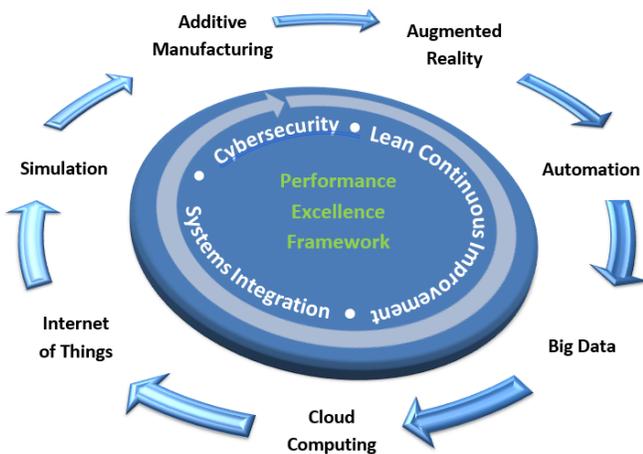


Process Mapping Uncovered

VSM versus SIPOC versus Process Flow Mapping versus Data Flow Diagraming by James R. Floyd

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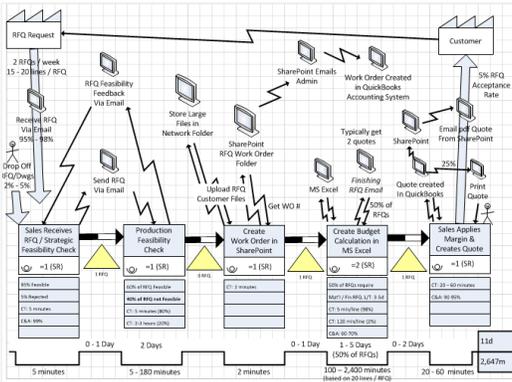
Process Mapping Uncovered – As IMEC’s Advanced Manufacturing Technologies Services (AMTS) service is the strategic incorporation of nine (9) core Industry 4.0 technologies along with all the enterprise’s other continuous improvement initiatives... we see the confluence of several process mapping tools come to bear, ensuring that the enterprise has a unified, well-coordinated and well-integrated improvement system for achieving their strategic and operational goals / targets.



So let’s uncover these process mapping tools to see how and when they can be most effective in coming together to support an enterprise achieving their strategic and operational goals / targets.

The process mapping tools I will be discussing here are VSM (Value Stream Mapping), SIPOC (supplier, input, process, output, customer) process mapping, PF (process flow) mapping and DF (data flow) diagraming. Each has their place in the framework of an AMTS solution and aligned with the enterprise achieving their strategic and operational goals /

targets (did you notice this is the third time this reference has been made?). For all practical purposes, let’s define the VSM as a 20,000 foot view process map, with SIPOC being a 10,000 foot view process map, PF a 5,000 foot view process map and DF diagraming the informational technology (IT) / operational technology (OT) shield under which the other three process maps exist and operate.



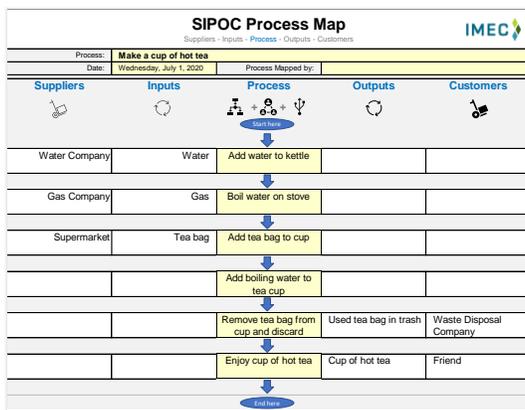
VSM – Value Stream Mapping is used for “improvement implementation planning” (say that 10-times fast). A value stream is... a series of value adding and non-value adding actions (processes) required to deliver a family of products / services to a customer; and value stream mapping is... material and information flow mapping for a particular value stream. So why do we value stream map?

Let’s look at a few reasons why we value stream map...

- 1) We don’t know where to begin to improve.
- 2) Helps us see the sources of waste in a value stream.
- 3) Allows us to see not only the waste and where flow is broken, but how the information flow supports / impacts the system.
- 4) Provides a common language for communicating improvement opportunities in a value stream.
- 5) Shows the inter-relationship in a system of processes.
- 6) Brings together all the solutions to bear – creating a unified and strategic roadmap to solving a problem / meeting an objective.
- 7) Allows us to plan for an ideal future state – breakthroughs not the status quo.

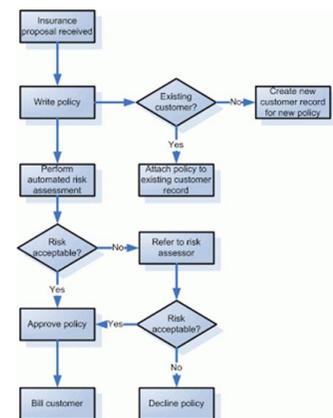
All this with the main objective of linking processes in a value stream to smoothly flow the material / service, at the pull of the customer, in the shortest lead time possible, with the highest quality and at the lowest possible cost.

SIPOC - The enterprise’s current processes that are either suppliers to or customers of the value stream are central to the success of the improvement initiative. As the value stream is an integrated system of supplier and customer processes (both internal and external), and as any change to the value stream is made, that change may in fact impact all these collaborative processes; thus, it is important to map



these process inter-relationships utilizing SIPOC (suppliers, inputs, process, outputs and customers) process mapping.

PF – Process Flow Mapping is a deeper dive yet, getting down to the individual process level of a value stream. Here we are mapping discrete steps in the process and any decisions that



need to be made – determining the path (process flow) the process will

