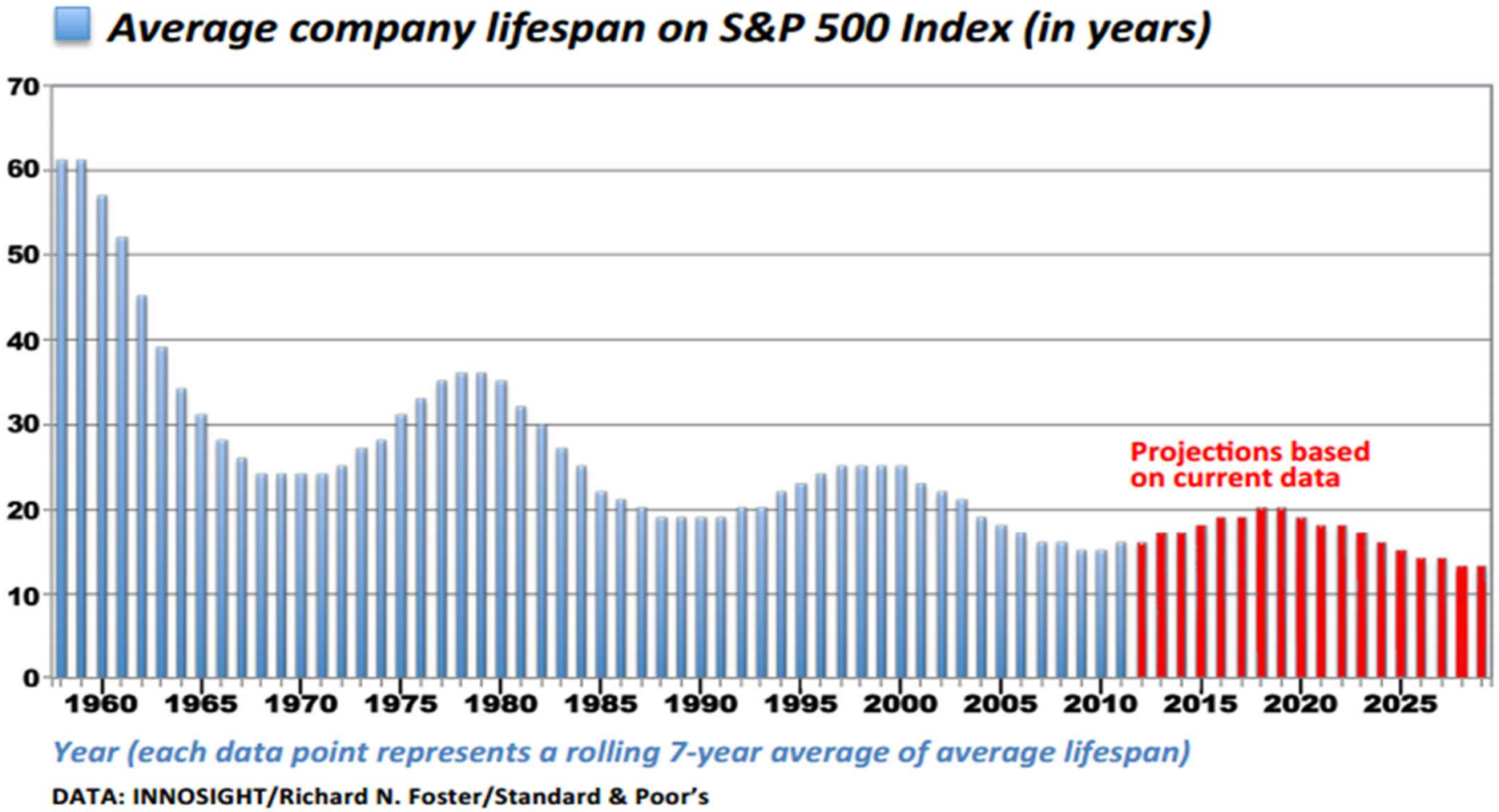
Business Agility

Nicolas Pangaud

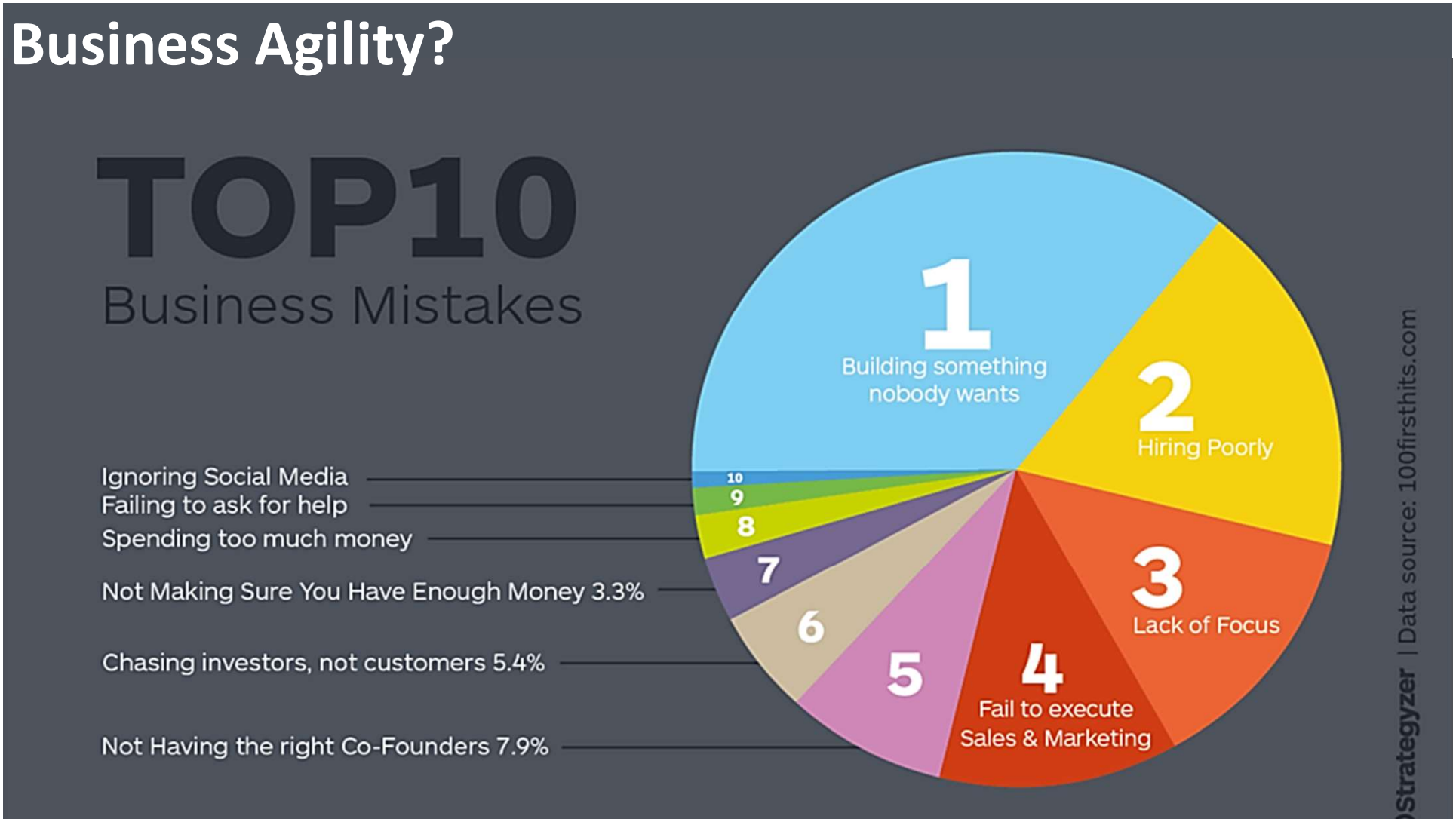
NAGRA
KUDELSKI GROUP

Business Agility

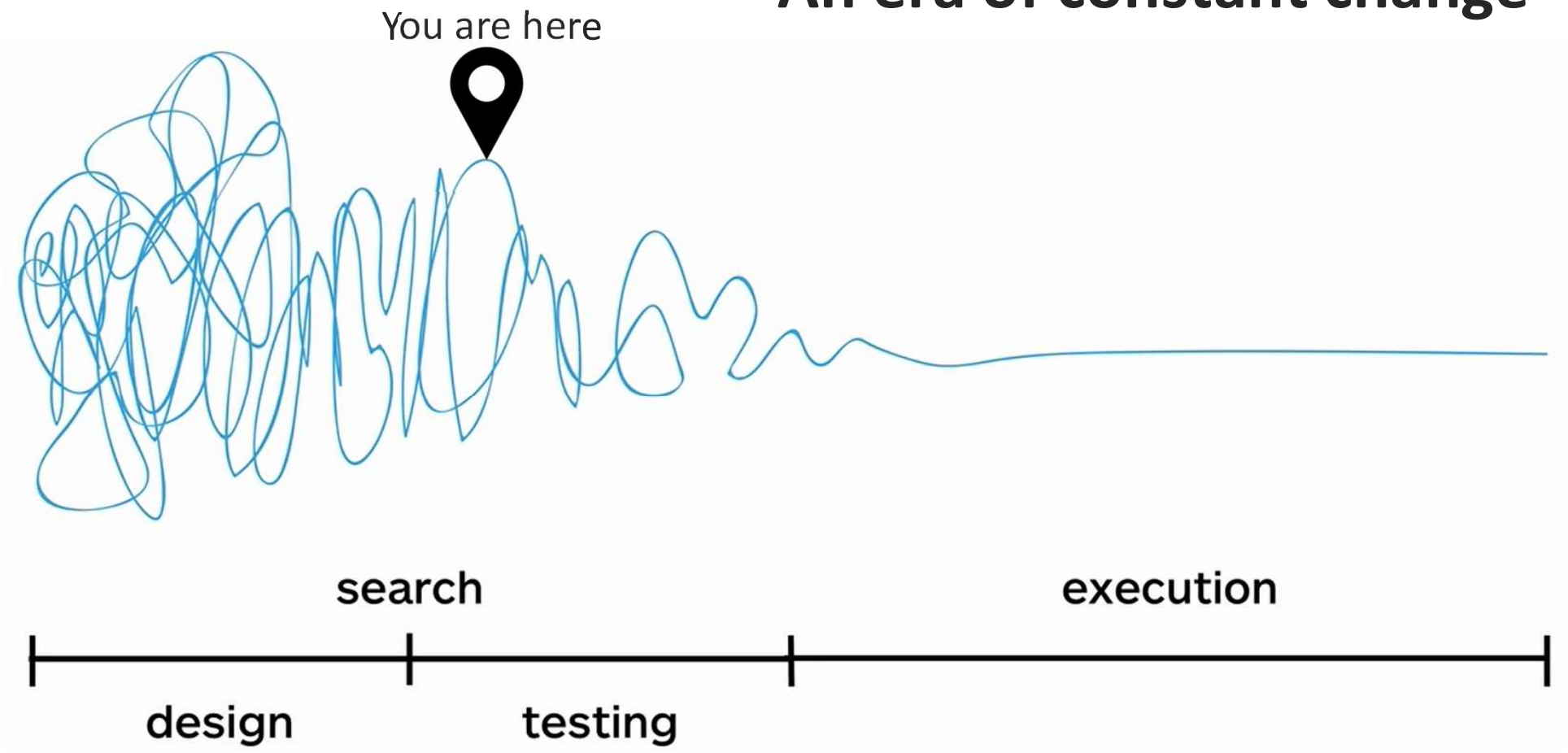
The difference between a threat and an opportunity is the **speed** which you react to it.


Average company lifespan on S&P 500 Index (in years)
70
60
50
40
30
20
10
0
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
2025
Projections based on current data
Year (each data point represents a rolling 7-year average of average lifespan)
DATA: INNOSIGHT/Richard N. Foster/Standard & Poor's

Business Agility?



An era of constant change



NAGRA
KUDELSKI GROUP

$ 1068 million	**Revenue**
$ 189 million	**R&D investment**
3500	**Employees**

R&D
400 engineers
5 Sites

System SW

Cloud solution

Graphic Interfaces

Embedded SW

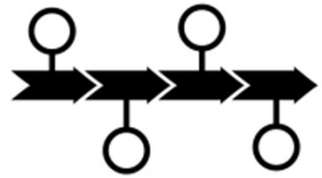
Crypto

HW

SW integration

SW Architecture

NAGRA Before Agile



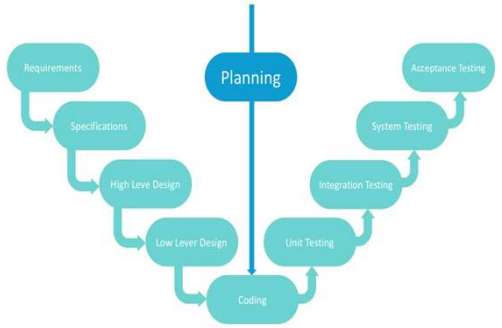
50 concurrent projects in R&D before transition for

Product evolution	- 1 week to 6 months
New products	- 2 to 3 years
New business area	- Continuous initiative

Managed using a Phase and Gate approach

Waterfall and CMMI process

Observation



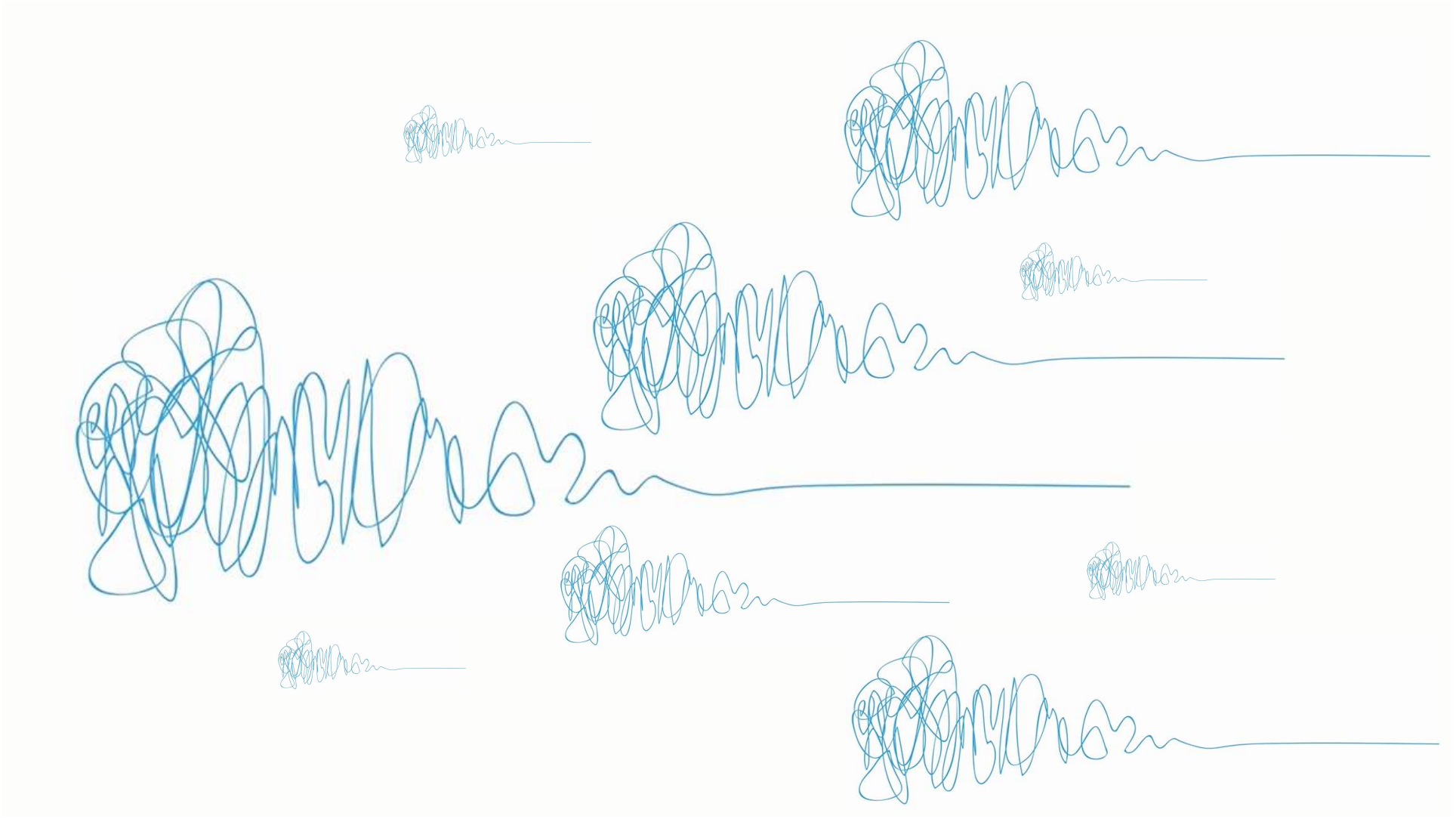
Waterfall and V cycle: project >2 years

CMMI: gate ‘’project start’’

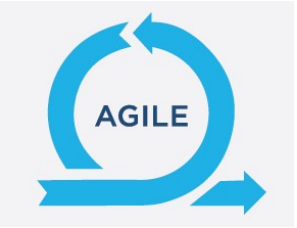
with >50% cost already engaged

At project definition

Battle for features



Why moving to Agile ?



Build the right product

Faster time to market

Reduce waste

Enhanced cooperation and collaboration

Agile introduction by managers


Training &
Management
Big Bang
all together
Inspect &
Adapt

Go to Agile with no spectators

"All in"

Managers play the agile coach role

Teams and managers learn and progress together

Implication from managers

1. Communication and coaching
2. Analysis gap for specific team that resists for good or bad reason
3. Adapt the model for Nagra
4. Monitoring the implementation process
5. Got to 1. every 3 months

→ continuous learning

FACTS

Agile ≠ Religion

Agile ≠ Accelerate project

Agile ≠ No more management

Agile ≠ Hero mode

FACTS

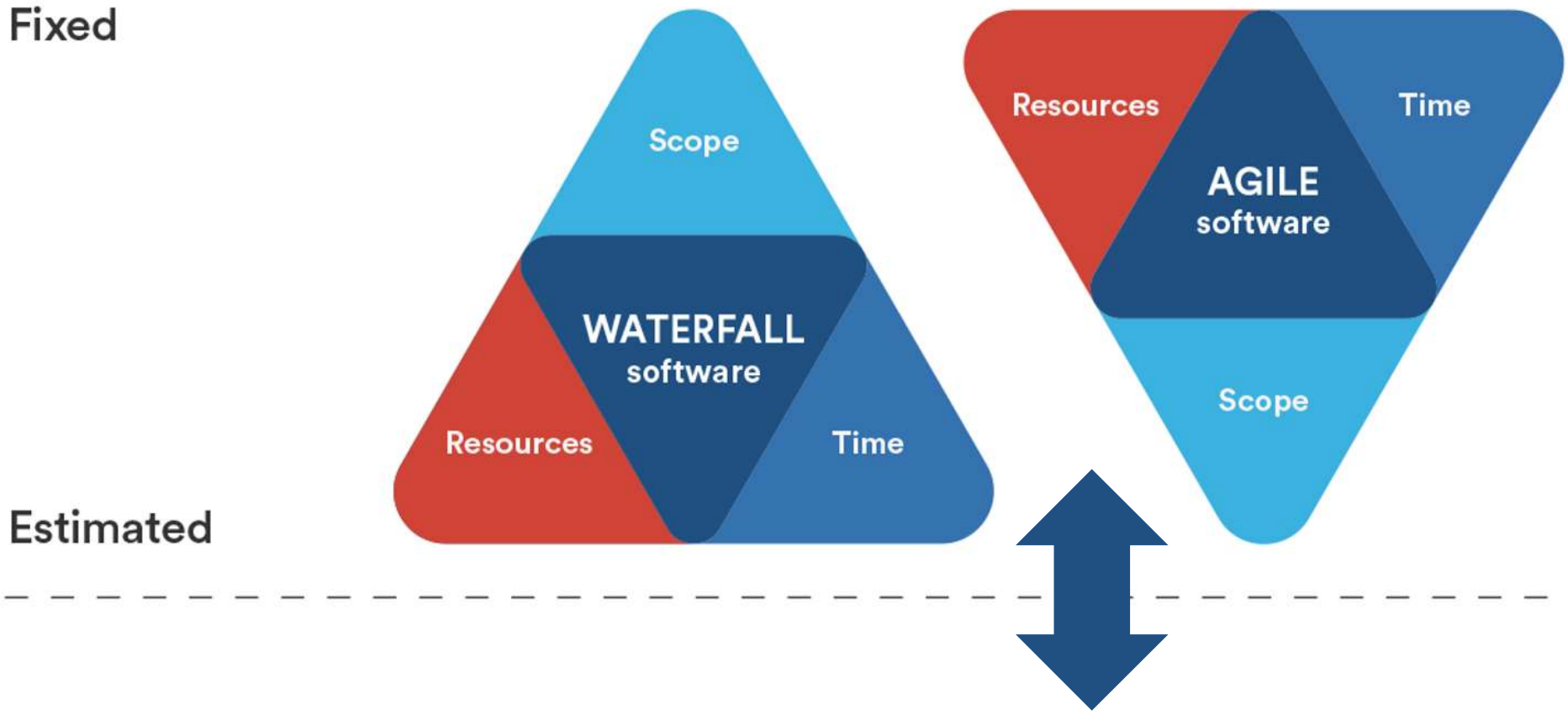
Agile = Transparency and trust

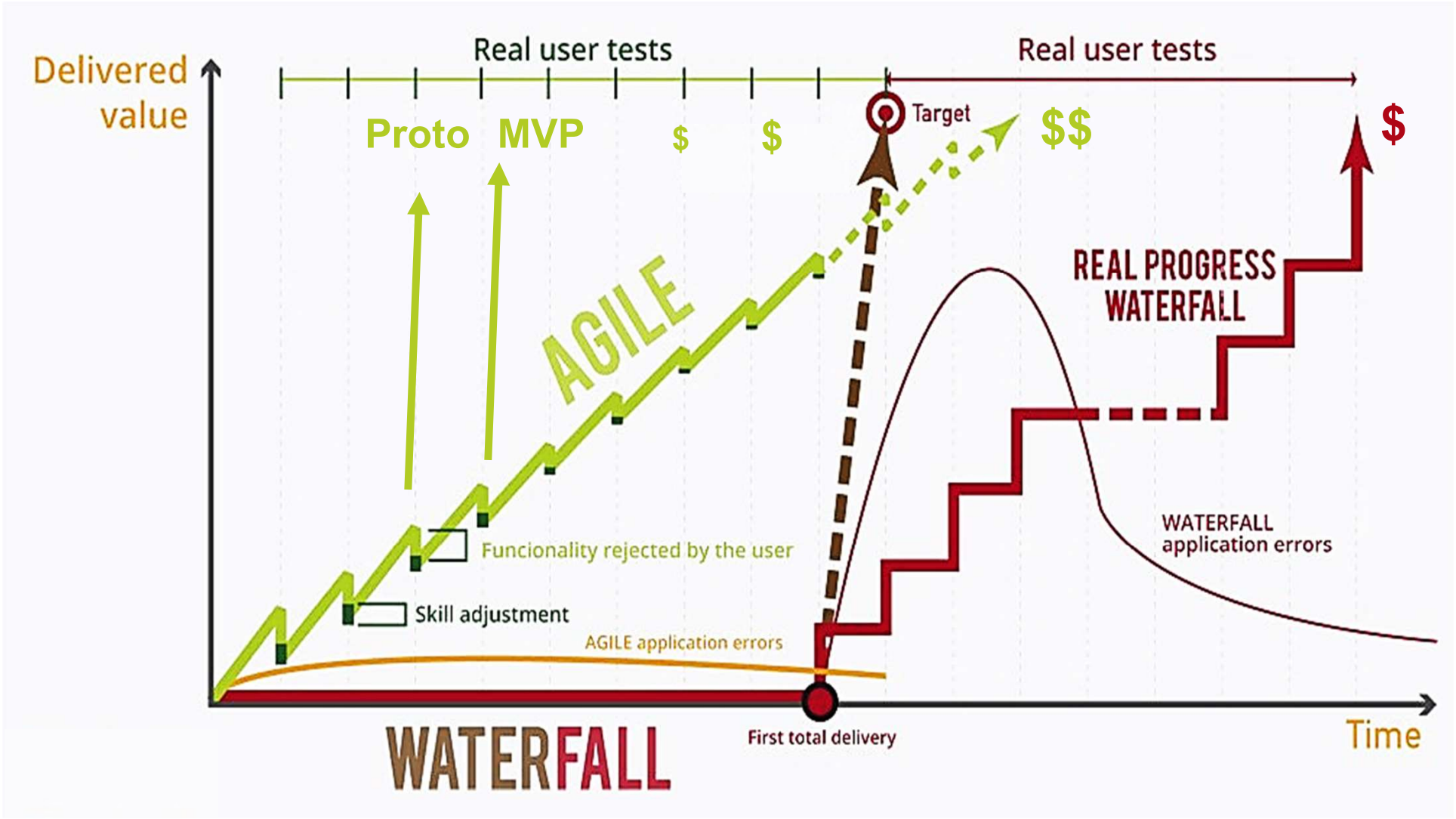
Agile = Decision at right level on time

Agile = Share economic view

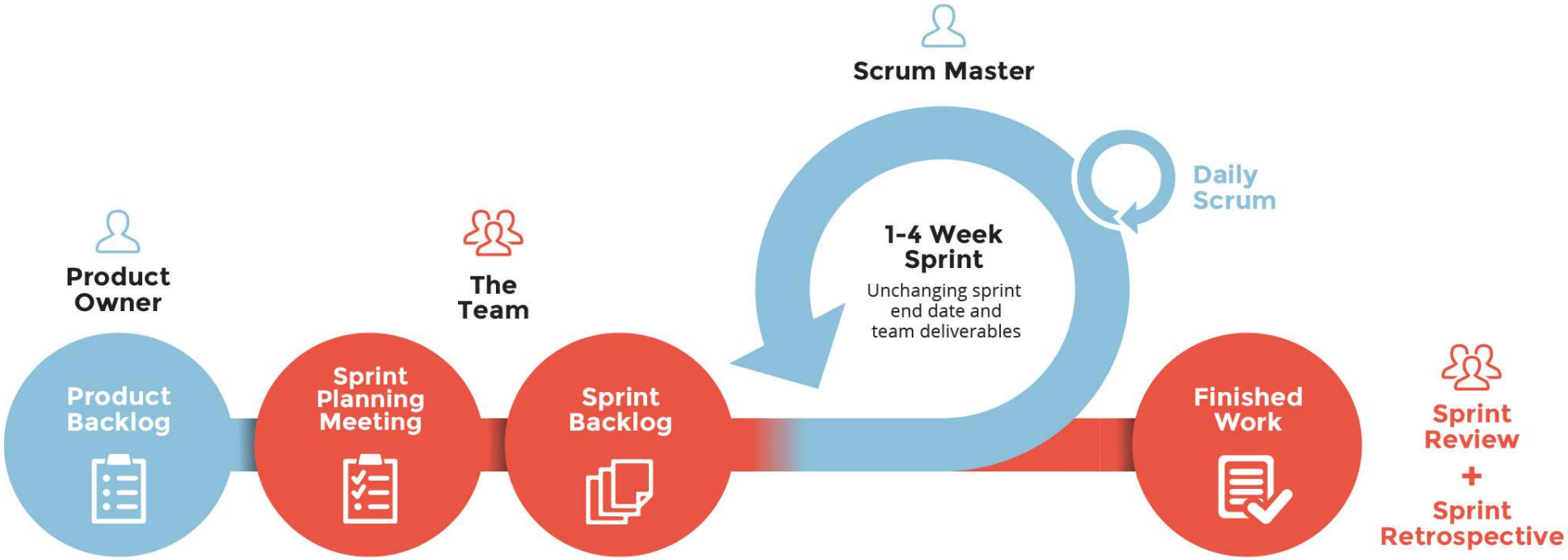
Agile = Create value shorter

Agile = Discipline and commitment


Fixed
Scope
WATERFALL
software
Resources
Time
Estimated
Resources
Time
AGILE
software
Scope

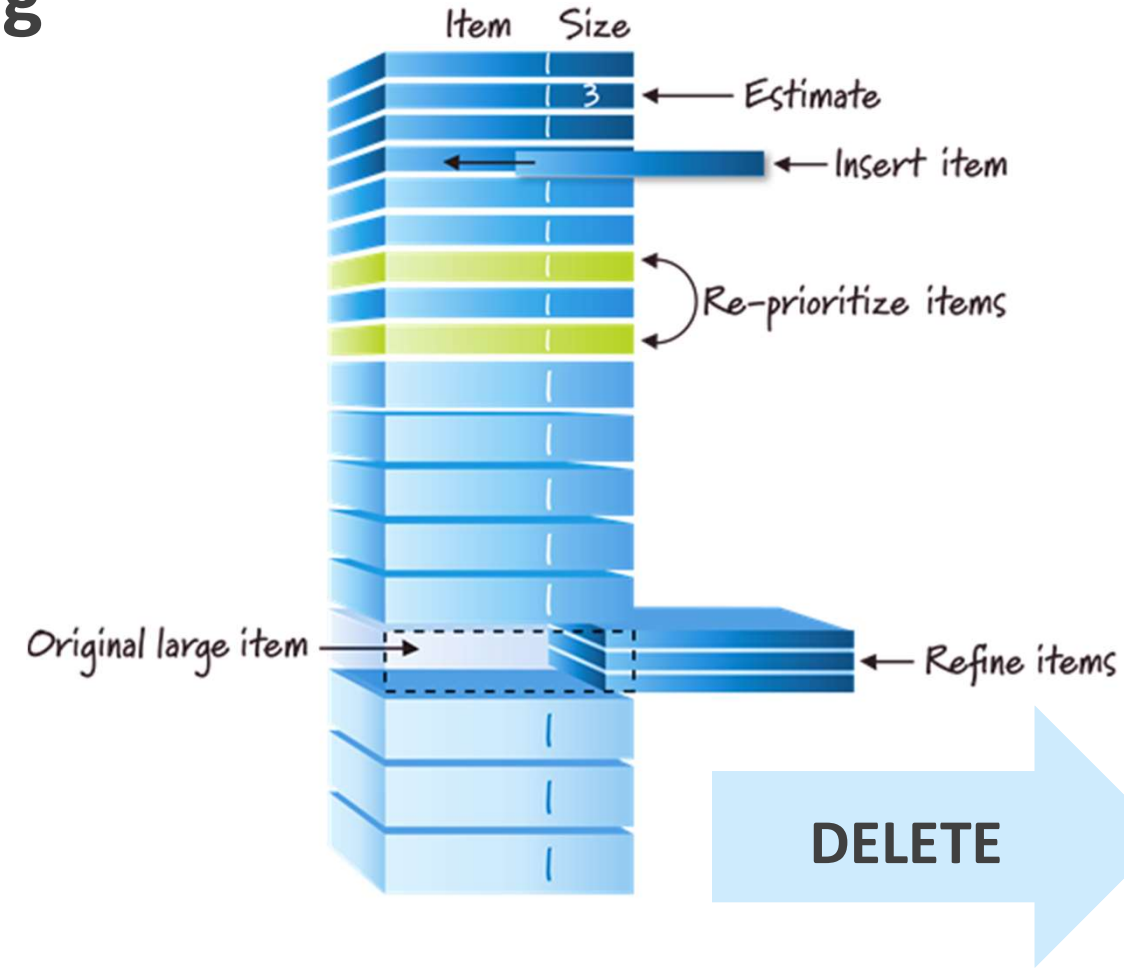

Delivered value
Real user tests
Real user tests
Proto
MVP
$
$
Target
$$
$
REAL PROGRESS WATERFALL
AGILE
Funcionality rejected by the user
Skill adjustment
AGILE application errors
WATERFALL application errors
WATERFALL
First total delivery
Time


enjoy achievement
get things done
no over engineering
each task has a result
TIMEBOXING
cost of delay
good enough
deliveries
predictability
commitment
collaboration


Scrum Master
Daily Scrum
1-4 Week Sprint
Unchanging sprint end date and team deliverables
Product Owner
The Team
Product Backlog
Sprint Planning Meeting
Sprint Backlog
Finished Work
Sprint Review
+
Sprint Retrospective

Most important tool in Agile

Backlog


Item
Size
3
Estimate
Insert item
Re-prioritize items
Original large item
Refine items
DELETE


THE UNITED STATES OF AMERICA
10,000
TEN THOUSAND DOLLARS

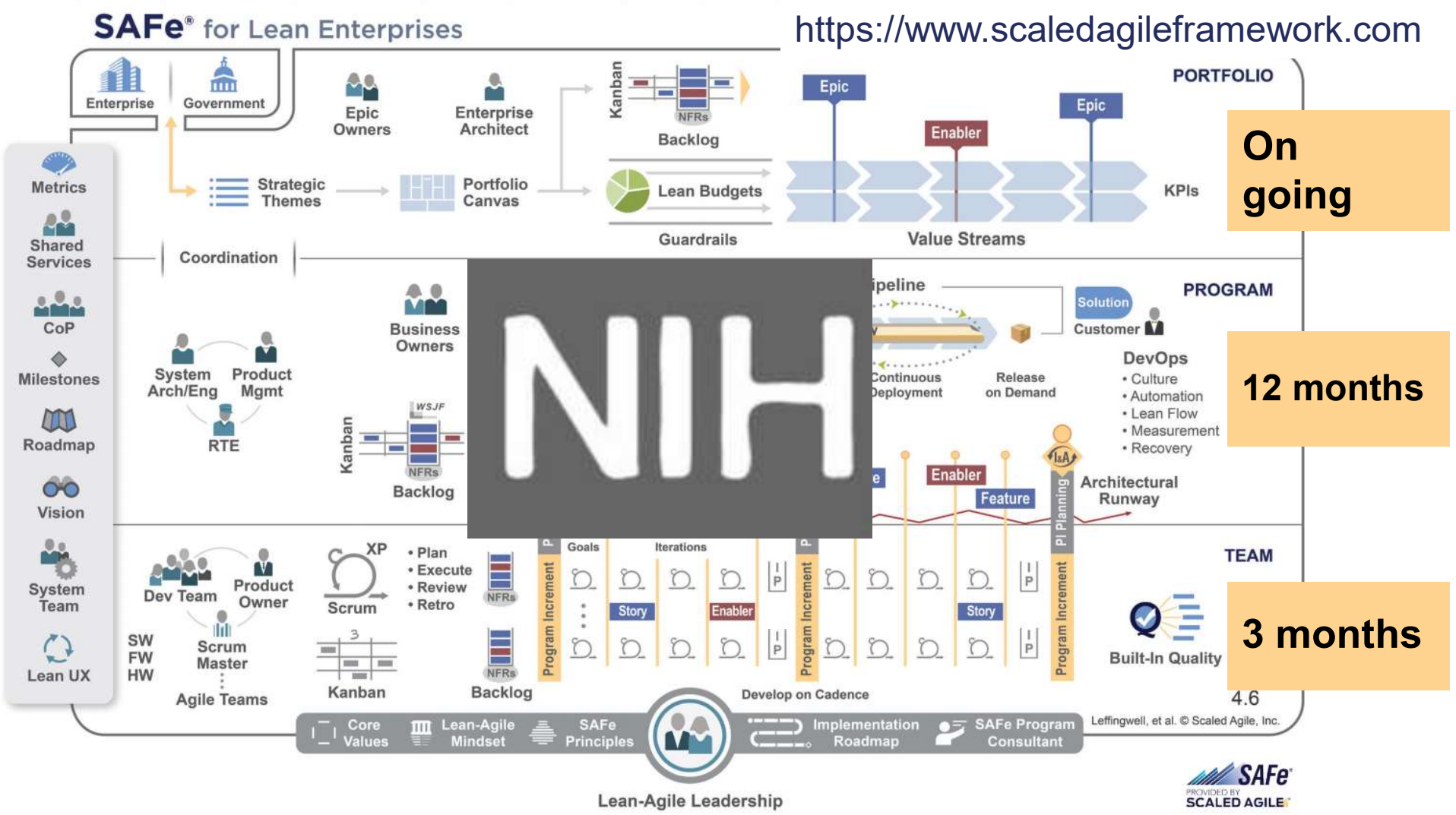
Tooling

Single data repository

Backlog - V1

Team area - V1 + Atlassian

Resource - *internal tooling*



On going

12 months

3 months

SAFe® Lean-Agile Principles

#1 – Take an **economic** view
#2 – Apply **systems** thinking
#3 – Assume **variability**; preserve options
#4 – Build **incrementally** with fast, integrated learning cycles
#5 – Base milestones on an objective evaluation of **working systems**
#6 – Visualize and **limit** Work In Progress in backlog
#7 – **Apply cadence**; synchronize with cross-domain planning
#8 – Unlock the intrinsic **motivation** of knowledge workers
#9 – **Decentralize** decision-making

Adding Nagra principles

#10 – Automatize all: flow, test, delivery ….

Continuous integration in a night

#11 – Something you are not good at? **do it more** frequently

#12 – Physical meeting with the right guy

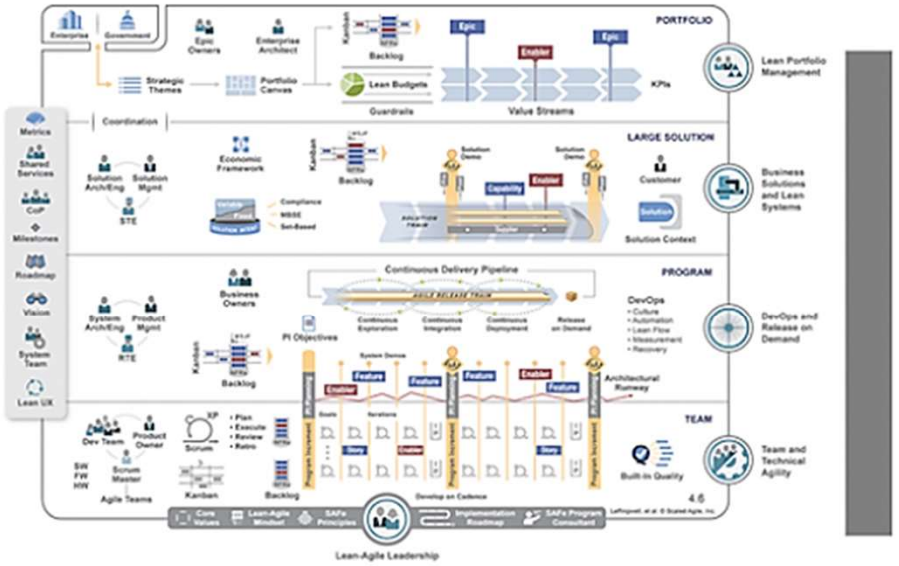
no proxy, no manager, **no bozo**

or visual skype or phone, last email

#13 – Definition of **done**[3]

Built-in Quality

Alignment



Transparency

Program Execution

SCRUM: team's work is changing

Architect + developer + tester + maintenance
= team members could do all tasks

Scrum manager distributes the tasks
Best teams are allocated at 100%

New Roles mapped to SAFe

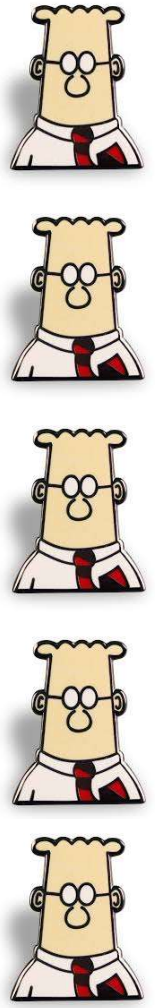
Product owner

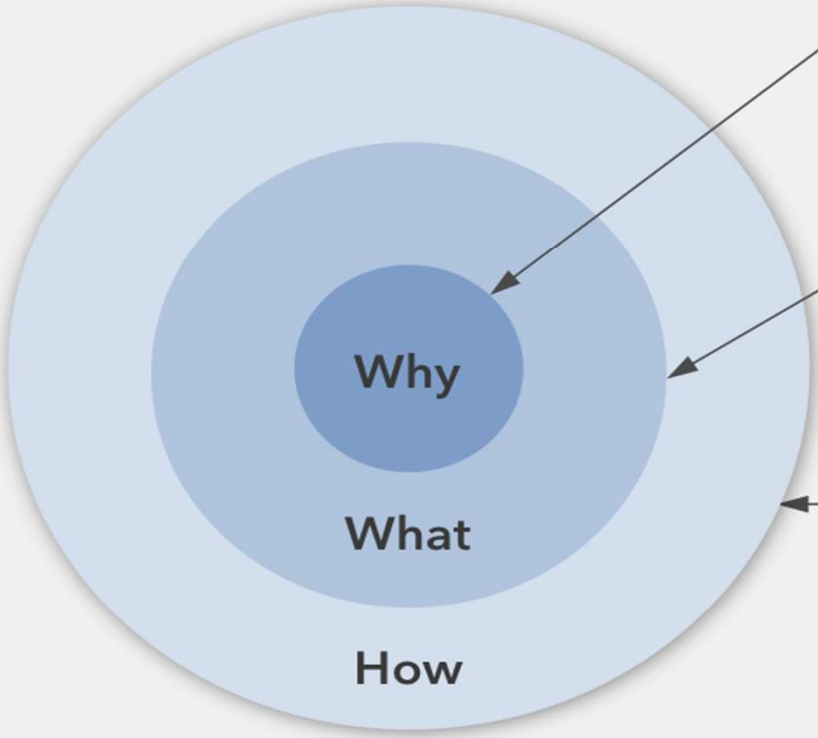
Scrum master

Feature owner

Release train engineer

Train Product manager





Why build

- To grow or add a product or business
- To add a user or partner ask
- To fix a product issue
- To address competitive or regulatory threat

What to build

Use these criteria to identify what to build

- Goals - Market share, validation, profitability or NPS
- Constraints - Time, resources, talent, tech, regulation
- Alternatives - Build, buy or partner

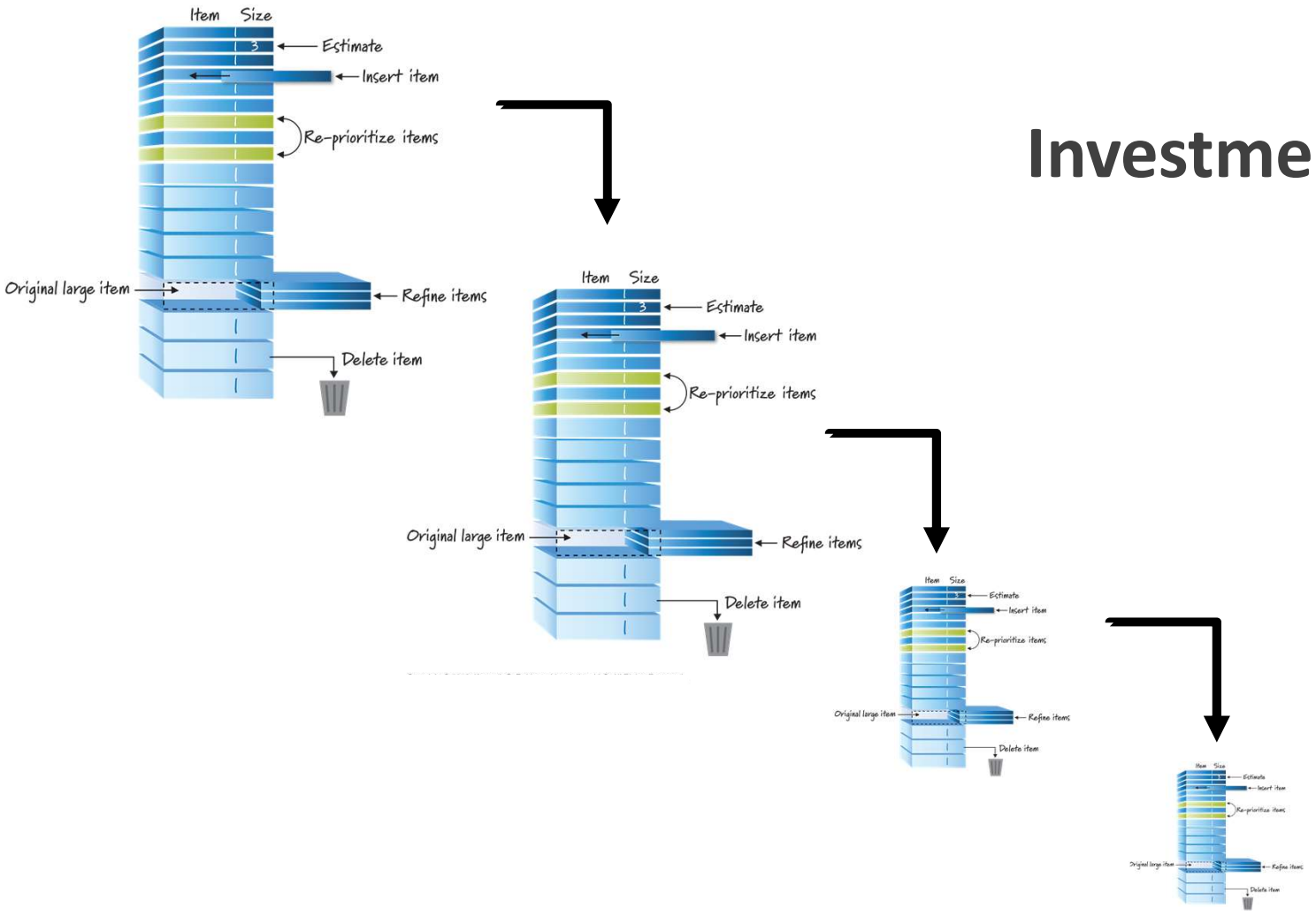
How to build

Use this framework to build the project

- Target market
- User types, use cases and user channels
- Distribution, marketing and signup
- Partnerships and risks

Golden Circle for Product Management

SIMON SINEK



Investment themes

EPIC

Feature

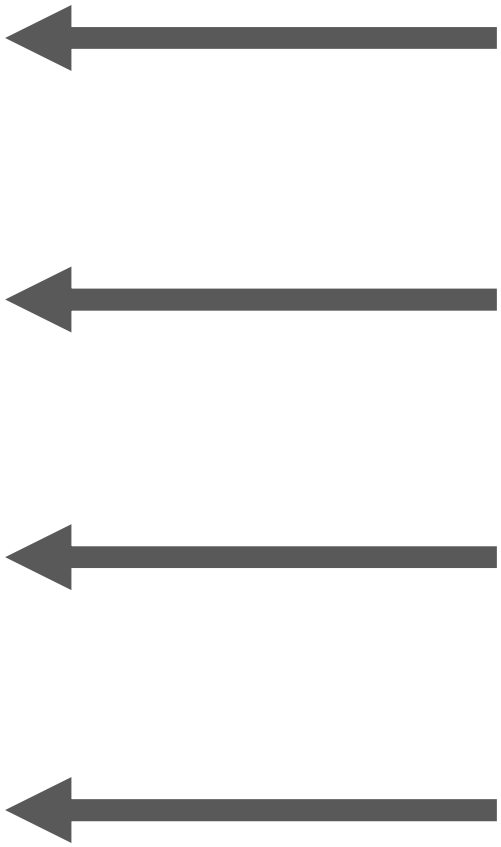
User Story

Purpose

Strategy

The way

The what



Investment themes

EPIC

Feature

User Story

Release planning event

2 days dedicated to plan the next 3 months

Everybody in the same room:

All developers
Scrum master / Product Owner
Architects / Product manager
R&D Managers
Project managers
Marketing

Business and technology teams are co-located

in the same boat

Release planning event - preparation

GoTo Agile + 3 months = Feature preparation

GoTo Agile + 6 months = first RPE for first train

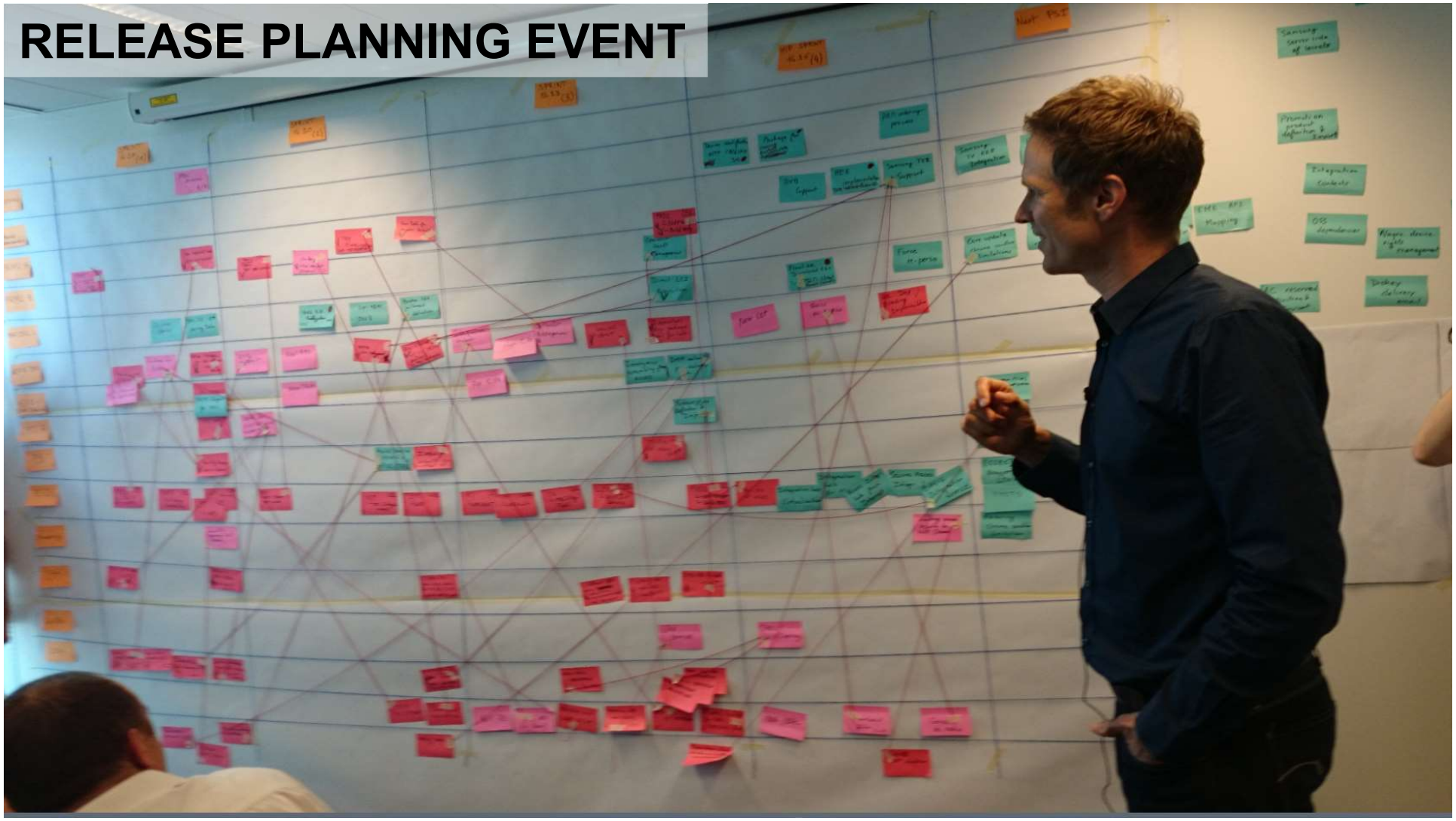
GoTo Agile + 9 months = RPE all trains

TRAIN BACKLOG

Original Order	Status	Team	BBAND_BE_OSL_1	BBAND_CloudOps	BBAND_HE-A_CHX	BBAND_HE-B_BLR	BBAND_HE-C_BLR	BBAND_HE-D_BLR	BBAND_HE-E_BLR	BBAND_HE-H_CHX	BBAND_SIT_CHX	INFRA_TEST FW	R&D_HE-SERVICES&WF_CH	R&D_HE-SYSDBA_CHX	R&D_PSTE-SDE_BLR	R&D_PSTE-SDE_CHX
		Broadband 2019-03 (PSI) KAlloc Velocity	118	143	85	186	177	210	118	185	245	51	80	99	111	44
		Adjusted Velocity	118	143	85	186	177	210	118	185	245	51	80	99	111	44
		Team Total Swag / Estimate (pts)	116	145	84	168	167	202	120	178	223	54	84.5	100.5	111	45
		Previous PI remaining work (pts)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Delta (pts)	2	-2	1	18	10	8	-2	7	22	-3	-4.5	-1.5	0	-1
		Team Load percentage	98%	101%	99%	90%	94%	96%	102%	96%	91%	106%	106%	102%	100%	102%
1	IMPL	[redacted]									10					
2	IMPL	[AWS] [redacted]MSBD an								5	6	3		25		
3	IMPL	[SSP] Imp[redacted]ative s		6	36	79	35	52	22	50	12	8				
4	IMPL	[On[redacted]ustrialize SSP		4							3	10	3.5	8		
5	IMPL	[On-Pr[redacted]y SSP depl	6	14	16						3		2	8		
6	IMPL	[TVKey C[redacted]f DVB H		3				38	23	40	30					
7	IMPL	[TVKey[redacted]ervice rea						49	35						21	20
8	IMPL	Optin[redacted]SP and nati	14	3	5	12	20	12	9	24	5	2		4		
9	IMPL	[On-P[redacted]y SSP depl								18		1		2		


RELEASE PLANNING EVENT

RELEASE PLANNING EVENT



Question to the teams:

What do you have to do

What is the estimated work load

What is your capacity

Plan the next 3 months

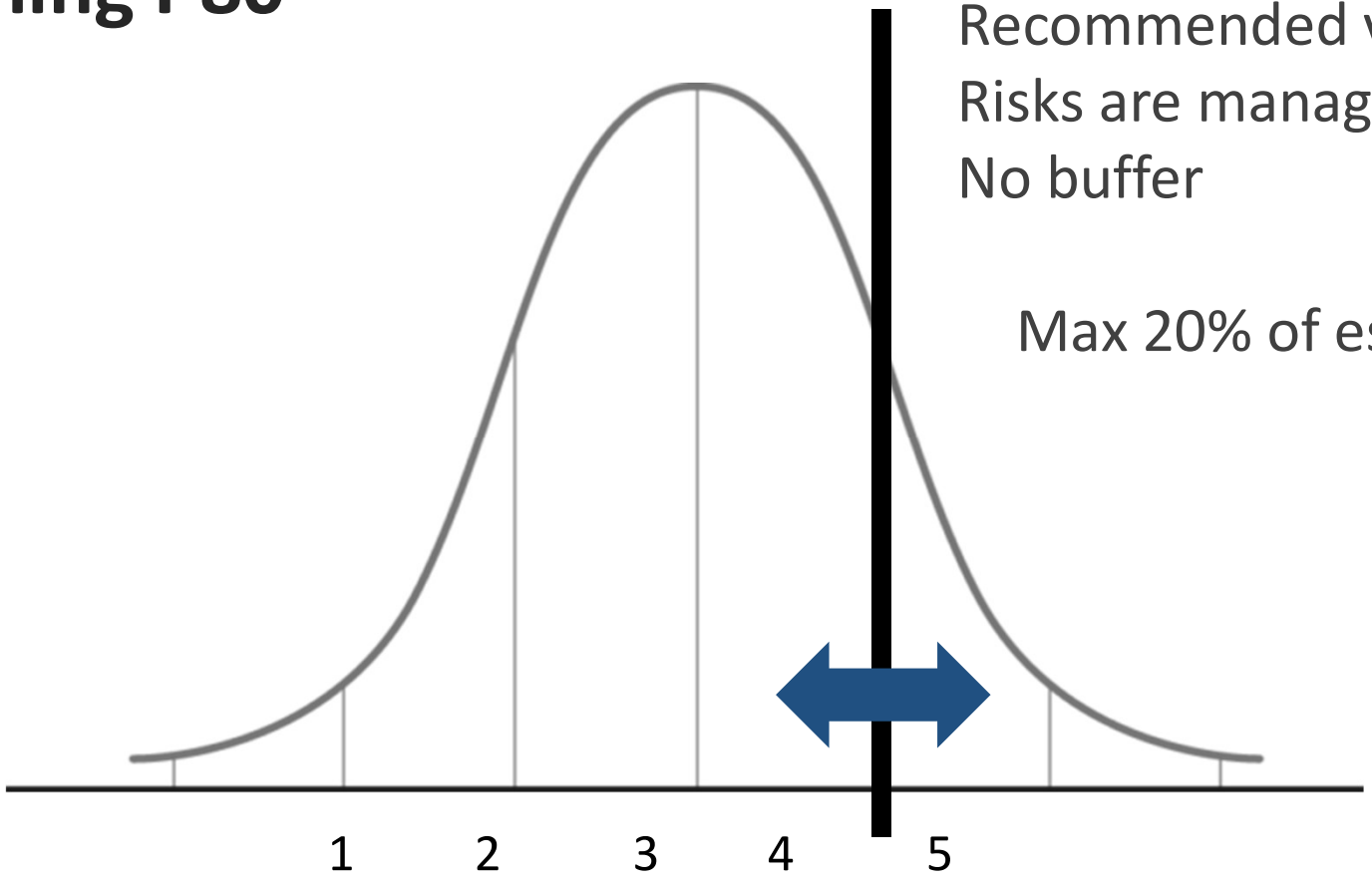
Dependencies and risks

?

Teams confidence vote to deliver: from 1 to 5

if bellow 4, we descope something

Planning P80



Recommended vote at 4
Risks are managed
No buffer

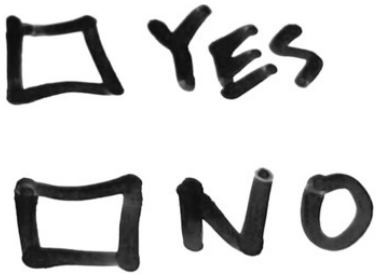
Max 20% of escalation
I&A

Question from project manager to dev team

Teams deliver **working software** or work item

no % of task based on discussion

Is it delivered ?



Metrics: feature done³

80% of the end to end features are **done³**

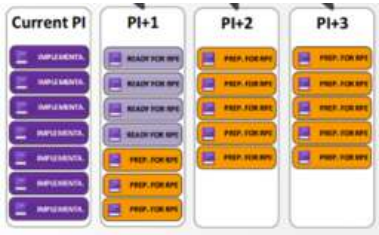
As we have no buffer, we **manage** issues

Max 20% of feature needs management **help**

Project delay is in sprint order of magnitude

not months

Product Iteration 3 months



Full autonomy for the team to have things done

Low escalation ratio

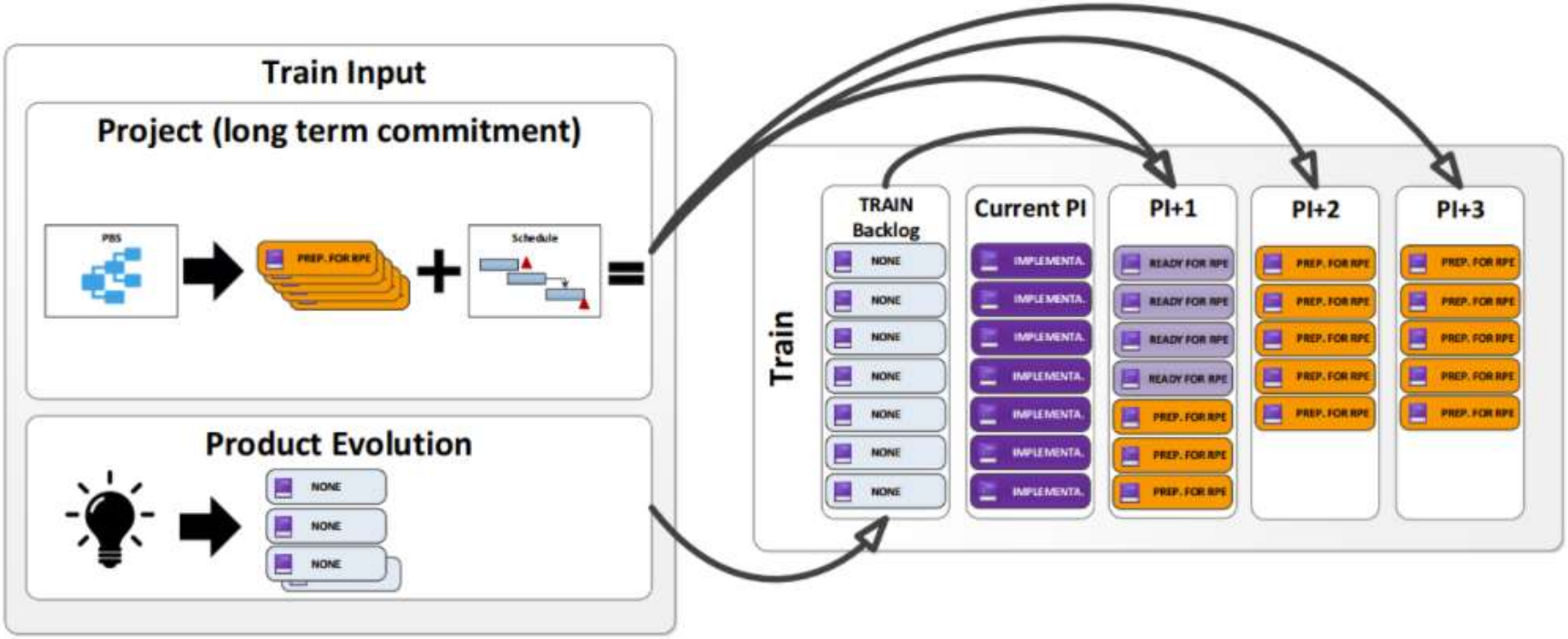
Mutual commitment for the next 3 months:

Management to not change objectives

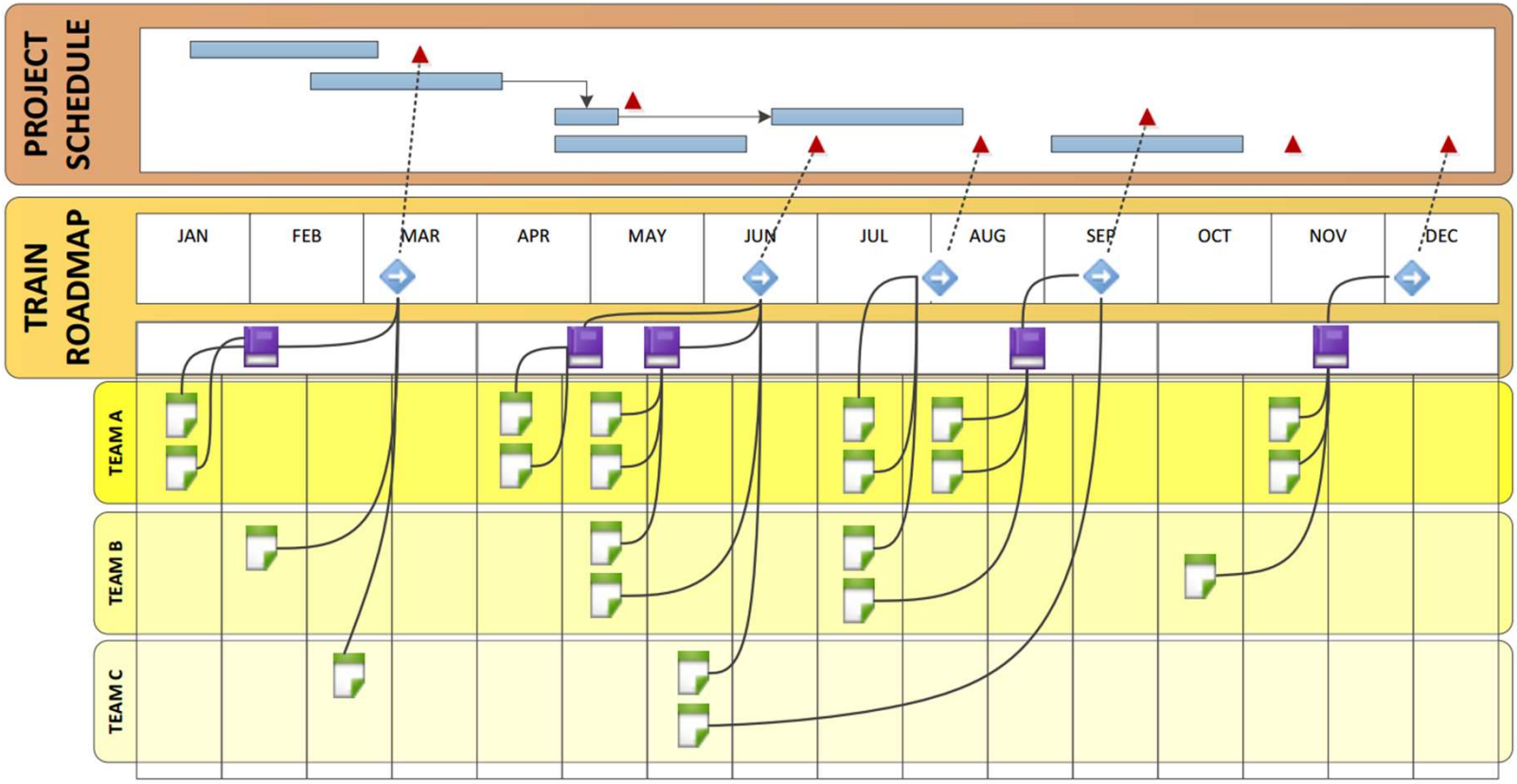
Teams commit to deliver

But always…change is welcome

Long Term Commitments in train



Project Milestones and Train Deliveries



Customer

Project manager

Non agile org

Observation

Teams are doing the role of R&D project managers

Discussion between teams

without proxy

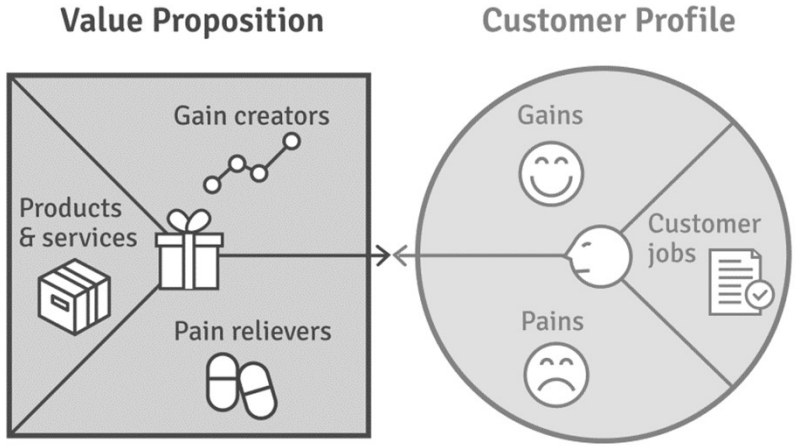
Project managers have more time for program management, partner and customer interactions

Observation

Very **low** escalation to management

Managers have more time for **business value** study

More time to really **help** team on impediment



Observation

All backlogs are **transparent**

for the organization

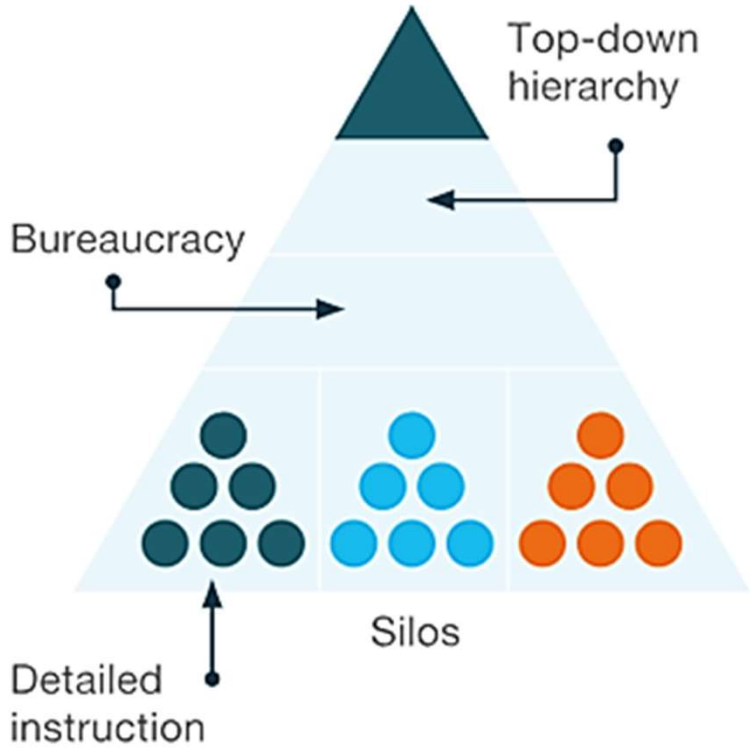
Strategy is on the wall - visual management

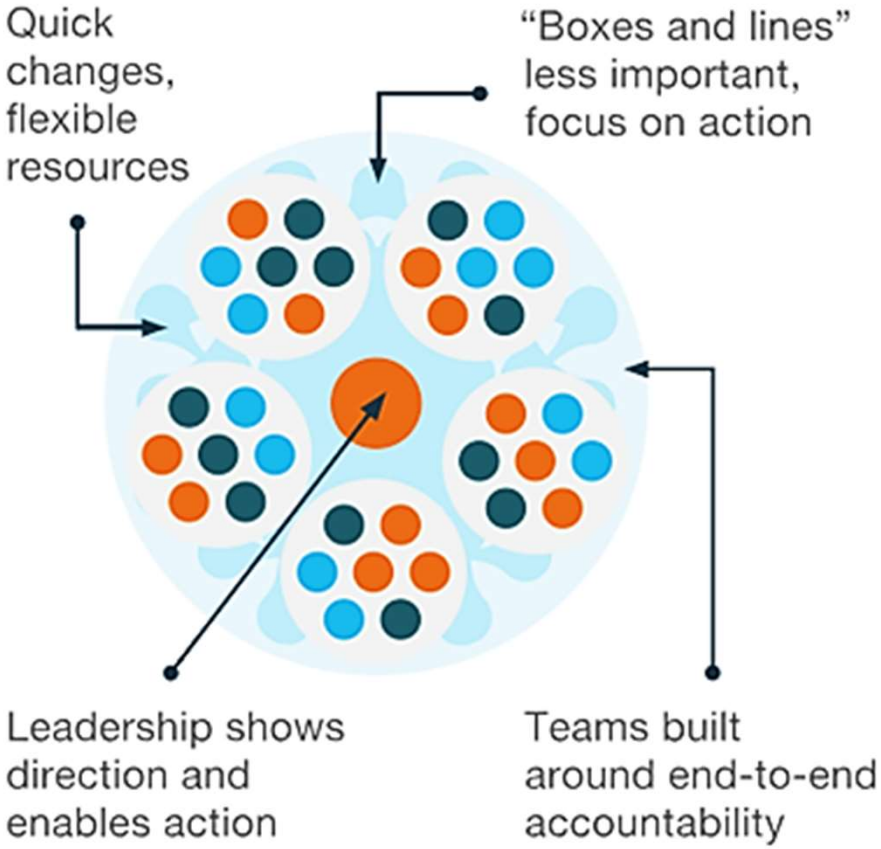
Lot of soft skills are needed:

Communication - presentation - negotiation – transversal leadership

Structure vs Organization

McKinsey&Company





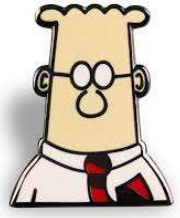
Observation

Need less Ego but team spirit

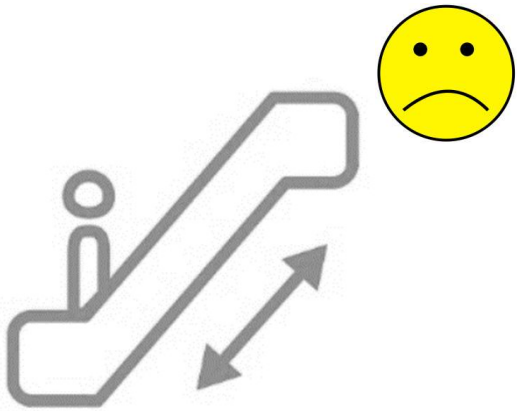
Low performers are rejected by the team

Structure and HR org chart are fixed

agile teams may change every 3 months



Changing middle management



Team Leader **becomes** Lead Engineer

+15% work force allocated in train

more flexibility to move across teams

Manager → leader

Bad manager behavior ruins agility

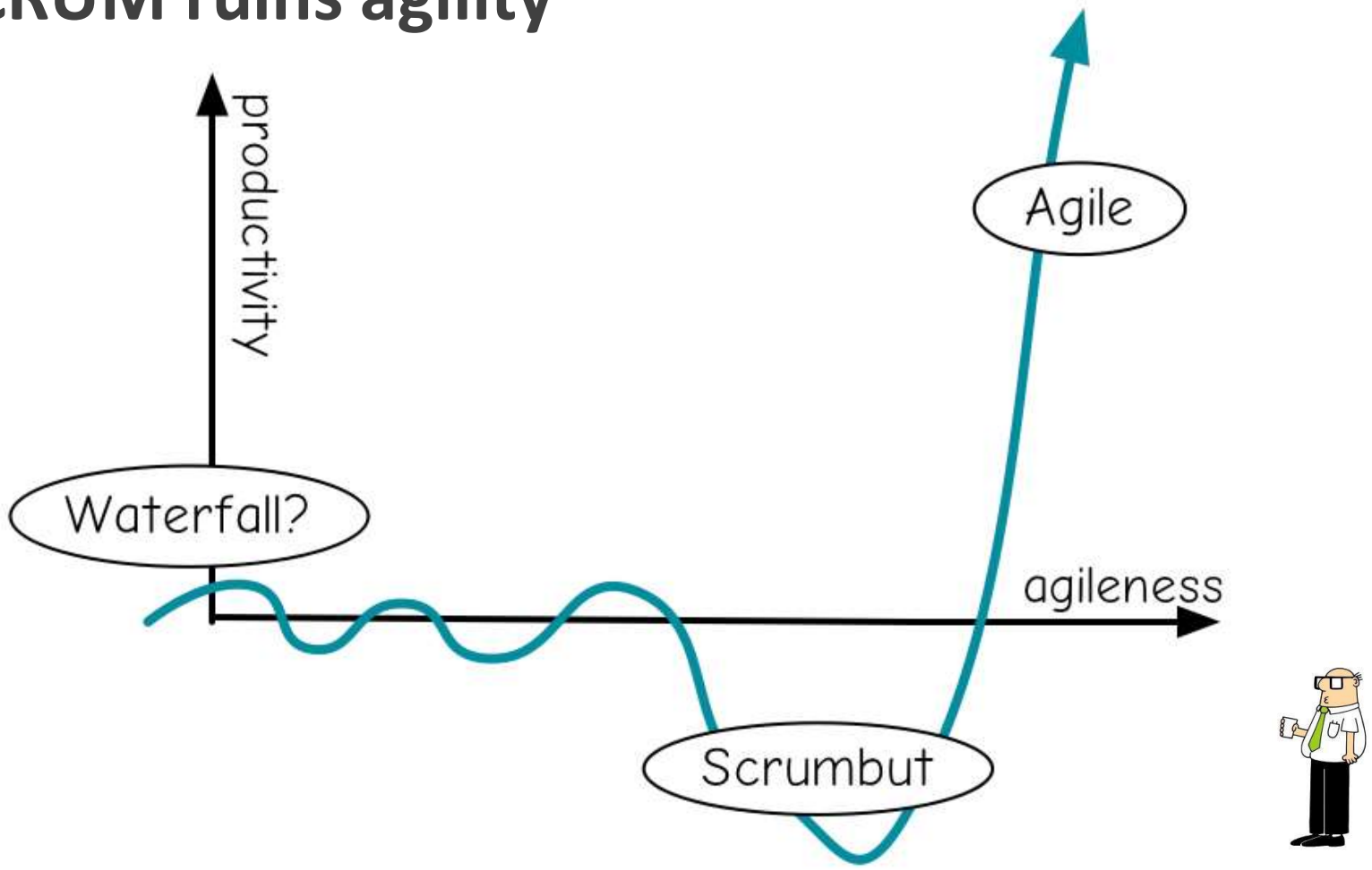
Micro management

No decision

No trust

No friendly environment for feedback

Bad SCRUM ruins agility



Pain point: mindset

Inspect and Adapt needs efforts to be maintained

Mindset to get **train** optimization
not team optimization

Teams feel too much **monitor and control**
it is not the goal

Pain point: corporate support

Change from **carrier track**

Team lead Versus Lead Engineer

Kudos for individual Versus Kudos for **team**

Annual Performance appraisal

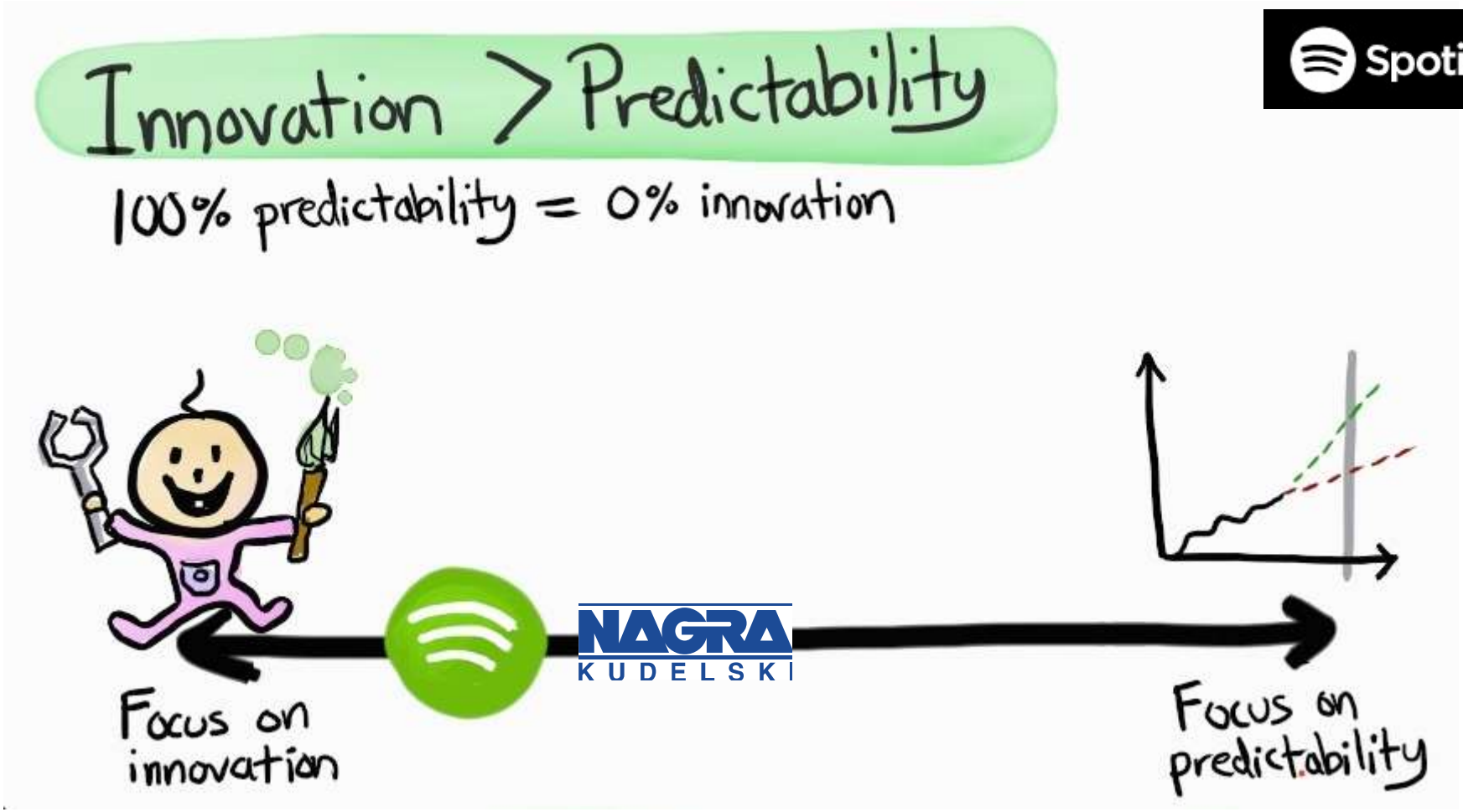
Versus continuous **feedback**

Pain point: corporate support

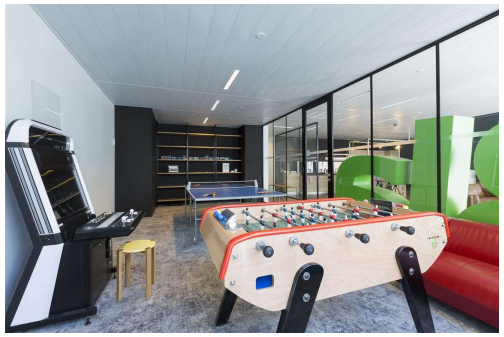
Re organize office layout by scrum team

Scrum teams may change every 3 months

who is the manager ?


Innovation > Predictability
100% predictability = 0% innovation
Spotify
NAGRA
KUDELSKI
Focus on innovation
Focus on predictability

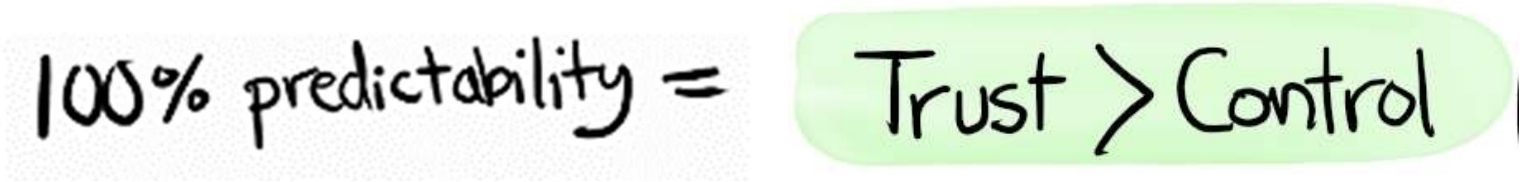
Innovation



- **80%** time allocation is tracked in agile backlog
- **20%** time allocation is not tracked

- 1 week / 3 months for **innovation** or hackathon
- Feature in backlog for specific **exploration or prototyping**

Innovation



Predictability improve trust then empowerment

It gives possibility to innovate

Innovation

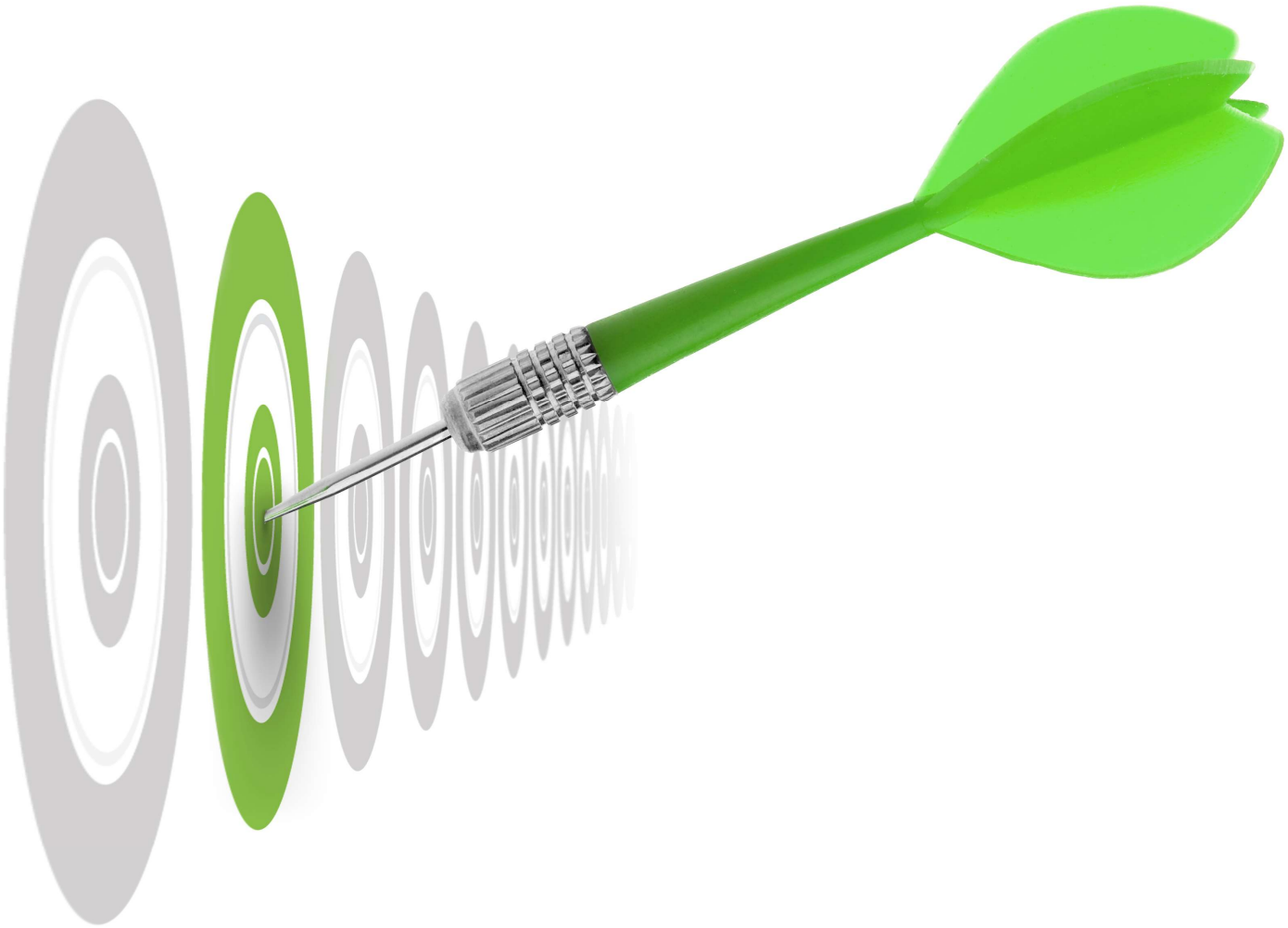
1. Tolerance for **failure** but no tolerance for incompetence

2. Willingness to experiment but highly **disciplined**

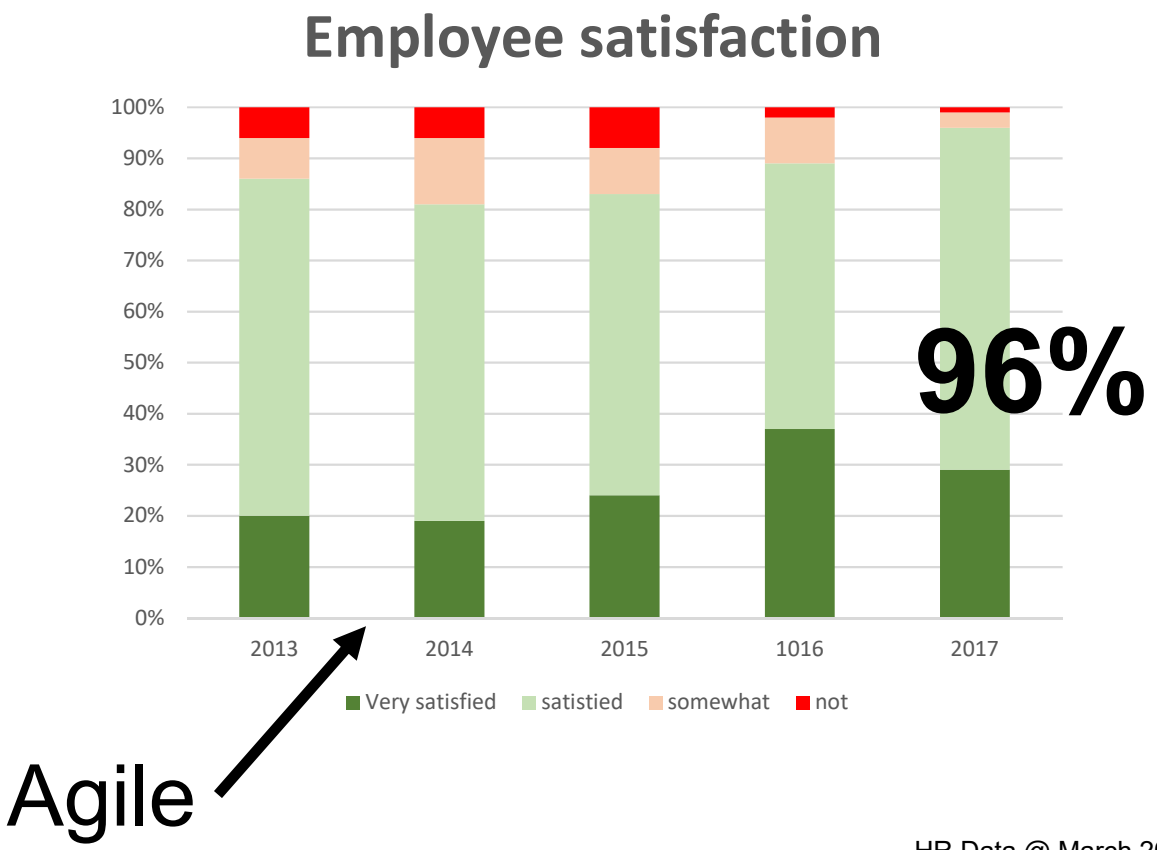
3. Collaboration but with individual **accountability**

4. Flat organization but strong **leadership**

Results



People



HR Data @ March 2018

R&D Efficiency

PI 2018-12	Preparation PI 2019-03			Implementation PI 2018-12		
	17/09/2018 - 09/12/2018					
	Features in "Prepare for PI" removed from backlog	Features in "Ready for PI" removed from backlog	Features carried from previous PI	Objective 4 Top priority Features Done	Objective 5 Overall features Done	Objective 6 Backlog volatility during PI
Broadcast	8	11	8%	73%	83%	8%
Broadband	24	13	3%	69%	77%	9%
IOT-SECURITY	10	5	0%	90%	80%	12%

Trend vs. Previous PI

R&D Data @ June 2018

Net Promoter Score

Press release 2018

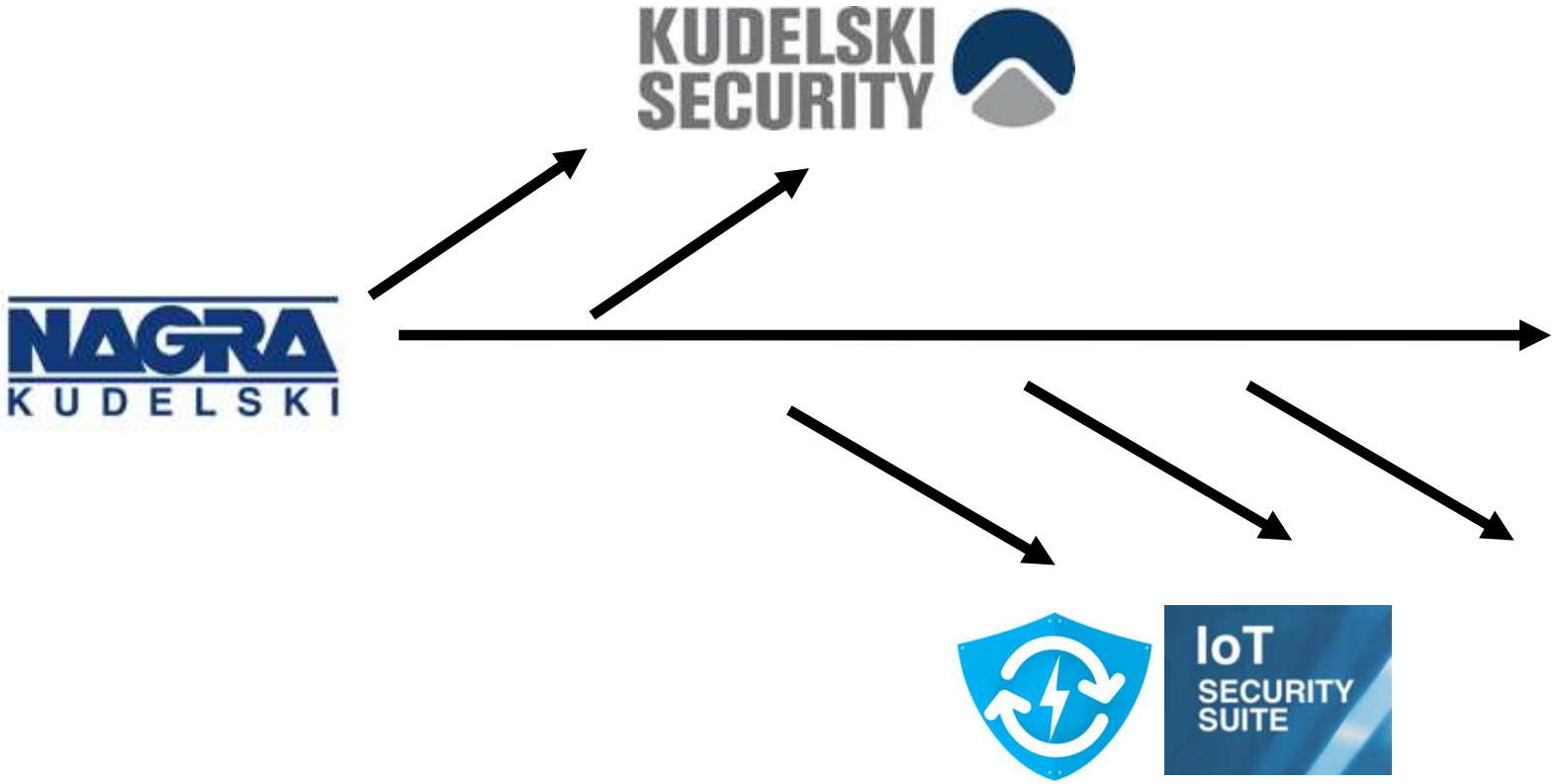
Business

$ 50 million

IPTV
Revenue in 2018
After 5 years

Press release 2018

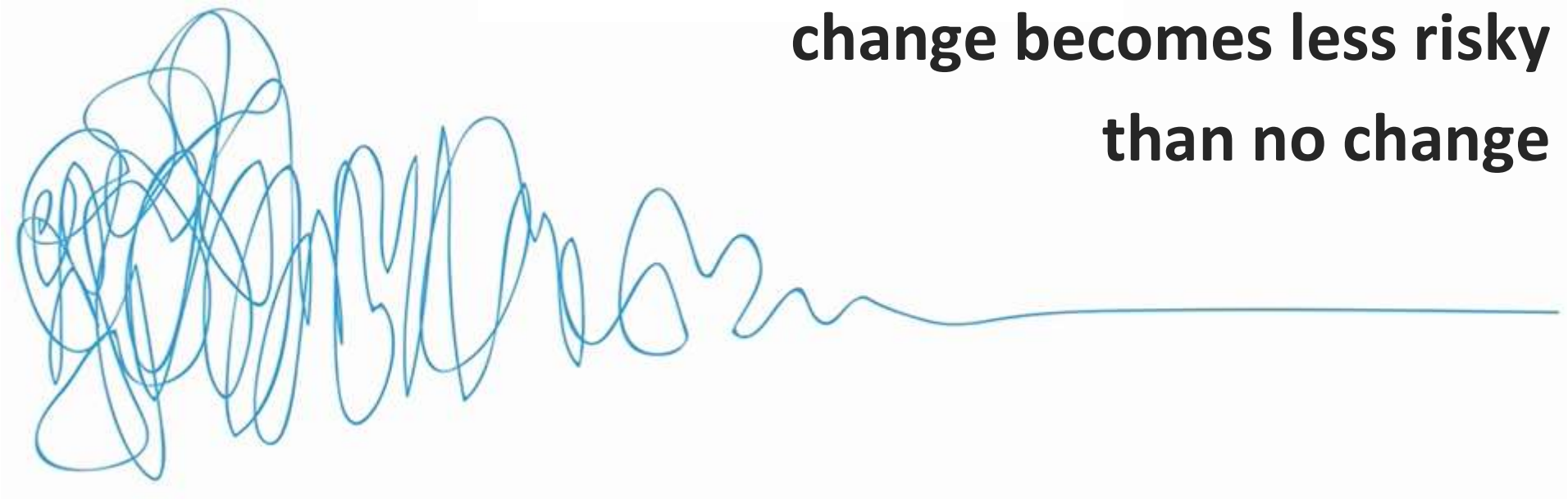
Innovation



Business Agility

If the management understands all impacts of a change

If the organization welcomes change with no compromise



change becomes less risky

than no change