ATLAS

Advanced Technology Library for Auto Spares

(digital) Product Management

AGENDA

Meet Jude Lam

Profile

Name : Jude Lam
Age: 38 M
Job Title: Quality Assurance Executive – Auto Spare Parts
Industry: Automotive Supply Chain & Logistics
Experience: 10 years in automative QA & logistics
Location: Warehouse & Distribution Center

Key Responsibilities

- Conduct QA inspections on inbound shipments of spare parts
- Verify parts against technical specifications, part numbers, and supplier documentation
- Maintain QA reports, checklists, and non-conformance logs
- Coordinate with suppliers to resolve quality issues and process returns

Motivations

- Wants to reduce errors in QA Process
- Minimise returns and customer complaints
- Improve QA efficiency with better tools

Mental Model

- Excel Sheets
- Paper supplier documentation
- Technical Specifications
- Part number information

User Journey

Step 1

QA receiving goods at the dock

Step 2

QA bring goods to office to manually check items against excel sheet and paper documentations

Step 3

QA key in details in excel

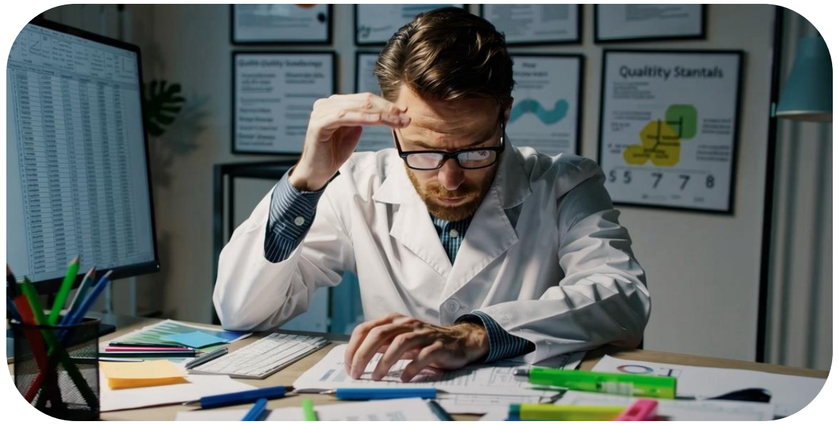
Step 4

Delivery of goods to customer

Quality Assurance Executive needs to **perform quality checks** on **auto spare parts** received from **suppliers** to ensure the **form, fit, and function** of the items.

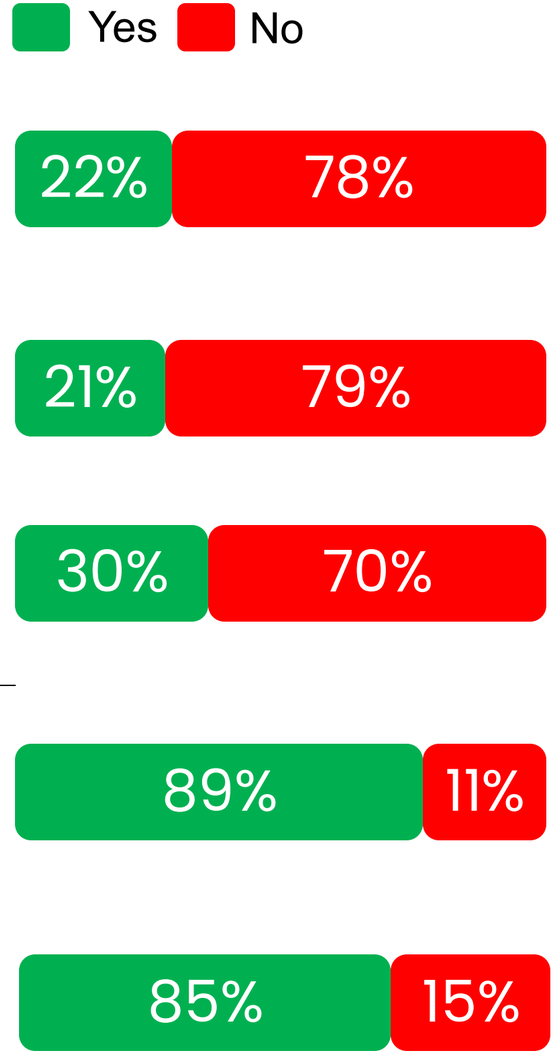
Job-to-be-done

Quality Assurance Executive feels **frustrated** about doing **autospare parts Quality Assurance checks** as he constantly has to **refer back to Excel sheets** to check **multiple individual spare parts** but cannot do so because this method introduces **inconsistencies, labour-intensive data entry, and a high risk of human error** – resulting in **limited traceability, difficulty in consolidating findings, and delays in identifying quality issues**.



Problem Statement

Statistics



Pain Points Identified

Time consuming manual inspection

→

Reduce time spent on repetitive manual tasks

Difficulty in consolidating findings across multiple spare parts

→

An integrated system to streamline communications and reporting during the inspection process

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Pressure to maintain high standards on accuracy and accountability of spare parts

→

A system that is reliable and can validate parts accurately

Hypothesis

If QA executives struggle with manual Excel-based spare parts checks due to **inconsistencies, labor-intensive data entry** that leads to **high risk of human error**, then **ATLAS** will help them **streamline inspections** and improve **inspection accuracy** by providing:

Objective	**Improve efficiencies in the search due to manual process**	**Enhance the accuracy of the visual inspection**
Key-Results	Improve time required to do quality checks by 50% by implementing a centralized digital system. Current estimate for one item is 20 minutes.	Improve defect detection accuracy by 90% through the implementation of AI-powered image recognition and augmented reality (AR) assistance.
	Achieve 100% traceability of all spare part inspections by integrating a digital tracking system.	Reduce return rate by 80%

Competitive Positioning

Unique Value Proposition (UVP)

Our auto spares QA solution uniquely streamlines the quality assurance process by combining industry-specific knowledge about the auto-spare parts with an intuitive, integrated interface that eliminates manual visual errors and accelerates inspections.

Defensibility

- ❖ Niche focus and specialization
- ❖ Technical moat
- ❖ Data moat and proprietary information

Product Roadmap

Weeks 1 - 5
Phase I: Research & Validation

❖ **User Research**
More than 70% of QA teams feedback difficulty in quality check processes.

❖ **Competitive Gap**
Existing barcode systems lack real-time error detection

❖ **Milestone**
Validated problem statement, competitive analysis and user insights

Weeks 6 - 12
Phase II: Prototype Development

❖ **AI Model**
Initial training on 1000 spare part images for error detection

❖ **Prototype UI**
Workflow, real-time-alerts, and inventory integration

❖ **Milestone**
Functional prototype with AI-powered verification

Weeks 13 - 20
Phase III: Pre-Market Pilot

❖ **User Testing and Feedback**
10+ QA personnel, feedback-led UI/AI refinements

❖ **Compliance**
Data security & industry regulation checks

❖ **Milestone**
Optimized AI accuracy & efficiency proven in pilot

Weeks 21 - 32
Phase IV: Full Deployment & Scaling

❖ **Go-To-Market**
Onboard QA teams, integrate with ERP systems

❖ **AI Learning**
Real-time monitoring, model refinement

❖ **Milestone**
80% returns reduction, 50% faster verification, possible company-wide adoption

Business Impact

❖ **80% fewer errors in spare part acceptance**
❖ **50% reduction in manual verification time**
❖ **5-10% operational cost savings**

Prototype

Prototype Demo: [YouTube - ATLAS - 1st Iteration]

Insights from User Reviews

Prototype – 1st iteration

“I still had to walk from warehouse to my desk in office to catalogue new items”

“I recall *someone* telling me this item was rejected, but it still showed up in Search”

Feature 1

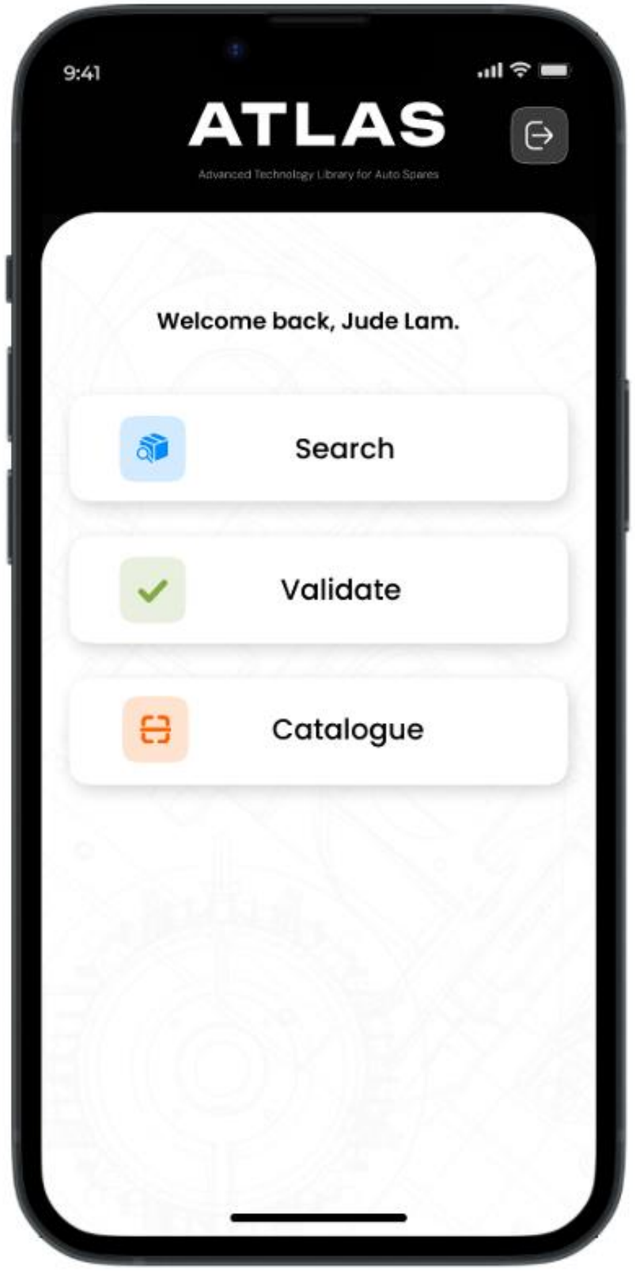
User wants to **catalogue items** so that **quality assurance work is covered end-to-end**

Feature 2

User wants to **identify items that are rejected by customer, passed, failed internal checks** so that **they won't mistakenly validate the items**

Feature 3

User wants to **be able to add comments** so that **other quality assurance executives can conveniently check on latest updates of the item**



Prototype

2nd iteration | User Insights

Product Prototype: Figma

User Insights

Provided color to checks - images not black and white like on excel sheets

No more walking from desk to warehouse with bulky documents

AI assistance improved accuracy – lessen load on burden of human accuracy

Business Impact

- Saving around 10 – 13 minutes per item check leading to more items checked per hour
- Lesser customer returns
  → enhance brand credibility
  → potential upside financial returns

Challenges

Constructing the Problem Statement
Accurately identify the persona

Developing the Prototype
Accuracy of computer vision algorithm

Key Concepts

- Objective-Key Results
  - Clear focus for product development
- Agile - User Stories
  - Enhance clarity of requirement
- Usability Heuristics
  - Familiar - Recognition
  - Aesthetic and Minimalist Design

thank you.