

Agile & Lean @ MediaGenix

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- » Introducing MediaGeniX
- » Agile development
 - XP
 - SCRUM
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 - Lean Thinking
- » Conclusion

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- » **Introducing MediaGeniX**
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Introducing MediaGenix

- » Introducing ourselves:
 - Marija – Agile software engineer
 - Maikel – Competence Manager Software Engineering

- » Agile/Lean practitioners, not gurus
 - Talking from personal experience

Introducing MediaGenix

» Product company: Whats'On

→ Planning software for TV-broadcasters

→ 120 Employees

→ 21 Years

WHATS'On4
generation

Introducing MediaGeniX



Introducing MediaGeniX



Introducing MediaGenix

- » 50 Customers worldwide
 - Different workflows & customisations
- » Offer maximum value to our customer
 - Short time to deliver
 - Flexible
 - Frequent communications

Introducing MediaGenix

» Project duration

→ Weeks up to years

» Project team composition

→ Ad hoc

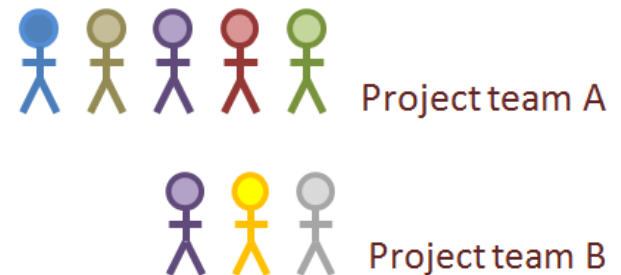
→ Cross-functional

→ 1-2 Project manager

1-4 Functional analysts

1-6 Developers

1-2 Customer service



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Agile development

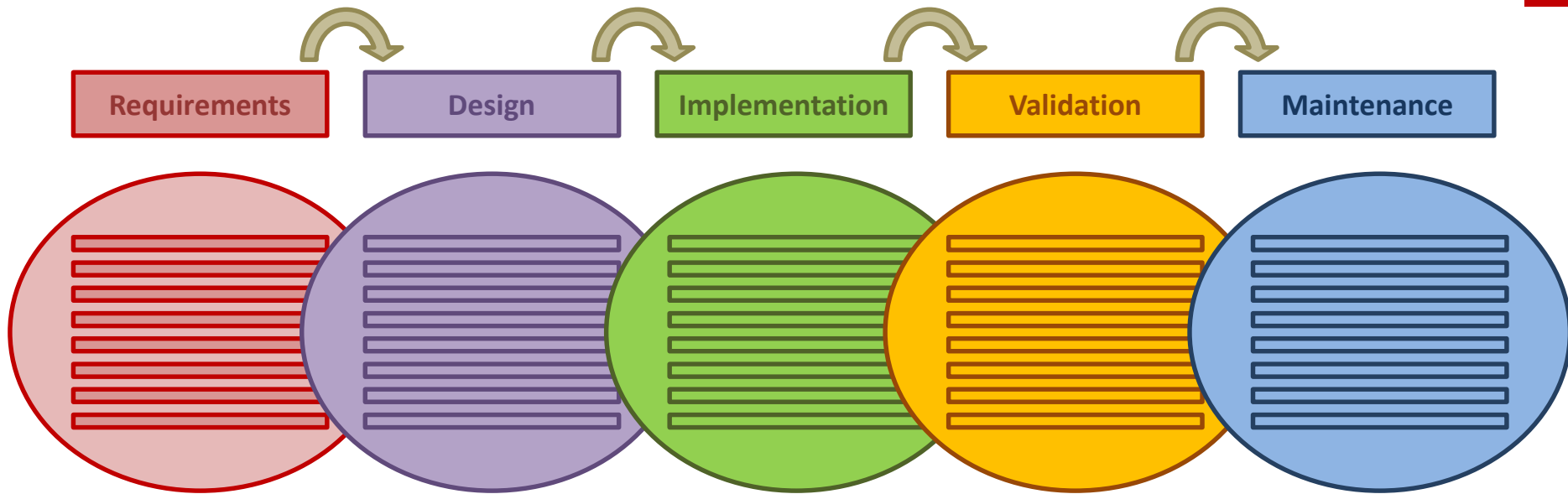
» What came before...

Waterfall Methodology





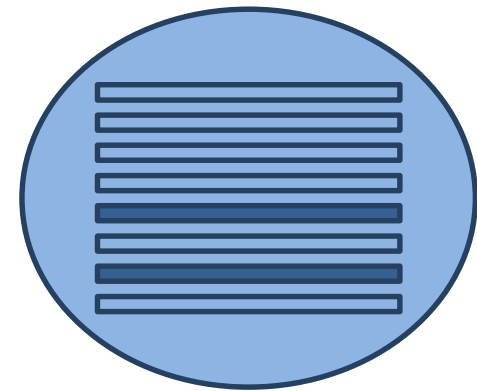
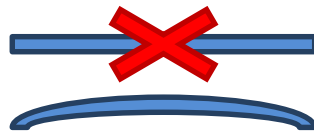
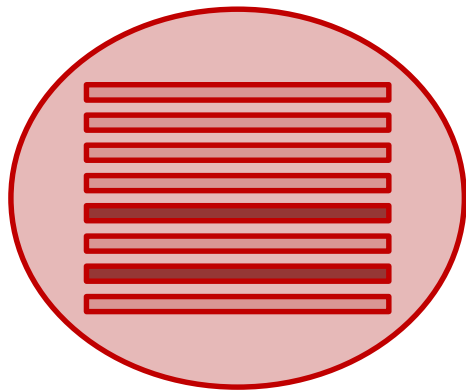
Waterfall Methodology



- ❖ Sequential
- ❖ Large time to market
- ❖ Late feedback



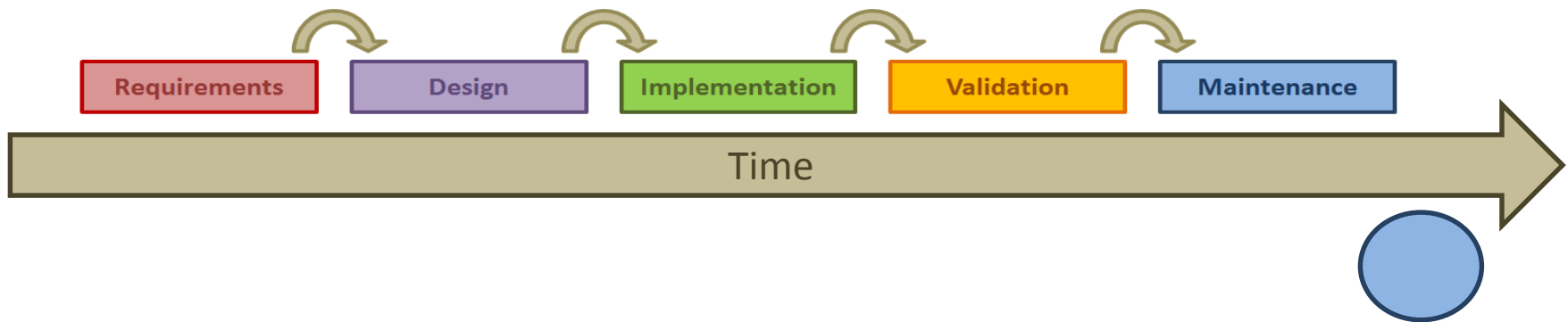
Waterfall Methodology



- ❖ Requirements are set at the beginning and remain **fixed**



Waterfall Methodology



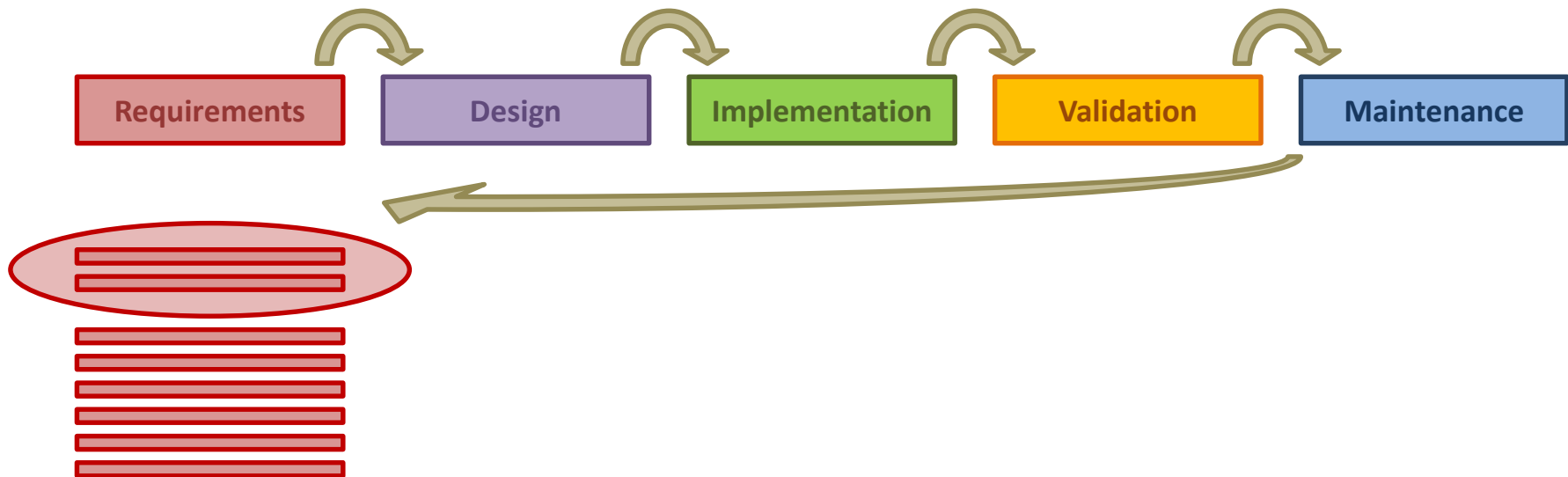
- ❖ Well defined process
- ❖ Good for small or stable projects
- ❖ Management makes all the decisions

Agile development





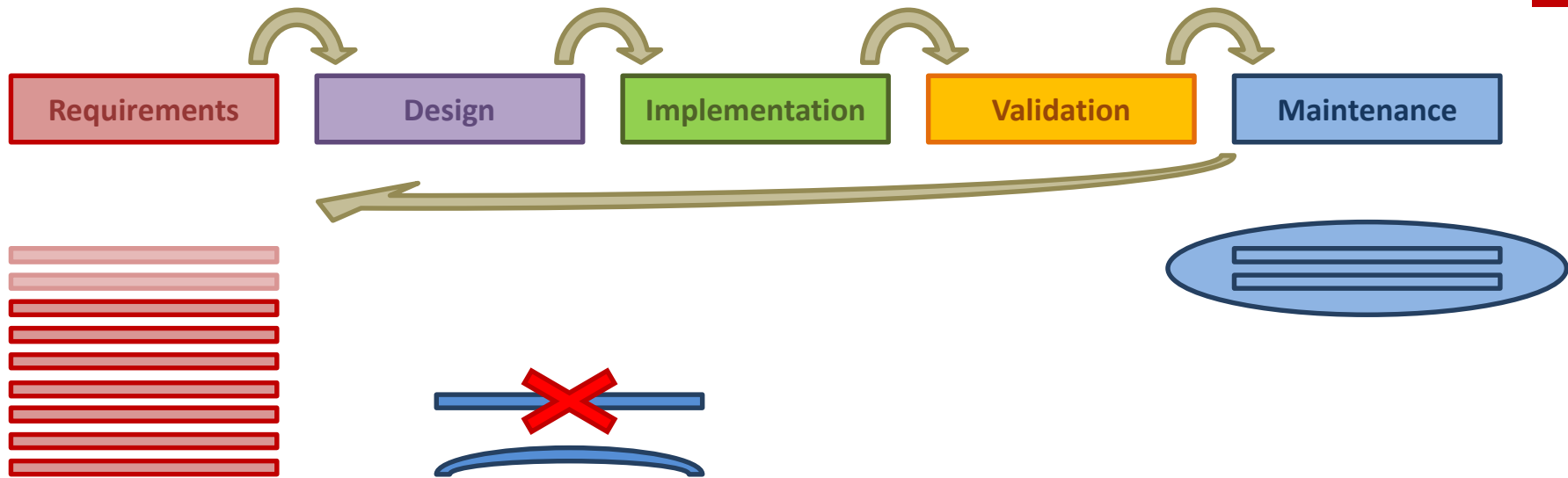
Agile development



- ❖ Iteration 1
- ❖ Prioritization of requirements



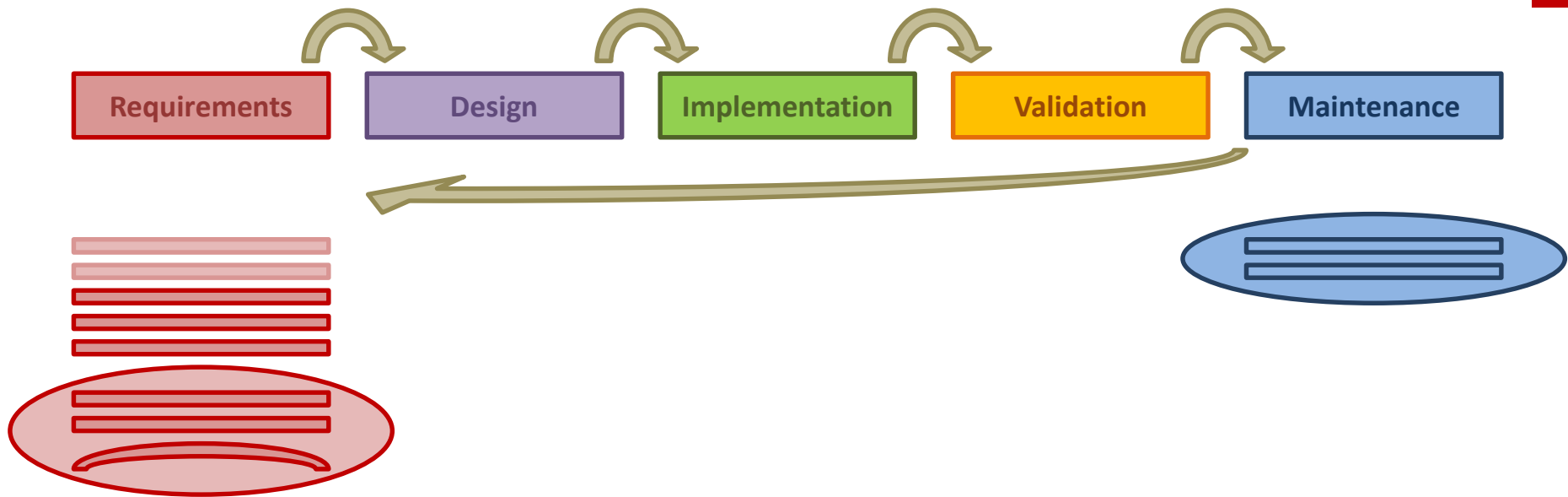
Agile development



- ❖ Iteration 2
- ❖ Prioritization of requirements



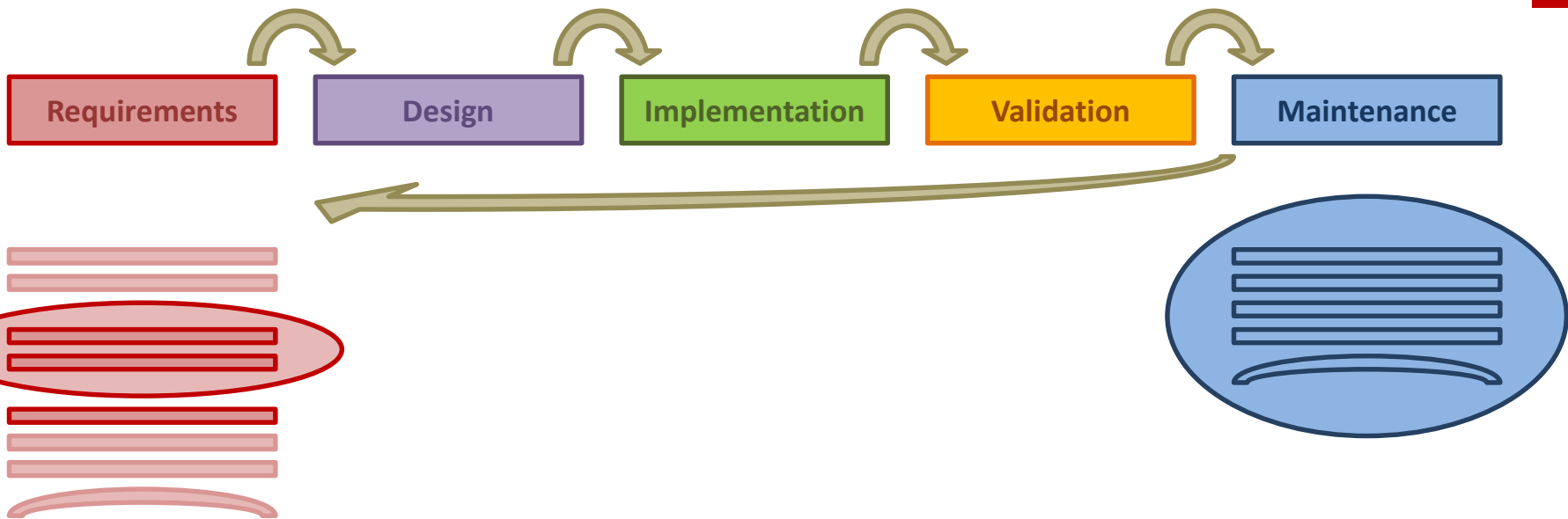
Agile development



- ❖ Iteration 2
- ❖ Prioritization of requirements



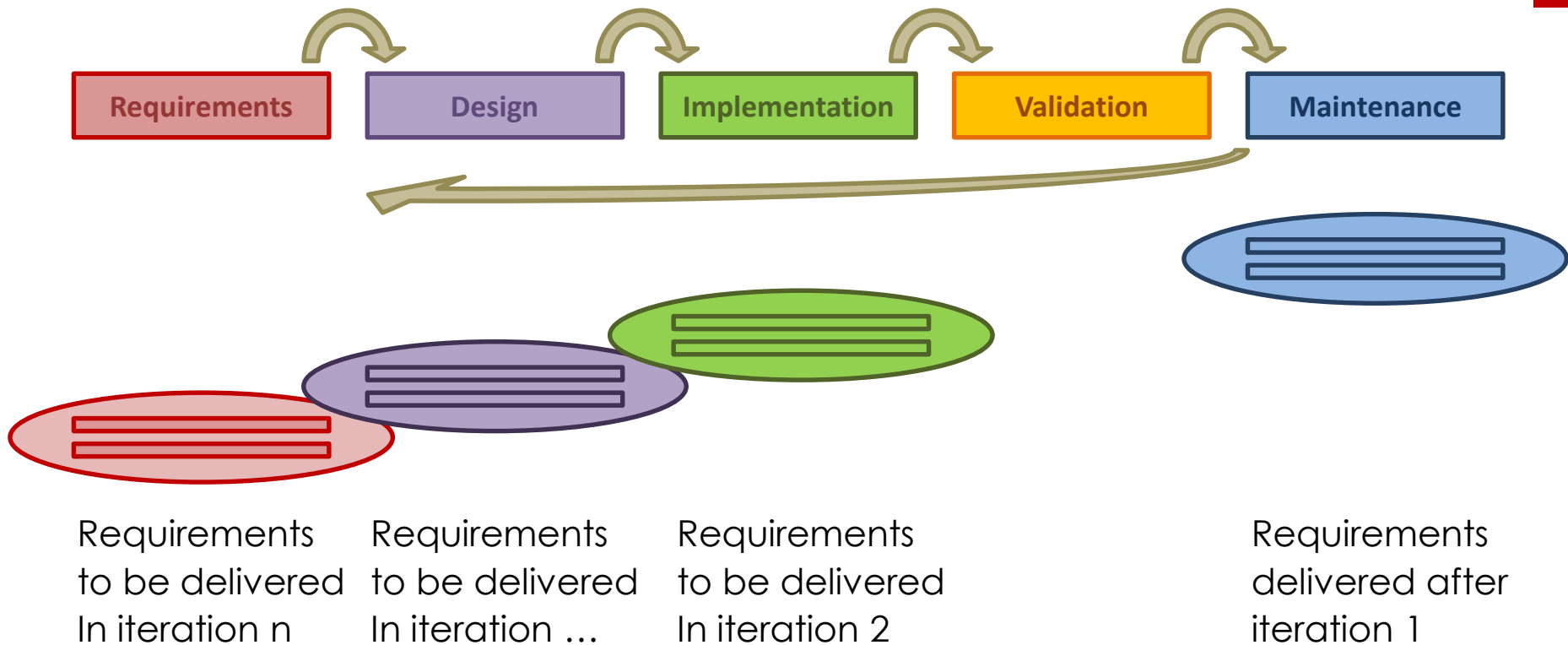
Agile development



- ❖ Iteration n
- ❖ Prioritization of requirements



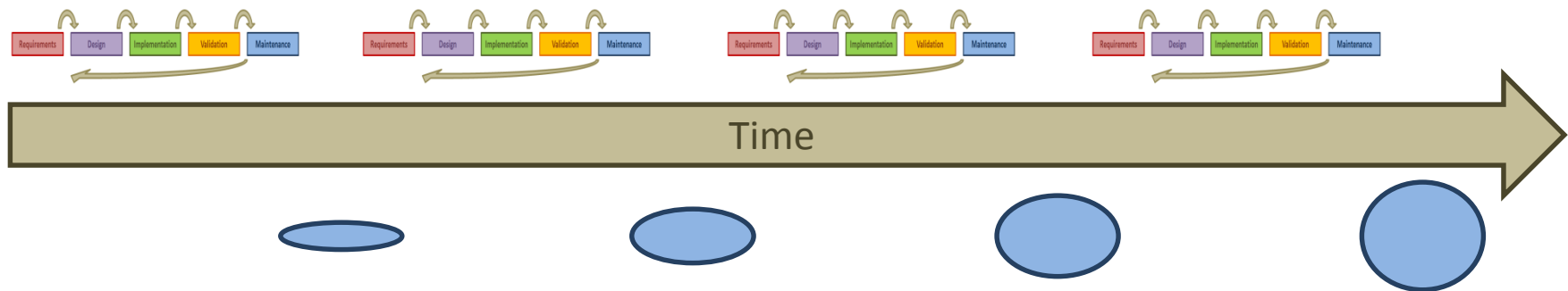
Agile development



❖ Not all requirements are in the same phase at the same time...



Agile development

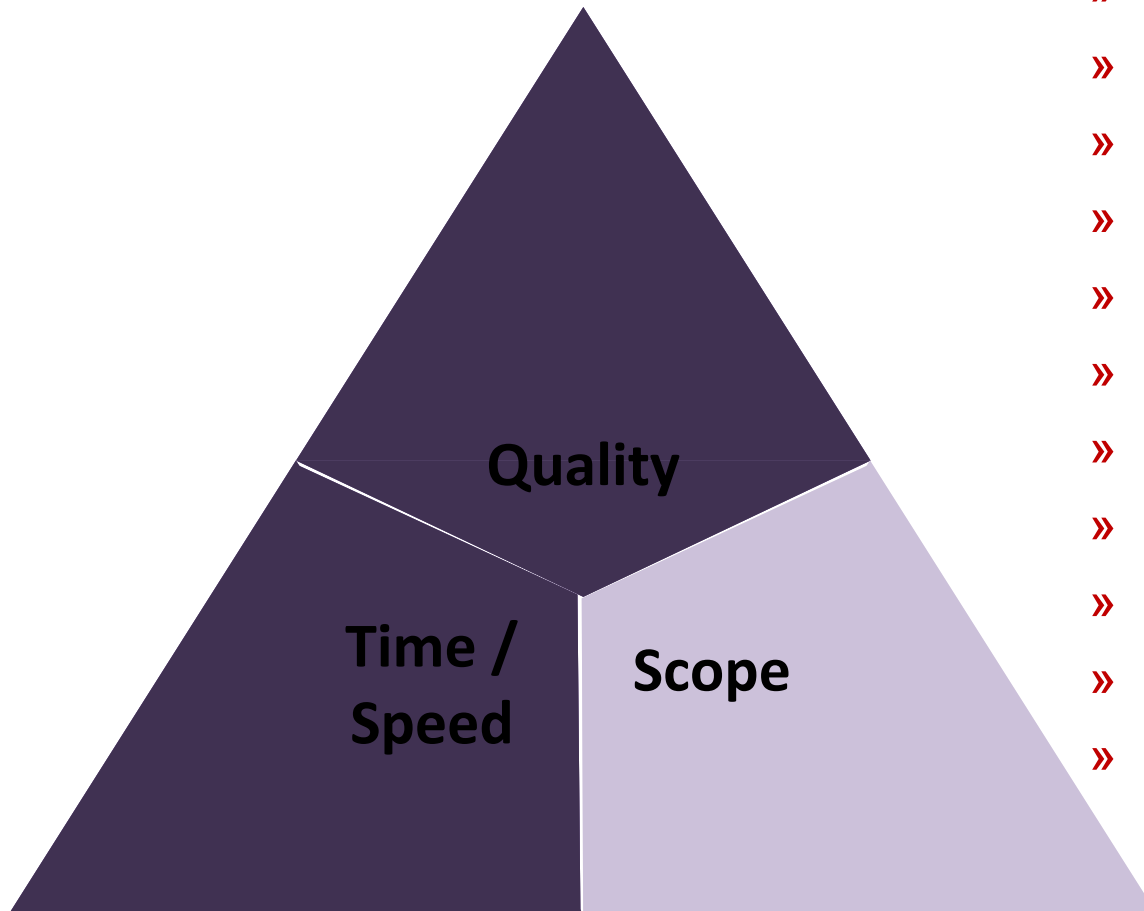


- ❖ Iterative & incremental
- ❖ Adaptive planning → Deliver more value
- ❖ React fast to changes
- ❖ Self-organizing & cross-functional teams

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XP (eXtreme Programming)



- » On-site customer
- » User stories
- » Communication
- » Simple Design
- » Pair programming
- » Unit testing
- » Test Driven Development
- » Continuous Integration
- » Refactoring
- » Collective code ownership
- » Iteration planning

XP (eXtreme Programming)

» At MediaGenix we like

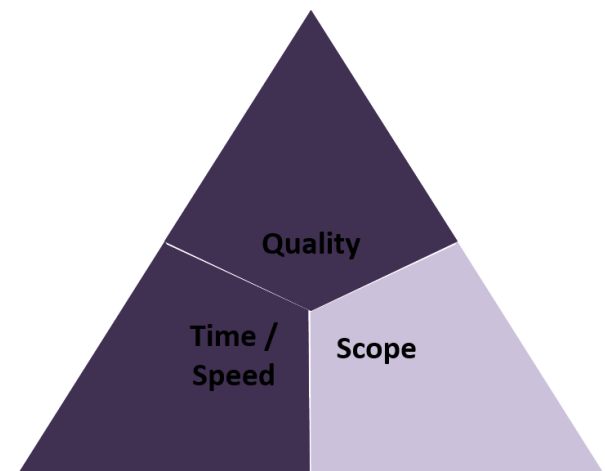
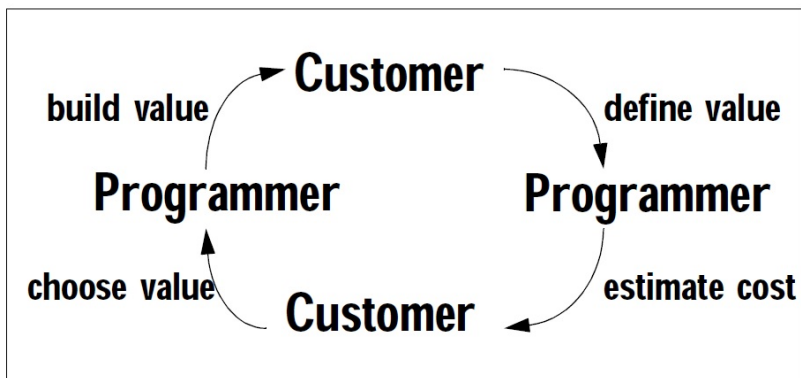


- User stories
- Collective code ownership
- Continuous integration
- Simple design + Refactoring
- Code reviews and pair programming for difficult parts

XP (eXtreme Programming)

» Conclusion about XP

- Focused on the programmer: delivering high-quality software fast
- On-site customer was not feasible for us



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SCRUM

- » Focus is on project management & team
 - Time-box deliveries => sprints
- » A sprint
 - A period of 2, 4, 6 or 8 weeks
 - Sprint definition – the work – sprint retrospective – delivery
 - Assumes fixed team

SCRUM

» Estimations of user stories

→ Relative to developing a small component with a known level of difficulty

- Aka “The reference story”

→ In story points, gummibears, chocolats, ...



SCRUM

» Team velocity

- Measures story points/sprint
- Pro: less overestimation
- Con: Team and project should be fixed



SCRUM

- » Reflection at each iteration
 - Sprint retrospective meeting
 - Team velocity is updated
 - With demo to customer

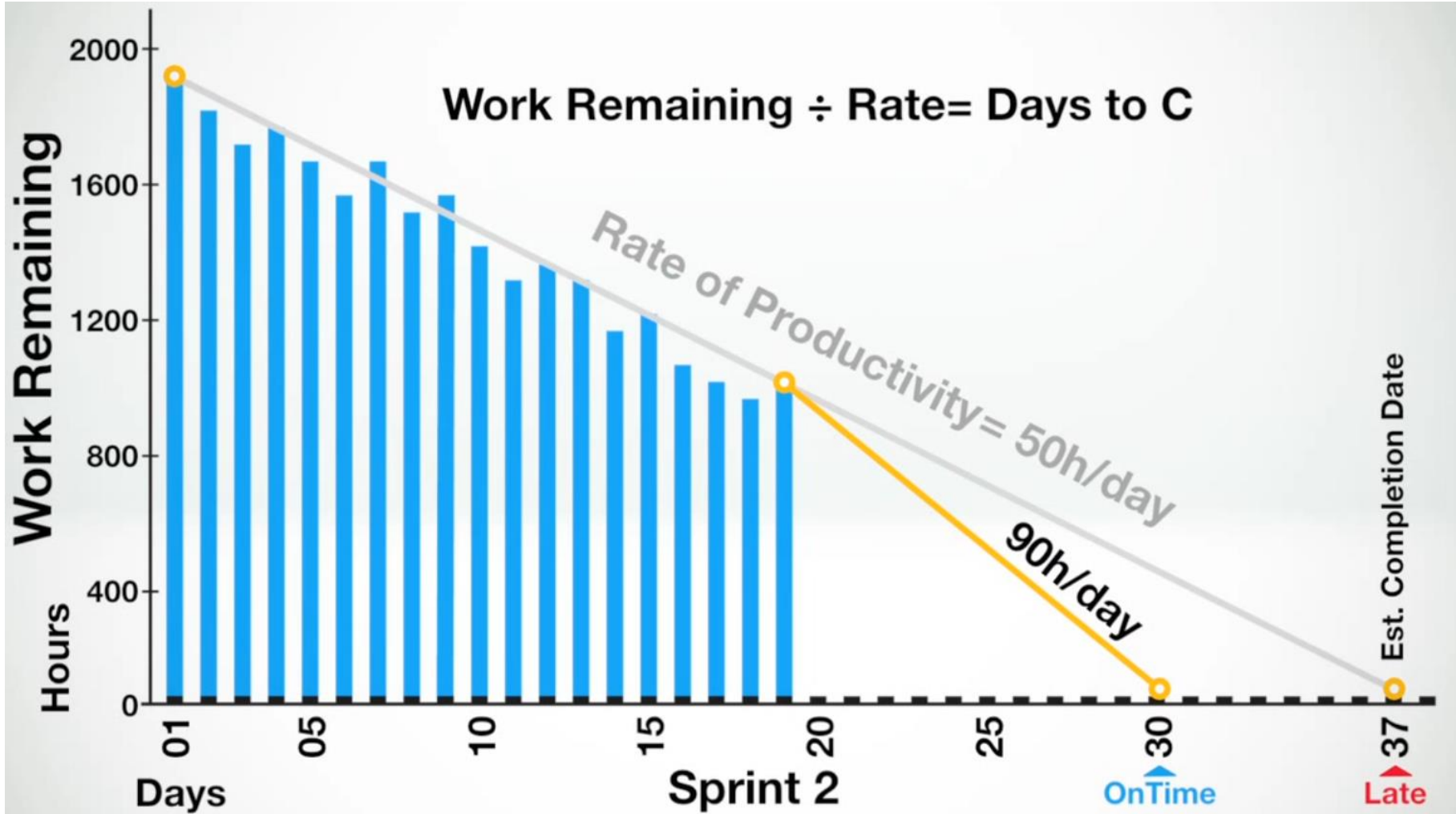


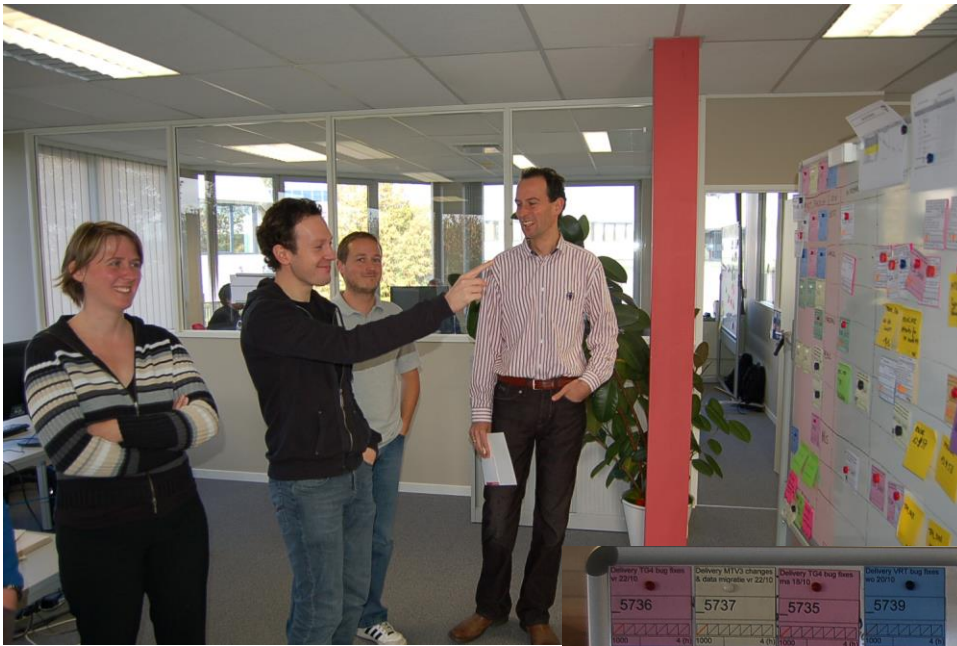
SCRUM

» Project Management

- Sprint definition
- Burn-down chart







Daily stand-up

- ➔ What am I working on?
- ➔ How long will it take to complete?
- ➔ Am I stuck?



SCRUM

» At MediaGenix we like



- Velocity would be a good way to manage the project
- Big step ahead in delivering value fast but more flexibility needed

» Conclusion about Scrum

- Focus is on project management and what the team can handle

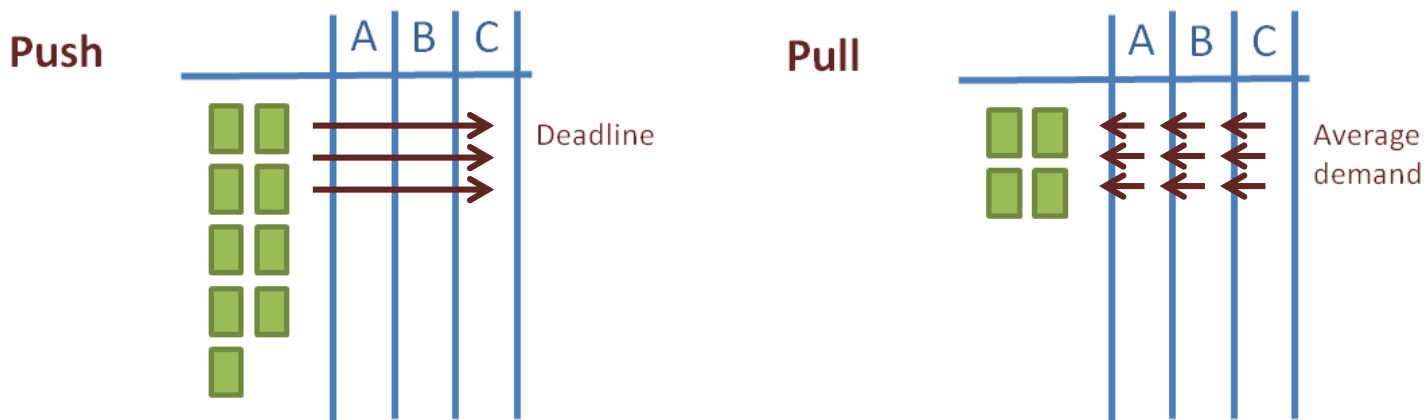
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Kanban

» Pull-system

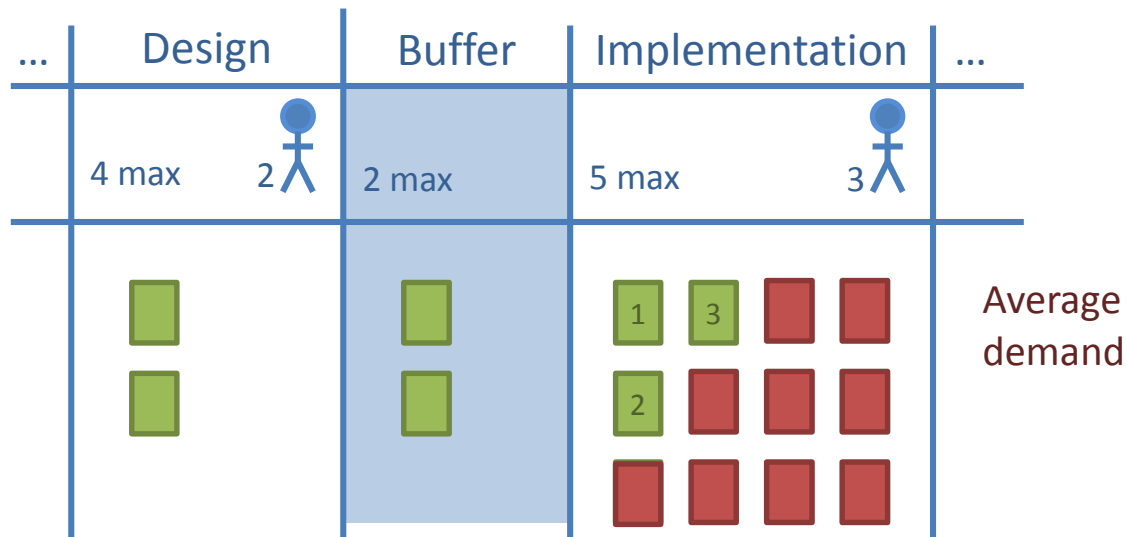
- Only start on a new work item, if there is capacity available



Kanban

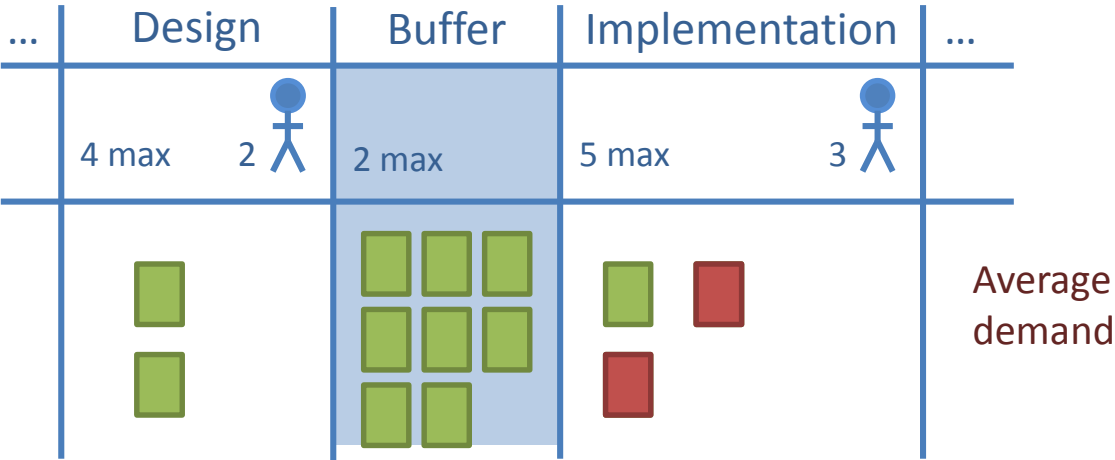
» Limit WIP (Work In Progress)

- WIP is directly proportional to lead time
- Prioritization of work items
- Frequent releases build trust



Kanban

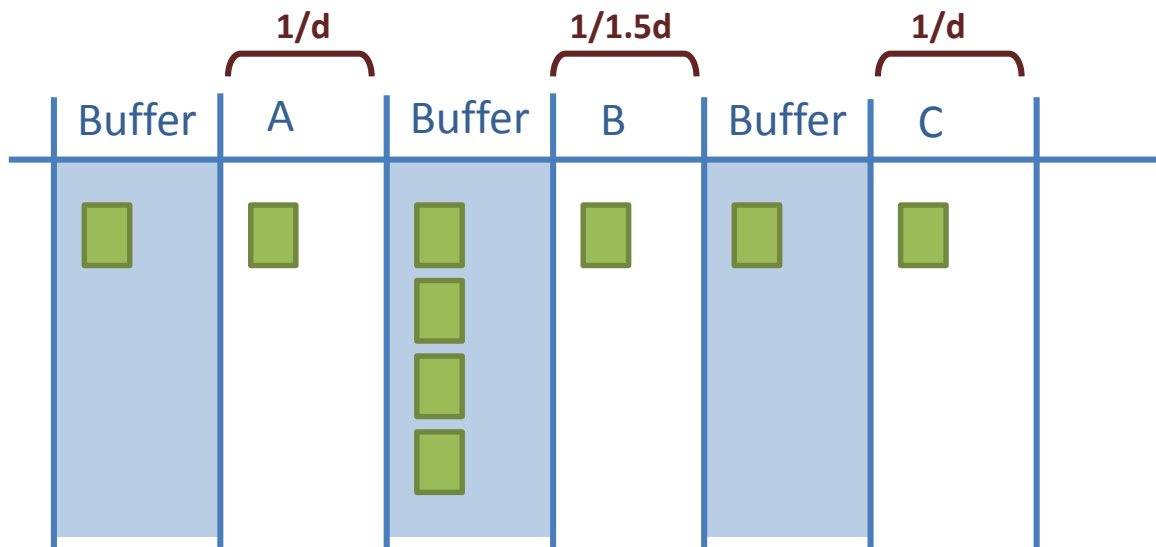
- » Create flow - Cadence
 - Buffer size trade-off



Idle time
~
Lead time

Kanban

- » Create flow – Cadence
 - Bottlenecks become visible

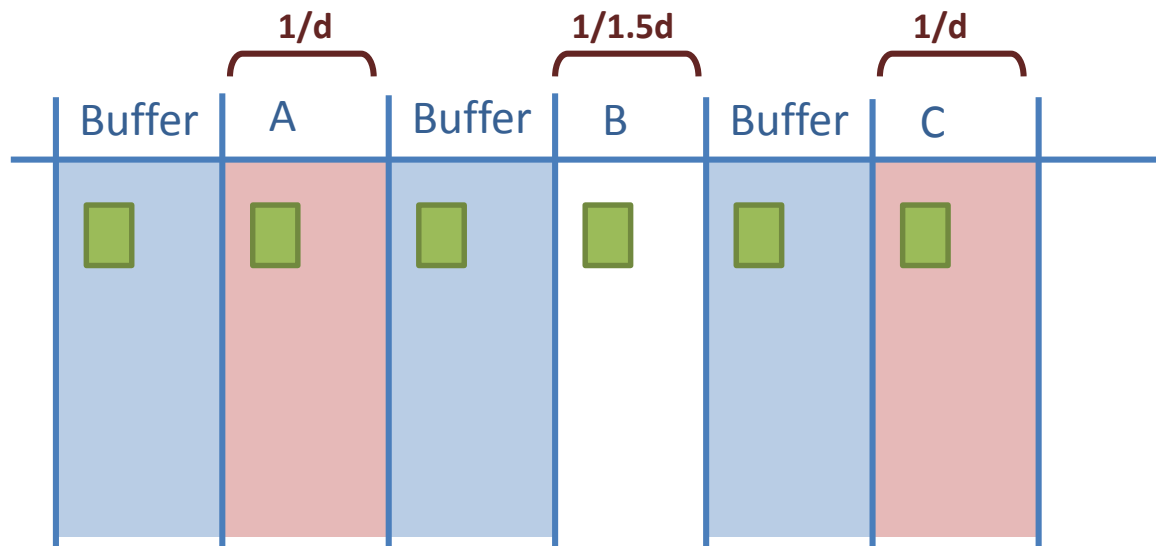


Cadence
=
Speed A
=
Speed C

Kanban

» Create flow – Cadence

- Bottleneck is constantly occupied,
Others have spare time to improve the workflow



Cadence
=
Speed B

Kanban

» Visibility and transparency

→ Kanban board

→ Everyone

- Knows the workflow
- Is involved
- Can propose improvement solutions

» E.g. Shifted focus in daily stand-up

To Be Developed

1 44 70

Remarks 18 issues

Support Bugs 2 weeks open 2 issues

Support Bugs 1 week open 6 issues

Expedite 2 issues

JOS-4522
WINTVCS - Catch up request message has changed

Report Dev Needed 15 issues

Bugs 38 issues

Standard Items 48 issues

JOS-1095 Eitsalat - Export VOD Metadata

JOS-4314
ETI - Interface Lookup for VoD Metadata Export

JOS-355 TV2DKRQ - Frame contracts and cost c...

JOS-3647
TV2DKRQ - DEV tool: cost group per cost type

JOS-405 new marketing campaign report

JOS-1431
xml tag for delivered GRP

JOS-2764 TV2DKRQ - Harris table replacement

JOS-4644
TV2DKRQ - Remove Harris Ingestlist?

JOS-3306
Implement reserve links in YLE v25

JOS-4012 WDRREQ - data and settings for Einsf...

JOS-4015
WDRREQ - import format for Einfeld import

JOS-4038
WDRREQ - store export reports on DB

JOS-4425
DR upgrade

JOS-4497
DRREQ - Fix tests

JOS-4498

development

17 18

JOS-369
WOREQ - no delete messages to be sent when marking a tx as out of synch after catch-up

JOS-4012 WDRREQ - data and settings for Einsf...

JOS-4016
WDRREQ - service and import logic for Einfeld integration

JOS-4438
Merge WOPr fixes

JOS-4536
VPMS integration updates visioning status when new cutlist is sent

JOS-4613
WOREQ - WIN - WO Traffic Program value (Network replica rules) using new Overwrite WO Traffic Program

Be Functionally Tested

10 25

JOS-4253
WOREQ - Notification list for slot

JOS-414
WOREQ - Week grid print modification: export the information allowing the report to create an

JOS-4080
Pebble Beach Neptune playlist and as-run folders to use won directories

JOS-4544
VPMS integration automatically updates media set

JOS-4649
FTORQ - New XML - XML export in UTC Z

Instructional Testing In Progress

8 25

JOS-4249
WOREQ - format template status

JOS-3004
Implement duopoly in V25

JOS-4252
WOREQ - WOT program status

JOS-4089
WOREQ - Copy through forced WOT program to replicated transmissions

Be Tested By CS

18 20

JOS-1073 CAS: Export PPV encryption sequence...

JOS-3813
ETI - PPV Class on a transmission

JOS-3814
ETI - Teaser time on a product

JOS-2788
Add the Budget Simulations module

JOS-2789
Add the Gridplanner

JOS-3000
VHTNETREQ - Mediadrain integrate service - update

JOS-4012
WDRREQ - data and settings for Einfeld export

Testing In Progress

6 16

JOS-314
WOREQ - mark an explicit product run as being lost

JOS-4019
WOREQ - Copy WOT program from main channel to subchannel

JOS-4085
VPRO upgrade

QA - To Deliver

26

JOS-258
BRREQ - know which transmission in my schedule caused an xsd validation err

JOS-4354
WOREQ - WO Program should be able to export Sydney time (AEST) to be used in reports

JOS-3978
WOREQ - Pattern Editor - assigning format template

JOS-1276
Schedule Import Service misses fields

JOS-3534
WOREQ - Reserve Links (icon) in Transmission View management (not available in WOP 25Q)

JOS-3977
WOREQ - Music Copyright - Search Materials

JOS-4085 VPRO upgrade

JOS-4096
VPROREQ - Fix tests

JOS-4097
VPROREQ - Upgrade populated database

JOS-4269
VPROREQ - VPRO to closed 25Q2

JOS-4526
FTORQ - Provisioning record import service filename issue : cf FTORQ-258

New 0	To be analyzed 0	In Analysis 0 Max: 3	To Be Developed 3 Max: 3	In Development 3 Max: 3	To Be Functionally Tested 2 Max: 3	Functional Testing 0 Max: 2	To Be Tested By CS 2 Max: 3	CS Testing In Progress 0 Max: 1	QA - To Deliver 7 Release...
<ul style="list-style-type: none"> Support Bugs 1 Project Bugs 3 									
							JOS-9795 Label Price code promotie per platform'		JO...-10214 FTOCS - Fix for FTOCS-273 JO...-10786 Remove the MMVisioningSi popup
<ul style="list-style-type: none"> Standard Items 13 									
			JOS-9583 FTORQ - Fields from media library JO...-10955 FTORQ - Upgrade script which JO...-10961 Upgrade to BFR 25Q3.110.000	JOS-9532 FTORQ - SCAM Evolution : JOS-9583 FTORQ - Field... JO...-10954 FTORQ - Copy media library fields JOS-9537 FTORQ - Import of "External IDs"	JOS-9583 FTORQ - Field... JO...-10951 FTORQ - New fields on product JO...-10953 FTORQ - New field in media				JOS-9535 FTORQ - New criteria in image JOS-9598 FTORQ - New check XML type : Product JOS-9644 FTORQ - 'Distributor product ID' on JOS-9644 FTORQ - New tab page with external IDs

MeG - Development Board - Standup

Plan Work Report

QUICK FILTERS: [Dimi](#) [Charles](#) [PVL](#) [Katerina](#) [Kiril](#) [Marija](#) [Bojan](#) [JanF](#) | [P7S1](#) [MTVA](#) [MTV - VIMN](#) [MTVNL - iteration 8 v2](#) [SBS BE](#) [SBSBE VOD 2013](#) [SBSBE Promo 2013](#) [SBSBE Upgrade Release](#) [SBS NL](#) [SBSNL VOD 2013](#)
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Analysis/Planning 0 / 36	To Be Developed 0 / 76	In Development 1 / 14 JOS-6733 P7S1ST - Active playlist JOS-10935 P7S1ST - Adjust "Copy tool" in Continuity plan	To Be Functionally Tested 0 / 30	Functional Testing In Progress 0 / 10	To Be Tested By CS 0 / 50	CS Testing In Progress 0 / 15	QA - To Deliver 0 / 112
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Kanban

» At MediaGeniX we like



- Kanban board
- WIP limits
- Transparency
- We still need to grow in adopting Kanban,
but we seem to like it so far

Kanban

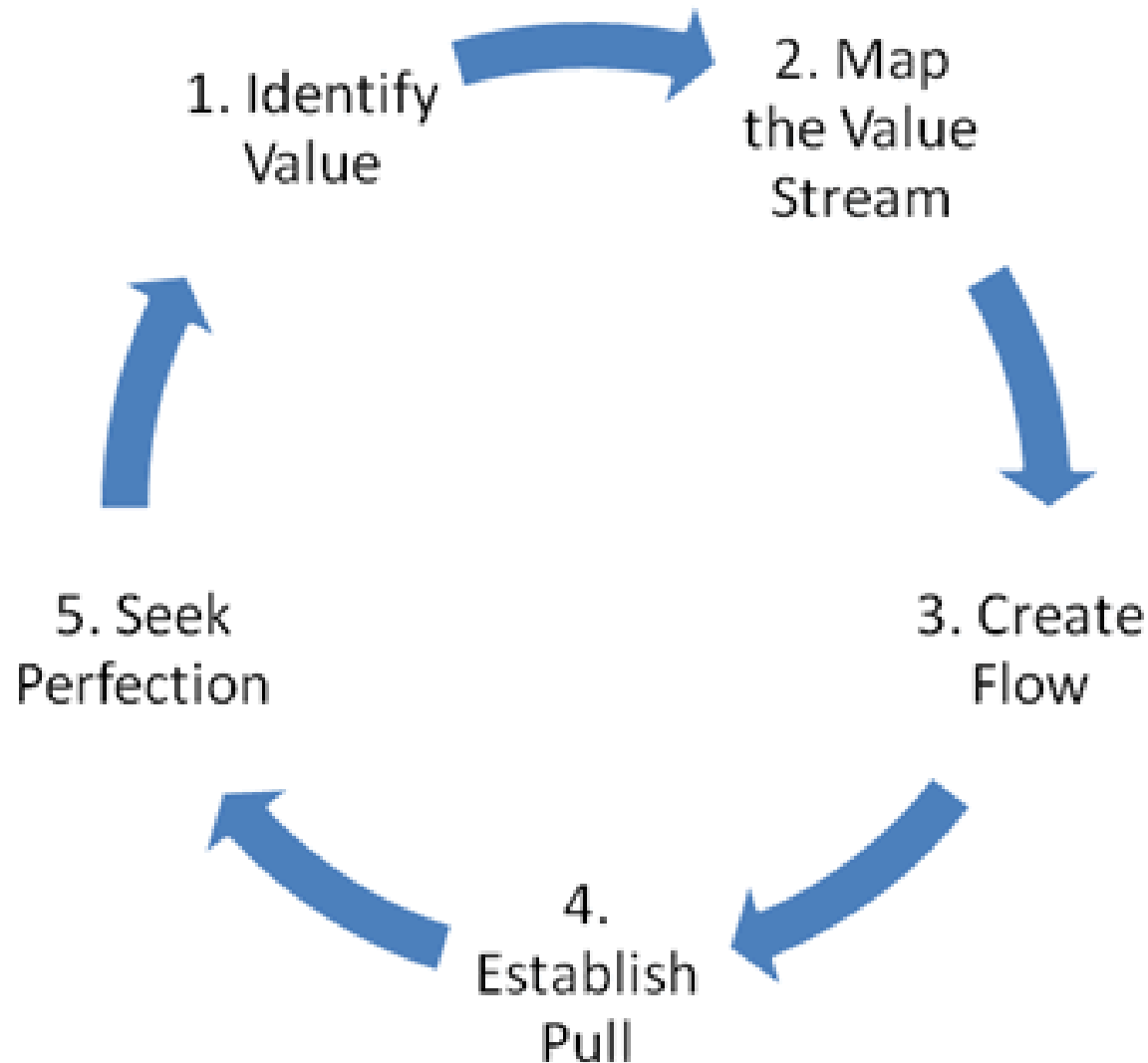
» Conclusion about Kanban

- Pull system, rather than push
 - => Deliver value more efficiently
- Doesn't work without an empowered workforce

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Lean Thinking



Lean Thinking

- » Problem solving = smaller initiatives
 - Well-defined starting point
 - Minor changes
- » Breakthrough events
 - Fuzzier starting point
 - Big changes
- » Same techniques
 - A3

1. Reason for Action Go No Go

Observations:

- Analysts = critical resource: influences flow time
- More slack time on dev side vs. increased work load for analysts; ratio analysts - developers tends to change (1/3 -> 1/1)
- Planning conflicts and frustrations
- Long flow time kick off -> first delivery

The process to be evaluated starts when a project (phase) is kicked off and the required WHAT'S'ON changes are accepted by the customer.

Reflections: Analyst are core to what we do!

People:

- Clear planning responsible
- Making sure analysts can work at a sustainable pace.
- Focus
 - # projects in progress
 - # project switches per day

Cost:

- Ratio analyst effort vs. dev and project effort (including planning)

Time:

- Lessen the flow time between project (phase) kick off and acceptance.

Quality: To improve the yield:

- Improve the quality of commitments to customers
- Improving the quality of analyses

4. Gap Analysis Go No Go

People (Too many projects/no flow)

- Not good at estimating how long an analyst is required for
- Customer lacks knowledge of WhatsOn base features
- we deliver something the customer hasn't asked for

Quality (no standard Process)

- We do not do a fit analysis to match customer need to WhatsOn base
- Too much in depth analysis to get a price (no fixed prices)
- No Contact with customer key users

Delivery (too long)

- Extra analysis because we are unsure of our work flow
- Unaware of costa and delivery schedule
- No project plan agreed with customer
- Customer does not know WhatsOn
- No Clear agreements in presales

Cost (analysis not delivered)

- Customer project owner/decision maker not always clear
- We invest analysis time without results
- We haven't a documented processes
- Everything is analysed and costed for each project

Root Cause: No documented standard process

Reflections: What did you learn and what are you going to do as a result? AND SO WHAT?

7. Completion Plans Go No Go

Action	TT	Owner	Due	RAG
Establish KB for Estimation in Jira		PvL	19/04/13	
Define Engagement Rules (creation in presales + follow-up during project)		gC	19/04/13	
Implement New Process (Rapid Experiment)		Johan	18/04/13	
Run Rapid Experiment for Flow in Dev Process		Jelena	18/04/13	
Implement Post-Project Review		MV	19/04/13	
Implement Integrated PM Processes/ High Level Process		Johan	03/04/13	
Communicate RIE Outcomes		MV	19/04/13	
Create VM and Test (rapid Experiment)		Ver	12/04/13	

Max 3 Actions WIP/person
30-90d break through focus.
Last Column is Status - use RAG (Red, Amber Green)

2. Initial State Go No Go

Multiple processes:

- P7 phase 1: no smaller iterations
- P7 phase 3a: lots of parallel small iterations
- Lagardere iteration 1: clear iteration with formal acceptance
- Telenet: formal acceptance when going live
- Etisalat: 2 phases

Multiple Processes

(a) People: Bar chart showing # projects per week for 7-8, 0-2, 3-4, 9-10, 5-6. Legend: to start of dev, to delivery, to acceptance.

(b) Quality: Gantt chart for P7 phase 3a QG3, P7 phase 1, Lagardere it. 1, Telenet, ETI fact. acc., ETI. Legend: to start of development, to delivery, to acceptance.

Over 30% of analyst work is not developed

(c) Cost: Bar chart for P7 phase 3a QG3: 11/6/12 - 3/12/12. Legend: to start of development, to delivery, to acceptance.

(d) Time: Gantt chart for P7 phase 3a QG3, P7 phase 1, Lagardere it. 1, Telenet, ETI fact. acc., ETI start to finish. Legend: to start of development, to delivery, to acceptance.

Reflections: Lagardere seemed to different in delivery but it still experienced the same types of issues/problems

5. Solution Approach Go No Go

Solution	Affecting	Current State	FS	E	C
Standard project approach process incl. guidelines	PCTQ	No standard iteration length	15 weeks kick off to accept.	Δ	X
Visual project status incl for analysis and stories	PCTQ	None	av. for whole team	Δ	O
Formal validation of fits before project plan	PCTQ	Many diff. approaches	1 process	X	X
Lightweight experience based gap estimation process before project plan	PCTQ	30% analyzed not in dev scope	5% analyzed not in dev scope	Δ	O
Presales customer engagement rules incl. identifying customer budget/solution responsible	PCTQ	Rules existing but not fulfilling the needs	Acceptance within 15 weeks	Δ	Δ
Interactive validation of solution design + agreed date	PCTQ	Sometimes interactive	Always interactive	Δ	O
Active support of customer to achieve acceptance by implementor	PcTq	Partly, sometimes	Fully committed	Δ	Δ

Reflections: What did you learn and what are you going to do as a result? AND SO WHAT?

8. Confirmed state Go No Go

One standard process

(a) People: Bar chart showing maximum projects per week and avg projects per week. A red stamp says "TO BE CONFIRMED".

(b) Quality: Gantt chart showing flow time kick off to acceptance. A green checkmark is present.

(c) Time: Gantt chart showing flow time kick off to acceptance. A red stamp says "TO BE TESTED IN RAPID EXPERIMENT".

Forecast: Reduction from 30% to 5% will release 15+ days of analyst time per project

Reflections: The process brings together good elements and puts understanding customer need right at the front of the process

3. Target State Go No Go

One standard process

(a) People: Bar chart showing maximum projects per week and avg projects per week.

(b) Quality: Gantt chart showing flow time kick off to acceptance.

(c) Cost: Bar chart showing maximum projects per week and avg projects per week.

(d) Time: Gantt chart showing flow time kick off to acceptance.

Reflections: There is no standard process; by standardising and creating capacity we will be able to taken on more customers this year

6. Rapid Experiments Go No Go

Experiment	Anticipated Effect	Actual Effect	Follow up Action
New Process Run a customer Iteration using the new process to learn	Reduction in wasted Analyst time deliver with 12 weeks, accept with 15 weeks		
Flow in Development Process (create 1 piece flow in development)	Reduction in WIP for analyst and developer Less errors Flow of work – less rework		
Use VVSM as visual management for first customer iteration (Above)	Easy to understand process and flow Achieve 12 weeks Team involvement and interaction		

If actual effect = anticipate then proceed to box 7 if not then return to box 4

Reflections: What did you learn and what are you going to do as a result? AND SO WHAT?

9. Insights Go No Go

Actions:

- Note Done Lessons Learnt on RIE
- Communication Lessons Learnt

What went well?

- Vertical Value Stream
- Open Discussions
- Getting Things Done
- Communication
- Focus from Team
- Convince MgX (?)

What did not go well?

- Nothing ??

What helped?

- Lots of Preparation upfront
- Good commitment
- Dave's coaching
- Overall communication about RIE

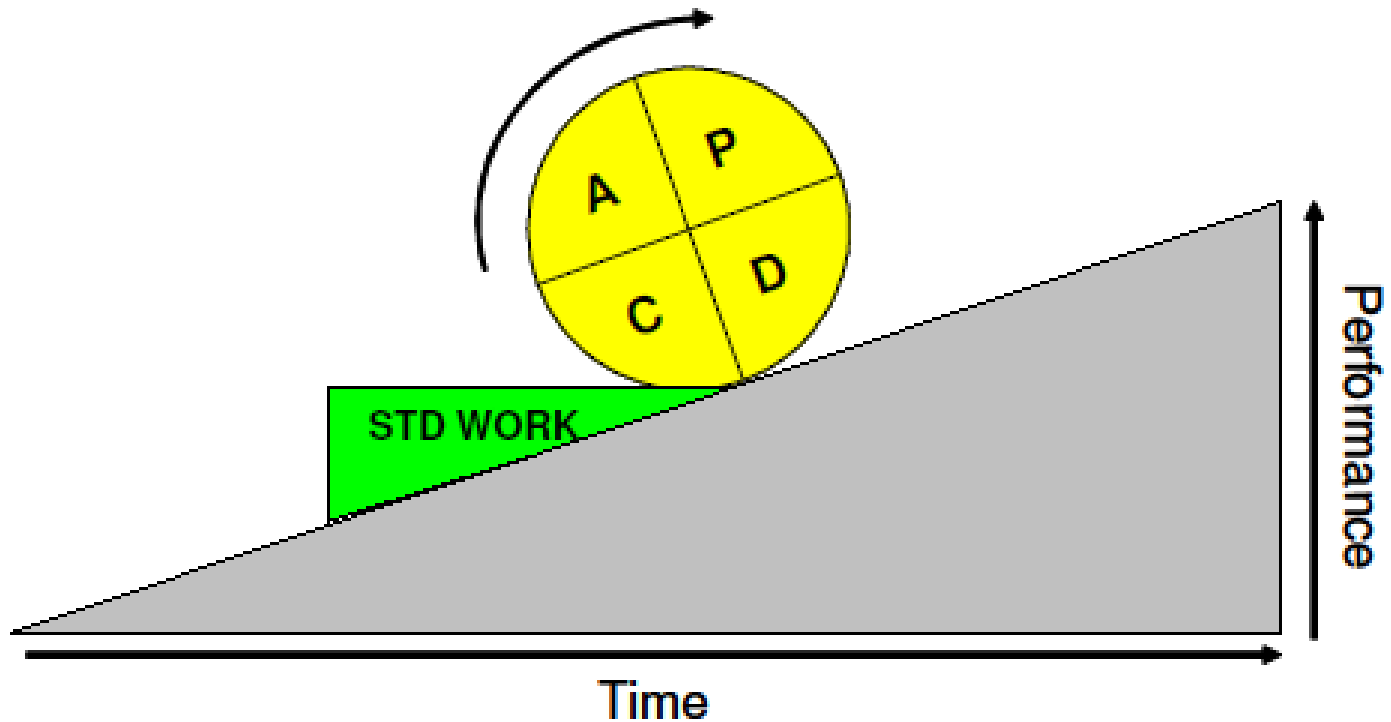
What hindered?

- No PM
- Johan not present that much

Lean Thinking – A3

- » Tells a story
- » Guides through change initiative
- » Iterative process with stakeholders
- » Helps convincing stakeholders
- » Learning tool (PDCA)

Lean Thinking



Lean Thinking

» At MediaGeniX we like



- Visual tools
- Step by step process : problem/idea definition, root-cause analysis, gap analysis, future defined process, follow-up

Lean Thinking

» Conclusion about Lean Thinking

- Confronting
- When applying “no blame” culture, you can achieve amazing results

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Conclusion

» You have to make it work!



References

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- » Extreme Programming Installed -- Ron Jeffries, Ann Anderson, Chet Hendrickson
- » Management 3.0, Leading Agile Developers, Developing Agile Leaders -- Jurgen Appelo
- » Leading Lean Software Development, Results are not the point -- Mary and Tom Poppendieck

References

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- » Lean Thinking: Banish Waste and Create Wealth in Your Corporation, Revised and Updated – James P. Womack and Daniel T. Jones