KNOWLEDGE TRANSFER AND SHARING

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Knowledge Transfer & Knowledge Sharing

Capture Tools Programs, books, articles, experts

Intelligence gathering

Shells, tables, tools, frames maps, rules

KNOWLEDGE CAPTURE (Creation)

KNOWLEDGE CODIFICATION

DATABASES

TESTING AND DEPLOYMENT

Explicit Knowledge

GOAL IS INNOVATION

KNOWLEDGE TRANSFER & SHARING

Knowledge Applications
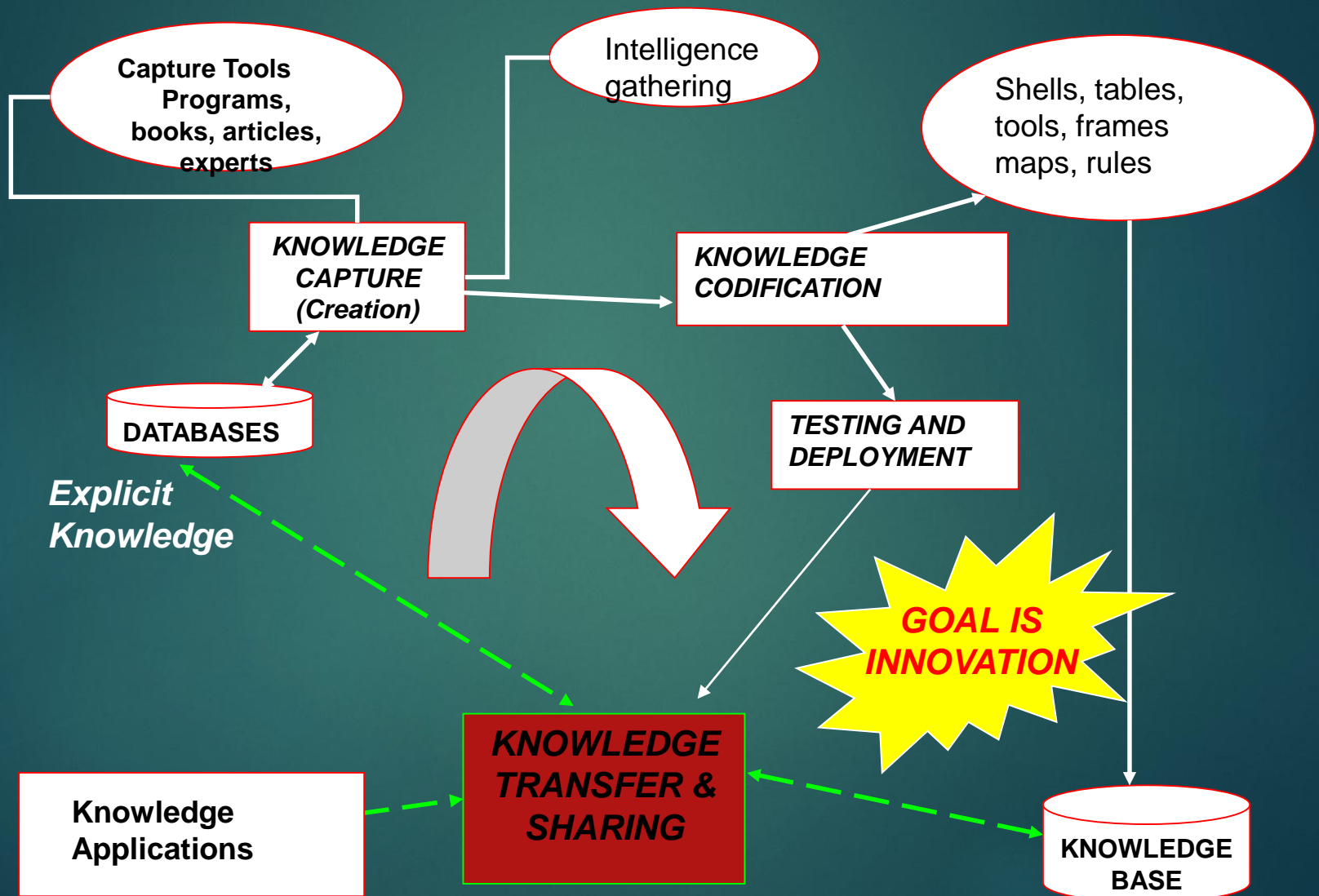
KNOWLEDGE BASE

Fundamentals of KT (1/2)

- ▶ Should be a daily, integral part of a learning organization.

- ▶ Transmitting (or conveying) the knowledge of one source to another source and the appropriate use of the transmitted knowledge

- ▶ Goal is to promote/facilitate knowledge sharing, increase collaboration and networking.

Fundamentals of KT (2/2)

▶ By working together, communicating, learning by doing, embedding knowledge through procedures, or document exchanges

▶ Sources: knowledge bases, experts, etc.

▶ Media: LAN,, secure/insecure lines, encrypted/plain text, etc.

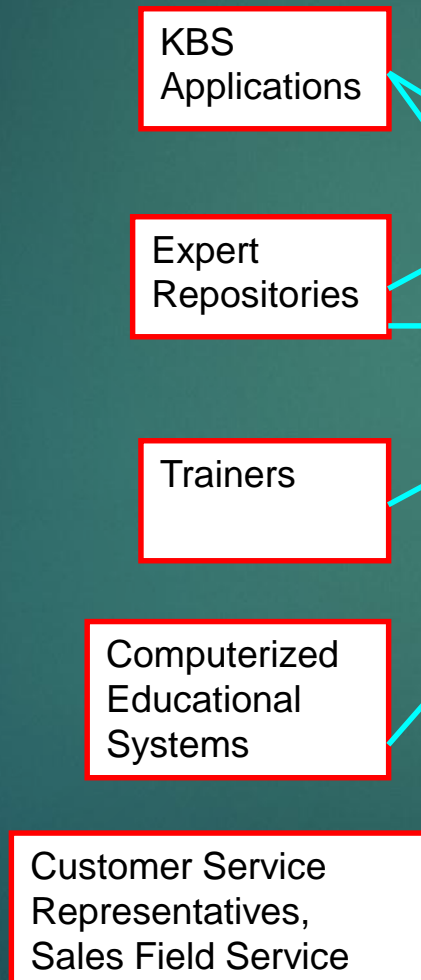▶ Consumers: another application, a manager, a customer, etc.

Knowing-Doing Gap

▶ A situation where an organization knows what to do, but ignore the information available and perform differently

▶ Knowing about this problem should help organizations make corrections

▶ Set up a KT and sharing environment to benefit all employees

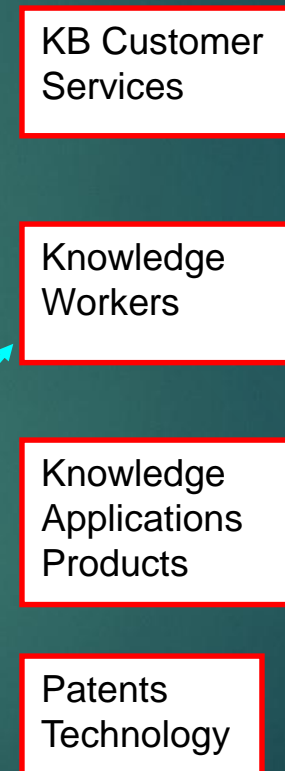# Partial View of a Knowledge Transfer and Sharing Scenario in An Organization

Knowledge Sources

Knowledge Consumers

Transfer

KBS Applications

Expert Repositories

Trainers

Computerized Educational Systems

Customer Service Representatives, Sales Field Service

KB Customer Services

Knowledge Workers

Knowledge Applications Products

Patents Technology

Guidelines for Successful KT and Sharing

▶ Building an Atmosphere of Trust within the Organization

▶ Collaboration/Cooperation are not Rivalry/Competition

▶ Creating the Culture to Accommodate Change

▶ *Reasoning* (why to do) BEFORE *Processing* (how to do)

▶ Knowing how the Organization handles Mistakes

▶ Doing is BETTER than Talking

Guidelines for Successful KT and Sharing

- ▶ How Management view and reward Knowledge Transfer

- ▶ Determine Employee Job Satisfaction

  - ▶ **Degree of match between vocational needs and job requirements**
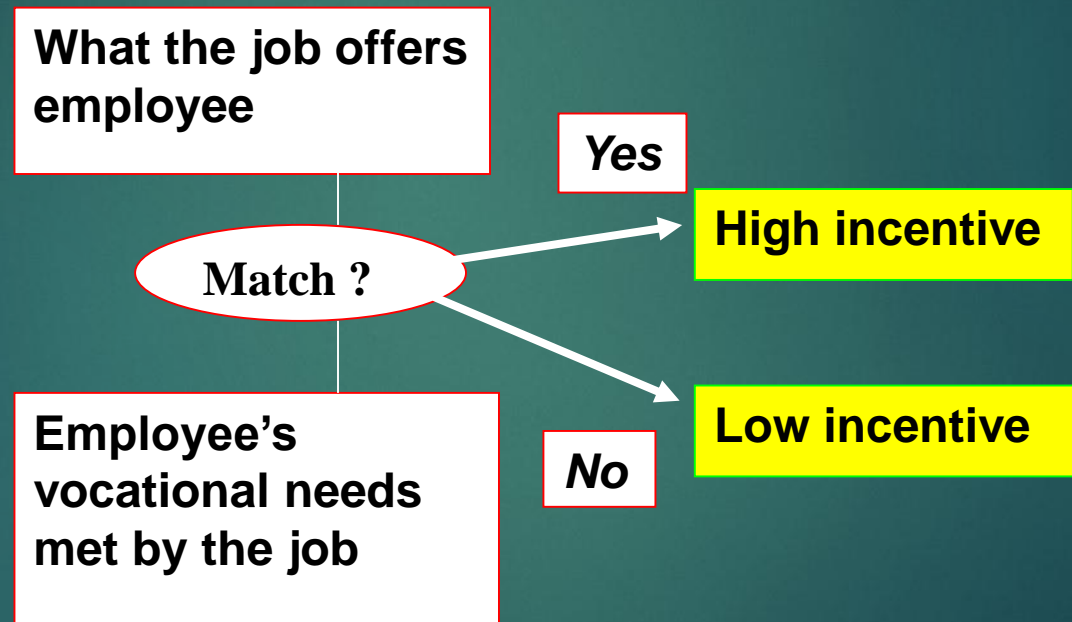
Employee's Vocational Needs

- Ability Utilization
- Advancement Prospect
- Level of Achievement
- Level of Creativity
- Compensation
- Independence
- Authority (supervision)
- Level of responsibility
- Recognition
- Status
- Job Security
- Variety
- Work conditions

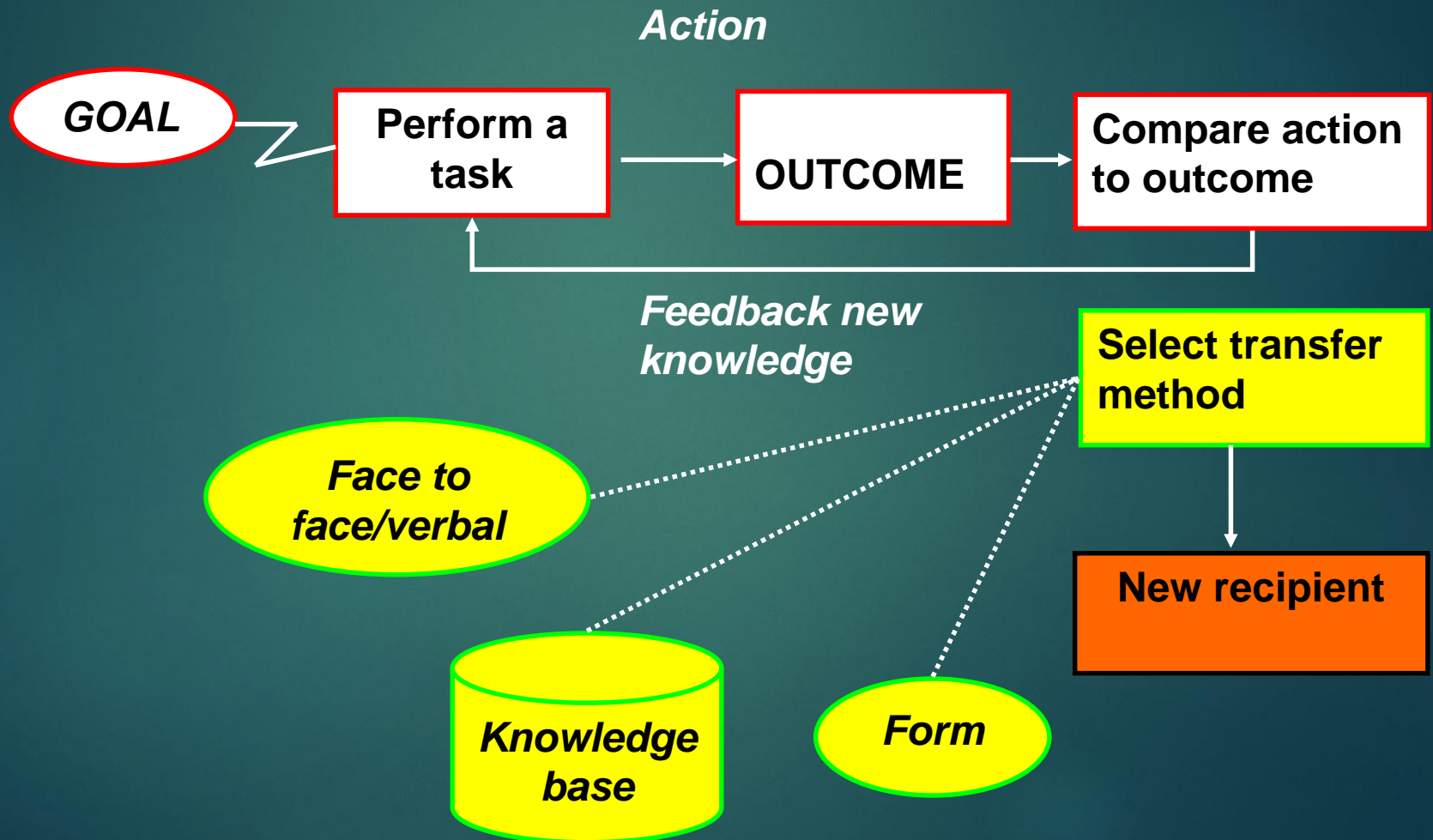# Employee's Job Satisfaction: A Conceptual Model

What the job offers employee

Match ?

Yes

High incentive

Employee's vocational needs met by the job

No

Low incentive

Converting Experience Into Knowledge via KT

Action

GOAL

Perform a task → OUTCOME → Compare action to outcome

Feedback new knowledge

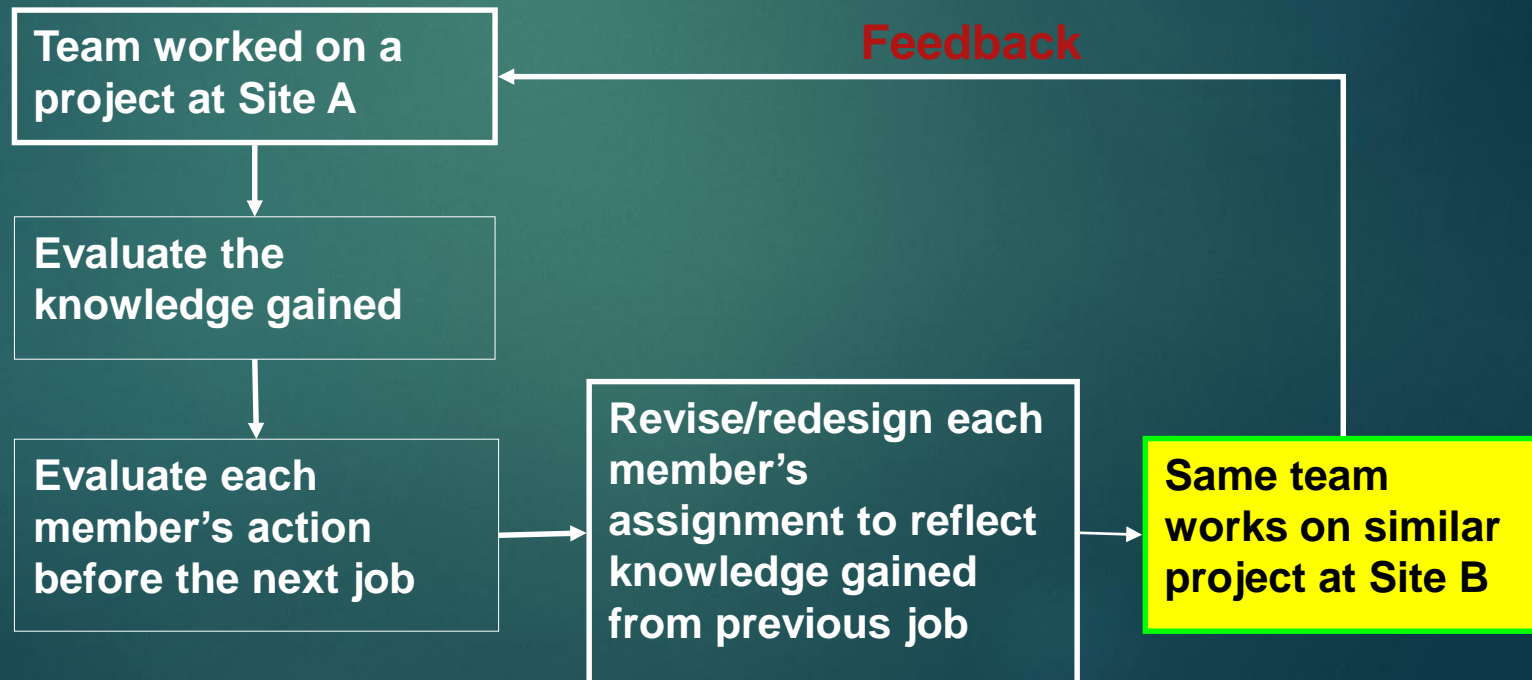Select transfer method

Face to face/verbal

Knowledge base

Form

New recipient

Strategies of Knowledge Transfer (1/3)

▶ Collective sequential transfer —specialized team performs same function at other sites

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┌──────────────────────┐                           Feedback
│ Team worked on a     │◀──────────────────────────────────────┐
│ project at Site A    │                                        │
└──────────────────────┘                                        │
           │                                                    │
           ▼                                                    │
┌──────────────────────┐                                        │
│ Evaluate the         │                                        │
│ knowledge gained     │                                        │
└──────────────────────┘                                        │
           │                                                    │
           ▼                                                    │
┌──────────────────────┐   ┌──────────────────────┐   ┌──────────────────────┐
│ Evaluate each        │──▶│ Revise/redesign each │──▶│ Same team            │
│ member's action      │   │ member's assignment  │   │ works on similar     │
│ before the next job  │   │ to reflect knowledge │   │ project at Site B    │
│                      │   │ gained from previous │   │                      │
│                      │   │ job                  │   │                      │
└──────────────────────┘   └──────────────────────┘   └──────────────────────┘
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Strategies of Knowledge Transfer (2/3)

► Explicit Inter-team Transfer — one team shares experience with another working on a similar job at another site

Team C worked on a project at Site C

↓

Knowledge capture through experience

↓

Team C shares experience with Team D working on project of similar nature at Site D

Feedback ←

Team D works on project benefiting from Team C's experience

↑

Team D shares experience with Team E at Site E
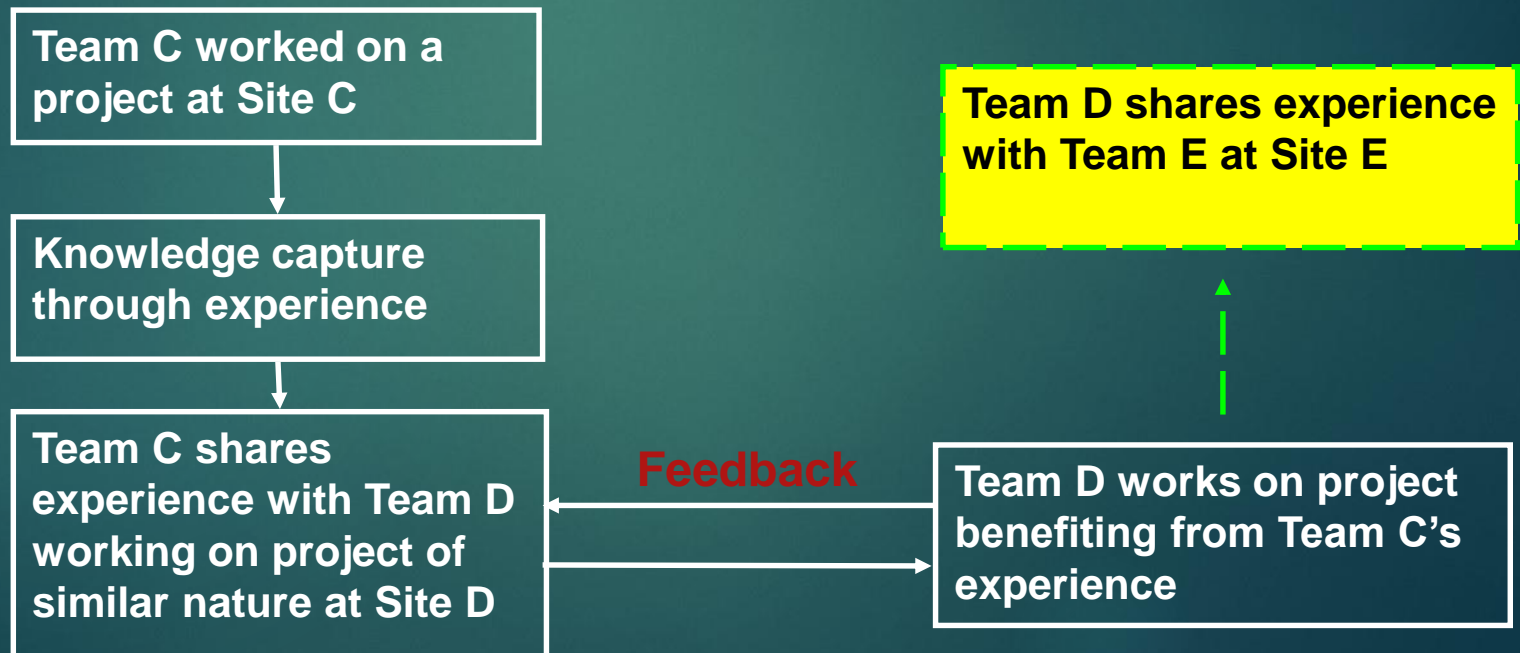
Strategies of Knowledge Transfer (3/3)

▶ Tacit knowledge transfer — unique in complex, non-algorithmic projects, where knowledge is mentally stored

TEAM A		TEAM B
of 11 specialists	Tacit knowledge transfer	of 18 specialists
AUSTRALIA		INDONESIA

▶ *Knowledge have to be modified in language, tone, and content to be usable*

Role of Internet in Knowledge Transfer & Sharing

▶ Accommodates knowledge exchange and communication

▶ Allows sending messages to multiple persons simultaneously

▶ Offers a variety of services

▶ Integrates systems and networks

KNOWLEDGE TRANSFER IN THE E-WORLD

Knowledge Transfer & Sharing in E-World

Knowledge Sources

CORPORATE DATABASES

KNOWLEDGE BASE

Knowledge-based Applications

Intranet

KNOWLEDGE TRANSFER

Extranet

Clients

Partners

Services Provider

3rd Party Vendors
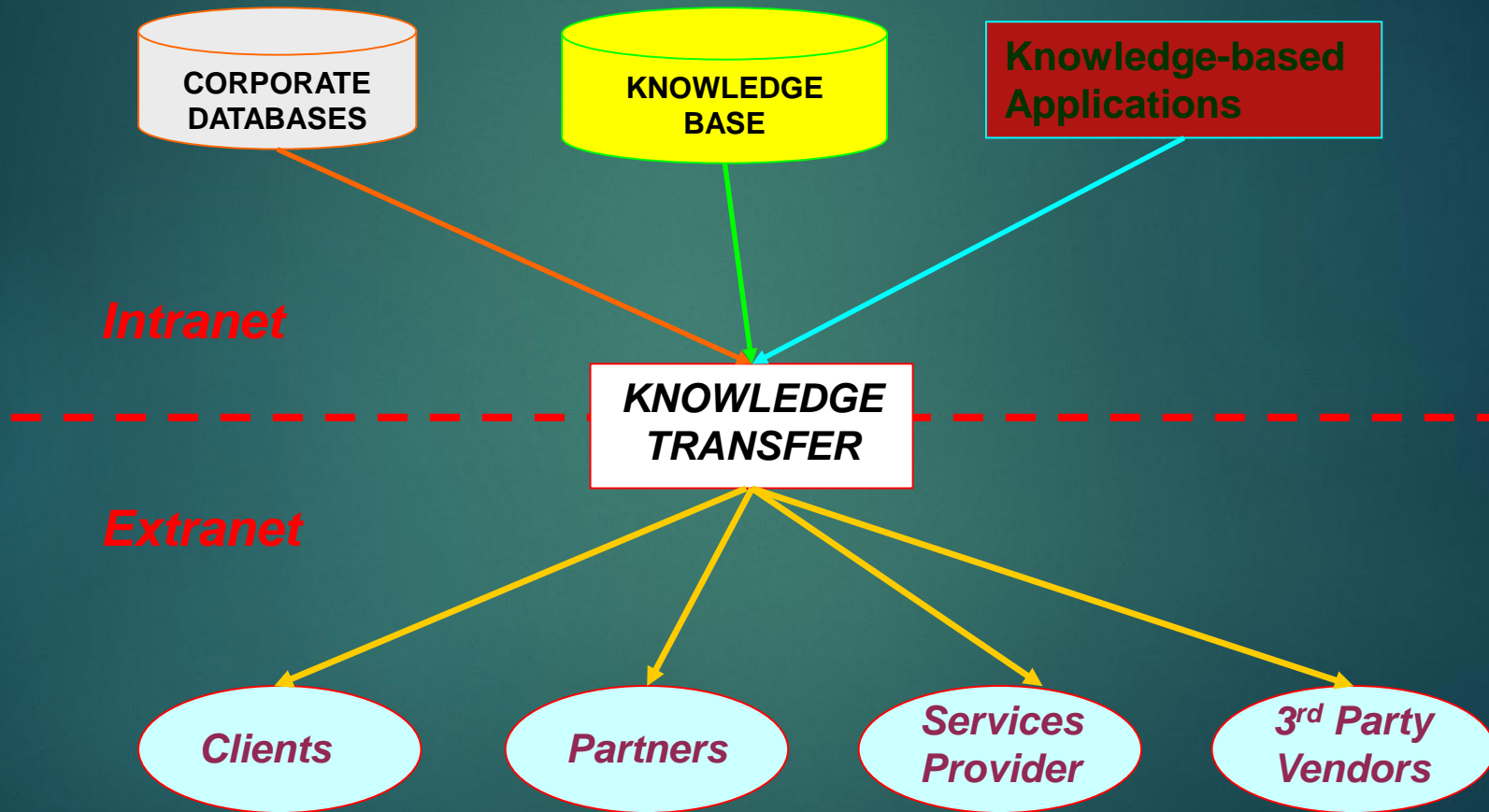
Knowledge Consumers

The E-World (Internal)

Intranets

- Internet technology to serve the internal needs of an organization

- Link knowledge workers and users (like line managers) 24 hrs a day

- Justified when number of employees is moderate to large (e.g., 100 employees or more)

- Justified when the needed knowledge must reach its destination in a hurry
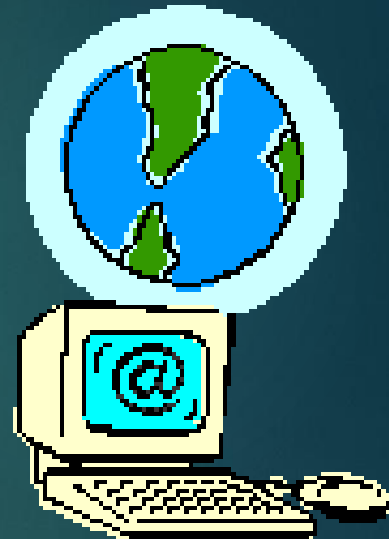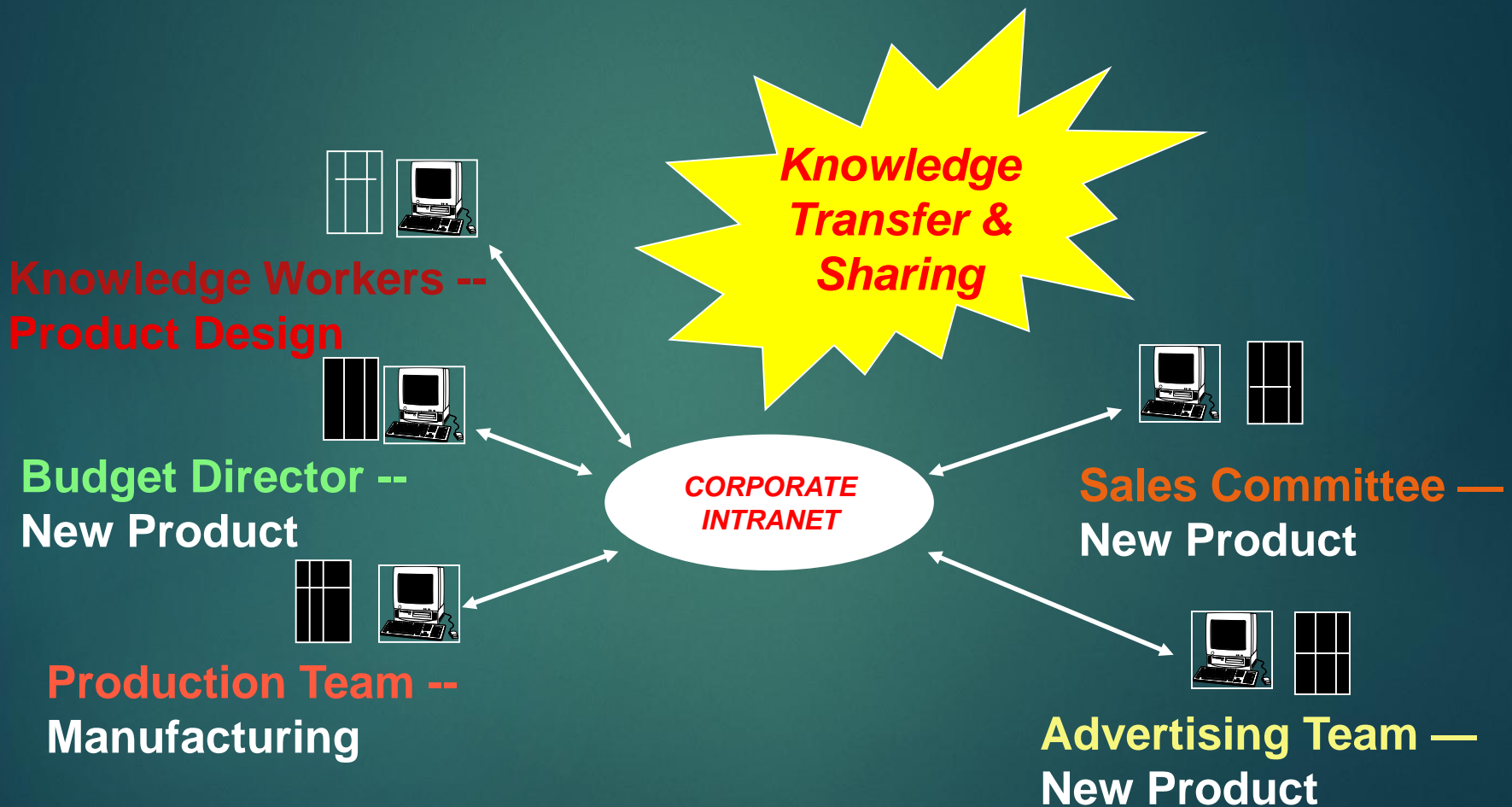
The E-World (External)

Extranet for Knowledge Exchange

▶ A company Web site linking two or more trading partners (B2B)

▶ System designers at each participating company must collaborate to ensure a common interface

▶ **Backbone of E-commerce**

▶ **Benefit:** Faster time to market, increased partner interaction, and customer loyalty

General Extranet Layout

Distributors

Customers

Suppliers

INTERNET

Firewall

Firewall

Office A

Office B

Corporate intranet
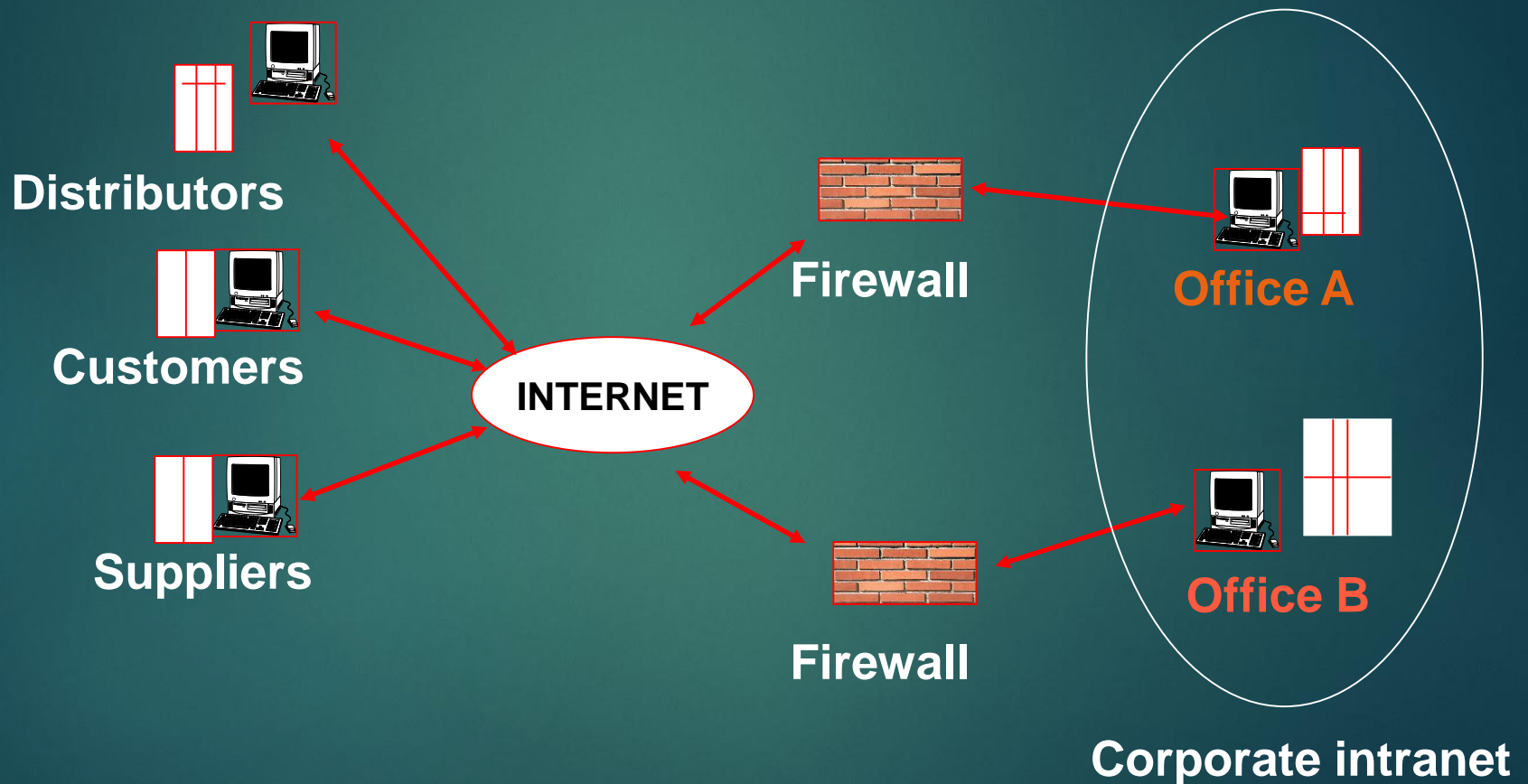
Extranets (cont'd)

- ▶ Extranets ensure lasting bonds between partners and corporate members

- ▶ Support from management is essential to success

- ▶ Extranets are the technical community to generate revenue and ensure competitive advantage

Groupware

▶ Software that helps people work together from a distance

▶ Facilitates knowledge transfer between knowledge seekers and knowledge providers

▶ Categorized by whether users are working face-to-face or in different locations

▶ Categorized also by whether users are working together at the same time or different times

Groupware Categories

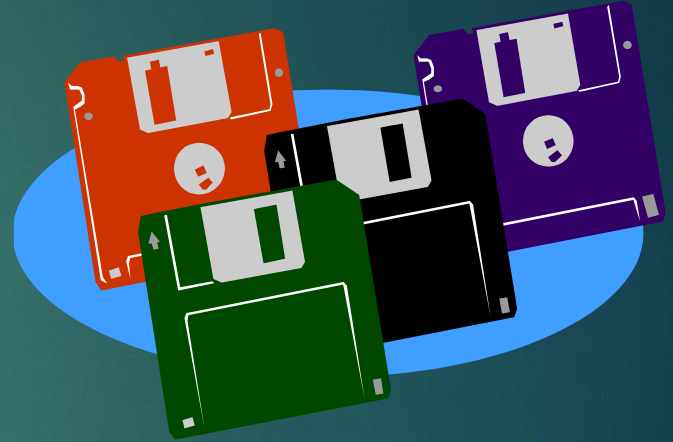|	**Same Place (colocated)**	**Different Place (distance)**
Same Time (synchronous)	**Voting, Presentation support**	**Chat room, Teleconferencing**
Different Time (asynchronous)	**Shared computers**	**Workflow process, E-mail**

Prerequisites for Success (Groupware)

- Compatibility of software

- Perceived benefit to every member of the group
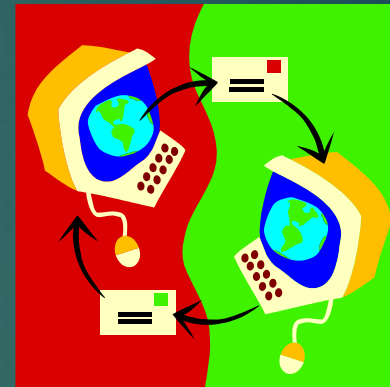
- Successful structure of communication
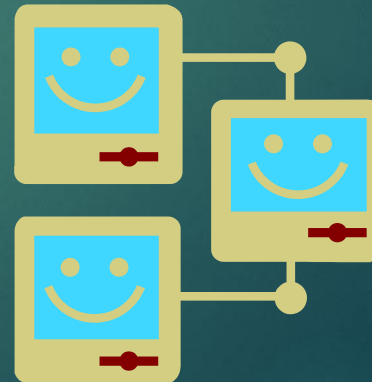
Groupware Applications

- E-Mail

  - Intranet and e-mail complement each other in knowledge transfer and communication within an organization

  - Unified "content management" and "messaging services"

  - Becoming a standard for knowledge dissemination of all kinds

Groupware Applications (cont'd)

- ▶ Newsgroups and work-flow systems

- ▶ Chat rooms

- ▶ Video communication

- ▶ Knowledge sharing groupware

- ▶ Group calendaring and scheduling

E-Business

▶ Brings universal access to Internet to core business process of exchanging information

  ▶ between businesses,

  ▶ between people within a business,

  ▶ between a business and its many clients

▶ Connects critical business systems directly to critical constituencies

E-Business (cont'd)

- Enables companies to accomplish these goals:
  - Create new products or services
  - Build customer loyalty via knowledge exchange/sharing
  - Enrich human capital by direct knowledge transfer
  - Use current technologies for R&D and creation of new knowledge for new products and services
  - Achieve market leadership and competitive advantage

E-Business - Problems and Drawbacks

▶ System and knowledge integrity

▶ Viruses cause unnecessary delays, file backups, storage problems, etc.

▶ Danger of hackers accessing files and corrupting accounts
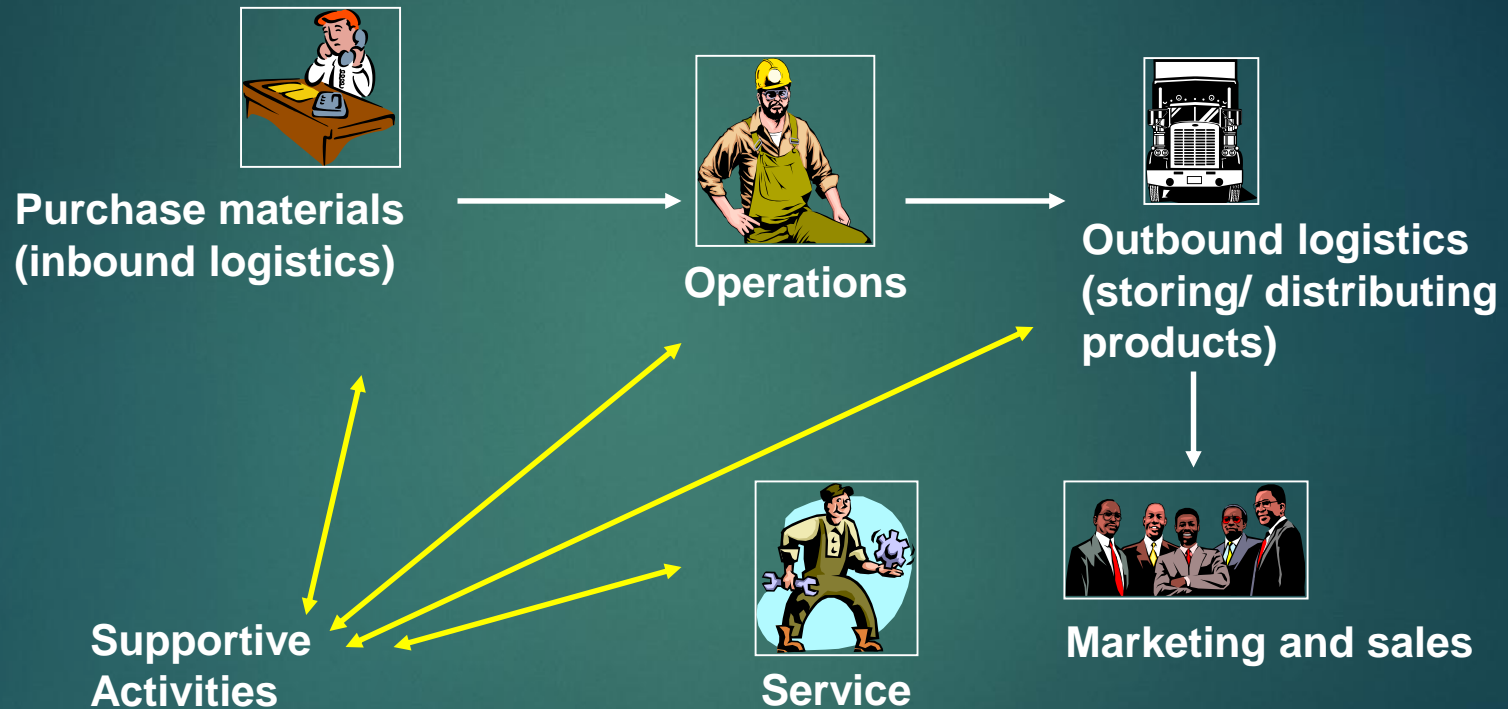
▶ Corporate vulnerability to access by the competitor

The Value Chain in E-Business

► A way of organizing primary and secondary activities of a business, where each provides "value added" to total operation

► A way of looking at how various knowledge exchange adds value to adjacent activities and to the company in general

► Everywhere value is added is where knowledge is created, transferred, or shared

A Knowledge-Based Value Chain

Purchase materials (inbound logistics)

Operations

Outbound logistics (storing/ distributing products)

Supportive Activities

Service

Marketing and sales

Corporate Infrastructure (planning, finance, accounting legal services, etc.)

Human Resources

Technology Development

Procurement

Supply Chain Management

▶ SCM means having the right product in the right place, at the right time, at the right price, in the right condition

▶ Requires collaboration, knowledge sharing of logistics, and consensus among knowledge workers and suppliers

▶ Employs powerful tools to allow companies to exchange and update information

▶ **Goals of SCM are improving efficiency and profitability**

Customer Relationship Management (CRM)

▶ Goal is to improve relationship management with customers and supply chain partners

▶ A business strategy to learn more about customers' needs and behavior to develop stronger relationships with them

Benefits of CRM

- Increased customer satisfaction
- Cross-selling products efficiently
- Making call centers more efficient
- Simplifying marketing and sales processes
- Discovering new customers

Critical Operational Components for CRM

- Personalization services
- Secure services to enforce security rules
- Publishing services to document location and meaning of business content
- Access services to help users find and access portal content
- Subscription services to deliver business content via e-mail, fax, or other media
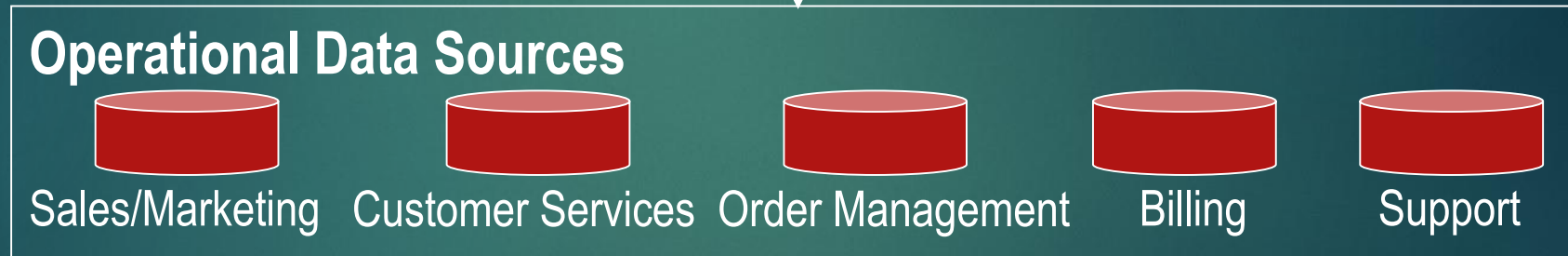
Critical Analytical Components for CRM

▶ Capture very large volume of data and transform it into analysis formats to support enterprise-wide analytical requirements

▶ Process and deploy quickly the intelligence gathered from analytical environments

Customers, Partners, Employees, Suppliers

Portal | **Presentation Layer**

Personalization Services	Application Services	Secure Services
Publishing Services	Subscription Services	Collaboration Services
Access/Search Services	Download Centre	Work-flow Services
Registration Wizard	Bulk Import Services	Digital Dashboard

Operational Data Sources

Sales/Marketing Customer Services Order Management Billing Support

Data Marts

Customer Product Sales Orders

Access Layer

Typical CRM Network

Customer

Supply Chain Partners

Telephone Call

Call Center

Purchase Order

Returns

Web-Based Portal

Corporate Database

Customer Information