SEMBIT310

Carrying out value stream mapping (VSM)

Overview

This standard covers the competences required for carrying out value stream mapping (VSM). It involves applying the principles and processes of value stream mapping to the chosen parts, using appropriate improvement tools and techniques. You will be expected to create a current state map for the parts or materials chosen, and to identify problems or conditions within the current state map where improvements can be made. Typically, the improvements will include improved workflow, improved lead time, improved quality, reduced waste and improved safety.

You will also need to produce future state maps, which include part or material flow through the process, information flow, inventory, set-up and cycle times for each operation, lead time for the part or material, value-adding percentage of lead time, delays which occur between each operation, Takt time and schedules for the chosen part or material, and customer and supplier ordering and delivery.

Your responsibilities will require you to comply with organisational policy and procedures for the value stream mapping activities undertaken, and to report any problems that you cannot solve, or that are outside your responsibility, to the relevant authority. You will be expected to take full responsibility for your own actions within the activity, and for the quality and accuracy of the work that you carry out.

Your underpinning knowledge will provide a good understanding of your work, and will provide an informed approach to the techniques and procedures used. You will need to understand the principles and procedures of value stream mapping, and its application, in adequate depth to provide a sound basis for carrying out the activities to the required criteria.

Applying safe working practices will be a key issue throughout.

Performance criteria

You must be able to:

1. work safely at all times, complying with health and safety and other relevant regulations, directives and guidelines
2. select appropriate parts or materials on which to carry out the activity
3. carry out the value stream mapping process on the chosen parts, using appropriate improvement tools and techniques
4. create a current state map for the parts or materials chosen
5. identify problems or conditions within the current state map where improvements can be made
6. produce a future state map
7. implement the changes identified

Knowledge and understanding

You need to know and understand:

1. how to work safely at all times, complying with health and safety and other relevant regulations, directives and guidelines
2. how a part is selected for a value stream mapping activity
3. from whom authority is gained for release of people and resources for the value stream mapping activity
4. how to structure and run a value stream mapping event
5. the principles and processes for the deployment of value stream mapping
6. how improvements to the process can be achieved
7. how to evaluate improvement ideas and select those that will give the greatest benefit for the least spend
8. how to set quantifiable objectives and targets for the future state maps
9. how to create standard operating procedures (SOPs)
10. the techniques used to visually communicate the information and results of the process
11. the techniques of problem solving and root cause analysis
12. systems lead time, how they differ from actual lead time, and how both are constructed
13. how to calculate Takt time
14. the principles of increasing process capacity
15. what constitutes value adding and non-value adding activities
16. the extent of your own authority, and to whom you should report in the event of problems that you cannot resolve

Scope/range related to performance criteria

1. Identify opportunities for improvements in order to create a future state map covering **three** of the following:
    1.1 improved workflow
    1.2 improved lead time
    1.3 improved quality
    1.4 improved safety
    1.5 less inventory
    1.6 improved flexibility
    1.7 less waste/cost
2. Produce current and future state maps which include **all** of the following:
    2.1 part or material flow through the process
    2.2 information flow
    2.3 inventory
    2.4 set-up and cycle times for each operation
    2.5 lead time for the part or material
    2.6 value-adding percentage of lead time
    2.7 delays which occur between each operation
    2.8 Takt time and schedules for the chosen part
    2.9 customer and supplier ordering and delivery

SEMBIT310

Carrying out value stream mapping (VSM)

Developed by	Enginuity
Version Number	3
Date Approved	30 Mar 2023
Indicative Review Date	31 Mar 2028
Validity	Current
Status	Original
Originating Organisation	Enginuity
Original URN	SEMBIT310
Relevant Occupations	Associate Professionals and Technical Occupations, Business and Finance Associate Professionals, Business Management, Business, Administration and Law
Suite	Business Improvement Techniques Suite 3
Keywords	Engineering; business; improvement; techniques; value stream mapping; current state; improvements; workflow; VSM