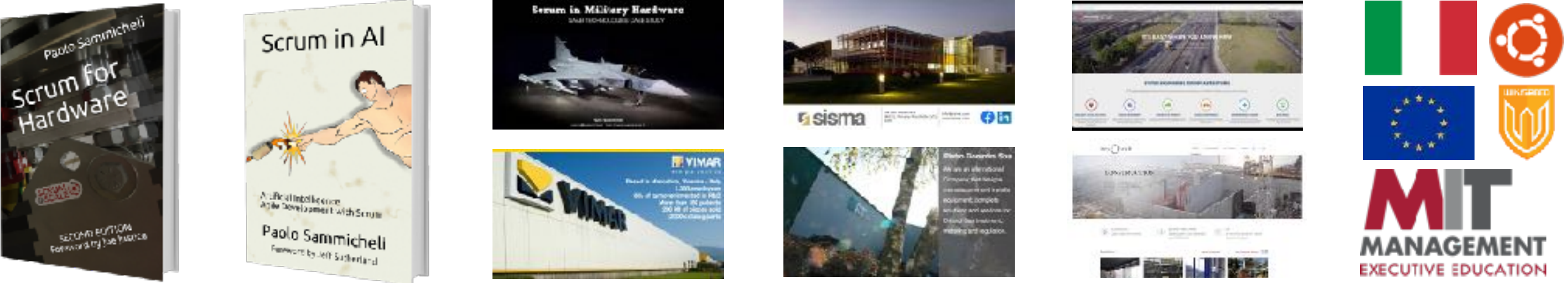


Agile Leadership and the Power of Decisions

Understanding Decision Latency

Paolo Sammicheli

Entrepreneur, Author, Speaker, Registered Scrum Trainer & Coach



**SCRUM
TRAINER**
by **scruminc.**

**SCRUM
@SCALE
TRAINER**

Neuro Linguistic
Programming
Business Coach

Interaction Design
Foundation
Design Coach

Licensed
Management 3.0
Trainer

Lean Agile
Procurement
Trainer

Scrum for Hardware - The Book



Discover the SCRUM for HARDWARE pioneers: from **Wikispeed** to the first **Scrum for Hardware Gathering**, the **Agile Product Charter**, and **Scrum@Scale**. The book is divided into three parts: the first one made of stories that easily introduce the topic; the second one explains the method, the underlying values, principles, and engineering practices; the third contains case studies and many practical examples on how to adopt it in your company. **Foreword by Joe Justice.**

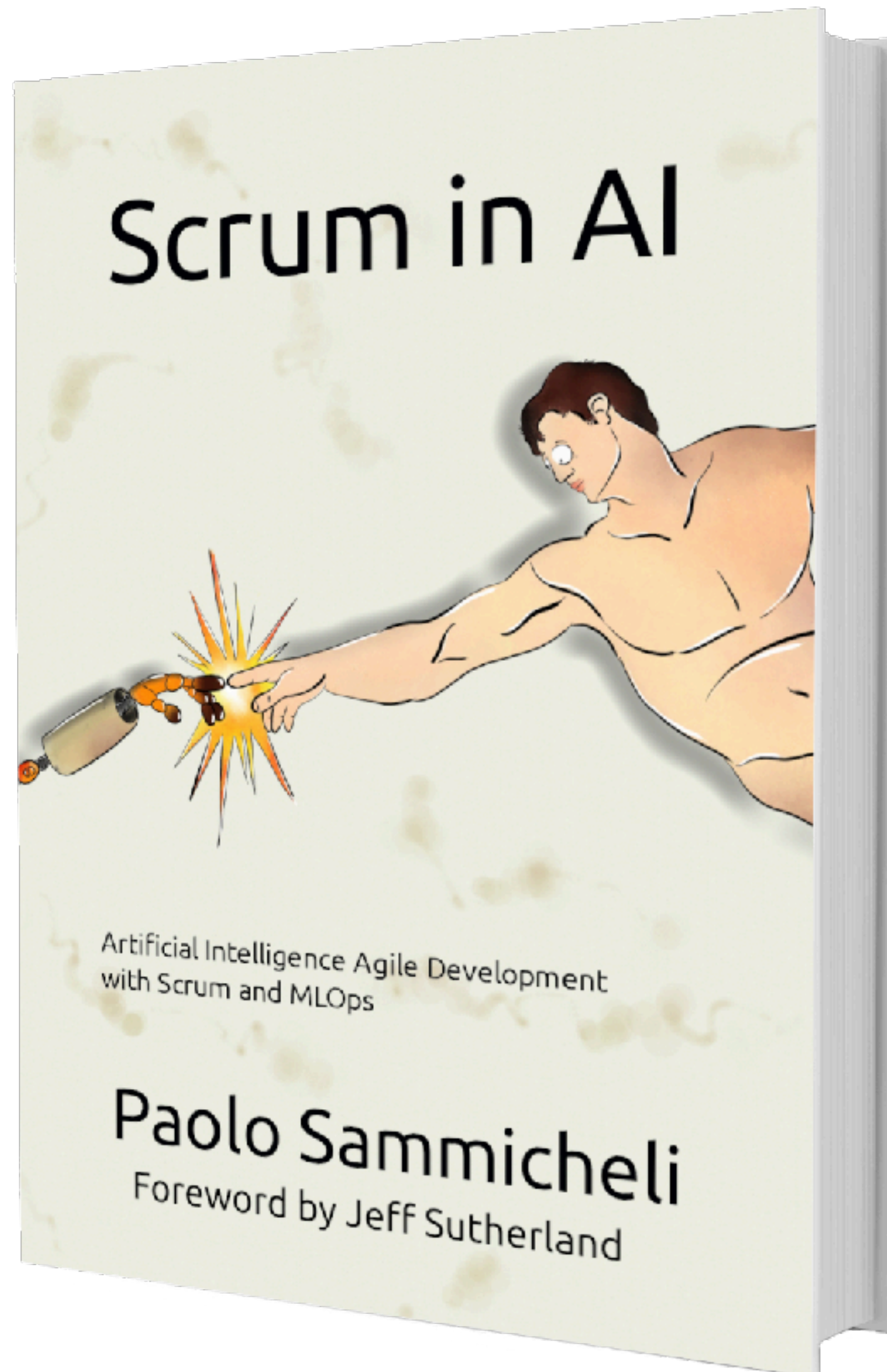


scruminc @scruminc · 7 giu

Scrum for Hardware is not just a must read, it's a must know for all those looking to get twice the work in half the time in manufacturing.

<https://www.scrum-hardware.com>

Artificial Intelligence Agile Development with Scrum and MLOps



How to develop an Artificial Intelligence application? With Agile and Scrum you will get team spirit, frequent feedback, empirical control, stakeholder involvement and developers motivation. The book includes Agility foundations, the engineering practices, real examples and suggestions on how to implement them in your company. **Foreword by Jeff Sutherland**



«Because Scrum emerged from a hotbed of AI concepts, implementations, and companies, it is with great pleasure that I recommend reading this new book from one of the best Scrum trainers in the world, Paolo Sammicheli. His keen insight into the topic and his ability to show how Scrum can produce better AI solutions brings the relationship between Scrum and AI full circle into contemporary times.»
- Jeff Sutherland

<https://www.scrum-ai.com>

What is a Decision?

«In business, a decision is the process of **selecting a course of action from multiple alternatives** to achieve a specific goal or solve a particular problem.

Decisions are made by individuals or groups within an organization, considering available resources, constraints, and organizational objectives.»

«Forget software and products, we are delivering decisions.
It is the molecule of our work, every decision needs to see the
harsh light of day so we can find the bad decisions early»

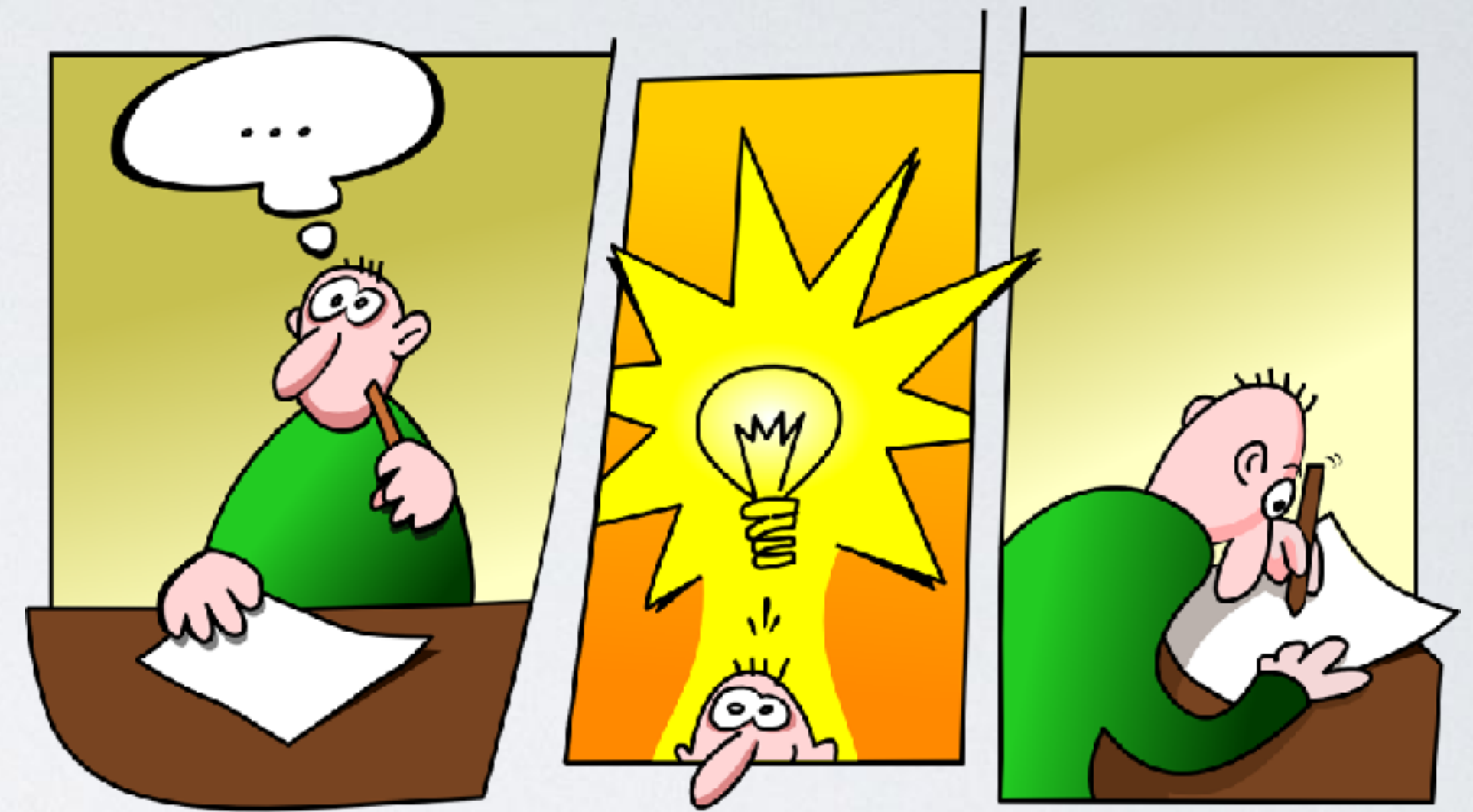
Alistair Cockburn,
Co-Author of the Agile Manifesto
and "The Heart of Agile"



Every white-collar job is about decisions

Decision Making is a two-sided coin, one in gold and the other in bronze:

- One side is about making the decision.
- The other side is about embodying the decision on visible, inspectable and usable supports (examples: an email, a software source, a cad file, etc.)



Decisions and Languages

Nuances across languages

The verb that typically goes with the word "decision" in English is "to make," as in "to make a decision." In other languages, the verb may be different, and it may carry different nuances:

- English: **to make** a decision
- Italian: **prendere** una decisione (literally: "**to take** a decision")
- Spanish: **tomar** una decisión (literally: "**to take** a decision")
- French: **prendre** une décision (literally: "**to take** a decision")
- Portuguese: **tomar** uma decisão (literally: "**to take** a decision")
- German: eine Entscheidung **treffen** (literally: "**to meet** a decision" or "**to strike** a decision")
- Chinese (Mandarin): 做決定 (**zuò** juédìng) (literally: "**to do** a decision")
- Japanese: 決定する (kettei **suru**) (literally: "**to be just about** to decide" or "to determine")

Nuances across languages

As you can see, the verbs associated with "decision" across these languages can have slightly different nuances:

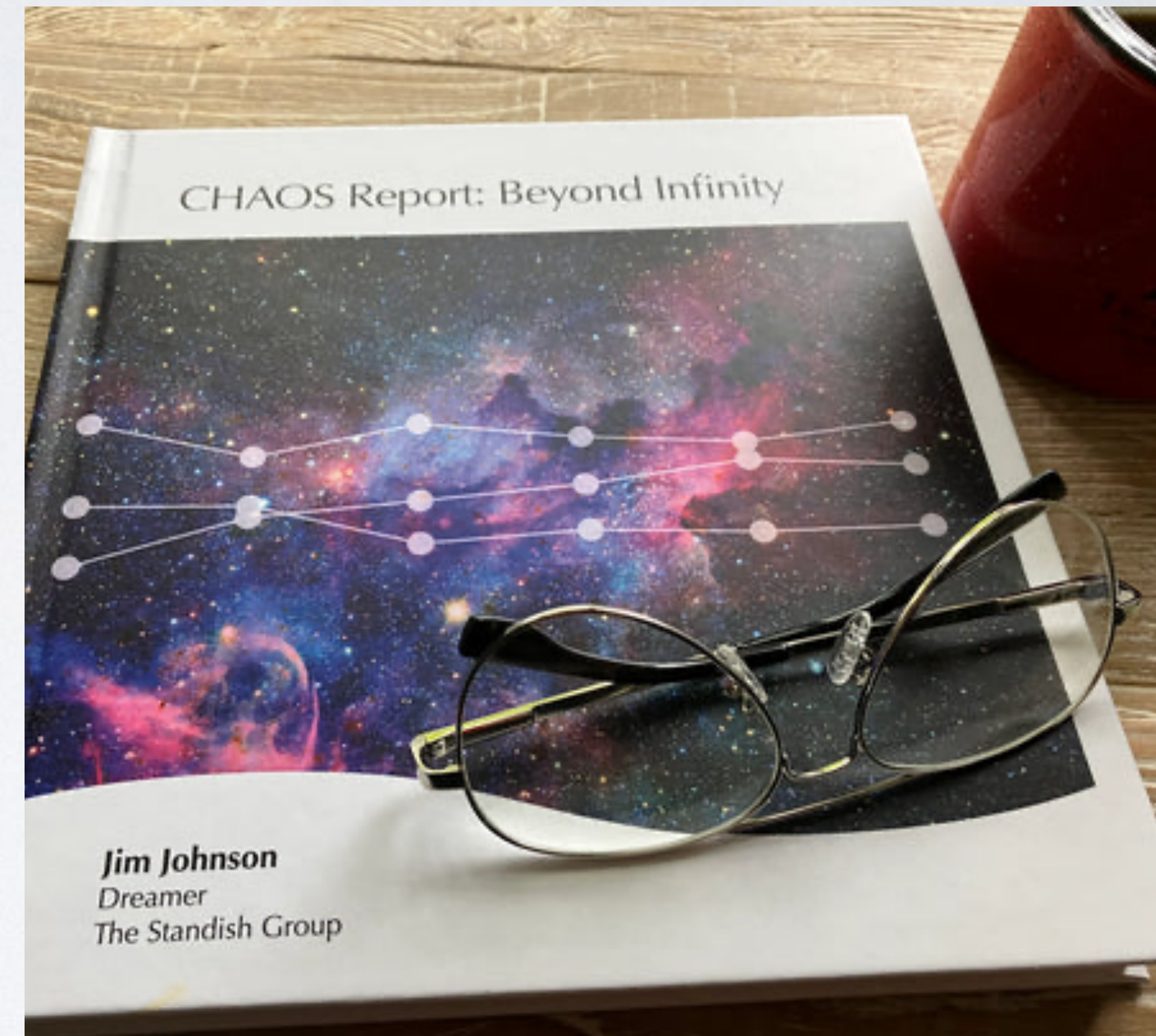
- English and Chinese focus on "making" or "doing" a decision.
- Italian, Spanish, French and Portuguese emphasize "taking" a decision, which implies an active choice between alternatives.
- German has a slightly different nuance with "meeting" or "striking" a decision, suggesting coming to a conclusion.
- Japanese simplifies the concept, using a verb that means "to be just about to decide" or "to determine," which only adds a temporal imminency.

Decision Latency

An overview of real data from the Standish Group

Real data from the Standish Group

- A 28-year research (since 1994) about the root cause on why software projects fail.
- Every 2 years, in-depth study with data from 50,000+ projects
- Private and public companies, government agencies and non-profits in almost every sector.



Source: Standish Group, "2022 CHAOS REPORT: Beyond Infinity"
<https://www.standishgroup.com/news/49>

Decision Latency

“The amount of
time from
when a decision
is needed to
when it is made”



Image by Midjourney.com: "A business person, wearing a suit and briefcase, taken from the back in front of a road intersection branching off in two directions"

Decision Latency Theory

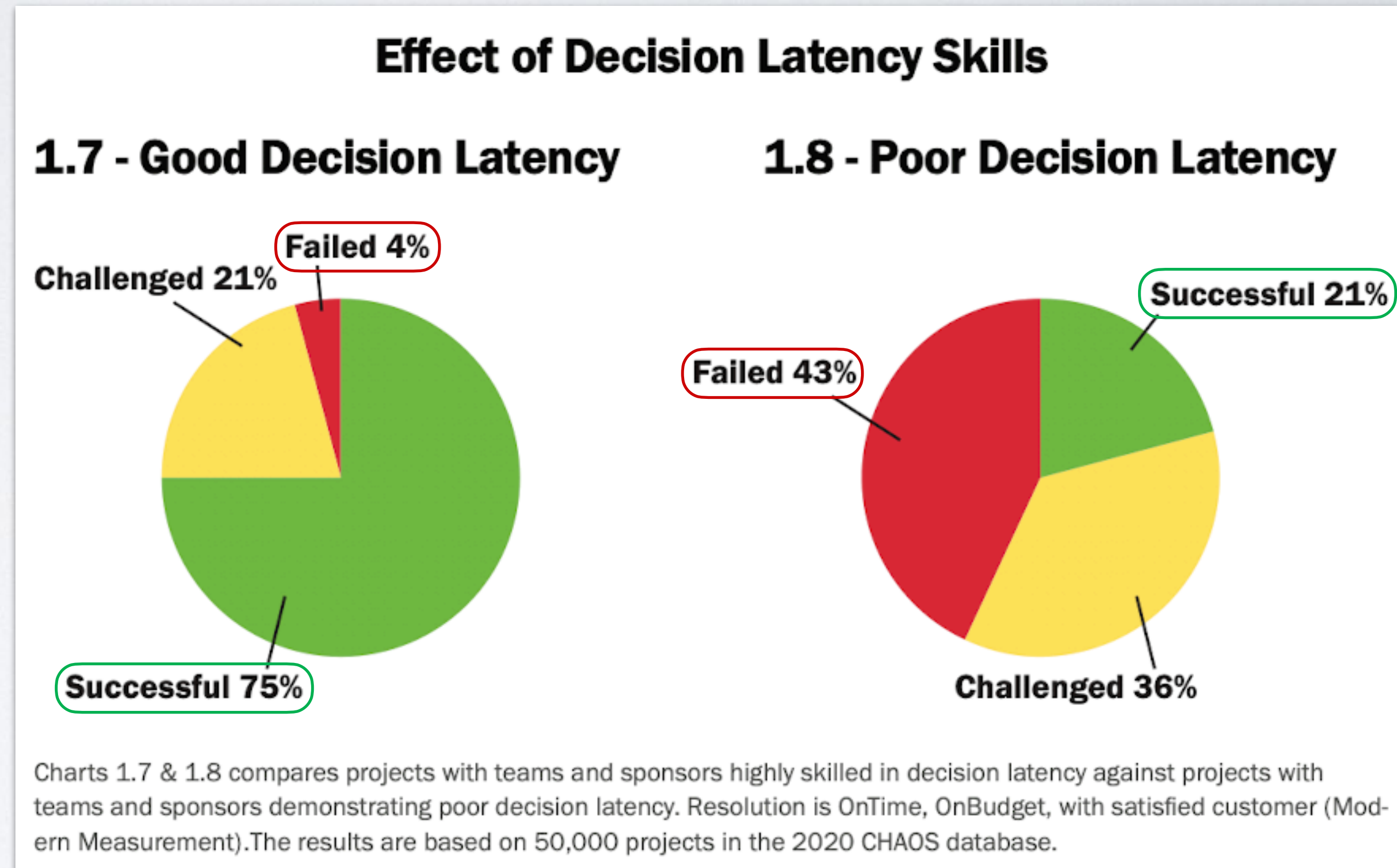
According to Standish Group:

- "The value of the interval is greater than the quality of the decision."
- In our 2007 CHAOS Report, entitled "The Ten Laws of CHAOS," we introduced Cheetah's Law: **"Swift decisions are typically better than long, drawn-out analysis."**
- "The root cause of poor performance in a software project is slow decision latency"

The root cause of poor performance in a software project is slow decision latency

Conclusion: The root cause of **poor** project performance is **long** decision latency.

Converse also true: The root cause of **good** project performance is **short** decision latency.



Good Decision Latency

“Decisions made in
< 1 hour”

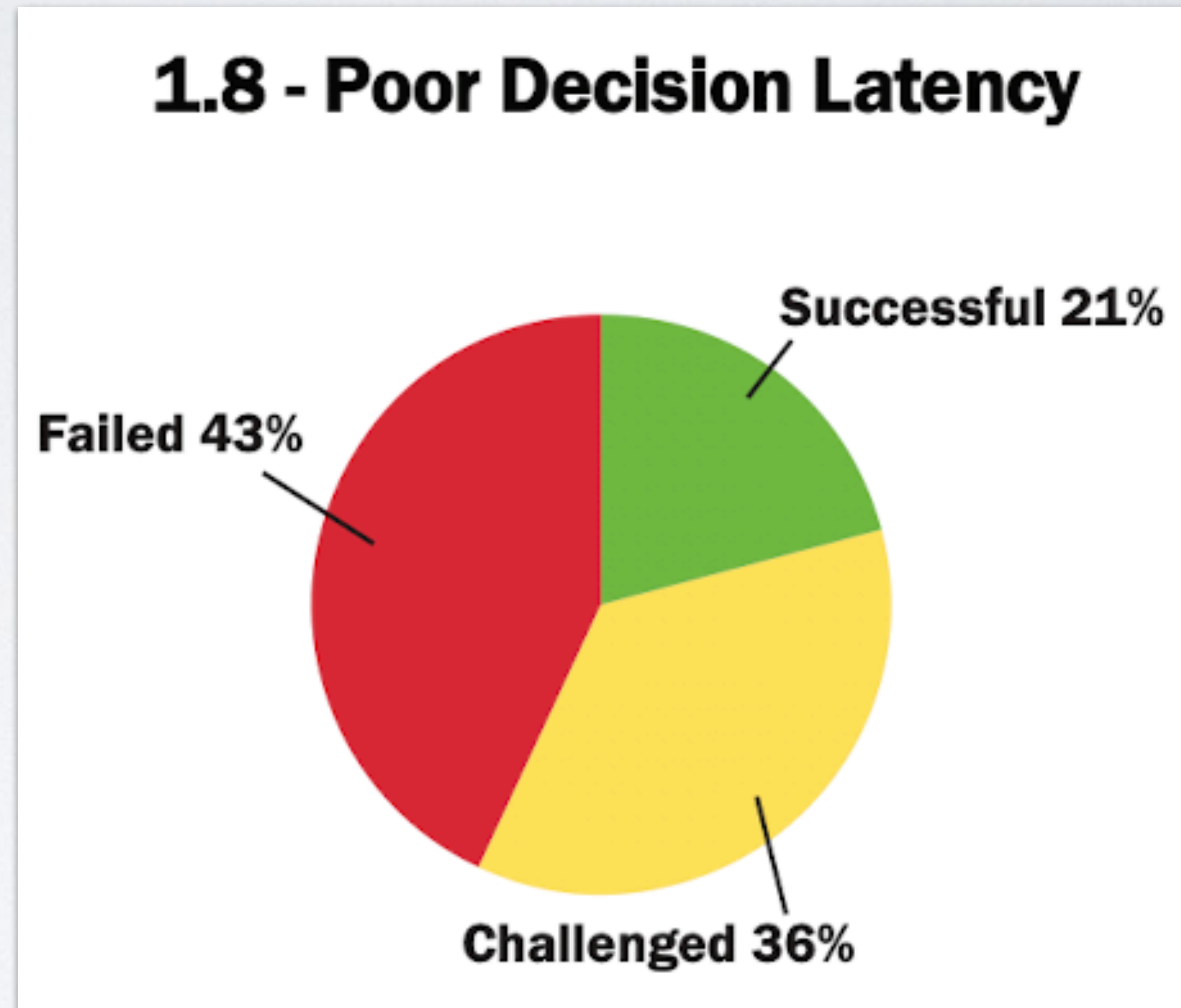
1.7 - Good Decision Latency



Source: Standish Group, "2022 CHAOS REPORT: Beyond Infinity"
<https://www.standishgroup.com/news/49>

Poor Decision Latency

“Decisions made in
5 hour(+)”



Source: Standish Group, "2022 CHAOS REPORT: Beyond Infinity"
<https://www.standishgroup.com/news/49>

Projects as batch of decisions to be embodied

«A project will create **one decision** for every **\$1,000** in labor costs.»

«A project with **1 million usd** in labor will require **1,000 decisions**; so **\$10 million project** (labor cost) will generate **10,000** decision points.»

Decision Latency affects the budget.

On average, the cost of a **one-hour decision** is about **\$100**.

With an average decision time of one hour, decision-making is 10% of your labor cost budget.

If your average decision takes four hours, it will increase your budget and time by about 50%.

If decisions take more than five hours, it can easily double the budget and significantly extend the time needed to complete the project.

1.11 - Effect of Decision Latency

≤ 1 hour
~ 2 hours
~ 4 hours
> 5 hours

Decision Skills	Project Estimate	Decision Costs	Total Cost
High	\$2 Million	\$200,000	\$2.2 Million
Skilled	\$2 Million	\$400,000	\$2.4 Million
Moderate	\$2 Million	\$1 Million	\$3 Million
Poor	\$2 Million	\$2 Million	\$4 Million

Source: Standish Group, "2022 CHAOS REPORT: Beyond Infinity"
<https://www.standishgroup.com/news/49>

Decision Reversals

A **Decision Reversal** refers to the act of changing a decision that has been previously made. It can occur for various reasons, such as new information becoming available, a change in circumstances or priorities, or the realization that the original decision was incorrect or ineffective.



Image by Midjourney.com: "a road sign with "change ahead" on a landscape with dark clouds on the horizon"

Decision Reversals

«Organizations with extended decision times have a higher rate of decision reversals.

A single decision reversal causes that decision to multiply by three — in other words, first there is a decision to reverse, then there is the decision to replace the former decision, then there is a lot of discussion about decisions, what to do about the things done in the name of the original decision.

Organizations with an average decision latency of more than three hours are also likely to reverse or revisit about 40% of their decisions.»

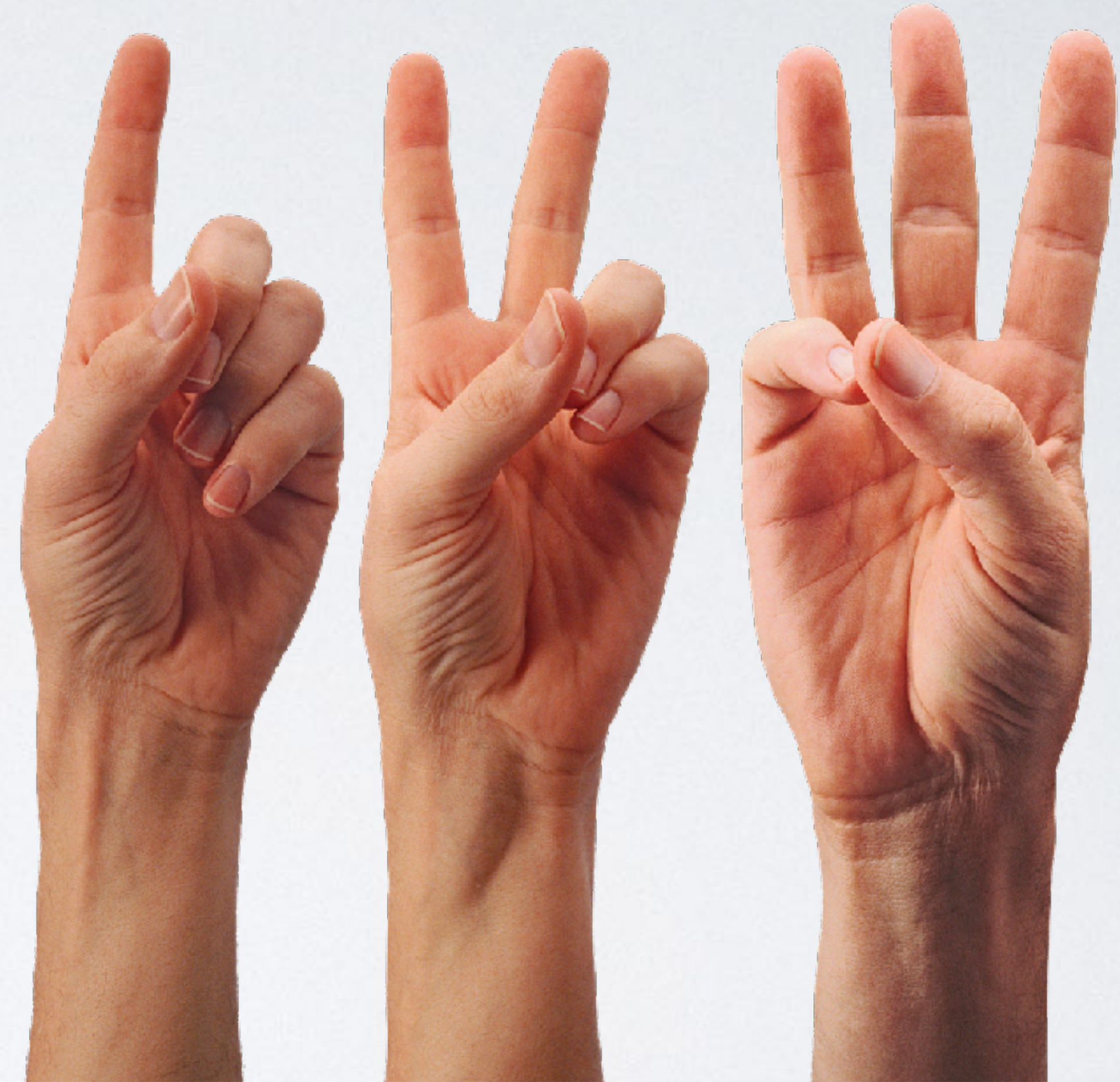


Image by Alexander Lesnitsky from Pixabay

Decision Reversals Frustration

«Poor decision latency also adds a great deal of frustration for stakeholders, users, and delivery teams.

People that make decisions that are then questioned and reversed naturally become cautious and less willing to make more decisions.

They will also spend more time pondering their decisions, which has obvious negative effects on decision latency. »



Image by www_slon_pics from Pixabay

The Spiral of Decision Reversals

«When people are discouraged from making decisions, their colleagues also are likely to stop participating and supporting the project in general. In no time, the whole team begins to lose its initial enthusiasm and starts to simply “go through the motions.”

Over the last 30 years, we’ve seen a stream of projects that overrun their estimated budgets by wide margins. It’s very common, for instance, to see a government project with a hundred-million-dollar budget turn into a billion-dollar budget — with no satisfactory explanation of where the money went, since the net delivery cost and effort is about the same.»



Image by Mehmet Turgut Kirkgoz from Pixabay

Source: Standish Group, "2022 CHAOS REPORT: Beyond Infinity"
<https://www.standishgroup.com/news/49>

“Increasing the speed of decisions is the single most important skill an organization can work on to improve”

Jim Johnson, Standish Group

Source: Standish Group, "2022 CHAOS REPORT: Beyond Infinity"
<https://www.standishgroup.com/news/49>

Agile and Scrum approach to improve Decision Latency

Flow of decisions

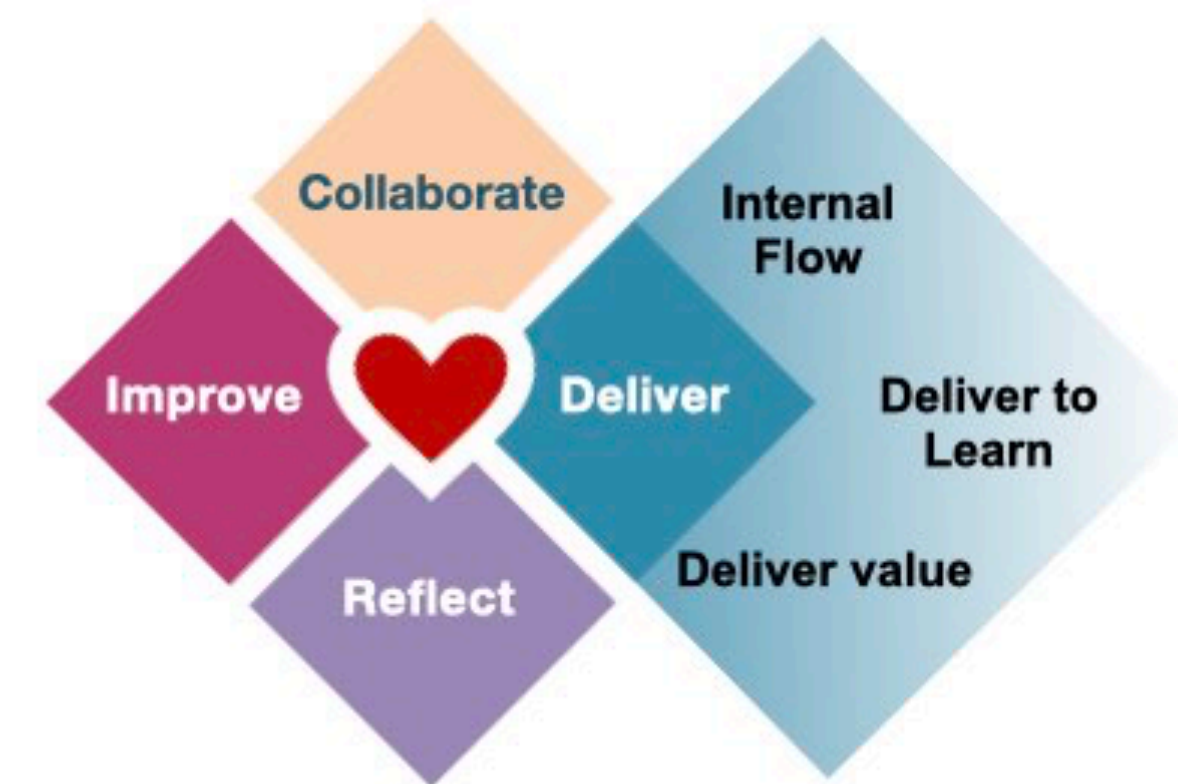
Alistair Cockburn Perspective

What we deliver to the world are Decisions!

«The key phrase of Deliver is
Deliver something Small & Soon»

«To get there, we need first to understand that there's a mapping between manufacturing and mental work, including design work, that's not at all obvious.»

What we deliver to the world are Decisions!



©Alistair Cockburn 2020



Source: https://youtu.be/ZK0axn60_OU
Heart of Agile, Alistair Cockburn
Agile Montreal

What we deliver to the world are Decisions!

«I have a picture here, and what we have is a flow of decisions»

«design looks like manufacturing, if your internal inventory is constructed out of unvalidated decisions»

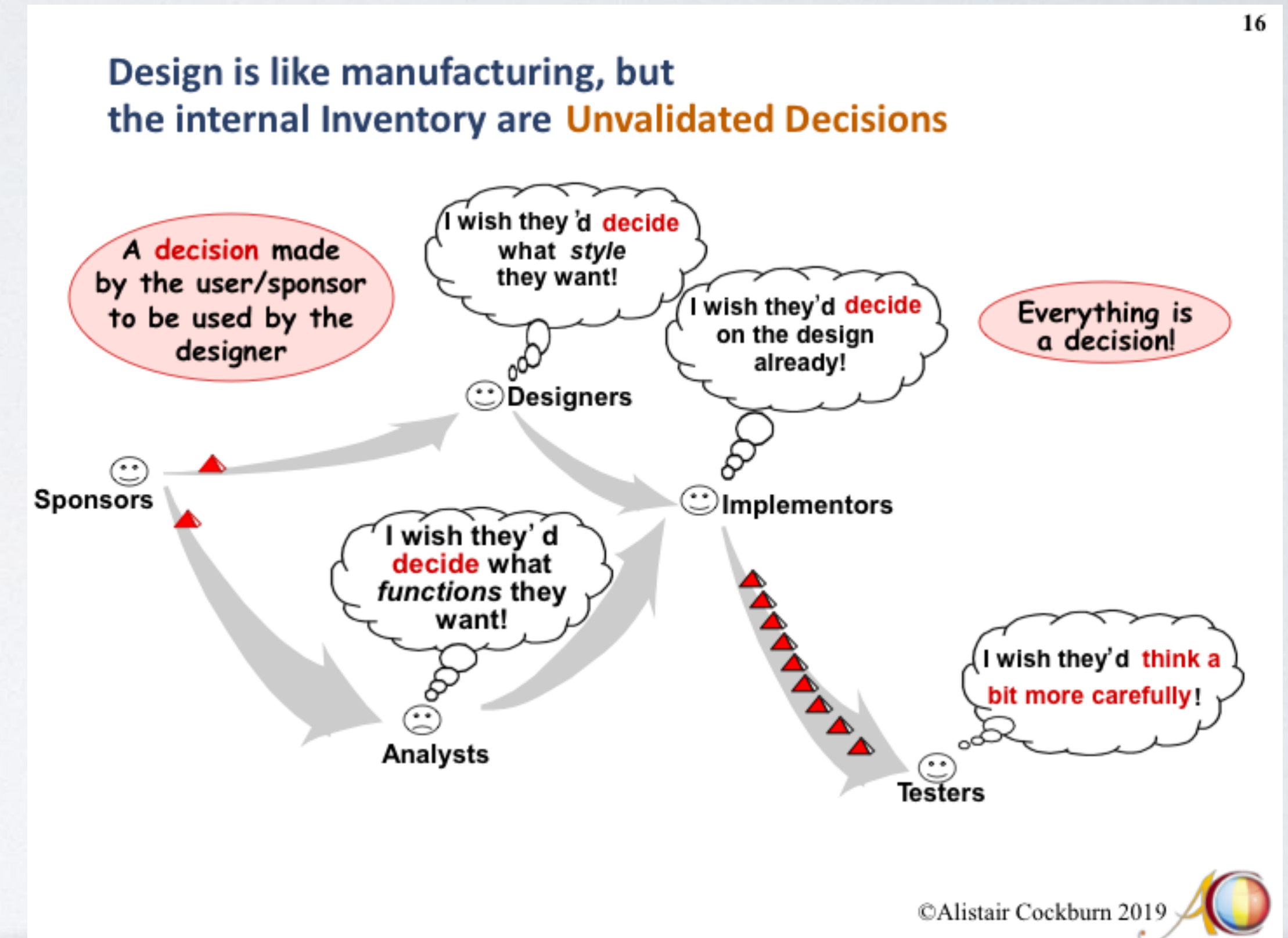
«the sponsor says: "hey I want this, our strategic market is..." so they make a decision»

«then the designers and analysts all go around and they add decisions on top of decisions»

«and the implementer people, they go doing the implementation stuff and designing and adding decisions on top of decisions»

«and then the testers go out, etc.»

«these little pyramids that i've got here are decisions stacked up»

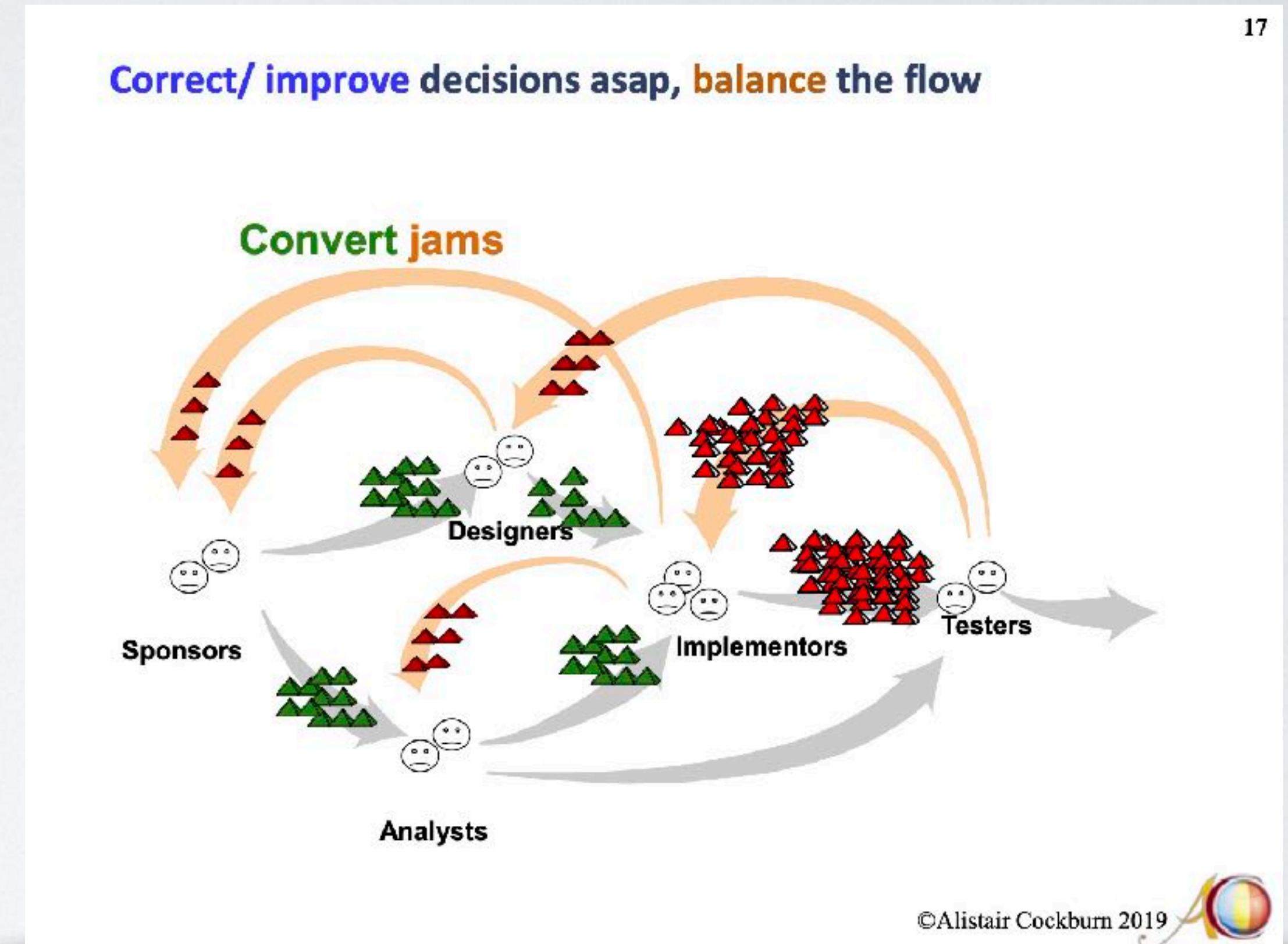


Source: https://youtu.be/ZK0axn60_OU
Heart of Agile, Alistair Cockburn
Agile Montreal

Correct and Improve decisions quickly

«you have a flow through the company that is a flow of decisions and it looks remarkably like a manufacturing flow line.»

«in fact, mathematically, it's the same! It's really really interesting, so as you know if you had a manufacturing flow line like look like this you would understand immediately, it's horrible!»



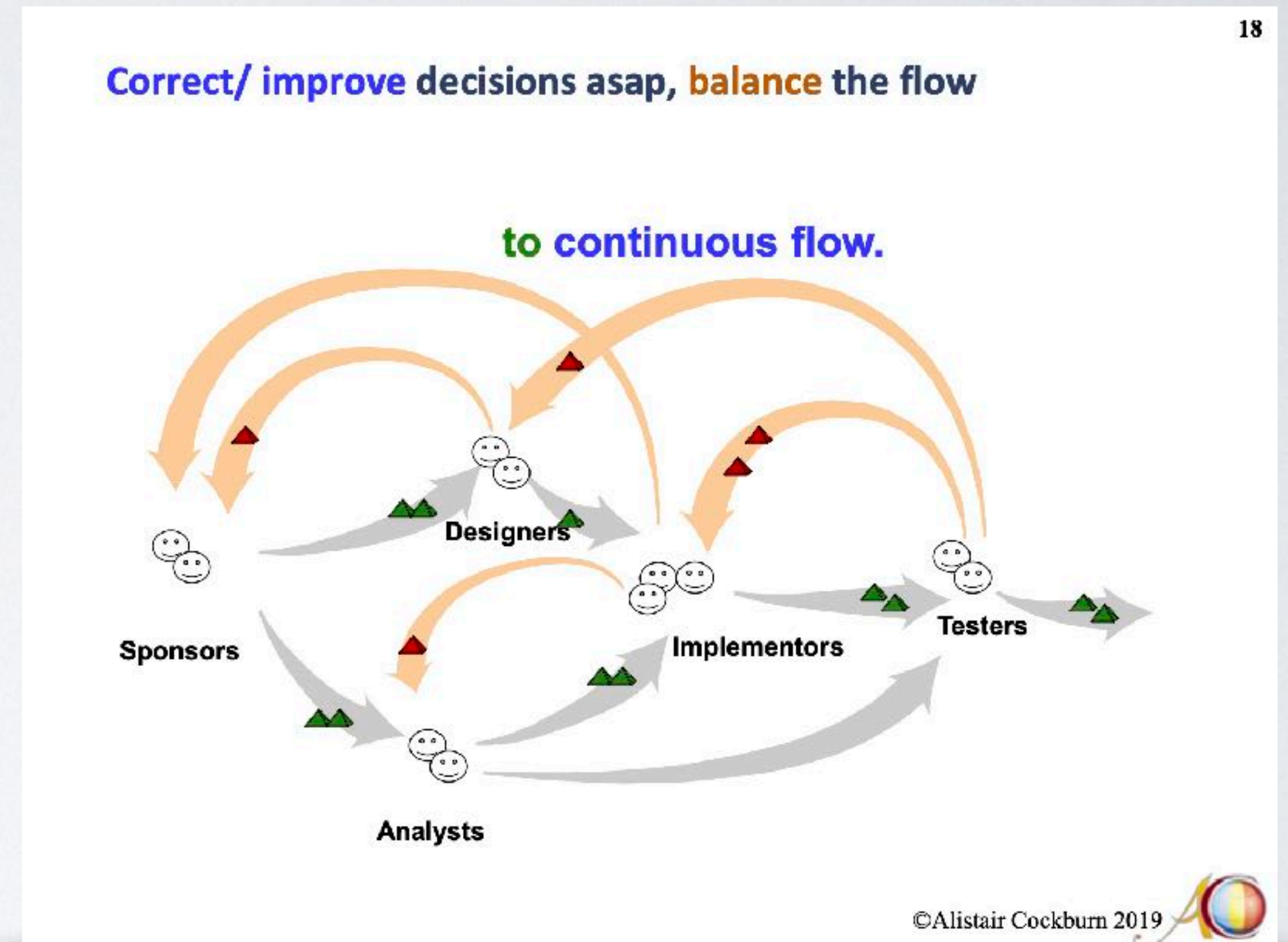
Source: https://youtu.be/ZK0axn60_OU
Heart of Agile, Alistair Cockburn
Agile Montreal

Balance the flow to continuous delivery

«This is why in the manufacturing world Toyota has made their factories look like this single piece flow»

«small batches, continuous flow, this is the thing that gets us more value from less work so nobody works faster but with the flow being smoother you correct errors earlier, you avoid leaving an error undetected and building a lot of stuff on top of a bad decision»

«this is why the agile crowd uses words like **minimum marketable feature**, **user story**, all of those things and we break things down into smaller and smaller pieces so that we can get the corrections the flow smooth and we can get things out into the world»



Source: https://youtu.be/ZK0axn60_OU
Heart of Agile, Alistair Cockburn
Agile Montreal

SpaceX about speed of decisions

«We have taken the general approach of **if a design is taking too long, the design is wrong**»

«One of the biggest traps for smart engineers is **optimizing something that shouldn't exist.**»



<https://www.youtube.com/watch?v=clQ36Kt7UVg>

Release early. Release often. And listen to your customers.¹

«The rise of microservices, or what we call microprojects, has increased the success and value of software projects.

The notion that size is dependent on scope and requirements is just plain foolhardy. The minimal viable product (MVP) trend demonstrates this fact. Over almost two and a half decades, small projects have outperformed their larger counterparts by a wide margin. »

Source: Standish Group, "2022 CHAOS REPORT: Beyond Infinity"
<https://www.standishgroup.com/news/49>

2.21 - Resolution by Project Size

RESOLUTION/SIZE	SUCCESSFUL	CHALLENGED	FAILED
GRAND	6%	52%	42%
LARGE	12%	58%	30%
MEDIUM	18%	56%	26%
MODERATE	26%	61%	13%
SMALL	61%	33%	6%

Chart 2.21 shows the results of the 50,000 projects in the CHAOS database. The resolution results for the project ranges were selected by a master adjudicator based on the project profiles.

2.25 - Resolution by Delivery Method

SIZE	METHOD	SUCCESSFUL	CHALLENGED	FAILED
ALL-SIZE PROJECTS	AGILE	42%	47%	11%
	WATERFALL	13%	59%	28%
LARGE-SIZE PROJECTS	AGILE	19%	56%	25%
	WATERFALL	8%	56%	36%
MEDIUM-SIZE PROJECTS	AGILE	34%	53%	13%
	WATERFALL	9%	66%	25%
SMALL-SIZE PROJECTS	AGILE	59%	36%	5%
	WATERFALL	45%	46%	9%

Chart 2.25 shows the results of the 50,000 projects in the CHAOS database. The resolution results for the project methods were selected by a master adjudicator based on the project profiles.

Product Backlog

PRODUCT BACKLOG

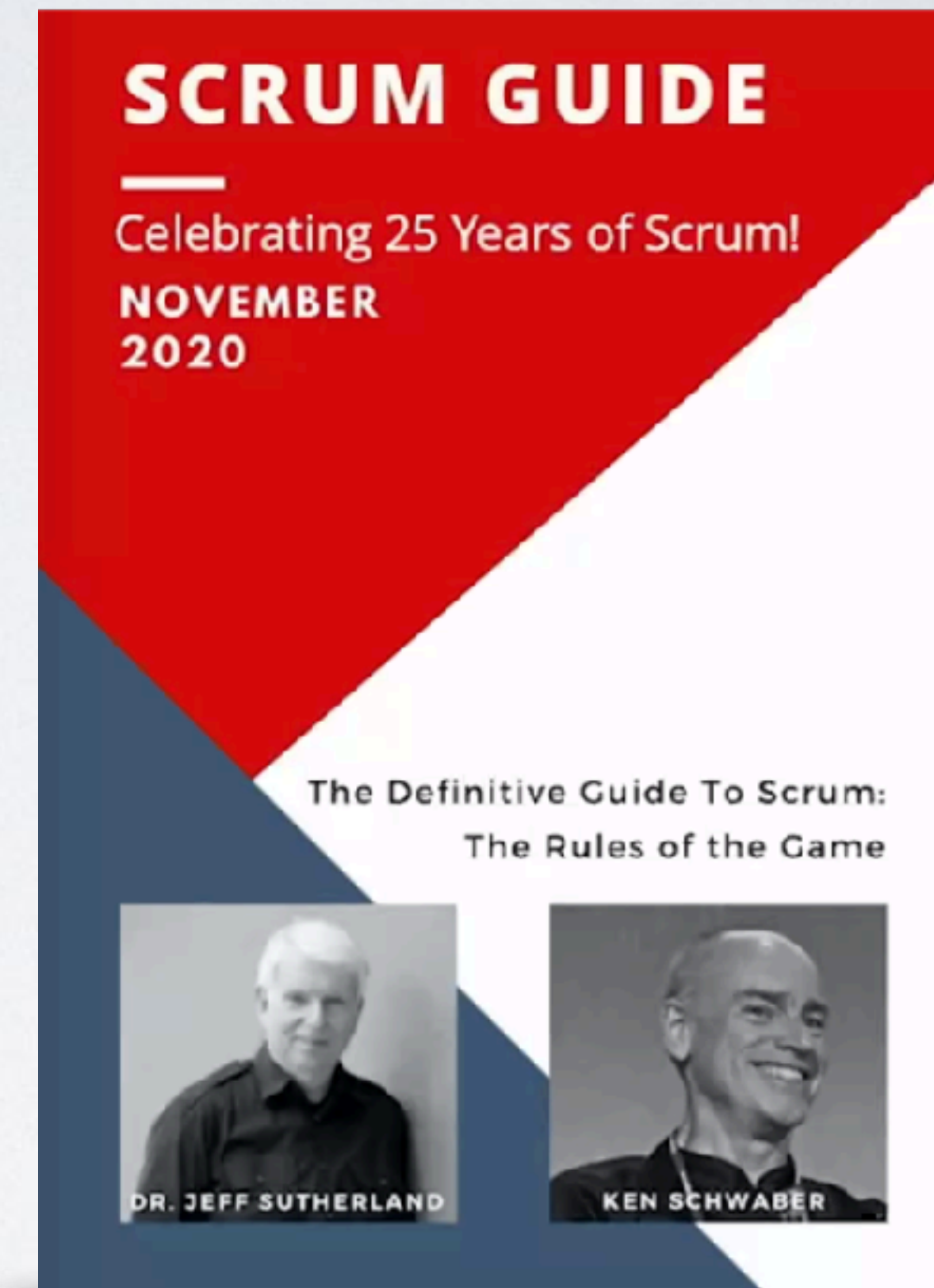
«The Product Backlog is an emergent, ordered list of what is needed to improve the product.

It is the single source of work undertaken by the Scrum Team.

It contains the deliverable and the requirement to the Product Goal.

The Product Goal describes a future state of the product which can serve as a target for the Scrum Team to plan against. The rest of the Product Backlog emerges to define “what” will fulfill the Product Goal.»

Adapted from the “Scrum Guide 2020”



Rephrasing the Product Backlog

*«The Product Backlog is an emergent, ordered list of **Decisions** that needs to be embodied, to improve the product.»*

Product Owner

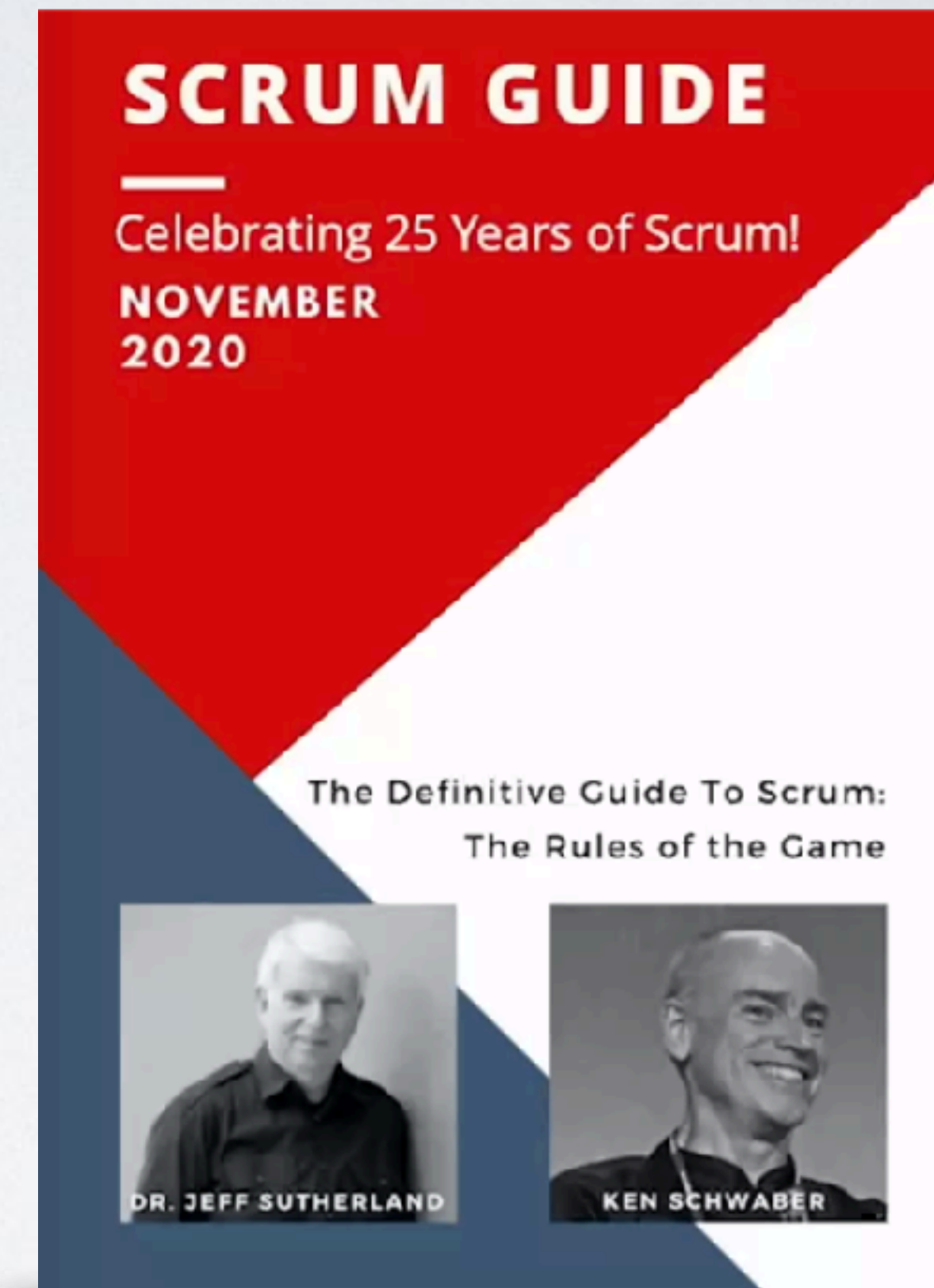
PRODUCT OWNER

«The Product Owner is accountable for maximizing the value of the product resulting from the work of the Scrum Team. »

«For Product Owners to succeed, the entire organization must respect their decisions. These decisions are visible in the content and ordering of the Product Backlog, and through the inspectable Increment at the Sprint Review.»

«The Product Owner is one person, not a committee. The Product Owner may represent the needs of many stakeholders in the Product Backlog. Those wanting to change the Product Backlog can do so by trying to convince the Product Owner.»

Adapted from the “Scrum Guide 2020”



Rephrasing the Product Owner

*«The Product Owner is accountable of taking the **Decisions** for maximizing the value of the product resulting from the work of the Scrum Team.»*

Leadership perspective

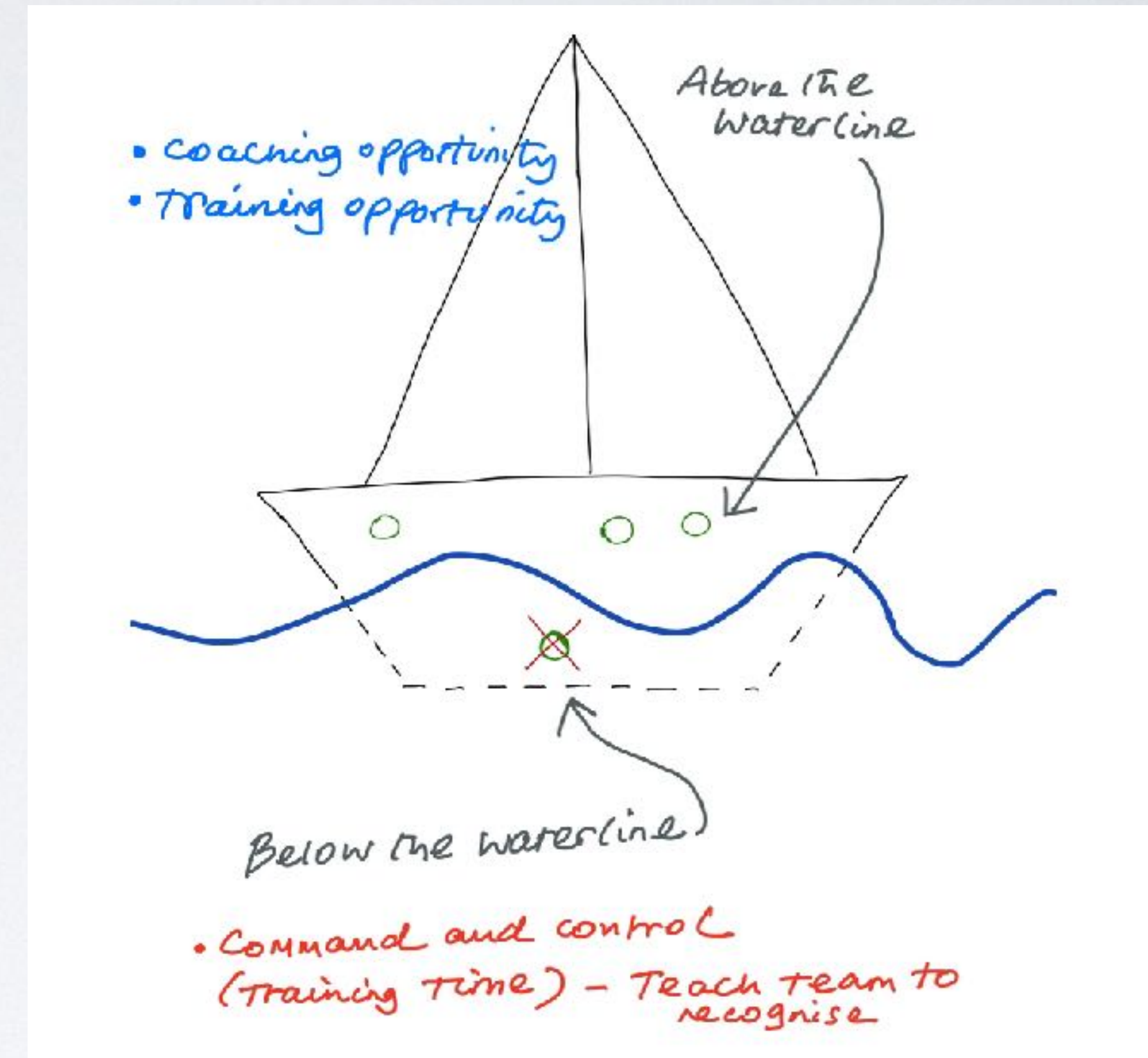
The rule seems to be “delegate to the point of extreme discomfort!”



Riccardo Mariti
Riccardo's London Founder

Decisions as coaching opportunities

- What decisions can we delegate? Think about the waterline or below the waterline.
- All the decisions above the waterline should be treated as coaching opportunities to empower collaborators.
- We need to learn how to recognize the below the waterline decisions.
- You have to make decisions to learn how to make decisions



Courtesy of Riccardo Mariti © 2017-2023
Image from "MAKING IT HAPPEN" - Our Journey to
Creating the World's First Self-Managing Restaurant

Simple Sabotage Field Manual

(a) General Interference with Organizations and Production

- Insist on doing everything through “channels.” Never permit short-cuts to be taken in order to expedite decisions.
- When possible, refer all matters to committees, for “further study and consideration.” Attempt to make the committees as large as possible — never less than five.
- Refer back to matters decided upon at the last meeting and attempt to re-open the question of the advisability of that decision.
- Advocate “caution.” Be “reasonable” and urge your fellow-conferees to be “reasonable” and avoid haste which might result in embarrassments or difficulties later on.
- Be worried about the propriety of any decision—raise the question of whether such action as is contemplated lies within the jurisdiction of the group or whether it might conflict with the policy of some higher echelon.



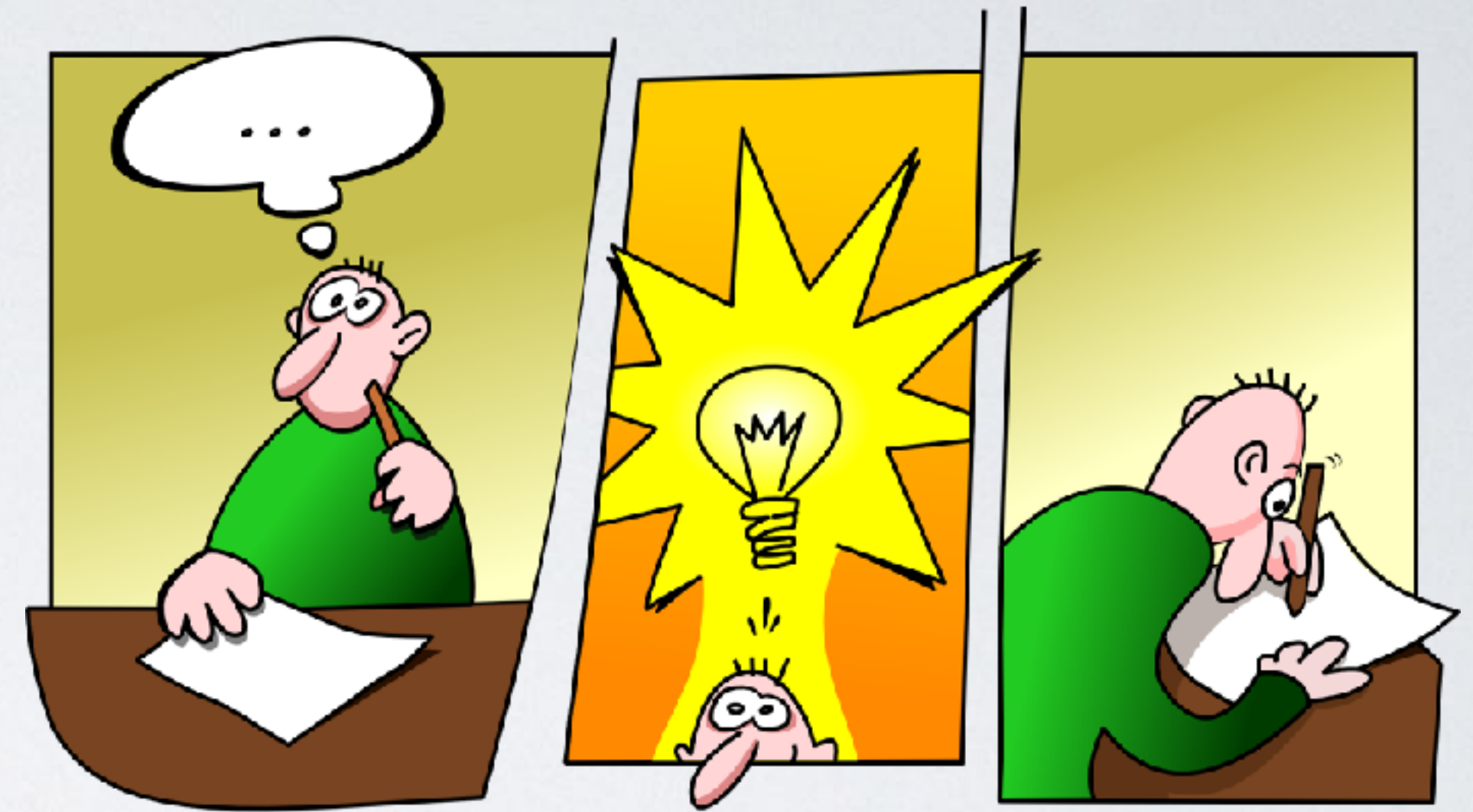
<https://www.hsdl.org/c/abstract/?docid=750070>

Office of U.S.A. Strategic Service

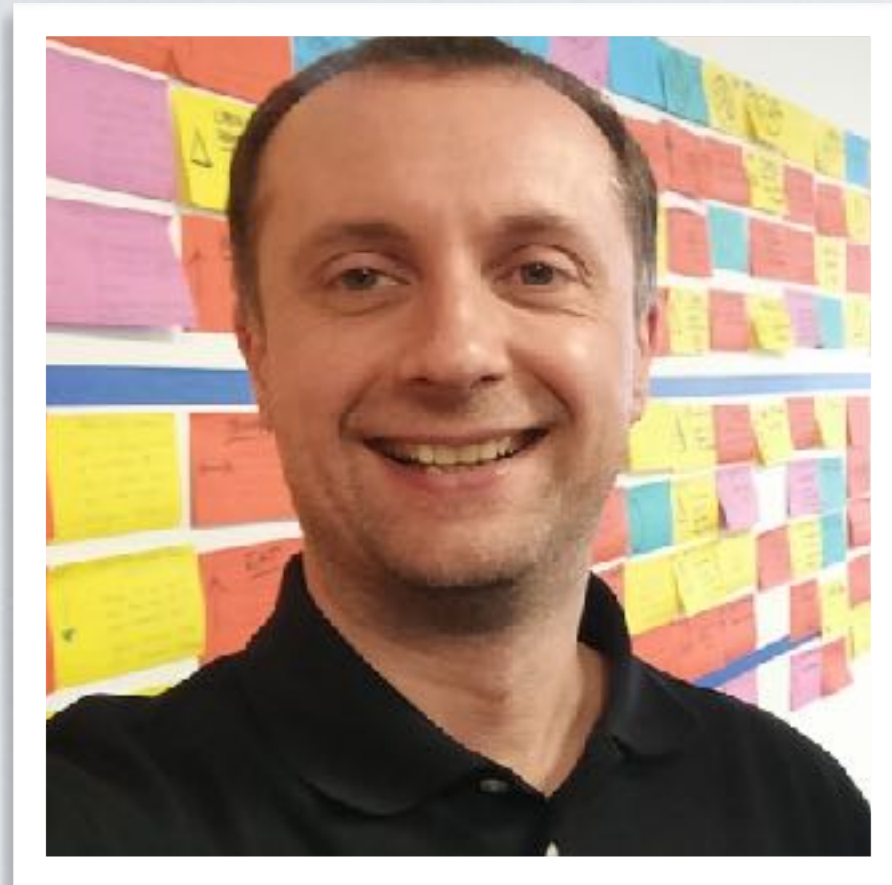
17 January 1944

How could companies improve?

- Decision latency primarily depends on the gold side of the medal. And it is caused by your organizational structure.
- Decision embodiment may take time as well and may also depend on technology.
- Organizations could improve Decision Latency today if they decide to do it.



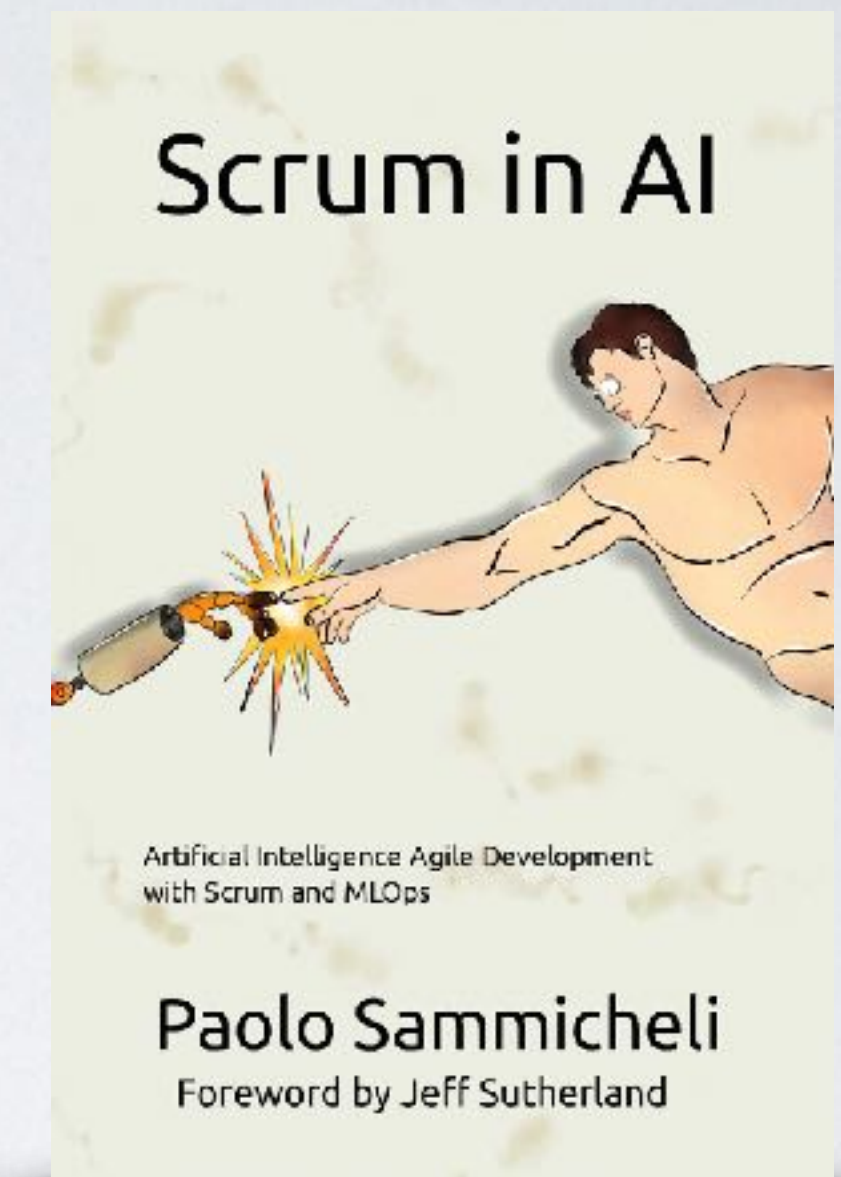
Let's Keep the Conversation Going



<https://paolo.sammiche.li>

www.scrum-hardware.com

www.scrum-ai.com



Special thanks to Riccardo Mariti for his inspiration and material, and for being a precious friend.