

# RFID FOR RETAIL

---

**By 2021**

RFID Global Market is  
Projected to be worth

**15.84 billion USD,**

at a CAGR of nearly 9% over that  
forecasted period\*

---

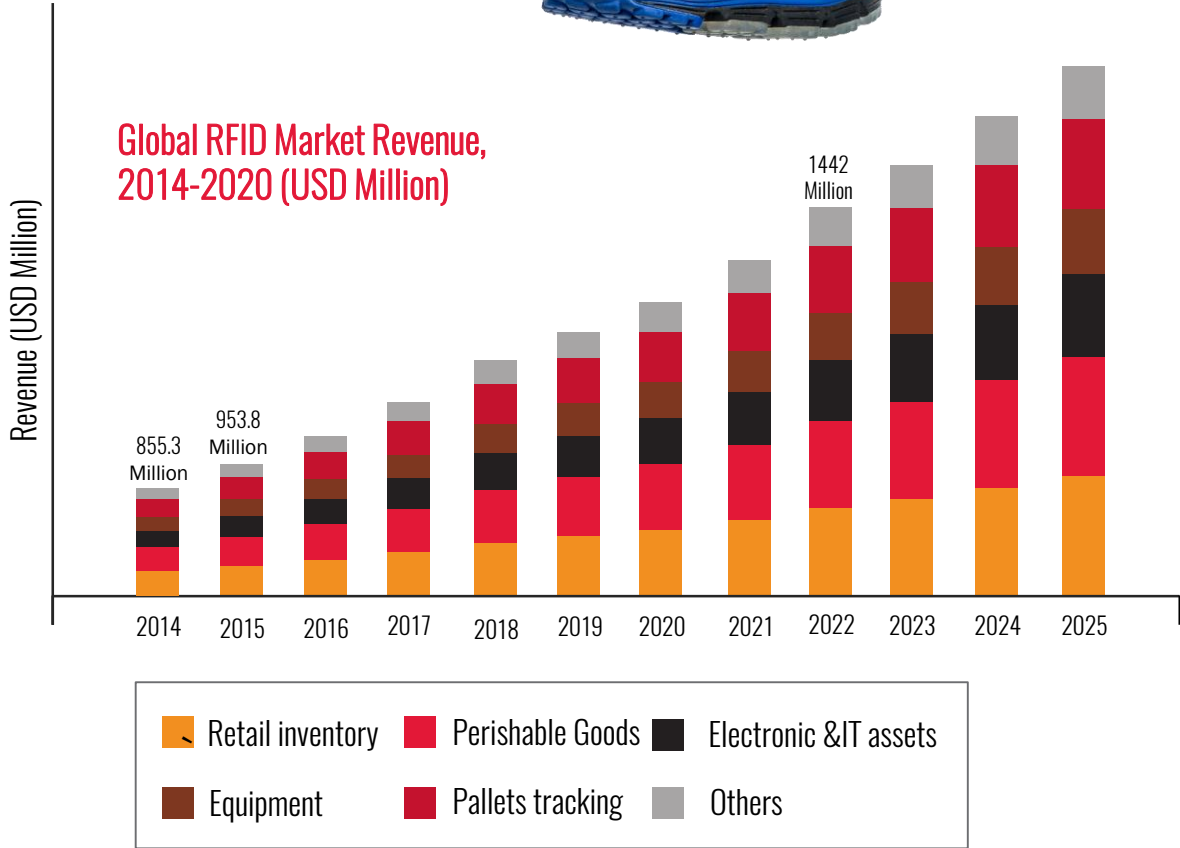
Global RFID Market 2017-2021 Report , by Technavio

# RFID Market Share and Growth

RFID market was dominated by North America with around **44%**

shares of total market in 2014. A strong demand for RFID in North America is mainly stemmed from U.S. North America is followed by Asia Pacific and Europe Retail, Healthcare and manufacturing constitute the most rapidly expanding sectors that would be instrumental in driving future demand for RFID technology

Nike will tag all of its footwear and apparel and is using RFID in its corporate stores





## Challenges in Inventory control and Traceability

50%

of retailers still not able to provide a Single-view of their Stock position in Stores and warehouses

\$24.2 billion

Amount of capital North American retailers have tied up in additional safety stock compensate for out-of-stocks

56%

online shoppers has encountered major problems in stores while picking up their online purchase

Long and never ending queues at the point of sales terminals

46%

of small businesses use don't track their inventory or don't have an automated method to track it. (Wasp Barcode State of Small Business Report, 2017)

Supply chain visibility is among the top strategic priorities of companies worldwide  
(GEODIS Supply Chain Worldwide Survey, 2017)

7 out of 10

Retailers still not able to track and manage the product availability across channels

75%

U.S. adults that have experienced unavailability of an In-store product Over the past 12 months When this Happens, 1 in 3 blames the retailer

# Current Trends in RFID Implementations

50%

RFID technology  
Cuts retail out of  
stocks in half

## Zara

Rolled out to 700 stores across  
22 markets  
Mostly recyclable tags  
Real time inventory view  
Plans to rollout to other Inditex  
brands  
Item level rate of sales in store  
and compare with online

## Target

Already deployed in 1600+ stores  
Helps find products quickly in store  
Higher BOPIS deliveries  
Leveraged to boost supply chain and  
in-store inventory visibility  
enhancing the omni-channel  
retailing

## Macys

RFID enabled merchandise fulfilment rate was 6.1% higher  
than non RFID  
Full price sales increased 2.1%  
Inventory markdowns decreased  
Display compliance improved for Women's shoe  
department from 30% to 4-5%

34%

Retailers Plan  
Investment  
In real – time  
Inventory for  
2021, 46%  
report either  
Working  
on it or  
Having the  
Tech in place

30%

Retailers already  
have or are  
implementing  
Item level RFID

ORDER ACCURACY<sup>5</sup>

31%

Accurate with  
U.P.C.Data

99.9%

Accurate using  
RFID Tags  
to capture  
information

Exploding  
acceptance of cloud  
computing is  
expected to  
accelerate the  
adoption of RFID  
technology

# RFID Benefits



## Key Drivers

- Real Time Inventory visibility'
- Product Identification
- Supply Chain Visibility
- Smart Checkout
- Product Velocity
- Loss Prevention
- Omni-channel Fulfillment
- Experience Enhancers
- Brand protection

## Store & WH Use Cases

- Counterfeiting
- Loss prevention
- Product locator
- Stock Replenishment
- Traceability
- Inventory Accuracy
- Automated Checkouts
- Clienteling
- Marketing and Promotions
- Connected Trial rooms
- Social shopping

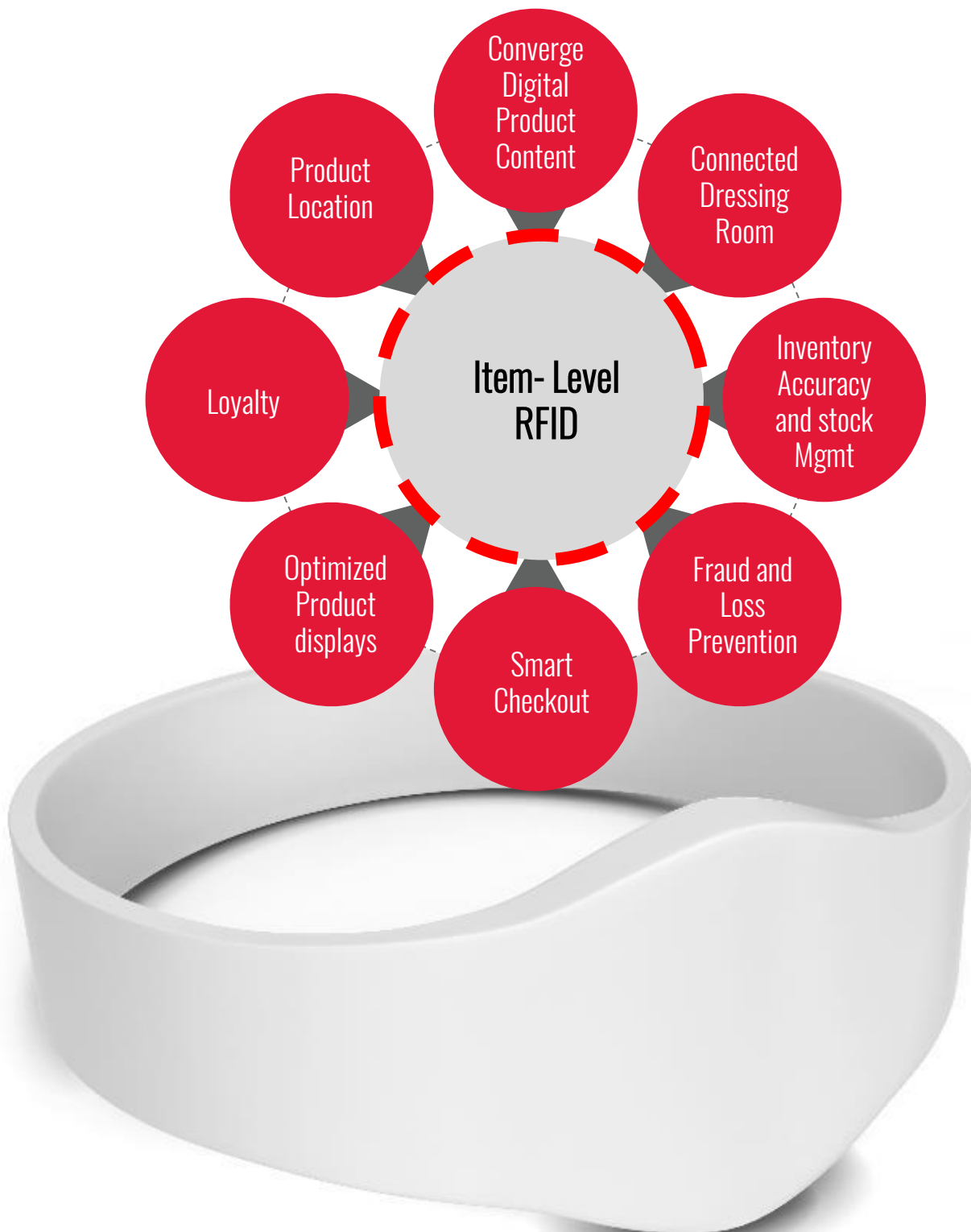


## Derived Benefits

- Product and Asset Tracking
- Smarter and faster checkouts
- Staff productivity
- Product Authenticity
- Customer experience
- Replenishment accuracy
- Better Risk management
- Faster sorting and picking
- Seamless Order fulfillment
- Omni-channel experience
- Lower inventory costs

# Item level RFID Benefits

- Item level RFID assists in retail operations within a store with its traceability
- Smart automated check-outs at the cash register or more accurate POS data can also be implemented when the products have RFID tags
- Increase product availability on the shelf, and decrease the number of out-of-stock (OOS) events
- Accuracy of both store orders and backroom-to-shelf process
- It's a significant contributor to Data Analytics platform for
  - better understanding of the customer behavior,
  - Improved execution and experience



# TechM's RFID Solution

ESL Gates

ESL Base Station

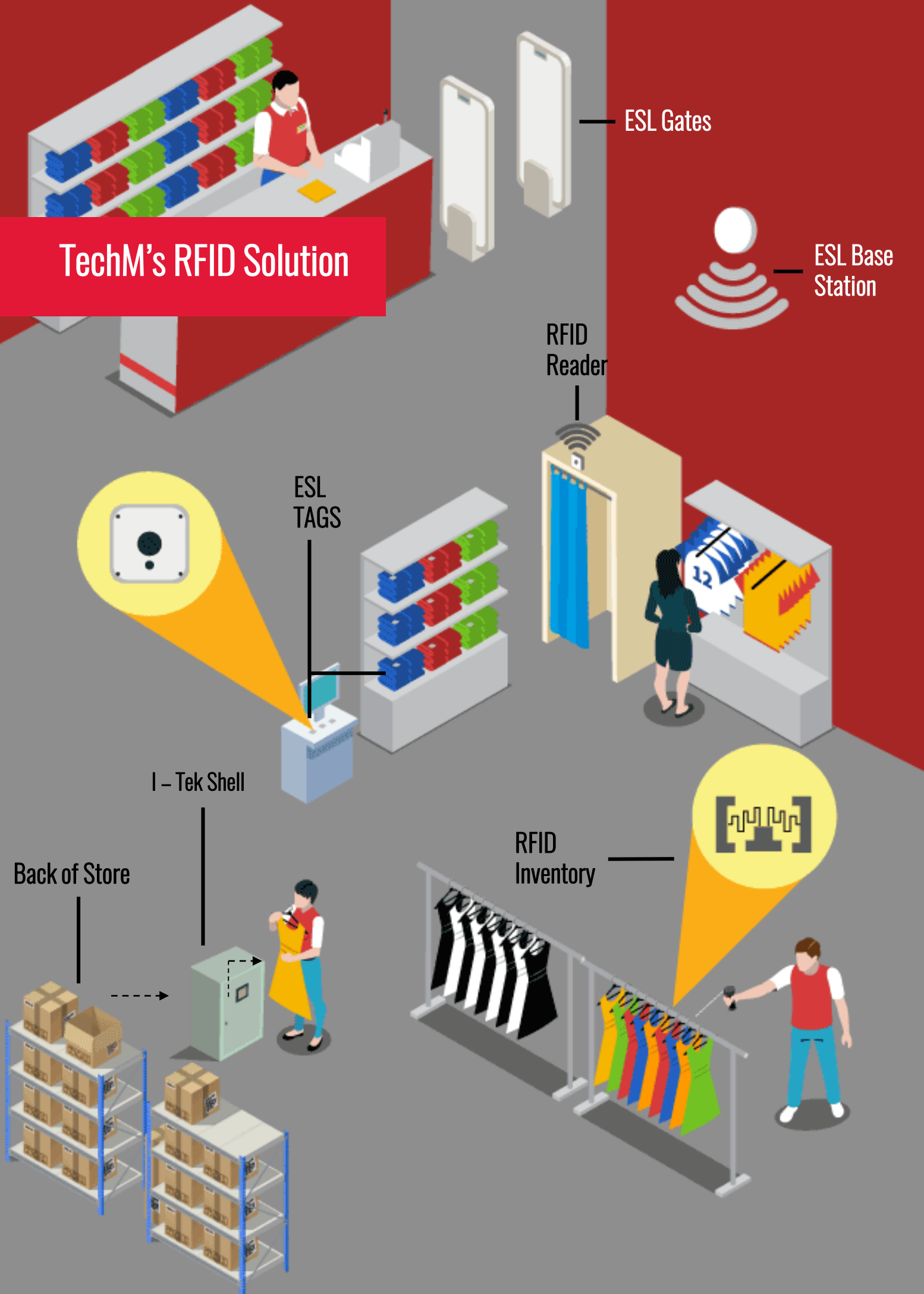
RFID Reader

ESL TAGS

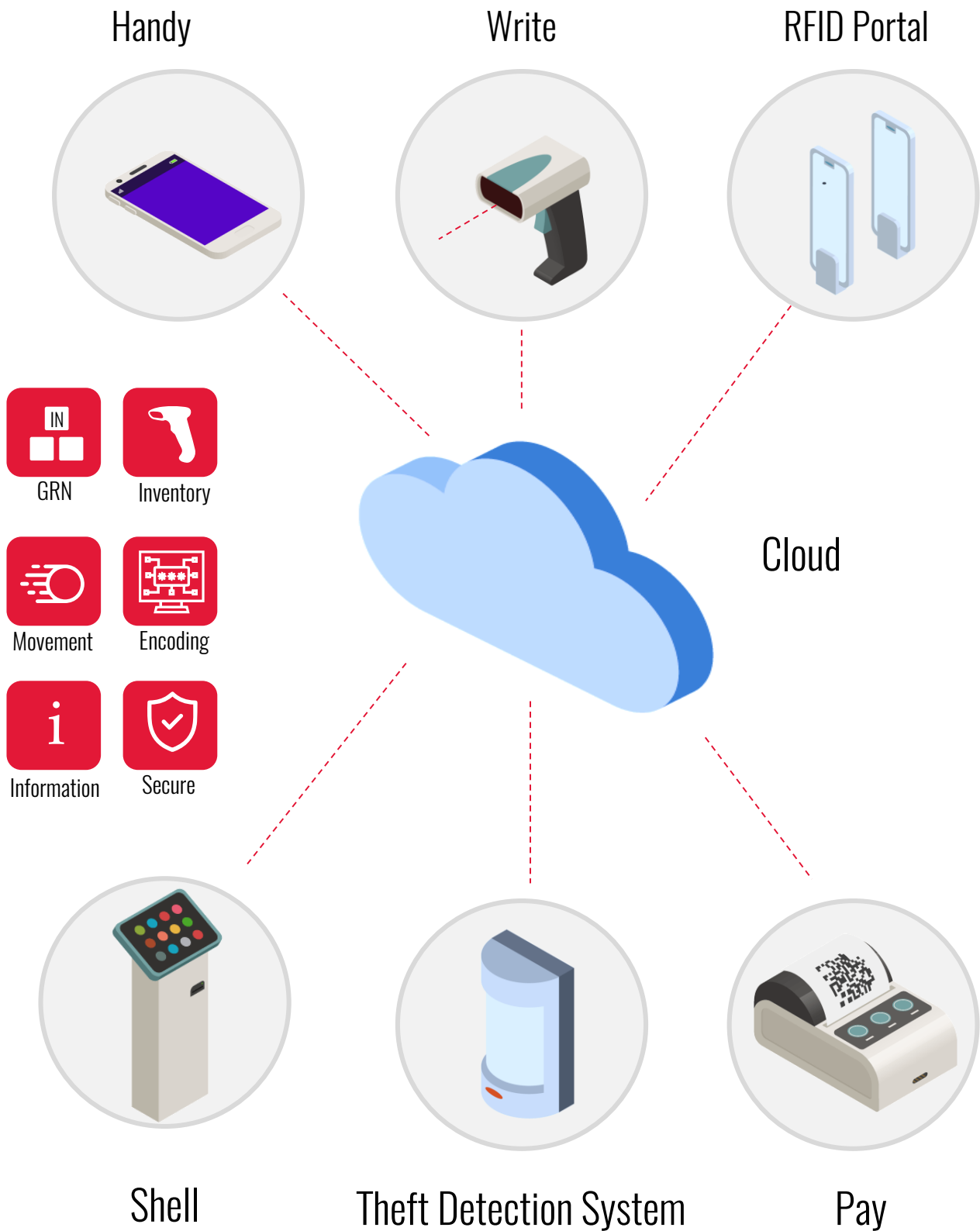
I - Tek Shell

Back of Store

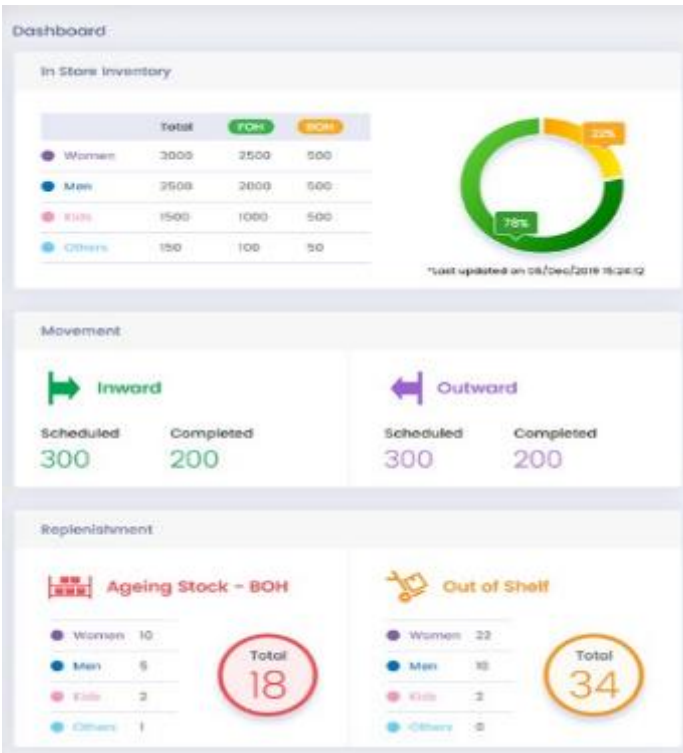
RFID Inventory



# Solutions Components

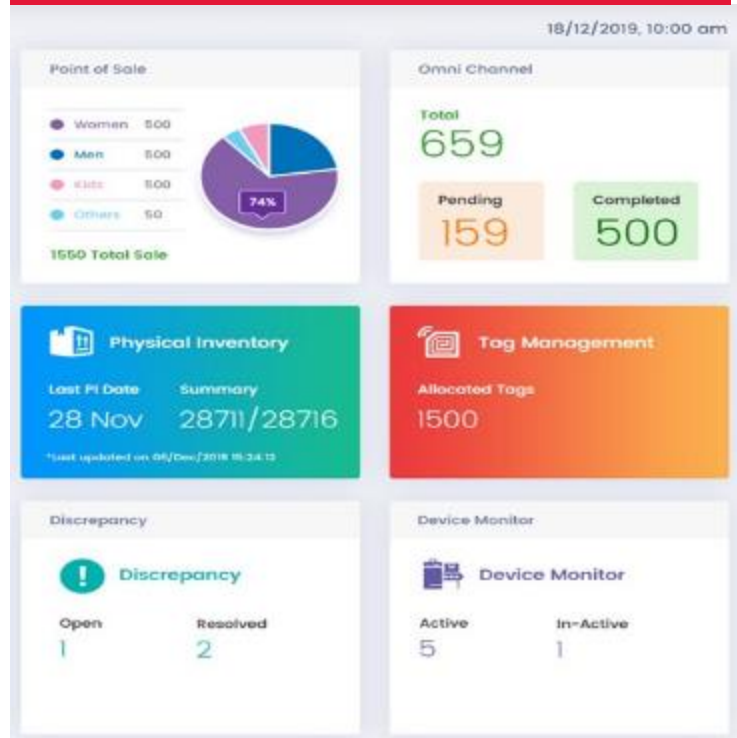




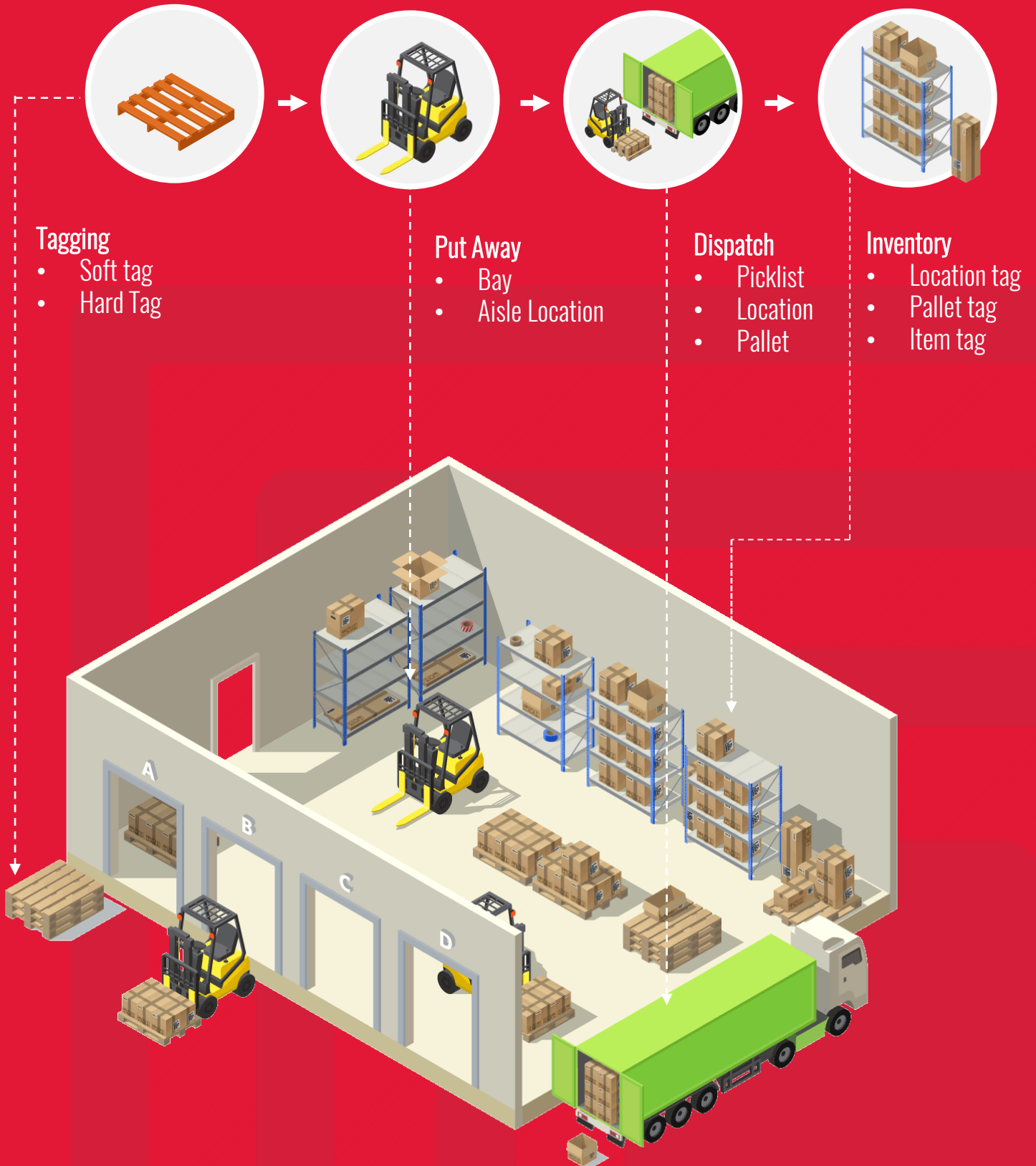


## Features of Handy

## Dashboard & Analytics



# Warehouse operations assisted by RFID





## Key Considerations in RFID implementations

Building RFID Framework is crucial for they are part of the data collection ecosystem , hence for

Better understanding of the various stages of the RFID implementation process,

Evaluation process with assessment methods for RFID systems

Policies to shortlist on the equipment's and applications for RFID integration

**Selection of RFID** - considering their Performance, Quality, Technical support availability, Integration services etc

**Security features** supporting data confidentiality and compliance (GDPR)

**Site survey for**

- RF Spectrum Analysis to search for any interfering or competing signals
- RFID tag testing

**Collaborate with experienced , reputed system integrators and Vendor** to achieve the benefits of reduced operations cost , inventory and labour costs etc

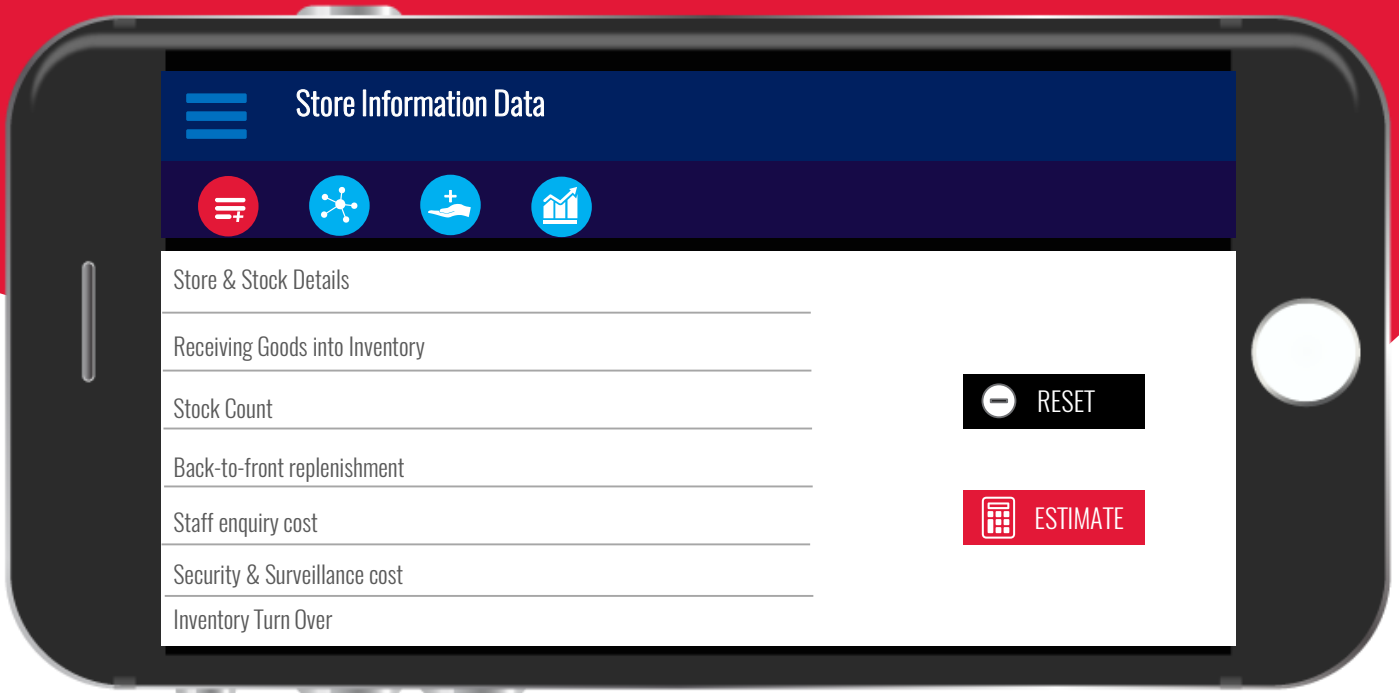




## Key Considerations in RFID implementations

- Selection of middleware, enterprise applications and decision support systems for RFID can provide data to identify problems and can be the catalyst to address problems, that work in real time is a MUST
- Training of the staff to embrace the new technology, and propagate real time thinking
- RFID is a fast evolving technology and various factors affecting an implementation might change quickly, hence periodic assessment of the deployment must be included as a Process

# Call us today to estimate the RFID ROI for your business



### RFID Retail Solution - ROI Estimator

#### Dashboard

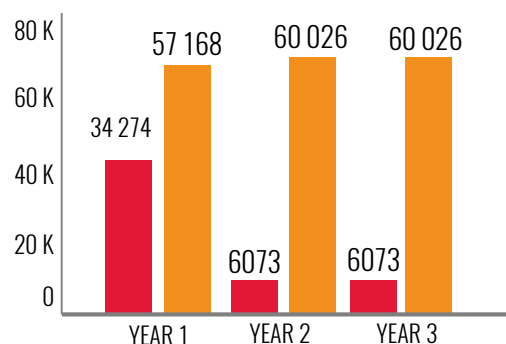
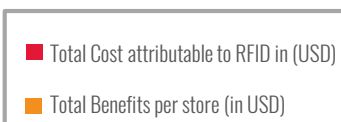
	(in USD)
Total Investment / store (for 3 years)	46K
Total Benefits / store (for 3 years)	180K
Chain wide total investment	255M
Chain wide total Benefits (for 3 years)	736M
Payback (in Months)	7

#### Benefits of RFID Solutions

<b>1 Reduction in Shrinkage</b>	<b>0.5%</b>
Reduction in Shoplifting	20%
Reduction in Employee theft	20%
Reduction in Paperwork errors	60%
<b>2 Reduction in Labour Hours</b>	<b>62%</b>
Reduction in Staff enquiry cost	36%
Reduction in Stock keeping time	75%
Reduction in security & surveillance cost	28%
<b>3 Increase in Inventory Turn over</b>	<b>8%</b>
Reduction in Failed Sales	10%
Leaner Inventory	5%
Reduction in Obscelence Cost/Mark down cost	0.10%
<b>4 Increase in Revenue/Sqft</b>	<b>5.00%</b>

### Cost Benefit Analysis/ Store





# Success Story

Leading Apparel retailer benefitted with the implementation by item level tracking at the store level, stock taking, source tagging, DC operations etc.

	Before	After RFID
Inventory Accuracy	75-80%	97-99%
Omni-Channel Fulfilment	65%	99%-100
Picking for Omni-Channel	24-48 hours	Less then 4 hours
Manpower Tagging	6	0
Safety Stock for Omni-Channel	2	0
Frequency of Physical Inventory	Once a year	Every Day
Time Taken for Physical Inventory	2 Days	2 Hours
Shrinkage Visibility	Twice a year	Every Day

# INTEGRATED ENGINEERING SOLUTIONS (IES)

Is a Connected Engineering Solutions business unit of Tech Mahindra. At Integrated Engineering Solutions, customers are at the core of every innovation. We align Technology, Businesses and Customers through innovative frameworks. We deliver future-ready digital convergence solutions across Aerospace and Defense, Automotive, Industrial Equipment, Transportation, Consumer Products, Energy and Utilities, Healthcare and Hi-Tech products. Our 'Connected' solutions are designed to be platform agnostic, scalable, flexible, modular and leverage emerging technologies like Networking, Mobility, Analytics, Cloud, Security, Social and Sensors, that enable launching of smart products and deliver unique connected consumer experiences, weaving a connected world. Coupled with this, our strong capabilities in Electronics, Mechatronics and Mechanical Engineering along with domain understanding and product knowledge, bring excellence to the entire lifecycle of these connected ecosystems.

## CONTACT US AT

[RCG.Info@techmahindra.com](mailto:RCG.Info@techmahindra.com)

[www.techmahindra.com](http://www.techmahindra.com)

## SOCIAL MEDIA

[www.youtube.com/user/techmahindra09](https://www.youtube.com/user/techmahindra09)

[www.facebook.com/techmahindra](https://www.facebook.com/techmahindra)

[www.twitter.com/tech\\_mahindra](https://www.twitter.com/tech_mahindra)

[www.linkedin.com/company/tech-mahindra](https://www.linkedin.com/company/tech-mahindra)

**Tech  
Mahindra**

