Building Radio frequency IDentification solutions for the Global Environment

EU Traceability Pilot in Pharmaceutical Supply Chain

Henri Barthel, GS1 Global Office
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Information Society
Technologies

BRIDGE

The BRIDGE Project

- A 3 years project
- Started on July 1st 2006
- 31 Partners
- 15 work packages
- Total budget: €13 millions
- European Union funding:€ 7,5 millions

BRIDGE Partners

GS1	Labs/ Universities	End users	Solution Providers
Global Office (Coordinator) China France Germany Poland Spain UK	Cambridge ETH Zürich Fudan TUG Graz UPC Barcelona	Bénédicta Carrefour Covap gardeur Kaufhof Nestlé UK Northland Sony	AIDA Centre AT4 wireless BT CAEN Confidex Domino JJ Associates Melior SAP UPM Raflatac Verisign UK
7	5	8	11

Building Radio frequency IDentification solutions for the Global Environment

Horizontal Activities

- WP15: Innovation policy and public policy
- WP14: Project management
- WP13: Dissemination & Adoption Tools
- WP12: Training Platform, Courseware & Certification

Business Applications

- WP5: Anti-Counterfeiting
- WP6: Pharma Traceability
- WP7: Textile industry
- WP8: Manufacturing
- WP9: Reusable Asset Mgt
- WP10: Products in Service
- WP11: Non-Food Item level

Technical Development

- WP4: Security
- WP3: Serial-Level Supply Chain Control
- WP2: Serial-Level Lookup Service
- WP1: Hardware Development
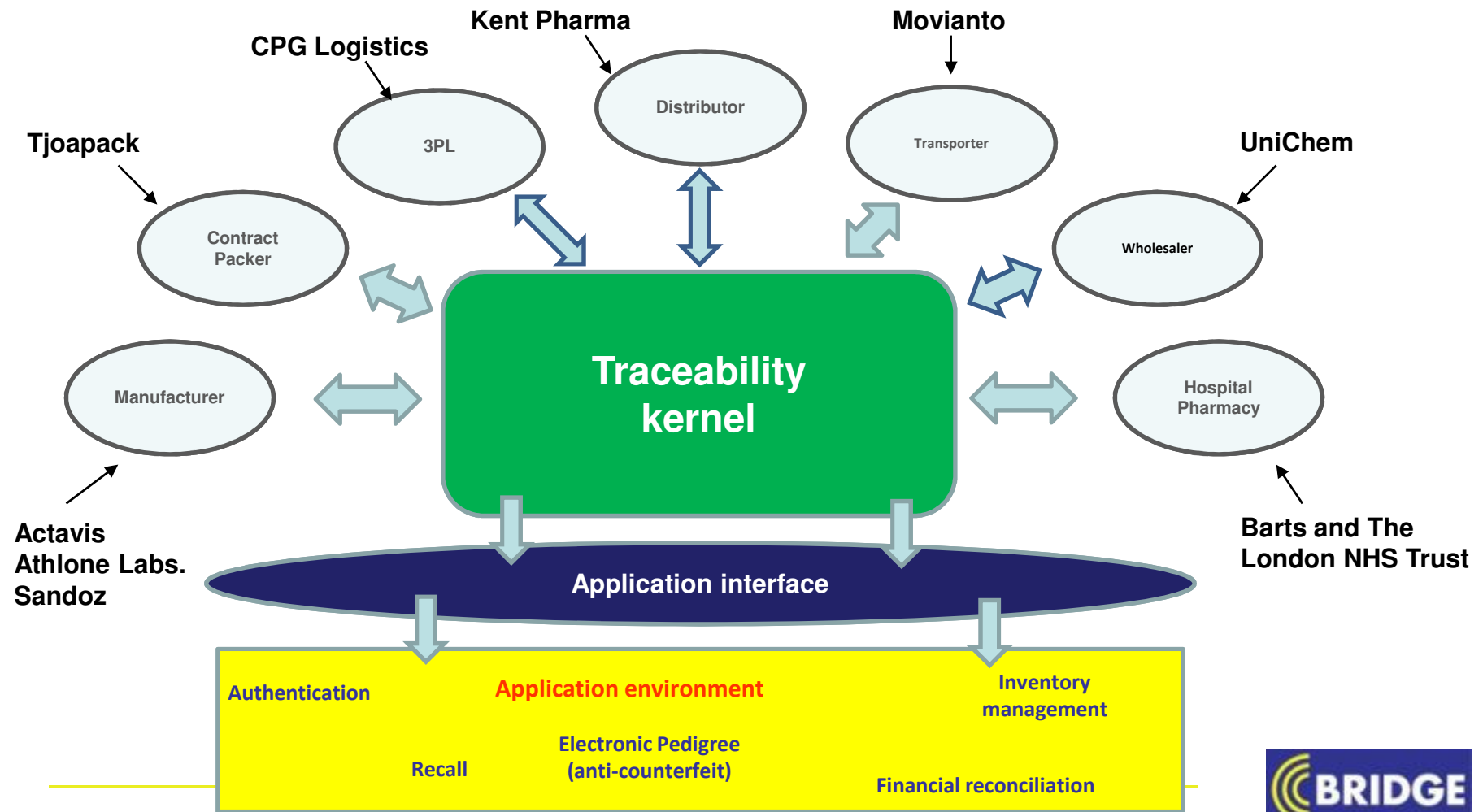
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Pharma traceability objectives

- **Implement a complete supply chain traceability system for pharma products in a <u>real life operational environment</u>**

- **Multi-application support capability e.g.**

  - Electronic pedigree

  - Product authentication

  - Recall

  - Inventory management

  - Financial reconciliation

- **Compliant with open standards (GS1)**

- **Easy to use, robust system**

Pharma traceability scope

Tjoapack

CPG Logistics

Kent Pharma

Movianto

UniChem

Contract Packer

3PL

Distributor

Transporter

Wholesaler

Manufacturer

Traceability kernel

Hospital Pharmacy

Actavis
Athlone Labs.
Sandoz

Barts and The
London NHS Trust

Application interface

Application environment

Authentication

Recall

Electronic Pedigree
(anti-counterfeit)

Inventory management

Financial reconciliation

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Pharma Traceability Pilot participants:
solution and technology suppliers

DOMINO — Provision and deployment of the inline equipment and printing solution

GS1 UK — Provision of standards and RFID consultancy

JJ ASSOCIATES *Independent Electronic Commerce Consultants* — Project management, business consulting & marketing

meliorsolutions — Technical design and software development

VeriSign® — EPCIS database provision

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Pharma Traceability Pilot participants:
End Users

- **Manufacturers**
  - **Actavis (UK)**
  - **Athlone Laboratories (Ireland)**
  - **Sandoz (UK)**
- **Contract packer**
  - **Tjoapack (The Netherlands)**
- **Pre-wholesaler**
  - **CPG Logistics (UK)**
- **Distributor/Storage**
  - **Actavis (UK)**
  - **Kent Pharmaceuticals (UK)**
- **Transport & Logistics**
  - **Movianto (integrated) and others**
- **Wholesaler**
  - **UniChem (UK)**
- **Hospital**
  - **Barts and The London NHS Trust (UK)**

AUTHENTICATION

IDENTIFICATION

MANUFACTURING   DISTRIBUTION   LOGISITICS   PHARMACY

information collection using EPCIS
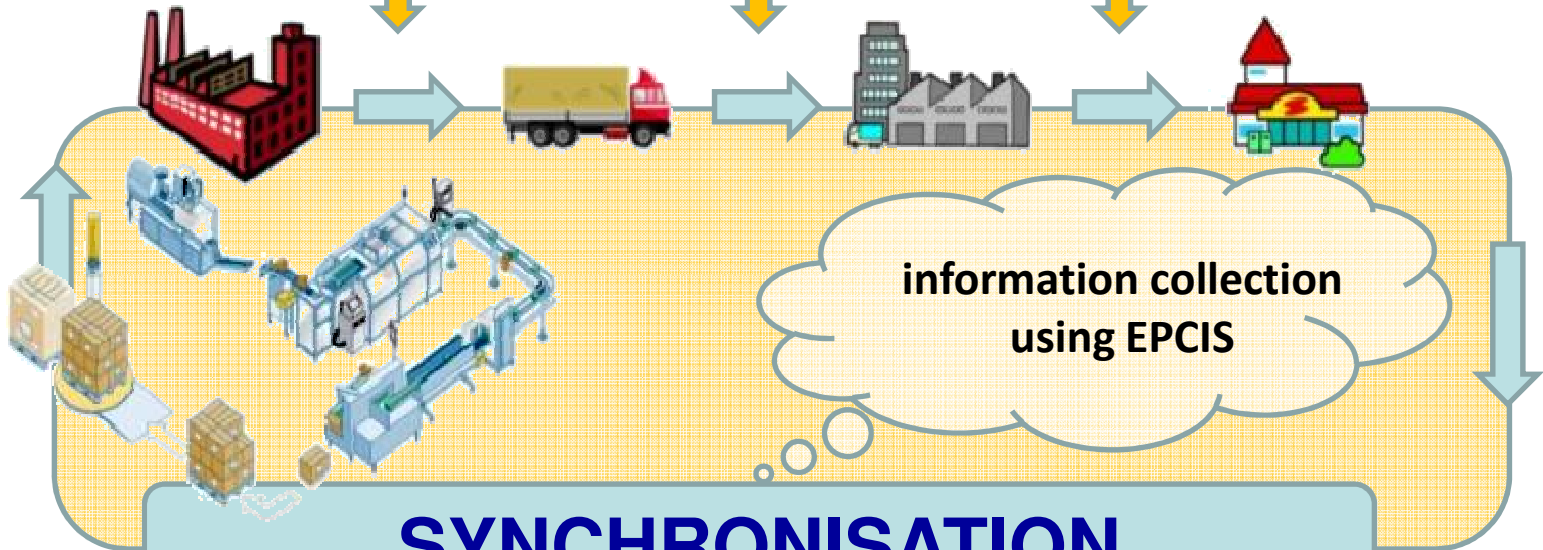
SYNCHRONISATION

INFORMATION
ANALYSIS & SUBSCRIPTION

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Major Achievements

- Nine supply chain end users involved

- 19 product lines selected

  - one years pharmacy stock ordered and manufactured

  - Different packs and forms, includes 2 controlled drugs

- Production line encoding/printing equipment specified, acquired, configured and installed at Contract Packer and one Manufacturer

- Application software specified, developed and implemented

Pilot Products – 19 lines

Product	Form	Pack
Aqueous Cream 500mg	Tubs	1
Warfarin 1/3/5mg	Tabs	28
Clindamycin 150mg	Caps	24
*Dihydrocodeine 30mg	Tabs	28
Prednisilone E/C 5mg	Tabs	28
*Co-Codamol 8/500mg	Tabs	30
Flucloxacillin 250 / 500mg	Caps	28
Penicillin V 250mg	abs	28
Amoxicillin 125 / 250mg	Susp/Sugar Free	100ml
Amoxicillin 250 / 500mg	Caps	21
Penicillin 125 / 250 mg	Susp/Sugar Free	100ml
Flucloxacillin 125 / 250mg	Susp	100ml

* controlled substances

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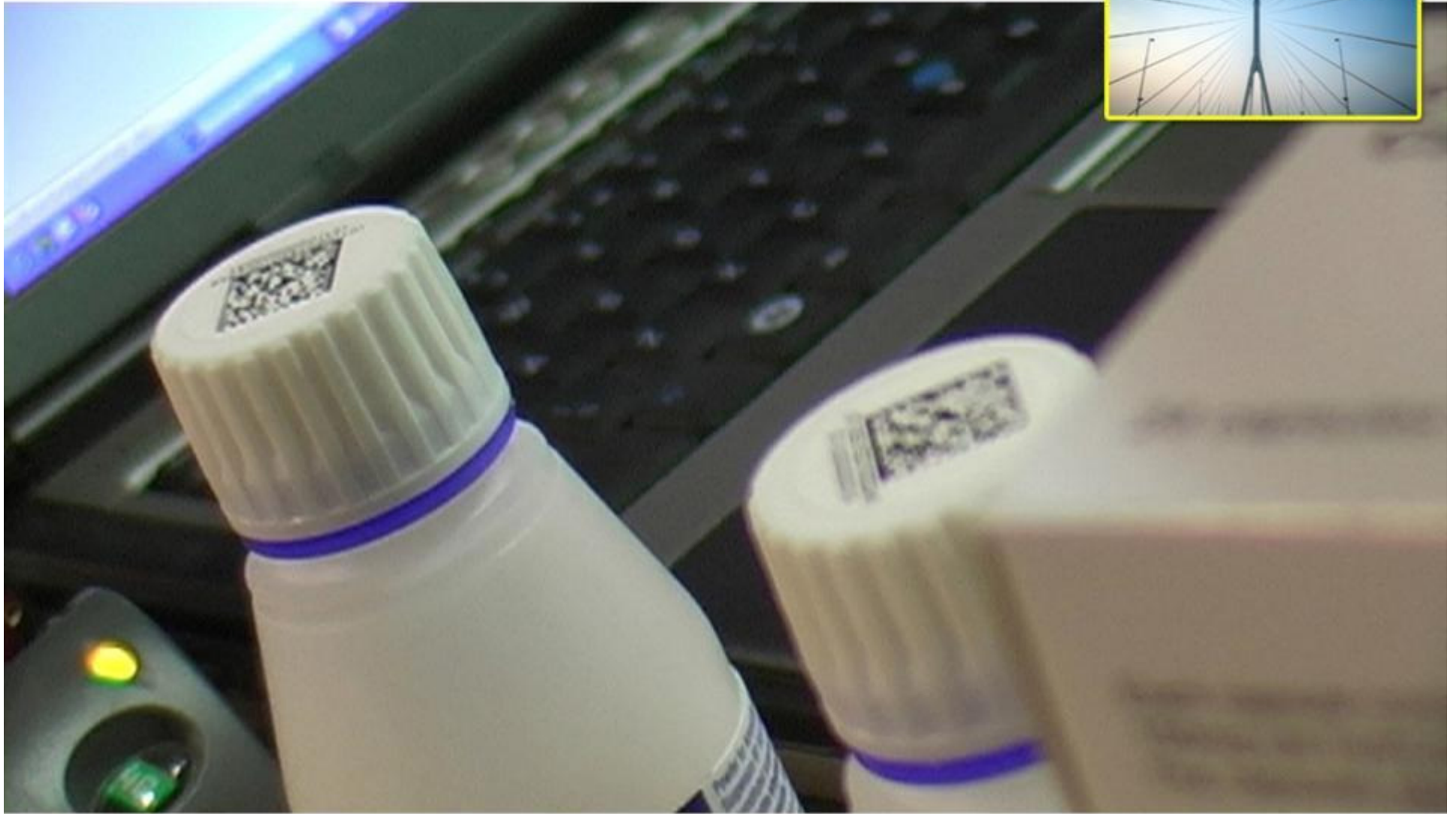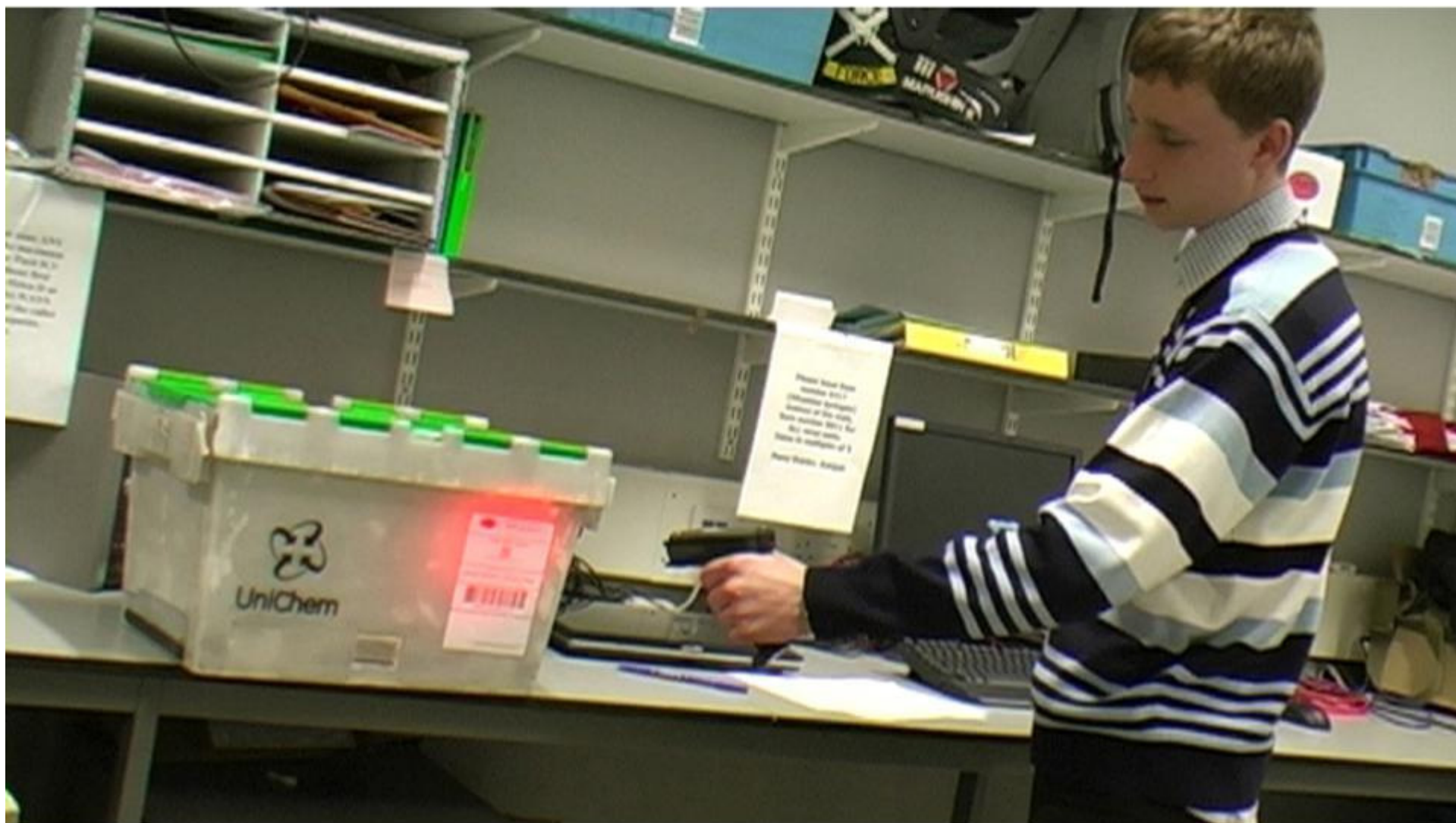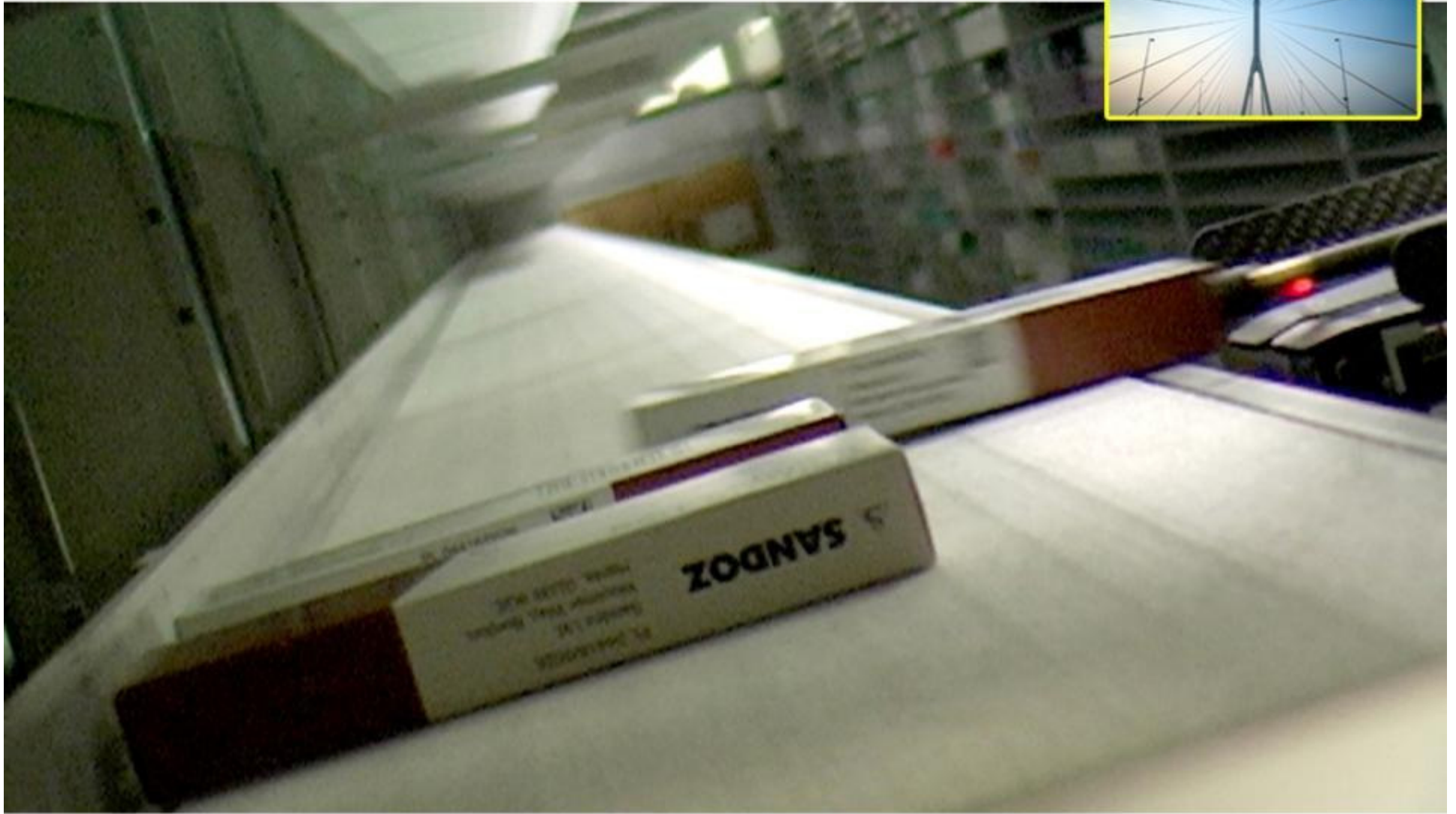
Lessons learned

- Inline production equipment installation is a complex, precise and resource intensive operation
- Data Matrix / RFID operates effectively in hybrid environment & generally provided good quality reads
- Integration of traceability data into back office systems is key
  - For inventory management, exploiting batch & expiry date data
  - For financial reconciliation – order/goods received/invoice
  - For product recall
  - For traceability purposes – product locations, sales made, consumption

Conclusions

- Business Case varies according to supply chain role & function
  - Clear patient safety benefits: all parties buy- in to that
  - Electronic chain of custody as counterfeit combatant
  - Recall systems, increased efficiency, inventory management, financial reconciliation are all integration dependent
- Supply chain wide traceability totally feasible <u>with</u>
  - Good **planning** & resourcing
  - User **commitment** (senior level) and prioritisation
  - **Easy** to use, intuitive, robust user systems and processes
  - Clear policy on **integration** with in-house systems
  - Good user **training** – for all operatives involved
  - Full trading partner **collaboration** & communication

Thank you for your attention!

Contact details

Henri Barthel
GS1 Global Office
E henri.barthel@gs1.org
T +32 2 788 78 23

www.bridge-project.eu

www.bridgewp6.eu

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