

Featureban

a simple kanban simulation game

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Visit www.agendashift.com/featureban for facilitation information and downloads.



Notes to facilitators: Please read

Hidden

- Do read **Featureban facilitation information and downloads** at www.agendashift.com/featureban and register for the latest source files (which you can adapt to your needs) and to receive future updates
- Most important points:
 - DO NOT give a lecture first. *Experience before explanation!*
Give participants the space to make their own discoveries
 - Interpret the pairing rules as you like, but don't let stickies move twice on the same day (the flow efficiency calculation in iteration 3 assumes that they won't)
 - Groups of 4 people work well
 - Leave stickies where they are at the end of each iteration (don't reset)
- Via agendashift.com/slack join us on Slack. Dedicated #featureban channel.

Facilitator's overview of iteration 1

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- Visualise work (introduce scenario)
- Visualise workflow
- Coins, variation
- Blockers
- Rules for heads (3-4 alternatives) and tails (both block & start)
- Names for the in-progress states
- Backlog – item names in the middle of each sticky, room above & below, no initials
- Take ownership of 1 item each, move into first in-progress column
- Play!
- Optional rule change!
- Debrief!

Iteration 1: Visual management

Ready	In progress		Complete 😊
	()	()	
<p>Fruit & veg</p> <p>Credit card validation</p> <p>Returns</p> <p>Project Neverland</p>	<p>^{MB} Celebrity home delivery</p> <p>^{NT} Chilli pepper lottery</p> <p>^{SC} Sponsor a farmyard animal</p>		

Iteration 1: Visual management

Ready	In progress		Complete 😊
	()	()	
<div style="border: 2px solid red; border-radius: 15px; padding: 10px;"><ul style="list-style-type: none">Fruit & vegCredit card validationReturnsProject Neverland</div>	<ul style="list-style-type: none">MB Celebrity home deliveryNT Chilli pepper lotterySC Sponsor a farmyard animal	<h2>Visualise our work...</h2>	

Iteration 1: Visual management

Ready	In progress		Complete 😊
	()	()	
<p>Fruit & veg</p> <p>Credit card validation</p> <p>Returns</p> <p>Project Neverland</p>	<p>^{MB} Celebrity home delivery</p> <p>^{NT} Chilli pepper lottery</p> <p>^{SC} Sponsor a farmyard animal</p>	<p>...and our workflow</p>	



redwood

What does the coin represent?

<https://www.flickr.com/photos/redwoodphotography/4356518997>



redwood

No coin? justflipacoin.com

<https://www.flickr.com/photos/redwoodphotography/4356518997>

Blocked work items

- After throwing tails, you may need to *block* one of your work items.
- In this game, *blocked* work items are marked with a “B”:



- Unblock by crossing out the “B”
- Here’s one that has been blocked, unblocked and re-blocked:



Heads I win...

Ready	In progress		Complete 😊
	()	()	
<p>Fruit & veg</p> <p>Credit card validation</p> <p>Returns</p> <p>Project Neverland</p>	<p>MB Celebrity home delivery</p> <p>NT Chilli pepper lottery</p> <p>SC Sponsor a farmyard animal</p>	<p>MB Celebrity home delivery</p> <p>Advance one of my items...</p>	

Heads I win...

Ready	In progress		Complete 😊
	()	()	
<p>Fruit & veg</p> <p>Credit card validation</p> <p>Returns</p> <p>Project Neverland</p>	<p>MB Celebrity home delivery</p> <p>NT Chilli pepper lottery</p> <p>SC Sponsor a farmyard animal</p> <p>MB Project Neverland</p>	<p>...start a new one</p>	

Heads I win...

Ready	In progress		Complete 😊
	()	()	
<p>Fruit & veg</p> <p>Credit card validation</p> <p>Returns</p> <p>Project Neverland</p>	<p>MB Celebrity home delivery</p> <p>Ø</p> <p>NT Chilli pepper lottery</p> <p>SC Sponsor a farmyard animal</p>	<p>...or unblock one of my items</p>	

Heads I win...

Ready	In progress		Complete 😊
	()	()	
<p>Fruit & veg</p> <p>Credit card validation</p> <p>Returns</p> <p>Project Neverland</p>	<p>MB Celebrity home delivery</p> <p>NT Chilli pepper lottery</p> <p>SC Sponsor a farmyard animal</p>	<p>If you have no other option, pair up with someone who threw tails</p>	

Tails you lose?

Ready	In progress		Complete 😊
	()	()	
<p>Fruit & veg</p> <p>Credit card validation</p> <p>Returns</p> <p>Project Neverland</p>	<p>MB Celebrity home delivery</p> <p>NT Chilli pepper lottery</p> <p>B</p> <p>SC Sponsor a farmyard animal</p>	<p>Block one of your items (if you have one to block)</p>	

Tails you lose?

Ready	In progress		Complete 😊
	()	()	
<p>Fruit & veg</p> <p>Credit card validation</p> <p>Returns</p> <p>Project Neverland</p>	<p>MB Celebrity home delivery</p> <p>NT B Chilli pepper lottery</p> <p>SC Sponsor a farmyard animal</p> <p>NT Project Neverland</p>	<p>AND start a new one</p>	

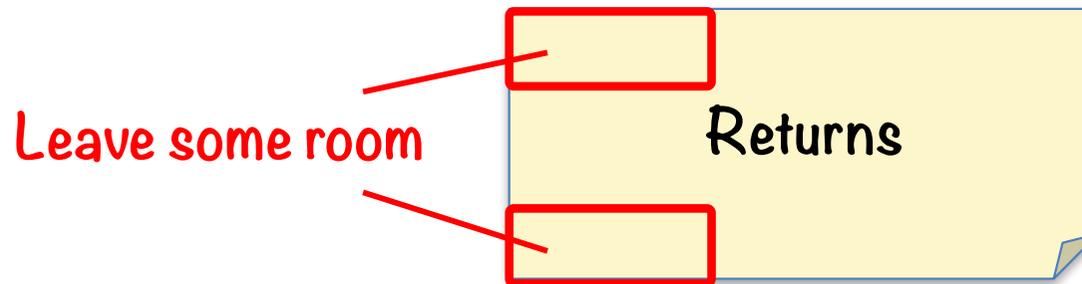
Setup

1. Get into groups of 3 to 5 people (4 is ideal)
2. Choose names for the two in-progress states on your board
 - “Design” & “Build”, “Prototype” & “Test” etc

Ready	In progress		Complete 😊
	???	()	

Setup (continued)

3. Quickly generate a backlog of work items – features, product lines, projects – for your supermarket website, a few per person. Write the name of each feature in the center of a sticky note (one per feature), leaving room top & bottom



Organize your work items

Ready	In progress		Complete 😊
	()	()	
<p>Fruit & veg</p> <p>Credit card validation</p> <p>Returns</p> <p>Project Neverland</p>	<p>MB Celebrity home delivery</p> <p>NT Chilli pepper lottery</p> <p>SC Sponsor a farmyard animal</p>	<p>Begin with one initialed item per person in your first in-progress column</p>	

Organize your work items

Ready	In progress		Complete 😊
	()	()	
<div style="border: 2px solid red; padding: 5px;"><ul style="list-style-type: none">Fruit & vegCredit card validationReturnsProject Neverland</div>	<ul style="list-style-type: none">^{MB} Celebrity home delivery^{NT} Chilli pepper lottery^{SC} Sponsor a farmyard animal	<p>Leave the rest (un-initialed) in your Ready" column</p>	

Iteration 1: Visual management – play!

- After everyone has tossed their coins, discuss your intended moves in your daily *standup meeting*
- After your meeting, make your moves according to the rules below
- Repeat these simulated “days” until your facilitator tells you to stop
- Remember to *replenish* your Ready column with new items before it empties

Heads

Choose one (your items only):

- **Move** an unblocked work item rightwards
- OR **unblock** a blocked one
- OR **start** a new work item, remembering to initial it

Only if you are otherwise unable to move, **pair** up to help someone who threw tails and has no other help

Tails

Do both (your items only):

- **Block** one of your currently unblocked items if you have one
- AND **start** a new work item, remembering to initial it

If you can, **pair** up with someone who threw heads and is otherwise unable to move

(Optional) Rule change!

Good news!

- We've automated our testing and are catching most of our bugs before they add significant delay
- If you throw tails, re-toss your coin

Take stock

Note down:

- How many items completed?
- How many in progress?
- Assuming you only throw heads from now on, how many heads will be required to clear your in-progress items?
 - 1 per item in the third column
 - 2 per item in the second column
 - 1 per blocked item
- Roughly how many “days” (rounds) would that take?

Debrief

Discuss and prepare to report back:

- What was that like?
- What elements seem familiar from your working experience? New?
- Suppose we continue in this way indefinitely. Then what happens?

Facilitator's overview of iteration 2

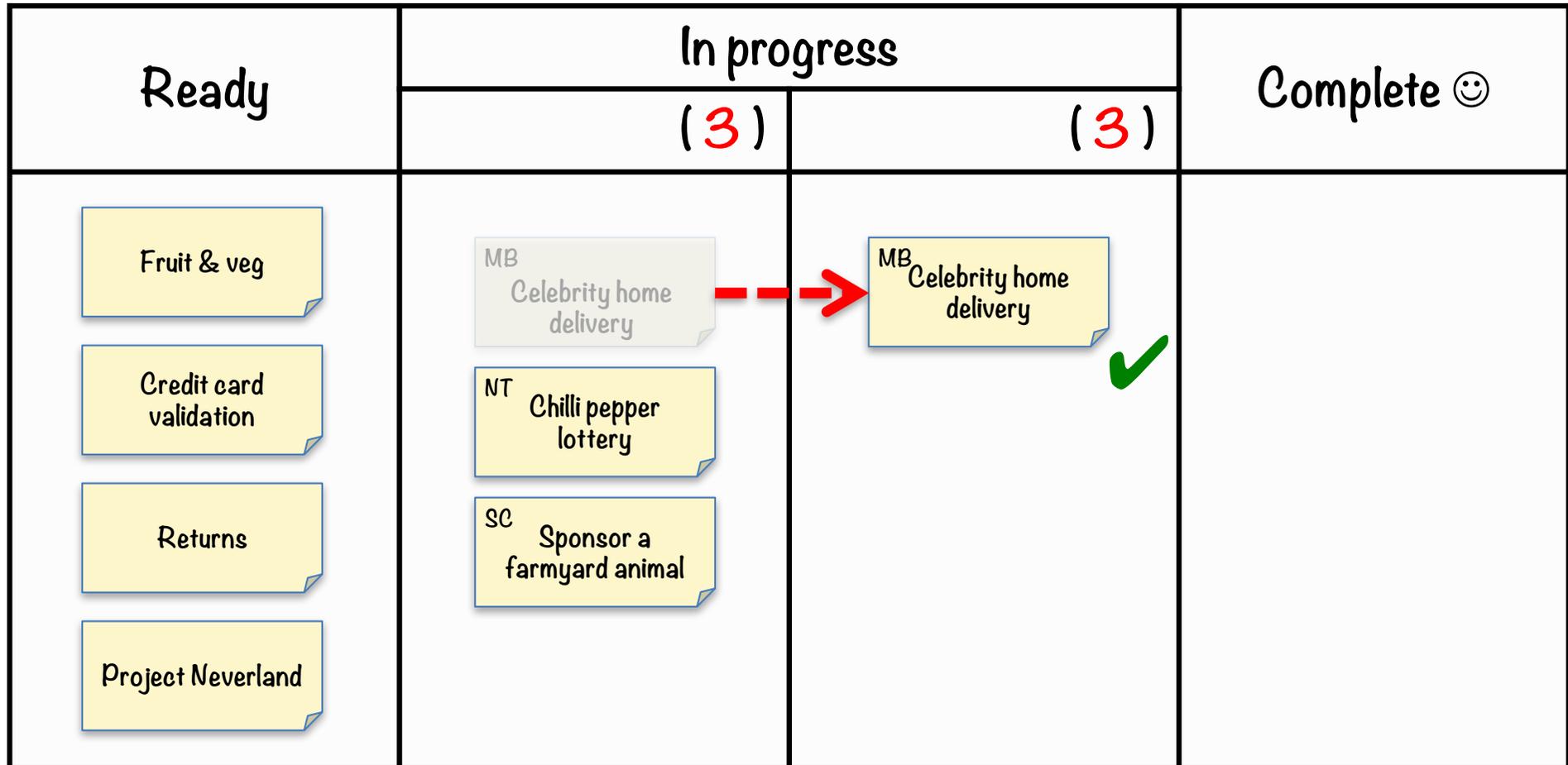
Hidden

- Leave your stickies where they are!
- Write a “3” in the parentheses above the two in-progress columns
- Exactly the same rules as before, except:
 - Don't move a sticky into a column that does not have capacity
 - In other words, don't move a sticky in a way that will cause a work-in-progress limit (WIP limit) to be exceeded (or further exceeded)
- Optionally:
 - Keep track of “day number”; write the day number on stickies when you start them (leaving existing in-progress stickies as they are)
 - Stop this iteration when when all your in-progress stickies have a day number on them and you've completed all the stickies that were still in progress at the end of iteration 1
- Debrief: flow, collaboration, Kanban Method practices
 - 1. Visualise; 2. Limit work-in-progress (WIP); 3. Manage flow; 4. Make policies explicit; 5. Implement feedback loops; 6. Improve collaboratively, evolve experimentally

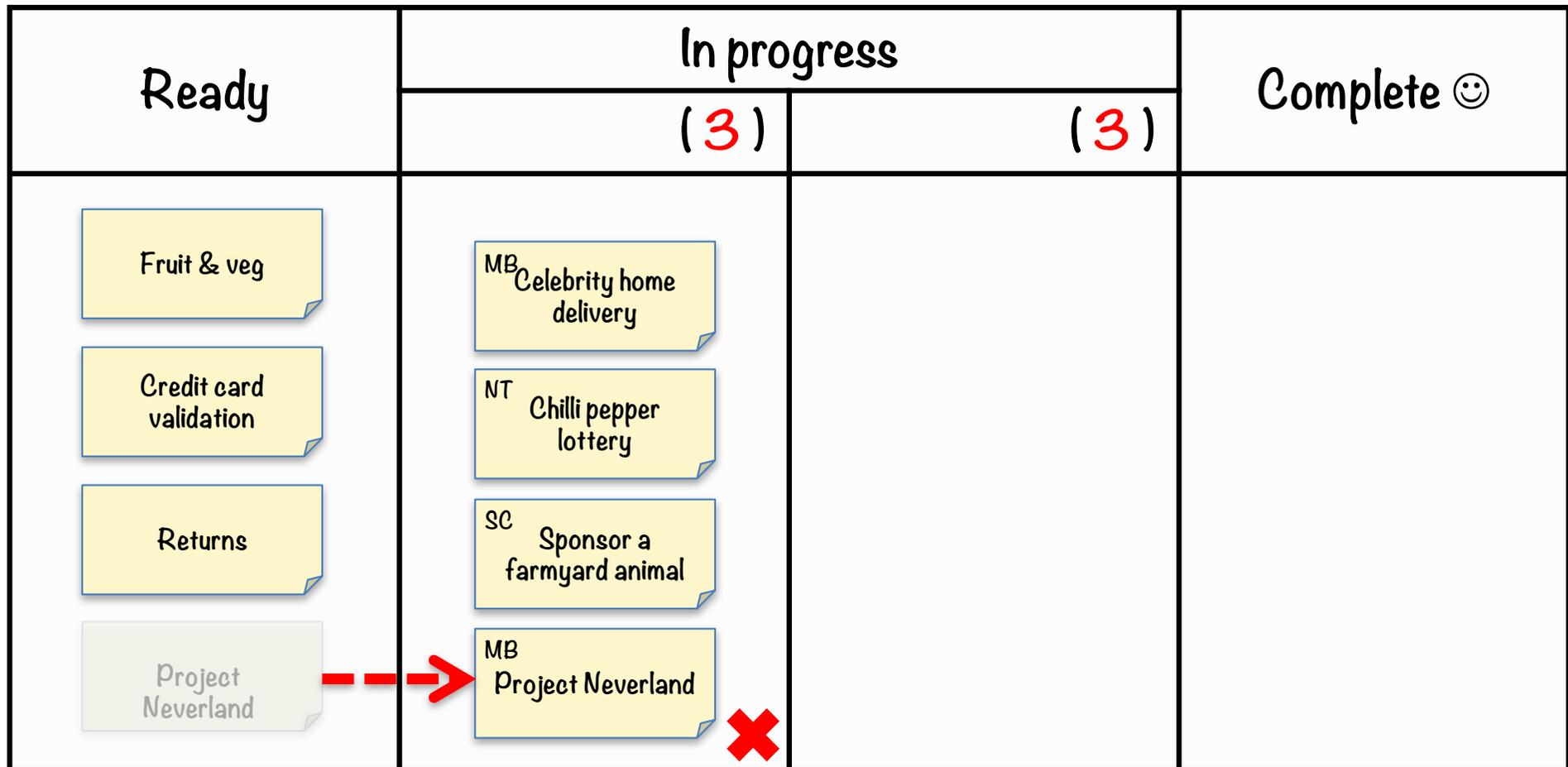
Iteration 2: WIP limits

Ready	In progress		Complete 😊
	(3)	(3)	
<p>Fruit & veg</p> <p>Credit card validation</p> <p>Returns</p> <p>Project Neverland</p>	<p>MB Celebrity home delivery</p> <p>NT Chilli pepper lottery</p> <p>SC Sponsor a farmyard animal</p>	<p>Same rules as before, but not moving work into columns that are at or above capacity</p>	

Iteration 2: WIP limits



Iteration 2: WIP limits



Iteration 2: WIP limits

Ready	In progress		Complete 😊
	(3)	(3)	
<ul style="list-style-type: none">Fruit & vegCredit card validationReturnsProject Neverland	<ul style="list-style-type: none">MB Celebrity home deliveryNT Chilli pepper lotterySC Sponsor a farmyard animal	?	

Iteration 2: WIP limits – play!

- Start with your board as it was at the end of iteration 1
- Same rules as before, but respect your WIP limits:
 - ! **Do not move work into columns that are at or above capacity**
- Keep going until your facilitator tells you to stop
- Remember to *replenish* your Ready column with new items before it empties

Heads

Choose one (your items only):

- **Move** an unblocked work item rightwards
- OR **unblock** a blocked one
- OR **start** a new work item, remembering to initial it

Only if you are otherwise unable to move, **pair** up to help someone who threw tails and has no other help

Tails

Do both (your items only):

- **Block** one of your currently unblocked items if you have one
- AND **start** a new work item, remembering to initial it

If you can, **pair** up with someone who threw heads and is otherwise unable to move

Take stock

Note down and compare with last time:

- How many items completed?
- How many in progress?
- Assuming you only throw heads from now on, how many heads will be required to clear your in-progress items?
 - 1 per item in the third column
 - 2 per item in the second column
 - 1 per blocked item
- Roughly how many “days” (rounds) would that take?

Debrief

Discuss and prepare to report back:

- What just happened?
 - How was it different?
 - What do you see more of? Less of?
 - Benefits? Drawbacks?
- Variations on this theme?
 - Different limits
 - Other ways to limit work in progress
- Parallels from your working experience

Cross-check with the Kanban Method

Against the three core practices that correspond to the **transparency** value:

CP1: Visualize

- ✓ Work items
- ✓ Work flow
- ✓ Work item state – where in the work flow, whether blocked

CP4: Make policies explicit

- ✓ The rules of the game

CP5: Implement feedback loops

- ✓ “Daily” (per-round) standup meeting
- ✓ Replenishment

Cross-check with the Kanban Method

Against the three remaining core practices and their corresponding four values (in bold) – **balance**, **flow**, **customer focus**, & **collaboration**:

CP2: Limit work-in-progress (WIP)

- ✓ Column limits, one way to **balance** workload vs capacity
- ✓ We made a true *kanban system*

CP3: Manage flow

- ? **flow** (smoothness, timeliness, economic outcomes)
- ✗ **customer focus** (customer need)

*CP6: Improve collaboratively, evolve experimentally
(using models and the scientific method)*

- ? We created conditions for **collaboration** in delivery
- ✗ Nothing collaborative, experimental or scientific about our change!

Facilitator's overview of iteration 3

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- Again, leave your stickies where they are!
 - (But could suggest reusing completed stickies)
- Still keep track of day numbers
 - Note the start day on stickies as before
 - Now note the completion day also
- Tracking sheet:
 - Record completed stickies
 - Each day, count how many stickies are in each column
- Optional rule change mid iteration (3-4 “days” in)
- Charts: Run chart, Histogram, CFD
- Metrics: Lead time metrics, flow efficiency

Iteration 3: Metrics

- Keep track of a “day number” for each round
- **Kanban system lead times, run chart, histogram**
 - Note the day number each work item enters and later leaves the WIP-limited part of the system
 - We will plot durations sequentially in a run chart and summarise in a histogram
- **Cumulative flow diagram (CFD), simple method**
 - Each day, count the number of work items in each column
 - We will plot in a stacked area chart, “Complete” at the bottom
- **Flow efficiency**
 - We will calculate the ratio of average *touch time* to average system lead time, expressed as a percentage

Iteration 3: Metrics

Featureban Metrics Capture Sheet

Column counts

Day	Ready	<Column 2>	<Column 3>	Complete :-)
1	9	3	2	6
2	9	3	0	8
3	8	2	0	10
4	7	1	1	11
5	5	1	0	14
6	2	3	1	14
7	6	3	2	14
8	6	3	1	15
9	6	2	0	16
10	5	3	1	16

Kanban system lead times

#	Start day	End day	Time
1	4	7	3
2	5	8	3
3	6	11	5
4	5	12	7
5	10	14	4
6	9	14	5
7	13	15	2
8	5	15	10
9	13	16	3
10	15	17	2

(Optional) What would you change?

- Take a few minutes to design three changes to the game
- You may propose changes to:
 - Artifacts (coins, board, stickies, tracking sheets, etc)
 - Policies (rules)
 - Parameters (eg WIP limits)
 - The structure of the game
- For each change you should be able to describe in real-world terms:
 - What underlying system change it might represent
 - Possible impact, downsides as well as upsides

Iteration 3: Metrics – run chart

Kanban system lead times

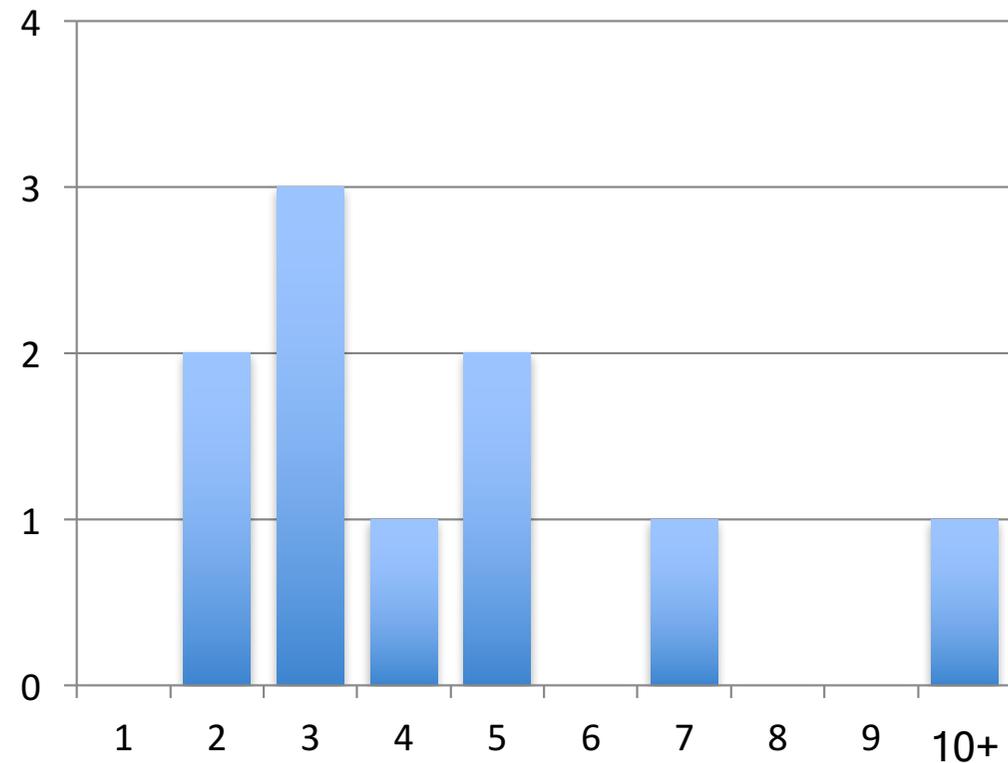
#	Start day	End day	Time
1	4	7	3
2	5	8	3
3	6	11	5
4	5	12	7
5	10	14	4
6	9	14	5
7	13	15	2
8	5	15	10
9	13	16	3
10	15	17	2



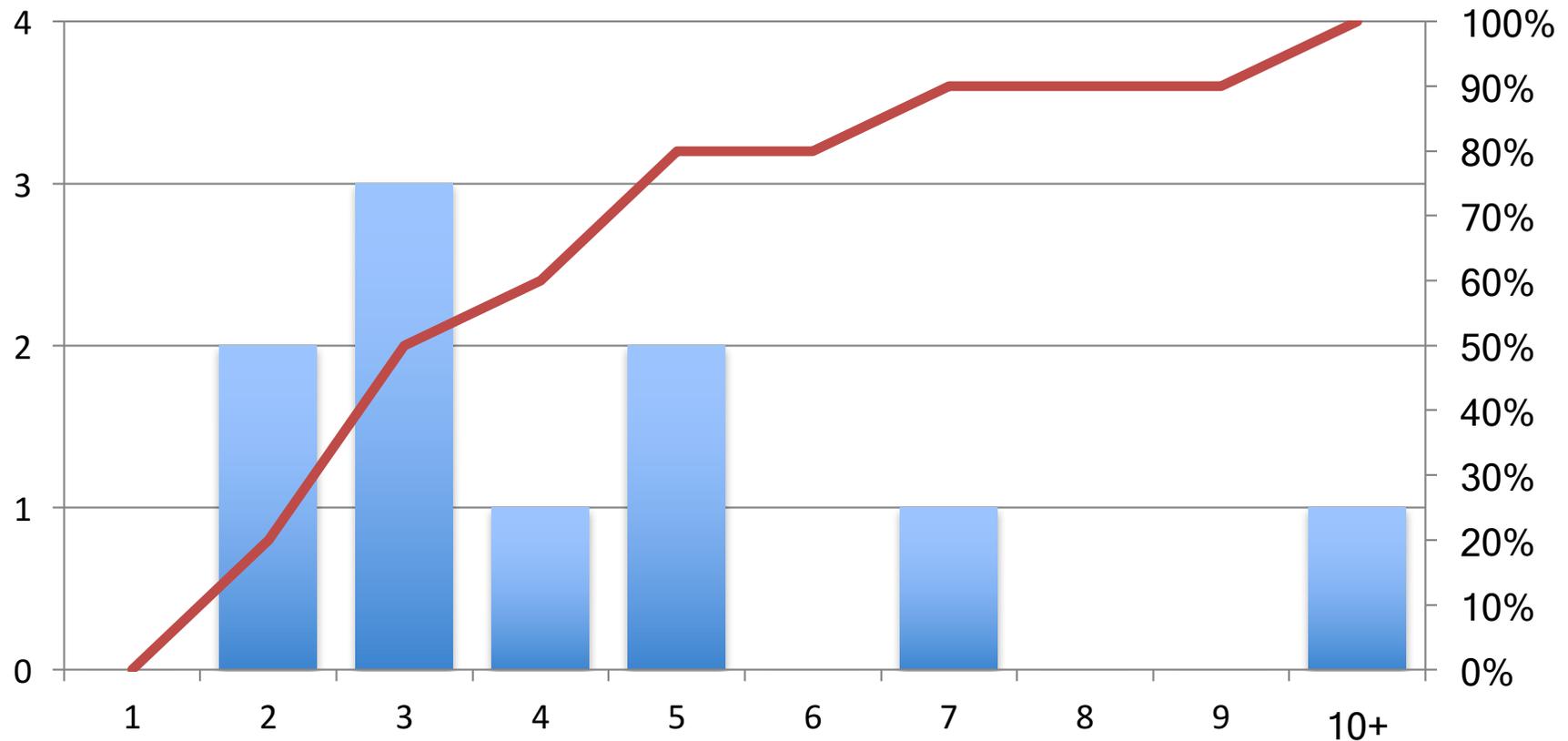
Iteration 3: Metrics – histogram

Kanban system lead times

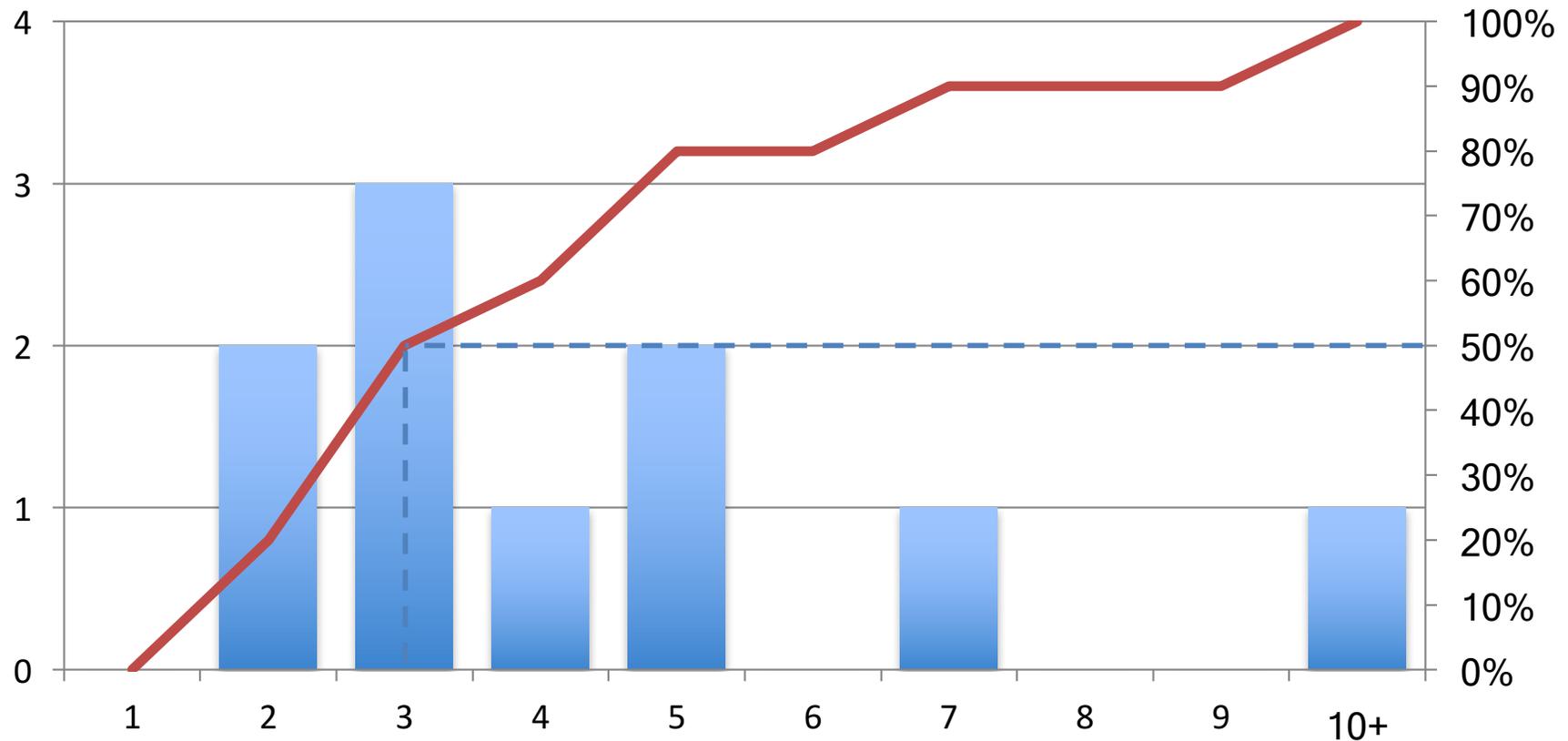
#	Start day	End day	Time
1	4	7	3
2	5	8	3
3	6	11	5
4	5	12	7
5	10	14	4
6	9	14	5
7	13	15	2
8	5	15	10
9	13	16	3
10	15	17	2



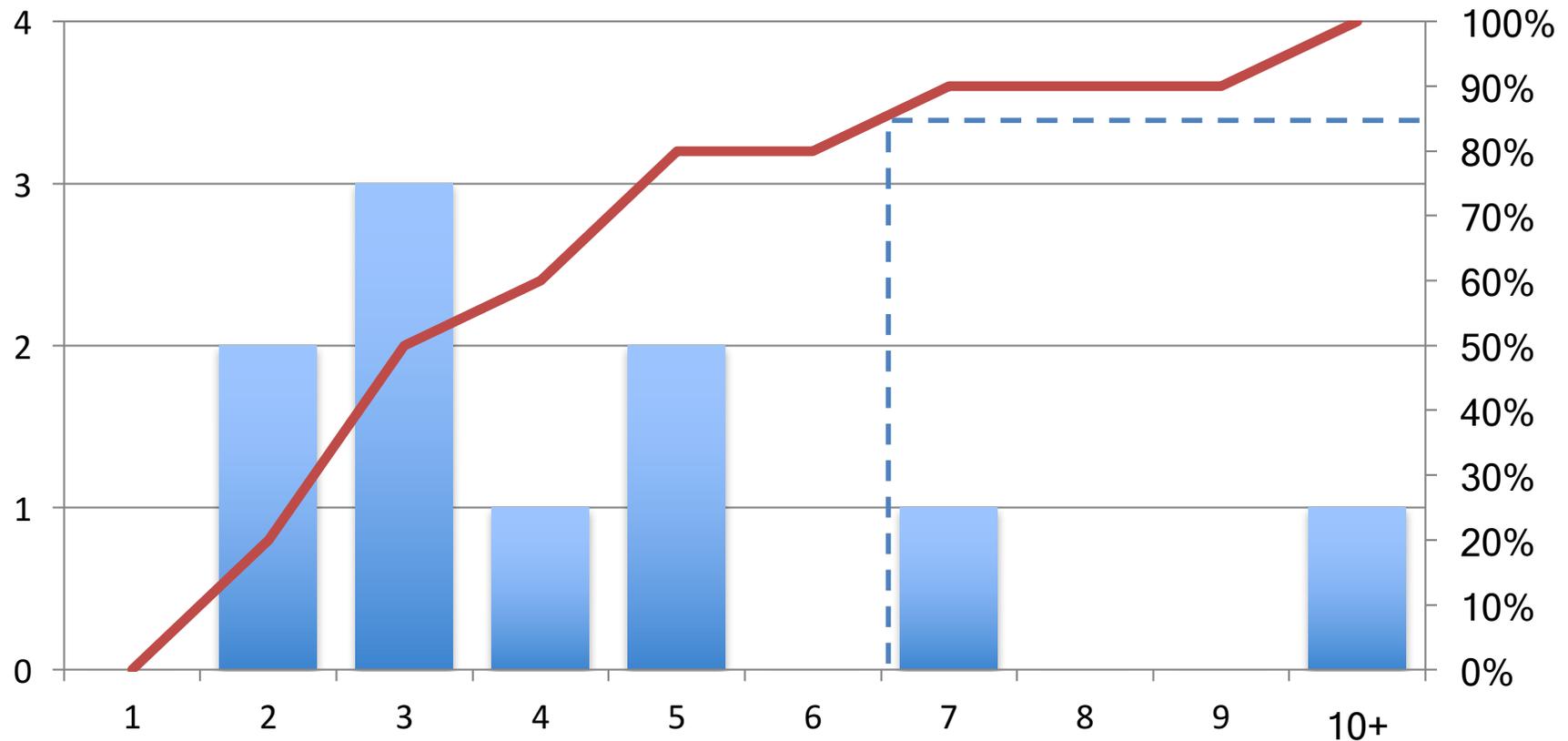
Iteration 3: Metrics – histogram



Iteration 3: Metrics – histogram



Iteration 3: Metrics – histogram



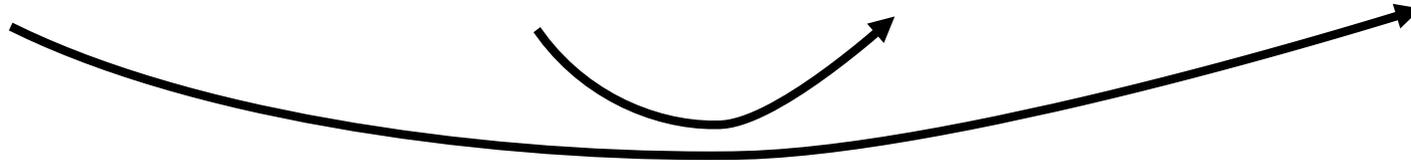
Iteration 3: Metrics – cumulative flow diagram (CFD)

Column counts

Day	Ready	Design	Build	Complete :-)
1	9	3	2	6
2	9	3	0	8
3	8	2	0	10
4	7	1	1	11
5	5	1	0	14
6	2	3	1	14
7	6	3	2	14
8	6	3	1	15
9	6	3	0	16
10	5	3	1	16

Reversed

Day	Complete :-)	Build	Design	Ready
1	6	2	3	9
2	8	0	3	9
3	10	0	2	8
4	11	1	1	7
5	14	0	1	5
6	14	1	3	2
7	14	2	3	6
8	15	1	3	6
9	16	0	3	6
10	16	1	3	5

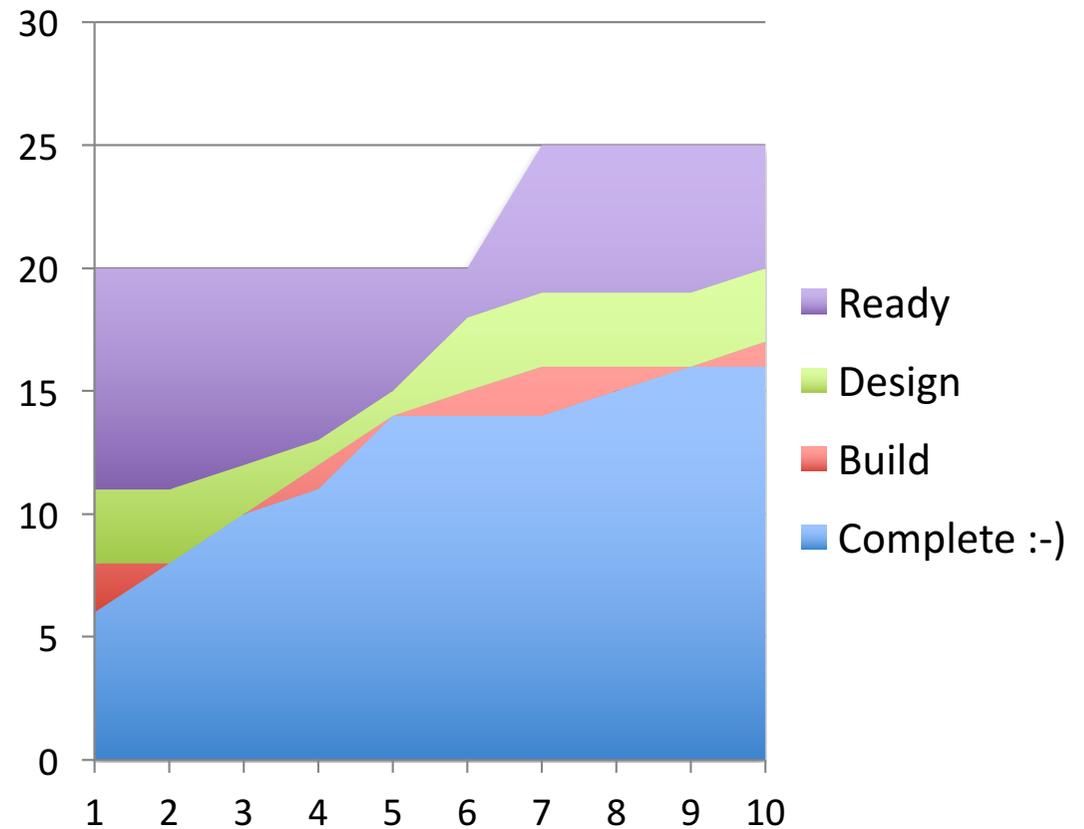


Cheating at CFDs: reverse columns, then stacked area chart

Iteration 3: Metrics – cumulative flow diagram (CFD)

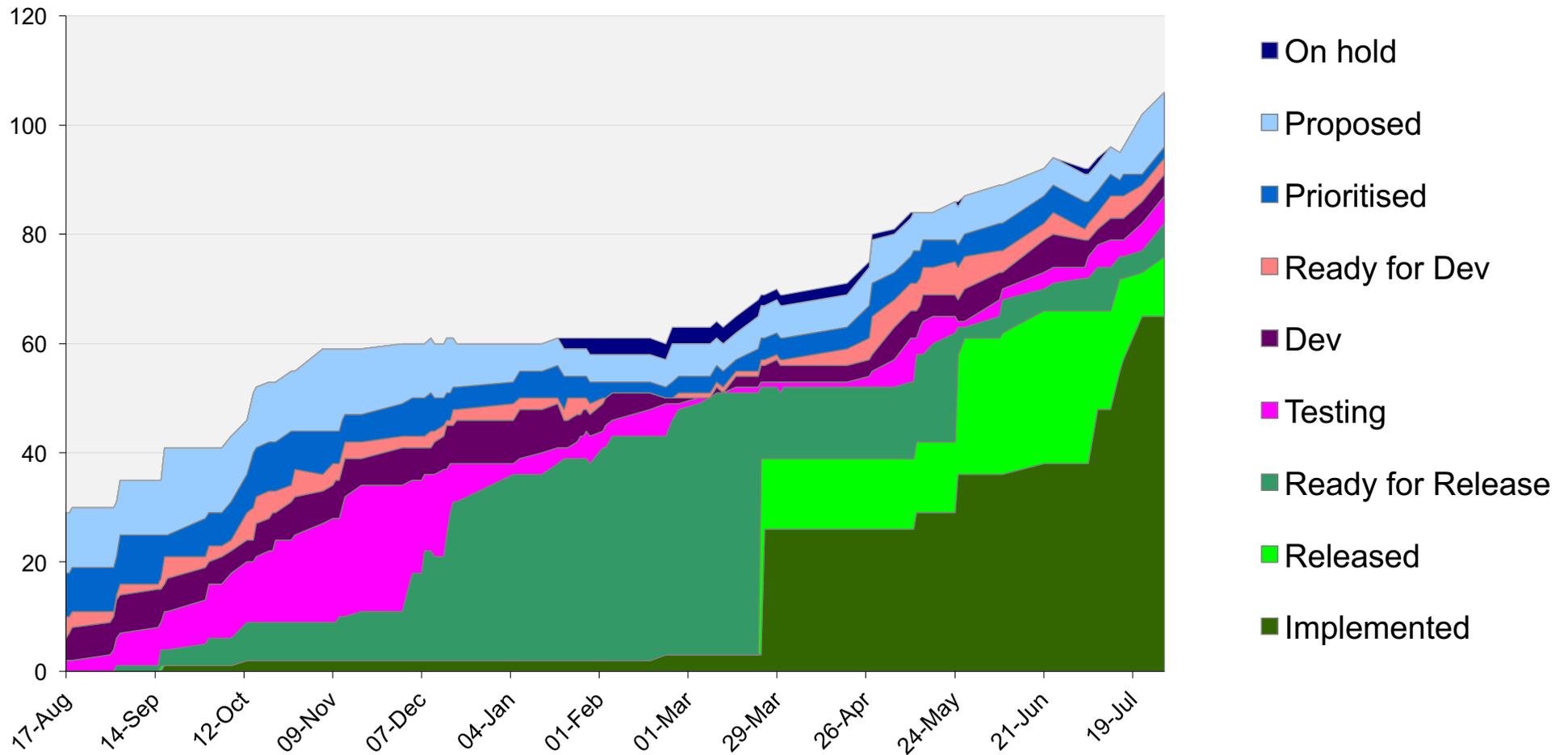
Reversed

Day	Complete :-)	Build	Design	Ready
1	6	2	3	9
2	8	0	3	9
3	10	0	2	8
4	11	1	1	7
5	14	0	1	5
6	14	1	3	2
7	14	2	3	6
8	15	1	3	6
9	16	0	3	6
10	16	1	3	5



Cheating at CFDs: reverse columns, then stacked area chart

Iteration 3: Metrics – cumulative flow diagram (CFD)



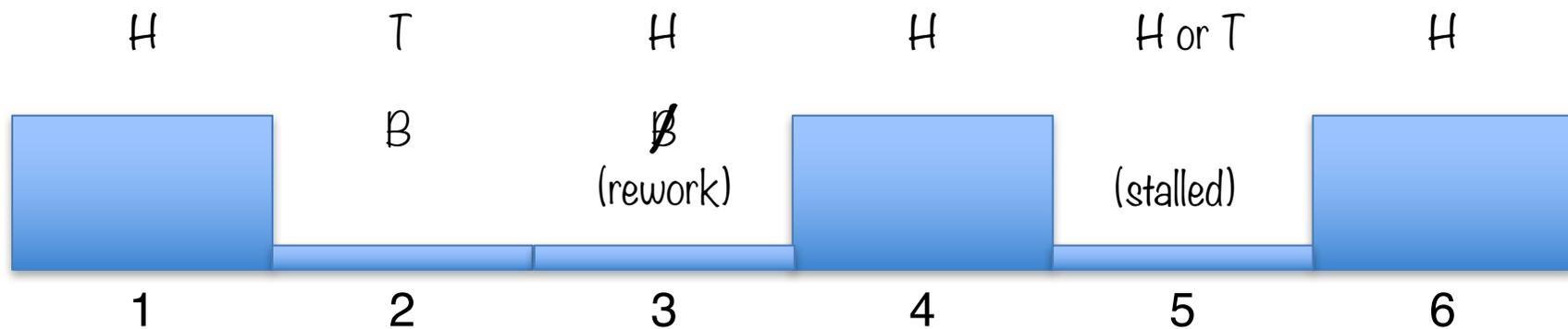
See: Mike Burrows, *Kanban from the Inside*, Blue Hole Press, 2014

Iteration 3: Metrics – key statistics

Mean lead time:	4.4 days
Median lead time:	3.5 days
85th percentile:	6.3 days
Flow efficiency:	68%


highly suspicious!

Iteration 3: Metrics – flow efficiency



- Heads: 4 or 5 out of 6
- Flow efficiency: $3/6 = 50\%$

(Meta) Iteration 4: Bigger-picture issues

Take one or more of the following issues and propose a Featureban-based simulation to explore it:

1. Sequencing / prioritising
2. Improving performance
 - cycle time, delivery rate, predictability, customer satisfaction
3. Delivering against competing objectives
 - different projects, stakeholders, types of work etc
4. Accommodating different kinds of customer expectations
 - *classes of service*
5. Upstream/downstream teams
6. Dependencies on another team for part of the process

Agendashift Values-based delivery assessment

In your own time, assess the game scenario

- Go to agendashift.com/featureban
- Click “Assess the Featureban scenario (iteration 2 onwards)”

For each of the six categories (values):

- Score the three prompts on the given 1 to 4 scale
- Which prompts would you prioritise for improvement?
- What improvements would you make in those areas?

Go to agendashift.com/2017 for the real-world global survey

Run your own Featureban session

- Go to agendashift.com/featureban
- Read the facilitation notes
- Register to receive the source files and future updates
- Adapt to your needs
- [Join our Slack group](#), #featureban channel
- Let us know how you get on!

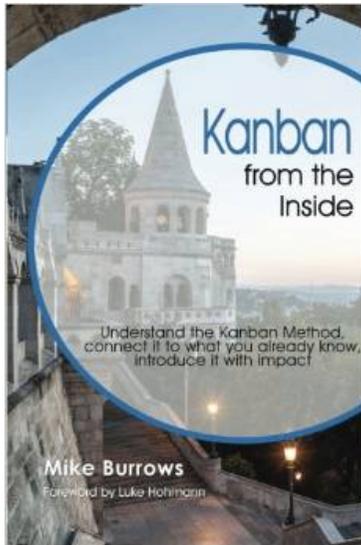
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By Featureban's creator



Kanban from the Inside

Mike Burrows, foreword by Luke Hohmann,
Blue Hole Press September 2014

“Clear, concise, beautifully structured summary of the essentials”

“...has by far the most extensive and up-to-date coverage of Kanban than anything published to date”

“The definitive Kanban textbook”

Agendashift: clean conversations, coherent collaboration, continuous transformation

Mike Burrows, part I published May 2017

leanpub.com/agendashift

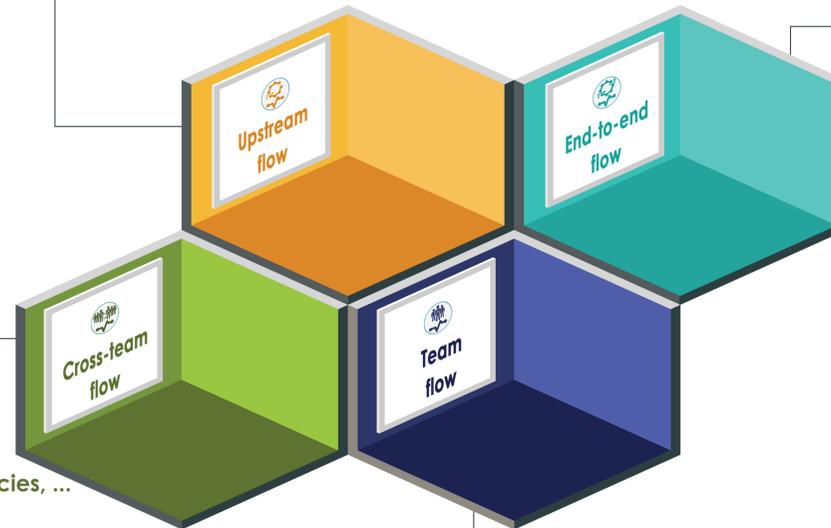




Okaloa Flowlab is a laboratory of business simulations to experience flow and to lay the foundations for business agility

- **Shaping demand**
 - ☞ Ensuring minimal options
 - ⚡ Uncertainty, fear of commitment, conflict, over-processing, ...
 - ~ Delivery Kanban
 - 📌 Product, program and portfolio management

- **Anticipating feedback**
 - ☞ Focusing on outcomes
 - ⚡ Inertia, mismatch between business and delivery teams, silo's, ...
 - ~ Discovery Kanban
 - 📌 Agile portfolio management



- **Delivering outputs**
 - ☞ Looking at the whole
 - ⚡ Bottlenecks and dependencies, ...
 - ~ Delivery Kanban
 - 📌 Release, delivery and project management

- **Organising work**
 - ☞ Finishing what you start
 - ⚡ Variation, specialisation, too many commitments, urgent work, lack of quality, ...
 - ~ System Kanban
 - 📌 IT, HR, Engineering, Finance, Legal, ...

Legend	
☞ Desired mindset	~ How to achieve flow
⚡ Friction preventing flow	📌 Applicable/relevant for