

PathStone Group



PathStoneGroup.com



Lean Principles

Agenda

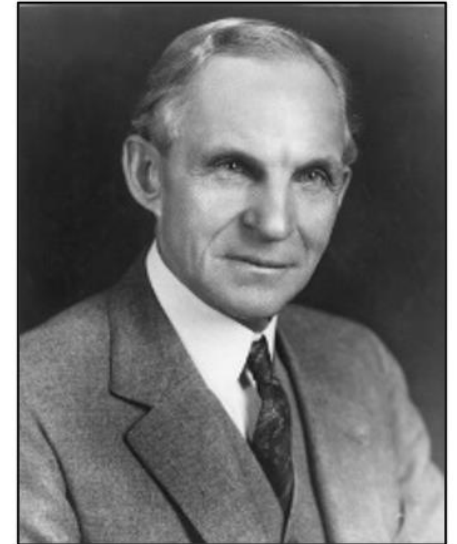
1. Lean Principles: What is it ?
2. Lean Principles:
 - a) Identify Value
 - b) Value Stream Mapping
 - c) Flow Creation
 - d) Establish Pull
 - e) Seek Performance
3. Takeaways



Introduction

What is it ?

Henry Ford understood well the impact of process speed on cost. His "process" was fabulously successful for a dozen years... but ultimately failed because it could only produce one product. The goal of Lean is to **quickly make-to-order a profusion of different products** with the low cost first attained by Ford.



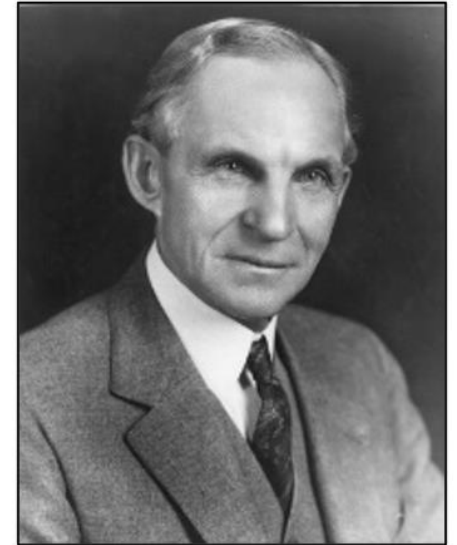
"Vision without Execution is just Hallucination."

Henry Ford (1863 -1947)

Introduction

What is it ?

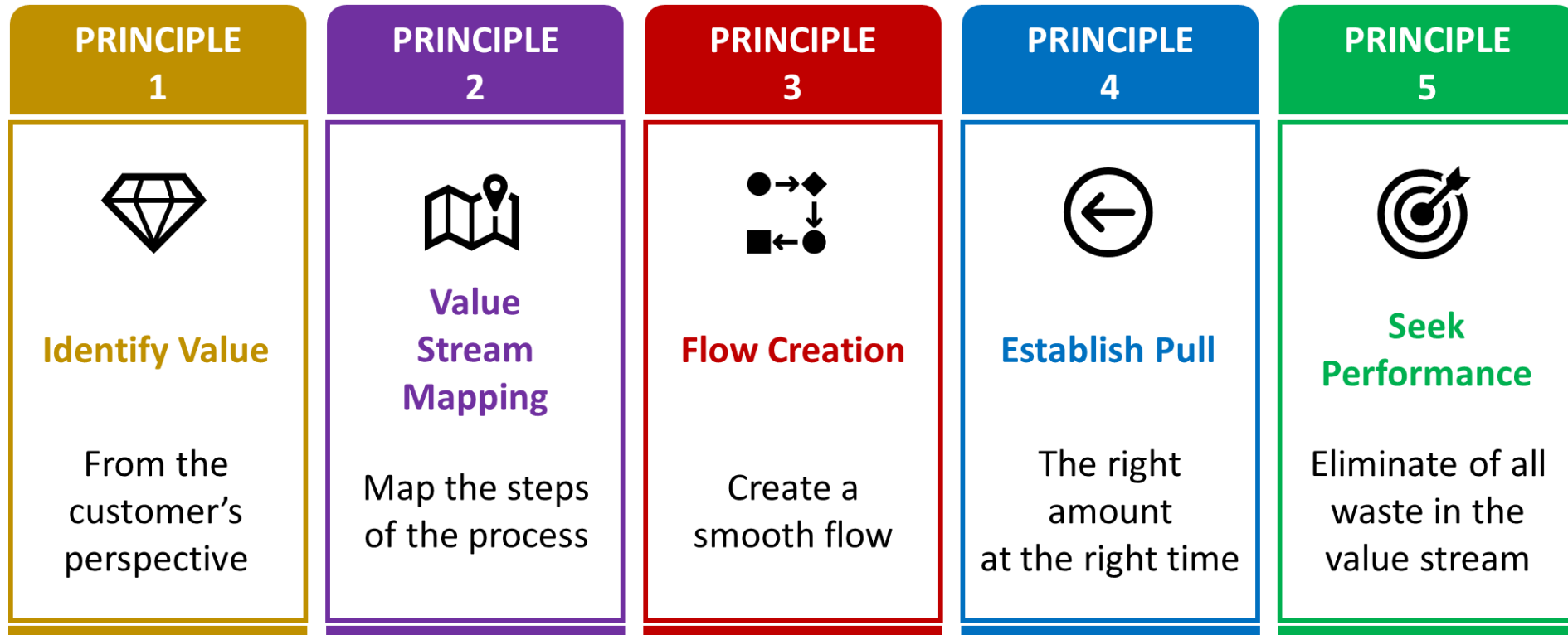
Toyota initially proposed the **lean manufacturing principles** (also known as **Lean Cycle**) to improve the overall productivity of manufacturing while reducing cost. The strategy is based on 5 key principles:



"Vision without Execution is just Hallucination."

Henry Ford (1863 -1947)

Introduction





Identify Value

Define what the value to the end customer is.

- Value is what the **customer will pay for**. It is paramount to discover the actual or latent needs of the customer.
- The customer is **external**, but also **internal**.
- There are **many techniques**, such as interviews, surveys, demographic information, and web analytics that can help us decipher and discover what end customers find valuable.

Internal customer



Is anyone in the organization who needs assistance or interaction from another to fulfill their job responsibilities.



Identify Value

The difficulty in identifying what is customer need and value



How the customer explained it



How the project leader understood it



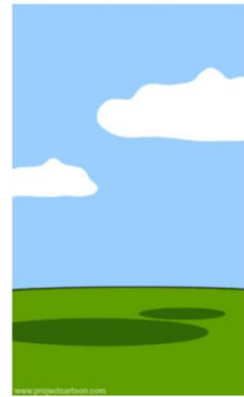
How the analyst designed it



How the programmer wrote it



How the business consultant described it



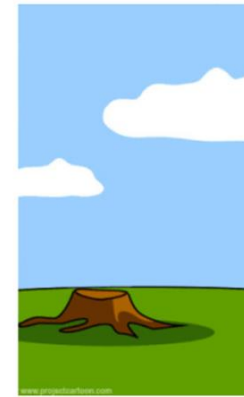
How the project was documented



What engineering installed



How the customer was billed



How it was supported



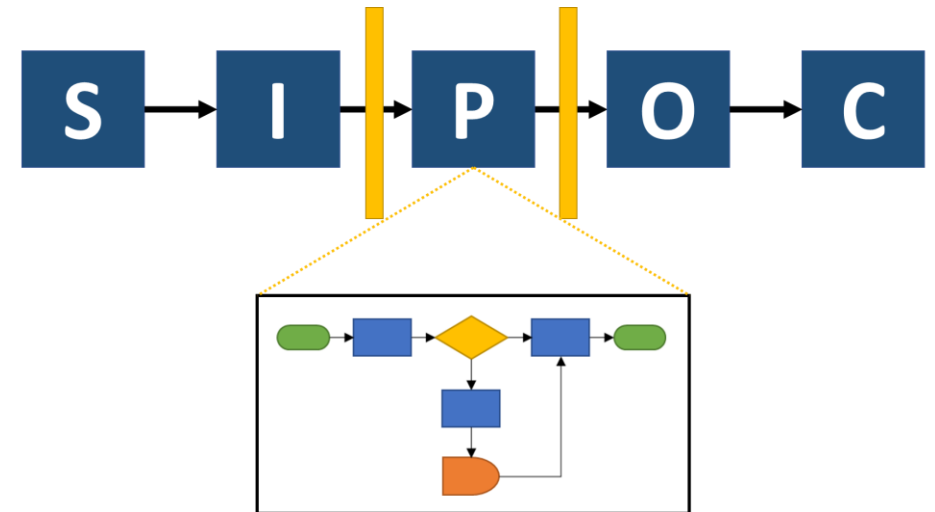
What the customer really needed



Identify Value

Tools to Identify Value:

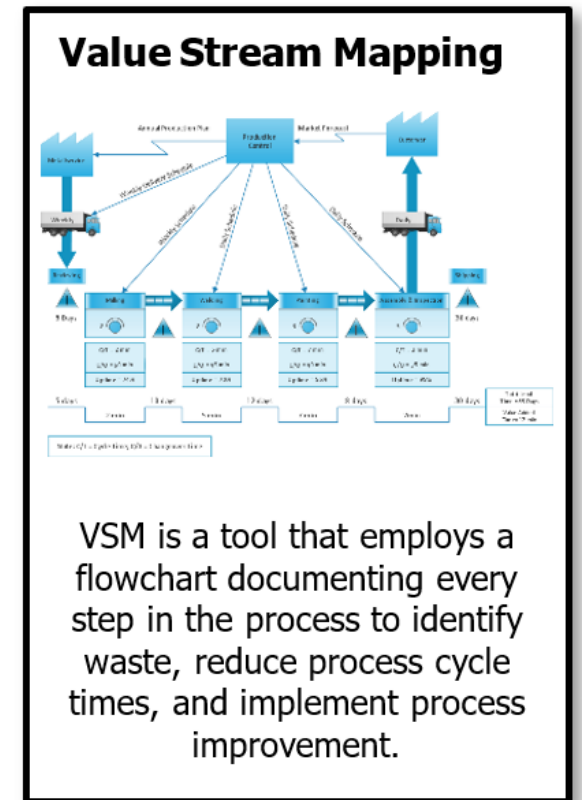
1. Process Walk Observation (Gemba Walk).
2. The Priority Matrix.
3. Affinity Diagram.
4. SIPOC diagram.
5. Metrics and KPI.



Value Stream Mapping

Use the customer's value as a reference point and identify all the activities that contribute to these values.

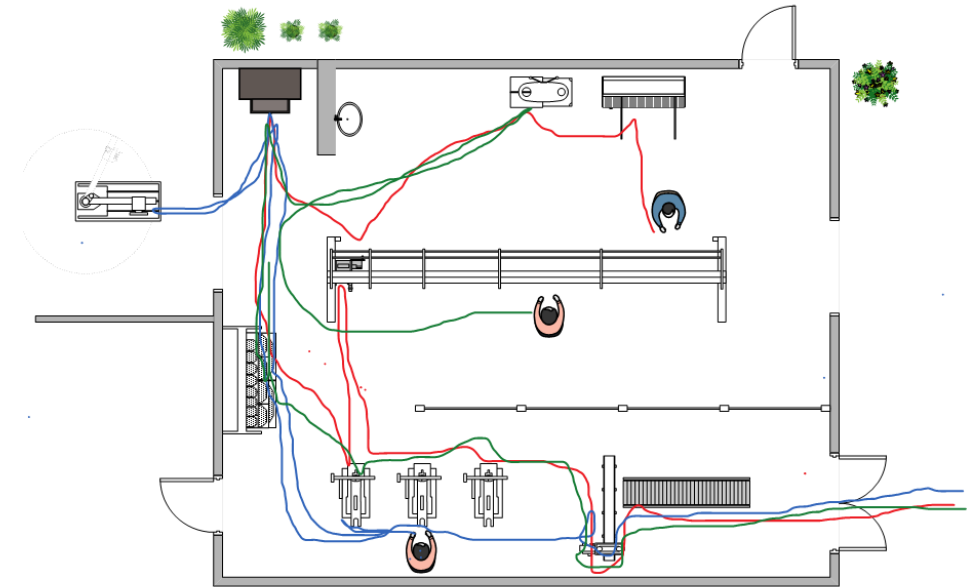
- The non-valued added but **necessary** and the non-value and **unnecessary**.
- By reducing and **eliminating unnecessary processes or steps**, we can ensure that customers are getting exactly what they want while **reducing the cost** of producing that product or service.



Value Stream Mapping

Tools for the Value Stream Mapping:

1. Value Stream Mapping.
2. Value-Added Analysis.
3. Spaghetti Diagram.
4. Process Mapping.



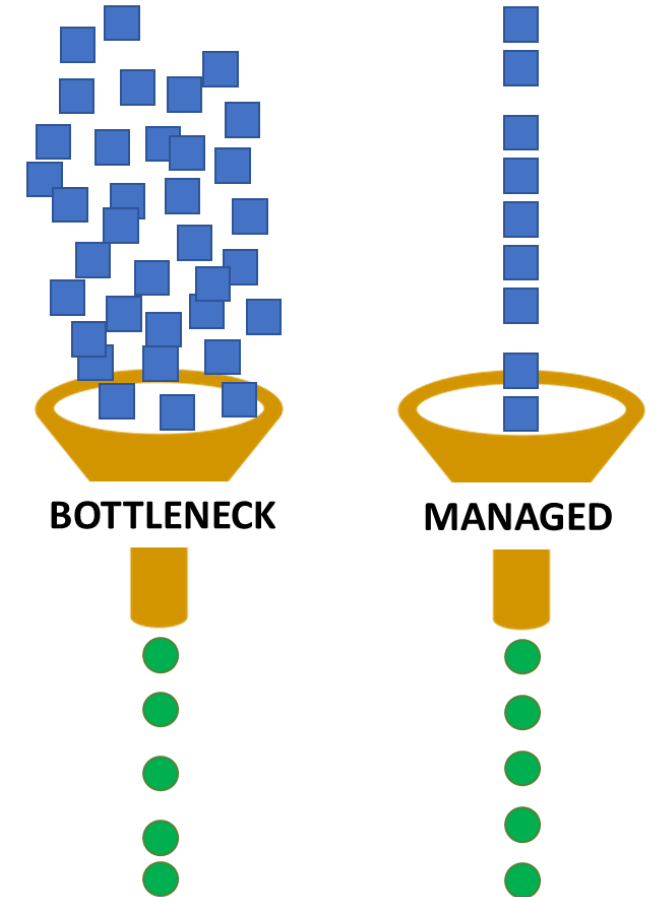


Flow Creation

Run smoothly without interruptions or delays.

Focus on activities flow, including:

- **Breaking** down steps,
- **Reconfiguring** the production steps,
- **Leveling** out the workload,
- Creating **cross-functional** departments,
- **Training** employees to be multi-skilled and adaptive.
- **Robust** preventive maintenance programs.





Flow Creation

Tools for Flow Creation:

1. One-Piece Flow (Minimum Lot Size).
2. Quick Changeover (SMED).
3. The 5 Why's.
4. Overall Equipment Effectiveness (OEE).
5. Total Productive Maintenance.
6. Process Observation: Time and Motion.
7. Metrics to Quantity Production Flow.

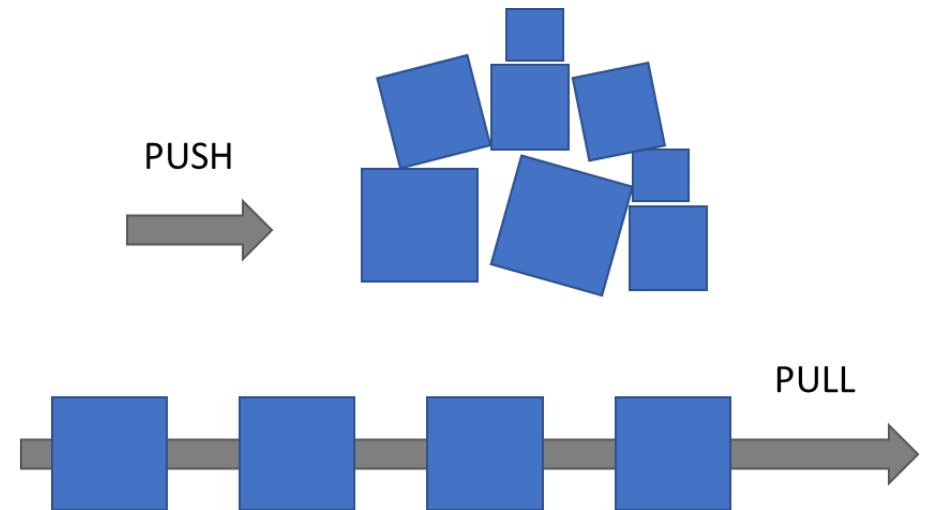




Establish Pull

Limit inventory and work in process (WIP) while sustaining a smooth flow of work.

- A pull-based system allows for **Just-in-time** delivery and manufacturing.
- Pull-based systems are created from the needs of the end customers.

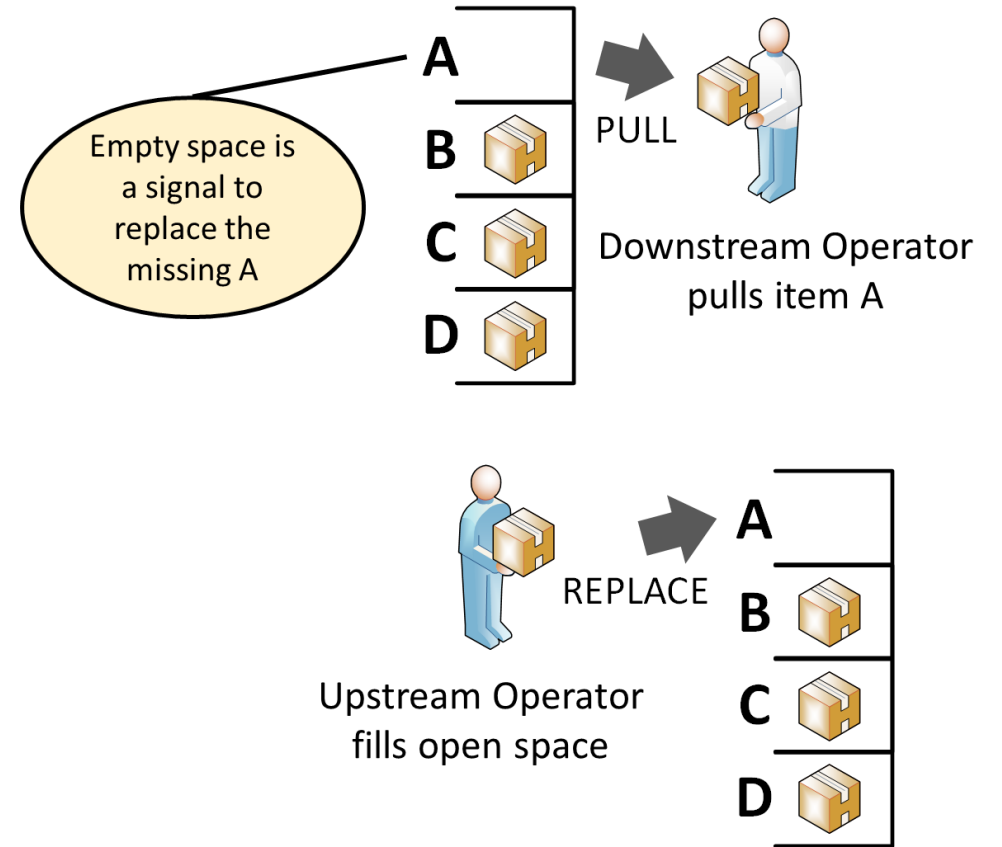




Establish Pull

Tools to Establish Pull:

1. Process Design.
2. Pull Systems.
3. Standard Work.
4. Line Balancing.





Seek Performance

Seeking performance or pursuing perfection

- Aims to **eliminate all the Waste** in the Value Stream.
- It makes lean thinking and continuous process improvement a **part of the organizational culture**.
- Integrates the Continuous Improvement **Roadmap** to pursue **Operational Excellence**.

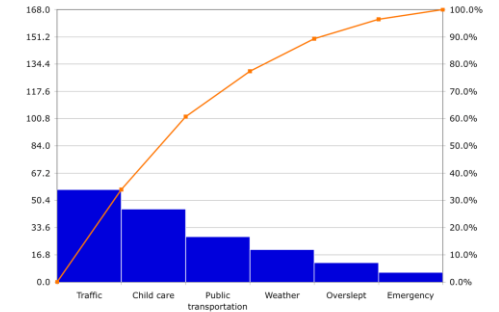
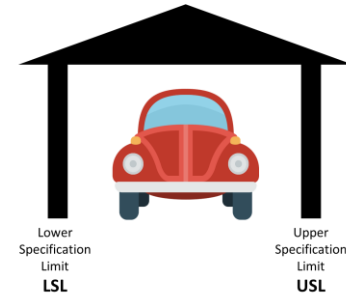




Seek Performance

Tools to Seek Performance:

1. Mistake-Proof methods (Poka-Yoke).
2. Cause-and-Effect Diagram.
3. Pareto Diagram.
4. Histograms.
5. Capability and Process Performance.
6. Failure Mode and Effects Analysis: FMEA.
7. Statistical Process Control.



Takeaways

We learn about implementing Lean methodologies to:

- Eliminate waste
- Reduce flow time
- Increase capacity
- Reduce inventories
- Increase customer satisfaction
- Eliminate bottlenecks
- Improve communication



Takeaways

- **Identify value:** Define what the value to the end customer is.
- **Map the value stream:** Identify all steps in our process and eliminate those that do not create value.
- **Create flow:** Make the value steps occur in a tight sequence to provide as much value to the customer as quickly as possible.
- **Establish pull:** Make it so that customers are demanding or seeking the product rather than us having to push it on them.
- **Seek performance:** Strive for perfection by using continuous improvement, eliminating waste, making reliable processes, and following the principles.



Thank You



PathStone Group



PathStoneGroup.com

Copyright notice -

This content is copyright of © PathStone Group 2022. All rights reserved.

Any redistribution or reproduction of part or all of the contents in any form is prohibited other than the following:

- you may print or download to a local hard disk extracts for your personal and non-commercial use only
- you may copy the content to individual third parties for their personal use, but only if you acknowledge the PathStone Group website as the source of the material

You may not, except with our express written permission, distribute or commercially exploit the content. Nor may you transmit it or store it in any other website or other form of electronic retrieval system.

Lean Principles

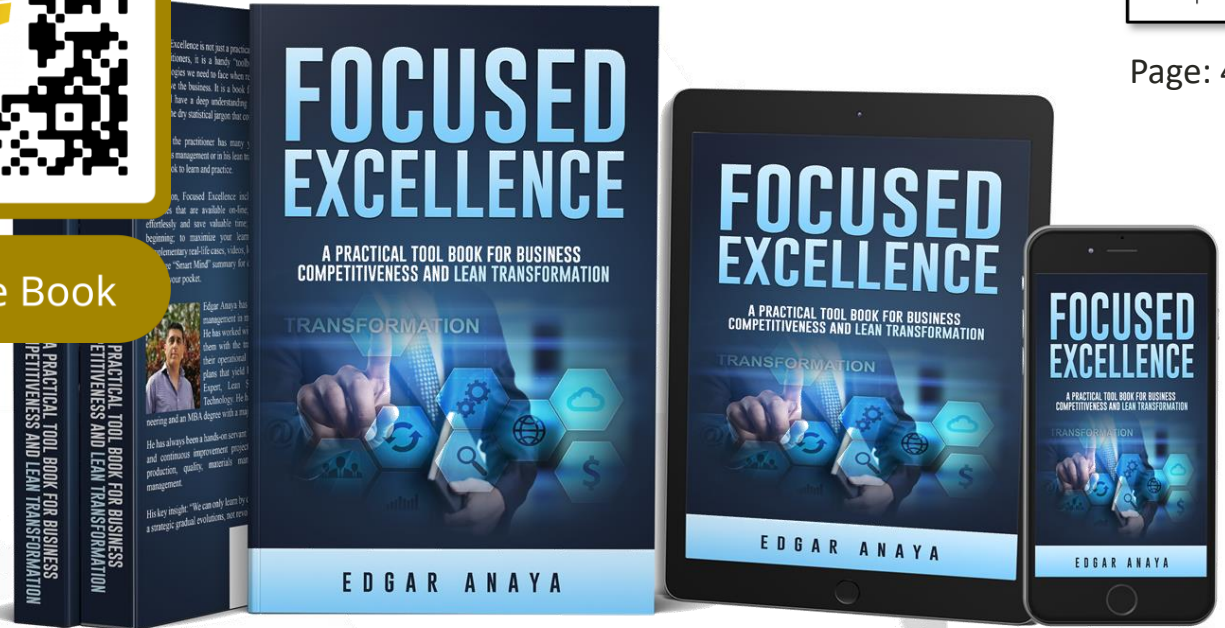
PathStone Group



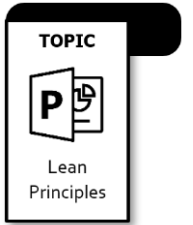
PathStoneGroup.com



Get the Book



edgar@pathstonegroup.com



Page: 49

Reference: Focused Excellence
by Edgar Anaya
© 2022

A Practical Tool Book for
**Business Competitiveness and
Lean Transformation**