

The Store of the Future

Indoor Positioning using Visible Light Communications

innovation + you

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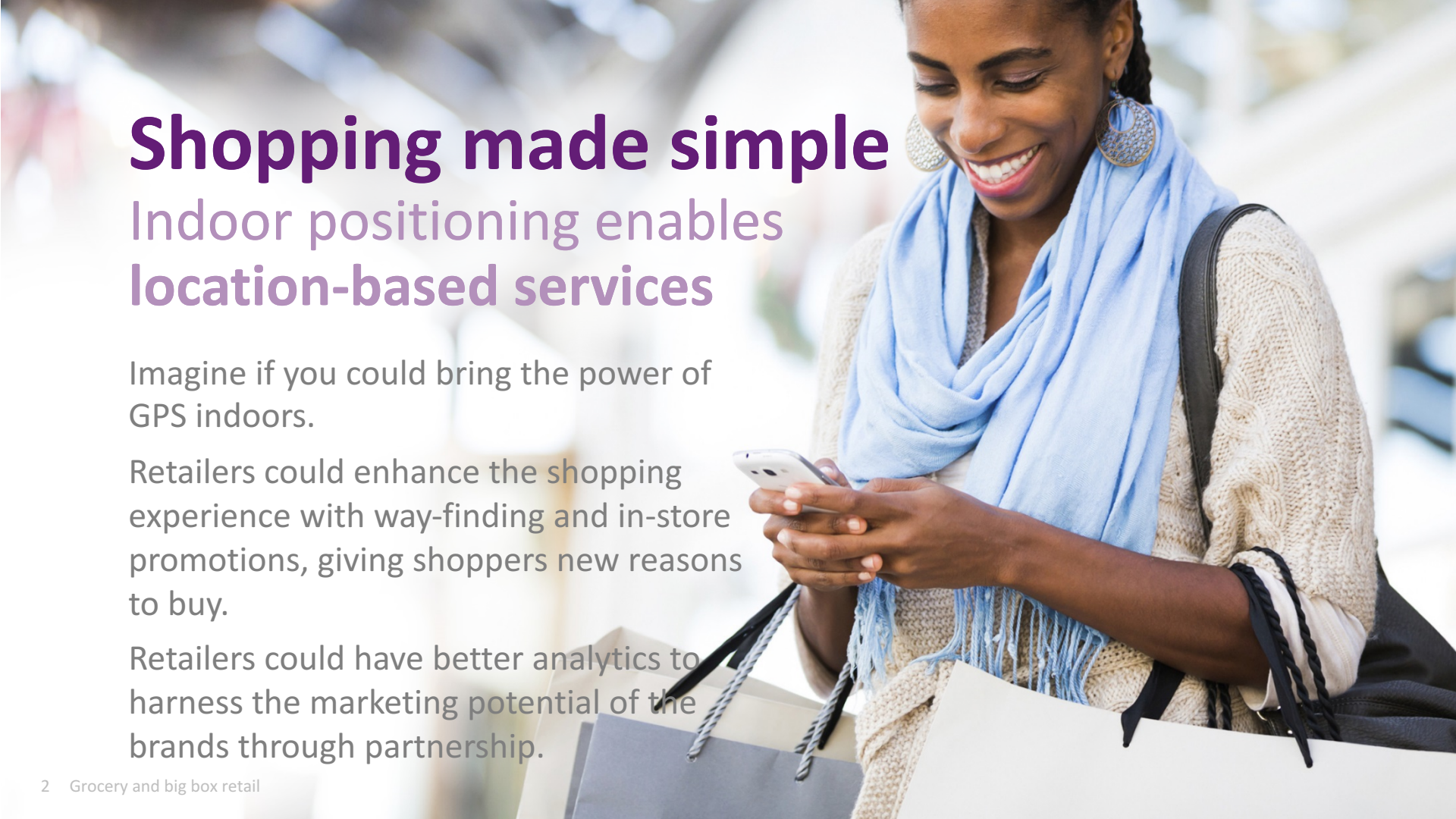
Shopping made simple

Indoor positioning enables **location-based services**

Imagine if you could bring the power of GPS indoors.

Retailers could enhance the shopping experience with way-finding and in-store promotions, giving shoppers new reasons to buy.

Retailers could have better analytics to harness the marketing potential of the brands through partnership.



The power of indoor positioning

Indoor positioning systems enable retailers to offer unique services that enhance customer experience and improve operational efficiency

Shopper convenience	Shopper engagement	Staff Engagement	Data / Analysis
Show me where I am	Location based (personal) promotions	Location tag products or issue reports	Enriched personalized multi-channel marketing
Wayfinding: products, points of interest	Location based information /notification • Product suggestions • Inform while queuing	Wayfinding: products, issues, staff	Store/staff effectiveness assessment: • Heat maps • Customer flow / dwelling
Dynamic (optimal) shopping route	Location based interaction • Trigger reaction / survey • Trigger social interaction	Dynamic routing for order picking	
Location relevant information look-up	Entertainment / gaming • Treasure hunt • Visit and collect points	Location based staff instructions	Marketing impact assessment
I need help: come and find me		Location based sales / service support	

Partnering with brands		
Brand-sponsored convenience and engagement	Location based compliance notification	Analytics based brand co-operation

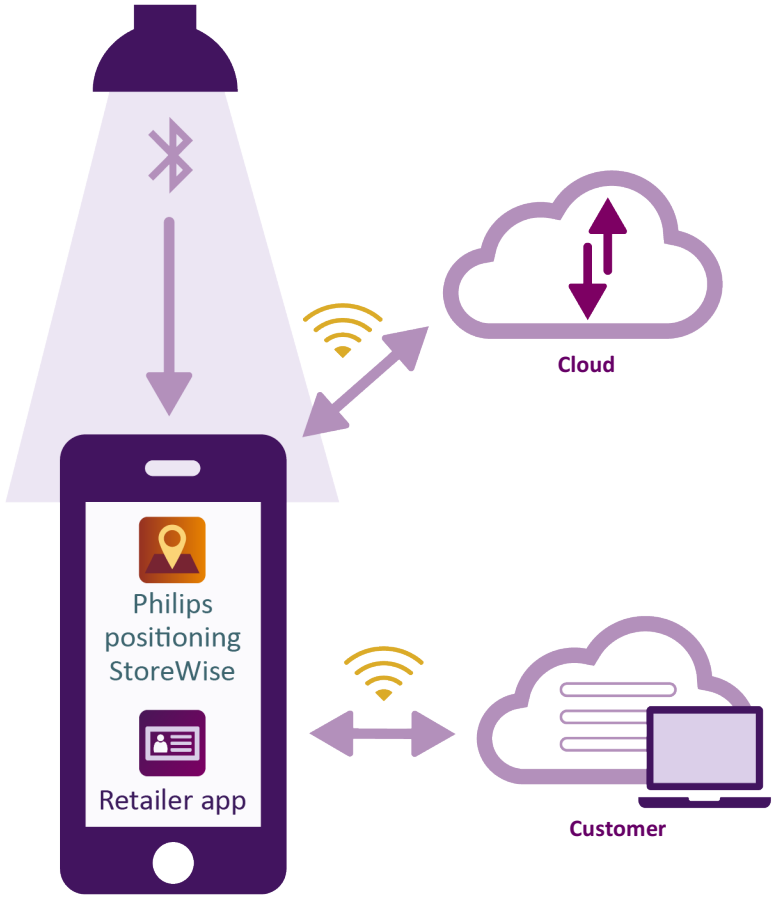
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Indoor positioning
how it works

LED fixtures send a unique visible light communication (VLC) code that is detected by the smartphone camera. They also carry Bluetooth beacons to support passive use.

Software determines the real-time and exact position of the phone. The software is available as SDK for integration into the customer's mobile app.

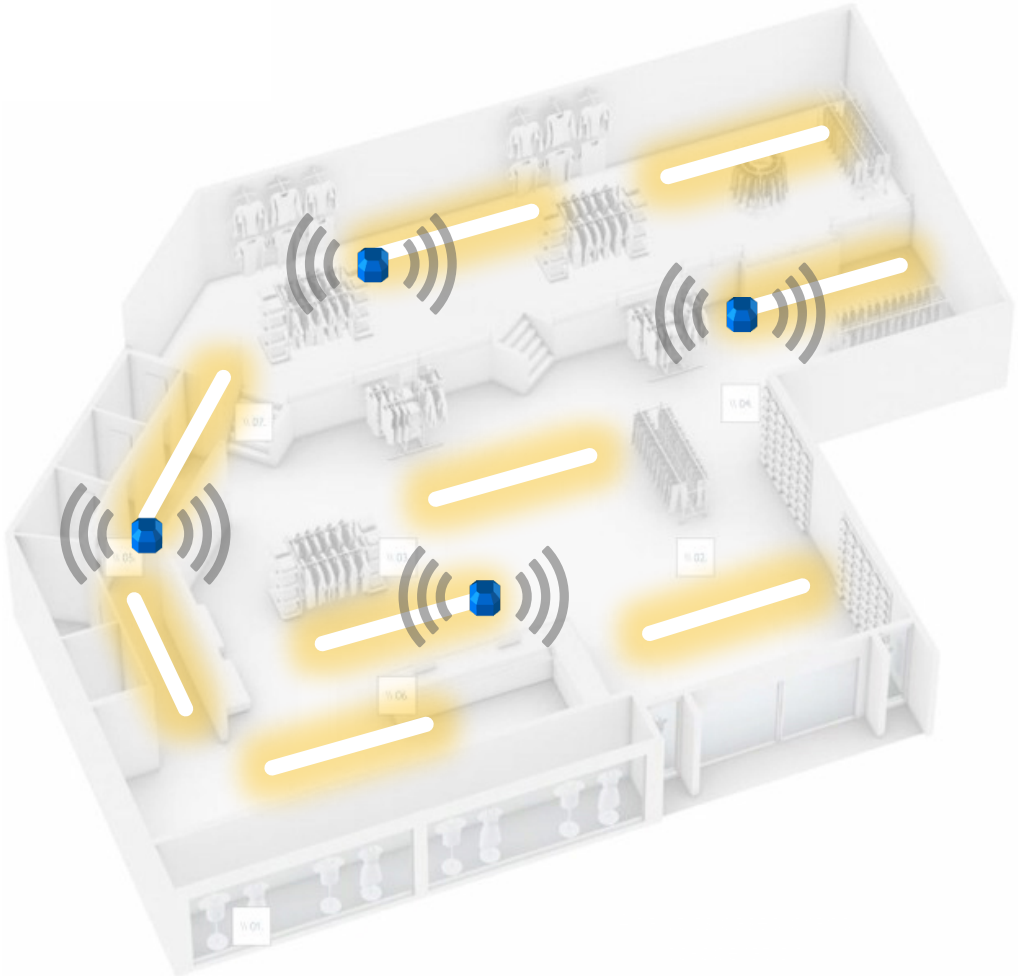
The position of the fixtures is stored in a **location database** in the the cloud



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Converging Technologies

The best approach for enabling indoor location services



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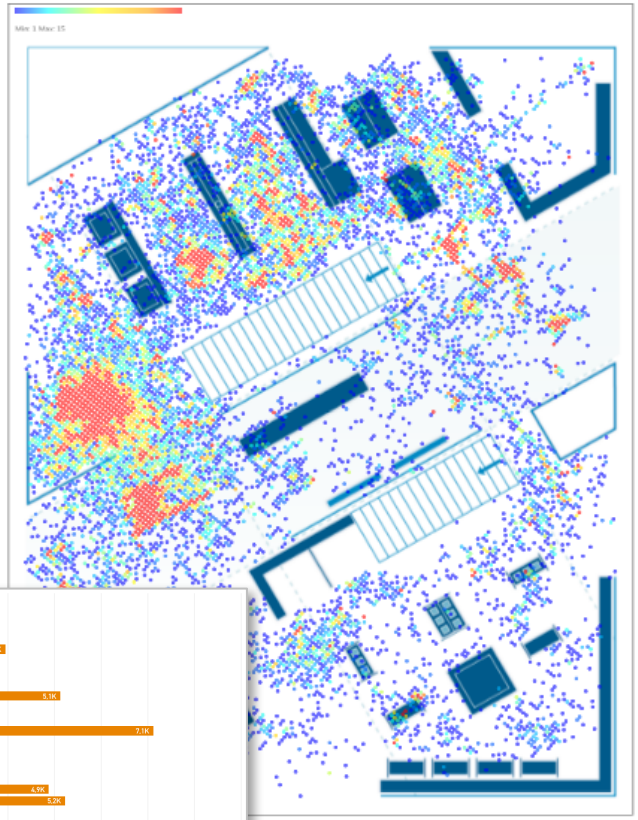
Data samples taken from Philips Lighting Euroshop 2017 booth

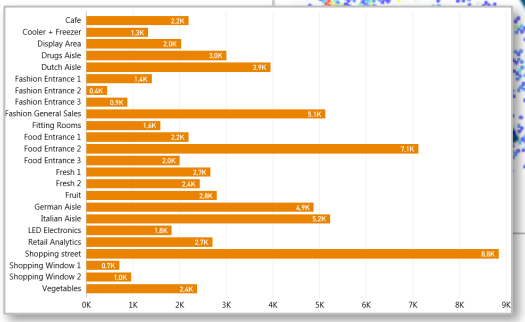
Insight from Location Analytics

Data-informed decision making

The indoor positioning system provides access to in-store location data per store **zone**, per selected **time interval** and allowing for **comparison**

- Footfall
- Dwell-time
- Density maps





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Carrefour

World's 1st Indoor Positioning enabled supermarket

Carrefour's mobile app, Promo C-où, allows shoppers to:

- locate themselves on a store map
- select and find promotions; see promotions 'around me'
- alert the store about out-of-stock items

Measured an increase in shopper satisfaction on promotion availability; now preparing all French hypermarkets for indoor positioning.

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CNN Money
Location:
Lille, France



aswaaq
Case study

aswaaq supermarket in Dubai, one of the Middle East's most innovative retailers.

- New lighting system has generated 50% energy savings
- Indoor positioning is combined with digital map and product search capabilities
- Use cases
  - Product search
  - Location based promotions
  - Location based content (recipes)

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Butchery
Deli & Cheese
Bakery
Fruits & Vegetables
Frozen Foods
Checkouts
Entrance
Entrance
Zone: -


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