

# FOM Unit – 5

## ◆ 1. Introduction

In today's world, **information and knowledge** are as valuable as money or machines.

Companies like **Google, Infosys, or IBM** succeed not only because of what they *do*, but because of *what they know* — their knowledge, skills, data, and processes.

Thus, **Knowledge Management (KM)** helps organizations capture, store, share, and use knowledge effectively to gain a **competitive advantage**.

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## ◆ 2. Data and Information

### ► Data

- Raw facts and figures — *unprocessed and without context*.
- Example:
  - 100, 200, 300 — just numbers, we don't know what they mean.
  - “500 units sold” — still just a fact.

### ► Information

- Processed or organized data that has *meaning and context*.
- Example:
  - “500 units of Product A were sold in Delhi in October” — now it tells us *what, where, and when*.
  - Hence, it helps in decision-making.

## ◆ 3. Data to Information: The 5 Cs

Transforming **data** → **information** requires five key characteristics known as the **5 Cs**:

C	Meaning	Example / Explanation
<b>Contextualized</b>	Data must be placed in a relevant situation	500 units sold in <i>Delhi</i> in <i>October</i>
<b>Categorized</b>	Organized into groups	Sales data categorized by region or product
<b>Calculated</b>	Processed to produce useful figures	Total sales, averages, growth rate
<b>Corrected</b>	Errors removed or cleaned	Removing duplicates or incorrect entries

C	Meaning	Example / Explanation
Condensed	Summarized to make it easy to understand	Monthly or quarterly reports

**Data → (Contextualized, Categorized, Calculated, Corrected, Condensed) → Information**

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#### ◆ 4. What is Knowledge?

**Knowledge** is *information combined with experience, interpretation, and judgment.*

It tells us *how to use information effectively* to solve problems or make decisions.

💡 Example:

Data = 500 units sold

Information = 500 units sold in Delhi in October

**Knowledge = “Sales increase during festivals in Delhi — we should plan higher stock for Diwali next year.”**

So, knowledge = **Information + Experience + Insight**

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#### ◆ 5. Definition of Knowledge

Here are some widely accepted definitions:

- **Peter Drucker:** “Knowledge is information that changes something or somebody — it becomes grounds for action.”
  - **Nonaka & Takeuchi:** “Knowledge is a dynamic human process of justifying personal belief towards the truth.”
  - **Simplified Definition:**  
👉 *Knowledge is the understanding, awareness, and skills gained through experience, study, or learning.*
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#### ◆ 6. Elements of Knowledge

Element	Description	Example
<b>Experience</b>	What we've done before	Past project learnings
<b>Truths/Beliefs</b>	What we think is correct	“Customers prefer eco-friendly packaging”
<b>Judgment</b>	Ability to evaluate and decide	Deciding which vendor is reliable
<b>Values</b>	What we believe is important	Quality, honesty, innovation

Element	Description	Example
<b>Information</b>	Facts and organized data	Market trends, customer data

These together make knowledge *actionable* and *valuable*.

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◆ **7. The DIKW Relationship**

► **The DIKW Hierarchy:**

It shows how **Data → Information → Knowledge → Wisdom** are connected.

Level	Meaning	Example
<b>Data</b>	Raw facts	“500 units”
<b>Information</b>	Processed data	“500 units sold in Delhi in October”
<b>Knowledge</b>	Insights from information	“Sales increase during Diwali”
<b>Wisdom</b>	Applying knowledge for sound decisions	“Launch festive discounts every Diwali”



◆ **8. Types of Knowledge**

► **1. Explicit Knowledge**

- Can be easily **written, documented, stored, or shared**.
- Found in manuals, books, reports, databases.
- Example: Standard Operating Procedures (SOPs), user guides.

► **2. Tacit Knowledge**

- Personal, **experience-based knowledge** that is hard to express or document.
- It includes intuition, insights, or “know-how.”
- Example: A senior engineer’s way of diagnosing a machine fault quickly.

Comparison	Explicit	Tacit
<b>Form</b>	Written / documented	Personal / experience-based
<b>Transfer</b>	Easy to share	Difficult to share
<b>Example</b>	Manuals, reports	Intuition, skills, insights

#### **Mini Case Example:**

When a skilled technician retires, the company loses valuable *tacit knowledge* unless it's captured or shared.

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#### ◆ **9. Building Blocks of Knowledge**

According to Nonaka's SECI Model (Knowledge Creation Model):

<b>Building Block Process</b>	<b>Description</b>
<b>Socialization</b>	Tacit → Tacit Sharing experiences (e.g., mentoring)
<b>Externalization</b>	Tacit → Explicit Documenting insights or best practices
<b>Combination</b>	Explicit → Explicit Integrating different documents/databases
<b>Internalization</b>	Explicit → Tacit Learning by doing / applying manuals

#### **Example:**

An employee learns (Internalization) from a training manual (Explicit), applies it, and then shares new tips with peers (Socialization).

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#### ◆ **10. Definition of Knowledge Management (KM)**

**Knowledge Management (KM)** is the systematic process of **capturing, creating, organizing, sharing, and applying knowledge** to achieve organizational goals.

#### ► **Simple Definition:**

“Knowledge Management means managing the organization’s knowledge assets effectively — so the right knowledge is available to the right people at the right time.”

#### ► **Example:**

Infosys has a KM system called “**KShop**”, where employees share case studies, technical documents, and experiences so others can learn from them.

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#### ◆ **11. Importance of Knowledge Management**

Benefit	Explanation
Better decision-making	Access to experience and insights
Innovation	Sharing ideas promotes creativity
Faster problem-solving	Reuse of solutions that worked earlier
Competitive advantage	Knowledge becomes a strategic asset
Employee development	Learning and collaboration improve skills

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◆ **12. Simple Diagram to Summarize**

■ **“Knowledge Cycle”**

Data → Information → Knowledge → Sharing → Application → New Knowledge

This shows how organizations continuously **learn and evolve**.

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⦿ **Mini Case Study**

**Case: Toyota’s Knowledge Sharing System**

- Toyota encourages employees to write “kaizen” (improvement) suggestions daily.
  - These ideas are documented and shared globally across plants.
  - Result → Continuous improvement and innovation.
- *This is Knowledge Management in action!*
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⦿ **Knowledge Society**

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◆ **Meaning**

A **Knowledge Society** is one where **knowledge creation, sharing, and use** are the main sources of **economic growth, innovation, and development**.

⦿ “Knowledge is the key resource, not land or capital.” – Peter Drucker

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◆ **Key Features**

- Knowledge and skills are major assets.
- Driven by **Information & Communication Technology (ICT)**.
- Focus on **innovation, research, and lifelong learning**.

- People collaborate and share ideas globally.
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#### ◆ Main Components

1. **Knowledge Creation** – through research and education.
2. **Knowledge Dissemination** – sharing via ICT, media, internet.
3. **Knowledge Application** – using knowledge to solve problems.

#### ■ Diagram (simplified):

Knowledge Creation → Knowledge Sharing → Knowledge Application → Development

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#### ◆ Importance

- Encourages innovation and entrepreneurship.
  - Improves education and technology use.
  - Supports economic and social progress.
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#### ◆ Examples

- **Japan, South Korea, USA** – advanced knowledge economies.
  - **India** – emerging knowledge society (Digital India, Skill India).
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### ■ Knowledge Assets, Knowledge Workers & Knowledge Economy

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#### ◆ 1. Knowledge Assets

- Knowledge assets are the **intangible resources** of an organization — things you **can't touch**, but which create value.
- They include **skills, experience, ideas, processes, patents, databases, and customer relationships**.

💡 Example: Google's algorithms, Infosys's project experience, or a company's R&D know-how.

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#### ◆ 2. Knowledge Worker

- A **knowledge worker** is someone whose main job involves **thinking, analyzing, and applying knowledge**, not just physical labor.
- They create value through ideas and expertise.

## **Examples Engineers, software developers, teachers, doctors, scientists**

💡 Peter Drucker called knowledge workers the “most valuable asset of a modern organization.”

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### ◆ **3. Major Drivers Behind Knowledge Management (KM)**

KM has become essential due to these key factors:

<b>Driver</b>	<b>Explanation</b>
<b>Globalization</b>	Need to share and use knowledge across countries.
<b>Technology Growth</b>	ICT enables fast storage and sharing.
<b>Innovation Pressure</b>	Constant need to develop new products/services.
<b>Employee Mobility</b>	Knowledge must stay even when people leave.
<b>Competition</b>	Knowledge becomes a strategic advantage.

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### ◆ **4. The Knowledge Economy**

A **knowledge economy** is an economy where **knowledge, information, and innovation** drive growth rather than physical goods or natural resources.

#### **Traditional Economy      Knowledge Economy**

Based on labor & materials      Based on ideas & skills

Tangible assets      Intangible assets

Focus on production      Focus on innovation & technology

💡 Example:

- India's IT & software sector
  - USA's Silicon Valley
  - Japan's robotics industry
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### ◆ **5. Examples of Knowledge Economies**

- **United States** – Innovation-led (Google, Microsoft, Apple)
- **Japan** – Robotics and high-tech manufacturing
- **South Korea** – ICT and digital technology
- **India** – IT, research, and startup ecosystem

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## ◆ 6. Intellectual Capital

- Intellectual capital = **Total knowledge, skills, and innovative potential** of a company that create value.
- It's the **sum of human, structural, and relational capital**.

Type	Meaning	Example
<b>Human Capital</b>	Skills, creativity, expertise of employees	Engineers, scientists
<b>Structural Capital</b>	Systems, databases, patents	Company's internal processes
<b>Relational Capital</b>	Customer and partner relationships	Brand loyalty, collaborations

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## ◆ 7. Relation between Knowledge Economy & Intellectual Capital

Knowledge Economy	Intellectual Capital
Relies on knowledge as key resource	Represents that knowledge in measurable form
Focuses on creating and applying knowledge	Measures how knowledge adds value
Country-level concept	Organization-level concept

👉 In short:

**Knowledge Economy** = National-level system based on knowledge

**Intellectual Capital** = Organizational-level knowledge assets that fuel the economy

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## 📘 Knowledge Management: Sources, Characteristics, Barriers & Models

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### ◆ 1. Sources of Knowledge

Knowledge can come from both **internal** and **external** sources:

Source Type	Examples
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**Internal Sources** Employee experience, project reports, meetings, databases, R&D results

**External Sources** Customers, suppliers, competitors, market research, online resources, consultants

💡 Example: A company learns from customer feedback (external) and employee insights (internal).

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### ◆ 2. Characteristics of Knowledge

<b>Characteristic</b>	<b>Meaning</b>
<b>Dynamic</b>	Changes with time and new learning.
<b>Shared</b>	Increases when shared, unlike physical assets.
<b>Linked to People</b>	Exists in human minds and experience.
<b>Contextual</b>	Meaningful only within a certain context.
<b>Transferable</b>	Can be communicated through teaching or documentation.
<b>Difficult to Imitate</b>	Gained through experience, so hard for competitors to copy.

💡 Example: An engineer's troubleshooting skill is unique and grows with use.

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### ◆ 3. Barriers to Knowledge Implementation

<b>Barrier</b>	<b>Explanation</b>
<b>Lack of Sharing Culture</b>	People hesitate to share knowledge.
<b>Poor Communication</b>	Knowledge doesn't flow properly in the organization.
<b>Lack of Technology Tools</b>	No system to store or access knowledge easily.
<b>Time Constraints</b>	Employees are too busy to document or share.
<b>Fear of Losing Power</b>	Some avoid sharing to stay "indispensable."

**No Top Management Support** KM fails if leaders don't encourage it.

💡 Example: Employees keeping "tricks of the trade" to themselves → loss of knowledge when they leave.

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### ◆ 4. Models of Knowledge Management (SECI Model – Nonaka & Takeuchi)

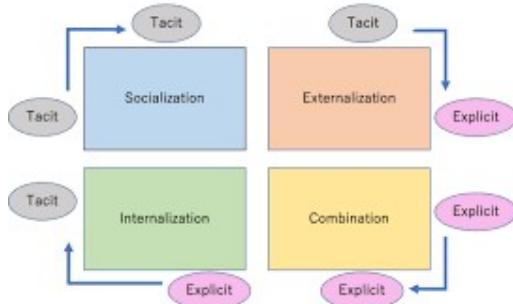
This is a **Japanese model** explaining how knowledge is created and shared through four processes:

<b>Mode</b>	<b>Type of Conversion</b>	<b>Meaning</b>	<b>Example</b>
<b>Socialization</b>	Tacit → Tacit	Sharing experiences directly	Mentoring, on-the-job learning
<b>Externalization</b>	Tacit → Explicit	Expressing ideas in written or visual form	Writing manuals, reports
<b>Combination</b>	Explicit → Explicit	Combining documents or databases	Integrating reports into one system

Mode	Type of Conversion	Meaning	Example
<b>Internalization</b>	Explicit → Tacit	Learning by doing	Reading manual → applying it → gaining skill

### Diagram :

SECI Model : Nonaka & Takeuchi (1995)



💡 Together, these four steps create a continuous knowledge cycle.

### ◆ 5. Wonders of Knowledge Management

Wonder	Benefit
<b>Faster Decision-Making</b>	Access to past experiences and data.
<b>Innovation &amp; Creativity</b>	Shared ideas lead to new solutions.
<b>Improved Efficiency</b>	Avoids “reinventing the wheel.”
<b>Employee Empowerment</b>	People learn from each other.
<b>Competitive Advantage</b>	Knowledge-rich firms adapt faster.

💡 Example: Toyota uses KM to share production ideas globally, improving quality everywhere.

### ◆ 6. Knowledge Management and Technology Innovation Process

Technology plays a **central role** in KM by making knowledge creation and sharing easier.

Stage	Role of Technology
<b>Knowledge Creation</b>	R&D software, simulation tools
<b>Storage</b>	Databases, cloud systems
<b>Sharing</b>	Intranets, collaboration platforms (Teams, Slack)
<b>Application</b>	AI, analytics tools for decision-making

 *Example:* Infosys's internal portal “KShop” helps employees share project learnings and innovations.