

RFID
JOURNAL
LIVE!

20 **YRS**
2003 - 2022

MAY 17 - 19, 2022
MANDALAY BAY | LAS VEGAS, NV

Urmi Group uses RFID to improve production

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Urmi Group

- Inception: 1955
- Knitwear exporter based in Bangladesh
- Vertically integrated from knitting to apparel
- 30 tons of fabric and 180,000 pieces of ready-made garments daily
- Products: Cut & Sew as well as seamless t-shirt, polo shirt, tank top, trousers, jackets, lingerie
- Annual turnover: US\$ 228 million
- Over 10,000 employees

Textile unit



Stitching unit



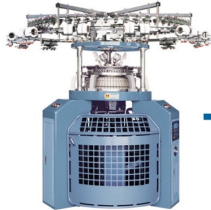
Sewing floor



Knit Fabric Manufacturing Process



Yarn in cone



Knitting by circular
knitting machine



Grey fabric roll



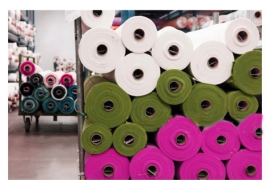
Batch creation



Dyeing



Finishing



Finished fabric rolls

Before RFID

- Receiving, issue and returns used to be recorded in the ERP manually or by barcode scanning:
 - slow and often inaccurate
 - increases machine downtime
 - affects fabric quality
- Taking physical inventory and finding misplaced items was laborious and time-consuming

Barcode label for Gray Rolls

FTML, Job No. 2254, M/C: 53-30X28
20020301811, Dt: 18-10-2020, P: 54982
DECATHLON, Sty: TBC
DECATHLON GREY-
FSOE-20-02254
L.S/J, 83% POLY 17% ELASTANE 100%
G/F-Dia: 30/52 3.05/1.10 Open Wldt
GSM: 160, 40/D, 75D/72F,
Lot: DE-K122/M18W, NB-Z4653,
Roll No: 5538, Wt: 24.00Kg, Sft: A
Op: ASRAFUL, Range: Dark Color
Col: DARK

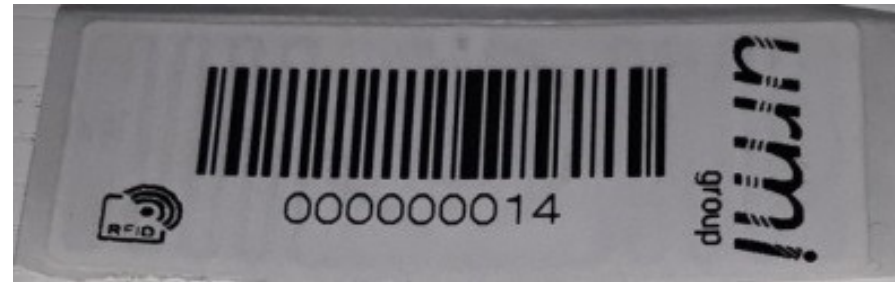
Objectives

- Fast & accurate delivery of raw materials, resulting in:
 - reduced machine downtime
 - improved quality
- Efficient physical inventory

Current system

- Boxes of yarn and gray fabric rolls are RFID tagged
- RFID tags come with barcode which facilitates mapping with ERP
- Receiving, issue, transfers and returns are recorded in ERP scanning RFID tags
- Gray rolls are placed in racks one by one scanning barcode in order to record location
- Hand held scanner is used for locating a particular item and conducting physical audit

RFID Tag



Challenges

- Fully automated scanning at receiving and delivery points could not be implemented
- Stray reads

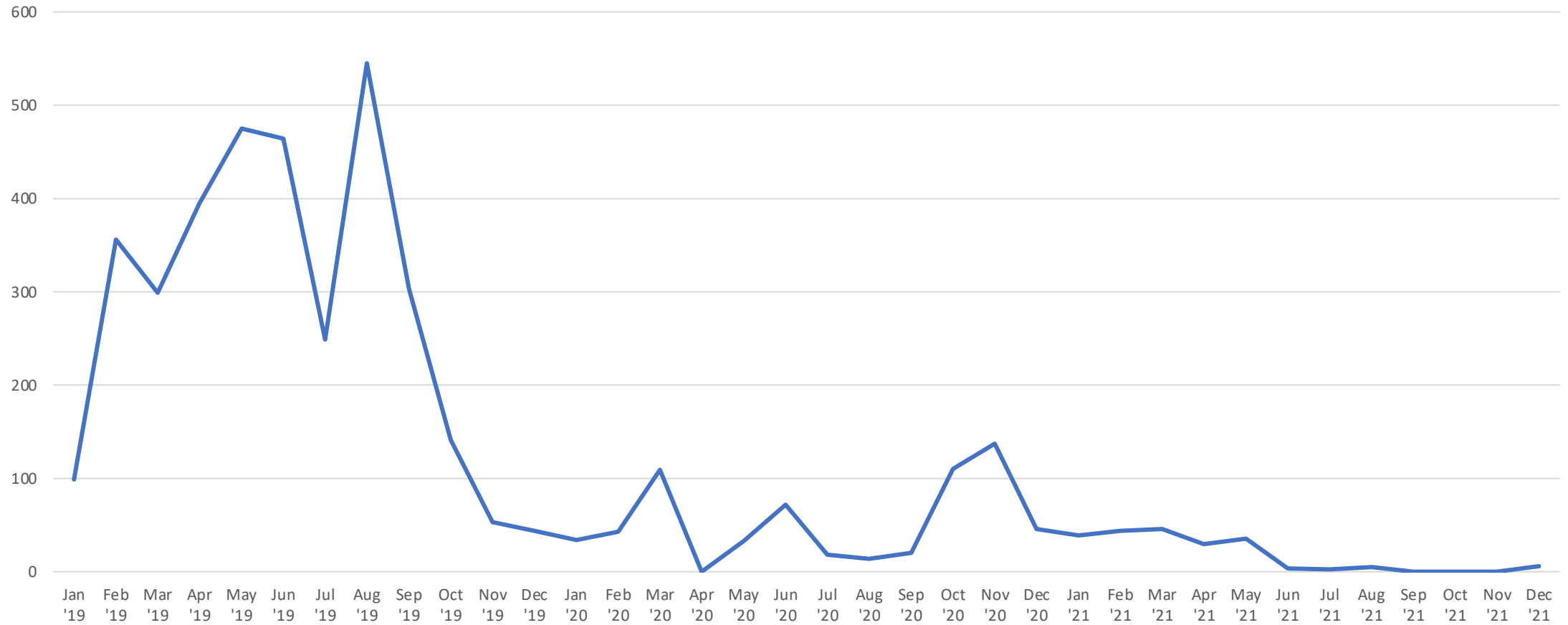
Results

- RFID facilitates faster receive, issue & transfer thus **saves labor** compared to barcode and reduces **machine downtime**
- ERP is updated without manual data entry, improves accuracy
- Allows hassle-free quick physical inventory
- Enables prompt locating of misplaced items
- Alerts against unauthorized/incorrect/incomplete delivery
- Faster checking permits checking as per SOP resulting in improved quality

A typical batch of gray fabric



Lost machine hour due to delayed gray delivery



ROI

- Investment: US\$ 50,000
- Return (Sep '19 to Dec '21):
 - Labor savings: US\$ 26,000
 - Reduced machine downtime: US\$ 80,000

Going forward

- Automatic detection of unauthorized movement
- Introduce RFID to following areas:
 - Stores for maintenance tools & spares
 - Dyestuff & chemicals store
 - Fabric library
 - Finished fabric stores

THANK YOU

