CARiH

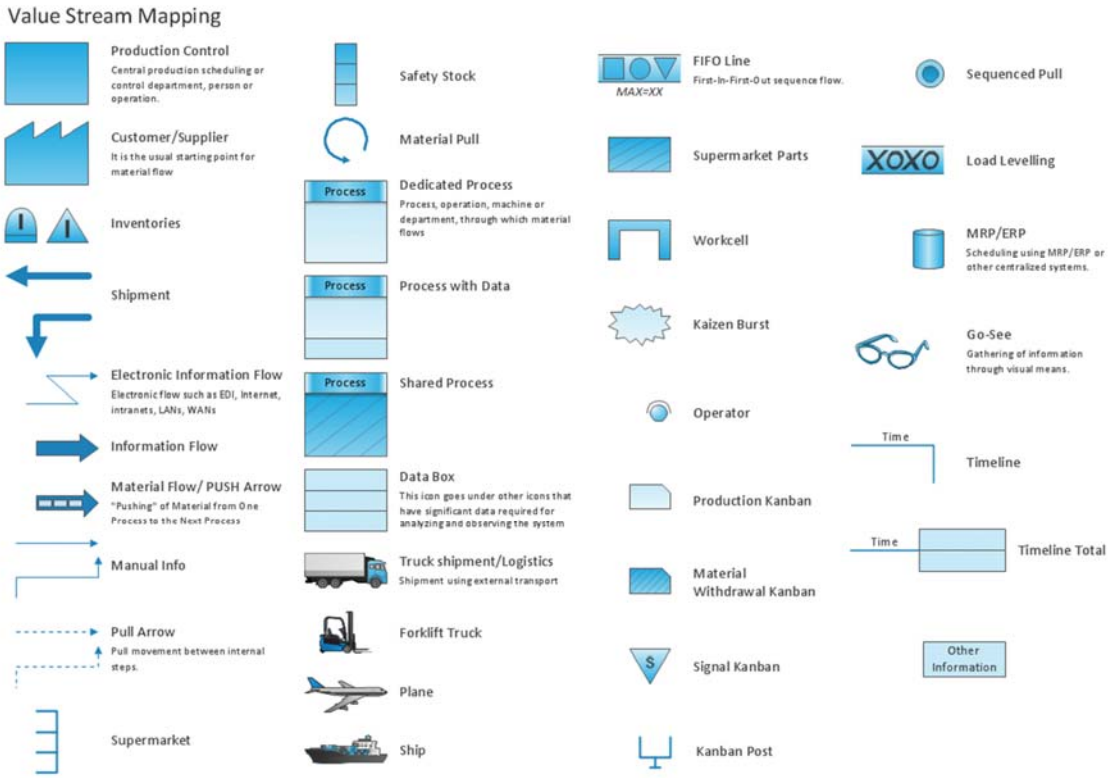
Value Stream Mapping

Definition

A Value stream map (VSM) is a flowchart of information and material flow. It is good for a single glance understanding of delays, restraints and extra inventory. It can be useful when you are not sure in which process the problem lies. The VSM should be germane to the current project and show the truth on the ground.

Value stream mapping is a team exercise and should involve representatives from the areas within the process the team is mapping. Resist the temptation to use technology right away. A value stream map is best created by hand using a pencil on paper. Even though the full team builds the value stream, a single person must put everything on paper.

Value Stream Mapping Symbols



These are standard symbols for value stream mapping. However, if you have more relevant and recognizable symbols, use those.

Steps:

1) Select your value stream: Many value streams exist in healthcare. The most obvious are things like cancer care, emergency care and stroke treatment.
2) Define Start & Stop Points: Crucial to put bounds for the value stream under study. These are the start and stop points for the value stream. Identification of bounds must be careful to make sure that important steps are included.
3) Fill in High Level Process steps: After setting the bounds, place up to five process steps in between the start and stop points. These give a framework to which one can add sub processes.
4) Add Sub-Process Detail: Add the sub processes to the high-level process steps. A good way is through direct observation. Use a stopwatch to time how long it takes to complete each step and document all actions required to take the patient through the value stream.
5) Display Information and Material Flows: Include how persons order products and services, frequency, and method, and how well the information flows back to the supplier. Include how persons communicate. Distinguish between the different types and highlight any standard documents used to pass information on the value stream map. Show on the map how replenishment/restocking of consumable material occurs and any systems in place to track this inventory.
6) Collect and enter process Data- Your teams collect data on each step of the process; typical data to collect are;
    a) Cycle time (time in between successful value delivery/error free products)
    b) Process time (time spent by item/patient in a process/step)
    c) Waiting time (time in between steps)
    d) Lead time (full time spent in the value stream process time + waiting time)
    e) Change-over time (e.g. time spent in OT in between surgery cases)
    f) Up-time (on-demand machine use)
    g) Number of operators
    h) Shifts worked
    i) Net available working time
    j) Scrap rate
    k) Batch Size