

Value Stream Mapping

AGENDA

- Introduction to mapping 
- Creating a Current State Map 
- Introduction To Lean Techniques 
- Creating a Future State Map
- Using a Map as a basis for Tactical Implementation Planning

Future State Value Stream Mapping

THE 9 KEY QUESTIONS :

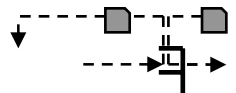
1. What are the customer requirements
2. How to apply Continuous Flow Processing
3. Which process is the pacemaker
4. How to control upstream processes
5. What size supermarkets (shop stock) are required
6. Is it sequential or fill-up pull
7. Where to level production
8. At what frequency will kanban be released
9. What further improvements can be made

Creating a Future State Value Stream Map

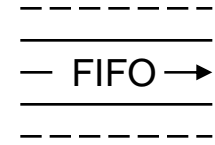
THE 7 STEPS

1. **Customer Requirements**
2. **Draw Process Steps**
3. **Process Data**
4. **Inventory**
5. **Material Flow: Supplier to Manufacturer & Manufacturer to Customer**
6. **Information Driving Flow & Internal Material Flow**
7. **Manufacturing Lead Time & Processing Time**

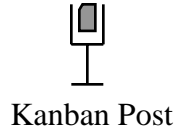
Icons for use in Future State



Supermarket with Prod Card & Withdrawal card



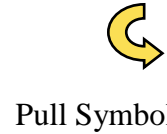
First In First Out sequence flow



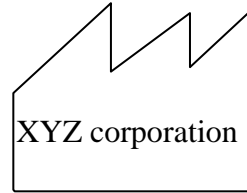
Kanban Post



300 pieces 1Day Inventory

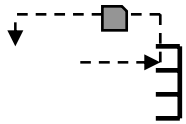


Pull Symbol



XYZ corporation

Outside sources



Supermarket with Prod Card



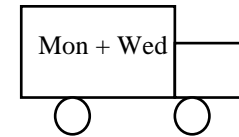
Supermarket



Signal Kanban Min & Max



Kaizen lightening burst



Truck Shipment

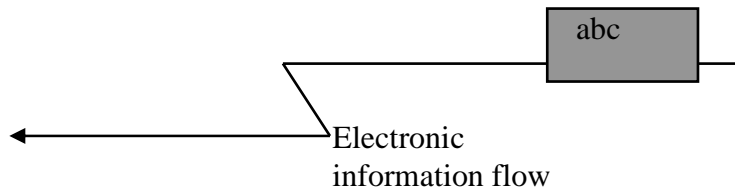


PUSH arrow



Production Control

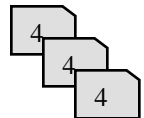
Information System VSM Symbols



Electronic information flow



Level loading Production



Manual Information flow

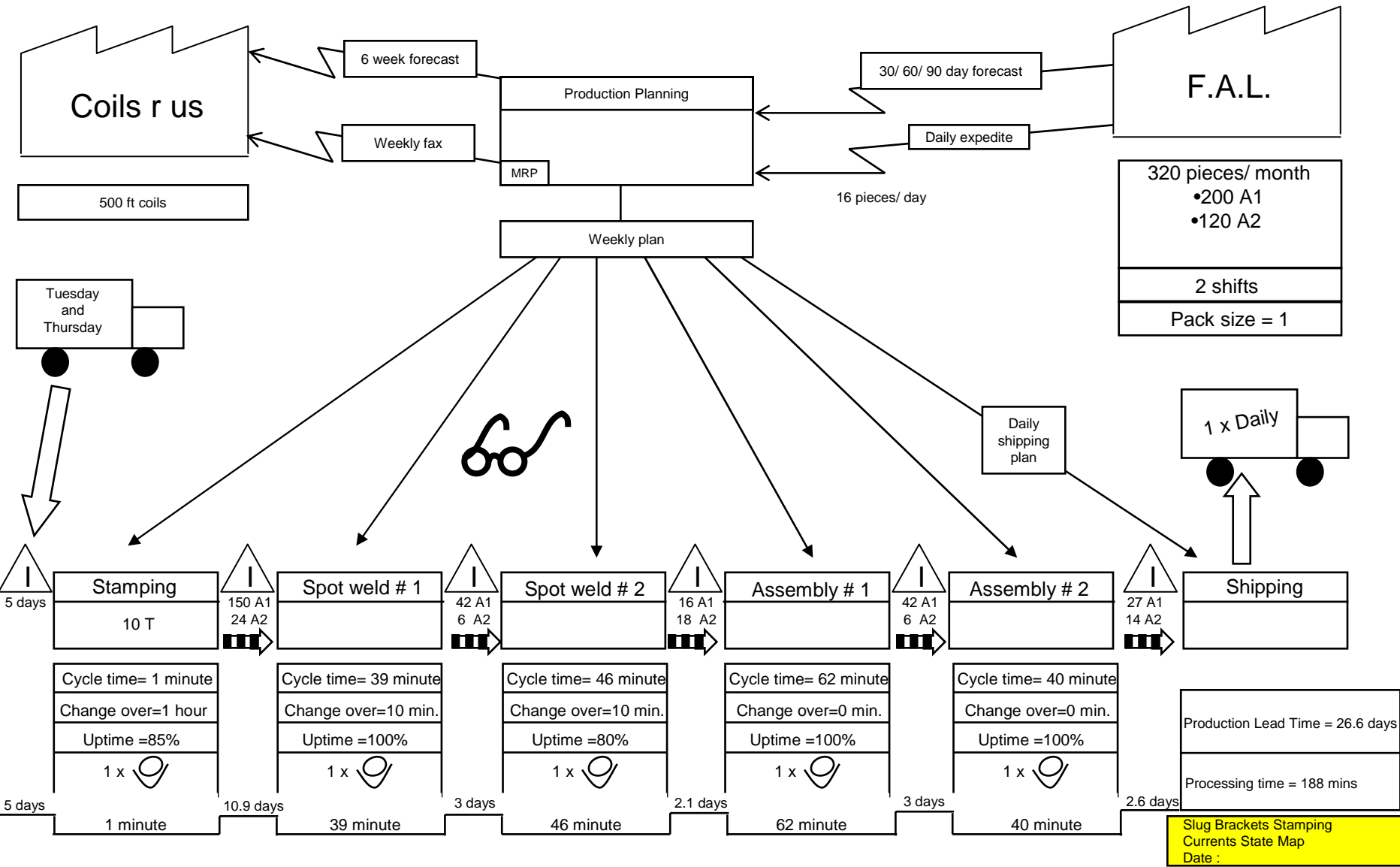


Sequenced-Pull Ball

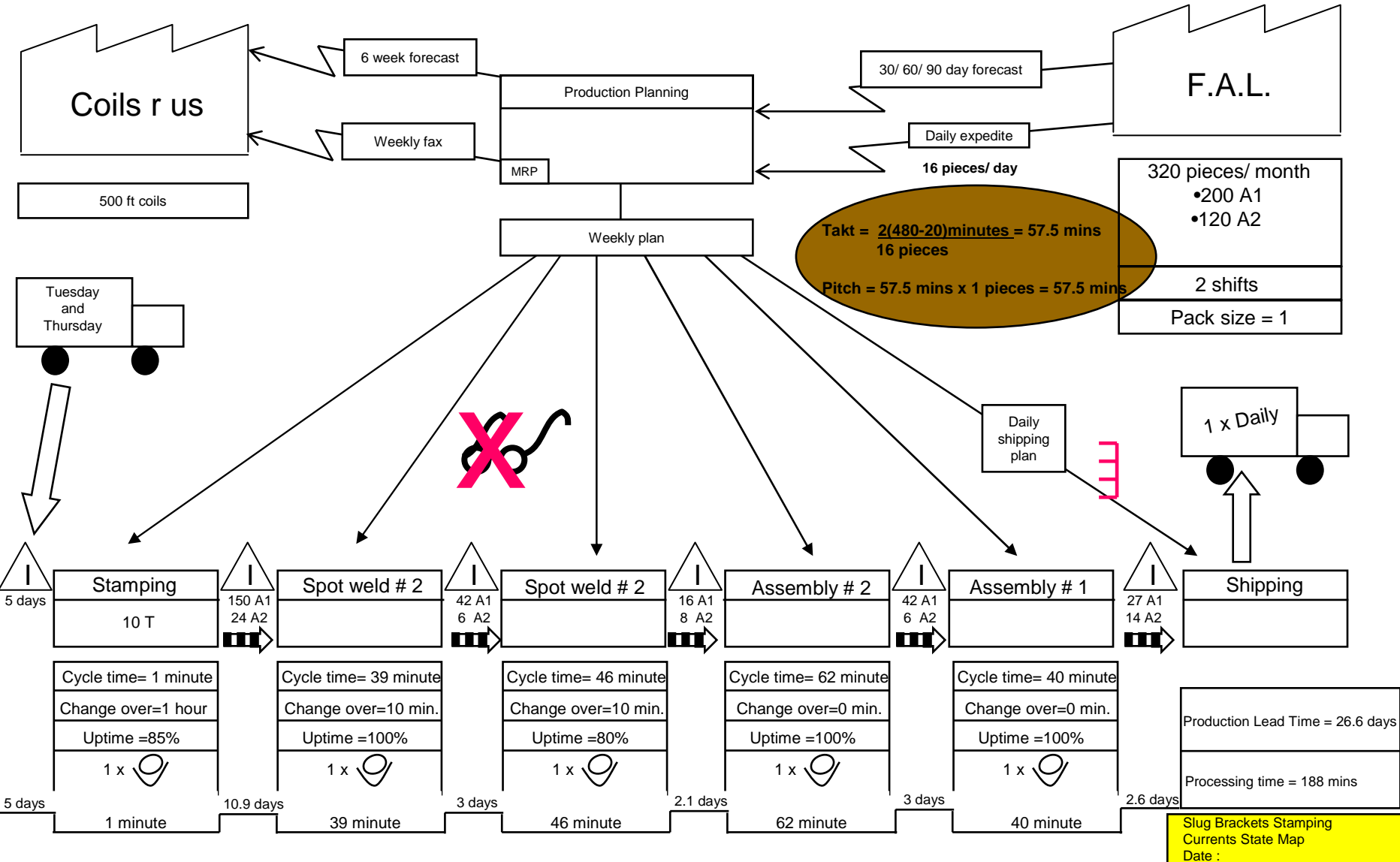
***Go to white board and change
current state to future state.***

***Ask the delegates to draw it with
you***

Current State Map

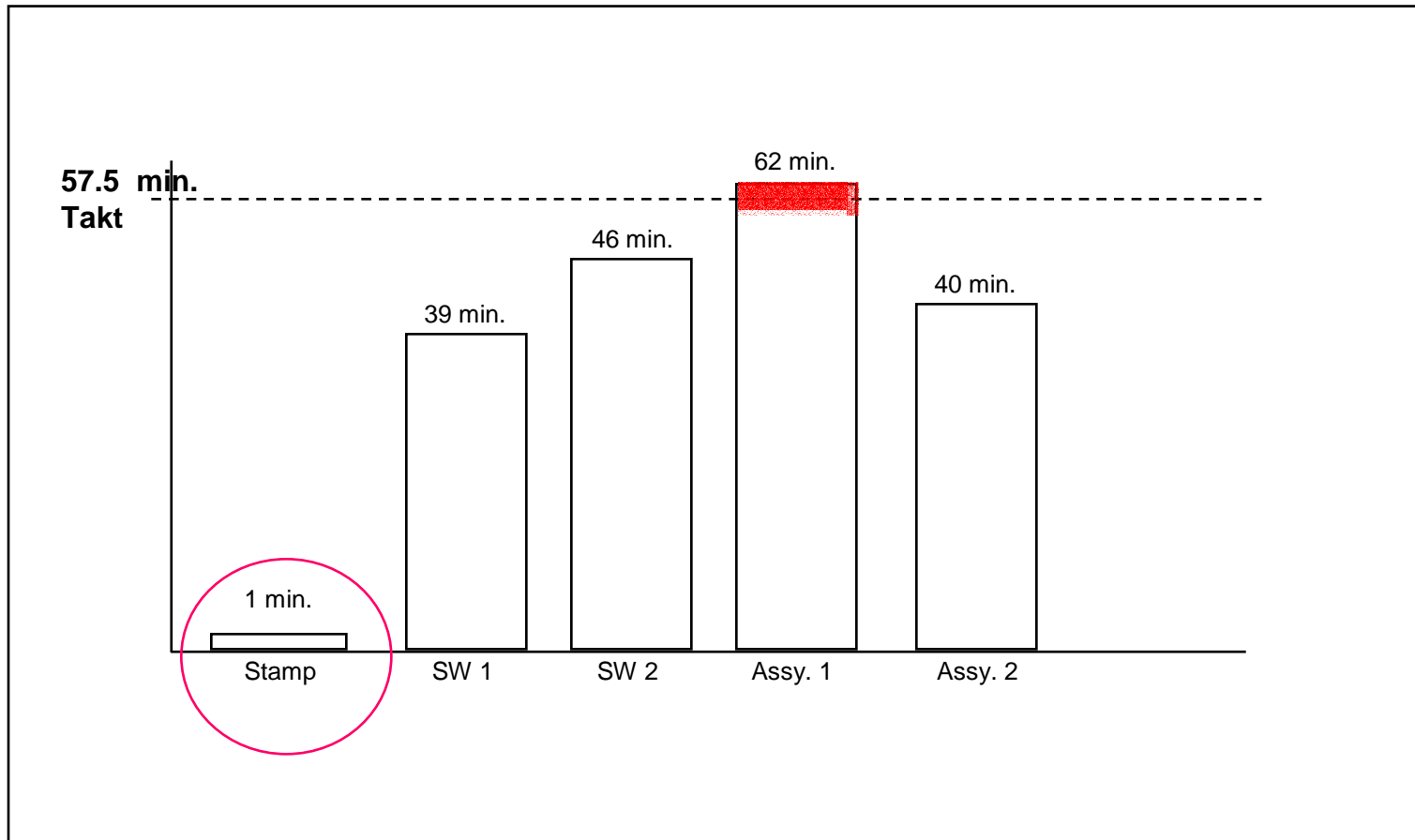


Add Takt Calculation

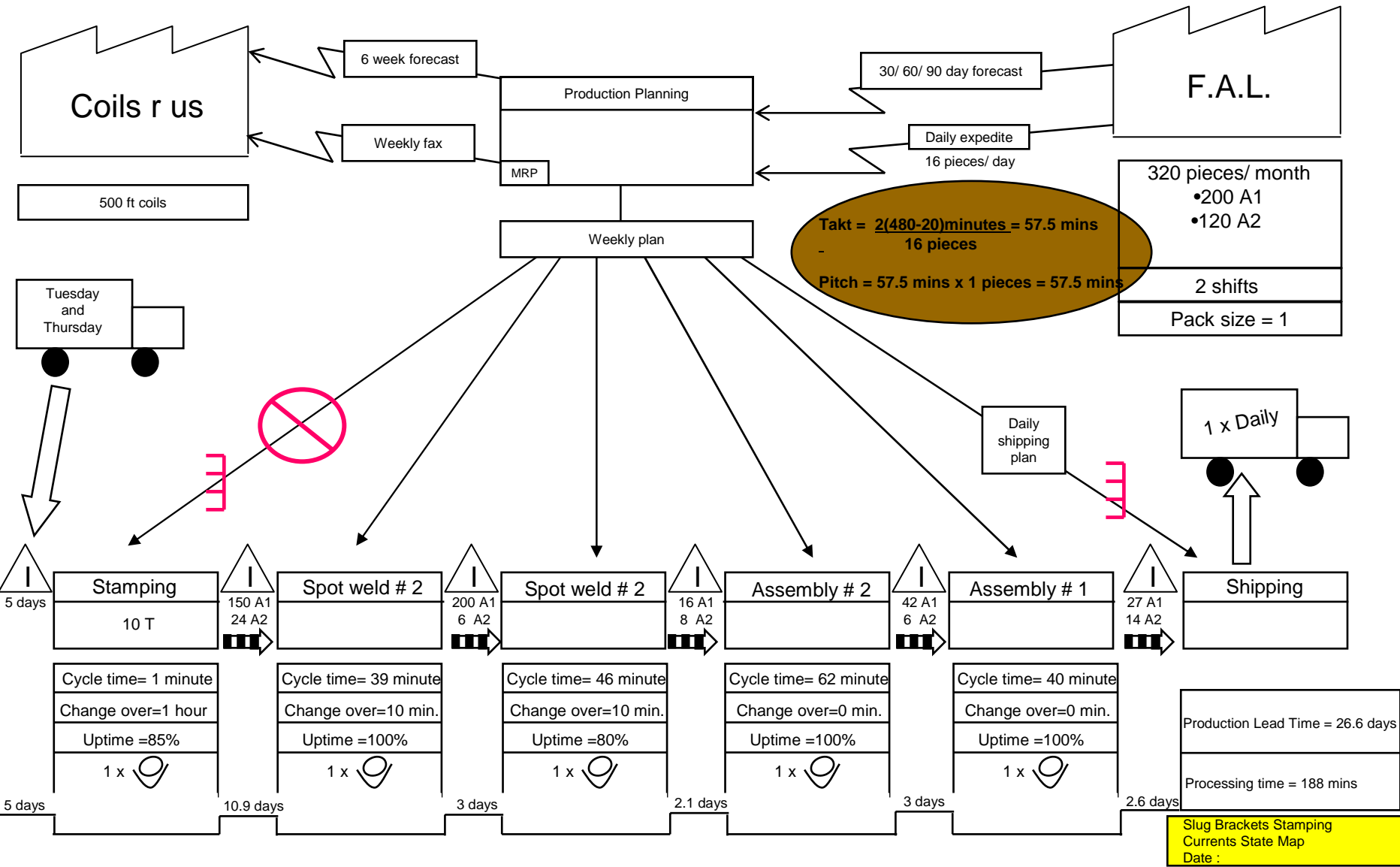


Where is Continuous Flow Possible?

- DRAW ON FLIP CHART

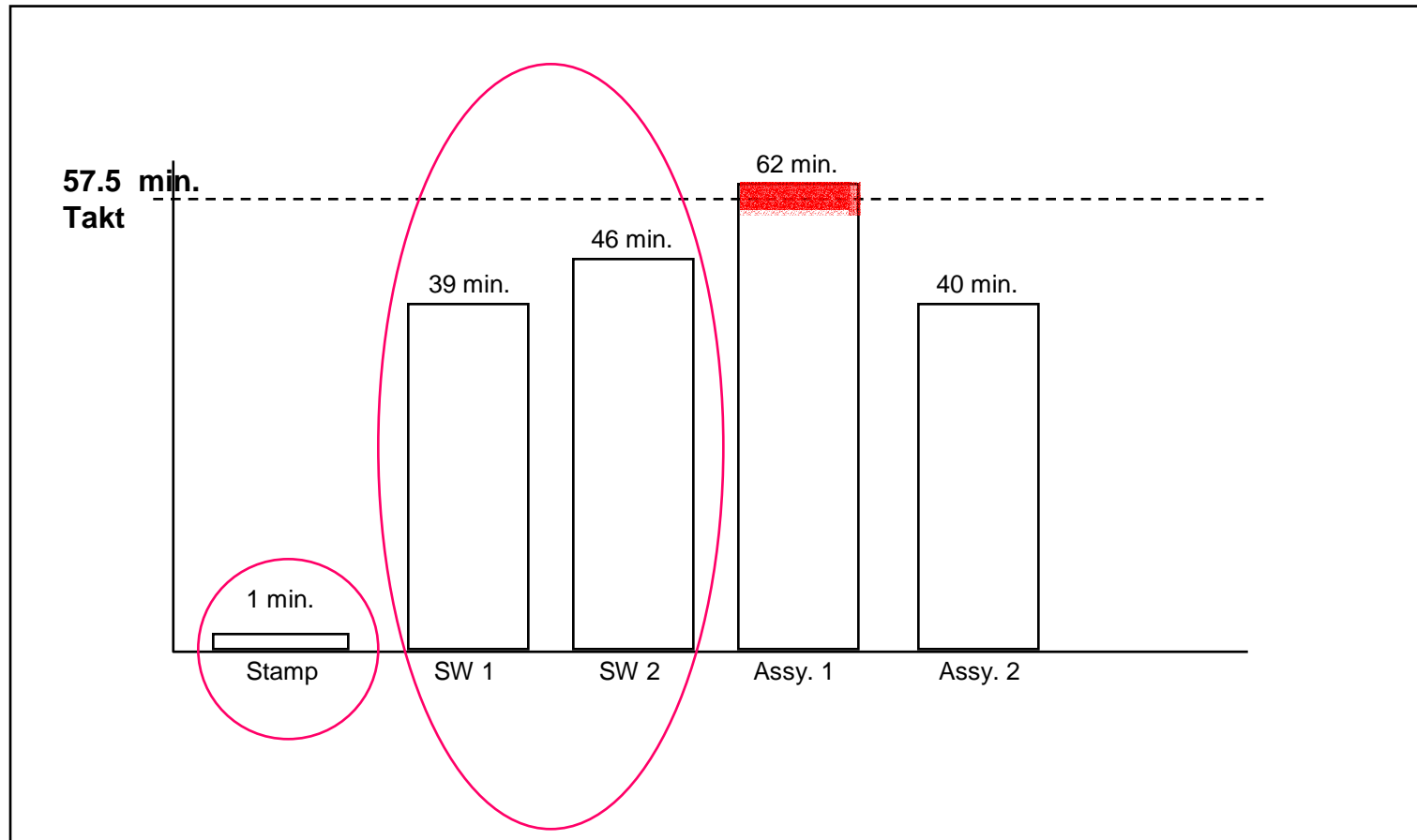


Drawing a Future State Map

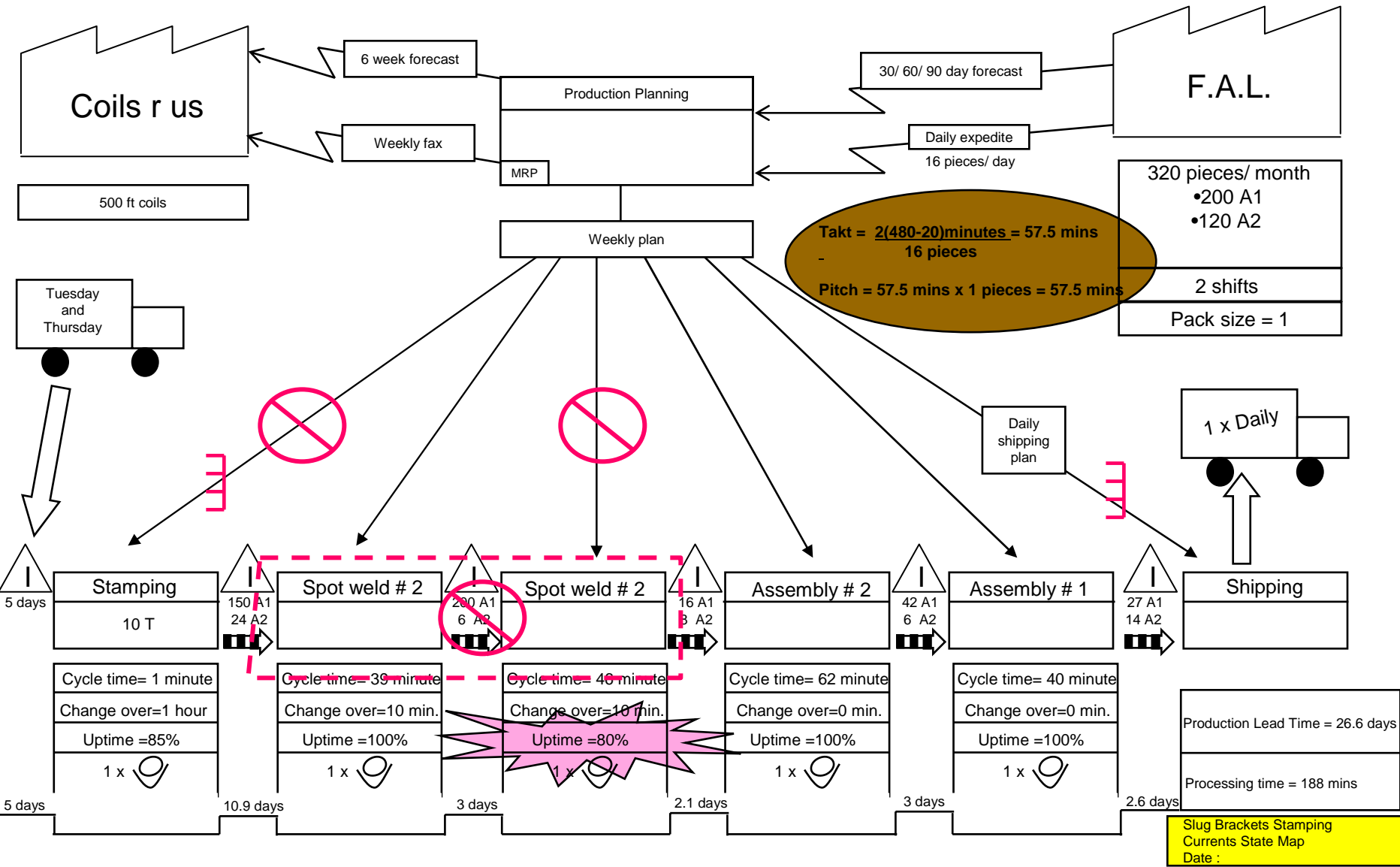


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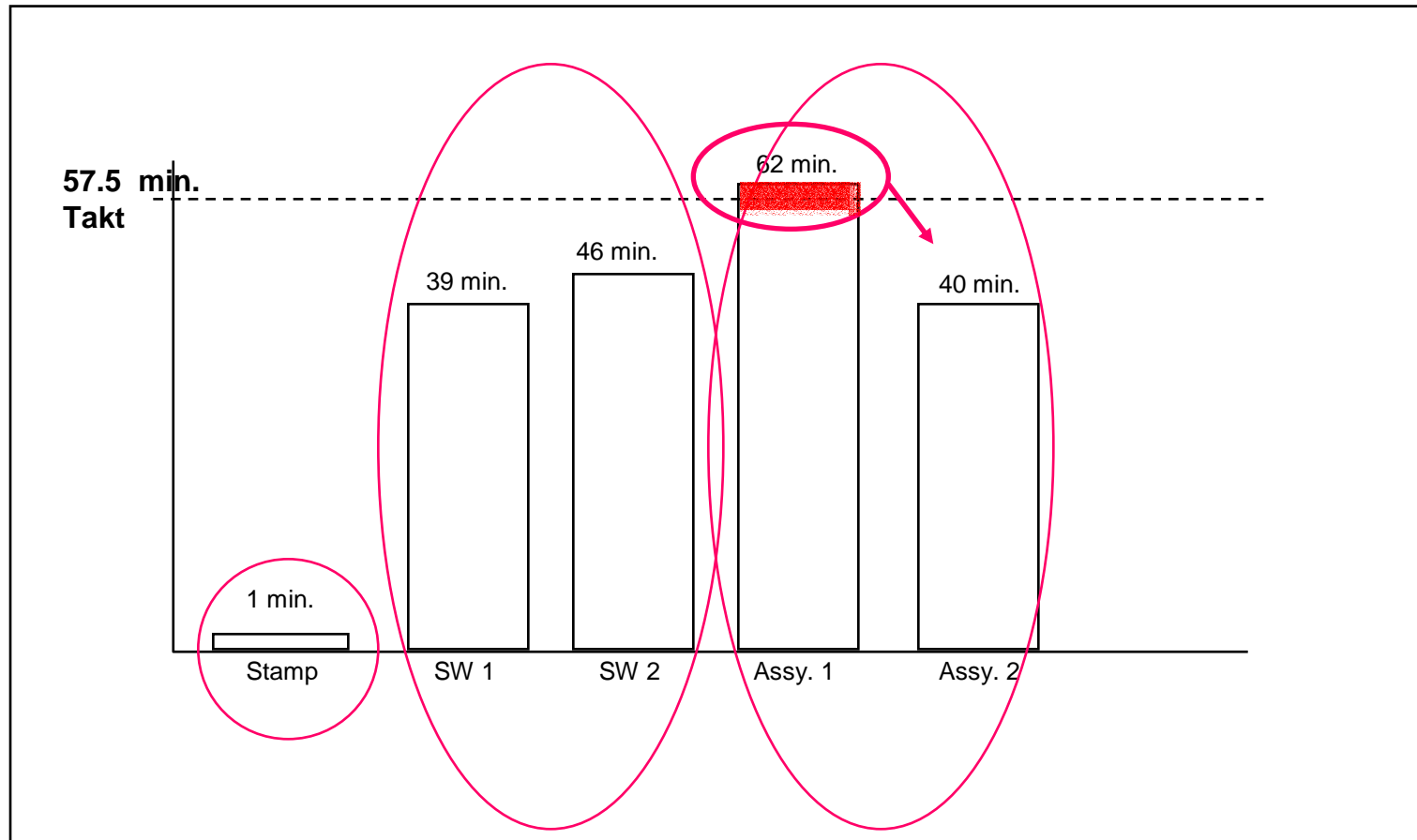


Drawing a Future State Map

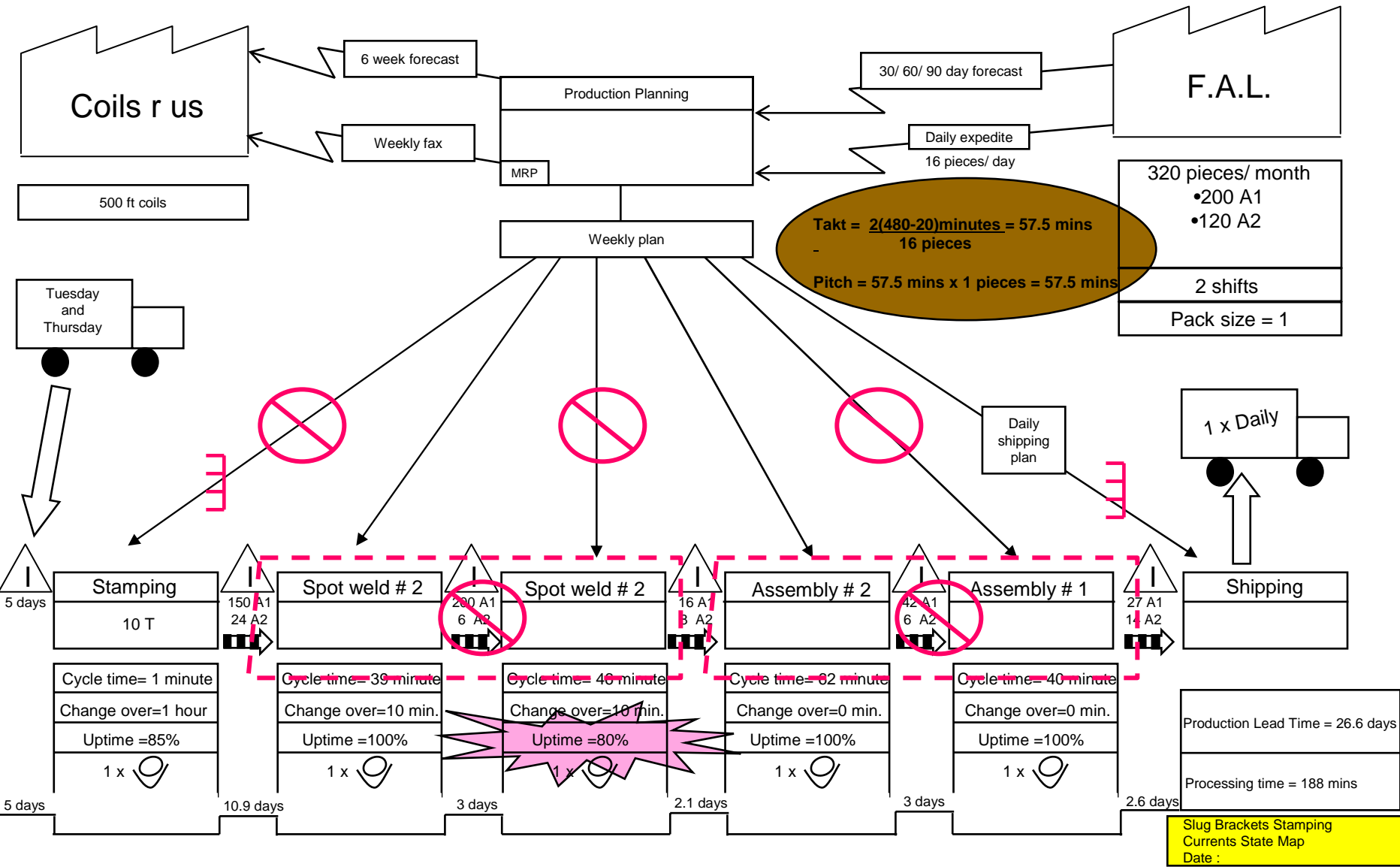


Where is Continuous Flow Possible?

- DRAW ON FLIP CHART



Drawing a Future State Map



Where is Continuous Flow Possible?

$$\text{Ideal No. Of Operators} = \frac{\text{Total Work Content}}{\text{Takt Time}}$$

e.g.

$$\text{Ideal No. Of Operators} = \frac{187 \text{ minutes of work}}{57.5 \text{ minutes Takt}}$$

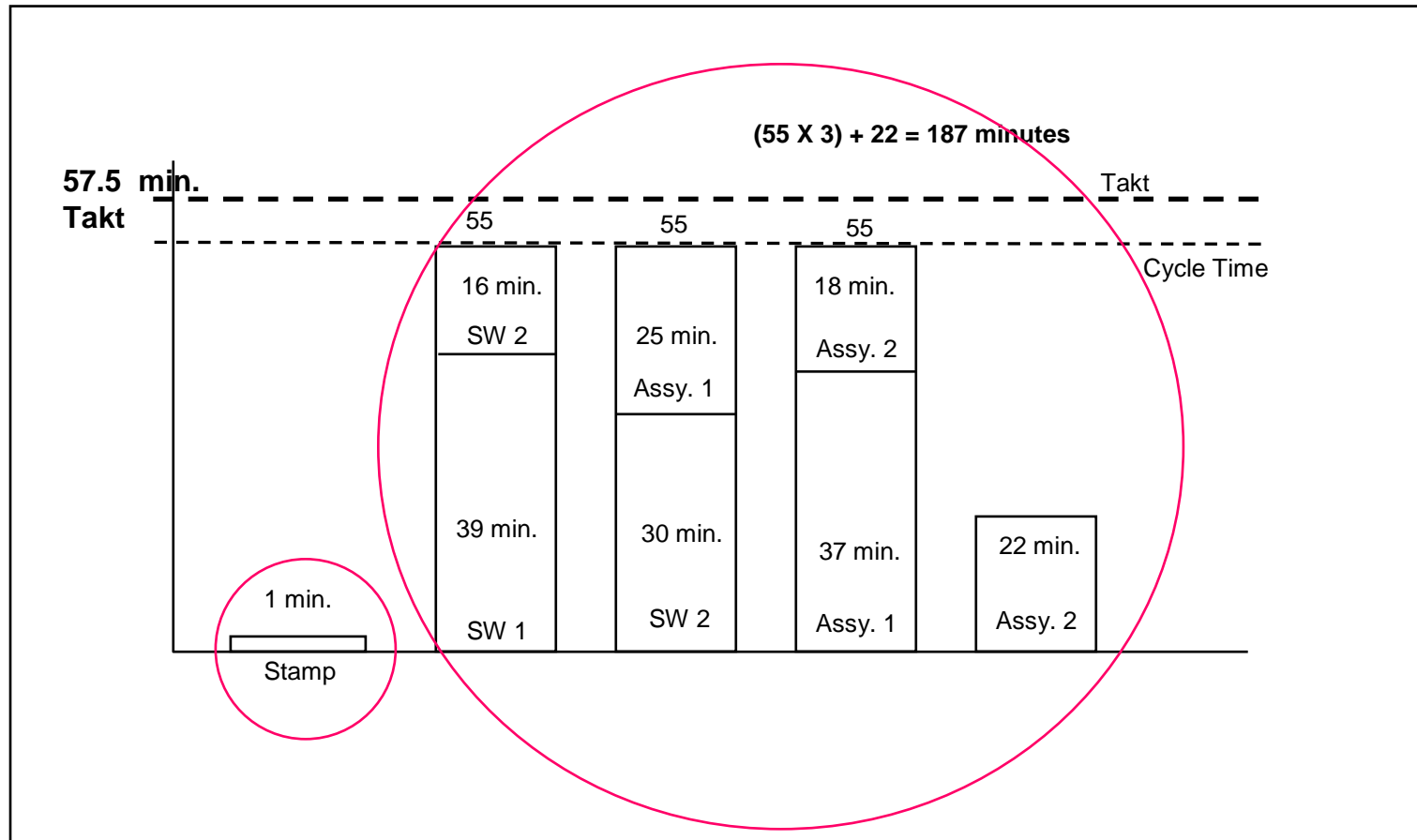
$$= 3.25 \text{ operators}$$

$$= 4$$

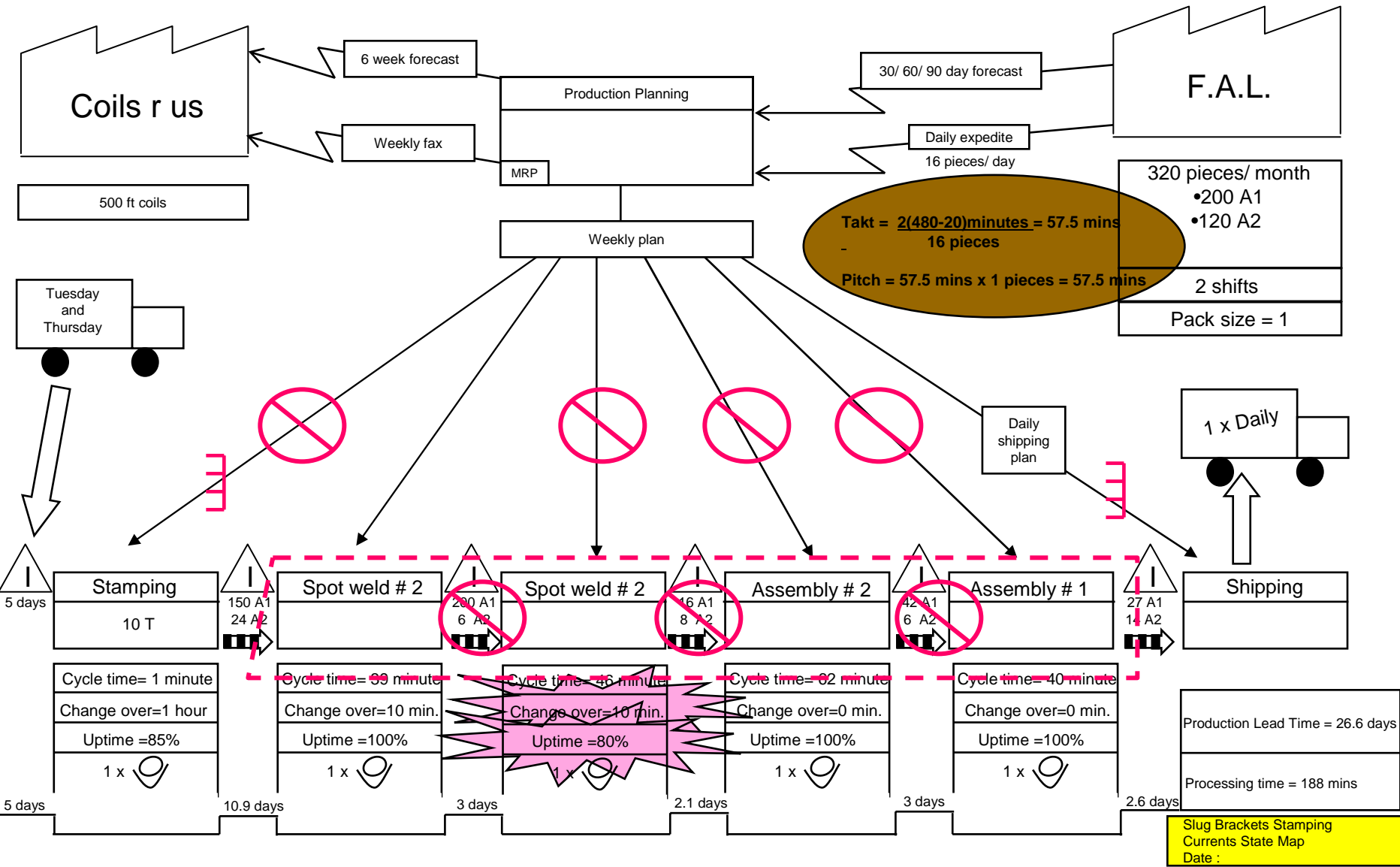
$$= \text{target of 3}$$

Where is Continuous Flow Possible?

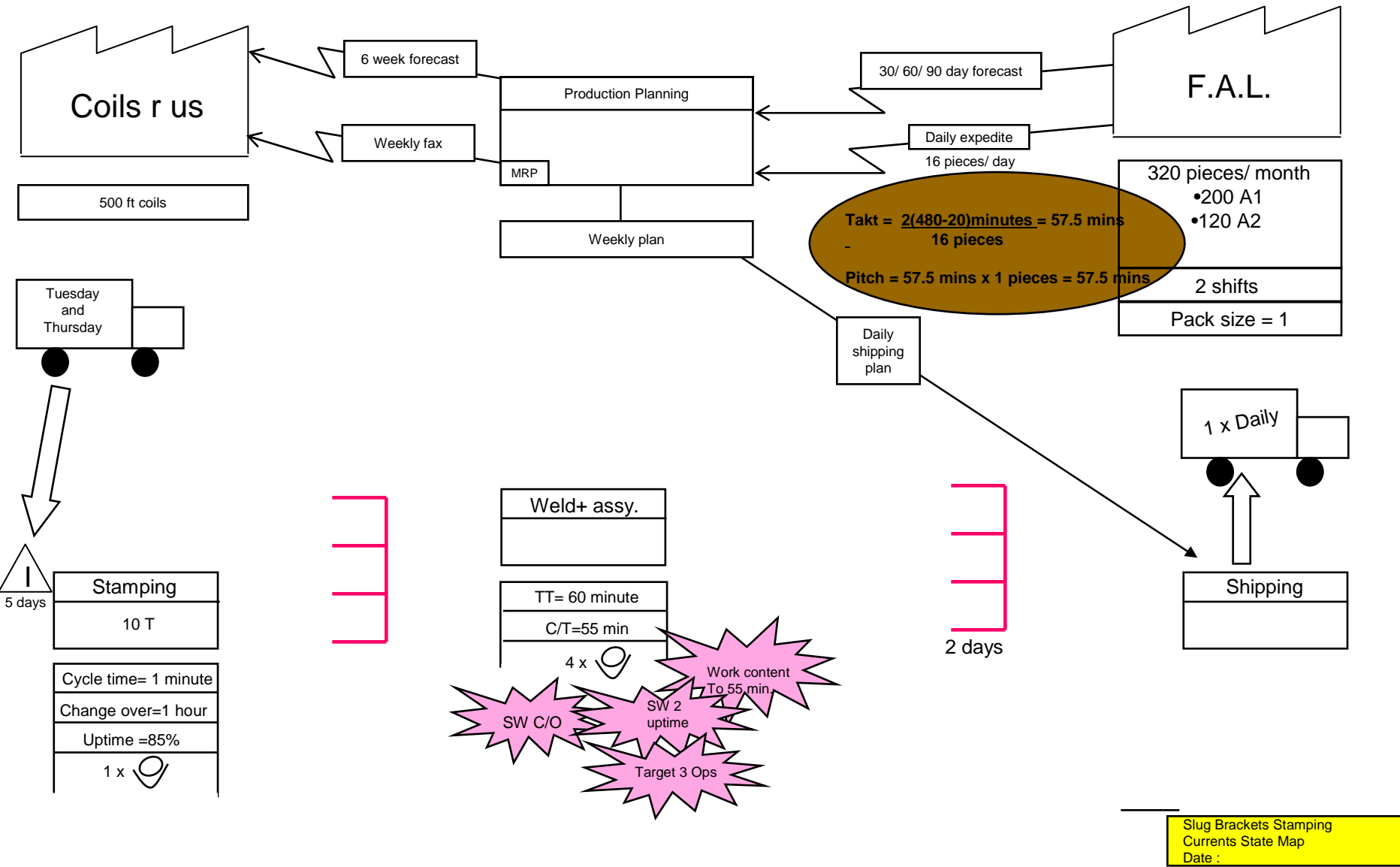
- DRAW ON FLIP CHART



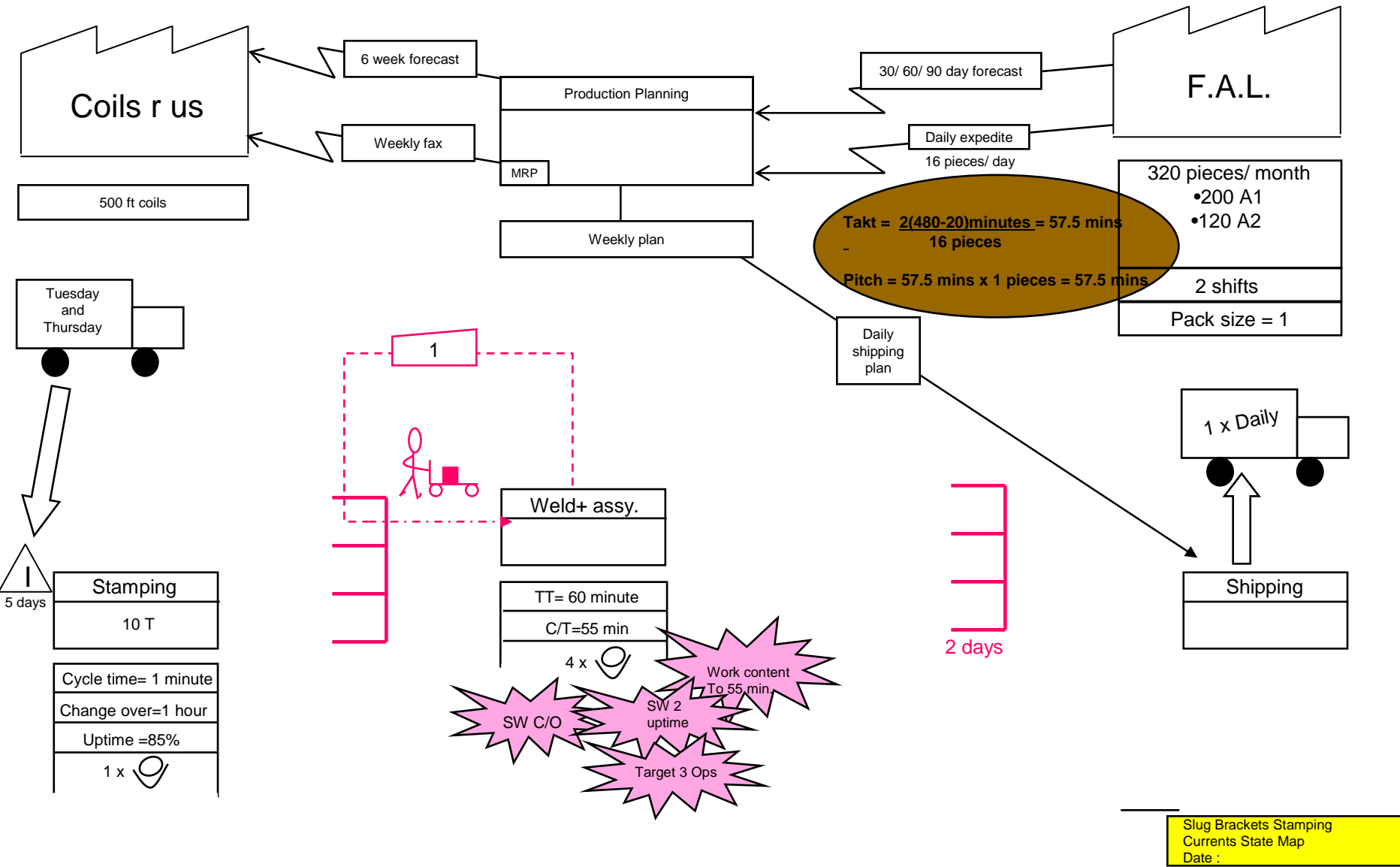
Drawing a Future State Map



Drawing a Future State Map

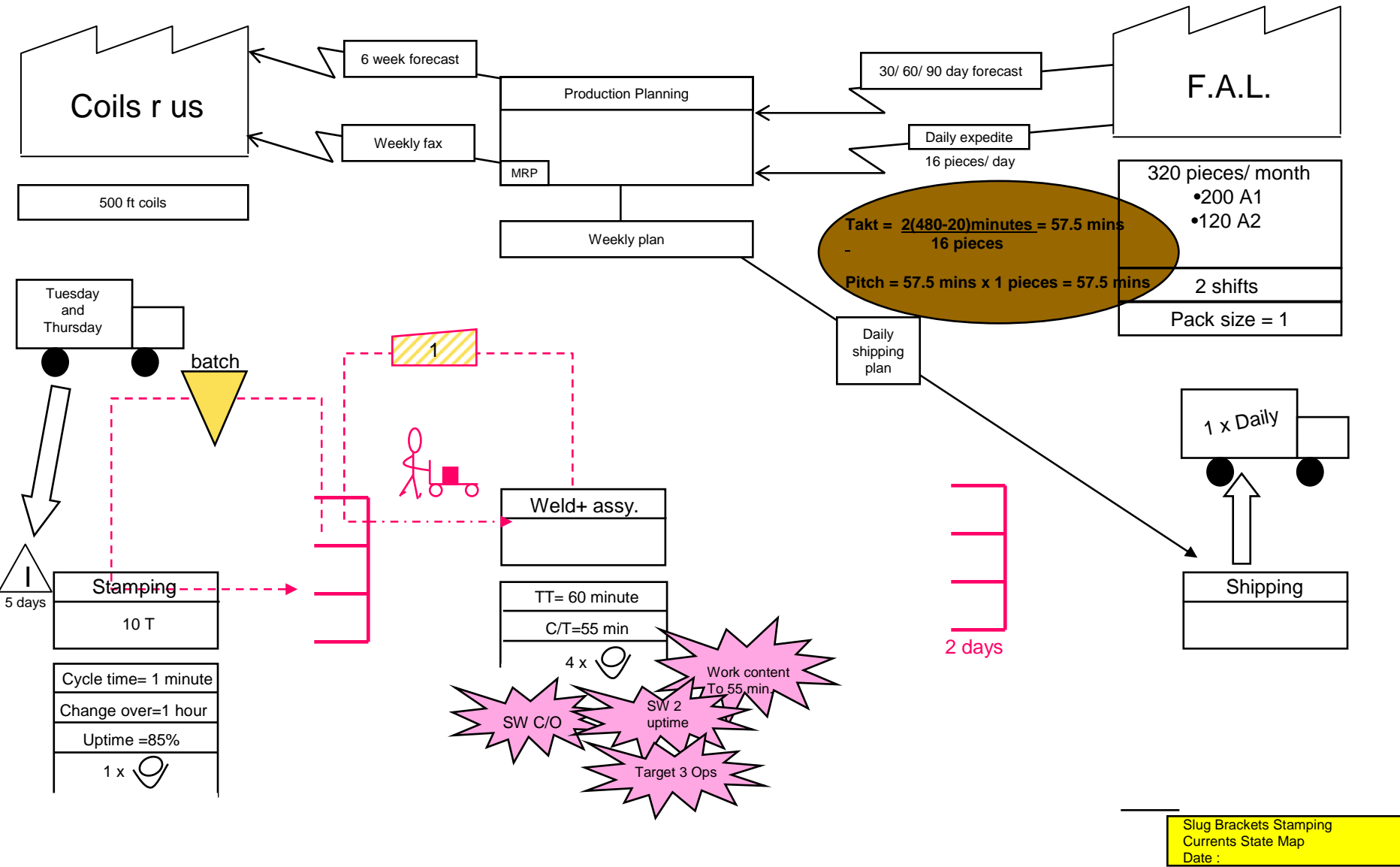


Drawing a Future State Map

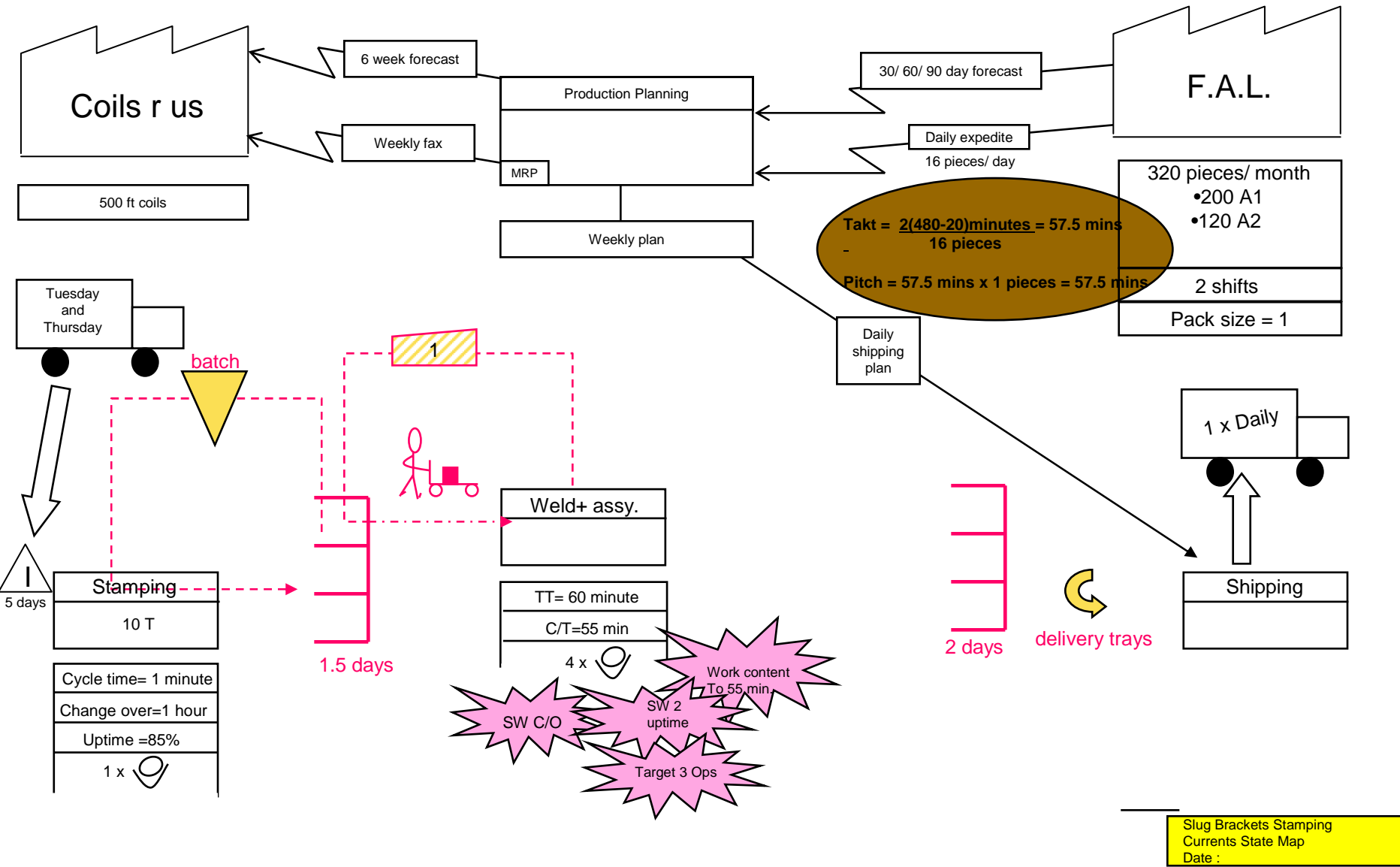


Slug Brackets Stamping
 Currents State Map
 Date :

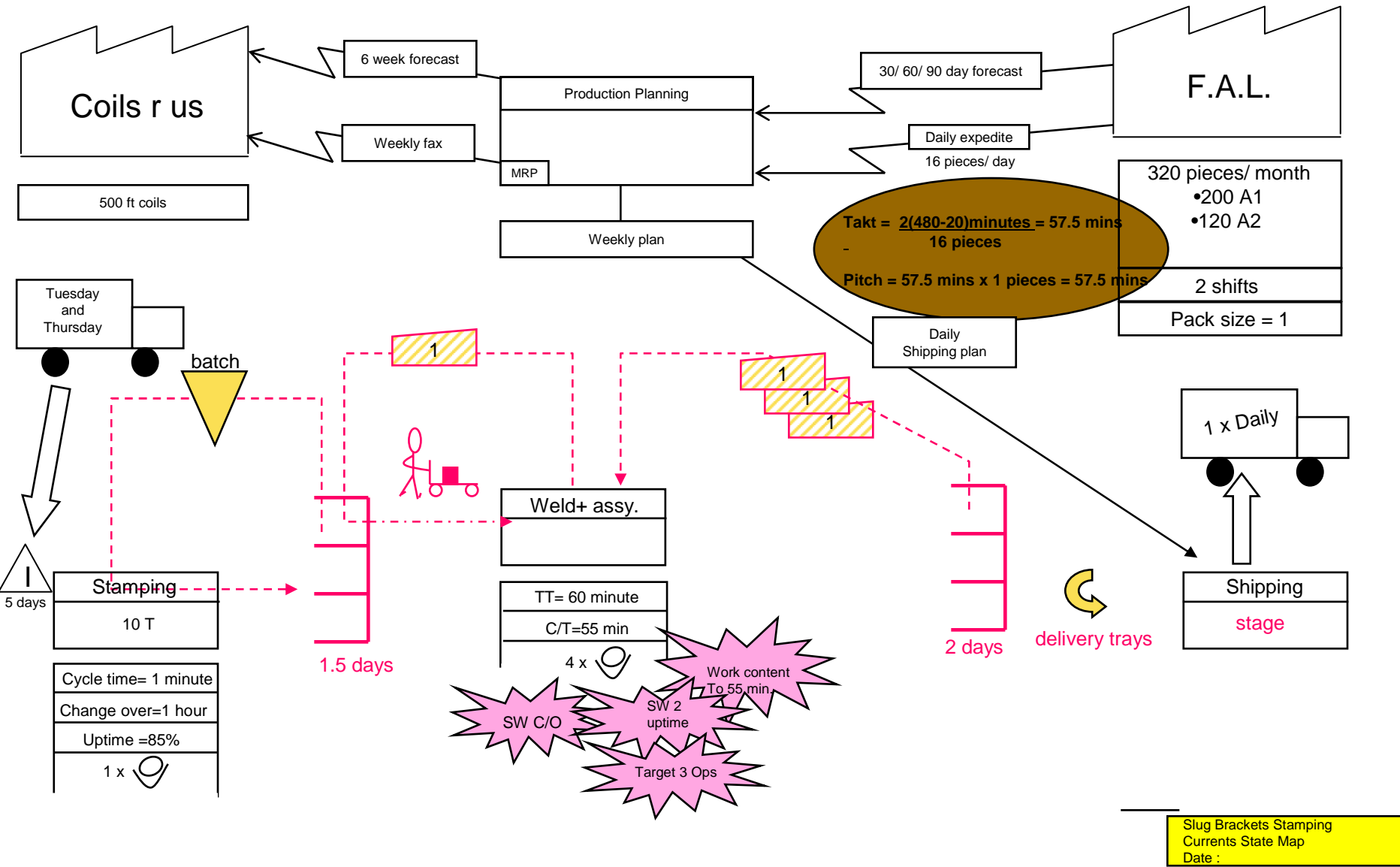
Drawing a Future State Map



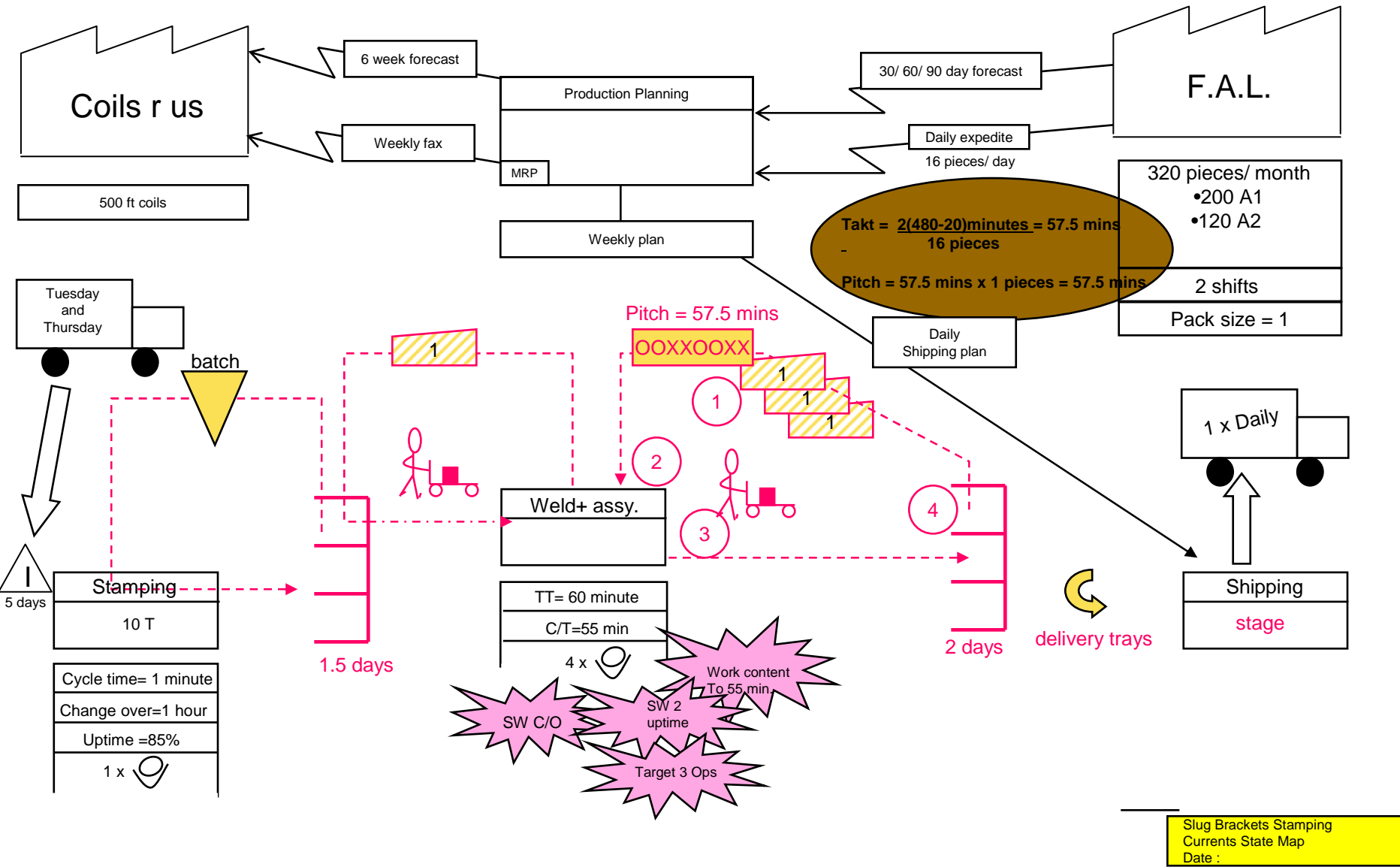
Drawing a Future State Map



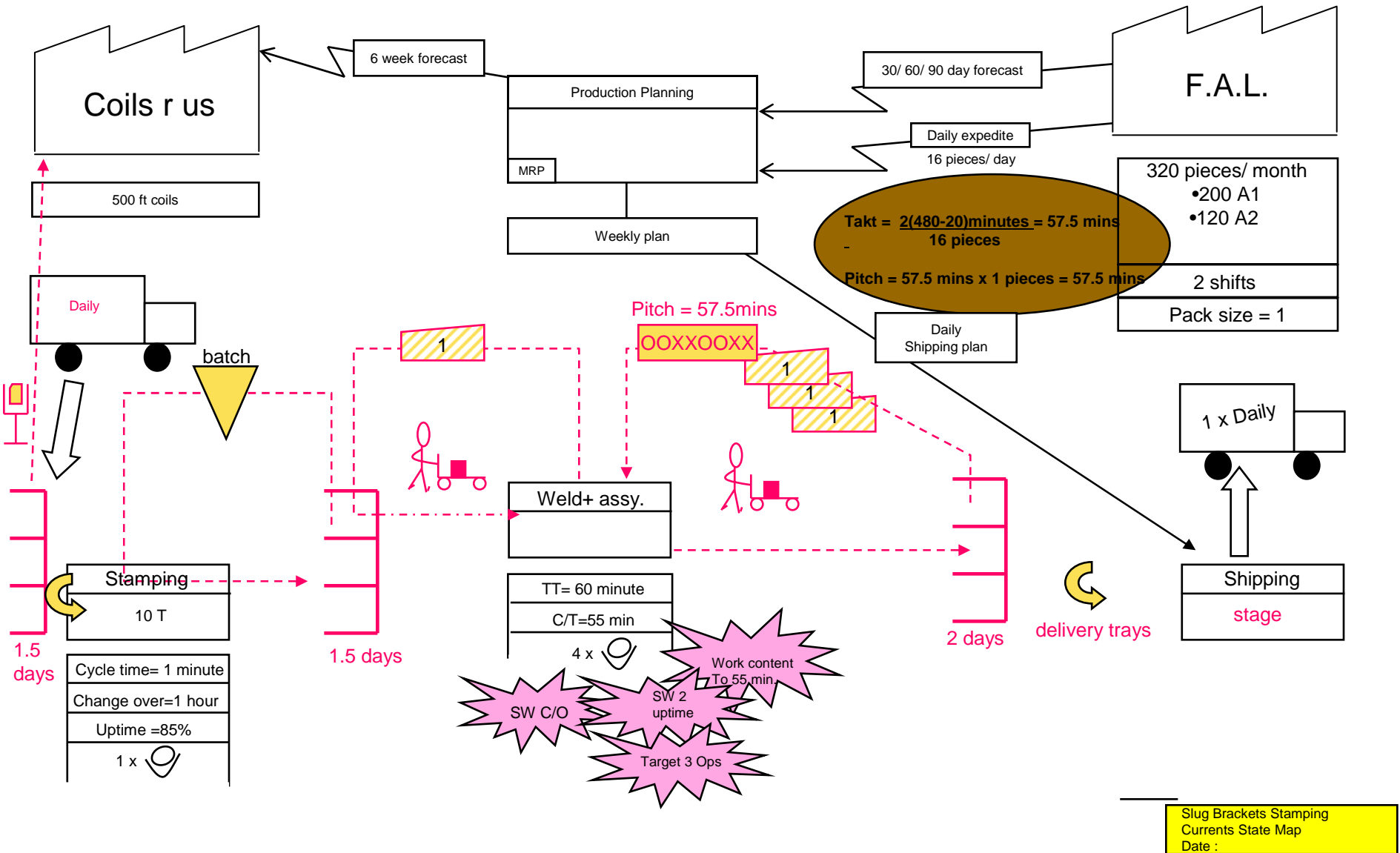
Drawing a Future State Map



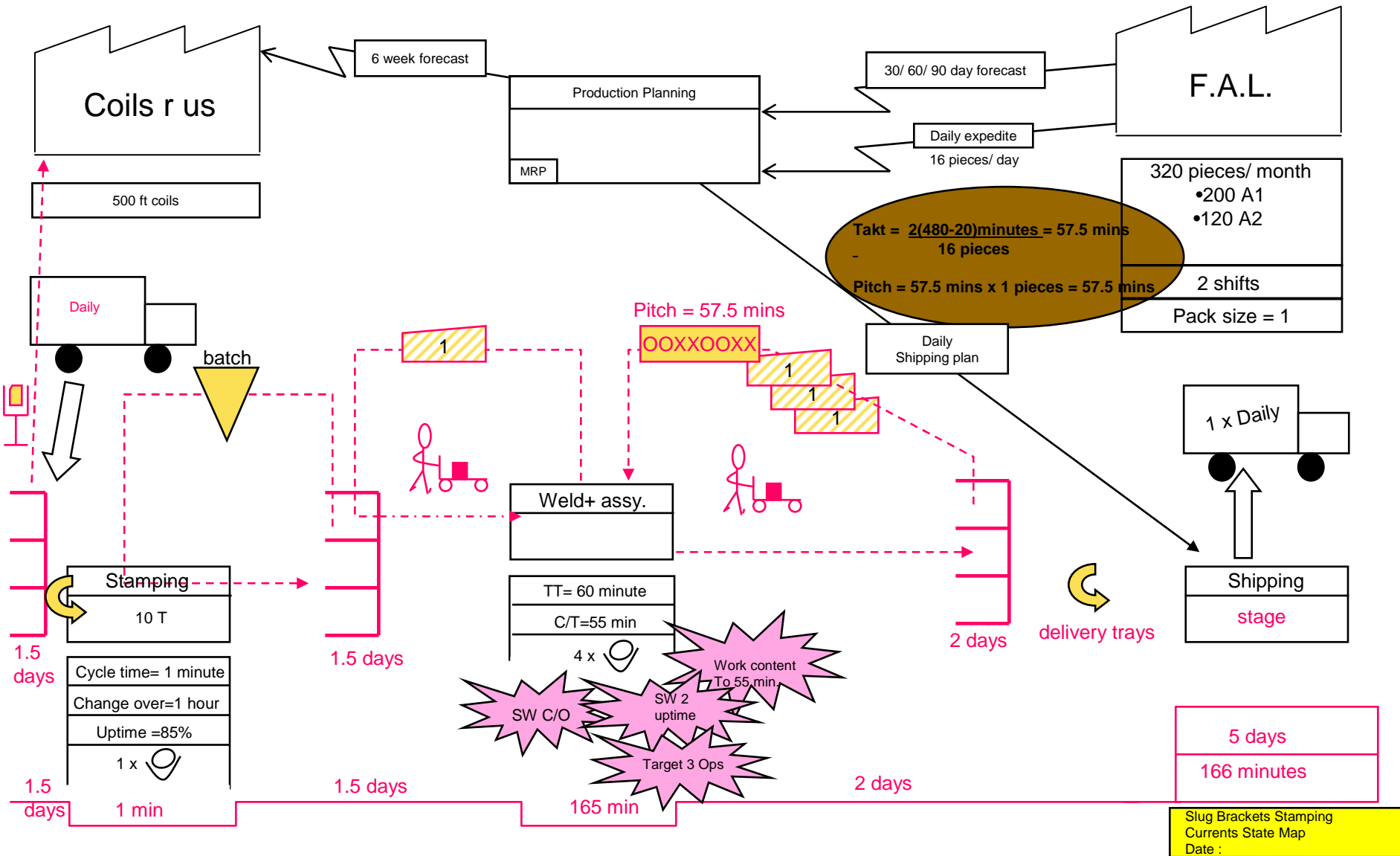
Drawing a Future State Map



Drawing a Future State Map



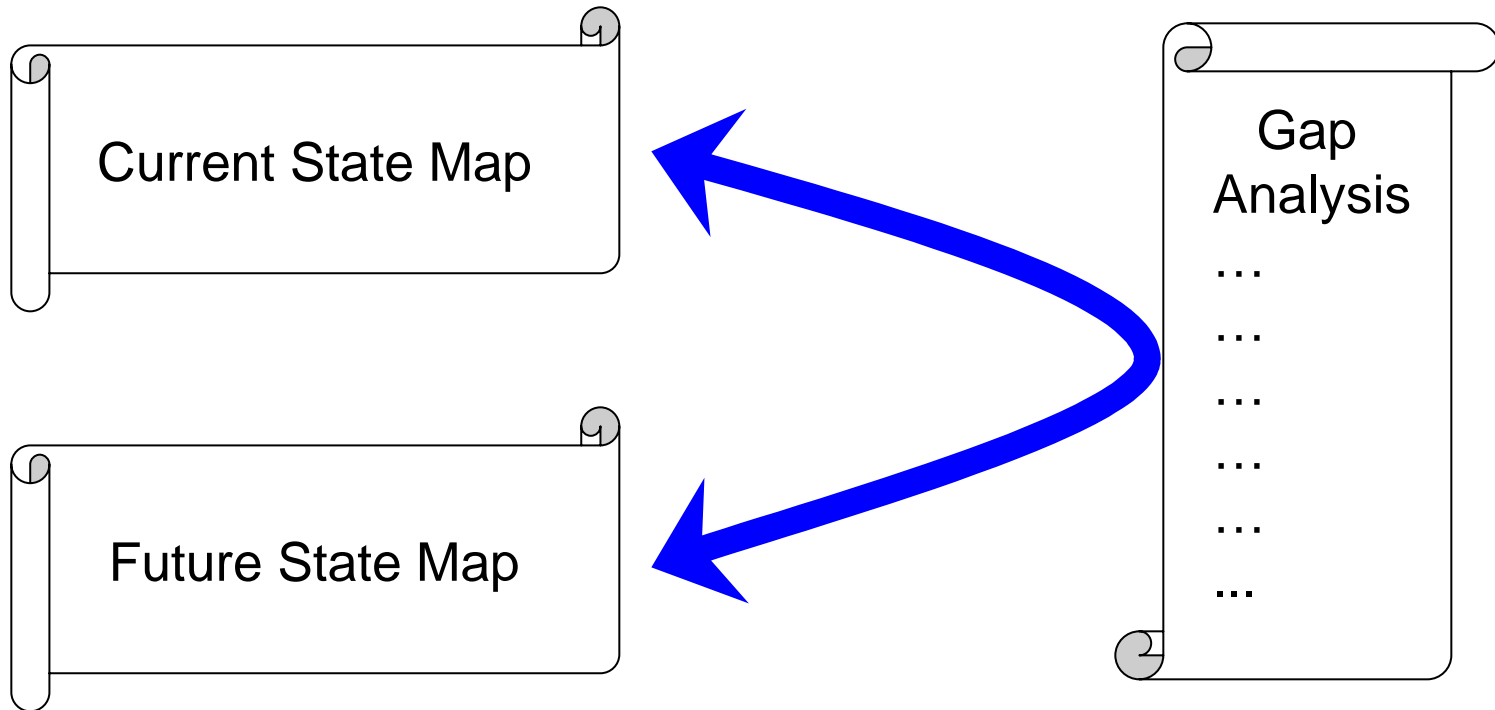
Drawing a Future State Map



Value Stream Mapping

**Delegates to design
own future state map**

Developing an Improvement Plan



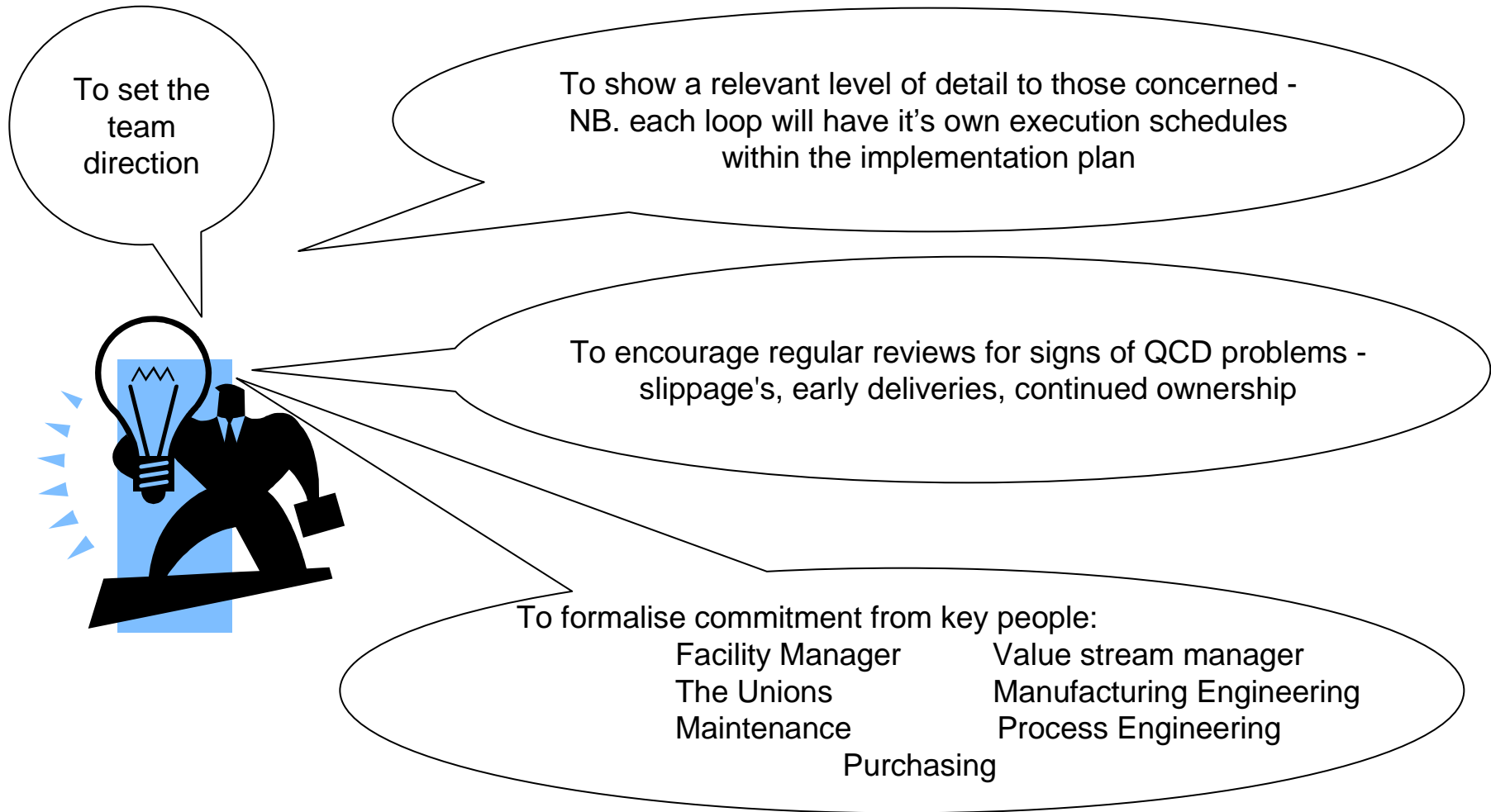
WHERE WILL YOU START ?

Value Stream Mapping

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- Practical Exercise 
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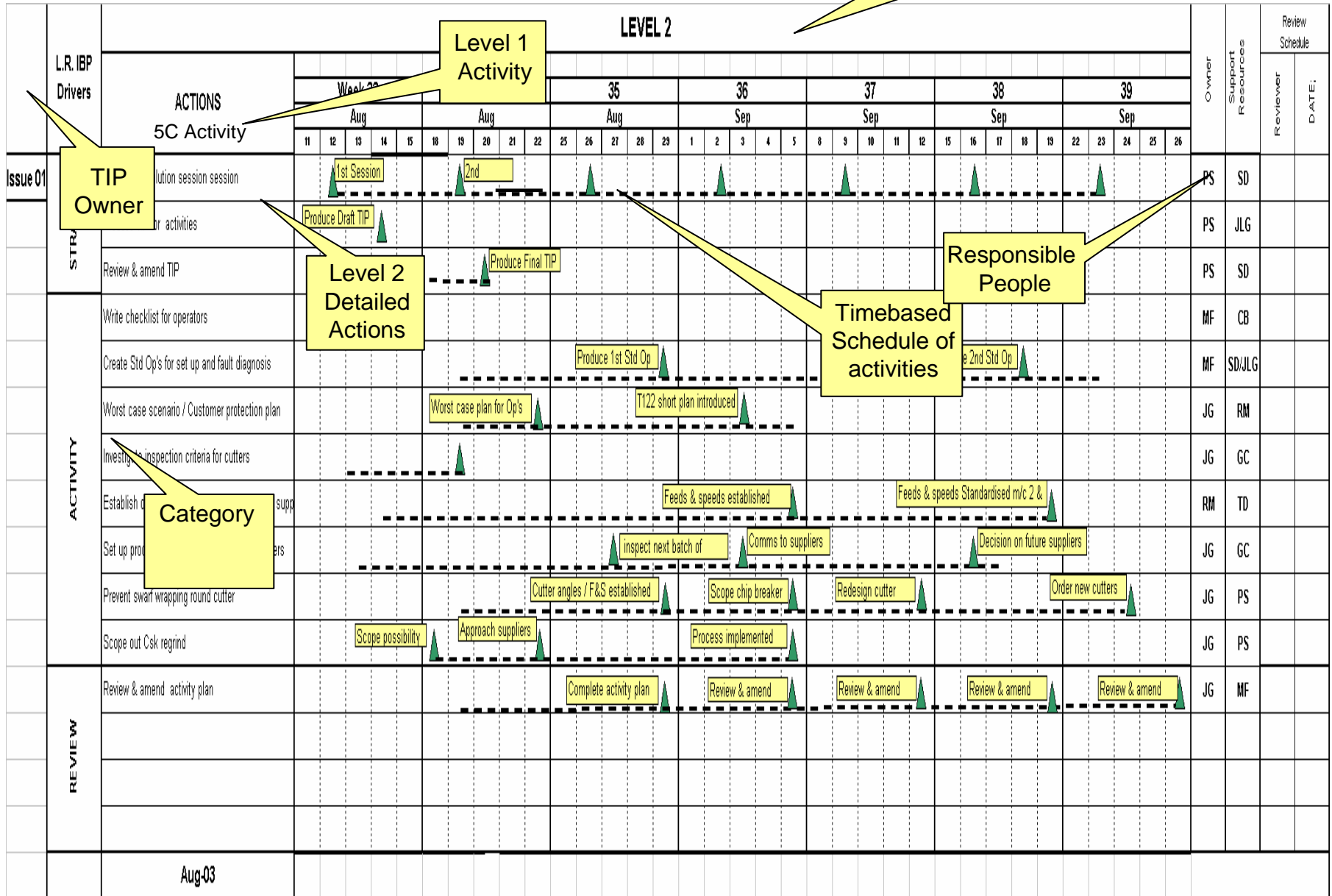
Why Have a Formal Plan to Achieve the future State?



The key elements of a Value Stream's Implementation plan are shown in the following example.

Example - Tactical Implementation Plan (T.I.P.)

Type of TIP and Model Line



TIP Owner

Level 2 Detailed Actions

Timebased Schedule of activities

Responsible People

Category

Aug-03

Summary

- **Collect data across a value stream.**
- **Use the 7 steps to draw a current state Value Stream Map.**
- **Use the 9 questions and 7 steps to draw a future state Value Stream Map.**
- **Identify your Material/Information loops.**
- **Decide the order to tackle the loops.**
- **Write the Tactical Implementation Plan**
 - Set objectives for each loop as required to achieve the future state
 - Set measurable goals for each objective
 - Use the 9 questions within each loop to set an order of work
 - Set milestones and write up the plan
 - Get formal agreement from all concerned
- **The leader of each work stream should produce their own execution schedule showing how to achieve each goal by it's milestone.**

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Summary

Just do it !