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FSGD
(Fizz Good)



Frequent

Small

Good

Decoupled



FSGD

(Fizz Good)



what **Fizz Good**
and
what **doesn't**

Frequent

Small

Good

Decoupled



FSGD

(Fizz Good)

Frequent

Small

Good

Decoupled

Annually

Quarterly

Sporadic



the [App Store every 2 weeks](#). If you have iOS7 or up, you can update the app automatically by going to Settings > iTunes & App Store > Automatic Downloads and turning on Updates.

Version 16.0 Posted Oct 15, 2014

Thanks for using Facebook! To make our app better for you, we bring updates to the [App Store every 2 weeks](#). If you have iOS7 or up, you can update the app automatically (without checking back here) by going to Settings > iTunes & App Store > Automatic Downloads and turning on Updates.

Every update of our Facebook app includes improvements for speed and reliability. As other new features become available, we'll highlight those for you in the app.

Version 15.0 Posted Sep 29, 2014

Thanks for using Facebook! To make our app better for you, we bring updates to the [App Store every 4 weeks](#). If you have iOS7 or up, you can update the app automatically (without checking back here) by going to Settings > iTunes & App Store > Automatic Downloads and turning on Updates.

Every update of our Facebook app includes improvements for speed and reliability. As other new features become available, we'll highlight those for you in the app.

Version 14.9 Posted Sep 17, 2014

Thanks for using Facebook! To make our app better for you, we bring updates to the [App Store every 4 weeks](#). If you have iOS7 or up, you can update the app automatically (without checking back here) by going to Settings > iTunes & App Store > Automatic Downloads and turning on Updates.

Every update of our Facebook app includes improvements for speed and reliability. As other new features become available, we'll highlight those for you in the app.



"We are getting away from 2 years, 3 years, 4 years, 5 years, to design, build, test and then deliver a product. We live in a world of high levels of agility; being able to build, measure, learn; being able to get on a faster cadence and a faster loop where we can deliver value more frequently."



S. Somasegar
Corporate Vice President, Developer Division

... and we
don't just
mean to the
customer



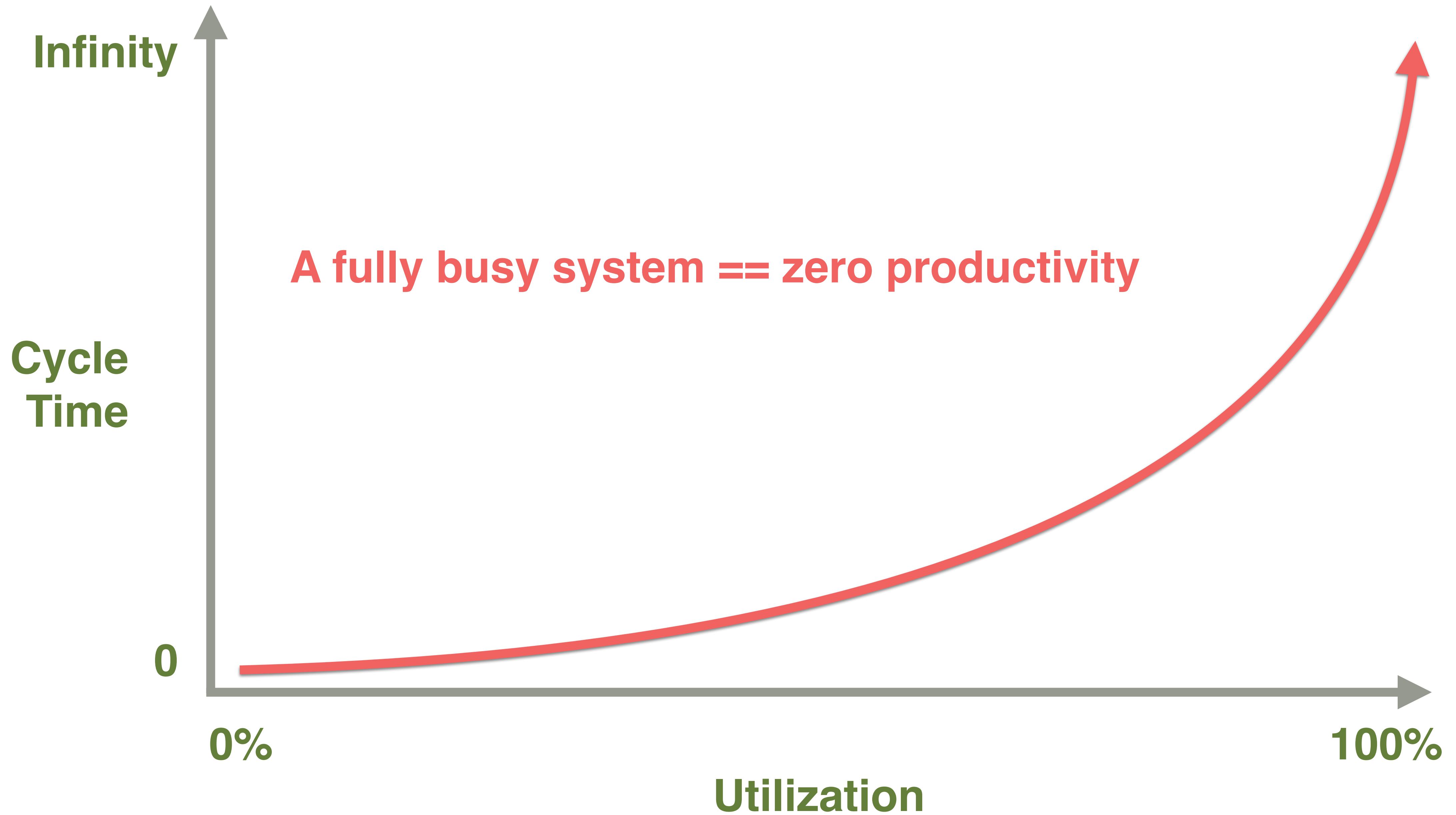
Frequent
Small
Good
Decoupled

Big



**because
math**

(not the Agile Manifesto)



All credit and praise rightfully belongs to Don Reinertsen

A little bit of reduction goes a long way

WIP Limit	1	2	5	10	20	Infinite
Average Cycle Time	1.0	1.5	2.8	4.6	7.2	10
Time in Queue	0	0.5	1.8	3.6	6.2	9
Utilization Percent	47	63	79	85	89	90
Slack Time	53	37	21	15	11	10
Blocking Percent	47	30	13	5	1	0

All credit and praise rightfully belongs to Don Reinertsen



Assumes starting point is 90% utilization, 10 day cycle time & no WIP limits

WIP Limit	1	2	5	10	20	Infinite
Average Cycle Time	1.0	1.5	2.8	4.6	7.2	10
Time in Queue	0	0.5	1.8	3.6	6.2	9
Utilization Percent	47	63	79	85	89	90
Slack Time	53	37	21	15	11	10
Blocking Percent	47	30	13	5	1	0

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A WIP limit of twice current average makes us 28% faster in return for 1% slack

WIP Limit	1	2	5	10	20	Infinite
Average Cycle Time	1.0	1.5	2.8	4.6	7.2	10
Time in Queue	0	0.5	1.8	3.6	6.2	9
Utilization Percent	47	63	79	85	89	90
Slack Time	53	37	21	15	11	10
Blocking Percent	47	30	13	5	1	0

All credit and praise rightfully belongs to Don Reinertsen



A WIP limit equal to current average makes us 54% faster in return for 5% slack

WIP Limit	1	2	5	10	20	Infinite
Average Cycle Time	1.0	1.5	2.8	4.6	7.2	10
Time in Queue	0	0.5	1.8	3.6	6.2	9
Utilization Percent	47	63	79	85	89	90
Slack Time	53	37	21	15	11	10
Blocking Percent	47	30	13	5	1	0

All credit and praise rightfully belongs to Don Reinertsen



**It's tough to
limit WIP with
variable batch
sizes**



Frequent

Small

Good

Decoupled

Bad

Tested
Logged
Documented
Reviewed



@ifandelse
github.com/ifandelse

Frequent

Small

Good

Decoupled

Bad

Perfect

If you are not embarrassed by the first version of your product, you've launched too late.

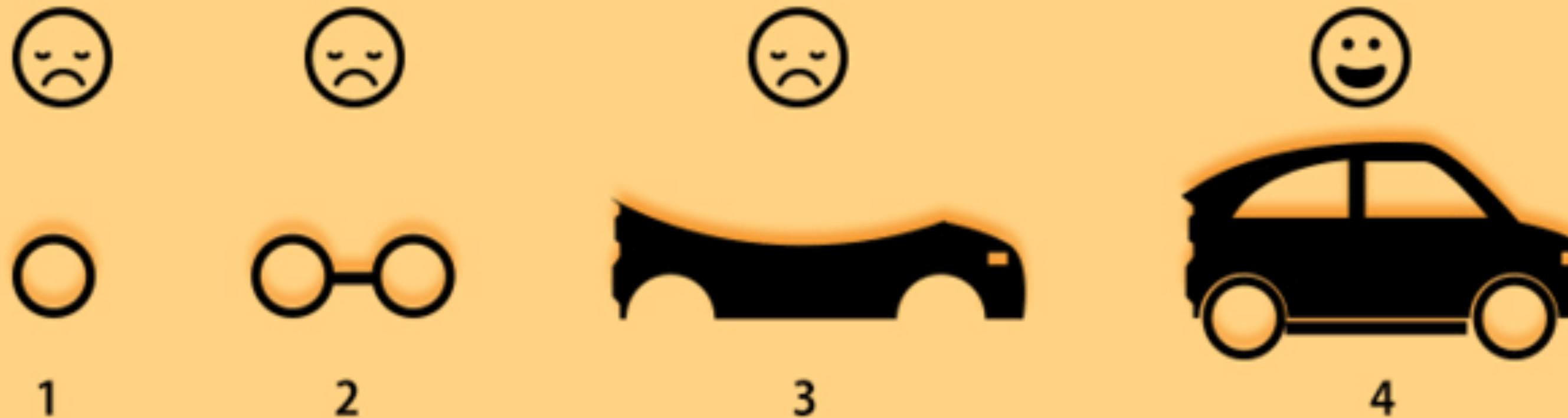
Startup Quote!



REID HOFFMAN
FOUNDER, LINKEDIN

HOW TO BUILD A MINIMUM VIABLE PRODUCT

NOT LIKE THIS —



LIKE THIS —







Cut, copy and paste

Works across apps

Undo support

Developer API

Cocoa Touch

Support for text



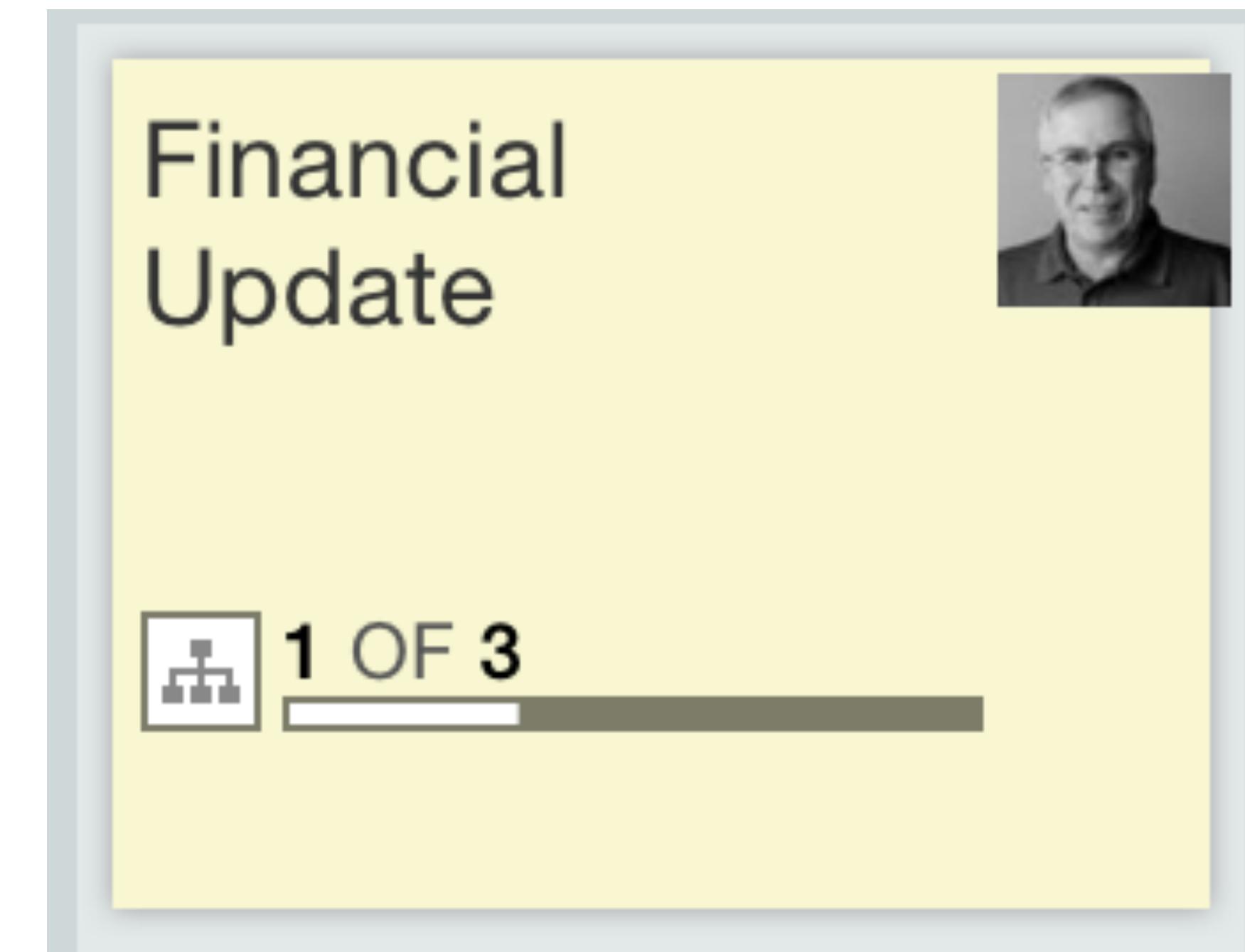
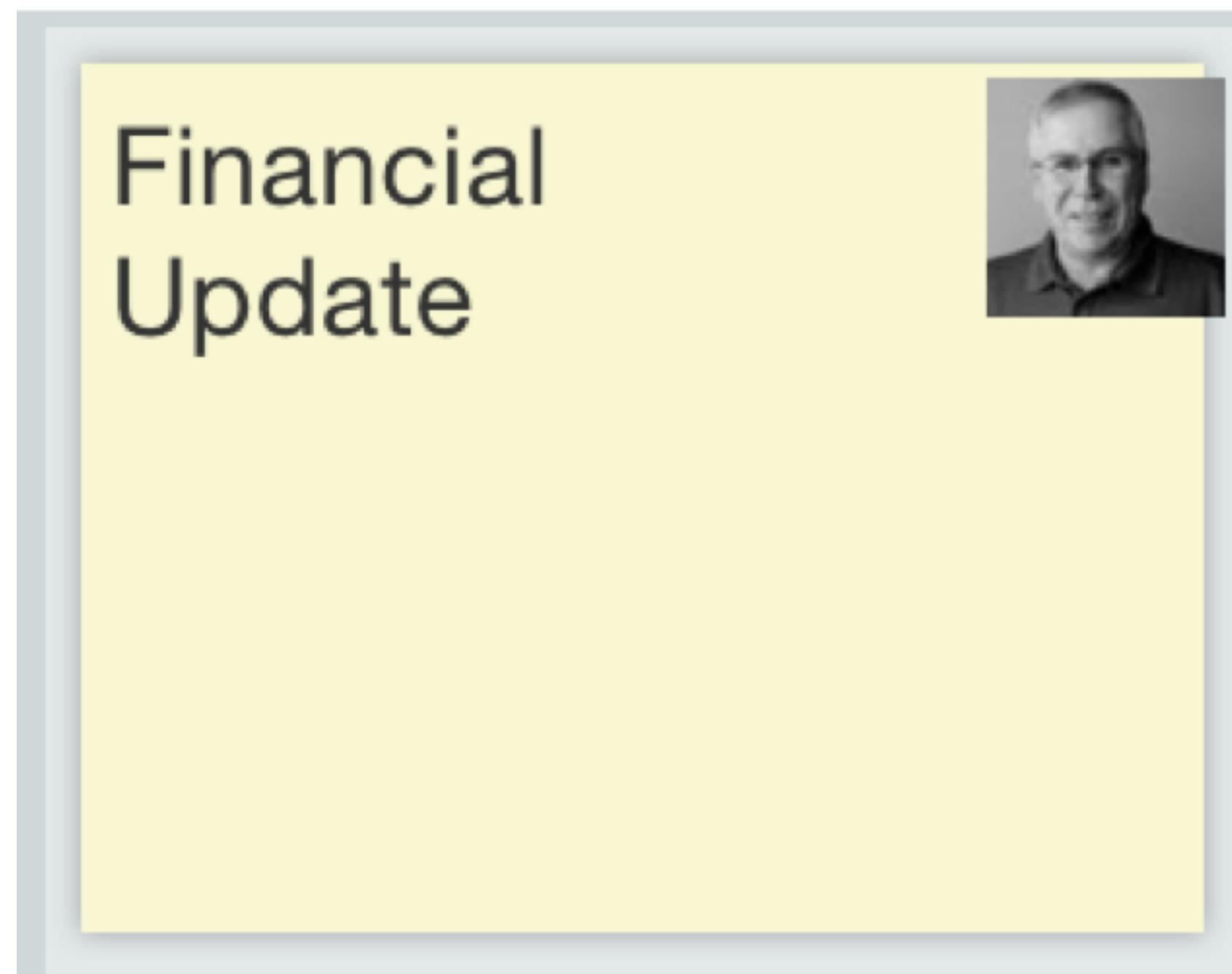
Frequent

Small

Good

Decoupled Coordinated

Releasing a New Feature



Releasing a New Feature

Sales
Team



Marketing
Team



Browser
Team



Mobile
Team

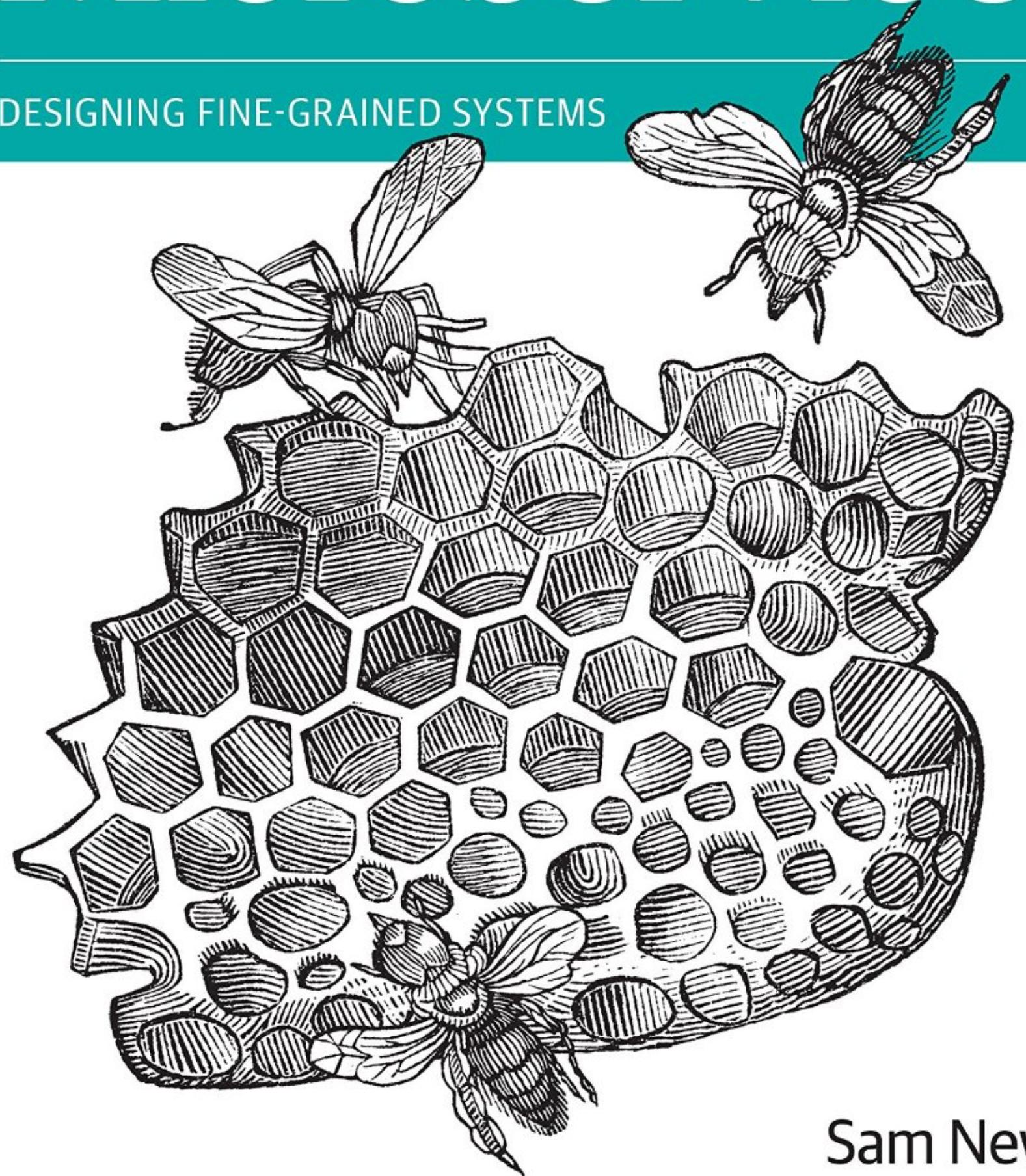


API
Team



Building Microservices

DESIGNING FINE-GRAINED SYSTEMS



Sam Newman

"These services need to be able to change independently of each other, and be deployed by themselves without requiring consumers to change. ... Without decoupling, everything breaks down for us."

Frequent

Small

Good

Decoupled

Coordinated

Damaging

**Frequent
Small
Bad
Decoupled**



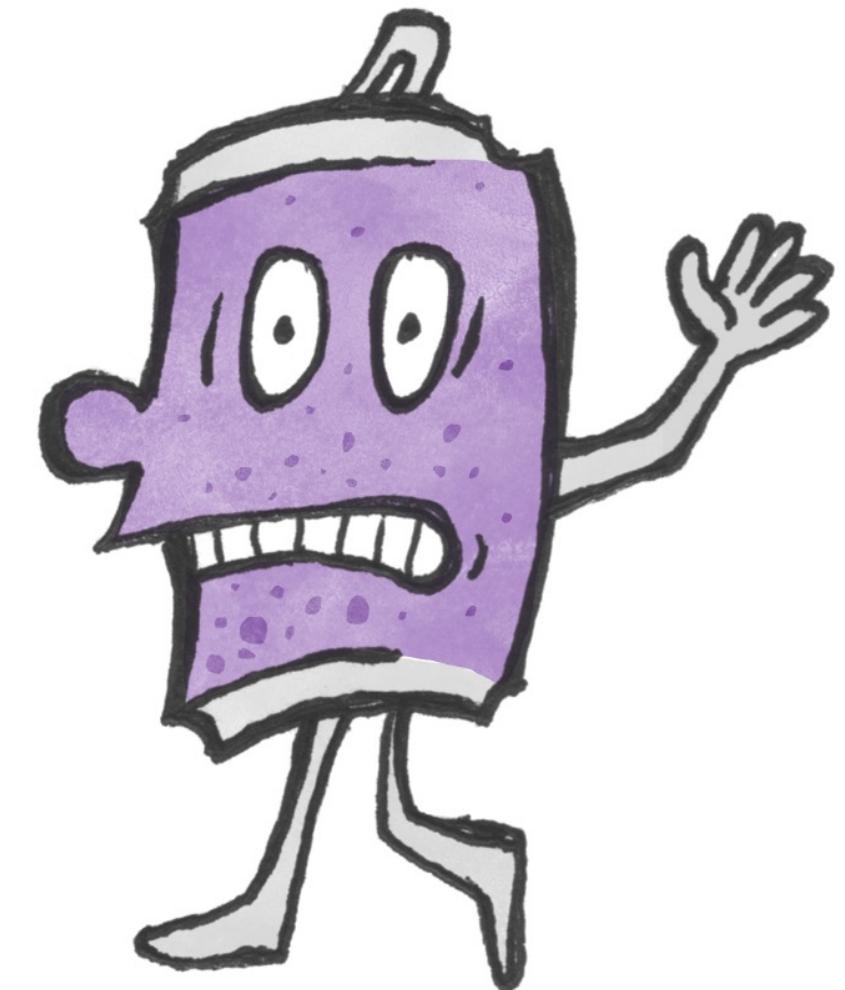
Frequent
Small
Bad
Decoupled



Frequent
Small
Good
Damaging



~~Frequent
Small
Good
Decoupled~~



PRIMUM NON NOCERE

PRIMUM NON NOCERE

First, do no harm

Frequent

Small

Good

Decoupled

(i.e. non damaging, do no harm)

bioethics

beneficence

non-maleficence

**Frequent
Small
Good
Decoupled**



**Frequent
Small
Good
Decoupled**



**Frequent
Small
Good
Decoupled**



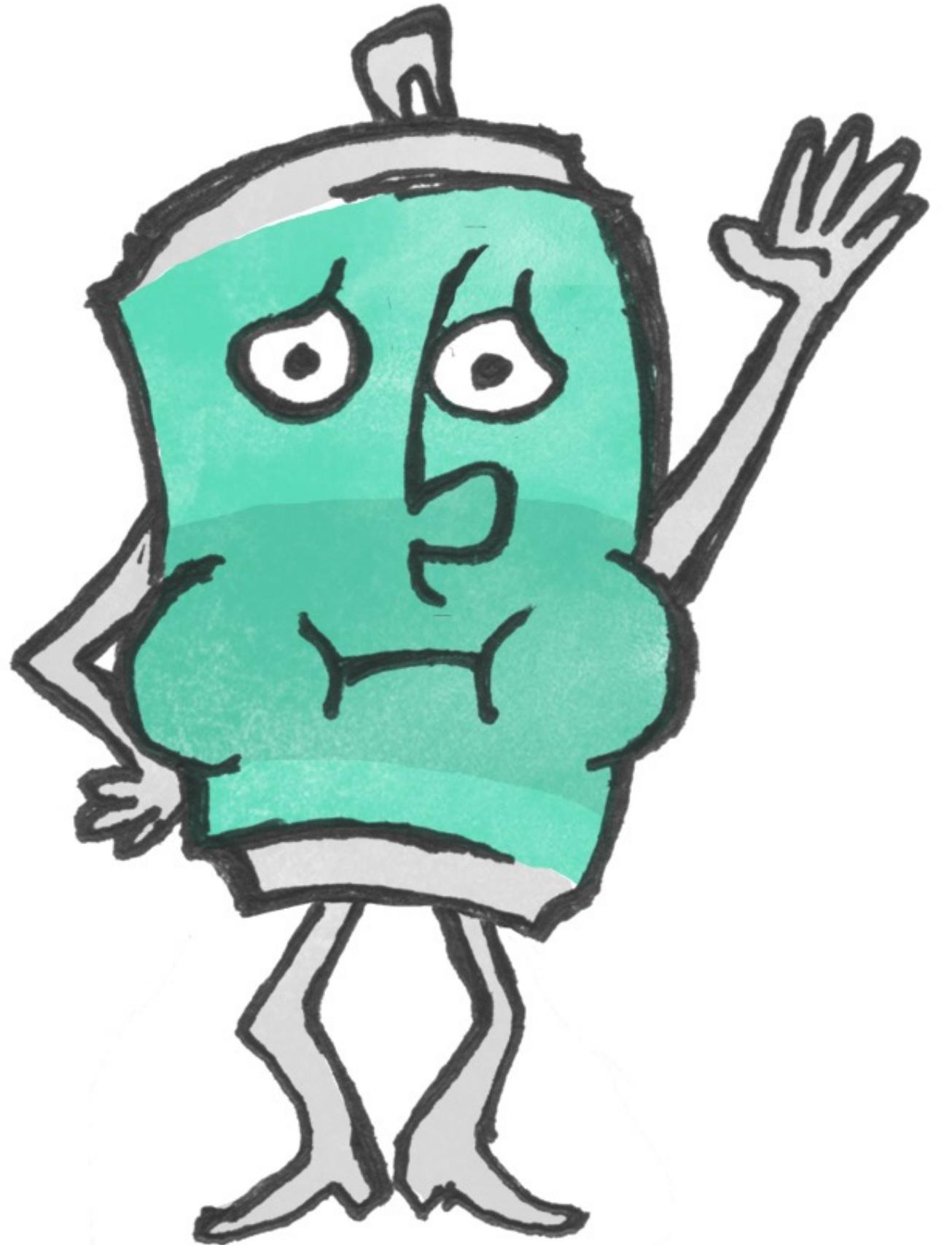
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Small
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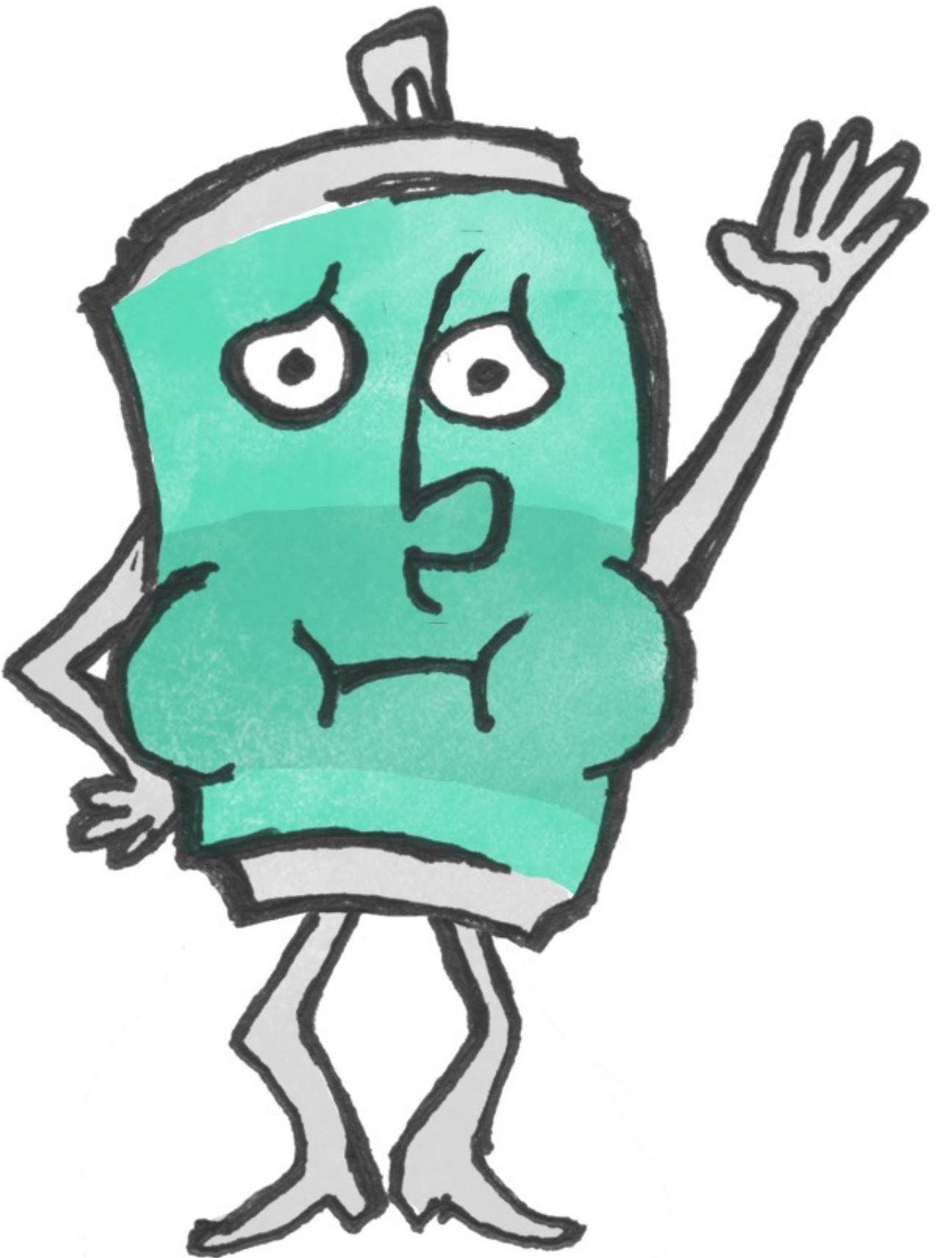
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Decoupled**



Common push back



- “This doesn’t apply to me.”
- “While we are at it, we should ...”
- “We have to coordinate this release.”
- “It has to be perfect the first time.”
- “We have to change everything at once.”
- “This bug is a showstopper!”
- “Are you telling me to release crap and fix it later?”





2014 by LEANKIT – Daniel Norton, Jon Terry and Chris Hefley

FSGD (Fizz Good) – A LeanKit Way of Working

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