



Location awareness in Retail

Where, when and who in your shop

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CGI Retail Xp360™

CGI

Experience the commitment®

The CGI company

The world is our home

CGI is the world's

**5th
largest**
independent information technology
and business process services
company

65,000
professionals;
75%
shareholders

Serving **10,000+** clients
from over **400** locations around the
world

CAD\$ 10B
annualized
revenue



40 years
of successfully
partnering with
our clients

100+
leading
IP-based
solutions

High-end
business and IT
consulting

Focused
industry and
domain
expertise

Client proximity
model complemented by unique
global delivery network



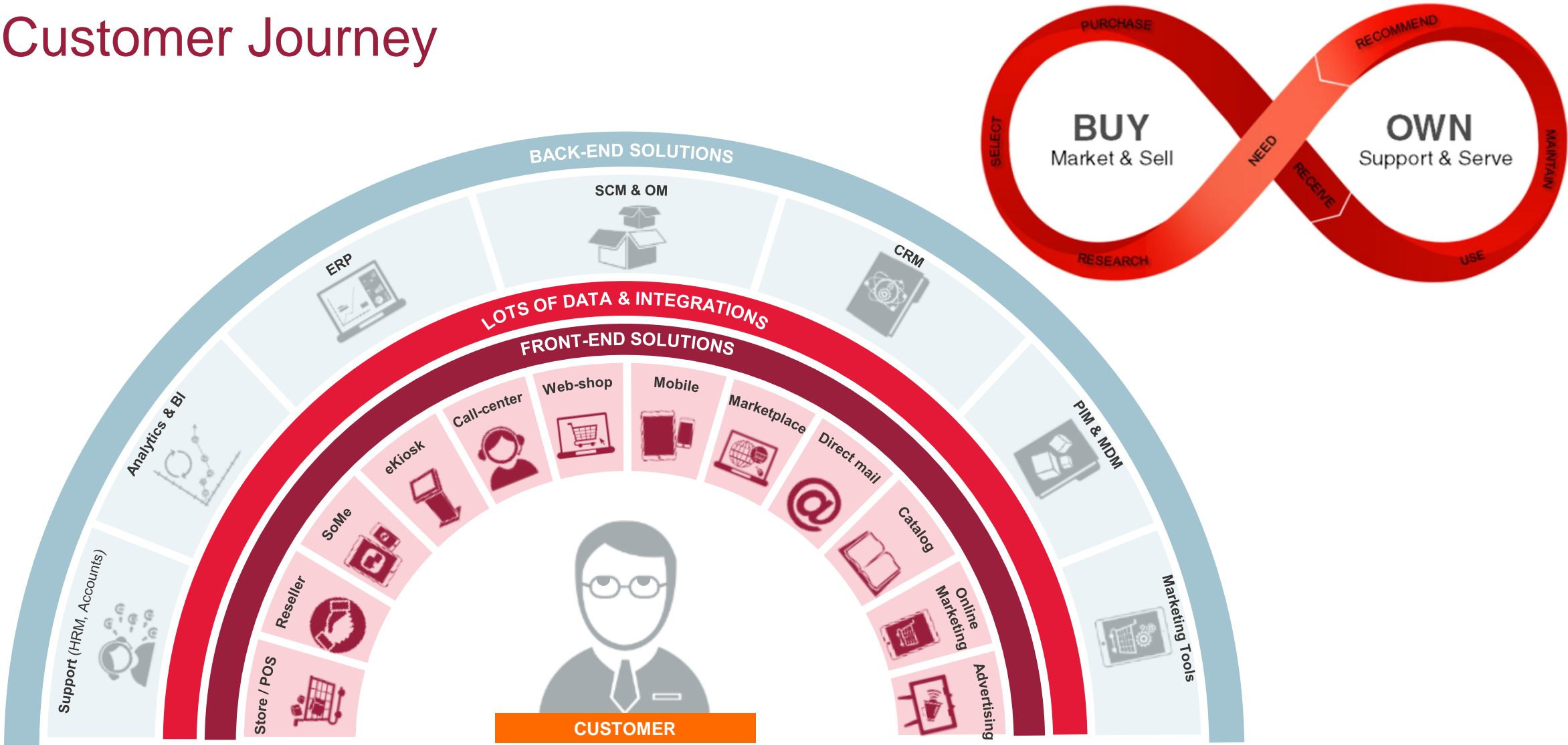
Digitally connected value chain: essential to deliver on rising consumer expectations for a seamless, real-time and personalized experience



Improving agility and time to market requires a technology-enabled, digitally connected value chain

Convergence continues to accelerate – the connected consumer can research, buy, receive products and services from a retailer, a manufacturer, or even directly from the source

Customer Journey



Enhancing the Experience!

OBJECTIVES

OPTIMIZE AND MAKE THE CUSTOMER
EXPERIENCE SEAMLESS

VALUE ADDED SERVICES & PRODUCTS

INCREASE IN-STORE TRAFFIC

DIFFERENTIATE FROM THE COMPETITION

THE PHYGITAL* STRATEGY



Attract, thanks to digital, clients to stores.

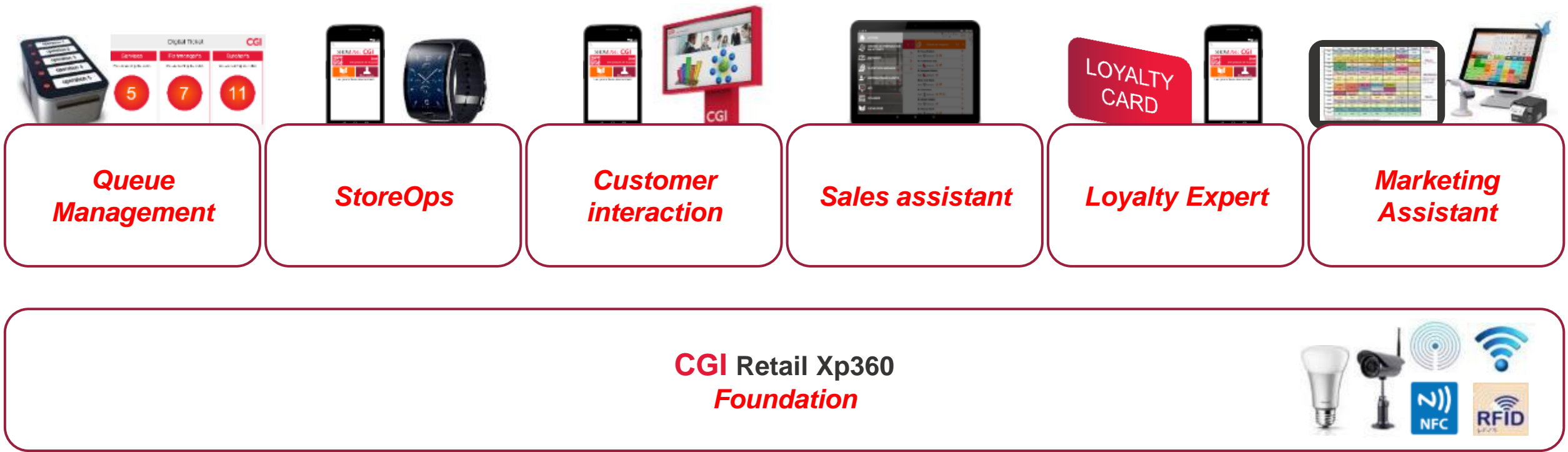


Satisfy customer expectations, at the point of sale,
by **creating/enhancing the shopping experiences**
by demonstrating new service and products



Standardize the data collected and ensure that all
previous customer interactions **are understood**
across each customer contact point.

CGI Retail Xp360™



**CGI provides Software to develop our customers
Digital capabilities to accelerate their transformation**

CGI Retail Xp360™

Extra slides - Components explained



CGI Retail Xp360™

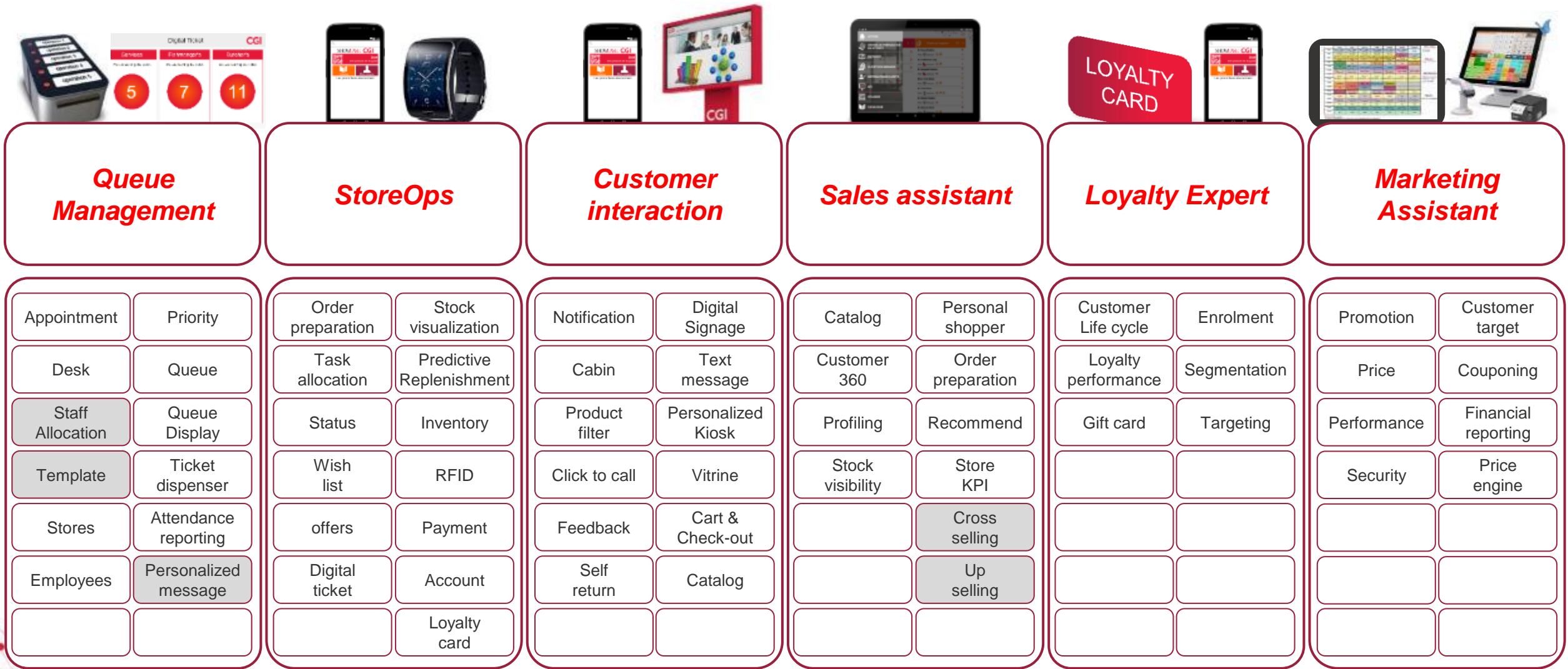


CGI Retail Xp360
Foundation

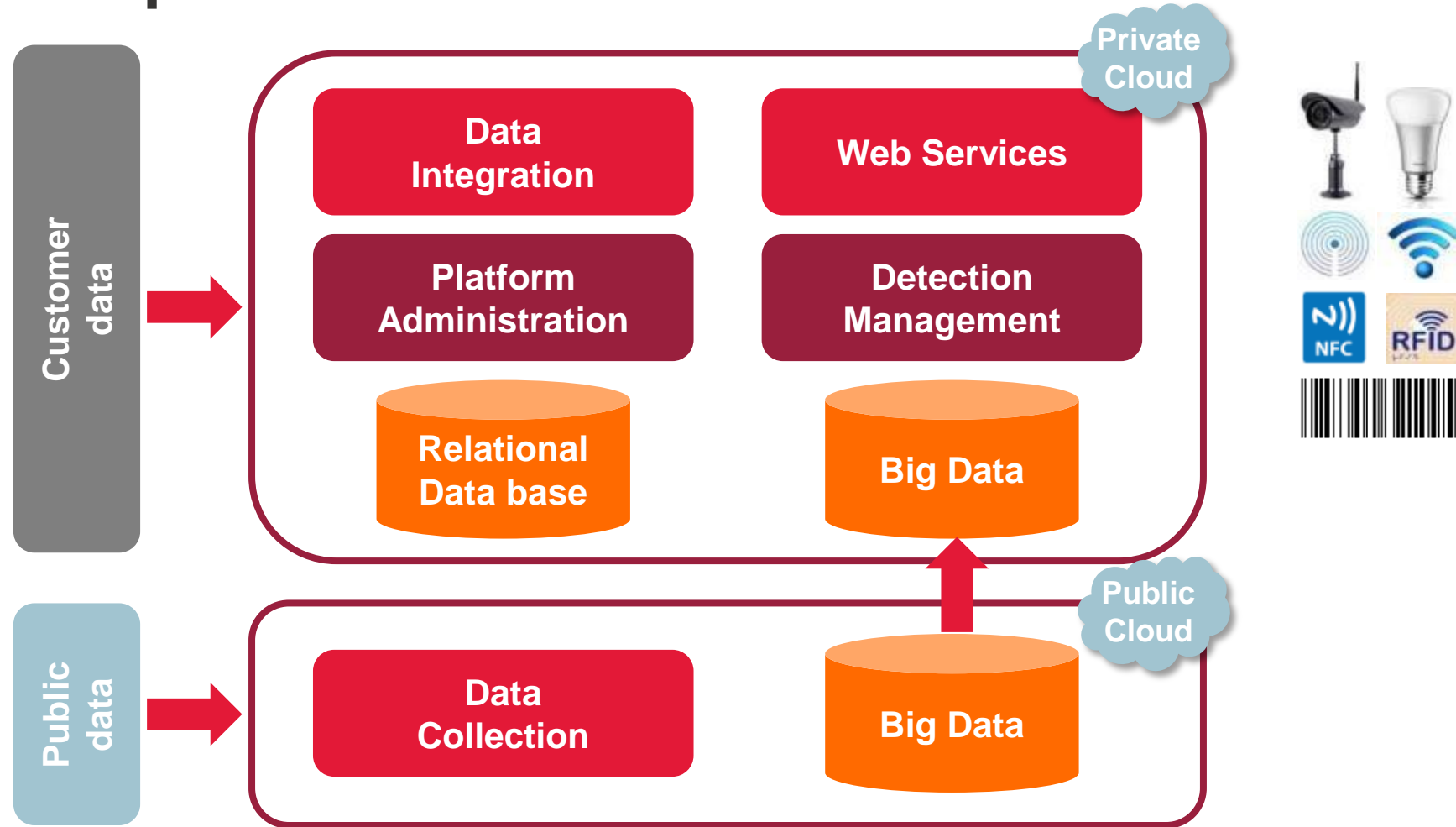


**CGI provides Software to develop our customers
Digital capabilities to accelerate their transformation**

CGI Retail Xp360™

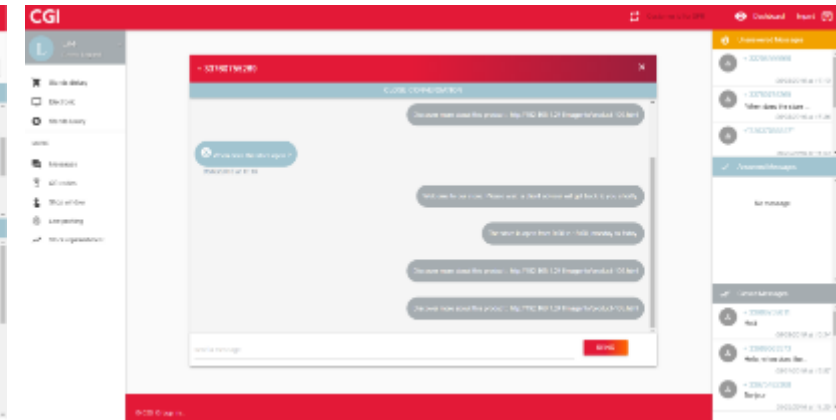
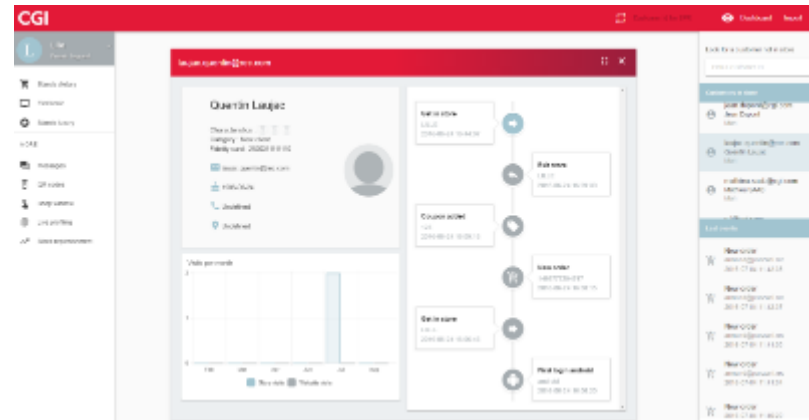
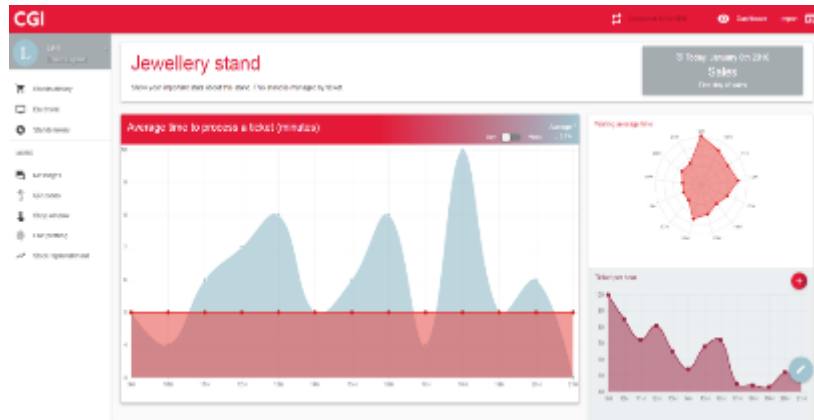


CGI Retail Xp360™ *Foundation*



It handles integration with the legacy system,
external data, detection means & business workflows

Drive your store in real time



Operational KPI

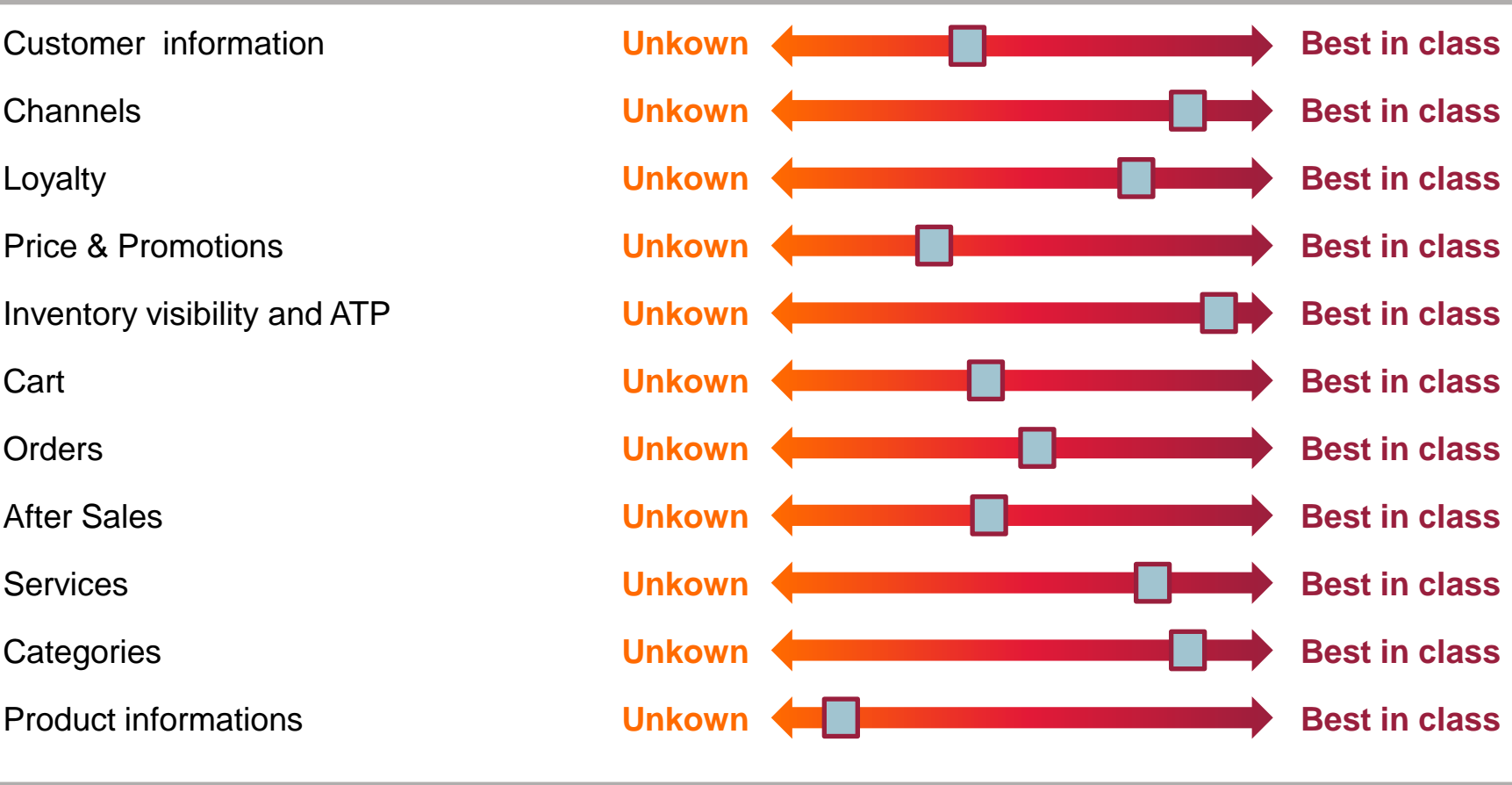
Customer profiling

Customer Interaction

CGI Retail360™ Omnichannel Maturity

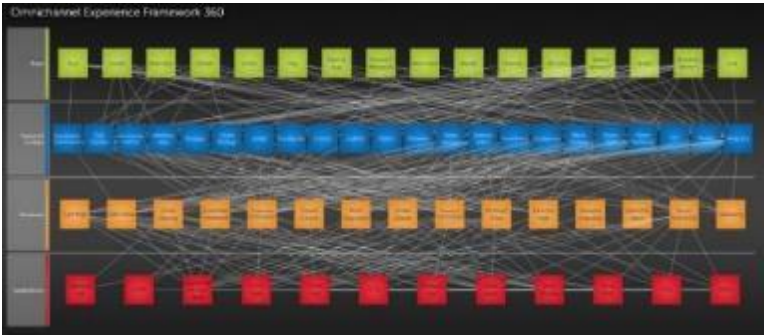
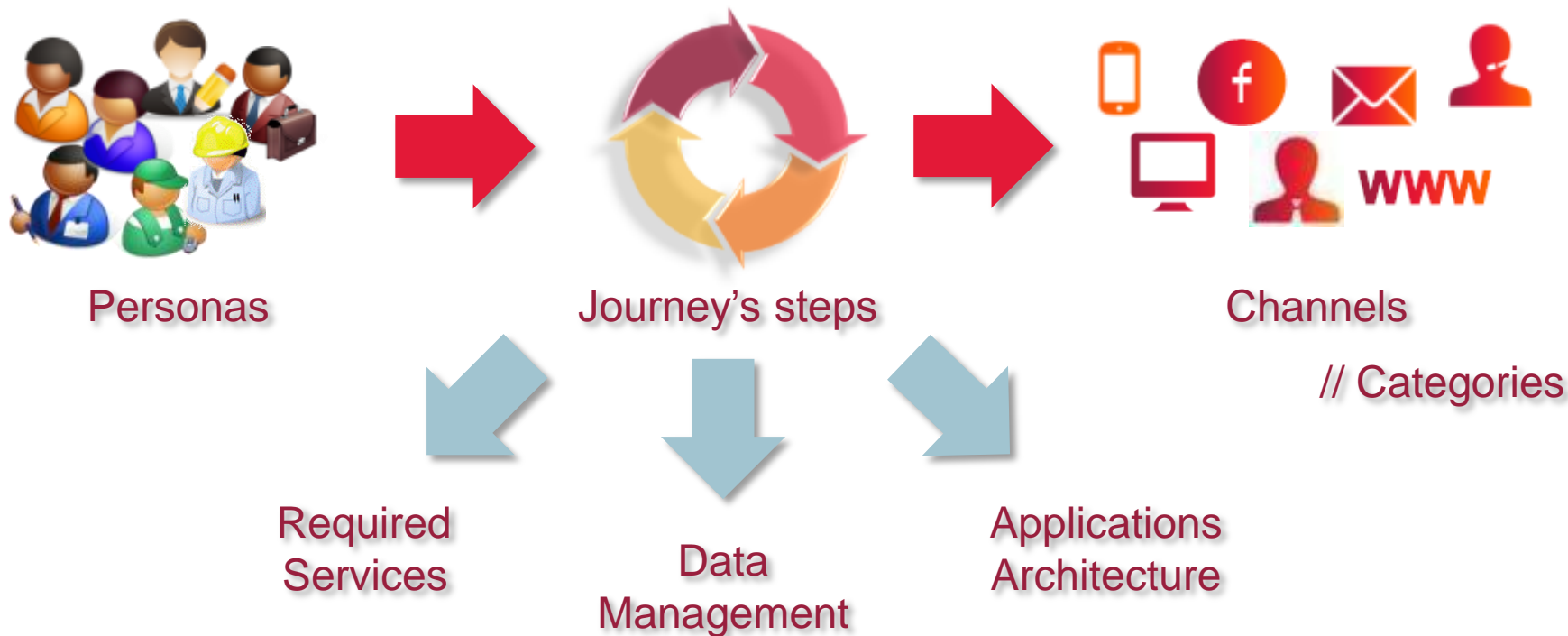
Measure Maturity level & Business Priorities

Maturity Grid

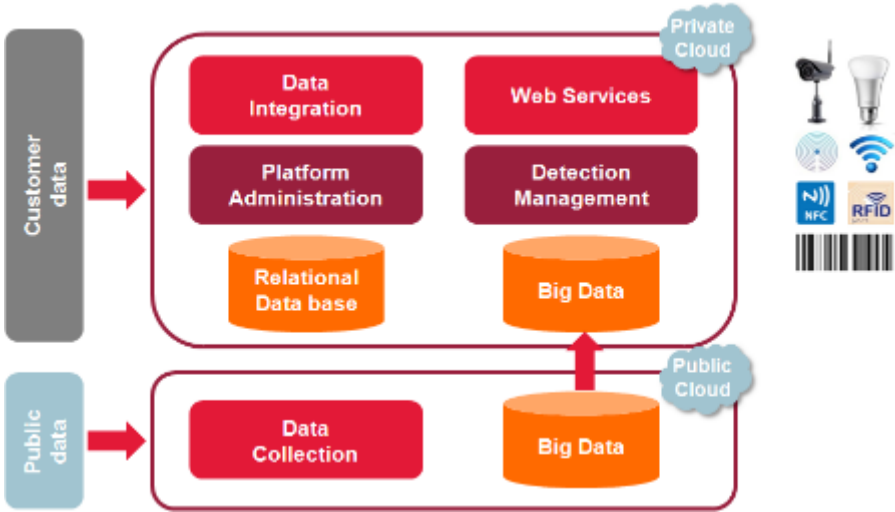


CGI Retail360™ Omnichannel Experience Framework

Design required Services & Systems



CGI Retail360™ *Proof Of Concept*



Use our Plug and Play Platform to find the best way to use a new device for your customers or employees

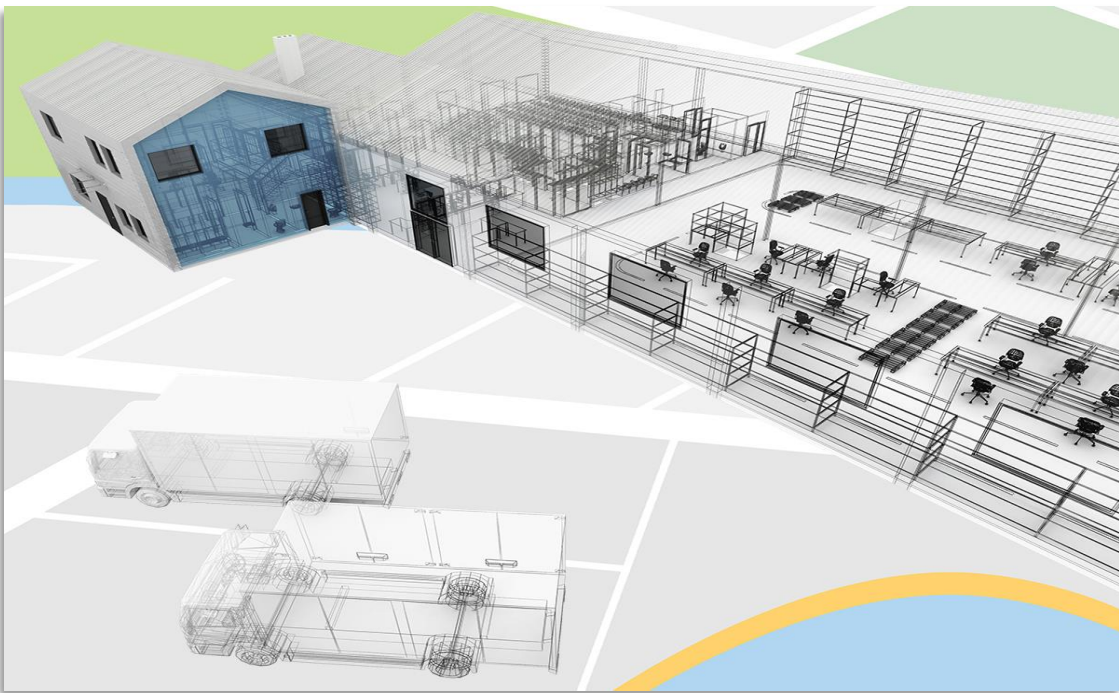
Location and Retail



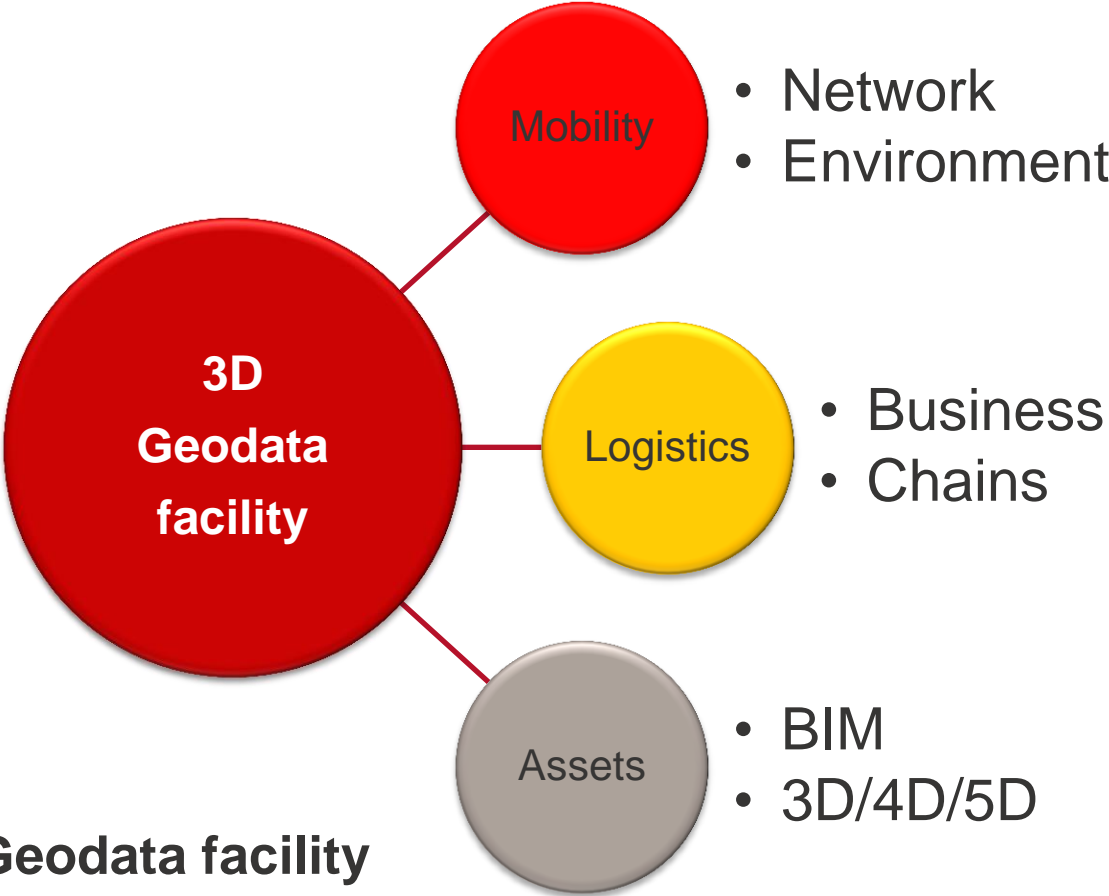
A 3D wireframe architectural rendering of a retail store layout. The image shows a large, open-plan space with various shelving units, display cases, and seating areas. A truck is visible in the foreground, and a building is shown in the background. The rendering is in a light blue and grey color scheme.

Location in Retail

Robert Voûte MSc
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Location/3D Geodata



3D Geodata facility

- Static and real time data
- 100% geospatial
- Storage and services oriented
- A digital (virtual) representation of the environment
- Outdoor and indoor
- Open and closed data



3D Geodata are data

Location

Big

Analytics

Realtime

Storage

Traditional environmental data

- Non integrated
- A must
- Mostly administrative

Adding 3D Geodata facility

- CGI IP under construction
- In cooperation with partners

Integrated, digital and virtual

- Earning capacity
- Operational
- Location enabled
- Compliance
- Safety
- Efficiency



Needs



Accurate



Updates every second



Auto-calibration



Scalable



Cost Effective



Fast Time To Market



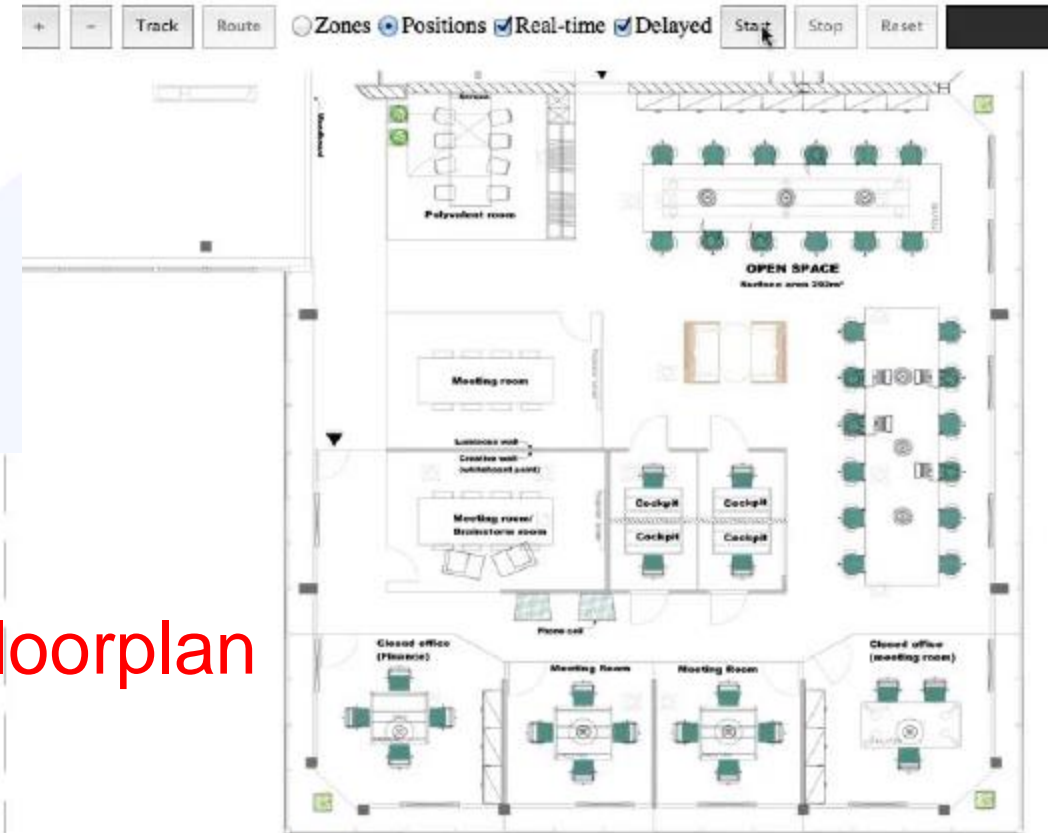
Infra



Tags



Floorplan



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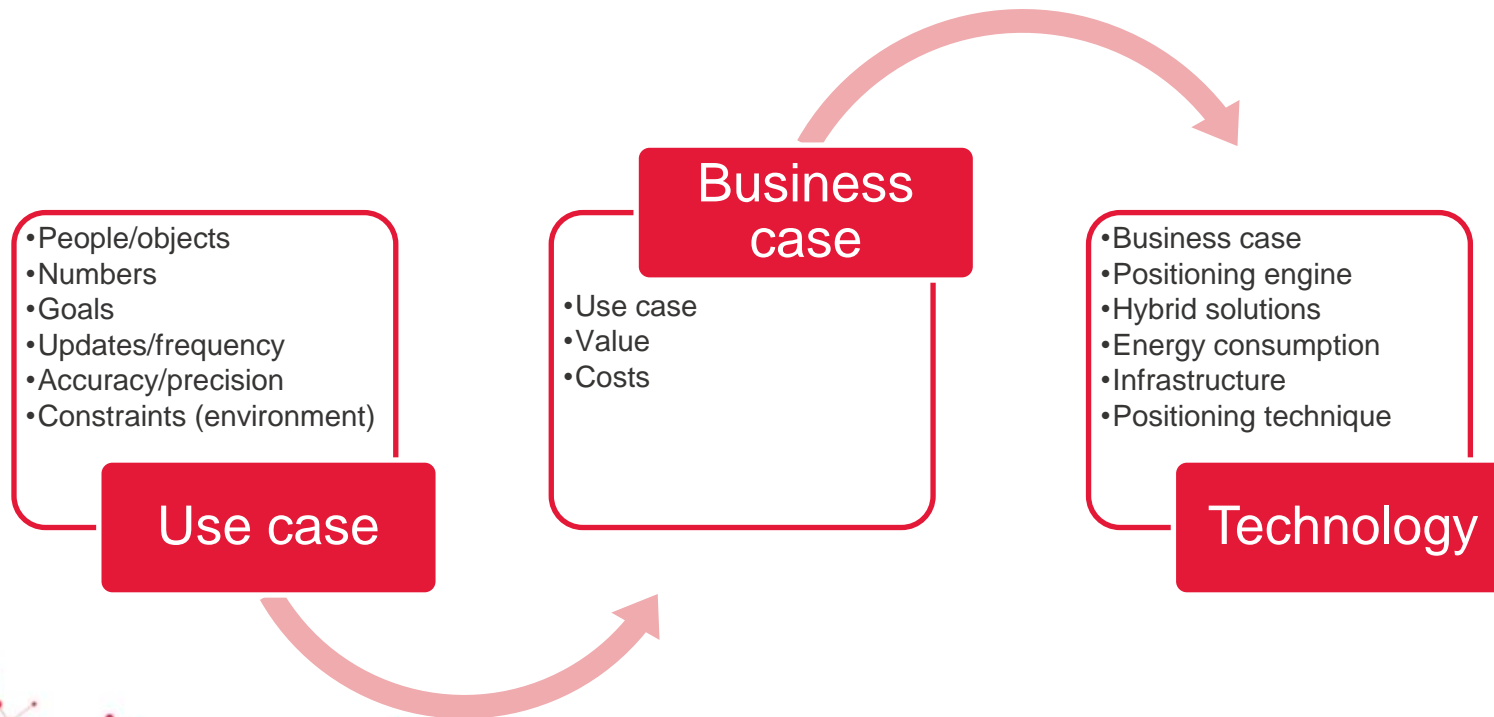
Positioning vs Localization

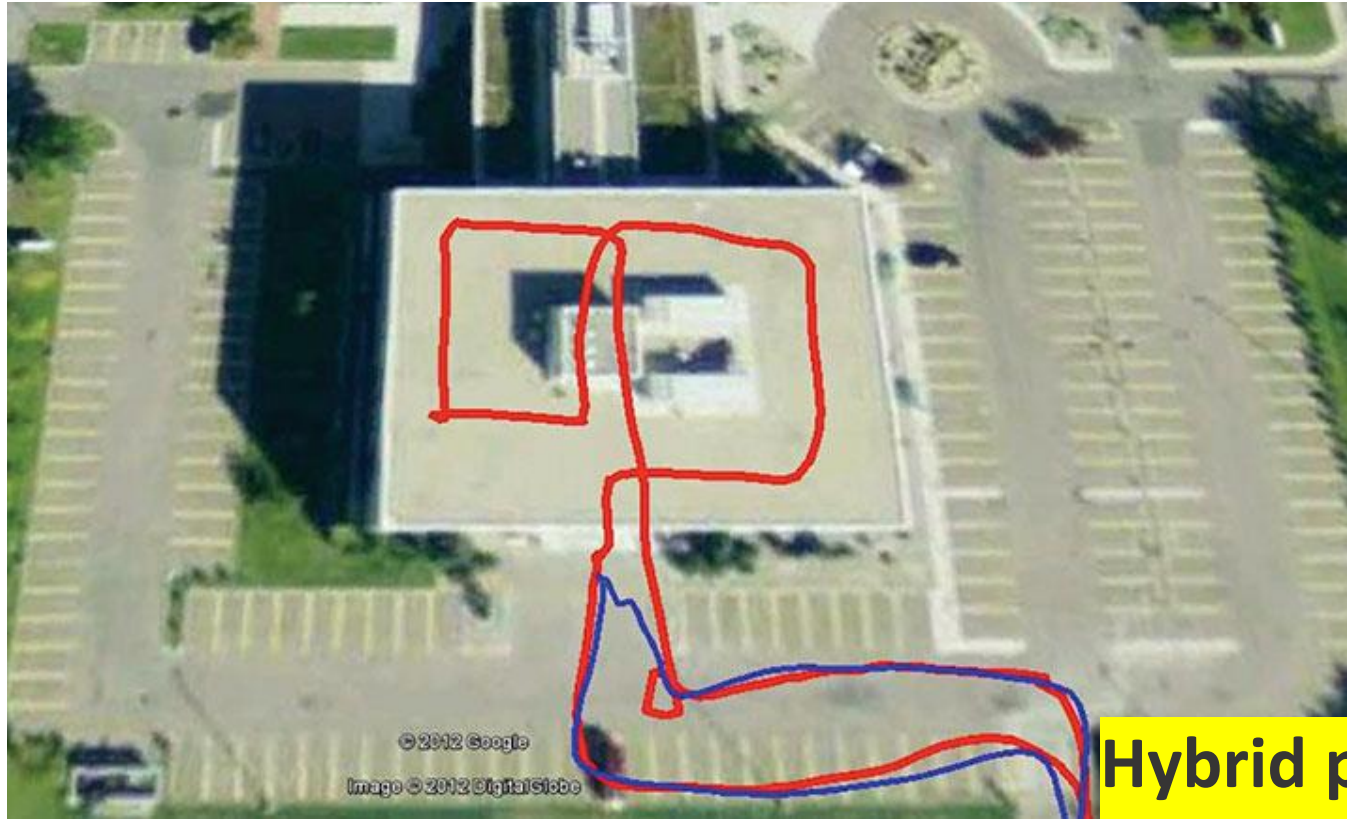
Positioning

- X,Y (,Z)
- Accuracy
- Reliability

Localization / segmentation

- Location in a logical area
- Can be with only logic (counting)
- Reliability





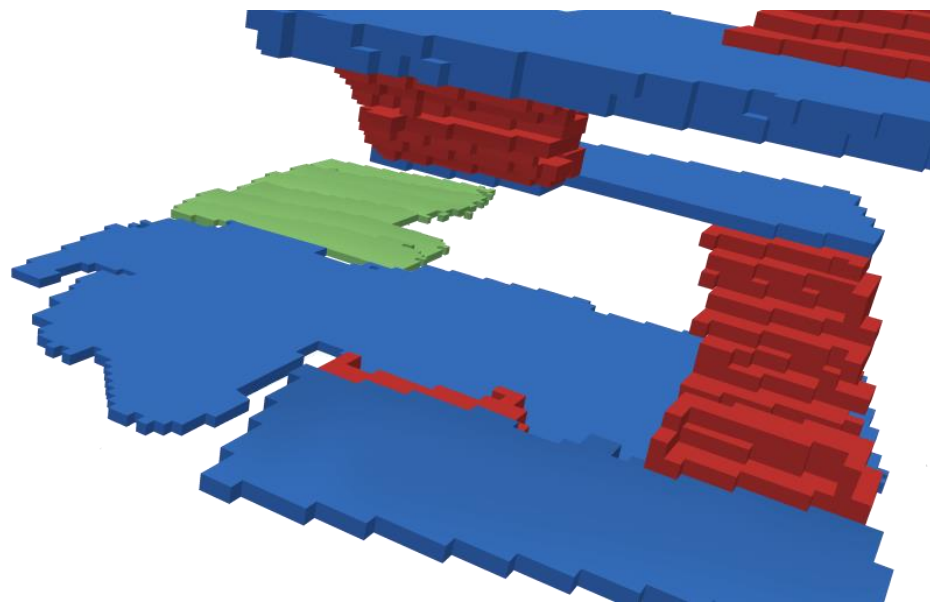
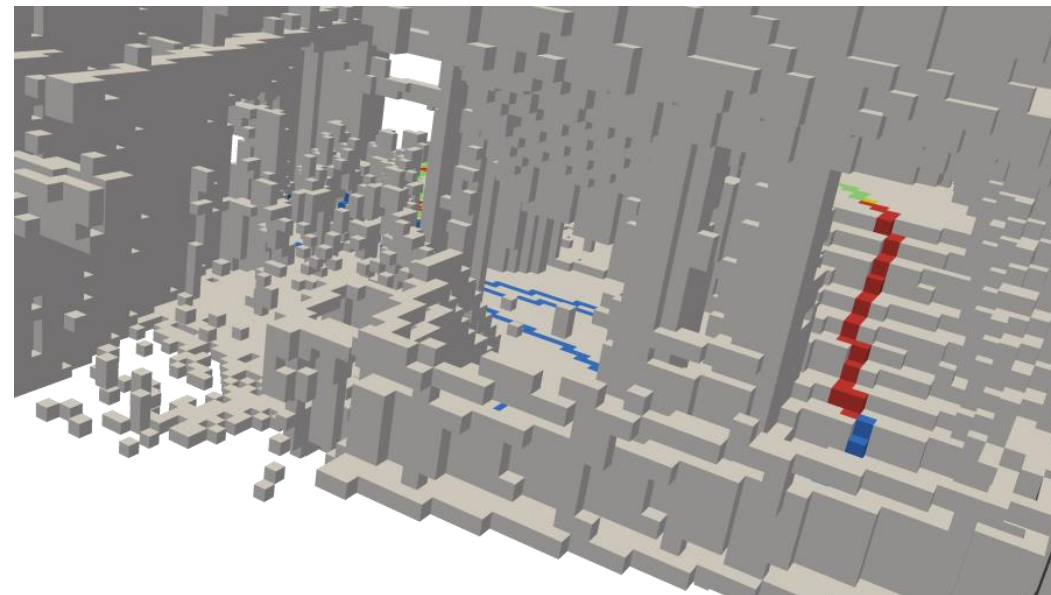
?

Hybrid positioning

- Door to door navigation
- One coordinate system
- Mixed techniques





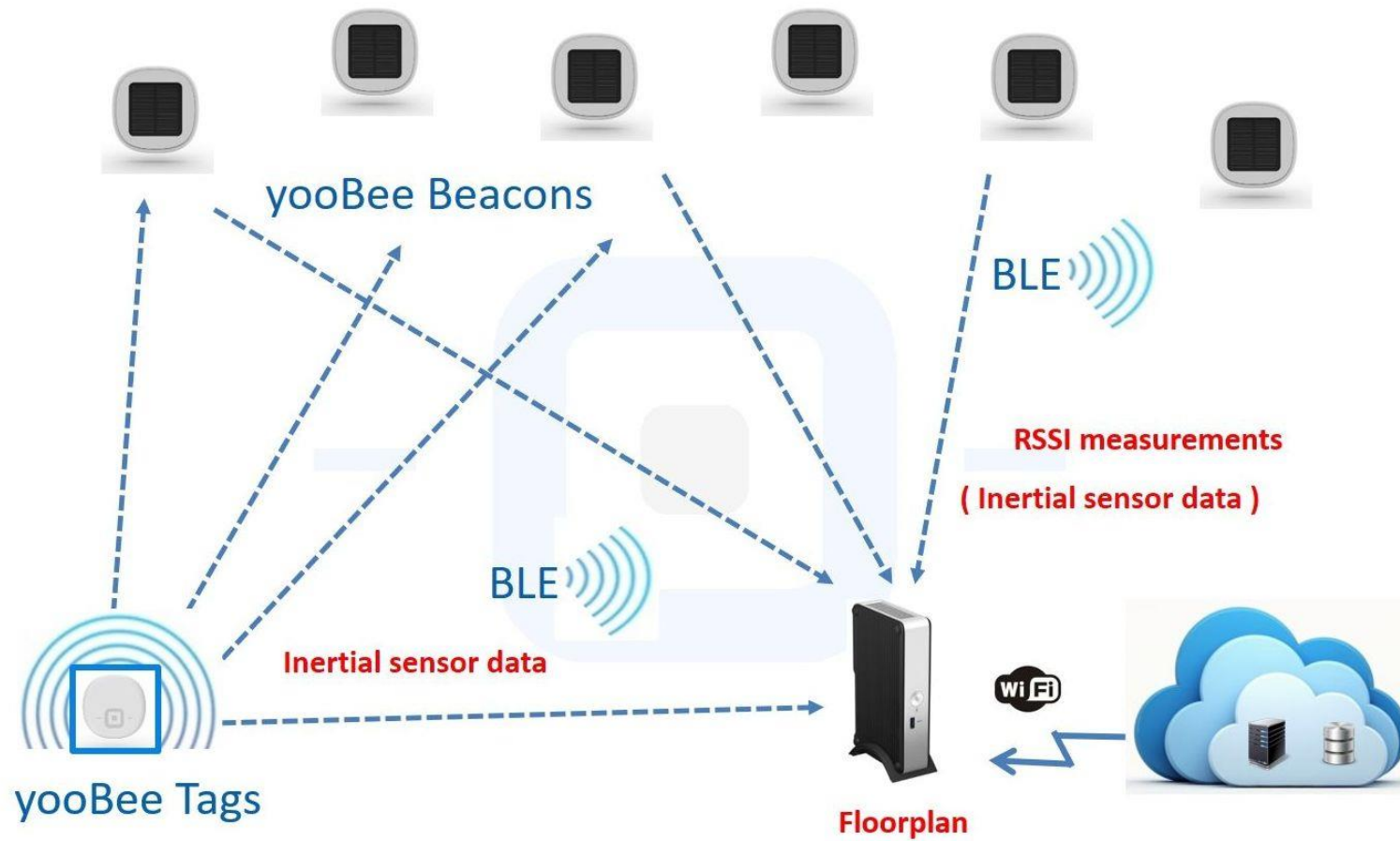


Motivation

- GPS signal is often blocked indoors
- Indoor positioning is high potential market with many applications
- Hospitals & care centres
- Warehouses & retail centres
- Airports, train/subway stations
- Smart grocery shopping
- Musea, public areas etc.

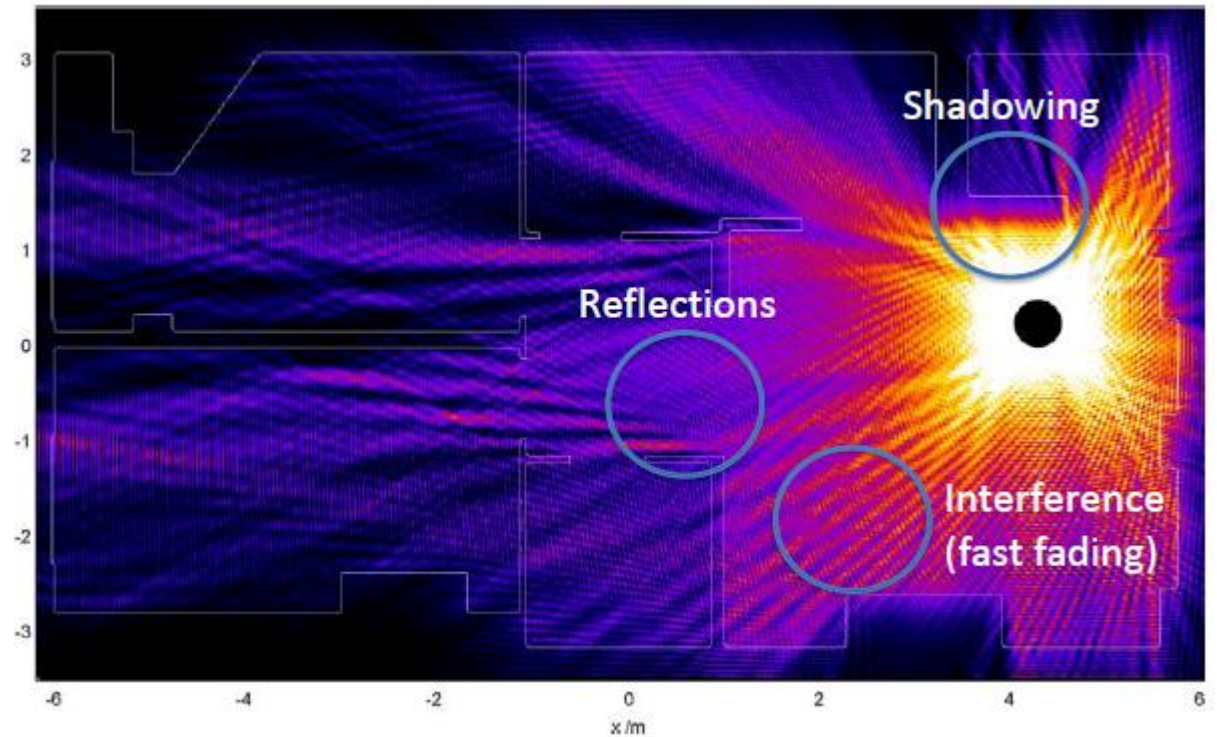


Indoor Positioning with BLE



Factors influencing system performance

- Multipath (reflections)
- Fading of the signal
- Shadowing, Non line of sight
- Geometry dilution of precision



- Collect real time data

Big data
(long data)

- Determine criteria

Analytics

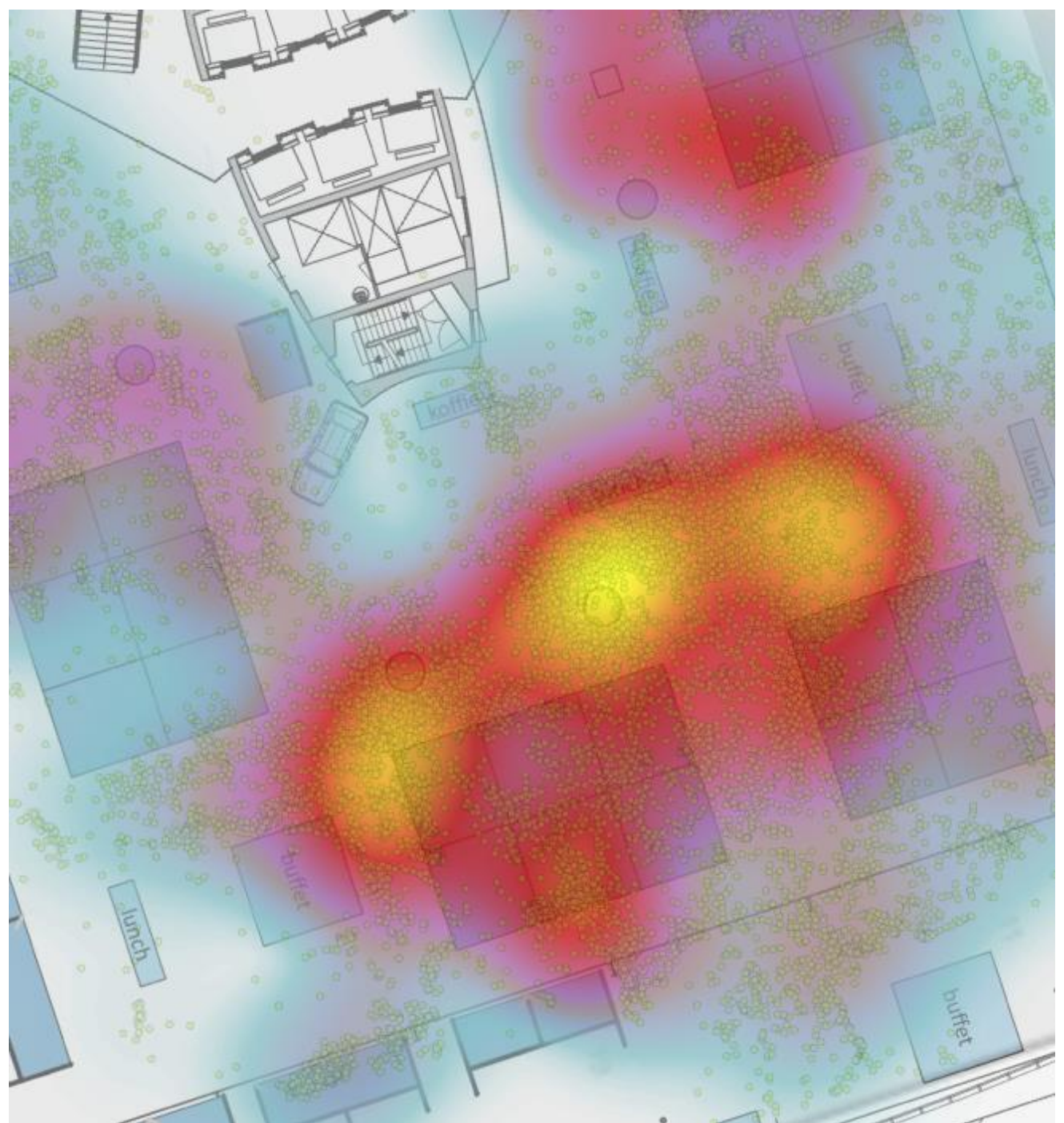
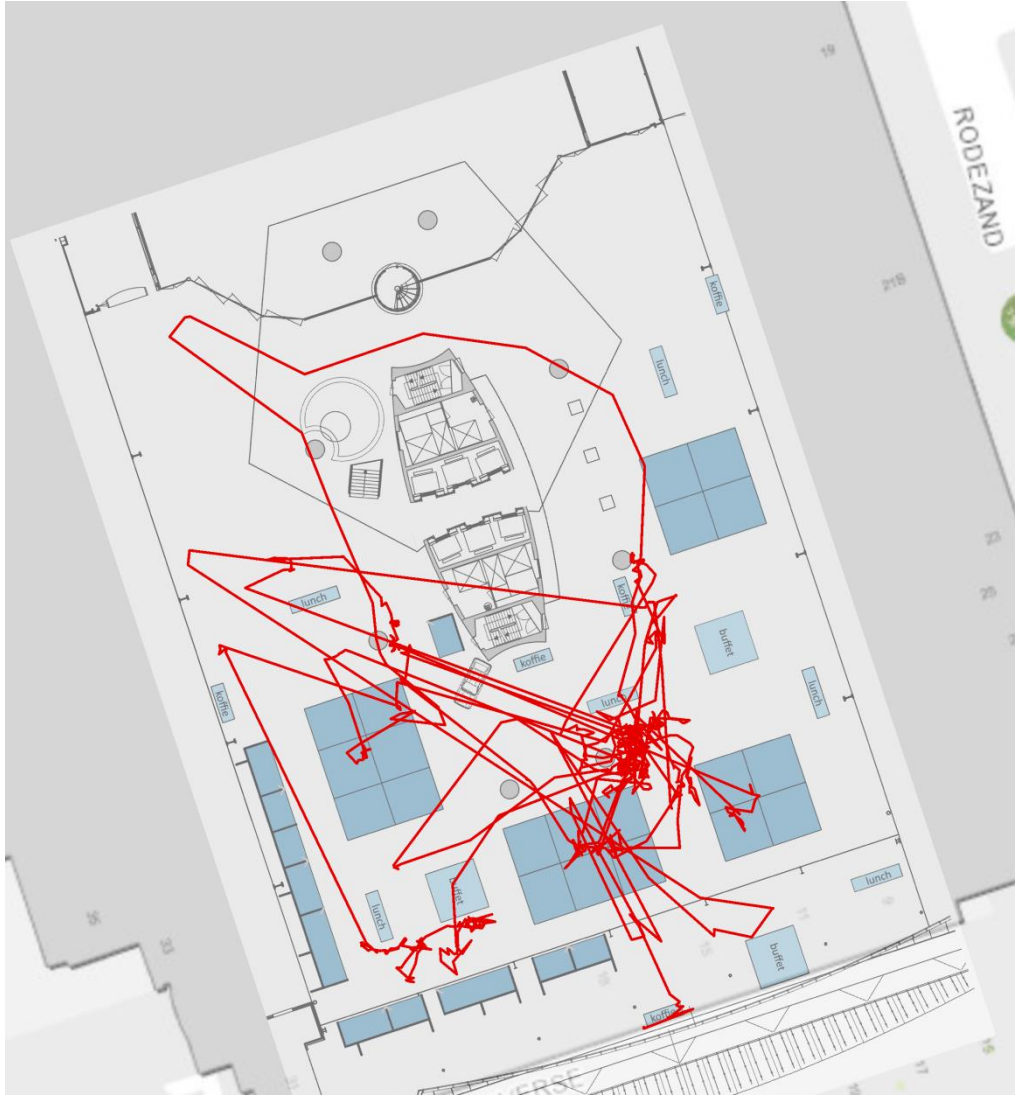
Decide

Real time data
(short data)

- Use criteria

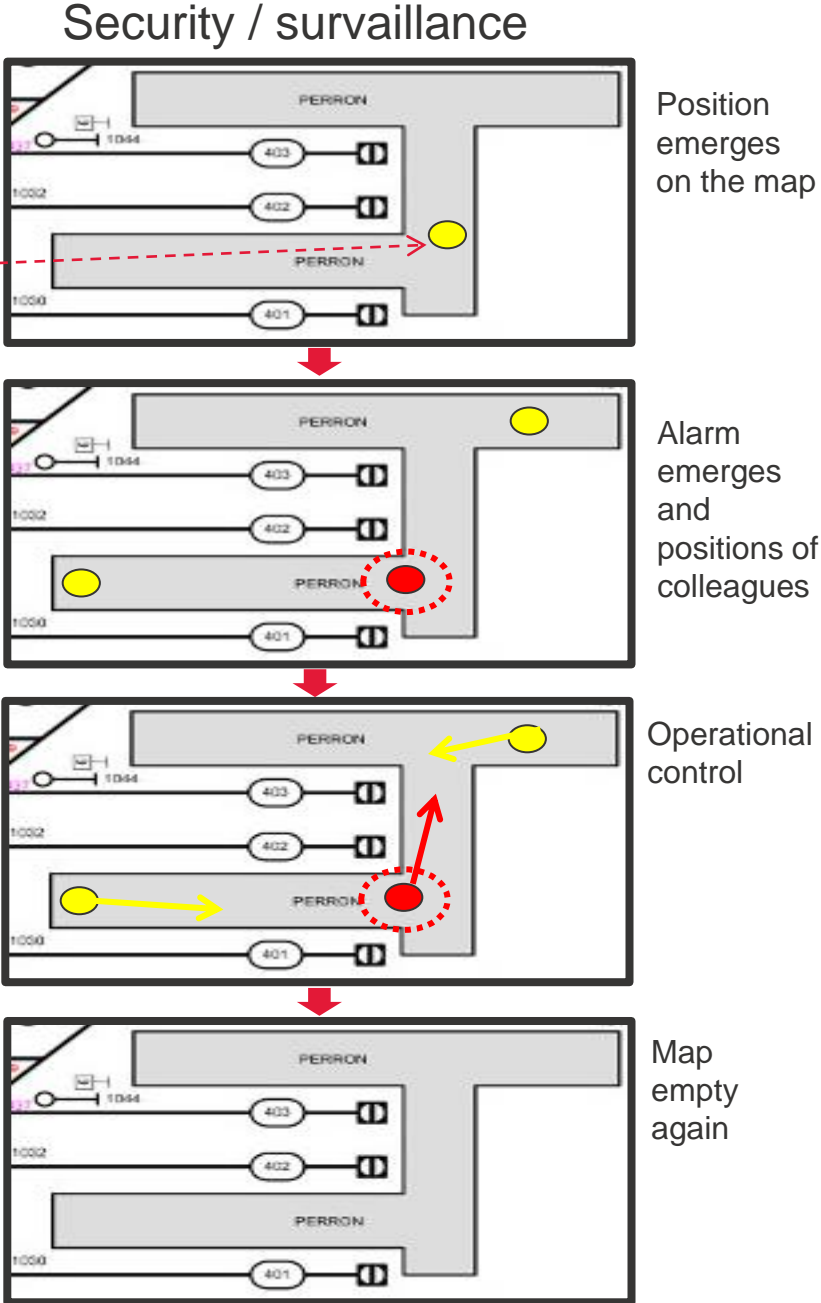
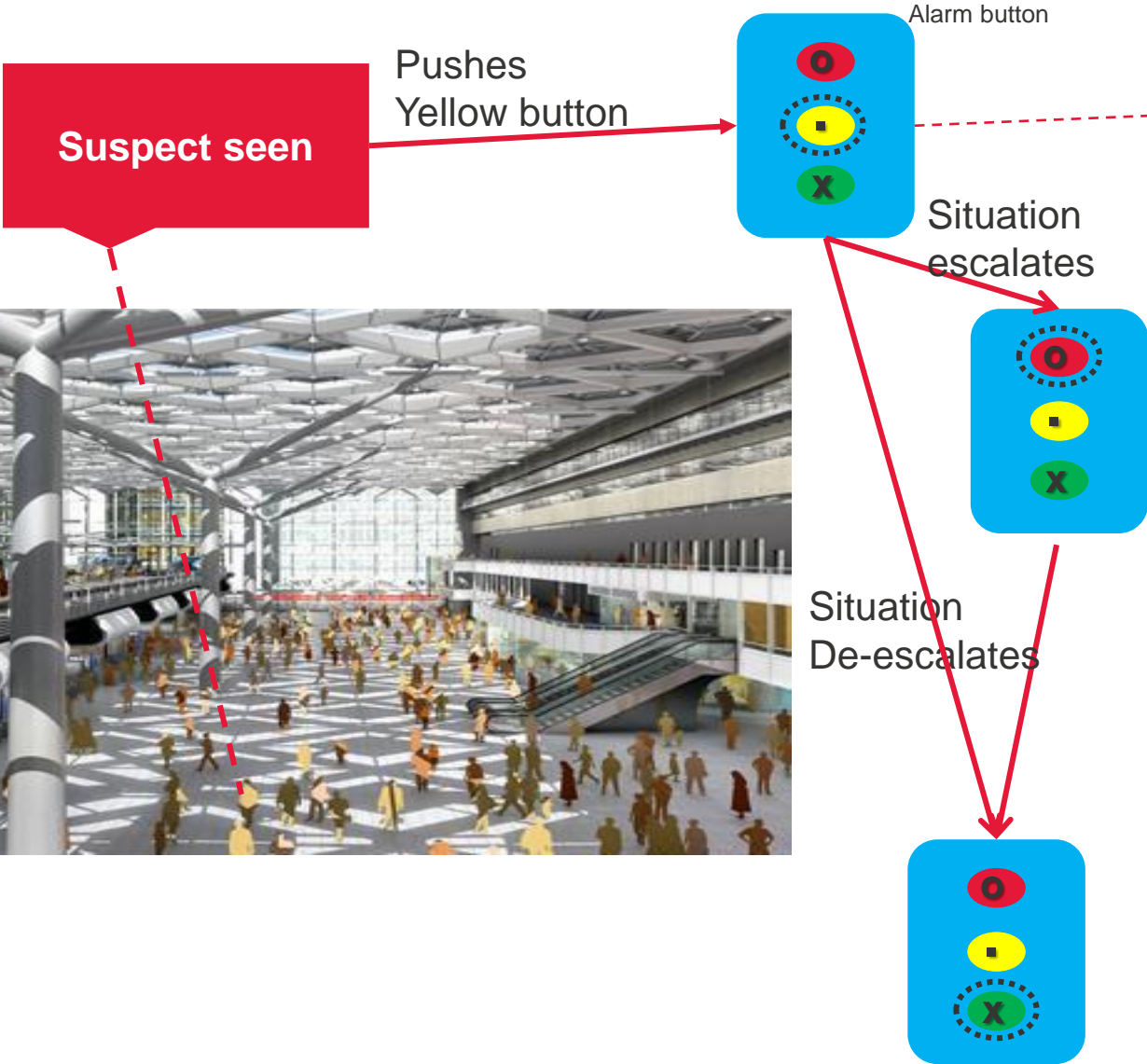
- Operation

Conferences and trade shows





Use Case: safety of rail-employee



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Indoor Mapping

