

RFID JOURNAL LIVE!

MAY 9-11, 2023 | ORLANDO, FLORIDA

The Visual Factory – SEKISUI Aerospace Journey to Digital with RFID

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SEKISUI Chemical

Service
Speed
Superiority



1st

PVC pipe ever made



75

Years



190

Facilities



\$10.2B

Revenue 2021



27,000

Employees

SEKISUI Aerospace

Service
Speed
Superiority



3

Facilities



34

Years



550

Employees



\$70M

Revenue 2021



300,000

Parts

SEKISUI Aerospace



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Why Care About Digital?

Engaging the workforce of the future

Empowering action with data

Delivering a modern customer experience

The Digital Mindset

Define a top-level vision - Get buy in

Find your pain points - Work them first

Connect the dots - Move from bottom to top

Take mitigated risks - Be okay with failure

The Digital Vision – Paperless, Visual, Integrated

Empower
Employees to
make decisions
with data at their
fingertips



Create an
integrated
supply
chain for
Customers

Focus on
Sustainability
and reducing our
footprint



Company Pain Points

30%

On-time delivery at worst
performing site



Customers parked in
offices asking for parts



Constantly reacting
instead of planning



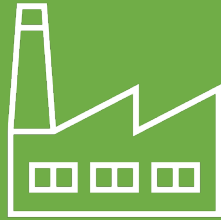
Everything manually
tracked with paper

- **Which** steps in our process had the lowest on-time delivery?
- **Where** did our internal teams park themselves when things went wrong?
- **Where** were we constantly reacting to chaos and **why** there?
- **What** areas presented the largest opportunity for a Visual, Digital Solution?

The Starting Point

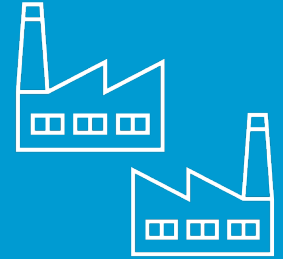
The Plaster Operation

If the Plaster was delayed for any reason, the job could not start



Build Tool
at Plaster
Shop

Ship to
Operations



Build Part
at 1 of 2
Sites

The Plaster Operation

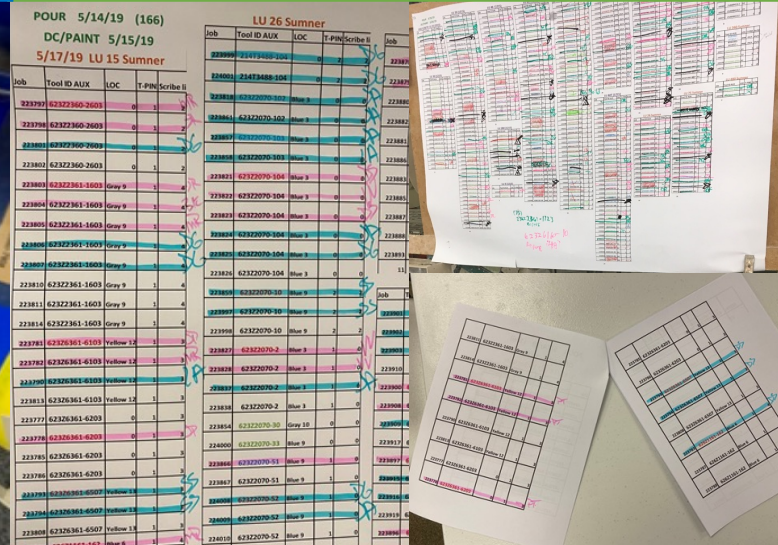
Diverse Parts



Fragile Plaster



Paper Lists



Existing Tech Infrastructure



Epicor 9.05



Barcodes & Scanners



Ignition



Paper Dispatch Lists



Custom Web Portal



Ethernet Connections

Considered Solutions

Hardware

 **Barcode/QR**

 **Bin Tracking**

 **RFID**

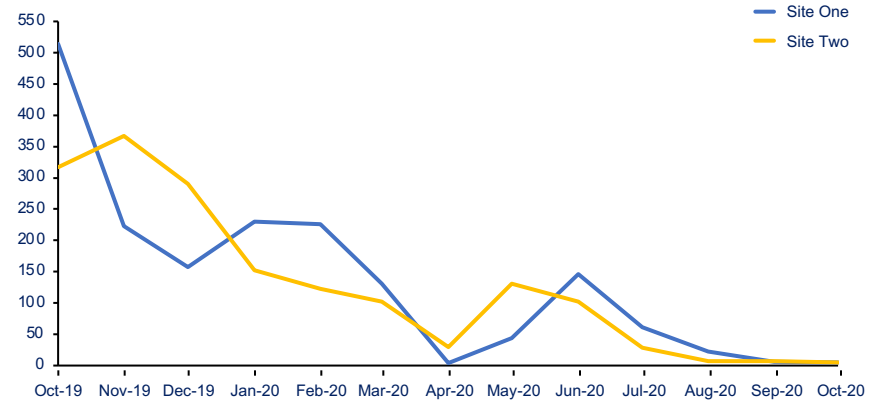
Software

 **Ignition** 

EPICOR

 **xemelgo**

Barcoding in SCADA



Manual scans took too much time



Hardware not usable for operators



Team did not enjoy using system

Establishing Partnership



Shared Vision

Co - Creation

Experience and Expertise



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Shipment Tracking

3 Facilities
20 Readers
580 Daily Plaster

AR85

TSL Handheld



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Deployment Challenges



Cultural Change



Metal Interference



Aging Technology



Reporting Challenges



Capturing Small Parts

Return on Investment

Increased Productivity -

From 3 to 11 plaster per person per day

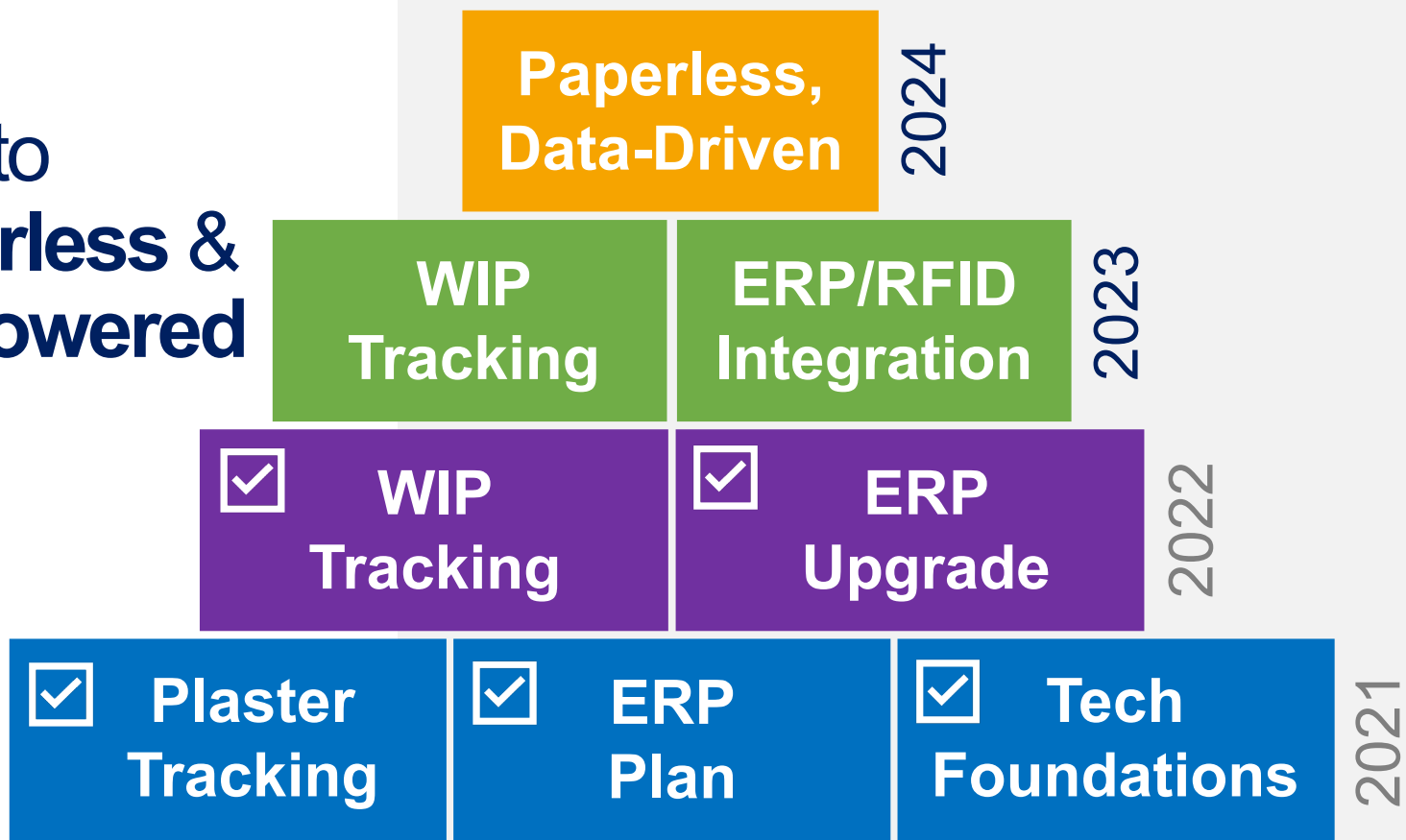
Reduced missing plaster -

From 800 to 0 per month

Created direct headcount avoidance -

When post-COVID production resumed

Path to Paperless & Empowered





Expansion to WIP Tracking

2 Facilities
105 Readers
3,100 Daily Jobs

The screenshot displays the xemelgo Management Dashboard. At the top, there is a search bar and a user profile for Eric Kha, Xemelgo Administrator. The main area features a floor plan with colored zones (green, orange, red) representing different job statuses. A legend indicates: Green for Healthy, Orange for Warning, and Red for Critical. To the right, a 'Summer' job status summary shows: 0 Late to Start - Critical, 3 Late to Start - Warning, 2 Time Exceeded - Critical, and 2 Time Exceeded - Warning. Below this, a table lists Work Order (WO) numbers and their corresponding input and output parts.

WO #	Input Part	Output Part
389673	Part A	Part B
391313	Part A	Part B

Below the floor plan, there is a section for 'Associated Part(s)' with a table showing part details. Below that is a 'Order Route' diagram showing a sequence of steps: Kitlist, Doors, Inbound, Open Entry, Summer, Open Core 2, and Breakout Staging. A 'Breakout Staging' step is highlighted with a red circle. Below the route is a table with columns for Location, Entry Time, Exit Time, and Total Duration.

Location	Entry Time	Exit Time	Total Duration
Kiosk	10:22 AM May 1	10:27 PM May 1	49:45
Doors	10:27 PM May 1	11:27 PM May 1	1:00:00
Inbound	11:27 PM May 1	11:47 PM May 1	20:00
Open Entry	11:47 PM May 1	12:10 AM May 2	26:13
Summer	12:10 AM May 2	12:12 AM May 2	1:55
Open Core 2	12:12 AM May 2	12:14 AM May 2	1:59:29
Breakout Staging	07:14 AM May 2	07:15 AM May 2	38s
Tray Staging	07:15 AM May 2	07:20 AM May 2	1:04:21
Breakout Staging	07:20 AM May 2	07:21 AM May 2	1:04:21

On the right side of the dashboard, there is a 'Work Order' section with a table showing job details, including status (Critical), quantity (42), and various time and cost metrics.



Selecting the RFID Technology



“**FIRST TIME RIGHT**”
— ControlTek

Doorways and Zones

AR62



Flush Mount



Workstations

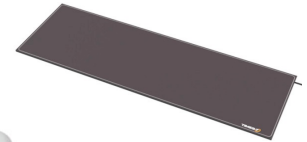
SAMPOS2



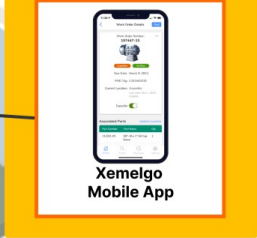
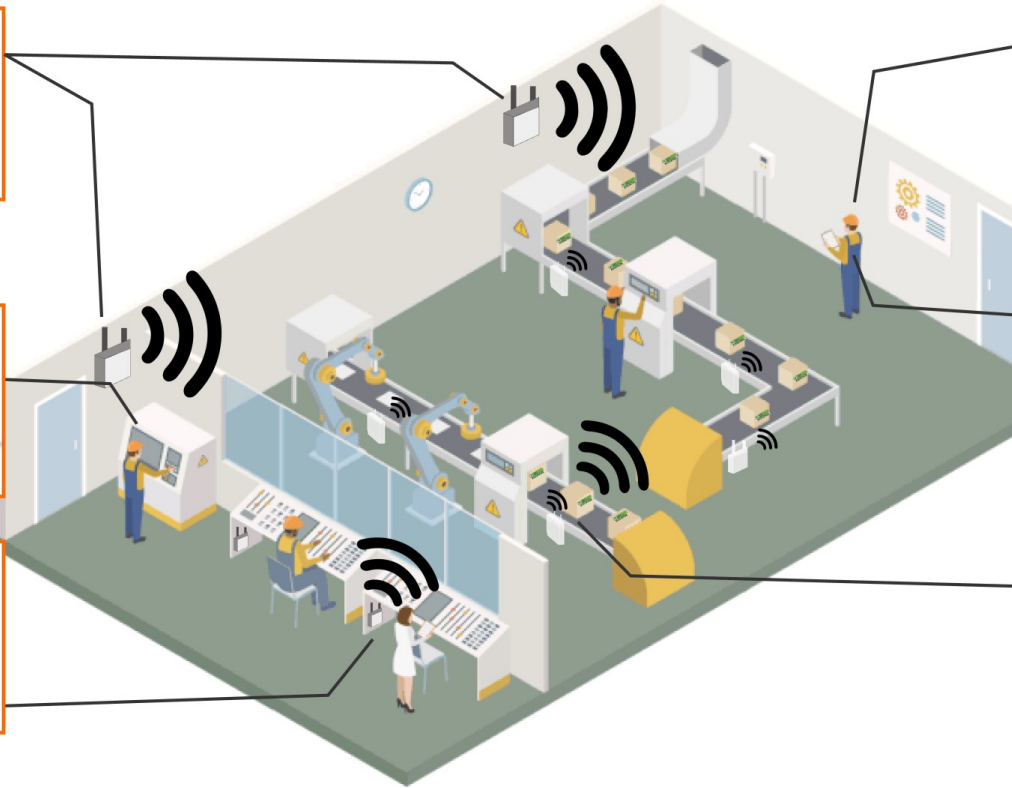
Staging Areas

Floor antennas

AR85



The Solution



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Return on Investment

Increased Productivity -

3% daily across 2/5 work centers

Confirmed cost avoidance -

\$2.5M over the next 5 years

Empowered workforce - See bottlenecks, late parts, and expedited parts in work zones in real-time

Eliminated Manual reports



Expansion to Site 2

+1 Facility
150 Readers
3,500 Daily Jobs

The screenshot displays the xemelgo Management Dashboard. At the top, there's a search bar and user information for Eric Kha, Xemelgo Administrator. The main area features a floor plan of a facility with color-coded zones: green for 'Healthy', orange for 'Warning', and red for 'Critical'. A legend at the bottom right of the floor plan identifies these colors. To the right of the floor plan is a 'Summer' status summary with 'Job Status' and 'Zones' tabs. It shows counts for 'Late to Start - Critical' (0), 'Late to Start - Warning' (3), 'Time Exceeded - Critical' (2), and 'Time Exceeded - Warning' (2). Below this are 'Expedited' (2) and 'On Hold' (2) counts. A 'See Detailed Table View' link is present. A table below shows 'WO #', 'Input Part', and 'Output Part' with values like 389673 and 391313. Below the floor plan is a detailed view for 'Associated Part(s)' for part number 420303006. It includes an order number (54138568), start date (05/01/2022), location (Breakout Staging), and last updated time (7:21 AM, May 02, 2022). A 'View All Contained' button is also visible. The 'Order Route' section shows a sequence of steps: Kitout, Doors, Inbound, Open Entry, Summer, Open Core 2, and Breakout Staging, each with a green checkmark. A table below lists the route with columns for Location, Entry Time, Exit Time, and Time Duration.

Location	Entry Time	Exit Time	Time Duration
Kitout	03:23 AM May 1	03:27 PM May 1	4h 4m 4s
Doors	03:27 PM May 1	11:27 AM May 1	8h 0m 15s
Inbound	11:27 AM May 1	11:47 AM May 1	4m 19s
Open Entry	11:47 AM May 1	12:10 AM May 2	26m 13s
Summer	12:10 AM May 2	12:12 AM May 2	7m 55s
Open Core 2	12:12 AM May 2	02:14 AM May 2	75m 29s
Breakout Staging	02:14 AM May 2	02:15 AM May 2	36s
Tray Staging	02:15 AM May 2	02:20 AM May 2	14m 27s
Breakout Staging	02:20 AM May 2	02:21 AM May 2	7s 7m 27s



Future of the **Visual Factory**

Phase 1

Improve Internal Performance

Phase 2

Give Customers Access to Portal

Phase 3

Embed Tags into Parts

Phase 4

Deliver Paperless Shipments

Phase 5

Track Customer Logistics Worldwide



THANK YOU

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