



Smart Shelf

Who
We
Are

Combining Expertise of

M²DERN EXPO

Equipment design, production & full service installation

 **MINT**

Smart solutions for retail, supply chains & FMCG companies

 **SQUARES**

Retail consulting and concept design

 **ENGINEERING**

Designing and manufacturing production lines as well as stamps, molding tools and rapid tooling

MINT INNOVATIONS

An innovative company created to develop and implement the latest high-tech solutions in Modern-Expo's portfolio

Our main competence is to develop comprehensive smart solutions that transform retail space into stores of the future



Our Experience

15+
years of experience

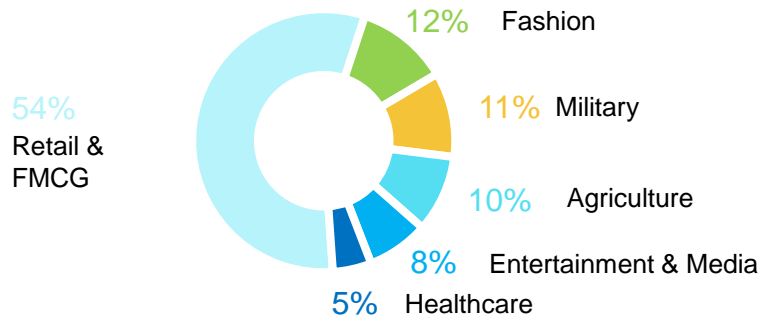
20+
ongoing projects

100+
Experiments

100+
pilot projects in:

- › Retail & FMCG
- › Fashion
- › Military
- › Agriculture
- › Healthcare
- › Entertainment & media

Areas of Expertise



Partners in

Ukraine, Belarus, Poland, Latvia, Germany, Netherlands, Finland, Sweden, France, Denmark, Belgium, UAE, Japan, USA, Canada, Australia

Our Agile Team

70

team members



46
Software
developers



10
Data
scientists



10
Hardware
engineers



4
PhD

We see efficiency as point of differentiation using



Internet
Of Things



Big
Data



Robotics



Computer
Vision

Challenges we successfully overcome

We collect and process valuable data about purchases, customer behaviors and sales. Based on this information we can formulate business processes that allow to:

Control and manage equipment remotely

Carry out merchandising control

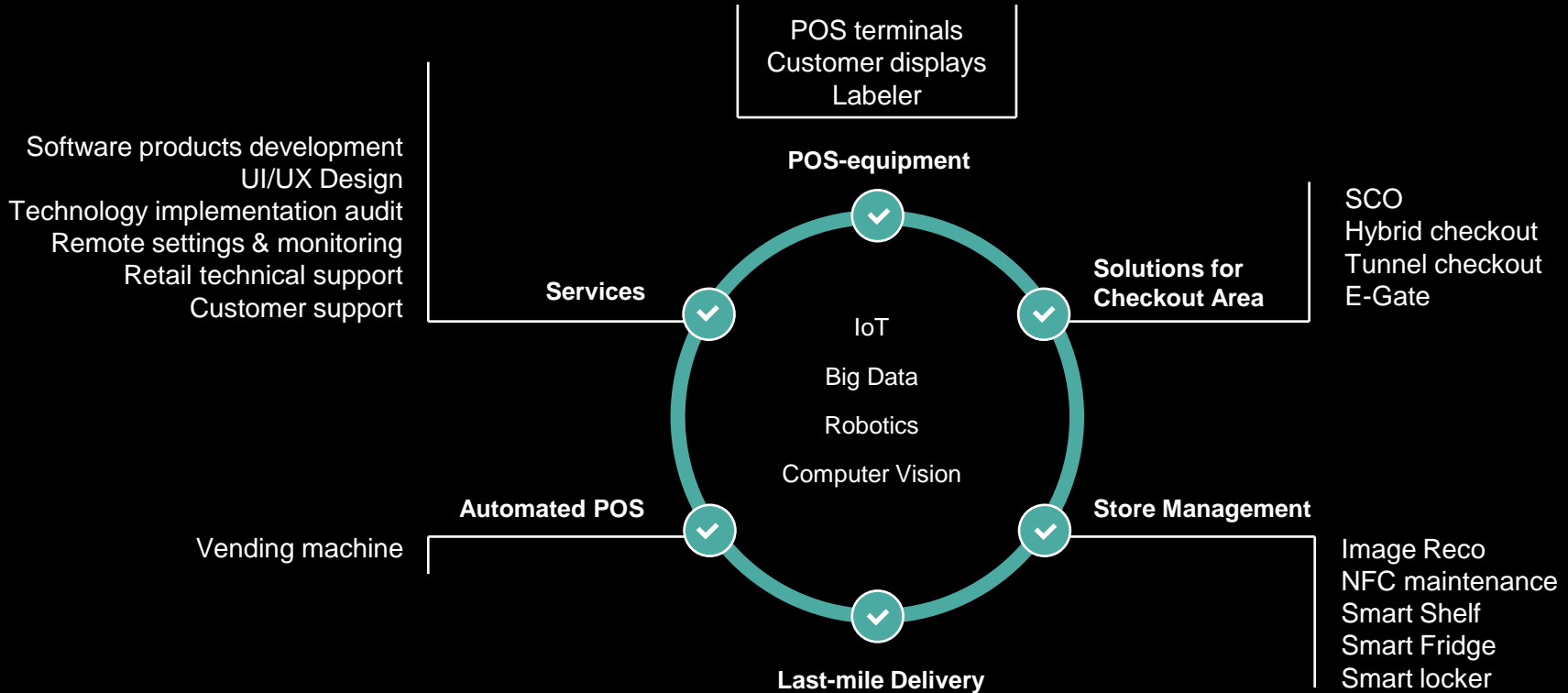
Make sales predictable

Build customer portraits

Analyze and manage client's portfolio

Eliminate out-of-stock

Our Solutions



KITCHEN

MACCHIATO
CAPPUCCINO
LATTE
MOCHA
HAND-POURED COFFEE
TEA

SMART SHELF

Smart Shelf



Losses due to out-of-stock (OOS)

The average out-of-stock rate in the US is close to **8 %** (up to **15 %** for advertised sale items)

Causes of Out-of-Stocks by Work Process

Work Process	Attribution
Store Stocking (too few staff, not found in back room)	38%
Store Forecasting (too little, slow response time)	22%
Planning (incorrect master data, wrong category planning)	11%
Store Ordering (not enough ordered, not ordered on time)	11%
Supply (not sent, not sent on time)	9%
Other (Manufacturer supply problems)	9%

Losses due to out-of-stock (OOS)

4%

annual profit losses
for retailer due to
OOS

\$23 mln for every \$1 bln

annual profit losses for
supplier due to OOS

Smart Shelf Functions

- › Remote merchandising control
- › Out-of-stock monitoring
- › Turnover analysis
- › Theft prevention

Key Indicators for Monitoring

- › amount of SKU on a shelf
- › quantity of goods on the “virtual” stock
- › speed of inventory turnover



Events / locations
map display



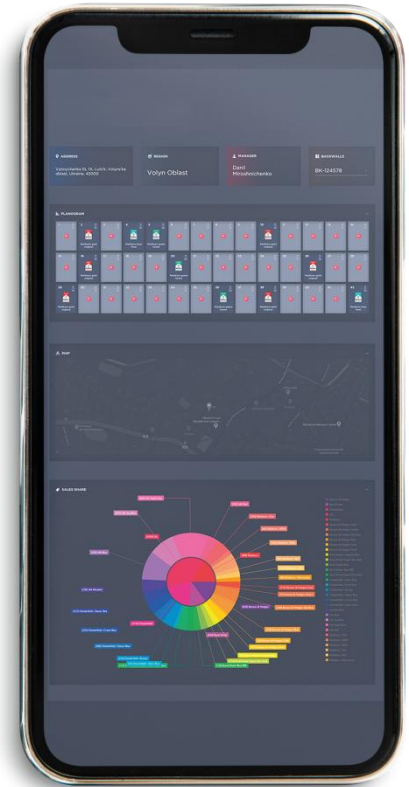
Planogram supervision
and editing



Sales forecast
and recommended
plans of deliveries



Analytics



Pushfeed System

- › Data gathering from sensors on the shelves
- › Collected data transmission to cloud dashboard for further processing
- › Real-time notifications to prevent out-of-stock



On-shelf availability control in real time



Planning and forecasting products delivery



Effective merchandising



Customized notifications



pusher

sensor



Camera-based System

Combination of merchandising control and stock monitoring

- › Photo verification of planogram compliance
- › Real-time view and monitoring of goods availability
- › Detection out-of-stock and pre out-of-stock situations, that stops sales losses due to empty shelves
- › Immediate alerts when shelves become empty
- › Theft prevention

Advantages:

- › Exceptional accuracy
- › Identification of optimal product positioning to maximize sales

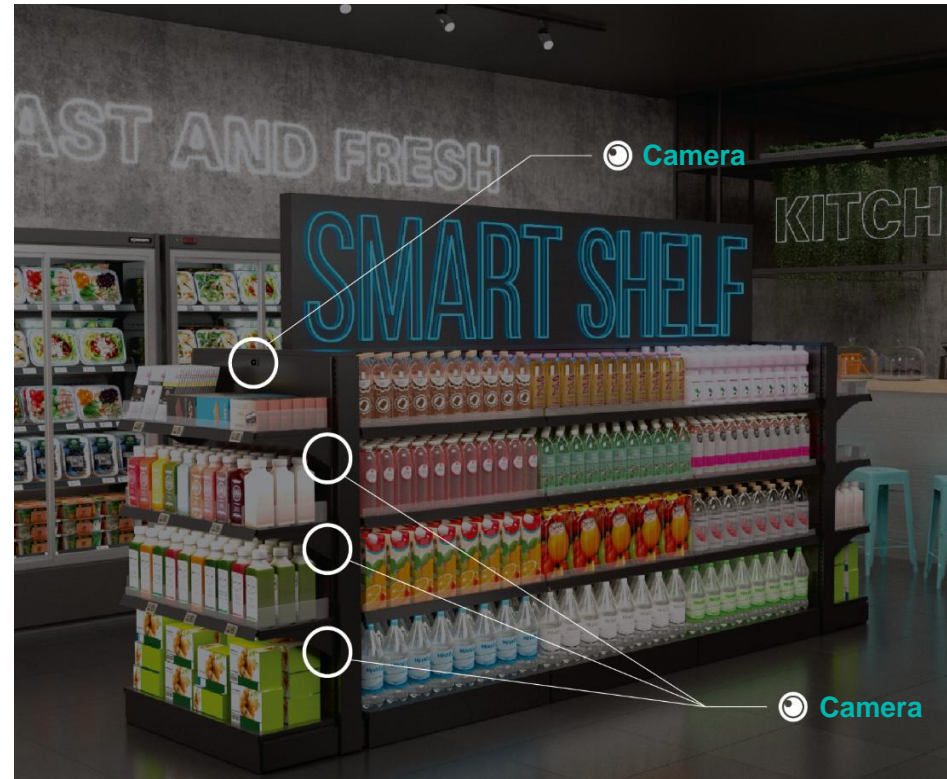


Image Reco

Image recognition technology – an innovative merchandising tool based on computer vision

Functions:



Big data collection and analysis



Tracking of goods availability in real time



Remote monitoring of a shelf planogram



Stock monitoring

Features:

- › accurate and fast images processing
- › ability to track 50+ SKUs per shot
- › comparison of the actual planogram with the planned one
- › information processing speed increased by more than x10 times
- › 100% customized solution



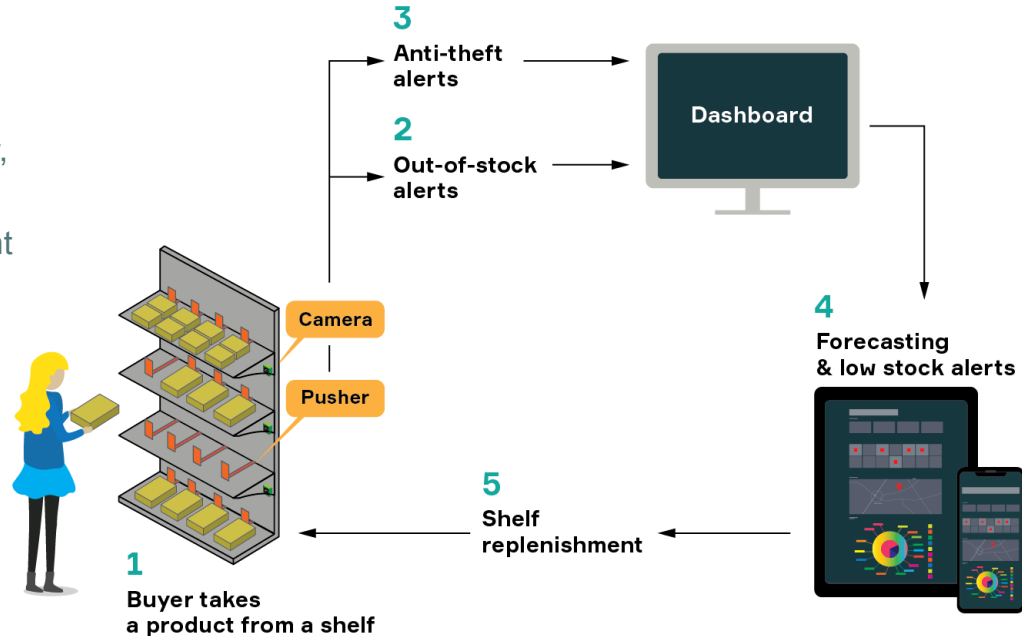
Smart Shelf Advantages

- › Minimization of human errors
- › Increased merchandising efficiency due to automated management
- › No need to actually visit each point of sales
- › Always in touch with the market via SMS, E-mail, Viber, Telegram and in-app notifications
- › Loss prevention - shelf keeps 'hot products' secure right on the shelf

Areas of use:

- › Tobacco
- › Food/Non-food
- › FMCG

How it works:





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