OPERATIONAL EXCELLENCE
Sam Lines, Concrete Sealants

DEFINITION
• How do you define *operational excellence*?

[Image]

https://www.youtube.com/watch?v=hpEiPrG6c28

DEFINITION
• A *philosophy* of the workplace where problem-solving, teamwork, and leadership results in the *ongoing improvement* in an organization.

The process involves focusing on the customers' needs, keeping the employees positive and empowered, and *continually improving* the current activities in the workplace.

• [http://www.businessdictionary.com/definition/operational-excellence.html](http://www.businessdictionary.com/definition/operational-excellence.html)

IT IS A PROCESS

[Image]

EXCEED CUSTOMER EXPECTATIONS
• Listen to the voice of the customer
• Under promise and over deliver
• Add value that is unexpected
• Make it easy to do business

[Image]

https://www.youtube.com/watch?v=Ump5ldajQ7Y

PROCESS EXCELLENCE
• Effectiveness
• Efficiency
• Minimum variation
• Minimal waste
• Customer value
STRATEGIC DIRECTION AND FOCUS
- What is your strategy?
- Excellence doesn’t happen by chance
- Work your plan with relentless determination

EMPLOYEE INVOLVEMENT
- Employees often have the best ideas
- Involve employees in the entire process
- They need to understand the why, not just the what.

LEADERSHIP ENGAGEMENT
Neuroscientist Paul Zane reports that a 10% increase in an employee’s trust in his or her company’s leaders has the same impact on engagement as a 50% salary increase.

According to research conducted by Gallup, around 80% of the US workforce is disengaged, and 25% to 30% is actively disengaged.

SUPERIOR SAFETY
- Zero accidents should always be the goal.
- Superior safety begins with culture.
- Safety starts at the top.

COMMITMENT TO QUALITY
- The cost of poor quality can be as much as 20% of sales.

COSTS OF QUALITY

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention</td>
<td>Costs associated with preventing defects.</td>
<td>Training, early reviews, quality planning, tools, process improvement initiatives.</td>
</tr>
<tr>
<td>Appraisal</td>
<td>Costs associated with analyzing and testing the product to ensure it conforms to specifications.</td>
<td>Inspections, testing, audits, quality control.</td>
</tr>
<tr>
<td>Internal Failure</td>
<td>Costs associated with fixing defects found prior to release.</td>
<td>Repair, rectifying, updating documentation.</td>
</tr>
<tr>
<td>External Failure</td>
<td>Costs associated with fixing defects found after release.</td>
<td>Technical support, defect reporting and tracking, field alterations, loss of future sales.</td>
</tr>
</tbody>
</table>
COSTS OF QUALITY

Quality Cost Management shows how increased Prevention Costs reduce the Total Quality Costs.

INNOVATIVE PRODUCTS

• What can you make that solves a problem?
• What can you add to what you make that creates added value?
• How can you create a brand for your products?

THE SHINGO MODEL

SHINGO MODEL

CULTURAL ENABLERS

• Respect every individual
  • Create a development plan for employees including appropriate goals.
  • Involve employees in improving the work done in their areas.
  • Continually provide coaching for problem solving.
  • https://www.youtube.com/watch?v=A4o000F51Hw
CULTURAL ENABLERS

- Lead with humility
  - There is consistent, predictable leadership engagement where the work happens.
  - Employees can report issues with confidence in a positive response.

CONTINUOUS IMPROVEMENT

- Seek perfection
  - Create long-term solutions rather than leave temporary fixes in place.
  - Constantly work toward simplifying work.
    - [https://www.youtube.com/watch?time_continue=2&v=zFW0hlK4IE](https://www.youtube.com/watch?time_continue=2&v=zFW0hlK4IE)

- Embrace scientific thinking
  - Follow a structured approach to solving problems.
  - Encourage employees to explore new ideas without fear of failure.

- Focus on process
  - When an error occurs, focus on improving the process that created the error.
  - Ensure that all parts, materials, information and resources are correct and meet specifications before using them in a process.

- Assure quality at the source
  - Organize places of work so potential problems become immediately visible.
  - Stop work to fix errors before continuing.
ENTERPRISE ALIGNMENT

• Flow & Pull value
  • Avoid creating or having more product or services than are necessary to serve customer demand.
  • Ensure the resources that are needed are available when required.
  • https://www.youtube.com/watch?v=6vqdrxwcjk

AIRPLANE MANUFACTURING

PUSH – THE TRADITIONAL MODEL

• Rules:
  • Each operator works as fast as they can.
  • Quality is the goal.
  • Do not worry about the pace of the next worker.
  • FIFO – First In First Out for work in process.
  • Goal: 20 completed planes

CLASS DISCUSSION

• What did you observe from this operation?

PULL – A BETTER WAY TO WORK

• Rules:
  • You can only build a part when the Kanban is empty
  • Quality is the goal.
  • Goal: 20 completed planes
**CLASS DISCUSSION**

- What did you observe from this operation?

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**ENTERPRISE ALIGNMENT**

- Think systemically
  - Eliminate any barrier that prevents the flow of ideas, information, decisions, product, etc.
  - Ensure the goals and issues for each day are understood by those who are affected.
  - [https://www.youtube.com/watch?v=fN1NjysuKn4](https://www.youtube.com/watch?v=fN1NjysuKn4)

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**ENTERPRISE ALIGNMENT**

- Create consistency of purpose
  - Clearly communicate the direction and purpose of the organization to all.
  - Set goals that are connected to the organization’s overall goals.

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**RESULTS**

- Create value for the customer
  - Work to understand customers’ needs and expectations.

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**THE SHINGO MODEL BOOKLET**

- [https://www.dropbox.com/sh/bm8pl7eisgc5p/AADhKjnoAQSI3SBGMjxeSWRa?dl=0](https://www.dropbox.com/sh/bm8pl7eisgc5p/AADhKjnoAQSI3SBGMjxeSWRa?dl=0)
- [https://shingo.org/model](https://shingo.org/model) (must register to download)
- Or, just email me: slines@conseal.com and ask for this booklet.
LEADERSHIP

• How does leadership affect operational excellence?

OPERATIONAL MARRIAGE

DEFINITION OF A LEAN SYSTEM

• Developing a lean enterprise SYSTEM allowing for the setting of STANDARDS aimed at CONTINUOUS IMPROVEMENT by ALL team members through the CONSTANT ELIMINATION OF WASTE.

LEAN IS NOT ONLY FROM JAPAN!

• Principles of Scientific Management
• Quality Control Concepts (Deming)
• Ford Mass Production System
• Etc.

PRINCIPLES OF SCIENTIFIC MANAGEMENT

• How to study operations for improvement
• Time and motion study
• Fostered key developments in materials science and cutting tool methods
• Many other areas
**DEMING LEADERSHIP IN QUALITY**

Total Employee Involvement
- Competency
- Participation

Lean Manufacturing System
- Level Production
- Visual Delivery System
- Preventative Maintenance
- Total Productive Maintenance
- Traffic Light System
- Mistake Proofing
- In-Station Process Control

**MASS PRODUCTION 101**
Mr. Henry Ford wrote a book entitled “Ford Today And Tomorrow” in 1926

Applying my methods of work standards we can make these men ultra efficient.

**PROCESS IMPROVEMENTS YOU CAN IMPLEMENT NOW**

- Engage employees to think systemically

**PROCESS IMPROVEMENTS YOU CAN IMPLEMENT NOW**

- A place for everything, and everything in its place.

- Have what you need, in the quantity needed, where you need it.
PROCESS IMPROVEMENTS
YOU CAN IMPLEMENT NOW

• Measure
• Analyze
• Report

PRECAST SHOW 2020
NPCA
precast.org/education

PROCESS IMPROVEMENTS
YOU CAN IMPLEMENT NOW

Courtesy of Concrete Sealants
precast.org/education

PRECAST SHOW 2020
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EXAMPLES OF OTHER CONTINUOUS IMPROVEMENT TOOLS WHICH HAVE WORKED FOR US!

Before

After

Kanban System

57

58

59

60
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