

## Session 5.2.3 Creating Value

May the Face Be With You?

# RFID as a new Business Model



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Information Technology

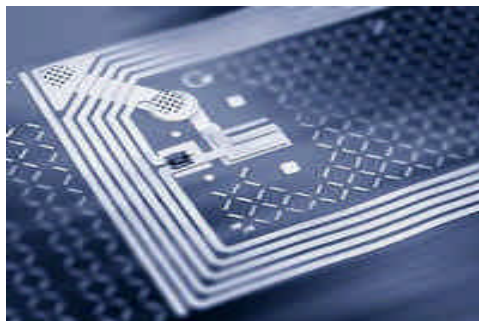
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## RFID as a new Business Model

- What is RFID? (Overview and Benefits)
- Range of applications (Case studies and Best Practice)
- State of affairs (Technology Adoption Life Cycle)
- Chances as RFID enabler company





# Auto-ID

## Automated Identification and Data Capture

- Identifying objects
- Collecting data about them
- Send data directly to computer

=> Barcode

=> RFID



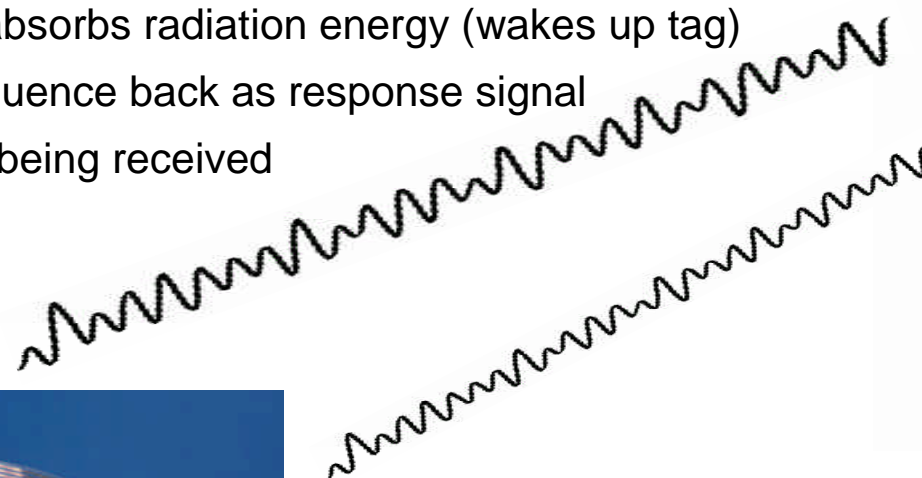


# What is RFID?

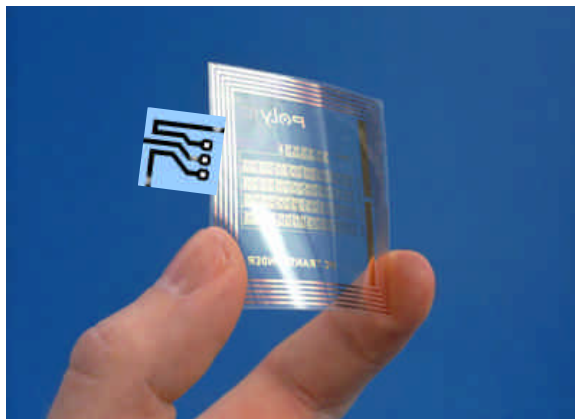
*RFID, the "Talking Bar Code"*

## Radio Frequency Identification

- Reader sends out a radio signal
- Transponder (tag) absorbs radiation energy (wakes up tag)
- Tag sends data sequence back as response signal
- Response signal is being received



RFID-Reader



RFID-Tag (microchip with antenna)

Frequencies: 13,65 MHz (HF), 868 MHz (UHF)

Range: Maximum of 10 meters



## Improvements with RFID

- Identify individual items
- Line of sight not required
- Stable in harsh conditions
- Read through most non-metals
- Fast Reading
- Multi-reading
- Big storage place on tags
- Sensor Tags



Low costs of tags: € 0.05 to € 1.00



# The Business Case

Fundament of efficiency



**Adopt, redesign and improve** it with use of RFID





## Business benefits

**Counterfeit product shielding**

Losing sales  
Quality image

**Theft prevention**

Shop  
Supply Chain

Return on Investment (ROI)

**Increase revenue**

No out-of-stock  
Reduce shrinkage  
Handling speed

**Cost reduction**

Inventory handling  
Fewer manual checks  
Lower stock levels

**Competitive advantage**

Measure of Key performance Indicators (KPI)  
Increase productivity

**Key question:**

How can RFID help you to reach the goals for process optimization



*RFID for your company??*

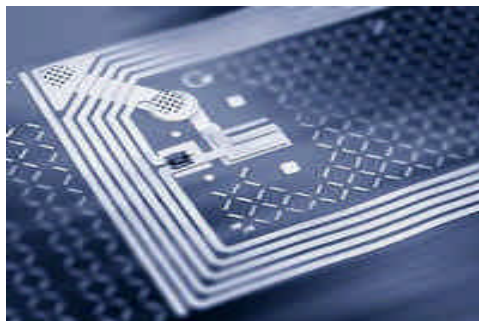






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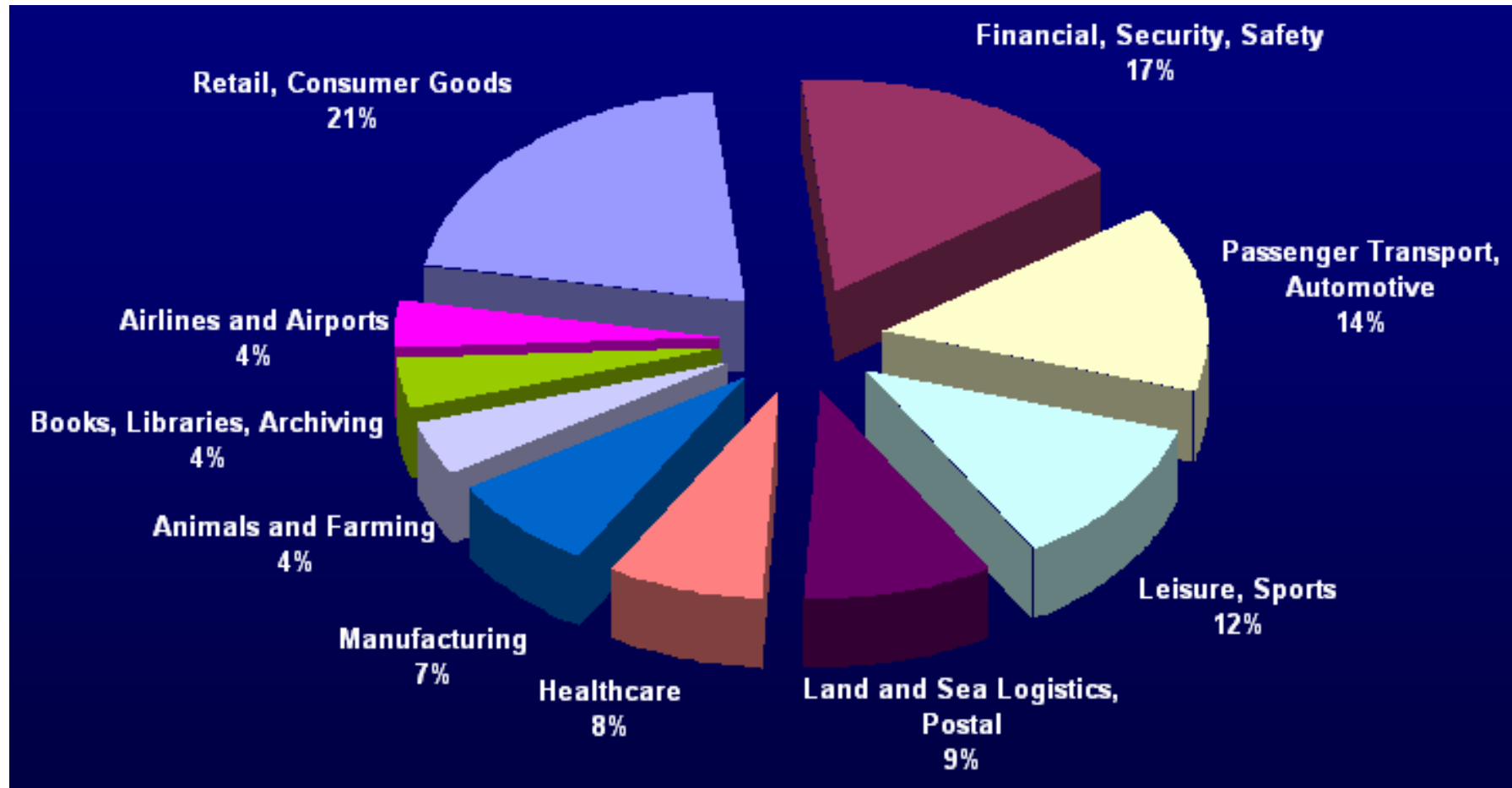
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# Range of applications

About 2000 documented Case Studies



Source: <http://rfid.idtechex.com/knowledgebase/>



# Best Practices I

## Austrian Post: Quality Measurement



Measure runtime of letters (97% delivered on next day)



RFID Reader



Distribution Center with antenna for measuring



Letter with RFID Tag



## Best Practices II

European Post Company:

Tracking of reusable assets such as roll cages Pilot (2005)

### General Challenges:

Extend information on supply chain status

Improve customer service (Track and Trace)

Reduce costs

### Business Case for Pilot:

Reduce shrinkage (loosing some 1000 cages p.a.)

Visibility of cage movements (analytical information)

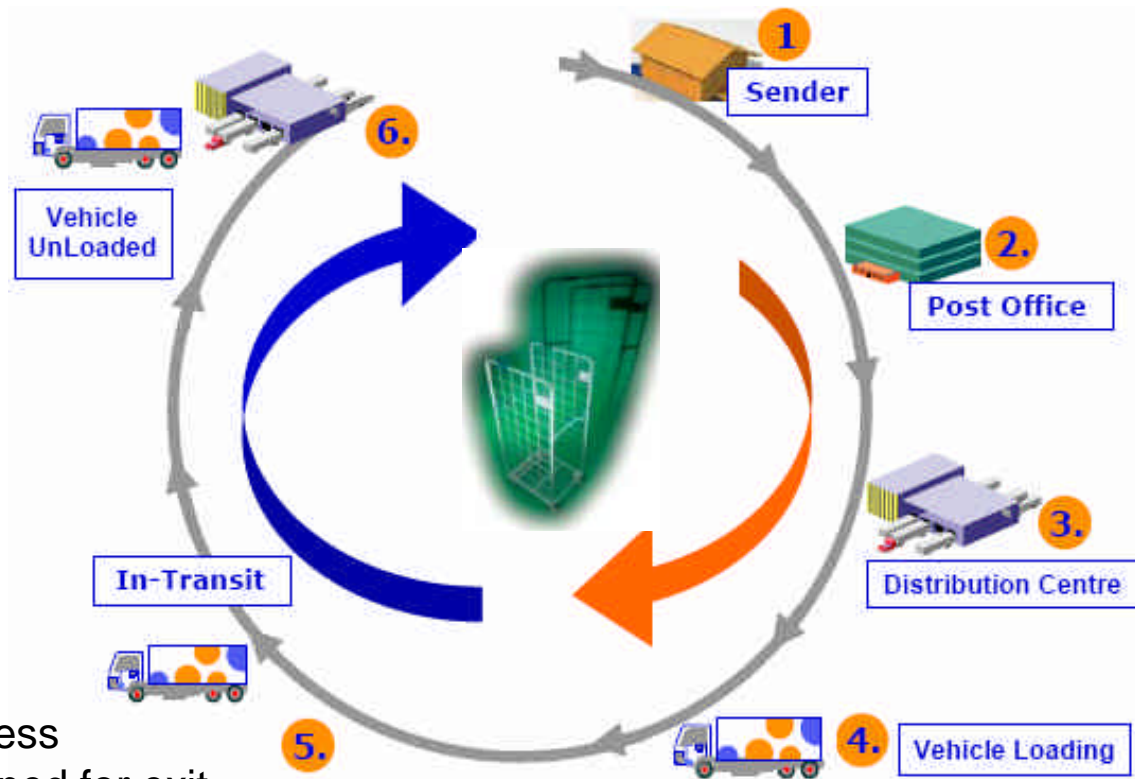
Availability of cages (right quantity, right place, right time)





## Best Practices II

European Post Company:  
Tracking of reusable assets such as roll cages Pilot (2005)



- Step 1-3:** Post internal process
- Step 4:** Roll cages are scanned for exit
- Step 5:** Transport
- Step 6:** Roll cages are scanned for entry





*RFID is definitely past the hype stage now!*

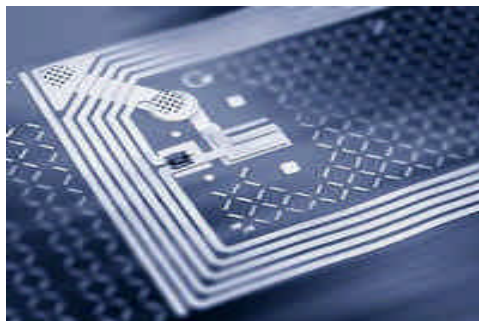






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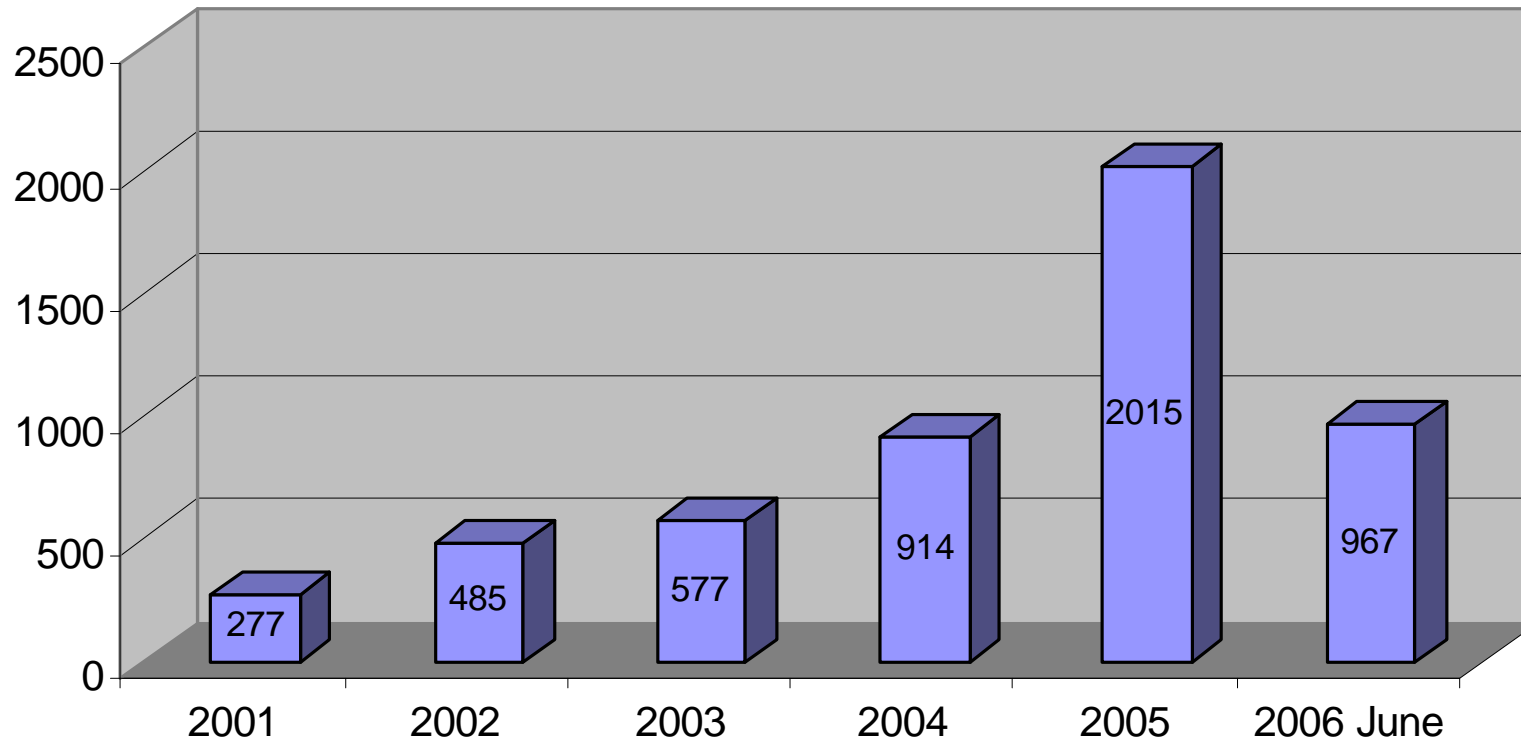
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# State of affairs

RFID Patent publications (worldwide)



Source: <http://depatisnet.dpma.de>



## Standardizations

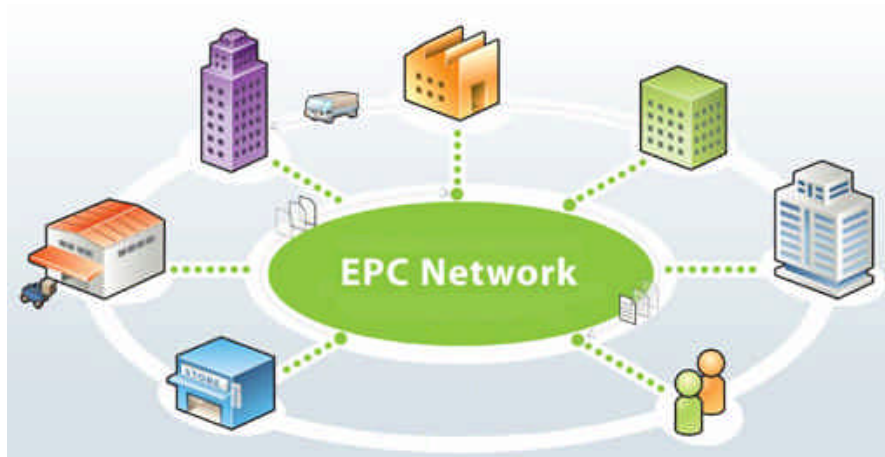


- Non-profit organization
- Founded in 2003
- Develop industry-driven standards



### Electronic Product Code

Worldwide RFID Standardization  
Instead of conventional barcodes  
Generation 2 of UHF tags



### EPCglobal Network

“Internet of Things”

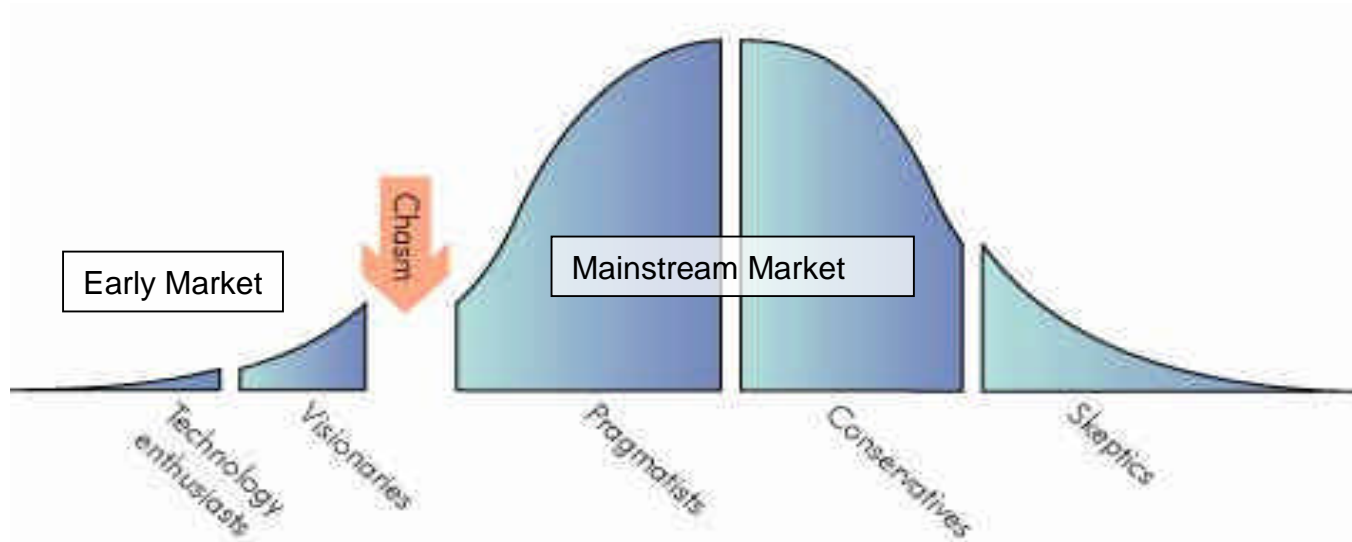
Global information of products

Enhance the supply chain

Reforms information flow between companies



# Technology Adoption Life Cycle



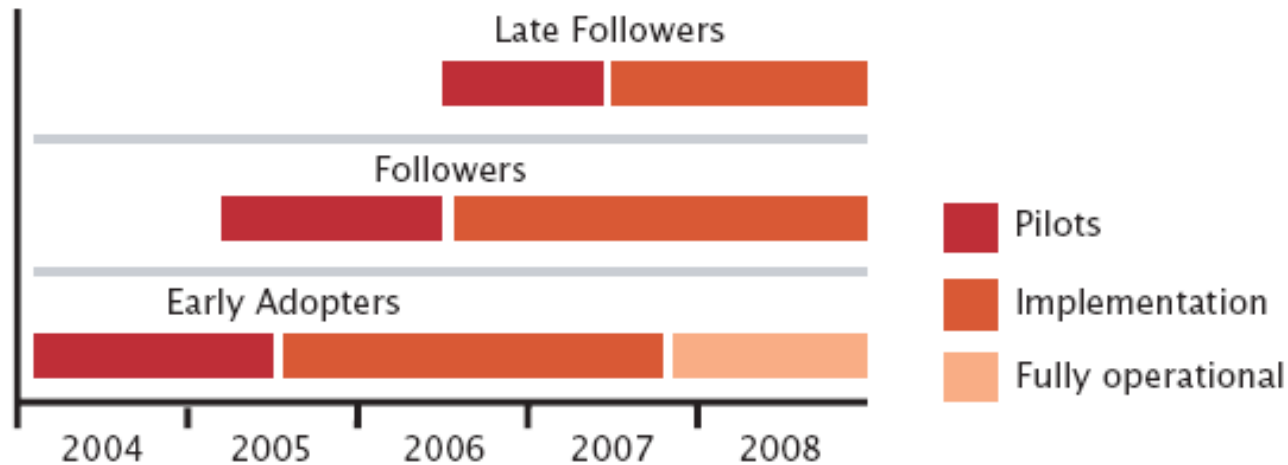
**Innovators**  
Create new ideas

**Early Adopters**  
Identify the value of new ideas  
Create visions

**The Chasm**  
Find marketing strategies  
Entering the Mainstream Market  
Preparing for enormous demand



## RFID adoption roadmap



### 2003: Innovators Test unproven products

- Almost isolated applications
- Waiting for standards
- Know-How from some pilots
- High privacy concerns
- Very high costs of adoption
- Tags about € 0.20 to € 0.30

### 2006: Early Adopters Obtain competitive advantage

- EPC for consumer goods
- Generation 2 of UHF tags
- Lot of pilots
- Privacy concerns taken seriously
- High costs of adoption
- Tags about € 0.10



*Are you an Early Adopter??*



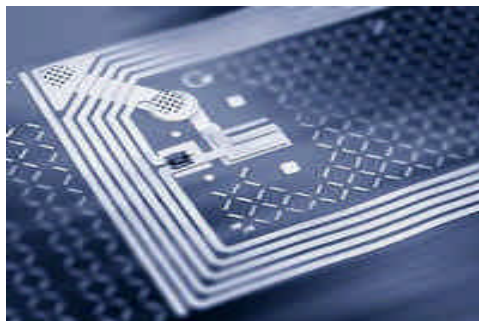
*"Should I wait for the early adopters or should I become one myself?"*





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# Chances as RFID enabler

RFID as a new Business Model

## Planning

Process revision  
 Project management  
 Network design  
 Customization  
 Consulting

## Operation

Hosting  
 Maintenances  
 Improvements  
 Tech support

## Available Services



## Development

System integration  
 Application development  
 Personal training

## Implementation

Installation  
 Configuration  
 Testing



## RFID Enabler Companies

- Small range of companies at the moment
- Big chances for market entrance
- First Come, first served





## RFID Enabler Companies



Microsoft and **British Telecom** are jointly developing managed RFID offerings for retailers (June 2005)



**Swisscom** founds new company Swisscom Auto-ID Services AG in the field of RFID services (October 2005)



Equipment manufacturer Cisco and IT service provider **T-Systems** will collaborate in developing smart-tag systems for the logistics and retail sectors. (May 2006)



The U.S. telecom giant **AT&T** is partnering with BEA, Symbol and Intel to provide an offering of RFID systems. (May 2006)



## Why RFID from Telecom companies?

- **Know-How** of data interchange, network technologies, IT and the internet
- **Long time experience** in delivering technical components and assemblies
- Experienced services personnel
- Big customer base
- Well known companies
- Service from one source
- Owner of technical network







*Your company as a RFID enabler??*







**"The best way to predict the future is to invent it."**

Alan Kay

