



RAIN[®]
R F I D



**Association for Automatic
Identification and Mobility**

RAIN Enabled IoT Case Studies

Presented to the
ISO/IEC/ITU IoT Workshop
Berlin, Germany
13 May 2016

Chuck Evanhoe
Chairman, AIM (Global) Board of Directors

Who is AIM?



Association for Automatic
Identification and Mobility

AIM is the association for automatic identification and data capture to advance the success of our members in the application of AIM technologies.

AIM technologies are the first millimeter, centimeter, meter or kilometer of the Internet of Things!



What are AIM technologies?



Association for Automatic
Identification and Mobility

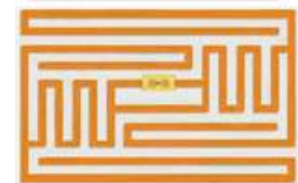
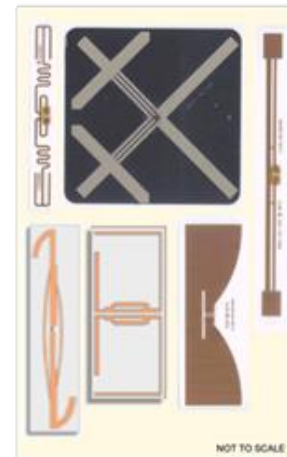


1D Barcode



**Contact
Memory
Buttons**

Passive RFID Tags



2-D Barcodes



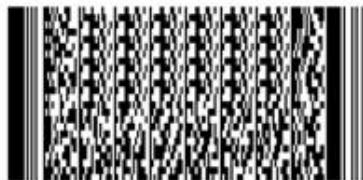
Data Matrix



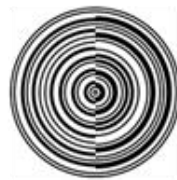
QR Code



MaxiCode



PDF417



Bullseye



Aztec

Active RFID Tags



RAIN RFID Alliance

RAIN, **R**Adio frequency **I**dentification**N**, an AIM Alliance created to promote UHF RFID conforming to ISO/IEC 18000-63 & GS1/EPC GEN 2

RAIN Mission and Vision



Mission

To enable businesses and consumers to identify, locate, authenticate and engage items in our everyday world

Vision

A future where everyday things are part of a connected world ... like raindrops to the sea



With Special Thanks to



**RFID
Propagation**

February 23, 2016



**Creator of
exclusive branded
sporting goods and
services**



**Local and on-line
retailer**



SUPPLY CHAIN



5 000 employees



650 million items shipped
to stores each year



46 warehouses

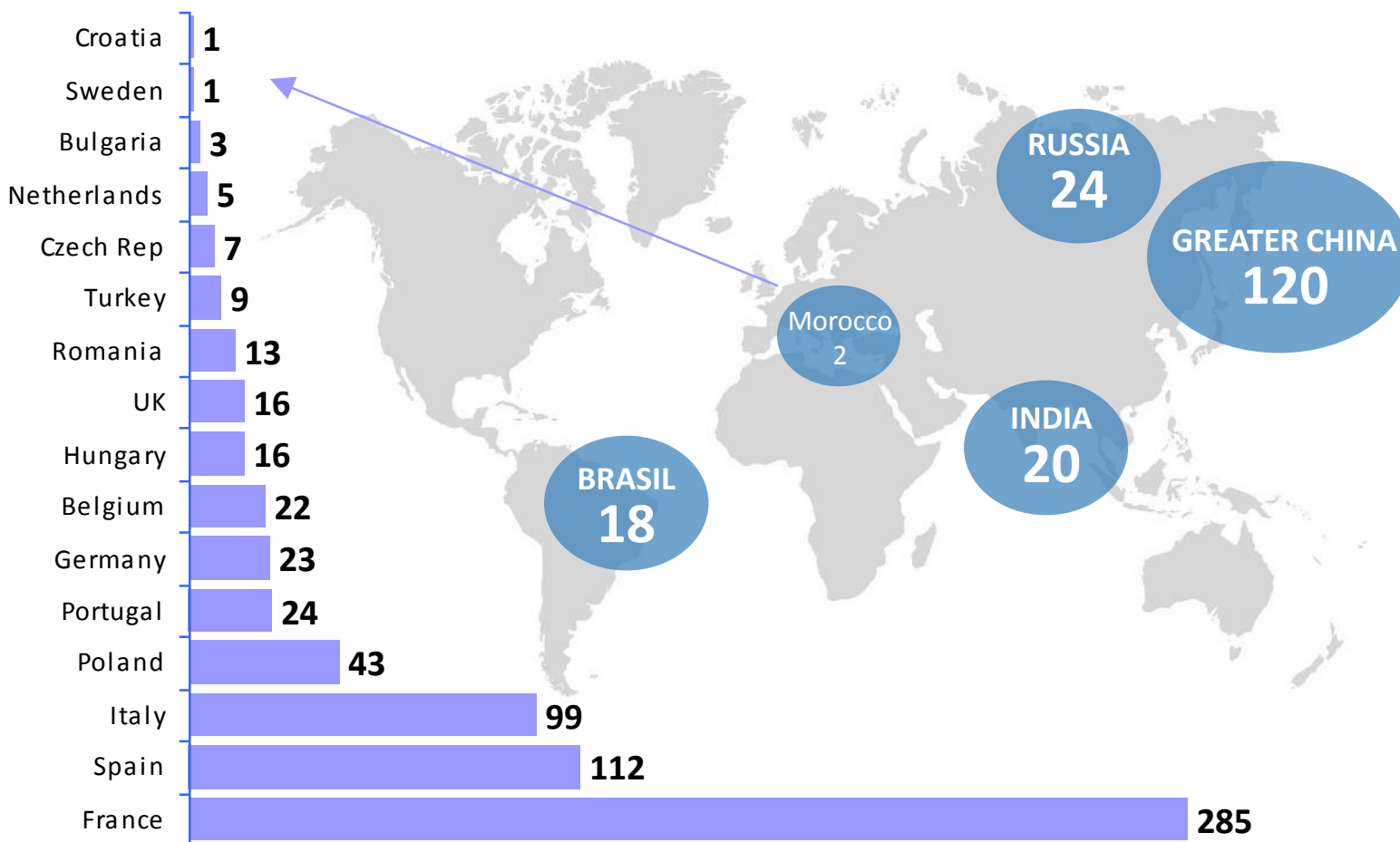


50 000 containers
exported



889 STORES* WORLDWIDE / **22** RETAIL COUNTRIES (2014)

EUROPE



*Decathlon & Decathlon Easy

“Improve the efficiency of store teams and the customer experience.”



A word cloud of business metrics and customer experience factors. The words are arranged in a circular pattern, with 'Availability' and 'Satisfaction' at the bottom, 'Security' and 'Turnover' on the left, and 'Customers' on the right. Other words like 'Business', 'Cashing', 'Productivity', 'Shrinkage', 'Products', 'Costs', 'Speed', and 'Traceability' are interspersed in the center. The words are in various colors (red, green, yellow, orange, brown) and sizes, creating a dynamic visual effect.

Security
Turnover
Cashing
Productivity
Shrinkage
Products
Business
Costs
Speed
Traceability
Availability
Satisfaction
Customers

**Unique
ID**



**PRODUCTION
SOURCE TAGGING**

- Dispatch
- Tracking

LOGISTICS

- Inventory
- Dispatch
- Tracking

STORE-RETAIL

- Inventory
- POS
- Loss Prevention

- Source-tagging of home-brand products
- RFID stickers in distribution centers & stores (External Brands)
- RFID server in store, connected to POS & antitheft gates





FACTORIES

Putting tags in products
Shipping control



WAREHOUSES

Delivery control
Inventory
Epc shipping
=>stores



STORES

Inventory
Cashing
Security of products



Inventory



New equipments



New applications



Cashing



New equipments



New applications



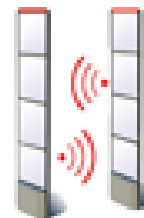
Security



New equipments



New applications



Kill on Pos

NEW PROCESSES: IN WAREHOUSES

DECATHLON



- 17 countries (in 4 different custom zones) implementing 3 processes in + 800 Stores & +30 DC through + 25,000 pcs of RFID equipment in 2014
- 25 countries and all stores implemented in RFID at the end of 2015
- 85% of tagged products (>1 billion by March 2015)
- Inventory
 - Productivity in store x5 (for RFID products), thus better stock availability and increased sales
 - End of External one-shot fiscal inventory (with service providers)
 - Increase of “physical” availability in store (> 5%)
- POS
 - Increased productivity
 - Less Sales Price Discrepancies



➤ Loss Prevention

- Increased interpellations
- Less wrongdoings at POS
- Decrease of the shrinkage

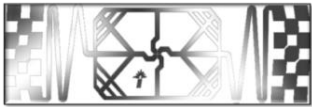
Another Example: Sports

Marathon Bibs are IoT



- Improved Runner Tracking
- Social Media Integration
- Real-Time Race Updates

RAIN Tag



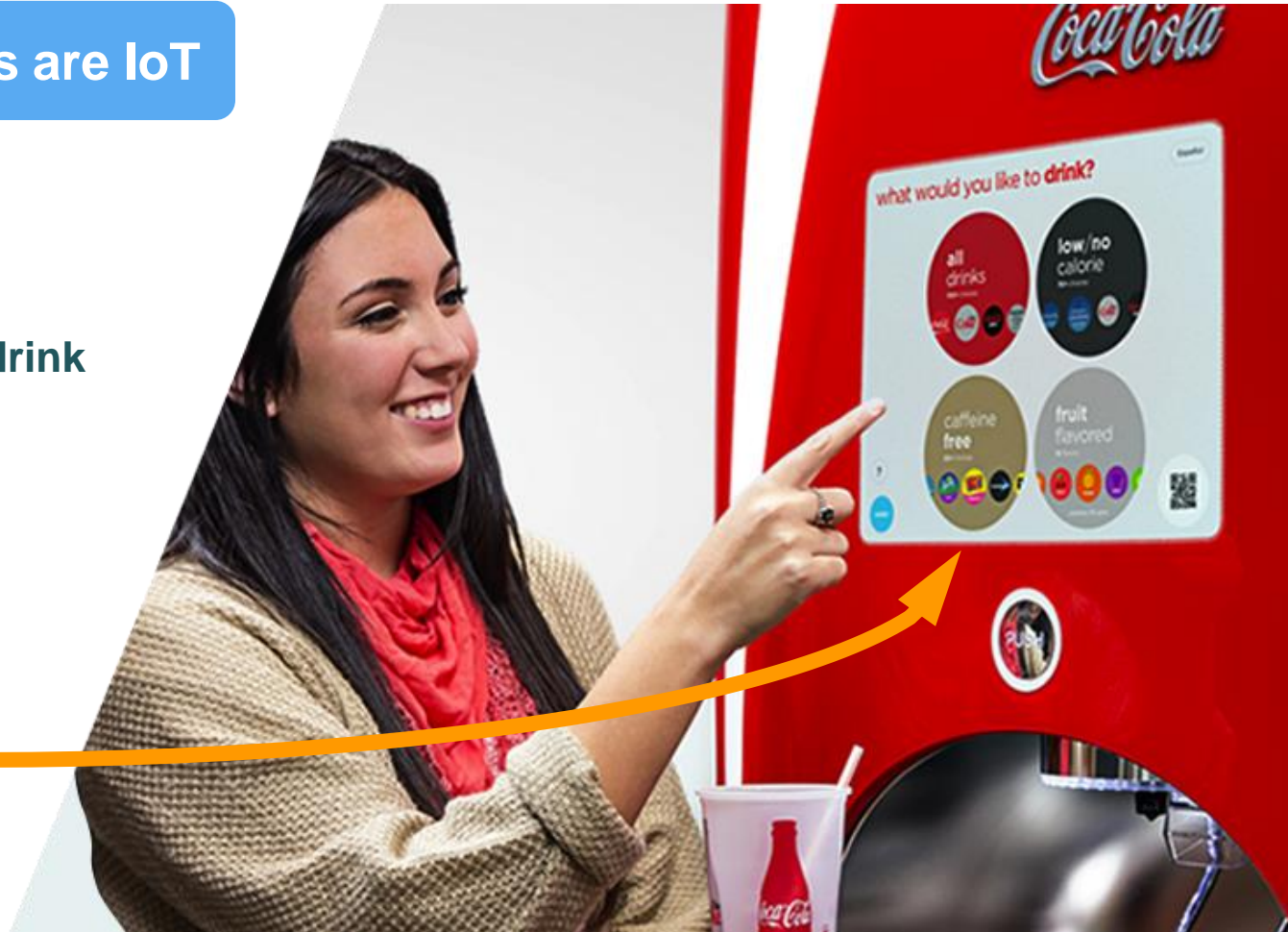
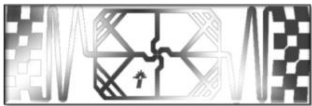
Another Example: Food

Flavor Cartridges are IoT



- RFID enables 100+ drink dispenser
- Coca Cola Freestyle delights fans

RAIN Tag



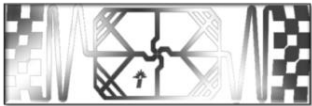
Another Example: Medicine

Pharmaceuticals are IoT



- Reduced Shipment Errors
- Improved Inventory Management
- Expiration Date Control
- Counterfeit Prevention

RAIN Tag



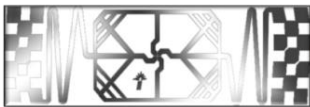
Another Example: Healthcare

Patient Tracking is IoT



- Better Customer Service
- Improved Asset Utilization
- More Effective Personnel Utilization

RAIN Tag



Edit Antenna

ID	Antenna	Active
A1	OR	Y
A2	Scope	Y
A3	OR Hallway	Y
A4	Recovery2	Y
A5	Exit To Room	Y
A6	Waiting Room Door	Y
A7	Pre-Post Op Default Antenna	Y

Default Antenna after Inactive Timeout: ☐ Send Tag to Address After Timeout: ☒

Antenna Number: Location: ☒ Inactive Period (sec.): Movement Delay (sec.):

Antenna Name: (Click an entry in the table to select)
Antenna Code: Antenna IP Address: Antenna Number:
Antenna Area: Recovery: ☒
RF Level (166-316): Active (Y/N): ☒

Add Antenna

Antenna Name:
Antenna Code:
Antenna IP Address: Antenna Number:
Antenna Area: Recovery: ☒
Active (Y/N): ☒

Surgery Patient Status Board	
Patient ID	Location
1163	Pre/Post Patient Room
1175	Surgery
1176	Recovery
1177	Pre/Post Patient Room
1178	Pre/Post Patient Room
1180	Pre/Post Patient Room
1181	Recovery
1182	Recovery
1400	Recovery

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Questions?

www.rainrfid.org

www.aimglobal.org