

Workbook 1

Lean Organisation Techniques in Business

PRODUCTIVITY NEEDS ANALYSIS

LEAN ENVIRONMENT

MEASURING PRODUCTIVITY

BENEFITS

PROCESS MAP

NCFE Level 2

Certificate in Lean Organisation Management Techniques

Section 1: Understand the concept of a lean environment

The principles of lean organisation techniques

Please read the following as it will help you to answer question 1.

Lean, sometimes referred to as 'simple business improvement philosophy', refers to a wide range of business improvement techniques. It involves setting up systems or processes needed to improve the production process. The main principle is to maximize customer value whilst minimizing waste and using fewer resources. Many people think of lean as being used only in manufacturing industries but this concept is now used in many businesses including suppliers of services as well as those who manufacture products.

It is a way of thinking and acting for an entire organisation. Businesses in all services and industries use lean principles although some choose not to use the word lean and may label it as their own system. Toyota, for example, use lean but call it the Toyota Production System.

Lean is used in healthcare, food services, office work and government services, as well as many others. Lean principles are applied to provide continuous improvement to:

- quality of goods and services
- efficiency of production
- costs



Did you know?

Lean management is used in dairy farming by the Agriculture and Horticulture Development Board (AHDB) which is a levy-funded, not-for-profit organisation working on behalf of Britain's dairy farmers. They provide products and services to improve the sustainability of British dairy farming.

The benefits for farmers include:

- increased efficiencies and net margin
- higher levels of performance
- being able to anticipate events and deal with problems
- understanding links between the different processes and their impacts
- improved business management and professional development for farmer and team
- identifying and managing business goals and targets
- having more time available



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The seven types of waste

These seven types of waste can be applied to service industries and office environments in the same way they are used in the manufacturing sector.

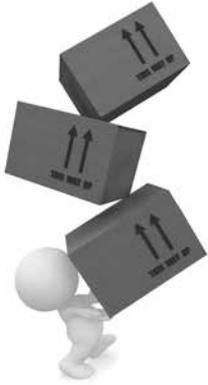
Type of waste	Explanation	Example
Transport 	Raw materials or products are sometimes moved more than needed if storage areas aren't big enough, if the layout is poor or there is too much stock to transport at once.	At Alexander Sports, a specialist sports equipment and clothing supplier in the town centre, they are struggling for space. Much of their storage space is taken up with items that have not sold well, even in the sale. They want to ensure that they are well stocked for the spring and summer seasons but don't have enough space. They decide to rent storage space out of town for stock. This involves daily trips to the storage to retrieve stock for orders.
Motion 	Unnecessary movement might be made if the workspace layout is not well planned and organised, for example walking to collect tools and equipment or too much bending and stretching. This means loss of working time and there is more chance of injury.	At Nino's Italian restaurant, the kitchen is not well organised so food stock is kept downstairs. Staff have to make frequent journeys downstairs to collect ingredients. This wastes time but also involves carrying large and heavy boxes of food and drink up a steep set of stairs.
Waiting 	If workers have to wait for the next step in a process, time can be wasted, for example if one area works faster than another.	At Caroline's Craft Cakes, special occasion cakes are made to supply supermarkets and individual orders. The fruit cakes are taking a longer time to produce and the decorating department have free time waiting for the cakes to arrive. This slows down production and means that staff are being paid to wait around.

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<p>Inventory</p> 	<p>If an organisation has a large stock of raw materials, work in progress or finished goods, the workplace can become cluttered and less efficient.</p>	<p>At SMS Metallurgy, metals are ordered in large amounts, needing considerable storage. They also produce parts way ahead of schedule so have to have enough storage for large numbers of partly and fully finished products. It is hard for staff to keep stock of the large storage areas and sometimes stock is missed and produced again when orders come in.</p>
<p>Overproduction</p> 	<p>If too many goods are produced so that output exceeds demand, or production is too far ahead of schedule waste can occur.</p>	<p>Harvey's Printing receives an order for a hotel brochure for 2018 containing events and prices. Someone has read the order wrong and overproduces by 500 colour brochures. As this is only for 2018 and can not be used after December, the excess is wasted and has cost the company materials, processes and working time.</p>
<p>Defects</p> 	<p>If goods have to be scrapped or improved, waste occurs; this can also lead to customer complaints and the need for extra hours and pay for staff.</p>	<p>Posh Pooch is a company producing clothes for dogs. On a large batch of coats the collar and hood section is found to be stitched incorrectly when it arrives at the station for attaching to the rest of the garment. This component has to be scrapped, meaning the fabric and working hours have been wasted. In addition, the workers putting the garment together then have to wait for the component needed and the company ends up having to pay a total of 40 hours overtime.</p>

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Overprocessing



It is important not to put more work in to a process than is needed, or to produce goods to a higher quality than is needed. Waste occurs if processes are more complicated than they need to be.

At the Princess Cupcake company, cupcakes are made to order for large events and promotions. Each one is baked and then wrapped in cellophane with a ribbon and label. It is decided that in addition each cupcake should be wrapped in brown paper, on top of the cupcake, and secured with a ribbon, before wrapping in the usual way. This adds on time and materials but doesn't add value. The customer takes off the wrapping and throws it away, meaning the produce has been overprocessed.

Did you know?



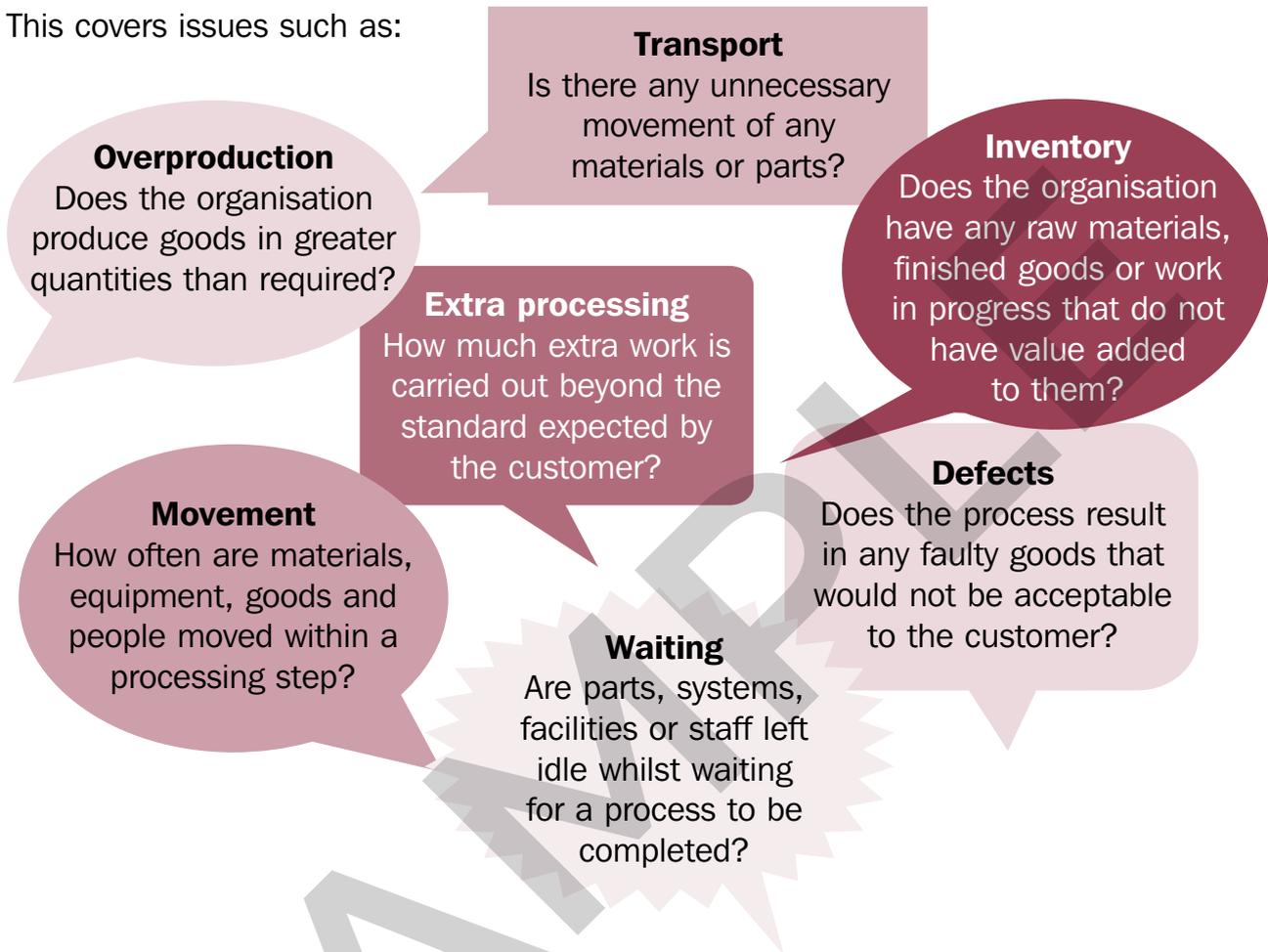
The founder of Ford Motor Company, Henry Ford, challenged ideas on waste in the 1900s. He wrote a book called 'My Life and Work' and in it he wrote about a farmer carrying water up a ladder rather than fitting water pipes as 'waste motion'. He showed that spending on improvements was not waste expense, but an increase in efficiency and a reduction in waste.



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How waste is minimised

This covers issues such as:



Did you know?

The term 'lean' was first used to describe Toyota's business management system during the late 1980s by a research team headed by Jim Womack at MIT's International Motor Vehicle Program.

There are five principles of lean management:

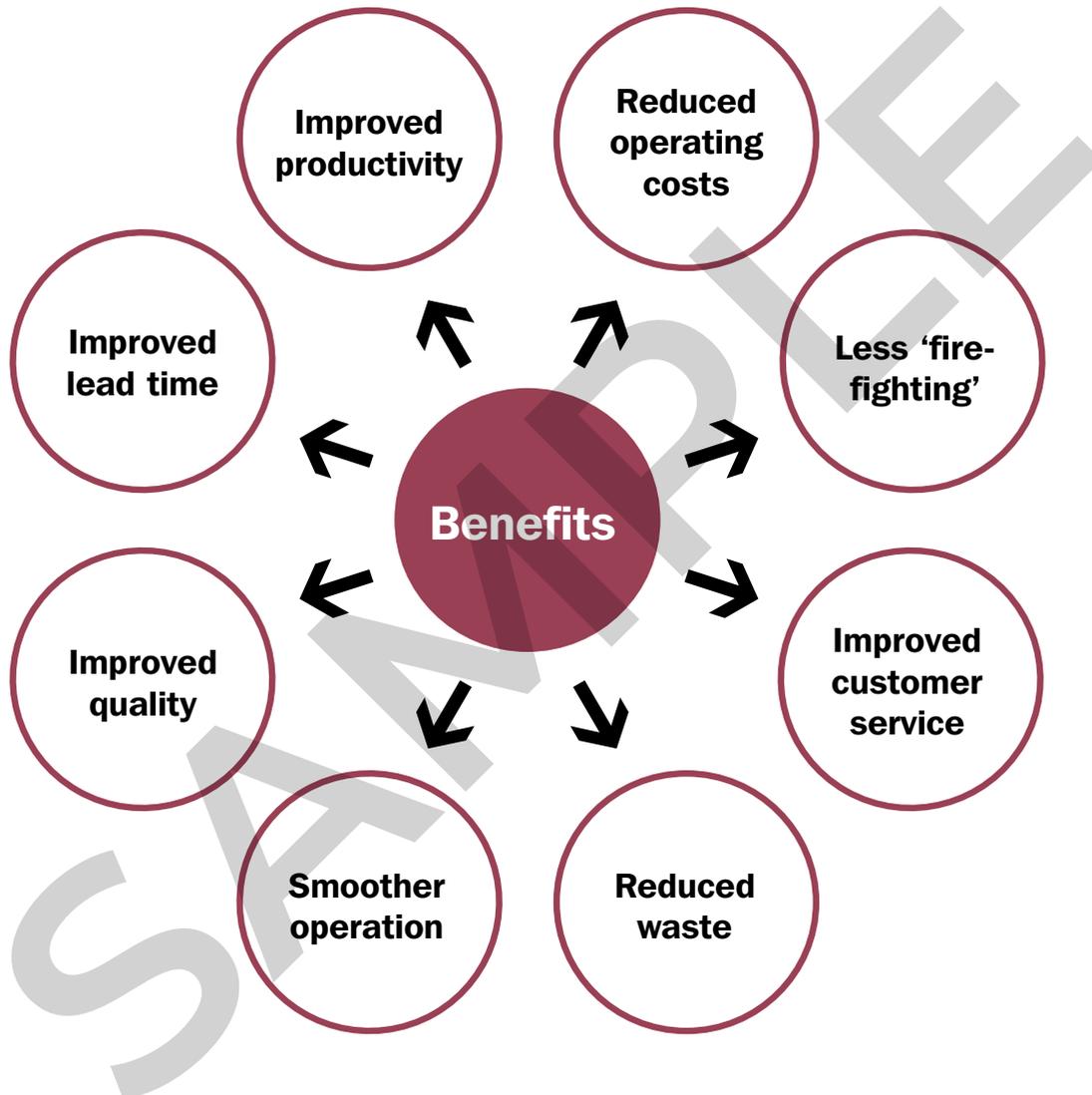
1. Specify value from the viewpoint of the end customer
2. Identify all the steps in the process
3. Make processes flow smoothly by eliminating waste
4. Make sure customer demand is met
5. Continue until a state of perfection is reached where perfect value is created with no waste

Section 1: Understand the concept of a lean environment

The benefits of a lean environment

Please read the following as it will help you to answer question 2.

Lean can provide an organisation with a clear competitive advantage as, if applied correctly, lean principles will bring about substantial benefits including:



Did you know?

The British Hospitality Association reported in 2017 that £67 million had been saved by UK hospitality businesses involved in the Hospitality and Food Service Agreement (HaFSA) over three years. This included reducing packaging waste by 11%, saving 24,000 tonnes of food from being thrown away, doubling the redistribution of surplus food and increasing recycling waste from 42% to 56%.



IMPROVED PRODUCTIVITY

PRIORITISING

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