DIGITALIZATION
PROJECT

M.E. Digitalization- Drew Burns

AGENDA

- Project Intro
- Operator’s Dillema
- Analyze
- Formulate
- Implement
- Future Projects
- Summary

DIGITALIZATION PROJECT

Implementing a digitalized solution to combat cycle time's biggest barrier.

MEET DINH NHI

Operator

Nhi works in the D building on floor 1, she works with a SNDL Post Machine. Her machine has encountered a problem.

Places a red flag on the top of her machine's SOP (start)

+00:05

She's able to work, but at only at half speed (00:05)

+06:58

Non-utilized talent waste to ERC

She leaves her station to search for a mechanic (07:03)

+06:14

Motion waste to ERC

She returns to her work station without help (13:17)

+07:37

Defect waste to ERC

She asks her manager to find a mechanic (20:51)

+00:31

Waiting waste to ERC

Mechanic begins fixing the machine (21:22)

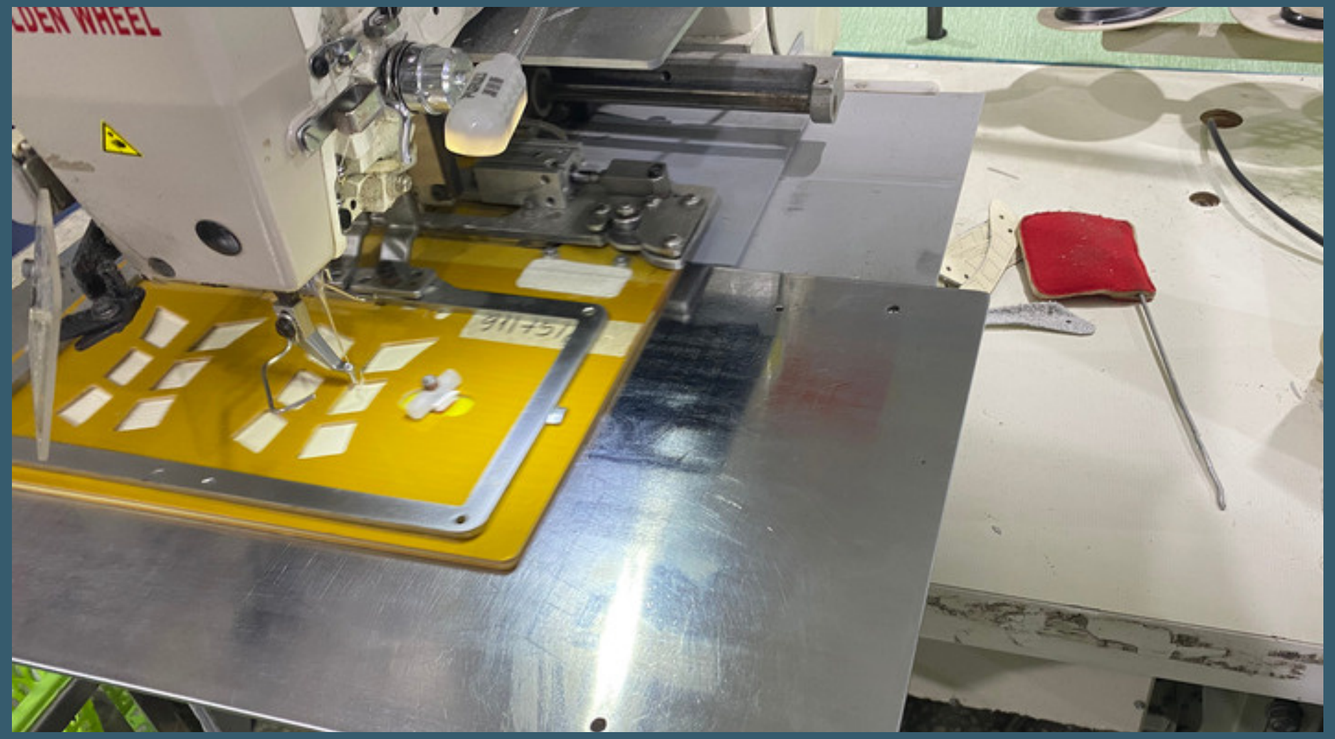
+06:50

Nhi does trials to ensure the problem is solved (28:12)

+06:36

The machine is fixed, the mechanic leaves, the flag is lowered, downtime complete

34:43



PROJECT
DOWNTIME DEPLETION

If we improve the speed that mechanics can start fixing machines, I believe that we can reduce downtime significantly.

ANALYZE

To make future plans, we must understand where we are and where we've been.

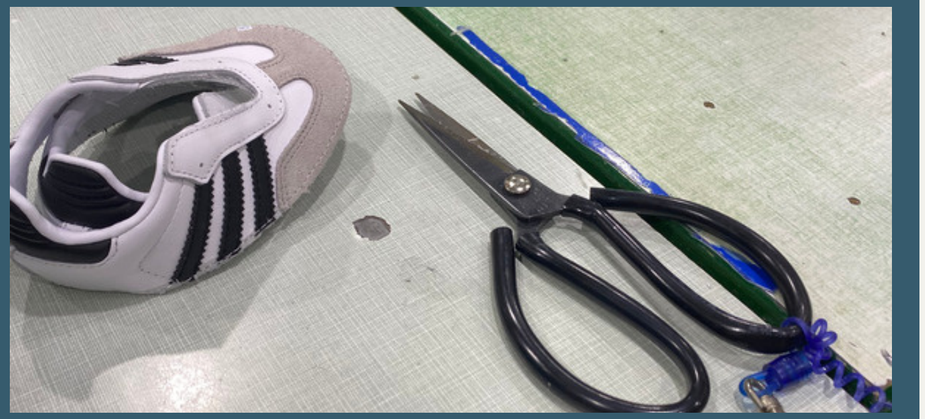
PROBLEMS TO BE SOLVED

"The mechanic's code is to fix machines if they can,
and only replace if they can't" -Wayne (Digitalization Project Manager)

"No one will use new technology if it is going to
make their lives more difficult" -Betty (Manager)

"Create a culture where operators are comfortable
putting their hands up" -Dave Kelley (FW Supply Chain Expert)

GEMBA WALKTHROUGH



Manual Fixing

Unseen Flags

Assigned Sections

Unprepared Fixes

Subjective Tests

KEY FACTORS

Operators

Self-Empowerment

Mechanics

Organized Workflow

Adidas

Production Value

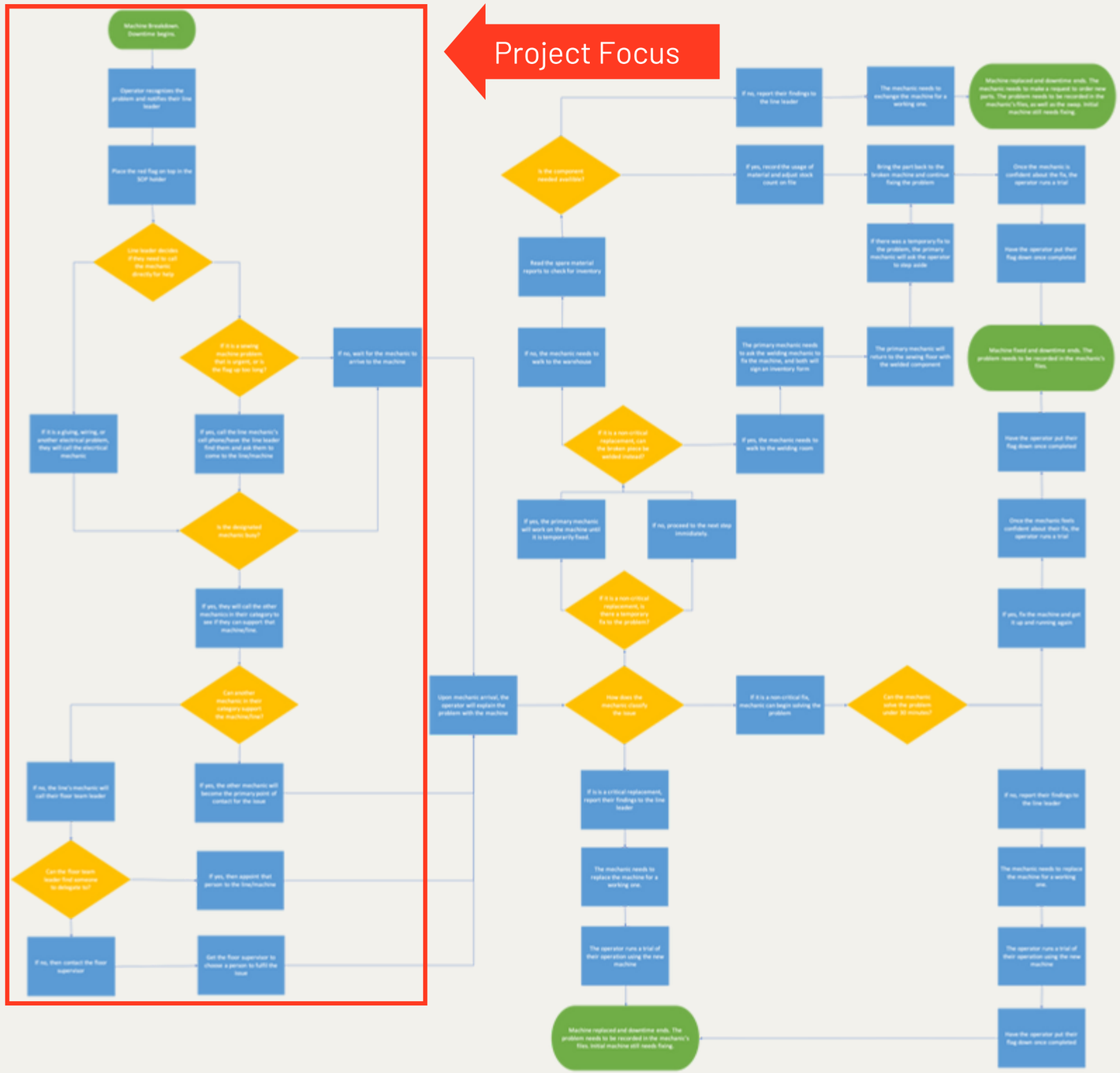
FLOW CHART

Key

Terminal

Decision

Process



INSPIRATION

Juki JaNets

Downtime/output calling system

Grab

Service request apps based on proximity

Expo line

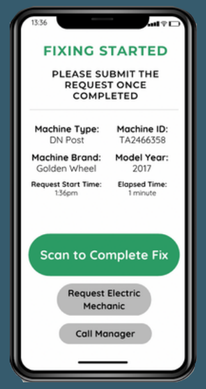
Prioritizes restaurant orders and times

FORMULATE

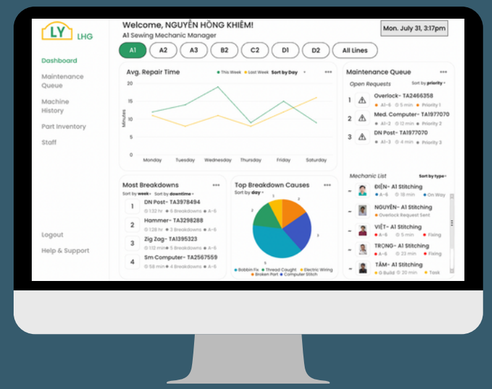
Translating the insights and observations into effective solutions.

THREE DATABASE APPROACH

Operator Request System

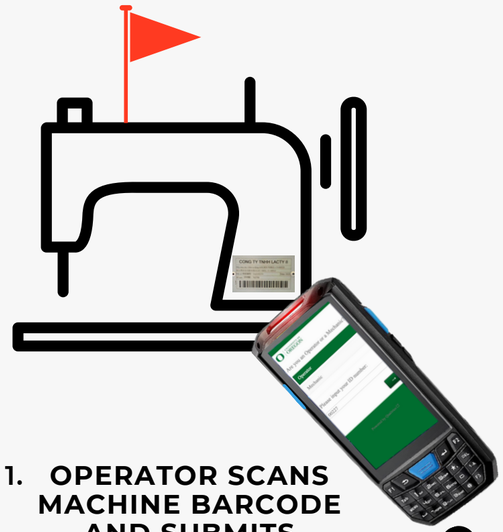


Mechanic RECEIVING Base

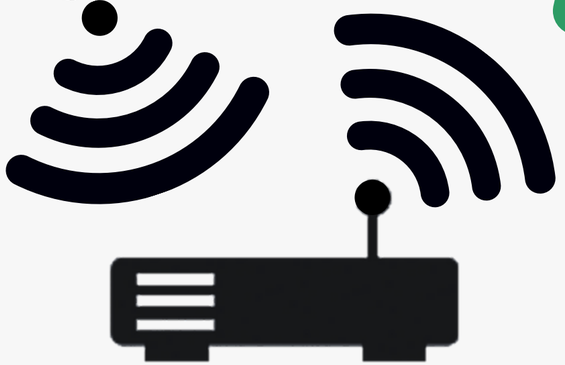


Centralized MAnager Dashboard

PROCESS FLOW



1. OPERATOR SCANS MACHINE BARCODE AND SUBMITS MECHANIC REQUEST

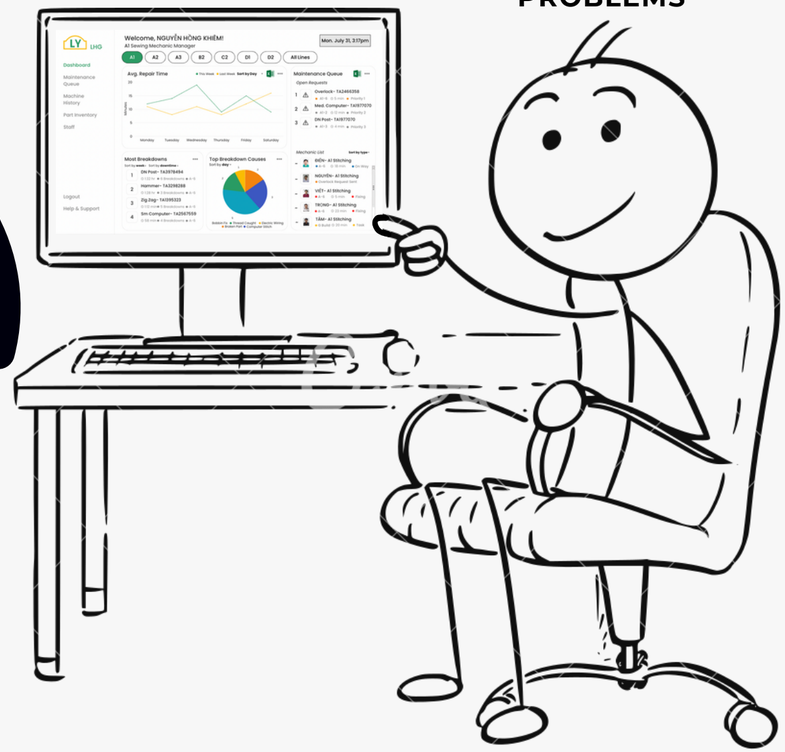


2. ACCESS POINT SORTS REQUEST AND SENDS TO AVAILIBLE MECHANICS

3.MECHANIC RECIEVES REQUEST, ACCEPTS, AND REPORTS TO MACHINE

4. MECHANIC FINISHES FIX AND FILLS OUT A REPORT SUMMARY

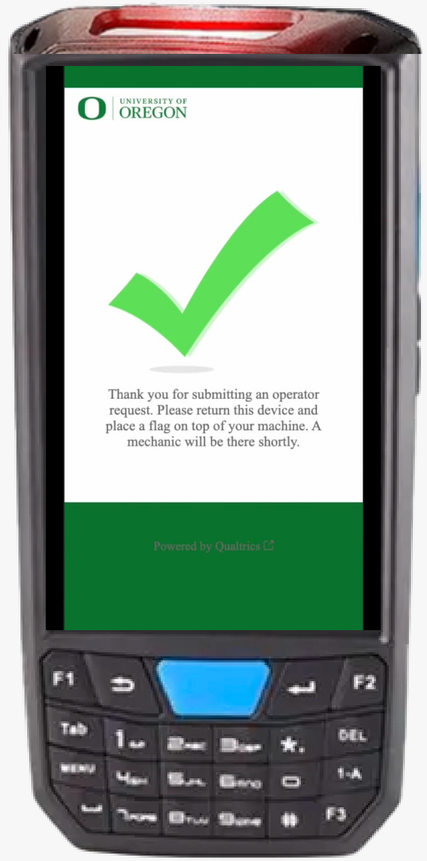
5.MECHANIC MANAGER CAN SEE DASHBOARDS TO TRACK PROGRESS AND VISUALIZE PROBLEMS



OPERATOR REQUEST SYSTEM

Scan System

- Every Machine has a unique identifier
  - Triggers response to pull machine information
  - Starts timer and begins request
- Survey option for mechanics and operators



Prompted Questions

- Machine Confirmation
- Line identification
- Calculation for adjusted line output
- Additional comments

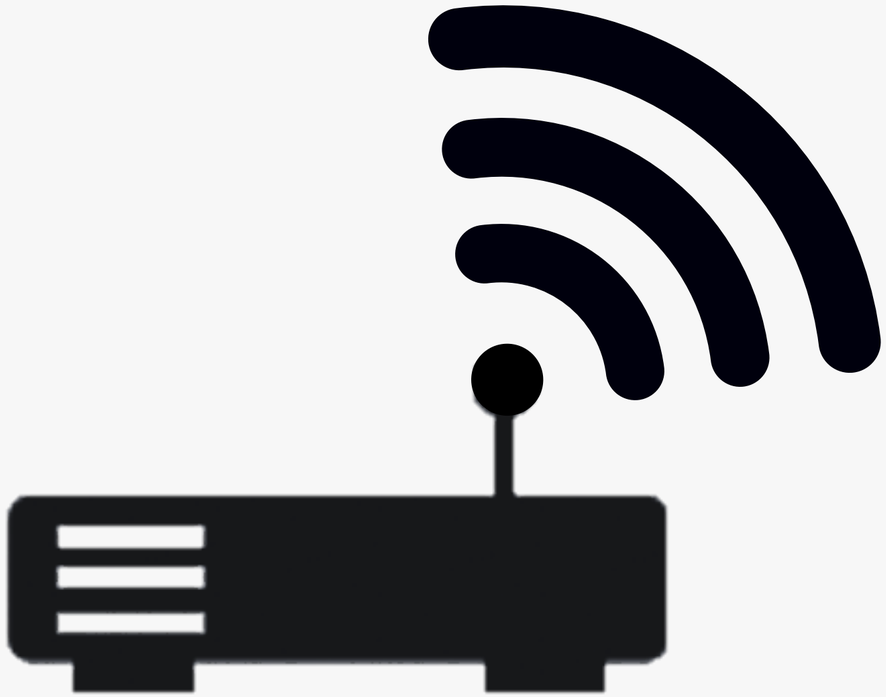
ACCESS POINT PRIORITIZATION

Sorting Requests

- Ranked by mechanic team priorities
    a. Updated line capacity
    b. Total time outstanding
    c. Average fix time

Choosing Mechanic

- Chosen for their skillset
    a. Machine test passed
    b. Stitching/electrical
    c. Mechanic proximity



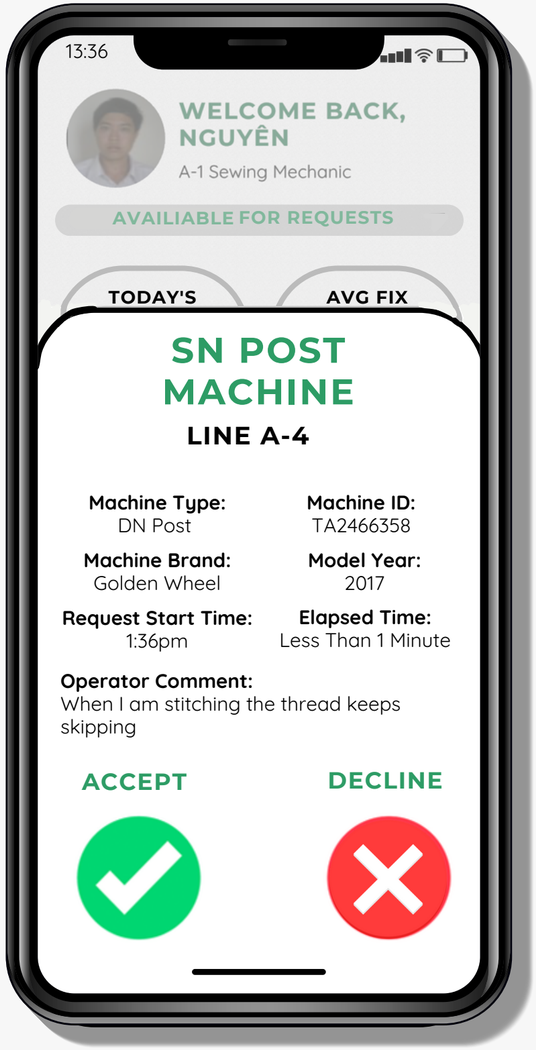
MECHANIC USER INTERFACE

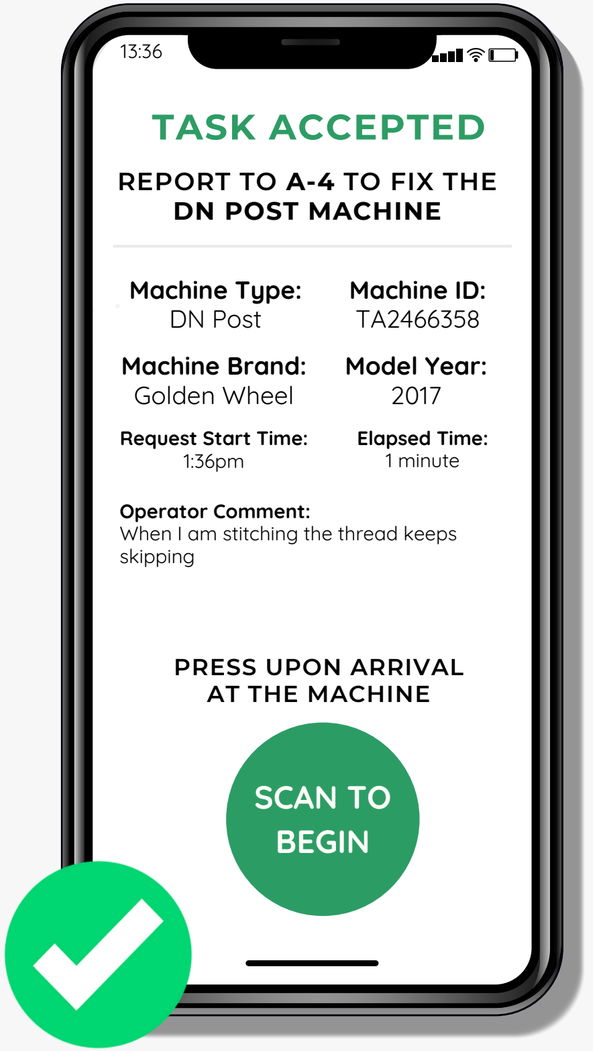
Request Recieving

- Notifications when receiving requests
- Valuable breakdown information
- Accept or decline option
    - Add comment to decline

Mechanic Request

- Accepting request changes status
- Start button once arriving at machine
- Same machine information available





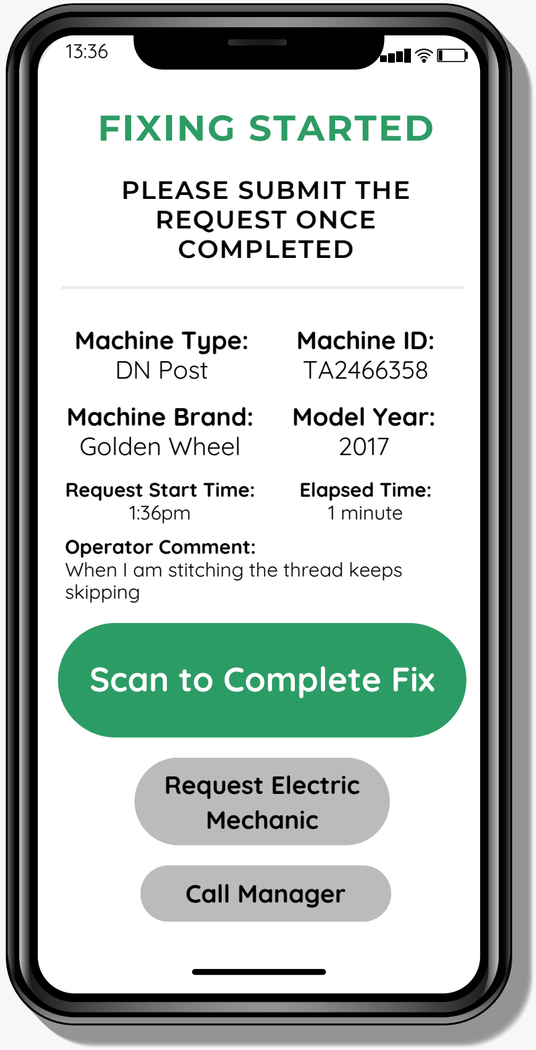
MECHANIC USER INTERFACE

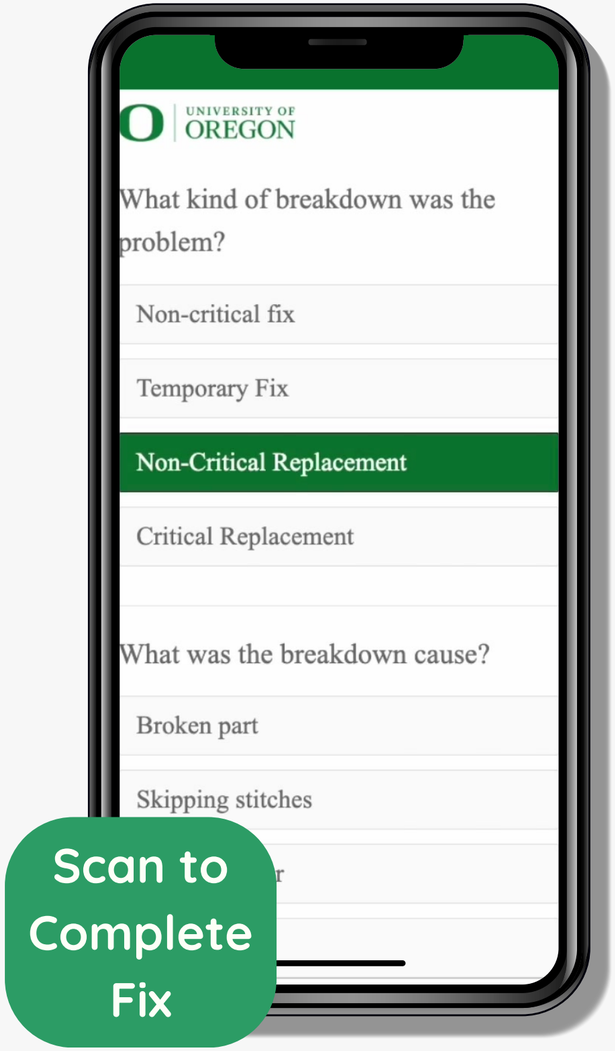
Fix

- Status changes to fixing
- One-touch electrical manager call
- One-touch manager call
- Outstanding fix time

Form

- Scan to start mechanic survey
- Tracking machine break down type
- Submits order ID
- Option for incomplete fixes/swaps





Scan to Complete Fix

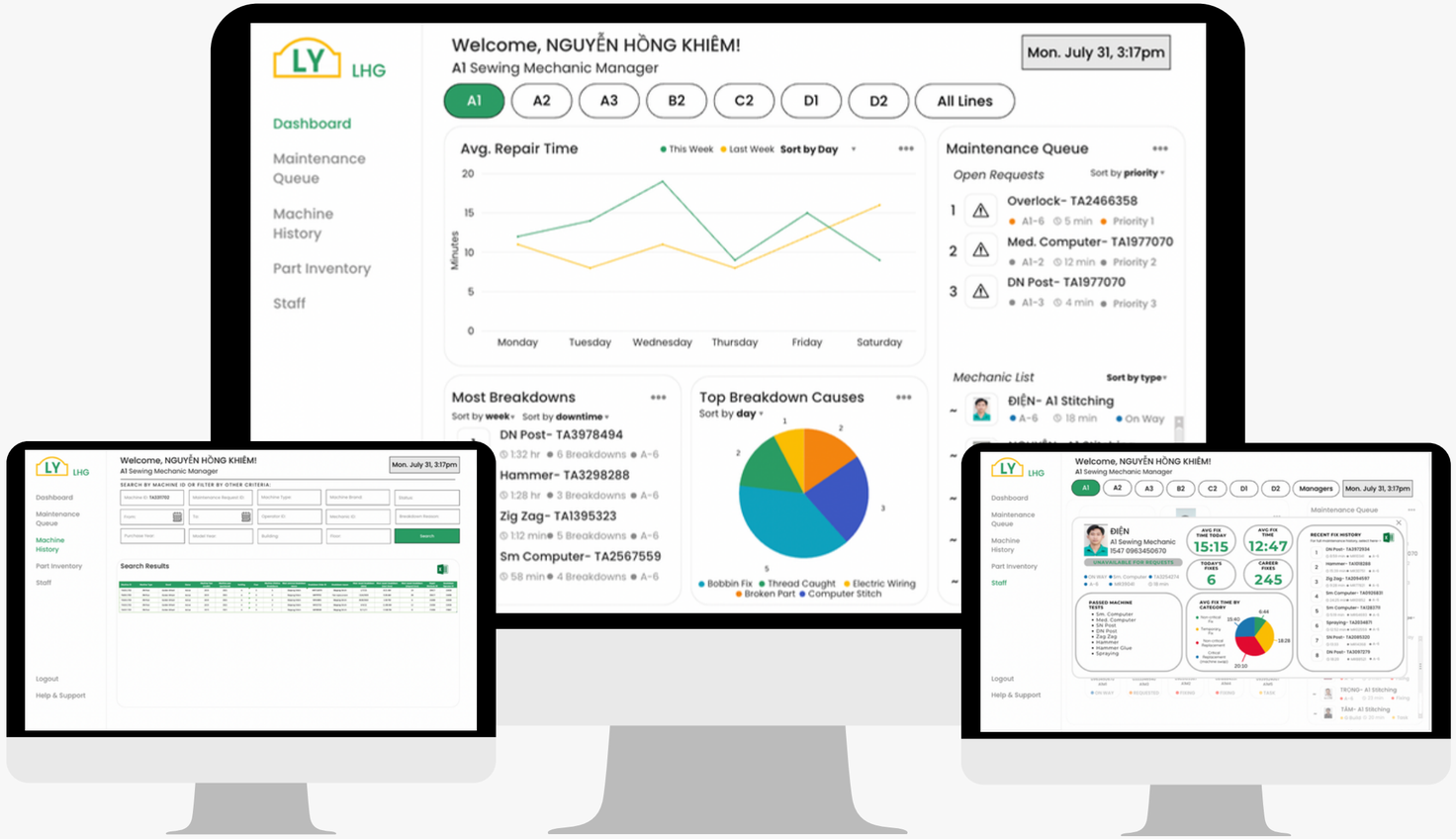
CENTRALIZED DASHBOARD

Performance

- Average repair time
- Daily/Weekly/Monthly totals
- Part inventory levels
- Prior response times

Visualization

- See the live floor
- Queue for outstanding requests
- Mechanic status list
- See staff progress



IMPACTS ON BUSINESS

Speed

Quicker issue resolution reduces waiting time and increases speed to market.

Space

Better understanding of what is stored in unavailable space, and knowing where inventory lies.

Sustainability

Significant reduction of paper usage and lowering energy needed in overtime.

Standardization

Less downtime helps operators stay in their working rhythm, improving output quality

Implement

Creating a plan to deploy this project without damaging current processes.

HARDWARE INVESTMENT

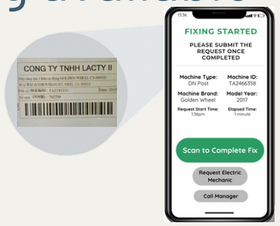
CELL PHONE SCAN APP

Pros

- Using tech already comfortable with
- No installation cost

Cons

- Allows cell phones/camera on production floor- security
- Requires all operators having available mobile phones
- Multiple UX designs



SMART BARCODE SCANNERS

Pros

- Single UX design needed
- High security protection
- Long-term solution/commitment

Cons

- Installation cost
- Limited scanners/line
- New tech training

HARDWARE PROPOSAL

Smart Scanners

The project only works for adidas if confidentiality is top of mind. Plus, the reliability of an internal system builds for the future.

HORIZON 1

(Now until November 2023)

Objectives

- Create a culture of reporting when machines are down
- Train mechanic managers and mechanics on the system

KPI's

- The software fully deployed on one trial floor per factory
- 100% of mechanics and mechanic managers trained

HORIZON 2

(November 2023 until February 2024)

Objectives

- Roll out software across all stitching floors
- Begin software development for assembly and cutting

KPI's

- 100% operator participation
- 20% lower downtime per stitching line request
- Cutting/assembly software trials begin at each factory

HORIZON 3

(February 2024 until August 2024)

Objectives

- Full cutting and assembly software launch
- Prepare line changeover and auto-ordering capabilities

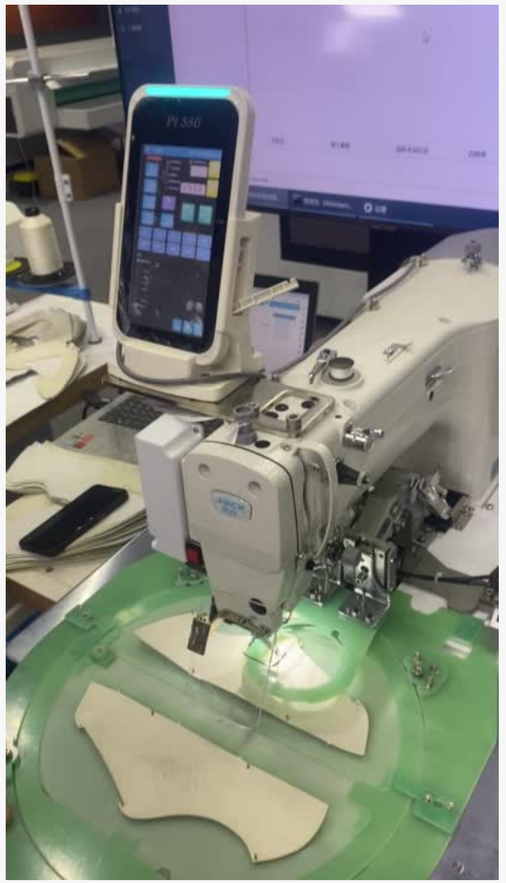
KPI's

- 30% lower downtime on all stitching lines
- 20% lower downtime on all production lines

FUTURE PROJECTS

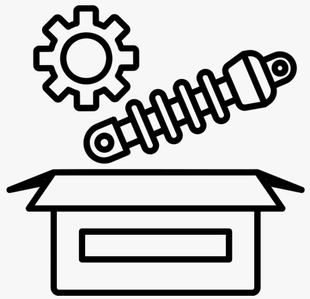
Line Changeover

- The most important waste to eliminate downtime
- Add a function into the downtime calling system
- Create an automated solution to scan/RFID computer stitching frames



Auto-Ordering

- Automatic reordering of parts with low inventories
- Reduce broken machine storage
- Save wasted time ordering materials



PROJECT SUMMARY

1	2	3
Analyze	**Formulate**	**Implement**
Assessed current breakdown procedures and found industry leading solutions.	Created a three database system accounting for the needs of the mechanics, operators, and managers.	Built a strategy for a product rollout that prioritizes implementation and caution.

THANK YOU

I learned so much about this industry, Vietnam, and myself through this trip. It was a privilege being an intern for LaiYih Group this summer.

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