Καινοτομία και Επιχειρηματικότητα

Ενότητα # 5: Βασικές αρχές Logistics

Διδάσκων: Θεόδωρος Αποστολόπουλος

Τμήμα: Μεταπτυχιακό Πρόγραμμα Σπουδών Πληροφορικής

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- Το παρόν εκπαιδευτικό υλικό έχει αναπτυχθεί στα πλαίσια του εκπαιδευτικού έργου του διδάσκοντα.

- Το έργο «**Ανοικτά Ακαδημαϊκά Μαθήματα στο Οικονομικό Πανεπιστήμιο Αθηνών**» έχει χρηματοδοτήσει μόνο τη αναδιαμόρφωση του εκπαιδευτικού υλικού.

- Το έργο υλοποιείται στο πλαίσιο του Επιχειρησιακού Προγράμματος «Εκπαίδευση και Δια Βίου Μάθηση» και συγχρηματοδοτείται από την Ευρωπαϊκή Ένωση (Ευρωπαϊκό Κοινωνικό Ταμείο) και από εθνικούς πόρους.

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- Οι εικόνες προέρχονται … .

Περιεχόμενα ενότητας

- Basic Terms and Key decisions in designing logistics

- Logistics Profiles and Business Model
- E-commerce και Logistics
- Case Studies
- Innovative Business Models

Basic Terms and Key decisions in designing logistics

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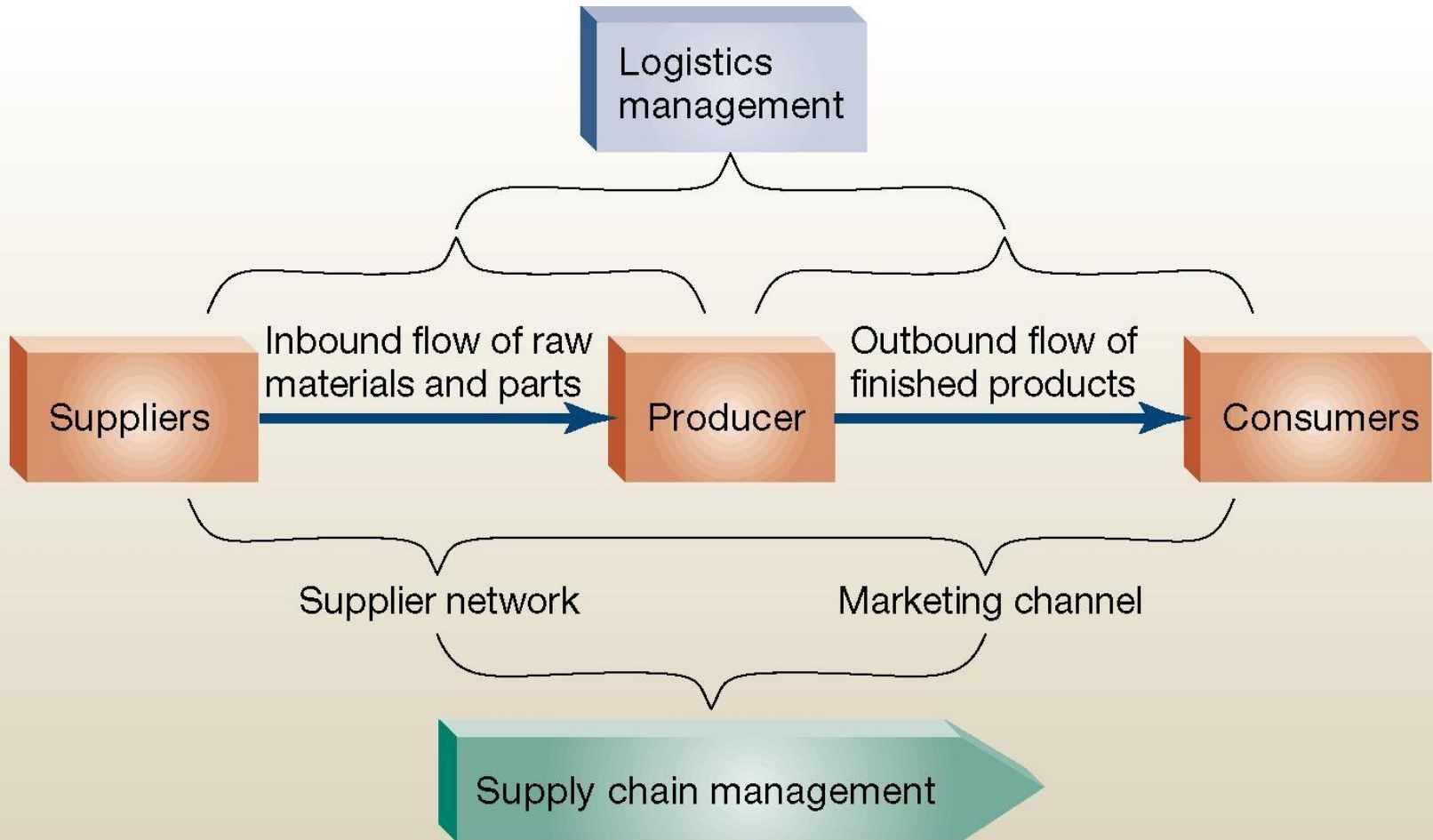**Τμήμα:** Μεταπτυχιακό Πρόγραμμα Σπουδών Πληροφορικής

Basic Terms
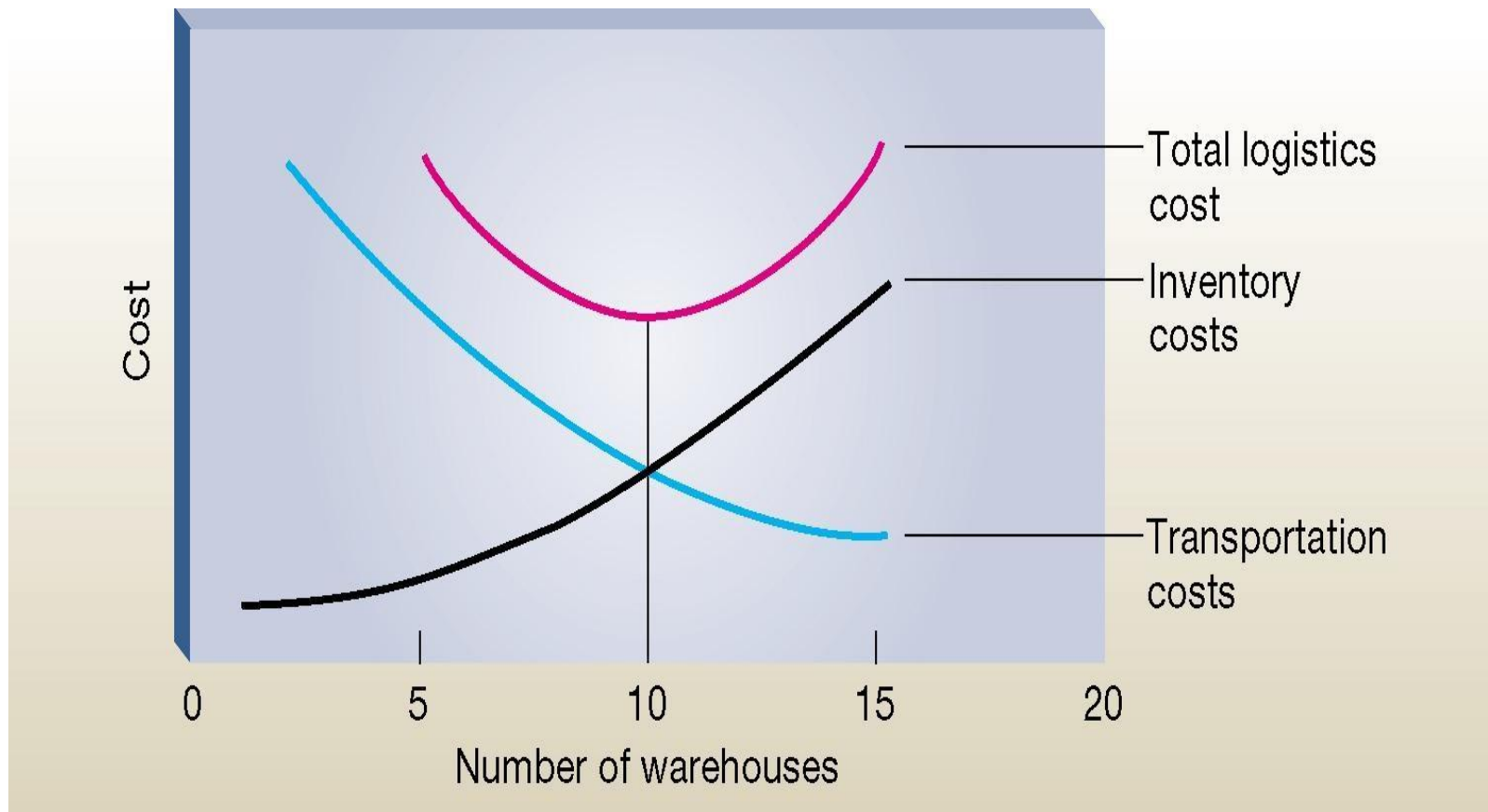
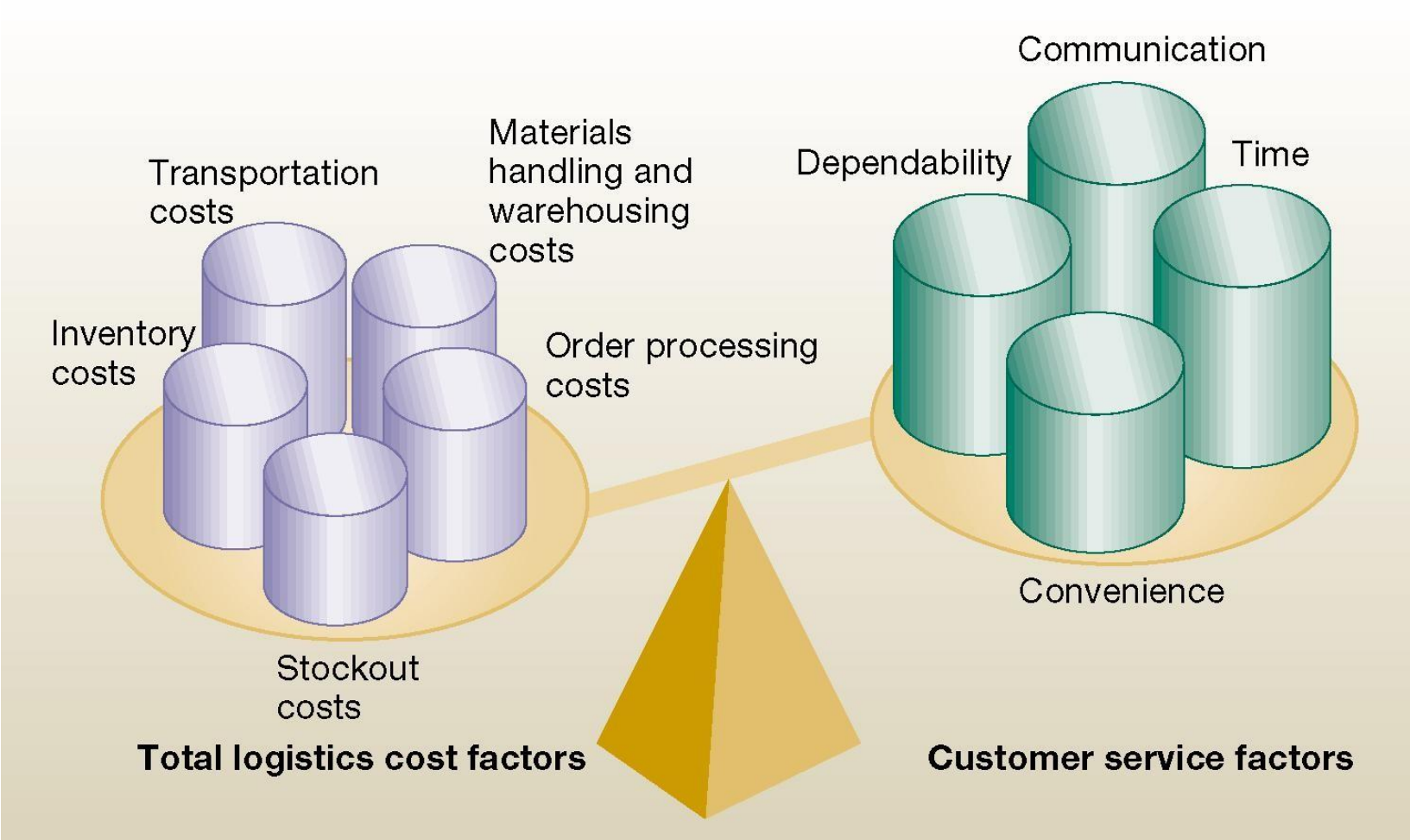Key decisions in designing logistics

Logistics

Logistics and supply chain

Total logistics cost and number of warehouses

Logistics cost vs. customer service

Key Decisions for Logistics Design

Major Components	Issues/Decisions
Procurement	Degree of centralization Supplier characteristics Multiple vs. single sourcing Degree of backward integration
Order Processing	Order cycle design Information flows Degree of automation
Inventory Policy	Coverage level Form/Location of inventories
Transport Policy	Frequency of delivery Order communication Inventory coverage levels Order selection methods

Key Decisions for Logistics Design

Major Components	Issues/Decisions
Customer Service Policy	Frequency of delivery Order communication Inventory coverage levels Order selection methods
Facilities Network	Degree of centralization Number of echelons For each: Number of facilities Location Scale Layout Product/process specialization Links between facilities: Information flows Sourcing Patterns

Case Study:

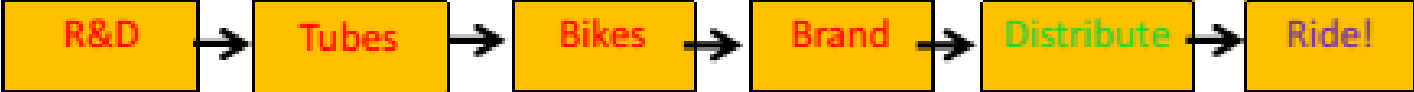## Carbon fibre & kevlar spider-like open lattice tube design
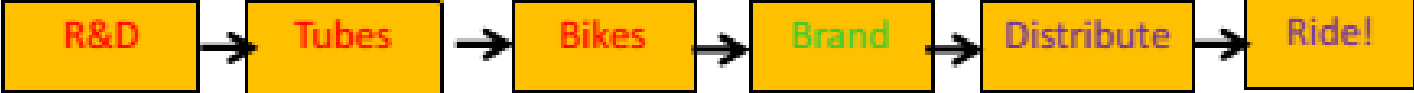
Source: Jeff Skinner, LBS

They decide to go for 'it'

- What is 'it'?
- Certainly, to get bikes into the hands of
  - serious mountain bikers.
- But what activities should the 'business':
  - do itself (build capacity)
  - partner (persuade or leave to others)
- Critical question – who's the 'customer?

Do themselves or 'partner'

- A number of options:
    - R&D only – 'license' to tube manufacturers
    - Make tubes & sell to cycle manufacturers
    - Make bikes and sell OEM to brands
    - Own brand, own bikes, sell through distributors
    - Everything – sell direct on line
- How does 'choice' influence the next step?

| R&D | → | Tubes | → | Bikes | → | Brand | → | Distribute | → | Ride! |

| R&D | → | Tubes | → | Bikes | → | Brand | → | Distribute | → | Ride! |

| R&D | → | Tubes | → | Bikes | → | Brand | → | Distribute | → | Ride! |

| R&D | → | Tubes | → | Bikes | → | Brand | → | Distribute | → | Ride! |

Key: | You do | | Customer | | Influencer |
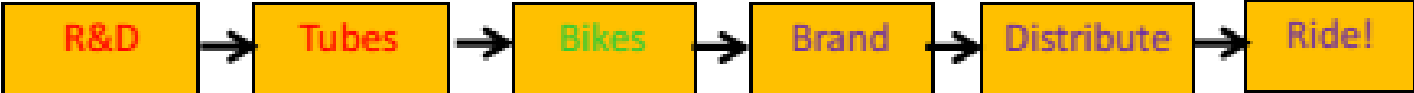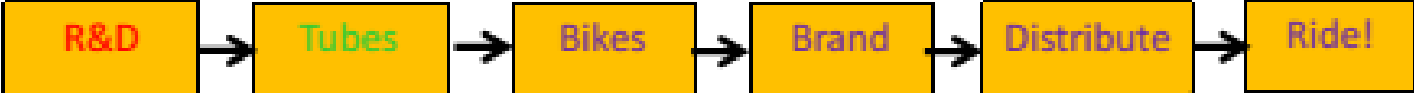
Scope of your business

- ## (what you do, what others do)
- Rarely will you build a vertically integrated
- business
- Nor is this practical, sensible or affordable.
- Where in 'value chain' should your business:
  - Build capacity
  - Buy on open market (reliable commodities)
  - Sub-contract
  - Partner, JV (e.g. license, franchise, buy investment)
  - Use customers to innovate, provide content)

How you determine 'scope'

- Some considerations:
  - Strategy – danger giving away 'power' ('e.g. primacy with customer')
  - Robustness of 'assets' - idea, IP, relationships…
  - Existence of 'willing others' in value chain
  - Ability to write 'contingent' (enforceable) contracts
  - Comparative advantage (of founders)
  - Cash - can you afford to build capability?
  - Window of opportunity – time to build capability.
- You usually change scope as you:
  - understand industry structure
  - find partners who you like, trust.

Why does it matter?

- Defines:
  - Who your 'customers' are
  - The relationships you need to build
  - The deals you'll have to do
  - The cash you' ll need to raise
  - Risks (of being squeezed out)
- Determines:
  - Who your immediate customers are
  - Who and what the venture is dependent on
  - Key relationships you need to form (and thus test … will they or won't they).
- Impacts investment (the more you do or pay for,
- the more you need pre-revenue).

Logistics Profiles and Business Model

Μάθημα: Καινοτομία και Επιχειρηματικότητα

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Business Model Components

Value Orientation

Value Proposition – The key ideas that create value for your customer segments

Customer Segments – The different groups of people you're trying to reach and serve **Customer Relationships** – The types of relationships you have with your customer segments

Channels – How you reach your customer segments

Costs Orientation

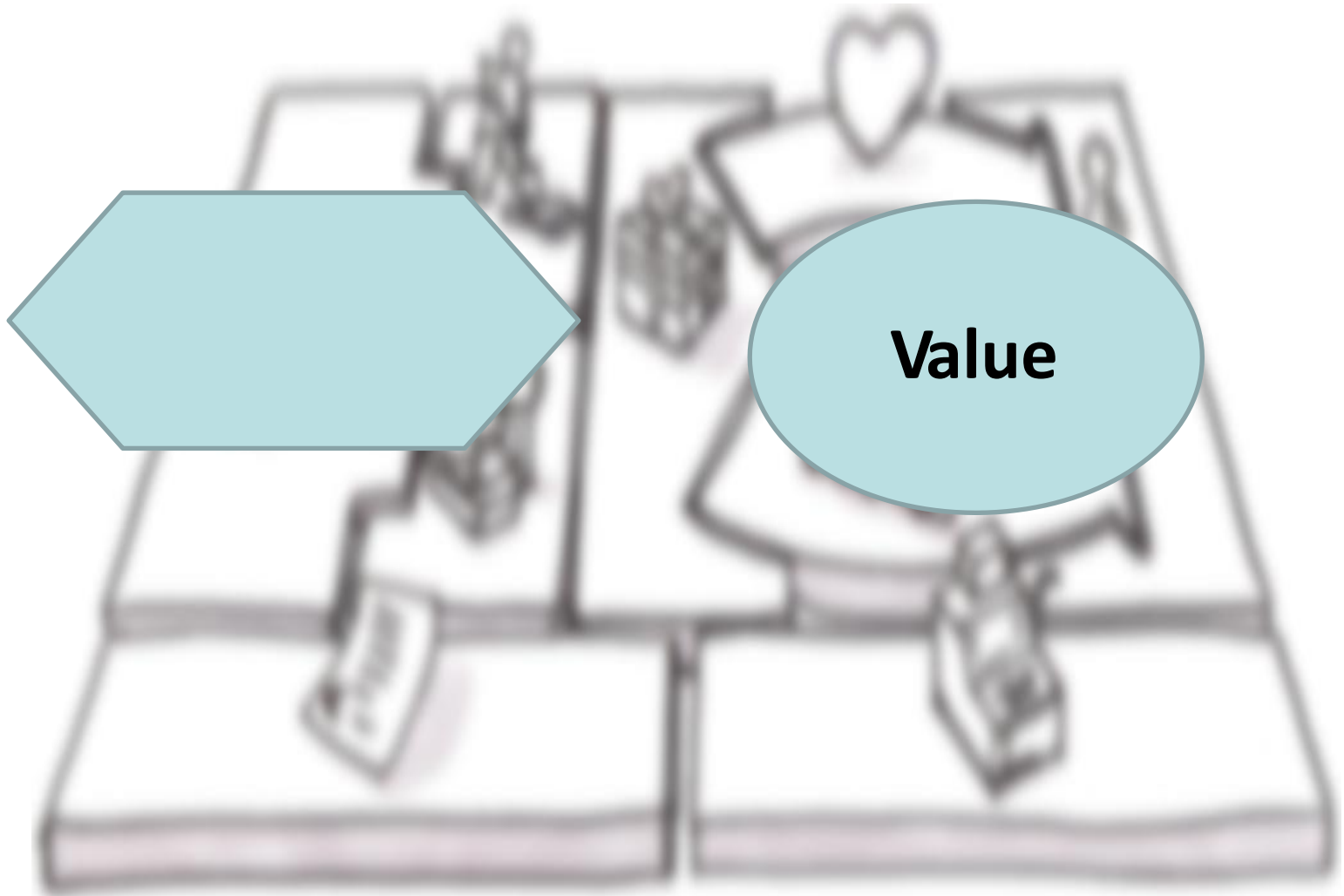**Key Activities** – What you do every day to make the model work

Key Partners – Your suppliers and partners that help you make the model work

Key Resources – The most important assets you used to create value

Cost Structure – All the costs involved in running the business

Revenue Streams – Where you make cash from your customer segments

Efficiency

Value

Business Model Canvas

Key Partners
Who are your key Partners?
Who are our key Suppliers?
Which Key Resources are we acquiring from partners?
Which key activities do partners perform?

Key Activities
What Key Activities do our Value Propositions require?
Our Distribution Channels?
Customer relationships?
Revenue Streams?

Key Resources
What Key Resources do our Value Propositions require?
Our Distribution Channels?
Customer Relationships?

Value Proposition
What value do we deliver to the customer?
Which one of our customer's problems are we helping to solve?
What bundles of products & services are we offering to each customer segment?
Which customer needs are we satisfying?

Customer Relationships
What type of relationship does each of our Customer Segments expect us to establish and maintain with them?
Which ones have we established?

Channels
Through which channels do our customer segments want to be reached?
How are we reaching them now?
How are our channels integrated?

Customer Segments
For whom are we creating value?
Who are our most important customers?

Cost Structure
What are the most important costs inherent in our business model?
Which Key Resources are the most expensive?
Which Key Activities are most expensive?

Revenue
For what value are our customers really to pay?
For what do they currently pay?
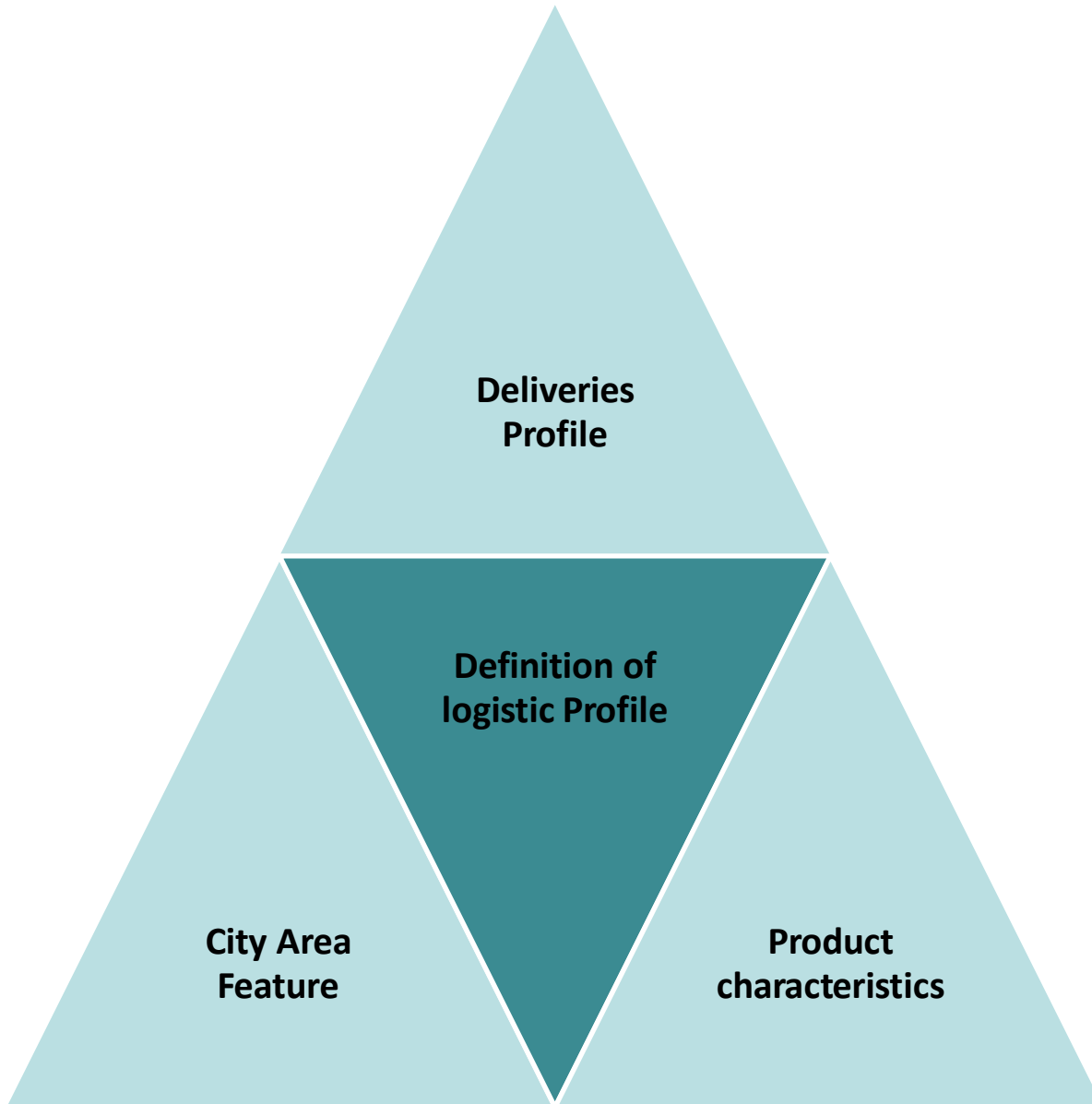
Source M. Forcolin, 5th European Conference on Transport Logistic

Determine logistic profile

City Area Feature	Product Characteristics	Deliveries Profile
Commercial density	Easiness of handling (size, weight, holding conditions)	Urgency of deliveries
Homogeneity	Special conditions (Fragility, perishability)	Frequency of deliveries
Logistic accessibility (logistic needs, level of congestion)		Amounts to be delivered (number of shops, vehicles weight and size)
Restriction applied		Number of shops
		Vehicles weight and size
		Planned deliveries

Example

HOTELS, RESTAURANTS, SMALL GROCERY STORES, SMALL NEIGHBORHOOD MARKETS
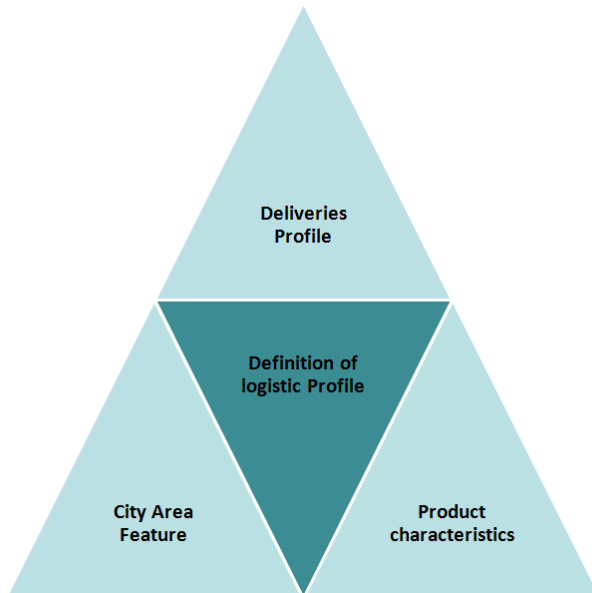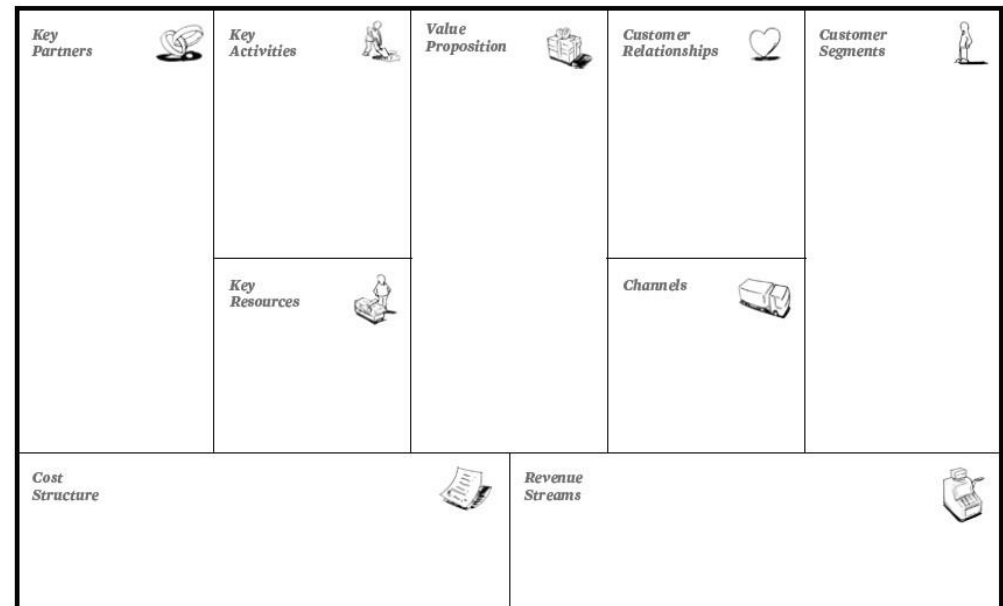

Main characteristic of these type of profile

City Area Features	
Commercial density	Low/Medium/High
Homogeneity	Low/Medium/High
Logistic acessibility	Bad/Reasonable/Good
Restriction applied	Yes/No

Product Characteristics	
Easiness of handling	Easy/Reasonable/Difficult
Special conditions	**Special needs**
Fragility	**Fragile**
Perishability	**Perishable**

Agent Profile/Deliveries Profile	
Urgency of deliveries	**Urgent**
Frequency of deliveries	**High**
Amounts to be delivered	**Several**
Planned deliveries	**Defined routine**

Adjusting business models to logistic profiles

Each logistic profile has a more suitable business model

Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer Segments
	Key Resources		**Channels**	
Cost Structure			**Revenue Streams**	

Deliveries Profile

Definition of logistic Profile

City Area Feature

Product characteristics

E-commerce και Logistics

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25% growth in Electronic Commerce in 2013 in Greece

Why e-commerce is growing

- External Environment-Government Regulatory
- Favorable Demographics
- Increasing number of urban househ
- Proliferation of Mobile devices
- Choice and Access
- Innovative Business Models
- Convenient payment options
- Consumer friendly policies

Welcome to 2015

- People will (soon) buy more with their cell phones!
- Wallets are becoming as unnecessary as watches
- The rise of social commerce
- Buy where you connect and connect where you buy!

Multichannel consumer path

Φυσικό σημείο πώλησης / Outlet — 42%

Offline εξ αποστάσεως αγορές (π.χ. μέσω… — 20%

Απευθείας διάθεση / Αντιπρόσωπο — 10%

Διαδικτυακή πλατφόρμα δημοπρασιών (π.χ. Ebay,… — 9%

Εκθέσεις — 7%

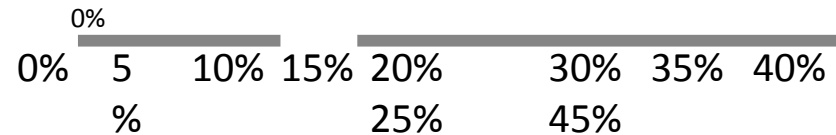Ιδιόκτητη ιστοσελίδα χωρίς λειτουργία eShop — 6%

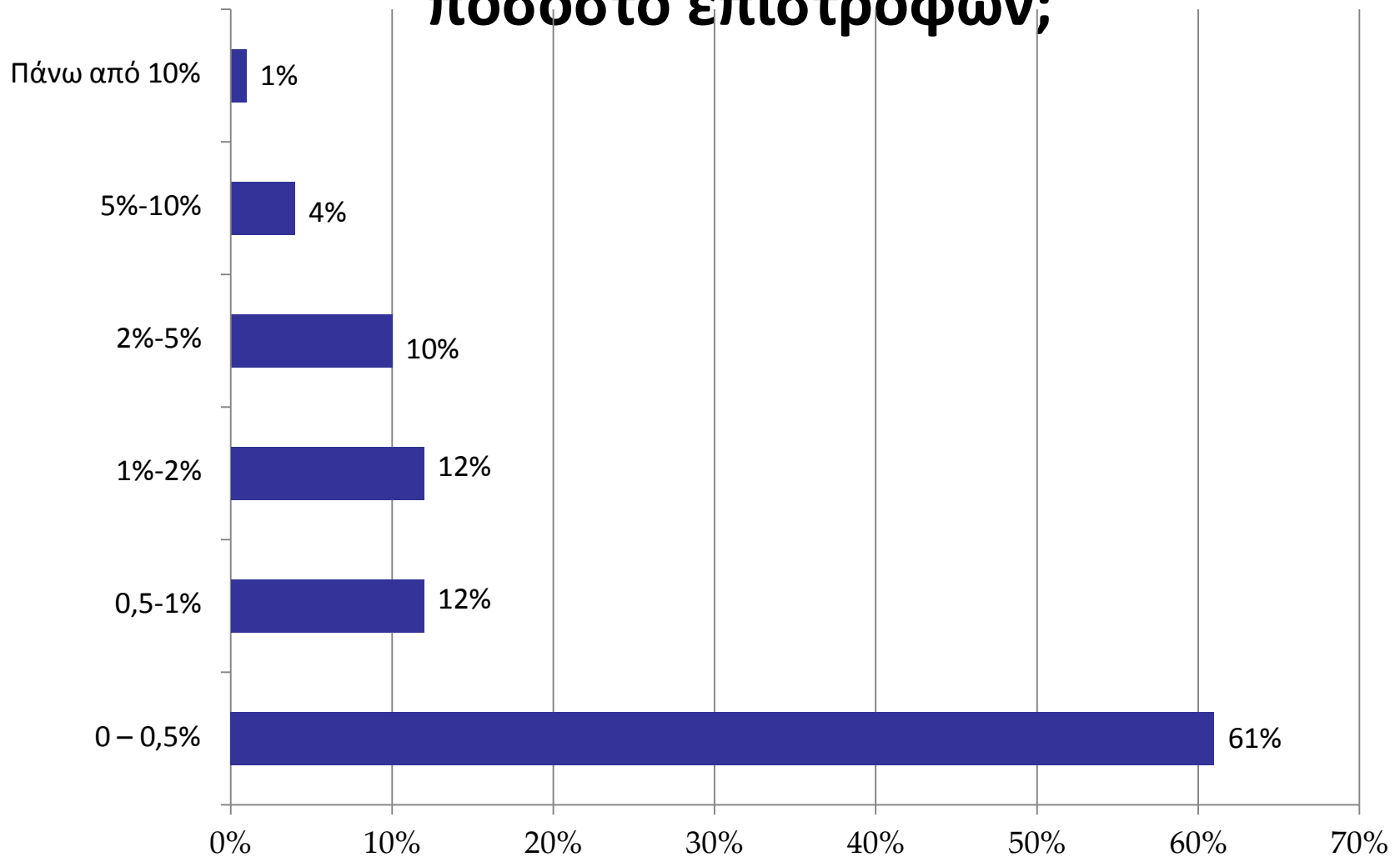Διαδικτυακή πλατφόρμα πώλησης (π.χ. Amazon) — 5%

Άλλη μορφή διαδικτυακής πώλησης — 1%

Sub-Shop (π.χ. Spreadshirt, Amazon aStore)

0%

| 0% | 5% | 10% | 15% | 20% | 30% | 35% | 40% |
| | | | | 25% | 45% | | |

Λαμβάνοντας υπόψη τα επιστρεφόμενα τεμάχια των προϊόντων, πόσο ψηλό περίπου είναι το ποσοστό επιστροφών;

Πάνω από 10% 1%
5%-10% 4%
2%-5% 10%
1%-2% 12%
0,5-1% 12%
0 − 0,5% 61%

0% 10% 20% 30% 40% 50% 60% 70%

Case Study:
Webvan vs Peapod

- Business model comparison -

- Webvan vs Peapod

- Where did Webvan go wrong?

- How Peapod succeeded

Business Model Comparison – webvan vs peapod

WEBVAN	PEAPOD
Heavy investment in infrastructure and facilities	Used existing infrastructure
No alliance with local supermarkets	Alliance with local supermarkets helped in developing business
Online/ home delivery model	Online/ home delivery or pickup from local stores
Perishable & Non perishable food products, OTC drugs,	Groceries only
Order size- $15/ order	Order size- Minimum $50

Where did webvan go wrong?

- Webvan's costs of facilities, inventory, transportation, and information (including software) are much higher
- Extra labor costs for handling customer orders
- Advertised that its prices were 5% lower than conventional stores while margins were only 1- 1.5%
- Forecasts such as 5% of US households would buy groceries online
during the early days of internet usage
- Built huge, expensive and complicated distribution centers
- Tried to expand too fast too early

How Peapod succeeded?

- Use of existing facilities to lower infrastructure cost
- Realistic model of 10000 customers
- Use of Quick pick centers and minimum order size of $150.
- Alliance with local supermarket chain in developing grocery
- business
- Build business on existing proven principles
- Optimum cost in implementing technologies

Innovative Business Models

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The Challenge - The logistics sector

- Current issues in transport & logistics
  - Extreme fragmentation
  - Labour intensive, **low margin**
  - Commodity vs. value-added service
  - **Sustainability challenges**
  - Regulatory pressures
  - Global crisis

Innovation is necessary as a way to face and possibly overcome these challenges

New Technologies in the Supply Chain
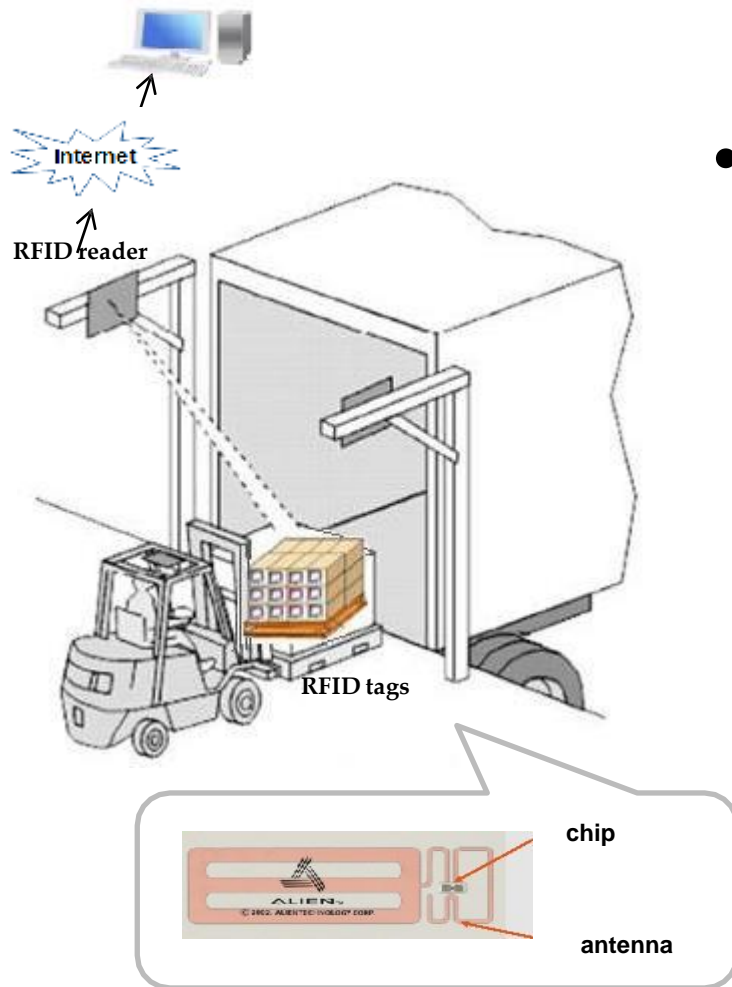
- **Radio Frequency Identification (RFID) Key characteristics**

  - <u>Automatically</u> and <u>massively</u> identify objects without line of sight

  - <u>Unique</u> product identification

Inventory Taking

Incoming Reception

Outgoing Check

Shelf Life

Permanent Inventory Taking

Collaborative Warehousing and Logistics

Carbon Footprint Monitoring

Thank you for your attention!

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www.acein.gr
www.eltrun.gr

Τέλος Ενότητας # 5

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