

# The Next Chasm To Cross

## The Science of Agile

Al Shalloway, PMI

Director, Thought Leadership for Agile at Scale Programs



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### Al Shalloway

PMI, Director, Thought Leadership for Agile at Scale Programs

Resources mentioned in this talk can be found [here](#).



[Al.shalloway@pmi.org](mailto:Al.shalloway@pmi.org)

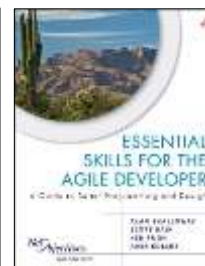
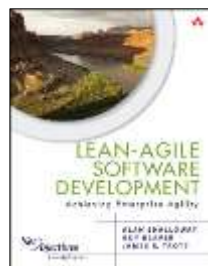
[@AlShalloway](https://twitter.com/AlShalloway)

Co-founder of Lean-Systems Society

Co-founder Lean-Kanban University

Contributor to SAFe, first non-SAI SPCT, former gold partner

No longer affiliated with any of the above



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“We cannot solve our problems with the same thinking we used when we created them.”

Albert Einstein

Thus, the task is not so much to see what no one yet has seen, but to think what nobody yet has thought about that which everybody sees.  
Schopenhauer



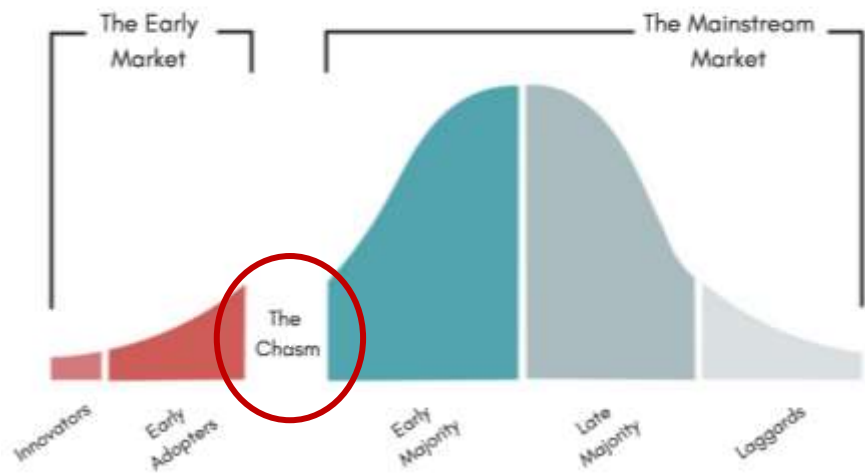
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**How do we go from early adopters to early majority?**

**The Chasm**  
from *Crossing the Chasm* by Geoffrey A. Moore



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## Why I say “science” is the next chasm to cross

Scrum and its descendants are based on empirical process control. They use “inspect and adapt” without attempting to create a model of understanding why the practices work.

While it has adapted Lean and Flow, it isn’t based on them.

*Agile has gotten to mean teams can do what they want.*

We believe Agile requires Discipline. Science.

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## What Is Science?



Body of knowledge that

- helps us be effective
- helps us learn

A method

- to use
- to validate what we know

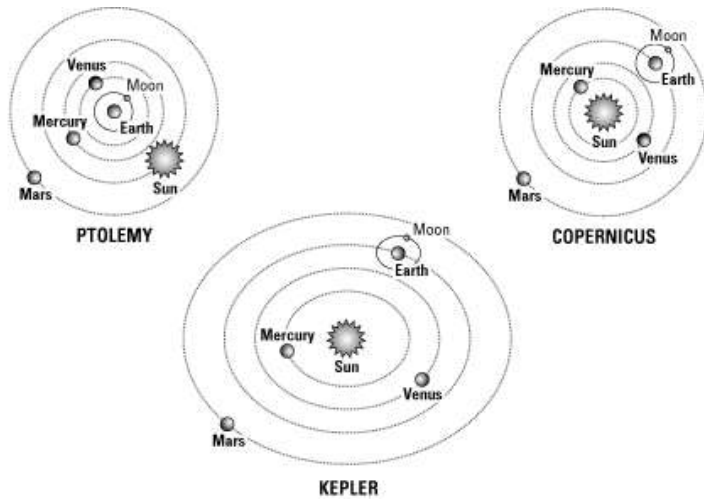
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## Dogma and claims of bashing are not scientific



Copernicus did not “bash” Ptolemy, nor did Kepler “bash” Copernicus. Very unlikely Copernicus would have defended his theory from Kepler.

Defending theories with anything other than logic or experience is **dogma**.

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## Cargo Cult



The last time these were here we got goodies from the sky! Let's try it again!

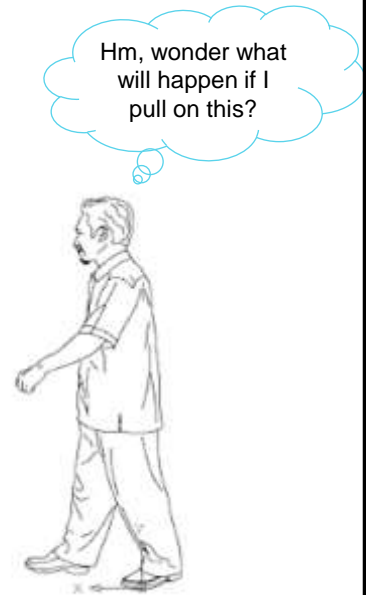
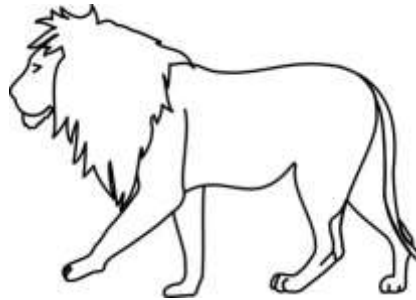
Post WW2 in Melanesia, Sub-region of Oceania, north of Australia.

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# Experiments Have a Purpose and Are Based on Past Understanding



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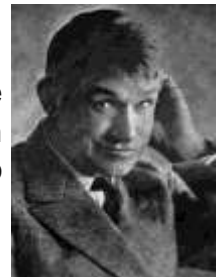
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# Different ways of learning

There are three kinds of men. The one that learns by reading. The few who learn by observation. The rest of them have to pee on the electric fence for themselves.



Will Rogers



Mark Twain

**A man who carries a cat by the tail learns something he can learn in no other way.**

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# Science is not deterministic

**Complexity means we can't totally understand the system we're in.**



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**Complex systems still have patterns**

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**Complexity**  
does not  
mean we  
can't make  
**predictions**



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different kinds  
of predictability

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## Three Types of Complex Systems

1. Those we just observe (weather, schools of fish)
2. Those we can't control but can change how they effect us (pandemic, forest fires)
3. Those we are embedded in and create (solution development)

*My interest is not in complexity per se, but what we can do when we find ourselves confronted with it –  
AI Shalloway*

## Chaotic events are ever-present

## Quick feedback must be as well

Straw that broke the camel's back.

Communication is most common example.

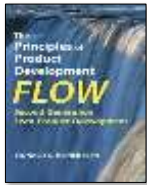
The \$125-million Mars Climate Orbiter crashed due to not converting measurements from English to metric when exchanging vital data before the craft was launched.

*Chaos is a state we are in. It can be caused by chaotic events, but it can also be caused by mere overwhelm of simple events.*



**The fact that what we're working on is not well-defined does not mean we can't use a well-defined method to work on it.**

Paraphrase from a  
Don Reinertsen blog



*Surgeries are a good example. Wouldn't want to hear your brain surgeon say "well, let's go in and see what we have. We will inspect and adapt as we go."*



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## Feedback

A mechanism to guide us and to dampen the effect of chaotic events.

Why ATDD is an essential *process* not a *technical* skill.

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## Perspective



What looks complicated, or even complex (imagine if the hedges moved) from one perspective ...



... may be simple from another

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# Science is objective



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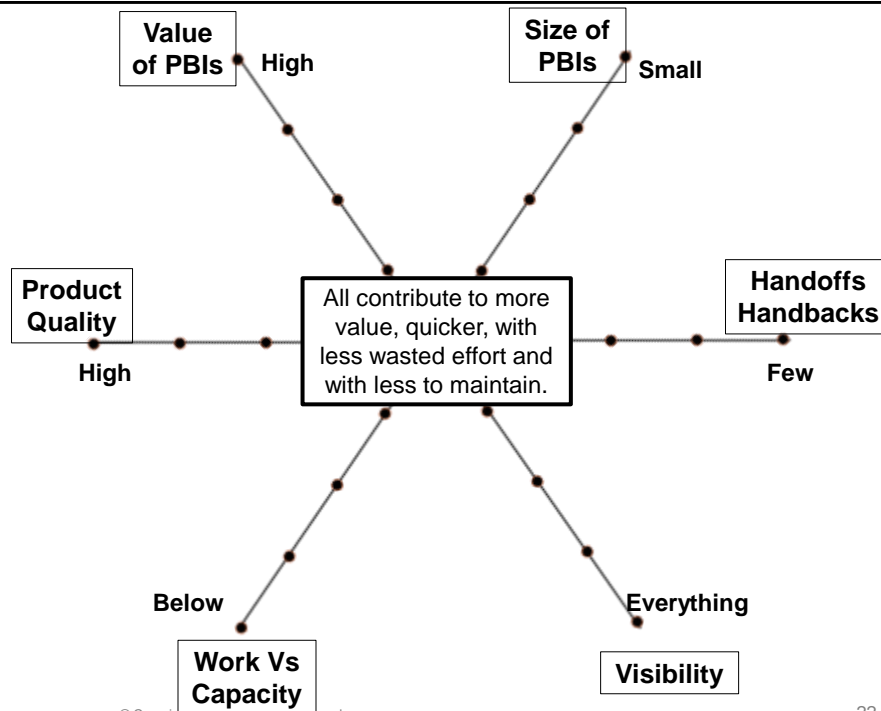
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# Factors for an effective value stream

All contribute to more value, quicker, with less wasted effort and with less to maintain.

# Factors for an effective value stream



## Most Agile methods / frameworks are missing two critical concepts

These are the *Minimum Business Increment* and the *Stable Solutions Team*

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## Minimum Viable Product (MVP)

### Using Eric Ries' Definition

Originated with Frank Robinson 2001

The smallest piece of work to be used to validate a hypothesis about a potential product.

Geared towards startups.

First time a product/service is released.

Usually built by a small team or teams dedicated to this MVP that can pivot

But, what do you do when:

- You are an established company?
- It is an enhancement to an existing product/service?
- Multiple teams are required to build it and they are not aligned?

DEFINITION

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## Minimum Business Increment (MBI)

The minimum amount of **value that can be built, deployed and realize value for** that makes sense from a business perspective.

It contains all the **pieces required** for realization of value and for sustaining that realization.

As well as the **capabilities needed** to create it.



MBIs are an extension of the MMF of Denne and Cleland-Huang's in Software by Numbers. Note MMFs in SAFe are unrelated to either of these.

# Science is precise

“You know that little thingie with a negative charge?”

“You mean an **electron**?”

“Yeah. And what about that little thingie with a positive charge?”

“You mean a **proton**?”

“Yeah. But why do they need different names? They’re both little thingies?”



MBIs contain what is needed.



MVPs are about discovering what is needed

	MVPs	MBIs
Investment in	Discovering <b>new</b> products / services	Getting more of a return from <b>existing</b> products / services
Development team	<b>Start small with a team</b> or people focused on the MVP	Usually <b>requires several teams</b> that also work on other items
Method of building	Start with a <b>few features</b> and add to them	<b>Split out</b> from larger initiatives
Interaction with customers	Focused interactions <b>directly with prospective client</b>	Through <b>existing marketing/sales</b> channels



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## The Stable Solution Team

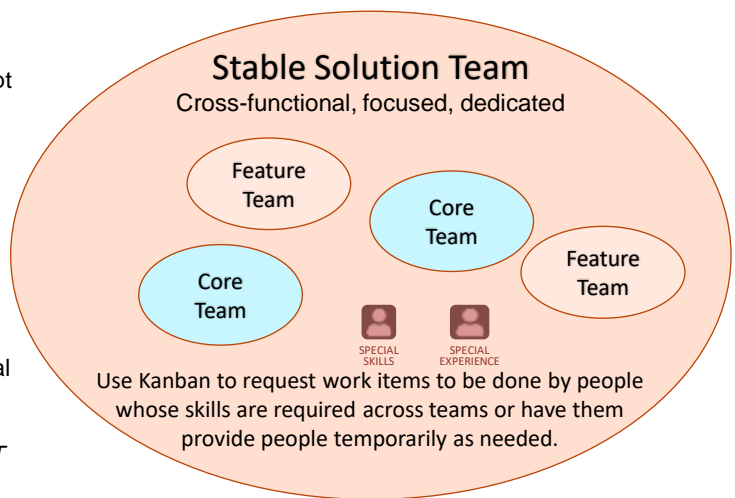
A **stable solution team (SST)** is a cross-functional team, or team of teams, able to create an MBI or MVP on their own. They are stable both in team formation and they are *focused* to working on this increment and do not work on other things while building this increment except on an exceptional basis.

If a *team of teams*, they are composed of:

**Feature teams** are teams that can create features – end-to-end functionality that a customer can use but may or may not be valuable by themselves.

**Core Teams** are close to being cross-functional but are missing a few key skills.

*It is more an attitude that the people in the SST are working together than the actual structure.*



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## The Dilemma We're In

Most people need a **well-defined starting point**

*But no one size fits all*

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## Disciplined Agile Principles

Delight customers

Be awesome

Context counts

Be pragmatic

Choice is good

Organize around products / services

Enterprise awareness

***DA suggests creating an approach that works for the company involved.***

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## Disciplined Agile Principles

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# Science is disciplined

Maybe Agile should be as well.





Follow [AI Shalloway on LinkedIn](#) and on Twitter @alshalloway

Go to the [Disciplined Agile User Group](#) to ask questions about SSTs, MBIs, ATDD, or anything else.

Please contact [John Munro](#) to learn more about Disciplined Agile.

#### Resources:

- [Types of Processes – Don Reinertsen](#)
- [Disciplined Agile Value Stream Consultant Workshop Layout and Study Guide](#) A considerable amount of information is available from links on this workshop description. More to come.



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