Innovation in Logistics
the Blockchain
Innovation in Logistics - Blockchain

1. Logistics

2. Blockchain

3. Blockchain in Logistics
Logistics in Greece

- Revenue 10% GDP
- 5% of total workforce
- A strong ecosystem
  - 3PL, 4PL, Software etc
ITS in Logistics

Logistics ecosystem

ITS Innovation

Transportation

P&P

Storing (WH)

Goods/Services delivery

Graph showing logistics services distribution by mode:
- Over seas (inc. customs) 55%
- Air (AÉRIEN) 12%
- Maritime (MARITIME) 20%
- Logistics (LOGISTIQUE) 13%

Bar chart showing logistics services:
- 93% transport logistics
- 72% delivery
- 72% storage
- 67% transshipment
- 54% distribution
- 36% warehousing

Translated text:
Προσφερόμενες υπηρεσίες

% του λογιστικού

- Μεταφορές
- Διανομή
- Διαδραστικά
- Σύλληψη
- Συμπλήρωση
- Διακίνηση
- Παραδοσία
- Συσκευασία

Innovative business solutions

iLINK
Industry 4.0

- **AI**
  - Machine Intelligence: intelligence demonstrated by machines
  - Intelligent Agents: any device that perceives its environment and takes actions that maximize its chance of successfully achieving its goals

- **IoT**
  - Smart Sensors
    - monitor environmental factors
    - temperature
    - humidity
    - asset performance
  - Predictive maintenance
  - Wearable technology

- **Blockchain**
  - A continuously growing list of records, called **blocks**
  - Linked and secured using cryptography.
  - Bitcoin example
  - 19 industries to extinct by 2030
A blockchain is a continuously growing list of records, called **blocks**. Linked and secured using **cryptography**. Each block contains a **hash** of the previous block, a **timestamp** and transaction **data**. It is an **open, distributed, decentralized ledger**. Records transactions between two parties efficiently and in a verifiable and permanent way.
Blockchain in a nutshell

Append-only system of record shared across business network

Shared Ledger + Cryptography

Ensuring secure, authenticated & verifiable transactions

All parties agree to network verified transaction

Consensus + Smart Contract

Business terms embedded in transaction database & executed with transactions
Smart Contracts

 contractual code

- Less prone to errors
- Fast
- Decentralized
- Eliminates the middleman
- Reduces cost

How Smart Contracts Work

- Creators upload content
- Users access content
Blockchain benefits – Cost improvements

1. Cost of Verification
   - Costless verification
   - Network verifies

2. Cost of Networking
   - Market democracy
   - Transparency

3. Cost of Intermediaries
   - DLT
   - Power of many
Blockchain @ Logistics future

TODAY

- Inconsistent information across organizational boundaries and “blind spots” throughout the supply chain hinder the efficient flow of goods
- Complex, cumbersome, and costly peer-to-peer messaging
- Manual, time-consuming, paper-based processes; high air courier expense and delays
- Risk assessments often lack sufficient information; clearance processes subject to fraud
- The administrative cost of handling a container shipment is comparable to the cost of the actual physical transport

TOMORROW

- Instant, secure access to end-to-end supply chain information; single source of the truth
- Assurance of the authenticity and immutability of digital documents; trusted cross-organizational workflows
- Better risk assessments and fewer unnecessary interventions
- Far lower administrative expenses and elimination of costs to move physical paper across international borders
- Estimated global savings from more efficient sharing of information: $27 billion
Blockchain in Logistics

Logistics nightmare
- $140b in disputed payments
  - 42 days to receive payment
- Admin cost -> 20% of TC
- Tones of papers
- Huge diversity of ERPs and SWs
- Demand & Supply mismatch
  - 29 billion miles half loaded trucks
- Sensitive products overlooked
  - Temperature sensors
  - 8.5% of shipment deviations

Blockchain approach
- Smart contracts
  - Immediate payments
- No intermediary is required
- Just electronic transactions
- Interoperability is guaranteed
  - One common DLT
- Timestamped load data
- IoT transactions
  - Sensor data
  - GPS data
Logistics blockchain bus
RaaS – Routing as a Service

RaaS Services
- Routes Optimization
- Driver dispatching
- Real time monitoring
- PoD (Proof of Delivery)
- GPS signals
- Sensor data (temp)
RaaS model

- **IoT**
  - Sensors
  - Temperature
  - Humidity

- **Route Optimization**
  - POIs
  - Algorithms

- **Dispatching**
  - Route me app
  - PoD

- **Monitoring**
  - GPS Telematics
  - Real time

- **Reporting**
  - BI
  - ERP integrated

Pay as you Use
RaaB – Routing as a Blockchain

- IoT
- Reporting
- Tokenized as you Use
- Route Optimization
- Monitoring
- Dispatching
SWOT

**Strengths**
- DLT & GPT
- Consensus
- Cost reduction

**Weaknesses**
- Scalability
- Last mile problem

**Opportunities**
- Common Platform
- Transparency
- Logistics ecosystem

**Threats**
- Collaboration
- Intermediaries

RaaB
A huge ecosystem

- Αριθμός ΜμΕ
  - 570,000 εταιρείες

  - Ατομικές επιχειρήσεις
    - 77%
      - Μικρές
        - 76%
      - Μεσαίες
        - 1%
  - Εταιρείες
    - 23%
      - Μικρές
        - 18%
      - Μεσαίες
        - 5%

- Κύκλος Εργασιών ΜμΕ
  - €74 δισ.

  - Ατομικές επιχειρήσεις
    - 37% ($28 δισ.)
      - Μικρές
        - 32% ($24 δισ.)
      - Μεσαίες
        - 5% ($4 δισ.)
  - Εταιρείες
    - 63% ($46 δισ.)
      - Μικρές
        - 23% ($17 δισ.)
      - Μεσαίες
        - 40% ($29 δισ.)
Did you ask your mom about Blockchain?

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