

# PROVIDING SMART RETAIL

From Self-Checkout Systems to  
Empowering Sales Force



IOT



Vision



AI



## Agenda

- Introduction
- Business Use Case
- Solution Introduction
- Process lifecycle of a on-boarding a customer
- Process lifecycle of solution
- Data Collection strategies
  - Pipeline of Data Collection
  - Helix Platform
  - Tools for Annotation
- Algorithms
  - Detection
  - Classification – Product, Package & Size
  - Rejection
  - Size Estimation
  - Transfer Learning
- GPU's
  - Training
  - Inferencing
- Edge Solutions
  - Algorithms
  - GPU's for Inferencing
- Scalability





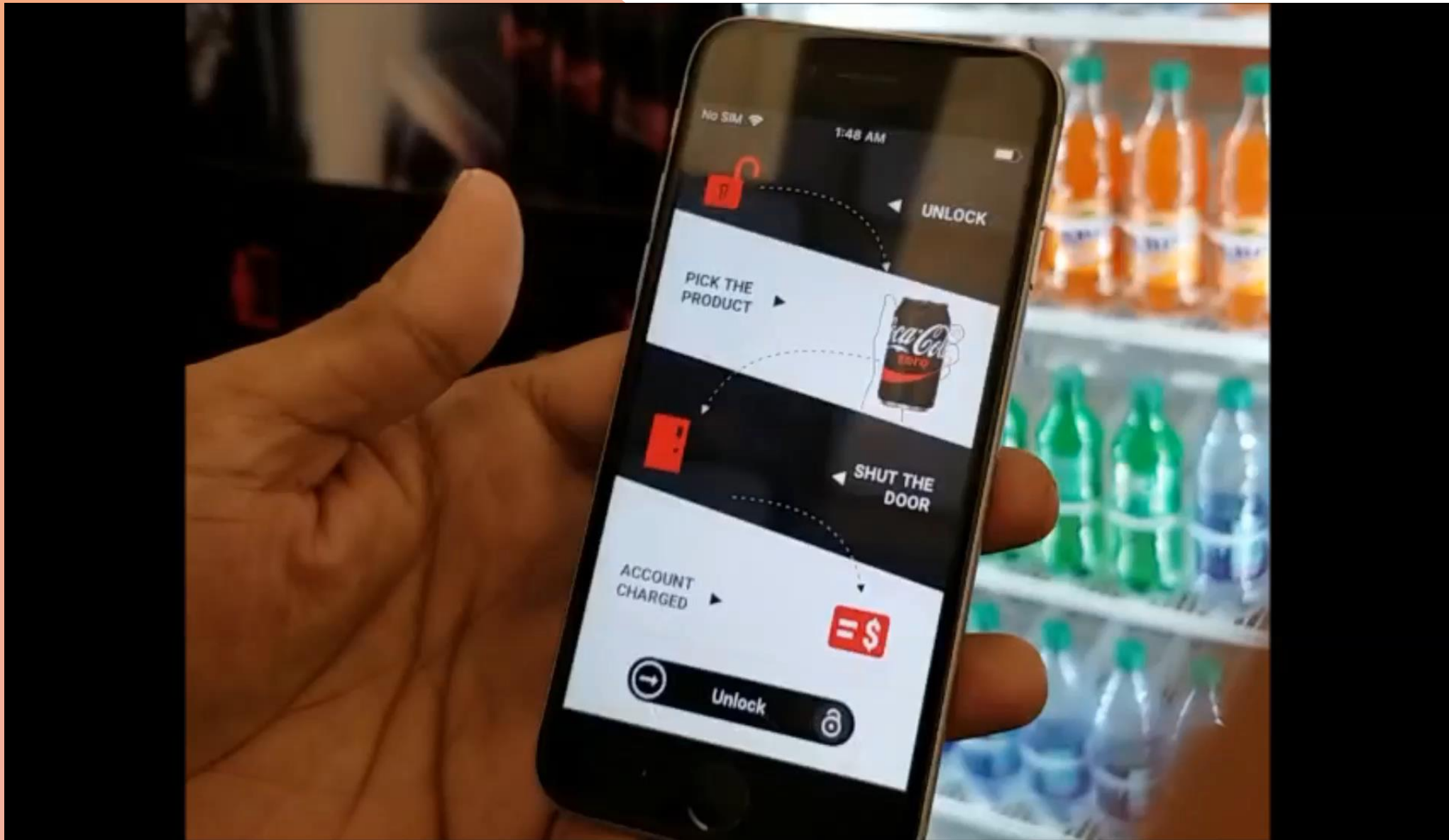
**Sell anywhere,  
Anytime!**





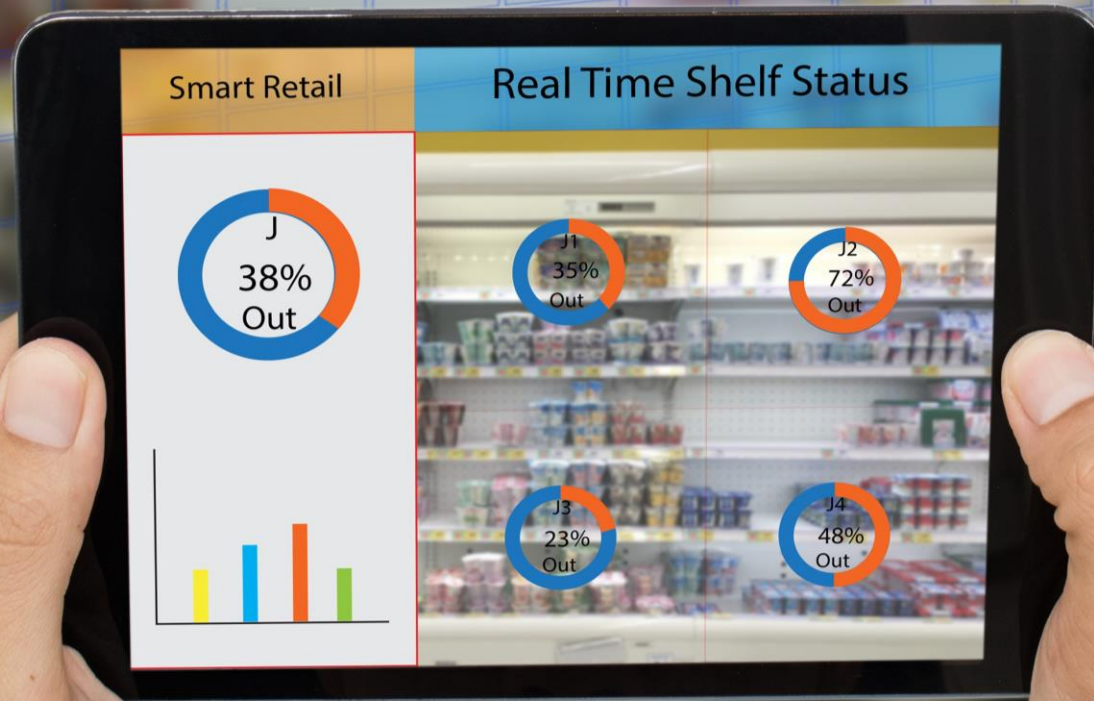
**Using checkout free,  
self serve assets**

## Using checkout free, self serve assets





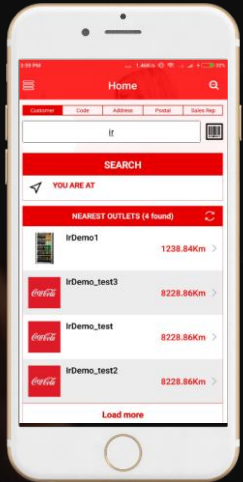
# Improve your market execution



7

# Leveraging instant actionable insights

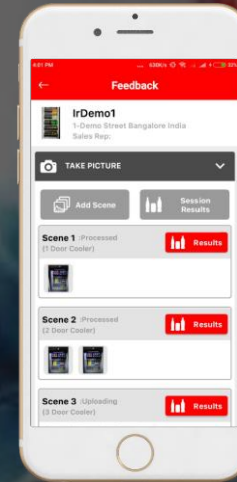
## 1 Outlet Located (GPS)



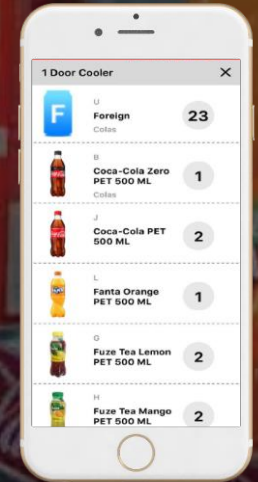
## 2 Retail Shelf/ Cooler Captured



## 3 Shelf/Cooler Analyzed



## 4 Prescriptive Analytics



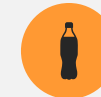
Select outlet



Simple Image Capture  
with Quality Check



Instant Result  
processing



Actionable Insights  
& Core KBI's



# Shelf and Position level Information

UFO-Tetra-0ml	UFO-Tetra-0ml	Mm_Apl-Tetra-150ml	Mm_Apl-Tetra-150ml	Maaza_Refresh-Tetra-150ml	Maaza_Refresh-Tetra-150ml	Rimzim_Spicy-Pet-250ml	Rimzim_Spicy-Pet-250ml
Sprite-Rgb-200ml	Sprite-Rgb-200ml	Sprite-Rgb-300ml	Sprite-Rgb-300ml	Sprite-Rgb-300ml	Sprite-Rgb-200ml	UFO-Pet-0ml	UFO-Pet-0ml
Sprite-Pet-600ml	Sprite-Pet-475ml	Sprite-Pet-400ml	Sprite-Pet-400ml	UFO-Tetra-0ml	UFO-Tetra-0ml		
Maaza-Pet-1.5L	Maaza-Pet-1.5L	Maaza-Pet-1.5L	Kinley-Pet-1L	Kinley-Pet-1L			
Thums_Up-Pet-750ml	Fanta-Pet-2.25L	Thums_Up-Pet-1.25L	Thums_Up-Pet-1.25L	Sprite-Pet-2.25L			





# Remotely know how you products are performing



*Using our  
Stick-n-Play  
IOT and  
Machine Vision  
Solutions*



# Enabling Scale via our Instant Product Cataloging Technology



Factories



Distribution  
Centers

**< 3 Minutes**  
to Capture Products  
@ Source

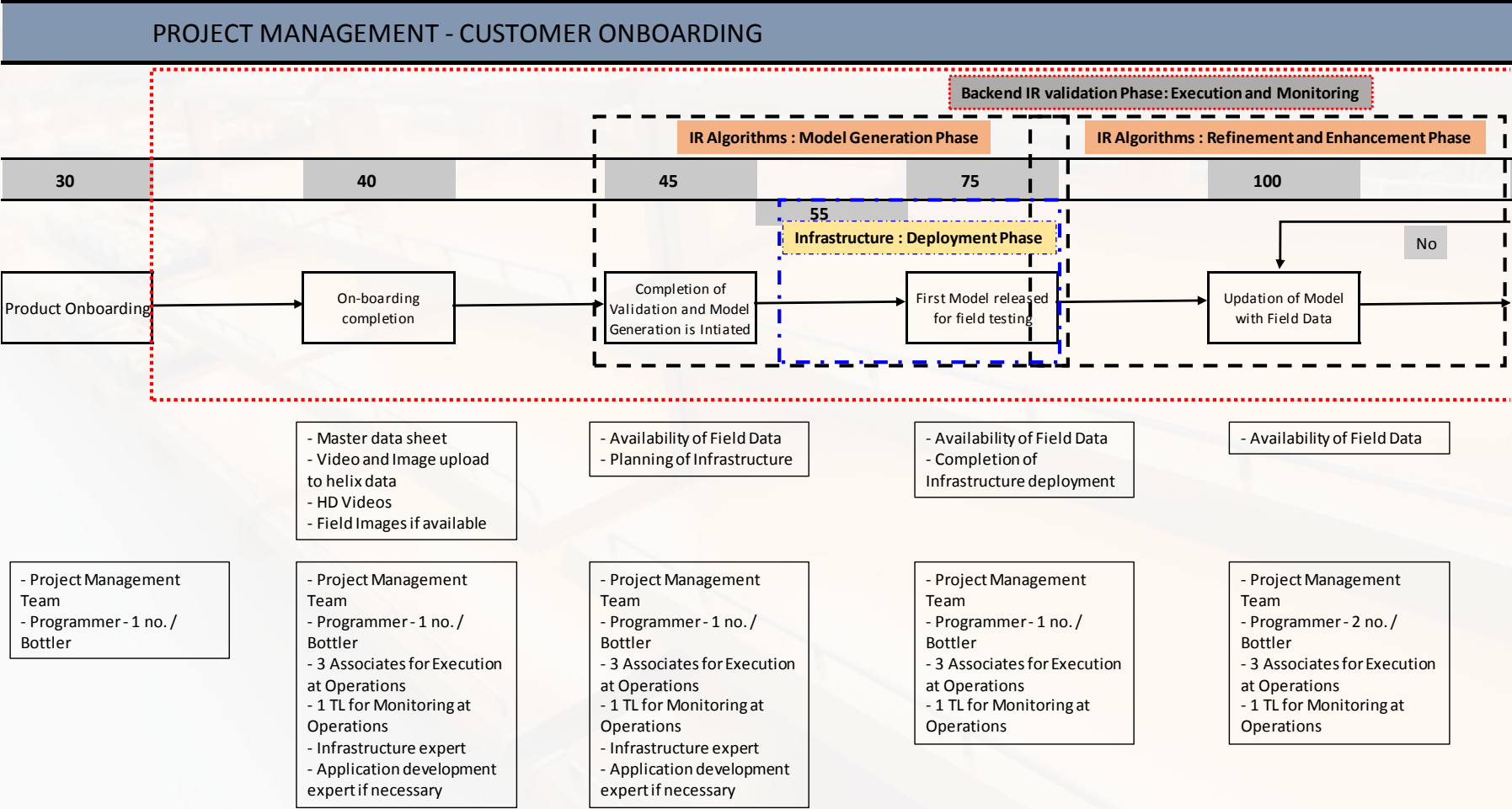


**< 24 Hours**  
Start Recognizing  
New Products



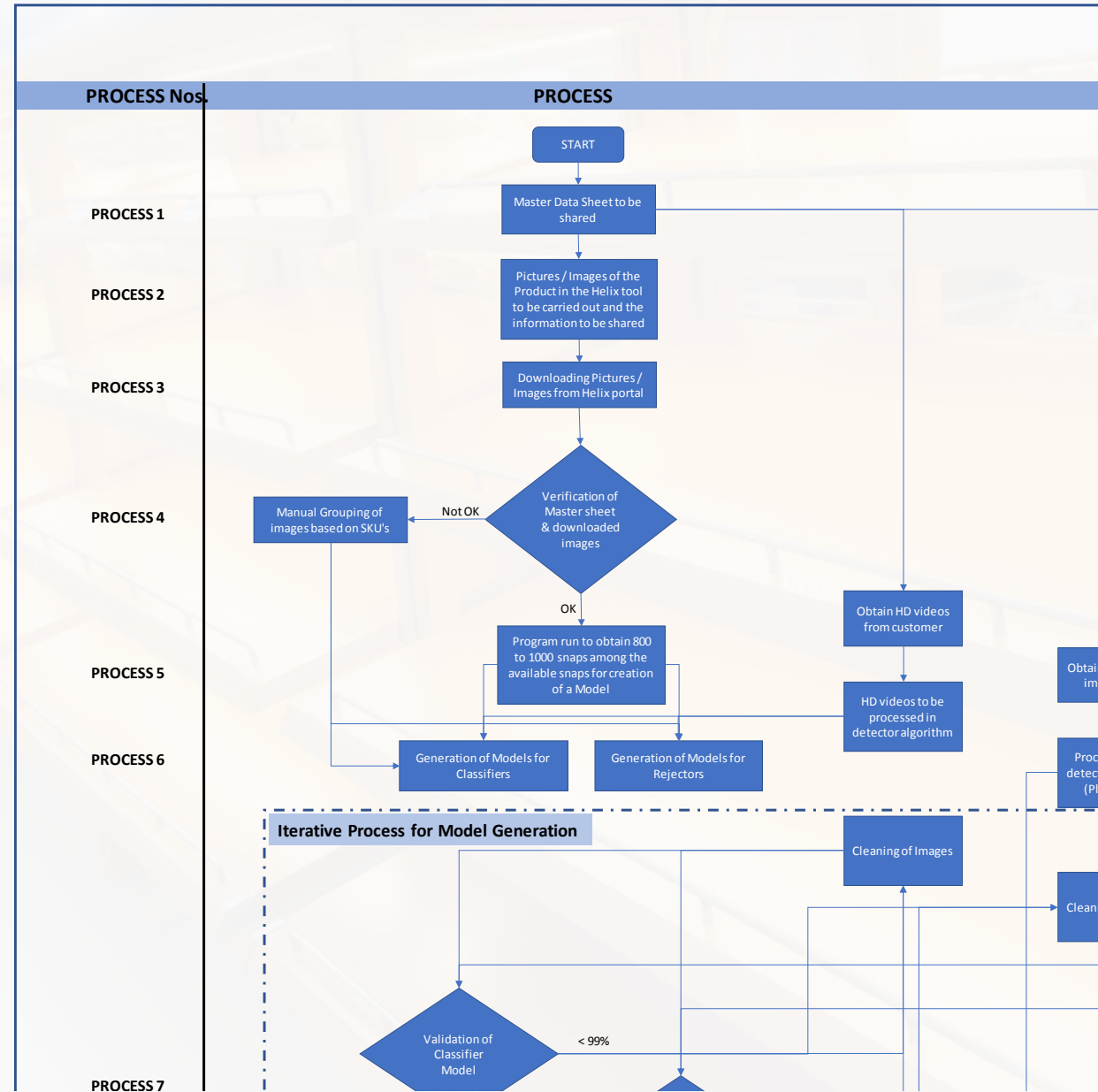


# Retail Customer Onboarding – Process Lifecycle



# Maxerience AI Solution– Process Lifecycle

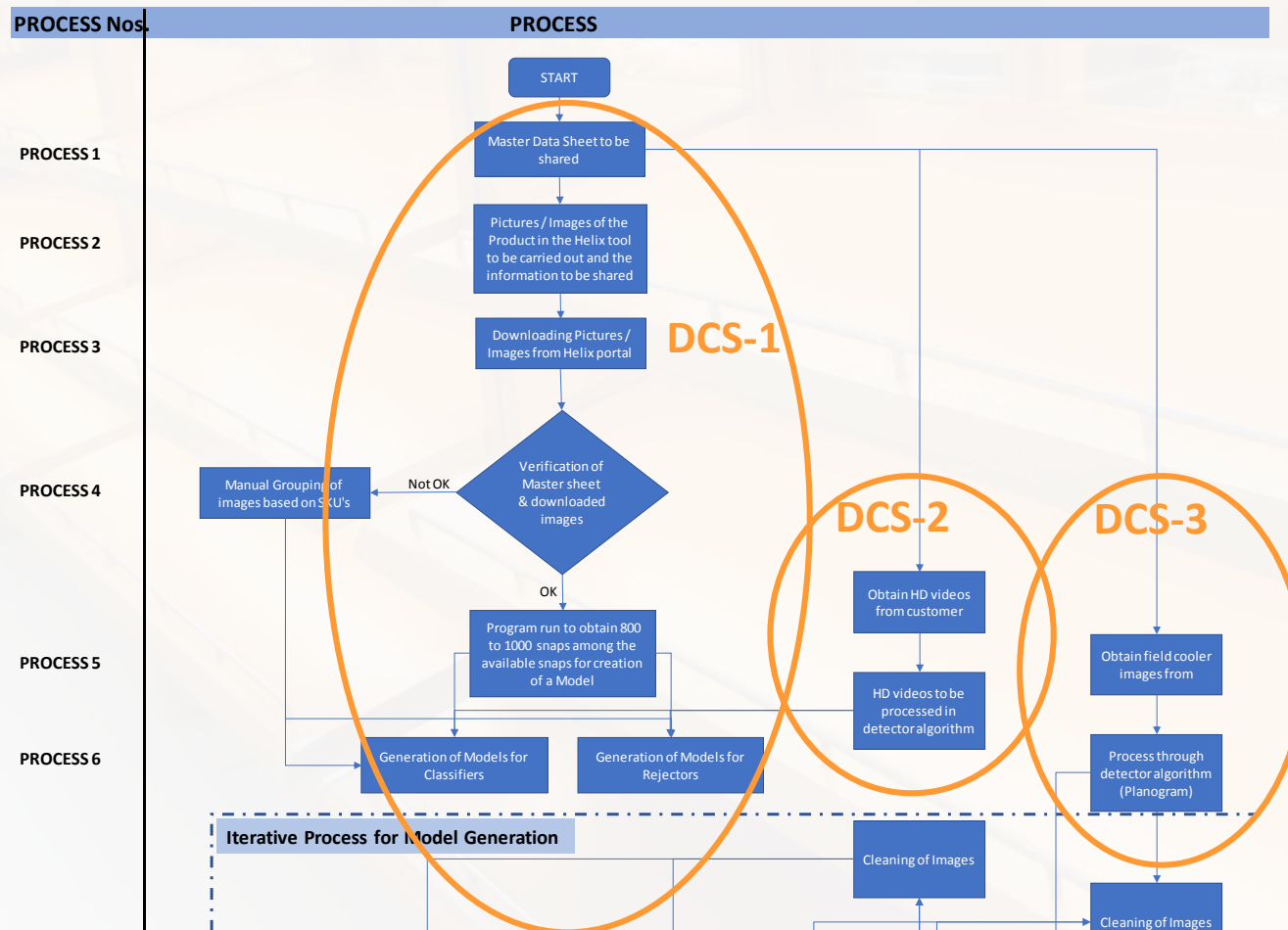
11





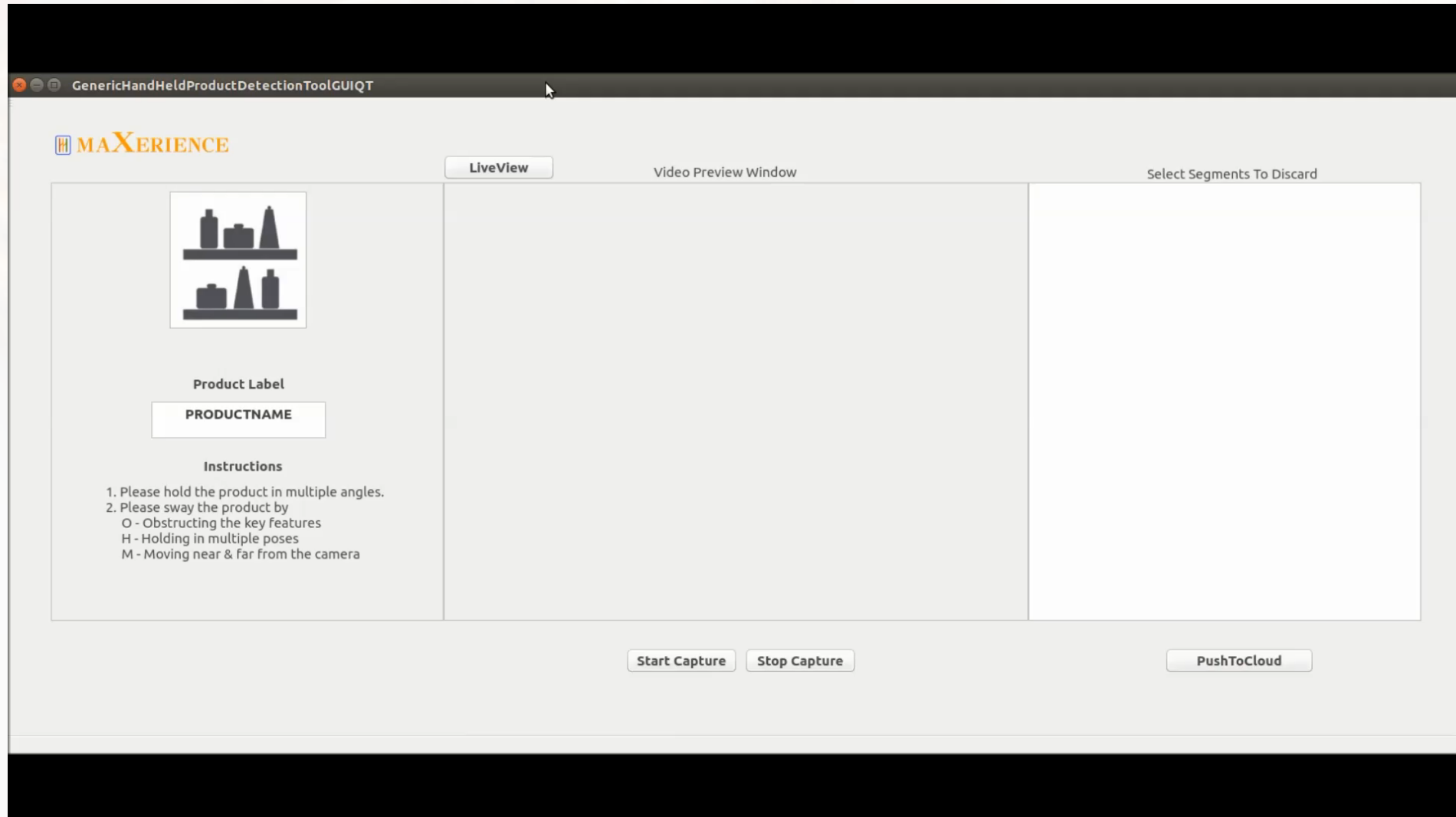
# Data Collection Strategies – Pipeline

Product ID	Batch	Product	SKU	Is Foreign Product?	Brand	Flavour	Brand in IC Sales?	Manufacturer	State	Country	Product Category	Package Size	Measurement Unit	Packaging Type	Pack Type	Beverage Type
ID tag		Name of the Product (Drink) or Unique product name	Base article number or Unique product identifier	Is the product foreign or In house	Brand name of the product	Flavour name of the product	Notify if Brand is considered as IC Sales or NOT	Manufacturer of the product	Product State	Product country	The container type of the product	Product Size in liters or ml	Liter or ml	Can/Pet/RCB/ Tera	Packaging Type is Immediate or Future consumption	SSDINCB



# Data Collection Strategies – Helix – Smart Phone

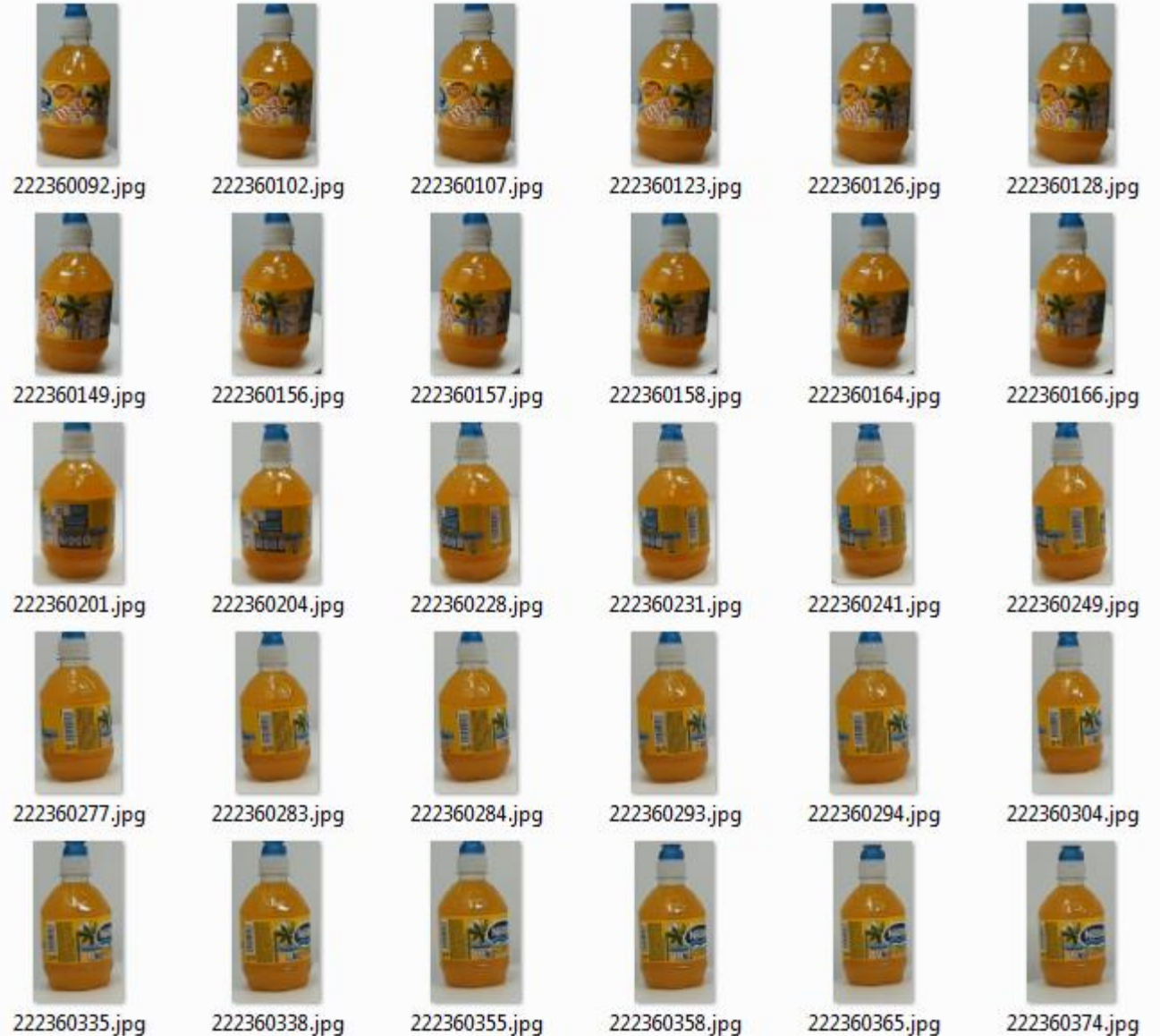
13





# Data Collection Strategies – Helix – Auto Turntable

14



# Data Collection Strategies – Tools for Annotation

15



Welcome to MaXerience x Welcome to MaXerience x Welcome to MaXerience x +

https://helixqa.maxerience.com/#/imageLabeling?imageId=c444f24e-dd1a-4ddf-a8fc-edfc30548591&starttime=1552785561048&endtime...

Maxerience Misc Learning eB eBest-IoT Reportin...

**MAXERIENCE** support@maxerience.com Validation Tool Insights Train Products Product List Test Sessions Create Planogram Pradeep Pydah

Images : 2 / 5 Current image time : 00 : 02 : 32



Coke, Pet, 750ml

03/17/2019 To 03/18/2019

Shelf	Col No	Image	Name	Package	Size
1	1		<input type="text" value="Coke"/>	Pet	750ml
1	2		<input type="text" value="Coke"/>	Pet	350ml
1	3		<input type="text" value="Coke"/>	Pet	350ml
1	4		<input type="text" value="Coke"/>	Pet	400ml
1	5		<input type="text" value="Coke"/>	Pet	1250ml
1	6		<input type="text" value="Coke_Zero"/>	Can	350ml

Shelves 1 2 3 4 5



- Self Service Portal for
  - On-boarding products
  - Training products
  - Validation of Inferences/Results
- Gamification
- Plug-n-Play Smart Shelves

# Monetize retail IoT and Image Recognition data

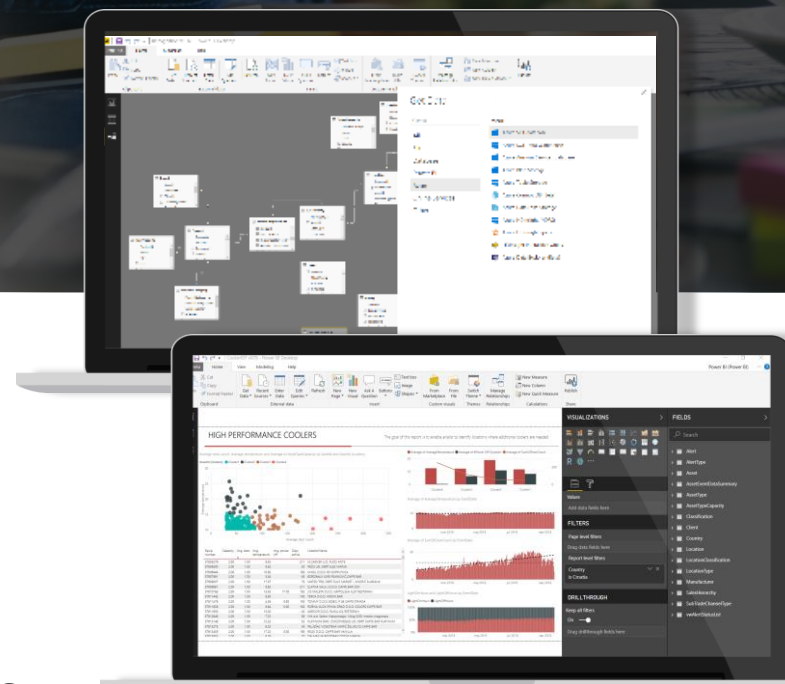
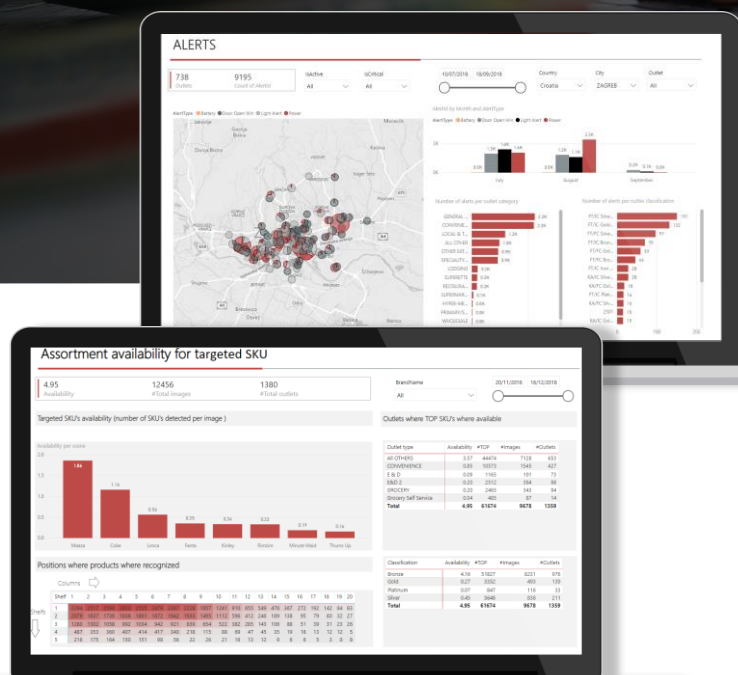
Out- of-the box  
actionable insights

Self-service

**Monetization of  
retail IoT  
and Image  
Recognition data**

Key KBI's

Machine  
Learning



19

# Leveraging IOT & AI for retail At Scale



5 Countries



**VISIT US FOR LIVE DEMOS**  
**BOOTH – 7102**  
**INNOVATION LAB- 4<sup>TH</sup> FLOOR**



**Pradeep V Pydah | CEO**



1-510-8960953



pradeep.v.pydah@maxerience.com



[22994, Lavender Valley Ct, Ashburn, Virginia 20148](#)