

What Does It Really Mean to be Agile?



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Hello!



- Siew Kok Ewe (“KE”)
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- Lives in Penang







What is Agile Really?

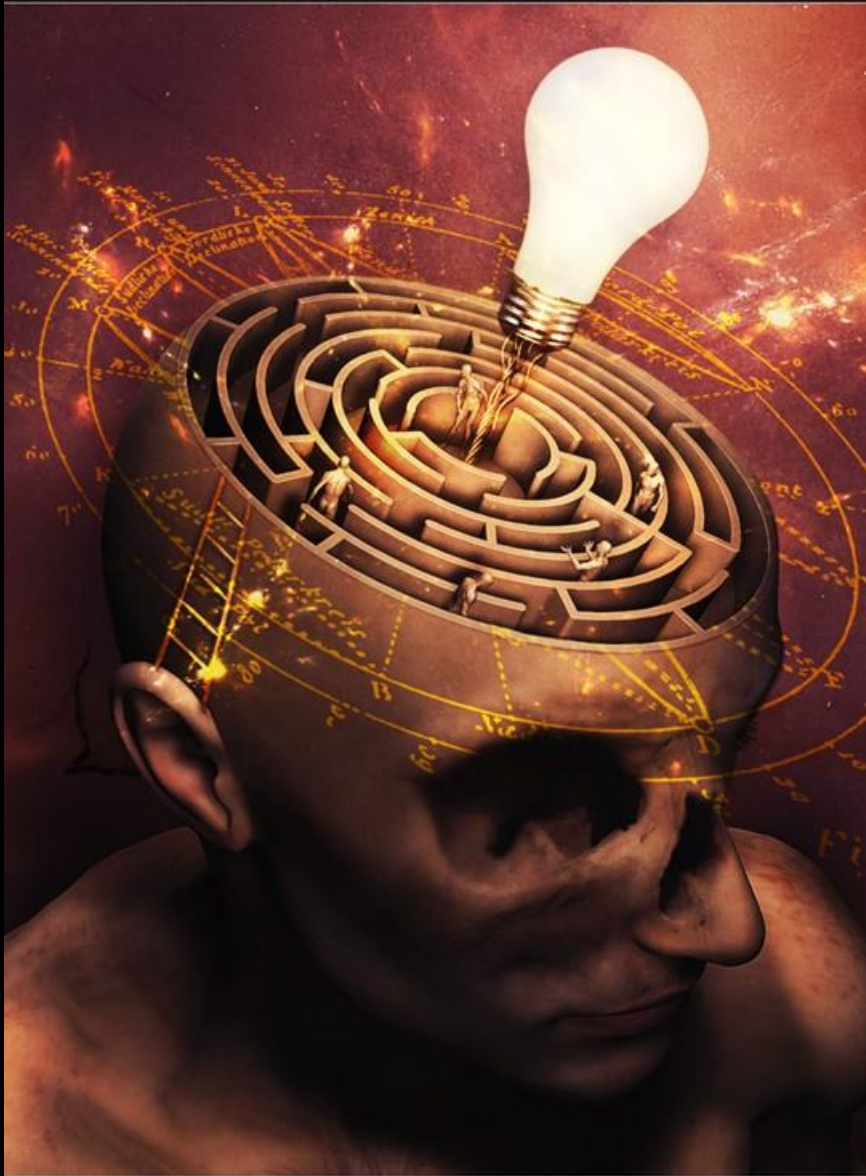


Traditional vs. Agile



Getting There

What is Agile, Really?



Product Development work is

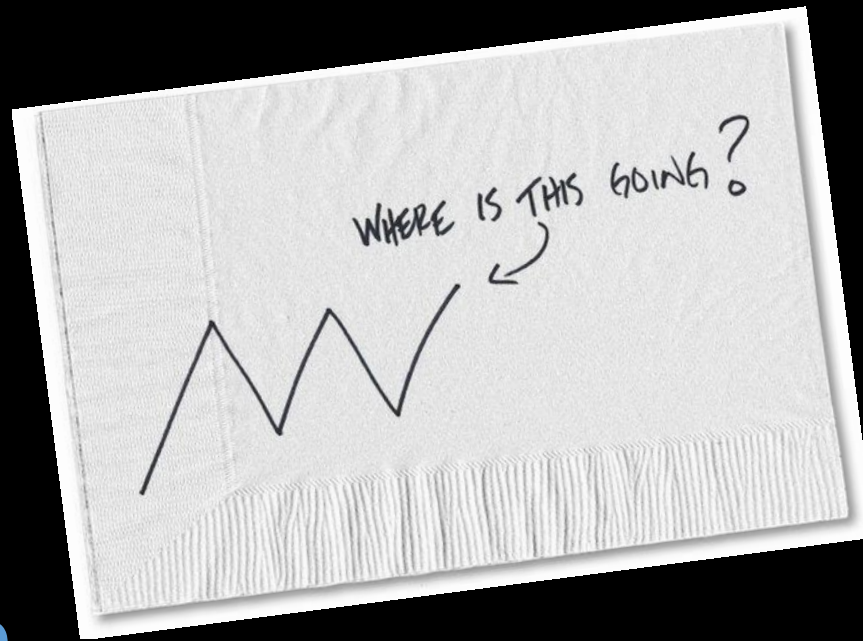
complex

Customers

Change their
mind

What are
they up to?

Competitors



Team

Doesn't have
full knowledge

A group of people in a meeting, with a man in the center pointing at a screen.

Manifesto for Agile Software Development

We are uncovering better ways of developing software by doing it and helping others do it.
Through this work we have come to value:

Individuals and interactions over processes and tools
Working software over comprehensive documentation
Customer collaboration over contract negotiation
Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.

Traditional vs. Agile

Traditional

vs.

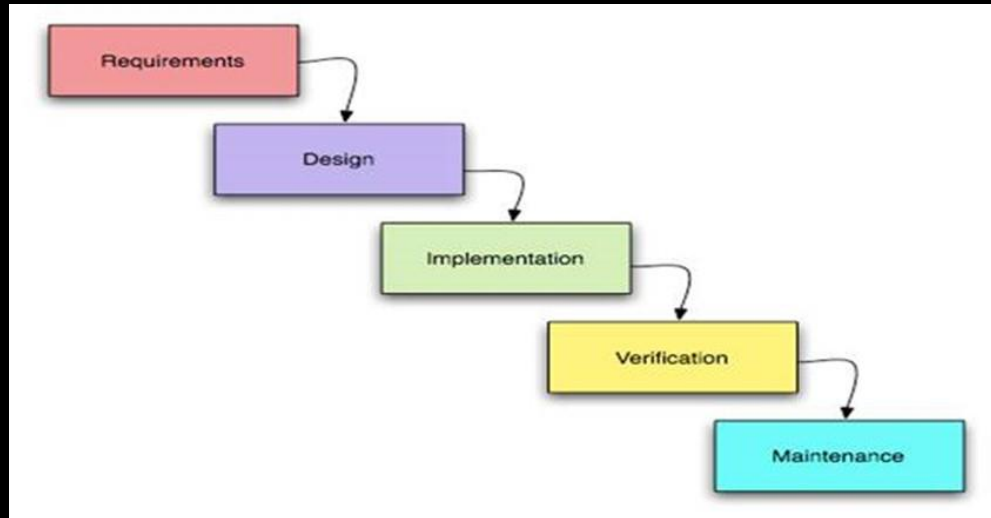
Agile



Process, Structure, Management

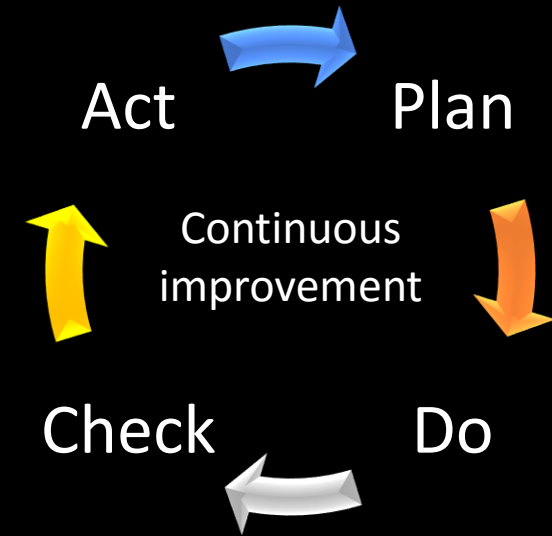
Process

Traditional



Defined Process
Predict & Control
Sequential activities

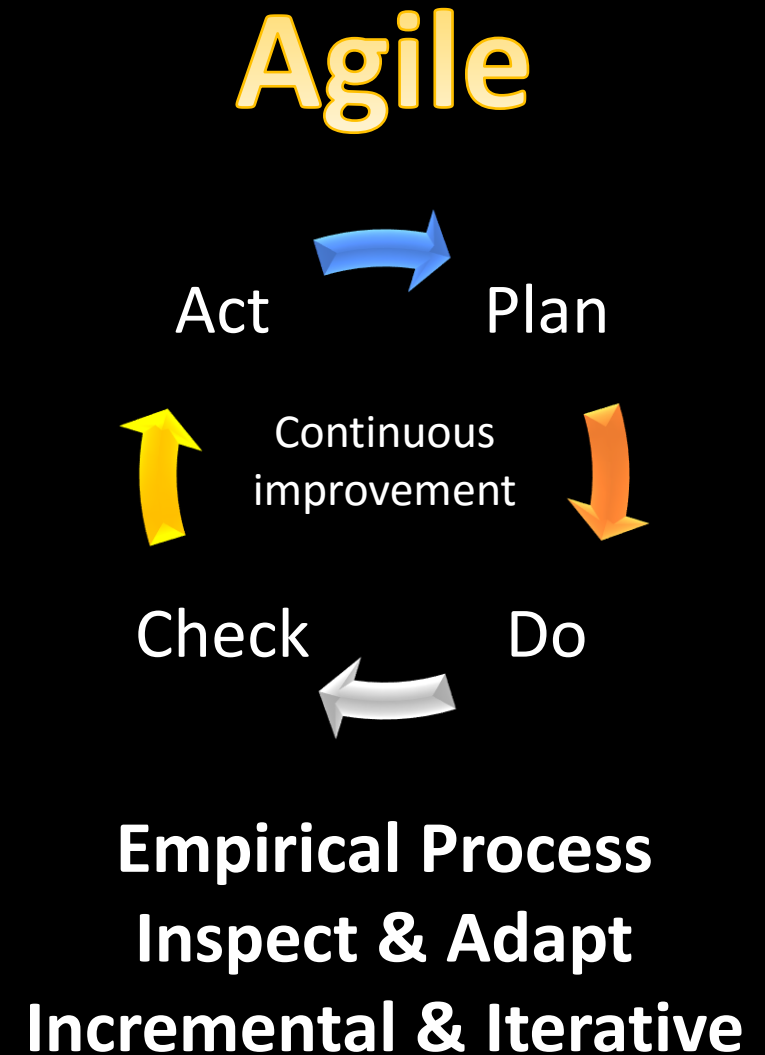
Agile



Empirical Process
Inspect & Adapt
Incremental & Iterative

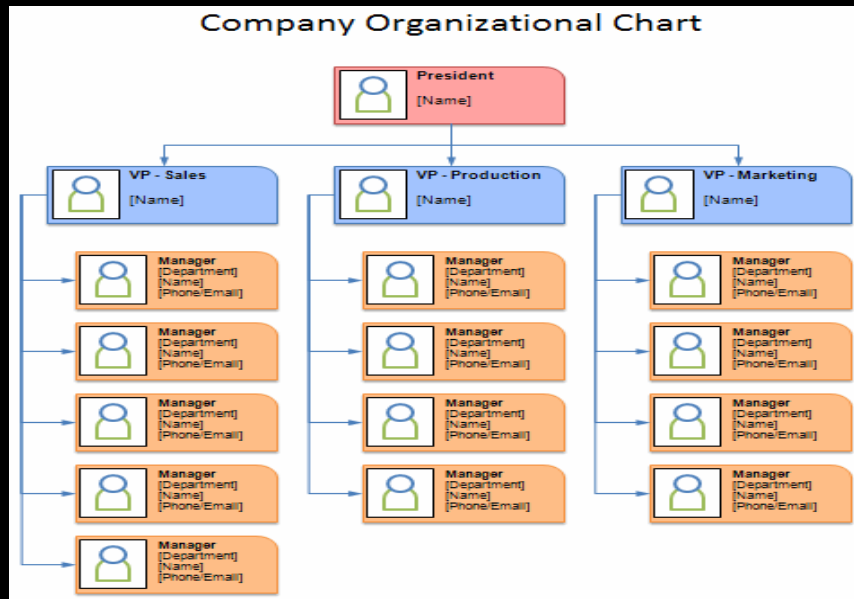
Process

- #1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
- #2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
- #3. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
- #7. Working software is the primary measure of progress.
- #9. Continuous attention to technical excellence and good design enhances agility.
- #10. Simplicity – the art of maximizing the amount of work not done – is essential.
- #12. At regular intervals, the team reflects on how to become more effective, then tunes and adjust its behaviour accordingly.



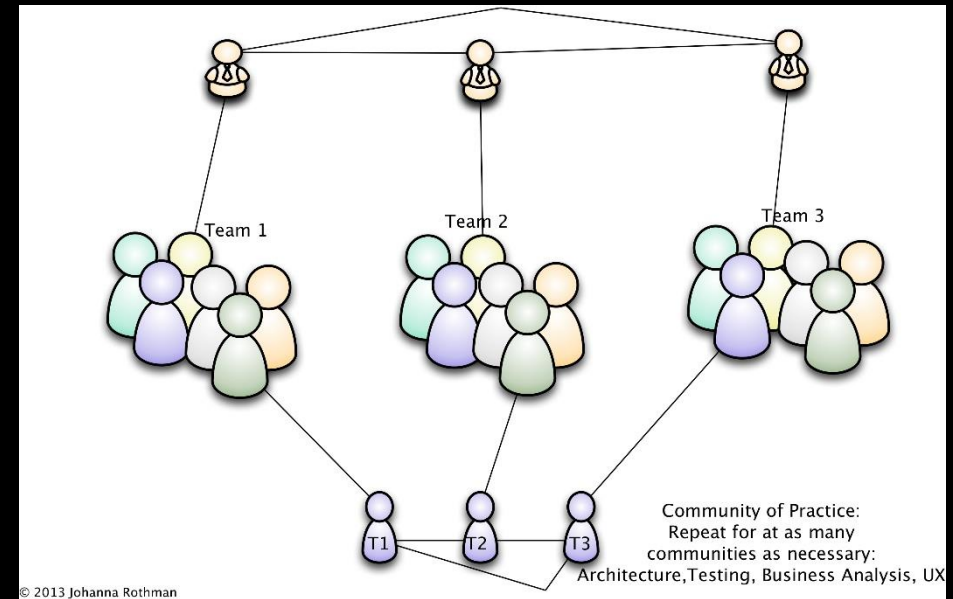
Structure

Traditional



**Hierarchy of Functional
Departments**

Agile



**Network of Cross-
functional Teams**

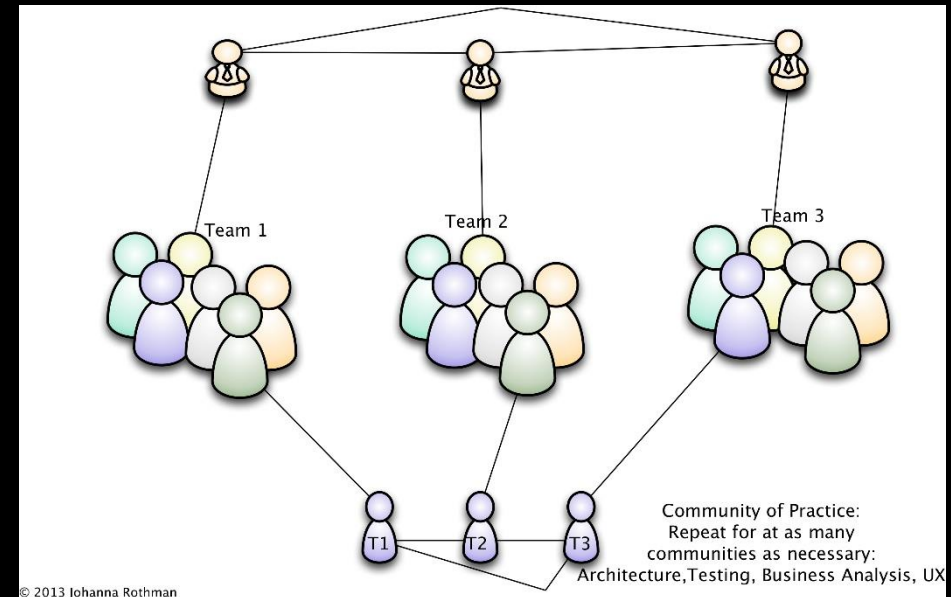
Structure

#4. Business people and developers must work together daily throughout the project.

#5. Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.

#6. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.

Agile



Network of Cross-functional Teams

Management

Traditional



**Command and Control
Management**

Agile



Self-Management

Management

#8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.

#11. The best architectures, requirements, and designs emerge from self-organizing teams.

Agile



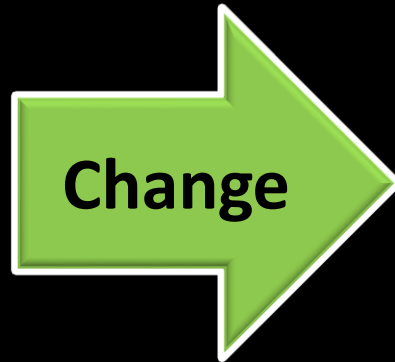
Self-Management

Getting There

Traditional

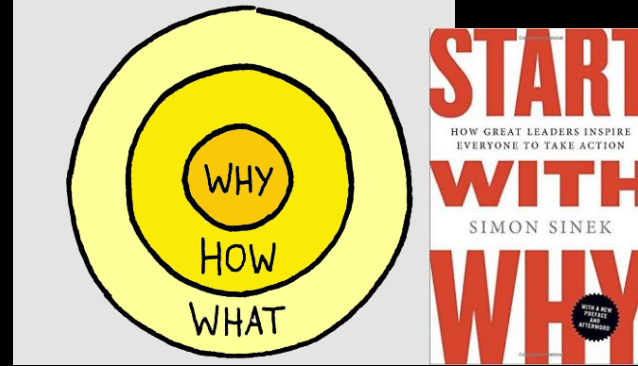
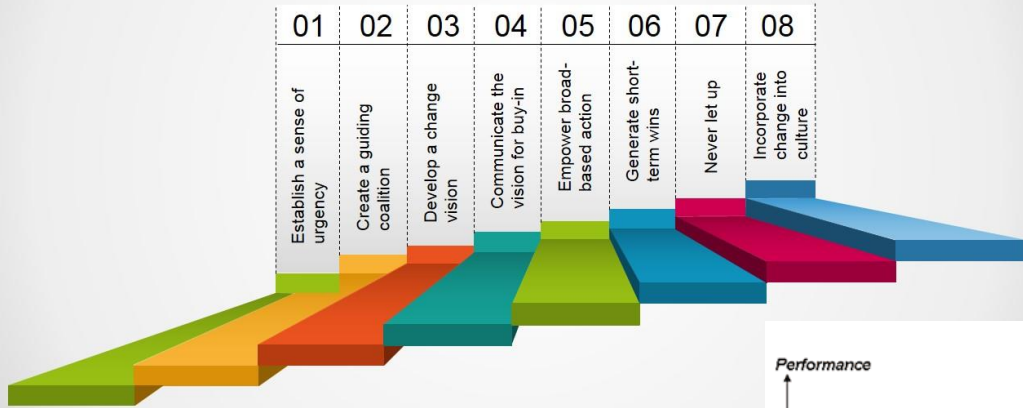
to

Agile

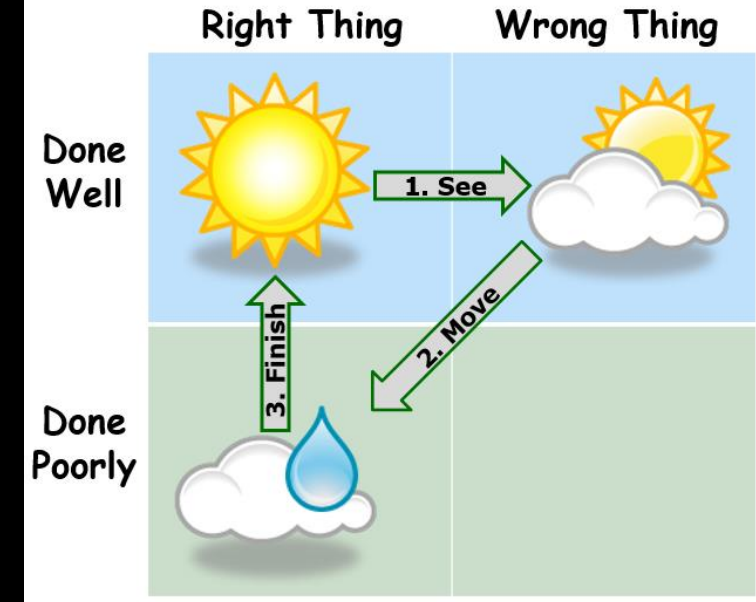
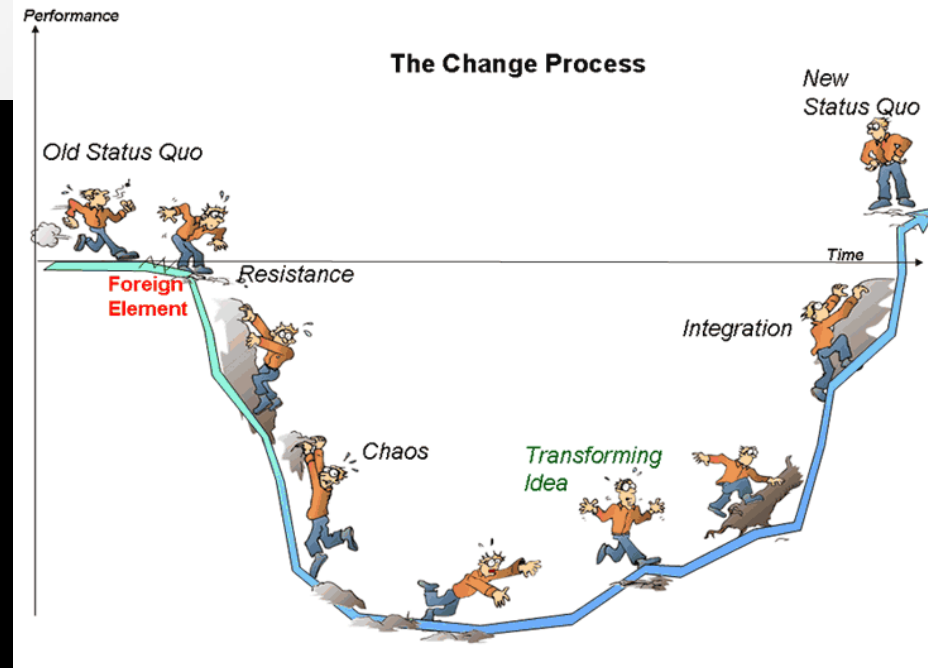
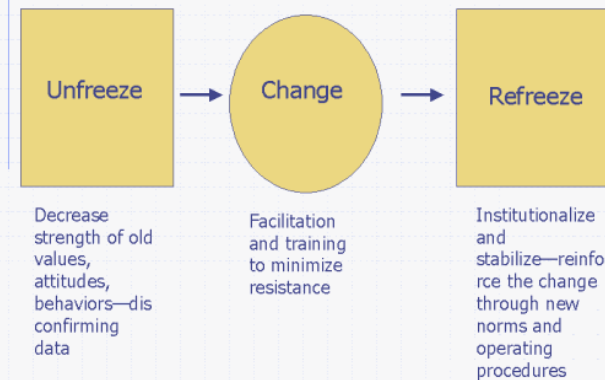


Change Models

Kotter's 8 Step Model



Lewin's Change Model



Traditional

to

Agile



Where They Were

- Poor Quality
- Missing Schedules
- High Attrition
- High Pressure
- Challenging Roadmap

What They Did

- New Software Process
- New Problem Solving Process
- New Tools
- Leadership & Coaching
- Learning Organization

What They Achieved

- Higher Productivity
- Higher Morale
- Higher Quality
- Better Return on Capital
- Lower Product Cost

May take years, so start now!



Ideal State

Educate everybody about the Ideal State

Inspect & Adapt



Future State

Start a backlog of what we need to change; prioritize and start working



Experiments

Possibility Thinking: Ask "what does it take?"

Current State

Ideal State



Educate everybody
about the Ideal
State

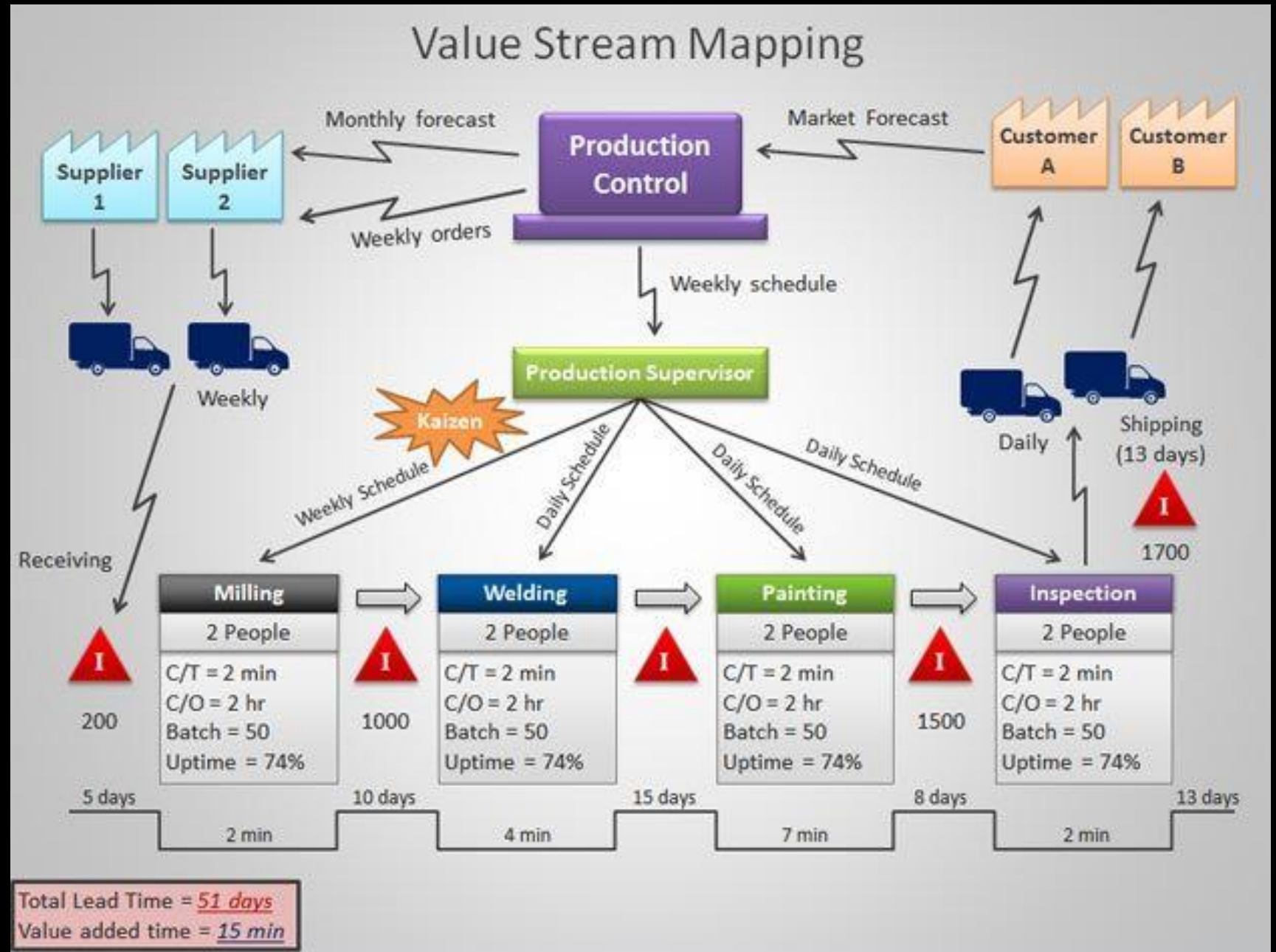
- Educate, educate, educate
 - Help everyone understand what the Ideal State is
 - Training, coaching, sharing, influencing
- For example, “Ideally, we want to be able to ship working software every day.”
- “That will never work in the *real* world...”
- We may never reach the Ideal State, but getting 20% there is better than getting 0% there.

- Where are we currently?
- What's the gap between Current and Ideal States?
- Collect input from everybody about what to change.
- Establish a prioritized change backlog and start working.
- Understand the Current State
 - Use direct observation
 - Measure them
 - Visualize them e.g. use Value Stream Mapping
- For example, “Right now, it takes us 6-12 weeks to make a change in our software and release it to production.”

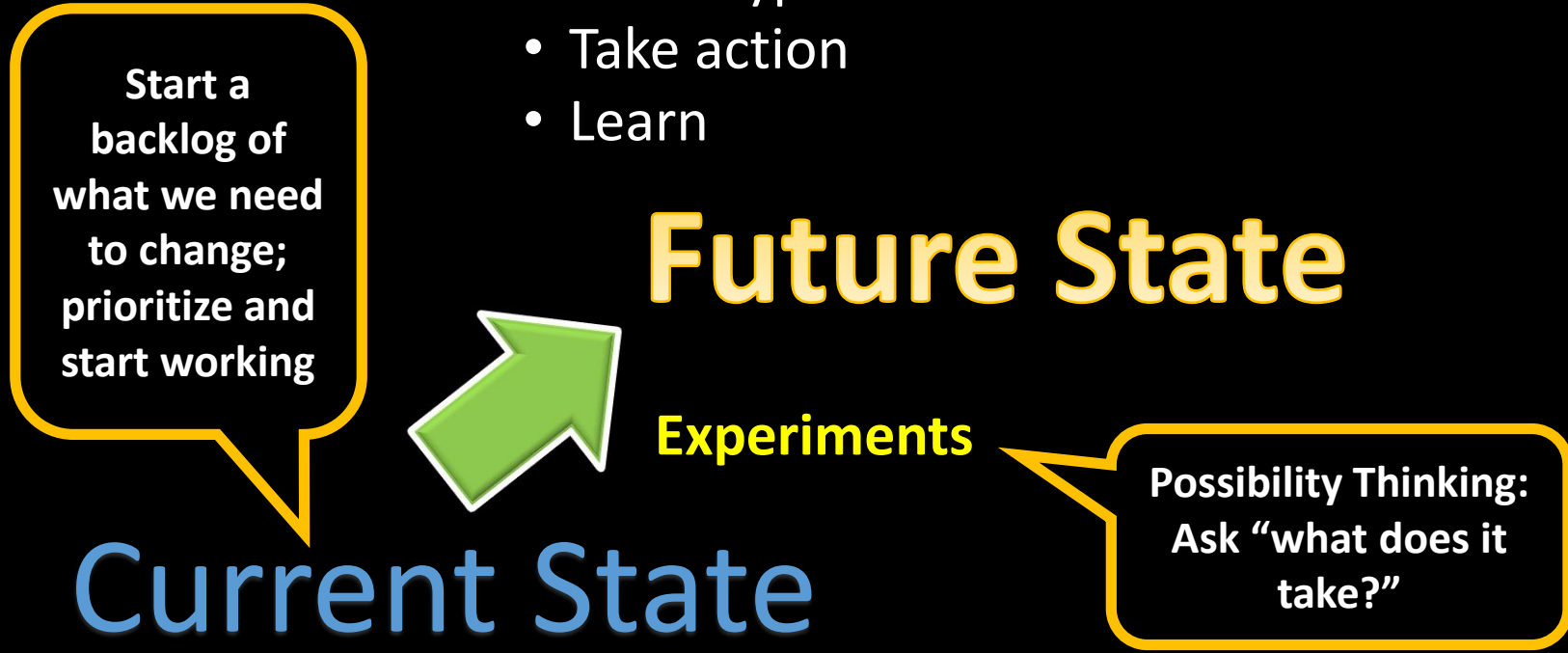
Start a
backlog of
what we need
to change;
prioritize and
start working

Current State

Value Stream Mapping



- Establish a Future State after understanding Current State
 - Understand the gap between
- For example, “What does it take to make a change and release it to production in 4 weeks consistently?”
- Do experiments
 - Analyse root causes
 - Form hypothesis
 - Take action
 - Learn



A3 Problem Solving

Support Launch Objectives with Accurate, Timely Document Translation

K5 8/8/08
DP 8/7/08

I. Background

Acme plant to double capacity. Much document translation required

- Poor English translations of Japanese documents caused many problems at original plant startup.
- Expansion plans call for aggressive launch timelines and cost reduction.

Document translation problems could impede launch!

II. Current Conditions

Problems:
 Cost = 10% over budget
 Delivery = over 50% late, long, variable lead times
 Quality = Multi-rework > 50%, many errors reach customer
 Overall = C

III. Goals/Targets

Quality - 0 defects at launch
 - Rework less than 10%

Delivery - 100% on-time
 - Level weekly volume (heijunka)
 - Consistent short lead time with predictable delivery

Cost - 10% decrease — Rework down, overtime down

IV. Analysis

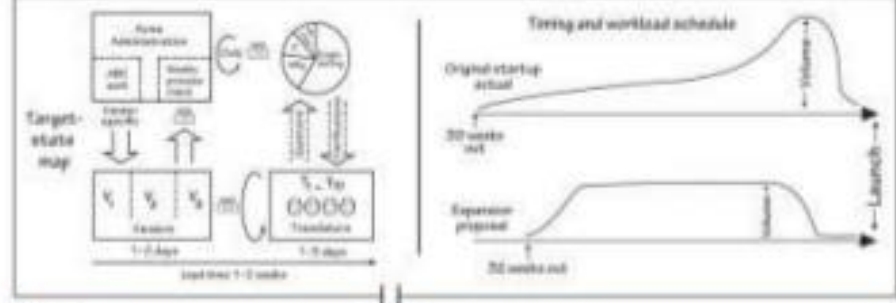
Cause A: Inconsistent function names, lack of clarity in text, no standard nomenclature, inconsistent abbreviations

Cause B: Poor document creation with many document formats, random use of technical vocabulary, unclear organization, unclear sequencing of paragraphs

Cause C: Poor or no English native speakers for copy editing, unclear organization, vague feedback and unclear responsibilities

V. Proposed Countermeasures

| Case | Countermeasure | Description | Benefit | Responsible/support |
|------|--|---|-----------------------------|--|
| A | Central document-flow tracking process | Overall process ownership established Document flow and timing management - Timing control chart; weekly check - Segmentation by document type | Delivery Quality Cost | Forster - Each day - Vendors |
| B | Standard vocabulary database and templates | Standard terms for processes, equipment, tools, work flow across job sites Create standard templates and include photos and videos Gathered from each department, input into database for use by internal document creators and translators | Quality | Administration IT Each department |
| C | Standard vendor three-step process | Step 1 Translation by topic specialist Step 2 Rewrite by native English speaker Step 3 Check by highly skilled bilingual | Quality Delivery | Analysis - Each vendor - Procurement |



VI. Plan

| Deliverables | Timeline | Responsible | Support | Escalate |
|--|-------------------------------------|--|--------------------------------|---------------------------------------|
| Support Launch Timeline | Timeline diagram showing milestones | Administration/Forster | Each department | Plant Management Council/Lan Japan PD |
| Planning | Timeline diagram | Procurement/Forster | Administration/Each department | Administration/Forster |
| Vendors | Timeline diagram | Each department/Administration/Forster | IT (Risk and Forster) | Administration/Forster |
| Document creation - Database and templates | Timeline diagram | Each department/IT | Administration | Administration/Forster |
| Training - Drafting documents | Timeline diagram | Administration/Forster | Each department | Administration/Forster |
| Document translation management system - Flow organization - Traffic control chart | Timeline diagram | Administration/Forster | Each department/Forster | Administration/Forster |
| Midproject review | Timeline diagram | Administration/Forster | Each department | Administration/Forster |

VII. Followup

Multitask review
 Pre-launch review

Ensure ongoing collaboration
 Monitor system weekly. All metrics, especially quality and delivery

**This process
is built into
the Scrum
framework,
so do it!**

May take years, so
start now!

Inspect & Adapt

Ideal State

Educate everybody
about the Ideal
State

- Learn from the experiments
 - Success and failures
- Everybody's responsibility to learn and continuously improve
 - Not just leaders and managers
- Employ ScrumMasters or Agile Coaches



Intel Corporation

(NASDAQ: INTC)
Santa Clara, Calif.
www.intel.com

Founded: 1968

Employees: 86,300

Annual revenue: \$38.3B

Products: microprocessors,
flash memory, motherboard
chipsets, network interface
cards

Agile Project Development at Intel: A Scrum Odyssey by Pat Elwer, Intel Corporation

Contributors included Tim Gallagher, Intel Corporation; Katie Playfair, Danube Technologies, Inc.; Dan Rawsthorne, Danube Technologies, Inc.; and Michael James, Danube Technologies, Inc.

ABSTRACT

In the microprocessor industry, the product development engineering (PDE) group exists to provide the test collateral to support cost-effective device screening and classification. Squeezed between the actual design teams and factory manufacturing teams, PDE is often put under tremendous pressure without ultimate control of team level deadline, scope, requirements, or deliverables.

To better coordinate the efforts of the sub-teams within PDE, seven teams comprising approximately 50 people volunteered to pilot a more integrated approach to product development. To organize this integration, the authors decided that Scrum was the best project management framework to employ along with agile engineering best practices. This paper describes the journey taken by the organization, its lessons learned, and the results of its investment in Scrum.

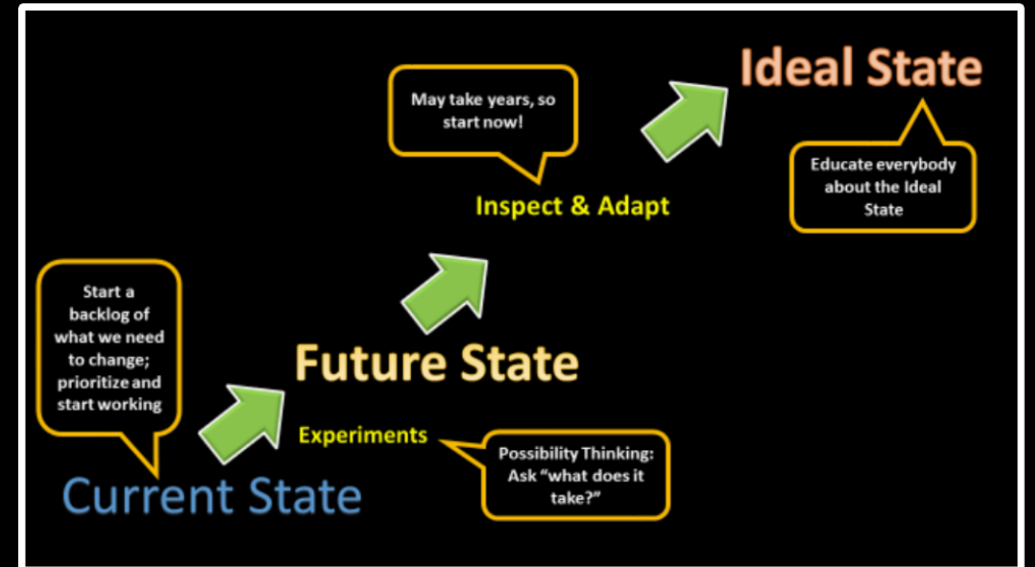


Traditional vs Agile



Agile

Getting There



Thank you...

