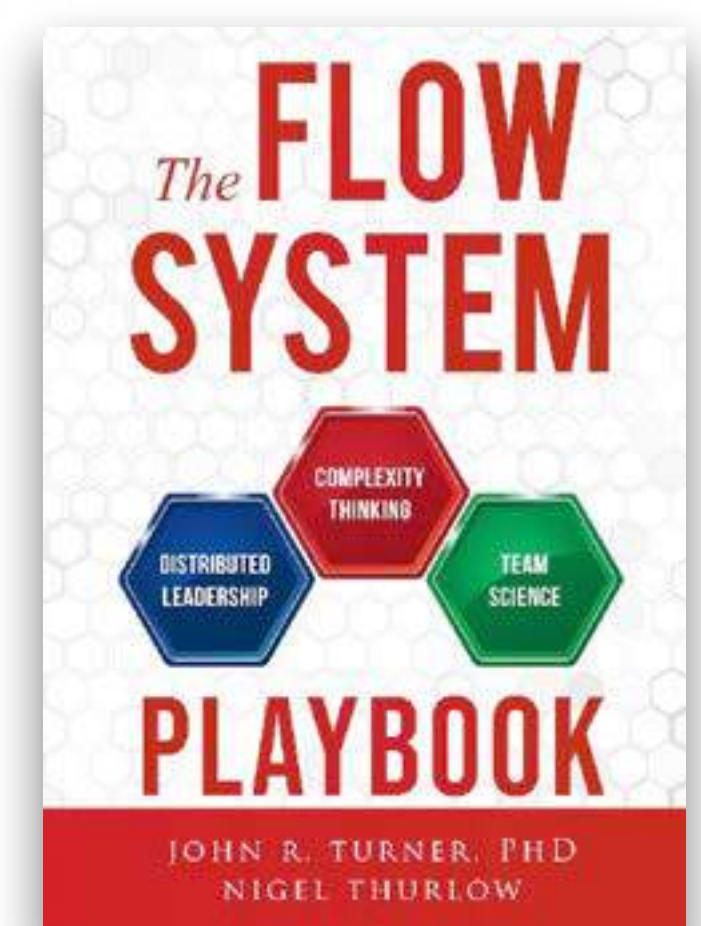
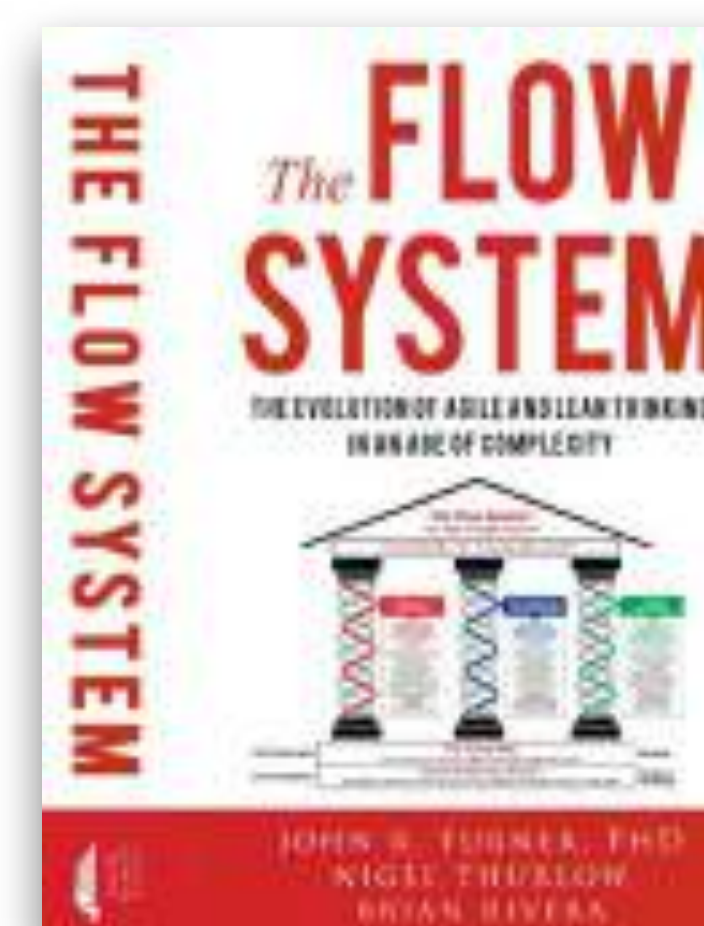
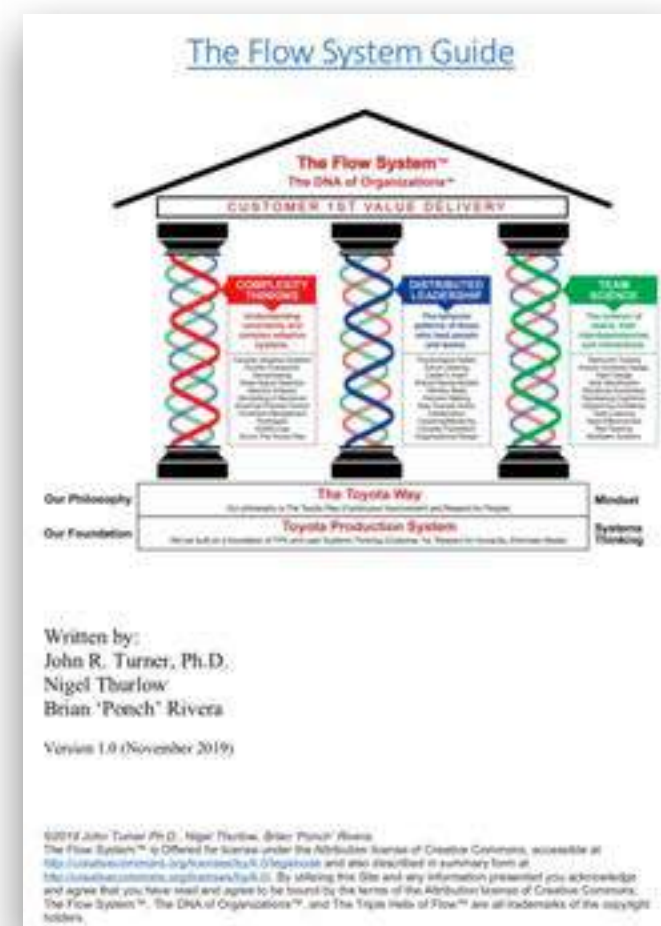
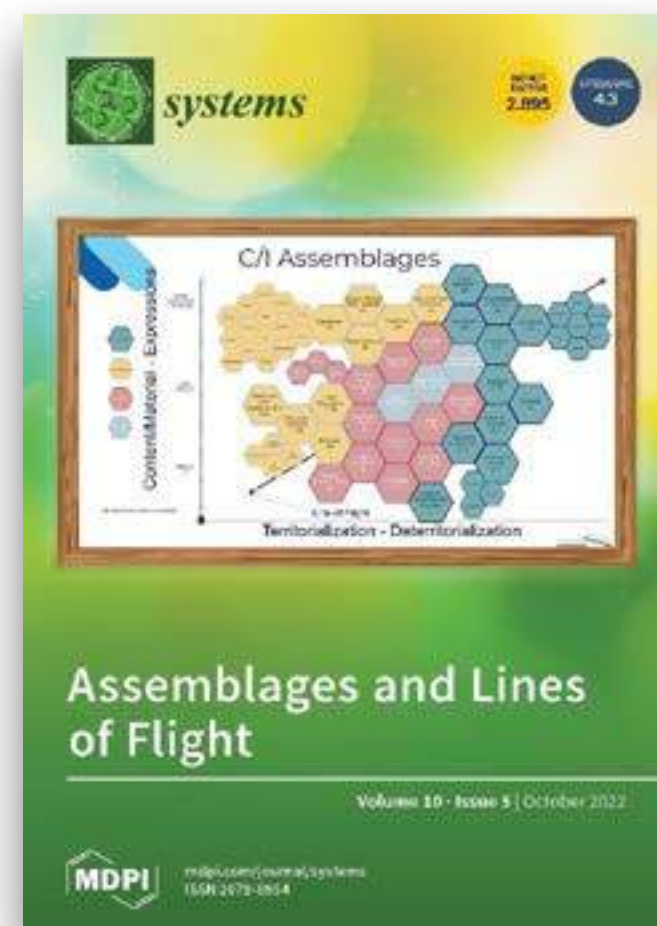
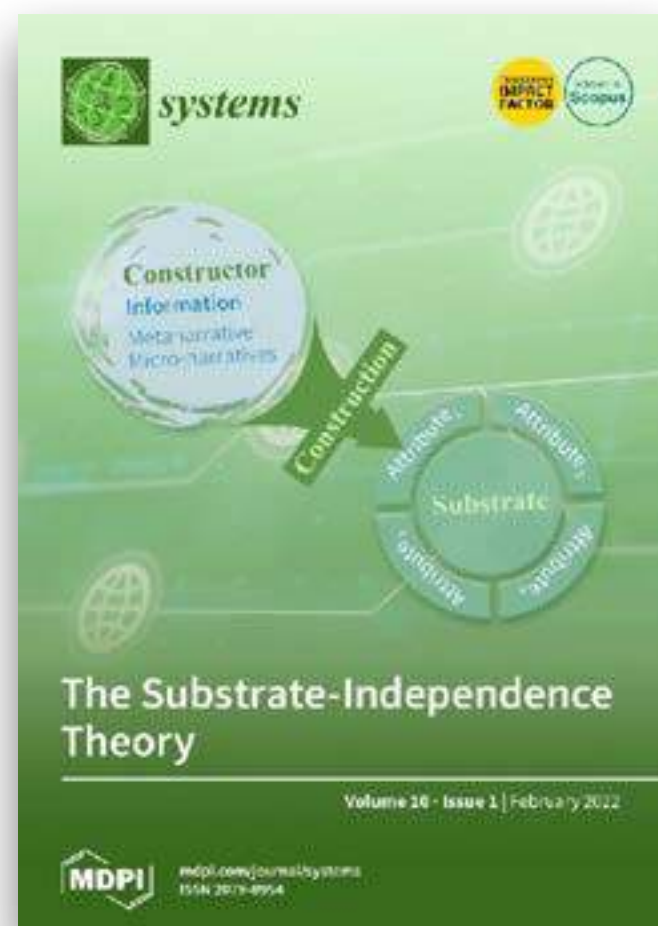
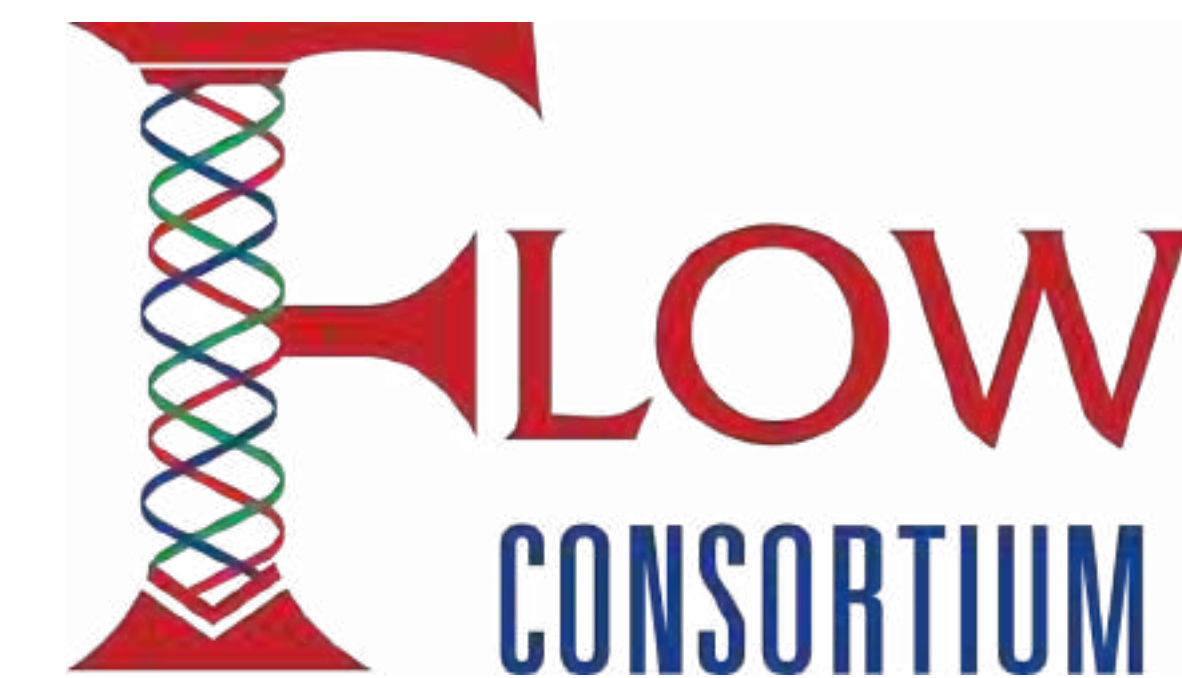




Nigel Thurlow



SubstrateTheory.com

AssemblagesTheory.com

flowguides.org



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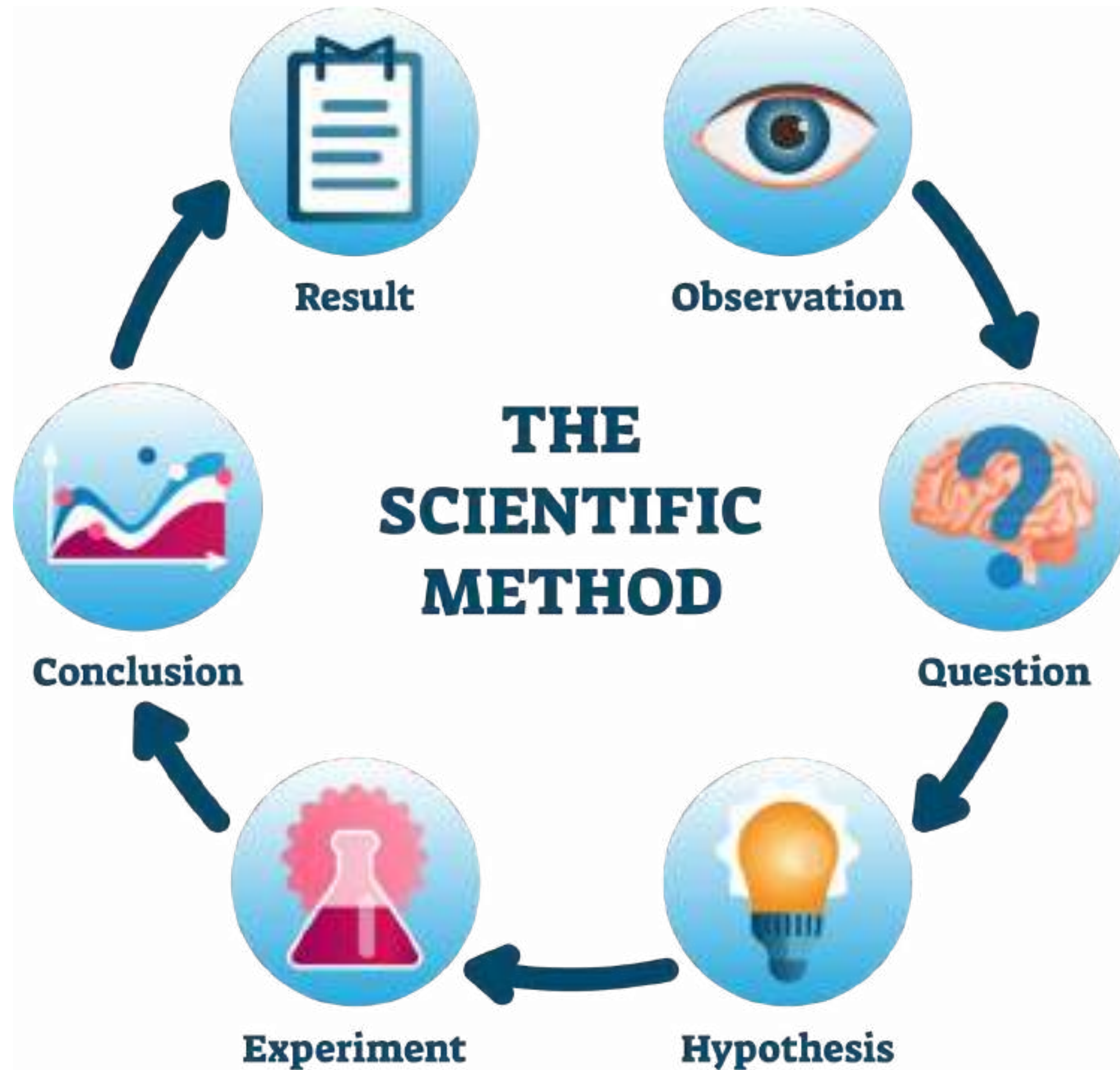


The Convincing Game



The phenomenon that happens when you ask experts to identify your issue, are shown the evidence of causes, and then argue why the experts are wrong, while vehemently resisting all attempts at corrective actions.

The Problem?



We don't have a methodology problem; we have a behavior problem! And that starts with leaders.

The Transformation Myth

A Philosophy



The Agile Manifesto (2001). It has been since been beautified and coopted as the primary approach for organizational change.

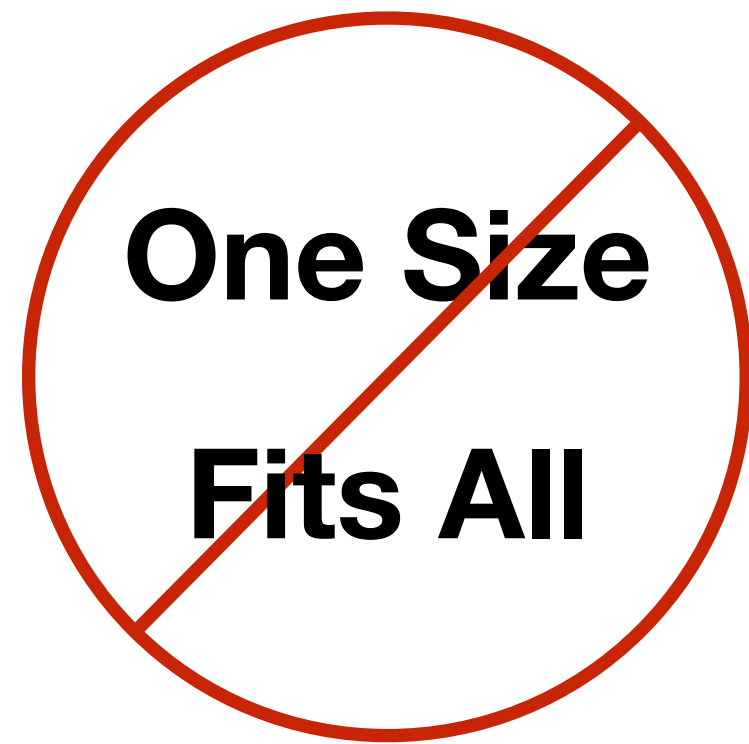
A Misuse



Culture is a product of our behaviors. You can neither plan or create it. It emerges based on how we behave and act.

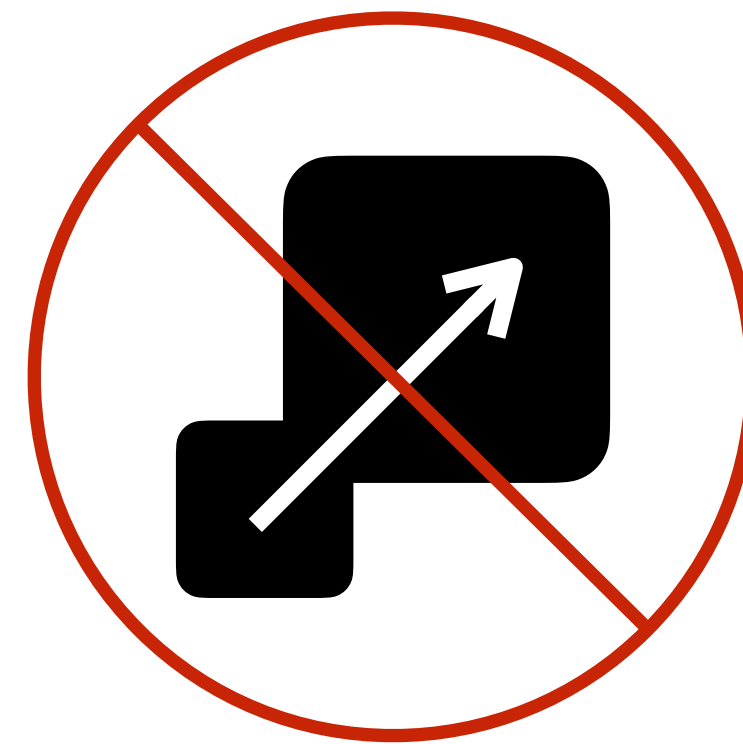
The Transformation Myth suggests that applying a universal framework will transform your organization, both operationally and culturally, into something that ensures faster delivery of value while creating a harmonious working culture previously unobtainable.

You Can't Scale Agile!



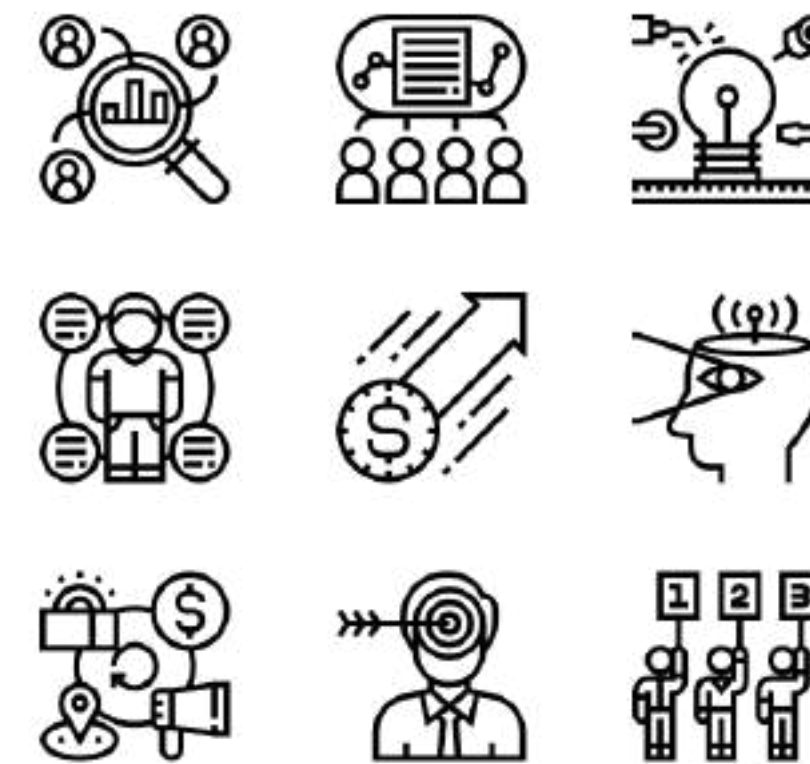
No Standard Approach

The Problem



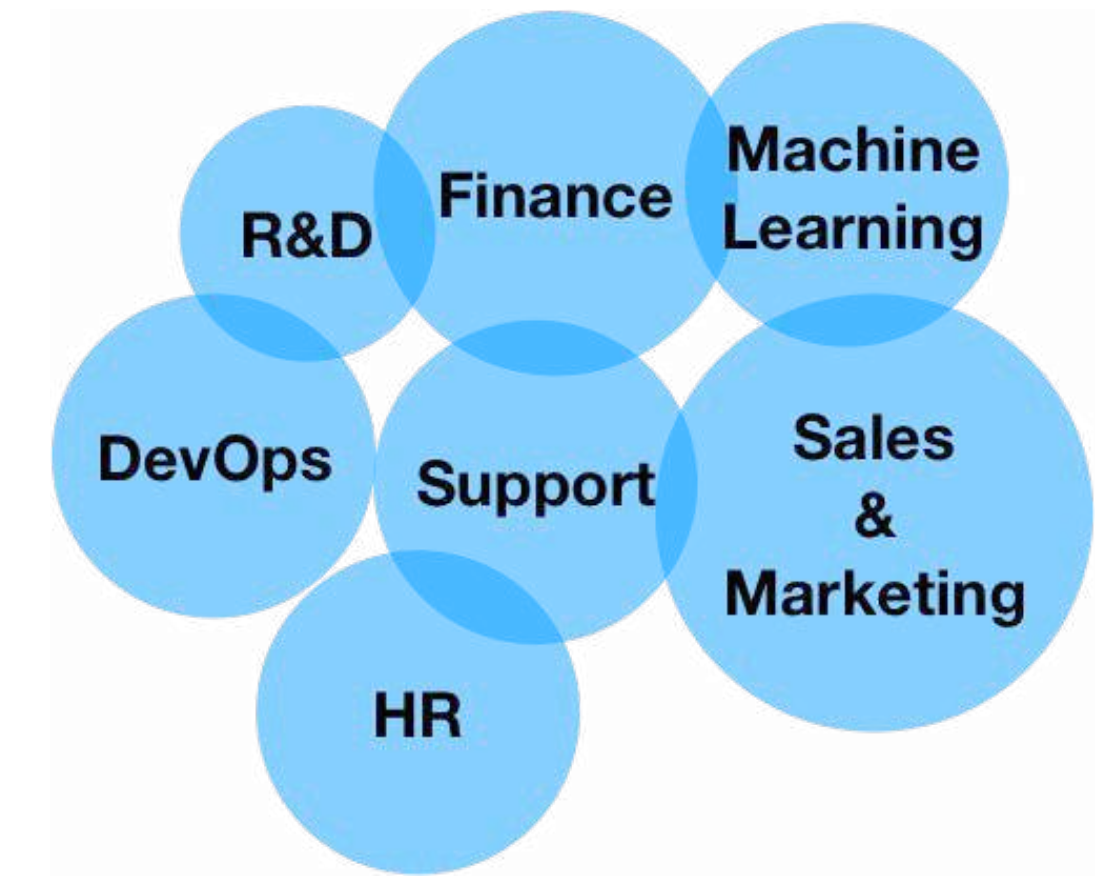
Scaling Frameworks

The Illusion



Many Patterns/Techniques

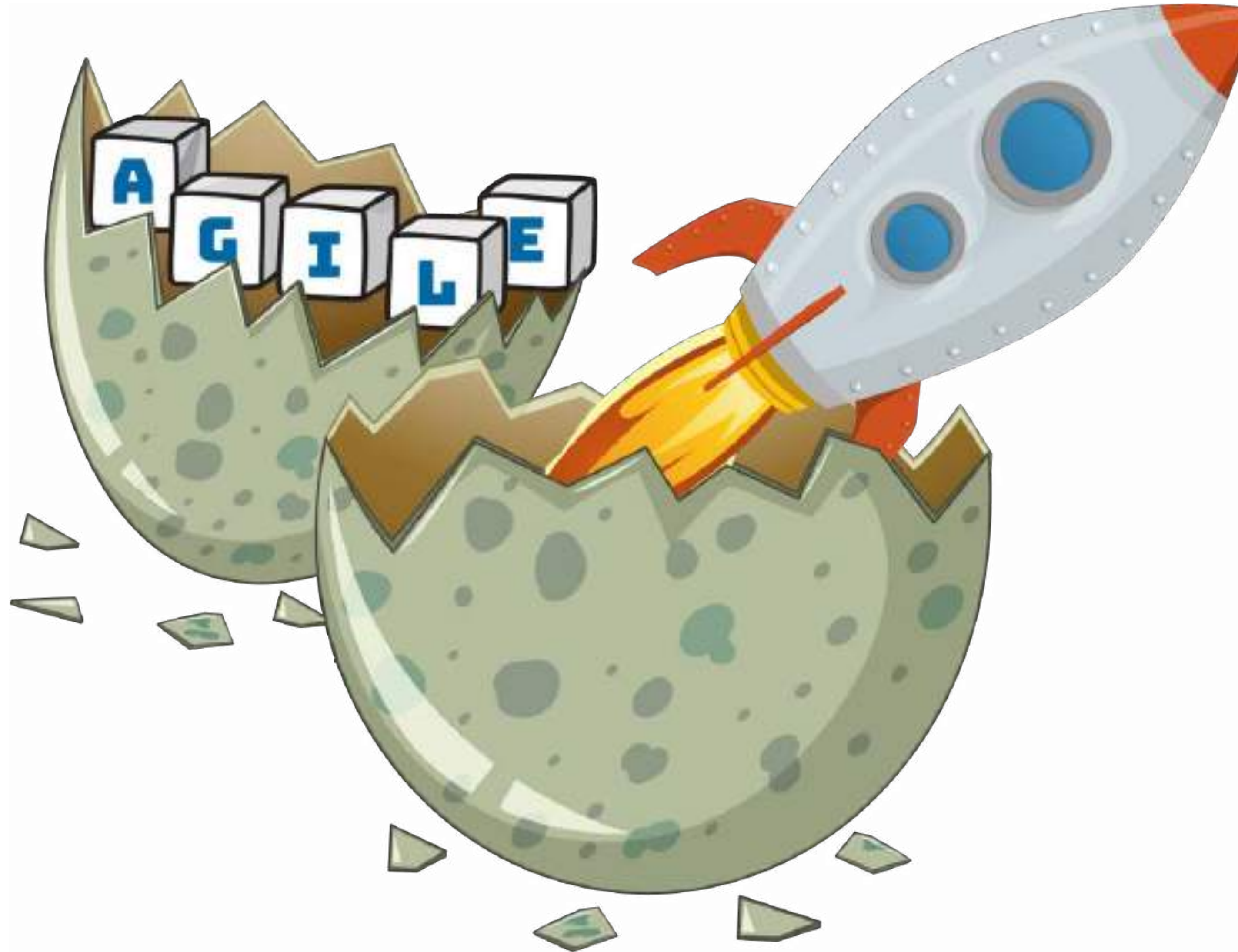
The Focus



Context Determines Approach

The Determiner

Agility is Emergent



Agility is an emergent property of the way we do work and the way we behave.

Types of Work



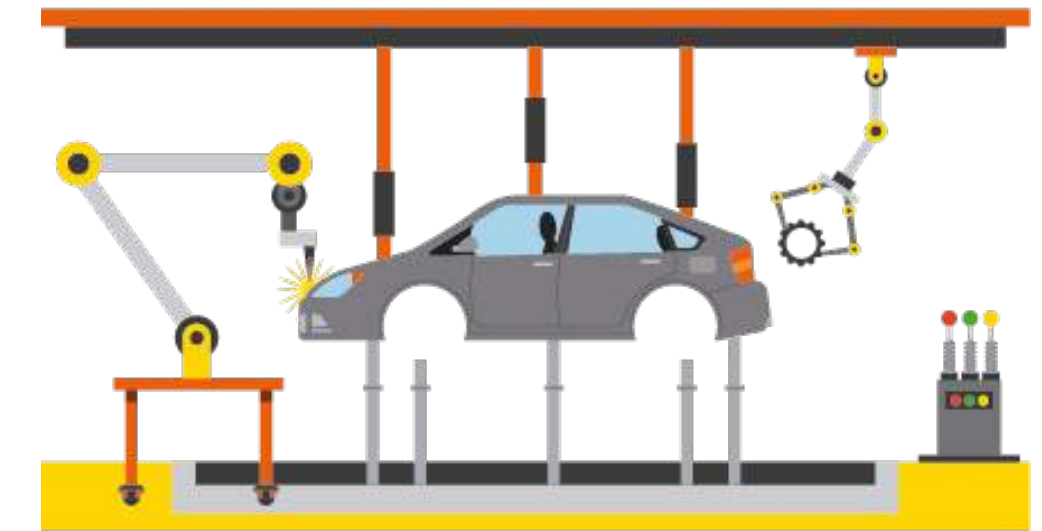
All Grocery is the Same?



Case Based vs Context Based



=



Case Based - Copying an example sold as a prescription, irrespective of context. Usually ineffective. Favors the purveyor.

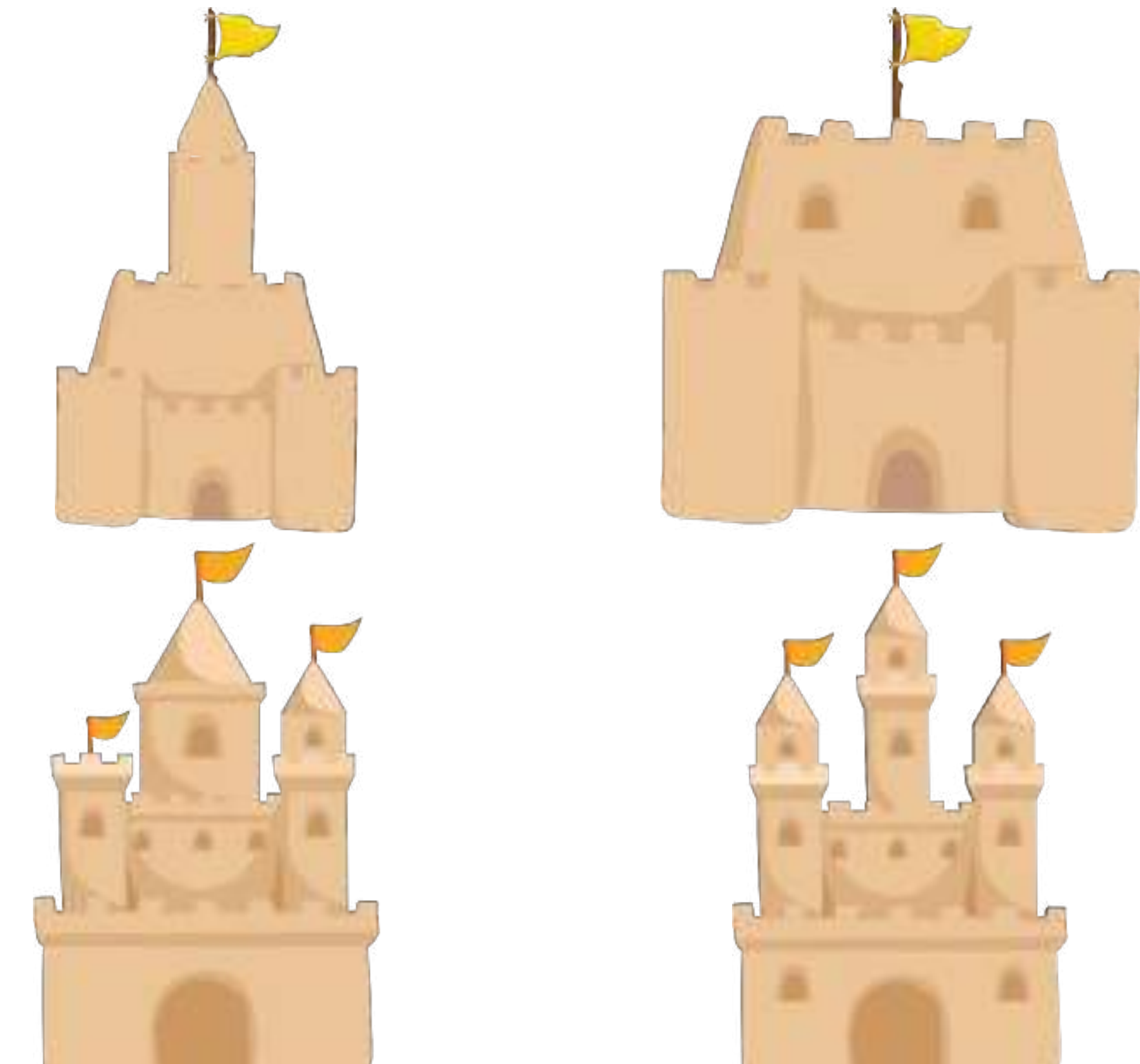
Context Based - Understanding method granularity & designing interactions for the specific environment or landscape.

Context is the set of circumstances or facts that surround a particular situation or set of conditions; the organizational environment or landscape. Multi-method approaches are required. Case Based approaches are examples, they are not a recipes or solutions.

Complex Adaptive System (CAS)



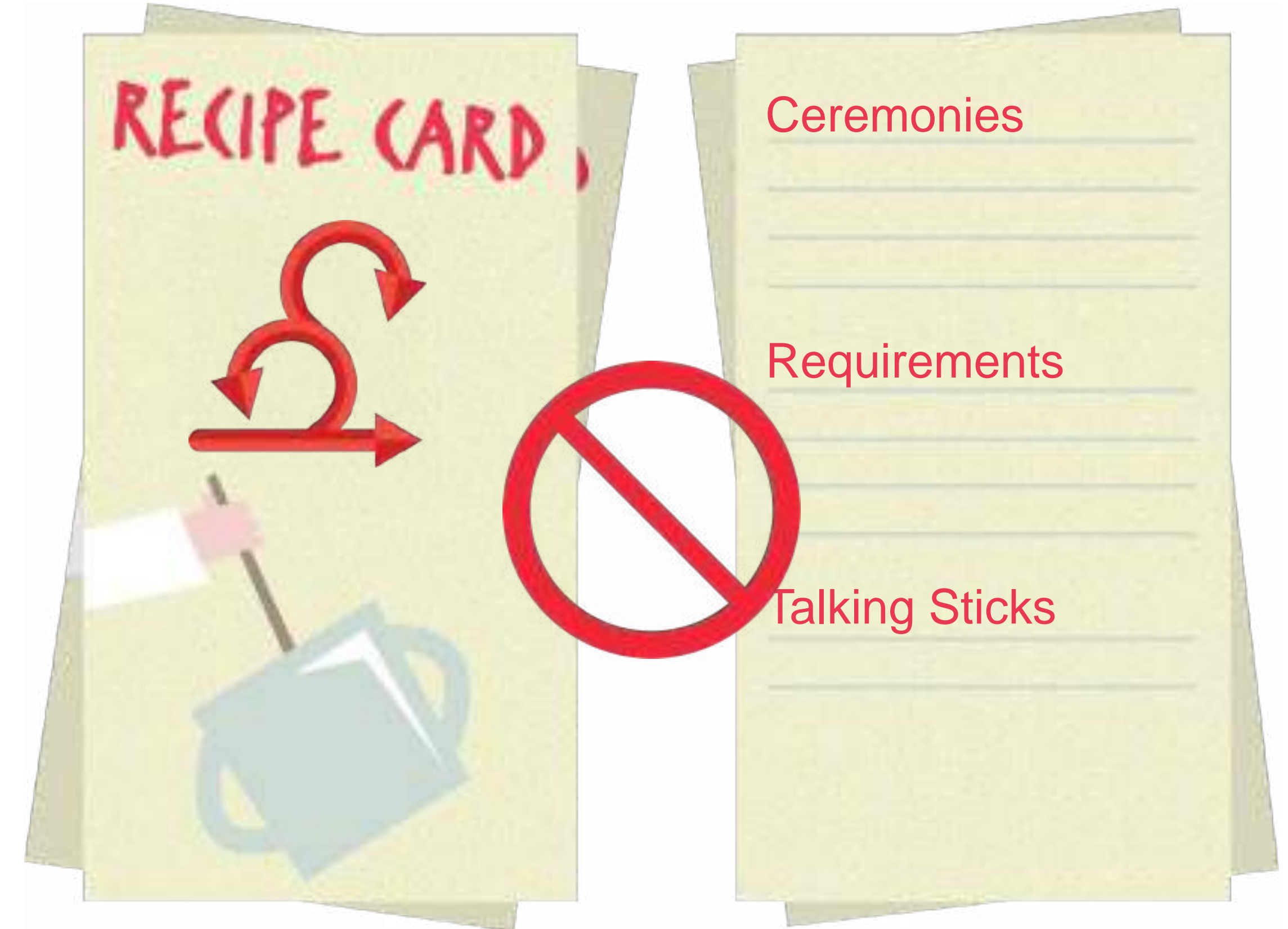
Complex systems scale by decomposition (to the lowest level of coherent granularity) and recombination



Complex system do not scale by imitation or replication or through case-based approaches.

CAS are dynamic, continuously learning to adapt to external forces, and emerge to new states when necessary to meet unique environmental needs and can't be predicted by the characteristics of the parts.

Chefs not Recipes



Complex Adaptive Systems require Chefs, not recipe book users, adapting to local context and combining core ingredients in different ways to feed people.

Tools have Context!



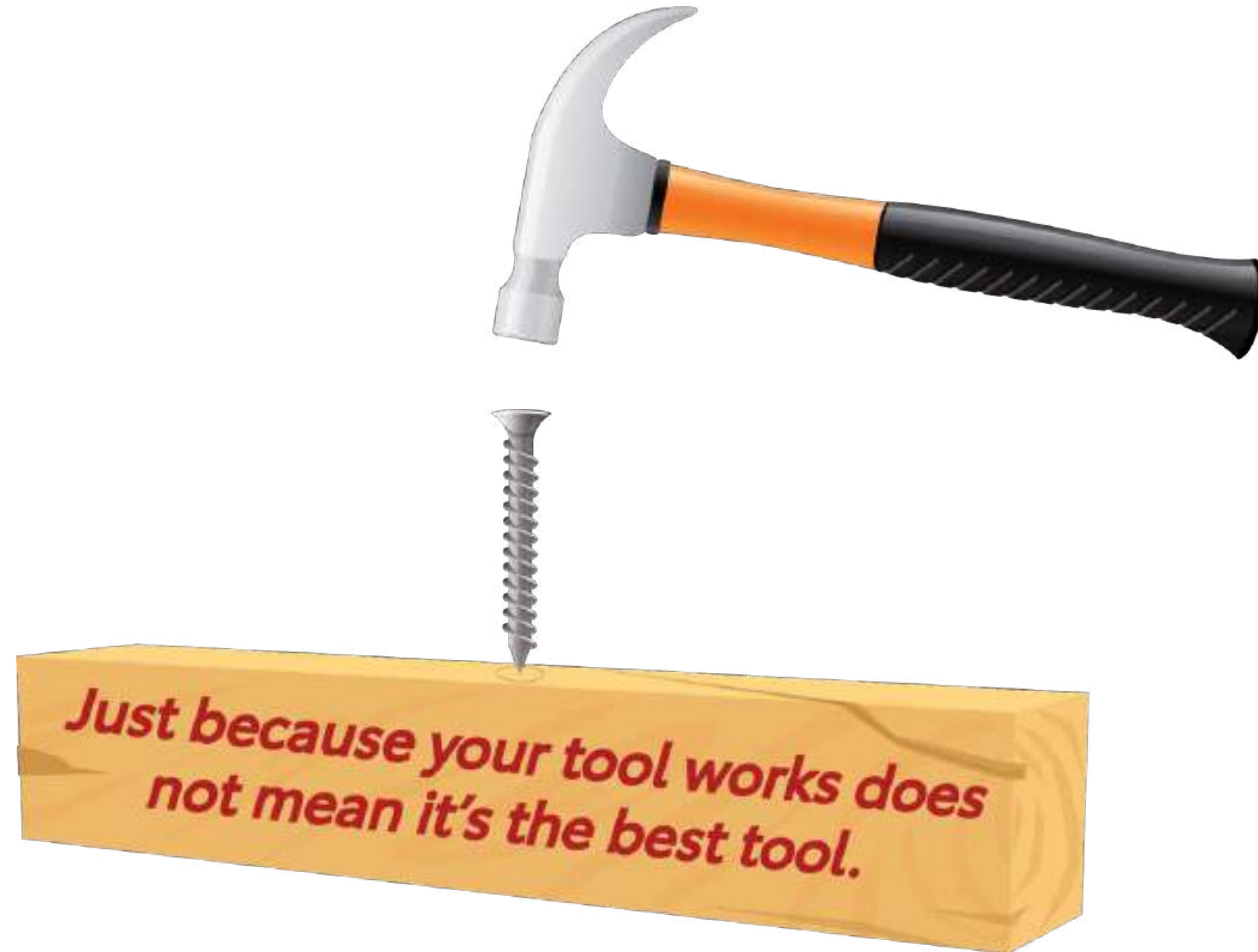
Bounded Applicability



Bounded Applicability simply states that any method or tool has limits and they are context specific. If using the established approach more furiously or energetically fails to tied better results you have reached the boundary of utility.

You may not understand the work, or you may be using the wrong tools?

Working ≠ Effective

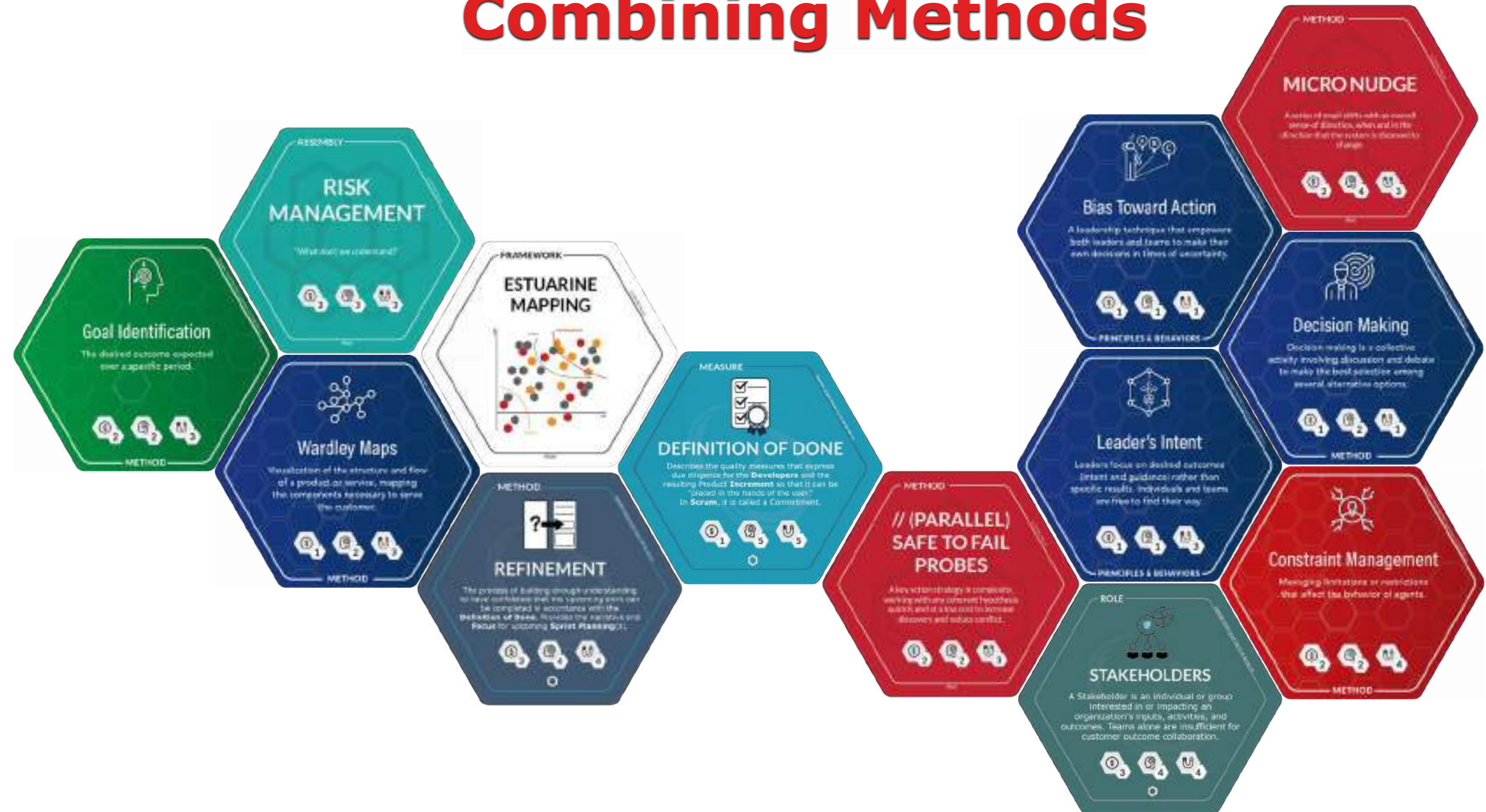


Hexi - A New Tool for Scale CAS



Granularity at which people can make sense of things without specific technical knowledge.

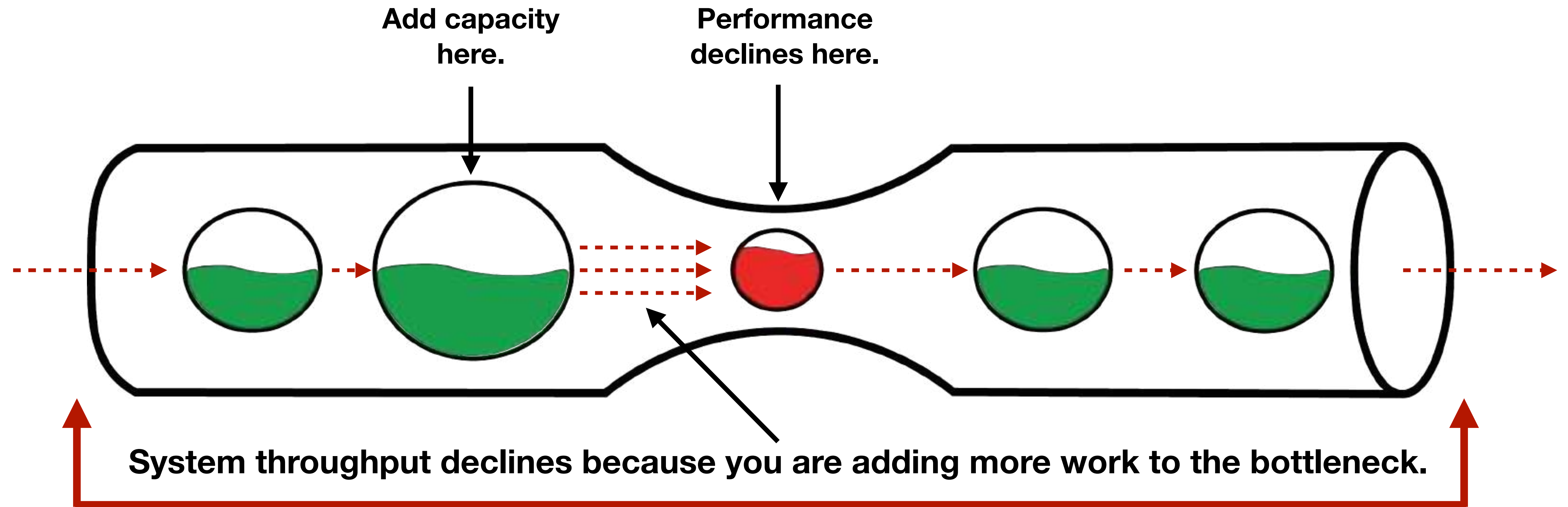
Combining Methods



Constraints



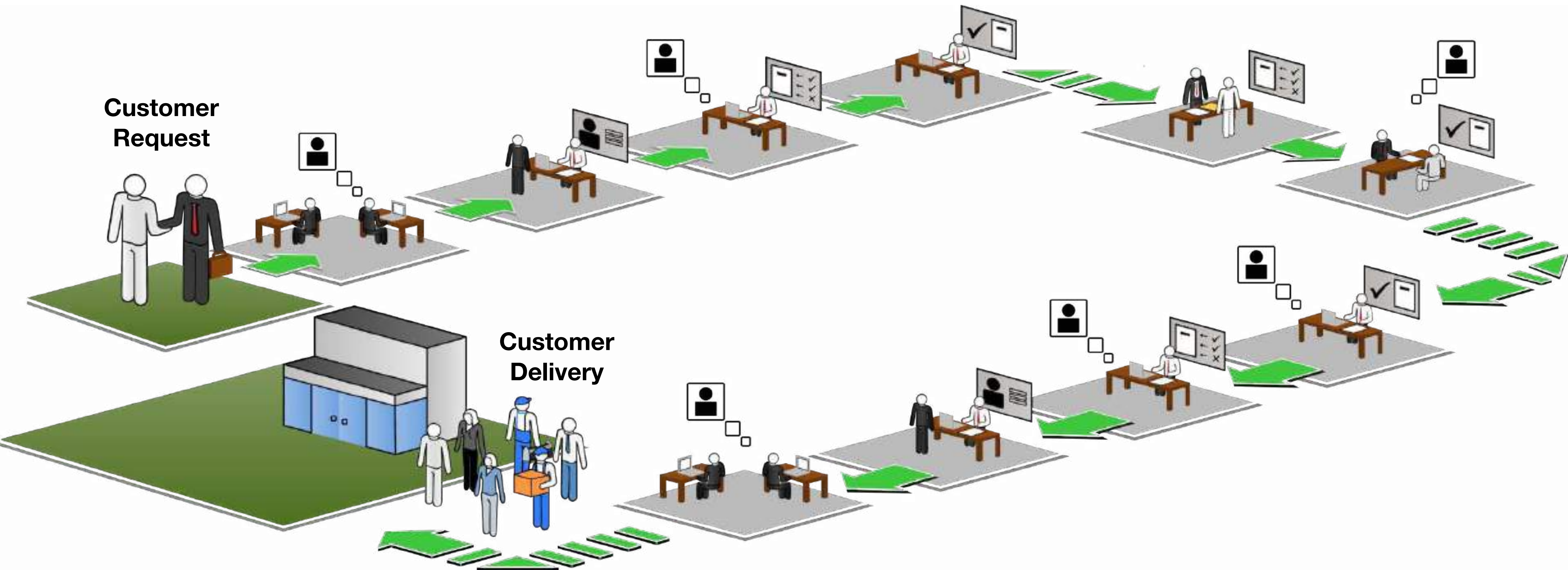
Theory of Constraints



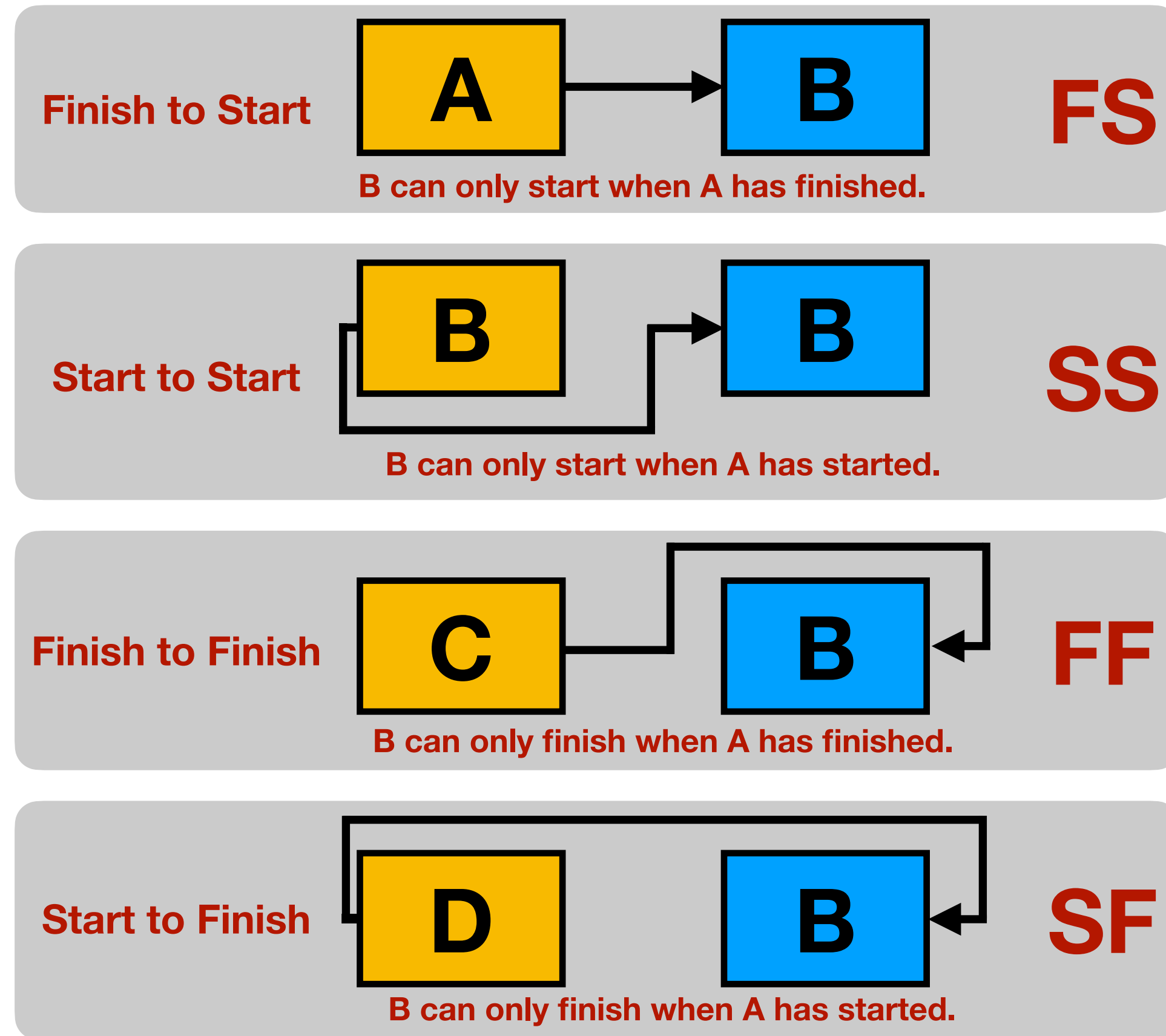
The theory of constraints defines a constraint as:

“Anything that limits the system from a higher level of performance.” (Pretorius, 2014, p. 498)

Reduce or Avoid Handoffs



Dependencies



A classification of dependency types.



Impact of badly managed dependencies.

A project dependency is the reliance of a preceding process to complete before a succeeding process can complete or often even start. It is also described as a series of interrelated work or tasks.

Biggest Challenge for Change

Value is created here!



**I give
instructions!**



**I relay those
instructions!**

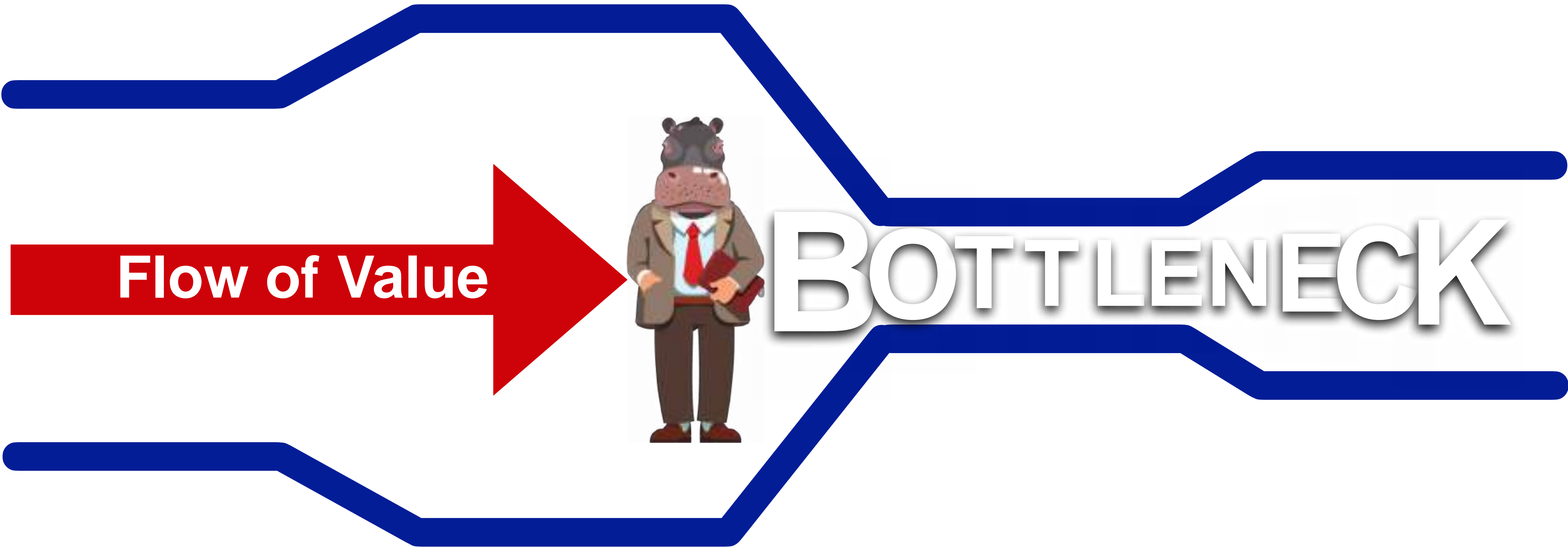


**I supervise
instructions!**



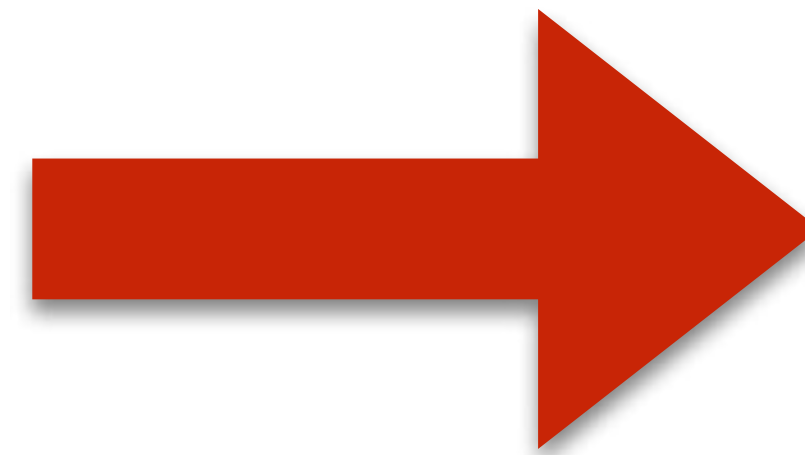
**I do the
work!**

How can we replace the need for you?



Highest **P**aied **P**erson's **O**pinion

Reduce The Power Distance Index



Move the Authority to Where The Information Is! Where the work is done.
Move authority to information and not information to authority! No More PowerPoint!

Based on the work by Geert Hofstede 'Power distance index (PDI)' and David Marquet 'Intent Based Leadership'.

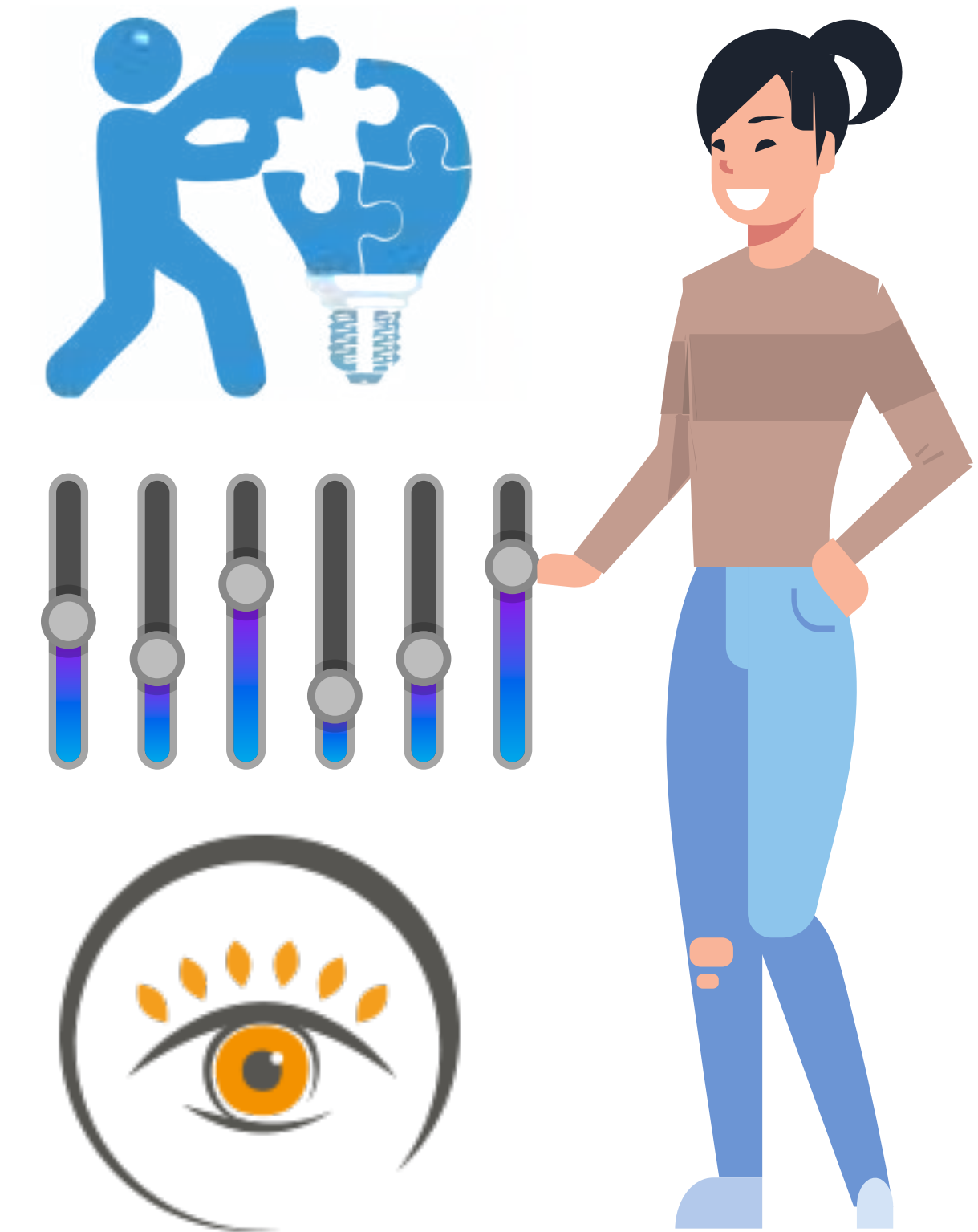
Leadership Behaviors



**Leaders fix the environment
not the people!**

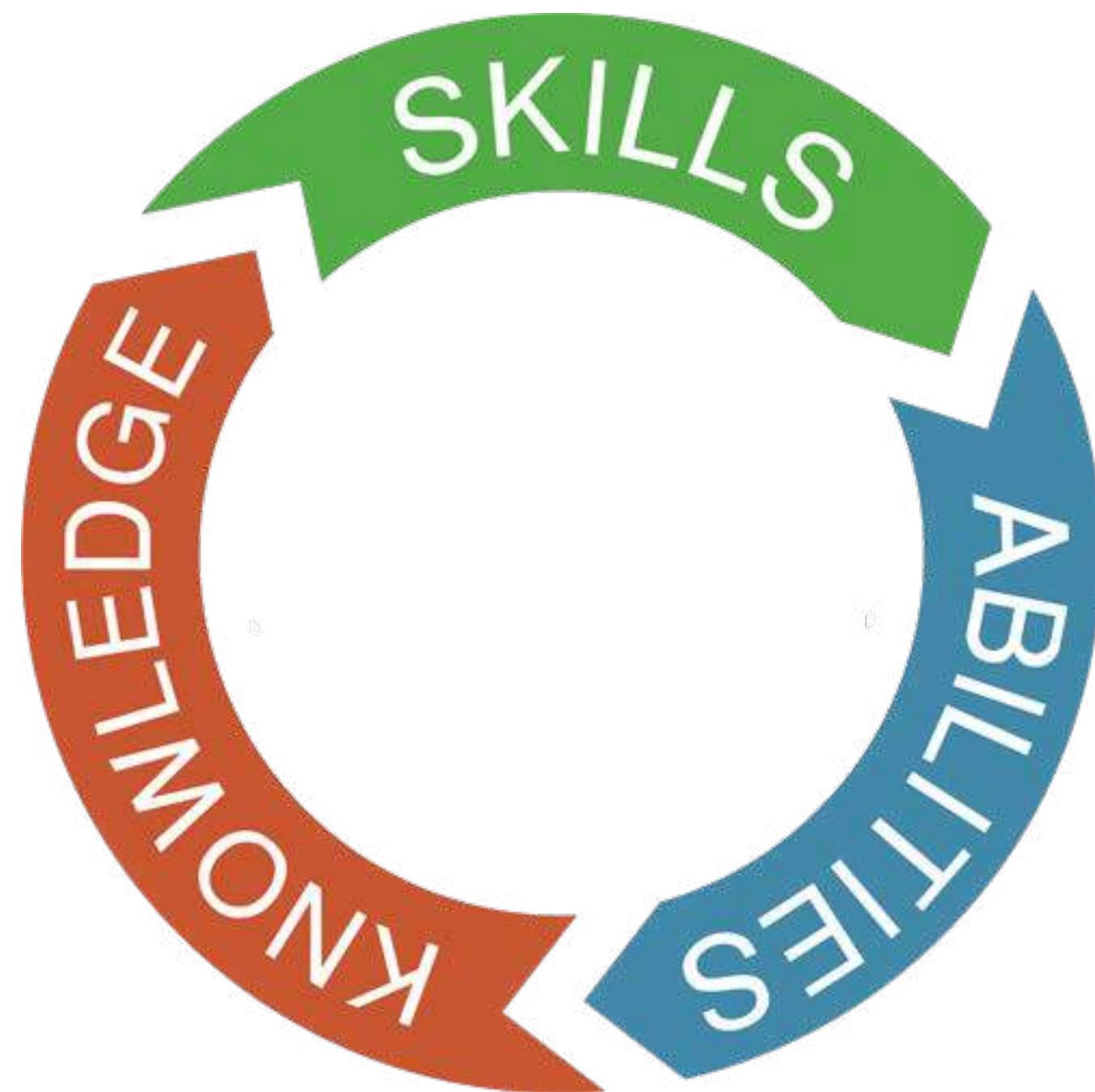


**Leaders make it safe to fail
and do not add stress!**



**Leaders tune control based on
level of competency and clarity.**

Two Pillars of Empowerment



Competency - Right Skills



Clarity - Right Thing to Do

As a leader, if your people lack either competency or clarity, it is your job to teach and coach them. Not to direct and tell them, or blame them. Your role is to create the environment for them to achieve.

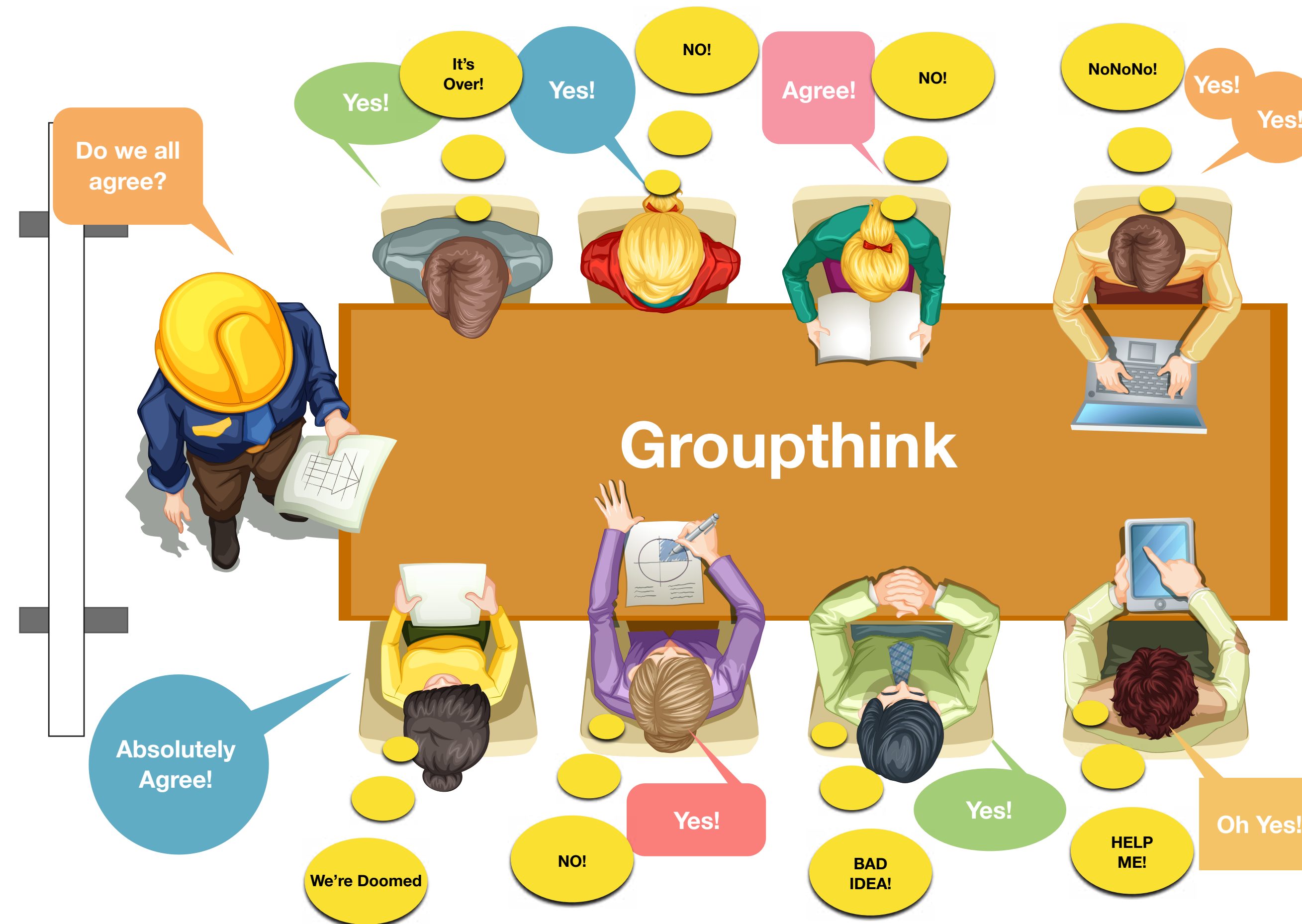
Adapted from David Marquet 'Intent Based Leadership'.

Bureaucracy



Bureaucracies are characterized by a strict adherence to rules and regulations.

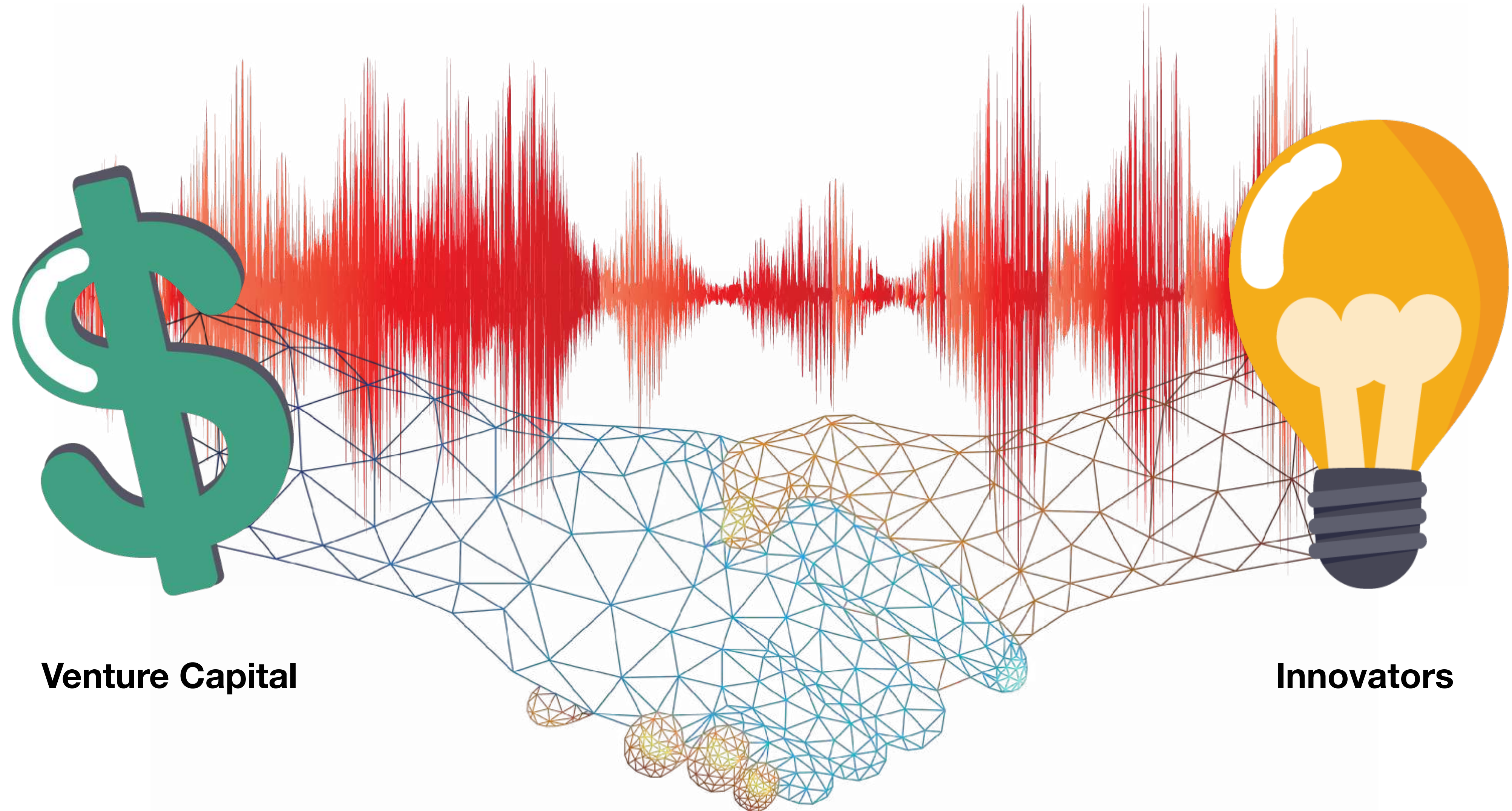
Groupthink



Groupthink is a pattern of thought characterized by self-deception, stress induced, forced manufacture of consent, and conformity to group values and ethics.

William H. Whyte first coined the term - <https://fortune.com/2012/07/22/groupthink-fortune-1952/>

Innovators Dilemma



What weak signals are you missing that the competition are detecting and exploiting?

Pseudoscience



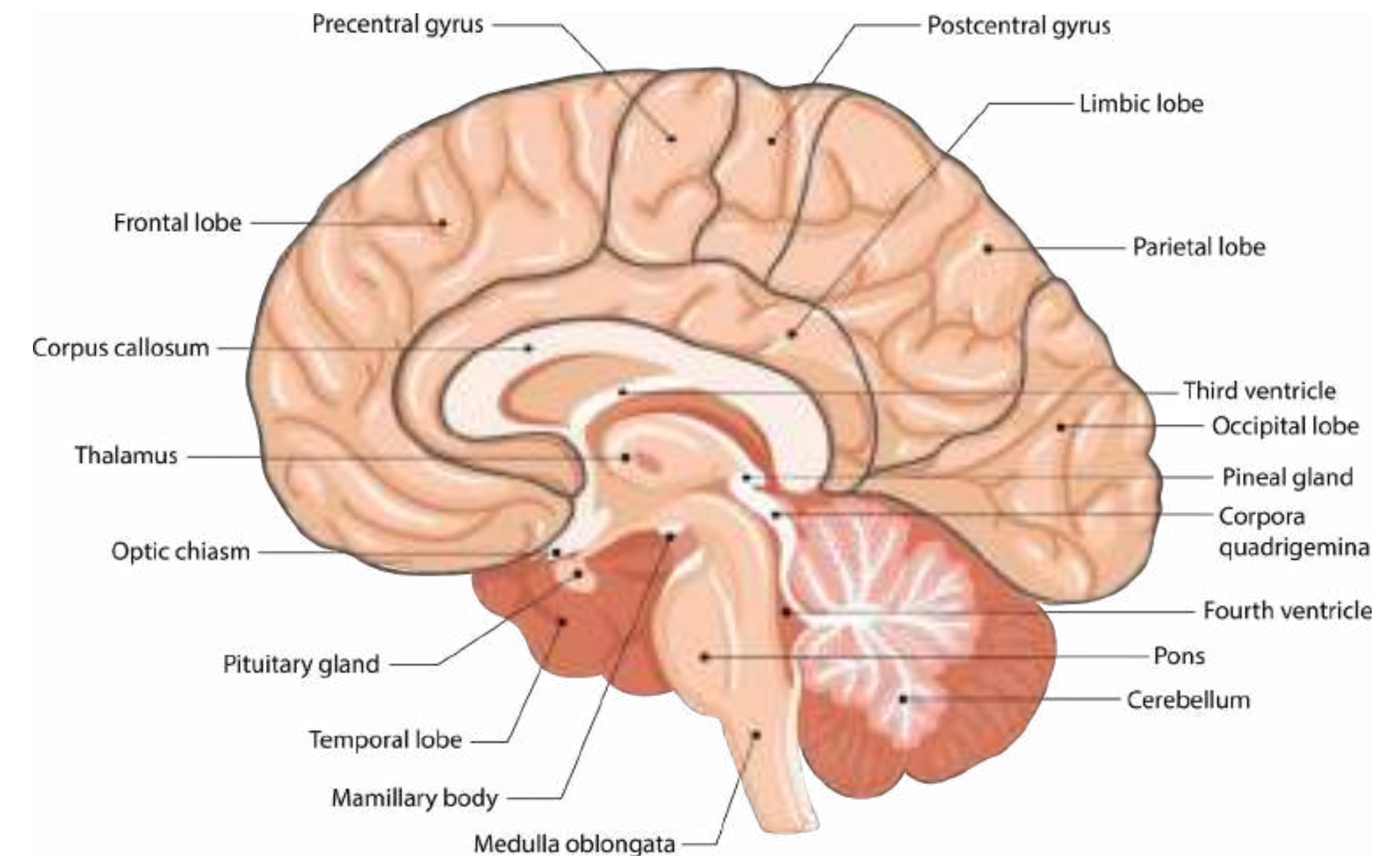
Neuroscience Proves while Agile Fails

The Expert



The experts claim that this “agile behavior” happens because subjects have trouble switching their point of view to consider what someone else might know, mistakenly projecting their own knowledge onto others.

The Neuroscientist



Brain scans indicate that this “agile behavior” happens because of the **frontal lobe brain circuitry known to be involved in self-knowledge**. Subjects have trouble switching their point of view to consider what someone else might know, mistakenly projecting their own knowledge onto others.

The Seductive Allure of Neuroscience Explanations (SANE) - Adding a picture of a brain and using neuroscience terminology has been found to convince people that would otherwise be skeptical of the information being presented.

Source: <https://pubmed.ncbi.nlm.nih.gov/29124752/>

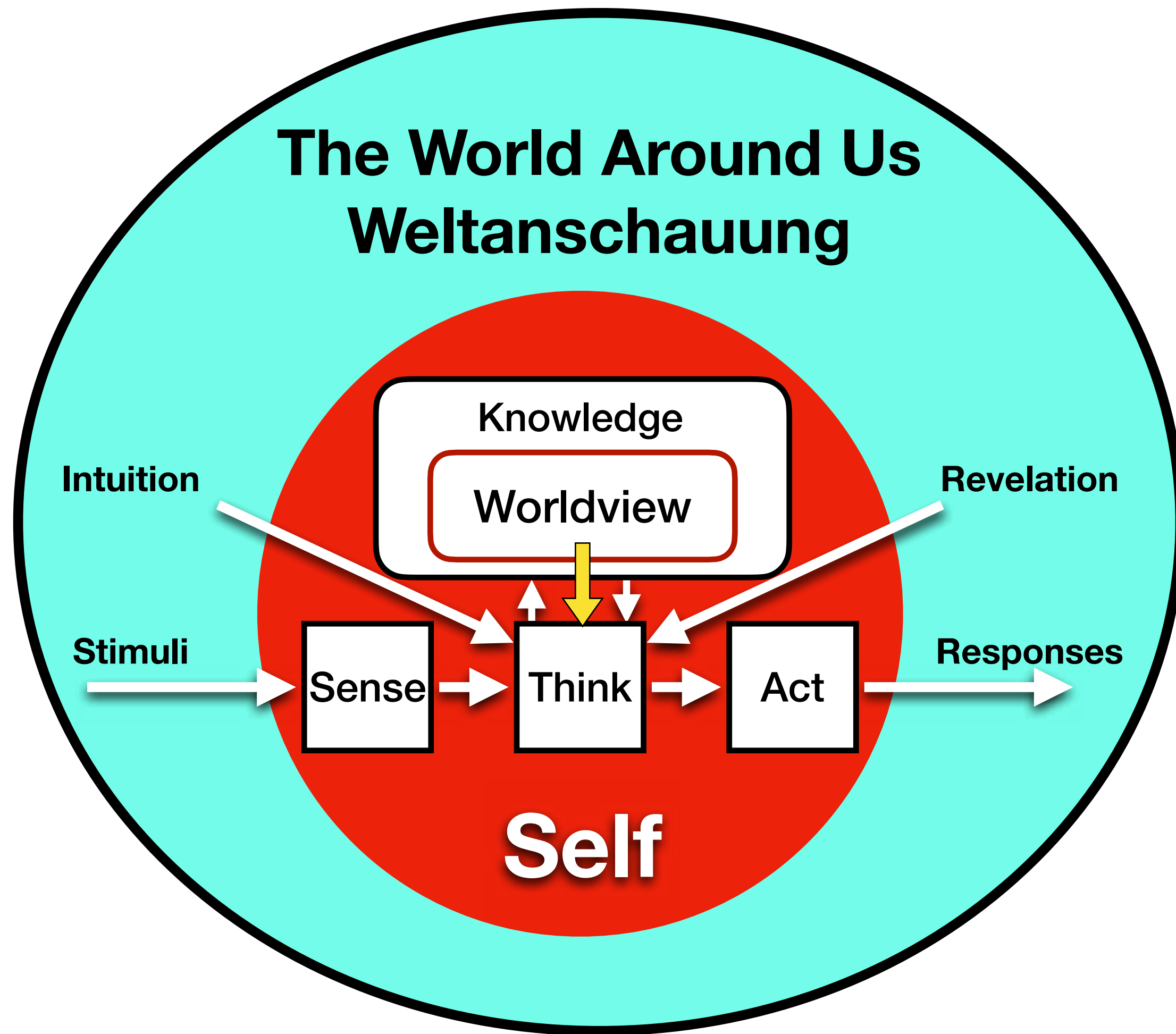
Cognitive Load Theory



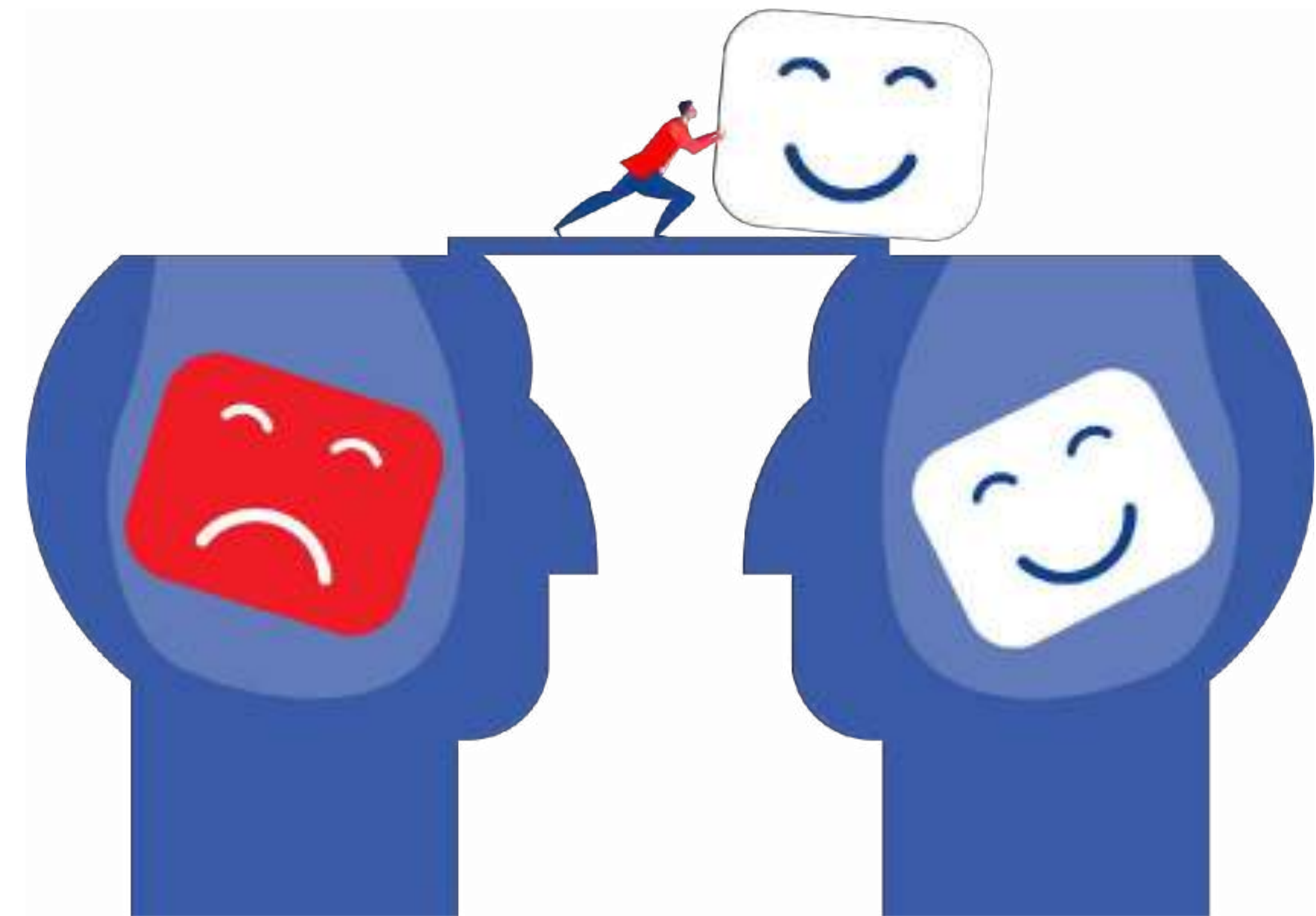
“Closer analysis reveals some fundamental conceptual problems within the theory. Various generalizations of empirical findings become questionable because the theory allows different and contradicting possibilities to explain some empirical results.”

Source: <https://link.springer.com/article/10.1007/s10648-007-9053-4>

Mindset vs Attitude

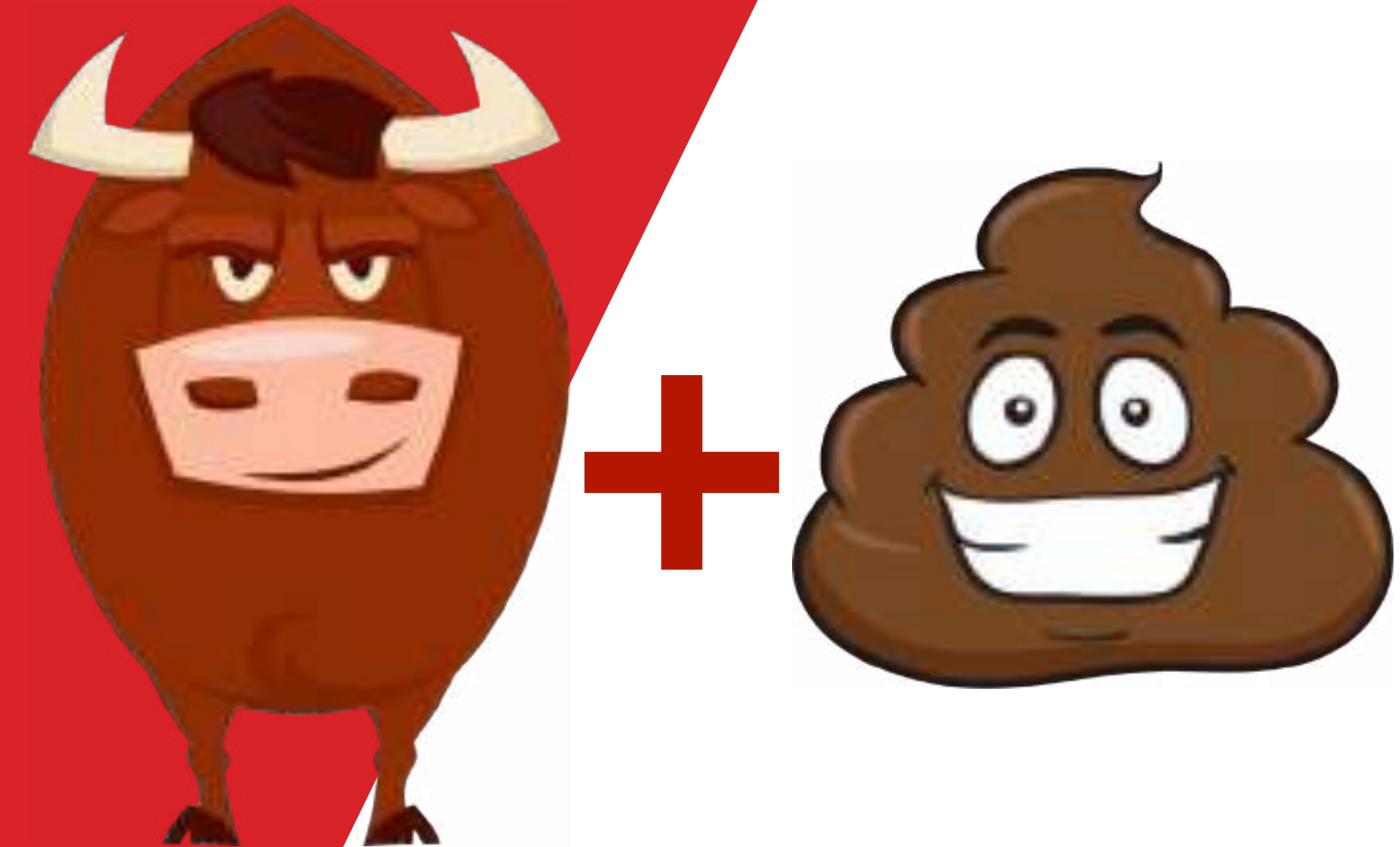


Mindset - An individual's emerging worldview based on external events, inputs, triggers, & their experiences.

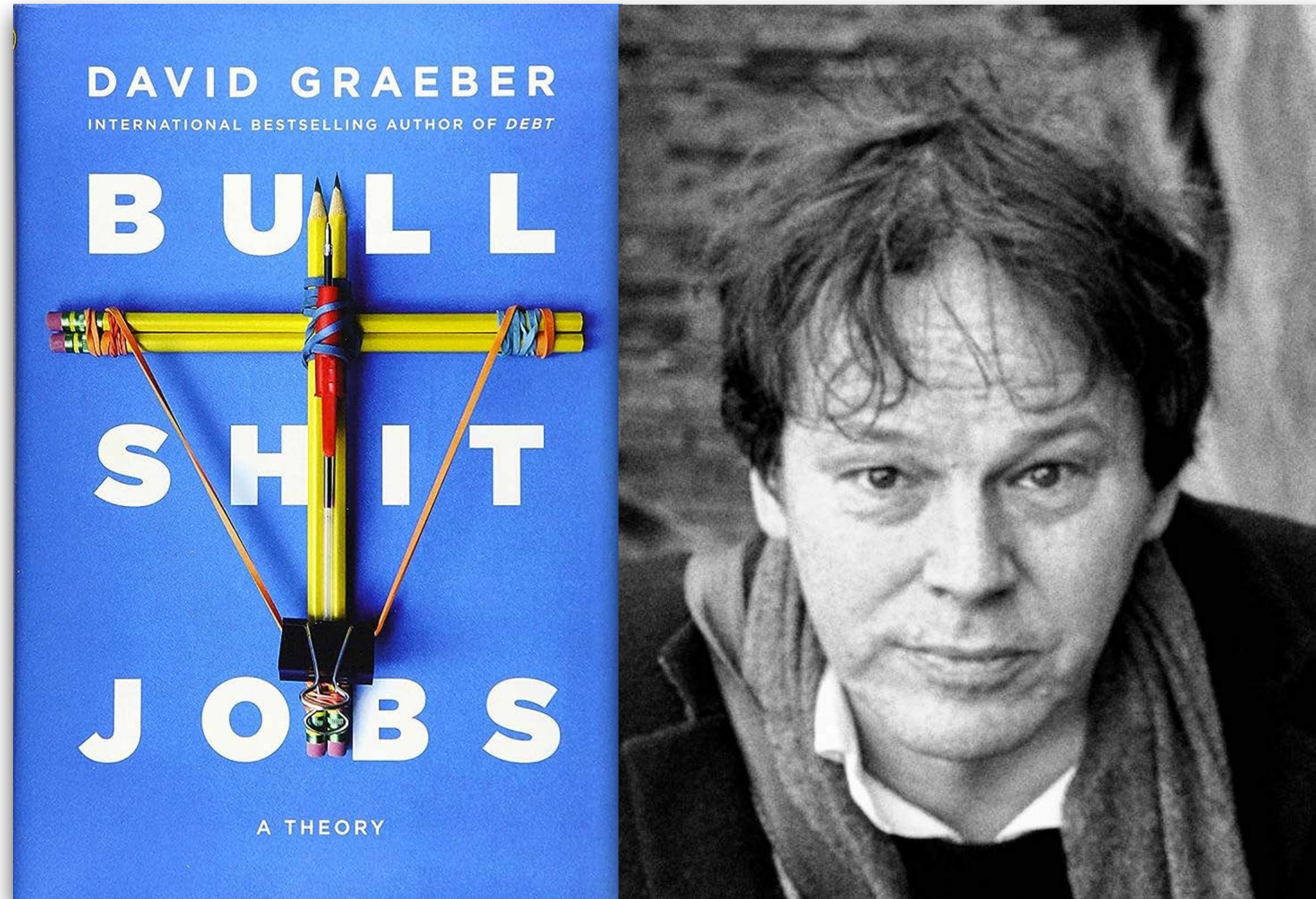


Attitude - A feeling or opinion about something or someone, or a way of behaving that is caused by this.

Bullshit Jobs

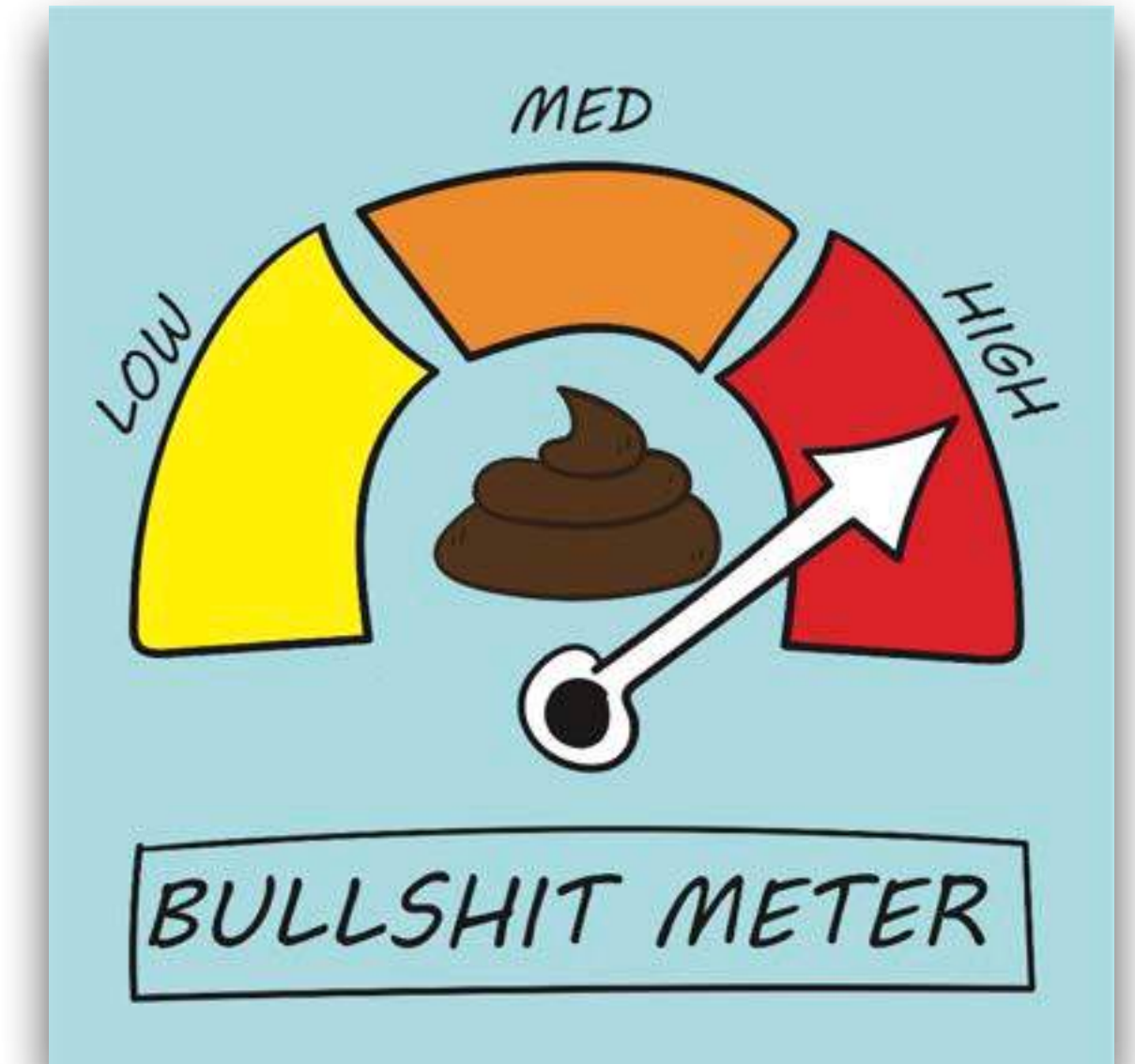
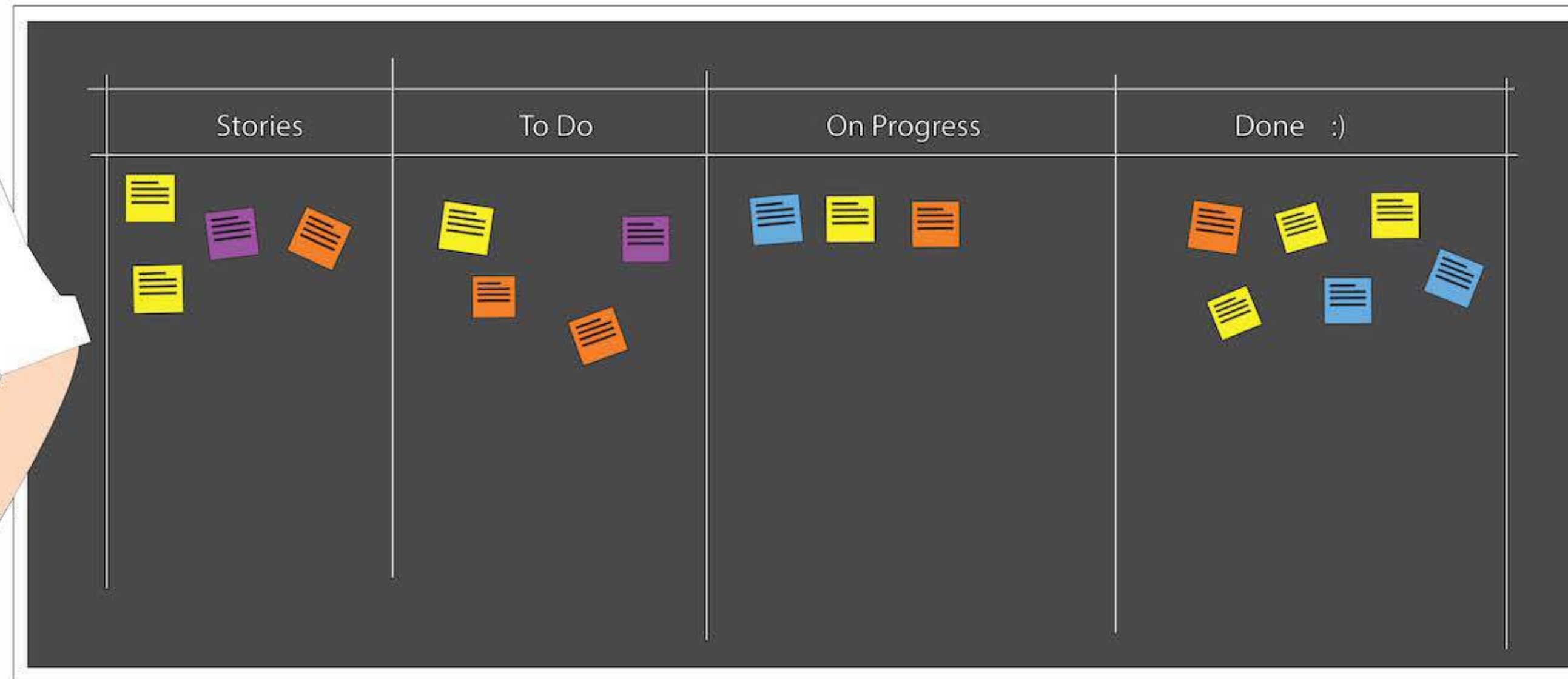
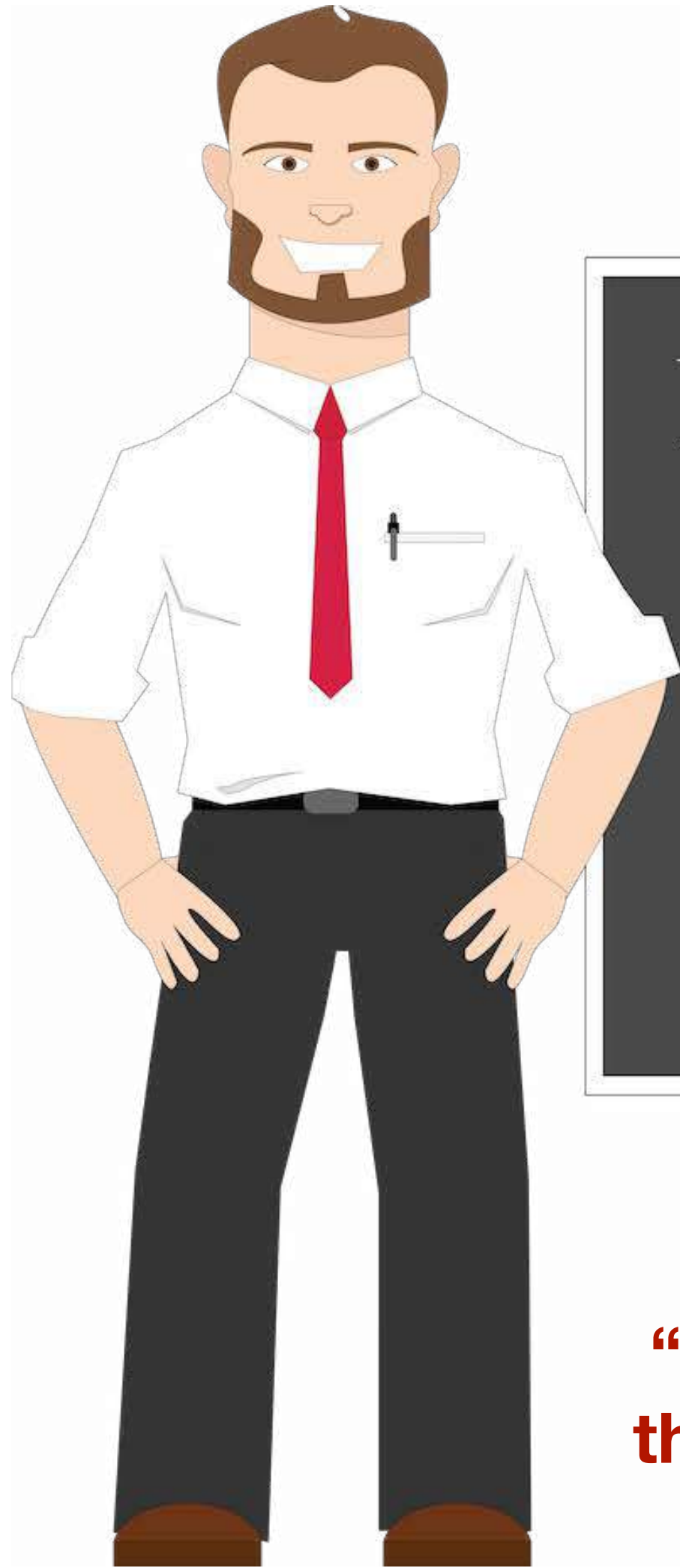


Bullshit Jobs by David Graeber



Bullshit Jobs 2018 - David Graeber 1961 - 2020

Definition of Bullshit Jobs



“A form of paid employment that is so completely pointless, unnecessary, or pernicious* that even the employee cannot justify its existence even though, as part of the conditions of employment, the employee feels obliged to pretend that this is not the case.”

***Pernicious - having a harmful effect, often in a gradual and subtle way.**

Certified Made Up Role



There is no such thing as a Flow Advisor, Flow Master, Flow Coach, Flow Resource, or Senior Flow Anything!

Bullshit Jobs



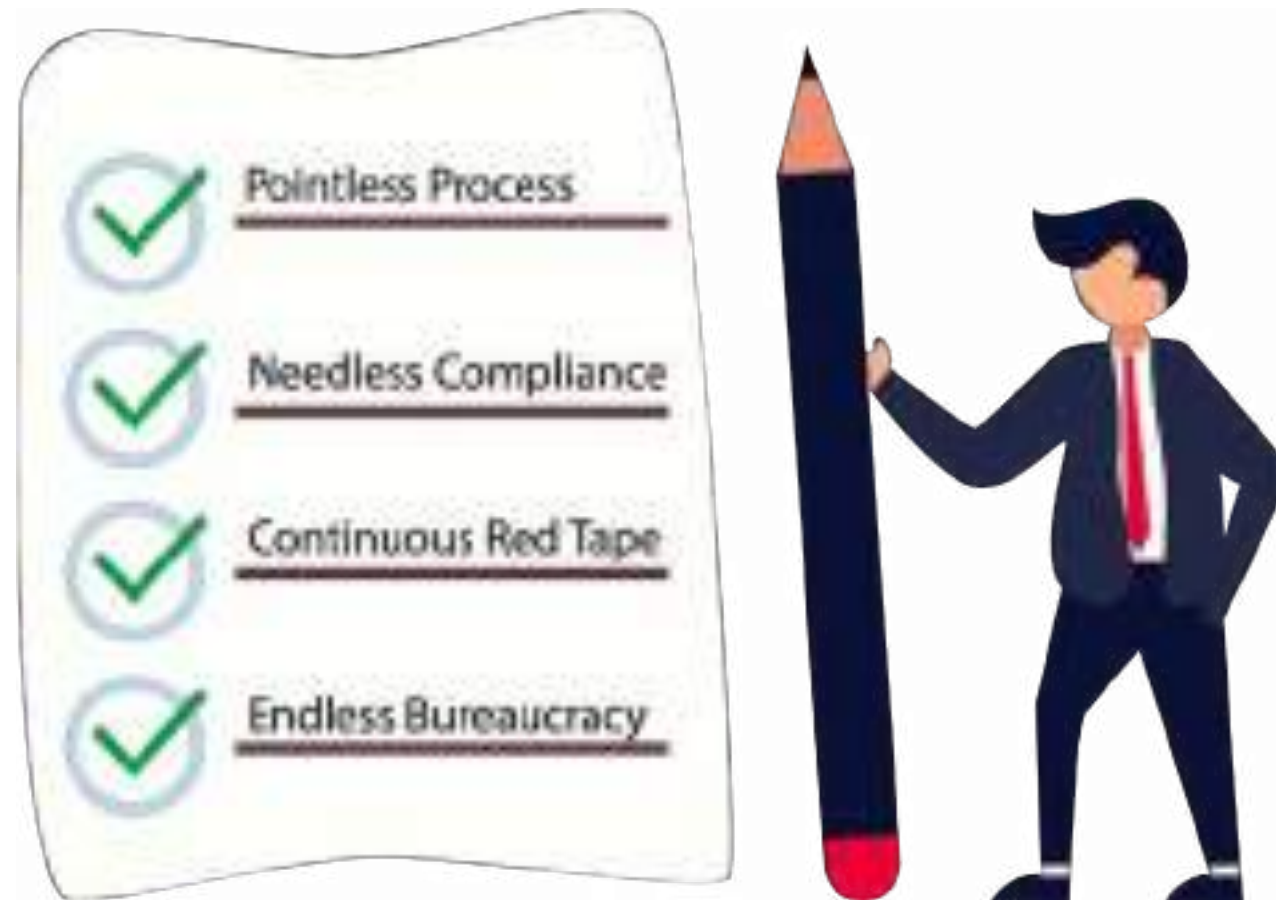
Flunkies, who serve to make their superiors feel important.



Goons, are hired due to a dynamic of one-upmanship to compete with our rivals..



Duct Tapers, temporarily fix problems that could be fixed permanently.



Box Tickers, who only create the appearance that something useful is being done.



Taskmasters, to manage or create more work for workers who don't need it.

Agile Ways of Working Force Change



Internal Operating Model
Projects (Tasks) to Products (Value)



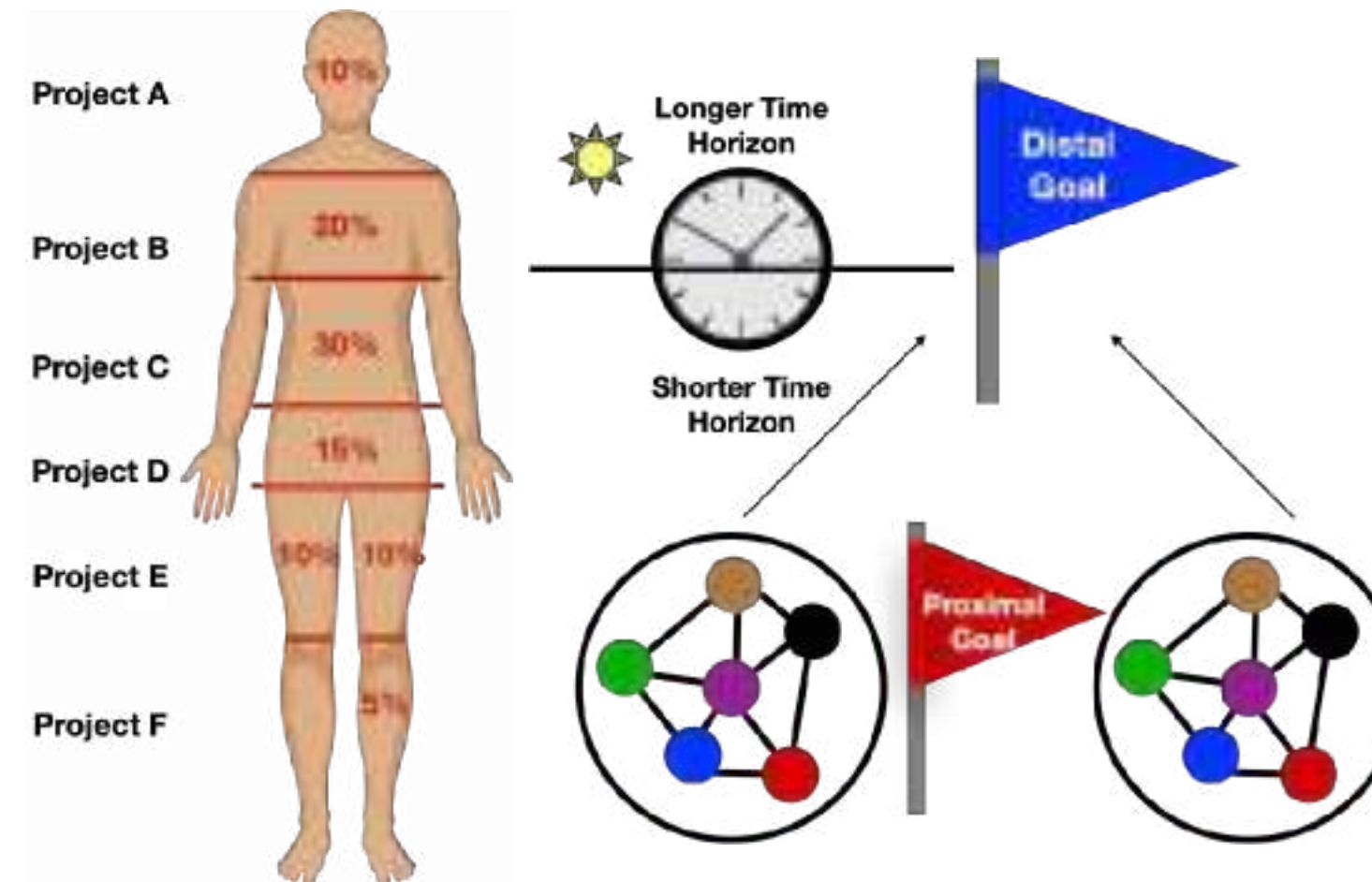
Distributed Leadership
Directing to Empowering



Funding Model
Projects to People (Capacity)



Flow Based Approach
Silo Mentality to Value Stream Thinking



Organizational Design
Matrix Management to Dedicated Teams



Delivery Focus
Arbitrary Milestones to Outcomes (Value)



Why Agile is Failing



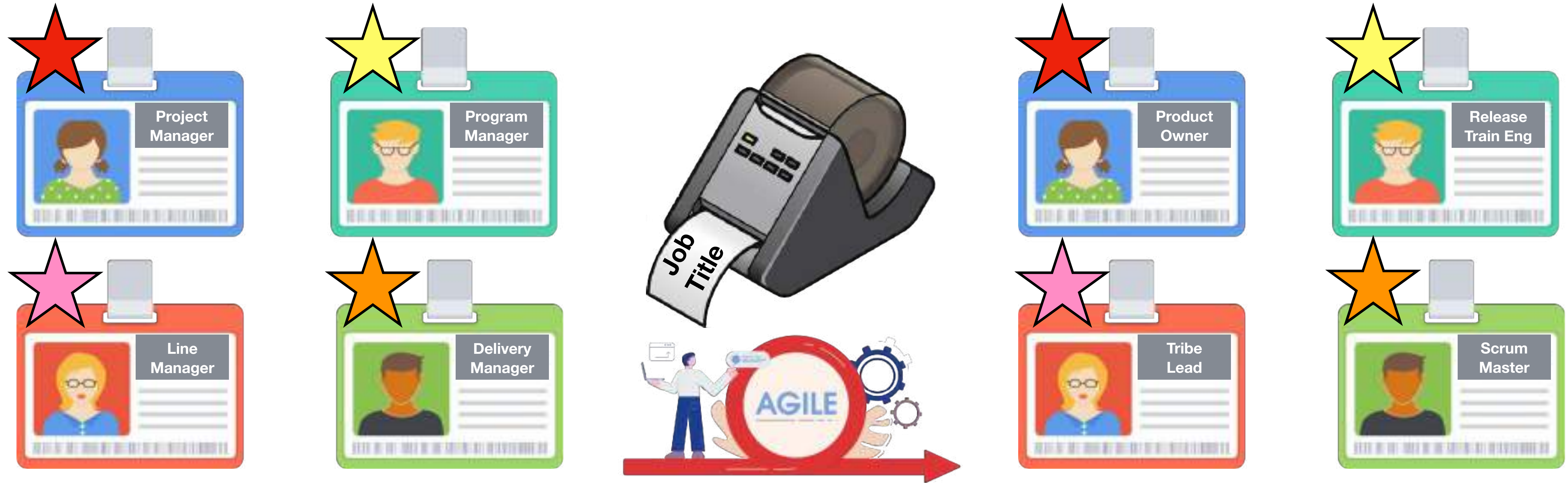
Most organizations desire change but aren't designed to enable change.

Agile requires significant change. Most leaders are not prepared to actually change.

Leaders find every reason and excuse why it cannot be done.

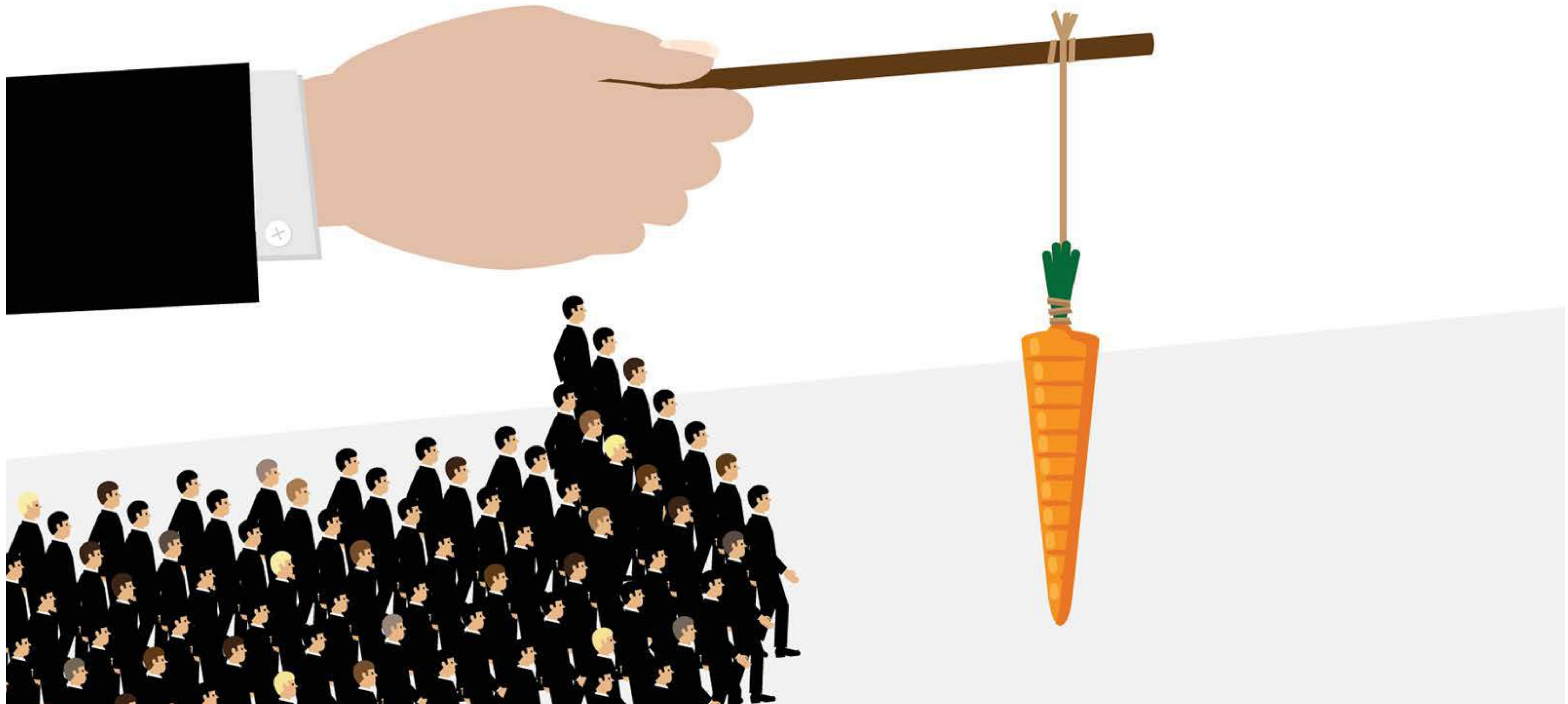
Most Agile is failing because the change it demands rarely occurs. It's roles are becoming fake or bullshit jobs simply serving to be the next casualty of change initiatives that originated in FAD, FOMO, or FUD.

Fake Agile Deja Vu?



AND We Just Relabelling the Status Quo!

Incentives Drive Behaviors



Issues arise when managers select problems as they impact their work and their promotion (salary, incentives, or evaluation measures) rather than the problem that affects the organization's performance or success.

Leadership - A Barrier to Change

R_x

EXPENSIVE CONSULTANCY
1 PowerPoint Masters DR
Endless Budget
Zip: 666



NAME The CIO/CTO/CFO/CDO DOB
ADDRESS Your Company Name Here DATE

Take A One Size Fits
all Framework!

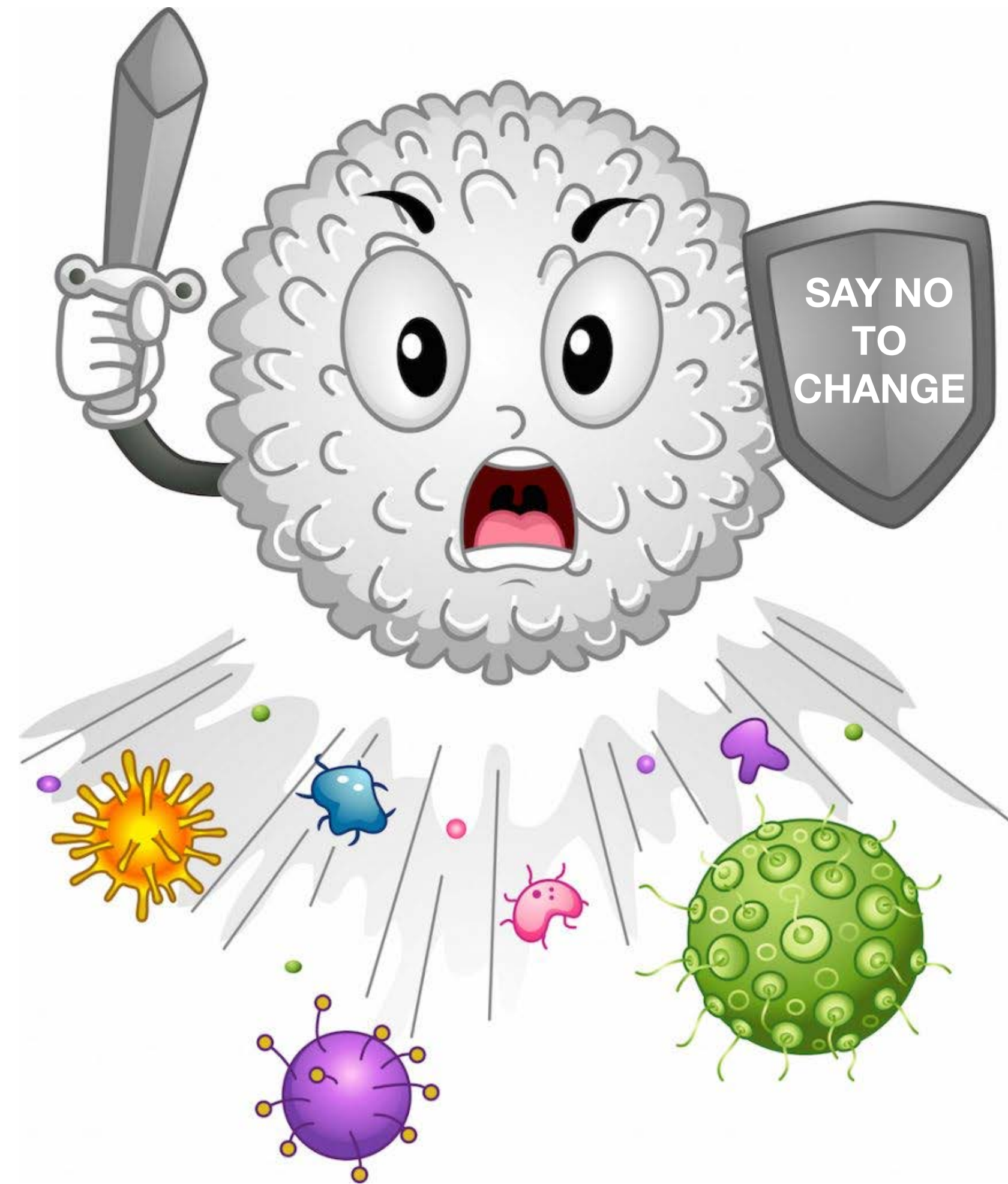
☐ LABEL

Refill about every 3-5 years!

MD

Leaders favor outsourcing the problem to a major PowerPoint development house rather than embracing and leading the required change by actively engaging and participating. As a result the change fails.

System Antibodies



































Any innovation in a corporation will stimulate the corporate immune system to create antibodies that destroy it!

This statement is wrongly attributed to Peter Drucker. The source is unknown.

Kanban 看板



Dependency Management System

Intake	Wait Design	Design	Wait Dev	Dev	Wait Test	Test	Wait Approval	DONE
								
								
								
								
								
								
								
		WIP 2		WIP 4		WIP 2		

Incorrectly called Kanban - a resource allocation system. A push system.

Kanban (看板 Billboard or Signboard)

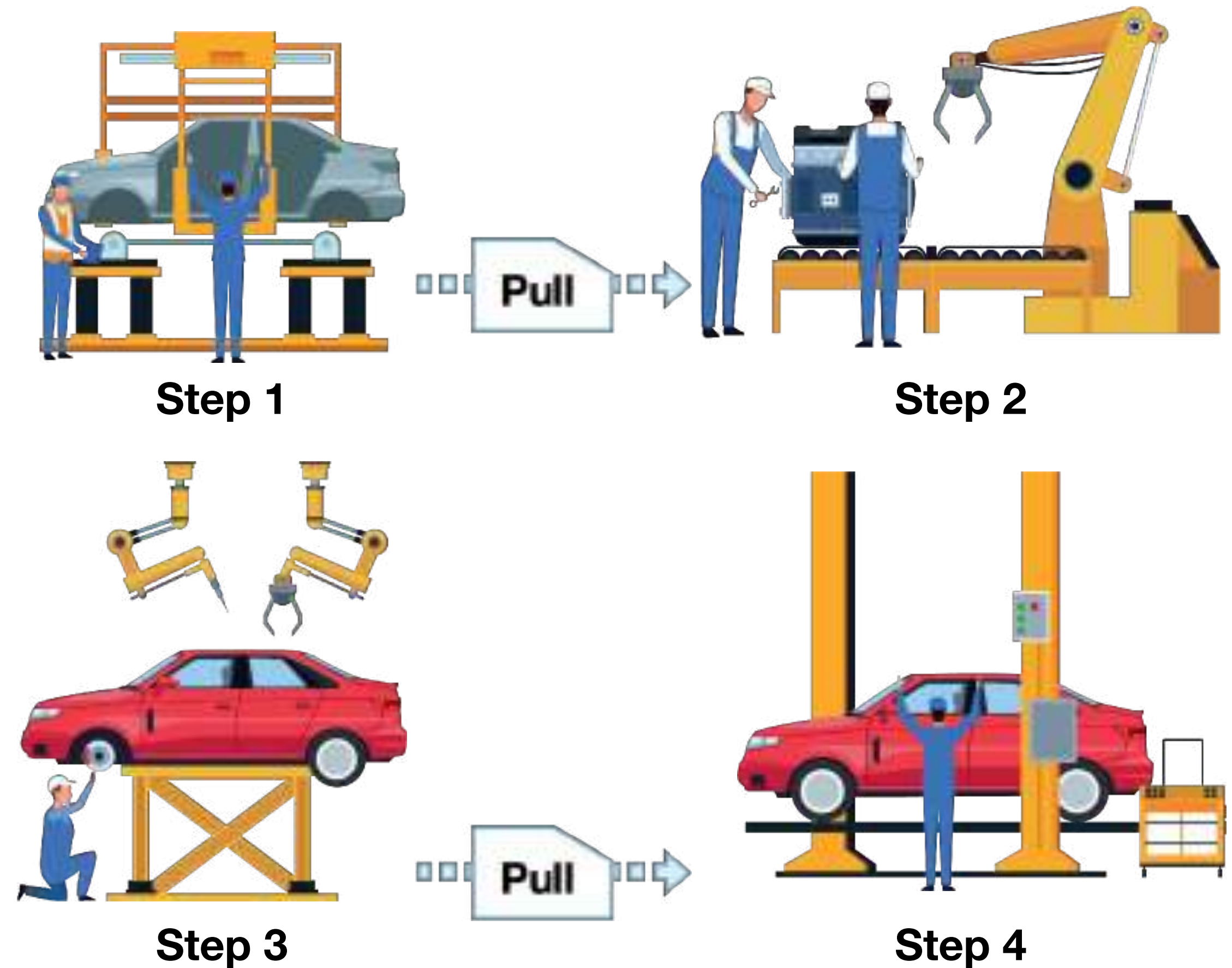


Kanban is the key to a Just in Time system and was developed by Taiichi Ohno at Toyota.

Push vs Pull



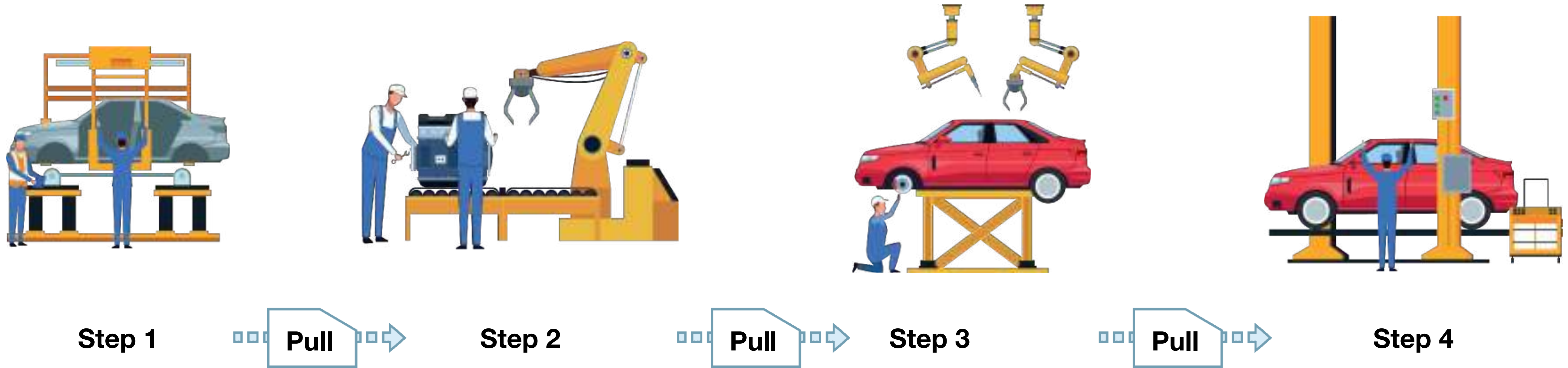
Producing at a maximum rate based on forecasted demand while consuming resources inefficiently.



A method of production control where downstream activities signal their demand to upstream activities as needed.

Most systems design for PULL often end up being nothing more than PUSH. They start with a backlog or intake or list of requirements, often defined by a committee or portfolio process.

Kanban - Not a Framework - Teams Optional



Dependent work means later steps depend on earlier steps but do not mandate teamwork, just good planning. Kanban aids flow.



Production Kanban initiates a process to produce a product.



Withdrawal Kanban calling for inventory or parts.



Signal Kanban indicating materials depleted and replenishment needed.



Kanban batch of cards moving through the process together.

Kanban is a dependency management system, not a teamwork framework. It's not a framework at all. Kanban is simply a visual control 'signaling system' to control/schedule the flow of materials or work in a Just-in-Time manner.



Learn to See Waste



Cycle Time: 90 seconds



Waiting Time: 90 minutes



Lead Time: 91.5 minutes



Process Cycle Efficiency: 1.64%

Cycle Time/Lead Time X 100 = PCE%

90/5490 = 0.0164 x 100 = 1.64

Where Time Goes



Process Time: The time taken for a process step to be completed.



Value Creation Time: The actual time value is created in a process.



Waiting Time: The time spent between each step when no work is being done.



Cycle Time: The time taken to complete one complete item.



Lead Time: The total time taken to deliver the work throughout the whole process. The total time from end to end, both value added and non value added.



Takt Time: How much time you have for each item to be processed.
(production time / customer demand = max time per item)

Calculating Your Efficiency



Individual Process Cycle Efficiency = (Value-added Time / Cycle Time)

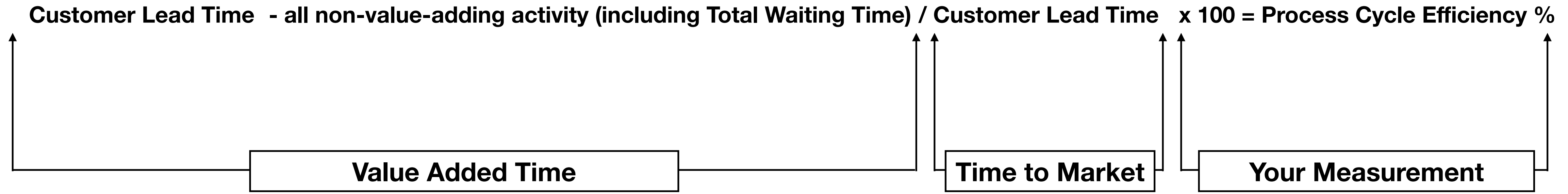


Product Process Cycle Efficiency = (Value-added Time / Lead Time)



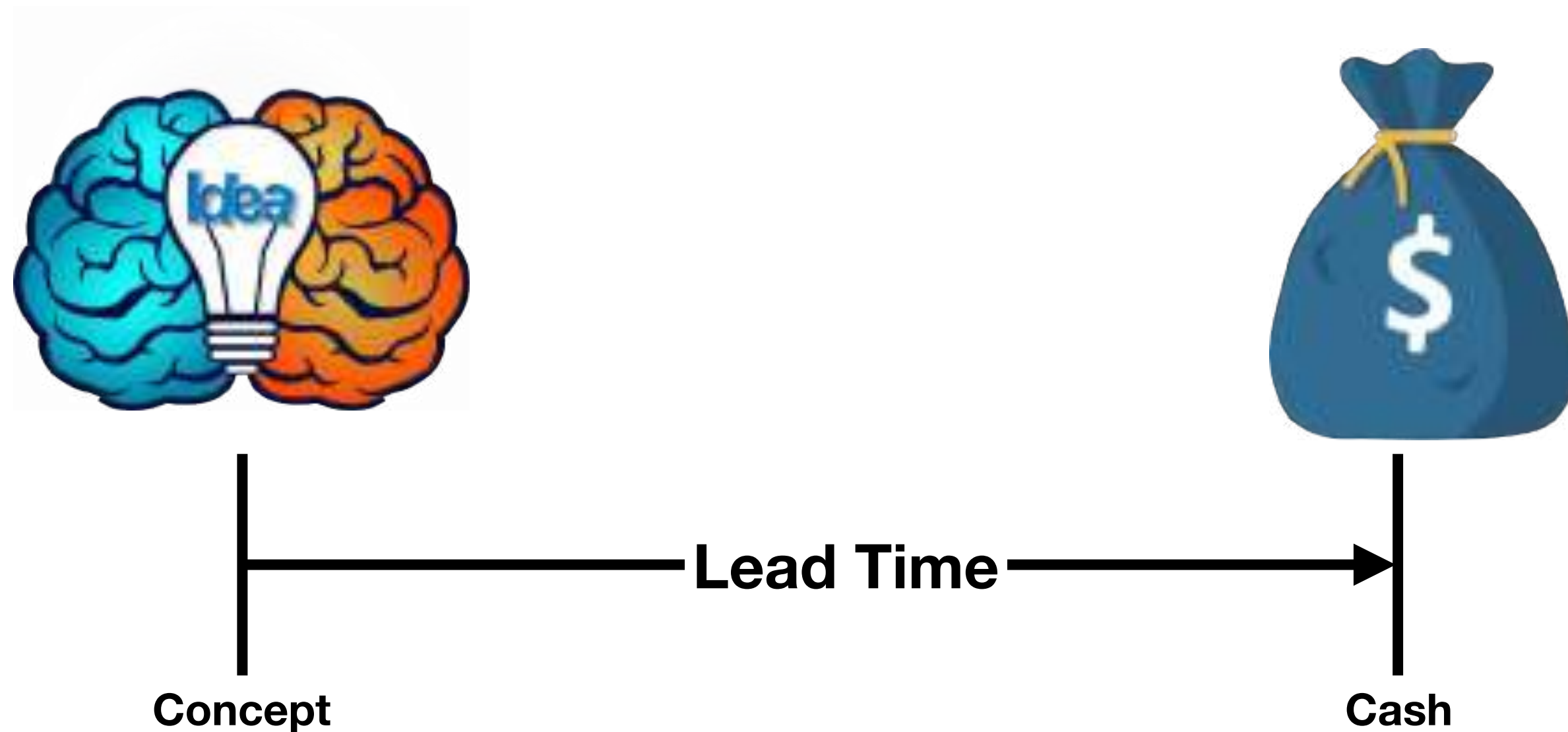
Overall Cycle Efficiency = (Value-added Time / (Lead Time + Queuing Time))

Calculating PCE



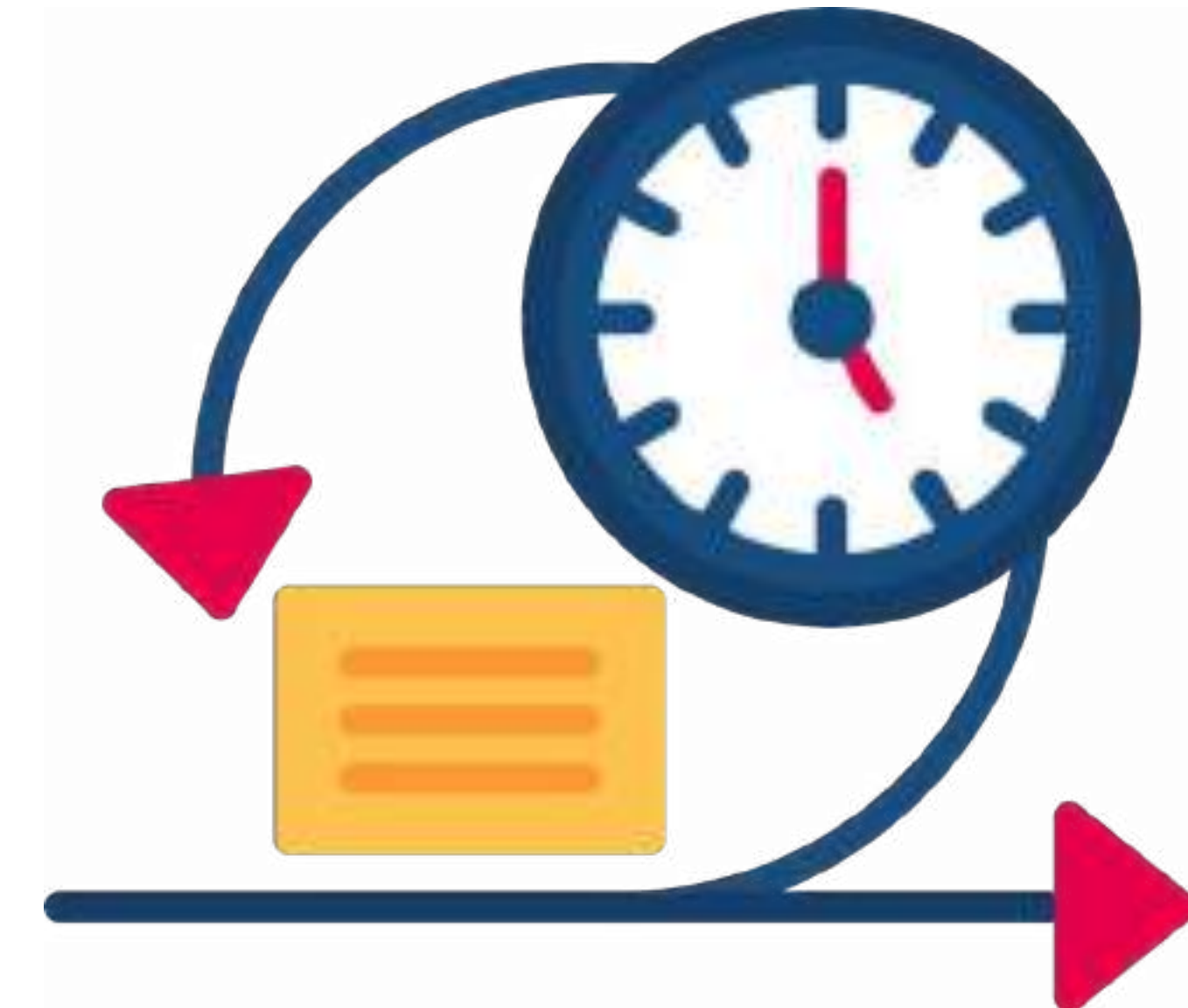
- **Customer Lead Time (CLT)** is the total time to market from concept to cash. Idea to customer use of the outcome.
- **Value Added (VA)** the is the time that value is being created. The work you are doing is changing the product or service in some way that enhances the value to the customer.
- **Waste is called "non-value-added activity" (NVA)**, and this is made up of any and all work that DOES NOT add value to the product/customer.
- **Waiting Time (WT)** is always non value adding (**NVA**). It is the worst waste and usually the easiest to eliminate. Handing off work between people and departments is usually where you will find this waste.
- **Classification** - Waste that cannot be currently avoided (**Type 1**), typically regulatory and mandatory work. Waste that we can eliminate there is no justification (**Type 2**).
- **Process Cycle Efficiency (PCE)** is the overall efficiency of the process. The value added (VA) work is divided by the overall customer lead time (CLT) and multiplied by 100 to give a percentage. It is what it is. There is no industry benchmark or target. 20% might be amazing in your industry. In another 60% may be dreadful.
- **PCE Percent Change Over Time** is what you measure. A 20% PCE today that improves to 40% tomorrow would represent a 100% improvement in efficiency!
- **Measure the improvement, don't set a target!** ((Improved value - initial value) / initial value) x 100 = percentage improvement.

Measure What Matters



Customer Lead Time (Time to Market)

Total time from Concept to Cash



Process Cycle Efficiency

$PCE = (Value\ Added\ Time / Total\ Lead\ Time) \times 100$

**PCE Percent Change Over Time is what you measure. Measure the improvement. Never set a target!!
A 20% PCE today that improves to 40% tomorrow would represent a 100% improvement in efficiency!**

Learn About Lean Metrics



<https://nigelthurlow.com/all-about-lean-metrics/>

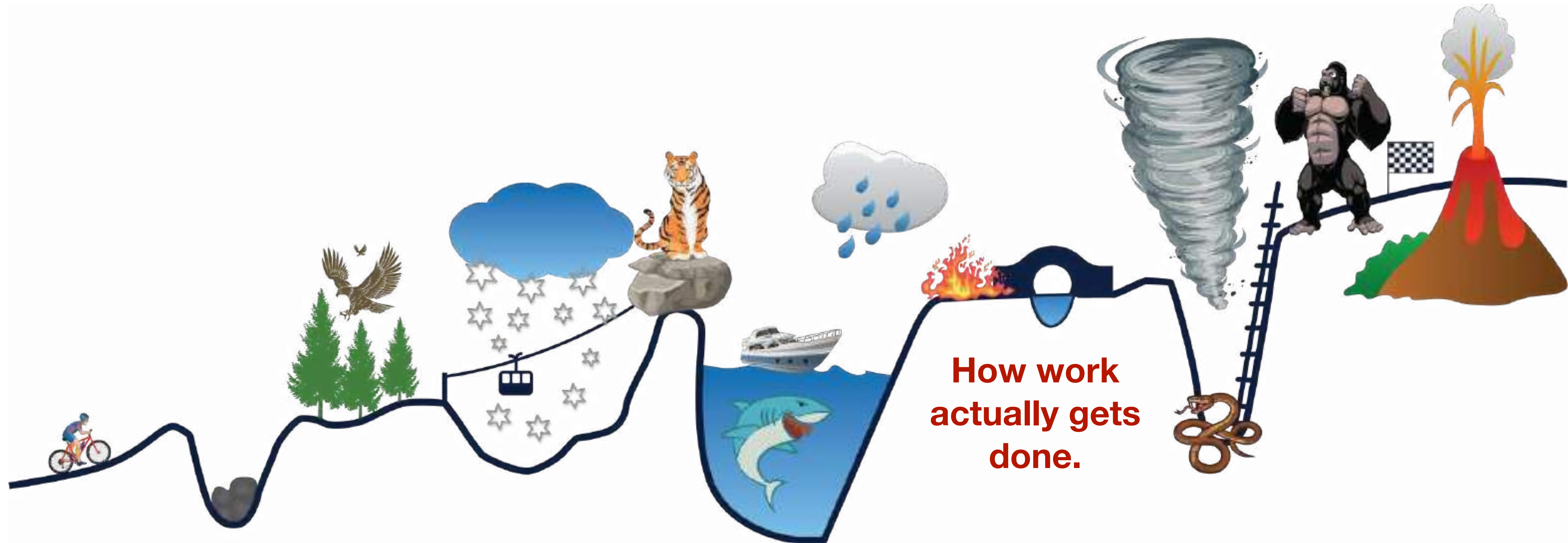
Value Streams



Work as Imagined vs Work as Done



How managers imagine work gets done.



How work
actually gets
done.

What Do You Think The Problem Is?



Growth

Time to Market



Attrition



Costs

What's the problem you think you are trying to solve?

These are not problems, they are outcomes!

**Positive or Negative Growth, Costs, Time to Market, Customer/Staff Attrition are not problems, they're outcomes!
They reflect how you do what you do. You need to change the how you work if you want different outcomes.**

Badly Defined Problems



Problem - People are not buying our products.



Solution - Do more advertising and sell harder!

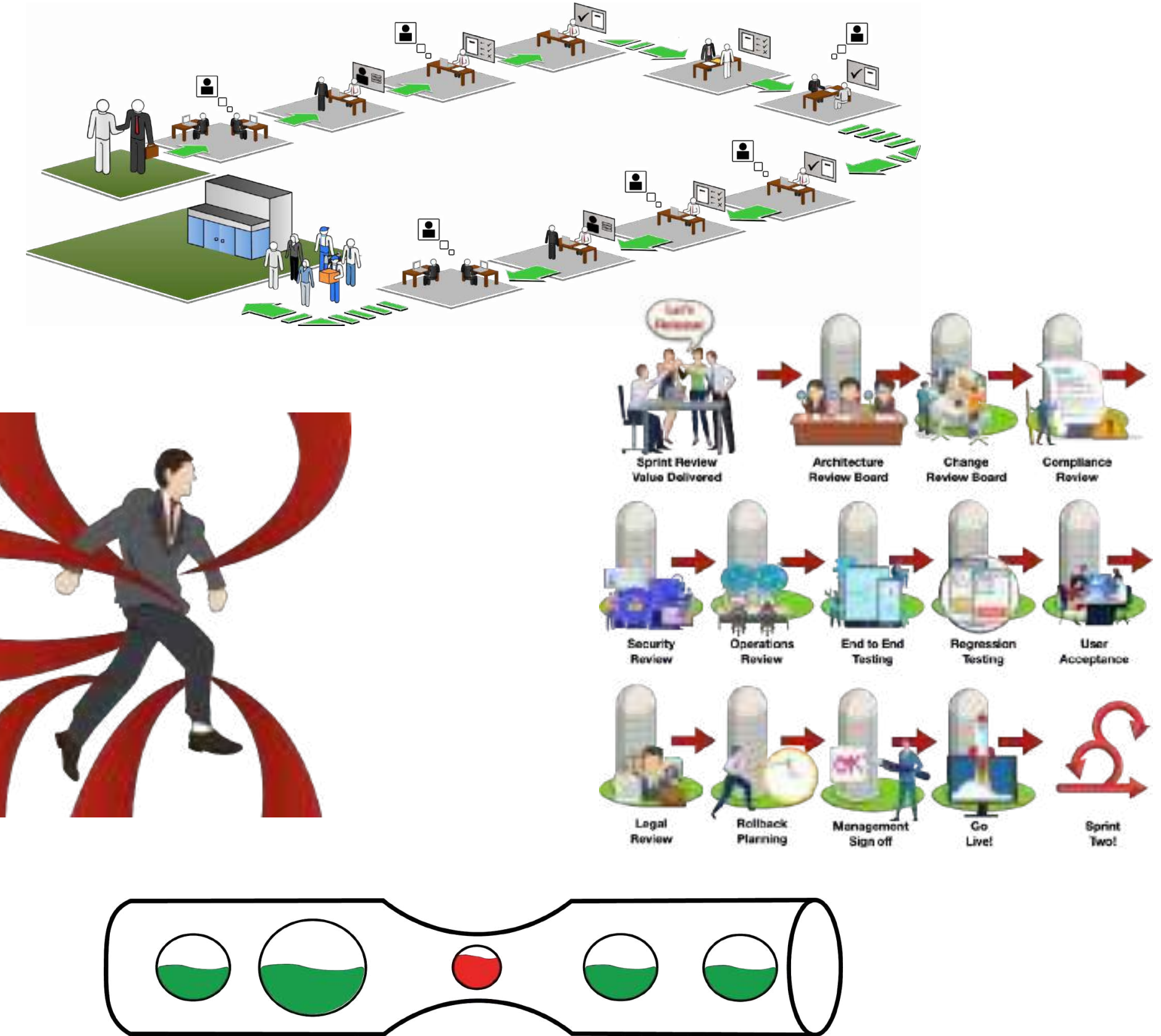
Not understanding the problem prevents organizations from being able to prioritize and plan work effectively, and being unable to select the correct methods and tools to execute, leading to wasted and overburdened resources.

How Do You Do What You Do?

OUTCOME



Do you know how you do what you do?



What is the actual problem that needs to be solved?

Until you recognize the problem that you need to solve there is little point implementing solutions.

Where do you manage from?

The Boardroom?

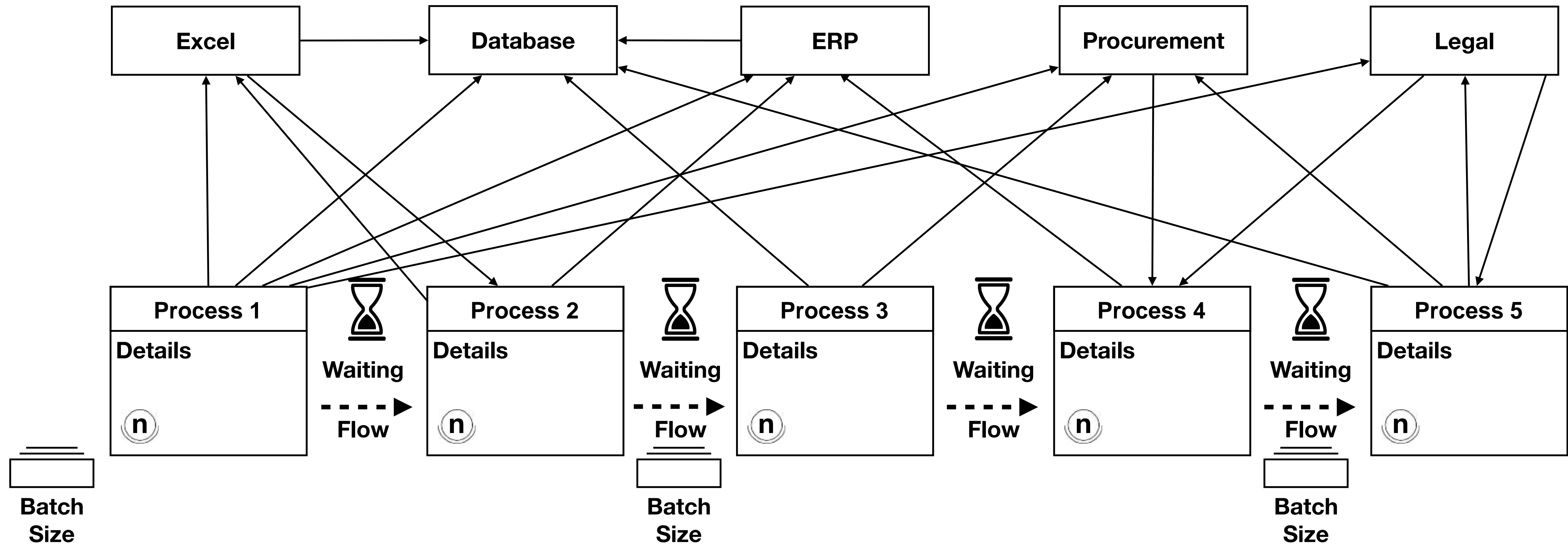


The Genba?



Once a problem has been agreed upon, it is typically pushed downward for others to solve. How many of you go and become your customer for a day, a week or more? Not relying on others, but you yourself?

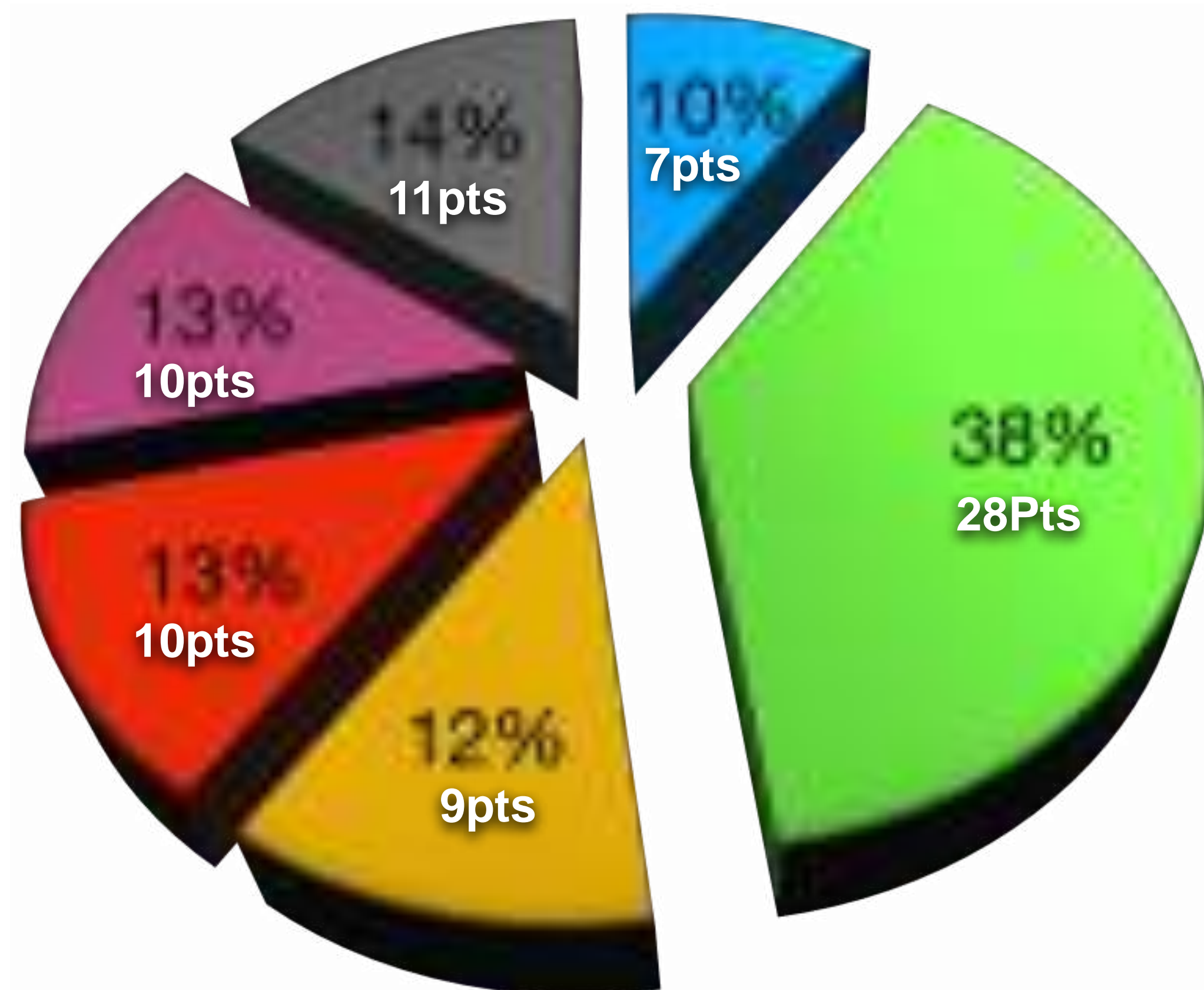
Hidden Costs of Information Flow



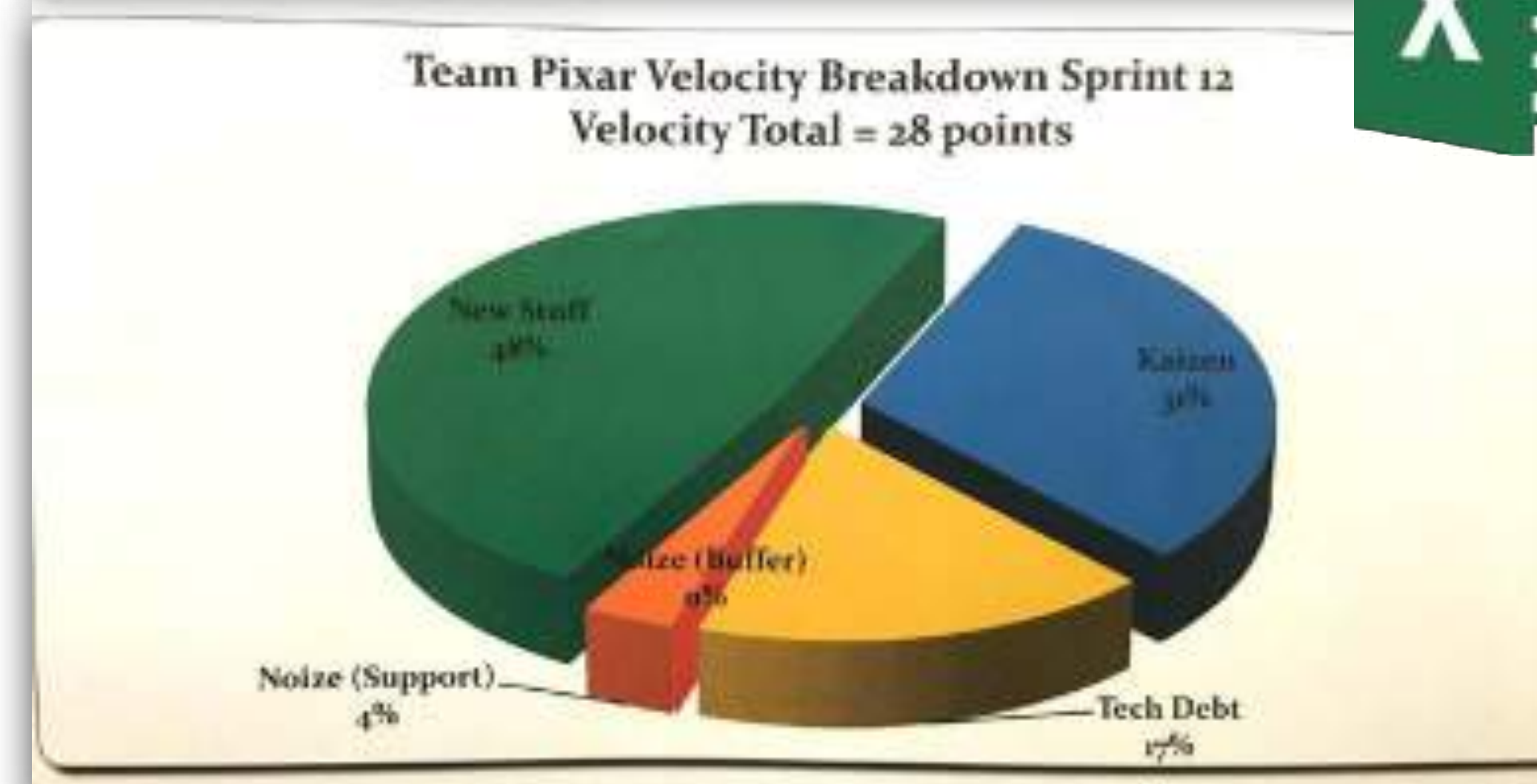
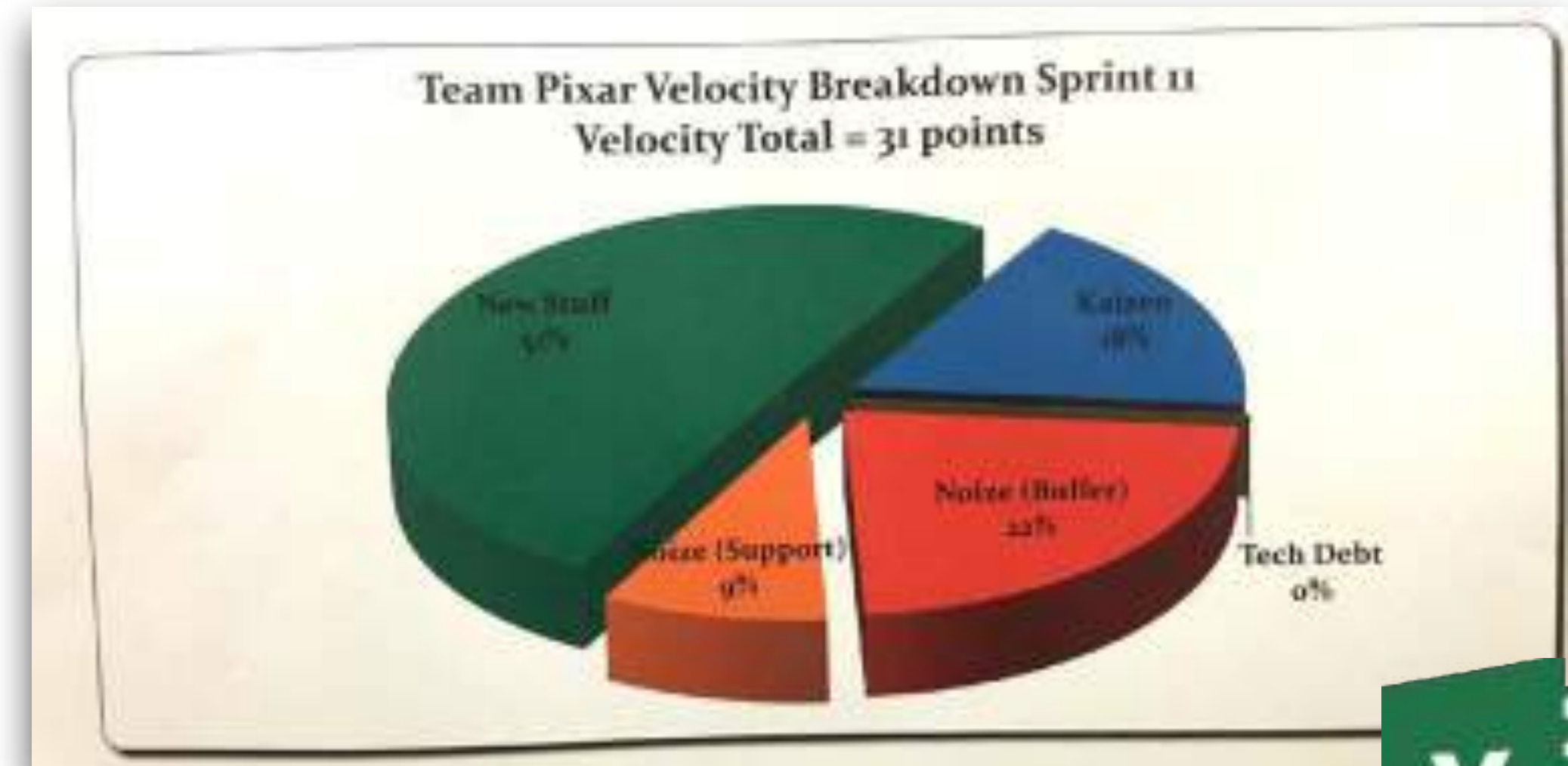
Understanding and simplifying information flows is essential. Immense cost is hidden in how information flows between systems and departments. Knowledge work is predominately The Flow of Information.

Making Work Visible

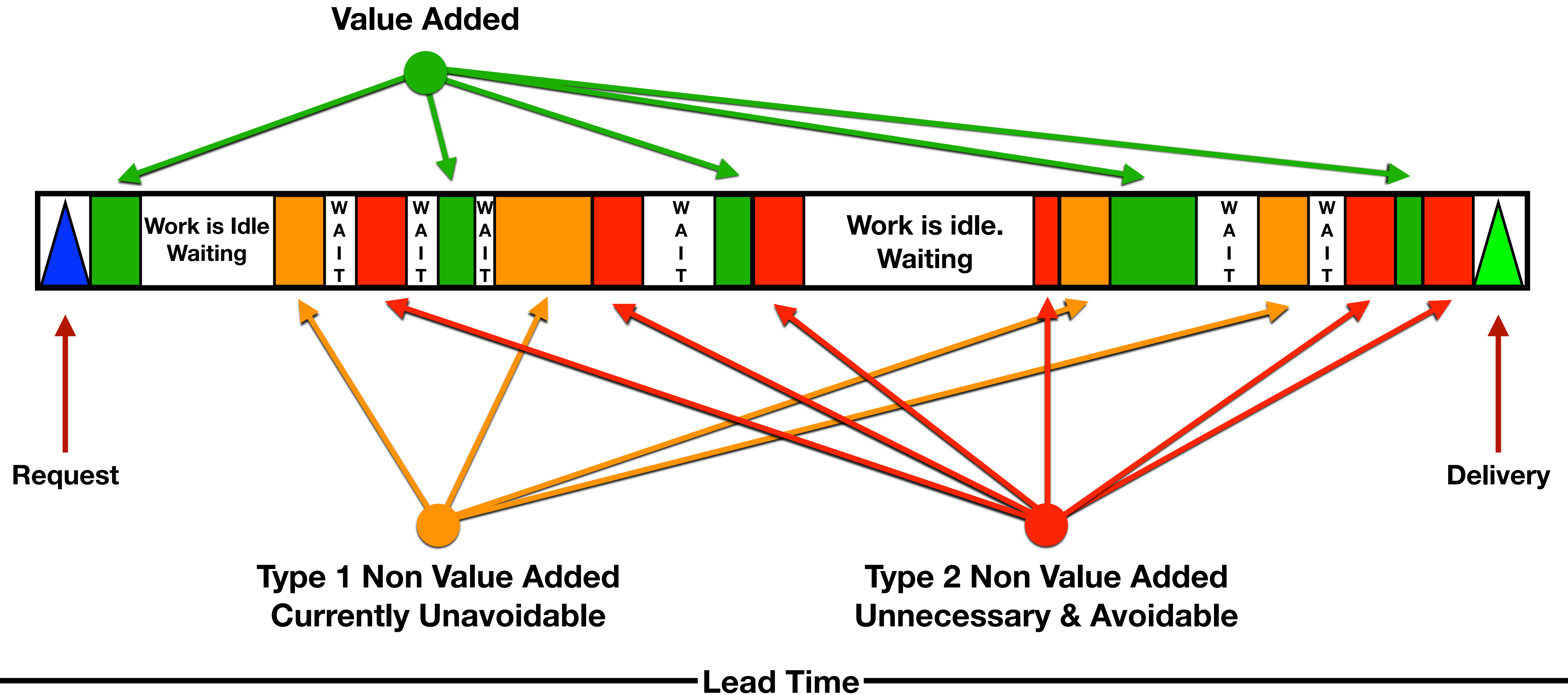
- Kaizen
- New Stuff
- KLO
- Defects
- Tech Debt
- Interruptions



Example Team Velocity = 75 Points

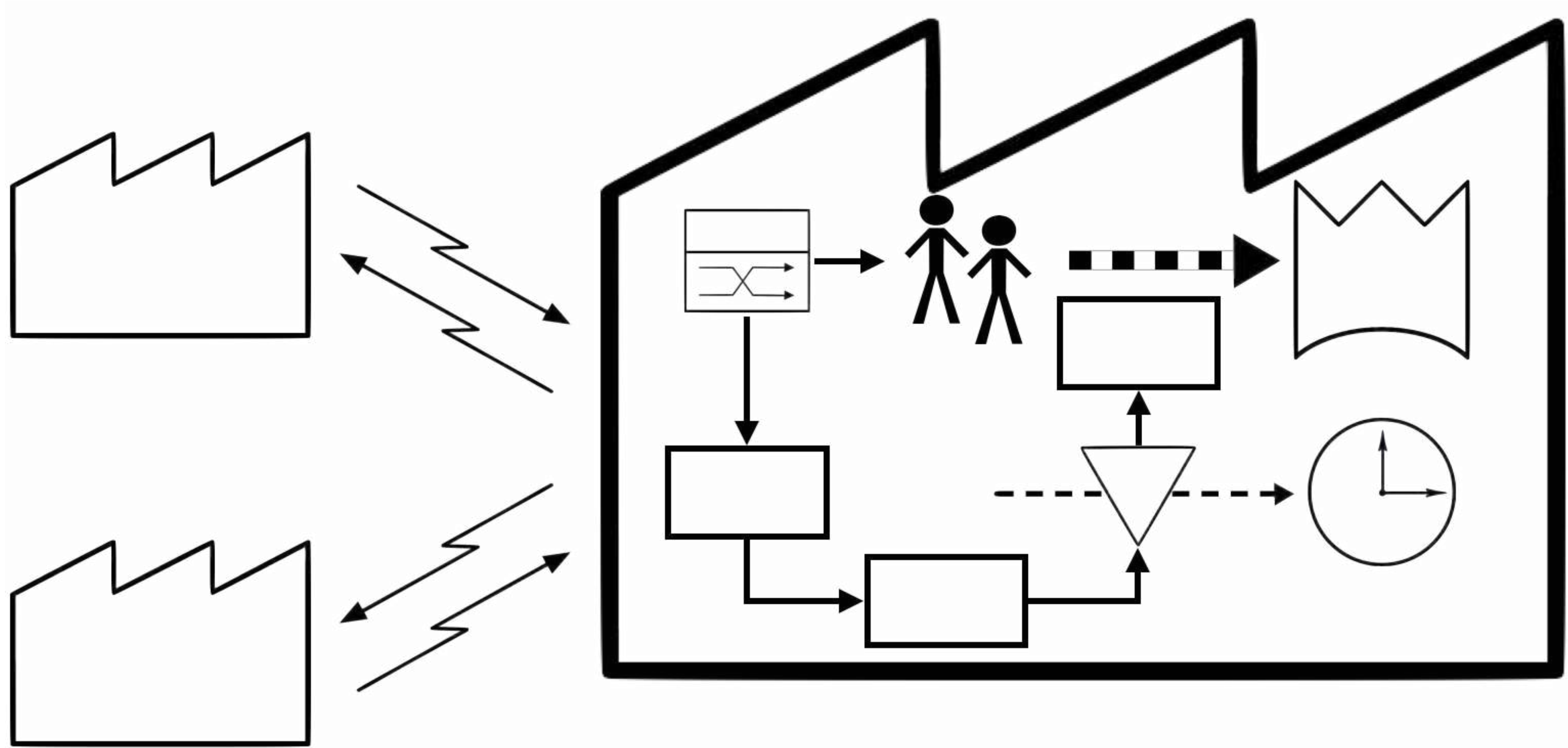


Finding the Value and Non Value



The total time taken to deliver the work from customer order to customer receipt. The overall time the customer waits.

The Purpose



“The purpose of value stream mapping is to design a simple system.” John Shook personal interview.

Overproduction vs Waiting



The Greatest Waste in Manufacturing



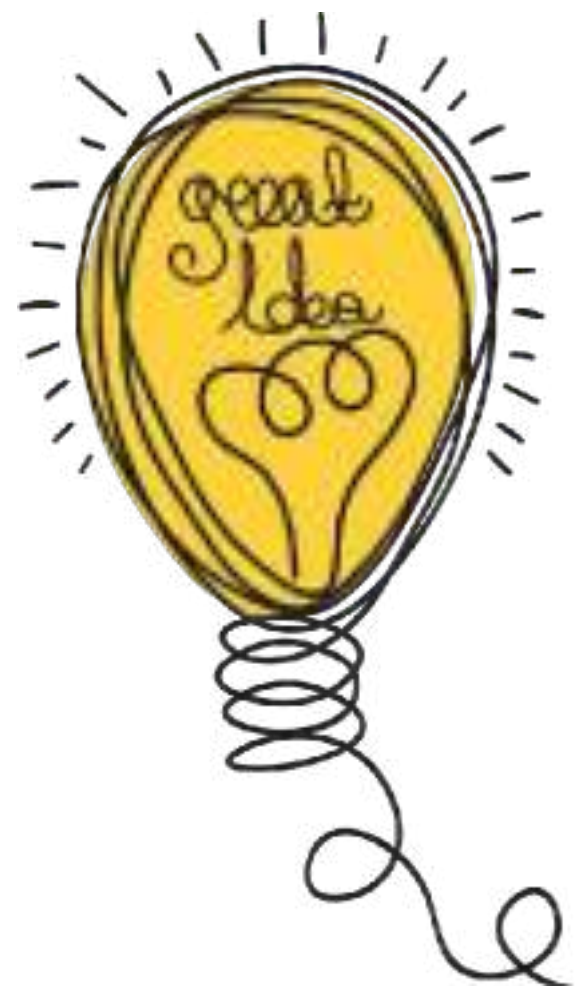
The Greatest Waste Everywhere Else?

A Value Stream Definition

Business is Included



A Value Stream contains all the people, machines, technology and skills needed to complete the end to end product or service delivery.

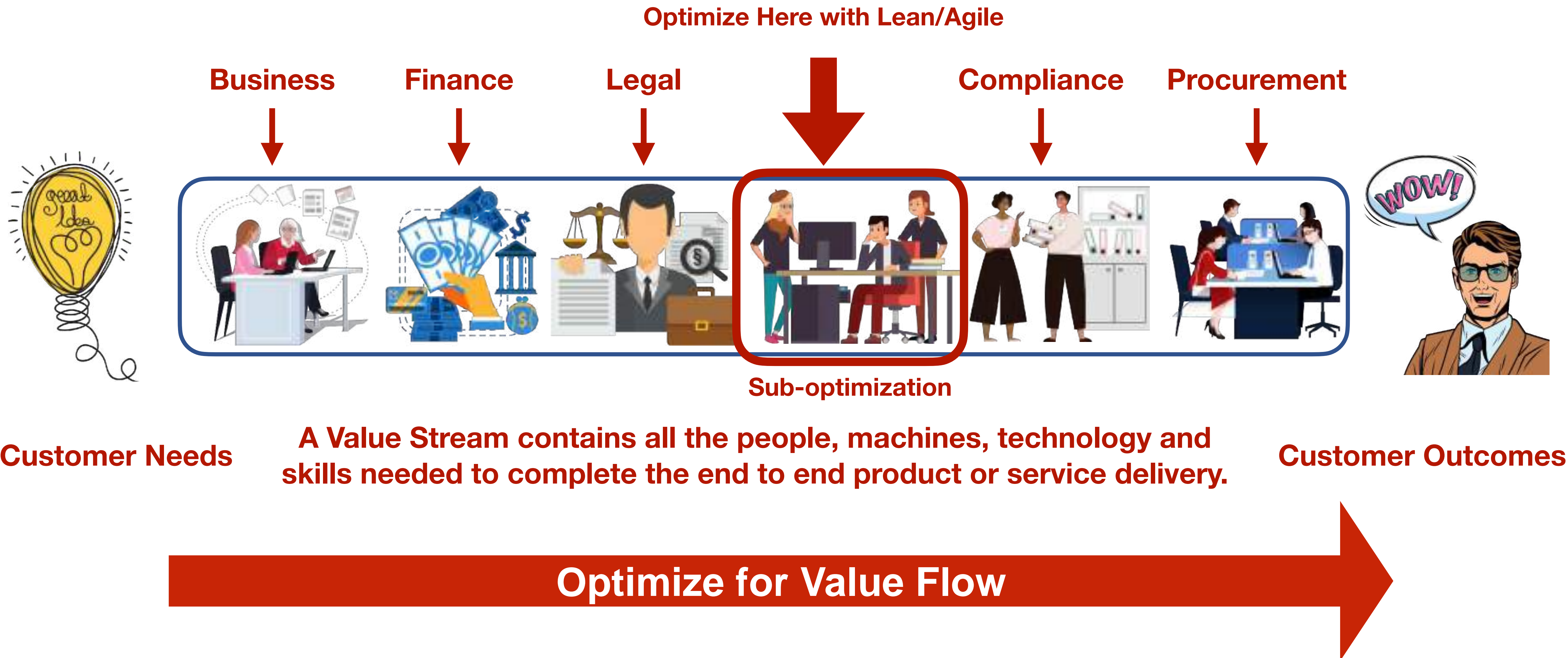


Customer Needs

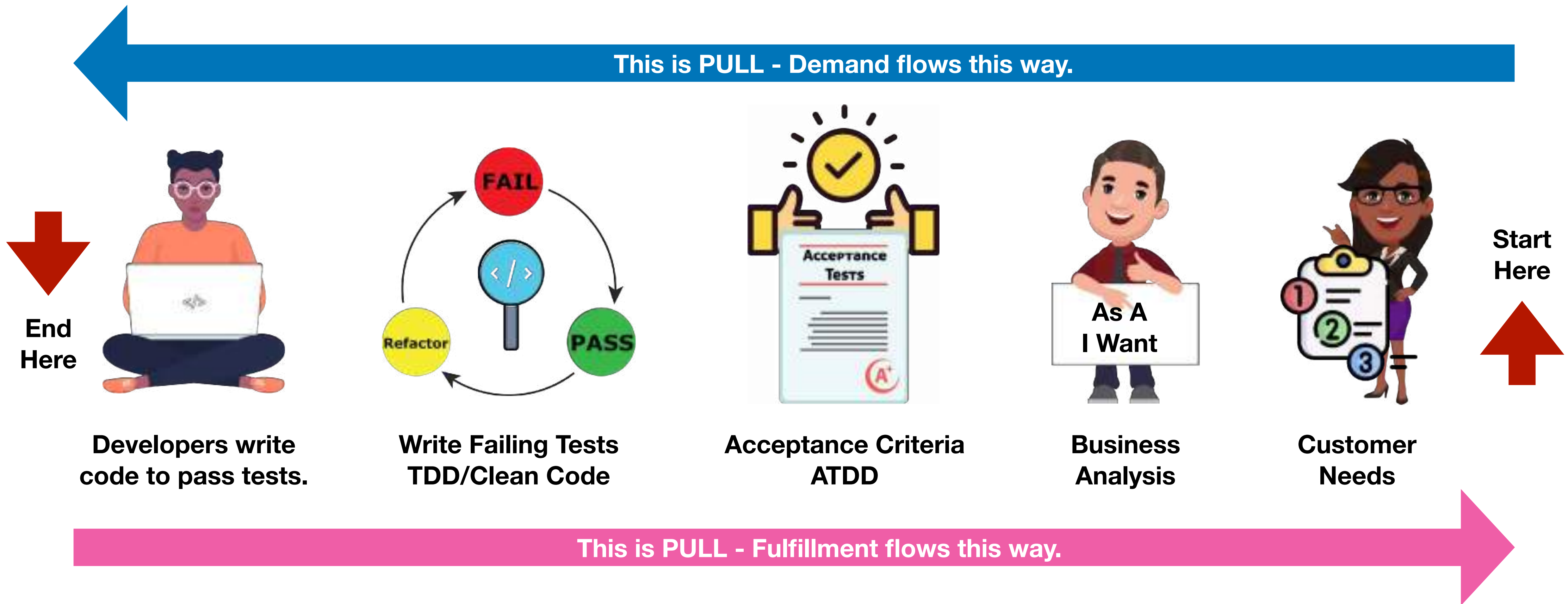
Customer Outcomes



Value is Cross Organization

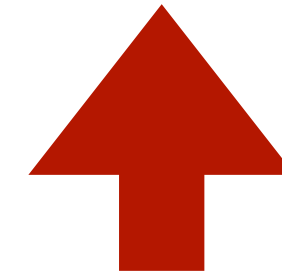
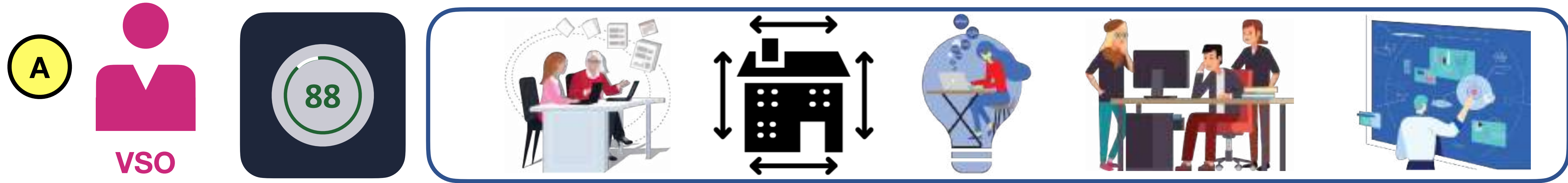


A Real Pull System for Software



Demand flows upstream. Fulfillment flows downstream. A kanban pull system is one where only downstream teams or processes can add work to an upstream queue. Adding work further upstream is a push system.

Value Stream Organization



Horizontal Cross Functional Team

Example Product Delivery Organization

The Customer

Judges value delivered. Talks to the PO continuously. Can be a real customer, voice of the customer, a focus group, internal stakeholder, or even crowdsourced.

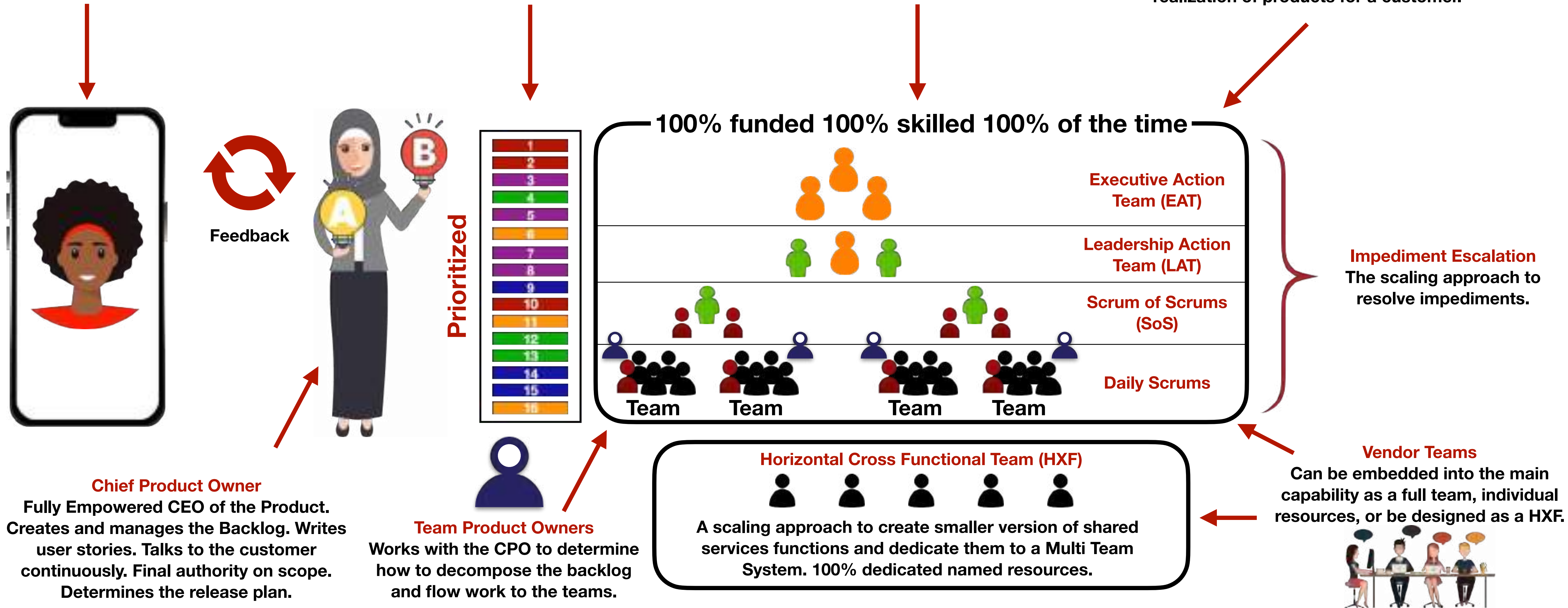
The Product Backlog

The single source of work for the team. A single ordered/prioritized list of things we might do. Scope is NOT Fixed. It's Variable. Evolves over time based on customer feedback.

Capability

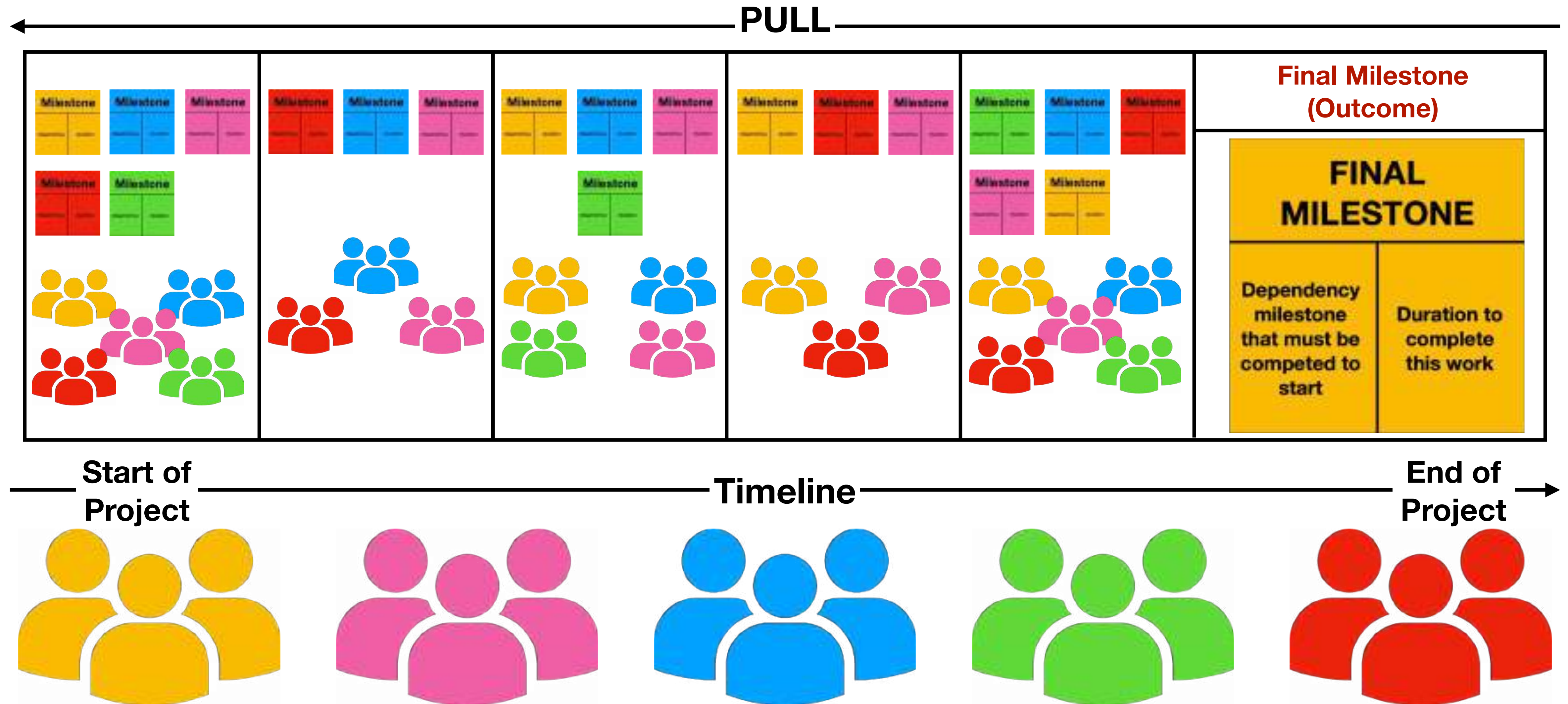
Fully funded for a fixed period. Fund people (capacity), not projects. Fully insourced containing all the skills needed to deliver end to end value.

Tribe/ART/Nexus correctly known as a **Multi Team System**. A fully resourced end to end capability to deliver value through the realization of products for a customer.



One more thing...

Last Planner System

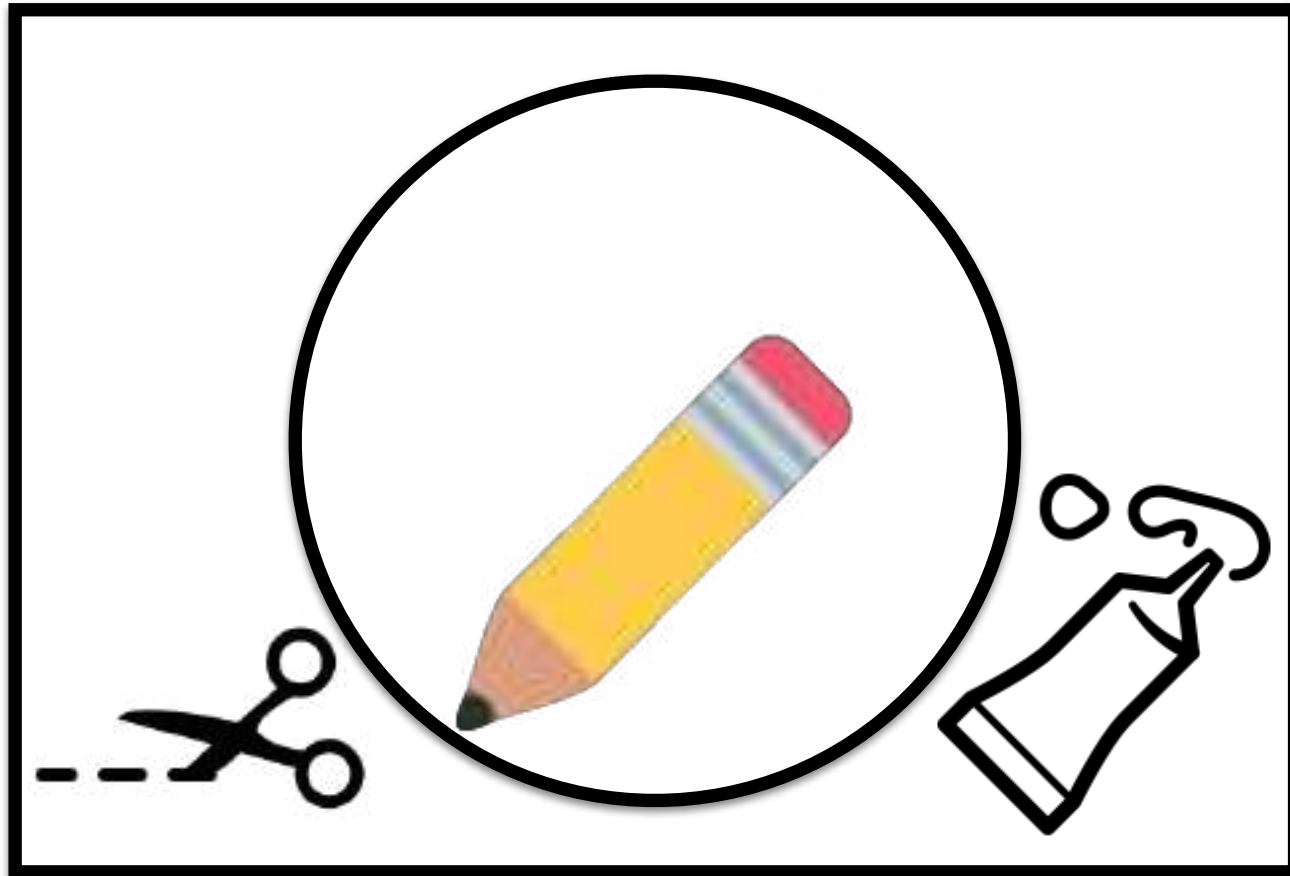
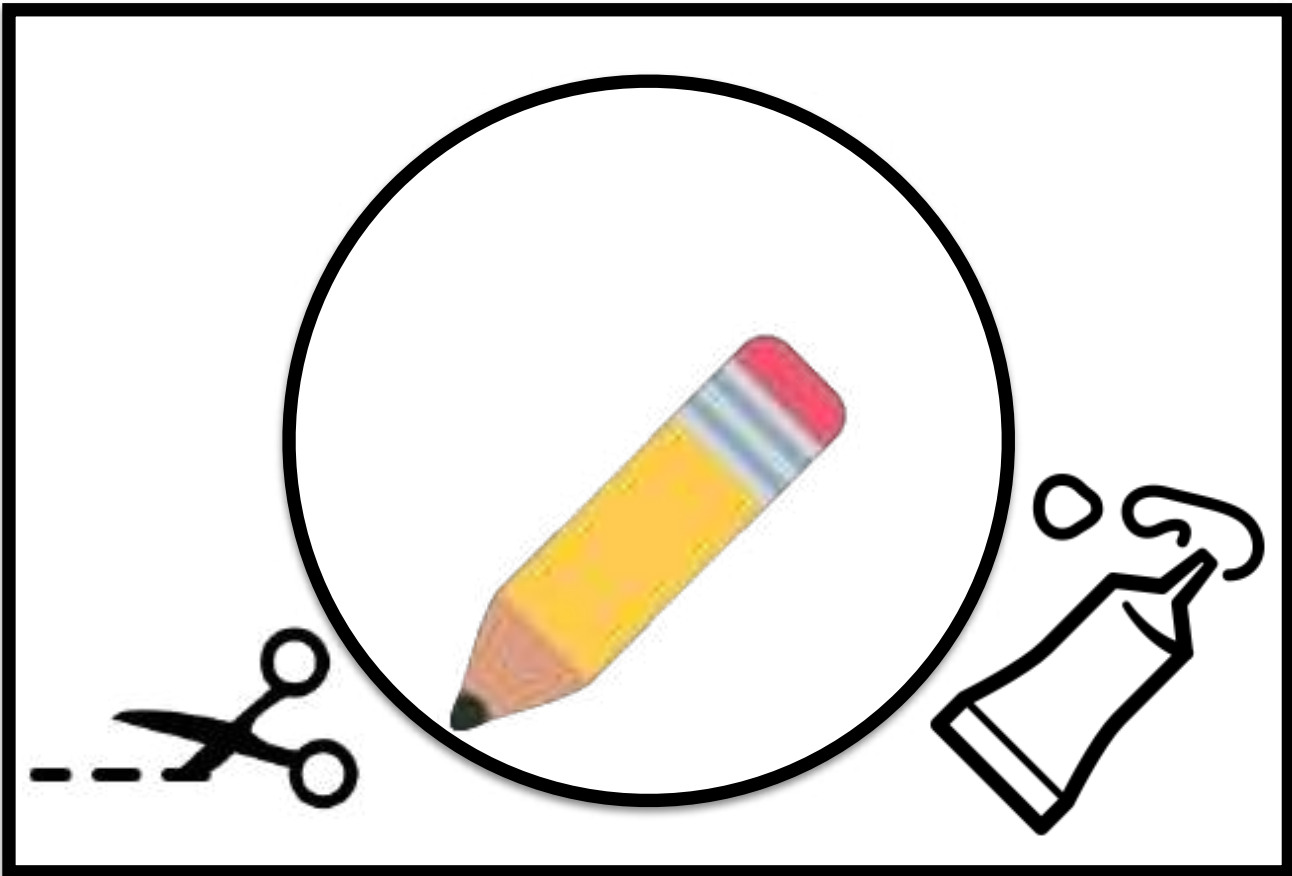
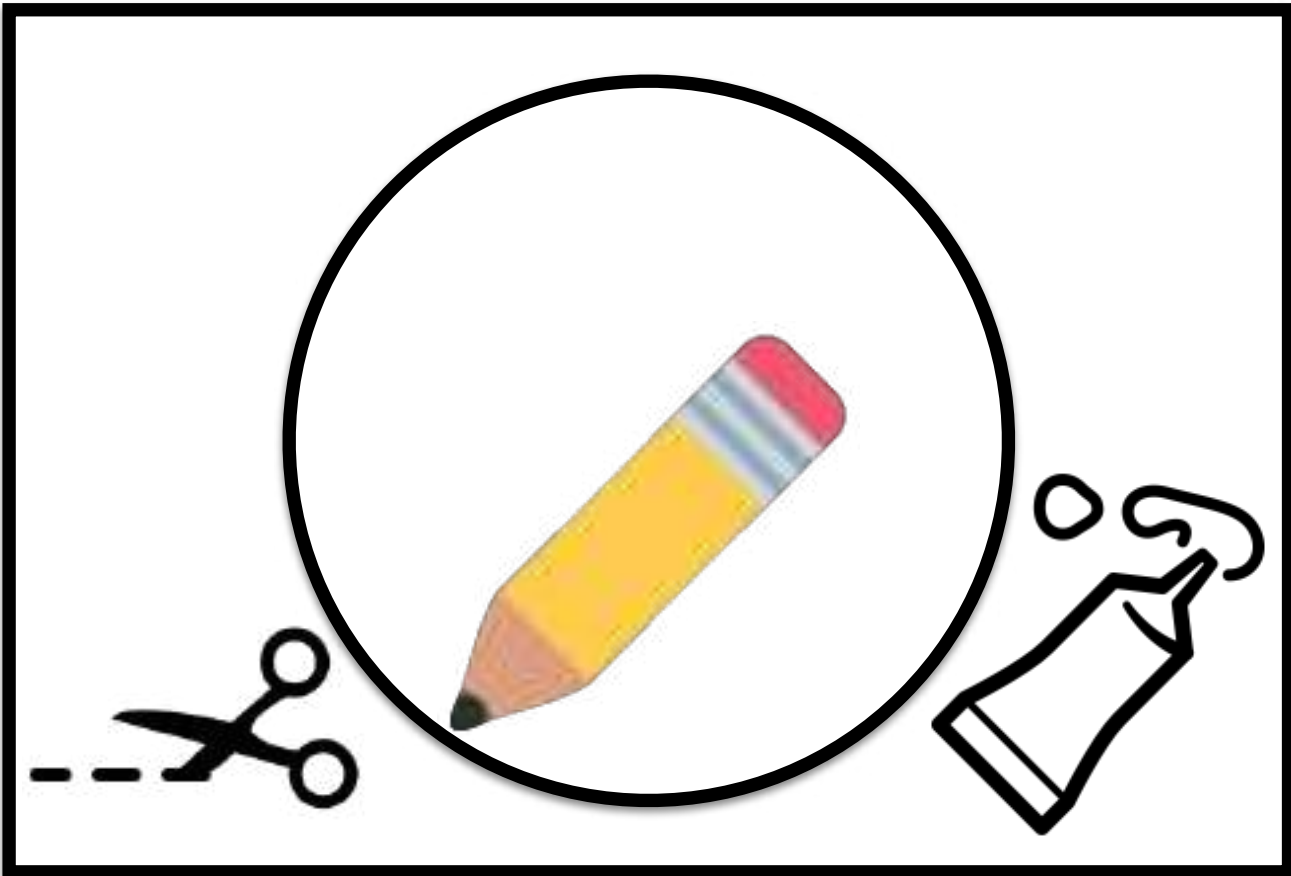
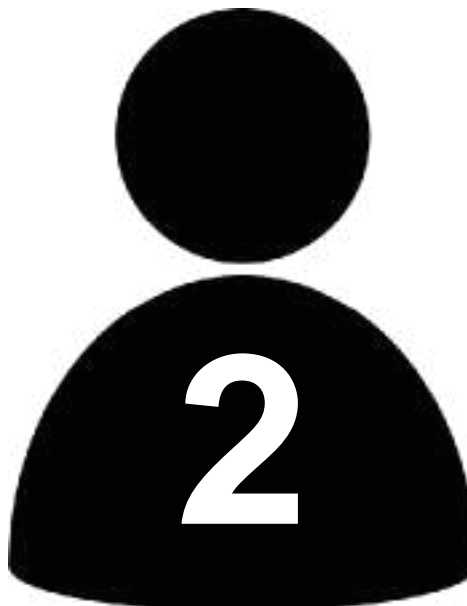
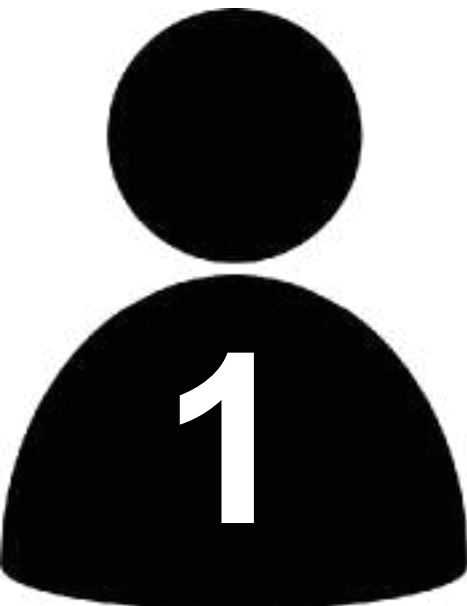


A true Kanban system for sequential and dependent work governed by timelines and milestones.

Extra Slides from the Workshop.



Ohno Baton Zone - Truly Cross Functional



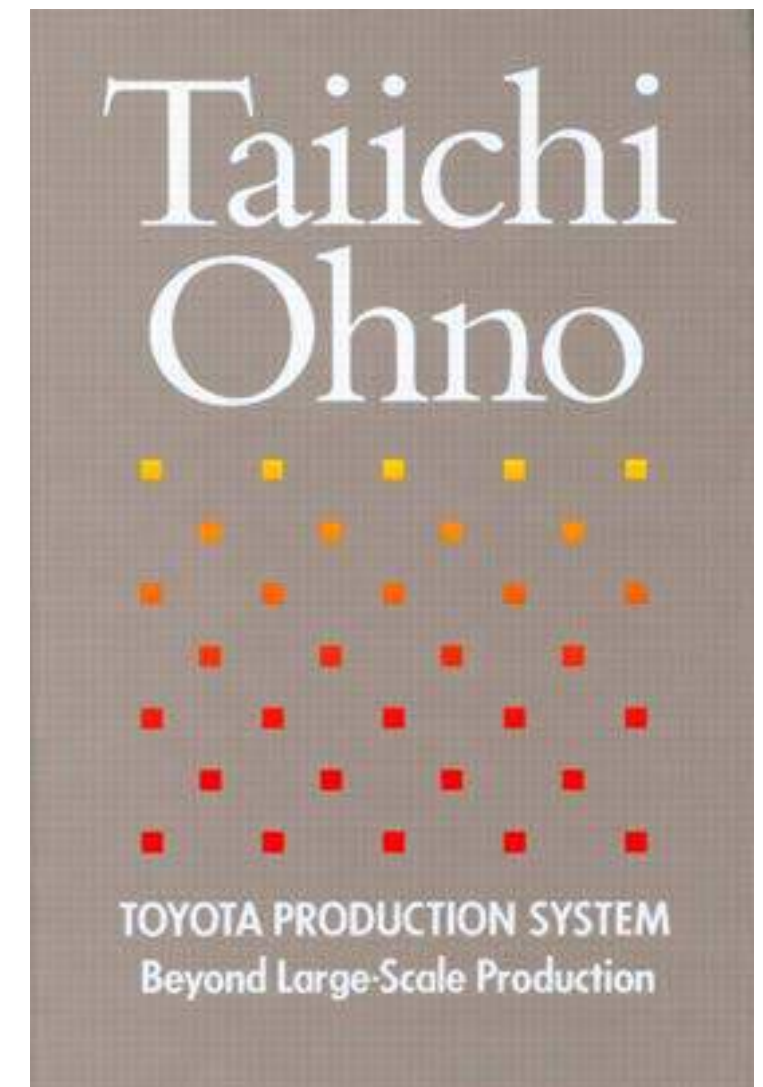
Worker One
Pulls from the
preceding process and
draws, cuts, glues.

Worker Two
Pulls from the
preceding process and
draws, cuts, glues.

Worker Three
Pulls from the
preceding process and
draws, cuts, glues.

Capable to Help Each Other

- If an operator in a later process is delayed, others should help set up his or her machine. When the work area returns to normal, that worker should get the baton and everyone else should return to their positions.
- At Toyota we call the Baton Passing System the Mutual Assistance Campaign. It provides power to generate more powerful teamwork.



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Small Multi Skilled Teams

Ideal Team

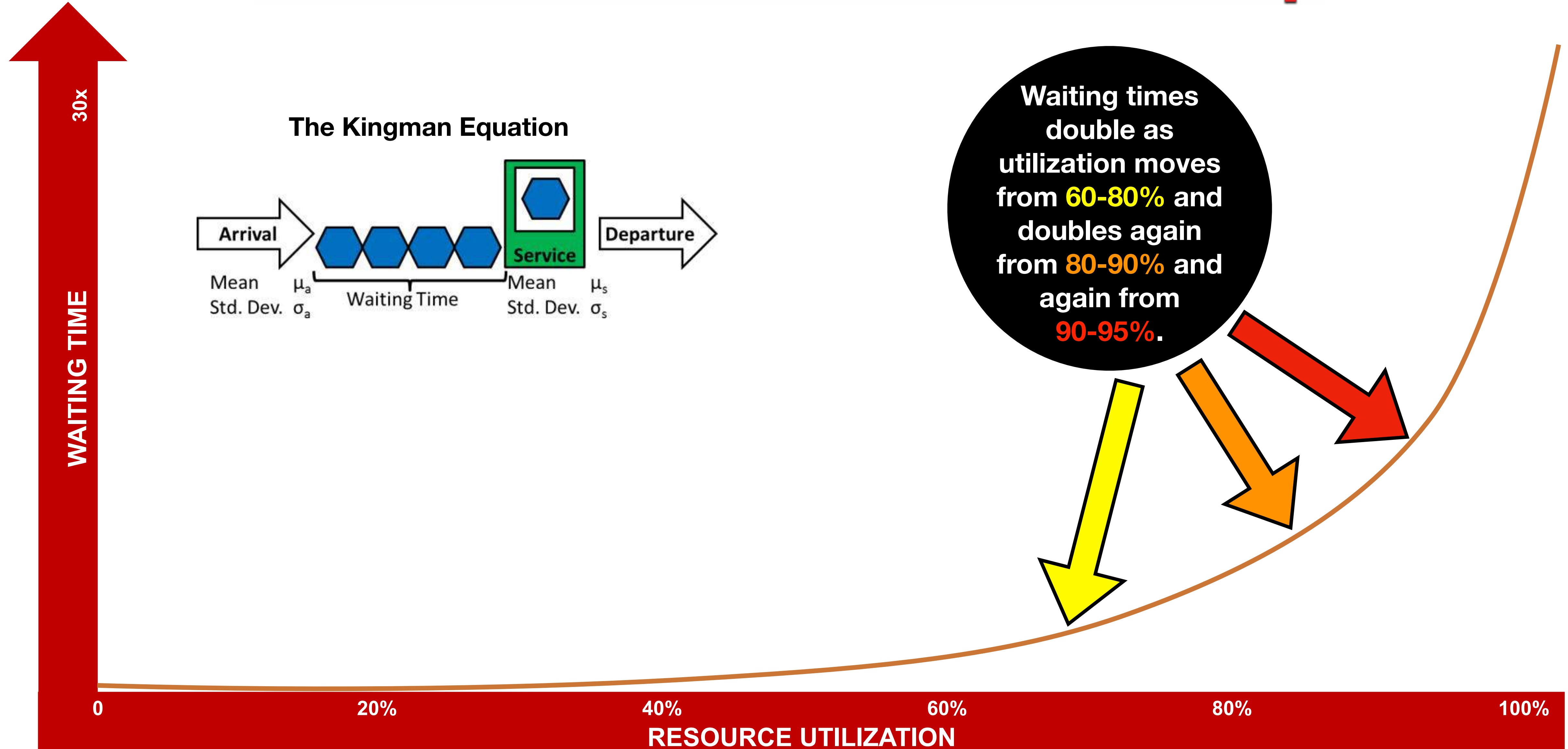
- Small!
- Co-located and working together.
- All the skills to do the work.
- Immediate communication.
- Intense collaboration.
- Cross-functional where every team member can contribute and help.



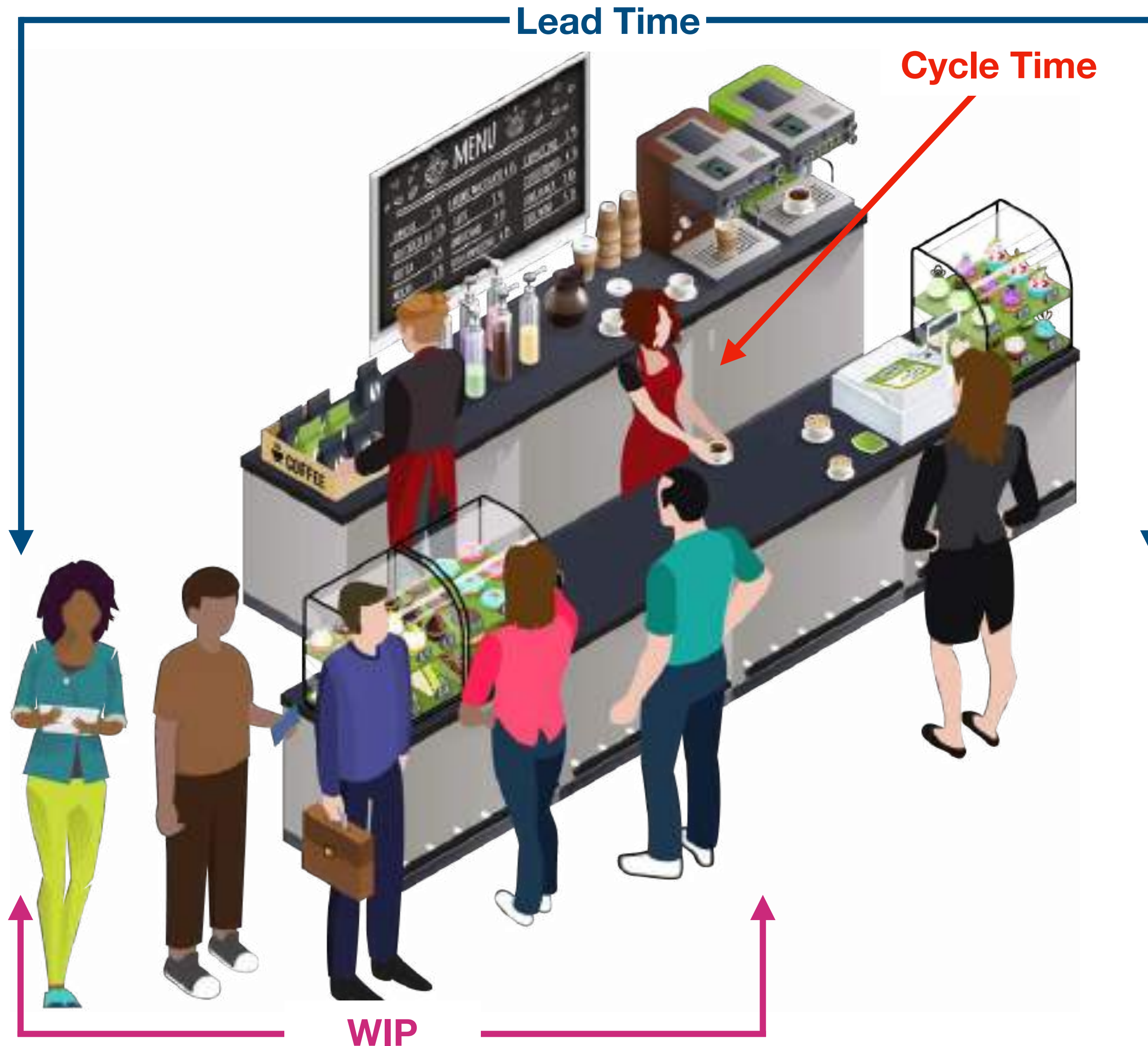
Just like the Teams on the Toyota Production Line



Beware of the Utilization Trap



Little's Law



$$L = \lambda W$$

(L) Queue/WIP = (λ) Throughput x (W) Lead Time

$$\text{Lead Time (W)} = \frac{L \text{ Work in Progress (or size of the queue)}}{\lambda \text{ Throughput (process efficiency)}}$$

$$\text{Lead Time (W)} = \frac{(L) \text{ WIP}}{(\lambda) \text{ Throughput}}$$

$$\text{Time to get Coffee} = \frac{\text{Number of people in the line}}{\text{People served per minute}}$$

$$\text{Time to get Coffee} = \frac{15 \text{ people in line}}{2 \text{ people served per minute}}$$

$$\frac{15 \text{ people in line}}{2 \text{ people served per minute}} = 7.5 \text{ mins wait (Lead Time)}$$

Key Takeaway: Reduce Lead Time by limiting the queue size (WIP) or improving throughput (reducing Cycle Time).

Creating/Using Spare Capacity



If we reduce capacity do we use the reduction to reduce stress/workload, or do we push for it to be reused to move capacity onto higher priority items assuming skills are transferable.