NEWSLETTER

Arête

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Arête Vol 53

Dear reader, we are delighted to bring you yet another edition of Arête. We have endeavoured to make each edition of Arête as fresh and content rich as possible. This time around we have added new case studies and knowledge nuggets, which we're sure you will find intriguing and enlightening. Please feel free to share your thoughts and views by writing to us at knowledge@ssa-solutions.com

Happy reading!

Chairman's desk

Dear reader,

Welcome to a new edition of Arete! In this edition, we feature a case study on *Manufacturing Re-engineering* at a *Kitchenware manufacturing company in India*. In the Knowledge nugget section, we present a piece on the concept of "Hansei" and how it plays an important role in lean manufacturing as it is one of the keys to Kaizen.

We have also shared my playlist on the subject "Enigma of Lean" which explains how Lean can be used as a vehicle for transforming the entire organization to achieve a competitive edge.

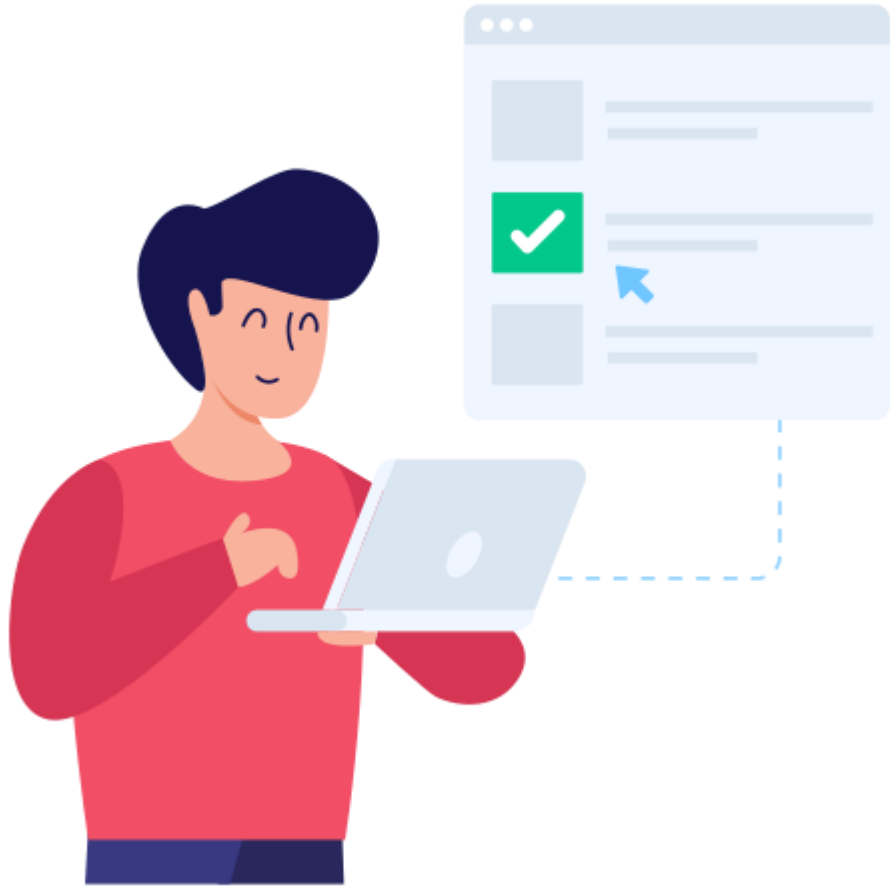
In the Useful resources section, we have shared an Excel template on "*Root Cause Analysis Chart*" which is a very important and helpful tool in identifying "root causes" of problems or events and an approach for responding to them. The template covers the following tools of RCA "Fish-Bone Diagram or Ishikawa Diagram" & The "5-Whys" Analysis" for the benefit of our readers.

Wish you a happy reading and, as always, I welcome your feedback!

Knowledge Nugget: Hansei

What is Hansei?

- Hansei is a Japanese word that means introspection or observation of one's reflection. The word “Han" means to change or turn over, while "Sei" means to look back upon and examine oneself.
- Hansei is a systematic approach used to recognize and contemplate committed mistakes in the project life cycle that helps understand misconception, inaccuracy, failure, and errors.
- It helps organizations comprehend appropriate action and how it can be improved to avoid recurrence of the issue.
- Hansei is commonly performed after projects are completed, during year-end reviews, or as part of employee self-assessments.



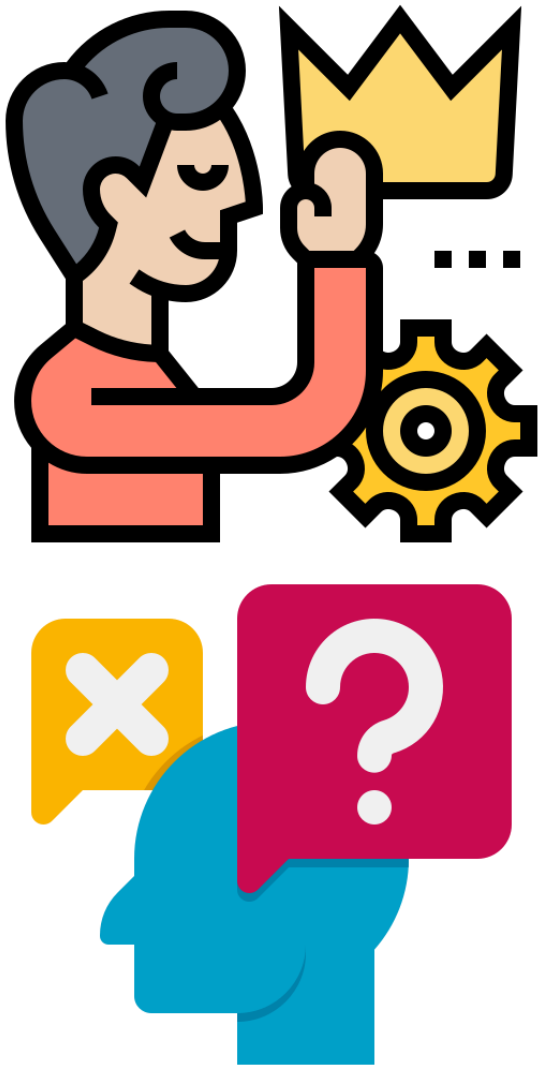
https://safetyculture.com/topics/hansei/

Knowledge Nugget: Hansei

Importance of Hansei

- Hansei plays an important role in lean manufacturing as it is one of the keys to Kaizen. It is a continuous practice to improve decision-making when an employee has self-realization of the mistakes that occurred in the past. It can help the organization in implementing continuous improvement and reap the following benefits:

1. Improve employee self-esteem.
2. Prevent reoccurrence of the incident.
3. Prepare the right approach to solve the problem.
4. Discover what went wrong and what can be done to improve the process.



https://safetyculture.com/topics/hansei/

Knowledge Nugget: Hansei

How to perform Hansei ?

- There is no formal format in performing Hansei as it can be done in a personal reflective manner or in a team setting. It can be a brief reflection of performances and ideation of what went wrong. Here are the basic steps to perform Hansei –

1. **Identify the problem** – Hansei looks at personal failures rather than systemic or process issues. It can be gauged on a personal level based on employee performance in a project life cycle. Begin with classifying the problem and determine which area of focus you want to reflect on.

2. **Ask Self-Reflective questions** – Self-reflective questions will help understand the reasons and assumptions behind weaknesses and committed mistakes. It helps comprehend failures by not blaming other people and being emotionally attached to them. Accept the accountability and admit undesirable outcomes to effectively plan on how to improve in the future.

https://safetyculture.com/topics/hansei/

Knowledge Nugget: Hansei

3. **Plan the next actions** – Review and analyze answers to self-reflection questions and commit yourself to rectification and improvement needs. Break down problems into smaller issues and create a detailed action plan on how it would improve and prevent the same mistakes.

- The main goal of Hansei is to identify problems, develop rectification, and communicate lessons learned within the organization to help prevent the recurrence of multiple failures. This would help the organization maintain its profitability, save internal costs, and improve the overall employee and organizational performance.

https://safetyculture.com/topics/hansei/

Case Study: Manufacturing Re-engineering

Situation: SAO is a kitchenware manufacturer in India. They were opening a new plant and had approached SSA with a requirement of designing the layout for the new plant along with re-engineering of the manufacturing process to reduce lead time.

Actions taken:

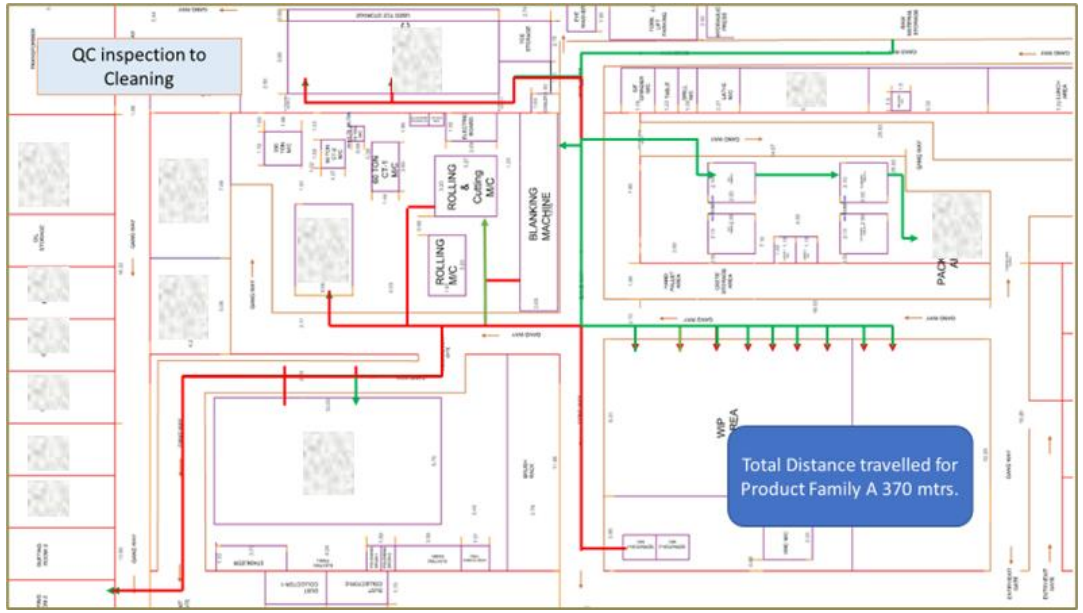
- Design of the factory layout
- Design a single crate flow-based system
- Implement a scheduling tool for better utilization of capacity

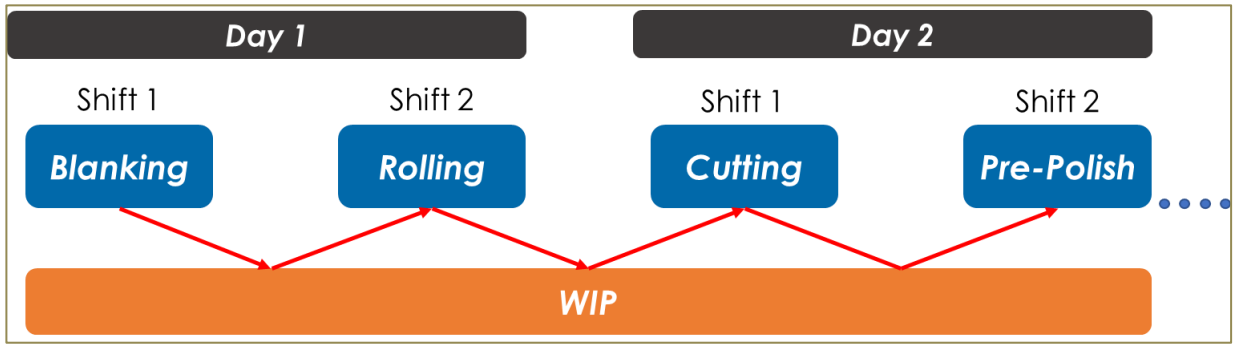
Goals:

- Improve Lead time and productivity through lean principles
- Design of New Facility Layout

Situation – Factory Layout Design

- The Existing Layout was not designed basis flow of operations leading to excessive material motion



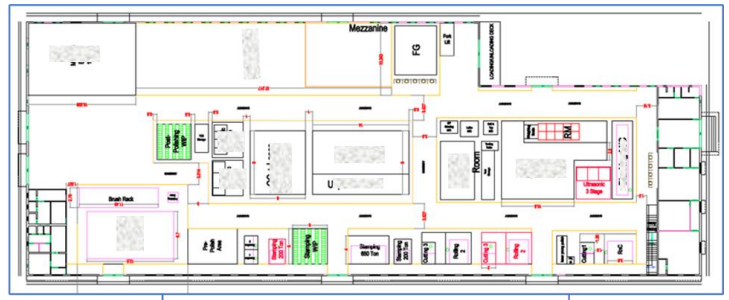


- A shift-based manufacturing process was followed leading to excess WIP inventory and long mfg. lead times

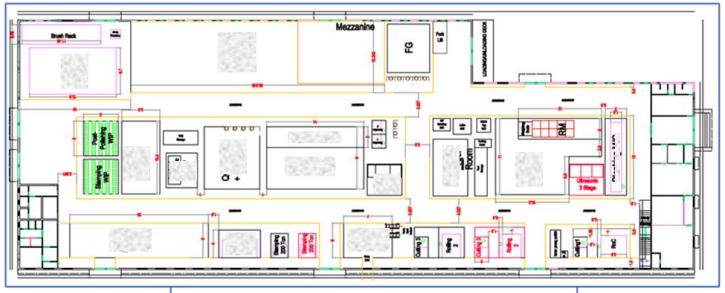
Action – Factory Layout Design

The factory layouts were designed with the concept of **minimising material motion** between machines across the entire manufacturing process

Iteration 1
Material Motion = 247m



Iteration 2
Material Motion = 330m

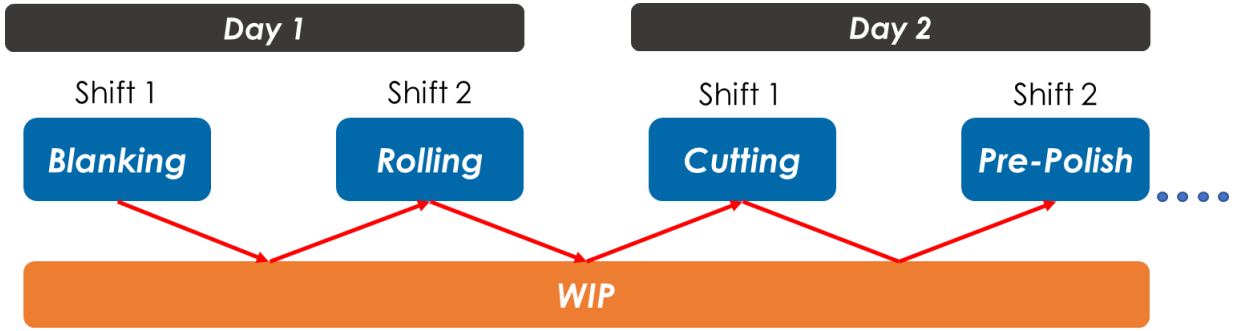


Iteration 3
Material Motion = 258m

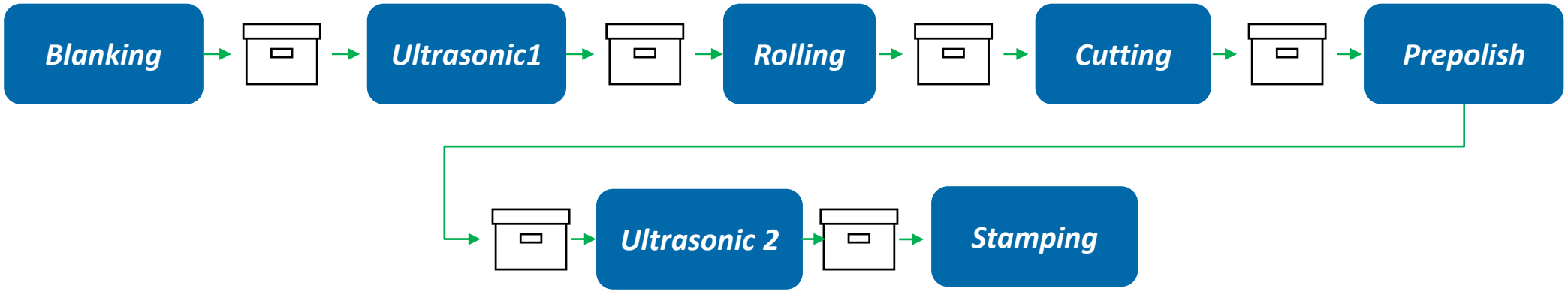
Movement	Old Factory	Interim Factory	New factory Option 3.4
First Factory Material Motion (mtrs) (All the mfg. activities – From Blanking to Stamping)	221.69	172.90	174.70
% Decrease		**22%**	**21%**
Second Factory Material Motion (mtrs) (Polishing activities)	88.2	52.6	86.5
% Decrease		**40%**	**2%**
Third Factory Material Motion (mtrs) (Post polishing ultrasonic, QC and final cleaning)	66.47	69.75	55.81
% Decrease		**-5%**	**16%**
Total Distance Travelled across all factories	376.36	284	317.01
% Decrease		**25%**	**16%**

Actions taken – Single Crate Flow

- Previously a Shift-based manufacturing system which led to increased WIP and longer lead times



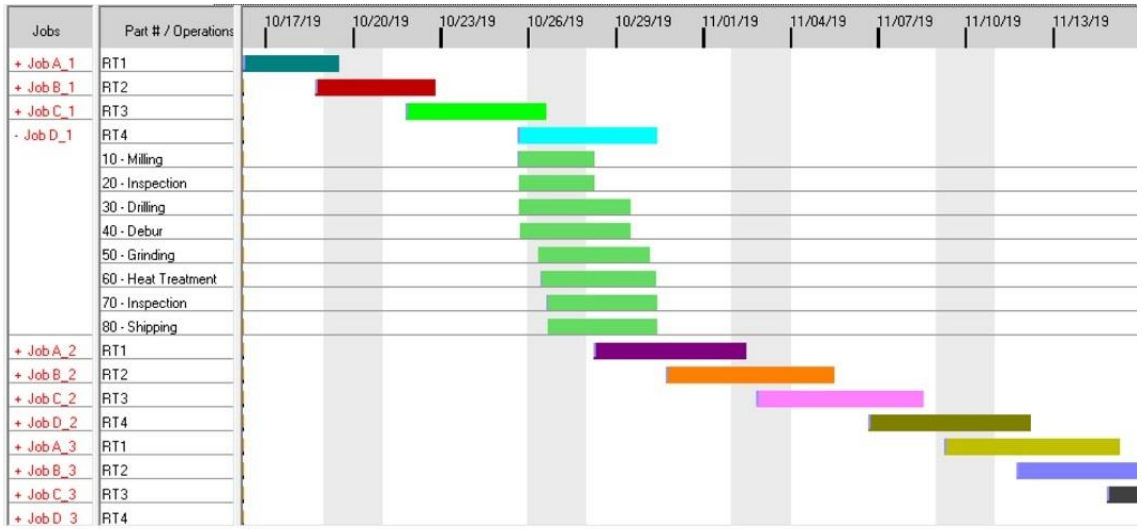
- SSA introduced a single crate flow to tackle the problems of high WIP and lead times



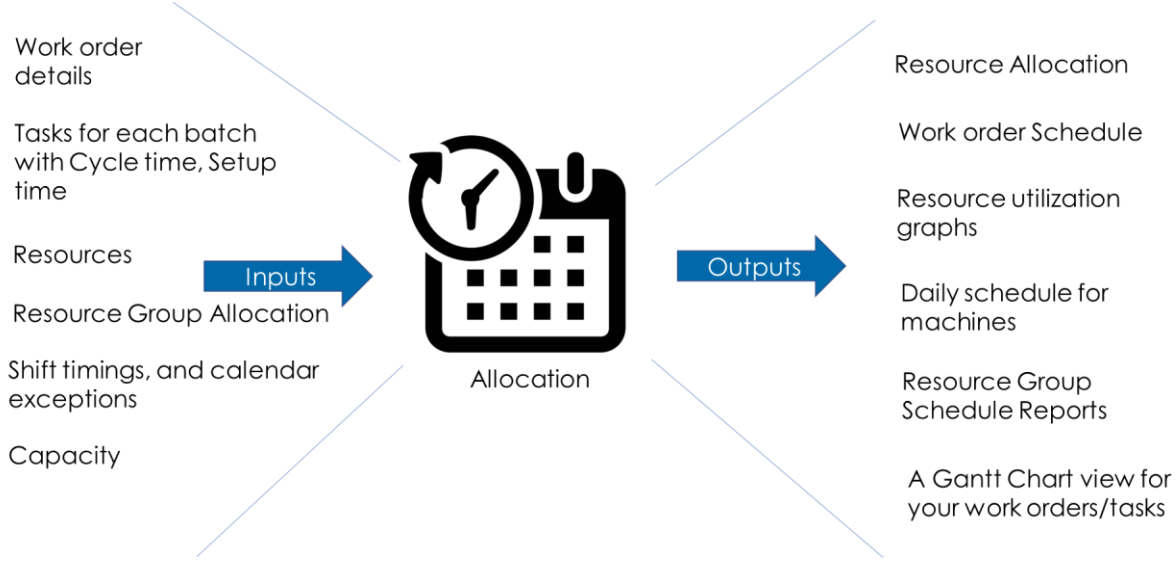
Actions Taken: Scheduling Tool

Velflow a powerful tool for *Simulation, Analysis and Scheduling of Mixed-Model Production Lines* was introduced to:

- Reduce the complexity of planning for the production planning department
- Efficiently utilise manpower and resources
- Improve planning for changeovers
- Ensure minimal WIP

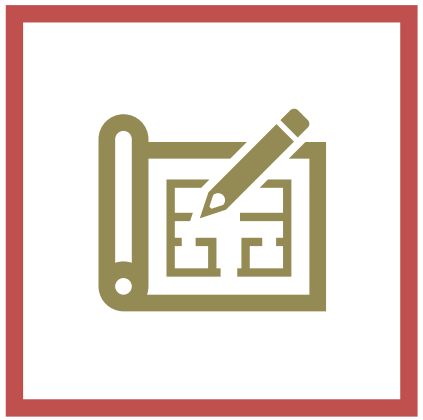


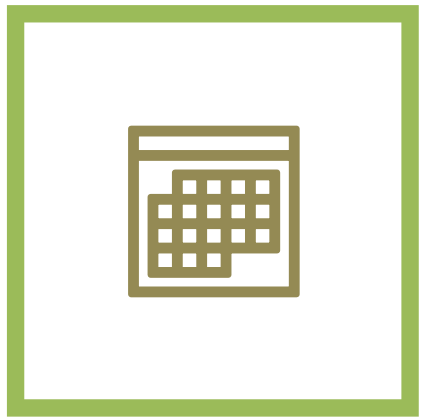
Gantt Chart



Benefits Achieved:

Material Motion
A Reduction of 16% wad realised through the new layout design



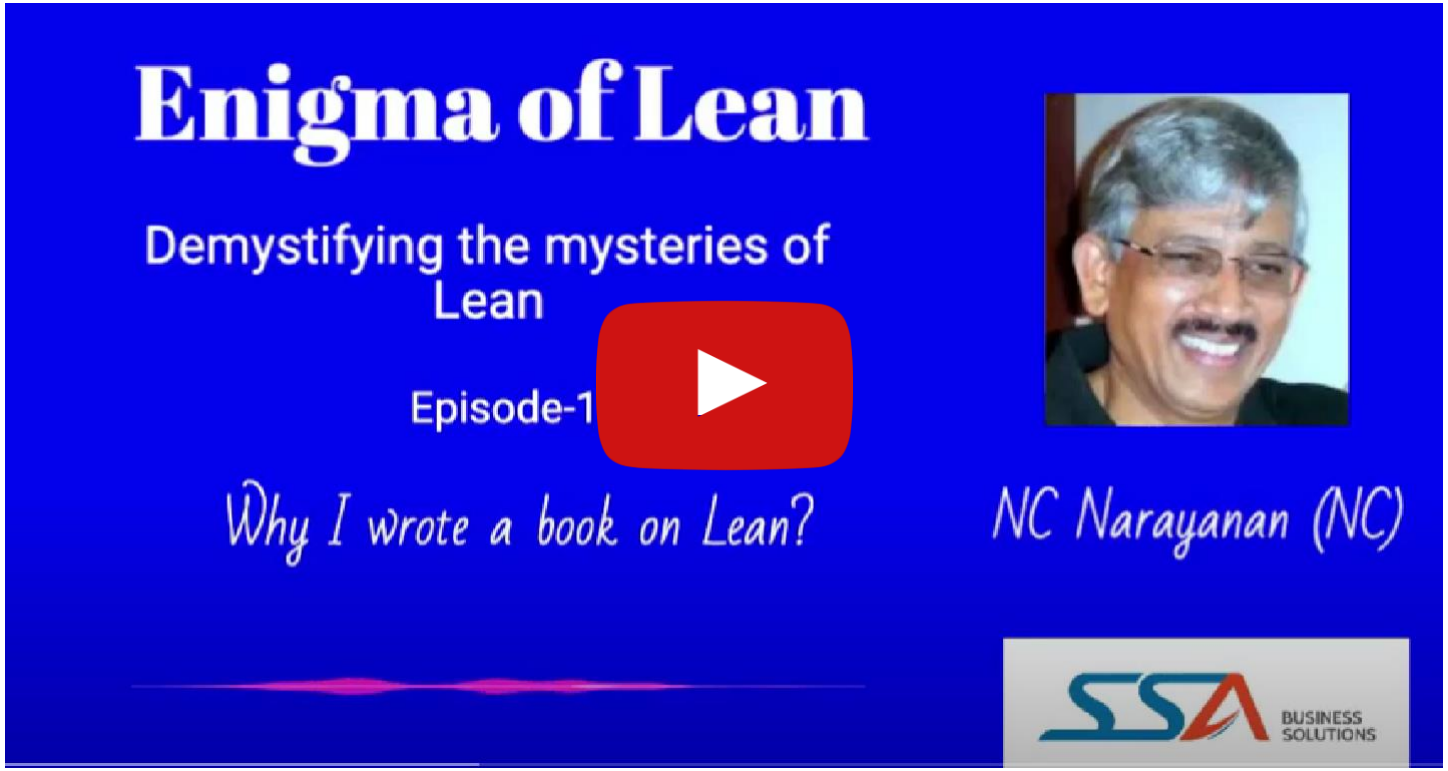


Optimised Scheduling
Implementation of scheduling tool for better utilisation of resources

Lead Time Reduction
A potential reduction of **30%** found in the manufacturing lead time

WIP Reduction
A potential reduction of **60%** in WIP was found basis the combined efforts of establishing a flow and introducing scheduling tool

Knowledge Nugget: Enigma of Lean series



NC Narayanan, Founder Chairman – SSA Group of Companies, in his Enigma of Lean series, explains how Lean can be used as a vehicle for transforming the entire organization to achieve a competitive edge.

Pragmatic Leadership Series

NC Narayanan, Founder Chairman – SSA Group of Companies, in his Pragmatic Leadership series, explains how Pragmatic Leadership can unleash a *Leader* within the Individual which can benefit the organization at various levels.

Upcoming Event

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Demand Driven INSTITUTE™ | Demand Driven Planner™

The Demand Driven Planner™(DDP) Program

This program equips the participants to implement and run a **Demand Driven Material Requirements Planning (DDMRP)** operating model

09th & 10th August 2022

DDMRP BENEFITS

For the company:

- Reduced stock outs
- Improved service levels

For the employee:

- Formal supply chain planning training
- Increased recognition of qualifications & skills
- Increased professional opportunities
- Improved working conditions (less stress)

For Enquiries:

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Register Here

Brochure link

News

SSA Business Solutions is a knowledge partner for Oman Manufacturing Summit & Awards 2022. SSA team led by Mr. Naveen Narayanan in GCC & Africa region shares significance of enabling Industry 4.0 solutions to arrest profit leakages across value chain.

Useful Resources

In this edition, we share an Excel template on **Root Cause Analysis Chart.**

- Root cause analysis (RCA) is a systematic process for identifying "root causes" of problems or events and an approach for responding to them. RCA is based on the basic idea that effective management requires more than merely "putting out fires" for problems that develop but finding a way to prevent them.
- The nature of RCA is to identify all and multiple contributing factors to a problem or event. This is most effectively accomplished through an analysis method –

1. Fish-Bone Diagram or Ishikawa Diagram — Derived from the quality management process, it's an analysis tool that provides a systematic way of looking at effects and the causes that create or contribute to those effects. Because of the function of the fishbone diagram, it may be referred to as a cause-and-effect diagram. The design of the diagram looks much like the skeleton of a fish—hence the designation "fishbone" diagram.

2. The "5-Whys" Analysis" — A simple problem-solving technique that helps users get to the root of the problem quickly. It was made popular in the 1970's by the Toyota Production System. This strategy involves looking at a problem and asking "why" and "what caused this problem". Often the answer to the first "why" prompts a second "why" and so on—providing the basis for the "5-why" analysis.

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