Streamlining Operations with Lean Methodology

M-D Building Products

About Client

MD Building Products, a family-owned enterprise, takes pride in crafting over 90% of its products within North America. Renowned for their custom aluminum and vinyl extrusion services, we serve as a trusted partner for numerous manufacturers. They have a longstanding history of North American manufacturing, offering secure, high-quality, and steady employment opportunities for over 800 individuals across eight locations.

Executive Summary

MD Building Products, a prominent family-owned enterprise specializing in custom aluminum and vinyl extrusion services, faced challenges in updating their quotation and sales order processes. SRI, with a targeted approach, streamlined data entry and automated key processes, contributing to enhanced operational agility and business resilience. The tailored solutions implemented by SRI significantly transformed MD Building Products' operations, fostering stability and steady expansion.
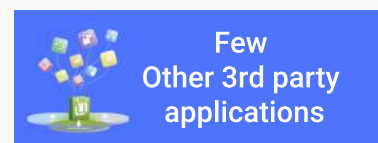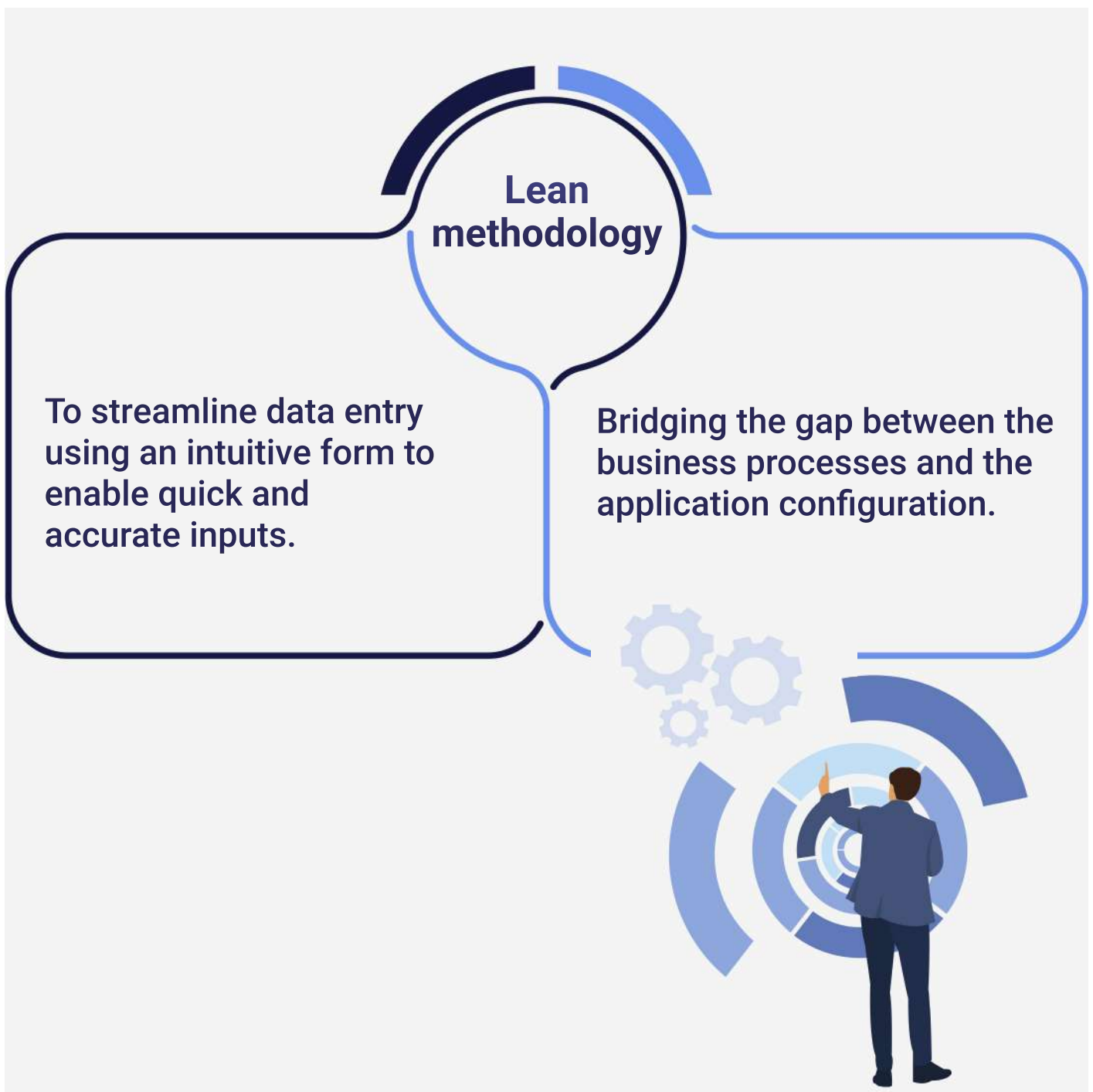
Type of Enterprise	Headquarters	Software Used
TYPE 4	Oklahoma City	ORACLE — Few Other 3rd party applications

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In collaboration with MD Building Products, SRI took on the challenge of enhancing operational efficiency and business resilience. SRI employed a systematic approach to identify and implement improvement opportunities, leveraging technical experts along with our proprietary lean methodology for a detailed review of various possibilities.

Lean methodology framework has been integrated into MD Building's Management System and Quality Management System, reflecting a proactive commitment to long-term efficiency. The integration of Lean principles, such as waste identification and systematic data-driven insights, played a pivotal role in this transformation.

Lean methodology

To streamline data entry using an intuitive form to enable quick and accurate inputs.

Bridging the gap between the business processes and the application configuration.

Challenges and Setbacks

Quotation Price Update

The client faced issues in the process of updating quotation process.

Sales Order Process

Supply allocation to close deals with a 10% order and reservation flexibility.

Seasonal Items Planning

Allocating extra non-seasonal supply for seasonal items without affecting their demand.

Setbacks in Business Processes

Implementing tech processes involves defining value, mapping current states, and classifying waste.

SRI's Solutions & Approach

Defined Value Stream

End-to-end Mapping → Mapped out the entire process from the initial concept or raw material acquisition to the delivery of the final product or service.

Customer Focus → Identified and focused on those steps and activities that directly contributed to meeting customer needs or requirements.

Value Stream Analysis → Analyzed the entire value stream to identify processes that had bottlenecks, inefficiencies, or high costs.

Improvement Focus → Based on the analysis of key processes and areas for improvement, selected specific focus areas for improvement projects.

Mapping the Status of the Process

Decision Points & Handoffs
Clearly marked decision points and highlighted handoffs, specifying responsibility or information transfer between individuals or departments.

Data Integration
Integrated relevant data into the process map to provide a more accurate representation.

Time Metrics
Assigned time metrics to each step to document the time taken for completion.

Delay Representation
Queues represented delays or wait times between steps and were crucial in understanding potential bottlenecks or areas for improvement.

Process Identification
Highlighted any instances where the process looped back on itself. This could have occurred due to iterations, revisions, or rework.

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Identifying and Classifying Waste

Identified and classified waste in the business process using Lean principles (TIMWOOD: Transportation, Inventory, Motion, Waiting, Overproduction, Overprocessing, and Defects) by:

Known Cause
Identified the root cause for each type of waste.

Impact
Assessed and documented the impact of each waste type on the process and business objectives.

Waste Type
Categorized each waste based on the seven types in Lean methods.

Collection of Data & Metrics

Determined issue occurrence frequency

Pinpointed specific causes

Assessed impact on workflow

Explored system/process configuration.

Understood intricacies contributing to challenges.

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Prioritizing Improvement for Opportunities

→ Process Launch

Launched a thorough process to prioritize improvement opportunities.

→ Definitive Research

Conducted research to identify and explore execution options

→ Prioritising Options

Clarified and refined options as necessary

→ Expert Coordination

Engaged technical experts for a deep review of current configurations.

→ Demonstrated a systematic approach

identification, research, debate, modification, and final ranking.

Created Roadmap

Our SRI team created a roadmap to implement the ranked improvement opportunities. They figured out the best timing for each improvement and identified the resources and costs involved

Execution of the Roadmap

SRI's team efficiently followed the schedule, prioritizing key enhancements and optimizing resource usage along the roadmap. We ensured the right people had the necessary resources and knowledge.

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Sales Order Process

→ SRI used Lean methodology to identify key processes impacting business outcomes.

→ A detailed process map highlighted anomalies affecting order closure, with a focus on reducing waiting times and overproduction

→ Data-driven insights prioritized changes to enhance customer value.

Process Setbacks in Business

→ SRI improved business processes by mapping tech adoption

→ The team used data to find issues, cut waste in processing, waiting, and defects

→ Prioritized changes based on challenge frequency and impact.

Implementing Lean Process

→ SRI embraced Lean principles, encouraged teamwork, and fostered continuous improvement.

→ Engaging employees at all levels, data-driven insights, enhancing efficiency. Training on Lean principles equipped the workforce with essential skills.

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Transformative Outcomes Delivered by SRI

Error-Free Operations
Achieved a zero-tolerance point for errors in MD Building Products' processes.

Increased Efficiency
The gap between business processes and technology reduced by an impressive 98%.

Business Impact

Cost Optimization
Lean principles led to a 25% reduction in operational costs for MD Building Products.

Automation Impact
Integration of automation cut processing time by 40%.

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Conclusion

MD Building Products experienced significant improvements in operational efficiency, cost reduction, and error prevention through SRI's tailored solutions and Lean methodology. Impressed with the outcomes, SRI is now extending its impact by rolling out similar processes across other business processes. Furthermore, SRI has developed a lightweight Lean methodology framework for Proof of Concept (PoC) implementations. This framework is being integrated into MD Building's Management System (MS) and Quality Management System (QMS), showcasing a proactive approach towards sustained efficiency and operational excellence. The collaboration between SRI and MD Building Products stands as a successful model for leveraging Lean principles to drive transformative results and ensure long-term business success.