FastSensor

Measuring Customer Engagement For ROI

Retail Store

How to get a customer to buy another beer

In 2013, with a team of 65 hardware and software engineers our Founder, Daniel Bichara, developed the most accurate non-PII tracking system with greater than 90% passive penetration and up to one square meter accuracy.
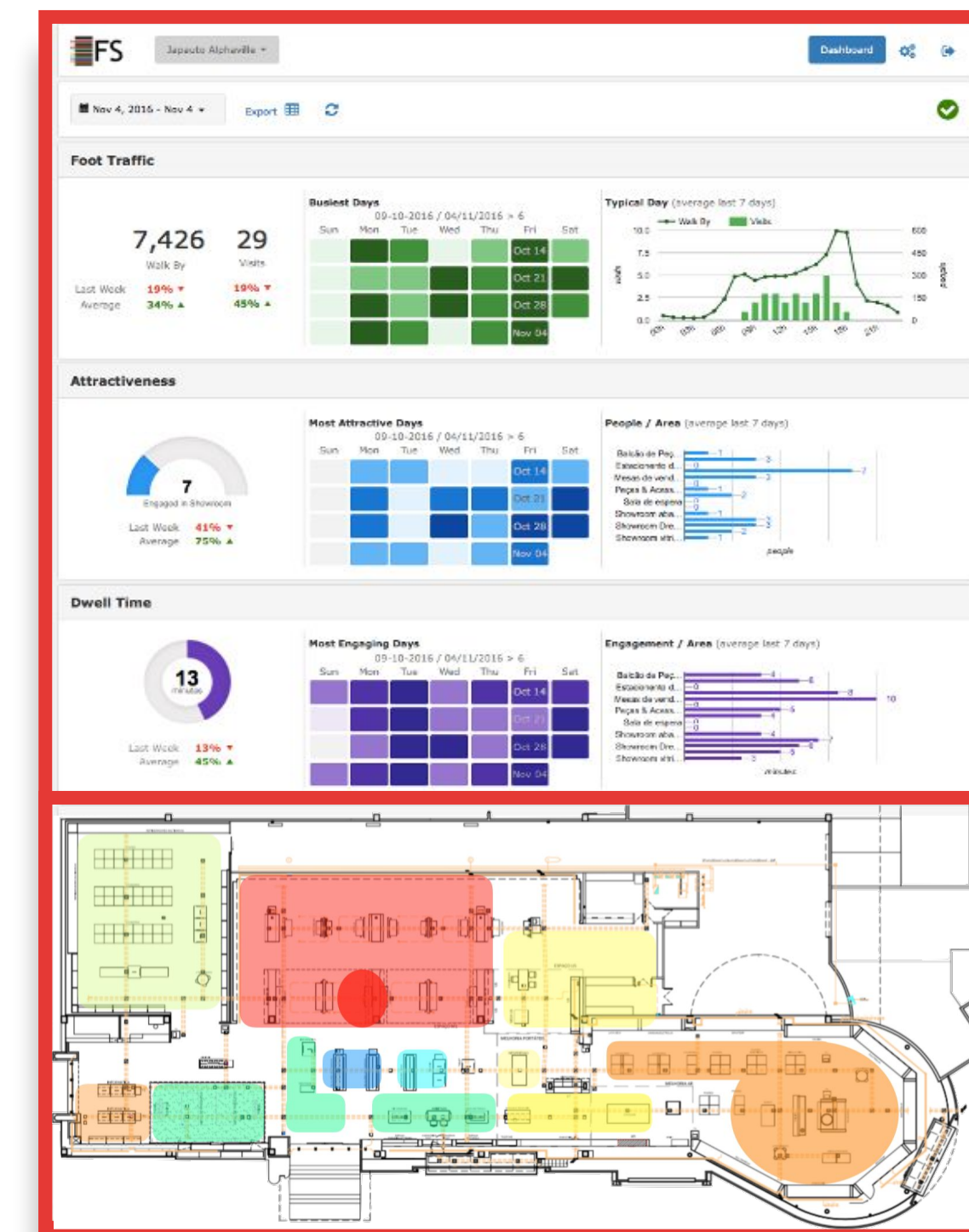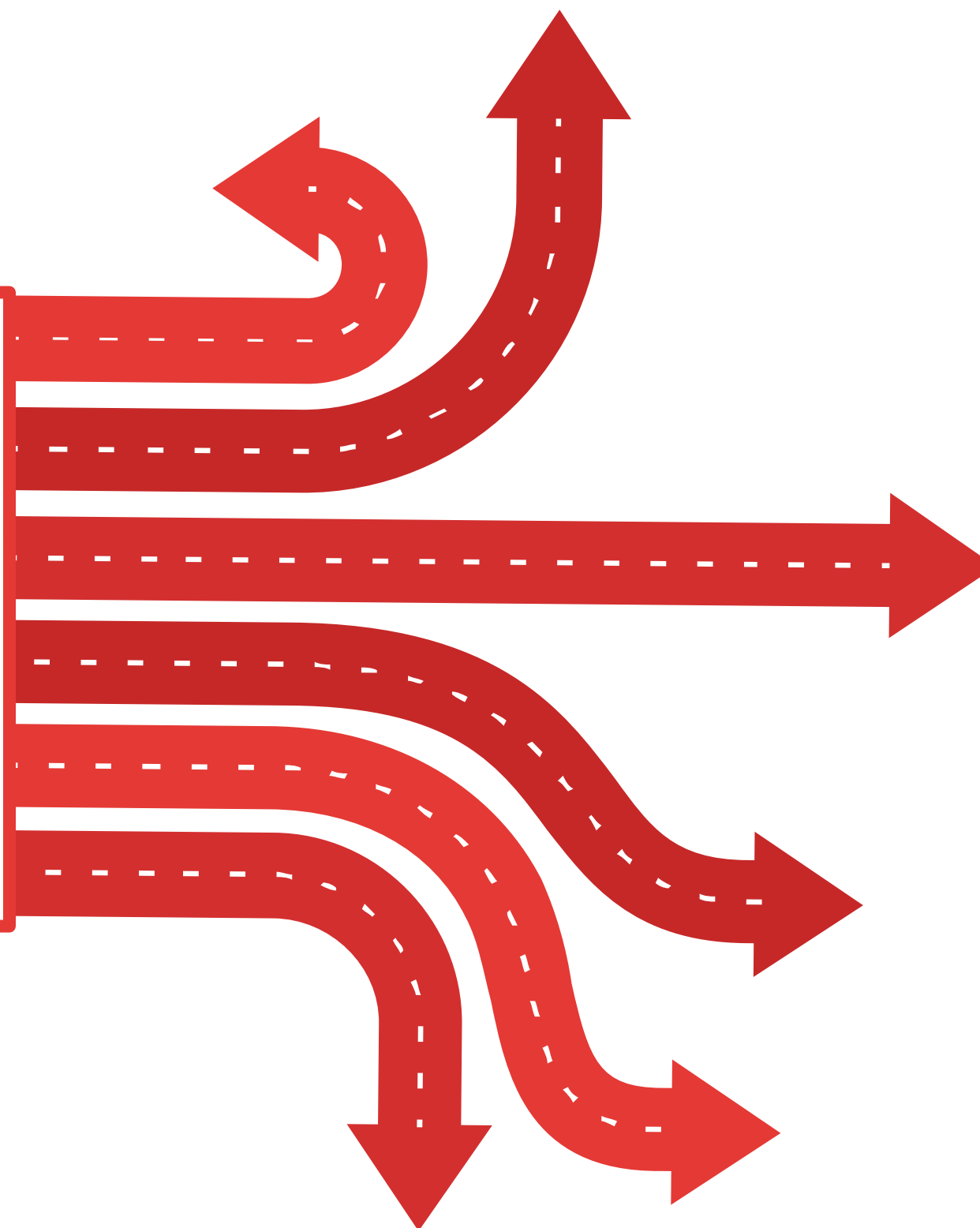
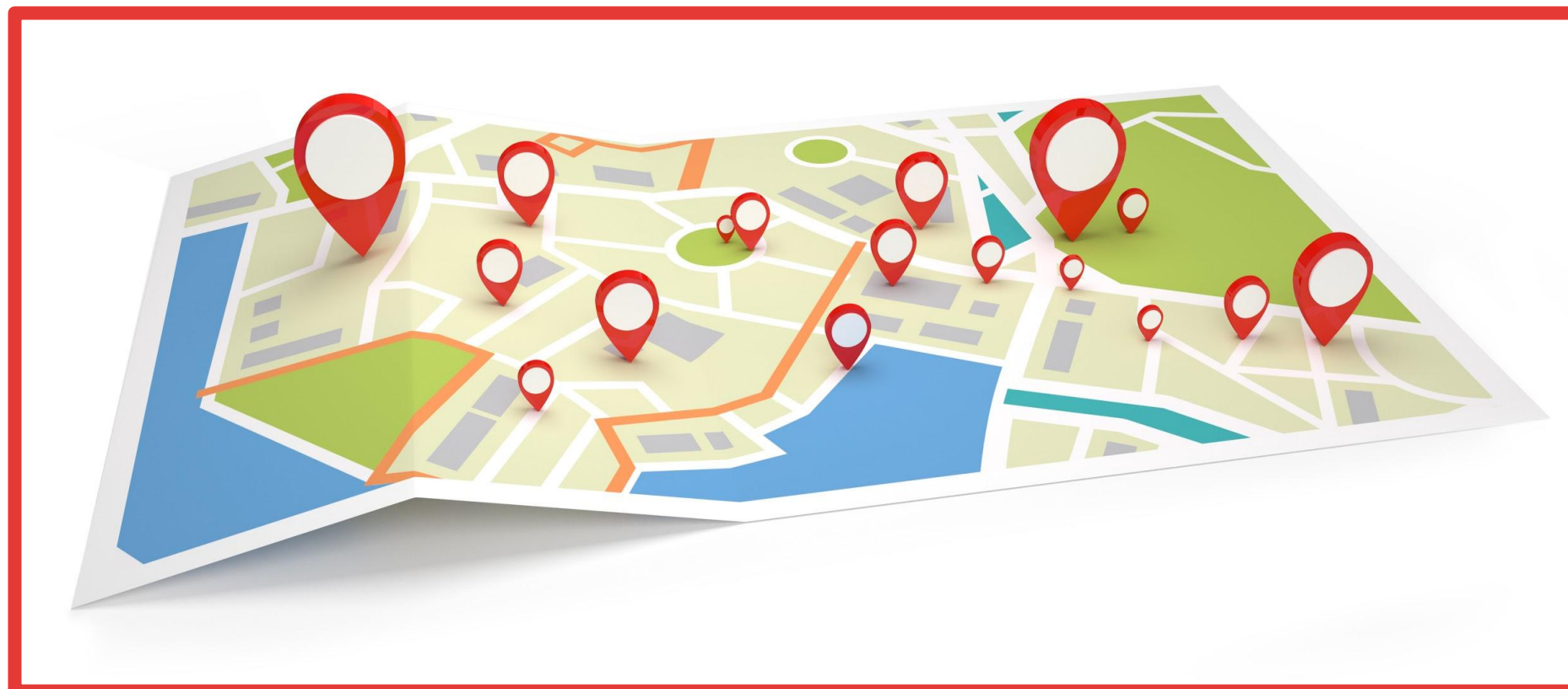Coupled with AI / Machine Learning, the FastSensor platform studies human behavior to create actionable analytics and triggers that help increase sales.

The client? Ambev (Anheuser-Busch InBev)
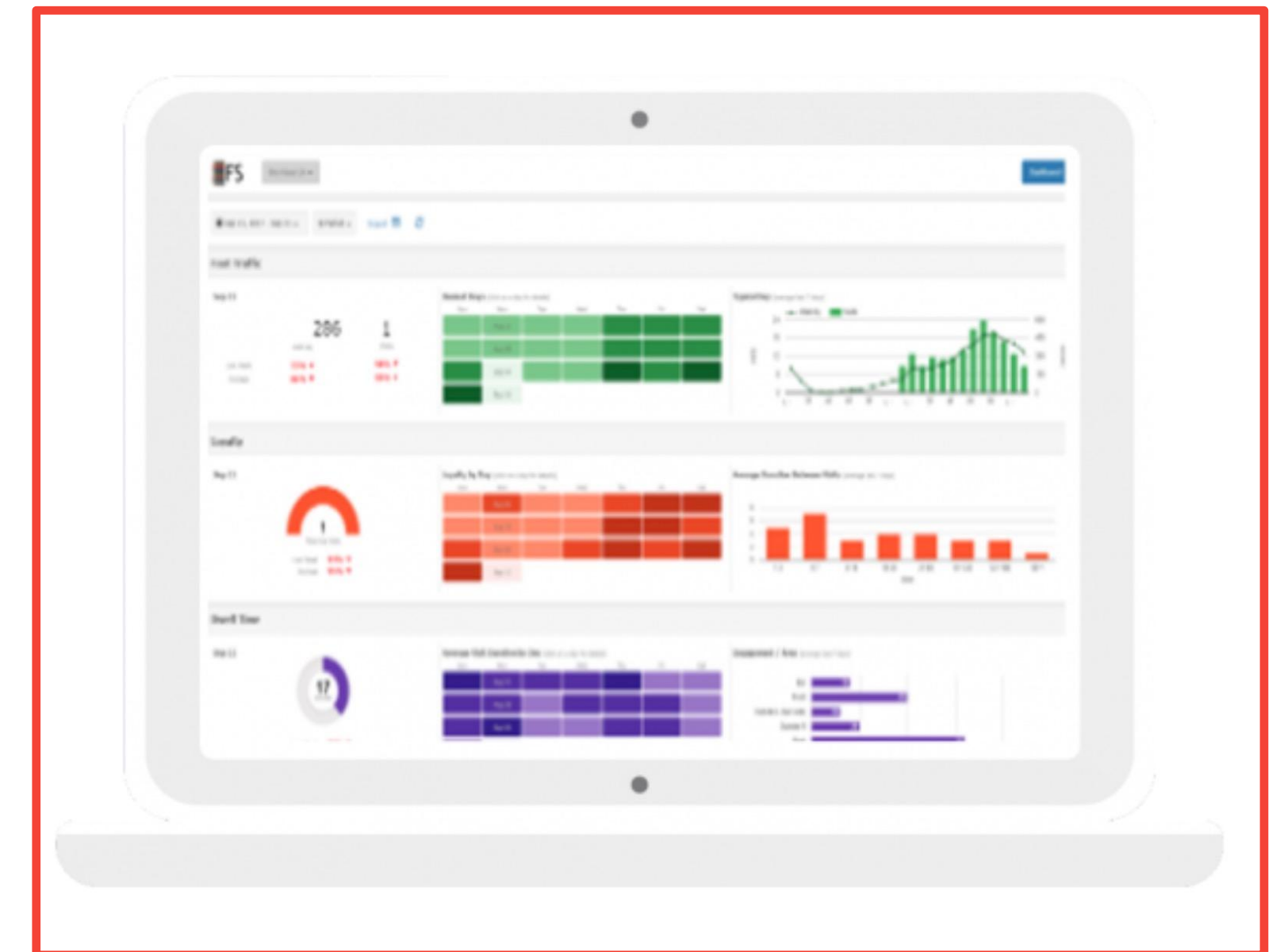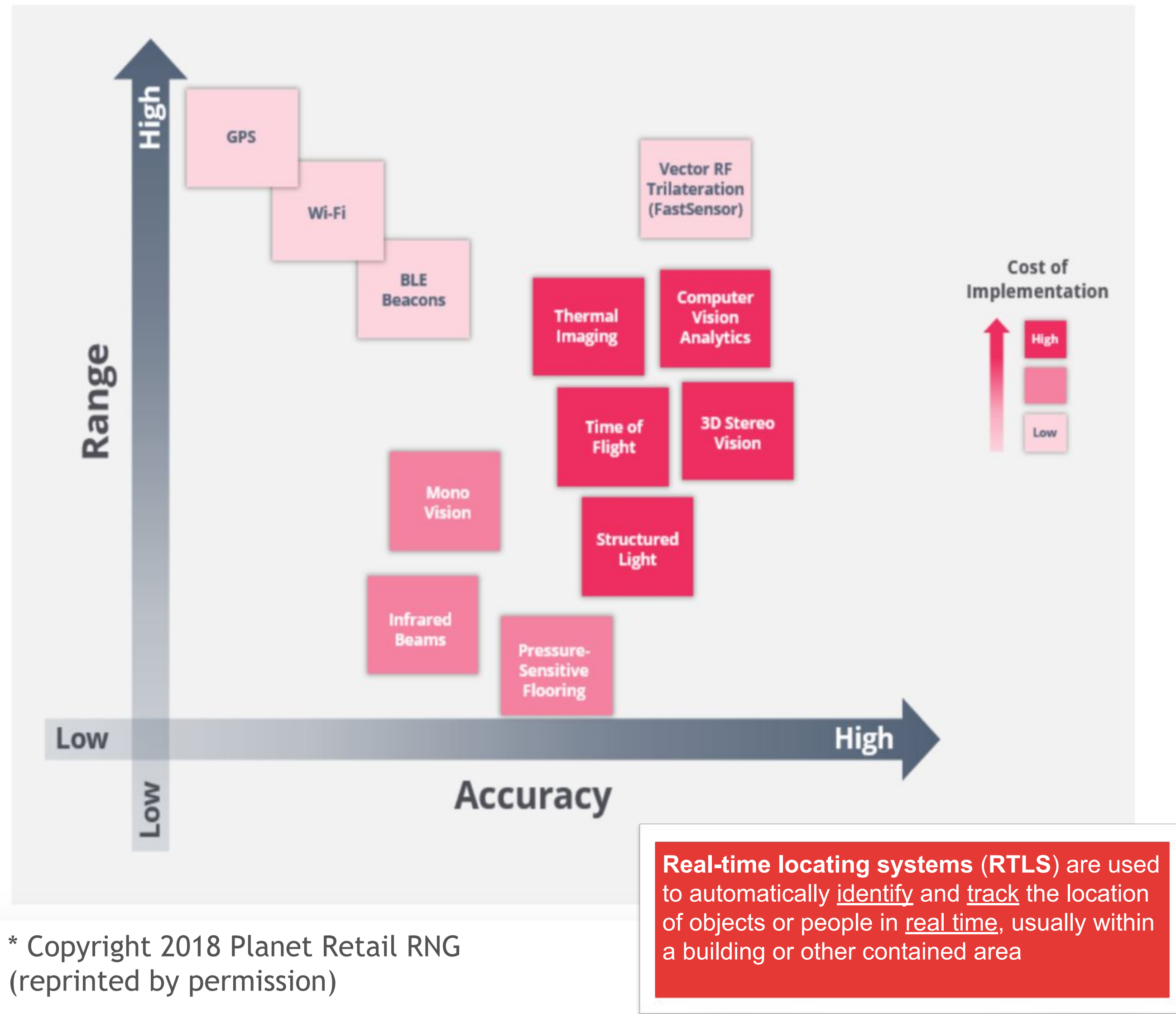
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FastSensor Footfall Analytics

Advanced RTLS (like indoor GPS) powered by AI / Machine Learning

Advanced analytics dashboard
for your brick-and-mortar stores.

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Existing Tech Overview

Shopper Tracking Technologies

GPS
Wi-Fi
BLE Beacons
Vector RF Trilateration (FastSensor)
Thermal Imaging
Computer Vision Analytics
Time of Flight
3D Stereo Vision
Mono Vision
Structured Light
Infrared Beams
Pressure-Sensitive Flooring

Range — High / Low
Accuracy — Low / High

Cost of Implementation — High / Low

Real-time locating systems (RTLS) are used to automatically identify and track the location of objects or people in real time, usually within a building or other contained area

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There are a lot of claims in the market, but the technology in use falls into a few categories, all with specific weaknesses and more limited accuracy than FastSensor.

- **Beacons** - requires download, opt in and bluetooth on, sampling issues (~5%), high ongoing maintenance costs
- **Wifi** - "randomized" by manufacturers, sampling issues (20%-60%), duplicate counts, no loyalty without opt-in, low accuracy (3-5m radius circle)
- **ComputerVision / Facial Recognition** - can't store face to track loyalty/uniques, duplicate counts, 5x+ our cost
- **Lidar** - no unique user or loyalty metrics, duplicate counts, high costs
- **FastSensor** - RTLS with accuracy @ 1 sq. meter, passive loyalty, 90%+ visitors tracked passively. **Best Range, Accuracy and Lowest Cost!**

FastSensor

How it works

Step 01

Step 02

Step 03

Turnkey sensors on private network gather anonymous, non-PII signals emitted by mobile devices.

FastSensor measures how customers flow in and through, where and how long they stay, and how often they return - all while maintaining privacy.

The cloud platform accumulates data from all locations, providing a unified view across the chain in near real time.

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Machine Learning IP

FastSensor's true differentiators are our proprietary, cloud-based algorithm which make sense of customer behaviors via the location data collected.

- Multi-signal reconciliation/deduplication
- Employee identification and data segregation
- Fixed asset identification and data segregation
- Location and behavioral triggers
- Behavioral analytics (customer vs people counting)

Machine learning /Deep Learning is the scientific study of algorithms and statistical models that computer systems use to effectively perform a specific task without using explicit instructions, relying on patterns and inference instead. It is seen as a subset of artificial intelligence. Wikipedia

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New data to better manage your retail store

- **Foot Traffic Analysis** - understand your customer count and their flow through a store over time

- **Attraction/Dwell by Area** - understand engagement by area and maximize the value of your real estate

- **Queue Management** - trigger opening new registers based on queue time or # of customers waiting

- **Loyalty Behaviors** - for the first time, track loyalty *passively*, understand loyal customer behavior without requiring opt-in or sign-up

- **Labor Optimization** - schedule employees based on actual traffic patterns and customer counts - not just POS data or inaccurate door counters

- **Sales Engagement** - trigger notifications to sales associates to engage with unattended customers

- **AB Display/Promotion Testing** - understand engagement, dwell and conversion rate for promotions and display areas to measure ROI, iterate and improve

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FastSensor retail store insights
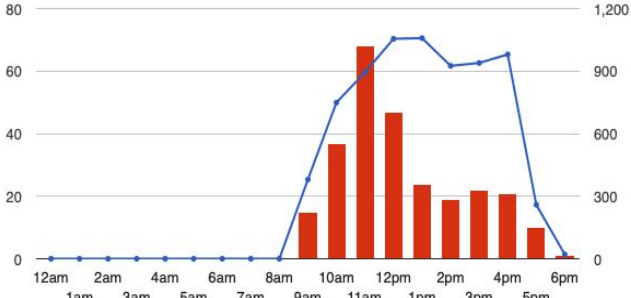
Customer Journey
Dwell time, visited areas, and more.

12 min

Passive Loyalty

87 Returning Visits
Last Week **45%** ▲
Average **25%** ▲

|	Sun	Mon	Tue	Wed	Thu	Fri	Sat
							Sep 14
							Sep 21
							Sep 28
							Oct 05

Measure passive loyalty to learn about returning customers, how to drive retention and improve ROI.

Foot Traffic

How many passersby enter the store?
Evaluate the effectiveness of window displays, marketing activities, and more.

Labor Costs & Traffic Flow
Schedule employees based on actual traffic flow to manage labor costs.
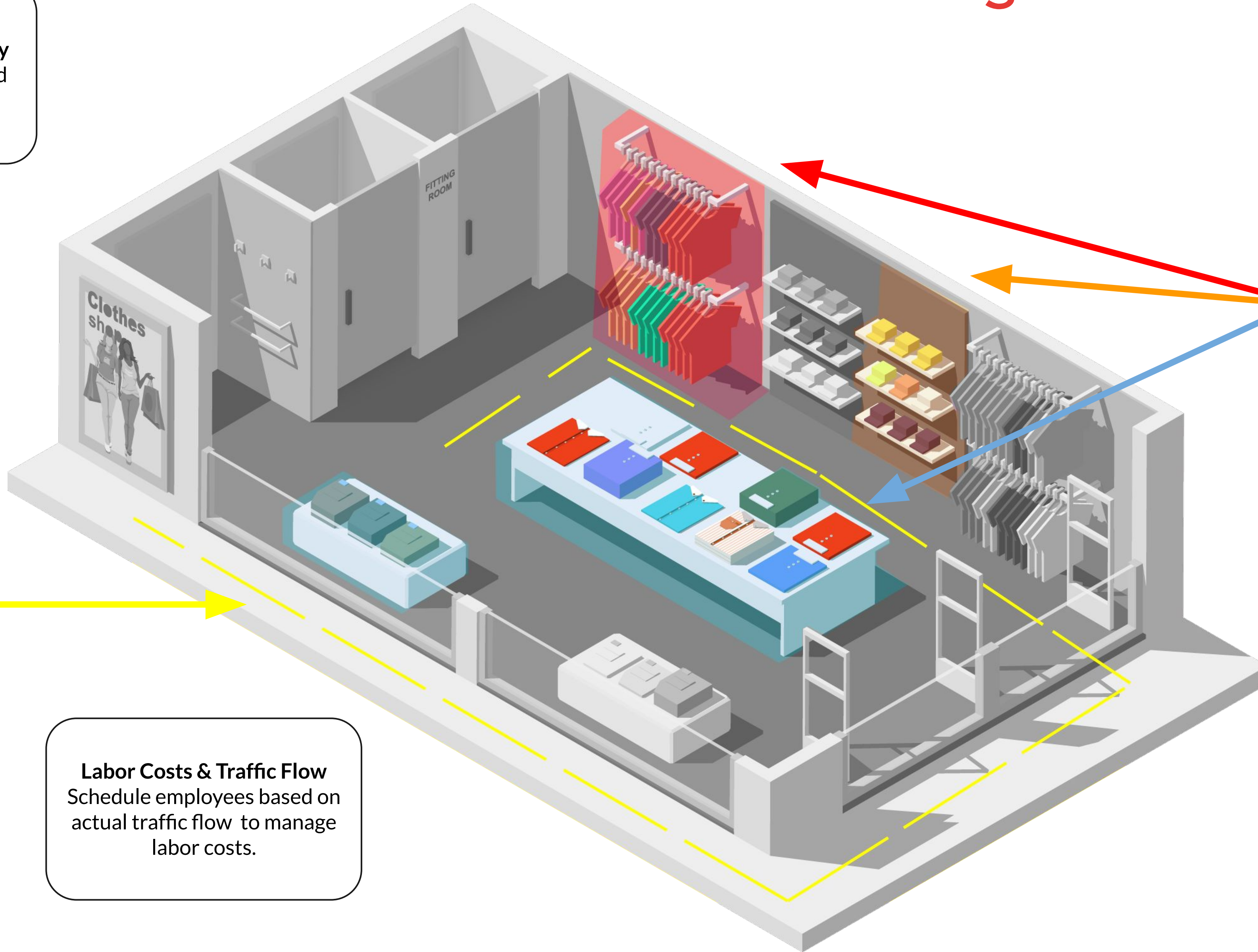
Average Engagement by Area

Shirts	4
Hats	4
Sales Table	-3
Polo	4
Fitting Room	4
Checkout	4

Learn what displays are low traffic and optimize your merchandise to drive engagement.

Fitting Room Conversion
Understand if the fitting room is driving conversion to the checkout and other areas.

Checkout Queue Management

5 min Wait time in line

7:00 Alert the store manager if it reaches 7 minutes

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Benefits

Attract Customers

Identify and engage with unique visitors across all locations, and collect data on frequency and attraction for individuals.

Increase Conversion

Explore how customers navigate the store, adjust to optimize their journey, and offer a better experience.

Keep Shoppers Coming Back

Understand how staffing impacts the customer experience, and use FS data to take interactions to the next level.

Increase Sales

Discover what's working and what's not, make data-backed improvements that will positively impact your sales.

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How many Sensors

- In a typical retail store, depending on the materials and shape of the location, 6 sensors can cover a 4-5,000 foot space.

- Sensors are placed in a rough V shape with line of sight 20-100 feet apart (70 typical) to track behavior associated with devices.

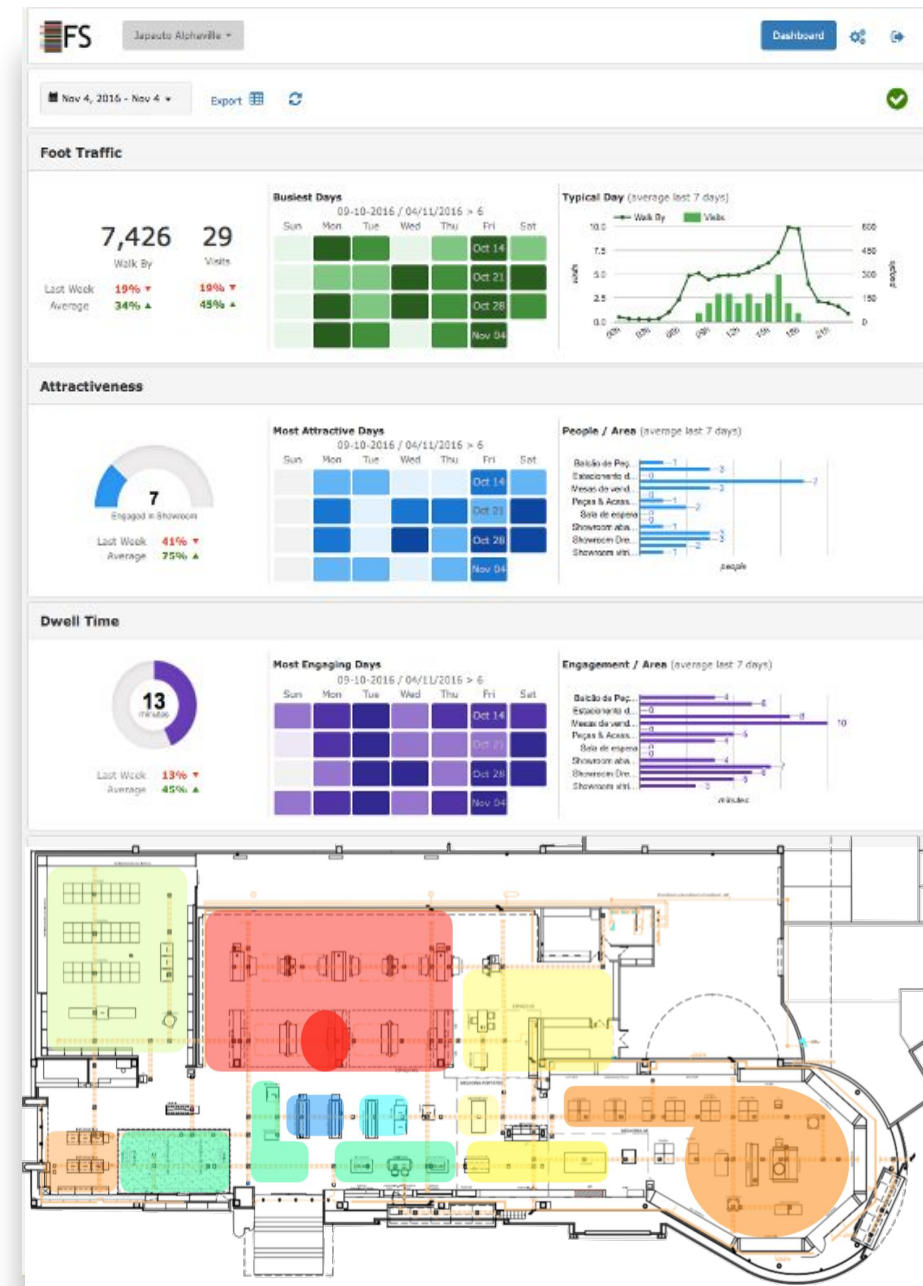- FastSensor is more cost effective and powerful than other technologies.

In the sample space, 6 sensors cover the average 4,500 square foot location for about $10,000 (first year contract) including cabling and installation with only $3,600 recurring annually. That's $300 per month for metrics with an ROI.
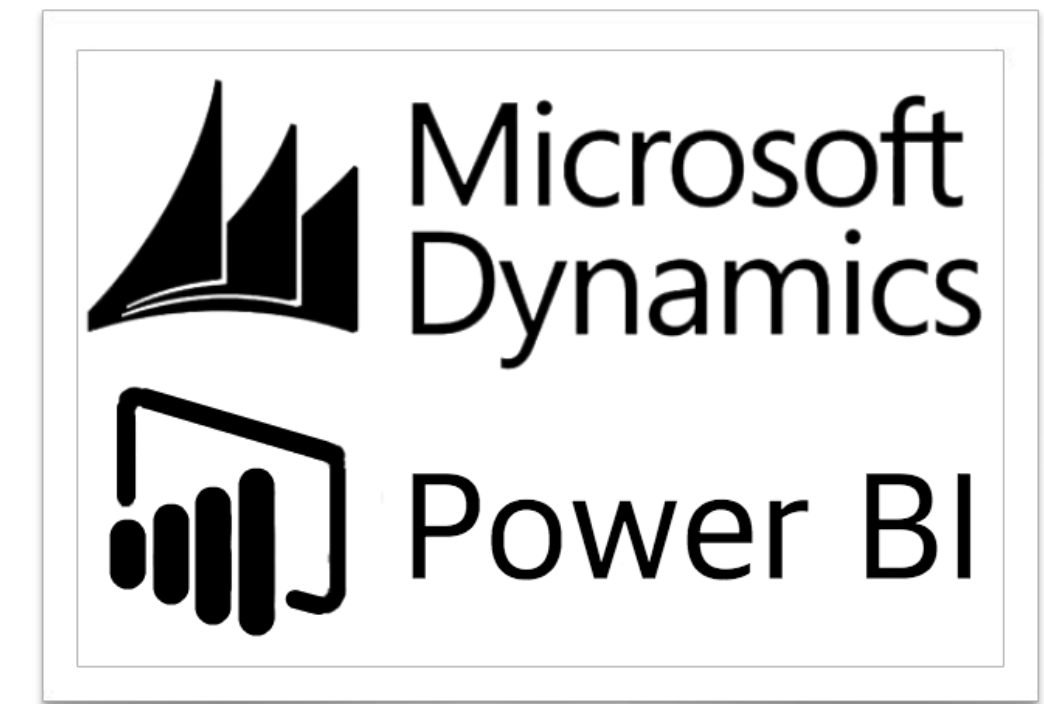
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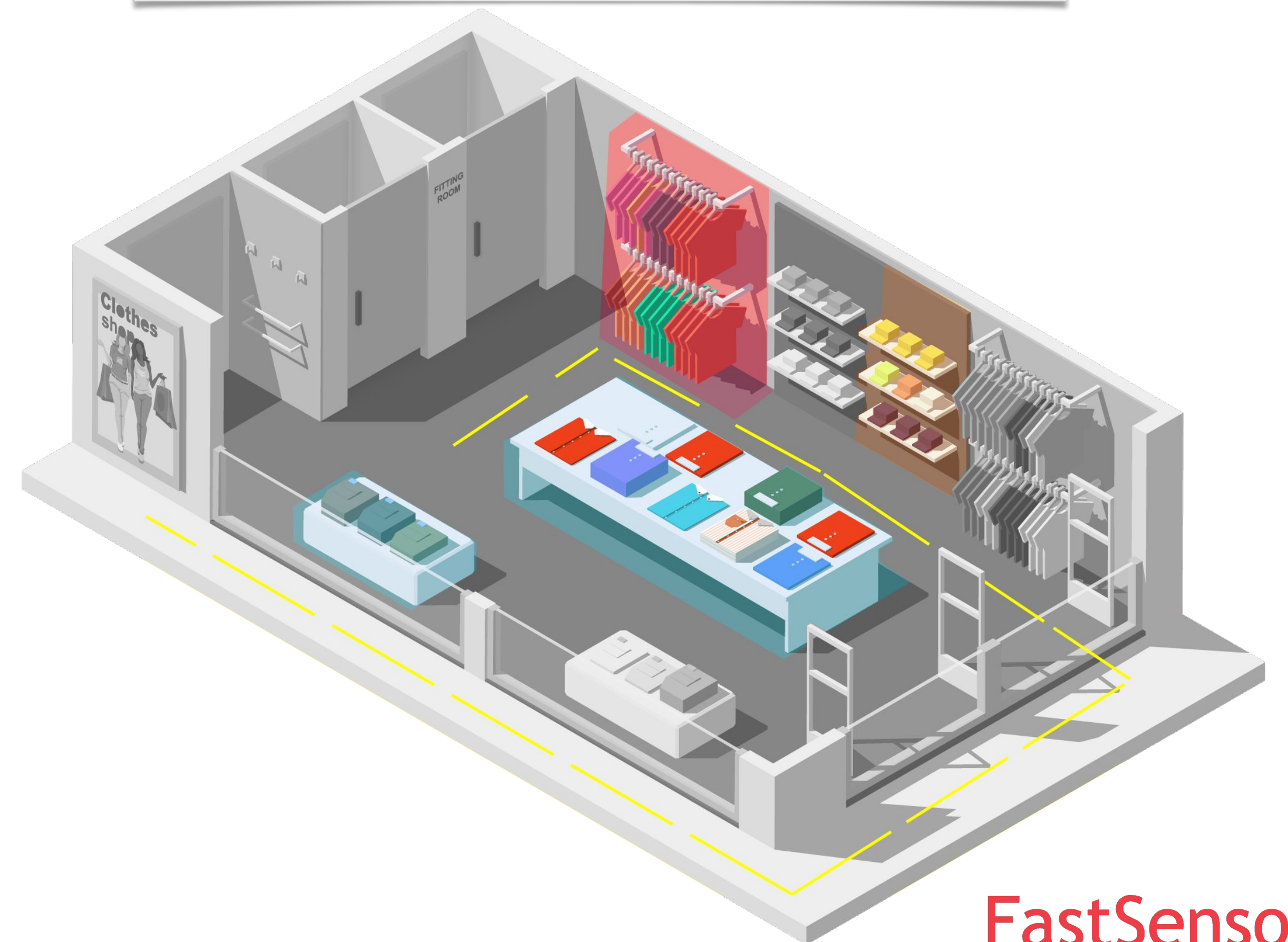
Consume the data your way.

⊘ **Use our Dashboard**
For fast and real time analysis

⊘ **Use our ETL or data export**
To connect to your tool of choice for custom analysis

Google Data Studio

Microsoft Dynamics

Power BI

tableau SOFTWARE

Qlik

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Simple, Secure, Reliable

Secure
- Private LTE network
- ACL for dashboard
- No-PII

Simple
- Captures public RF only
- No opt-in required
- Passive loyalty

Reliable
- Accurate data
- 90%+ penetration
- GDPR compliant

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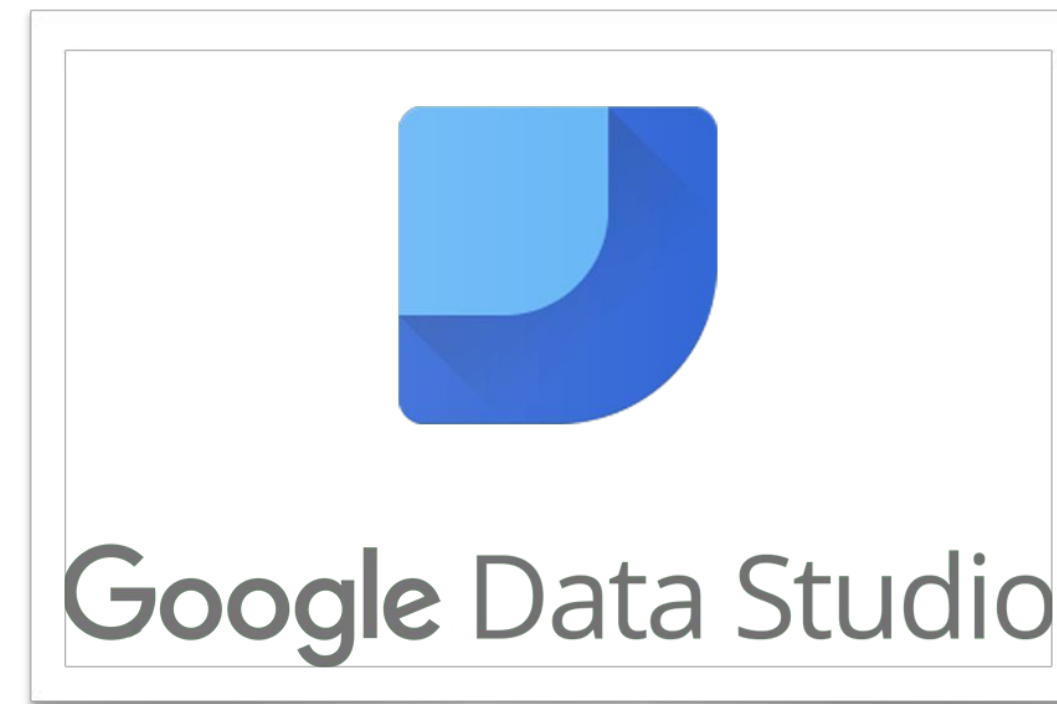
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Let's talk numbers...

6,179,264

Different devices
tracked per week.

1,895,763,037

Movement vectors
plotted per month.

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Average Q4, 2017

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Honeywell

FIAT

YAMAHA

Clients

HYUNDAI

MedMen

MITSUBISHI MOTORS

PEUGEOT

KTM

BRÜHAUS

SAMSUNG

fnac

CHEVROLET

Jeep

GUESS
U.S.A.
WASHED JEANS
?
1201 1203

BURGER KING™

Coca-Cola
Marchi Registrati

vonder

ambev

TOYOTA

QUALITY
Taylor
GUITARS

VW

HONDA

HONDA

Ford

RIFFEL
MOTOSPIRIT

HGTV

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STL AUTO SHOW
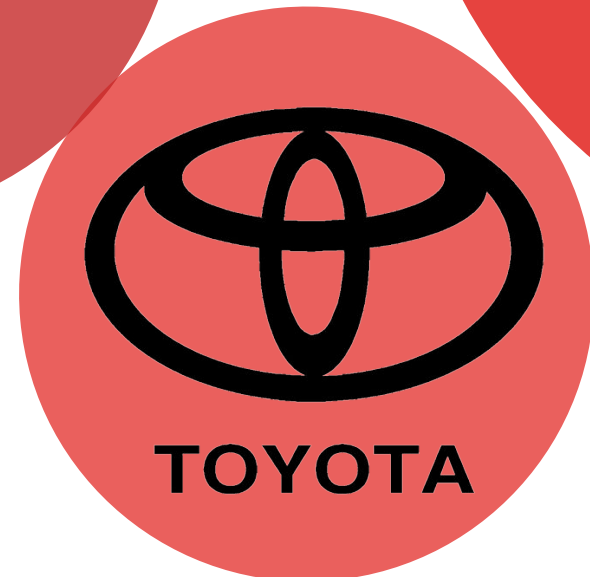
AGUSTA
MV

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Measuring Customer Engagement For ROI

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Appendix

Planet Retail: Comparing Features*

FastSensor is the top ranked provider across key categories.

Scorecard Criteria		RetailNext	FastSensor	Coursa Retail	ShopperTrak	Scanalytics	RetailFlux	Aura Vision Labs
Functionality	People Counting	🟩	🟩	🟥	🟩	🟩	🟩	🟨
	Traffic Monitoring	🟩	🟩	🟥	🟩	🟨	🟨	🟨
	Shopper Personalisation	🟩	🟩	🟩	🟥	🟥	🟥	🟨
Flexibility		🟩	🟩	🟨	🟩	🟩	🟨	🟨
Economics		🟥	🟩	🟩	🟥	🟨	🟨	🟥
Reach & Adoption		🟩	🟥	🟥	🟥	🟥	🟥	🟥
Success/Survival		🟩	🟩	🟨	🟨	🟨	🟨	🟨

Execution Effectiveness

Low 🟥 🟨 🟩 High

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Comparing Sensor / Dashboard technology

	FastSensor	Beacons	Cameras	What this means?	Why it matters?
Distinguishes First Time Shoppers	**Yes**	Yes	No	FastSensor tracks how long they visit, by area, within the bldg.	Knowing the percentages of people who are new or returning matters.
Distinguishes Returning Shoppers	**Yes**	Yes	No	How many returning loyal customers are inside.	Know how often your shoppers return to keep your promotions fresh.
Allows for Passive Tracking	**Yes**	No	Yes	No action required by shopper.	No Opt-in required for FastSensor.
No IT integration required	**Yes**	No	No	First to use cell-to-dashboard technology.	Marketing departments need systems and data that doesn't require IT integration. That matters a lot.

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FastSensor

Comparing Sensor / Dashboard technology

	FastSensor	Beacons	Cameras	What this means?	Why it matters?
No Wifi network required	Yes	No	No	Major headache avoided in not using existing Wifi.	FastSensor seamless cell transmission matters for speed and efficiency.
Mobile transmission to the cloud/ dashboard	Yes	No	No	System is self contained.	FastSensor doesn't touch existing IT.
Coverage down to	1 sq meter	6 sq meters	1 sq meter	Records duration of stay down to as small an area as a checkout counter.	Tracking where people go, and how long they wait matters.
Coverage includes outside too	Yes up to 70 ft	No	No	Records all visits for those that walk by the front entrance.	Knowing the percentages of walk bys to visits matters when changing the window display.

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