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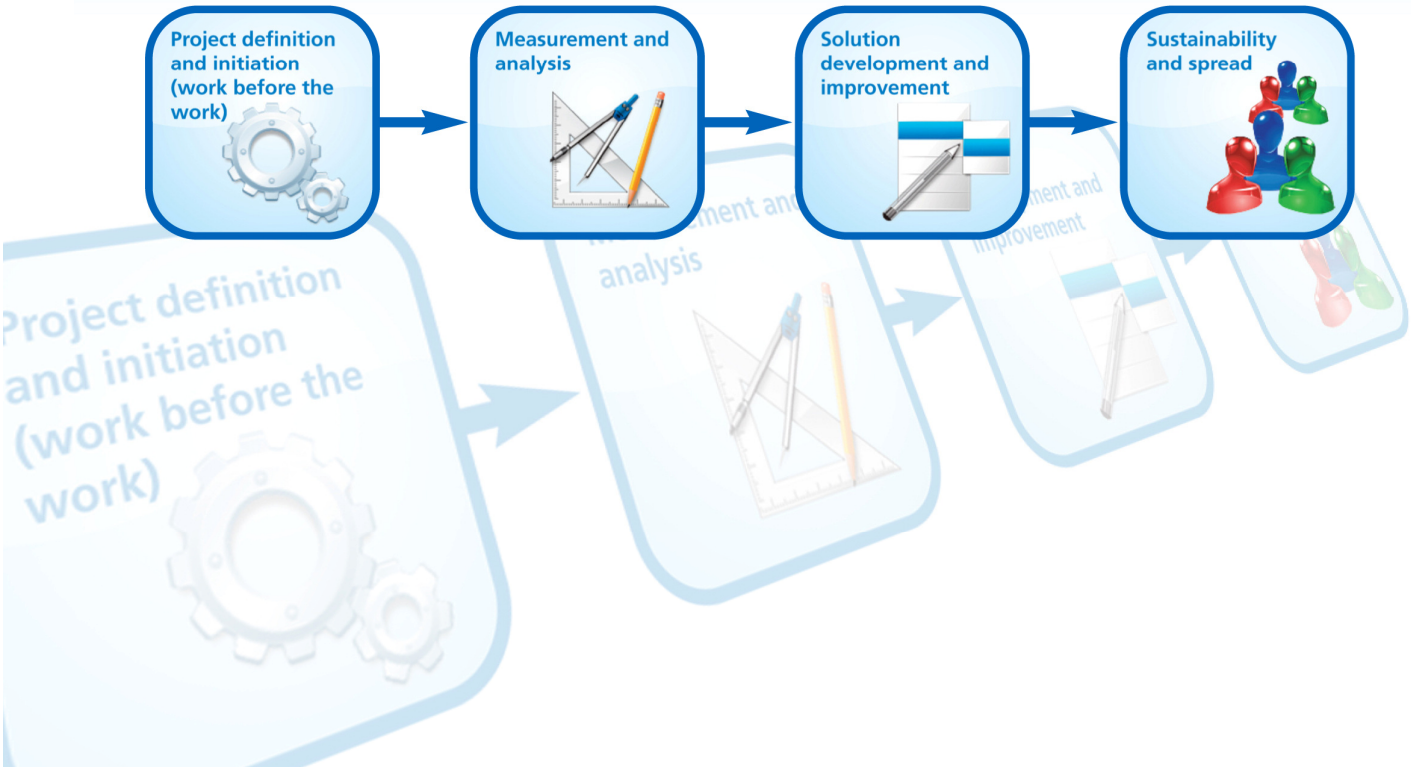
An Overview of Value Stream Mapping

October 2011



Introduction to Value Stream Mapping

Value stream mapping is a tool commonly used in lean continuous improvement programmes to help understand and improve the material and information flow within organisations. Value Stream Mapping borne out of lean ideology captures and presents the whole process from end to end in a method that is easy to understand by those working the process - it captures the current issues and presents a realistic picture.

Through a simple to understand graphical format, future state (a diagram showing an improved and altered process) can be formulated and defined. The method encourages a team approach and through the capture of performance measurement data provides a mechanism to constructively critique activity. Participants in the activity are encouraged to suggest improvements and contribute towards and implement an action plan.

As with any lean management toolset the principle aim of Value Stream Mapping is to improve processes. This is achieved by highlighting areas of waste within a process and therefore enable businesses to eliminate these activities. Value Stream Mapping also has the benefit of categorising process activity into three main areas - value add, Non value add (but necessary) and waste.

While Value stream mapping isn't overtly complicated it does benefit from some preplanning – it is important that for example a house style is developed using common graphics for use in the diagrams so that everyone participating does so in a common language. You need to ensure you consider including the following:

* Material Flow
* Inventory
* Buffer stock
* Suppliers, Customers
* Material Transport
* IT System
* Information Flow

Step 1 - Select your sponsor and set expectations

As with any project, it is important that a sponsor or champion is appointed – this needs to be someone who can make decisions, arbitrate solutions, and plan the project. The sponsor will usually select the processes that will be mapped and will usually have a firm grasp of what achievement is being targeted.

Step 2 - Select your team

The make up of the VSM team is crucial and it is imperative that you adopt a team approach. You should ensure that each area or stakeholder of the process is represented e.g. Sales, Purchasing, Warehouse etc

Step 3 -Select process to be mapped

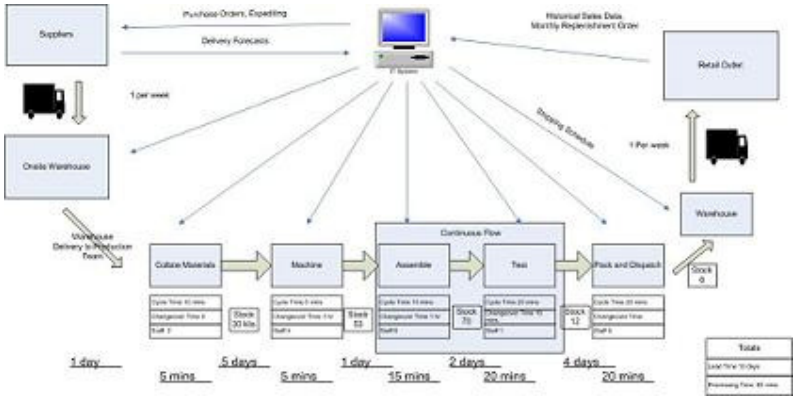
Value Stream Mapping is suitable for most businesses and can be used in Manufacturing, Logistics, Supply Chain and some Service orientated Organisations.

Step 4 - Collect data and produce current state map

One of the key foundations of VSM is that it utilises and analyses business data - this includes process times, inventory or materials information, customer (or demand) requirements. Do not underestimate the time required to capture reliable data – remember that future state maps will be developed using information captured here so it's imperative you have a correct understanding of the business.

When mapping your current state, use icons/graphics to represent each step – the material flow, the information flow, the supplier and customer.

As part of the map calculate the total time taken including both waiting and processing time.



Step 5 - Critique Current state

Go mad - work with the rule that no idea is a bad idea - use post-it notes or labels to place ideas and possible solutions over your current state map - encourage everyone to play a part - analyse the data and encourage your team to make suggestions as to how the process could be improved - challenge the current thinking. Comments will usually take the form of suggested improvements, risks or fixed elements which

The big thing is before moving on to the Future state - you and your team must know the process inside out (that's why your Value Stream Mapping!) – check, check and recheck the process

Step 6 - Map Future State

Taking both the current state map and the critiques that you have obtained from the previous stages - compile a future state map - this should incorporate:

* Aligning Output and demand at each stage
* Adequate review of process criticisms from Step 3 has taken place
* Deployment of Key Performance Indicators

When designing the future state pay close attention to ensure that the process considers the customer requirements. The Future state map should aim for a steady state production - ensuring that there is no surplus materials and maximum productivity. Ensure that the map takes the following into account, Customer, Supplier, Material Flow, Information Flow

Your Future state map will normally fall into either a Push situation where goods are produced irrespective of demand or a pull situation where goods are produced specifically to demand patterns.

Key Performance Indicators are an important part of the Future State, and if they are not already in place you should consider what measures are applicable.

Remember that mapping the future state does not change the existing process – it is merely a method of graphically representing changes that could be made.

Step 7 - Create Action Plan and deploy

Taking the Future State map consider an action plan that could be implemented to change the current process to the future state. This could be done in a number of ways e.g. it could be staged in that elements are introduced sequentially (this works well if there is a series of easy to introduce changes that can leverage immediate benefits. Another method is a "Big Bang" approach – for example – the production plant in our scenario could close down on the Friday and all the changes required to implement the future state are implemented over the weekend and the production team start up the new process in it's entirety on the Monday morning. There are various options and you should consider your business to get the best method.

Step 8 - Measure benefits

After the future state has been deployed after a period of time a review should be undertaken where you check to ensure that the benefits expected have been obtained – review each change made and analyse benefits – Utilise the KPI's deployed at Step 4 to provide insight.