



THROUGHPUT THE PEDAL TO THE METAL

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PROBLEM OVERVIEW



ACCESS LASER

Manufacturer of cutting edge lasers for a variety of specifications and purposes



Question: How can our team reduce non-value added time by minimizing waste and **improving quality**?

Descriptive Scenario



Inventory: **26.3 min** wasted due to the current inefficient kitting system



Buildroom Layout: Does **not meet OSHA** standards and can be improved ergonomically



Main Issue: Frequent **halt in production**, causing problems in keeping pace with increased demand



PROJECT SCOPE

Original Scope: Improve inventory and the kitting process to reduce the laser assembly setup time



Calculated original scope to have **insignificant impact**

Projected to only save around **three minutes** per laser



Our team identified **significant NVA time** in defects

22% of sensitive parts experience defects

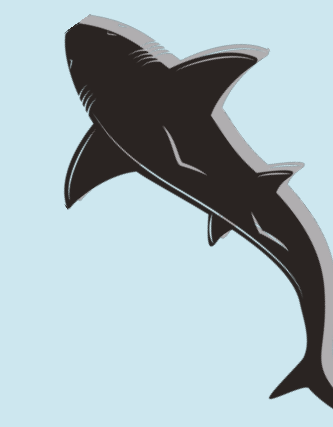


Proposed scope expansion to **include defects** and **rework**

New scope accepted by Access Laser in early March

Quality now serves as our primary impact measurement

SOLUTIONS



Inventory System



Designed a **Point Of Use** system to replace kitting, leading to **decreased touch points**

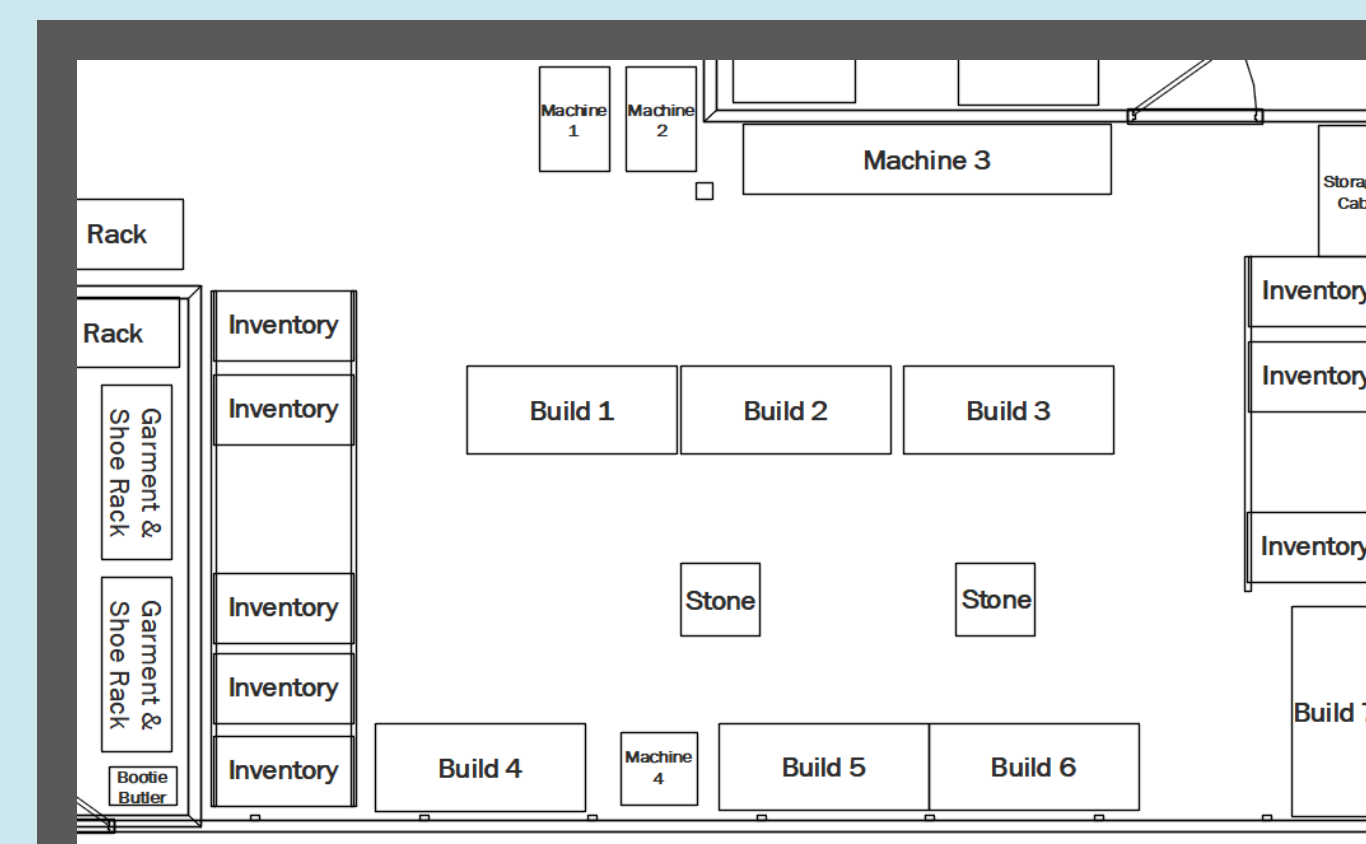


This system is projected to decrease overall process setup time by **51%**



This also **improves data traceability** and provides more precise tracking of defects

Buildroom Layout



Original Layout

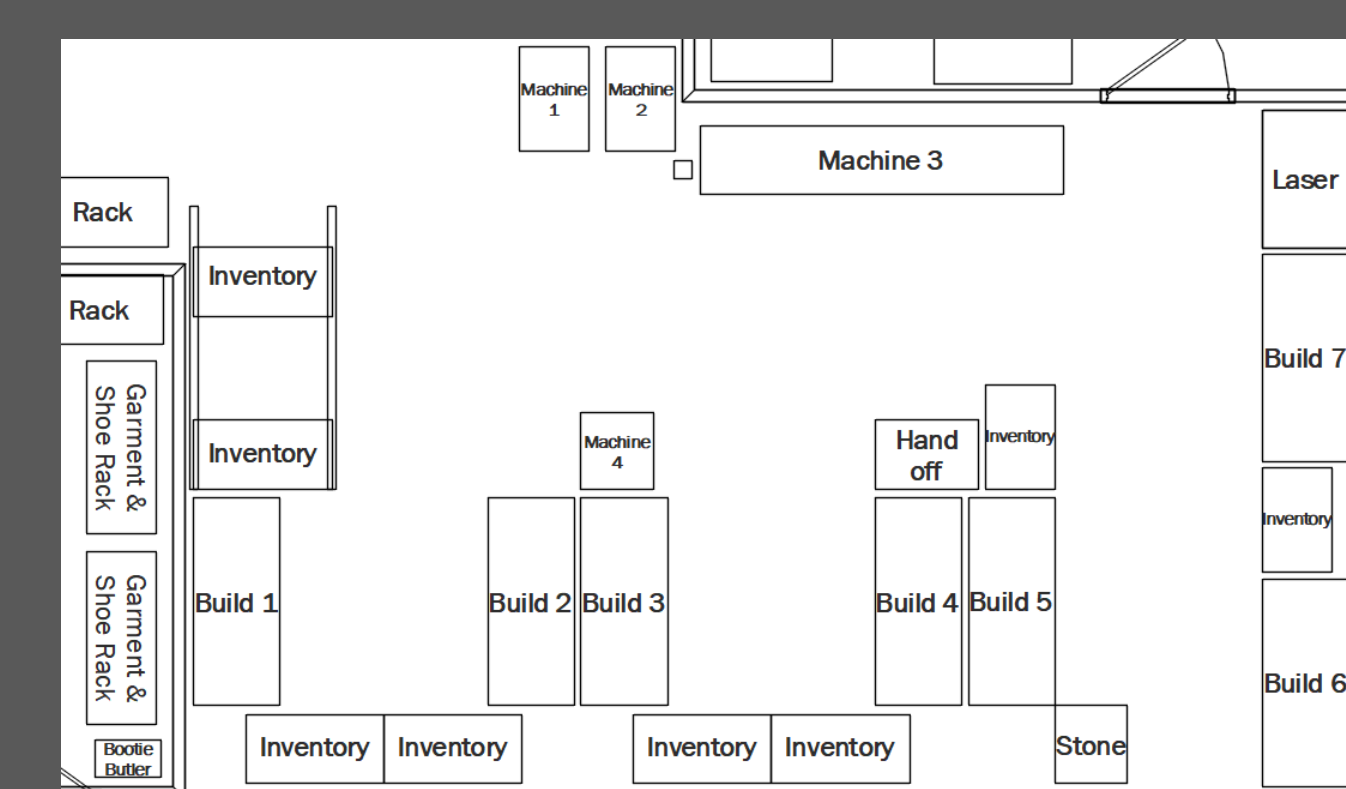
7 build desks
424 sq ft storage
8 inventory racks
Did not allow for **point of use**
Did not meet **OSHA** standards



Improved Layout



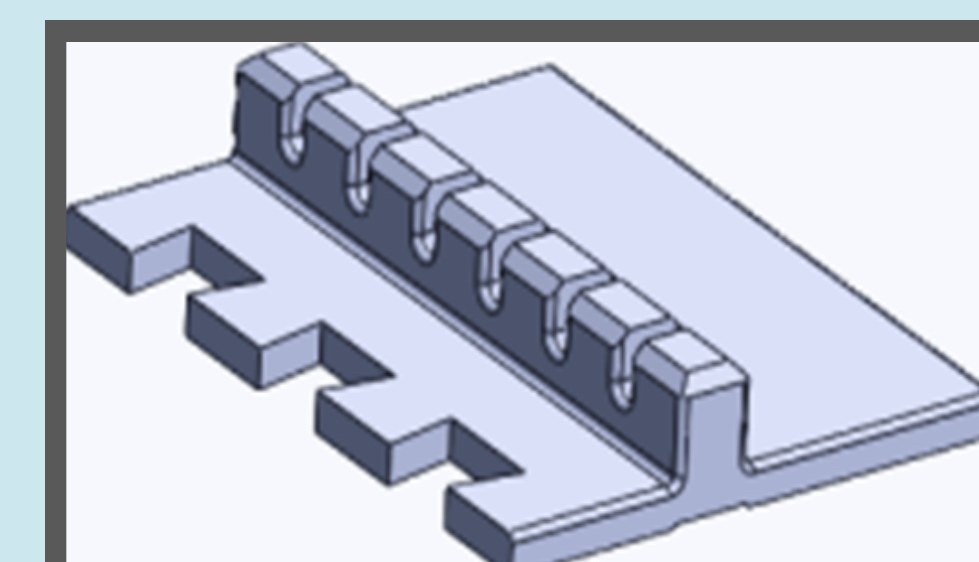
7 build desks
504 sq ft storage
10 inventory racks
Improved **ergonomics**
16% increased inventory space



Sensitive Part Storage



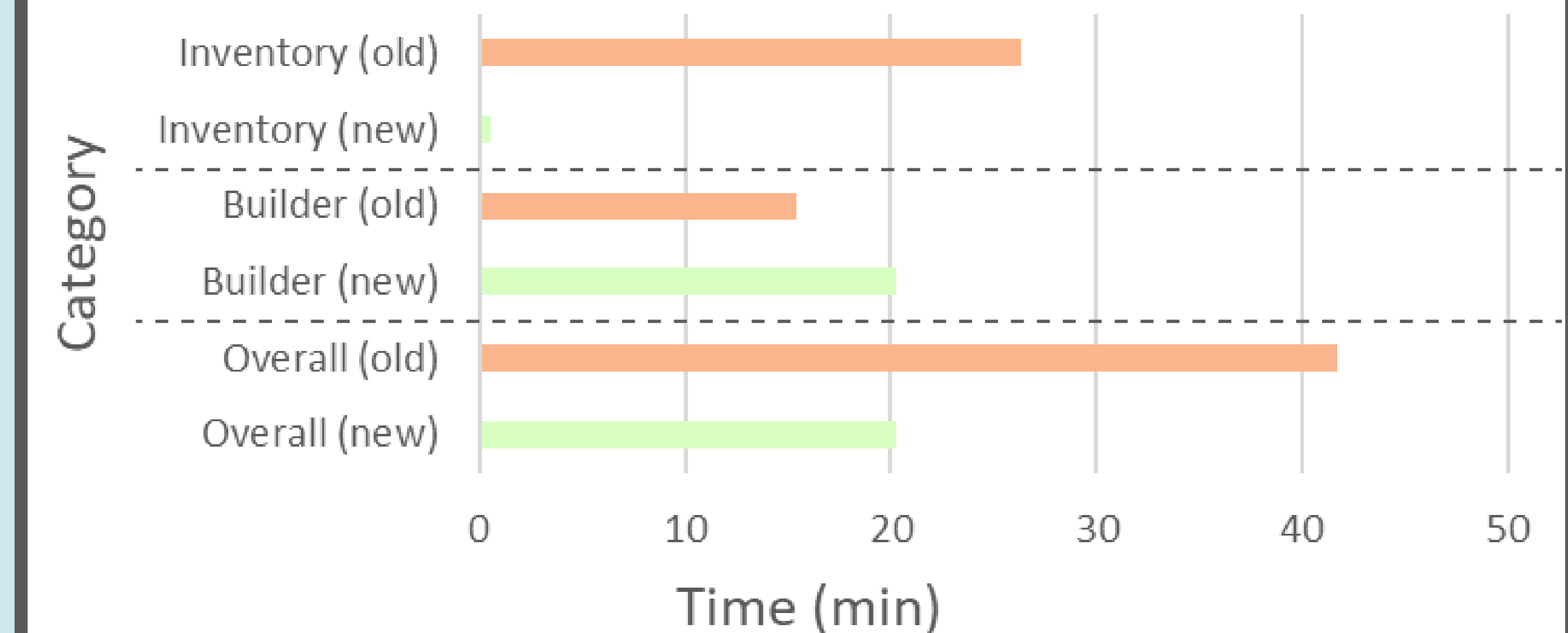
Provided **new storage solutions** for all five sensitive knife edge parts



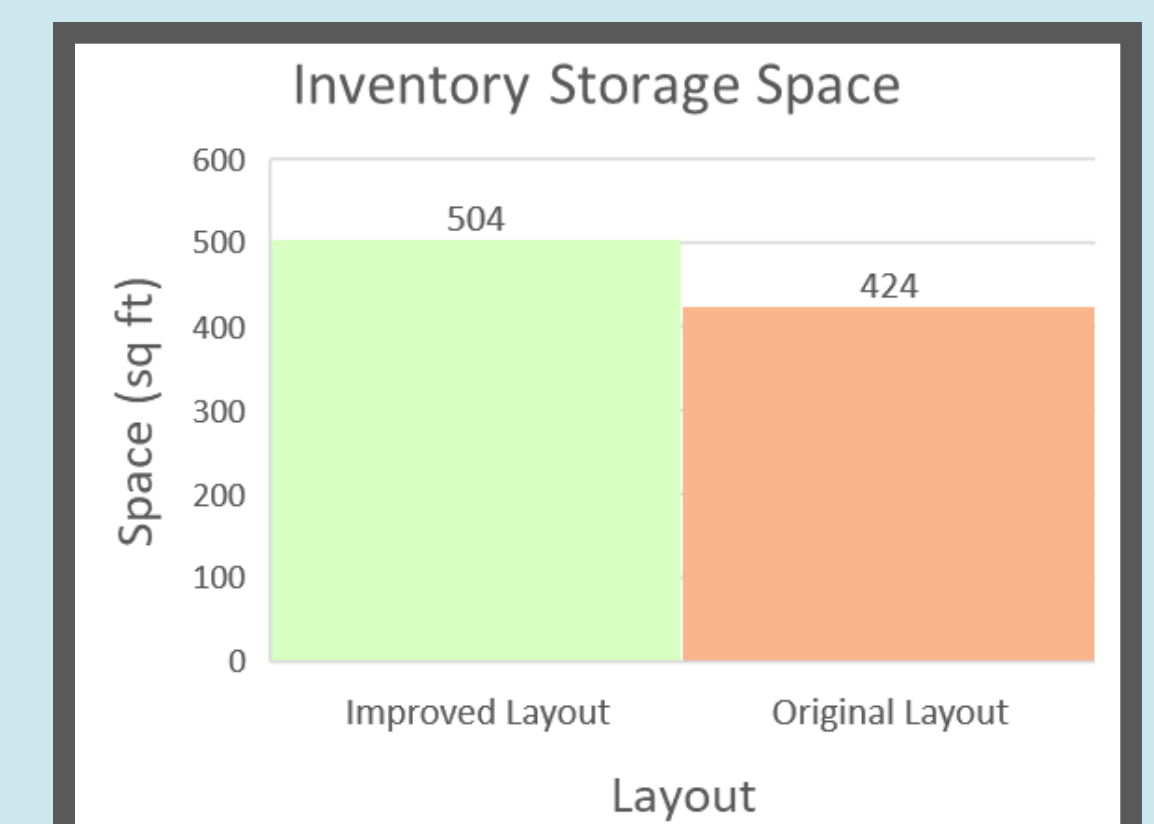
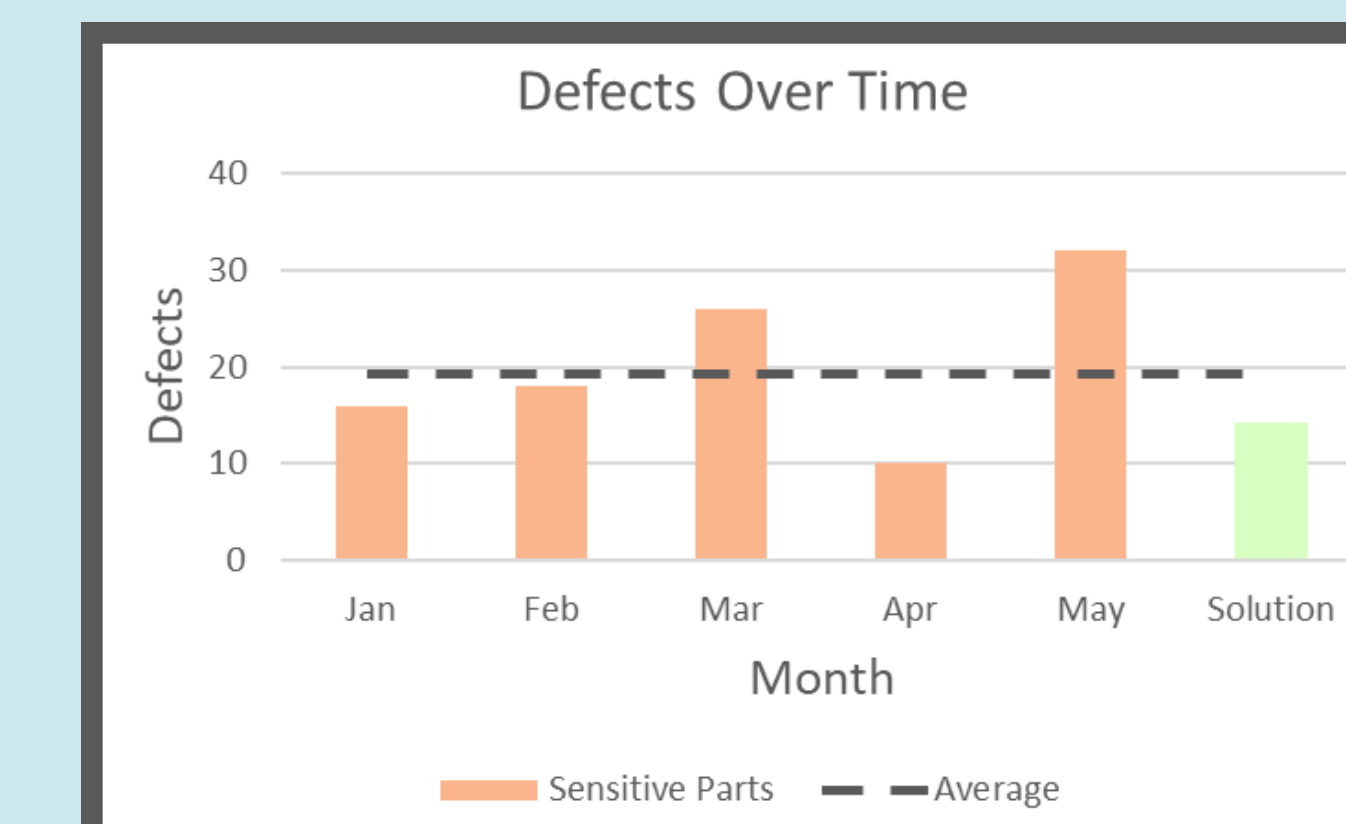
33% reduction in touchpoints and projected **26%** defect reduction

IMPLEMENTATION & ANALYSIS

Process Setup Time Before and After Solution



The slight increase in builder setup time is a result of a more thorough part issuing process that leads to **more precise defect tracking**, and is an essential tradeoff for improved quality



Layout iterations



Part storage designs



Time study pictures

Note: we are unable to share throughput statistics for confidentiality reasons

IMPACT



26%

Projected **reduction** in sensitive part **defects**

113hrs

Projected **time saved** in total rework **per month**

51%

Projected process **setup time reduction** per laser

A special thank you to Patricia Buchanan and Michelle Song (UW ISE), and Alark Choudhary and Markus Wilhelm (Access Laser)