THE FLOW ENGINEERING GAME

by Steve Pereira and Andrew Davis

This simple workshop serves as a fun, quick, and effective introduction to Value Stream Mapping and the core of Flow Engineering. Using a fictional example stream and randomly generated data, we can quickly introduce collaborative mapping, current state analysis, and future state improvements with groups of any size—whether they work together or not.

Since this example stream doesn't directly reflect an actual stream, it can be used to not only introduce concepts but also simply and clearly show how to map and analyze in a positive context before we get into higher stakes and more detail. It gives participants a chance to practice something closer to a consultant or facilitator view of a value stream without the emotional or logical connection to a real stream. The game-like workshop serves as a warm-up for real mapping, so participants can learn the basics before applying the technique to their own context. This also works to demonstrate mapping to participants from varied contexts, where they don't share a common stream.

INSTRUCTIONS

Get started with Flow Engineering in 30 minutes:

- 15 minutes for intro and activity
- 15 minutes for group discussion

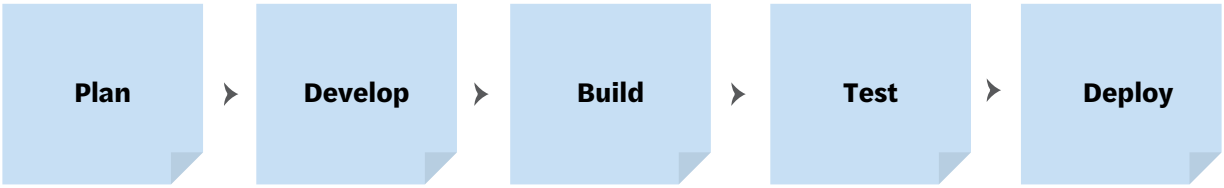
STEP 1: Introduce the ideas behind the game. (5 mins.)

- We want to create end-to-end visibility of the flow of work.
- We do this to measure performance of the overall flow.
- Doing it allows us to find and address a constraint to improve the flow of work.

STEP 2: Set a simple target goal: Reduce time to market.

- Once you're more experienced with mapping, you can choose new target outcomes related to quality, cost, value-added time, information flow, etc.

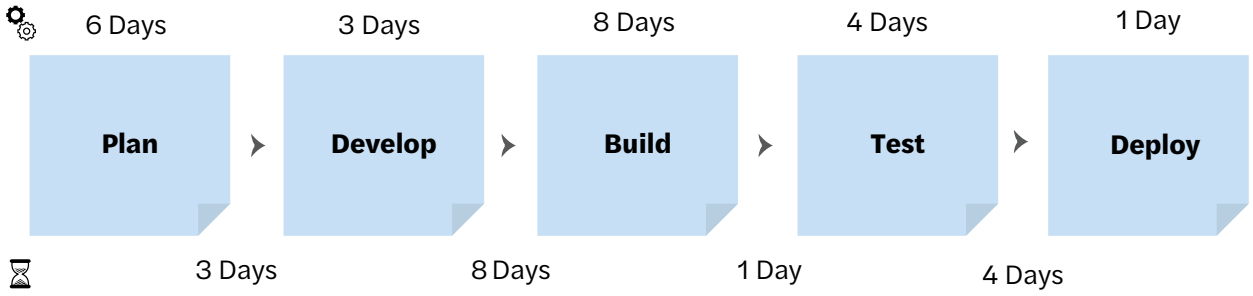
STEP 3: Provide each team with a prototypical stream example on sticky notes or have them copy an example.



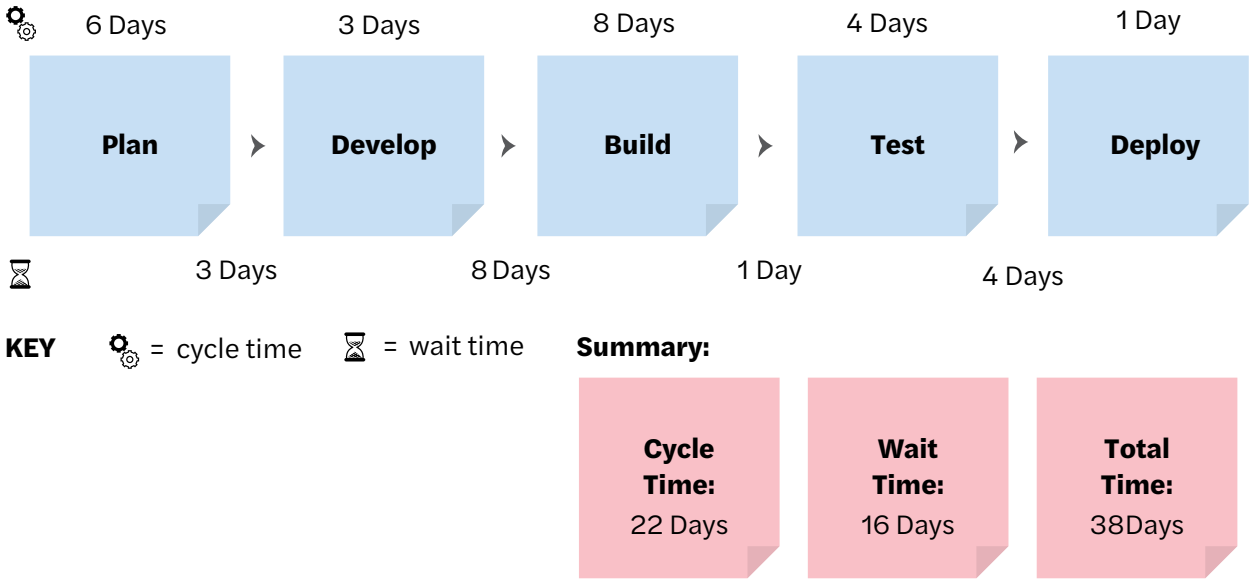
- Add stages as needed. The starting scaffold can help participants understand the scope and zoom level you're targeting.

STEP 4: Have one or several members of each team roll dice or use a random number generator to record timing for each cycle time and wait time between stages. (3 mins.)

- For each number, add a time unit to describe scale: months, weeks, days, hours. This works to demonstrate how perfect detail is less important than generating dialogue.
- The base unit can fit the current flow of the organization in question.
- We could use mostly months and weeks to illustrate a case in medical technology or weeks and days to illustrate a fully digital product release.
- Vary from the base unit to see what appears when you have multiple stages following the base scale (e.g., days) but a few that dramatically vary (e.g., months or hours).



STEP 5: Have the team total up the time for cycle time and then wait time. (1 min.)



STEP 6: Have each team identify their most impactful section of the stream and identify an experiment to improve it. (6 mins.)

In our example above, the waits between each stage are issues but especially after Develop and Test.

STEP 7: Discuss results as a group. (15 mins.)

Sample questions include:

- Was issue you found just present at the bottlenecl or could it be caused upstream?
- What would be the downstream effects of the constraint you identified?

There are other useful games and exercises you can conduct to expand this practice or introduce concepts that are complementary to flow and collaboration, such as the TRIZ Liberating Structure, the Penny/Ball Point game, the Telephone game, and Kanban games.

Learn more about *Flow Engineering*
and download more resources at: