



Localisation pour la planète entreprise



Xcit'ID

Demo Project

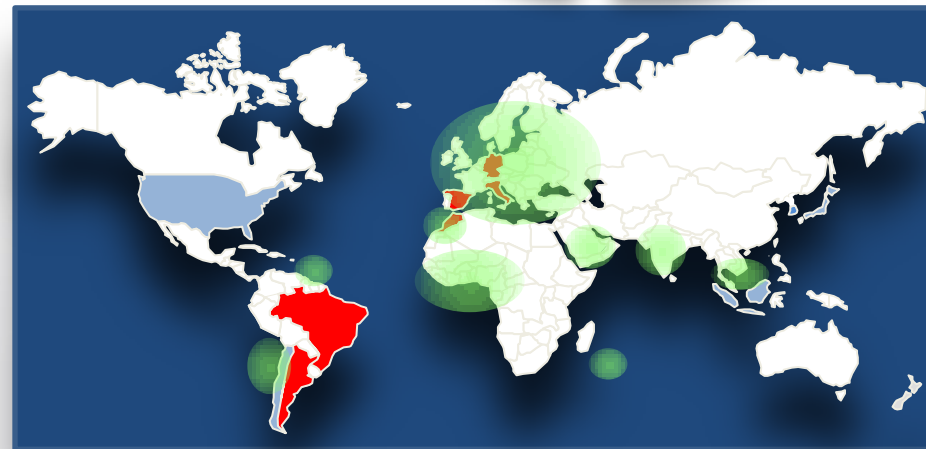


The Company

- Founded in 2002
- Subsidiary of CLS Argos and Telespazio (Finmeccanica)
- 40 000 equipped vehicles
- 2.5 million daily messages
- 150 customers
- 50 employees
- 1 subsidiary in Amsterdam

Shareholders

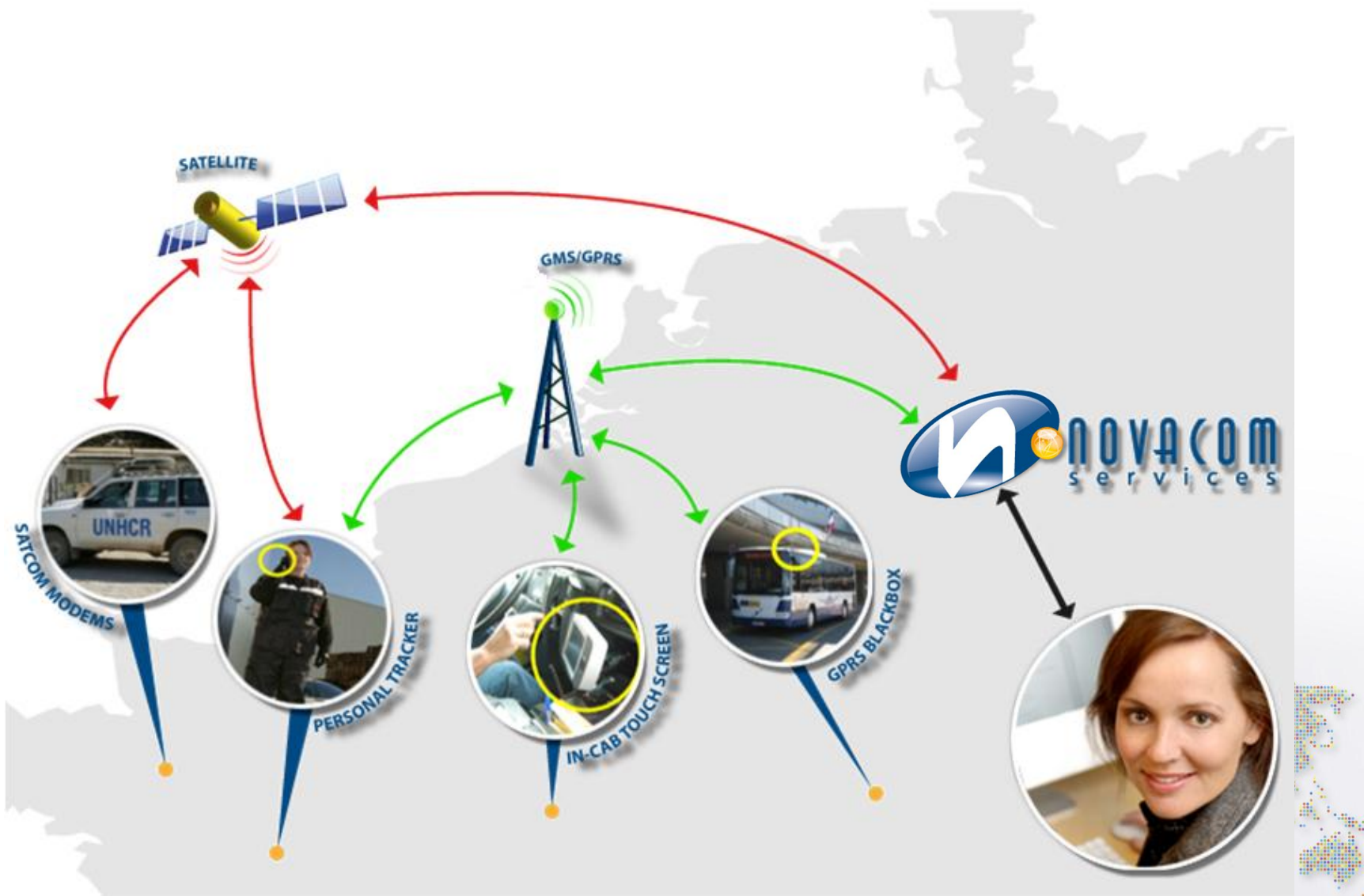
Net equity: 4 473 200 €



Telespazio network – CLS network – Novacom customers



The Novacom system



Success stories: Industry-specific solutions

Waste management

Waste collection
rounds management

Real-time weighting
& counting of bins

On-board navigation



Fleet management & services

Real-time
positioning

Man-down
systems

Closest unit

Vehicle
maintenance

On-board
navigation



International & humanitarian

Agents protection
in case of hijacking

Road safety and
behavior analysis

Fleet management,
economies of scale

Carbon print
decline



Transport / Freight

Real-time
positioning

Alerts on door
openings

Refrigeration
monitoring

Social data

Dispatching

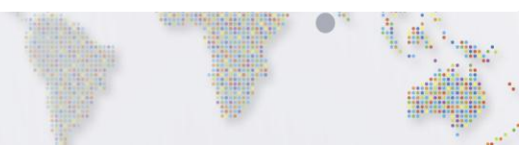


- **Xcit'ID: follow-up of ARTES 20 Feasibility Study “GULLIVER”**
 - ***Aid & Development community - Pharmaceutical Cold Chains, need to:***
 - ✓ Enhance cold chain quality, monitoring, control, coordination between parties
 - ✓ Reduce product loss risk, allow real-time reactivity when the chain fails
 - ***Insurance companies***, manage risks and determine liabilities (expensive loss)

→ NOVACOM proposes a solution:



- **Xcit'ID is a Demo Project:** *create a solution and deploy it in operational field pilot looking forward to the rollout of a commercial product*
- **Xcit'ID: project funded at 50% by European Space Agency**
21 Month project (December 2012 – August 2014)



Xcit'ID Partners



Who needs what

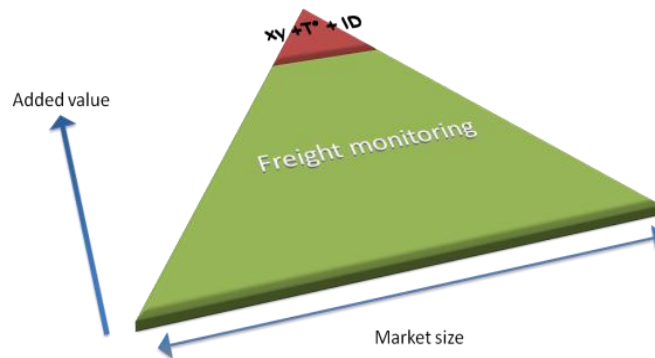
- **Pharma producers:** *cold chain products are safe; keep reputation; reduce product loss (the value of 1 shipment may easily exceed 1MEUR!), better inventory management*
- **NGO's, end-users:** *campaigns are successful, products arrive in good condition*
- **Insurance:** *better understand risks and responsibilities; determine liabilities in case of failure*
- **Transporters, 3PL:** *save goods in the field; prove good practices*
- **Donors:** *money is well used, goals achieved*



Solution: ***Xcit'ID***



- **Xcit'ID focuses on Aid & Development community:** two main target markets:
 - **High-end product**, for pharmaceutical cold chains
 - **Low-end product**, freight monitoring (temperature monitoring is optional)



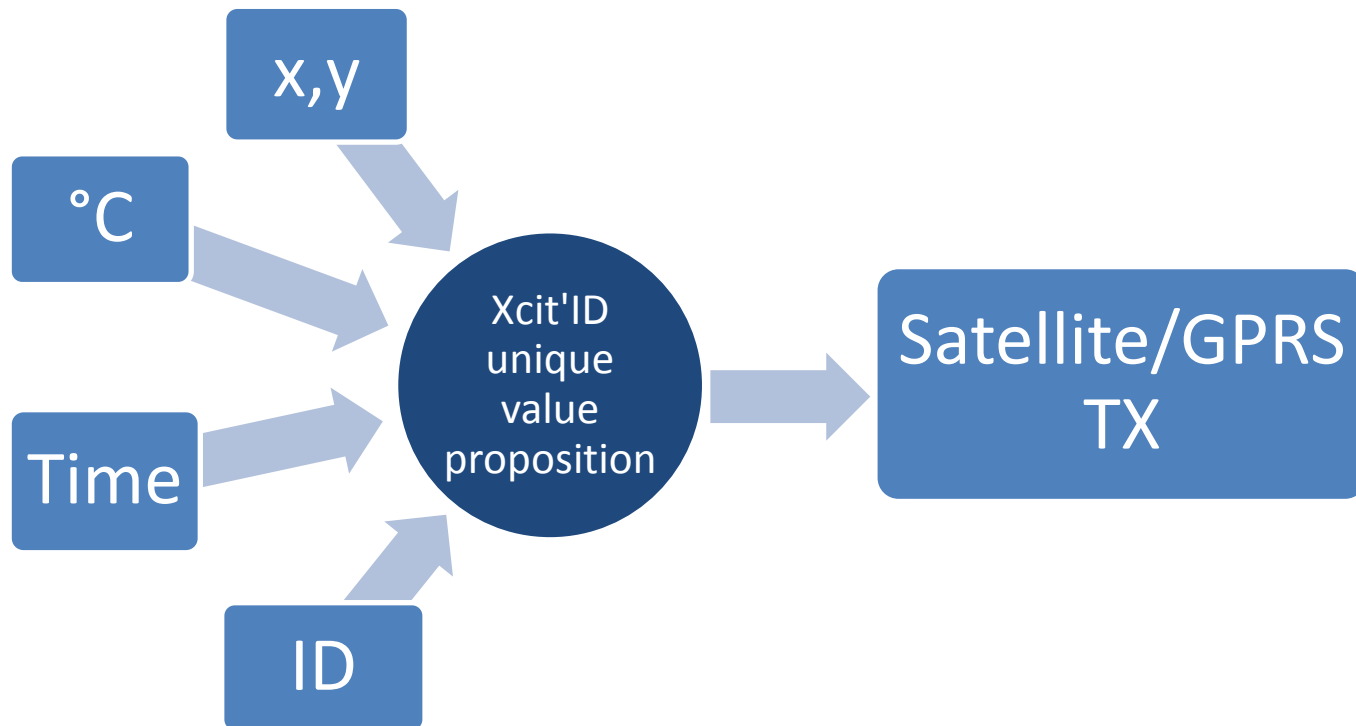
- **So far, simple methods exist in the market:** *Temptale*
 - **No real-time visibility** (only at the end of the chain, too late),
 - **Lack of reactivity** (no alerts generated if wrong situation happens)
 - **No coverage in remote areas** (not valid for humanitarian missions)
 - **Identification and tracking for vehicles, not for box**
- **Xcit'ID uses space assets to create a solution providing service world-wide**



Xcit'ID concept

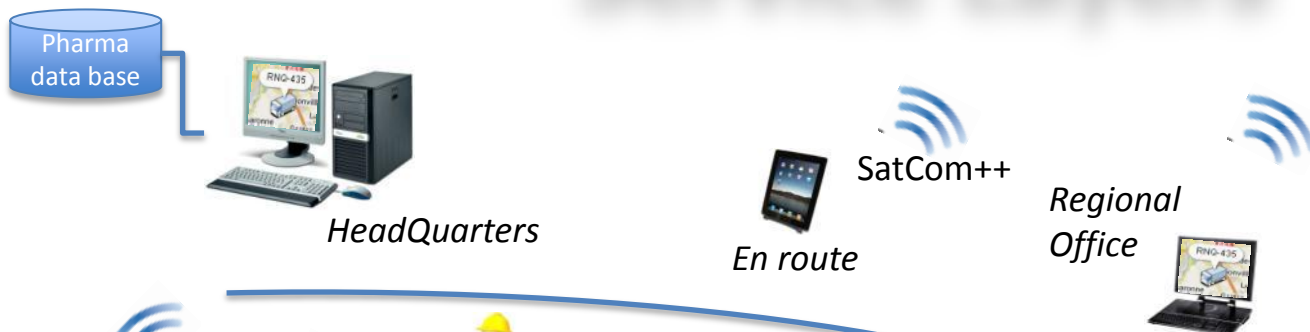
- **Xcit'ID:** near-real-time monitoring of Position (“X”), Temperature (“C”), and Timing (“t”) of Uniquely Identified goods (“ID”) traveling along cold chains

Firstly intended for temperature-sensitive pharmaceutical goods reaching isolated areas or disaster regions with no local infrastructure



Service Layers

Information
display



Means
of collection



Collected
information



Tracked
assets



How do we do it? (I)

Three components deployed in the supply chain:

1-RFID Temperature Tag Units (RFID-TTUs)

- ✓ *Unique Identification of goods*
- ✓ *Temperature sensor and logger*
- ✓ *Packed with goods in boxes/pallets all along cold chain*



2-RFID Reader/Transceiver (RFID-RTD), to retrieve data from sensor tags by short range radio-frequency interface and send to NOVACOM Platform

- ✓ *Automatic: installed in vehicles and reefers*
- ✓ *Manned: portable version for warehouses and checkpoints*
- ✓ *Operator's HMI for local monitoring*
- ✓ *Messaging system (GPRS/SatCom) operator ↔ supervisor*



How do we do it? (II)

3-NOVACOM database and platform, *world-wide remotely accessible through web-based interface*

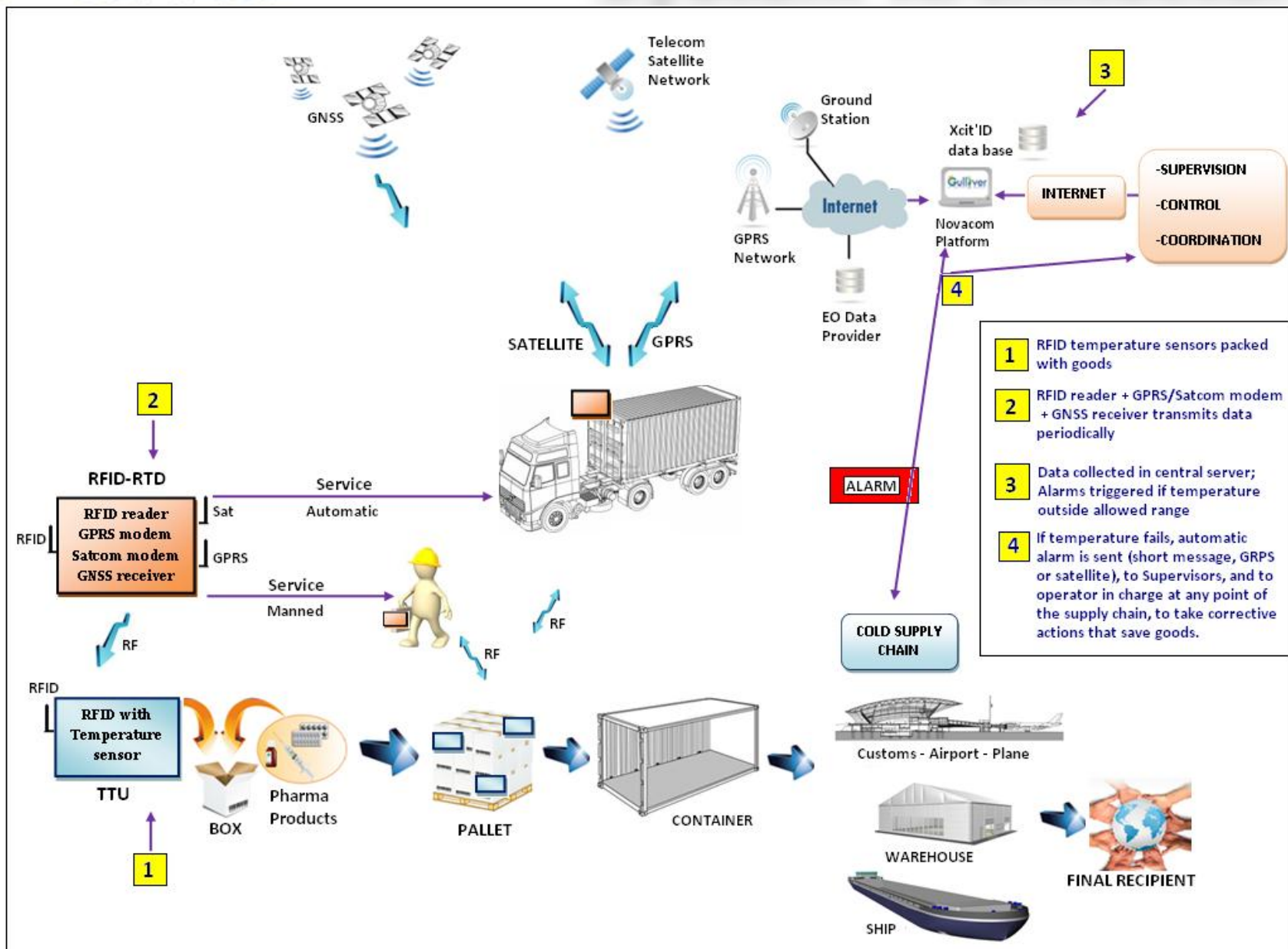
- ✓ *Stores all data from the field*
- ✓ *Allows user's remote monitoring (X, C, T, ID), supervision, coordination end-to-end*



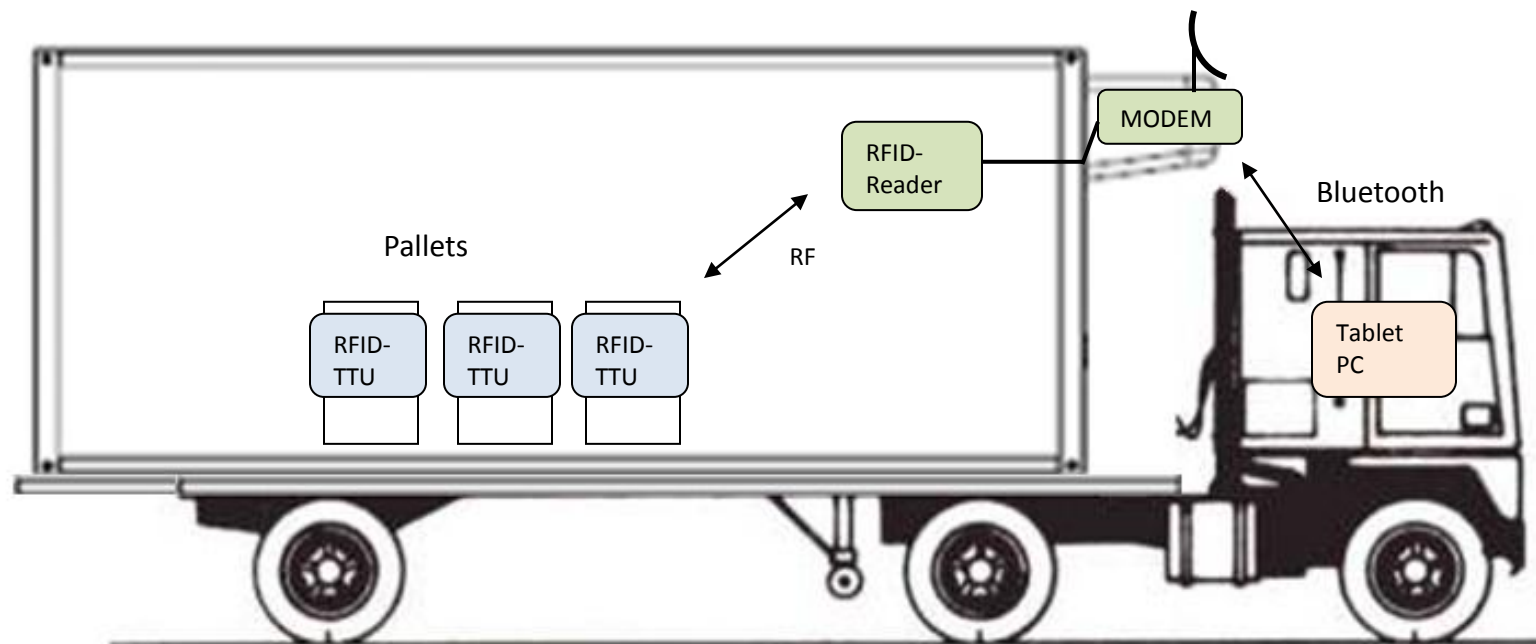
If product's temperature fails, alert is triggered by the platform *and sent to operator in charge and supervisor (satellite-based SMS, mail) in order to trigger corrective actions*



System Architecture



Prototype for “Automatic” service



- 🕒 **Workshop held in Paris with all partners/end-user in late January 2013 to refine user needs and derive user and system requirements**
- 🕒 **User requirements finalized and system architecture designed during ESA Baseline Design Review meeting in early April 2013**



● Finalize System Architecture and Service specification

● Terminals-transceivers HW&SW development

- Type “Automatic” for reefer containers, trucks, vehicles
- Type “Manned” for warehouses

● Novacom Platform, SW development

- Temperature data, alerts (DB and GUI)
- GPRS/Inmarsat connectivity (new modems and protocol to integrate)
- New GIS layers: Contextual Images + Meteorology Forecast

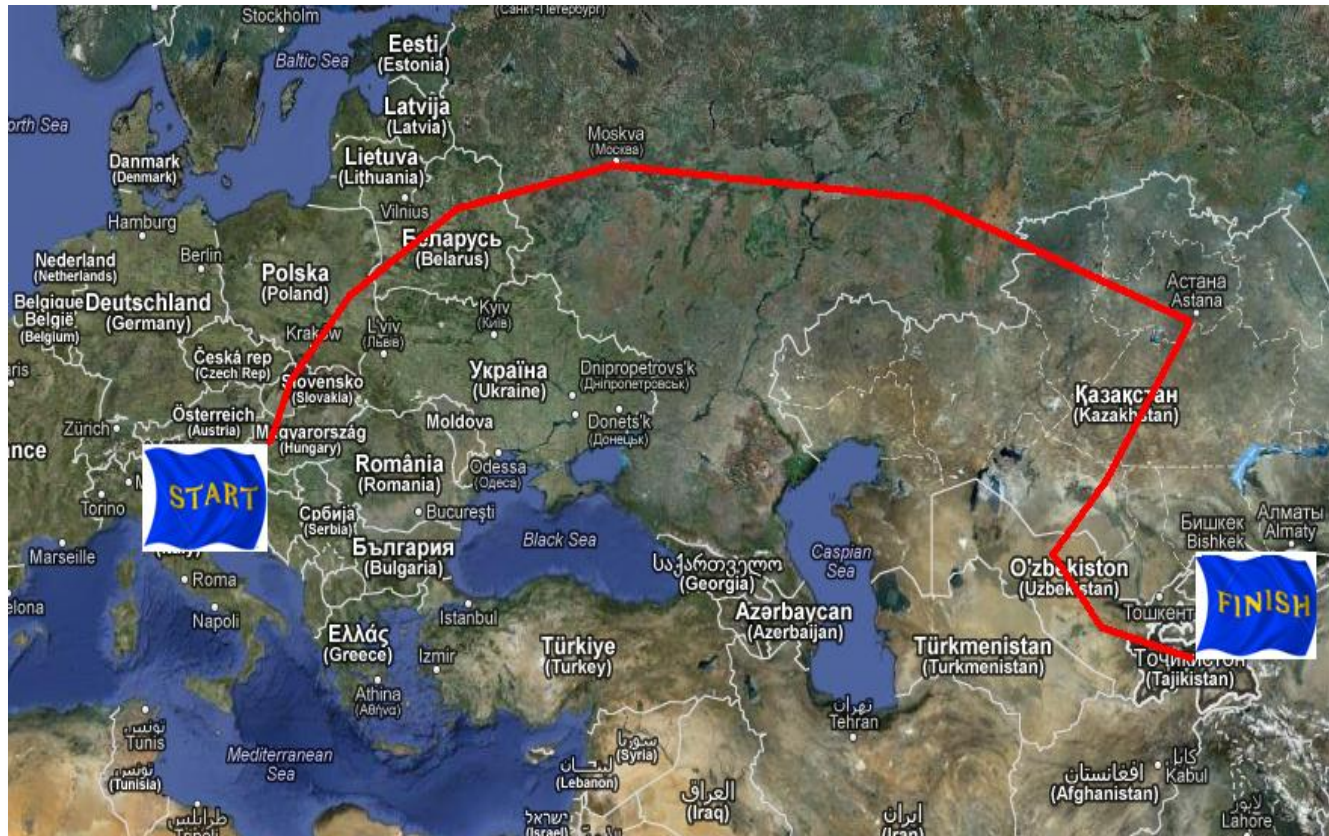
● Demo Utilization Plan – 3 Pilots in October 2013

- Pilots definition with partners and their carriers
- Validation plan
- Deployment and training plan



Pilot 1- Sanofi (Oct 2013)

- From Hungary to Uzbekistan + Tajikistan
- By road (reefer truck)



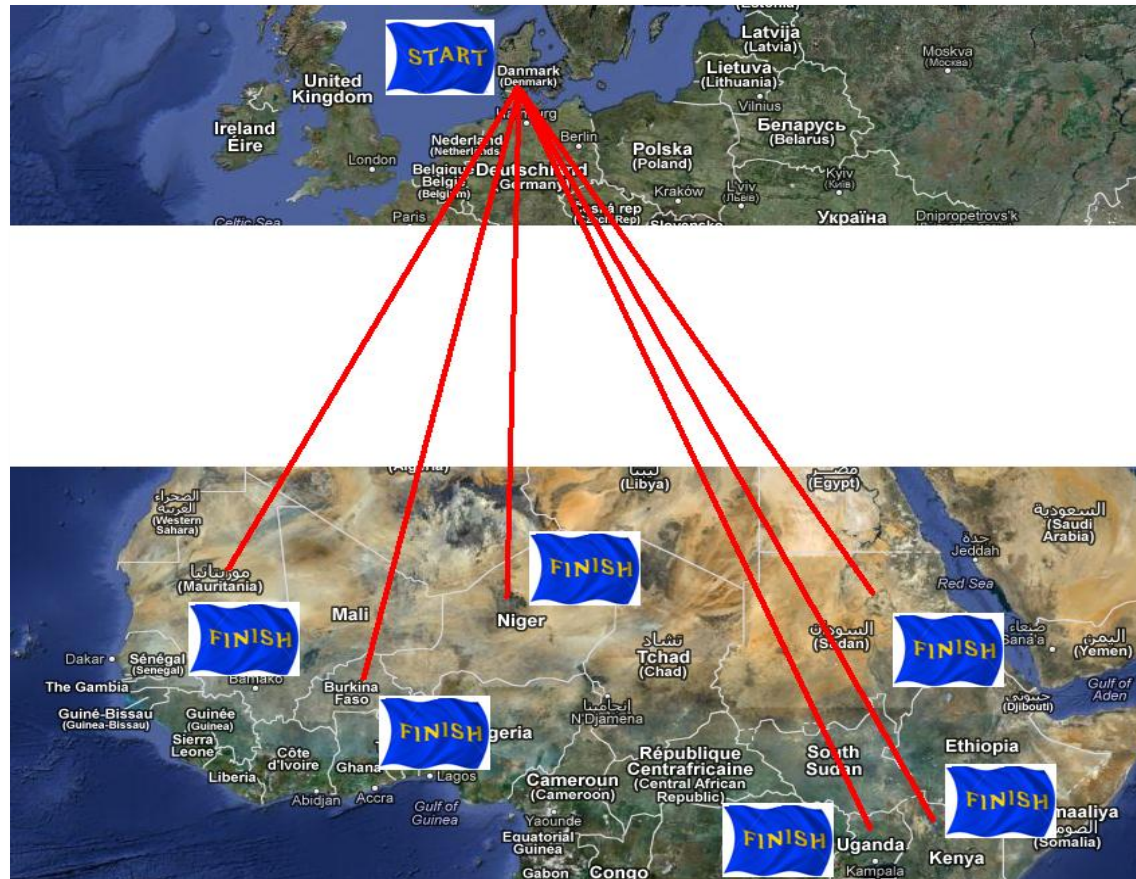
Pilot 2 - SDV (Oct 2013)

- From Le Havre to destination country (TBC)
- Multimodal transport (reefer containers on different transportation means)



Pilot 3: UNICEF (Oct 2013)

- From Denmark to Sahel or East Africa (TBC)
- Mixed (Multimodal + Last Mile truck)



www.novacom-services.com



Localisation pour la planète entreprise

