

## Project Overview

TE Connectivity's AMT (Automated Manufacturing Technology) team, located in Harrisburg, PA, is responsible for designing and building custom machines. They require a more efficient inventory management system for all of their concurrent projects. This project touches both project management and operations.

### Project Management

- Provide clear visibility of part inventory
- Track part status on the machine and subassembly levels
- Quantify part storage performance

### Operations

- Easily know when kits are complete and ready for build
- Easily identify subassembly and machine for a part through data entry

## Problem Statement

### How can we increase visibility of part inventory?

#### Initial Problem:

- Incomplete data transfers
- Unorganized part staging and storage
- No part visualization

#### Our Focus:

- **Inventory Visualization** - visualization at machine and subassembly levels using software
- **Standard Processes** - improve part reception and storage
- **Project Integration** - aid the integration of software at the build stations

## Constraints

- Remote work + limited network access
- COVID-19 restrictions
- 6-month timeline
- Limited budget
- Limitations to Power BI
- TE's technical literacy

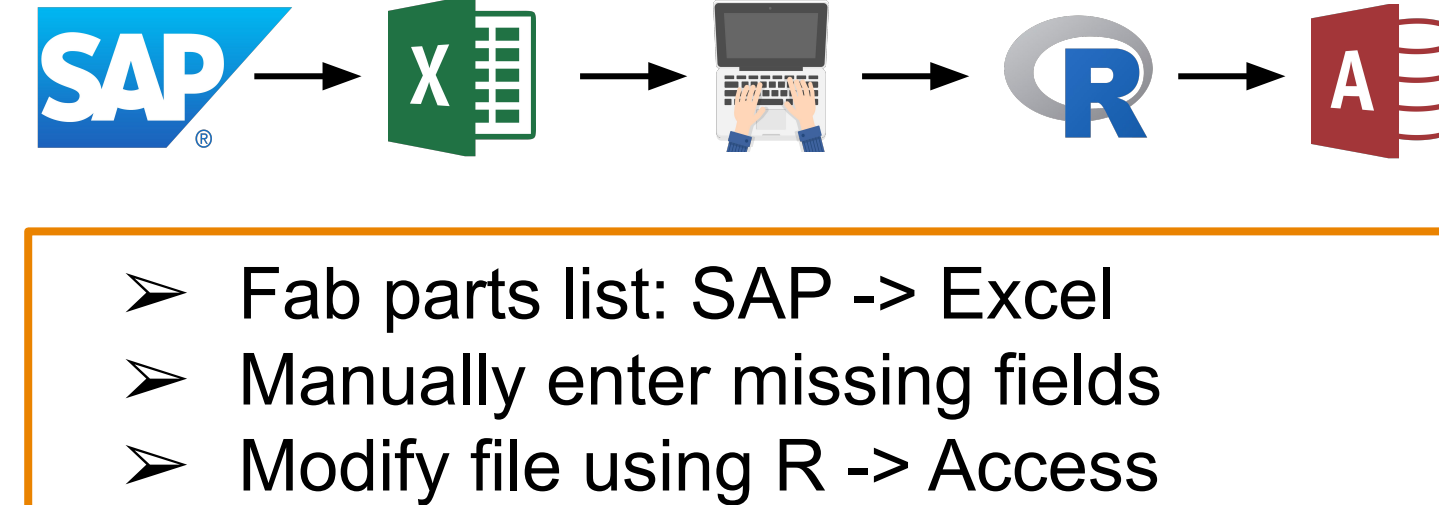
## Assumptions

- Receptive to new technology
- Correctly set up + operate dashboard
- Power BI + Access compatibility
- Information is accurate

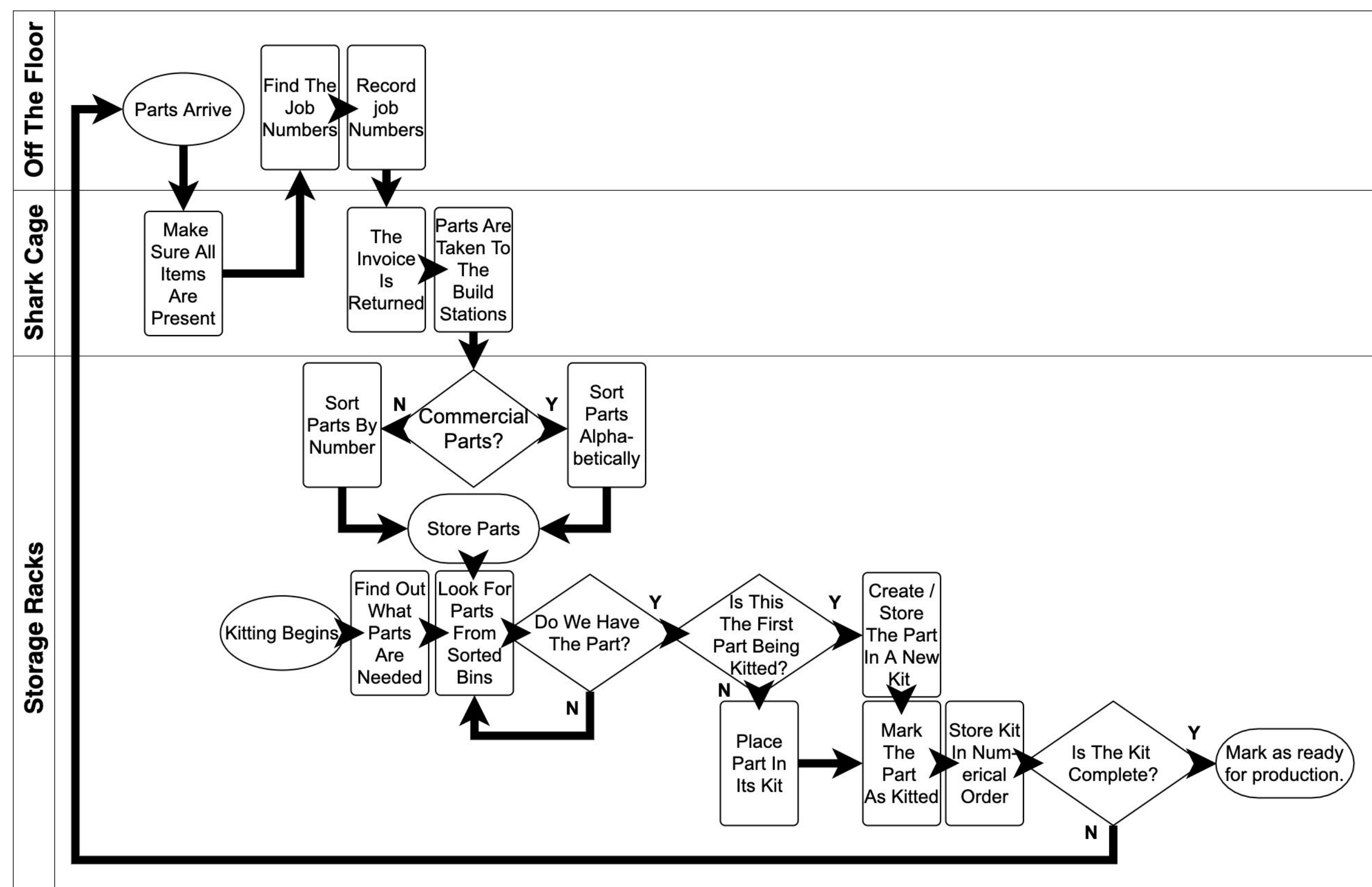
## Performance Criteria

- Reduce manual task time
- Improve inventory visualization + accuracy
- Design user-friendly tool for management + floor personnel
- Cost effective

## Updating Part Status



## Initial Part Storage Process



**Off The Floor:** Both the shipping dock and dock attendant's office. **Shark Cage:** A rack and table located near the shipping dock. **Storage Racks:** Dedicated storage on wheels.

## Solution

### Dashboard

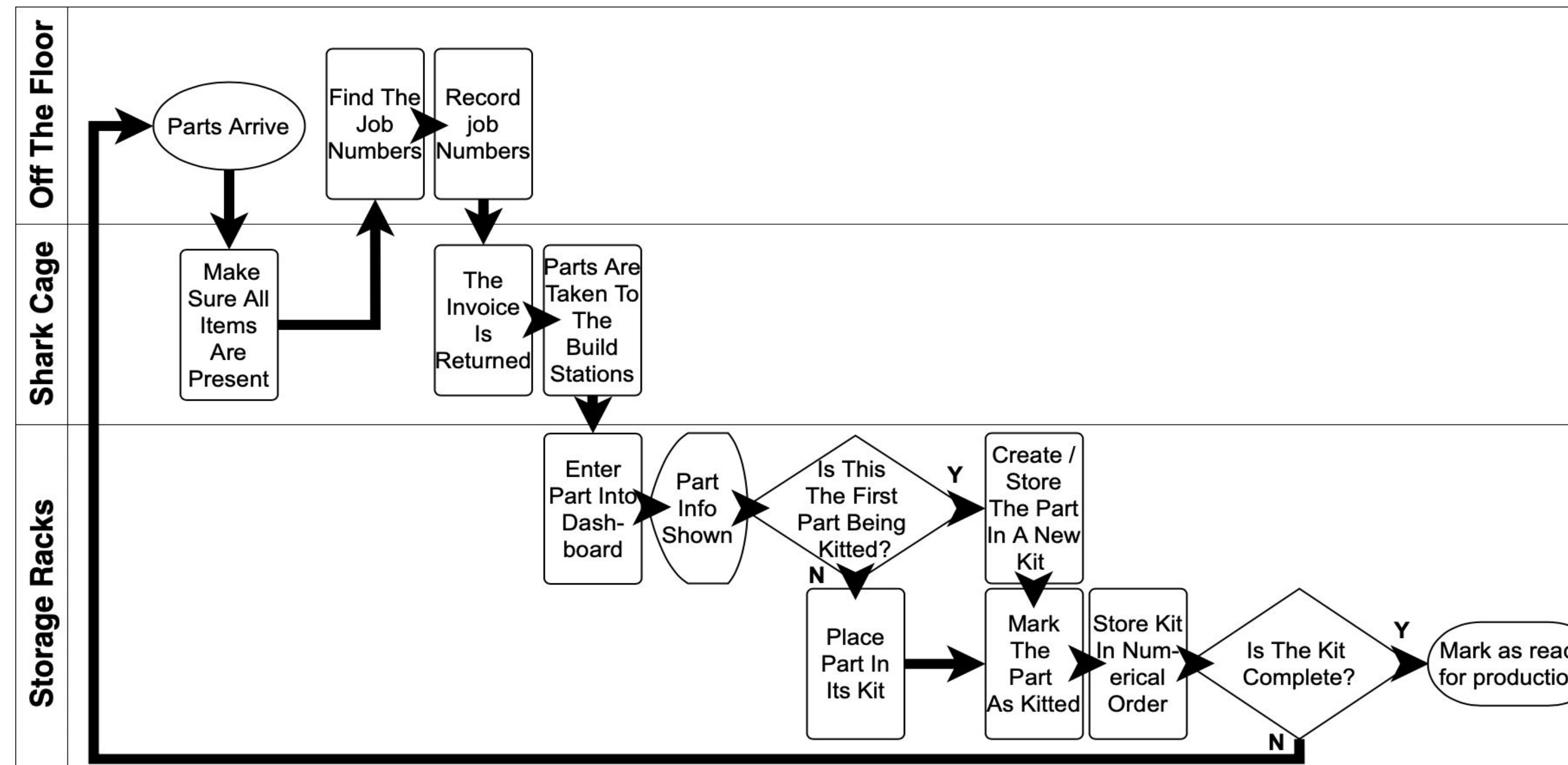
**Before subassembly/machine is selected:** All parts are listed with the quantity needed and quantity received for each part. Completed kits are highlighted for visibility.

**After selection:** Parts list is filtered to only show parts for the selected subassembly or machine.

**Part search:** Operators can lookup a part's subassembly/machine info.

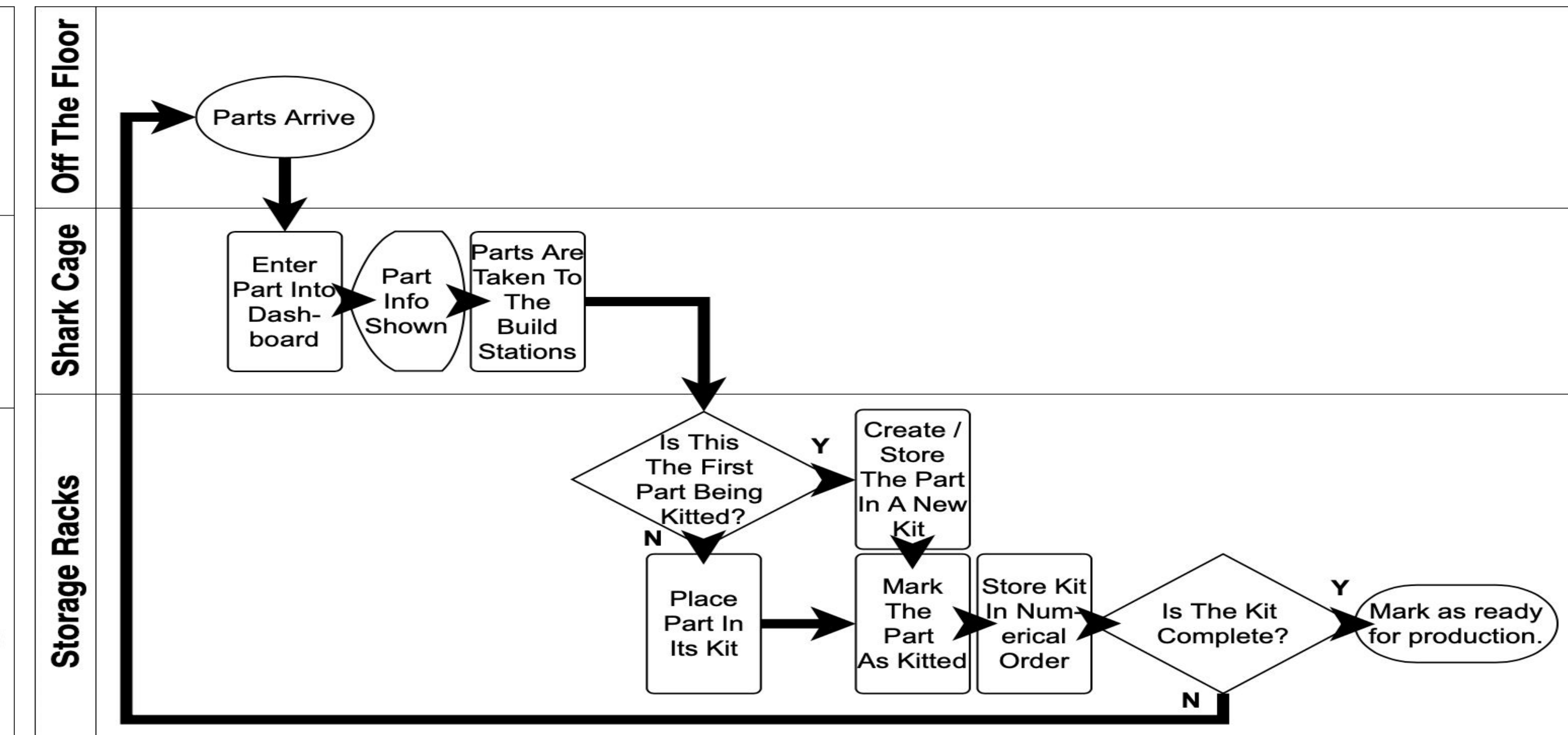
## Improved Part Storage Process

### Future Realistic



**Future Realistic** denotes the most likely result of implementing our changes.

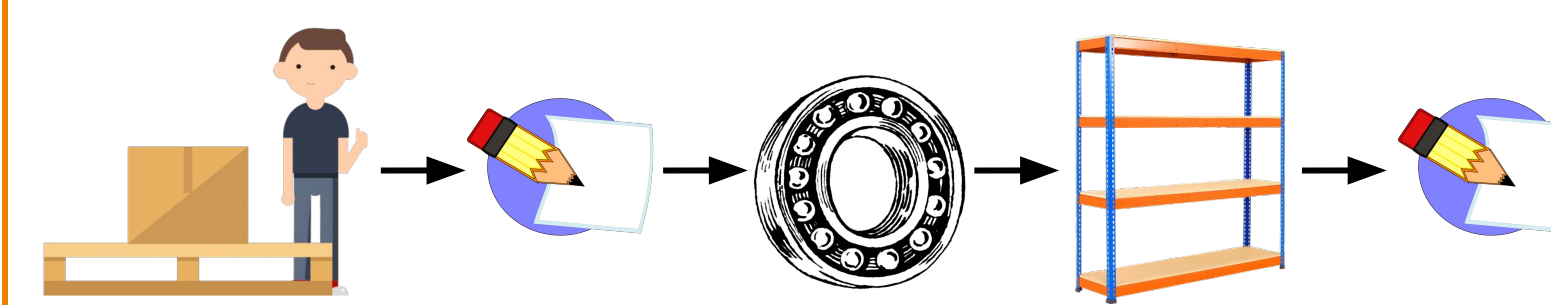
### Future Perfect



**Future Perfect** denotes the ideal result of implementing our changes by following the recommendations below.

## Tools For Achievement

- **User and Set-Up Guides**
  - Created Set-Up Guide to assist users with set-up + User Guide to familiarize end-users with dashboard features
- **Evaluation Surveys**
  - Asked machine builders to rate 1 - 10:
    - Difficulty of finding all parts for subassembly production
    - Time to gather all parts for subassembly production
    - How well the storage area is organized
    - Stress level when seeing the storage area
- **Tracking Slips**
  - Method of measuring performance of part storage process before + after implementation of dashboard



Tracking Slip	
Part Number:	
Time of Arrival	Time of Kitting

## Recommendations

- **Develop one project identifier to be used throughout the company**
- **Increase frequency with which Access is updated**
- **Decrease spacing of bread racks**

## Impact

- **Reduce idle time when working on machines with incomplete kits**
- **Reduce time spent looking for parts**
- **Reduce time spent matching parts to kits**

## Acknowledgements

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