SESSION 1
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Path to Autonomous Retail.

Hosted by founder and CEO, Haitham Al-Beik. Register and join our live sessions at wings.business/sessions.
SESSION 1

Path to Autonomous Retail

- Levels of Autonomy (preliminary)
- Expectation of an Autonomous Retail
- Stations and Workflows
- Impactful Implementation of Automation
- Automation Implementation Models
- Examples of Automation Implementation Models
- Q&A
Autonomy Levels

TRADITIONAL RETAIL

L0

- No workflow automation
- No station automation - including digital orders
- End-to-end human labor
- End-to-end human-to-human communication
- Customer-to-business interaction is fixed
Autonomy Levels

L0

- At least one workflow automation
- Reduction in human labor (optional)
- Reduction in human-to-human communication
- Customer-to-business interaction is more versatile (ordering)
Autonomy Levels

- Multiple workflow automation
- At least one station automation
- Further reduction in human labor
- Further reduction in human-to-human communication
- Customer-to-business interaction is more versatile (delivery)
Autonomy Levels

- All workflows are automated (internal logistics)
- At least two adjacent stations are automated
- Limited human-to-human communication for intervention
- Customer-to-business interaction is most versatile
SUSTAINABLE AUTONOMOUS RETAIL

- Retail is fully electrified (no gas or petrochemicals)
- Automated waste management, cleaning, and recycling
- 80% of the materials are recyclable and renewable
- Human workforce are optional
- Customer-to-business interaction is fully personalized
AUTONOMOUS RETAIL

Expectations

Increase in confidence for everyone involved.

More efficient business model with higher ROI.

- Increased I/O bandwidth of stations and the retail as a whole.
- Increased concurrent operations at every station.
- Increased staff focus and their station permanence.
- Increased personalization features (i.e. sensitivities & allergies.)
- Language independency with internationalization (i18n.)
- Real-time bi-directional communication system.
- Transparent inventory and business operations.
- Sustainable logistics with scalable and modular components.
**Concierge**
- Eliminates P.O.S.
- Live consumer activity.
- Administer operations.

**Robotics**
- 24/7 operations.
- Efficient deliveries.
- Safe and clean.

**Robotic Sensors**
- Guiding systems.
- Versatile delivery points.
- Service terminals.

**Mobile App**
- Consumer A.I. Interface.
- Crypto-authenticated ID.
- Live personalized services.
Stations and Workflows

TRADITIONAL RETAIL

- Storage
- Orders
- Prep
- Assembly
- Pickup

External Logistics

Internal Logistics

Customer Logistics

Human Operation

Human Workflow

Human-to-Human Communication

Cleaning, Recycling, and Waste Management
Stations and Workflows

STATION OVERVIEW

INPUT

WORK

OUTPUT
Stations and Workflows

ASSEMBLY STATION OVERVIEW

INPUT

WORK

OUTPUT

INGREDIENTS

ASSEMBLE

ASSEMBLED PRODUCT
Stations and Workflows

WORKFLOW OVERVIEW

Assembly → Delivery
WORKFLOW

INGREDIENTS → ASSEMBLED → PRODUCT → DELIVERED

Assembly Station → Delivery Station
Impactful Implementation of Automation

- Every step towards automation must include a workflow.
- Automated stations with traditional workflows are bottlenecks.
- Automate workflows for an increased I/O from relevant stations.
- Begin with workflows with most friction and work backward.
- Uni-directional workflows enforce separation of concern design.
- Elevate the experience at either or both ends of the workflow.
- Optimize based on cost & revenue from and to every station.
Models of Automation Implementation

Pre-Station

Station A

Station B

Station-to-Station

Station A

Station B
Models of Automation Implementation

TRADITIONAL RETAIL

Internal Logistics
- Storage
- Orders
- Prep
- Assembly

External Logistics
- Ordering
- Pickup
- Cleaning, Recycling, and Waste Management

Human Workflow
- Human Operation

Human-to-Human Communication
Example of Automation Implementation

LOGISTICS

- Automating Workflow
- Eliminated
- Digital Operation
- Human Operation
- Human Workflow
- Human-to-Human Communication
- Digital Automation (Workflow + Ops)

PRE-STATION AUTOMATION

- Storage
- Orders
- Pickup
- Assembly
- Prep
- Ordering

Cleaning, Recycling, and Waste Management
Example of Automation Implementation

**Digital Automation (Workflow + Ops)**
- Eliminated
- Human Workflow
- Human-to-Human Communication
- Digital Operation
- Human Operation

**STATION-TO-STATION AUTOMATION**

- **Storage**
- **Orders**
- **Prep** → **Assembly**
- **Assembly** → **Pickup**
- **Prep** → **Assembly**
- **Assembly** → **Pickup**
- **Prep** → **Pickup**

**Human Workflow**
- Human-to-Human Communication

**Cleaning, Recycling, and Waste Management**

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Example of Automation Implementation

Long-term Benefits

- Reduced symptoms of poor mental and physical health.
- Fewer injuries, less illness and lost time.
- Reduced sick leave usage, absences and staff turnover.
- Increased productivity and greater job satisfaction.
- Reduced costs to the employer.

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let’s make history together

If you would like to be part in our mission to accelerate the transition to a sustainable future, let’s talk!

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