

Group I2.04 – Inking to Innovate

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Problem Statement

The West Texas Lighthouse for the Blind focuses on training and empowering visually impaired individuals in the Tom Green County area. They have successfully tailored their manufacturing processes to suit the needs of visually impaired employees. However, they face a significant challenge in the production of pen caps and need to enhance the manufacturing process for greater efficiency.

Project Purpose

Our goal in this project is to identify and eliminate production bottlenecks within the West Texas Lighthouse for the Blind's pen cap manufacturing process, increasing throughput while sustaining job opportunities for visually impaired individuals.

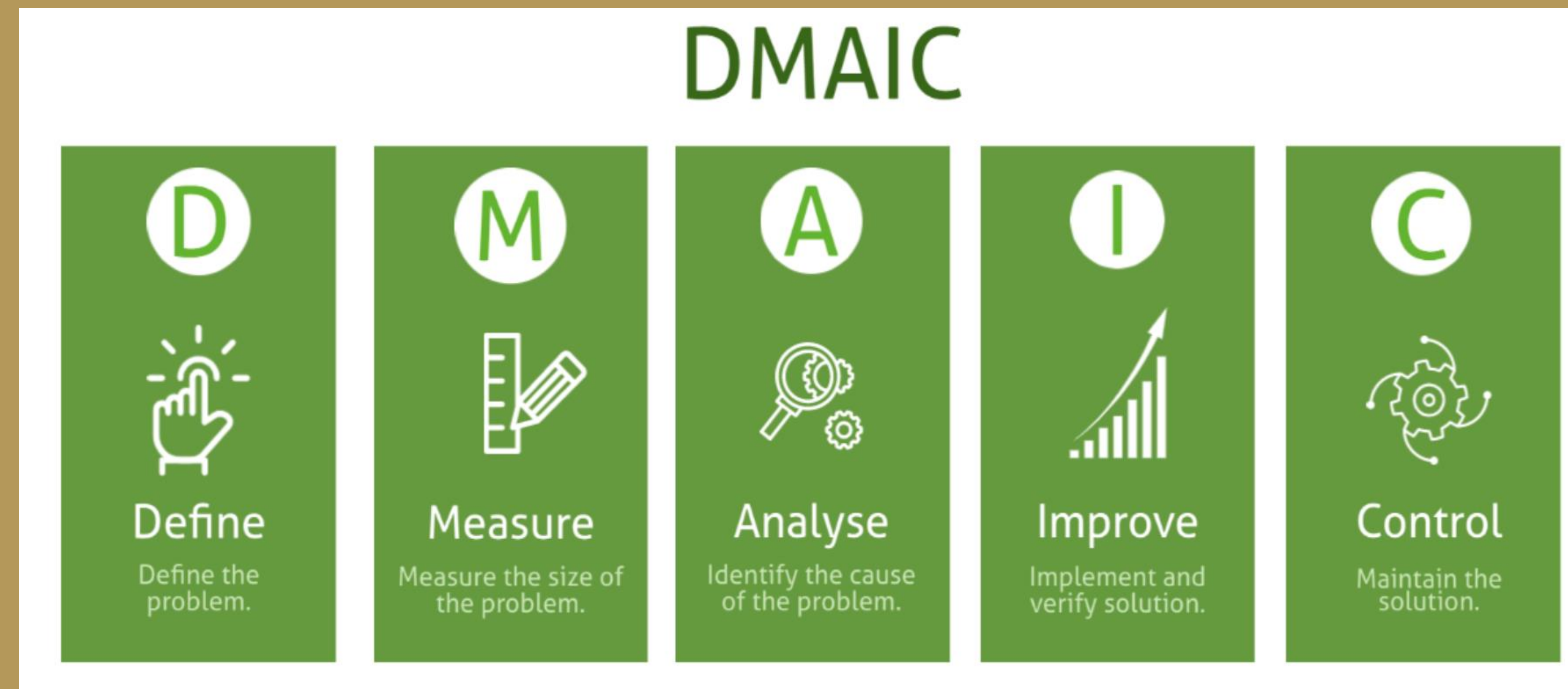
Objectives

Alternative Analysis	40%
M.O.S.T. Analysis	40%
Cost Analysis	15%
Prototype/Simulation	5%

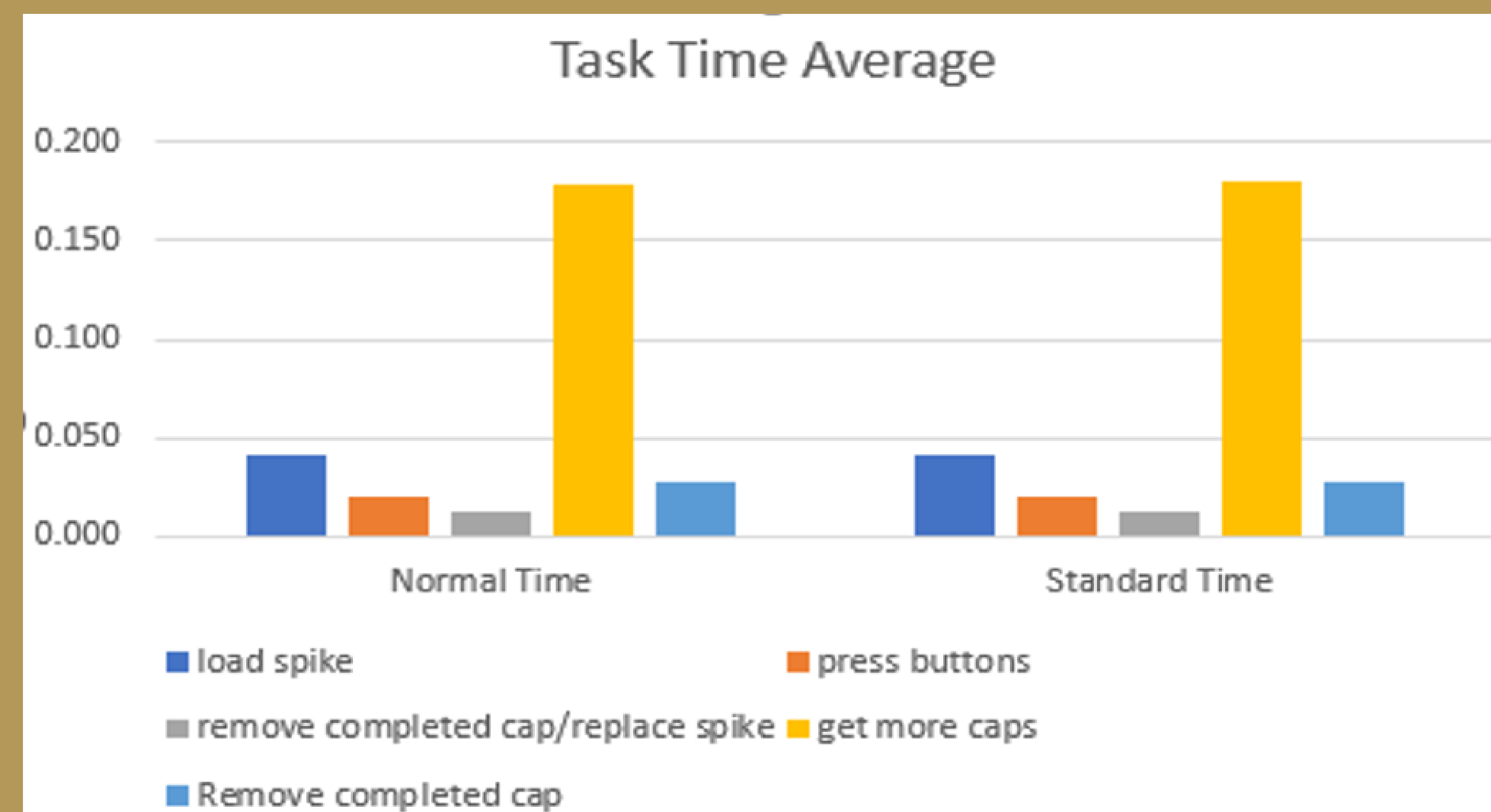
Time Study

	Hold P0		Toss P0		Put P1		Place P3		Position P6	
	ID No	TMU	ID No	TMU	ID No	TMU	ID No	TMU	ID No	TMU
Hold G0			918	10	723	20	39	40	724	70
Grasp G1	725	20	919	30	726	40	727	60	728	90
Get G3	729	40	920	50	730	60	395	80	584	110

Problem Solving Approach



Results



The results quantify the steps of the process and show that the single most inefficient step in the process is when the operator has to reload the blank cap.



The step in the process that includes placing a new blank cap on the workpiece of the pneumatic punch machine ranked as the second most time-consuming. This is due to its immediate succession after the operator reloads the blank caps. Removing these two steps could significantly shorten the process.

Background Information

The West Texas Lighthouse for the Blind is a non-profit organization that strives to include blind persons in gainful employment at their manufacturing facilities.

Based in San Angelo, Texas. Since 1963, the Lighthouse has been promoting self-sufficiency and resourcefulness for visually impaired West Texans by providing manufacturing, logistical and administrative employment opportunities.

IE Team



Kendrick Leggins (Project Coordinator), Jason Ponce (Data Analysis), Christian Sandoval (Project Manager), Izak Salinas (Data Analysis)

Future Plans

Our analysis identified reloading blank caps as the primary time-consuming bottleneck. To optimize the process in the future, we will introduce a tool or machine to dispense caps individually, making it easier for operators during press placement.

Acknowledgements

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