

How Agile can Help Turnarounds to Succeed

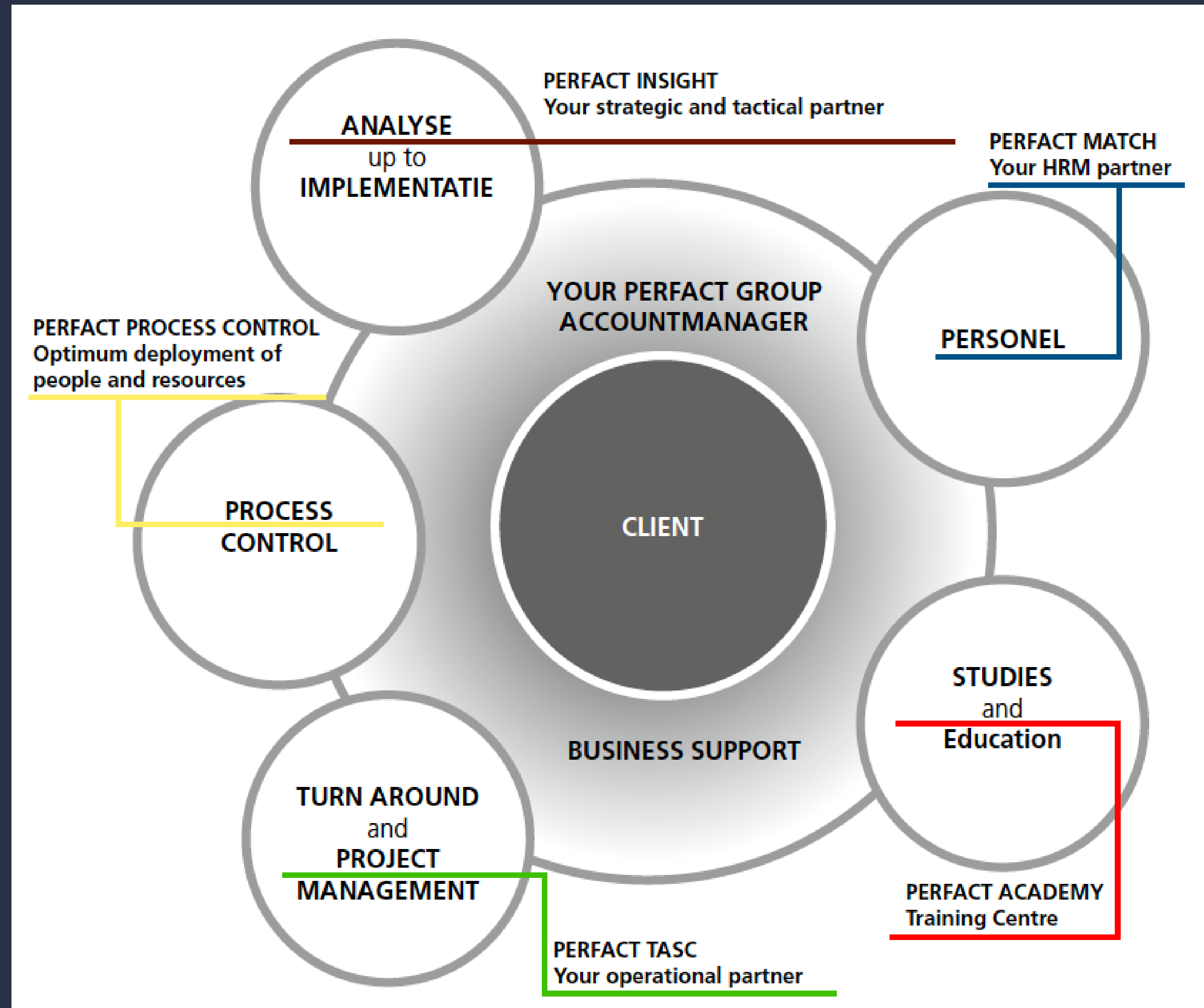


Lars Bessems
1973

Expertise Manager Turnarounds & Projects
Director of Events PMI Netherlands Chapter

Since 1996 experience in Petro-/ Chemical / Gas /
Pharmaceutical and Electricity Industry

Master in Biomechanical Engineering
Post Academic Master in Business Administration
PMI-PMP / -SP /-ACP
PRINCE II
Scrum Master PSM-I
Lean Six Sigma Black Belt





All relevant information for
Maintenance and Turn Arouns



Schedule information for
Maintenance and Turn
Arouns

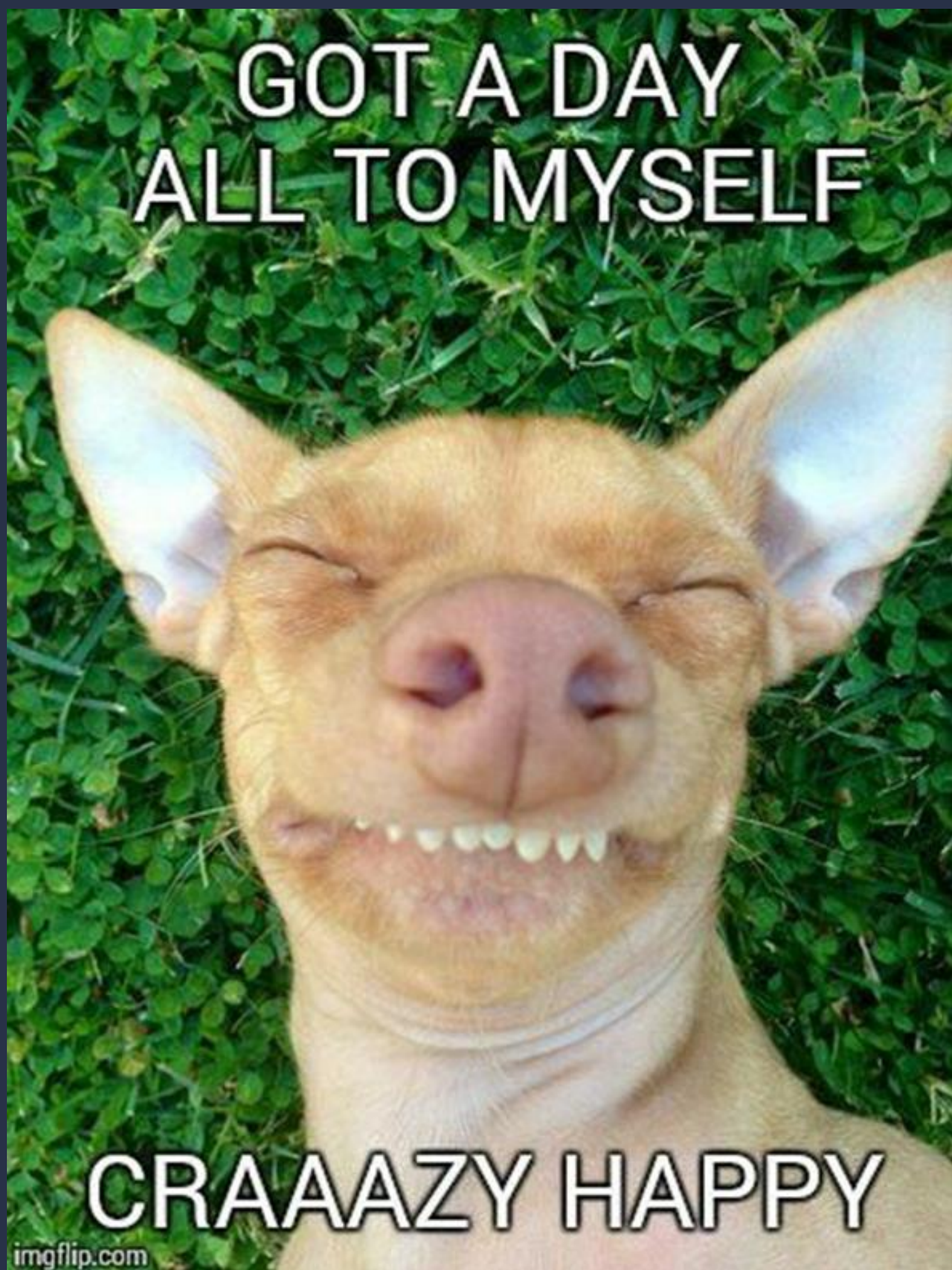


Complete
solution from
A to **Z** ...

Why are you here?



Unhappy family



Day off ?!

Good food and drinks ?





Networking ?



Networking !

Improve yourself !





**How wonderful it is that
nobody need wait a
single moment
before starting
to improve
the world.**

Anne Frank

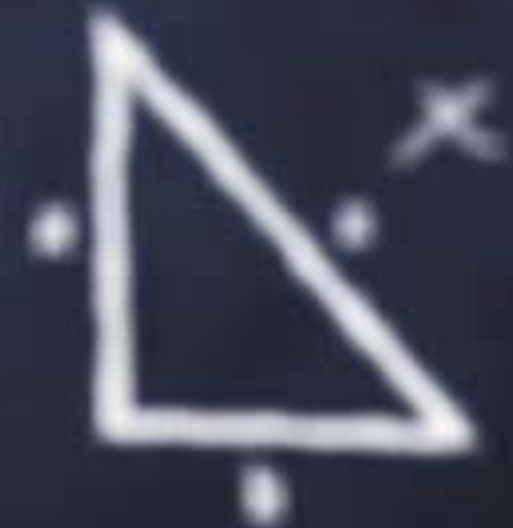
Improve the world !



Happy family !!!!



Event



$$a^2 + b^2 = c^2$$

$$E = \frac{1}{2} \frac{1}{f}$$

Empirical User Stories

Em

TA Service provider meets Asset Owner

Things that happen very often





Too late started.

Nothing much has happened

Priority Daily Maintenance.

Not much will happen



TA Process is not familiar.

TA only happens every 4-5 year





Stepping into the unknown.

TA maybe even for the First time

Time for change.

TA Improvement



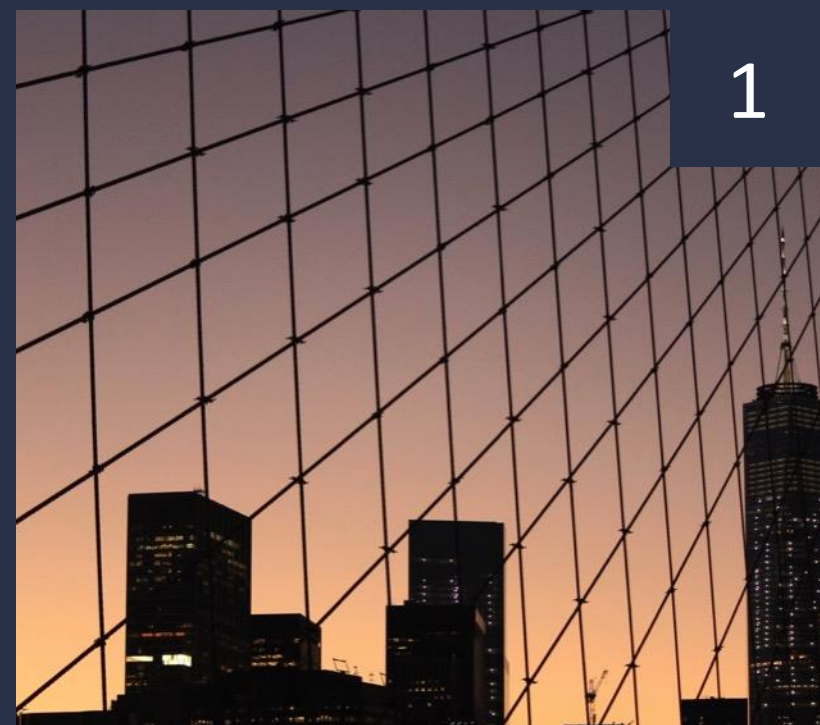
TOGETHER WE CAN DO IT

Make it
happen!

YES
WE
CAN

SUCCESS

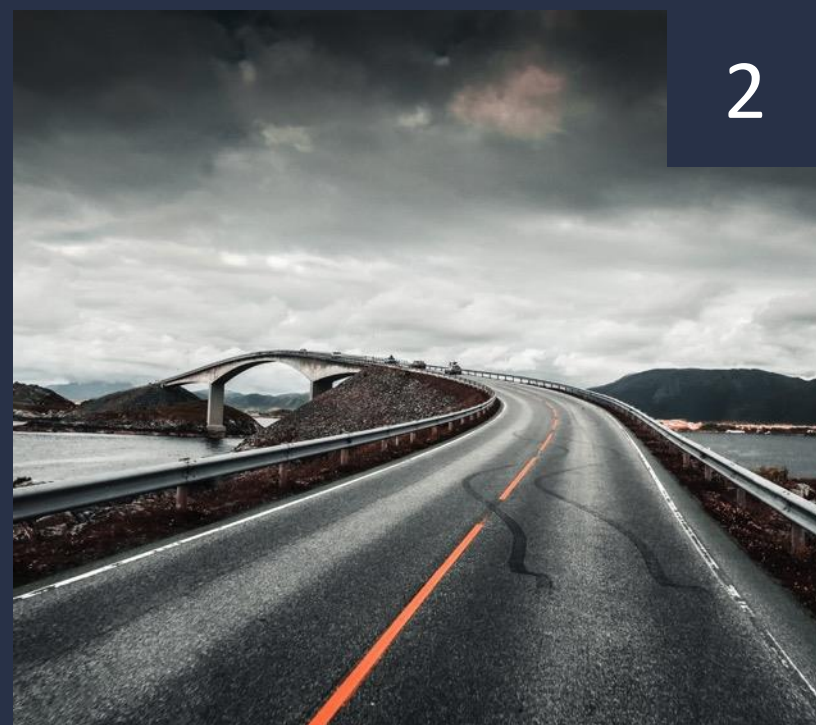
Always bear these **points** in mind
with the premise of the time still available
till Execution of the TA



1

What

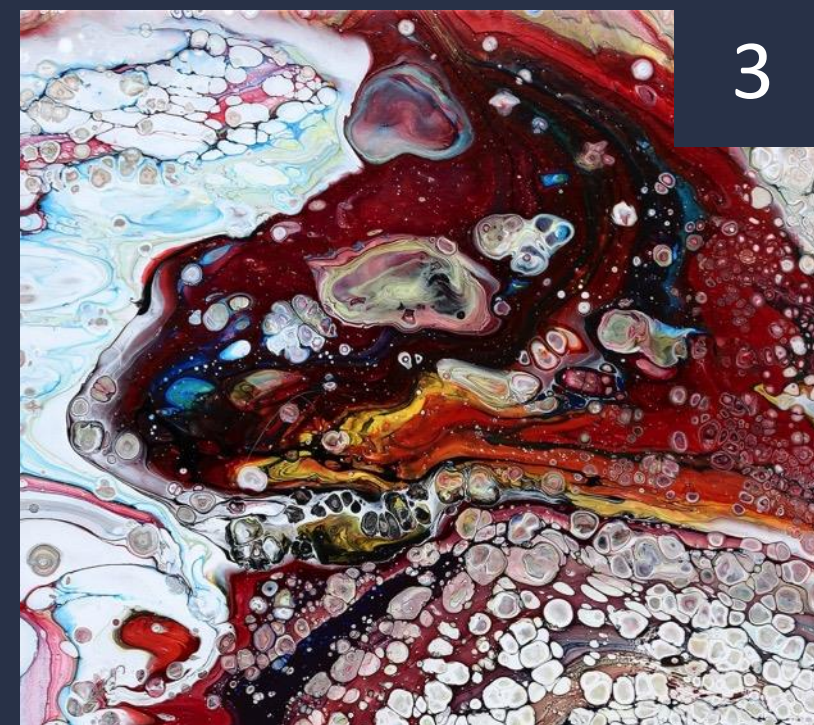
can we do in this time period



2

Why

should we do it this TA



3

When

Should we do it!



4

How

can we do it



5

Who

can do it

TA Project Phases and their needed time periods per TA Category



Project Initiation Phase



Waterfall Method

Scope

Schedule



Communication

Quality

Risk

Integration

**TA
Knowledge
Area's**

Procurement

Resources

Stakeholders

Cost

Deliverables per TA Project Phase and Knowledge Area

Previous

Cat. 1 Cat. 2 Cat. 3	Preparation Phase		Scoping Phase		Planning Phase		Execution Phase		Close-out Phase	
	-26	-24	-18	-12	0	0	0			
	-20	-18	-8							
Cat. 3 -14		-12								
Scope	<ul style="list-style-type: none">Preliminary Scope + Capex ProjectsDefine Scope Management Plan		<ul style="list-style-type: none">GatekeepingTechnical Task ClarificationScope FreezeInitiate Scope Change procedure		<ul style="list-style-type: none">Prepare Scope + Capex Projects workpackagesTagging completed		<ul style="list-style-type: none">Prepare Scope ChangesPunch list		<ul style="list-style-type: none">Punch List closedAs-built documentation completedPreliminary Scope next TA	
Schedule	<ul style="list-style-type: none">Milestone Schedule		<ul style="list-style-type: none">Follow-up Milestone ScheduleDefine Schedule Management Plan		<ul style="list-style-type: none">Define Shutdown-Start-up ScheduleDefine Detail Schedule incl. projectsIntegrale Schedule		<ul style="list-style-type: none">Follow-up Integrale Schedule		<ul style="list-style-type: none">Analyse Actual Schedule against Baseline	
Resources	<ul style="list-style-type: none">Define Resource Management PlanSet-up TA Scope OrganisationKick-off meetingDefine TA-Roles		<ul style="list-style-type: none">Set-up TA Planning OrganisationPlan Planning Resources		<ul style="list-style-type: none">Set-up TA Execution OrganisationPlan Execution ResourcesDefine Training RequirementsDefine Infrastructure PlanKick-off meeting		<ul style="list-style-type: none">Set-up TA Close-Out OrganisationPlan Close-Out Resources		<ul style="list-style-type: none">Set-up TA Scope OrganisationKick-off meeting	
Integration	<ul style="list-style-type: none">TA Management PlanReview Lessons Learned		<ul style="list-style-type: none">Approve TA Management Plan		<ul style="list-style-type: none">Scope Change approvalsCreate Workpermits		<ul style="list-style-type: none">Execute ScopeScope Change approvalsAdminster Work Permits		<ul style="list-style-type: none">Close Out report incl. Lessone LearnedBenchmark conducted	
Stakeholders	<ul style="list-style-type: none">Define Stakeholder management planIdentify StakeholdersStakeholder listPlan Engagement		<ul style="list-style-type: none">Update Stakeholder listPlan EngagementManage EngagementMonitor Stakeholders		<ul style="list-style-type: none">Update Stakeholder listPlan EngagementManage EngagementMonitor Stakeholders		<ul style="list-style-type: none">Update Stakeholder listPlan EngagementManage EngagementMonitor Stakeholders		<ul style="list-style-type: none">Update Stakeholder listPlan EngagementManage EngagementMonitor Stakeholders	
...										

Next

Deliverables per TA Project Phase and Knowledge Area

Previous

Cat. 1 -12		Preparation Phase -11		Scoping Phase -18		Planning Phase 0		Execution Phase		Close-out Phase	
Cat. 2 -10		Preparation Phase -18		Scoping Phase -17		Planning Phase 0		Execution Phase		Close-out Phase	
Cat. 3 -18		Preparation Phase -17		Scoping Phase -8		Planning Phase 0		Execution Phase		Close-out Phase	
Scope		<ul style="list-style-type: none">Preliminary Scope + Capex ProjectsDefine Scope Management		<ul style="list-style-type: none">GatekeepingTechnical Task ClarificationScope FreezeChange procedure		<ul style="list-style-type: none">Prepare Scope + Capex Projects workpackagesTagging completed		<ul style="list-style-type: none">Prepare Scope ChangesPunch list		<ul style="list-style-type: none">Punch List closedAs-built documentation completedPreliminary Scope next TA	
Schedule		<ul style="list-style-type: none">Milestone Schedule		<ul style="list-style-type: none">Milestone ScheduleManagement Plan		<ul style="list-style-type: none">Define Shutdown-Start-up ScheduleDefine Detail Schedule incl. projectsIntegrale Schedule		<ul style="list-style-type: none">Follow-up Integrale Schedule		<ul style="list-style-type: none">Analyse Actual Schedule against Baseline	
Resources		<ul style="list-style-type: none">Define Resource Management PlanSet-up TA Scope OrganisationKick-off meetingDefine TA-Roles		<ul style="list-style-type: none">Set-up TA Planning OrganisationPlan Planning Resources		<ul style="list-style-type: none">Set-up TA Execution OrganisationPlan Execution ResourcesDefine Training RequirementsDefine Infrastructure PlanKick-off meeting		<ul style="list-style-type: none">Set-up TA Close-Out OrganisationPlan Close-Out Resources		<ul style="list-style-type: none">Set-up TA Scope OrganisationKick-off meeting	
Integration		<ul style="list-style-type: none">TA Management PlanReview Lessons Learned		<ul style="list-style-type: none">Approve TA Management Plan		<ul style="list-style-type: none">Scope Change approvalsCreate Workpermits		<ul style="list-style-type: none">Execute ScopeScope Change approvalsAdminster Work Permits		<ul style="list-style-type: none">Close Out report incl. Lessone LearnedBenchmark conducted	
Stakeholders		<ul style="list-style-type: none">Define Stakeholder management planIdentify StakeholdersStakeholder listPlan Engagement		<ul style="list-style-type: none">Update Stakeholder listPlan EngagementManage EngagementMonitor Stakeholders		<ul style="list-style-type: none">Update Stakeholder listPlan EngagementManage EngagementMonitor Stakeholders		<ul style="list-style-type: none">Update Stakeholder listPlan EngagementManage EngagementMonitor Stakeholders		<ul style="list-style-type: none">Update Stakeholder listPlan EngagementManage EngagementMonitor Stakeholders	
...											

Too late Started !!!

Next

Deliverables per TA Project Phase and Knowledge Area



Deliverables per TA Project Phase and Knowledge Area

Previous

Cat. 1 -26	Preparation Phase --24		Scoping Phase -18		Planning Phase 0		Execution Phase		Close-out Phase	
Cat. 2 -20	Preparation Phase -18		Scoping Phase -12		Planning Phase 0		Execution Phase		Close-out Phase	
Cat. 3 -14	Preparation Phase -12		Scoping Phase -8		Planning Phase 0		Execution Phase		Close-out Phase	
Scope	<ul style="list-style-type: none">Preliminary Scope + Capex ProjectsDefine Scope Management Plan		<ul style="list-style-type: none">GatekeepingTechnical Task ClarificationScope FreezeInitiate Scope Change		<ul style="list-style-type: none">Prepare Scope + Capex Projects workpackagesTagging completed				<ul style="list-style-type: none">Punch List closedAs-built documentation completedPreliminary Scope next TA	
Schedule	<ul style="list-style-type: none">Milestone Schedule		<ul style="list-style-type: none">Follow-up Milestone ScheduleDefine Schedule		<ul style="list-style-type: none">Shutdown-Start-upDetail Schedule incl. projectsFollow-up integrate schedule				<ul style="list-style-type: none">Analyse Actual Schedule against Baseline	
Resources	<ul style="list-style-type: none">Define Resource Management PlanSet-up TA Scope OrganisationKick-off meetingDefine TA-Roles		<ul style="list-style-type: none">Set-up TA Planning OrganisationPlan Planning Resources		<ul style="list-style-type: none">Set-up TA Execution OrganisationPlan Execution ResourcesPlan Planning RequirementsPlan Infrastructure PlanPlan Meeting		<ul style="list-style-type: none">Set-up TA Close-Out OrganisationPlan Close-Out Resources		<ul style="list-style-type: none">Set-up TA Scope OrganisationKick-off meeting	
Integration	<ul style="list-style-type: none">TA Management PlanReview Lessons Learned		<ul style="list-style-type: none">Approve TA Management Plan		<ul style="list-style-type: none">Submit approvalsCreate permits		<ul style="list-style-type: none">Execute ScopeScope Change approvalsAdminister Work Permits		<ul style="list-style-type: none">Close Out report incl. Lessons LearnedBenchmark conducted	
Stakeholders	<ul style="list-style-type: none">Define Stakeholder management planIdentify StakeholdersStakeholder listPlan Engagement		<ul style="list-style-type: none">Update Stakeholder listPlan EngagementManage EngagementMonitor Stakeholders		<ul style="list-style-type: none">Update Stakeholder listPlan EngagementManage EngagementMonitor Stakeholders		<ul style="list-style-type: none">Update Stakeholder listPlan EngagementManage EngagementMonitor Stakeholders		<ul style="list-style-type: none">Update Stakeholder listPlan EngagementManage EngagementMonitor Stakeholders	
...										

TA Processes
unknown/unclear

27

Knowledge Area's

Next

Deliverables per TA Project Phase and Knowledge Area

Previous

Cat. 1 -26	Preparation Phase --24		Scoping Phase -18		Planning Phase 0		Execution Phase		Close-out Phase	
Cat. 2 -20	Preparation Phase -18		Scoping Phase -12		Planning Phase 0		Execution Phase		Close-out Phase	
Cat. 3 -14	Preparation Phase -12		Scoping Phase -8		Planning Phase 0		Execution Phase		Close-out Phase	
Scope	<ul style="list-style-type: none">Preliminary Scope + Capex ProjectsDefine Scope Management Plan		<ul style="list-style-type: none">GatekeepingTechnical Task ClarificationScope FreezeInitiate Scope Change procedure		<ul style="list-style-type: none">Prepare Scope + Capex Projects workpackagesTagging completed		<ul style="list-style-type: none">Prepare Scope ChangesPunch list		<ul style="list-style-type: none">Punch List closedAs-built documentation completedPreliminary Scope next TA	
Schedule	<ul style="list-style-type: none">Milestone Schedule		<ul style="list-style-type: none">Follow-up Milestone ScheduleDefine Schedule Management Plan		<ul style="list-style-type: none">Define Shutdown-Start-up ScheduleDefine Detail Schedule incl. projectsIntegrale Schedule		<ul style="list-style-type: none">Follow-up Integrale Schedule		<ul style="list-style-type: none">Analyse Actual Schedule against Baseline	
Resources	<ul style="list-style-type: none">Define Resource Management PlanSet-up TA Scope OrganisationKick-off meetingDefine TA-Roles		<ul style="list-style-type: none">Set-up TA Planning OrganisationPlan Planning Resources		<ul style="list-style-type: none">Set-up TA Execution OrganisationPlan Execution ResourcesDefine Training RequirementsDefine Infrastructure PlanKick-off meeting		<ul style="list-style-type: none">Set-up TA Close-Out OrganisationPlan Close-Out Resources		<ul style="list-style-type: none">Set-up TA Scope OrganisationKick-off meeting	
Integration	<ul style="list-style-type: none">TA Management PlanReview Lessons Learned		<ul style="list-style-type: none">Approve TA Management Plan		<ul style="list-style-type: none">Scope Change approvalsCreate Workpermits		<ul style="list-style-type: none">Execute ScopeScope Change approvalsAdminster Work Permits		<ul style="list-style-type: none">Close Out report incl. Lessone LearnedBenchmark conducted	
Stakeholders	<ul style="list-style-type: none">Define Stakeholder management planIdentify StakeholdersStakeholder listPlan Engagement		<ul style="list-style-type: none">Update Stakeholder listPlan EngagementManage EngagementMonitor Stakeholders		<ul style="list-style-type: none">Update Stakeholder listPlan EngagementManage EngagementMonitor Stakeholders		<ul style="list-style-type: none">Update Stakeholder listPlan EngagementManage EngagementMonitor Stakeholders		<ul style="list-style-type: none">Update Stakeholder listPlan Engagement	
...										

Knowledge Area's 28

TA Improvement

Next

How to Proceed now!

Giving all the things needed for a successful TA how can we make the best out of it giving the time left over and the set conditions.

What are the options
Define



What is the status:
Measure



What can we use:
Analyse

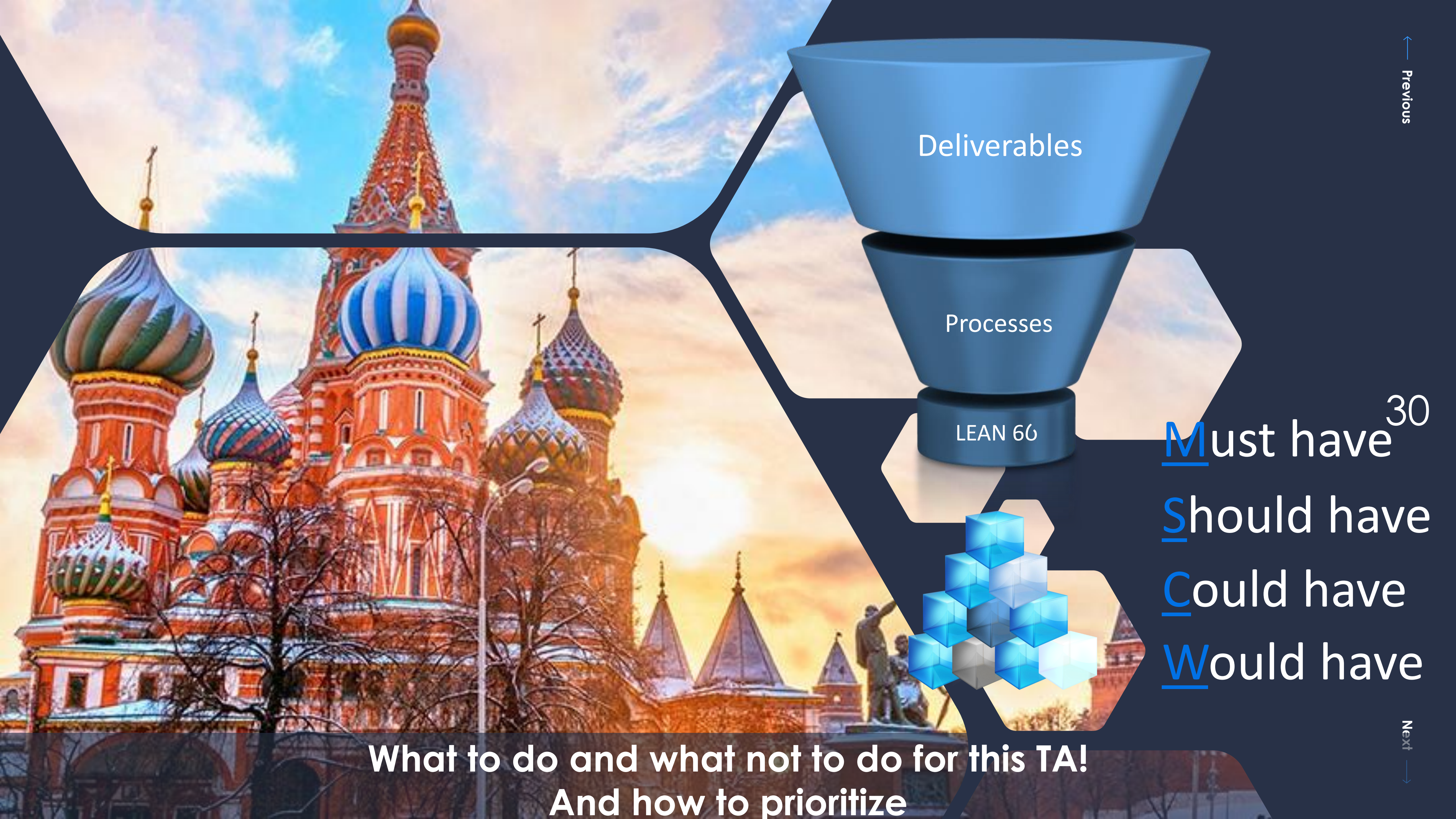


What can we develop
Improve



Is it working
Monitor

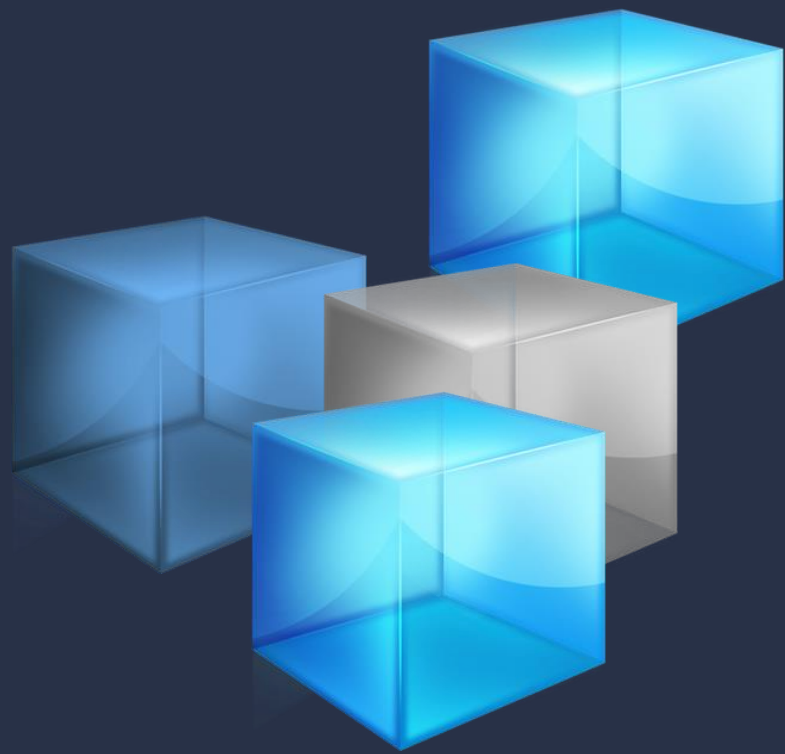




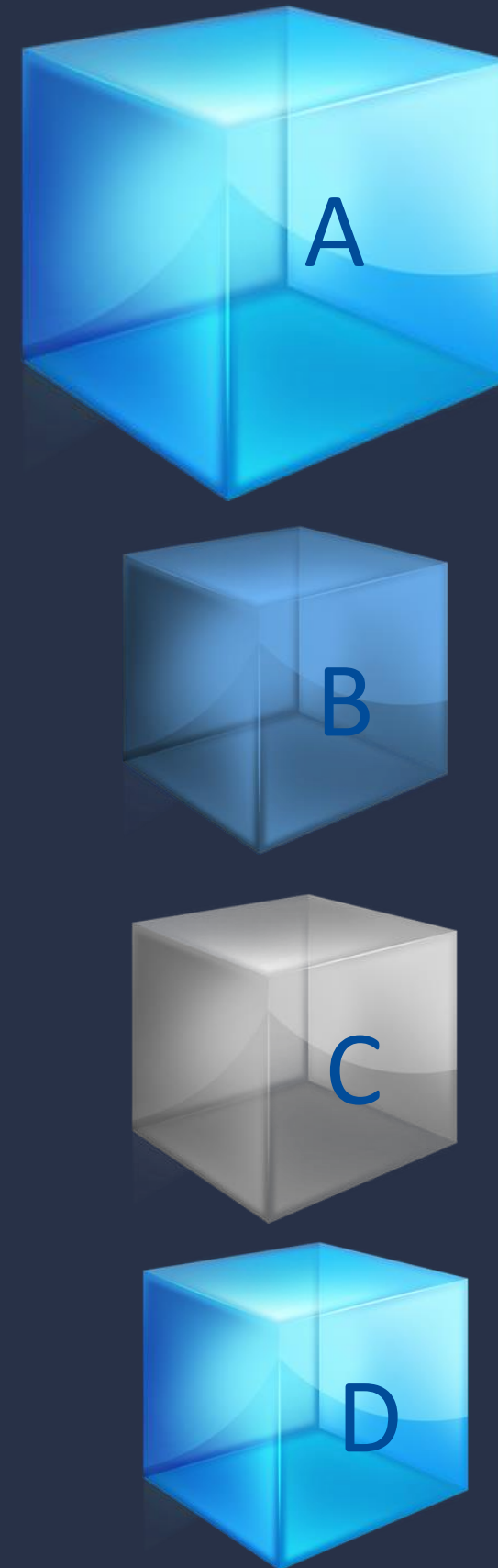
Must have³⁰
Should have
Could have
Would have

What to do and what not to do for this TA!
And how to prioritize

All Deliverables we
selected to do



Prioritize



Divide
Smaller partitions



If you think you MIGHT have an idea, but you aren't really sure, then this is your chance to really dive into the subject and see what you can find.

Giving a public talk is your chance to research a topic.



We have to Speed up deliverance

An example

01

Scope definition



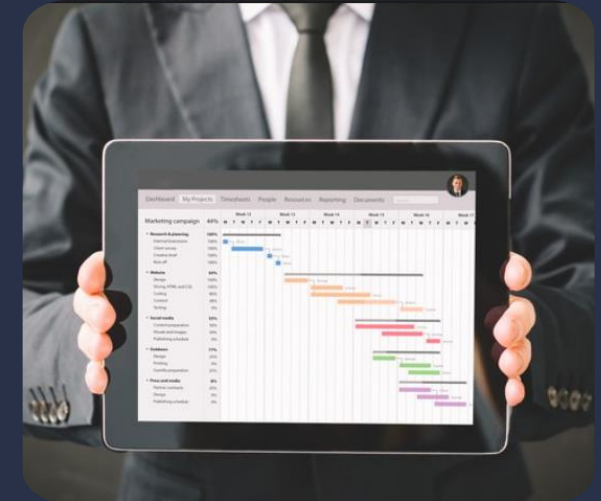
02

Planning

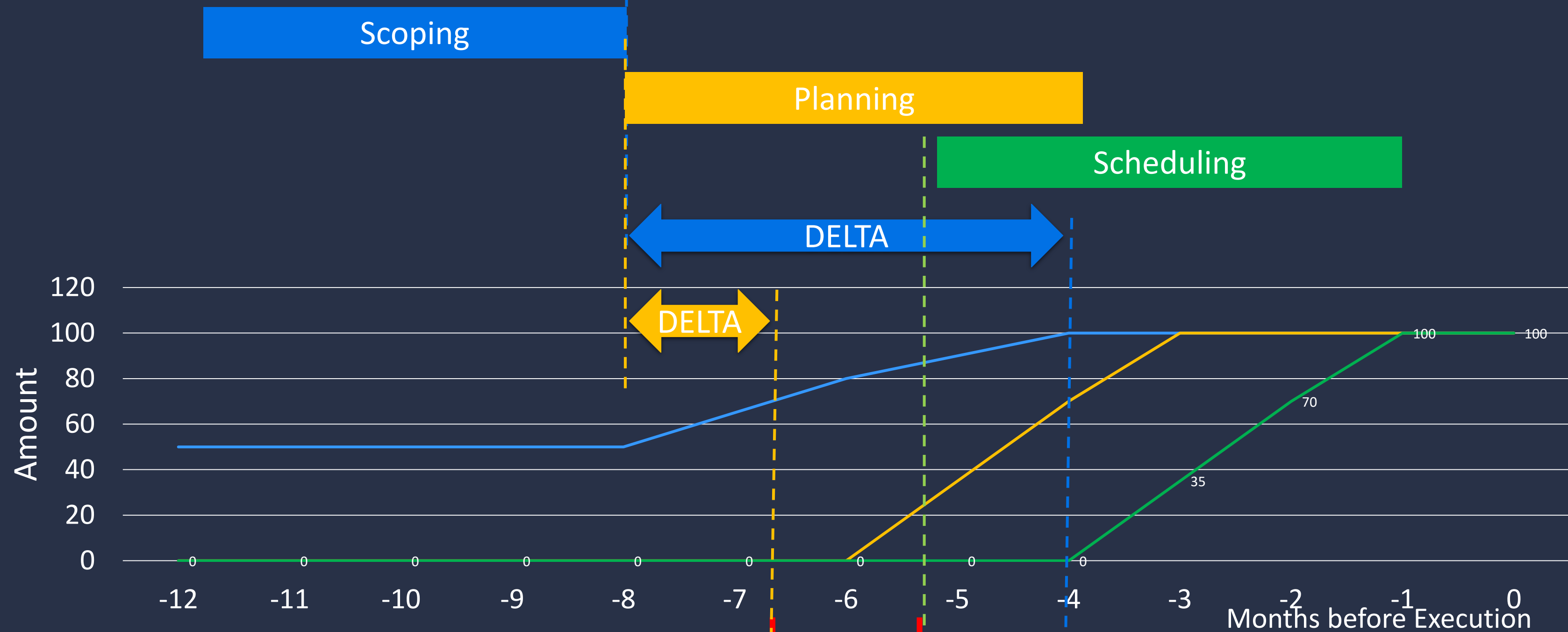
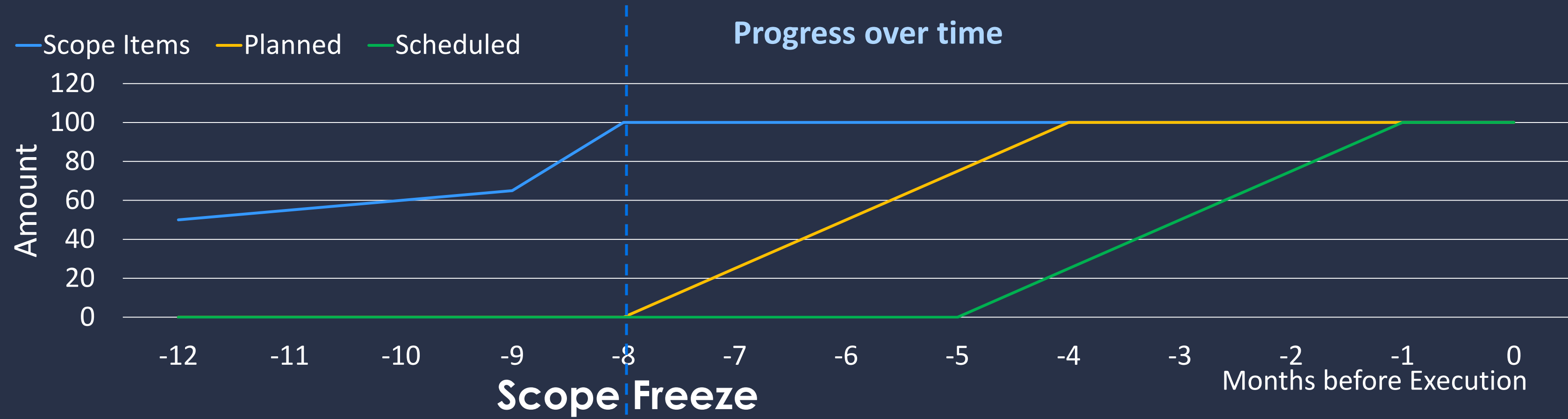


03

Schedule

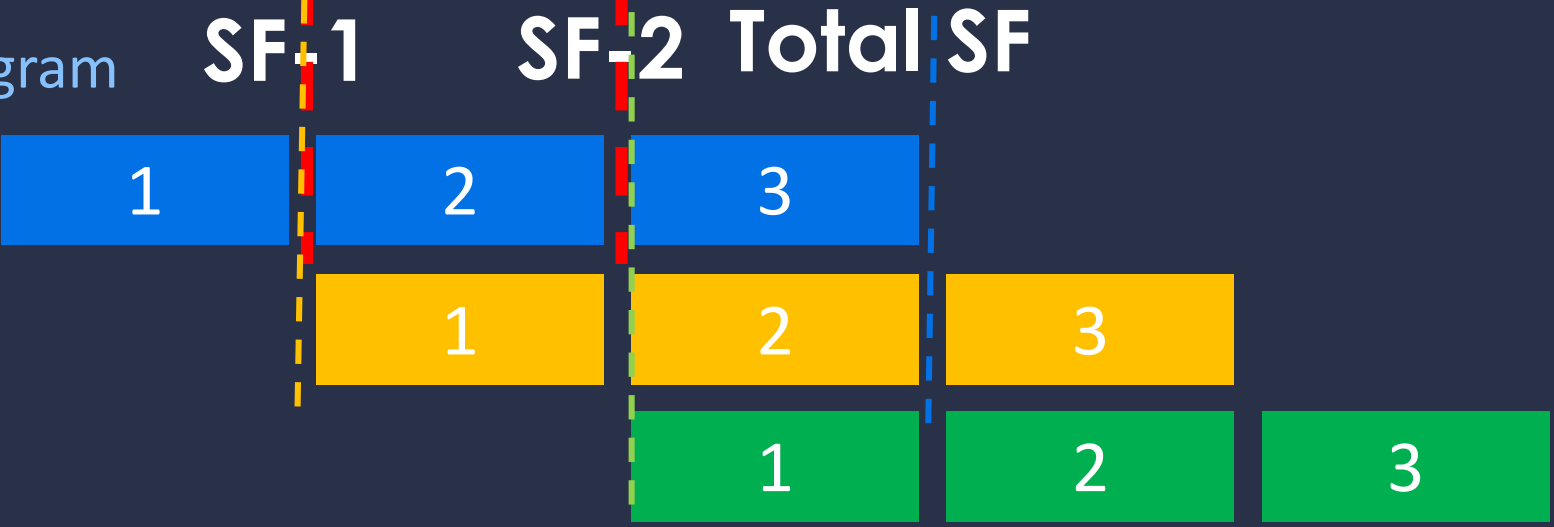


32

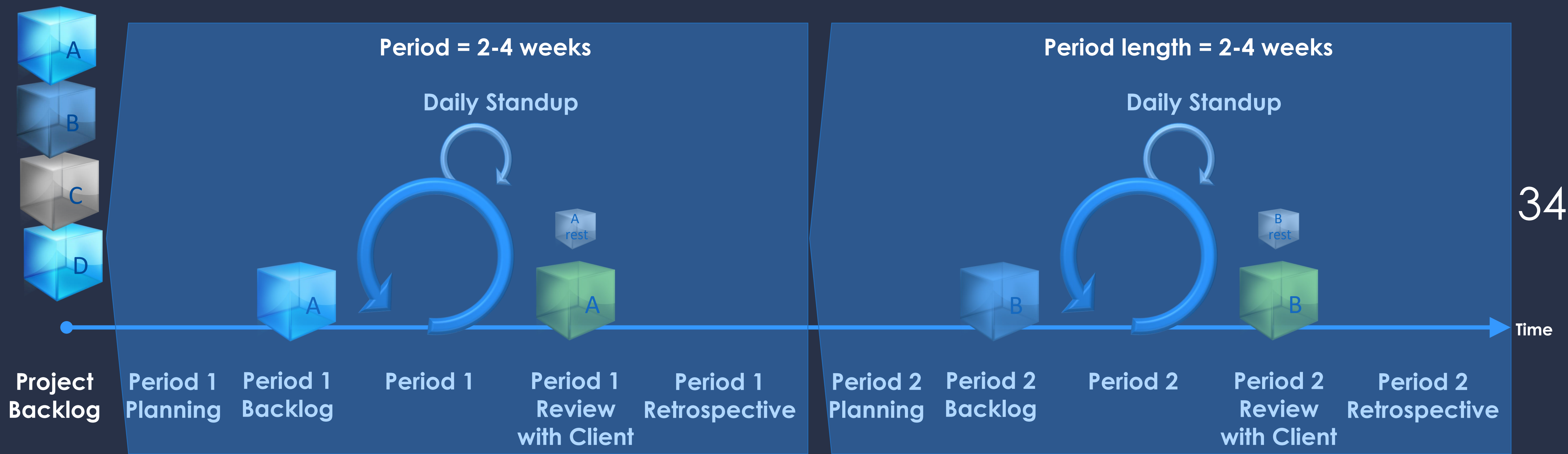


Continuously prioritize for example per System and/or Process Instrumentation Diagram

- Critical Systems
- Critical Path
- Long Lead Materials needed
- Projects

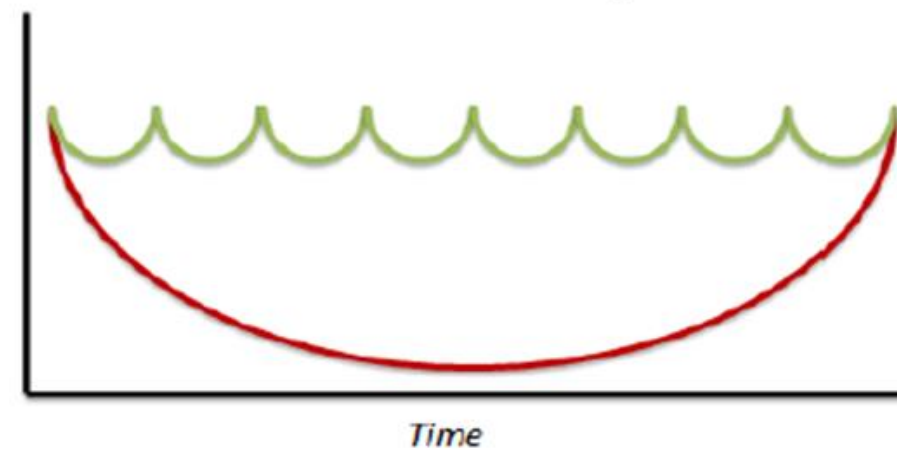


How does everything now comes together and works



Agile versus waterfall

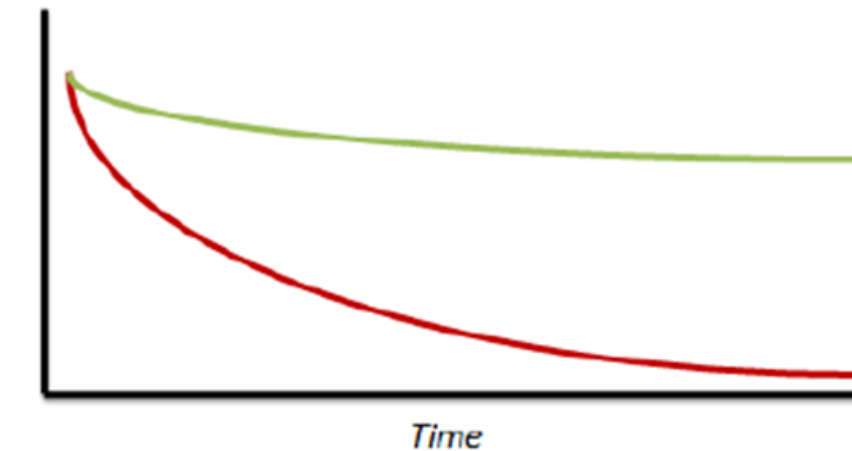
Visibility



Visibility

Providing transparency

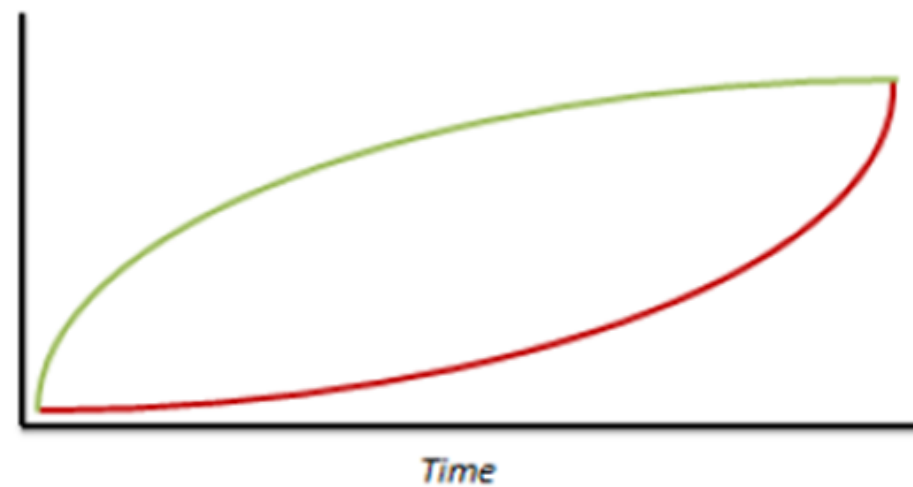
Ability to Change



Ability to Change

Easy to adapt when requirements change

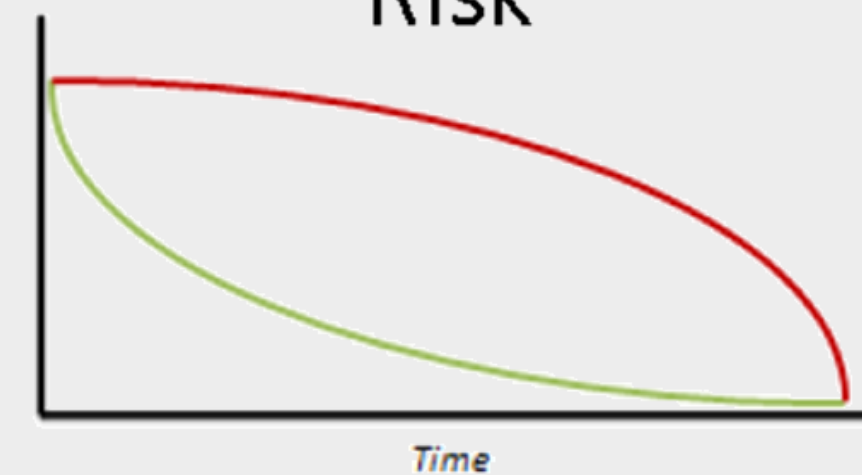
Business Value



Business Value

Deliver early from the start

Risk

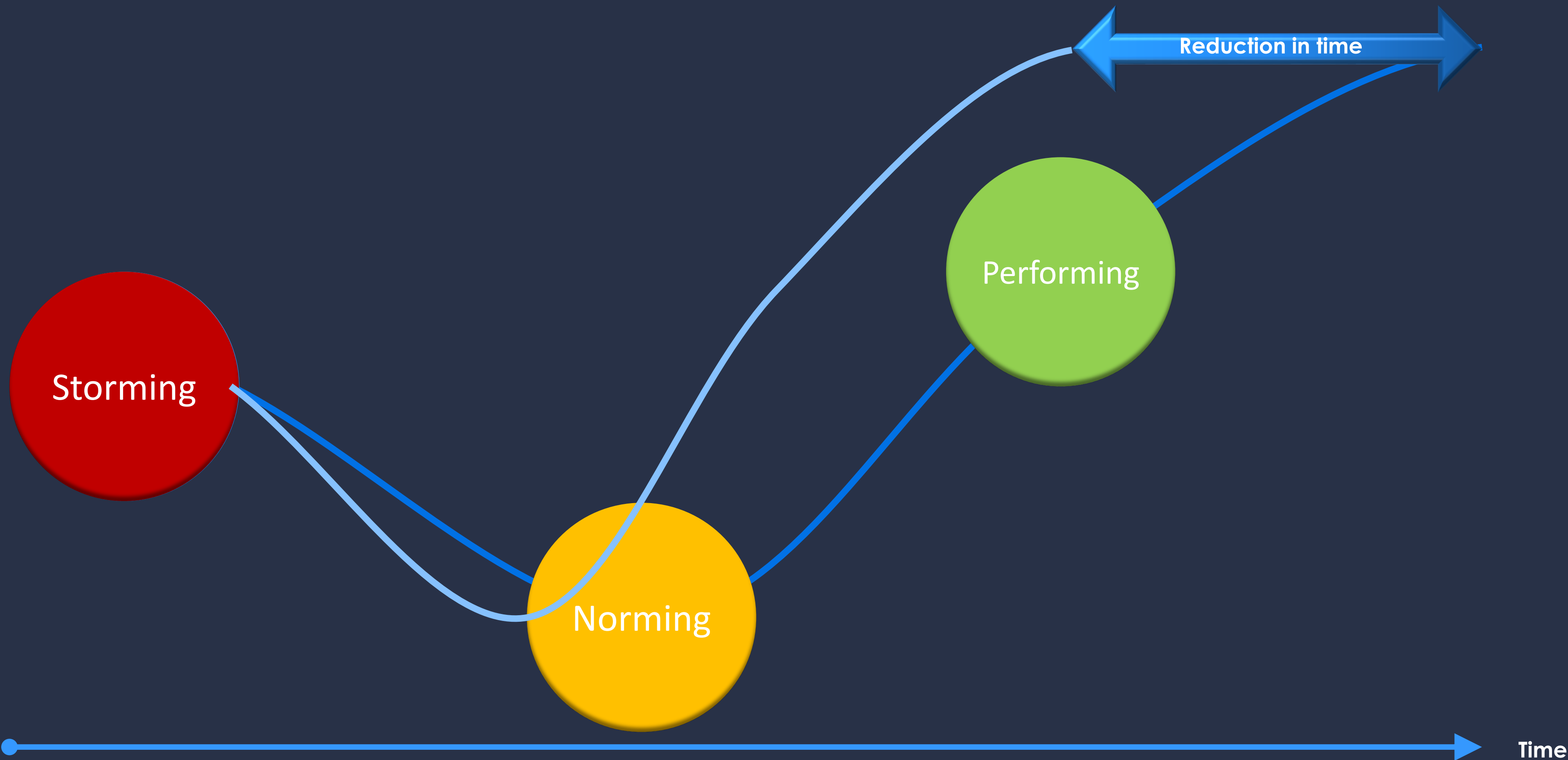


Risk

Lower risks by getting earlier insight on critical scope, schedule, materials, costs and quality

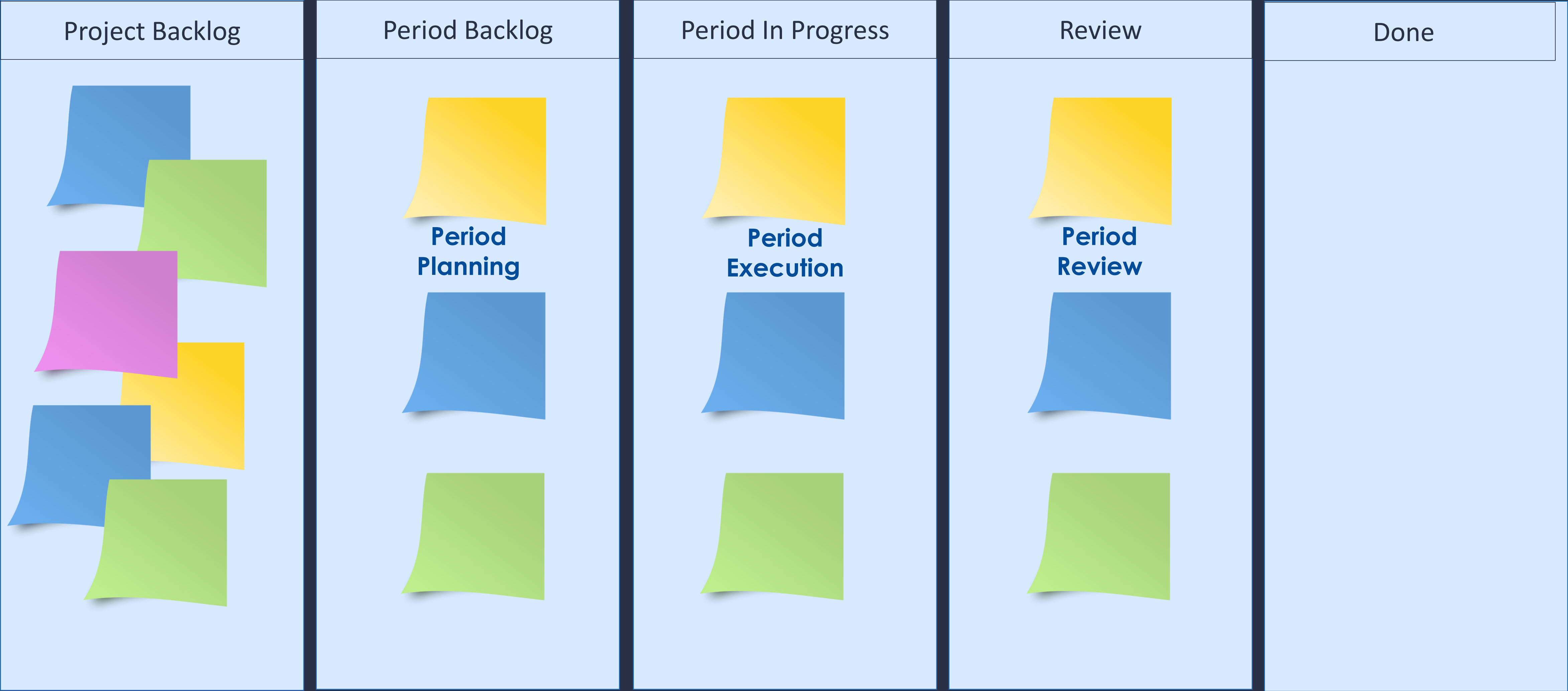
Team development

Tuckman's Model





Tool for Communication: To Do, Doing and Done



KANBAN Board (example look at Trello.com)

Satisfy
the Client

Collaborate
daily

Measure of
progress through
ready
deliverables

Simplicity is
essential

Regularly
Reprioritize
deliverables

Motivated
individuals

Our 12 Principles of TA-Agile

Promote
sustainable work
methods

Self-organizing
teams

Deliver
deliverables
frequently

Face-to-face
conversation

Continuous
attention to
technical
excellence

Regularly reflect
on
continuous
improvements

Conclusion from this Story



Does it make sense to you?

Can your understand the points told?



Do the points connect?

Do they flow together?



Are there any gaps?

Are there places where you got lost?

40

Agile together with Waterfall as a Hybrid can work,

especially if it is not clear what must and can be done in a given time period

Using Lean Six Sigma helps

to choose, prioritize, develop, improve and speed up work processes and deliverances



The Best Stories ARE TRUE

41

I hope you liked it and learned something from this story



Expertise Manager
Turnarounds & Projects

For more information

You can contact me

Lars Bessems

+31-(0)6-26 88 11 37

larsbessems@perfect-group.com

Or you can find me at LinkedIn or XING