



Report on the Webinar
“LEAN SIX SIGMA FOR INDUSTRIES”

Presented by Dr.GOPAL SIVAKUMAR,

CEO, Vision Excellence, Advisor and Consultant -MSME .

15.07.2021

July 15, 2021, Time: 4.30 PM to 6.30 PM

Department of Mechanical Engineering,

BSACIST Organized a Webinar on

“LEAN SIX SIGMA FOR INDUSTRIES”

Coordinator <u>Dept. of Mechanical Engineering</u> Dr.S.Ravikumar, Asst Professor Department of Mechanical Engineering School of Mechanical Sciences, BSA Crescent Institute of Science and Technology	Speaker: Dr.GOPAL SIVAKUMAR, CEO. Vision Excellence , Advisor and Consultant -MSME (Govt of India) Chennai, Tamilnadu, India.
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PREAMBLE

The online webinar on **“LEAN SIX SIGMA FOR INDUSTRIES”** was organized by Department of Mechanical Engineering. The webinar was presided by Mechanical HOD. Dr.H.Siddhi Jailani . The presentation was delivered by Dr.Gopal Sivakumar, CEO. Vision Excellence, Advisor and Consultant -MSME (Govt of India).

Around 36 students from Mechanical Hope and three faculty members participated in the webinar. The webinar emphasized on the importance of lean six sigma concepts that students have to develop in order to excel on their career.

The following points were described during the webinar

1. **Lean Six Sigma** is a fact-based, data-driven philosophy of improvement that values defect prevention over defect detection. It drives customer satisfaction and bottom-line results by reducing variation, waste, and cycle time, while promoting the use of work standardization and flow, thereby creating a competitive advantage. It applies anywhere variation and waste exist, and every employee should be involved. The five phases of lean six sigma were explained

2. Define - In this stage, project objectives are outlined. A project charter is an important component of this phase. A project charter is a blueprint document for a six-sigma project.

3. Measure -Process variables are measured at this stage. Process data is collected. The baseline is obtained, and metrics are compared with final performance metrics. Process capability is obtained.

4. Analyze - Root cause analysis is done at this stage. Complex analysis tools are utilized to identify the root causes of a defect. Tools like histograms, Pareto charts, fishbone diagrams are used to identify the root causes. Hypotheses tests are conducted to verify and validate root causes, Viz Regression test, ANOVA test, Chi-square, etc.

5. Improve -Once the final root causes are identified, solutions need to be formed to improve the process. Steps to identify, test, and implement the solutions to eliminate root causes are part of this stage. Simulation studies, Design of experiments, Prototyping are some of the techniques used here to improve and maximize process performance.

6. Control - After implementing the solutions, the performance of the solutions must be recorded. A control system must be in place to monitor the performance post improvement. And a response plan is developed to handle solution failure. Process standardization through Control plans & work instructions is typically a part of this phase. Control charts show the process performance. The main purpose of this phase is to ensure holding the gains.

The above phases were explained with relevant examples

Further the speaker explained the significance of having a lean six sigma green belt certification for industrial career.

- Finally Dr. Saibalaji -Program Coordinator (Hope) concluded the webinar with Vote of thanks .



Coordinator

HOD (Mech)

Attendees

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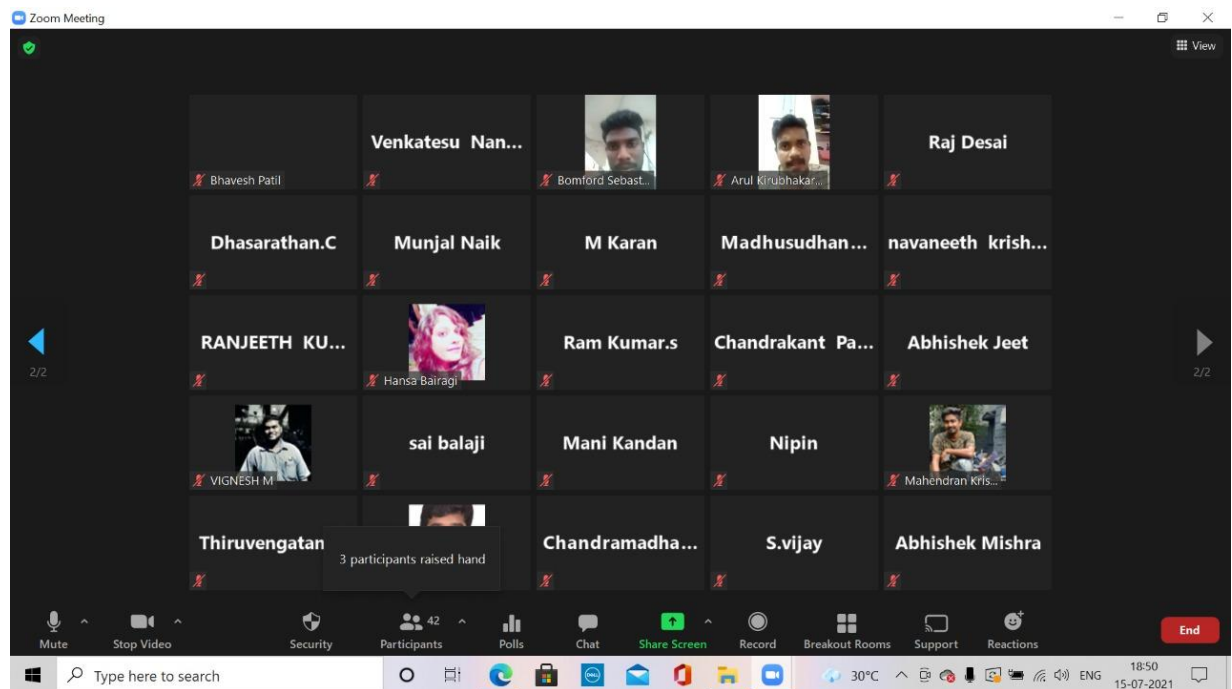
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Some sample presentations:

Prof. Dr. GOPAL SIVAKUMAR, B.E.(Distn.), M.E., Ph.D.,
Author/Trainer/Principal Consultant-LSS
Director, Vision Excellence Consulting Private Limited
Head-Campus to Corporate Program, MSME-TDC, Chennai
Advisor & Consultant – Industries & Institutions
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YouTube: <https://www.youtube.com/user/TheGSK545>



- **Lean Six Sigma Black Belt** with expertise in SPC, DoE, MSA, Hypothesis testing, Regression, 5S, LSS deployment
- **Research interest:** Diesel combustion, Thermal barrier coating, alternate fuels
- **18+ years Experience** with **6600 hours of training experience** on LSS tools and techniques
- Authored research articles and books in **Mechanical Engineering, Mathematics and Statistics**
- Has developed many **Industry Collaborative PG programmes** for Automotive, Manufacturing, IT and Electronics Industries
- Demonstrated highly successful DMAIC projects for his clients.



Zoom Meeting

Zoom Meeting

Participants: Venkatesu Nan..., Raj Desai, Dhasarathan.C, Munjal Naik, M Karan, Madhusudhan..., navaneeth krish..., RANJEETH KU..., Hansa Bairagi, Ram Kumar.s, Chandrakant Pa..., Abhishek Jeet, VIGNESH M, sai balaji, Mani Kandan, Nipin, Mahendran Kris..., Thiruvengatan (3 participants raised hand), Chandramadha..., S.vijay, Abhishek Mishra

Toolbar: Mute, Stop Video, Security, Participants (42), Polls, Chat, Share Screen, Record, Breakout Rooms, Support, Reactions, End

System Tray: Type here to search, 30°C, 15-07-2021

Zoom Meeting

You are viewing Dr.Gopal Sivakumar's screen

View Options

DMAIC, the breakthrough strategy

VISION - EXCELLENCE -

Define

What's exactly the problem?
Can we measure the pain?


Dr.Gopal Sivakumar

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LEAN TOOLS



3M MUDA, MURA, MURI

TPM Total Productive Maintenance

VSM Value Stream Mapping


Single Minute Exchange of Dies

SMED, KANBAN Trigger based Pull System

Sort, Set-in order, Shine, Standardize, Sustain

5S, KAIZEN Continuous Improvement

7 WASTE TIMWOOD




Dr. Gopal Sivakumar

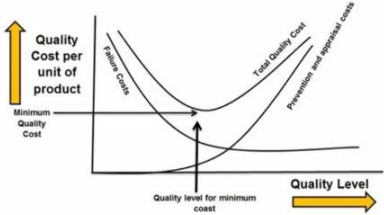
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Cost of Good Quality





Dr. Gopal Sivakumar

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Recording...

Process Improvement

VISION
- EXCELLENCE -

WILL YOU FOCUS ON IMPROVING RESULTS OR PROCESSES?



Will you change the fruits or the roots?

PROCESS {Y = F (X)}

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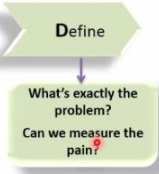
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Recording...

DMAIC, the breakthrough strategy

VISION
- EXCELLENCE -



Define

What's exactly the problem?
Can we measure the pain?

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