

KANBAN

Mads Troels Hansen
Prosa, October 4th 2009



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- Inspiration and my experience!

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What I do - today



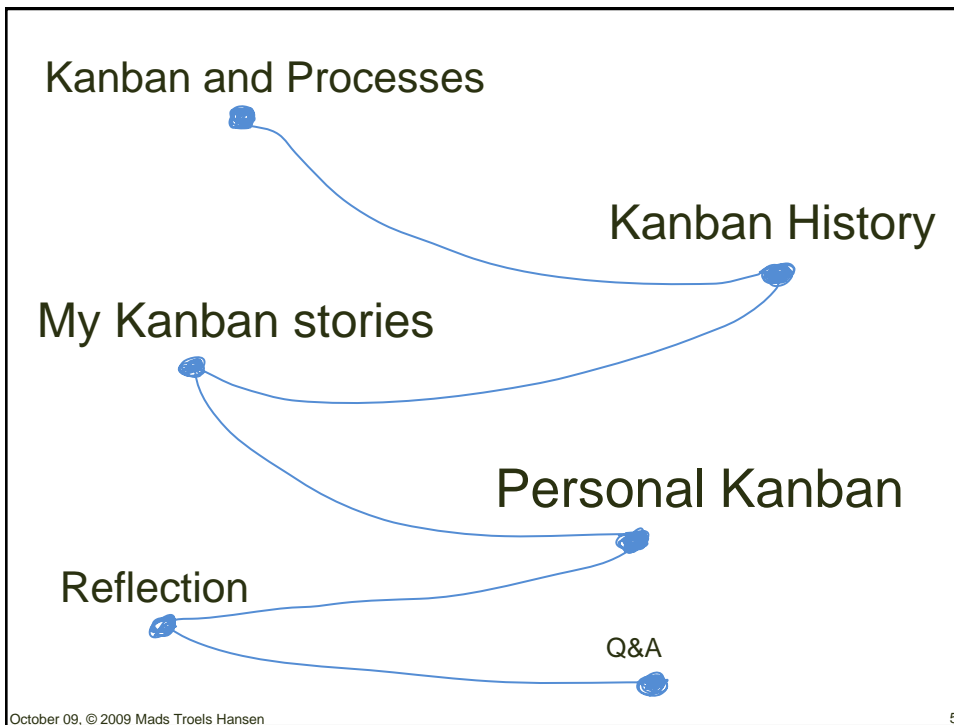
	<p>Project Booster</p> <p>Shared Product Vision [User Story Mapping, Personas] Iterative Delivery [Iterations, Stories, Tasks, Est.] Visual Mgt., Progress [Task Board, Kanban, Charts] Planning [Release Mgt, Risks]</p>
	<p>Accelerated Product Management</p> <p>Product Definition [Innovation Games] Product Delivery [Portfolio, Release Mgt.] Delivering Business Value [Backlog Grooming, Kano Model]</p>
	<p>Successful Outsourcing – 8 patterns</p> <p>High Productivity, Visibility [Implementing Offshore Patterns] Train the Trainers [Train/Coach Offshore Teams] Business Training [Talks, Business Case] Improvement, Readiness [Offshore Assessment]</p>
	<p>Tuning & Improving</p> <p>Reflection, Problem Solving [Retrospectives] High Business Value [Value Stream Mapping] Improvement, Readiness [Assessment] Training with Games [Kanban, Bottleneck, Business Value]</p>

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- Agile team
 - Face-to-face collaboration
 - Visual Management - Task board on the wall

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Schedule large work orders and align resources by workflow

Schedule small work orders and align resources by schedule

QUEUE	DEVELOPMENT IN DEV FOR REVIEW	TEST FOR TEST IN TEST	DONE DONE
■	■	■	■
■	■	■	■
■	■	■	■

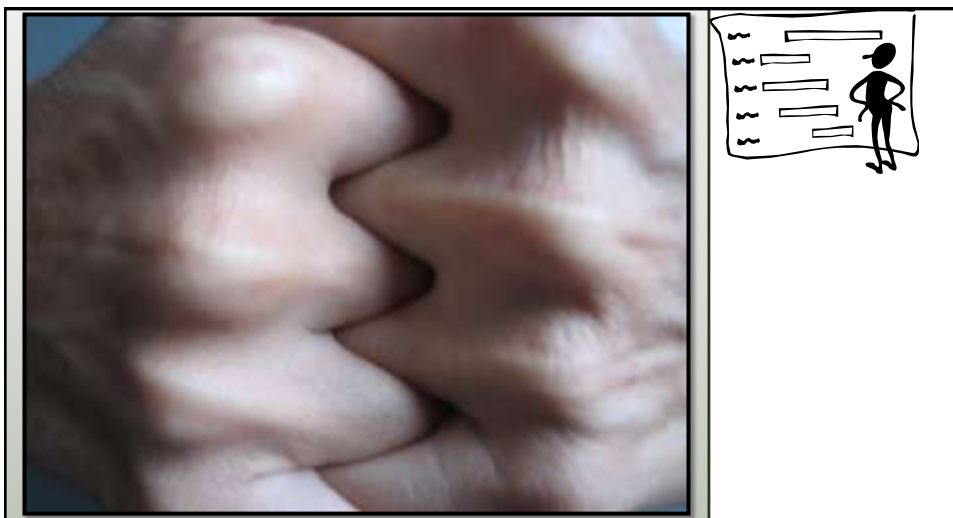
Schedule small work orders and align resources by workflow

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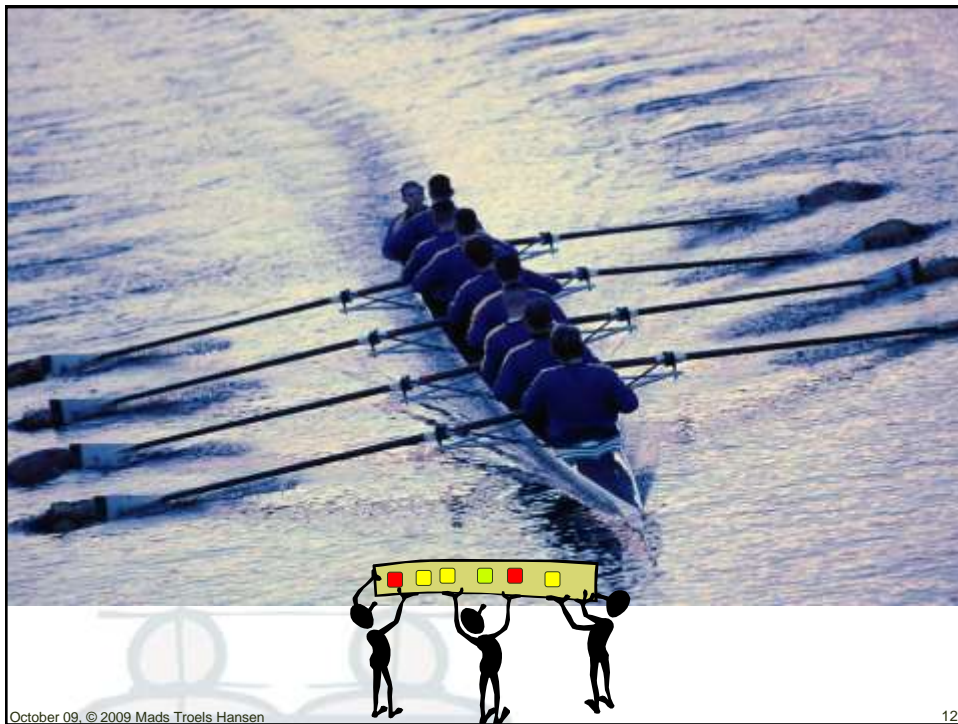
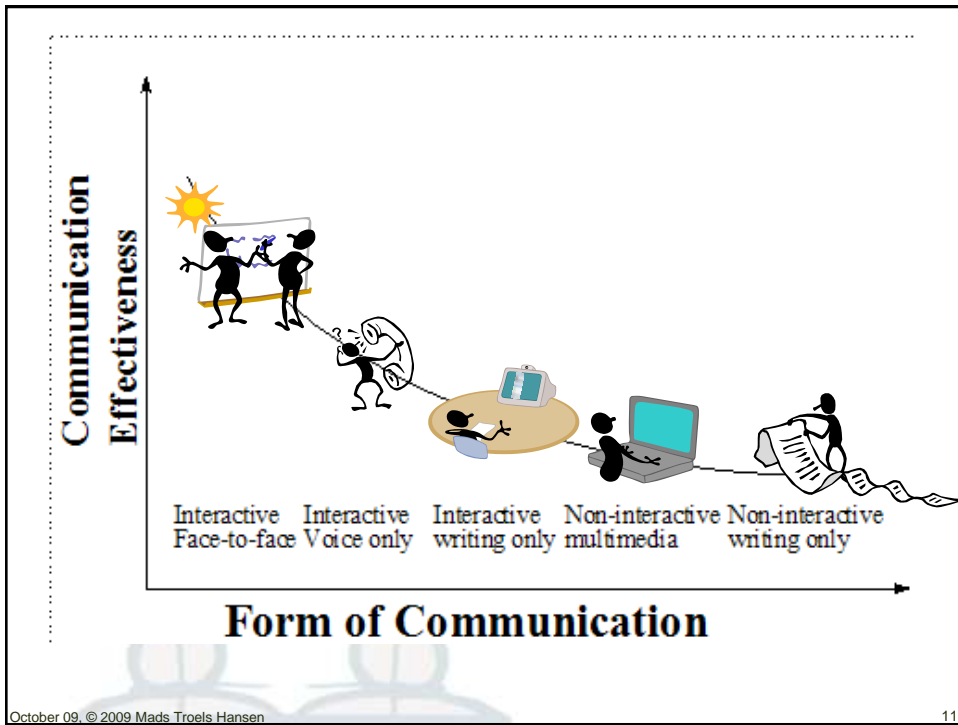
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- A normal way of folding hands



- Change the structure



WEST ◆ → **D** *Handwritten signature* ◆

JAPAN ◆ *Handwritten signature* **D** → ◆

PREPARATION **IMPLEMENTATION**

- Time to decision vs. total time -
- Knowledge distribution -
- Process Quality -

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Kanban and Processes

Kanban History

My Kanban stories

Personal Kanban

Reflection

Q&A

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- Toyota Production System (TPS)
- *Taiichi Ohno* (大野 耐)
- A kan-ban
 - A physical card (kan)
 - A signaling device (ban)



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TPS Conceptual Structure



Kenji Hiranabe, InfoQ 2008



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Exercise 1:
What number is missing?

1	19	11	2	3	46	38	6	51
35	10	41	12	13	14	15	16	17
18	4	20	43	22	44	24	25	9
26	48	30	56	55	31	53	32	34
27	52	23	36	37	8	39	40	42
21	33	45	7	47	27	49	50	5
54	29							

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Exercise 2:
What number is missing?

1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27
28	29	30	31	32	33	34	35	36
37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54
55	56	57	58	59	60	61	62	63

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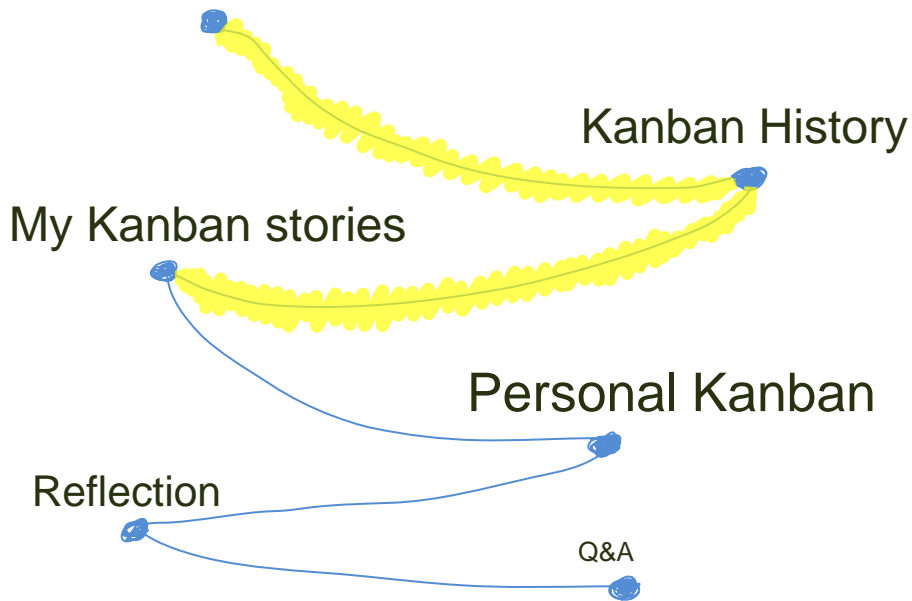
Exercise 3: What number is missing?

1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	
18	19	20	21	22	23	24	25	
26	27	28	29	30	31	32	33	
34	35	36	37	38	39	40	41	
42	43	44	45	46	47		49	
50	51	52	53	54	55	56	57	

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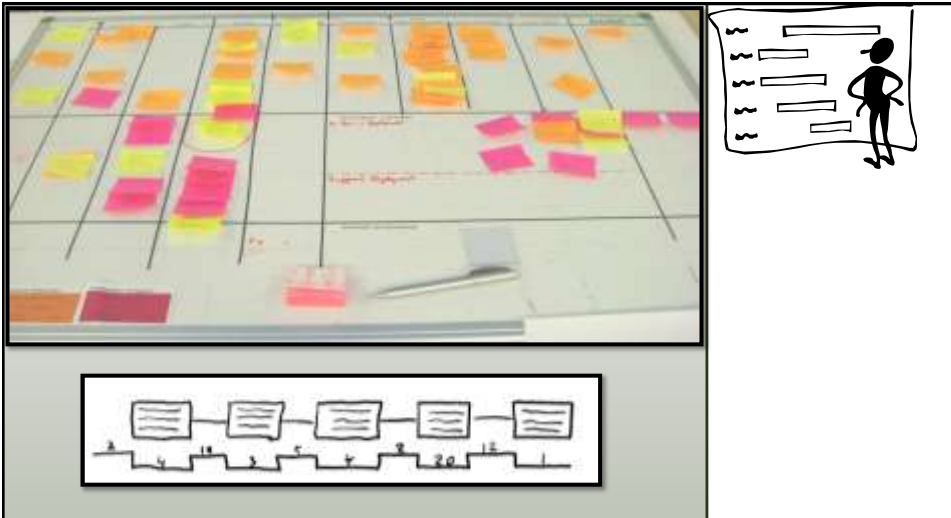
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Kanban and Processes

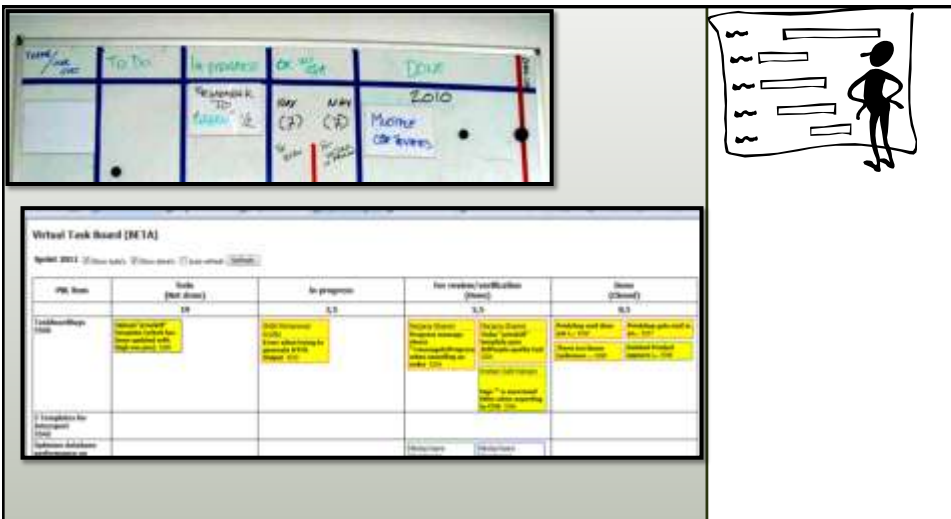


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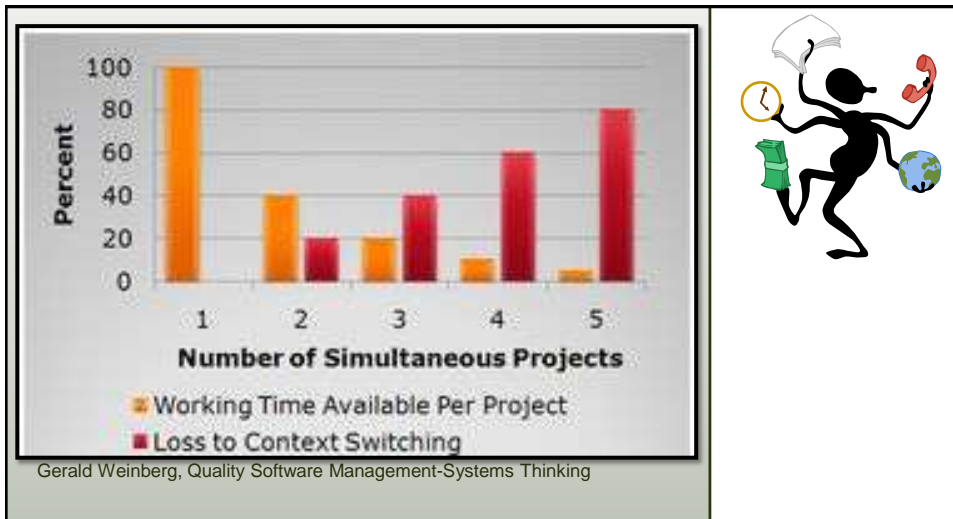
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- Devs, tests, technical writer, operations, support



- Traditional task boards extended with limits
 - Why limits?
 - Cadence



- Task Switching

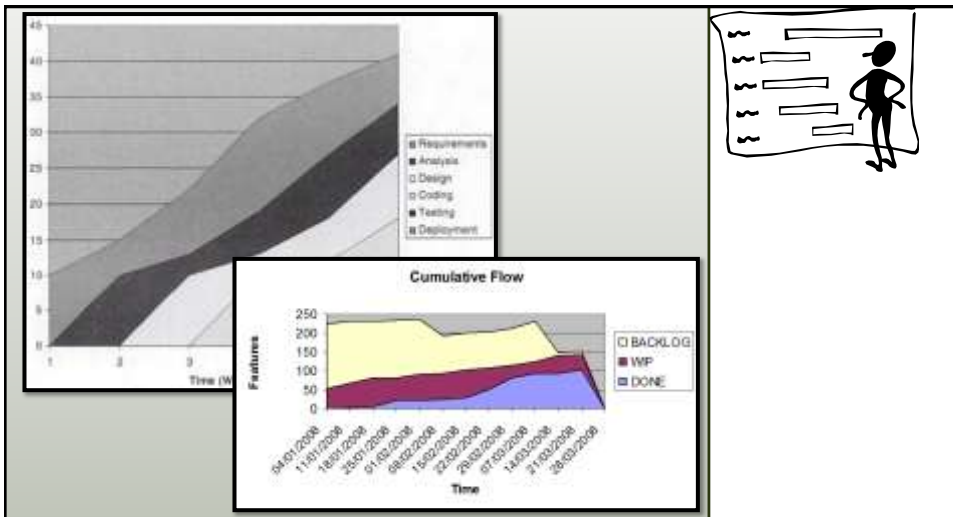
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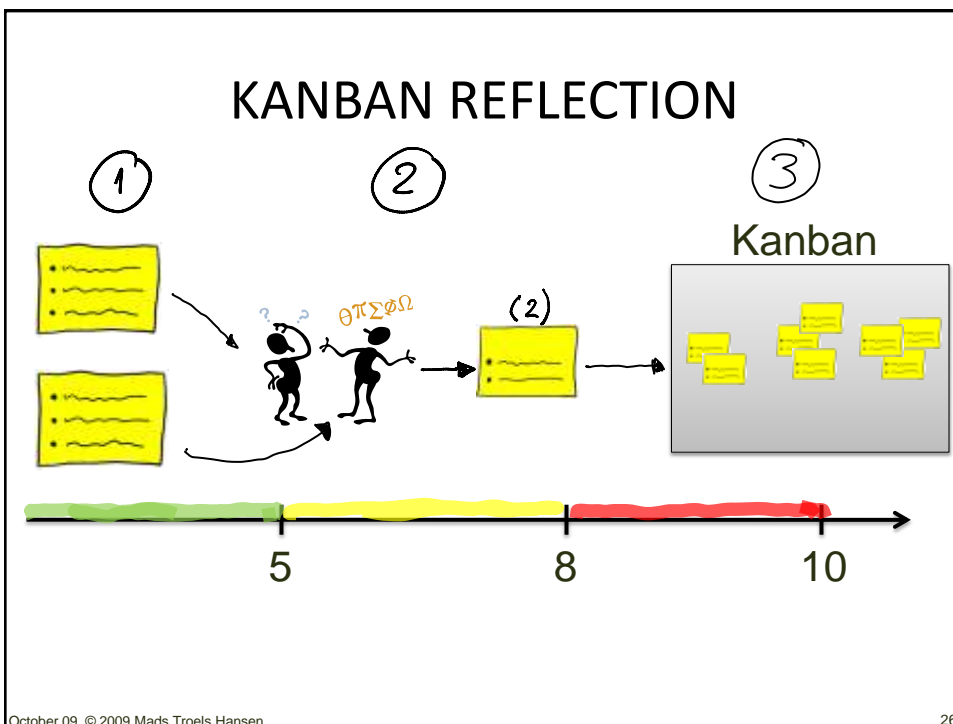
- Visibility and Transparency → TRUST
 - Use Google Docs or another online tool

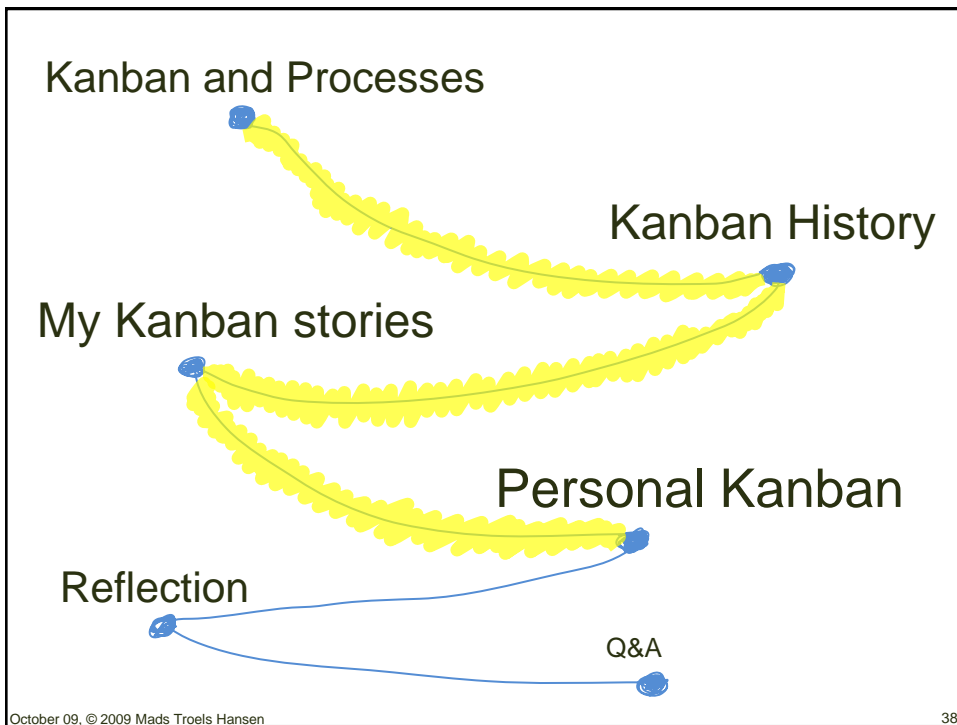
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- Establish flow and remove bottlenecks
 - Limit Work In Process, CF Diagrams
 - Value Stream Mapping





QUEUE	DEVELOPMENT		TEST		DONE
	IN DEV	FOR REVIEW	FOR TEST	IN TEST	DONE
📄	📄	📄	📄	📄	📄
📄					📄
📄					📄

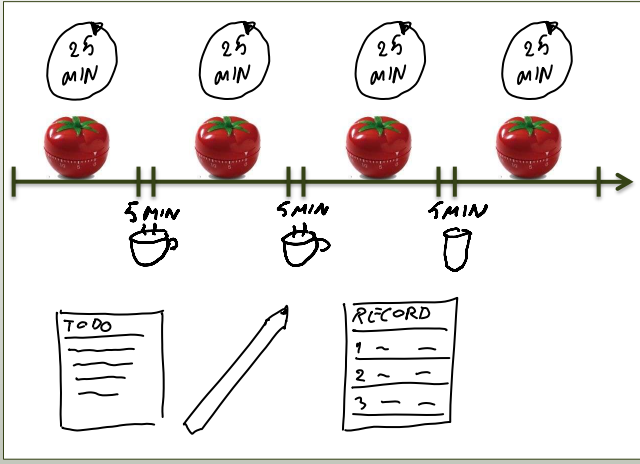
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- Personal Kanban, Focus, High productivity
 - Kanban board
 - Pomodoro technique

My version

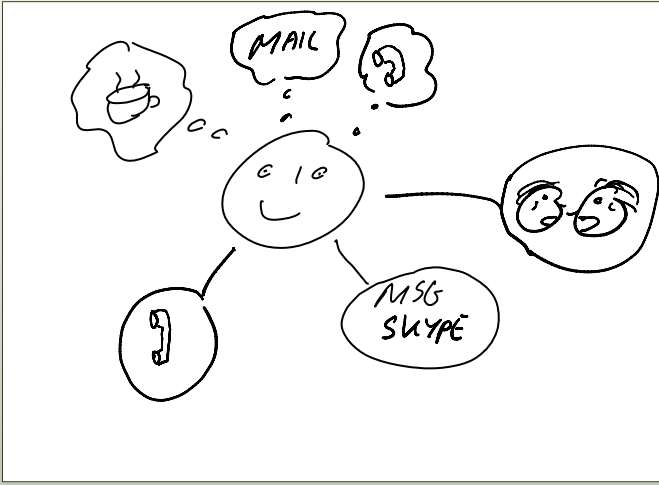
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The diagram illustrates the Pomodoro Technique. It features a horizontal timeline with four 25-minute work intervals, each marked with a tomato icon and '25 MIN'. Between these intervals are three 5-minute breaks, each marked with a coffee cup icon and '5 MIN'. Below the timeline are a 'TODO' list, a pencil, and a 'RECORD' sheet with three rows for tracking.

- Pomodoro Technique
 - Focus in 25 min
 - 5 min pause

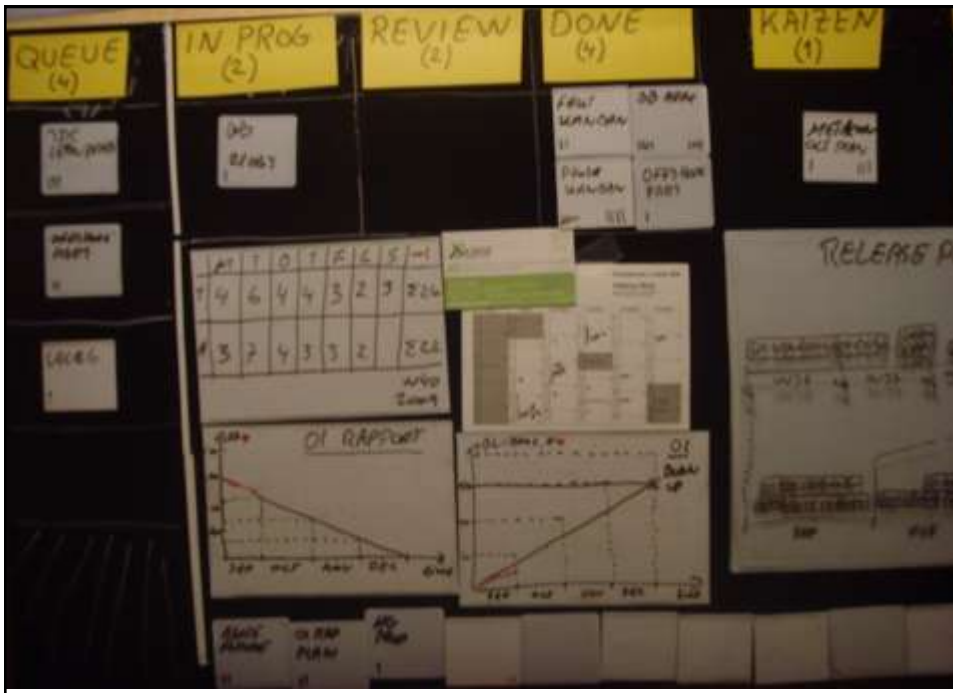
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The mind map diagram shows a central node labeled 'CIO' with a smiley face. It is connected to three other nodes: 'MAIL' (with a thought bubble containing a coffee cup), 'MSG SKYPE' (with a thought bubble containing two faces), and a question mark. A tomato timer is shown to the right.

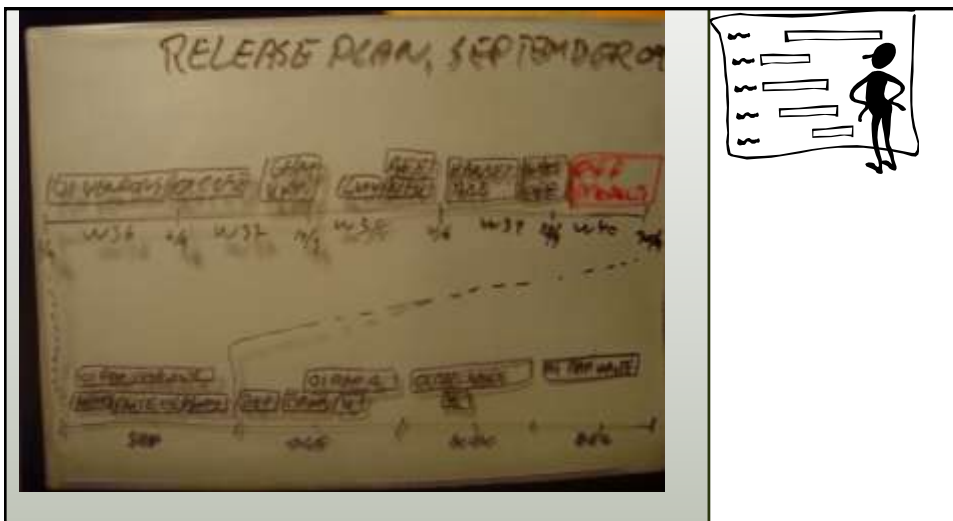
- Manage all the interruptions
 - External
 - Internal

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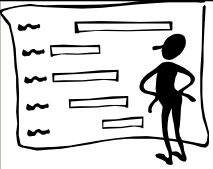


• Release Plan

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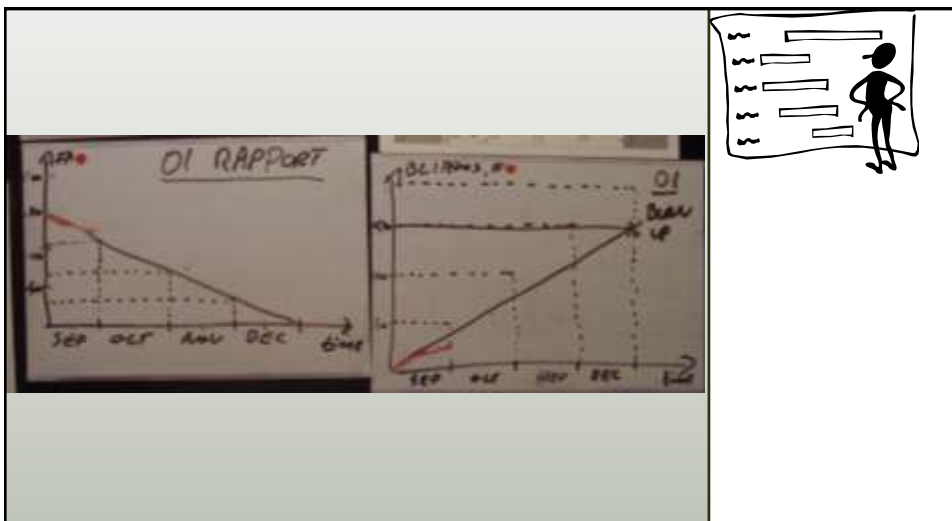
	M	T	O	T	F	L	S	-1
T	4	6	4	4	3	2	3	Σ26
A	3	7	4	3	3	2		Σ22
								W40 2009



- Weekly stats
 - Target
 - Actual

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- Project Progress
 - Burn down
 - Burn up

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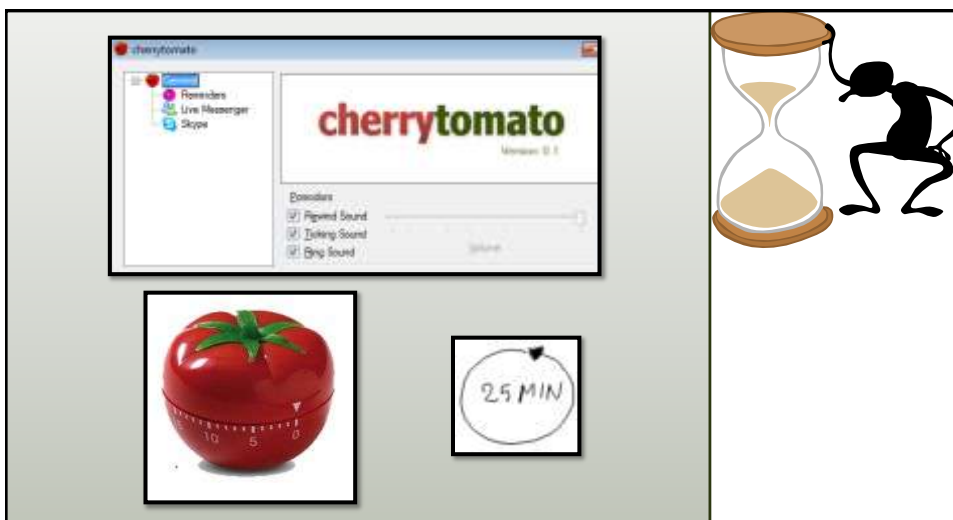
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- Kaizen
 - Improvements

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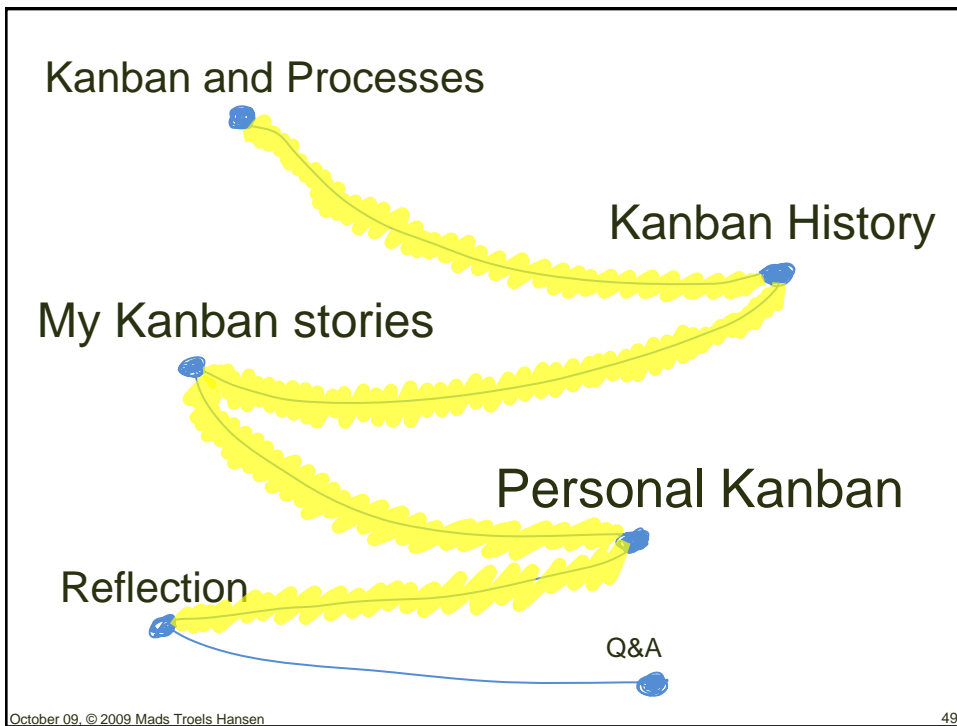
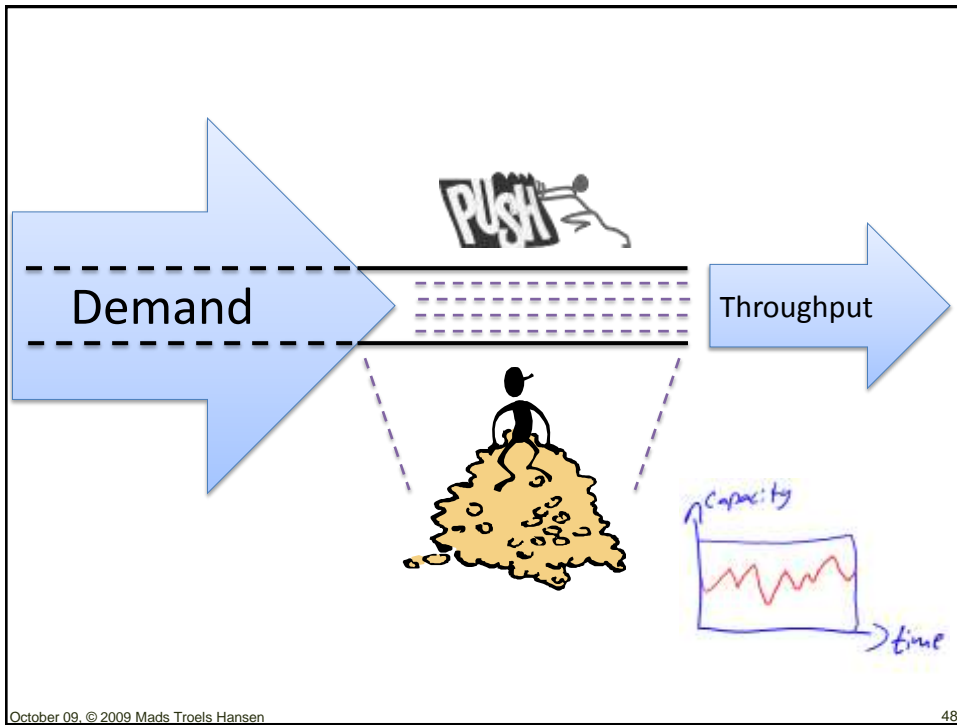
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- Pomodoro tools
 - Distributed team
 - Local team

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Remember the future

1. Imagine that you have used some of the techniques
2. Discuss in groups how it has improved your daily work
3. Each group writes **ONE** post-it note with two techniques

Techniques

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Kanban and Processes

Kanban History

My Kanban stories

Personal Kanban

Reflection

Q&A

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QUEUE	DEVELOPMENT		TEST		DONE DONE
	IN DEV	FOR REVIEW	FOR TEST	IN TEST	



People don't resist change, they resist being changed.
- Peter Scholtes

Thank you  @MadsTH
mth@bestbrains.dk

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Some references

- Lean Software Development - An Agile Toolkit, Mary & Tom Poppendieck, 2003
- Implementing Lean Software Development, Mary & Tom Poppendieck, 2007
- The Enterprise and Scrum, Ken Swaper, 2007
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- Scrumban, Corey Ladas, 2009
- Kanban vs Scrum – A practical guide, Henrik Kniberg, April 2009
- Kanban intro, Karl Scotland, <http://availagility.wordpress.com/2008/10/28/kanban-flow-and-cadence/>
- [YahooGroup: Kanbandev](#)
- Software Excellence <http://www.bestbrains.dk/dansk.aspx/Rådgivning>
- Distributed Pomodoro: CherryTomato <http://www.chrylers.com/cherrytomato/>
- Agile 2009 Paper: Agile for Distributed Teams <http://tinyurl.com/CmmiAgile>

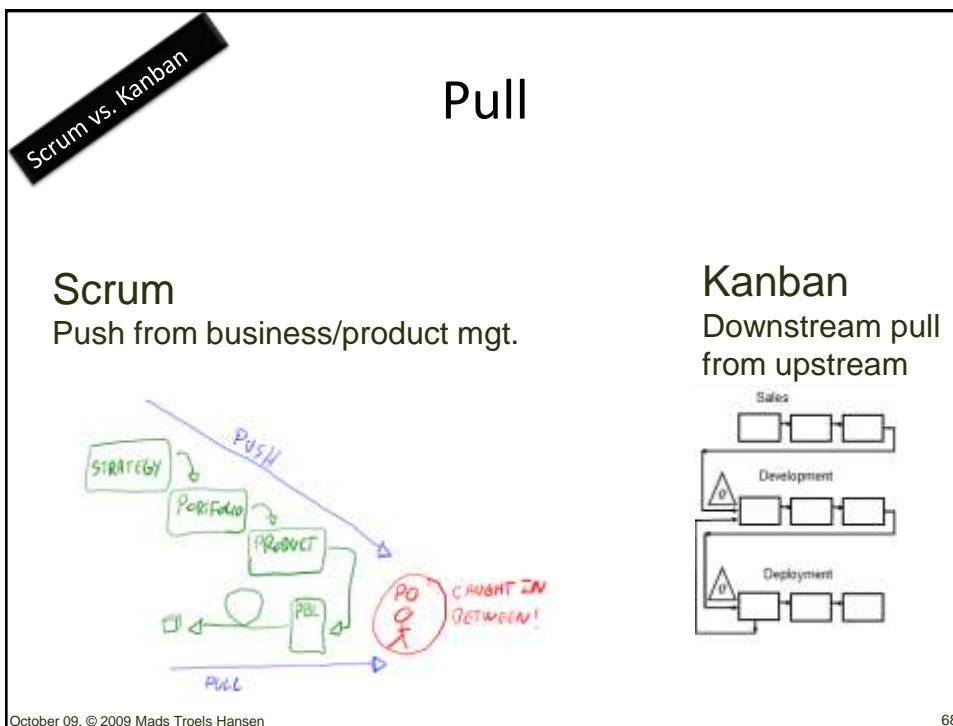
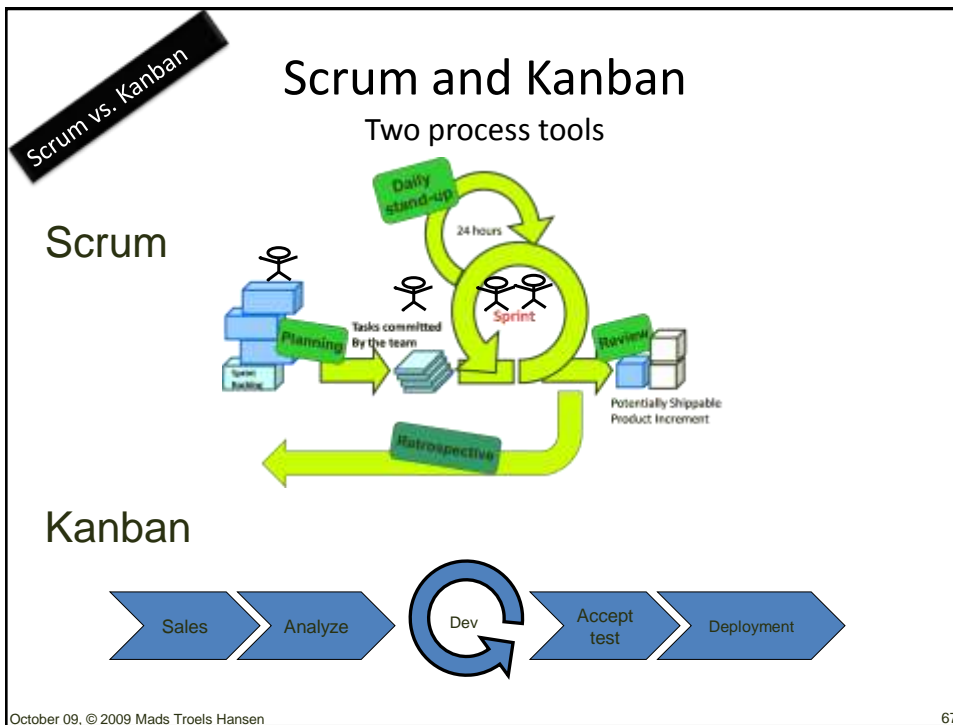
Scrum and Kanban

Extra slides

Scrum vs. Kanban

Quick summary

Kanban	Scrum (Iterations)
Change prioritization any time	Iterations
No roles	Roles defined (PO, SM, Team)
Commitment to deliver capacity, SLA	Commitment to a scope
Seperated planning and release	Combined planning and release
Limits WIP pr. Workflow state	Limits WIP pr. iteration
Queue	Backlog
Can use CFD	Burndown charts
Break down features, no estimation	Estimation and velocity
Different Cadences: Release Cycle, Others	Iteration is the Cadence
Throughput	Velocity



Scrum vs. Kanban

Task board game

PBL

ToDo	In Prog	Review	Done
A			
B			
C			
D			
E			
F			

PBL

Queue (3)	In Prog (2)	Review (2)	Queue (2)	Test	Queue (2)	Doc	Queue (2)	Deploy
D	A							
E	B							
F	C							

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Scrum vs. Kanban

Task board game

X New request from a customer

PBL

ToDo	In Prog	Review	Done
	A		
	B		
C			
D			
E			
F			

PBL

Queue (3)	In Prog (2)	Review (2)	Queue (2)	Test	Queue (2)	Doc	Queue (2)	Deploy
D	A							
E	B							
F	C							

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Scrum vs. Kanban

Task board game

x New request from a customer

PBL

x

ToDo	In Prog	Review	Done
		A B	
C D E F			

PBL

Queue (3)	In Prog (2)	Review (2)	Queue (2)	Test	Queue (2)	Doc	Queue (2)	Deploy
D E F	x C	A B						

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Scrum vs. Kanban

Task board game

x New request from a customer
y New bug reported

PBL

y

x

ToDo	In Prog	Review	Done
	C D	A B	
E F			

PBL

Queue (3)	In Prog (2)	Review (2)	Queue (2)	Test	Queue (2)	Doc	Queue (2)	Deploy
F	y x C	A B						

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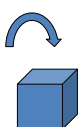
Scrum vs. Kanban




Task board game

x New request from a customer
y New bug reported

PBL

ToDo	In Prog	Review	Done
F	D E	A B C	



Test

Doc

Deploy

PBL

Queue (3)	In Prog	Review (2)	Queue (2)	Test	Queue (2)	Doc	Queue (2)	Deploy
F D E	Y	X C	B	A				

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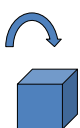
Scrum vs. Kanban




Task board game

x New request from a customer
y New bug reported

PBL

ToDo	In Prog	Review	Done
	E F	A B C D	



Test

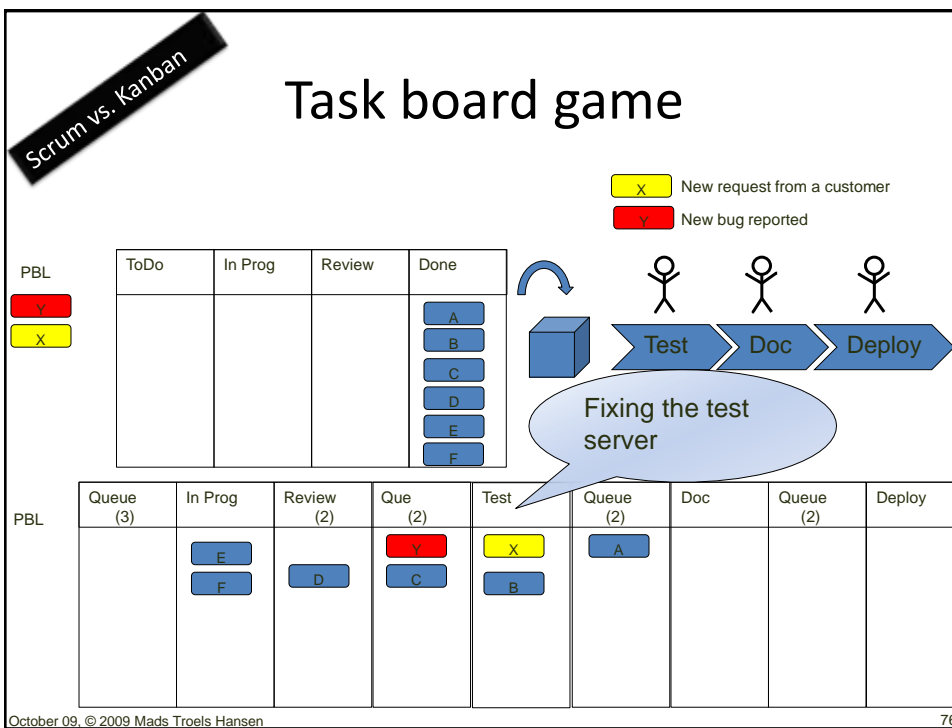
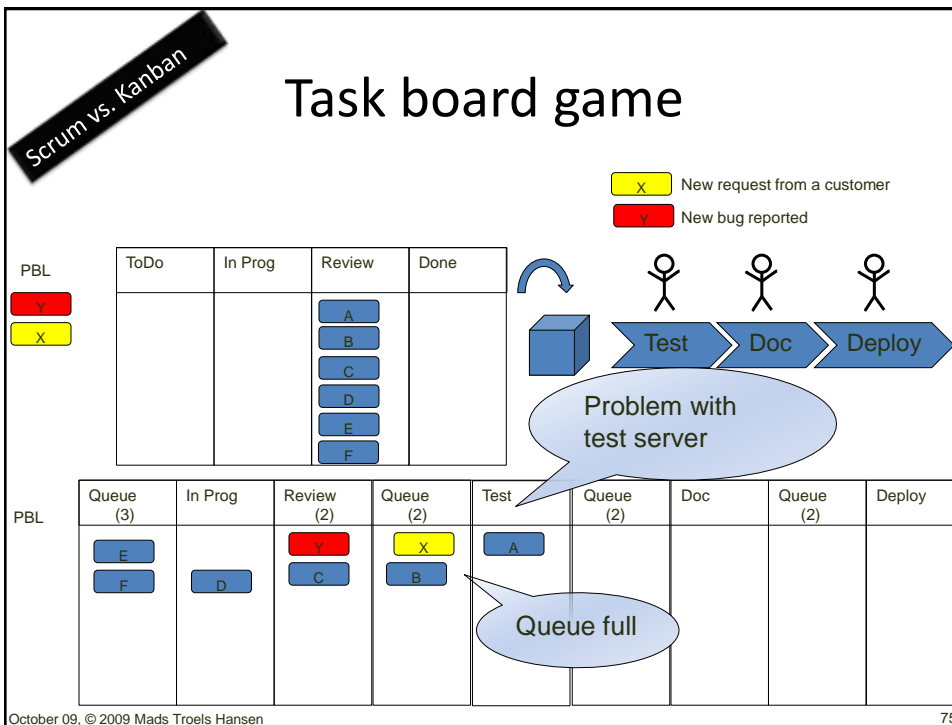
Doc

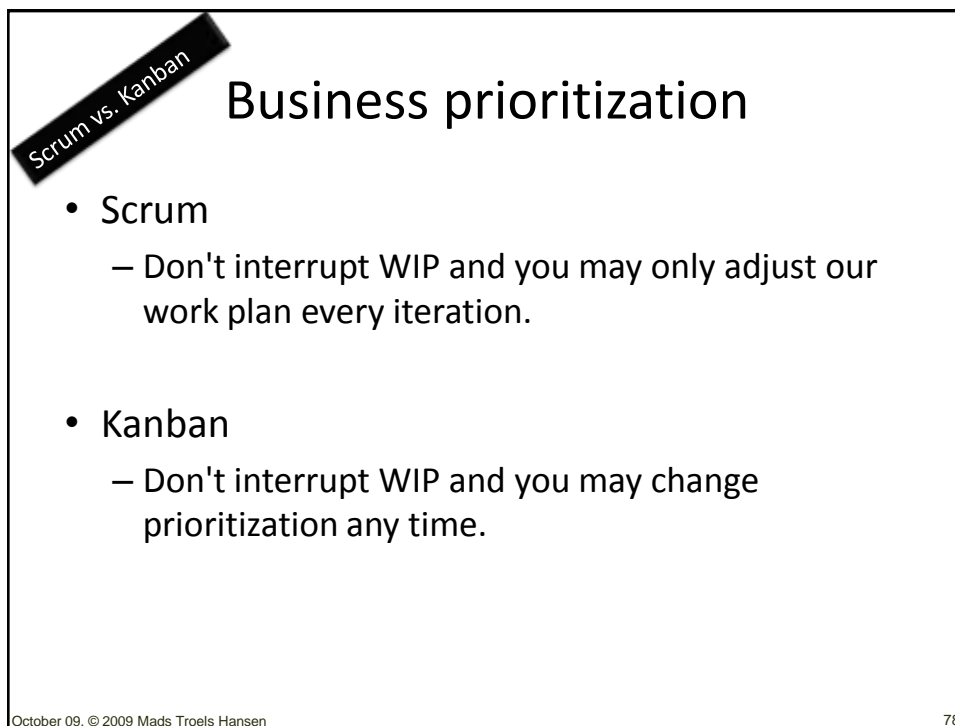
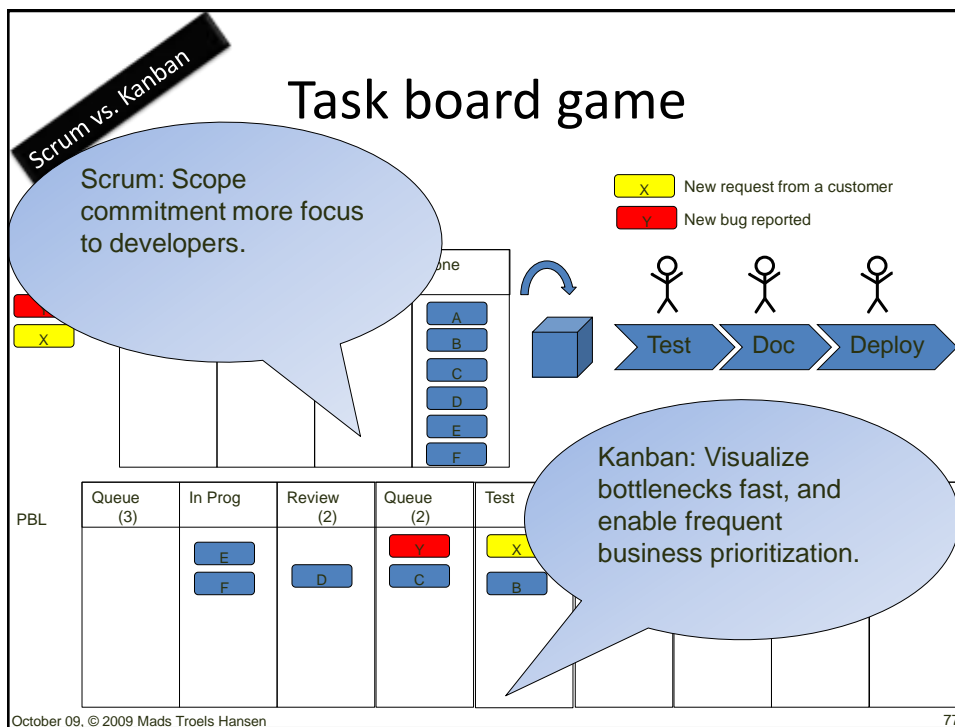
Deploy

PBL

Queue (3)	In Prog	Review (2)	Queue (2)	Test	Queue (2)	Doc	Queue (2)	Deploy
E F	Y D	C	X B	A				

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Scrum vs. Kanban

Commitment and goals

- Scrum
 - Commit to a scope (as professionals)
- Kanban
 - Commit to deliver working features within a time limit.
 - SLA: “...always deliver within 14 days...”

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Scrum vs. Kanban

Planning

- Scrum
 - Combined planning and release cycles.
- Kanban
 - Planning and release can be separated.
 - Frequent planning with release interval related to cost of release and business feedback.

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Scrum vs. Kanban

WIP

- Scrum
 - Limit WIP pr. iteration
- Kanban
 - Limit WIP pr. workflow state

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Scrum vs. Kanban

Roles

- Scrum
 - Product Owner
 - Scrum Master
 - Team
- Kanban
 - None prescribed!
 - An Agile Project Manager might be valuable to focus on the full value stream

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Scrum vs. Kanban

Iterations

- Scrum
 - Sprints, one cadence with
 - Planning
 - Process improvement
 - Release
- Kanban
 - No iteration
 - Can chose when to do planning, Process improvement, release etc.

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Scrum vs. Kanban

Backlogs

- Scrum
 - Product Backlog
 - Sprint Backlog
 - (Impediment backlog!)
- Kanban
 - Queues
 - Maybe combine with a Backlog of requirements

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Scrum vs. Kanban

Teams

- Scrum
 - Cross-functional team
- Kanban
 - Specialists
 - Different roles
 - Can also be cross-functional

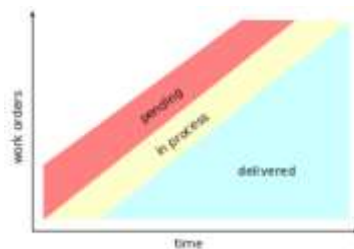
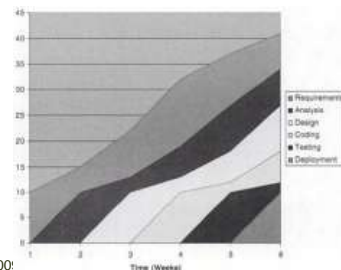
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Scrum vs. Kanban

Reporting

- Scrum
 - Product Backlog Burndown chart
 - Sprint Backlog Burndown
- Kanban
 - Cumulative Flow Diagrams (CFD)



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Time (Weeks)

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Scrum vs. Kanban

Estimating and velocity

- Scrum
 - Estimate relative size
 - Measure velocity
 - Use velocity for planning
- Kanban
 - None... might make sense to do it
 - Break down work at same size
 - Throughput instead of velocity