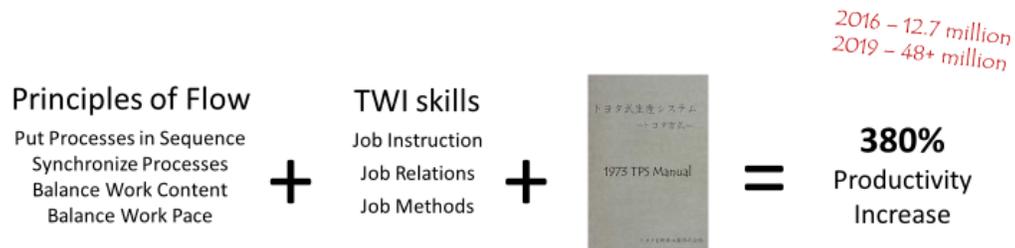


# Getting Ready for 2020 Summit

You are going to have the opportunity to see how a company has increased their output 380% in three years by their leaders learning to use the TWI skills on the shop floor.

The session format will be a brief overview of their progress. Then we will go directly to the step by step methods they used during improvements. You can prepare for the session by gathering data and we will coach you through the next steps.

## Three Years of Coaching

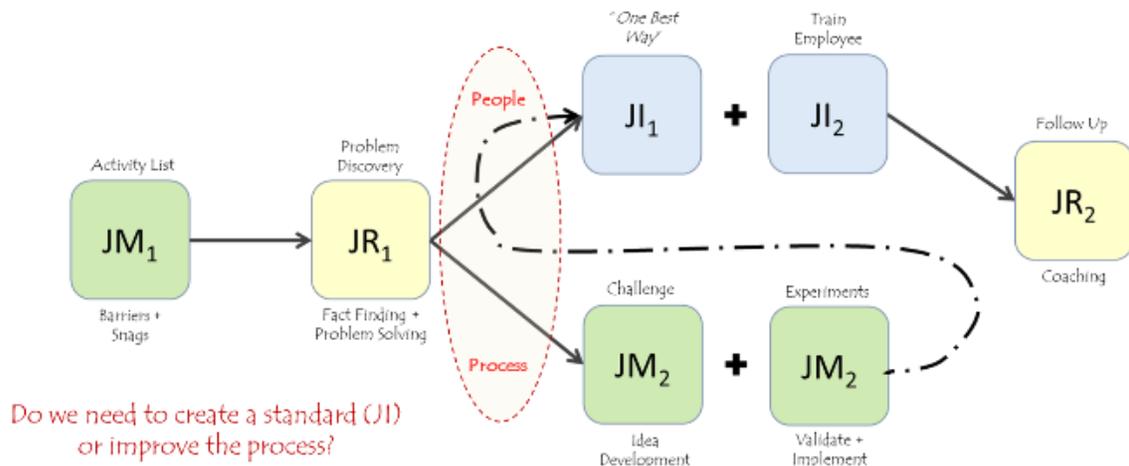


The objective is to achieve flow = Ohno's "River System"

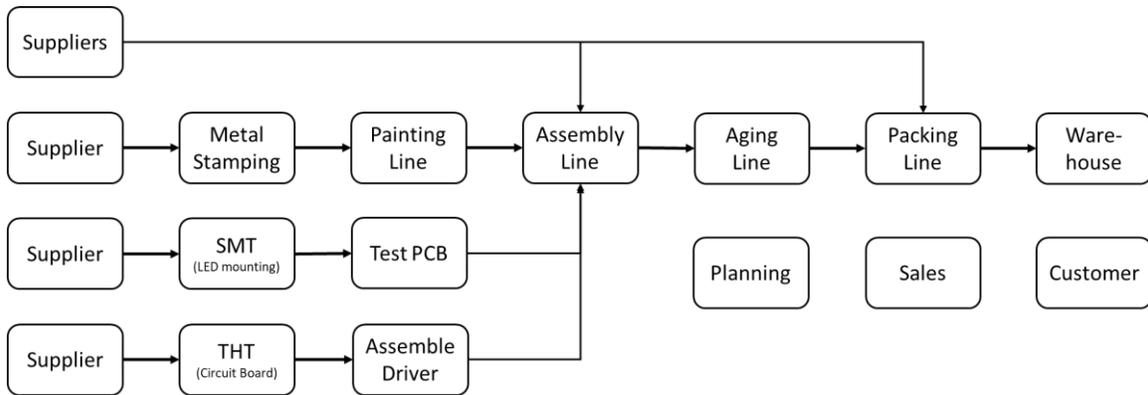
Company was experienced in Lean

Focus shifted to creating flow and applying TWI skills

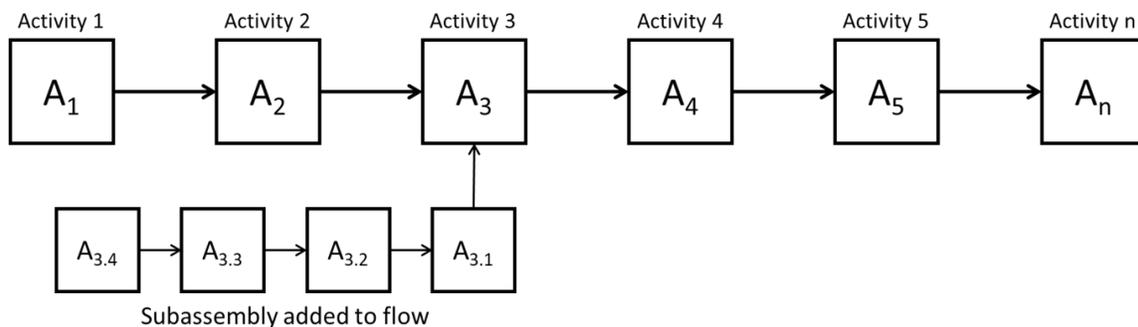
This is the general application pattern for using the TWI skills. First, they did some fact finding starting with mapping the process flows and defining the issues at each activity.



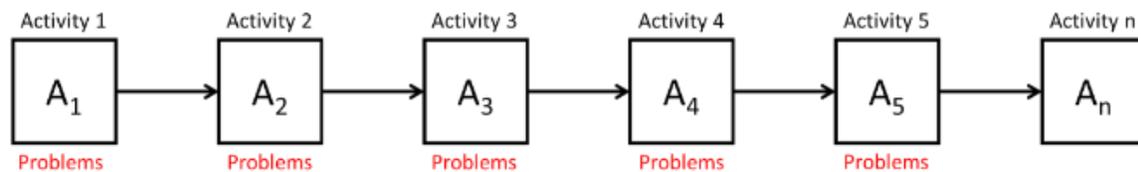
Preparing for the workshop is best done by creating two levels of process maps. First will be the high level map that is generally done at a department level. It can be done in a general process sequence as well. Here is an example from the lighting company.



After you have done the high level map, choose a department or process that you would most want to improve. (What department do you worry about the most? Which process has the most defects or has the most uncertainty for delivery?)

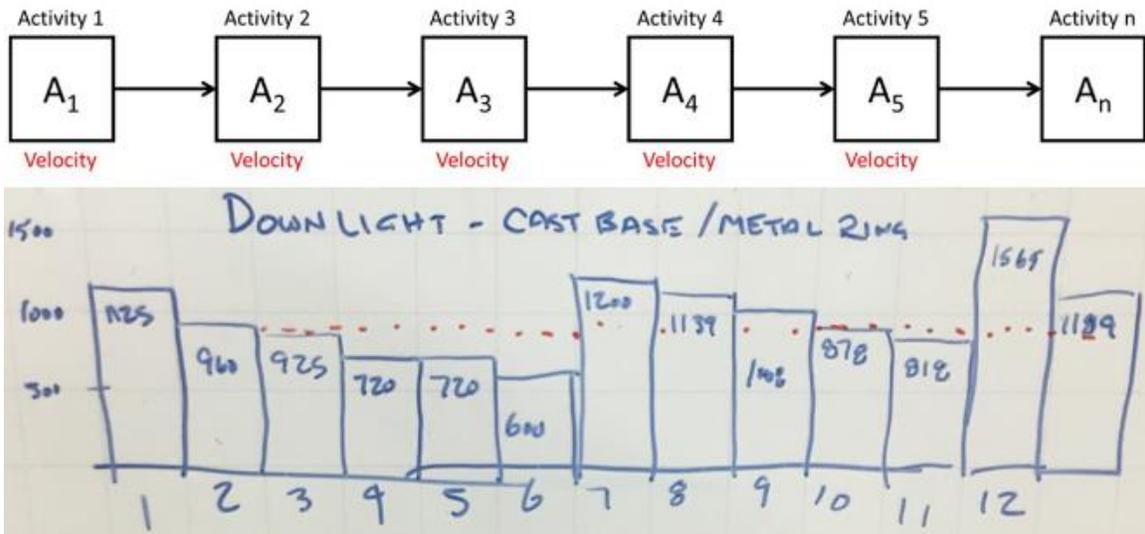


This example shows a subassembly process feeding the main flow. Do not worry about making this fancy... just sketch off on a sheet of paper to start. Alternately, you can use sticky notes or a whiteboard to start making notes. For a smaller company you may be able list all the activities in one diagram. Once you have defined the activities, you gather facts on each one.



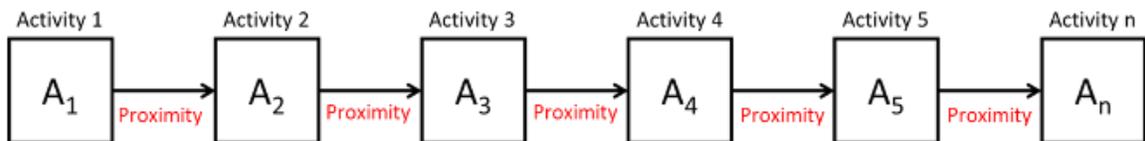
Gather facts on each activity about the problems, issues, difficulties encountered. This can be safety and ergonomic issues. It can be quality related where material is rejected or scrapped. Or where the problem is so common that you have a standard rework process. It can be an issue were the process is so difficult or complex that only *one person* can do the job. You can take pictures or videos to help remember during the workshop. For extra help, get phone numbers of people you can ask questions if you need more information.

The next piece of information you want to collect is the velocity of each activity. You do not need to do any time studies; approximate values are good enough to start. (*Ask the operators for estimates.*) Use number of pieces per hour or how you normally define production rate.



The sketch is an example done by IE students to choose where to start their improvement efforts.

The next piece of helpful information to note is the proximity between each activity. You do not need actual measurements, just count the number of steps will be enough for the first round of activity. You might have some close enough that they can hand it to the next step, or it is on a conveyor so they have no transport functions.



You should bring as much information as practical so you can work with facts during the practice steps.

Reorganizing for Flow can optimize your production system output. Production operations can be organized for flow without obviously being organized like assemble lines. Before you start moving things around, gather the basic facts you need to make the most effective choices for your next steps.

You will learn about how to apply the four Principles of Flow and how to use your TWI skills to solve problems.

Further reading is available online – a shorter summary of organizing for flow that is about 15 pages and a more detailed version of using 12 steps for improving (TWI skills) that is about 95 pages.

<https://www.linkedin.com/pulse/reorganizing-flow-project-2020-mark-warren> - Working outline of the improvement sequence for organizing for flow.

*Be prepared to challenge your thinking and solve problems.*

# Years of Experiments with TWI skills

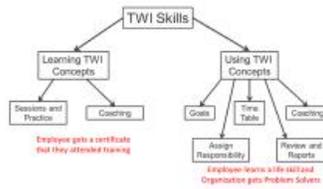
... and research

What did Ohno do differently with TWI?



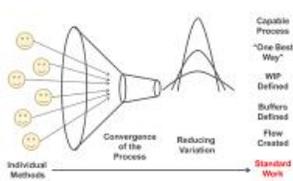
about 2005

Learning and Using are Different

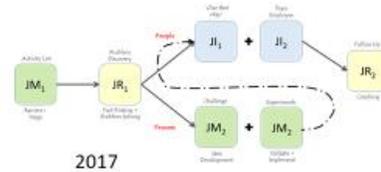
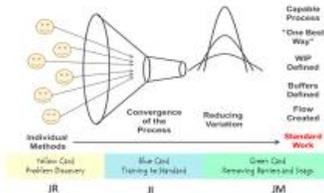


2015

Job Instruction progression toward Standard Work



about 2010



2017



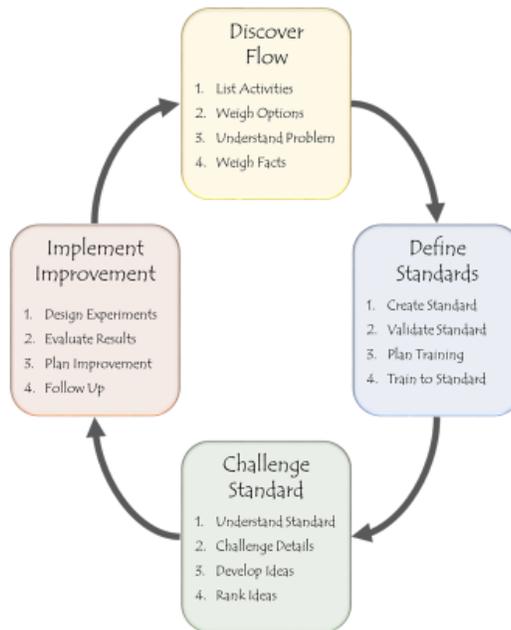
2020?

## Connecting Lean and TWI skills

Once you master the thinking patterns, just follow the sequence.

Remove unnecessary activities, solve problems, make the job easier.

**Daily Practice = Mastery**



You can achieve 20%+ improvement each year.