# Transforming Healthcare Inventory Management with RFID

RFID Forum 2025

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# About TEC-RFID

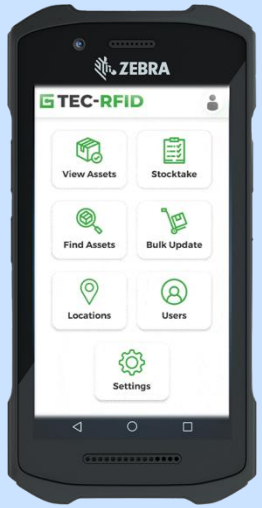
## Complete RFID Solutions

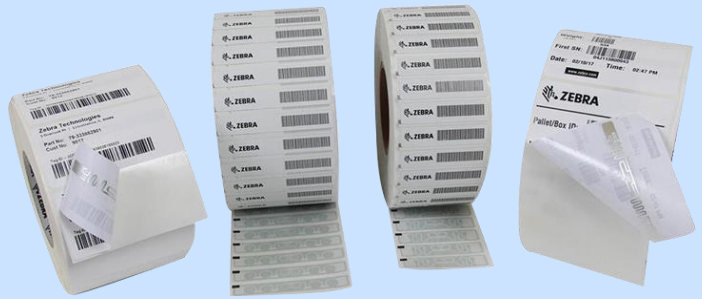
### End-to-end RFID solutions provider

- Readers
- Tags
- Printers
- Software
- Installation
- Support

### Verticals

- Healthcare
- Manufacturing
- Warehousing and Logistics
- Retail









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## Inventory management before

### Private Ophthalmology Group

- 32 locations in the UK and growing

### Issues with stock management

- Manual spreadsheets
- Nurse's time spent counting stock – 3 hours per month per site
- Stock figures were inaccurate
  - Some stores had multiple years' worth of stock
  - Driving stock to sites to enable surgeries
  - The P&L was up and down because of stock
  - Not knowing what was expiring, causing waste

### Wish list

- Stock accuracy of at least 95%, preferably 98% or higher
- Wanted stock reduced by 50% at all sites
- Redirecting nurses' time away from stocktaking to patient care

# The Solution



# The Solution

## RFID Inventory Management

### Zebra Technologies hardware

- ZD621R printer
- FX9600 fixed reader
- AN510 antenna
- RFID labels

### TagworX Software

- Created by Worx Software
- Highly configurable
- Barcode & RFID
- Inventory Management and order tracking
- Printing, handheld reading, fixed reading

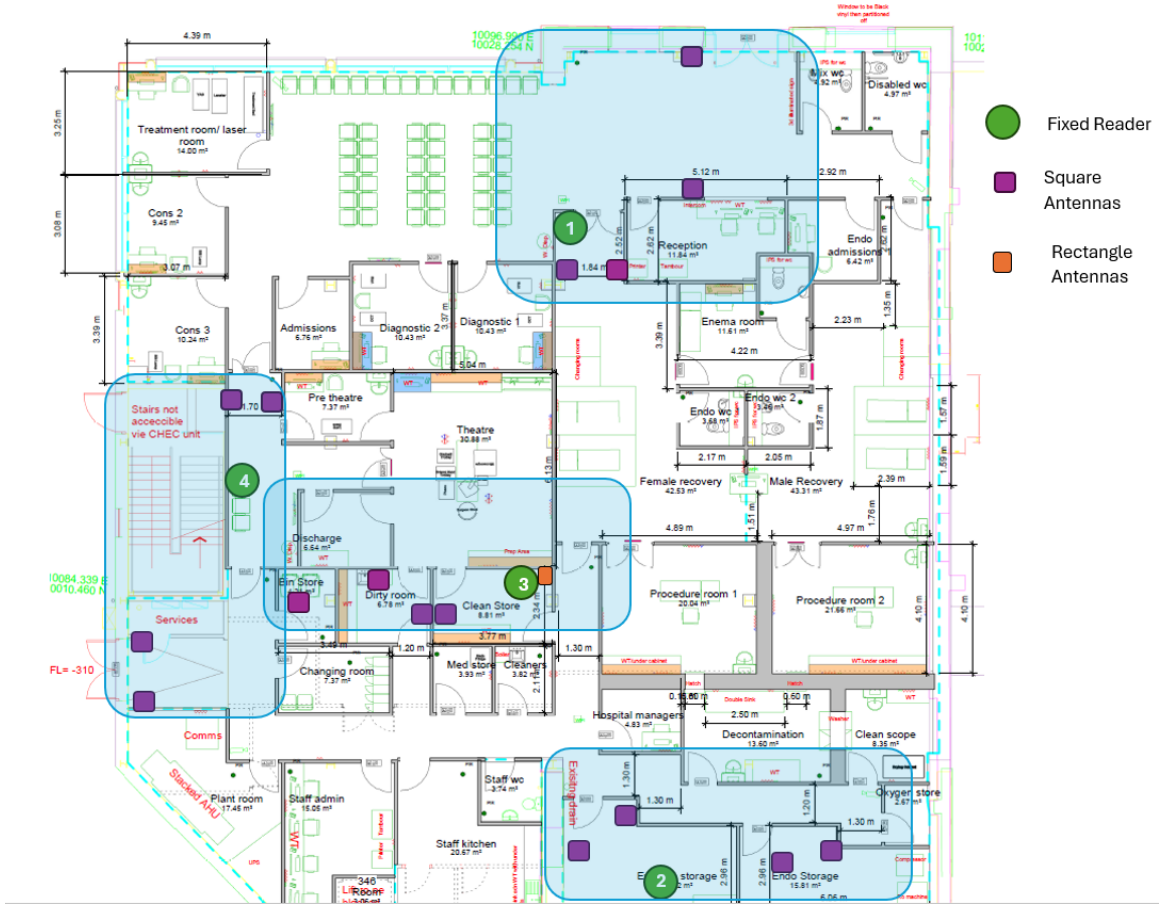
### Installation and project management

- Proof of concept to test the reliability of reading items with fixed readers
- Surveying hospitals
- Installing fixed RFID readers and antennas
- Configuring the locations and consumption rules to remove used stock
- Audits to ensure accuracy
- Training staff on using the system

# Testing and surveying

## A key first step

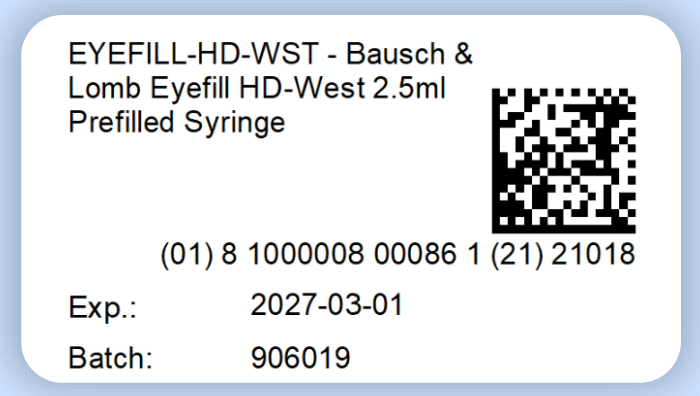
- Different stock items have different read ranges, especially when containing metal and/or liquid
- Testing the readability, especially with fixed readers is essential
- Creating plans for engineers to install to



# RFID Printing

## Getting the data

- **Zebra ZD621R RFID printer**
- **SGTIN encoding**
- **Printing labels**
  - Printing through TagworX
  - Tracking additional data per variant
    - Serial number autogenerated
    - Expiration date
    - Batch Number
    - PO Number
    - Cost price
  - Enables enhanced reporting






# Fixed Reading

## Automated stock tracking

- **Fixed readers and antennas at key points**
- **Automating stock tracking**
  - Adds stock automatically to the stock room
  - Consumption zones, such as the bin store, automatically archive stock through the use of consumption rules

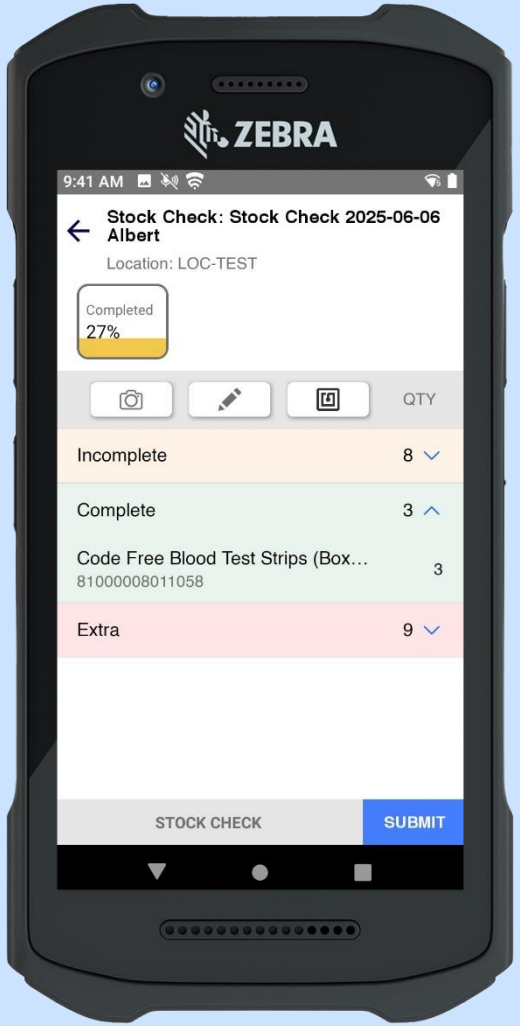





# Handheld Reading

## Stocktaking made easy

- **Stock counts went from more than 3 hours to less than 3 minutes**
- **Stock check flow**
  - Shows what is expected so users can see discrepancies
  - Can be used to archive stock that has been consumed or unarchive stock consumed mistakenly

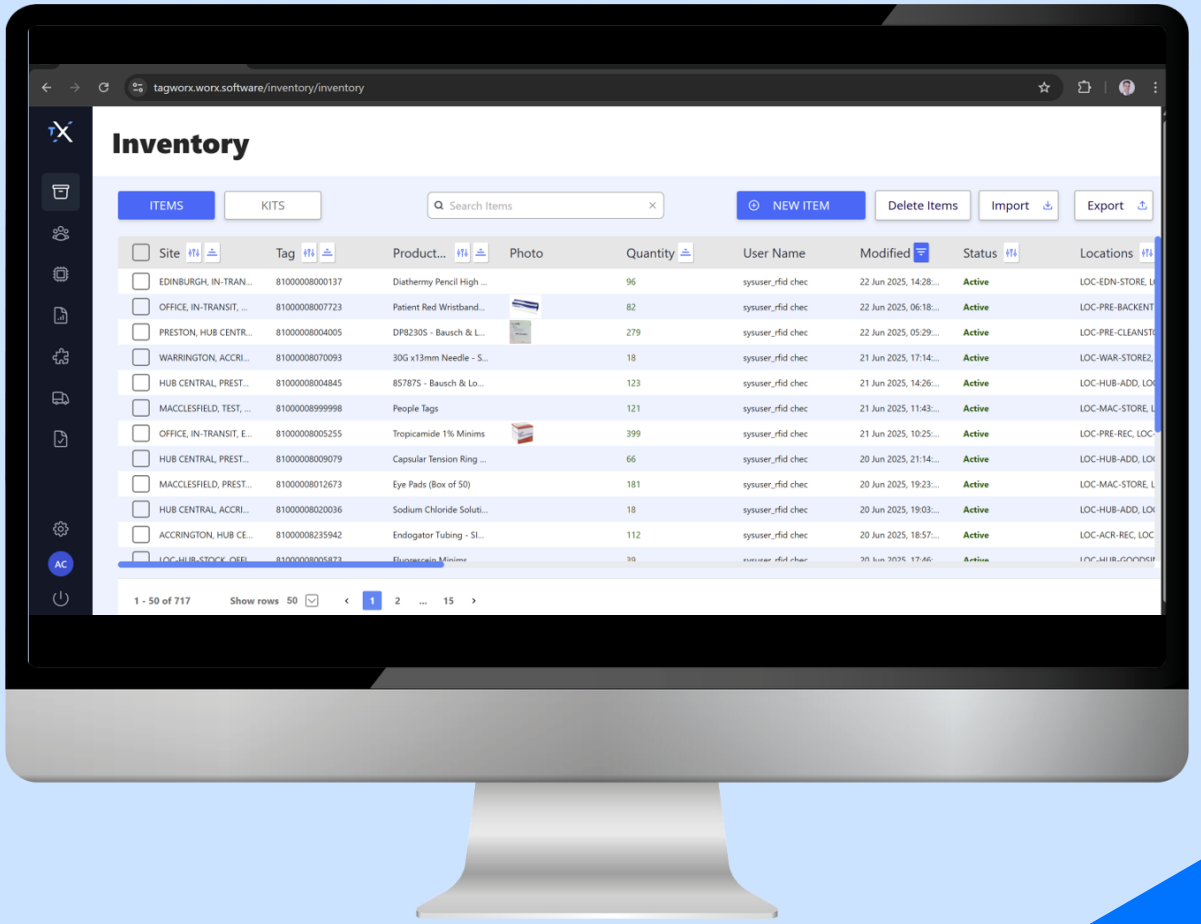





# Reporting

## Powerful analytics

- Accurate Inventory per site
- High and low stock levels per site and per item, helping the purchasing team
- Consumption report
- Variant report
  - See when items are due to expire
  - Find stock with specific batch numbers in case of recalls



# The Impact



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## The impact of RFID

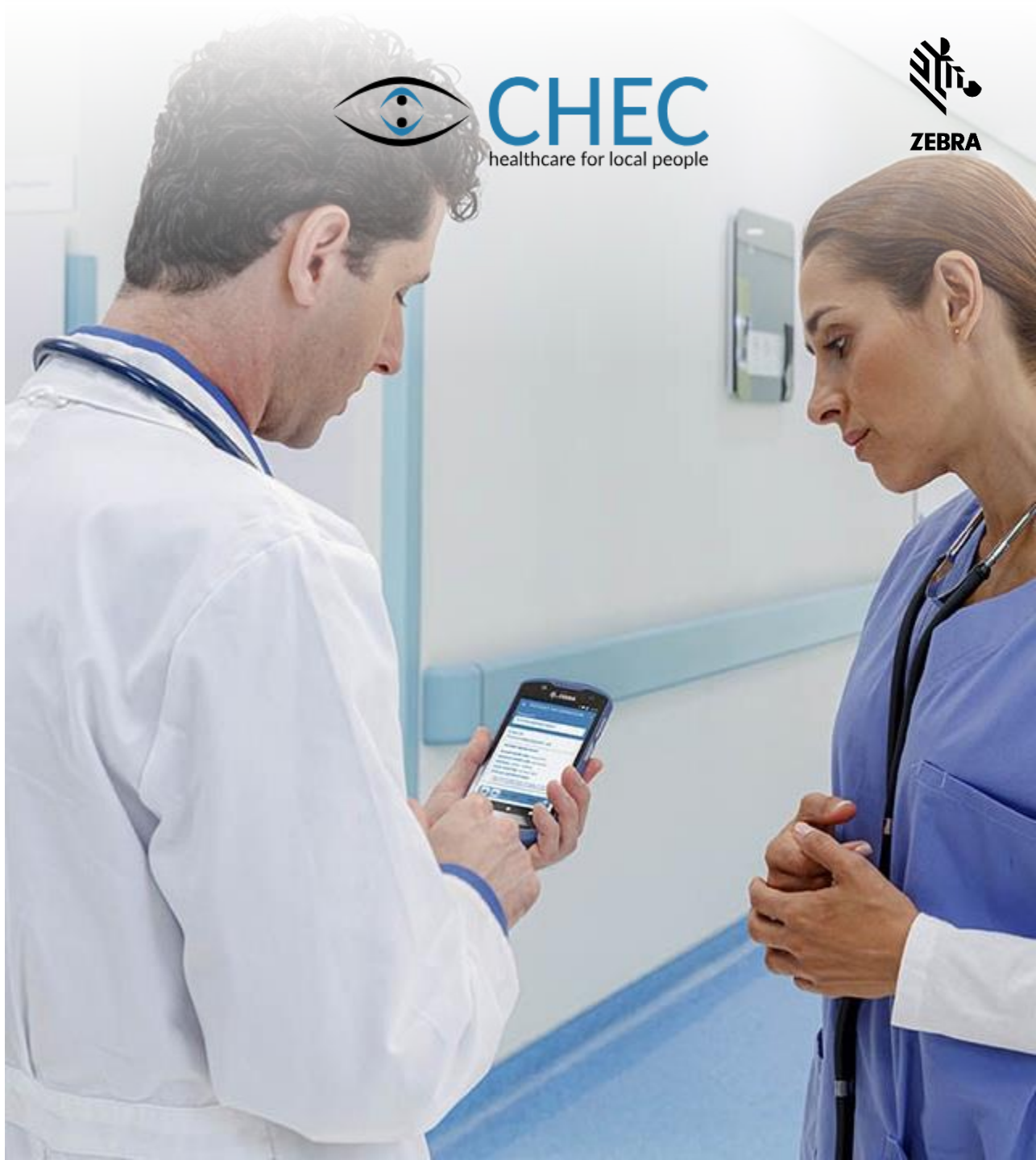
- Stocktakes take 2-3 minutes
- Stock accuracy of 98% in audits
- Senior Management has stock visibility
- Less stock held
- Purchasing is more efficient
- Reporting detailed data to the NHS enables them to win more contracts
- Nurses can spend more time on patient care



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## The future plans

- Associating items with patients to have full traceability
- Using the accurate data with AI to further improve purchasing and decision making
- Patient tracking



# Key Learnings



# Key Learnings

## Successfully deploying RFID

- Have a business case and clear KPIs
- Get input from the users as they will help shape the project
- All sites are different, meaning testing and tweaking is needed
- Have a dedicated team responsible for the project
- Have a regular meeting time to review progress

# Thank You




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