

DevOps

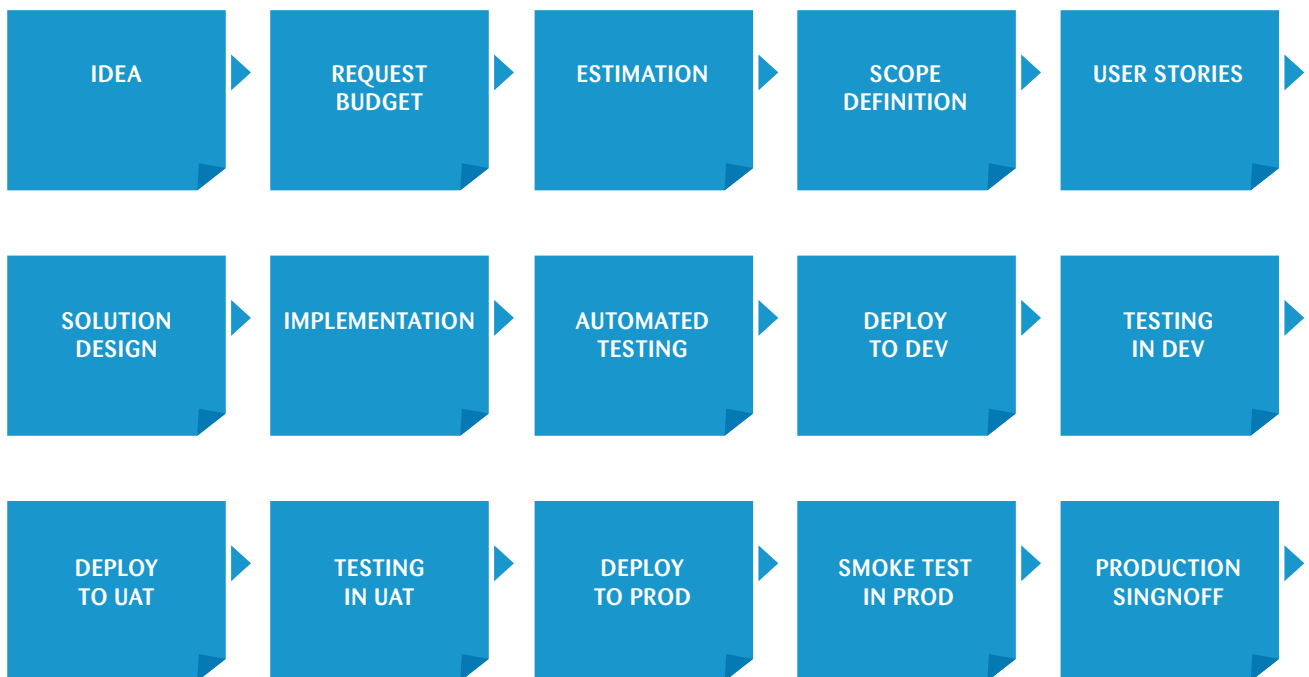
Guide: How can we improve the value stream?

Step 1: Identification of process steps

The first step involves identifying the process steps that are necessary to get from the idea to production.

The process steps are written on post-it notes and stuck to the wall.

Here is an example:



Step 2: The right people

The second task is to identify the people who are needed for each of these steps.



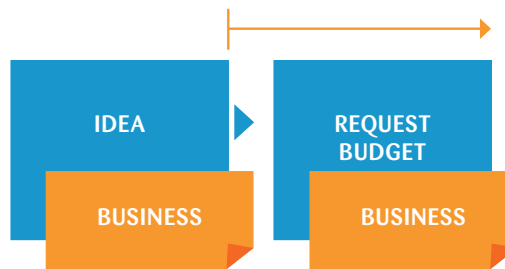
Step 3:

Focused measurement

In the third step, the following values are measured with the help of the people identified in the previous step:

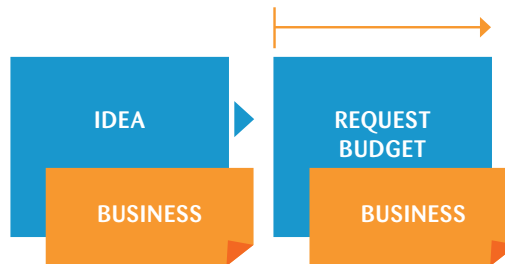
Lead Time (LT):

Period from the start of the process step to its completion.



Process Time (PT):

Period in which work was actually carried out (with no waiting time), i.e. value-generating time.



Percent complete and accurate (%C&A):

Percentage at which the next process step can start with no reworking, additions or queries.

Total LT (TLT):

Sum of lead time (LT)

Total PT (TPT):

Sum of process time (PT)

Activity ratio:

Ratio of TPT to TLT (TPT/TLT), i.e. how much time was actually spent working.

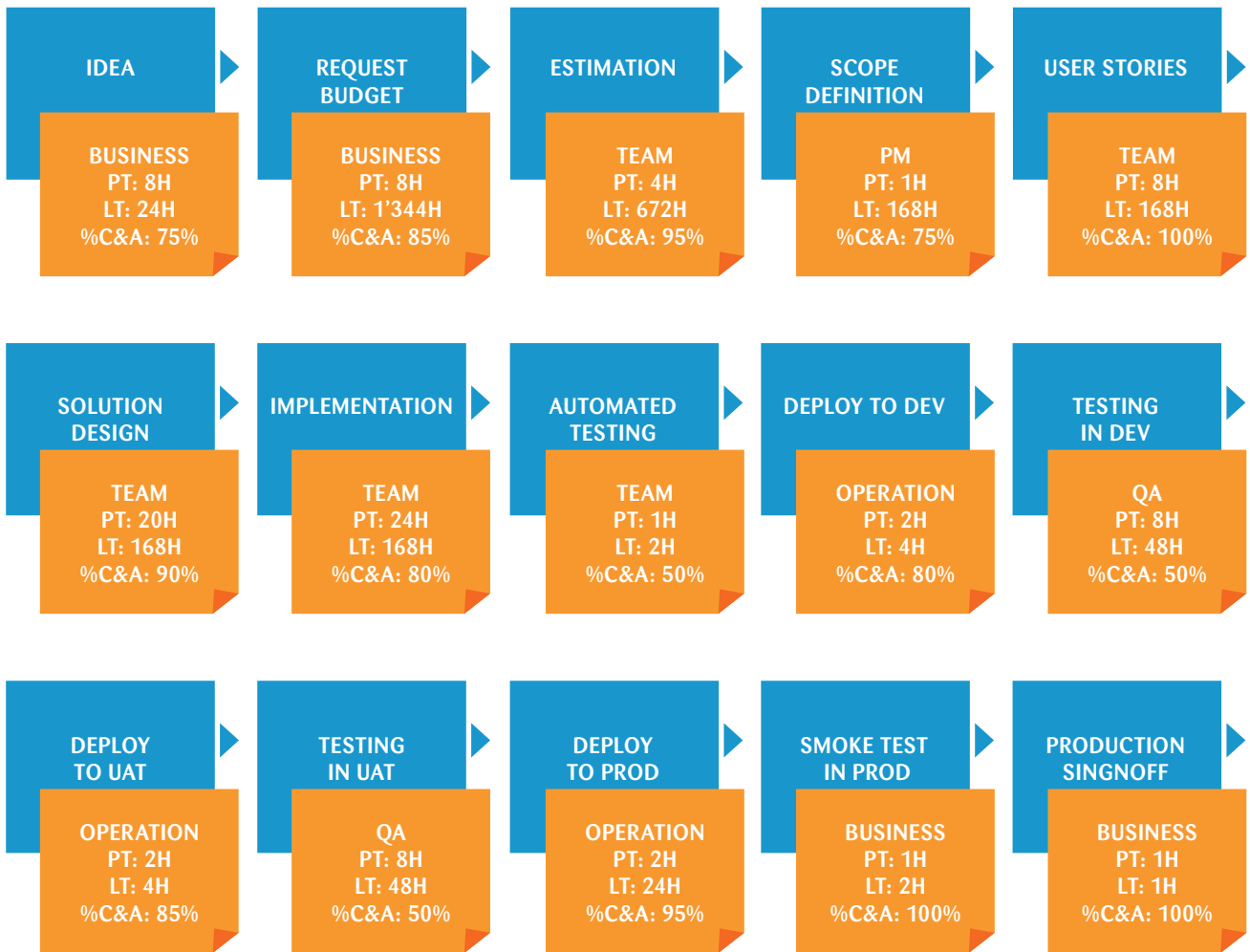
Rolled %C&A:

Multiplication of all %C&A = In what percentage of cases does an idea make it through the entire system with no reworking, additions or queries?

It is important to use the right values in the calculation:

A day has 24 hours, not 8 hours.

A week has 7 days, not 5 days



Total PT (sum of all PT): 98 hrs
Total LT (sum of all LT): 2,845 hrs
Activity ratio (TPT/TLT): 3.44%
Rolled %C&A (multiply all %C&A): 2.64%

Step 4:

Analysis of data

In the fourth step, the collected data is analysed and problem areas are identified:

Where is the %C&A low?

A lot of reworking, additions and queries are needed here.

Which process step has a low activity ratio (PT/LT)?

Here, work is stuck in the queue for a very long time.

Where can hand-overs be eliminated?

Where can shorter feedback loops be integrated?

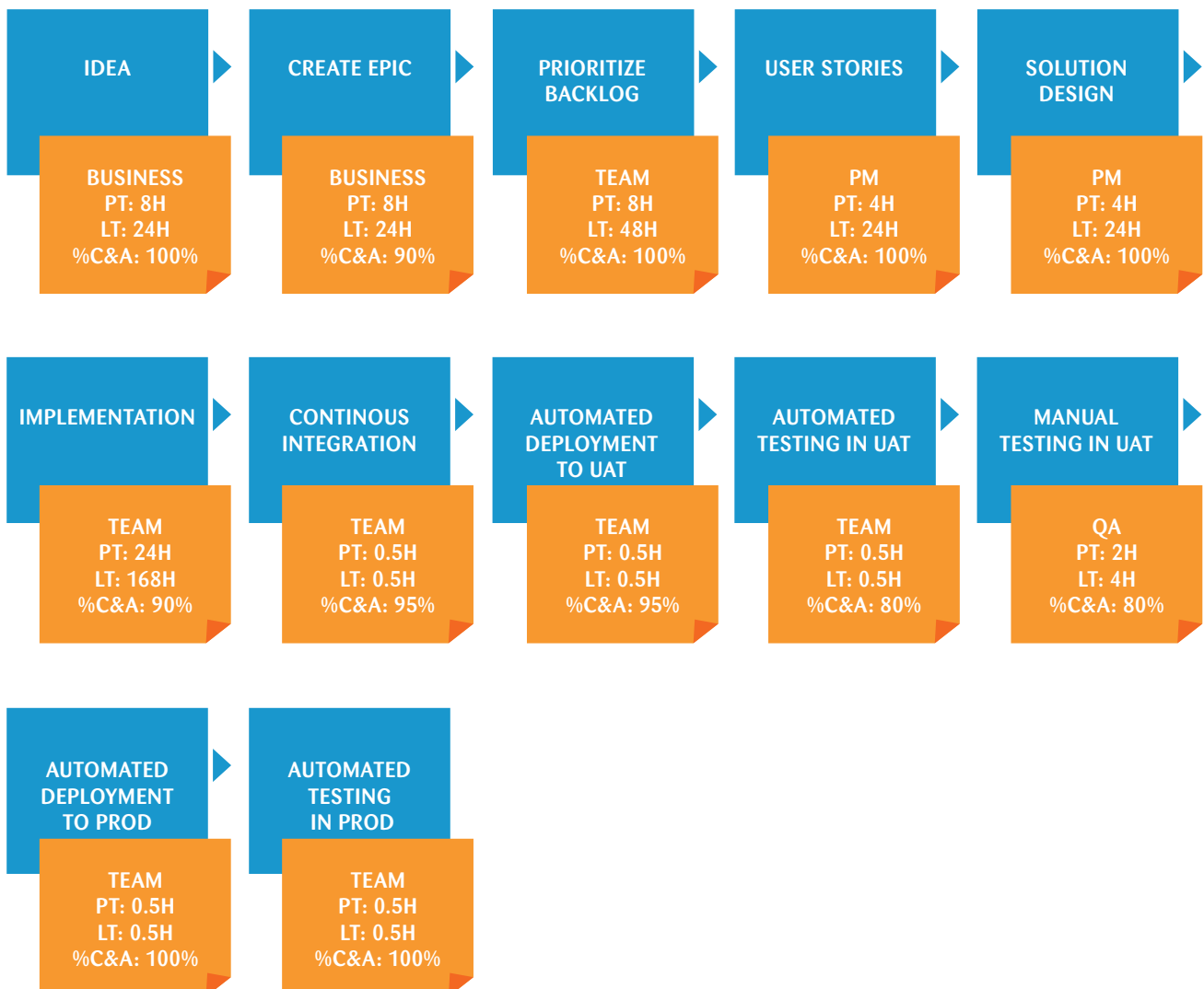
Which process steps can be automated?

Which process steps can be eliminated?

Step 5: Future value stream map

In the fifth step, a new target value stream map is created on the basis of the data gathered in the previous steps.

This also involves defining the new PT, LT and %C&A that are to be included in the future value stream map.



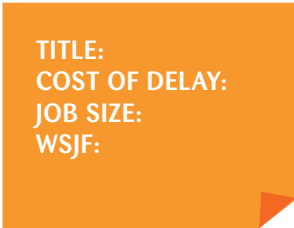
Total PT (sum of all PT): 60.5 hrs (previously 98 hrs)
Total LT (sum of all LT): 318.5 hrs (previously 701 hrs)
Activity ratio (TPT/TLT): 46.2% (previously 3.44%)
Rolled %C/A: 46.7% (multiply all % C&A): 42.1% (previously 2.64%)

Step 6:

Specific measures

The sixth step is to define the measures necessary for achieving the new value stream map.

The procedure for this is as follows:

1. All improvement suggestions are written down on post-it notes
 - a. One post-it note per improvement suggestion
 - i. Title:
 - ii. Cost of delay:
 - iii. Job size:
 - iv. WSJF:
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2. Intify the suggestion that generates the smallest improvement (lead time, process time, %C&A, etc.). For cost of delay, write '1'. This will now serve as our reference suggestion for cost of delay.
 3. Estimate the cost of delay for all other improvement suggestions with these numbers: 1,2,3,5,8,13,21,34,... Use the reference suggestion for cost of delay. How many times greater is the improvement that it generates in comparison to the reference suggestion?
 4. Identify the improvement suggestion that will take the least effort to implement. Write a '1' for job size. This will now serve as our reference suggestion for job size.
 5. Estimate the job size of all other improvement suggestions with these numbers: 1,2,3,5,8,13,21,34,... Use the reference suggestion for job size. How many times more effort does it need compared to the reference suggestion?
 6. Now we calculate the WSJF (weighted shortest job first) for every improvement suggestion. $WSJF = \text{cost of delay} / \text{job size}$
 7. Arrange all improvement suggestions according to WSJF.
 8. Start implementing the improvement suggestions with the highest WSJF.

Step 7: Repeat

Value stream mapping should never be performed just once. The whole process should be repeated after one month at the earliest and after one year at the latest.

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