



UniCourse.org
flexible online higher education

Unit 4: Management and Operations (Core)

Leadership and Operations Management A2

In a series of 2 for this unit

Learning outcome 3/4

Theories of Operations and Operational Management

- Six Sigma
- Lean Production
- Queuing Theory
- Principles of Total Quality Management (TQM)
- Just In Time Inventory
- Kaizen Model

Six Sigma

“Six Sigma is a quality program that, when all is said and done, improves your customer’s experience, lowers your costs, and builds better leaders.

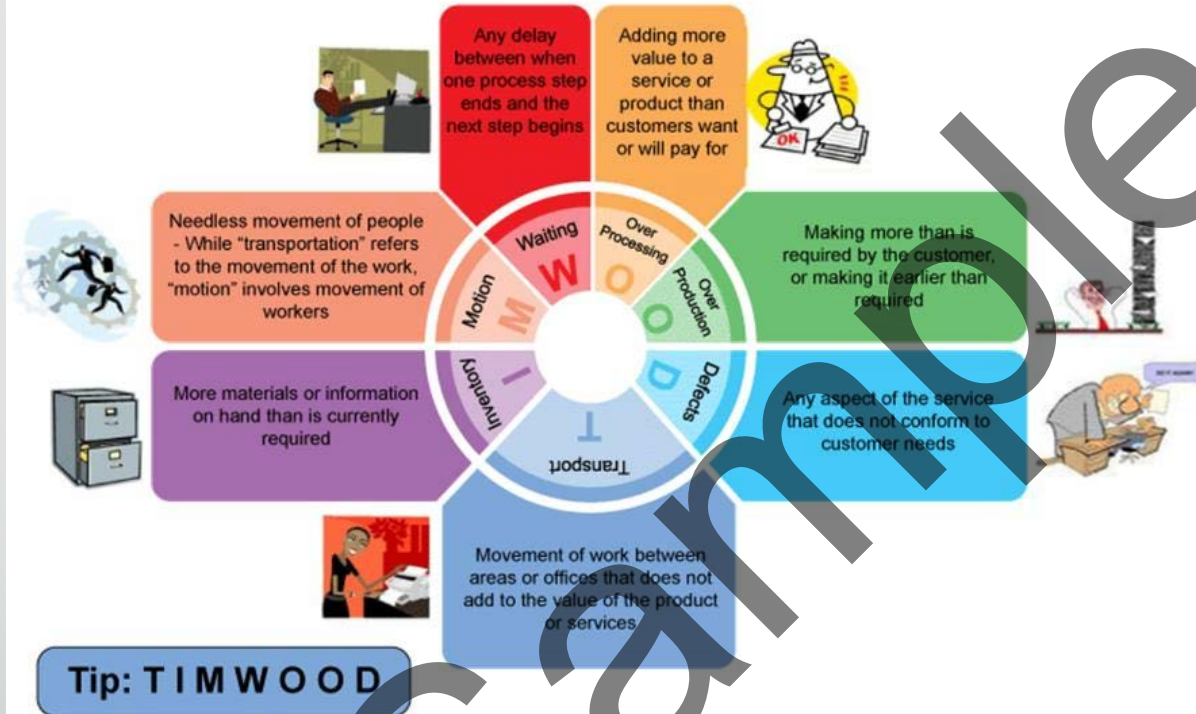
Read More:

<https://www.isixsigma.com/new-to-six-sigma/getting-started/what-six-sigma/>



What is Lean ?

The 7 Wastes of Lean



Watch this short video
[:https://www.youtube.com/watch?v=kWQWnl-BmWY](https://www.youtube.com/watch?v=kWQWnl-BmWY)

The core idea is to maximise customer value while minimising waste. Simply, lean means creating more value for customers with fewer resources.

Read More: <https://www.lean.org/WhatsLean/>

Queuing Theory

- The Queuing Theory, also called as a Waiting Line Theory was proposed by A.K. Erlang.
- This theory looks at Mathematical modelling of waiting lines, whether of people, signals, or things. It aims to estimate if the available resources will suffice in meeting the anticipated demand over a given period
- It is useful in predicting and evaluating system performance
- This theory has been used for operations research, manufacturing and system analysis
- Key elements of queuing systems; customer and server

Read More: <https://businessjargons.com/queuing-theory.html>

Where the Time Goes

In a life time, the average person will spend :

SIX MONTHS	Waiting at stoplights
EIGHT MONTHS	Opening junk mail
ONE YEAR	Looking for misplaced Objects
TWO YEARS	Reading E-mail
FOUR YEARS	Doing housework
FIVE YEARS	Waiting in line
SIX YEARS	Eating



Principles of Total Quality Management (TQM)

All the members of the organisation, makes continuous efforts so as to maintain high work standards, in all the operations of the company. Its main aim is to make a continuous increase in the customer loyalty and satisfaction, at constantly lower cost.

Phases:

- Planning Phase
- Doing Phase
- Checking Phase
- Acting Phase

Read More: <https://businessjargons.com/total-quality-management.html>

Just-in-Time Inventory



Just-in-time (JIT) inventory management, also known as lean manufacturing and sometimes referred to as the Toyota production system (TPS), is the process of ordering and receiving inventory for production and customer sales only as it is needed and not before. This means that the company does not hold safety stock and operates with low inventory levels. This strategy helps companies lower their inventory carrying costs by increasing efficiency and decreasing



Read More: <https://www.thebalance.com/just-in-time-jit-inventory-management-393301>

What Is Kaizen?

The purpose of Kaizen goes beyond simple productivity improvement. When done correctly, the process humanizes the workplace, eliminates overly hard work, and teaches people how to spot and eliminate waste in business processes.

The continuous cycle of Kaizen activity has seven phases:

1. Identify an opportunity
2. Analyse the process
3. Develop an optimal solution
4. Implement the solution
5. Study the results
6. Standardize the solution
7. Plan for the future

Japanese term

-“Kai” means “Change”

-“Zen” means “for the better”

Read More:

<https://www.isixsigma.com/methodology/kaizen/kaizen-six-sigma-ensures-continuous-improvement/>