Process Design & Engineering*

Professor Charles Fine
Massachusetts Institute of Technology
Sloan School of Management
Cambridge, Massachusetts   02142

http://cfp.mit.edu

Adapted from Michael Hammer*

Hammer's Process Concept

PROCESS: an *organized* group of *related* tasks that work *together* to create a *result* of value
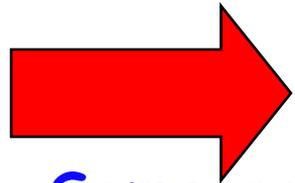
➡️ ## end-to-end work

- Some common processes
    - order fulfillment
    - procurement
    - product development
   - quality management
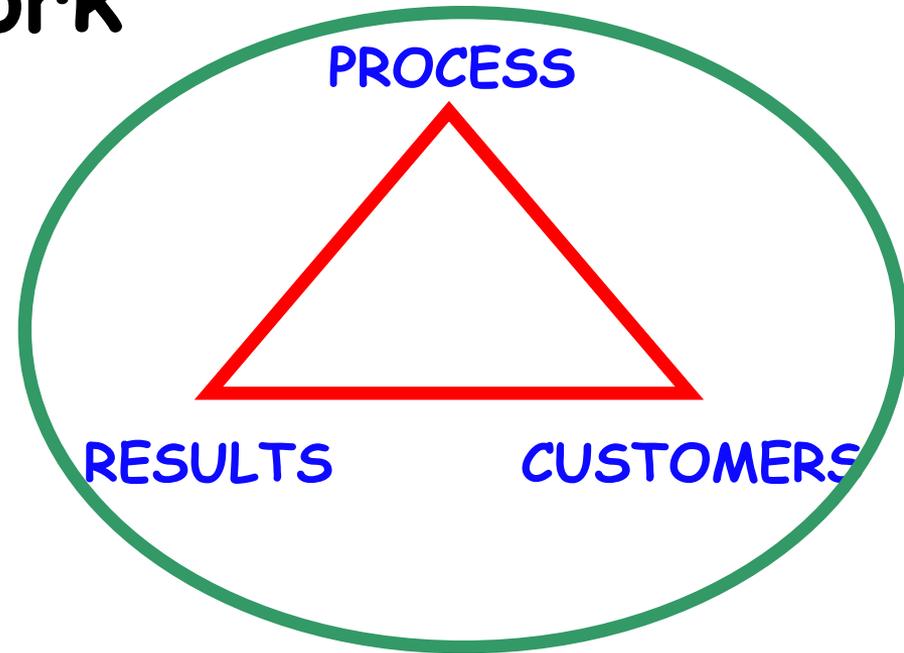
cross-functional, outcome-focused

PROCESS

RESULTS   CUSTOMERS

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2

Order Fulfillment: Mapping the Process & Owners

Order Entry	Credit Check	Inventory Allocation	Production Scheduling	Assembly
Sales Dept.	**Finance Dept.**	**Materials Dept.**	**Production Control**	**Manufac-turing**

Pick & Pack	Transport. Planning	Shipping	Billing	Collections
Warehouse	**Logistics**	**Logistics**	**Finance Dept.**	**Accounts Receivable**
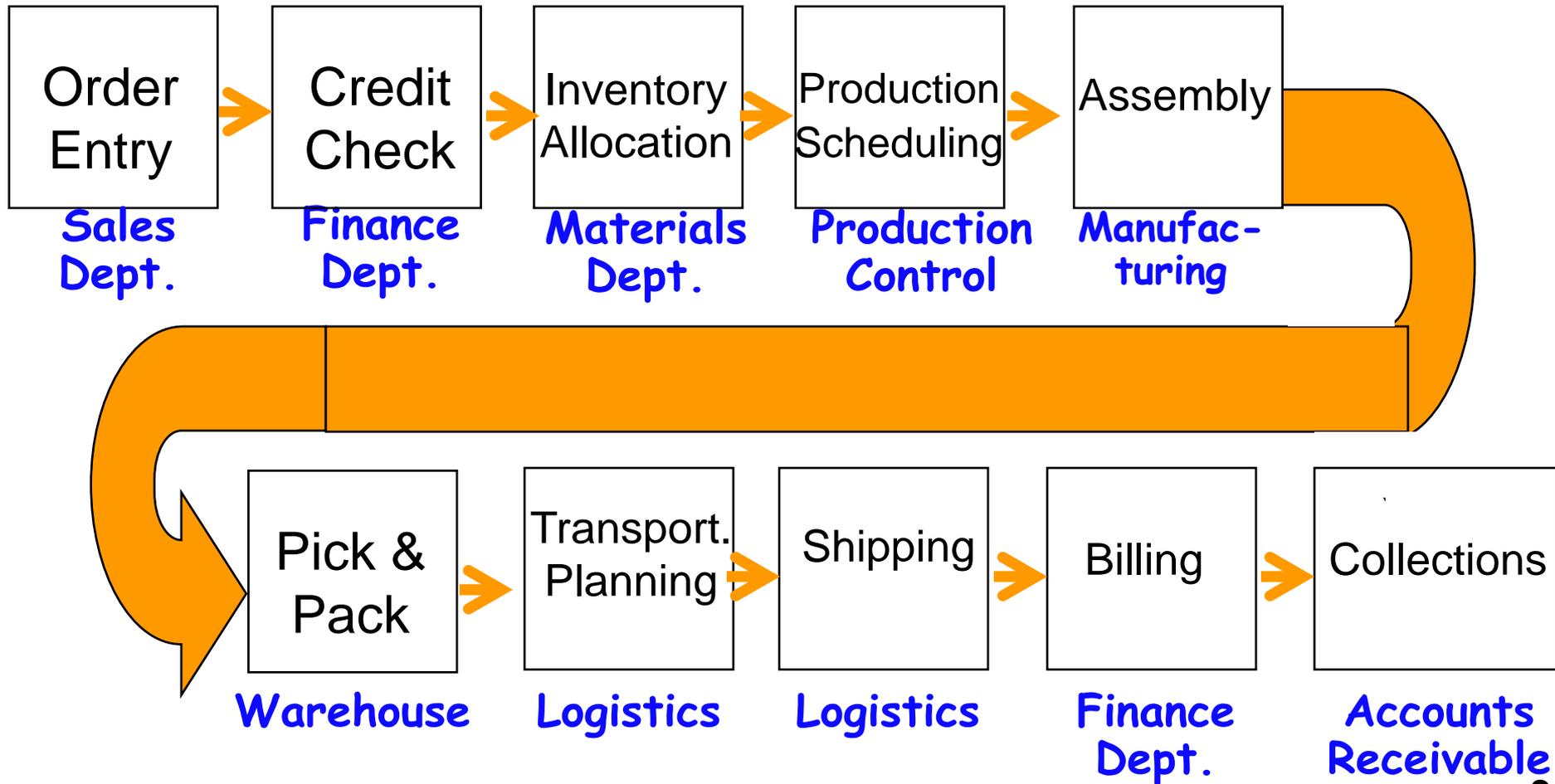
Optimize production schedules vs. Deliver solutions on time

Process Orientation

Process: An organized set of related tasks that come together to create a result of value

   (e.g., order fulfillment process, product development process)

Value-Added Work:

   Necessary tasks the customer will pay for

   (e.g., assemble the product, design improved performance, reduce cost)

Non-Value-Added Work:

   Necessary tasks the customer will NOT pay for

   (e.g., update inventory records, install MRP, balance the books)

Waste:

   Unnecessary tasks the customer will NOT pay for

   (e.g., rework improper assemblies, resolve manufacturing-sales disputes)

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Principles of High Performance Process Design

- A process should be performed by as few people as possible to minimize handoffs

- Strive for simplicity
  non-value-adding work <==> complexity

- Structure in terms of alternatives rather than exceptions *triage* keeps the basic flows clean

Adapted from M. Hammer

The Facets of the Process Enterprise

- **Essentials**
- **A Model of the Enterprise in Process terms**
- **Process Owners**
- **Designs**
- **Measurement**
- **Teams**
- **Leadership**
- **Enablers**
- **Process literacy**
- **Integration**
- **Coaching**
- **Culture**
- **Information Technology**
- **Facilities**
- **Human Resource Systems**
- **Management Systems**

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Cisco's Processes

Idea to Offering (Pdt Dev)

Research to concept
Concept to commit
Design to prototype
Validate to ramp up
Monitor to improve
Improve to EOL

Market to Order (Sales)

Research to market identification
Market identification to plan
Campaign to lead
Lead to order
Account strategy to relationship

Quote to Cash (Order Fulfillment)

Quote to order entry
Order validation to commitment
Delivery to revenue recognition
Invoice to cash
Contract to renewal

Forecast to Delivery (Mfg Ops)

Forecast to demand
Demand to Plan
Manage to Buy
Plan to Build
Ship to Receive
Commit to deliver service

Issue to Resolution (Qual Imp)

Issue detection to problem identification
Develop solution to resolution
Return to replace
Closed loop feedback

SUPPORT THE BUSINESS

Resource management
Financial mgmt
Fixed assets mgmt
Hire to develop/develop to retire
Vendor/Partner mgmt
Other

Business management
Strategy and planning / Acquisitions
Brand / Identity mgmt
Knowledge mgmt/Intellectual Capital
Customer feedback
Metrics Review
Other

7

Recognizing a Process Enterprise

- **Teams are the norm**
  as opposed to an occasional exception
- **Workers are professionals with broad roles, responsibility, and decision-making authority**
- **Measurement is taken seriously on an end-to-end basis**
- **Supervisors act as coaches developing people but not managing their work**
- **Structure revolves around processes w/ process owners**

- **Teams are supported by the**
  -infrastructure: facilities & systems, and
  -culture: customer orientation, sharing, accountability, discipline

8

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Process Design Mindset

- **Maintain the customer's perspective**
  (create process metrics to support customer view)

- **Seek out process leverage points**

  (what would make a very big difference --pro or con?)

- **Increase the value added**

  (reengineer the product as well as the process)

- **"Is it worth it?"**

  (sensitivity to tradeoff)

- **Always ask "why?"**

  (what's the real purpose? --goal vs. mechanism)

- **Keep things simple**

  ("complexity is the work of the devil")

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9

Reengineering Principles

1. Organize around outcomes, not tasks
2. Have those who use the output of a process perform the process
3. Subsume information-processing work into the real work that produces the information
4. Treat geographically dispersed resources as though they were centralized
5. Link parallel activities instead of integrating their results
6. Put the decision point where the work is performed, and build control into the process
7. Capture information once and at the source

10

Ref: M. Hammer

Top Ten "Mistakes" in Reengineering (recast as "do's")

1. Understand the reengineering concept(s).
2. Identify your processes.
3. Understand existing processes. Don't over analyze them.
4. "Serious" and committed leadership is critical.
5. Encourage aggressively creative ideas.
6. Use prototypes and experiments to test ideas.
7. Be fast. Be focused.
8. Everything should be on the table.
9. Implementation should be fast, improvisational, iterative.
10. Tend to the needs of your people.

Hammer & Stanton, *The Reengineering Revolution*, Chapter 2, 1995

The Process Transition

From	To
Task	Process
Worker	Professional
Job	Career
Department	Resource pool
Supervise	Support
Productivity	Results
Compensation	Earnings
Manager	Owner/coach
Organization chart	Process model
Operating committee	Process council
Executive	Leader

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