TECHNIFORM™

Final Term Project

Techniform Metal Curving Inc.

OPSM 4320.001
Jennifer Harrison, Robert Smith, Harrison Cook, Brent Arnold Jr., Makarios Michael

Agenda

01 Company Overview

02 Analysis of MPC Process

03 MPC Suggestions

04 “Walk A Mile” Interviewee Experience

05 Conclusion

Company Overview

“Solutions To Shape Tomorrow”

Techniform is a world leader in forming, fabricating and machining of metals for several different industries.

Core Competencies:

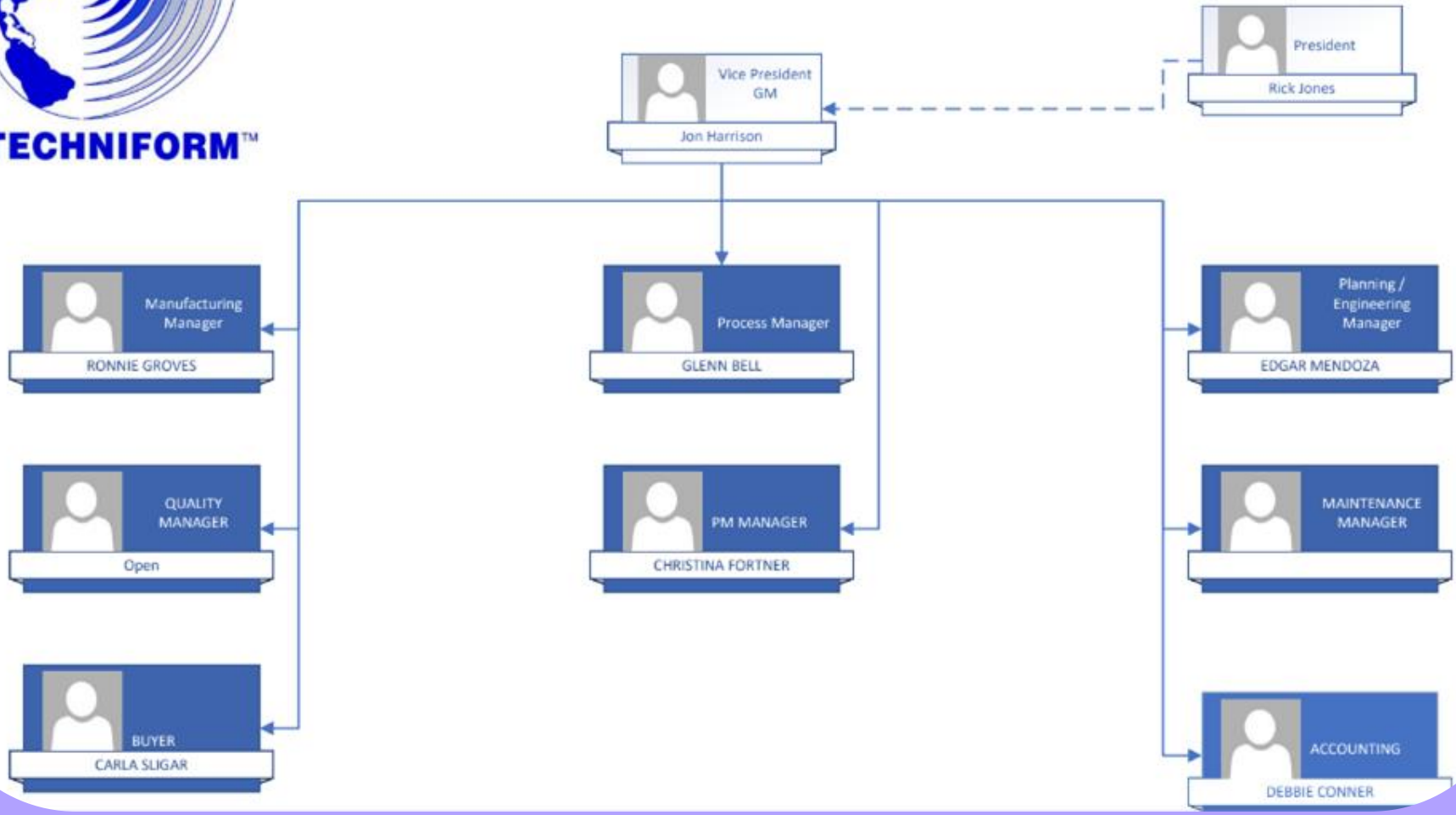
Stretch Forming, CNC Machining, Pipe Bending, Compression Bending, and Sheet Metal Fabrication

Headquarters located in Mabank, Texas.

Current Industries and Products

- Aerospace
- Architectural
- Conveying
- Rail
- Portable Structures
- Automotive
- Signage

TECHNIFORM™


President
Rick Jones
Vice President
GM
Jon Harrison
Manufacturing
Manager
RONNIE GROVES
Process Manager
GLENN BELL
Planning /
Engineering
Manager
EDGAR MENDOZA
QUALITY
MANAGER
Open
PM MANAGER
CHRISTINA FORTNER
MAINTENANCE
MANAGER
BUYER
CARLA SLIGAR
ACCOUNTING
DEBBIE CONNER

Suppliers

Extrusions

- TW Metals
- AMI Metals
- FLACO
- Kaiser Aluminum

Sheet Metal

- Prominox
- Ryerson
- Bralco Metals
- Nova Metals

Heat/Treat Age

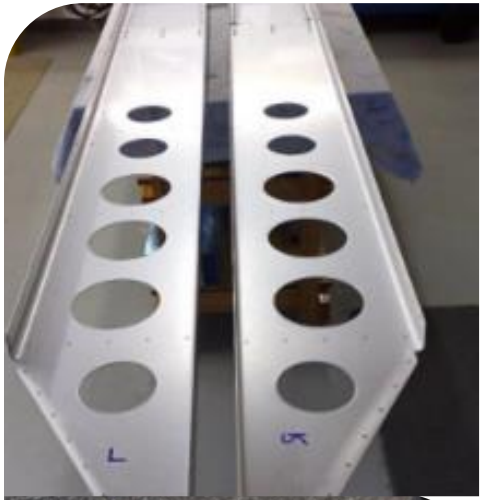
- Metal Finishing- Heat Treat
- Bodycote
- Hi-tech Metal Finishing

Competitors

- Stretch Forming Corporation - 40 years
- Cyril Bank - 80 years

Processing

- 3P
- Metal Finishing
- AAA
- Gamma
- Maximum



Suppliers SWOT analysis

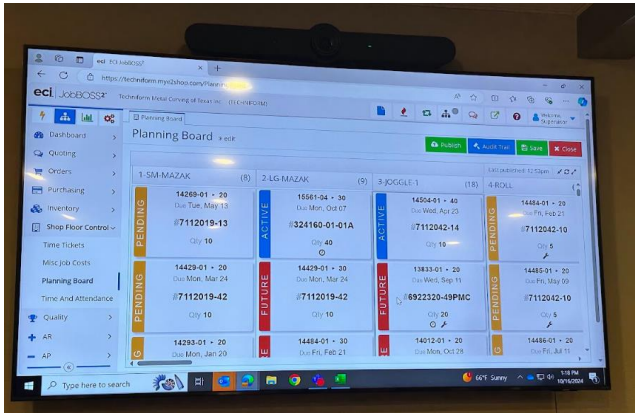
Strengths	Weaknesses
Don't fully rely on suppliers to complete orders, many to choose from per order	Only a number of Approved suppliers for Aerospace quality assurance
Opportunities	**Threats**
Bringing special operations in-house rather than needing outside help such as Painting/Powder Coating	Everchanging/Increase in lead times for aerospace aluminum extruders due to limited quantity available

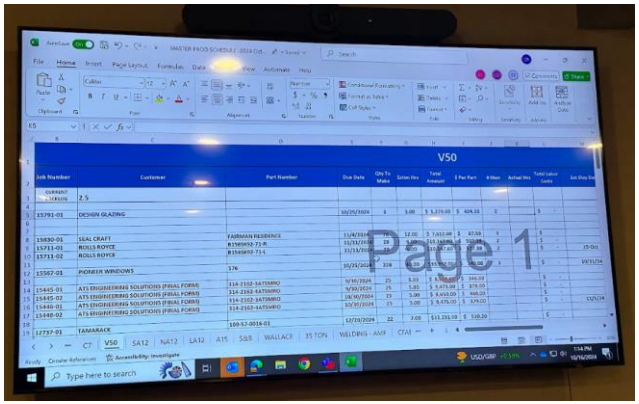
MPC Analysis

Key Components

Held To AS9100 Quality Standards which is a requirement for Aviation, Space and Defense Organizations

- Utilizes a “Make to Order” process
- CRM for Sales – HubSpot
- ERP System – JobBOSS²
- Each Machine has tablets to report to JobBOSS² for real time information





MPC Process

Order and Review

Job is created on the JobBOSS² ERP system with updates on materials required, due dates and design specifications.

JobBOSS² handles materials needed, time scheduling and forecast machine time requirements

Materials Procurement and Manufacturing

Supplies are scheduled and delivered from suppliers

Techniform begins Manufacturing of orders and techniques (Stretch Press, CNC, Compression bending)

Each stage is logged with tablets located at each Machine to track progress and ensure quality

Finishing and Packaging

Projects undergo finishing touches and a final quality inspection is done before packaging

Finished parts are packaged and shipped

Job is closed out through JobBOSS²

Strengths and Weaknesses of the MPC Process

Strengths

- Streamlined workflows with high quality standards
- High Resource Utilization rates
- Strong coordination among teams
- Workers are cross trained on multiple machines and techniques
- High value in company culture and mission

Weaknesses

- Inconsistent scheduling amongst workers and job schedules
- Limited Automation techniques or inability to automate processes
- Generation of excess Scrap

MPC Suggestions

Core Issue: Scrap Reduction

Techniform's monthly performance

- Sales: $1,000,000/month
- Production: 3,500 parts from 350 orders

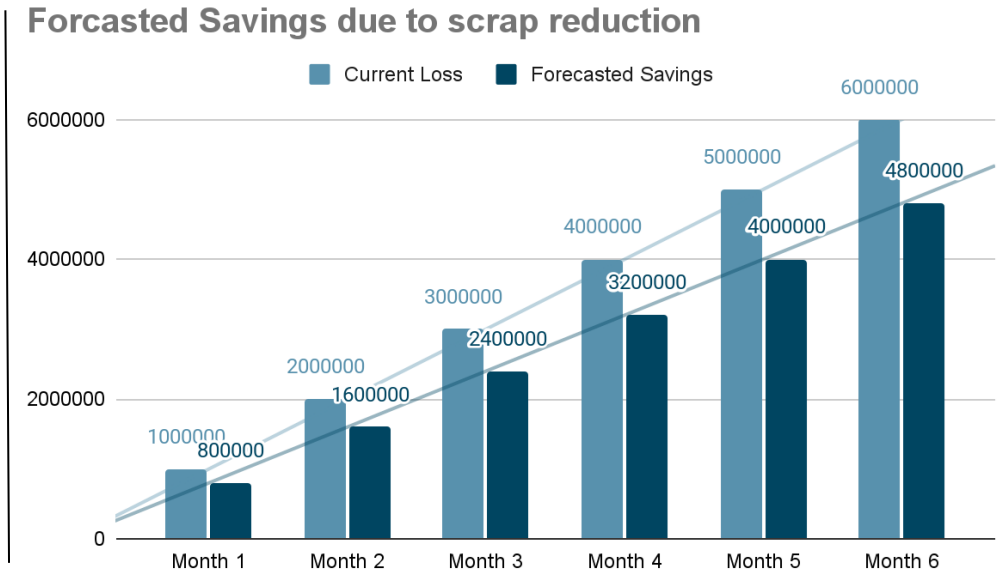
Impact of scrap:

- Average loss: 1 part per order
- Cost per part: $285
- Monthly loss: ~$100,00 due to scrap

Scrap Reduction

By implementing Six Sigma methods to reduce scrap, we can reduce scrap rates by **20%** within a **5 month** implementation plan

Projected savings: $20,000 per month



Initial Project Proposal

Develop DMAIC plan

Add specific cause codes to JobBOSS² that can track:

1. Tool Type & Reason for loss
2. In-process scrap: Operator error, machining issues, material quality
3. Defects

Develop Key KPI's

Collect detailed Data for Analysis

Generate Key Performance Indicators:

- Scrap by Tool Type
- Scrap Rate by Process
- Cost of Scrap material
- Time Spent on Rework
- Machine Wear on Scrap Rates

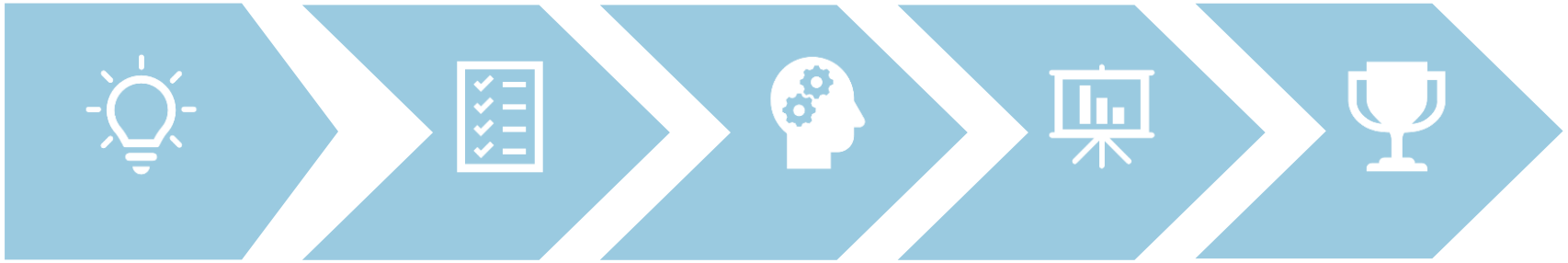
Begin data analysis

Root-cause analysis using collected data

Pareto or Fishbone analysis to determine potential root cause

Brainstorm potential fixes for implementation

Scrap Reduction Implementation Plan



Define	Measure	Analyze	Improve	Control
• Define Project Goals for scrap reduction • Begin gathering initial data and map processes	• Generate Systems to collect and analyze data • Implement collection into JobBOSS	• Analyze data and test hypothesis • Root-Cause analysis techniques such as Pareto or Fishbone Analysis	• Process Control • Implement Pilot adjustments for improvements	• Measure Results • Fully Implement successful changes • Repeat for continuous improvement cycles
Month 1	Month 2		Month 3/4	Month 5

"Walk a Mile" Interview Insights

Jon Harrison

“If it flies, beautifies, supports, transports, connects, protects… It's made possible through ***Techniform.***”

Jon Harrison: Insights from Leadership

Started at Techniform at **15** as a **Janitor**. Since has gained **36 years of expertise** through various roles in tooling, sales, planning and engineering. Currently serves as the **Vice President** and oversees Texas operations.

Professional Highlights

Expanded Techniform from just aerospace to diverse industries

Holds AIA certifications; Techniform is AS9100 certified

Engages in many workshops,Trade Shows and Conferences

Leadership Style

Hands-on across all aspects of operations

Trusted for expertise and decision-making

Encourages input from cross-functional teams to develop effective solutions.

Key Responsibilities

Morning: Banking, Emails, Sales Forecasting

Production Meetings: Addresses challenges and sets priorities

Contracts: Pricing, negotiations, internal planning

Floor Oversight: Ensures smooth workflow and progress towards goals

Layout and Flow

- Product manufacturing process is done via cellular layout
- Flow of materials through process is V-shaped.
- Potential bottleneck could be lack of automation

Manufacturing path is very linear in nature but material/part storage can be tricky due to volatile demand and schedule.

Key Observations

Labor

Techniform has very robust staffing, but this can cause a large sum of profit to be directed towards direct labor costs.

Storage

Storage of spare parts is very simplistic, but could be updated based on business needs. Techniform is Make-To-Order, so going through and updated what parts are actually needed or is taking up space.

Material Handling

Material scrap is one of the biggest points of improvement for profit savings.

Conclusion

Techniform's Strengths:

- **Industry leader** in Metal curving, serving diverse industries
- Maintains **high quality control** and standards (AS9100 Certification)
- Strong Coordination between departments and **cross-trained workforce**

Opportunities for Improvement:

- **Scrap reduction** using Six Sigma to save $20,000/month
- **Reduce reliance on external services** like painting and powder coating

---

Final Thoughts

Techniform commitment to a quality first enables its leadership in the metal forming industry. Techniform is well-positioned to sustain growth while delivering quality products to its customers.

Thank you

TECHNIFORM™

"Solutions To Shape Tomorrow"