



MAXIMIZE YOUR OPERATIONAL EFFICIENCY

BCFPA BREAKFAST SERIES

5 PRINCIPLES OF LEAN MANUFACTURING

IDENTIFY VALUE

The value a customer places upon products and services determines how much money they are willing to pay for them or if they want to pay for it at all.

MAP THE VALUE STREAMS

A value stream includes all the processes, steps, and materials necessary to place the product (or service) in the hands of the customer.

CREATE FLOW

Just as water flows freely downstream, the value chain should experience a smooth progression from start to finish.

ESTABLISH PULL

Rather than “pushing” production based on a forecast or schedule, those who take the pull approach ideally don’t make anything until the customer (internal or external) orders it.

SEEK PERFECTION

Implement systems and measurements that continuously seek opportunities to improve, speed, and reduce the cost of each step of the value stream.



MAXIMIZE YOUR OPERATIONAL EFFICIENCY

BCFPA BREAKFAST SERIES

8 WASTES OF LEAN MANUFACTURING

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DEFECTS

Errors, rework, or scrap in products, paperwork, and information.

OVERPRODUCTION

Producing more than needed.

WAITING

People waiting for information, materials, tools, and machines.

NON-UTILIZED TALENT

Not effectively engaging employees in the process.

TRANSPORTATION

Unnecessary movement of people, products, materials, and information.

INVENTORY

Unnecessary storage of materials, products, information, and data.

MOTION

Motion of people or machines that don't add value to the product or process.

EXTRA-PROCESSING

Any activity that's not necessary to produce a functioning product or service.



THE 8 WASTES

TO LEAN MANUFACTURING: EXAMPLES

DEFECTS

- Product non-conformance
- Data entry and pricing errors
- Missing or wrong information
- Missed specifications
- Lost records, information, or data

OVERPRODUCTION

- Making too many components in advance of demand
- Printing more paperwork than is needed
- Purchasing items before they are ready to be used

WAITING

- Waiting for steps to finish
- Equipment downtime
- Waiting for information
- Waiting for items or parts to arrive
- Waiting for approval from others

NON-UTILIZED TALENT

- Employees are not being utilized to their full capability.
- They are engaged in tasks that would be more efficiently done by someone else.

TRANSPORTATION

- Moving parts or documents between sites, offices, or inboxes
- Carrying documents to and from locations
- Retrieving or storing files off-site
- Suppliers which are far from your facility

INVENTORY

- Excessive raw materials and packaging
- Unsold finished goods
- Unused records and information in the database
- Office supplies, information literature
- WIP, uncompleted projects, and files

MOTION

- Excessive hand movements reaching for tools and materials
- Excessive reaching (too high or too low)
- Too many clicks or keystrokes
- Handling paperwork
- Looking through manuals and catalogs

EXTRA-PROCESSING

- Using inappropriate tools for the job
- Too many fastens for tightening and loosening, and not using clamps instead
- Using multiple software systems to perform a task
- Over-processing due to complexity, too many steps



GEMBA WALK

TAIICHO OHNO

"When you go out into the workplace, you should be looking for things that you can do for your people."

G

GO AND SEE!

Gather facts and ask the 5 Why's

E

ENGAGE WITH PEOPLE

Ask people about issues that affect them

M

MODESTY IS A VIRTUE

Always be humble. Show respect.

B

BACKWARDS & FRONTWARDS

Understand process sequence and pull

A

ASSESS SQDCM!

Look for evidence that the organization makes Safety a priority. Is there visual record of Safety incidents? Visual Management?

Q

QUALITY

Do you see visual evidence of the recorded Defects?
Are defects counted? Quarantined?

D

DELIVERY

Do you see evidence of a recorded Delivery times? Ship dates? Service level agreements?

C

COST

Do you see evidence of inventory levels? Can you see indications of productivity levels?

M

MORALE

Employee satisfaction: do you see evidence of workplace engagement?



THE 5S GUIDE

WORKPLACE ORGANIZATION

"Where there is no standard, there can be no kaizen." - Taiichi Ohno

5S is a key tool for establishing the LEAN Framework in your company. It can be used to develop employee's LEAN mindset through engagement and accountability.

Create a safe and efficient work environment and increase the flow of value to customers by removing waste.

SORT

Remove anything which isn't needed for current work.
Leave only the bare essentials.
Focus on what you really need (when was the last time you used it?)

STABILIZE OR SET IN ORDER

Arrange and position items for easy access to support the process flow (steps).
Stabilize each item using labels, lines, and outlines.
Example: Shadowboards.

"A place for everything, everything in its place."

SHINE

Keep the workplace safe and clean.
Inspect daily to eliminate sources of accidents and dirt.

STANDARDIZE

Document standard (SOP) that describes the safest, most efficient, highest quality work condition for the area or process.
Use the standard for training and auditing purposes.
Place the document at the point of use.

SUSTAIN

Training
Inspection
Feedback

Coaching
Auditing
Story-telling