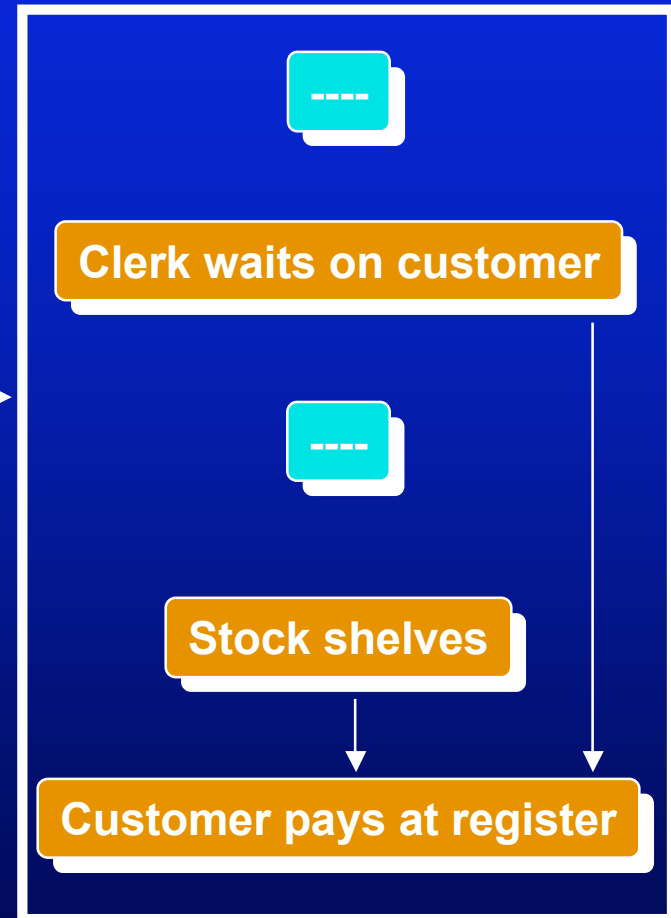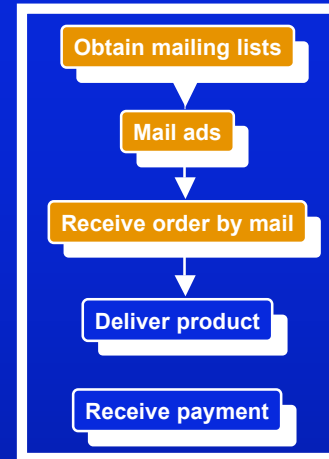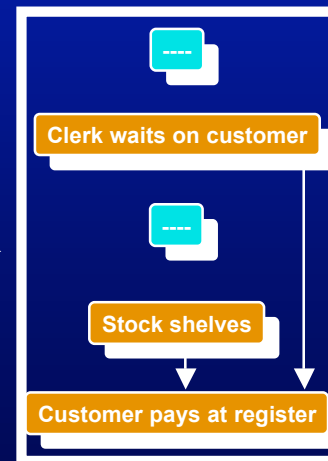
# Example:
# Inventing new ideas about hiring

- Special project with AT Kearney and one of their clients ("Firm A")

- Focus on using the Process Handbook concepts and tools to develop radical new ideas about the hiring process

# The MIT eBusiness Process Handbook

**Monday, October 23, 2000**

Home

Directory

Search

History

Profile

Logout

Administration

## *Hire human resources*

- Related Processes
- Show flow diagram
- Generate new ideas!
- Join the discussion
- Be notified of updates
- Print this process
- Find more information
- View with Compass Explorer (advanced)
- Switch to Edit mode (advanced)

### Description of *Hire human resources*                    Parts | Properties | Top

This is a general version of a hiring process. It covers the acquisition of labor where the person is selected and paid by the organization. Other ways of acquiring labor may be to outsource the work, where the particular person used to do the work is not selected by the organization, or to get donated labor.

### Parts of *Hire human resources*                    Description | Properties | Top

| Identify staffing need | Identify potential sources | Select human resources | Give offer | Receive employees | Pay employee | Manage human resource providers |
|---|---|---|---|---|---|---|

### Properties of *Hire human resources*                    Description | Parts | Top

Document: Done

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## *Hire human resources*

· Back to Details

### New Ideas!

Below is a list of 17 new and potentially useful ideas. These processes are not in the repository but instead were generated automatically from processes that are similar to *Hire human resources*. Because they are computer generated some may seem peculiar but they may provide you with new ways of thinking about this process.

If you wish to create an implementation of an idea listed below and save it in the repository, you can switch to edit mode and then click on the name of the idea.

| 💡 The idea... | The process that inspired it |
|---|---|
| 1. Hire human resources in electronic store | · Buy in electronic store |
| 2. Hire human resources in physical store | · Buy in physical store |
| 3. Hire human resources via mail order | · Buy via mail order |
| 4. Hire human resources via telemarketing | · Buy via telemarketing |
| 5. Hire human resources via television direct response marketing | · Buy via television direct response marketing |
| 6. Hire human resources via emailfax | · Buy via email/fax |
| 7. Hire human resources using simple EDI | · Buy using simple EDI |

Document: Done

File  Edit  View  Go  Communicator  Help

## New Ideas!

Below is a list of 44 new and potentially useful ideas. These processes are not in the repository but instead were generated automatically from processes that are similar to *Hire human resources*. Because they are computer generated some may seem peculiar but they may provide you with new ways of thinking about this process.

If you wish to create an implementation of an idea listed below and save it in the repository, you can switch to edit mode and then click on the name of the idea.

| 💡 The idea... | The process that inspired it |
| --- | --- |
| 1. Hire human resources using posted prices in electronic store | · Buy in electronic store using posted prices |
| 2. Hire human resources using auction in electronic store | · Buy in electronic store using auction |
| 3. Hire human resources using lottery in electronic store | · Buy in electronic store using lottery |
| 4. Hire human resources using bulk purchasing network | · Buy using bulk purchasing network |
| 5. Hire human resources via electronic lottery | · Sell IPOs via electronic lottery<br>· Sell via electronic lottery |
| 6. Hire human resources via electronic BPN | · Sell general merchandise via electronic BPN |
| 7. Hire human resources using Internet | · Sell dolls using Internet<br>· Sell customer configured item using |

Document: Done

# Open Process Handbook Initiative

- **Open source version of Process Handbook planned**

    – **http://ccs.mit.edu/ophi**

- **See also:**

    – **Malone, Crowston, Herman (Eds.), *Organizing Business Knowledge:  The MIT Process Handbook,* MIT Press, 2003.**

# What does this mean for management?

- By making it feasible for more people to make more decisions, IT can help create organizations in which workers are more dedicated, flexible, and innovative.

- A key to managing—and inventing—these organizations is focusing on *processes*, not organization charts.

# What does this mean for IT?

- **Some of the most important innovations in the coming decades will not be new technologies.**

- **They'll be new ways of organizing work that are made possible by these new technologies.**

# What does this mean for you?

- You probably have more choices than you realize.

- To make the choices wisely, you need to think about what really matters to you.

# How can you know what to do?

- "... 'What can I actually *do*?'  The answer is as simple as it is disconcerting:  we can, each of us, work to put our own inner house in order.  The guidance we need for this work cannot be found in science or technology, . . . but it can still be found in the traditional wisdom of mankind."

    – E. F. Schumacher, *Small Is Beautiful,* 1973