



XSCALE Alliance

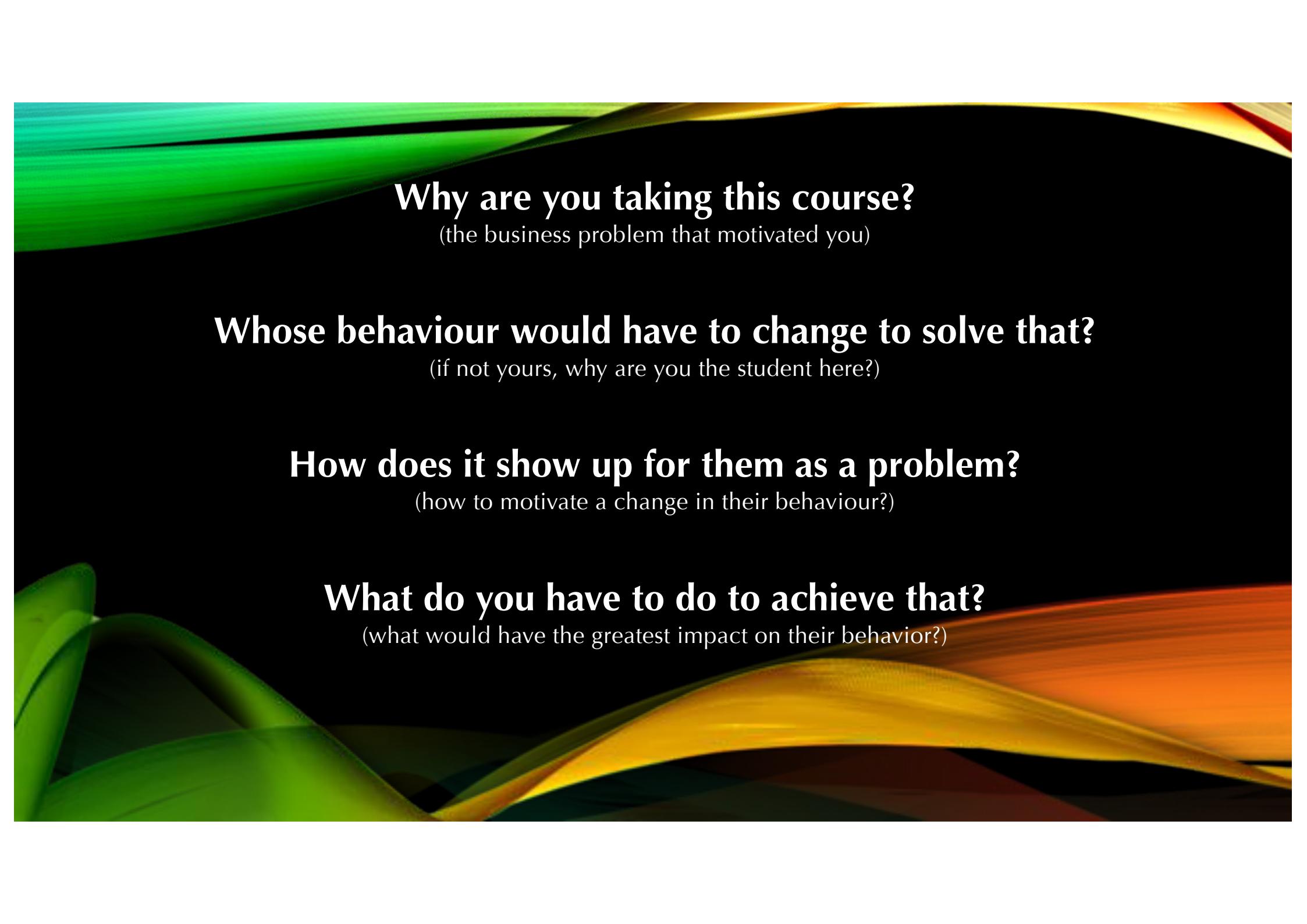
XSCALEAlliance.org



eXponential
Product
Management

Course Outline

- Why, Who, How & What?
 - The XSCALE Principles
- Game: Two Minty Machines
 - Throughput Accounting
- Practice: Pirate Canvas
 - Agile Contracts
- Game: Three More Minty Machines
 - Forming a Product Squad
- Practice: Behavior Driven Analysis
 - Using a Kanban to whip WIP
- Practice: Behavior Driven Development
 - Continuous Deployment
- Game: Set-based Logo Design
 - Set-based UX Design
- Product Squad Ceremonies
 - LaaS & DRIs
- Practice: Business Bingo
 - Change as a Product
- Practice: Release Refactoring
 - Ecosystems Thinking



Why are you taking this course?

(the business problem that motivated you)

Whose behaviour would have to change to solve that?

(if not yours, why are you the student here?)

How does it show up for them as a problem?

(how to motivate a change in their behaviour?)

What do you have to do to achieve that?

(what would have the greatest impact on their behavior?)



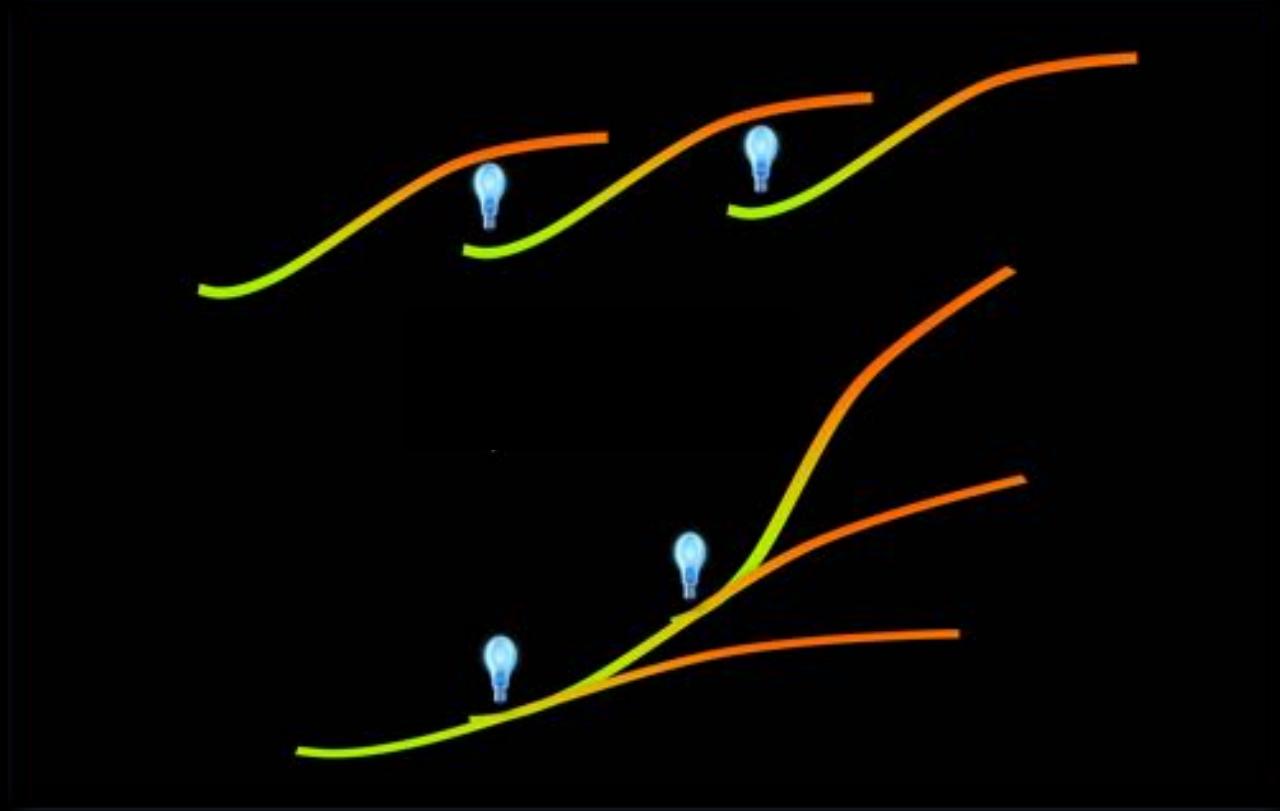
What's the difference between Agile Organization and some other kind?

- › eXponential return
- › Simple design
- › Continuous throughput
- › Autonomous teams
- › Learning: triple-loop
- › Ecosystems thinking

www.xscalealliance.org

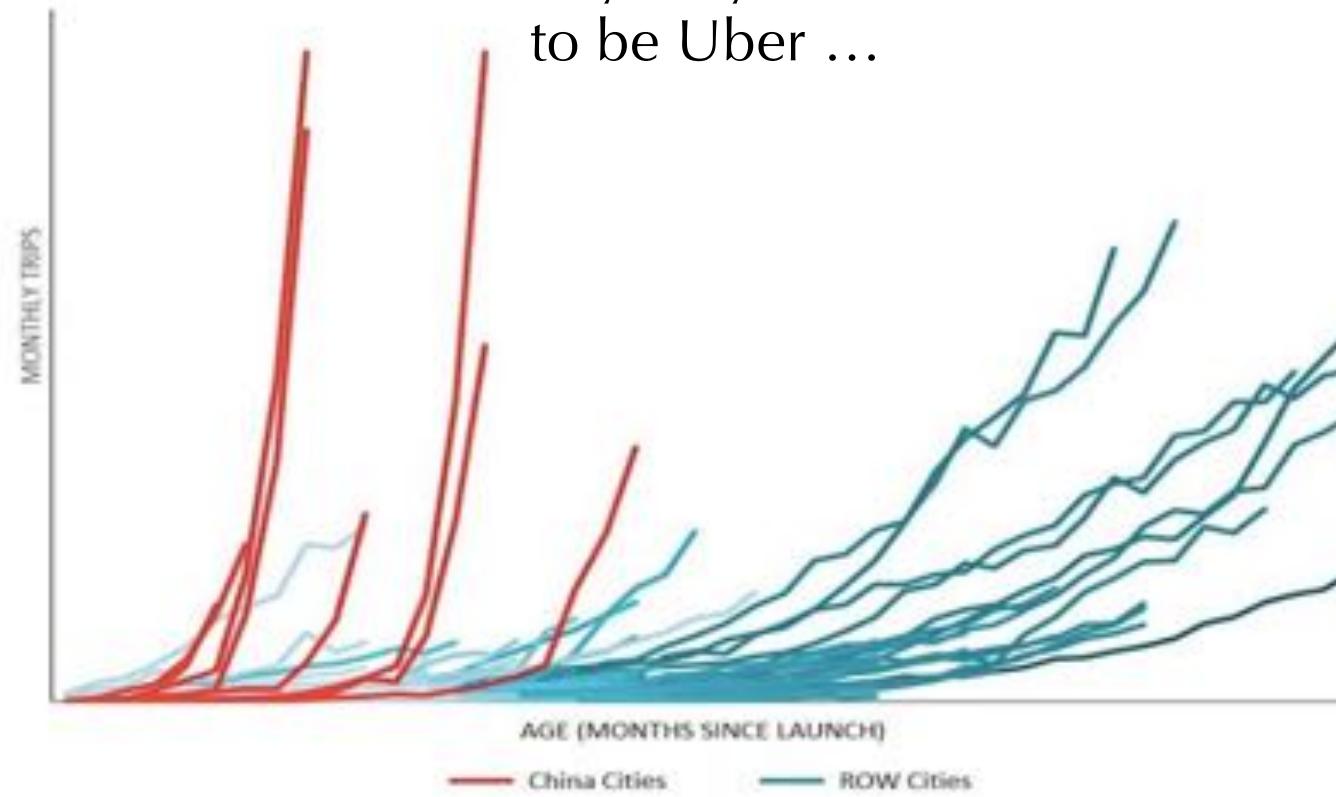
eXponential return

- › Products are service ecosystems
- › Product return curves are sigmoids
- › Don't chain the curves; stack them



eXponential

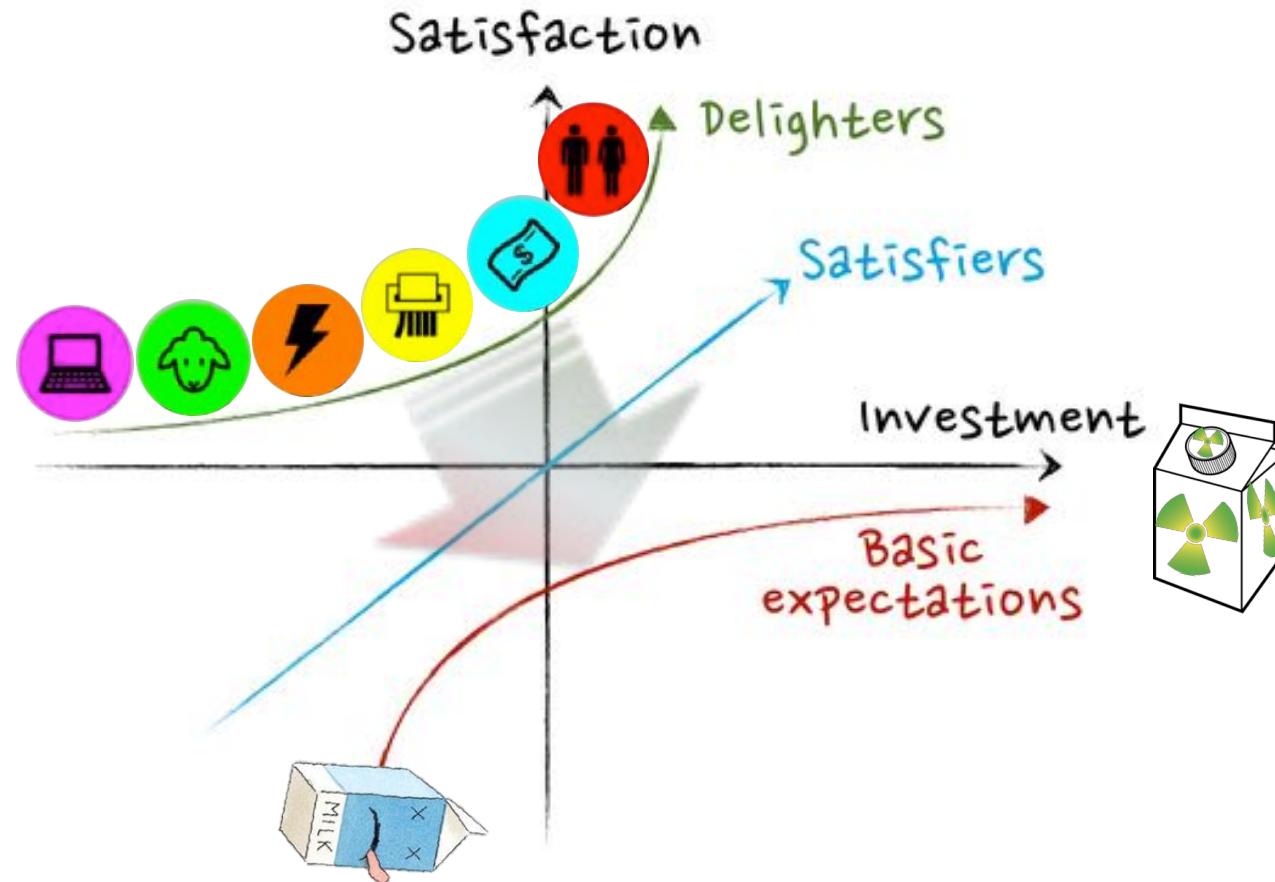
Everybody wants
to be Uber ...



eXponential

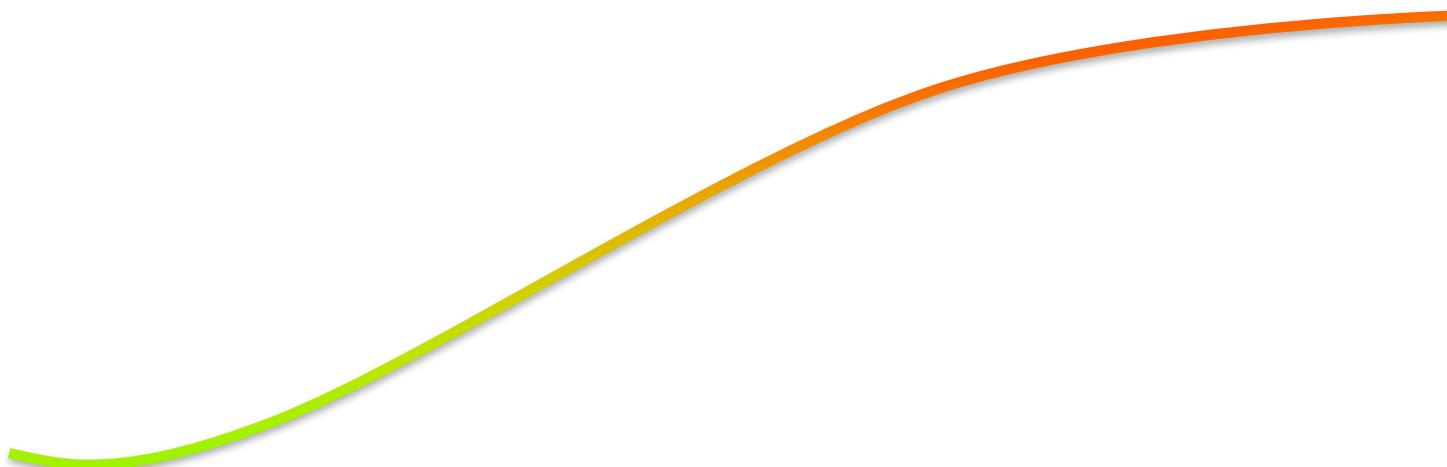


eXponential



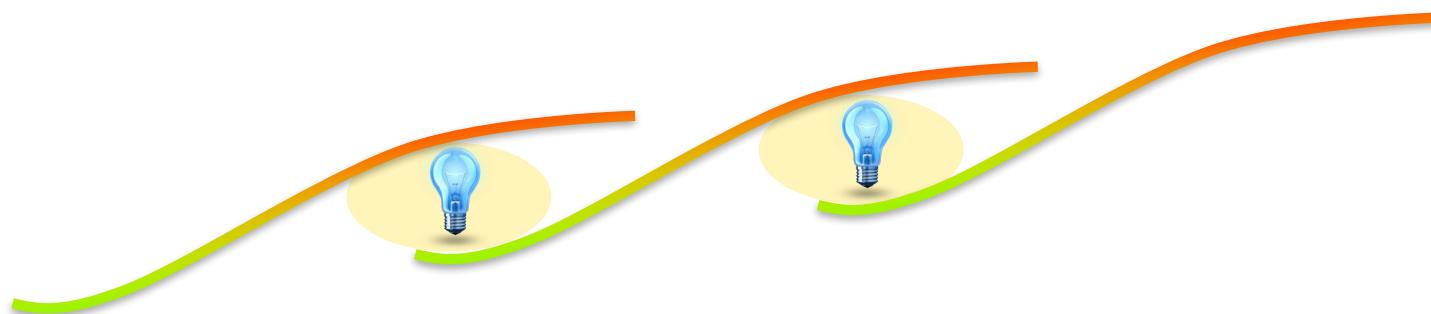
But Kano.

eXponential



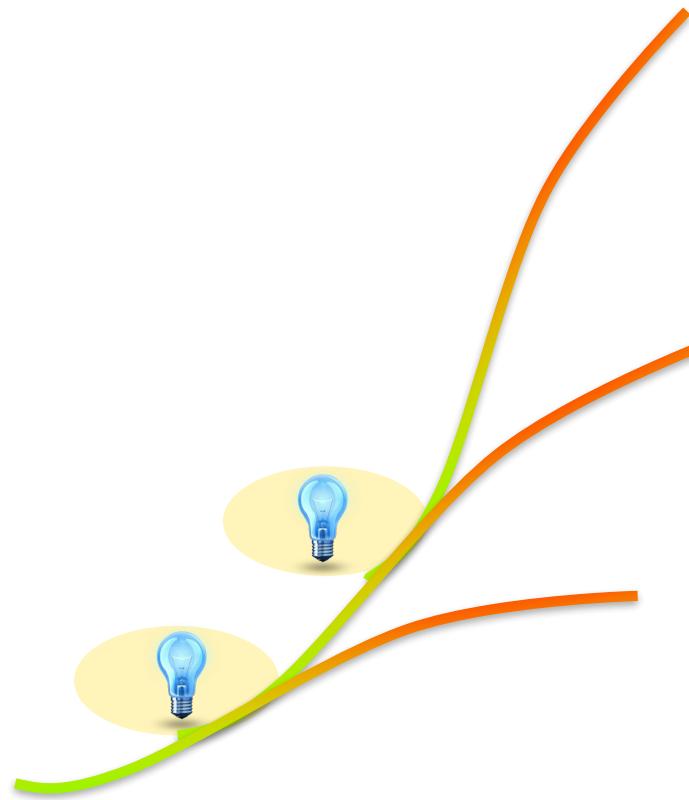
Entropy

eXponential



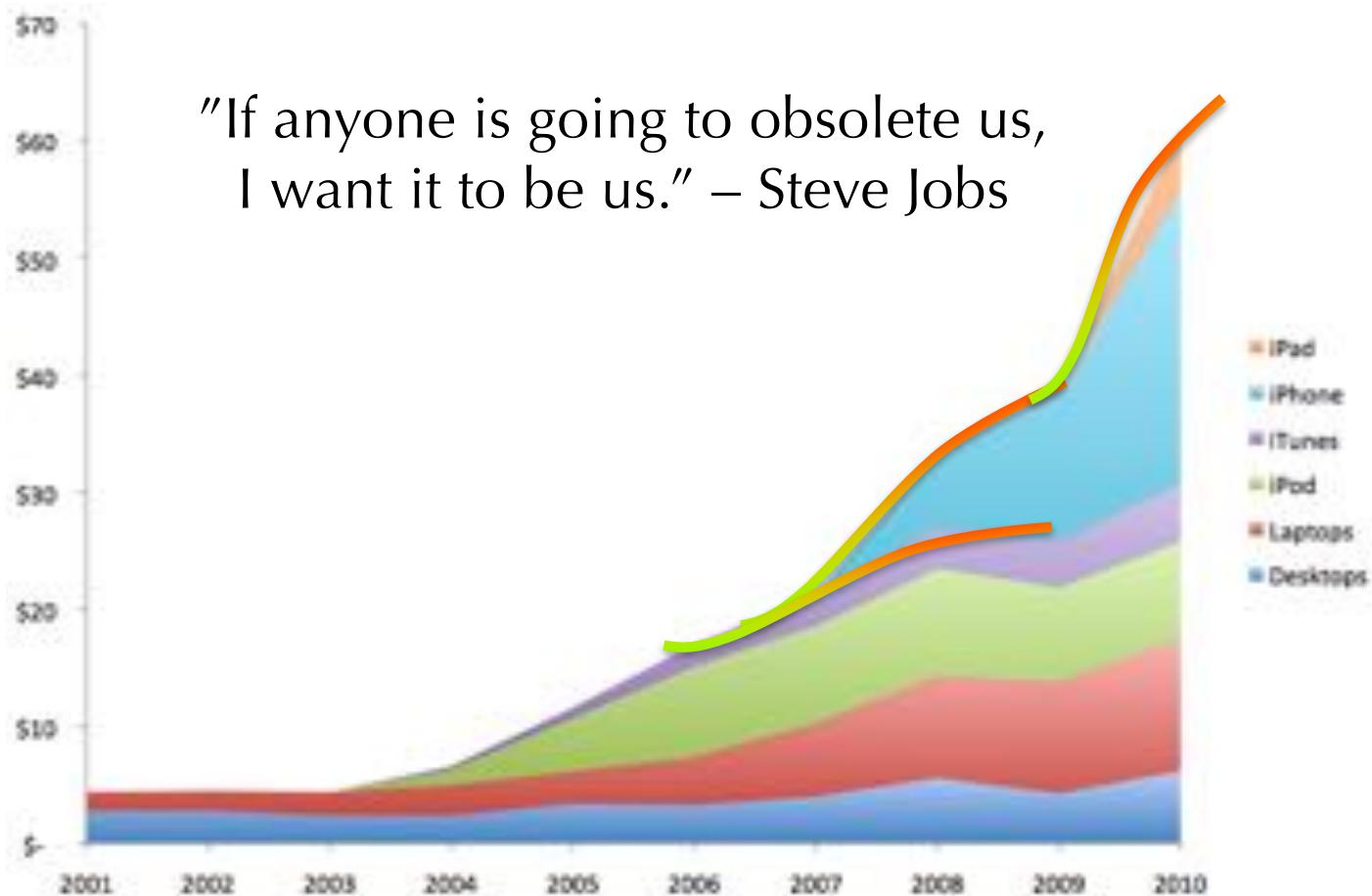
Linear growth

eXponential



Extropy

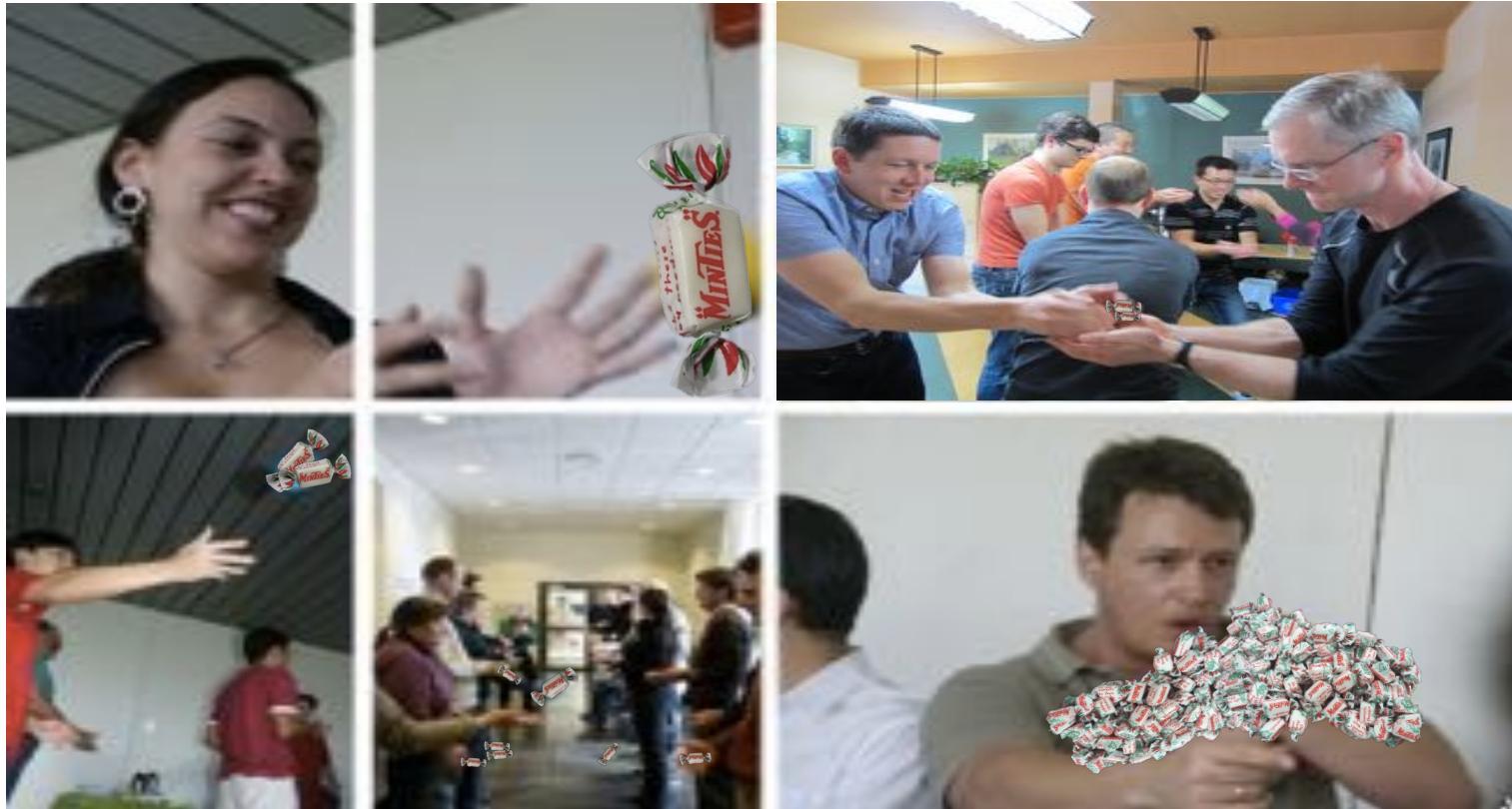
eXponential



Extropy begins with an Agile mindset.



An Exponential Game

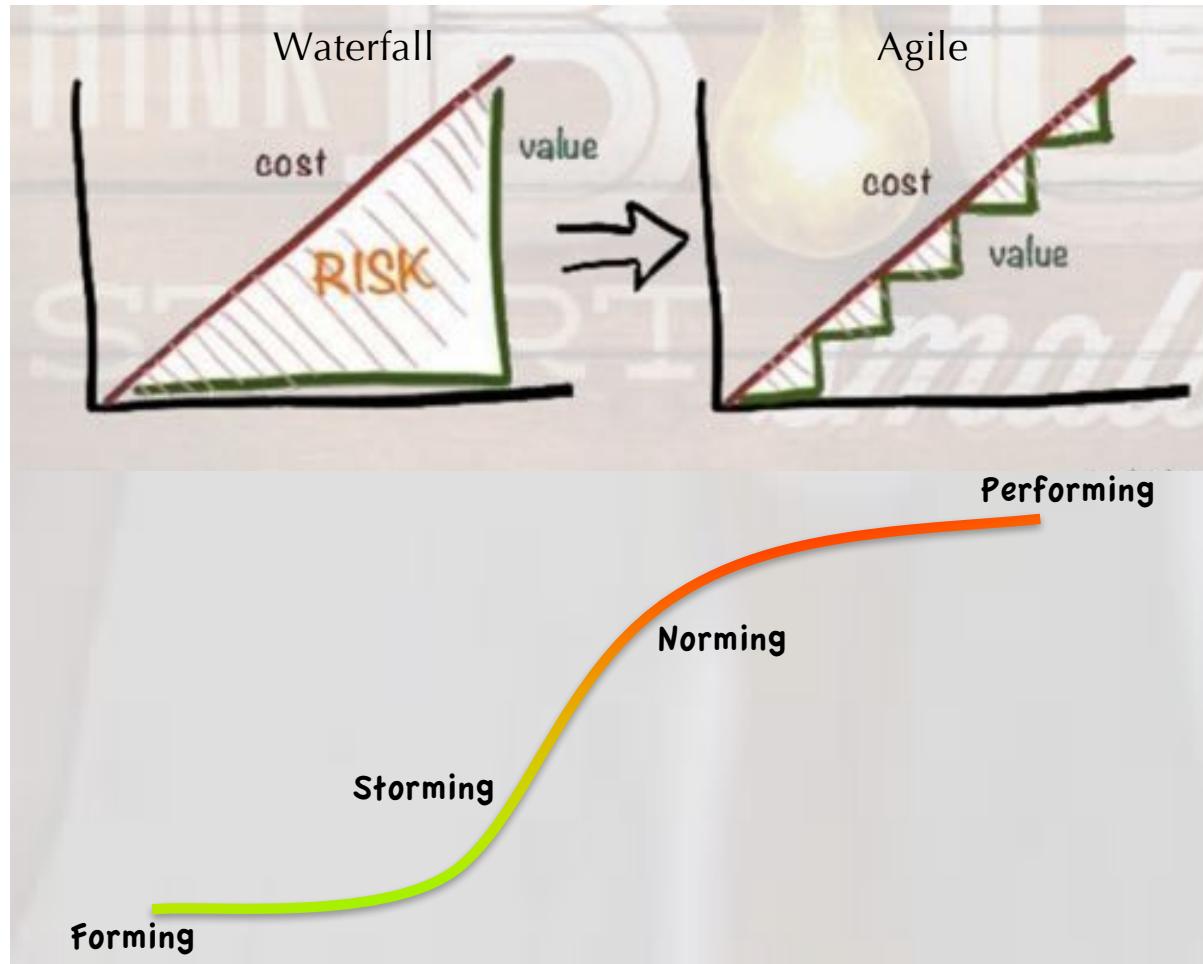


Ceremonies

Two Minute Sprints.
One minute Retro.
Estimate Throughput.

Solution Constraints

- Air-time! No containers!
- Minties stop where they start!
- Don't pass left<->right!



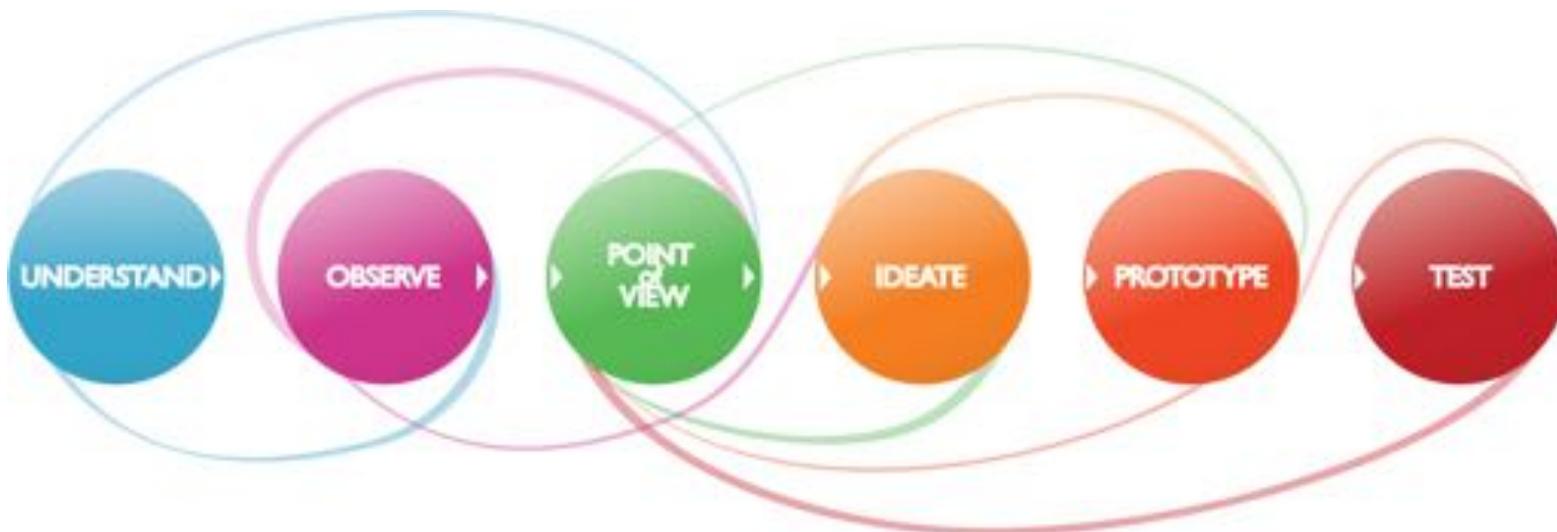
How do we open this bottleneck?

Simple design

- › Design means the elegance of minimum
- › Not look and feel; how the ecosystem works
- › Design, Delivery & Devops -> hand-in-glove



Simple



Design Thinking isn't about simple

Simple



2003 Nokia N-Gage. "The Taco Phone". Apps. Internet. MP3s. Everything iPhone did ... 4 years before iPhone.

Simple



2004 Nokia N-Gage QD. Design Thinking by IDEO.
Improved look and feel. Sank like a stone.

Simple



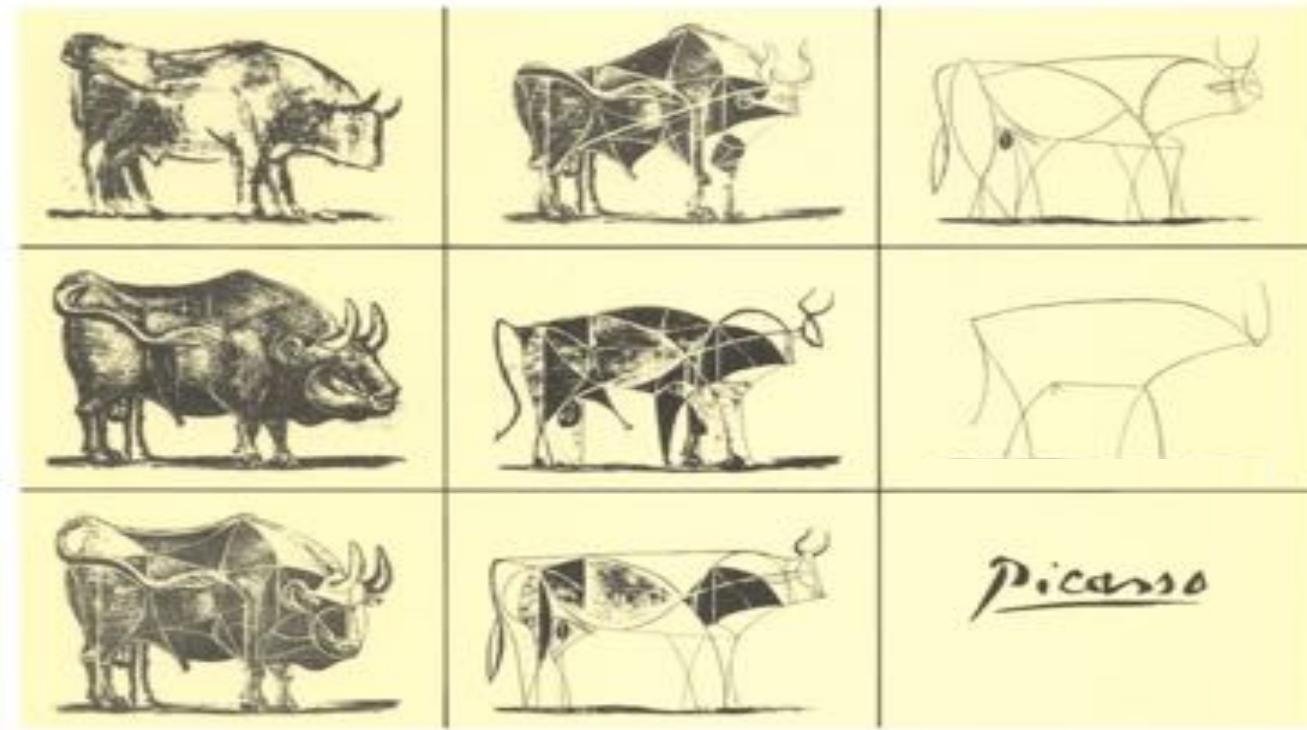
2008 Nokia N-Gage Next Gen. Design Thinking by IDEO.
An app store for Nokia phones. Discontinued 2009.

Simple



iPhone 2007 threw Design Thinking out the window.
“People don't know what they want till you show them.”.

Simple



"Design means the elegance of minimum.
It isn't look and feel. It's how it works." -- Jobs

Simple



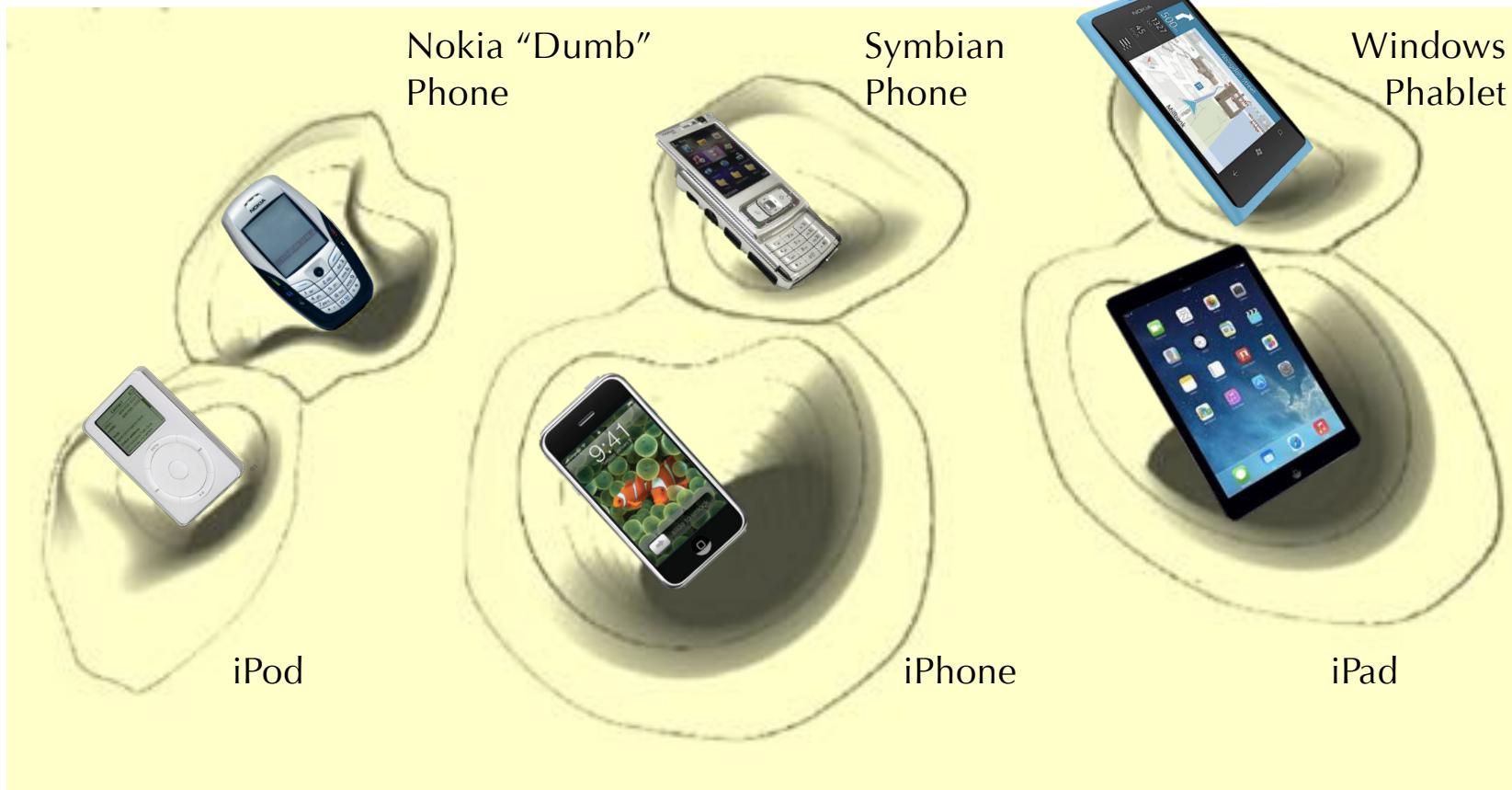
Design Space isn't flat. It's curved and dynamic.
Like spacetime.

Simple



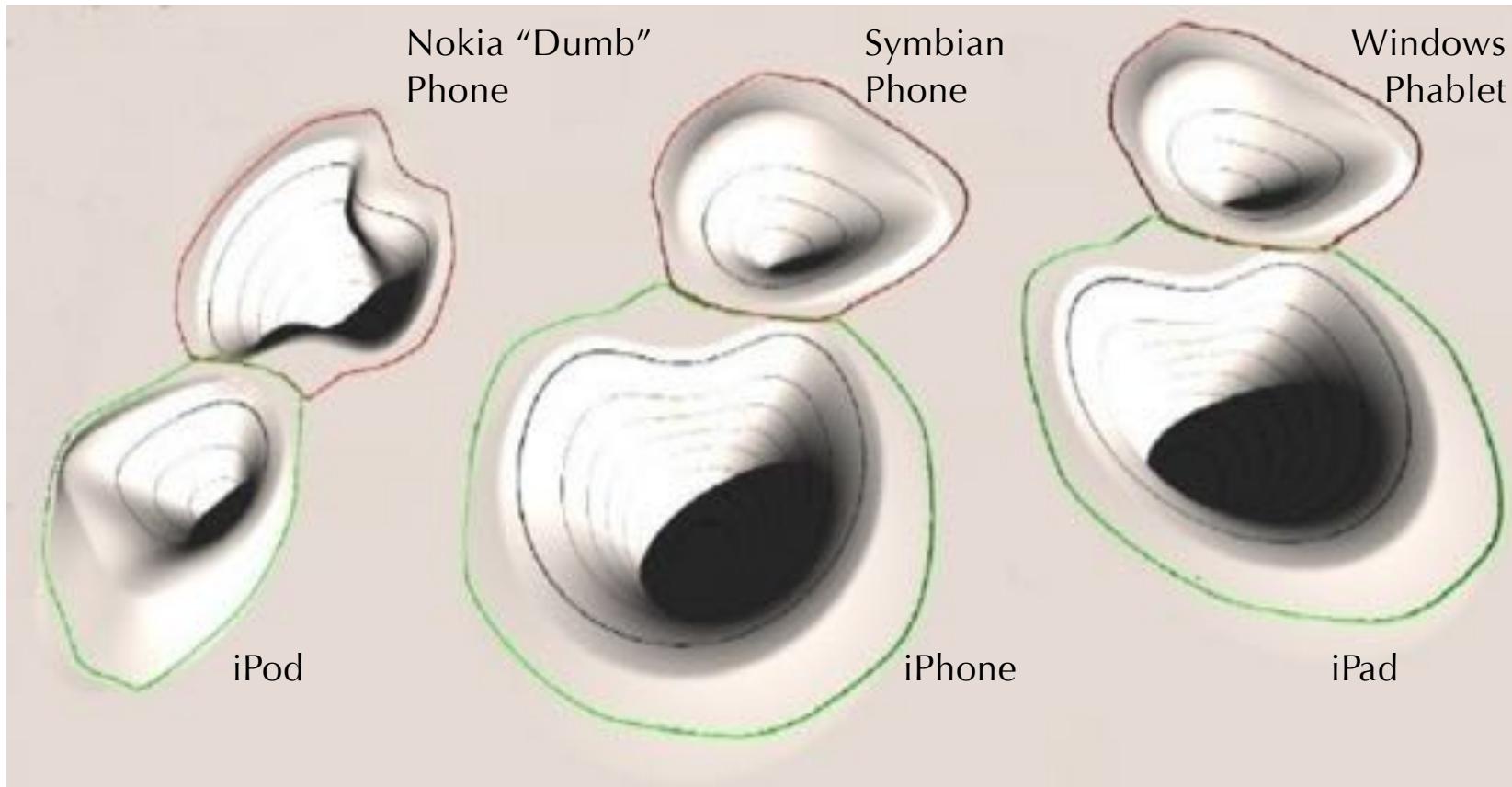
Kano explains why.

Simple



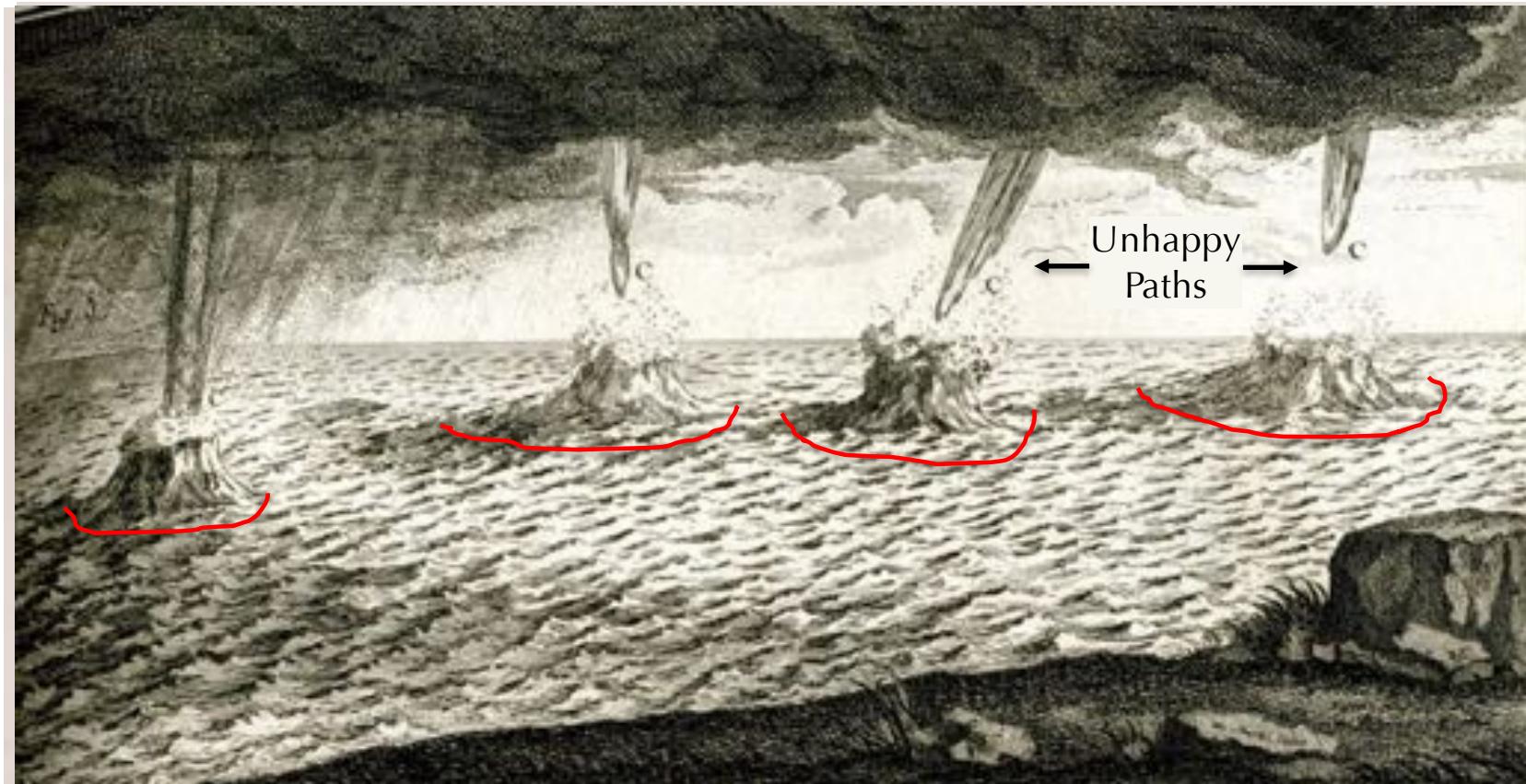
Products aren't devices. Devices only represent products.
Products are “how it works”. They're service ecosystems.

Simple



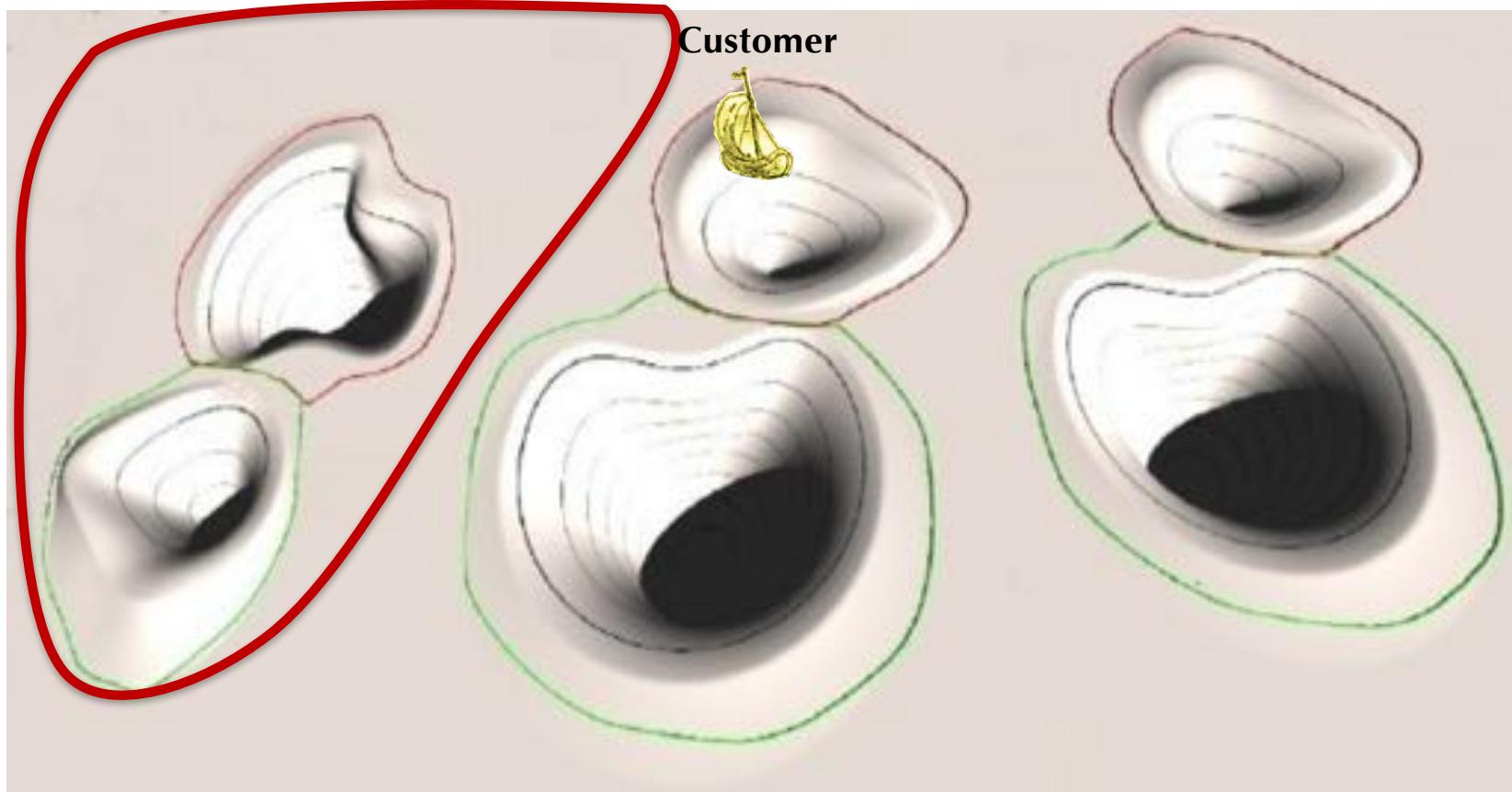
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Simple



Service ecosystems are defined by their “Pirate Metrics”.
Acquisition. Activation. Retention. Revenue. Referral.

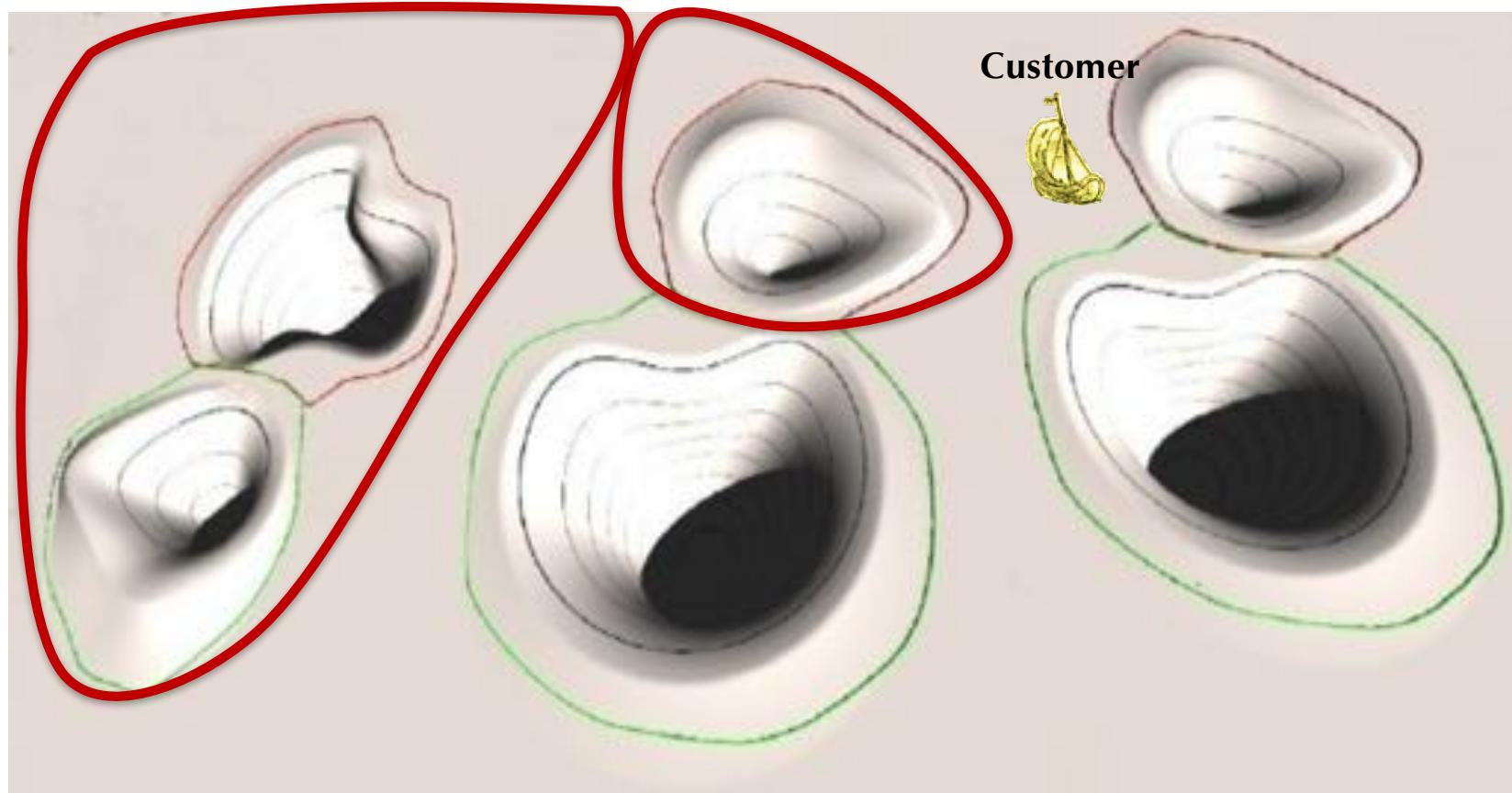
Simple



Acquisition: take the product out of the big box stores.



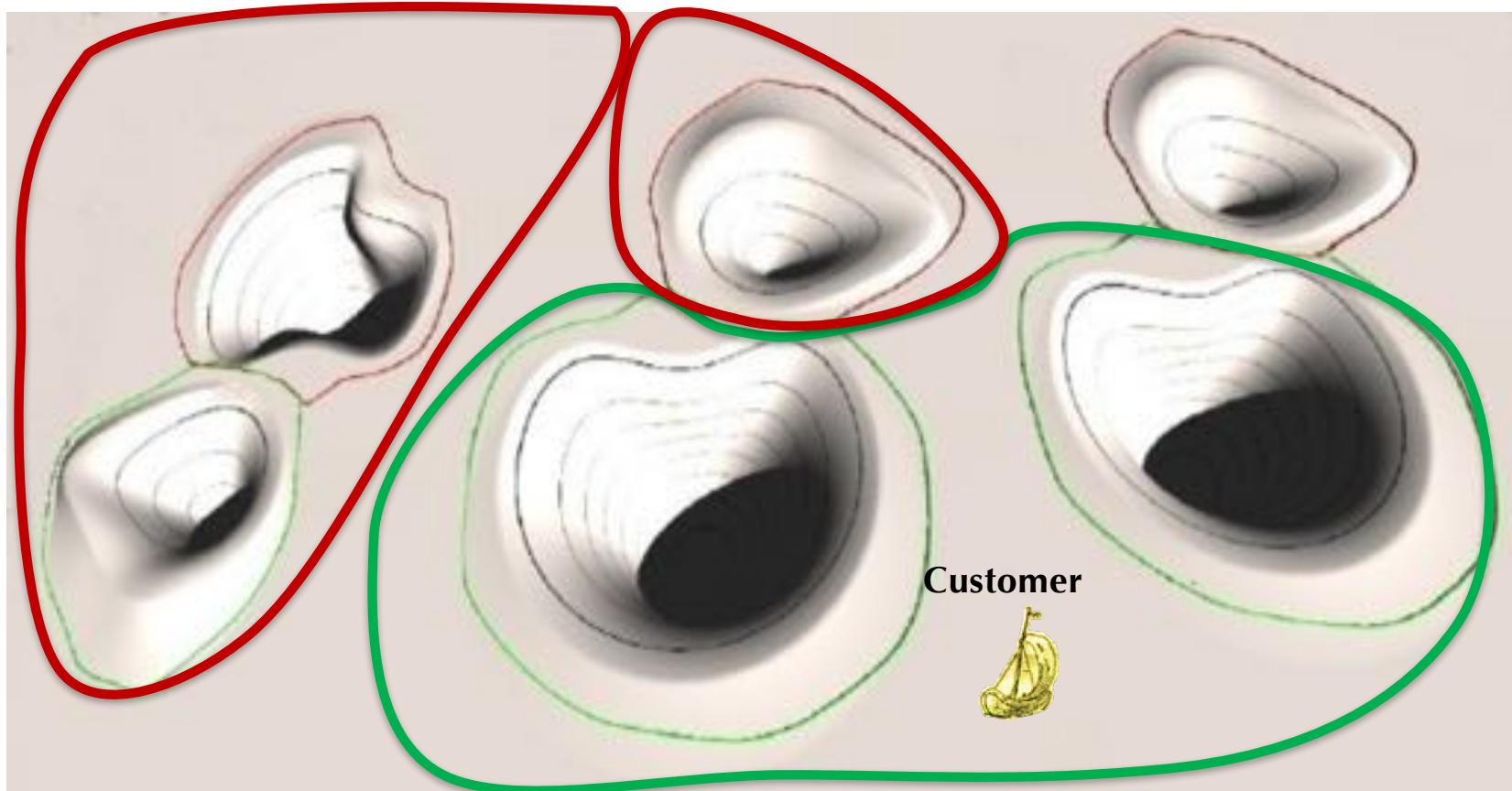
Simple



Retention: multi-touch UX obsoletes all hard-button phones.



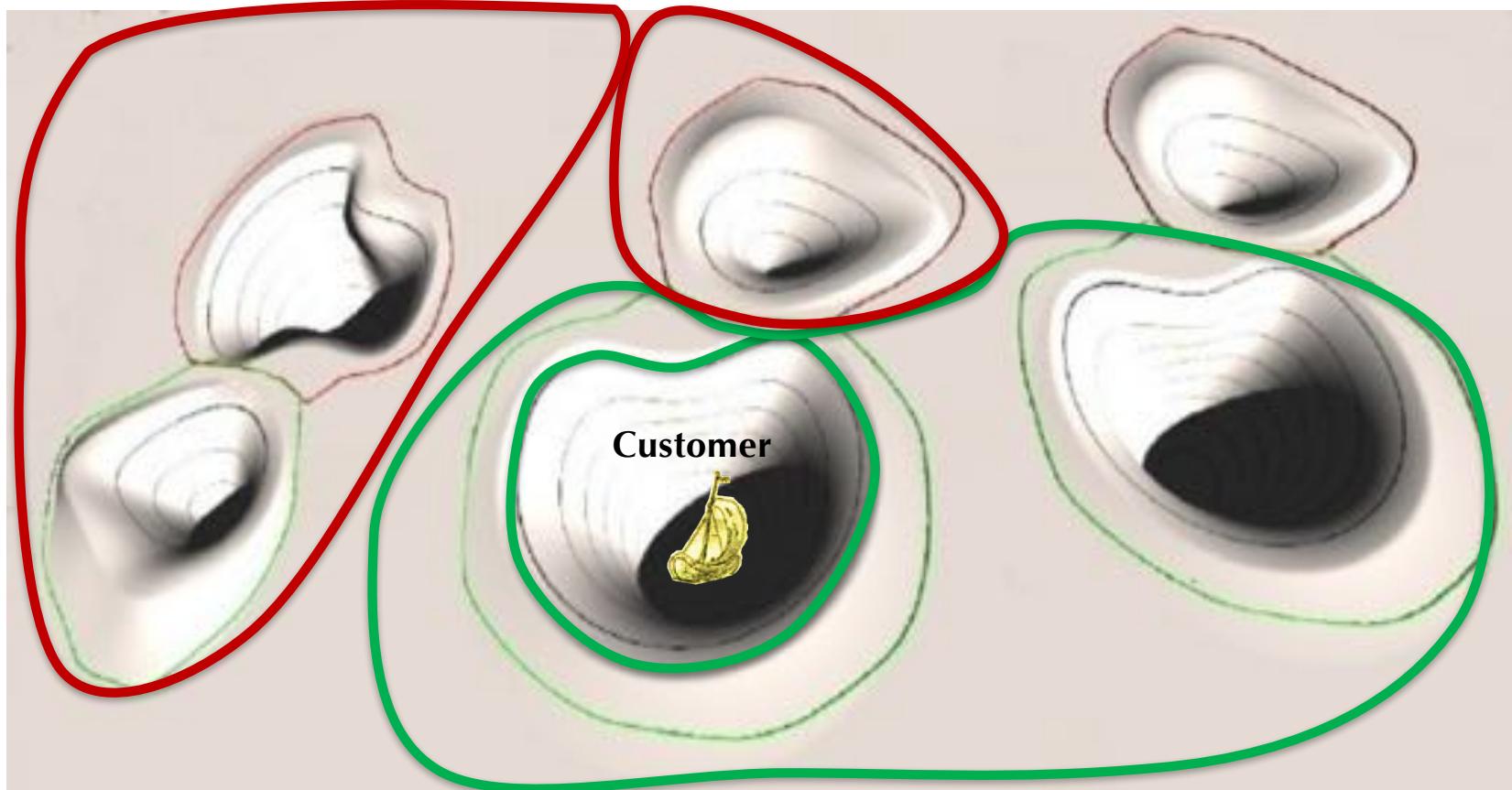
Simple



Activation: migrate iTunes accounts and media to iPhone



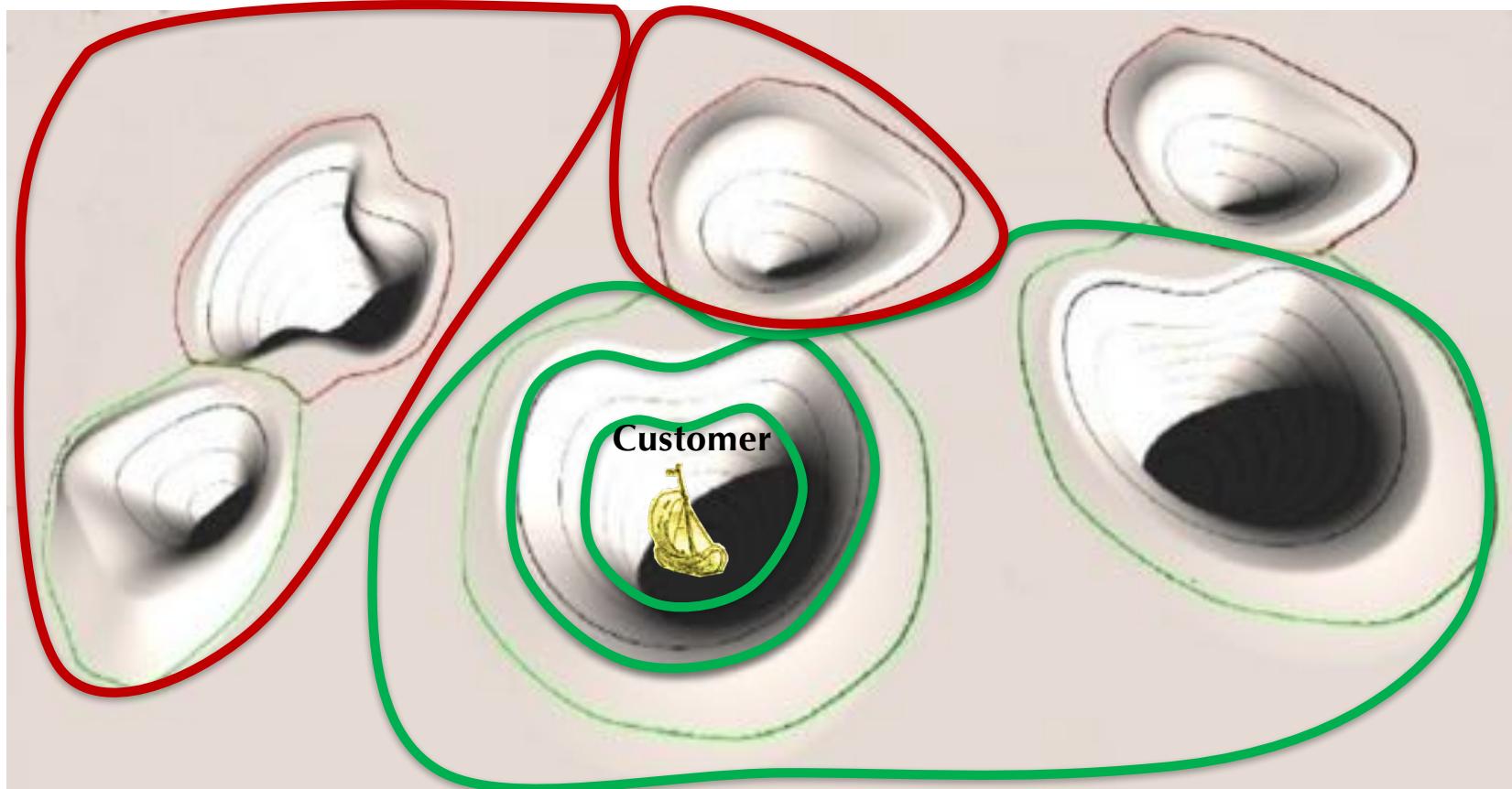
Simple



Revenue: App Store obsoletes the software retailing industry.



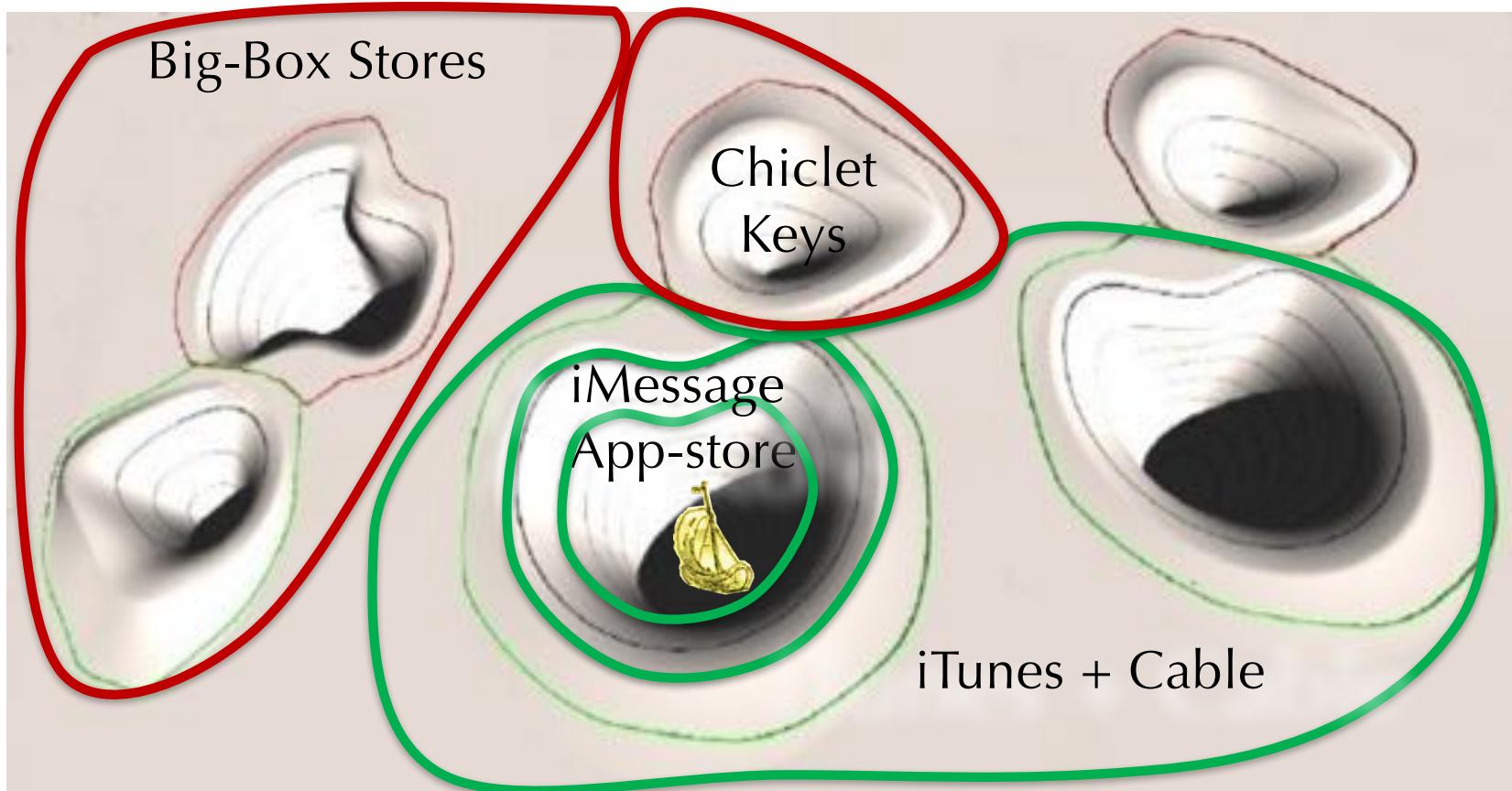
Simple



Referral: iMessage provides free SMS – but only to iOS users.



Simple



Acquisition



Activation



Retention



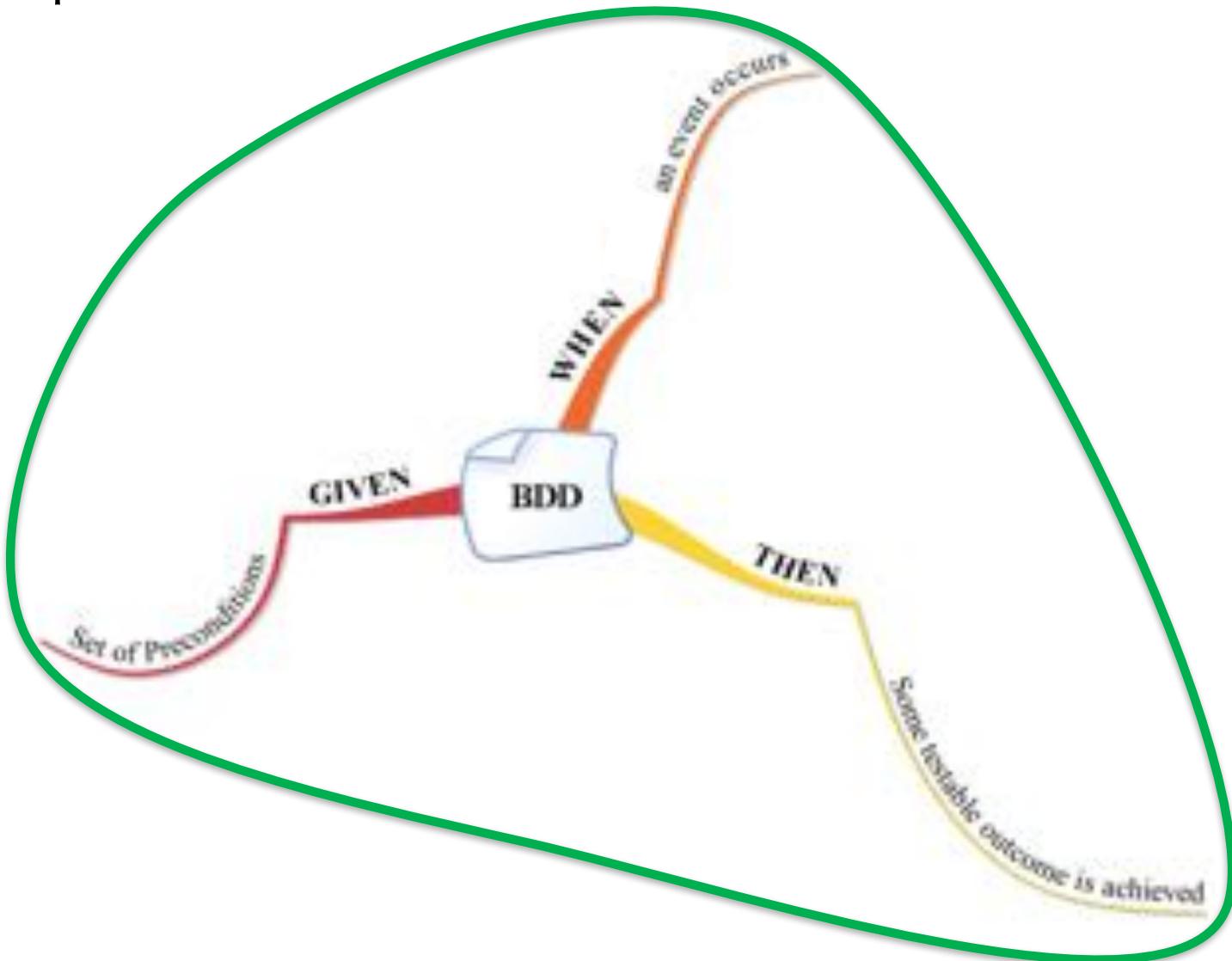
Referral



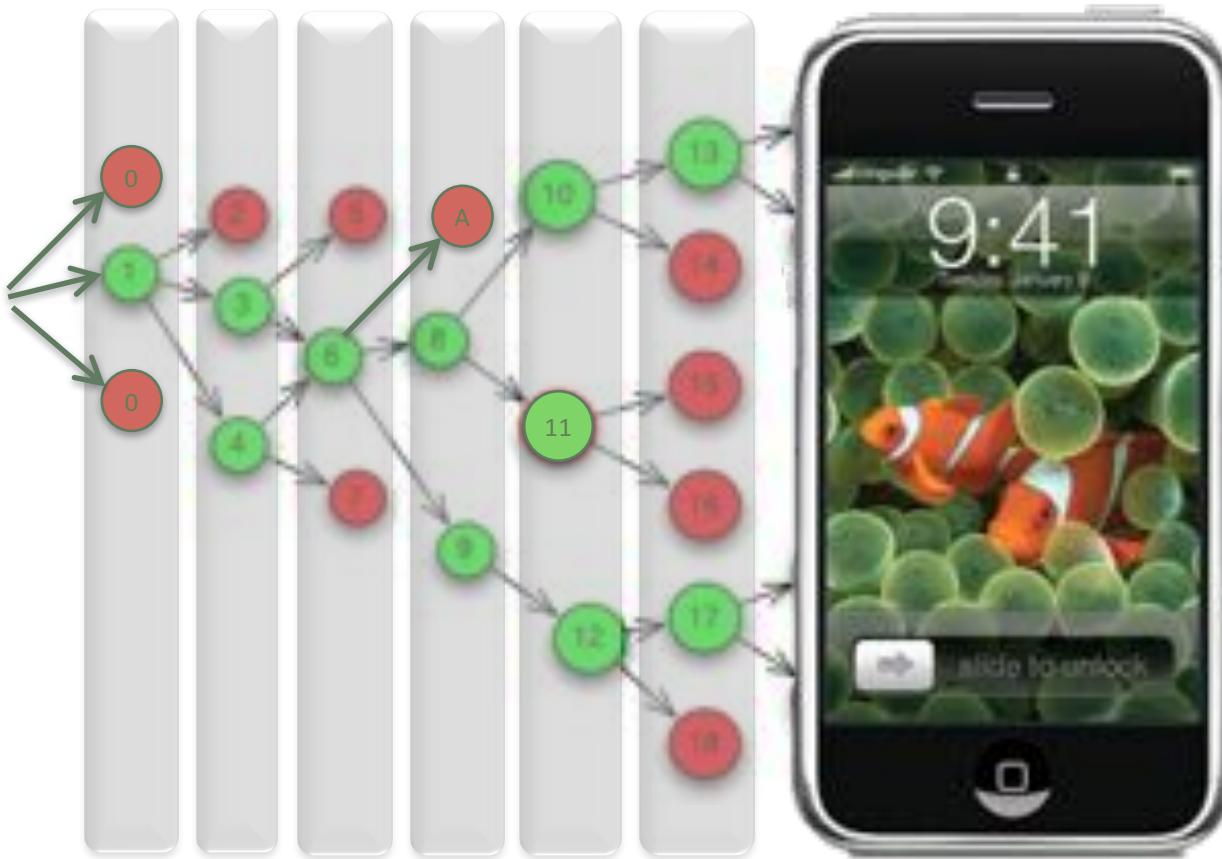
Revenue



Simple

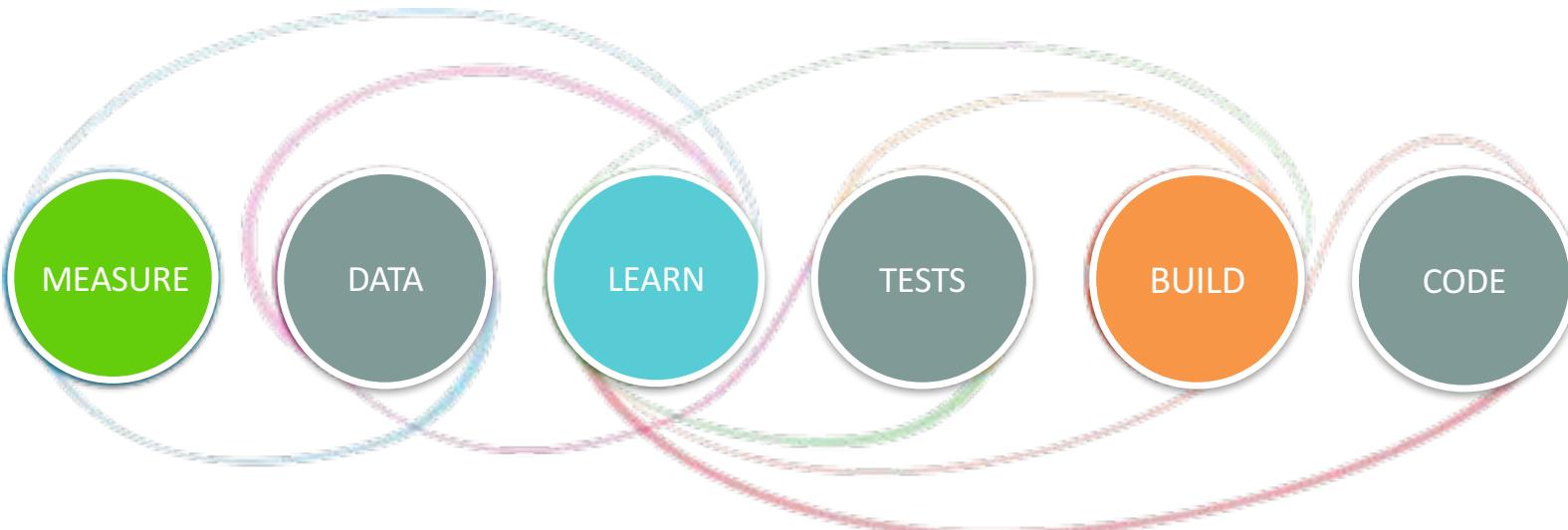


Simple



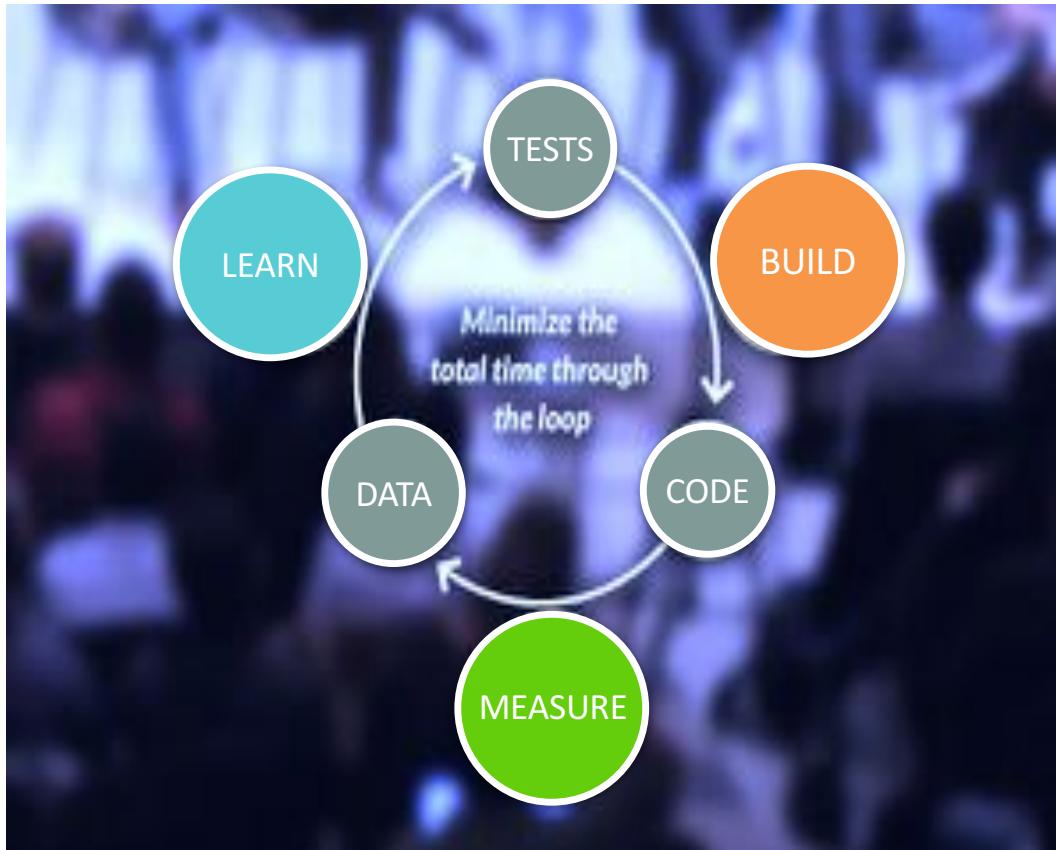
"Spikes" build, measure and learn by a process of elimination.
Prioritized, breadth-first, parallel, "set-based" design.

Simple



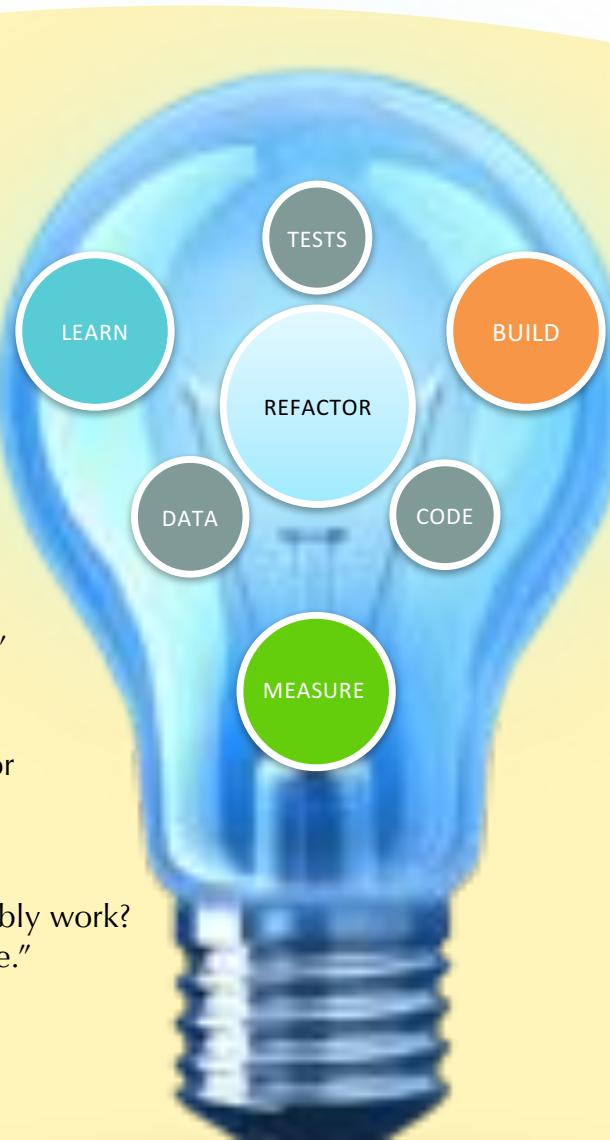
How to refactor all this into
Jobs' "elegance of minimal"?

Simple



Lean Startup + BDD

Simple Design



"Add value by removing that without."
-- Ron Jeffries

"Each and every declaration of behavior
should appear once and only once."
-- Kent Beck

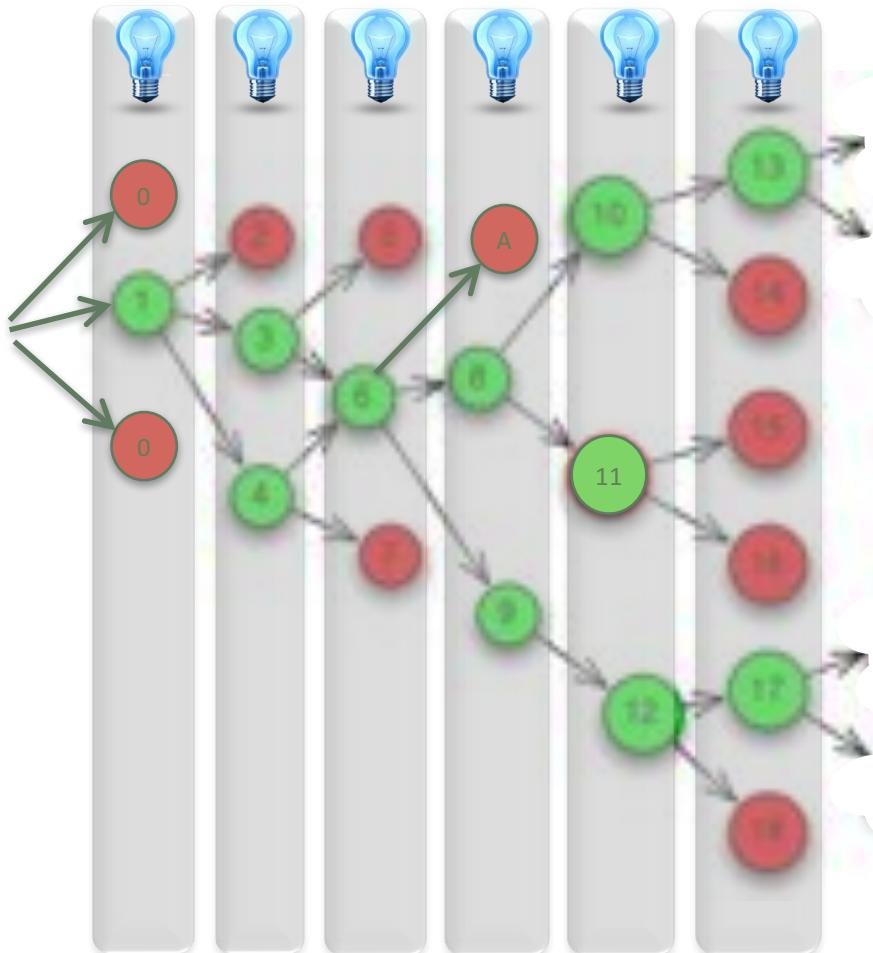
"Ask, what's the simplest thing that could possibly work?
Don't solve problems you don't yet have."
-- Ward Cunningham

Simple Design





Set-Based Design Game



Design a logo for our new product!

2-person 2-minute Design Sprints.

What Acceptance Criteria did we learn?

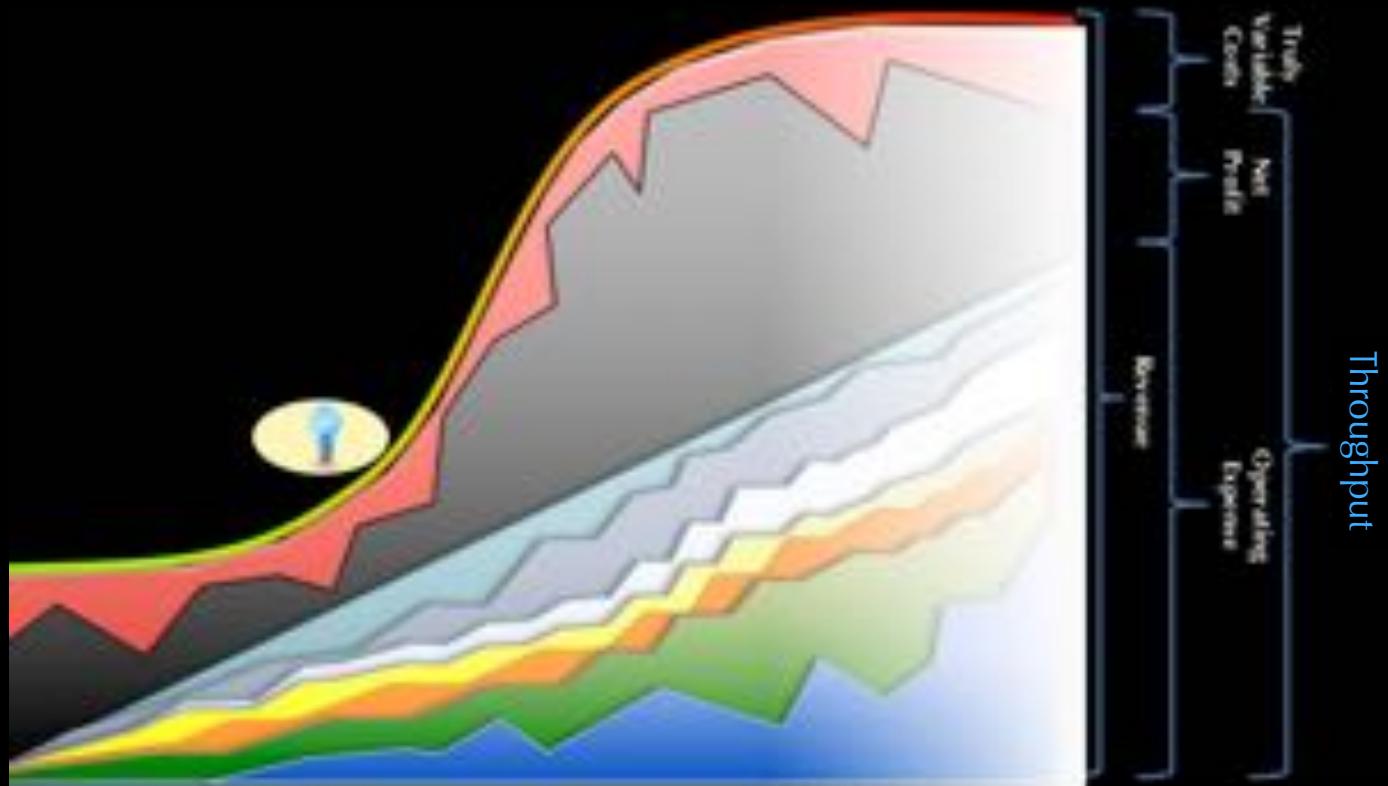
Knock Out Alternatives via LaaS!

Refactor!

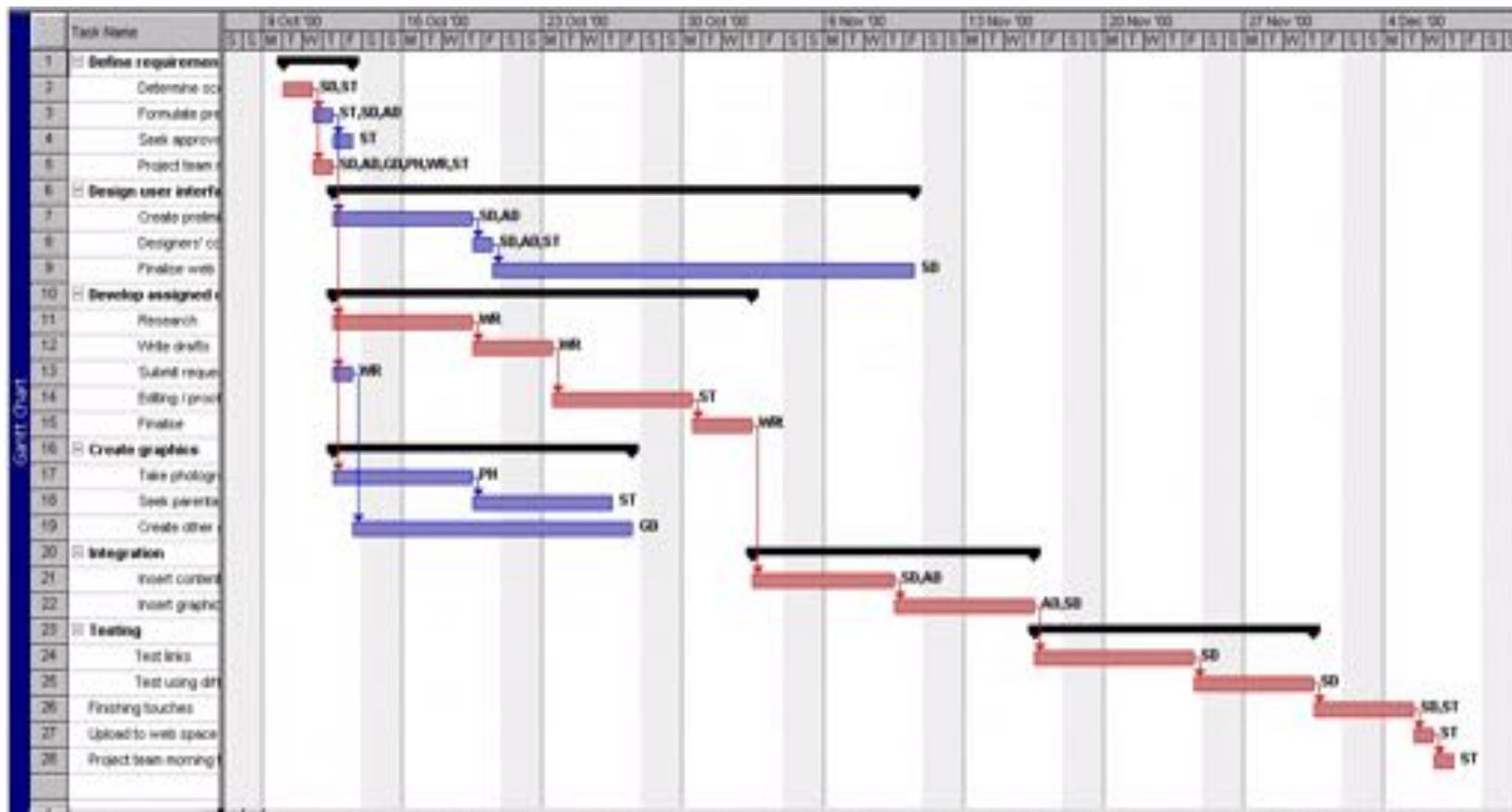
Repeat!

Continuous throughput

- › At any time there's **one** bottleneck constraint
- › Work on other constraints is premature
- › Because it won't increase **Throughput**

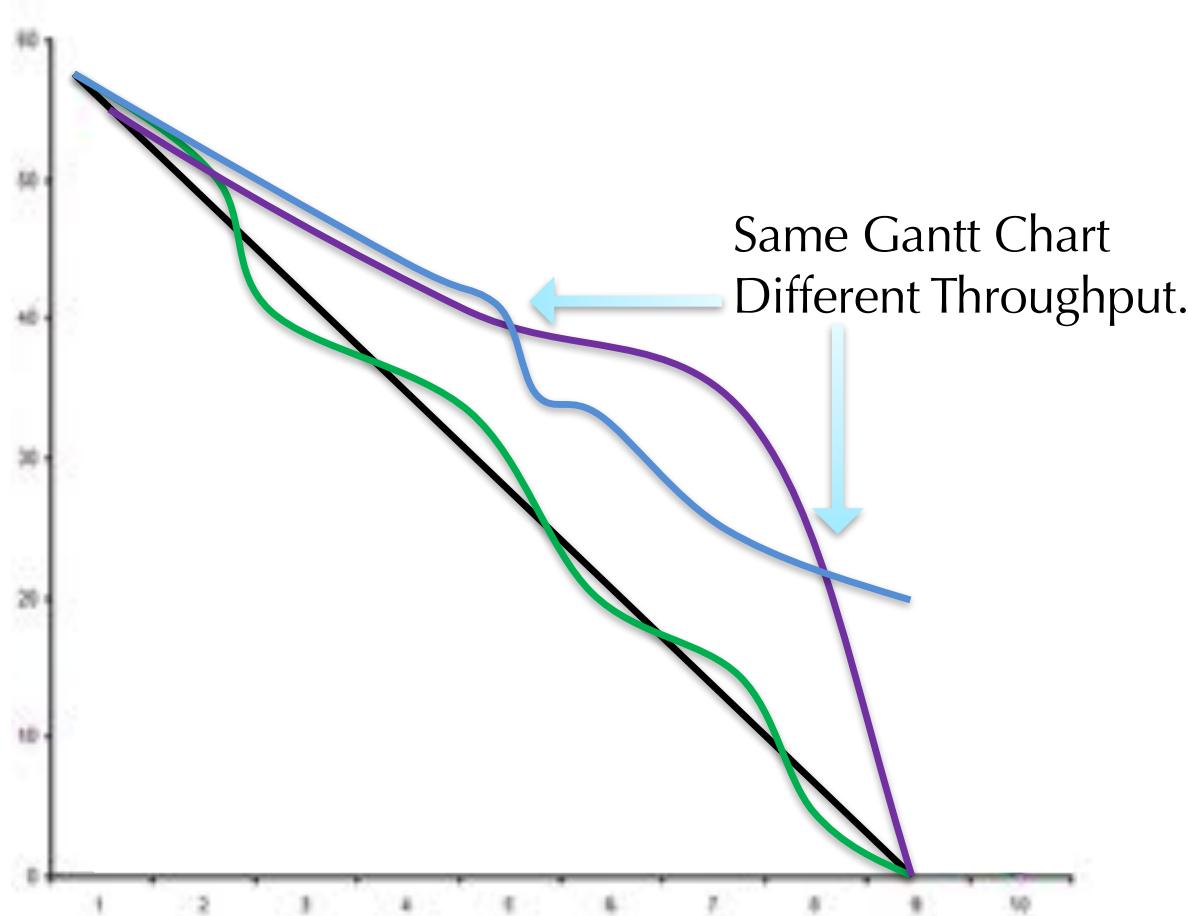


Continuous



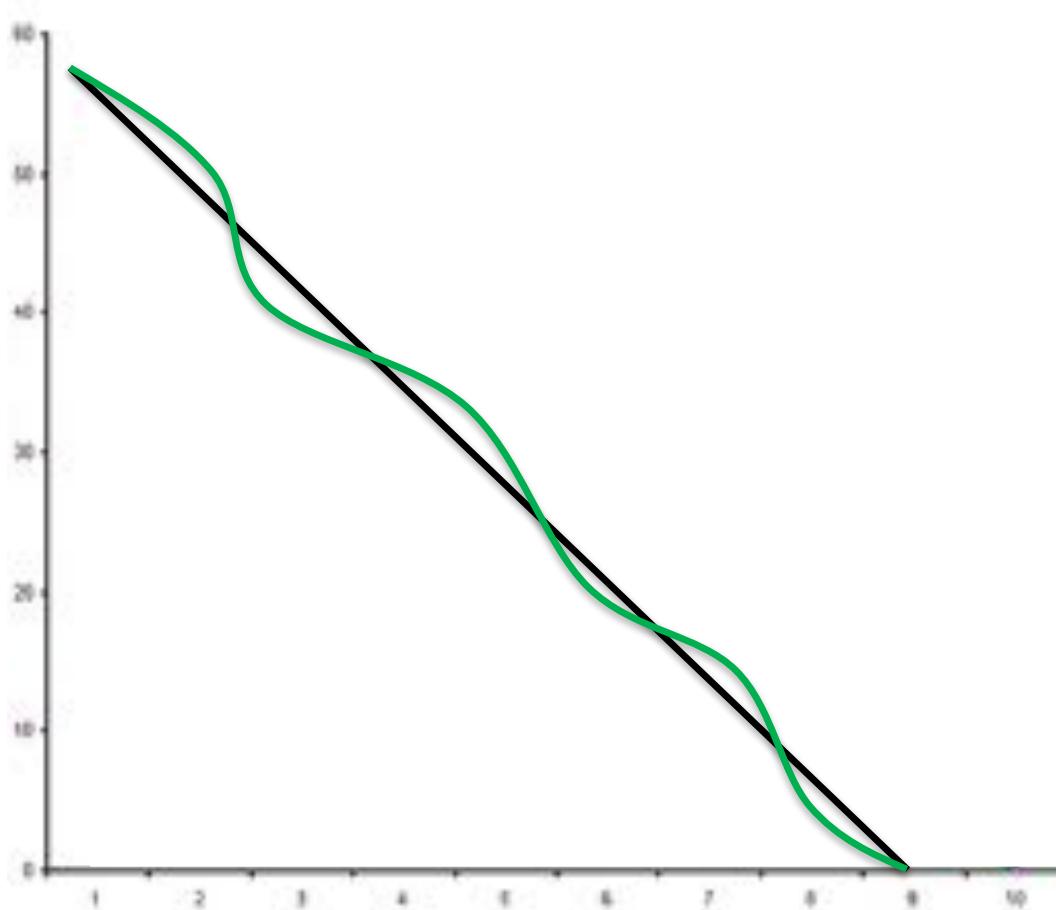
“Tell me how you measure me and I will tell you how I will behave. If you measure me in an illogical way do not complain about illogical behavior.” – Eli Goldratt

Continuous

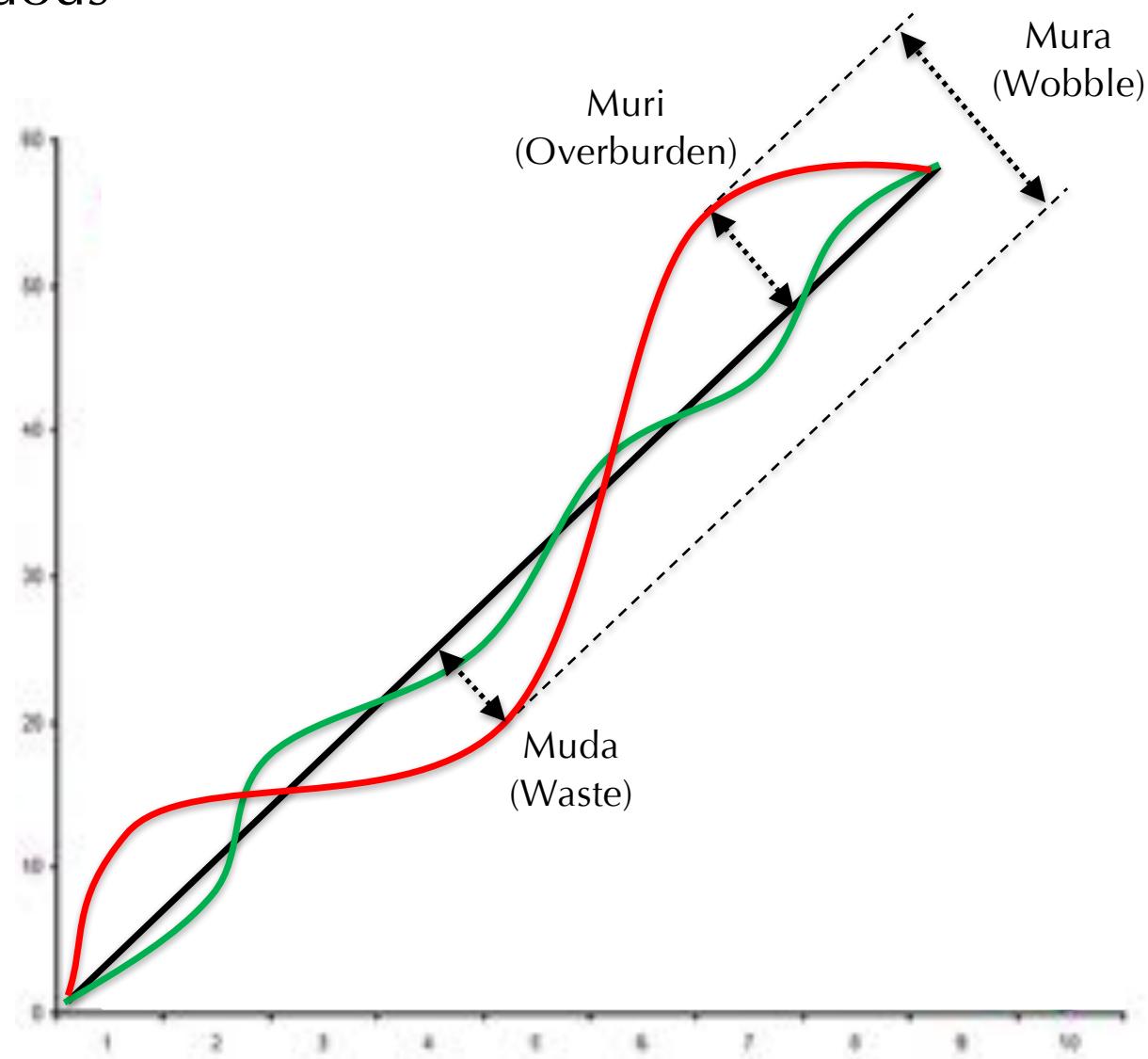


Continuous optimization of throughput
prevents illogical behavior.

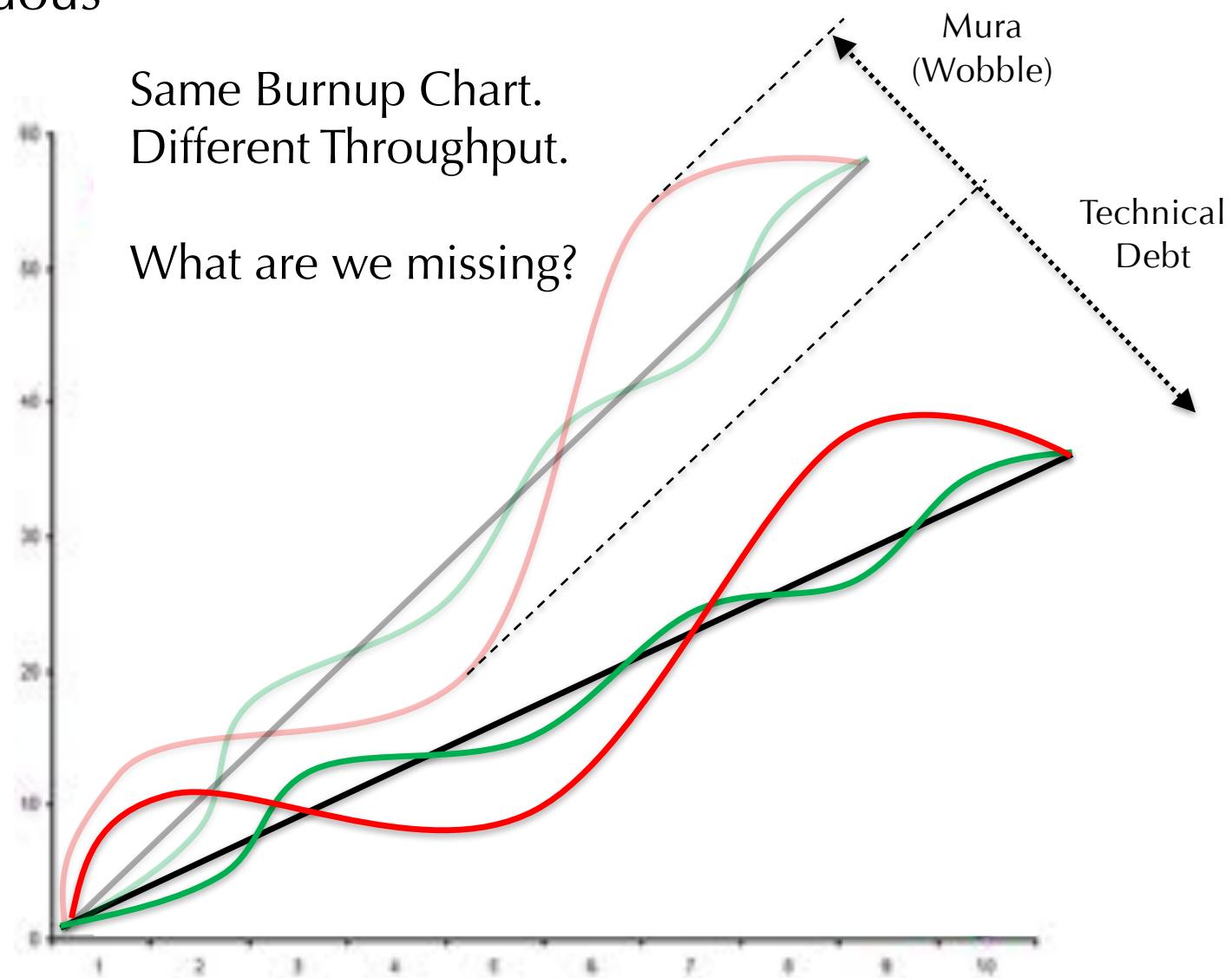
Continuous



Continuous



Continuous



Continuous

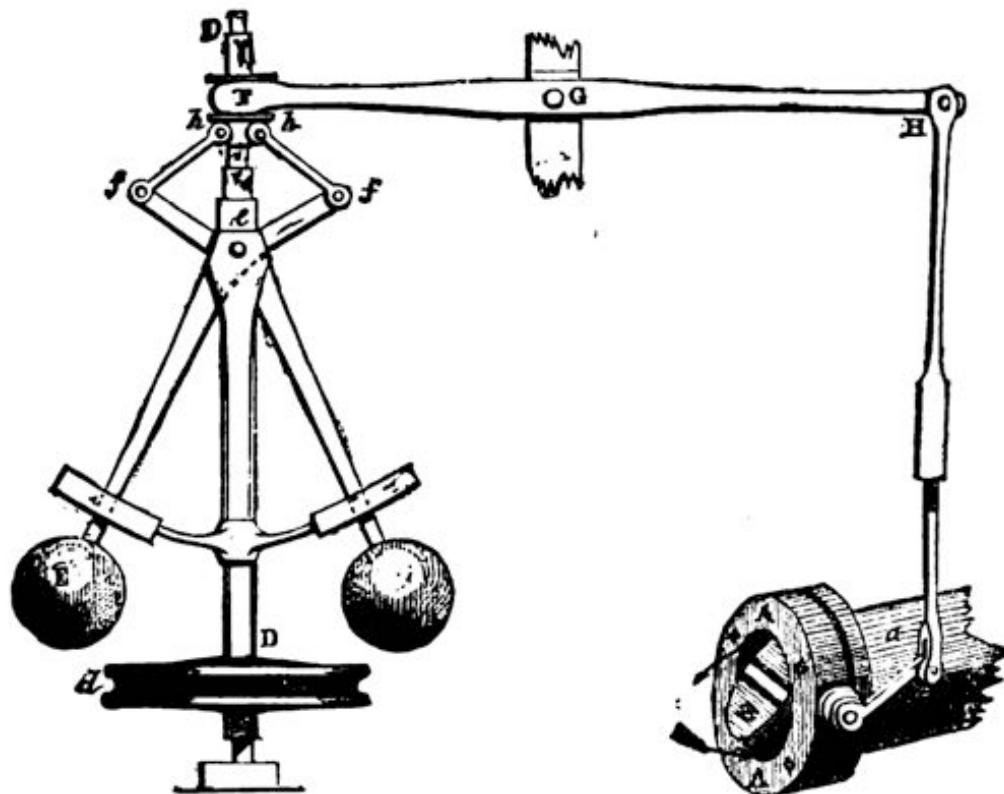


FIG. 4.—Governor and Throttle-Valve.

Industrial machines use metric feedback loops to continuously optimize throughput.

Continuous

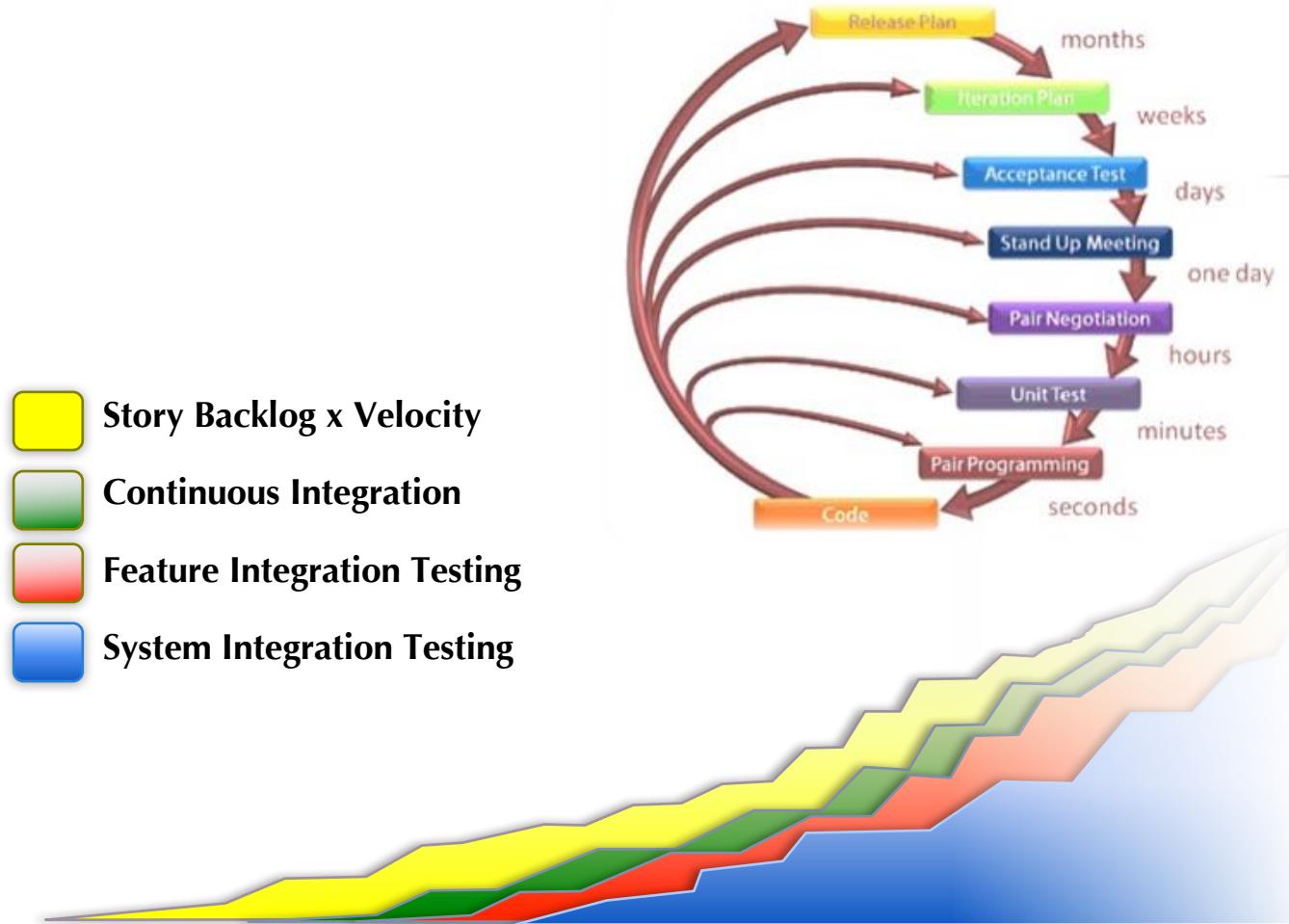


1G Agile is a feedback machine for small IT delivery teams.

Beck's Maxim: "Turn all the knobs to ten."

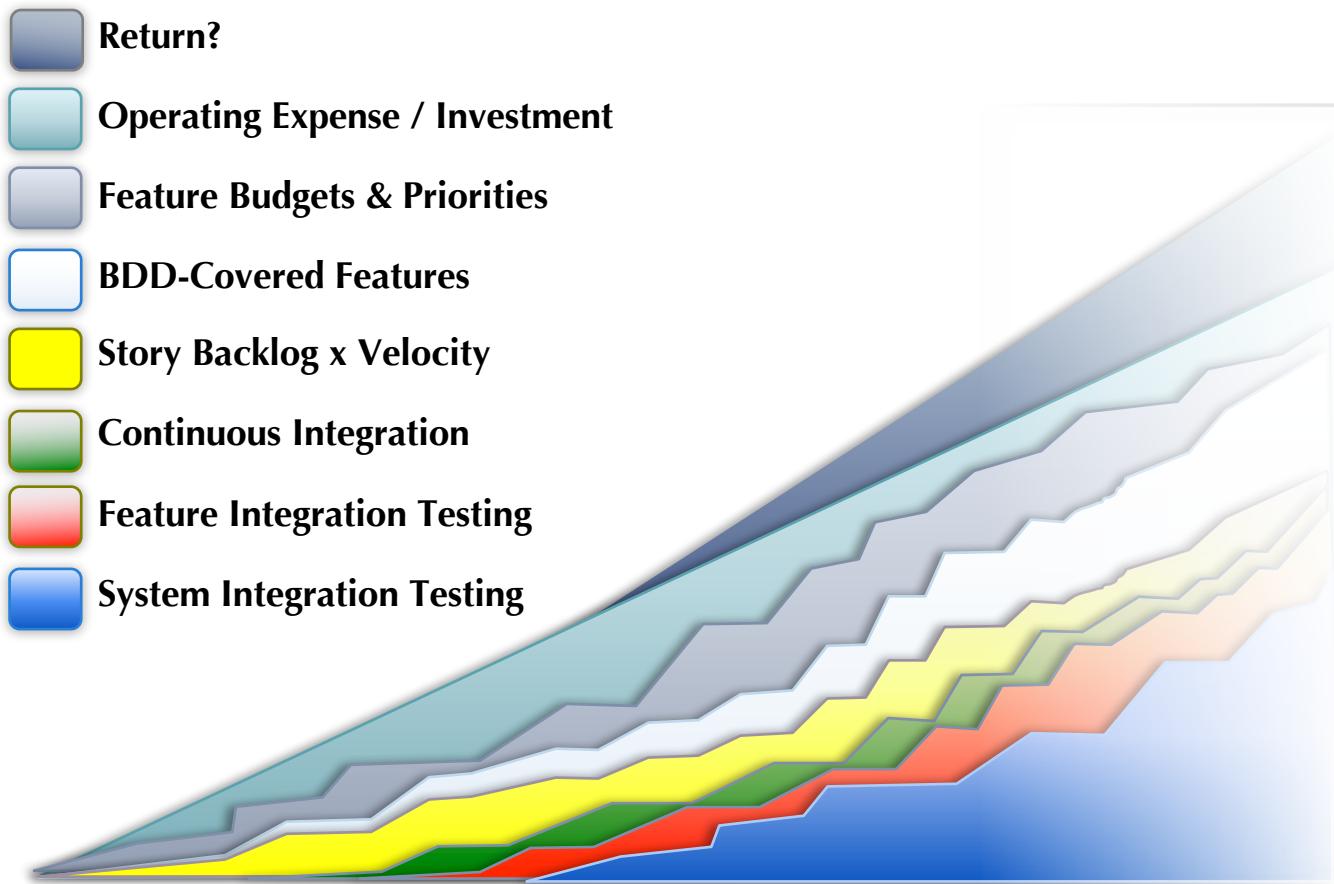
The knobs are continuous feedback loops.

Continuous

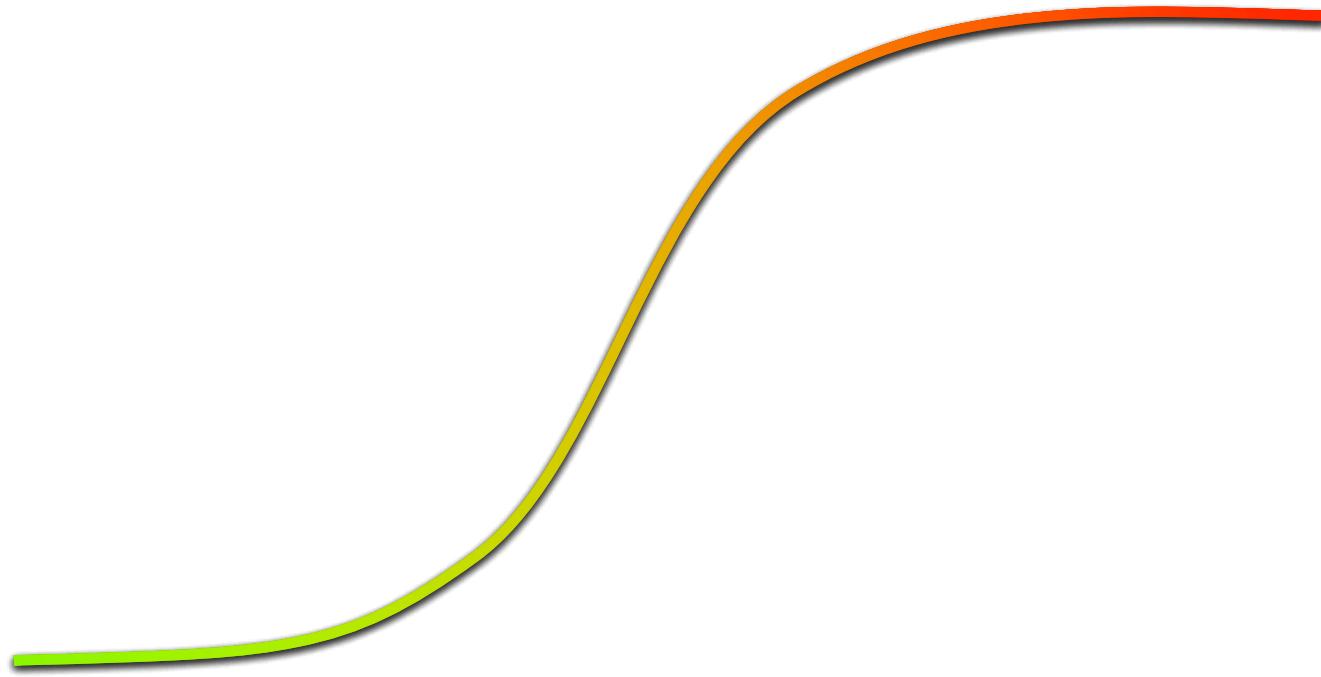


Which one of these curves is throughput?

Continuous



By themselves, stories don't generate throughput. Features do.



Metric	Criterion	Rate	Return
Acquisition	Starts App / Clicks Past 1 st Page	100%	\$1.00
Acquisition	Views 2+ Screens for 10+ Secs	90%	\$1.10
Activation	Email/FB/Google Signup	80%	\$1.30
Activation	Adus Profile Data	70%	\$1.50
Retention	3+ Visits in 1 st 30 Days	60%	\$1.75
Retention	Email RSS Subscription	50%	\$2.00
Referral	Shares Contacts	40%	\$2.50
Referral	Refers +1 Users Who Activate	30%	\$3.00
Revenue	One-Off Purchase	20%	\$5.00
Revenue	Billing Subscription	10%	\$10.00

Metric	Criterion	Rate	Return
Acquisition	Starts App / Clicks Past 1 st Page	50%	\$0.50
Acquisition	Views 2+ Screens for 10+ Secs	45%	\$0.60
Activation	Email/FB/Google Signup	80%	\$1.30
Activation	Adus Profile Data	70%	\$1.50
Retention	3+ Visits in 1 st 30 Days	60%	\$1.75
Retention	Email RSS Subscription	50%	\$2.00
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Activation	Adds Profile Data	35%	\$0.80
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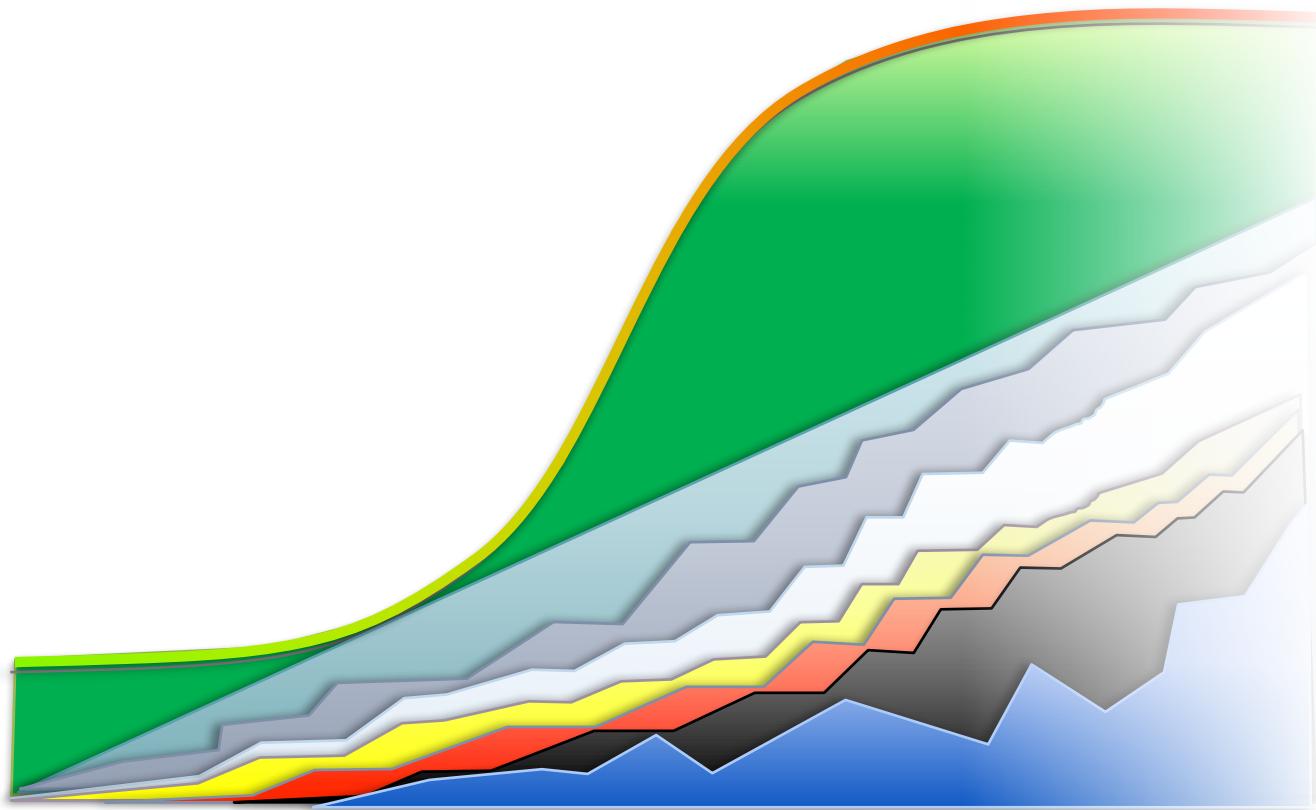
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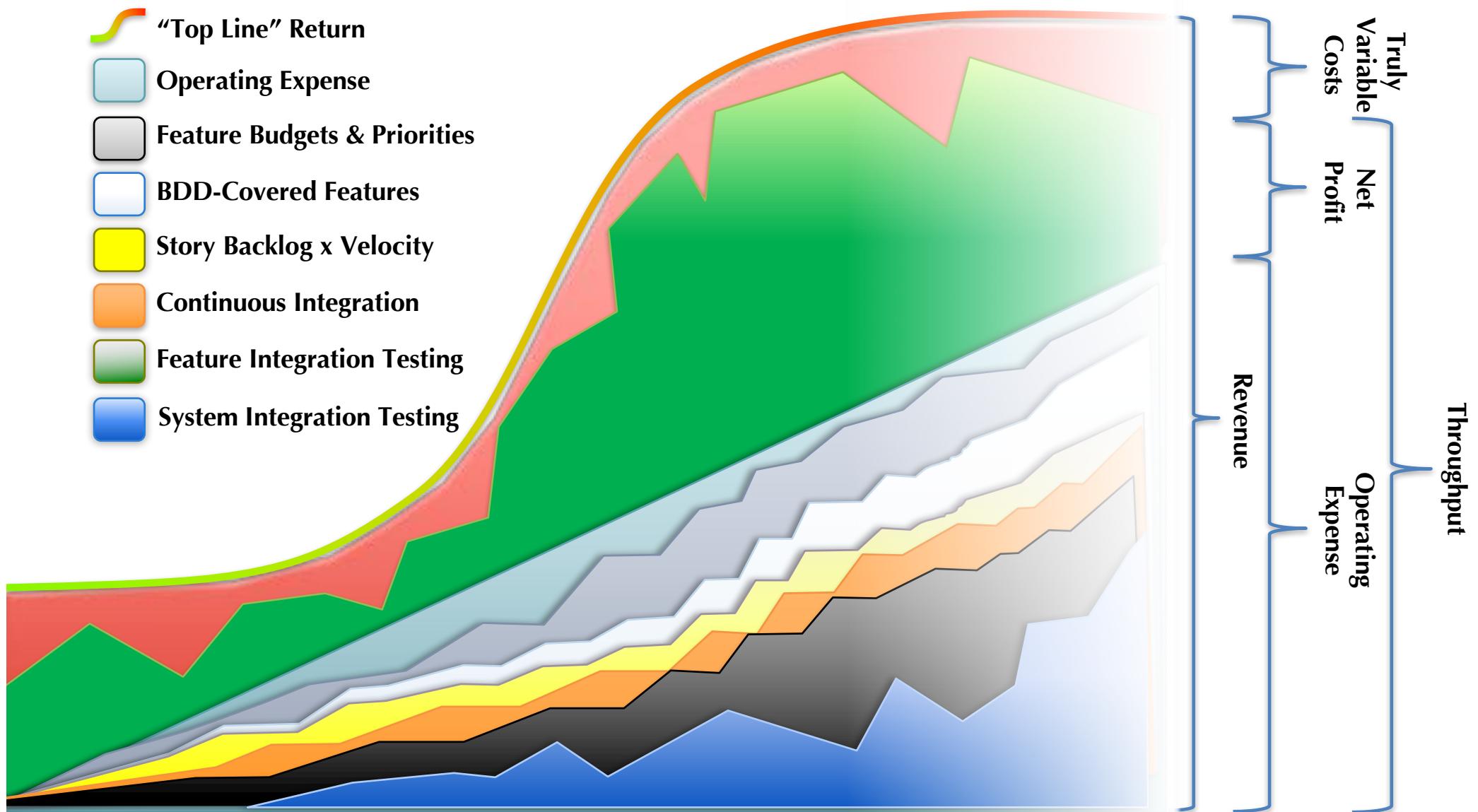
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Activation	Adus Profile Data	70%	\$1.50
Retention	3+ Visits in 1 st 30 Days	60%	\$1.75
Retention	Email/RSS Subscription	50%	\$2.00
Referral	Shares Contacts	40%	\$2.50
Referral	Refers +1 Users Who Activate	30%	\$3.00
Revenue	One-Off Purchase	20%	\$5.00
Revenue	Billing Subscription	10%	\$10.00

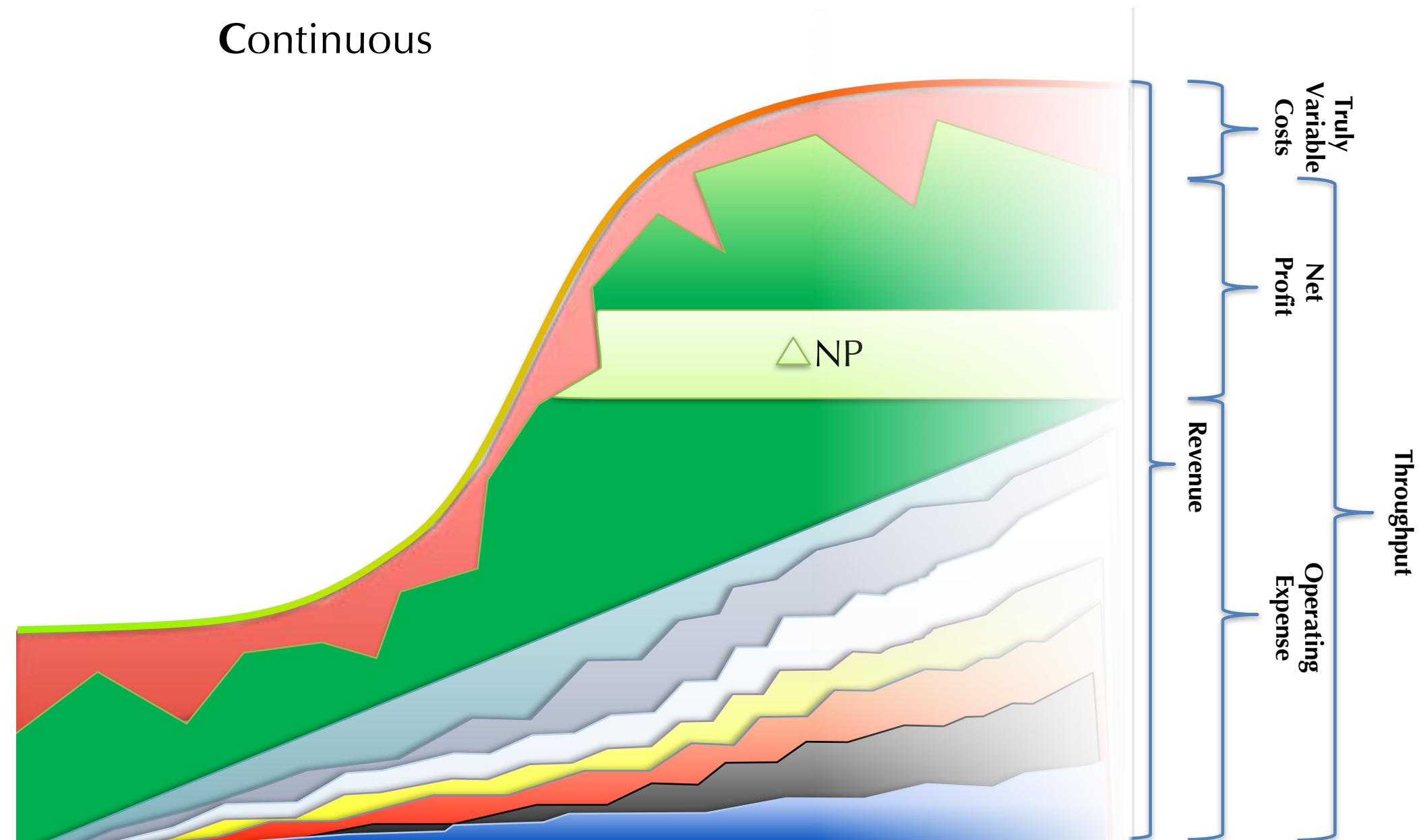
Continuous



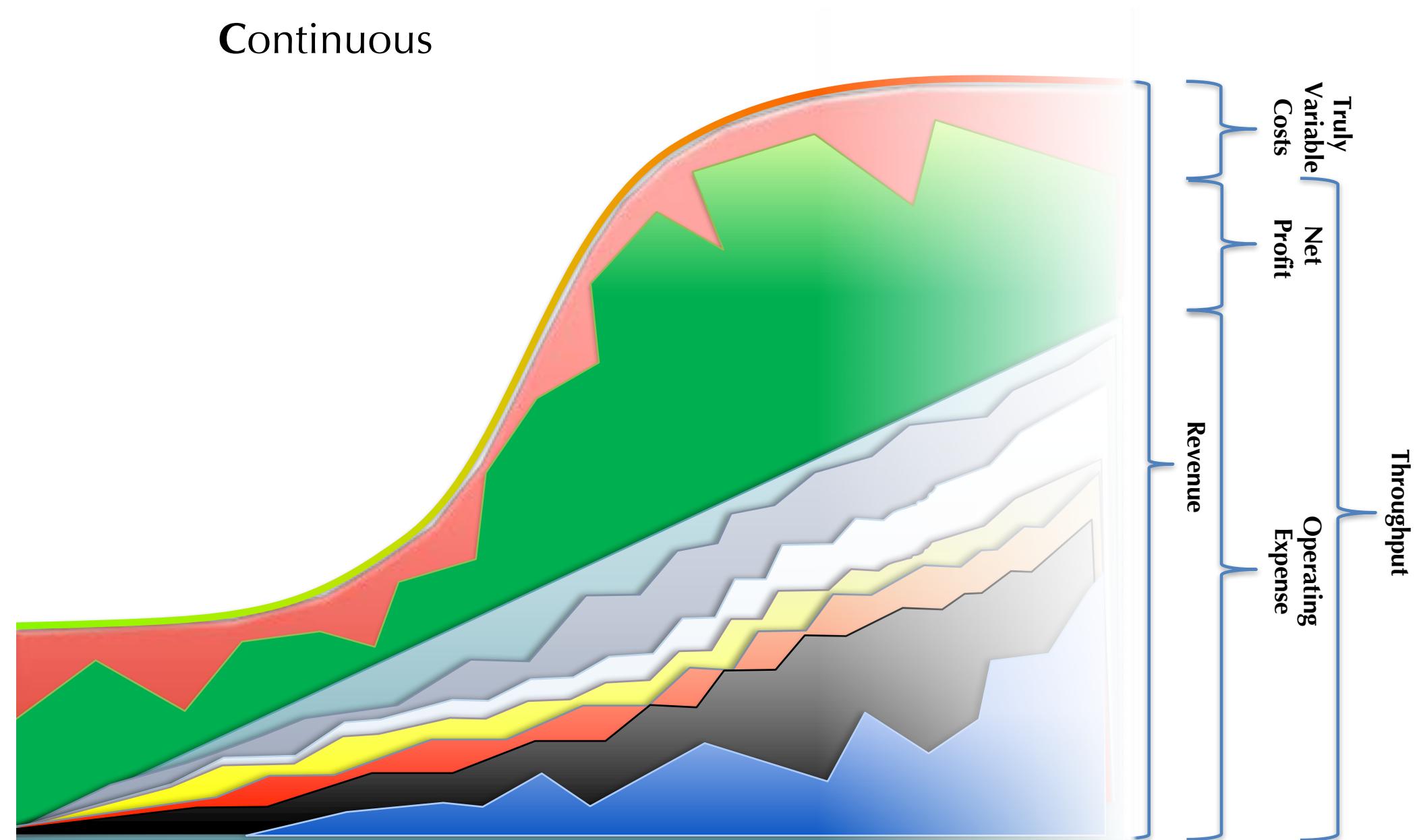
There is no fixed cost per unit of return



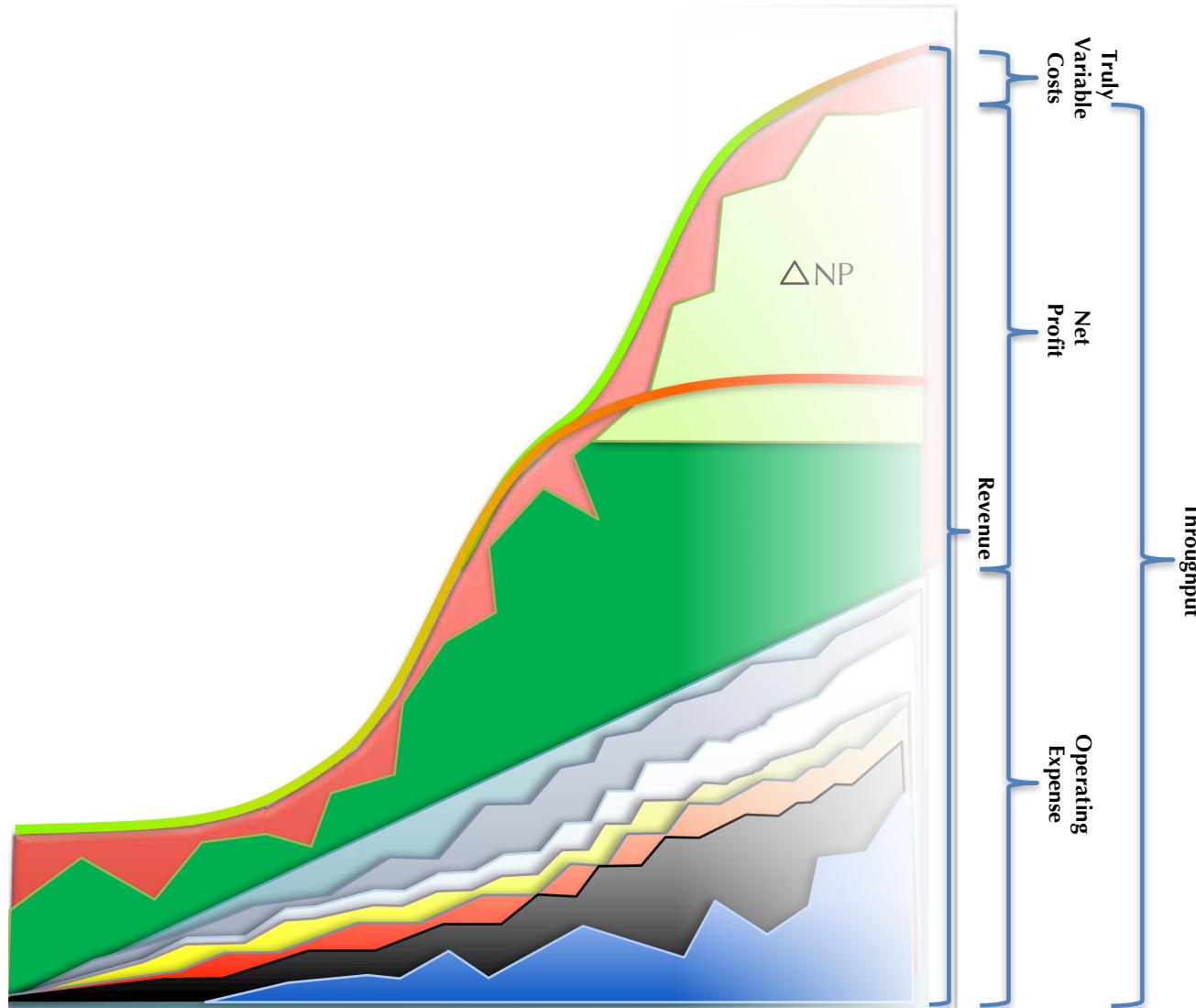
Continuous



Continuous



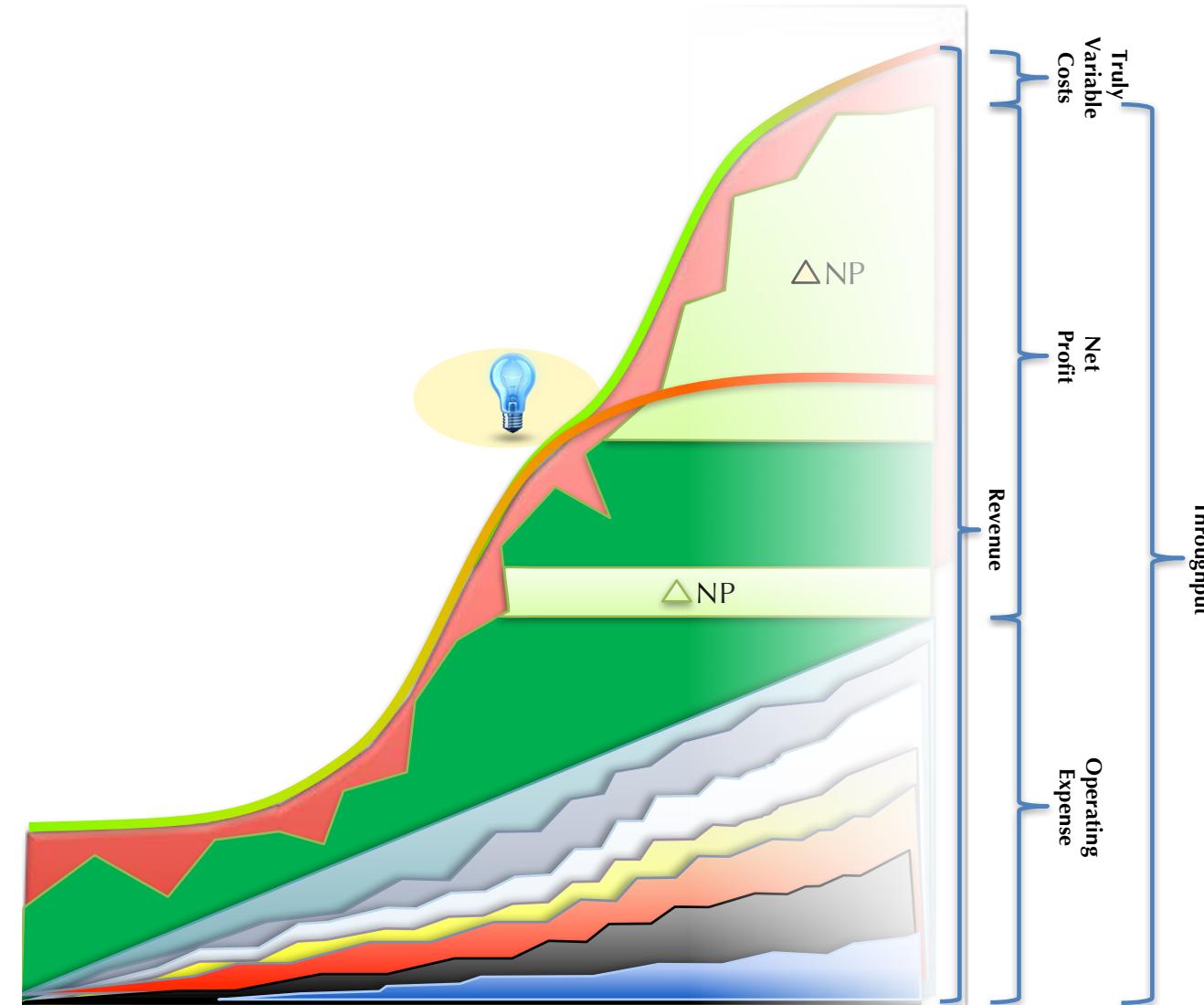
Continuous



Continuously
Prioritize Design to
Open the Bottleneck

- Lift a pirate constraint

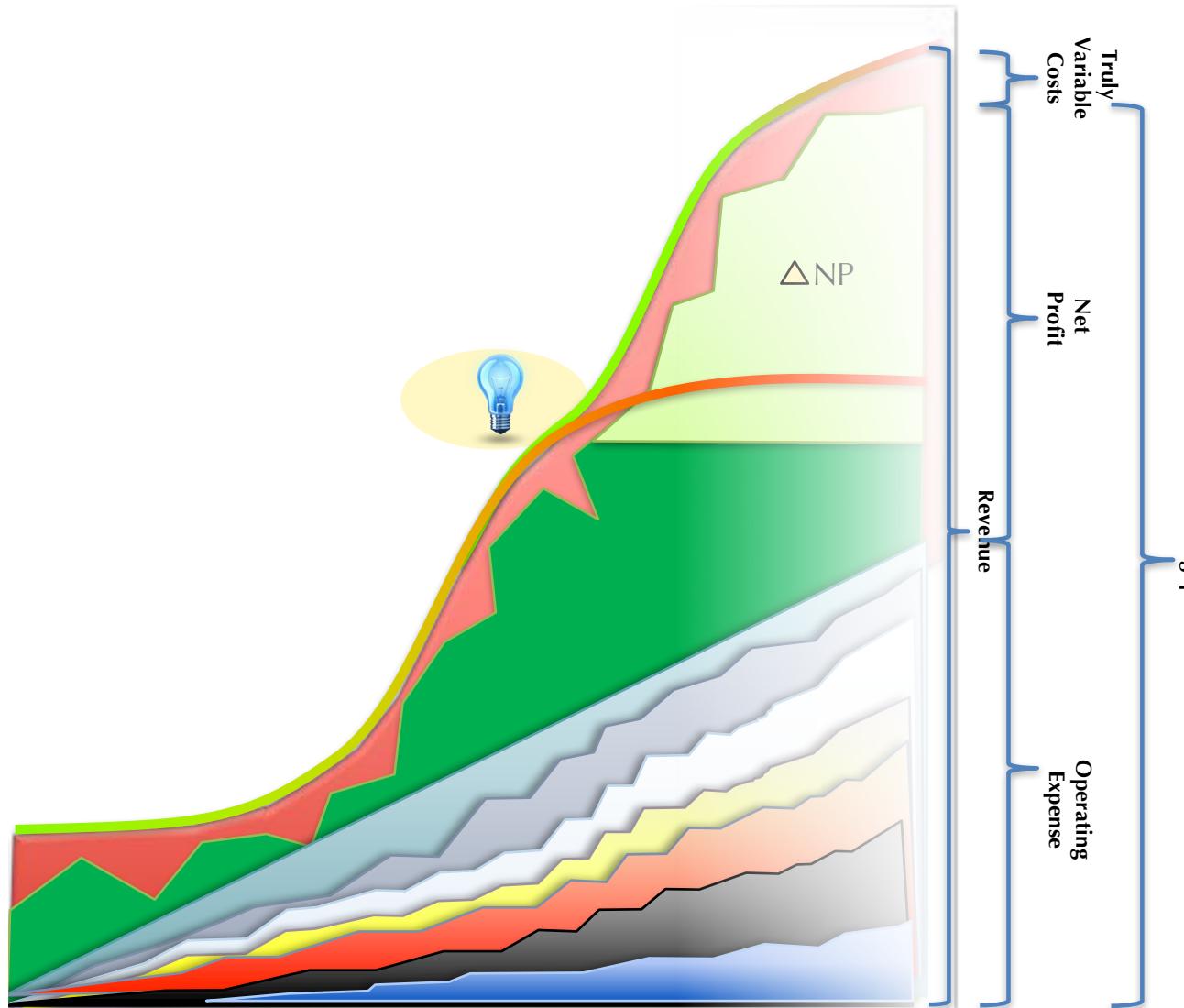
Continuous



Continuously
Prioritize Design to
Open the Bottleneck

- Lift a pirate constraint
- Cut Operating Expense

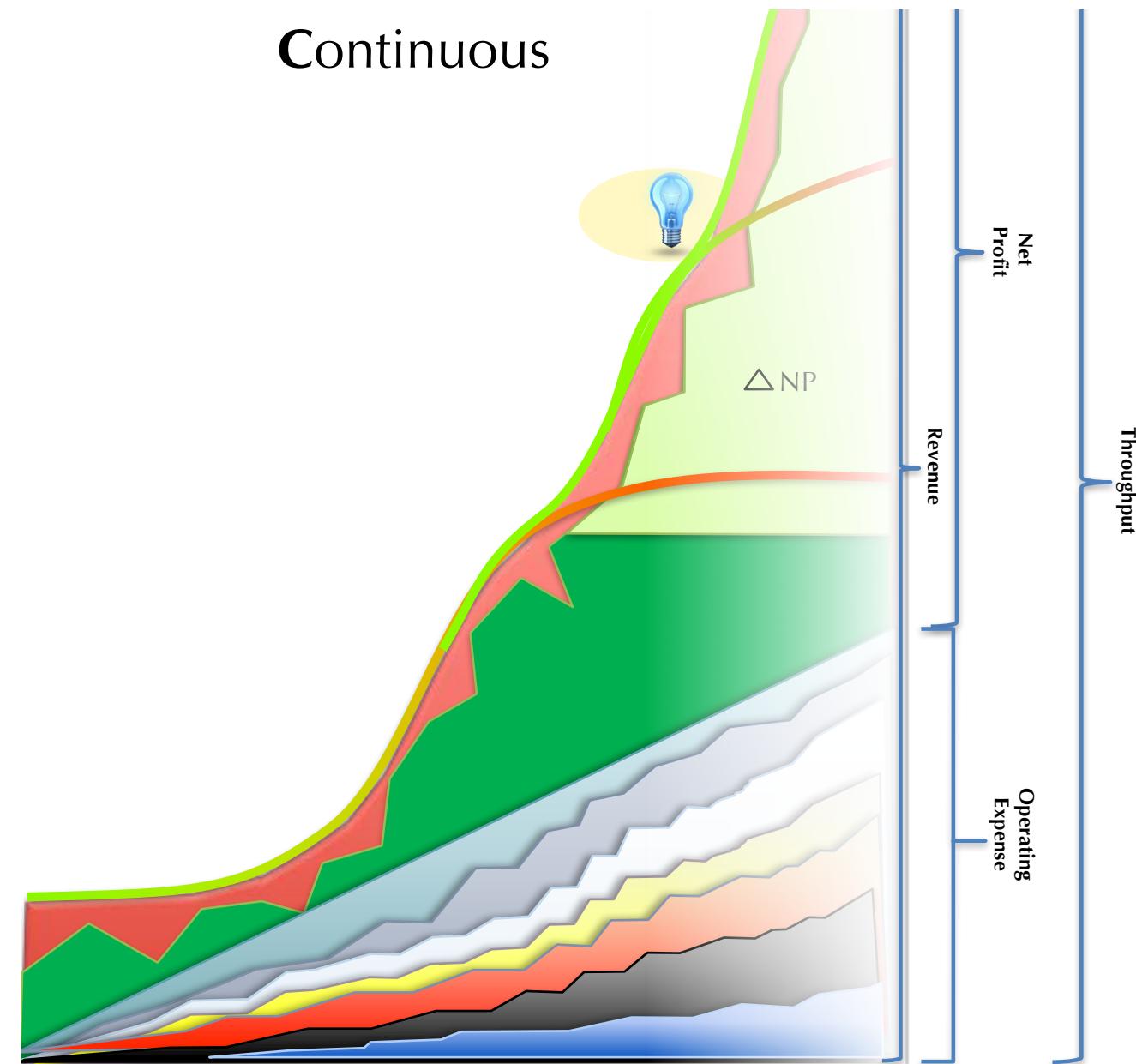
Continuous



Continuously
Prioritize Design to
Open the Bottleneck

- Lift a pirate constraint
- ~~Cut Operating Expense~~
- Lift Efficiency

Continuous

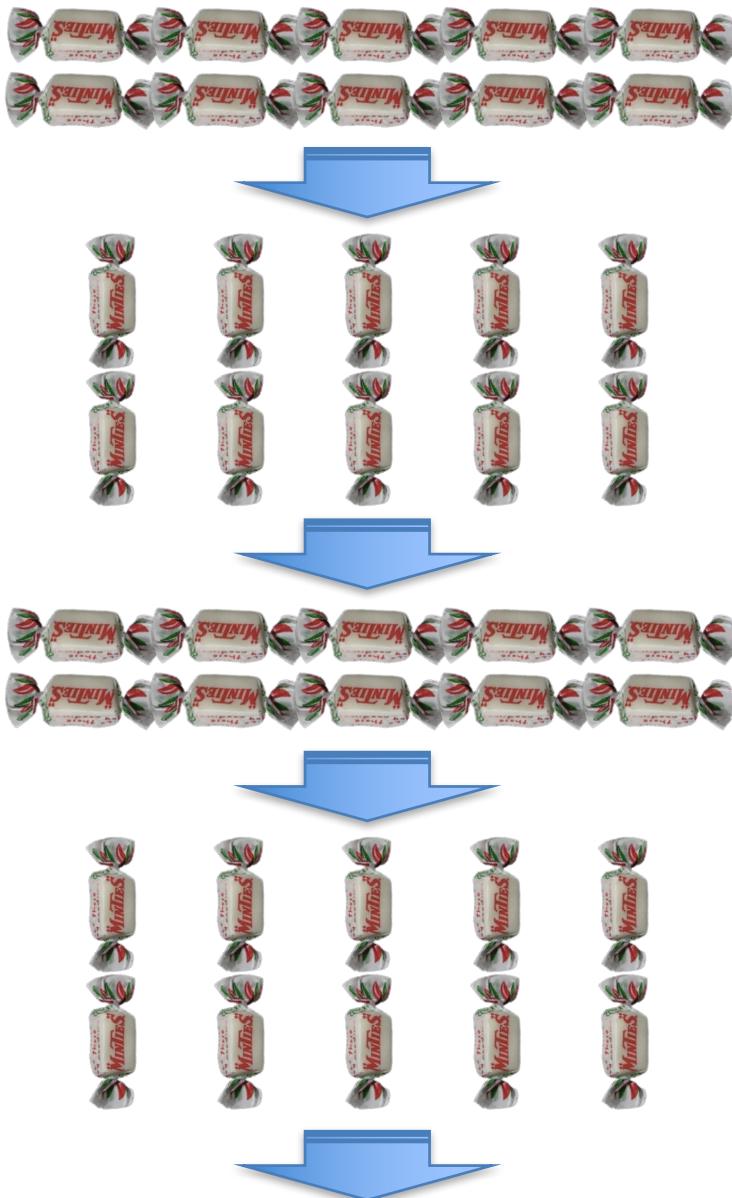


Continuously Prioritize Design to Open the Bottleneck

- Lift a pirate constraint
- ~~Cut operating expense~~
- Lift Efficiency
- Capture a new market
- Open a new ecosystem



Three Minty Machines



Minty Machine 1: form teams of 2-5 people

Each to “process” 10 Minties.

Each flips all 10 Minties before passing.

No air but each player can use both hands.

Use a stop watch to time each person.

Record who's best and how long end to end.



Minty Machine 2: same teams

Handicap – use only one hand.

Also more passes - pass as each is flipped.

Coordinator to call out seconds.

Each person to time themselves.

Record who's best and how long end to end.

Why was that faster end to end?

Autonomous Teams

- › Self-managing teams don't have masters
- › Self-aligning streams don't have owners
- › Leadership as a Service + Chapter Meetings



Autonomous



Picture a system out of control.
No plan survives contact with the enemy.

– Von Moltke

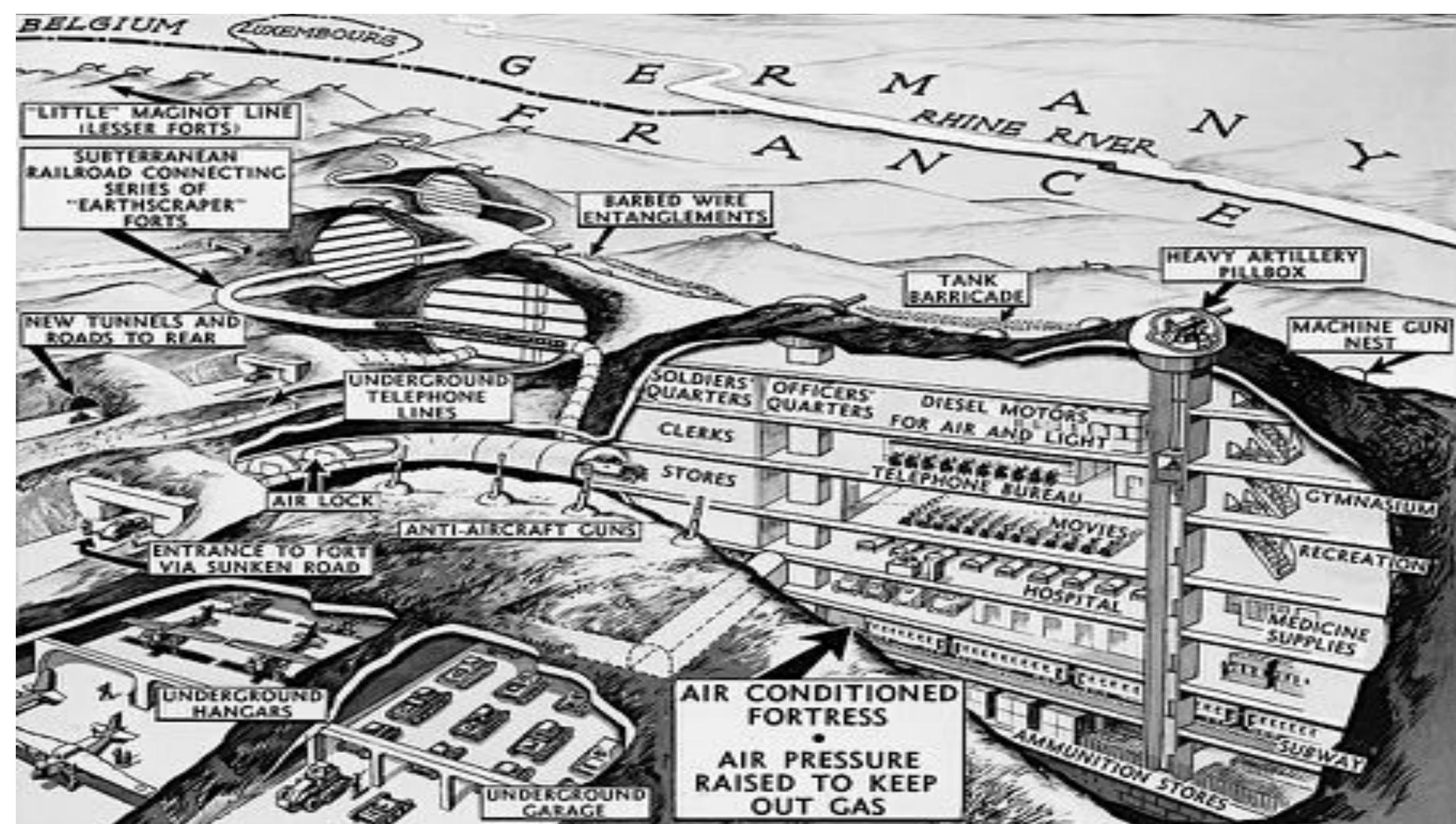
Autonomous

Mission Command

*"No plan survives contact with the enemy.
Each officer must act on the basis of his own
view of the situation. All productive action is
controlled by a superior framework of intent."*

-- Field Marshal Helmut Von Moltke, Chief
General of the Prussian Army 1857–1888





Autonomous

Mission Command “Auftragstaktik” overcame the Maginot Line in just 5 days.



Autonomous

The Royal Navy used huge convoys to guard against lone submarines.



Autonomous

"Auftragstaktik" U-Boats decimated Royal Navy convoys by attacking in packs at night.



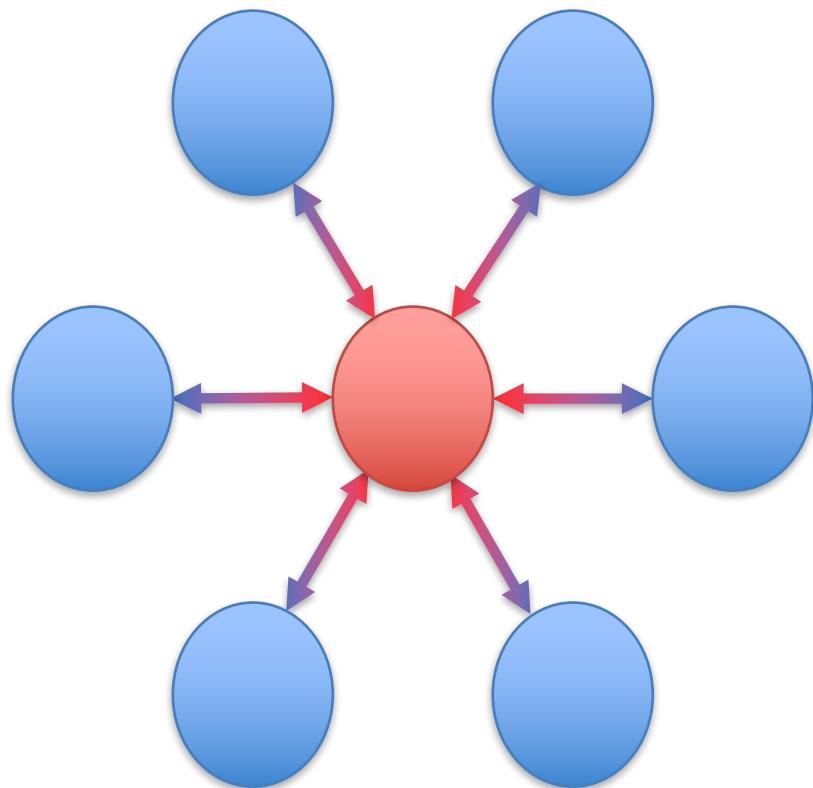
Autonomous



What else is wrong with this picture?

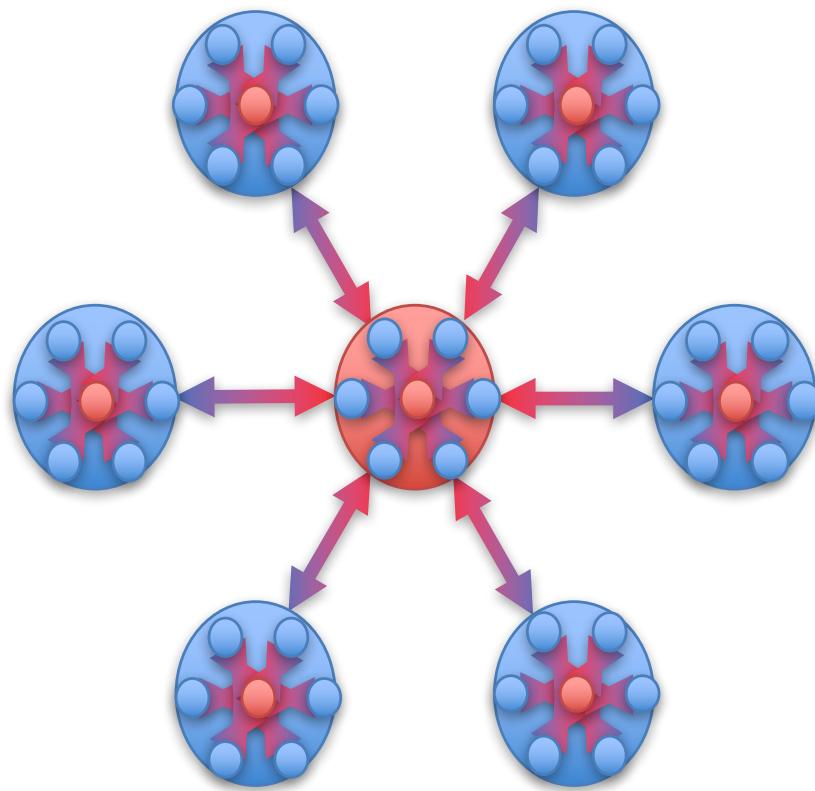
1. Too many people in the room.
2. Terrible Collaboration Loop Limit.

Managed Team



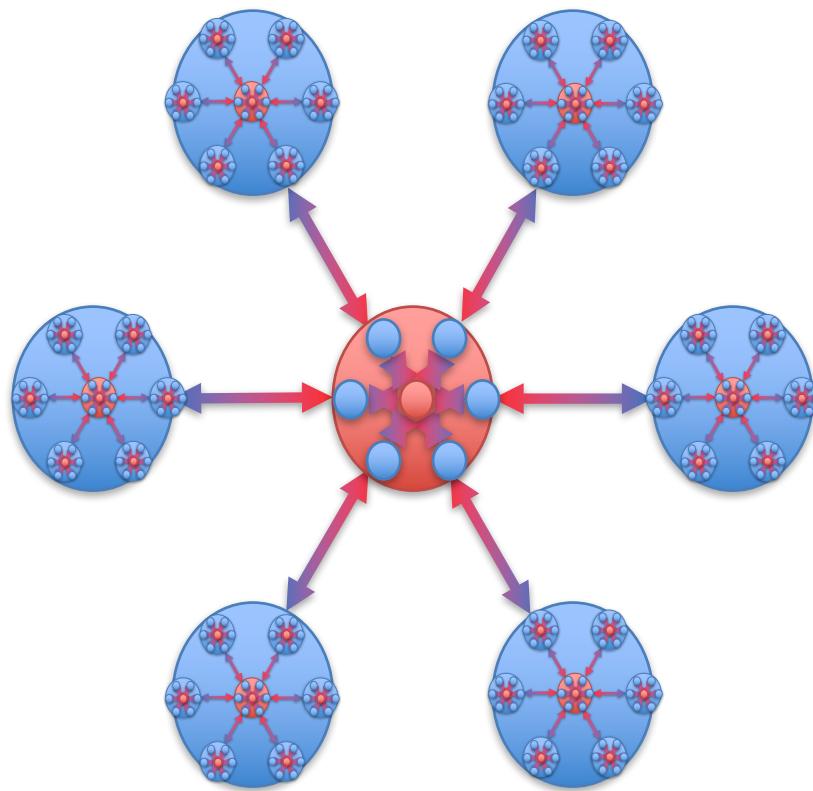
Team Size: 7
Collaboration Loop Limit: 4

Managed Program



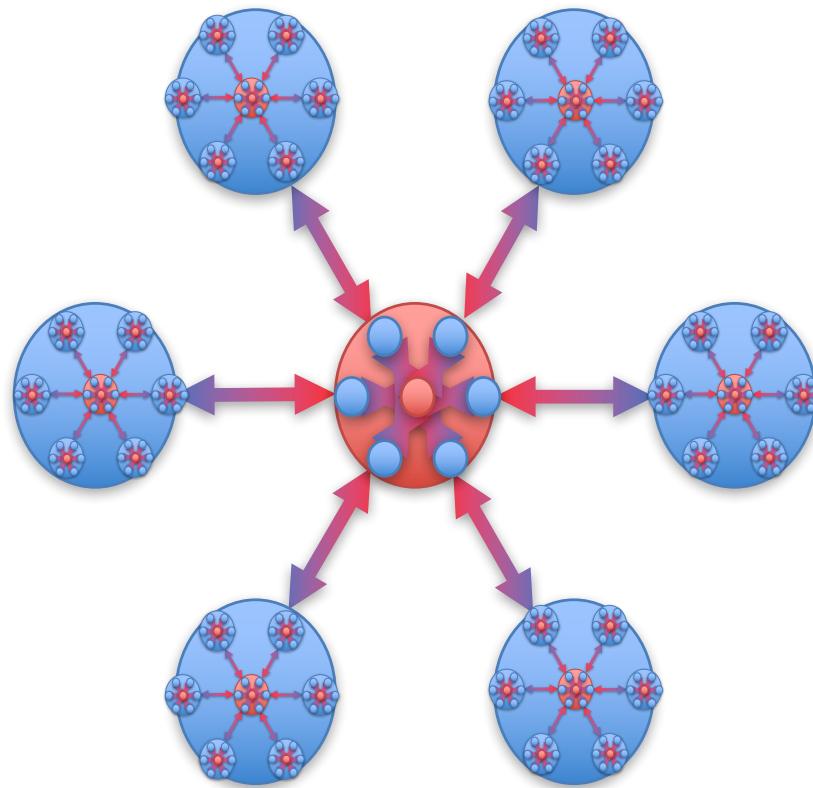
Team Size: 43
Collaboration Loop Limit: 8

Program/Portfolio Management Office (“PMO”)



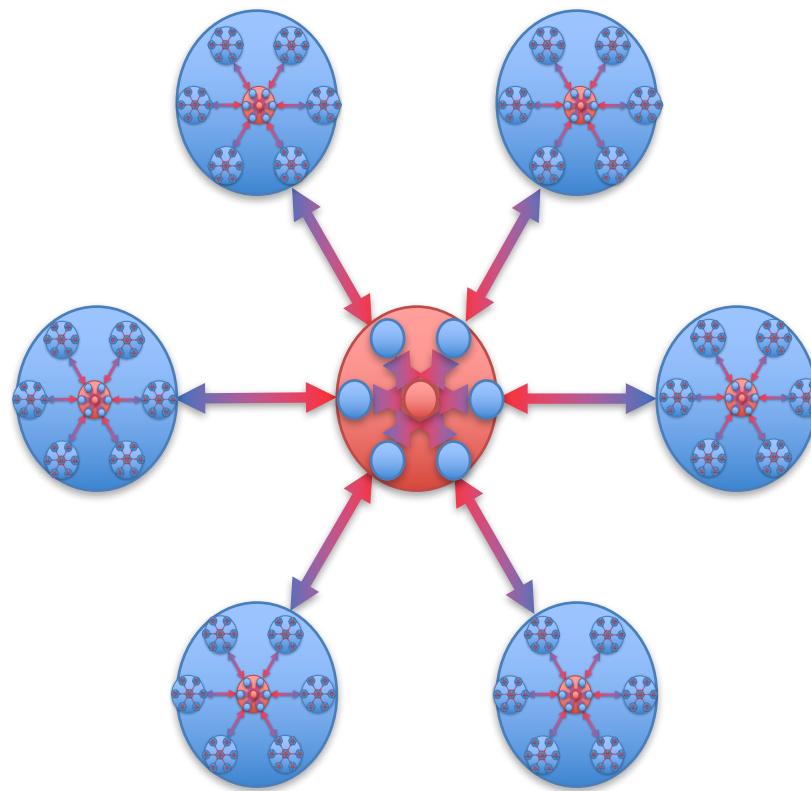
Team Size: 259
Collaboration Loop Limit: 12

Program/Portfolio Management Office (“PMO”)



Team Size: 259
Collaboration Loop Limit: 12

Enterprise Project Management Office (“EPMO”)



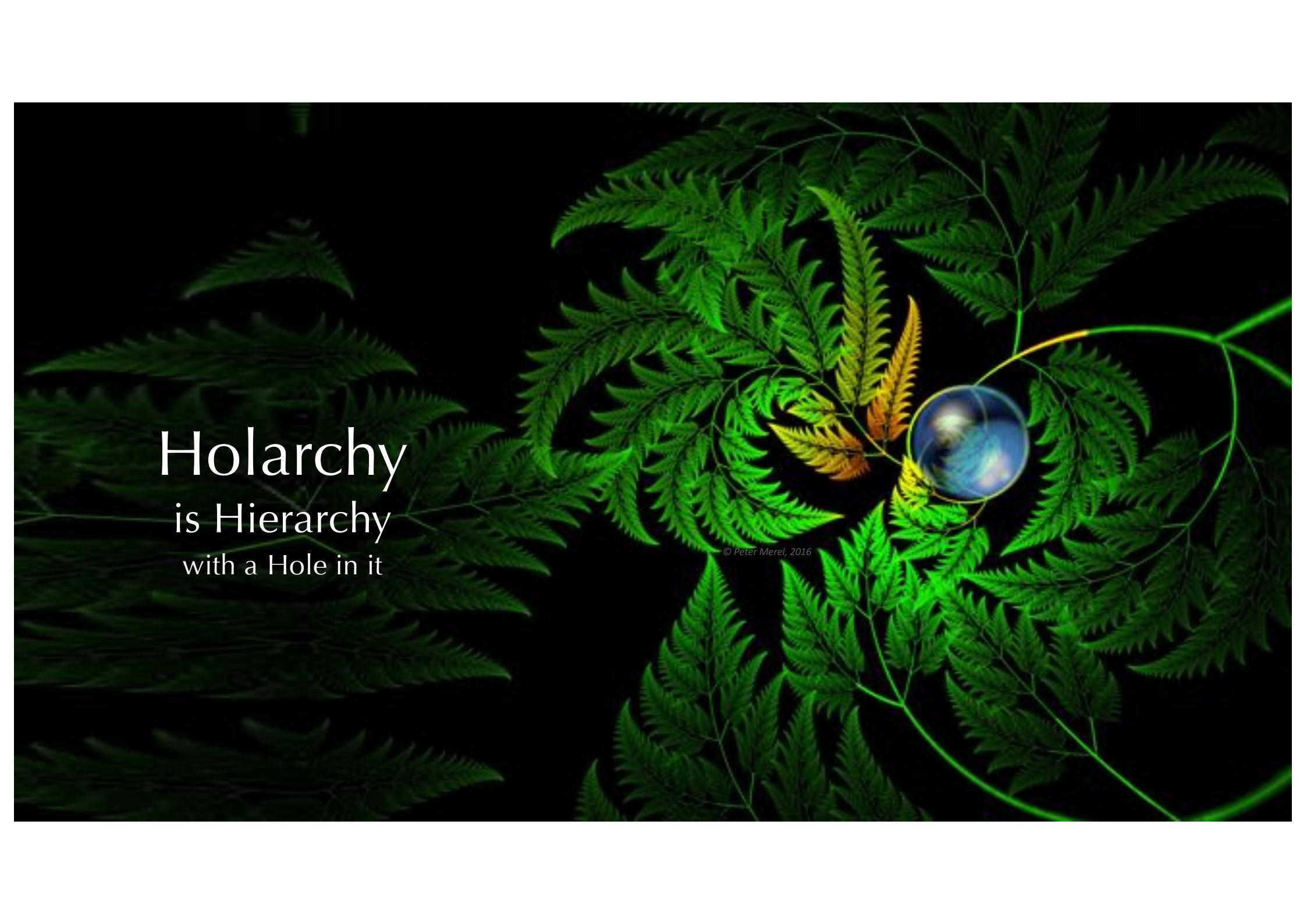
Team Size: 1,555
Collaboration Loop Limit: 16

Autonomous



●	Squad
● ●	Section
● ● ●	Platoon/Troop
	Company/Squadron
	Battalion
	Regiment/Group
X	Brigade
XX	Division
XXX	Corps
XXXX	Army
XXXXX	Army Group/Front

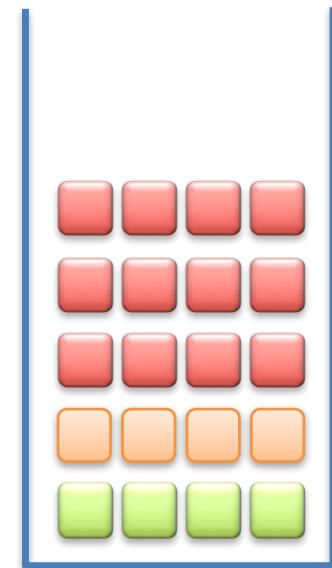
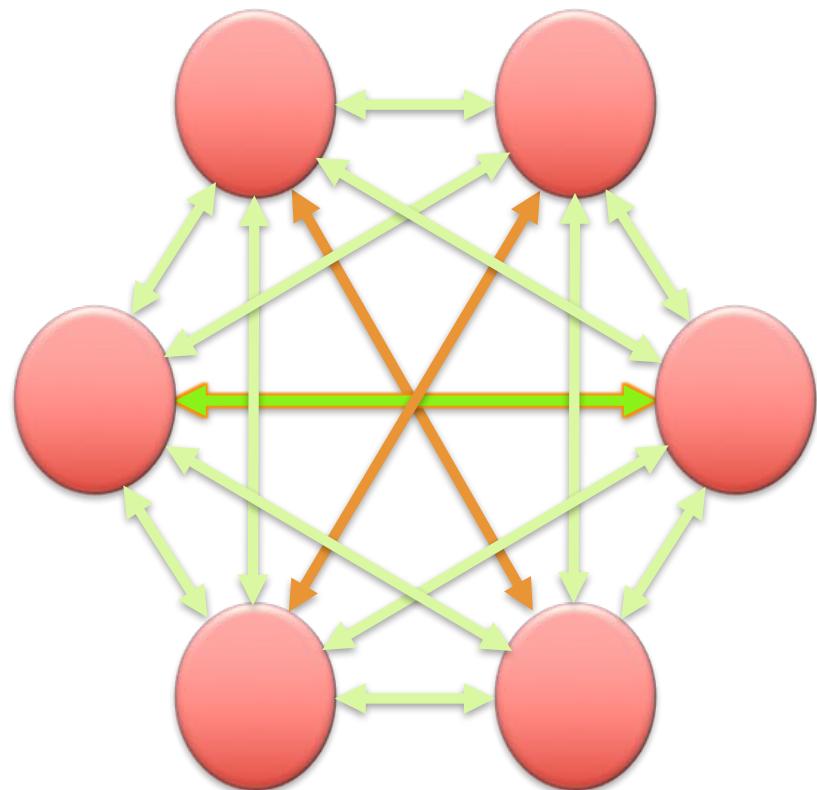
US Military Collaboration Loop Limit: ... um ...



Holarchy
is Hierarchy
with a Hole in it

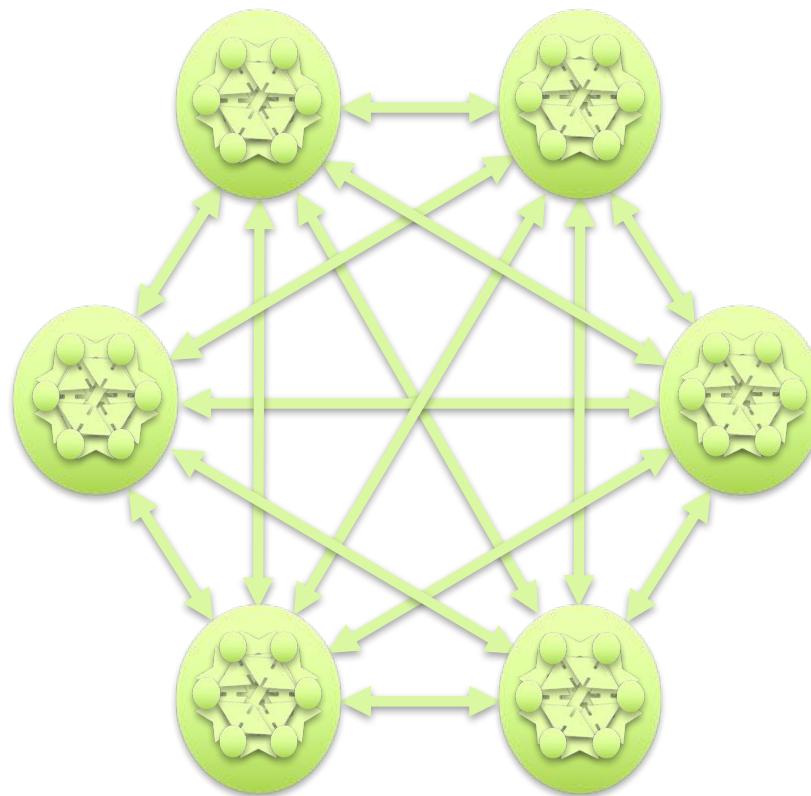
© Peter Merel, 2016

Autonomous Squad

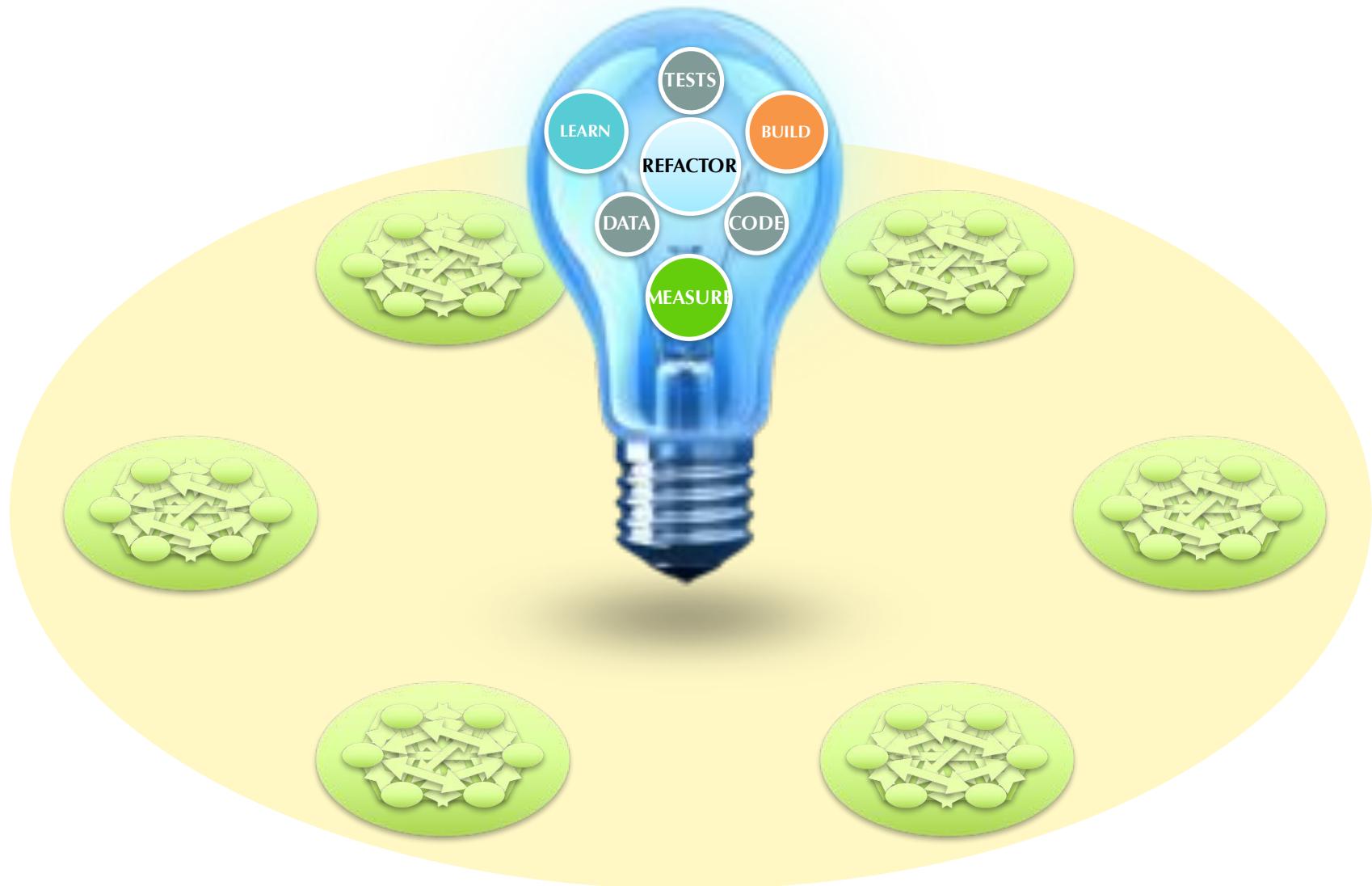


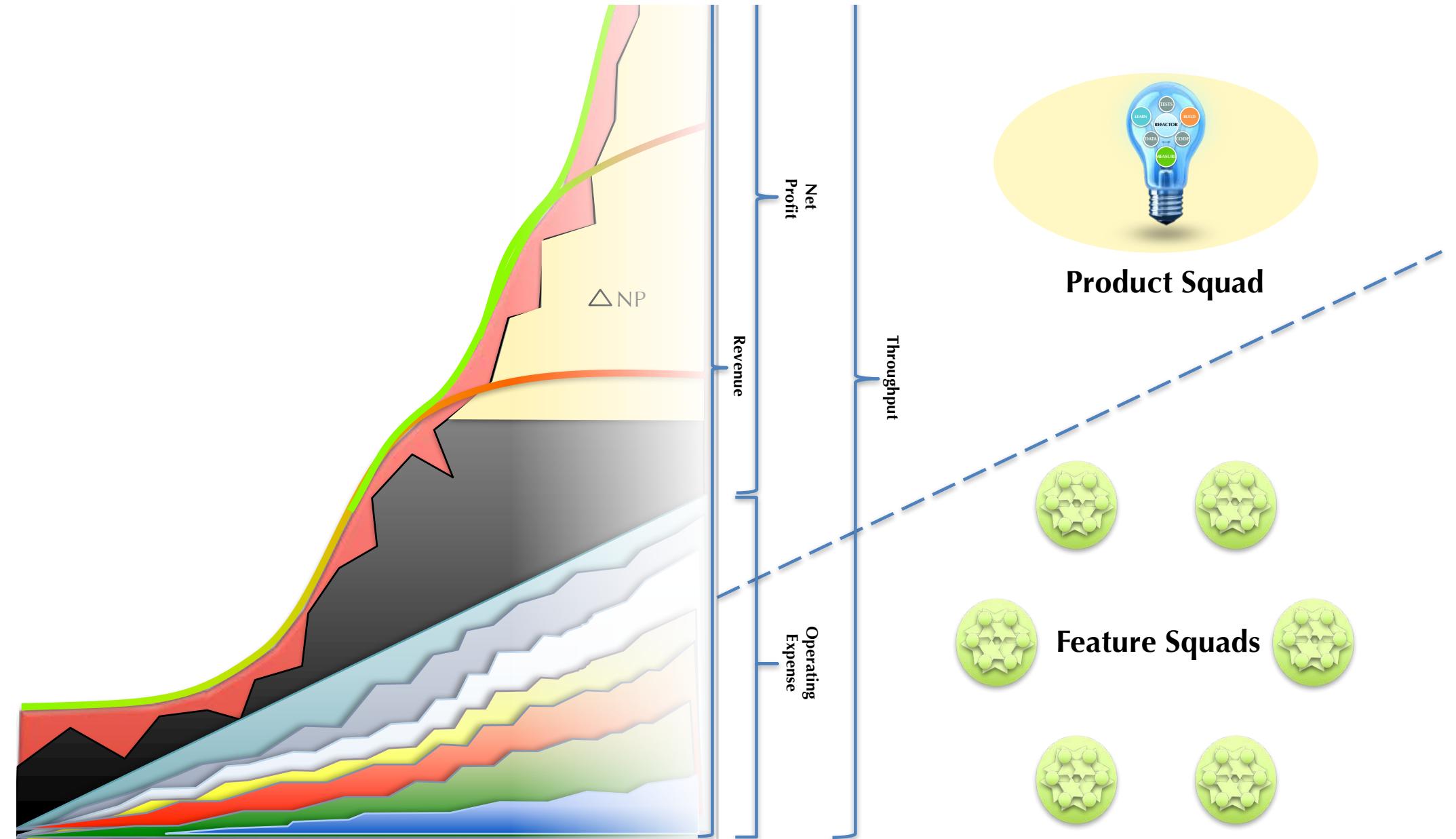
Prioritization + Pairing

Can autonomy scale without hierarchy?

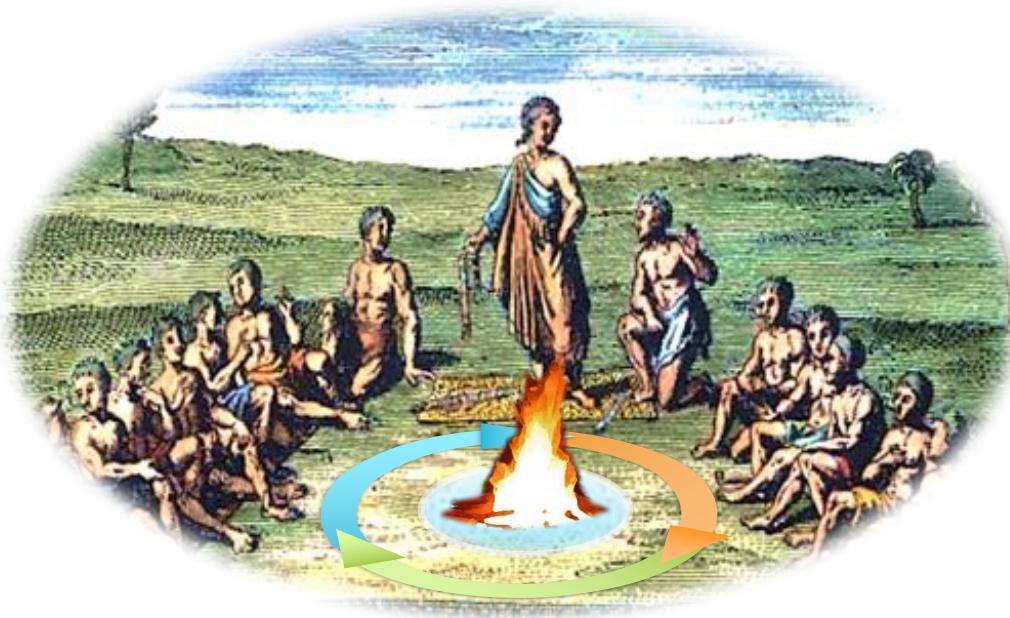


Autonomous Value Stream





Autonomous



The Iroquois “Great Law of Peace”

Leadership as a Service

Split management into three parts:
Coach, Leader and Team.

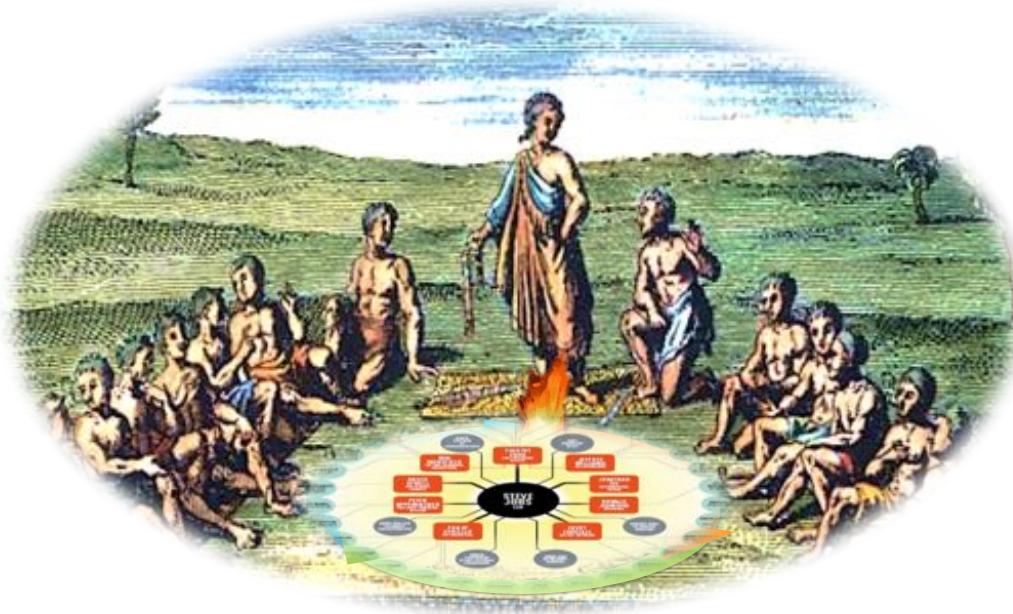
Coach maintains timeframe and
ceremonies for making decisions.

If and only if the Team isn't
unanimous, the Leader decides.

Motivating trade-offs to achieve
consensus without politics.

The Leader role ensures decisions
are always made in good time.

Autonomous



The Iroquois “Great Law of Peace”

Leadership as a Service

Split management into three parts:
Coach, Leader and Team.

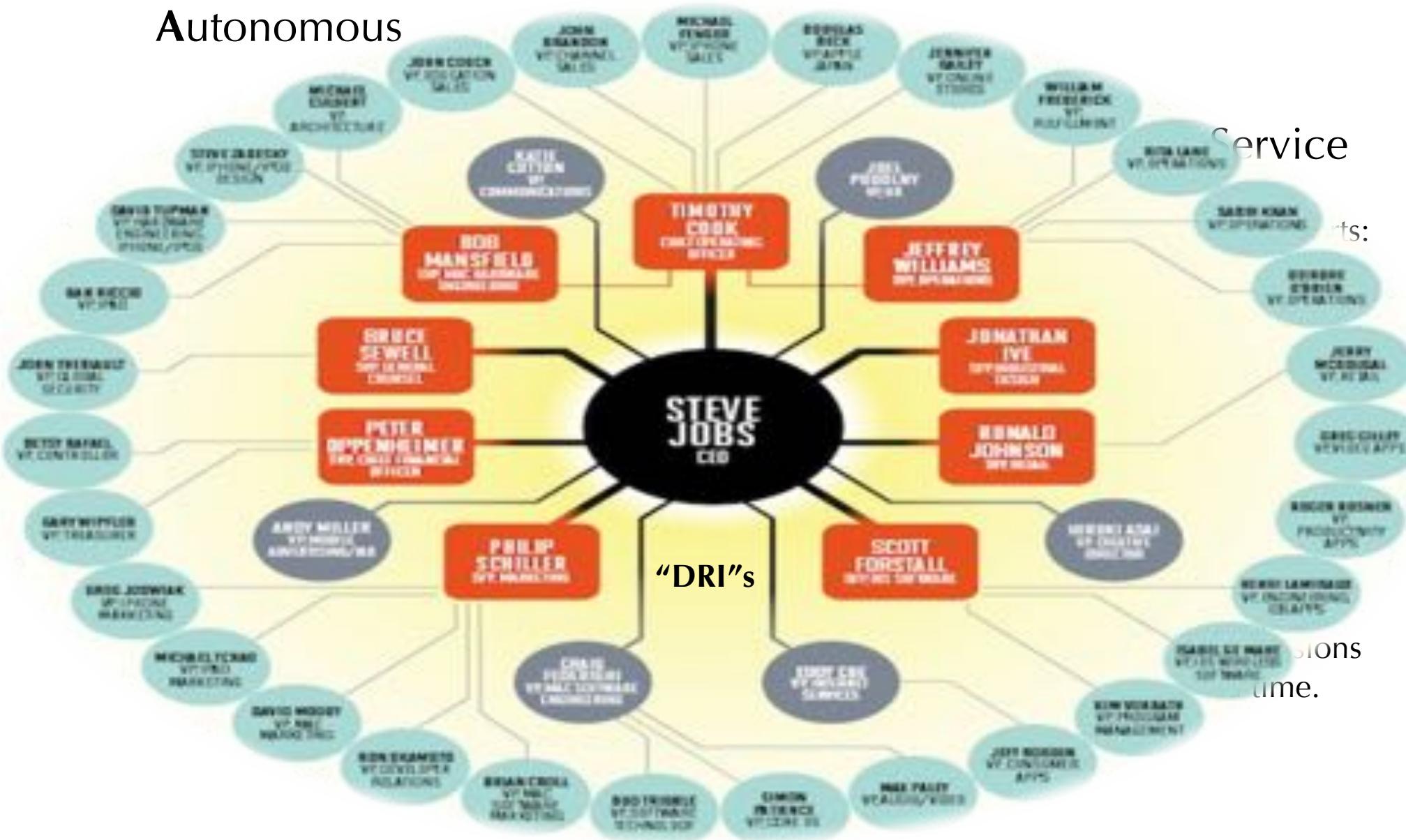
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Autonomous

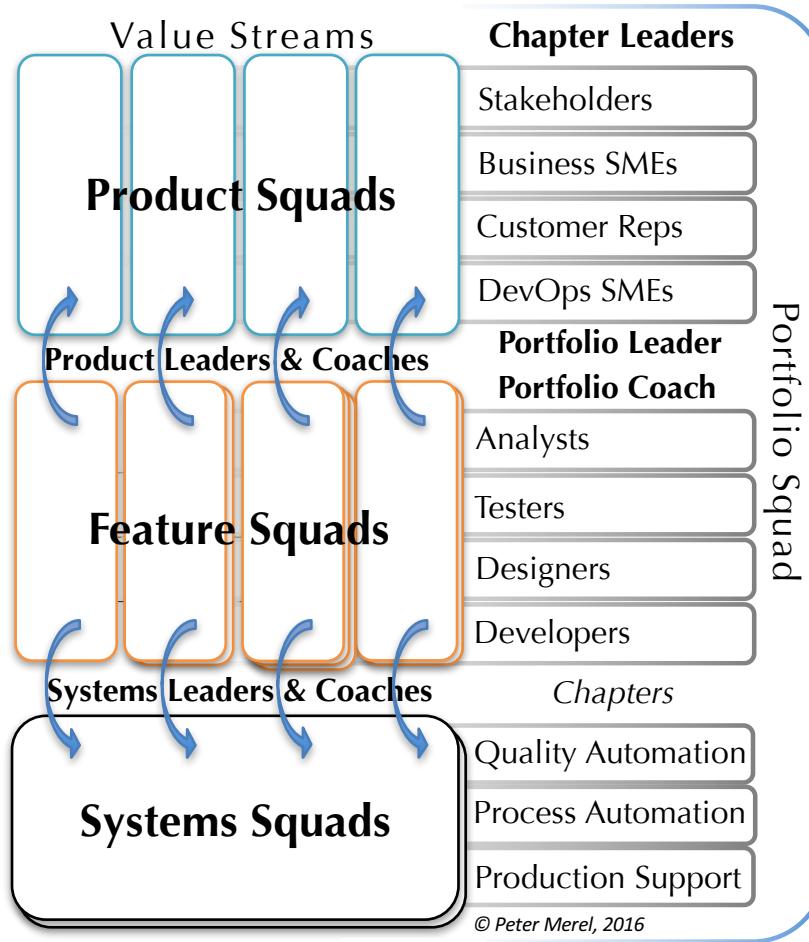


Service

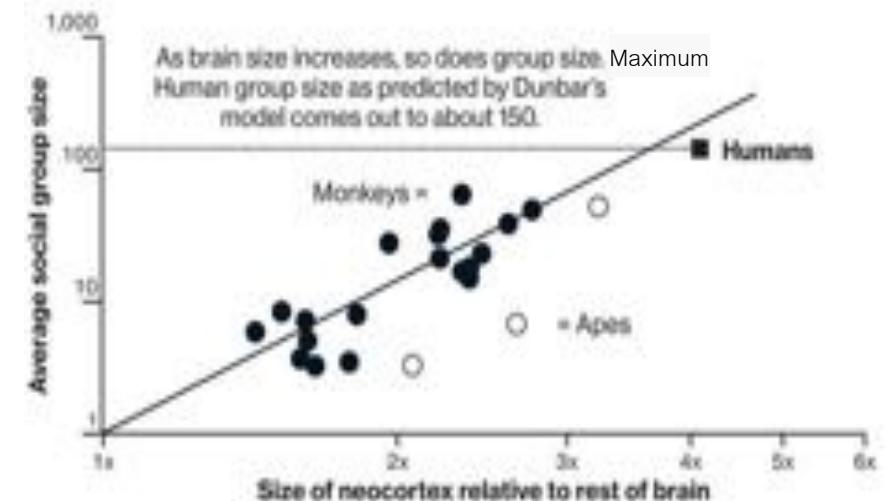
ts:

sions
time.

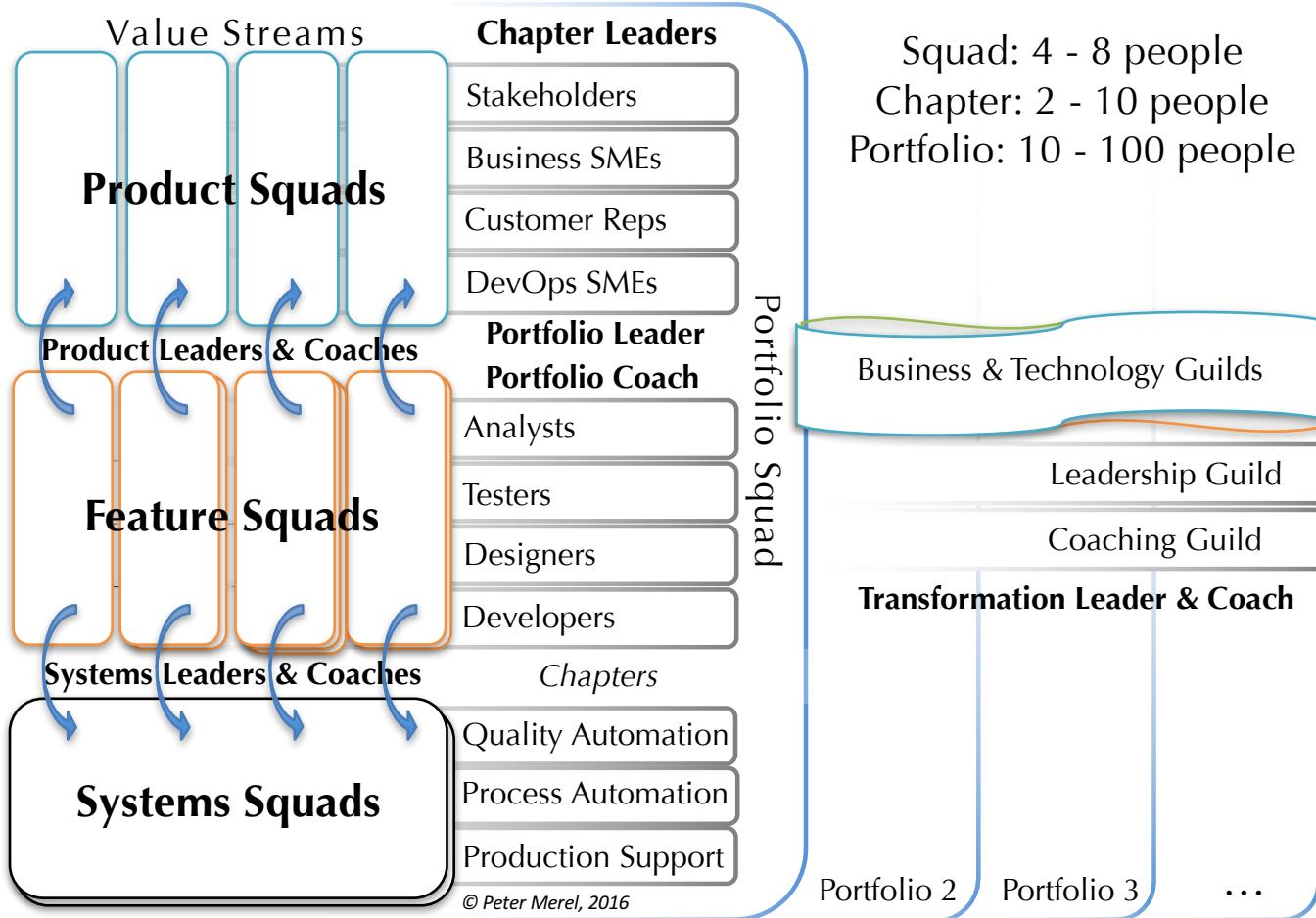
Autonomous



Squad: 4 - 8 people
Chapter: 2 - 10 people
Portfolio: 10 - 100 people

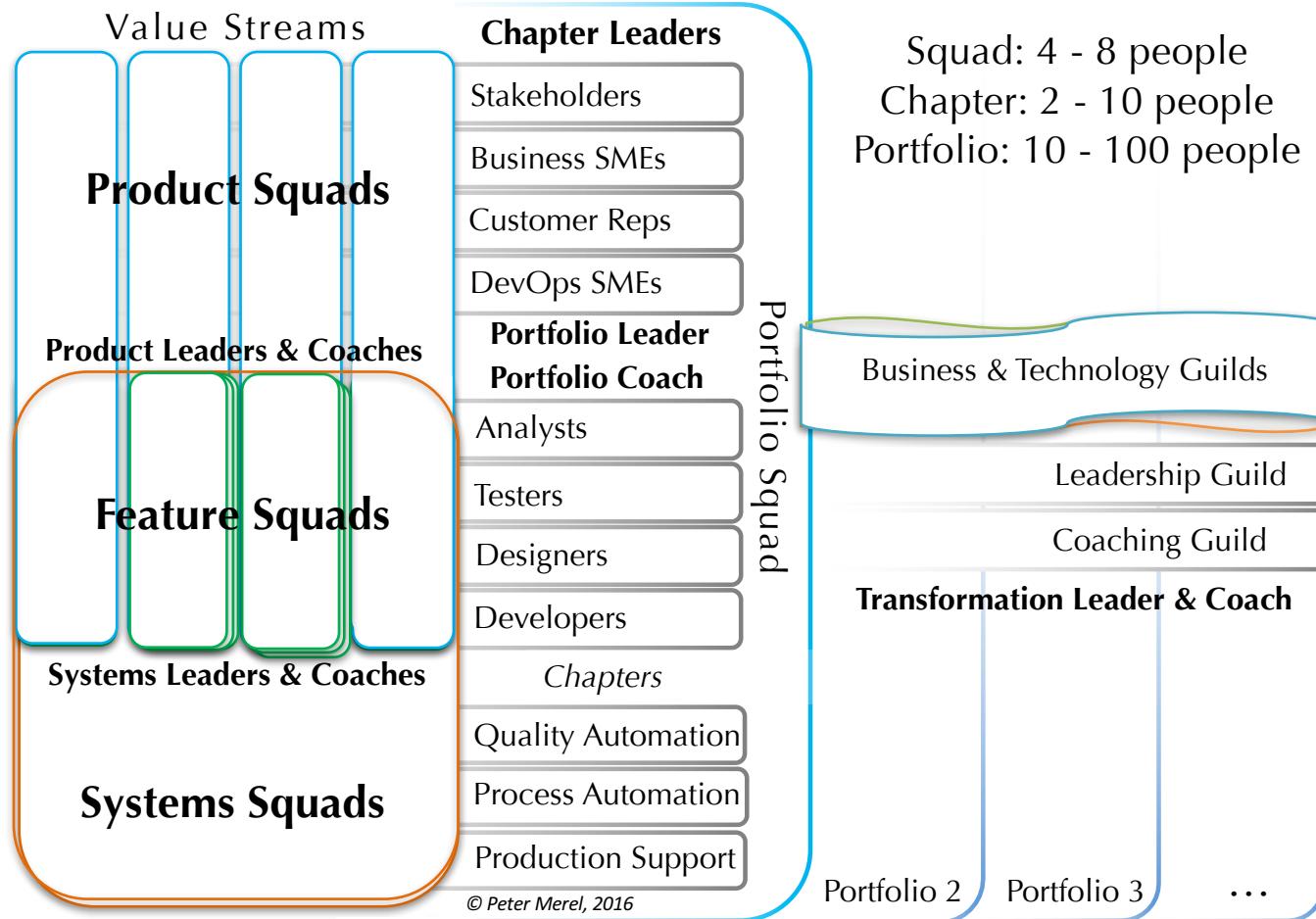


Autonomous



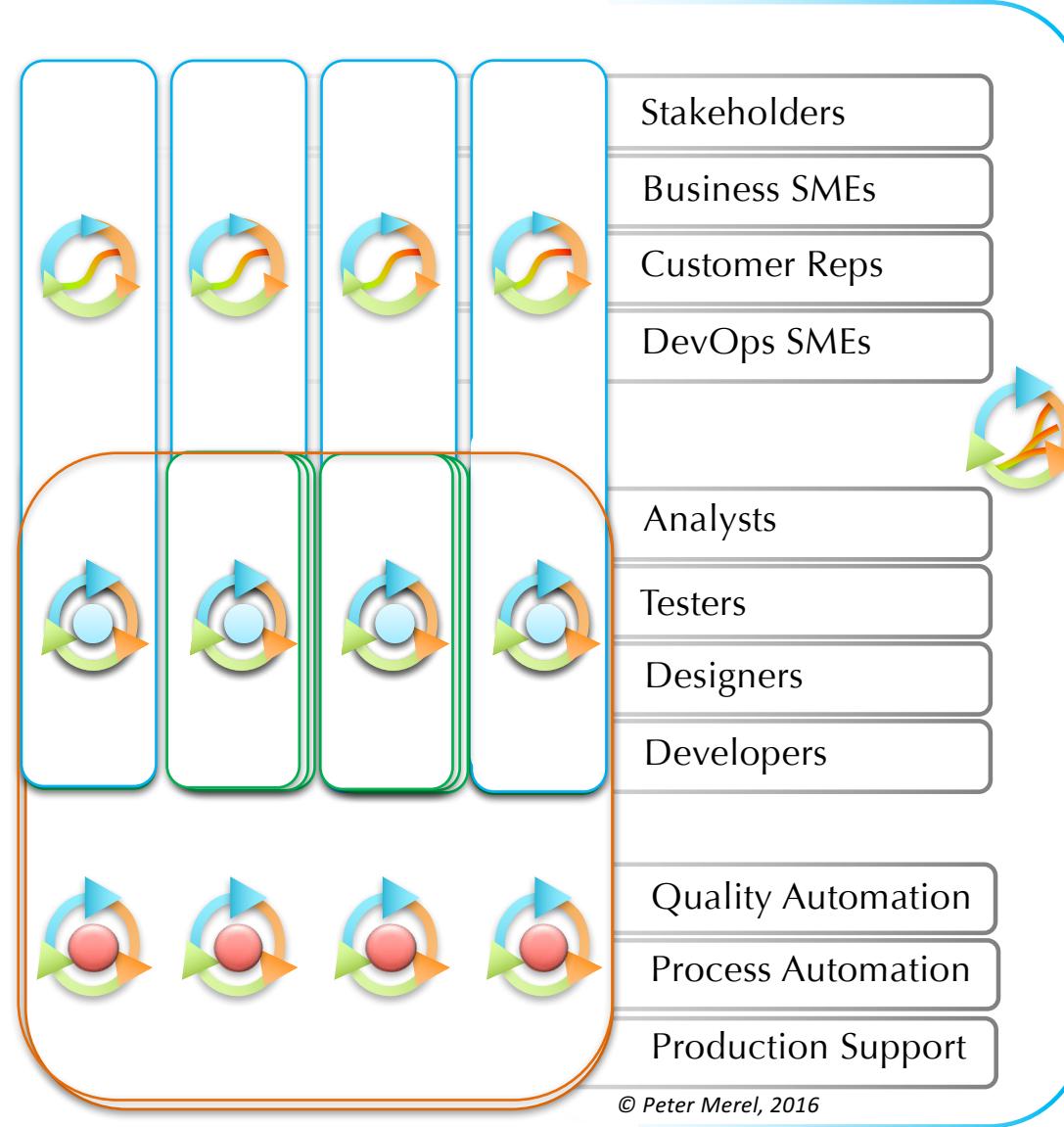
Leadership as a Service is the key enabler for holarchy because ...

Autonomous



Portfolio Collaboration Loop Limit: 4

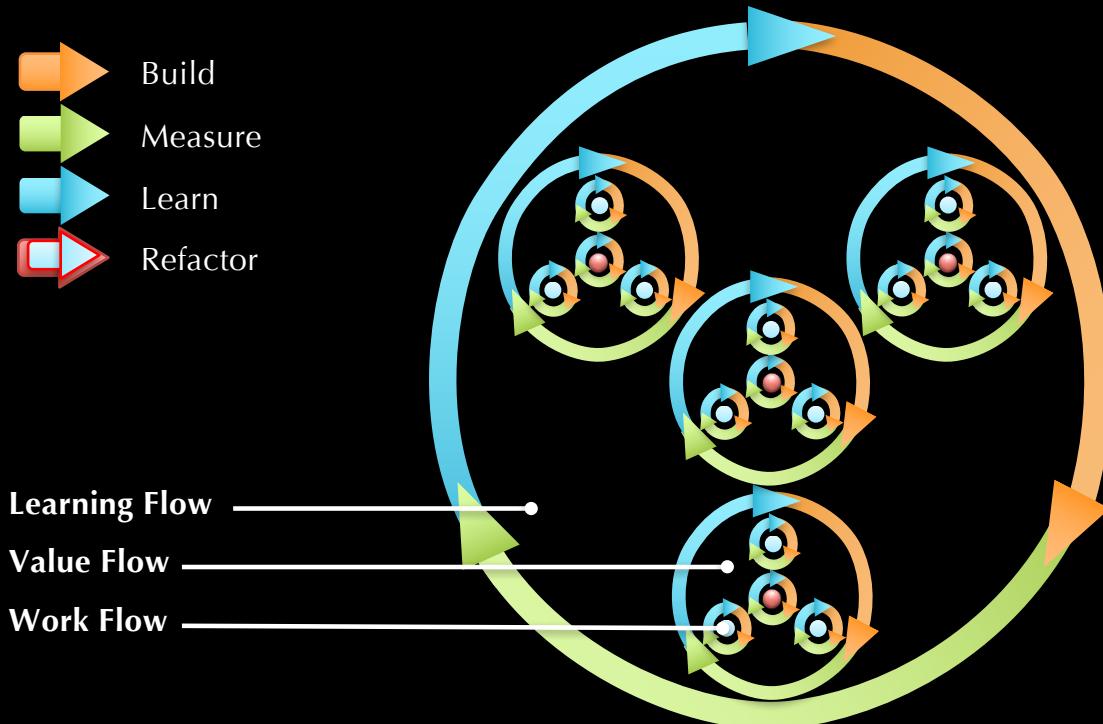
Autonomous



© Peter Merel, 2016

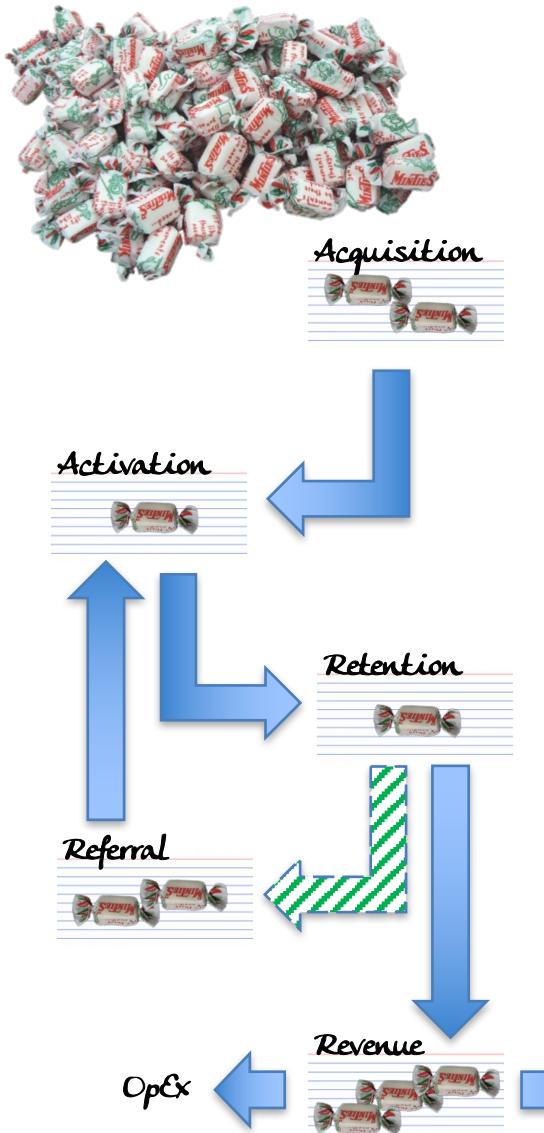
Triple loop Learning

- › Learning Flow → Work Flow → Value Flow
- › Self-Organizing Transformation: Steel Threads
- › Continuous Delivery x Continuous Learning





The Business Agility Game



The Business Agility Game

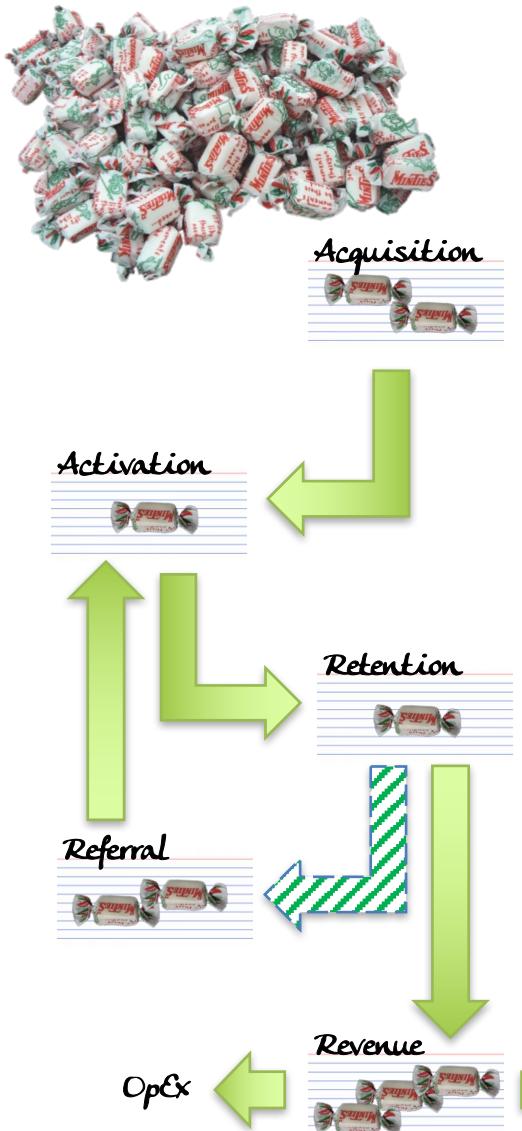
Form Teams of 5.
Each person represents a Pirate Metric.

To start, each is constrained to 1 Minty/turn.
You can't pass more Minties than you get.

Except: Referral creates N Minties for every Minty that gets Retained. It passes to Activation.

Before each turn each person flips a coin.
Heads increases your constraint by +1.

50% of Revenue can be applied to open any Constraint(s). The rest is Net Profit.



Run 5 Releases in 5 Minutes.

Now try it where you don't know your coin flip analytics until after allocating OpEx.

Now try having OpEx allocations by a PO who can't see flip analytics or card constraints, only Net Profit.

This is why **Continuous Learning, Open Book Management & Bottleneck Prioritization** are critical to Business Agility. And why OpEx minimization isn't.

Learning



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PSM-1
CIP

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The All New Course from AXELOS Courses starting in June!



Certification isn't how organizations learn

ICP TST CERTIFIED PRO
AGILE TESTING

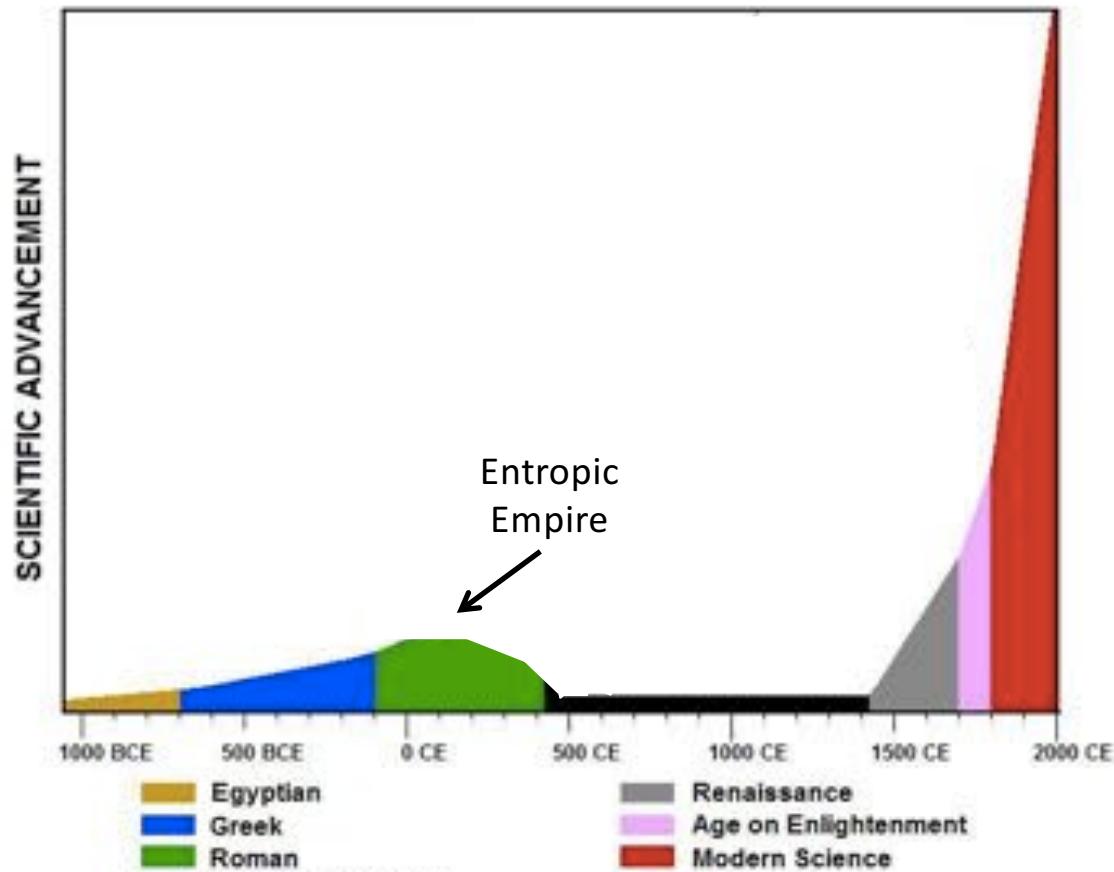
ICP ICAGILE CERTIFIED
PROFESSIONAL

ICP BVA CERTIFIED PRO
BUSINESS VALUE ANALYSIS

ICP ENT CERTIFIED PRO
AGILITY IN ENTERPRISE

APMG International™
AgilePM

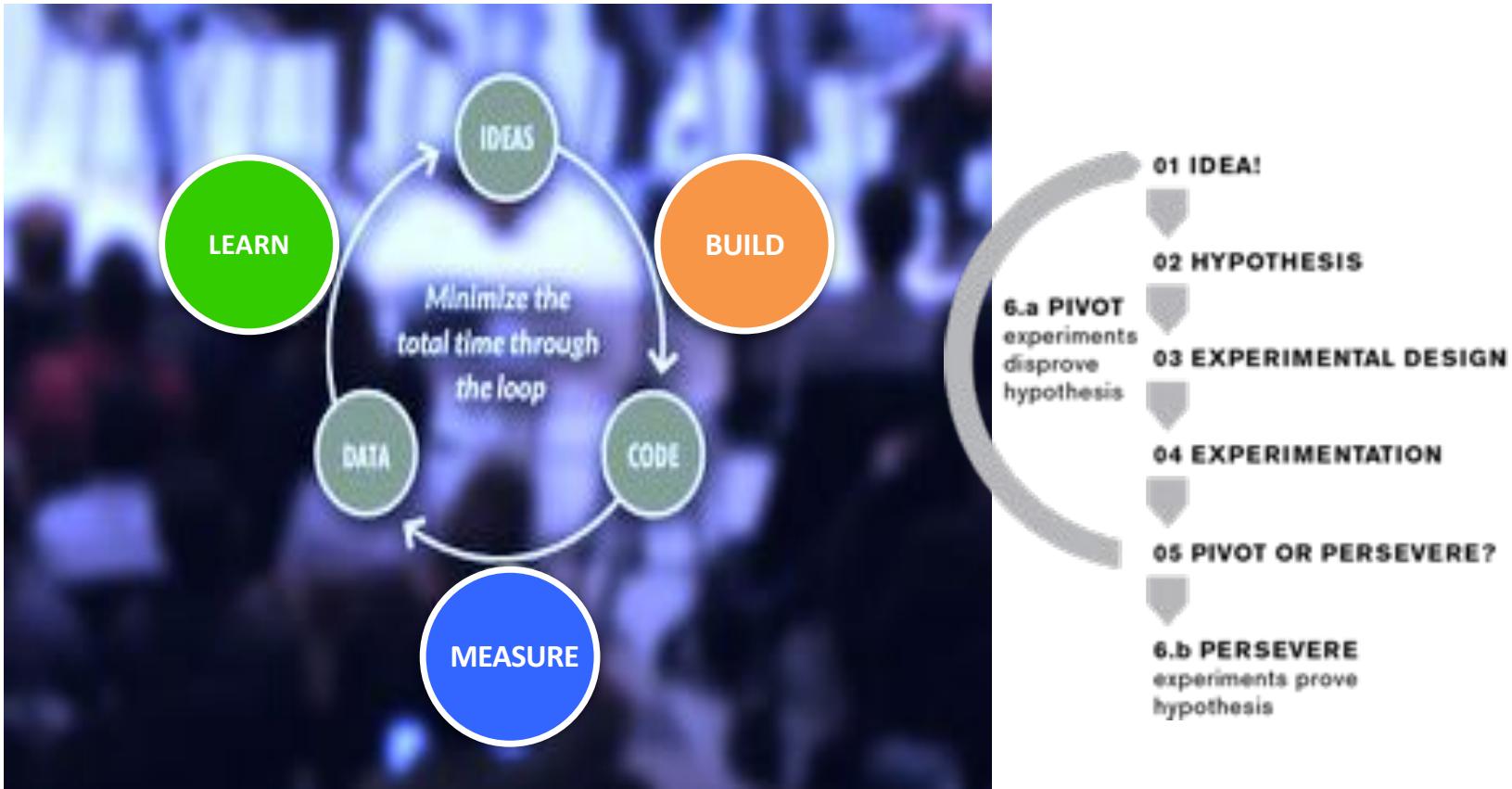
Learning



Learning doesn't standardize understanding.

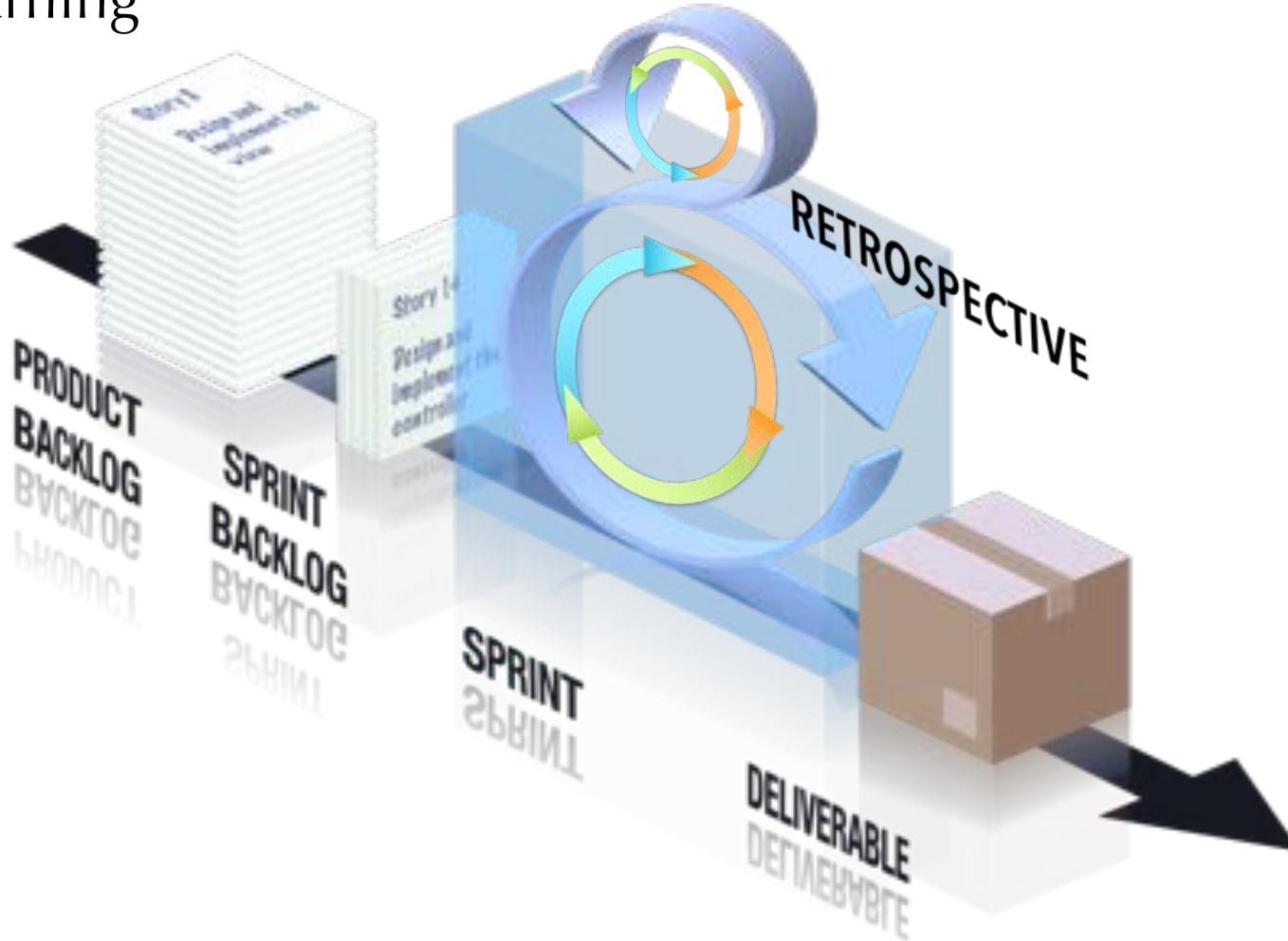
Learning obsoletes understanding.

Learning

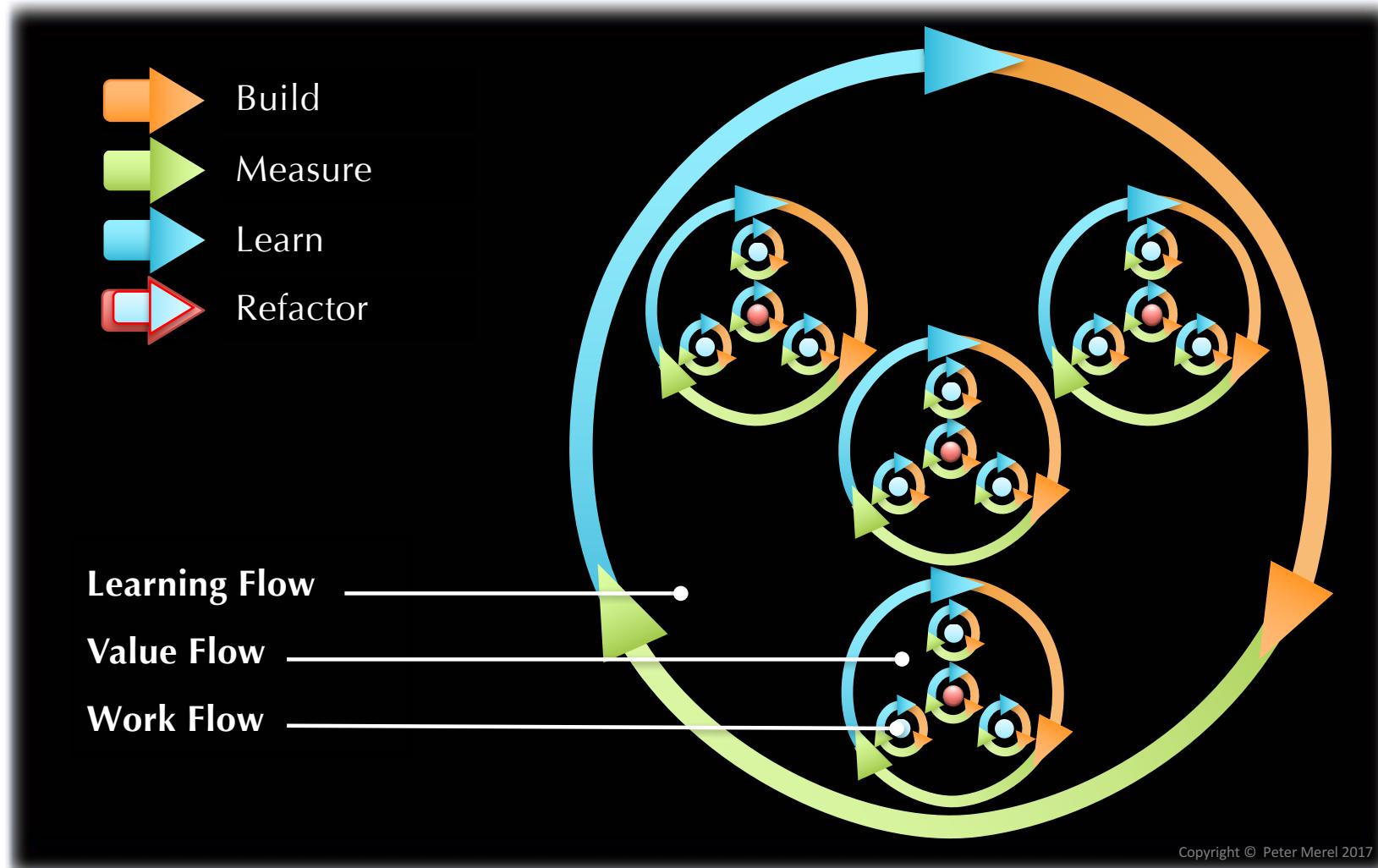


Lean Startup is single loop learning. Startups need profitability, not productivity. They learn fast or die slow.

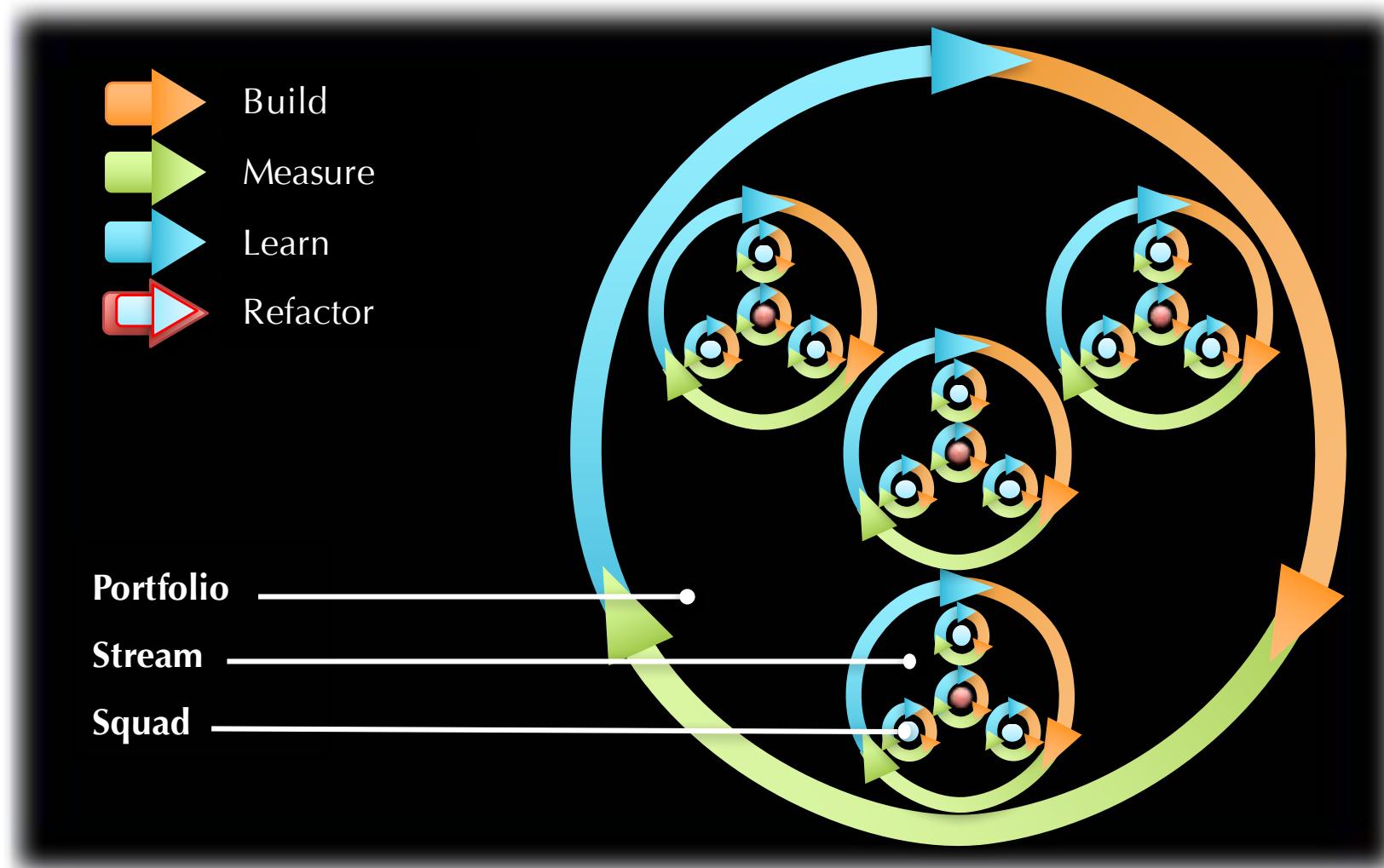
Learning



Scrum is double-loop learning.
It learns what products to deliver, and how.



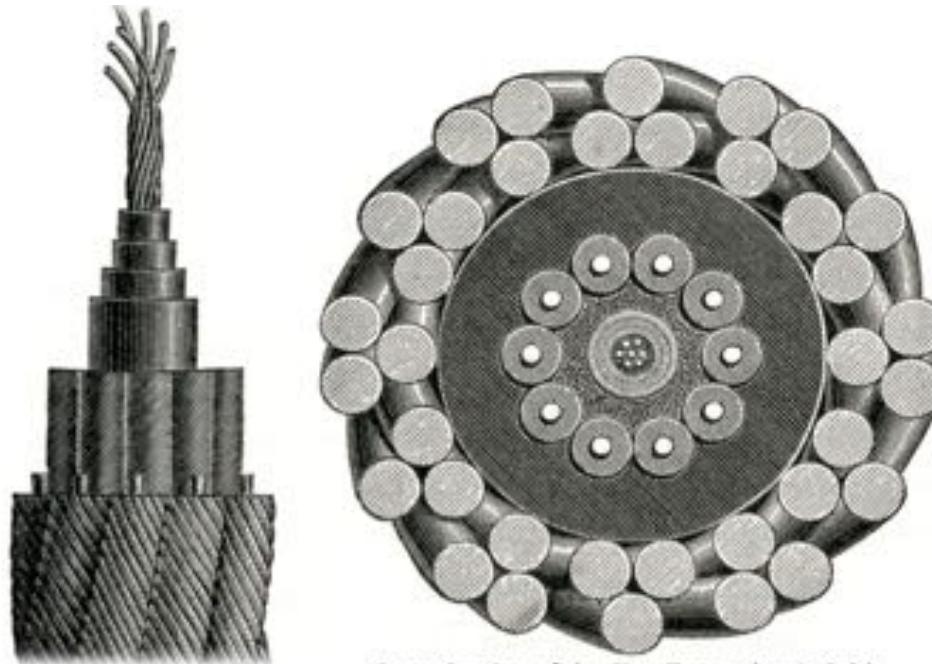
Learning flow accelerates work flow
which accelerates value flow.



Triple Loop means we treat learning as a product
and the whole organization as its ecosystem.

Learning

How does an organization learn the 3rd loop without compromise, confusion and loss of control?
We can't stop and change everything at once!



Cross-Section of the first Transatlantic Cable

Learn Agile using Agile. Make a **steel thread stream**, a slender but uncompromised capability. Then exponentially split and double.

Learning



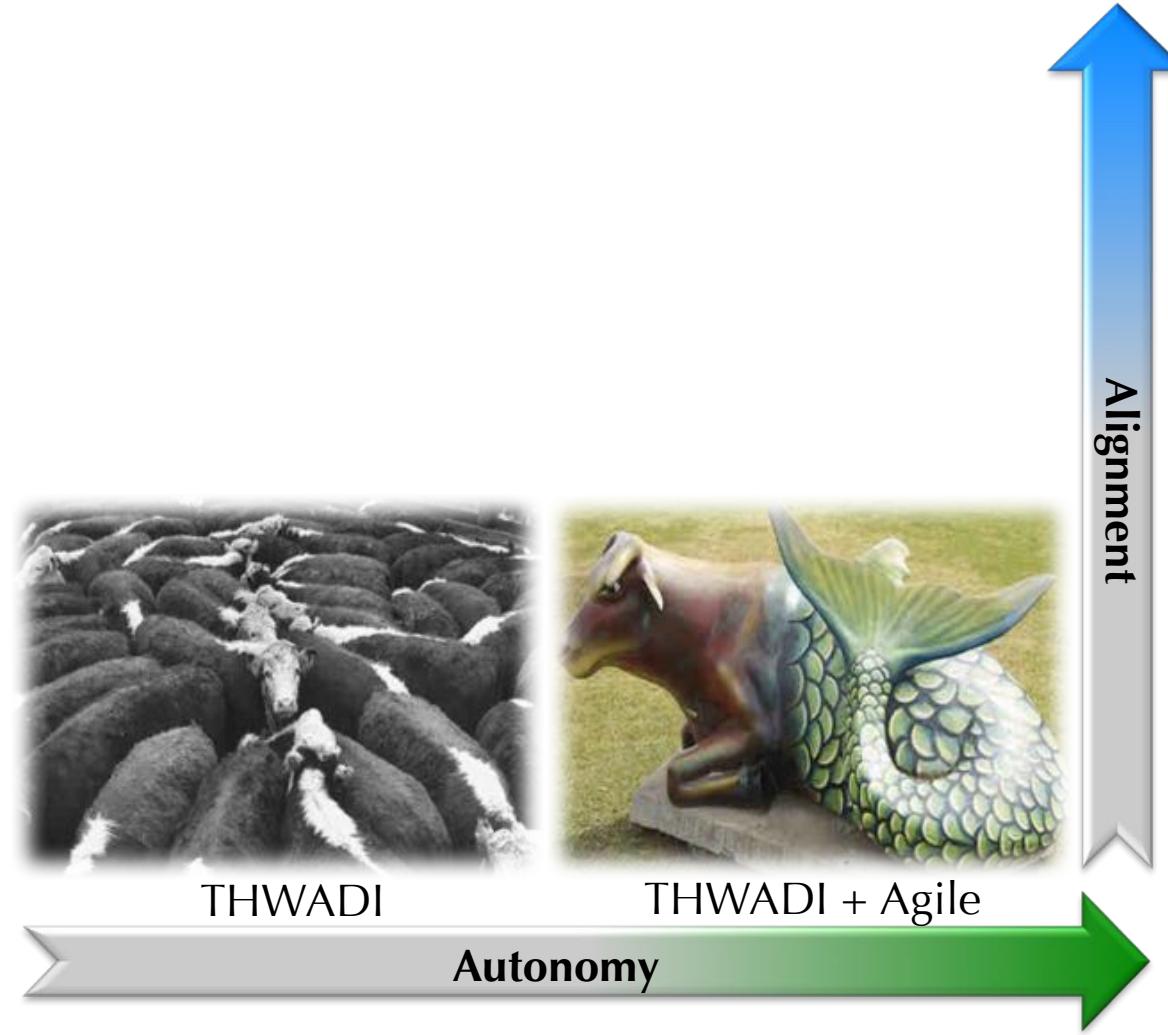
THWADI*

Autonomy

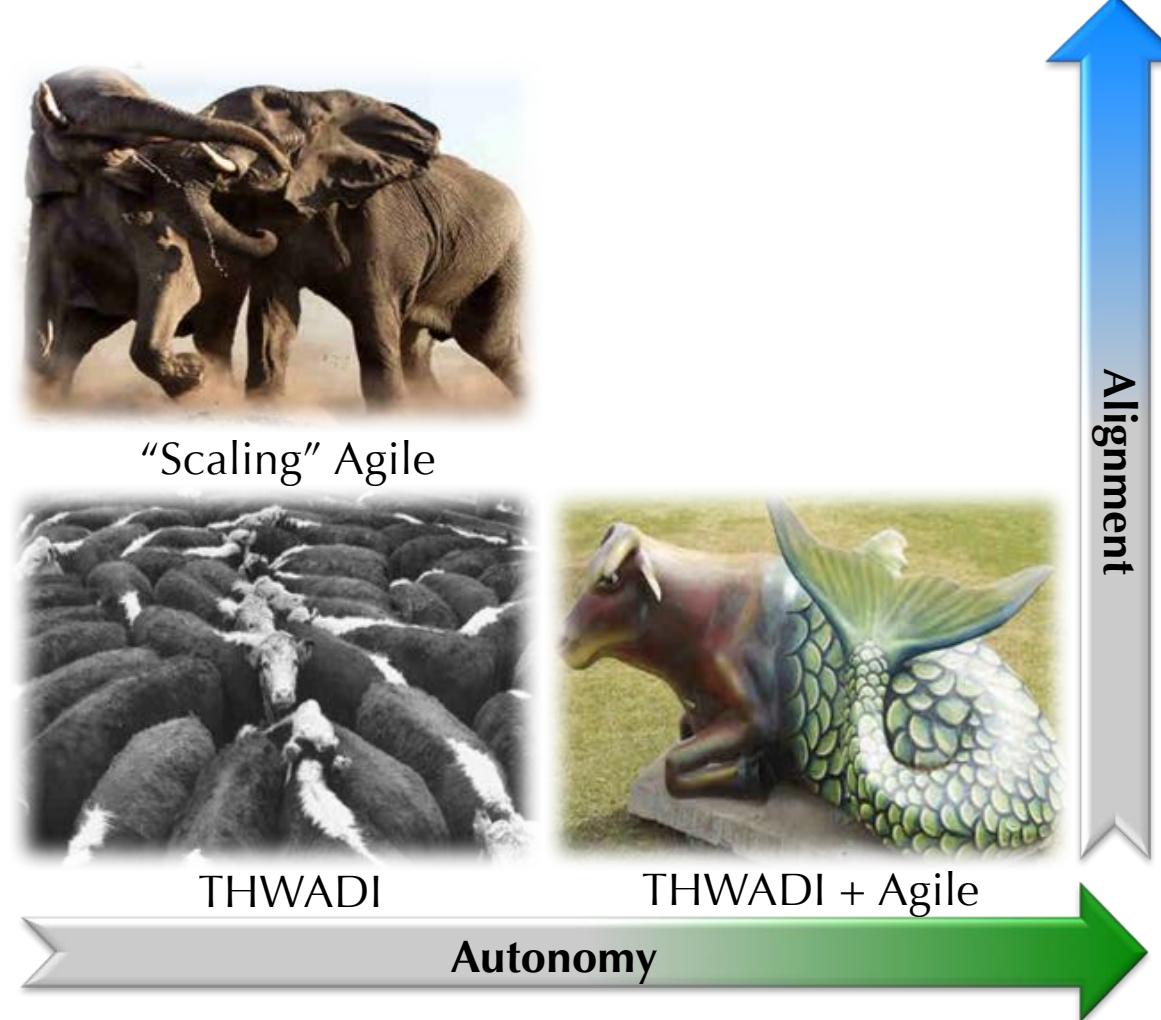


(* That's How We Always Do It)

Learning

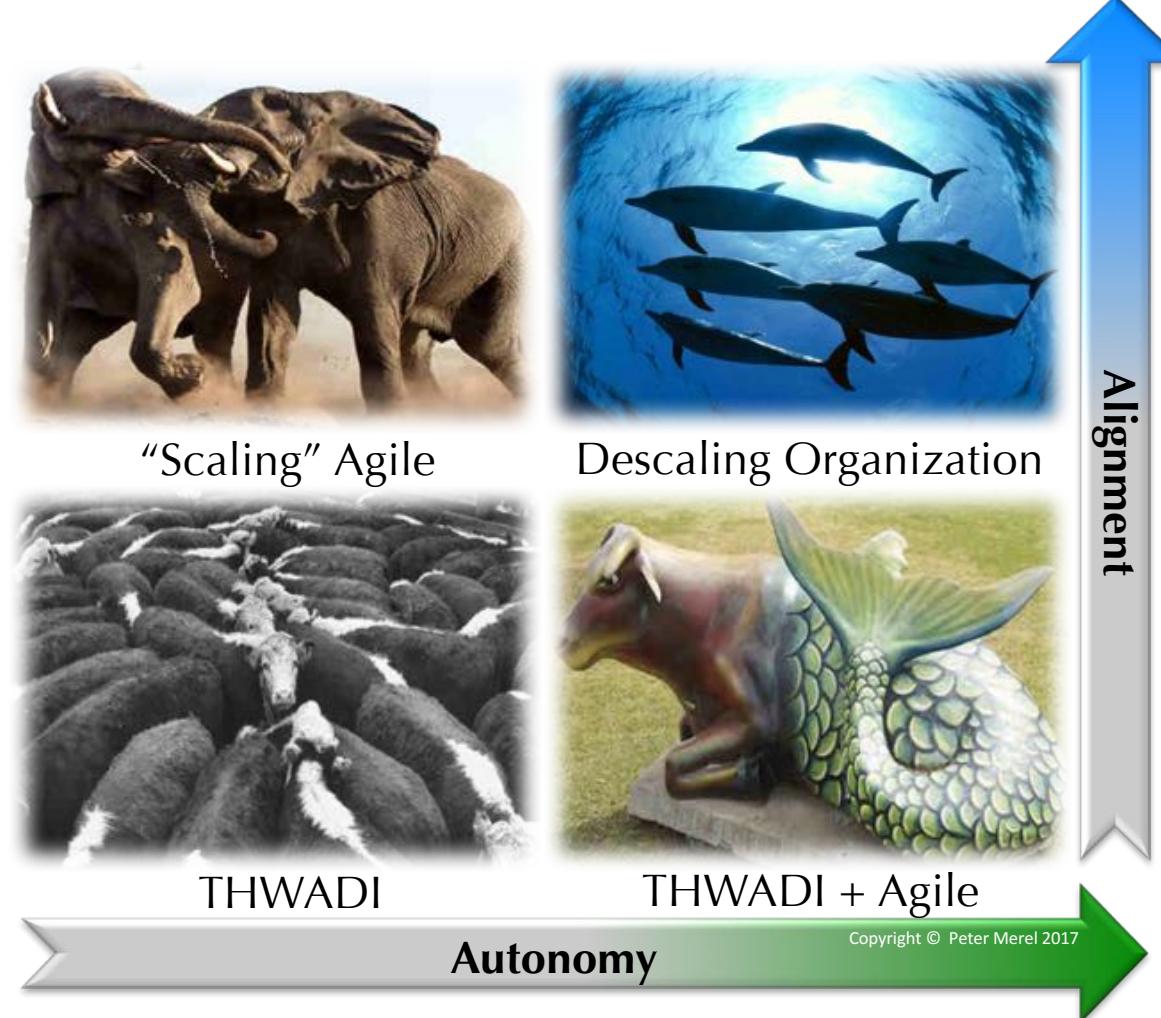


Learning



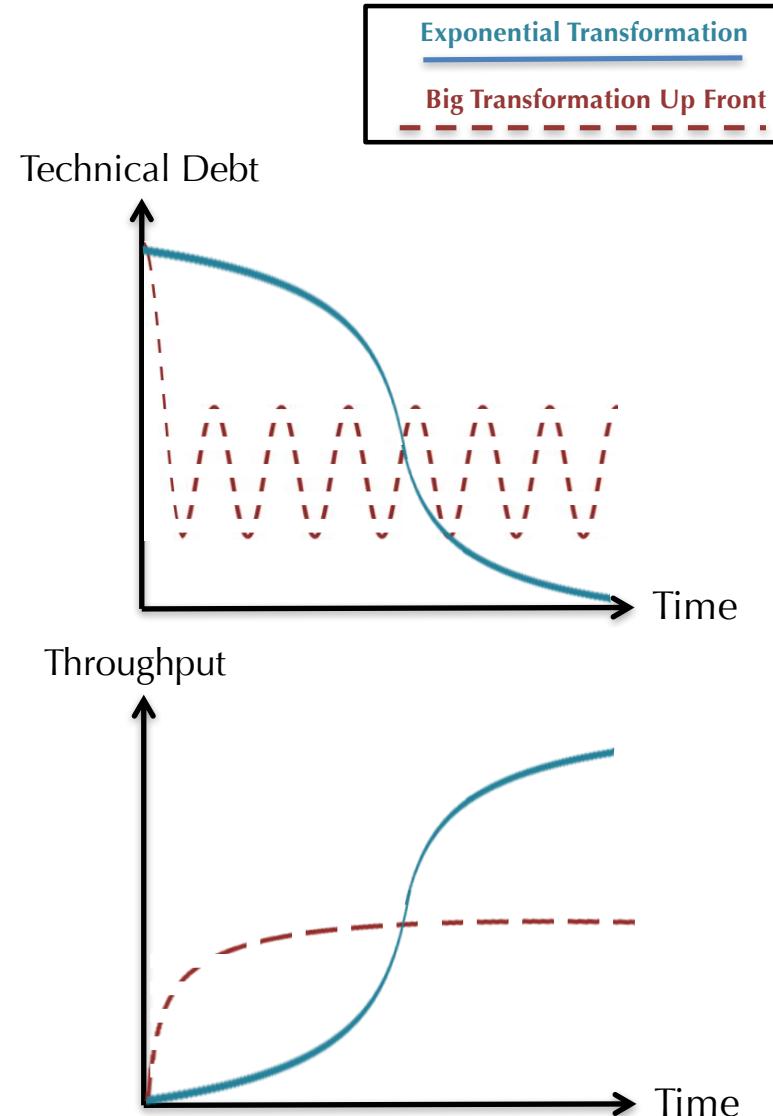
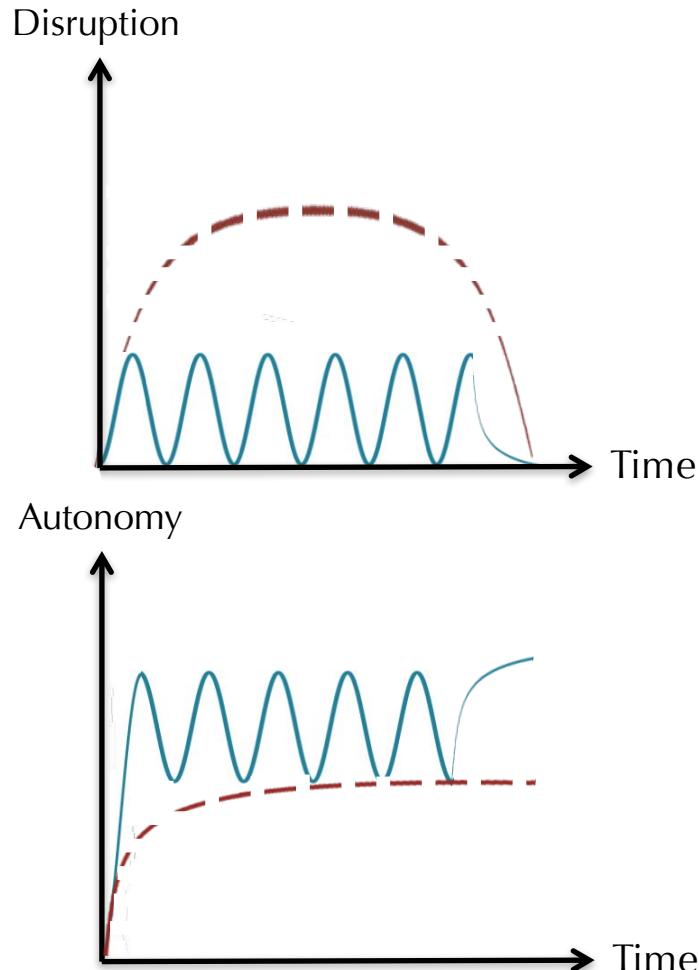
Align Agile teams to a THWADI Organization

Learning



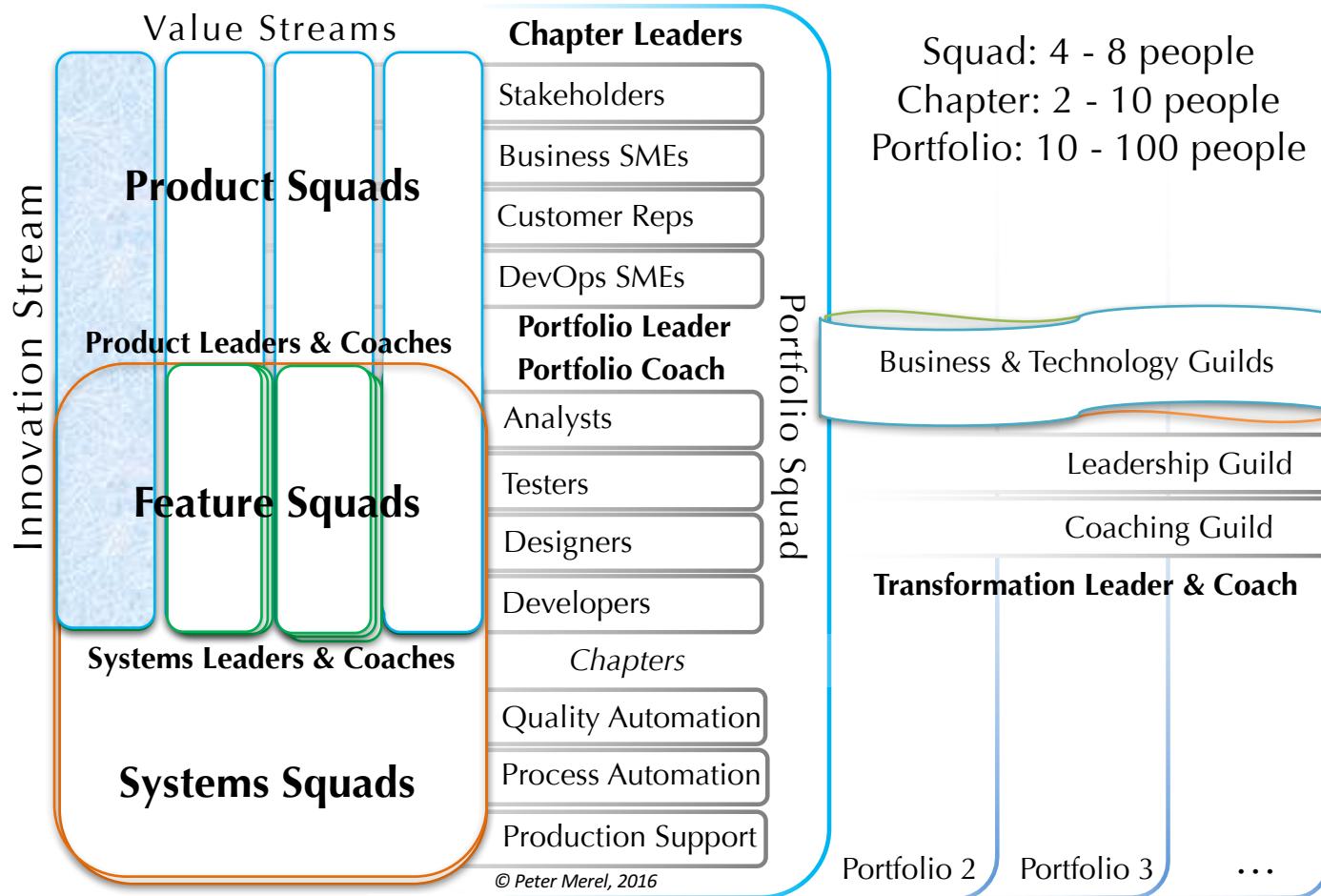
Refactoring the organization into self-aligning streams of self-organizing teams
Continuously, exponentially transforming change recipients into change agents.

Learning



And what do we do when throughput hits a bottleneck?

Autonomous



All streams prioritize features to lift bottlenecks.
A stream in innovation mode prioritizes new markets.

Why
Who
How
What

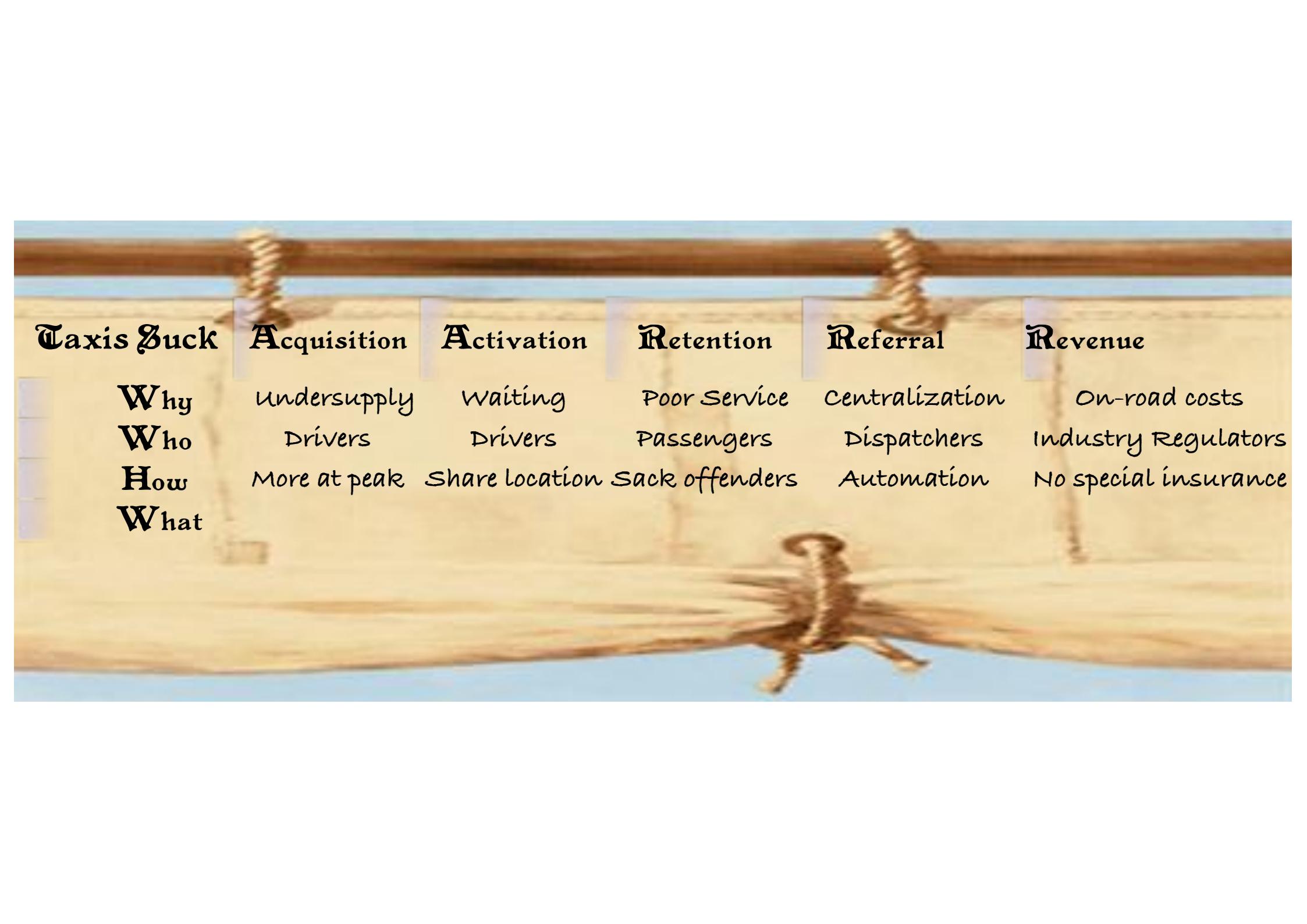
Acquisition Activation Retention Referral Revenue

The Pirate Canvas

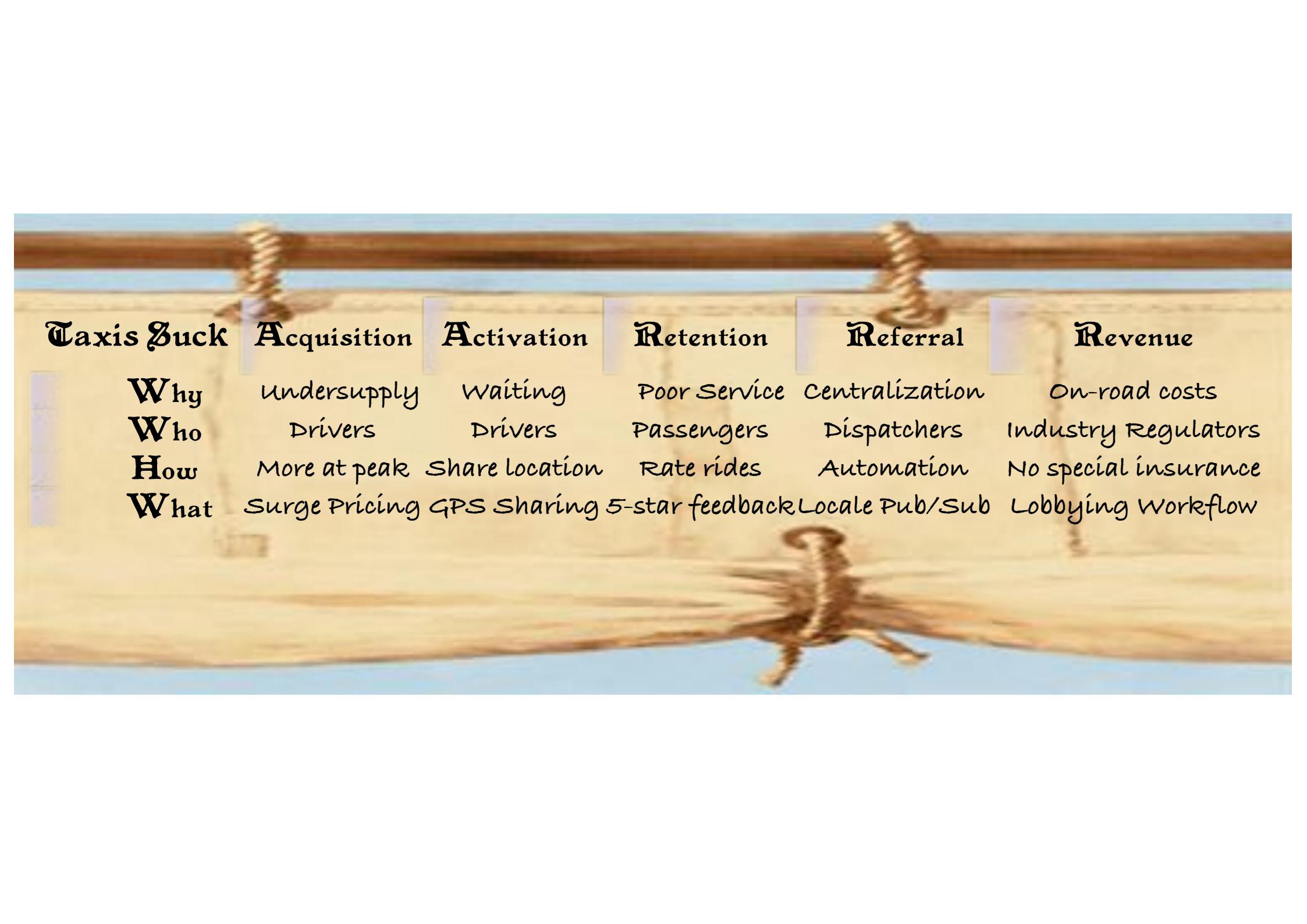
Charting Your Service Ecosystem

Taxis Suck	Acquisition	Activation	Retention	Referral	Revenue
Why	undersupply	waiting	Poor Service	centralization	On-road costs
Who					
How					
What					

Taxis Suck	Acquisition	Activation	Retention	Referral	Revenue
Why	undersupply	Waiting	Poor Service	centralization	On-road costs
Who	Drivers	Drivers	Passengers	Dispatchers	Industry Regulators
How					
What					



Taxis Suck	Acquisition	Activation	Retention	Referral	Revenue
Why	undersupply	Waiting	Poor Service	Centralization	On-road costs
Who	Drivers	Drivers	Passengers	Dispatchers	Industry Regulators
How	More at peak	Share location	Sack offenders	Automation	No special insurance
What					



Taxis Suck	Acquisition	Activation	Retention	Referral	Revenue
Why	undersupply	Waiting	Poor Service	Centralization	On-road costs
Who	Drivers	Drivers	Passengers	Dispatchers	Industry Regulators
How	More at peak	Share location	Rate rides	Automation	No special insurance
What	Surge Pricing	GPS Sharing	5-star feedback	Locale Pub/Sub	Lobbying Workflow

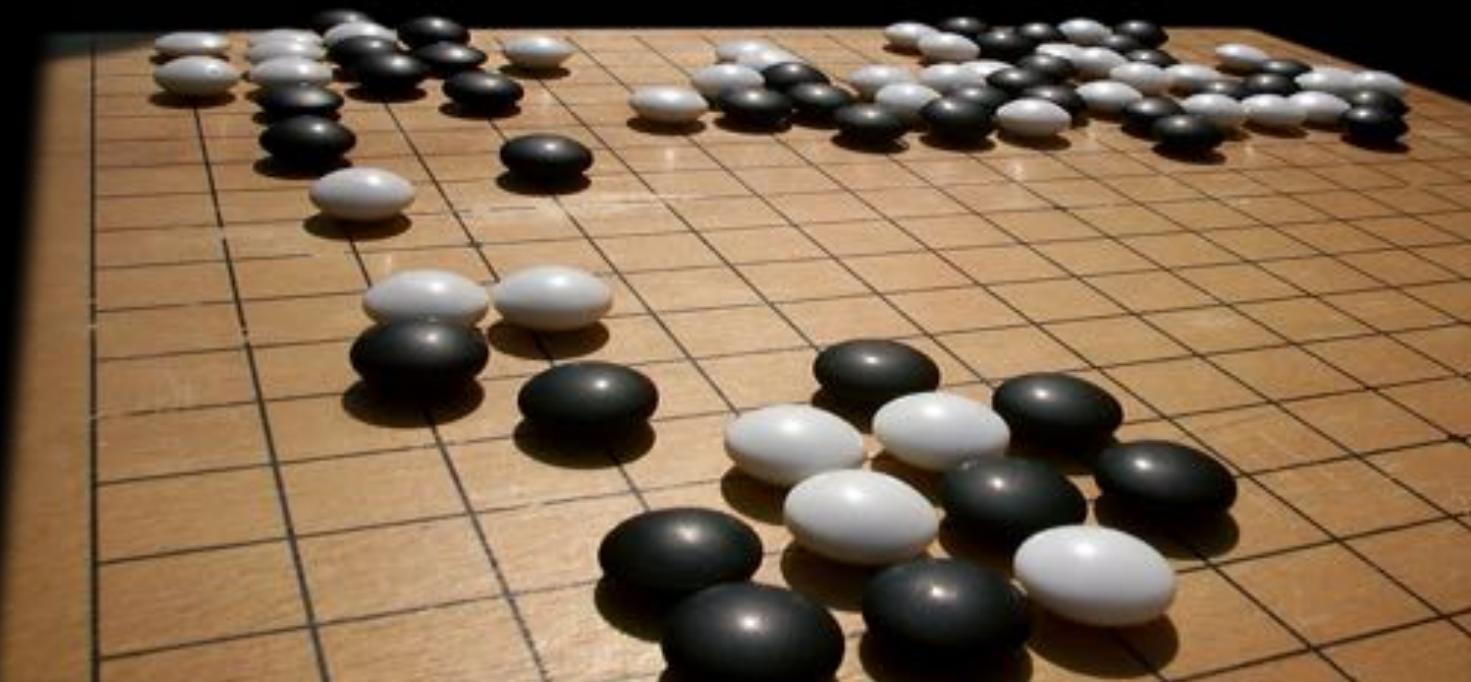


Practice:

Now let's run our own Pirate Canvas

Ecosystems thinking

- › Ecosystems are networks of mutual benefit
- › Whole board: think globally, act locally
- › Avoiding hill-climbing: iterative and **reductive**



Ecosystem



Ecosystems are networks of mutual benefit.

Ecosystem



The more different species they generate,
the more stable with changing constraints.

Ecosystem



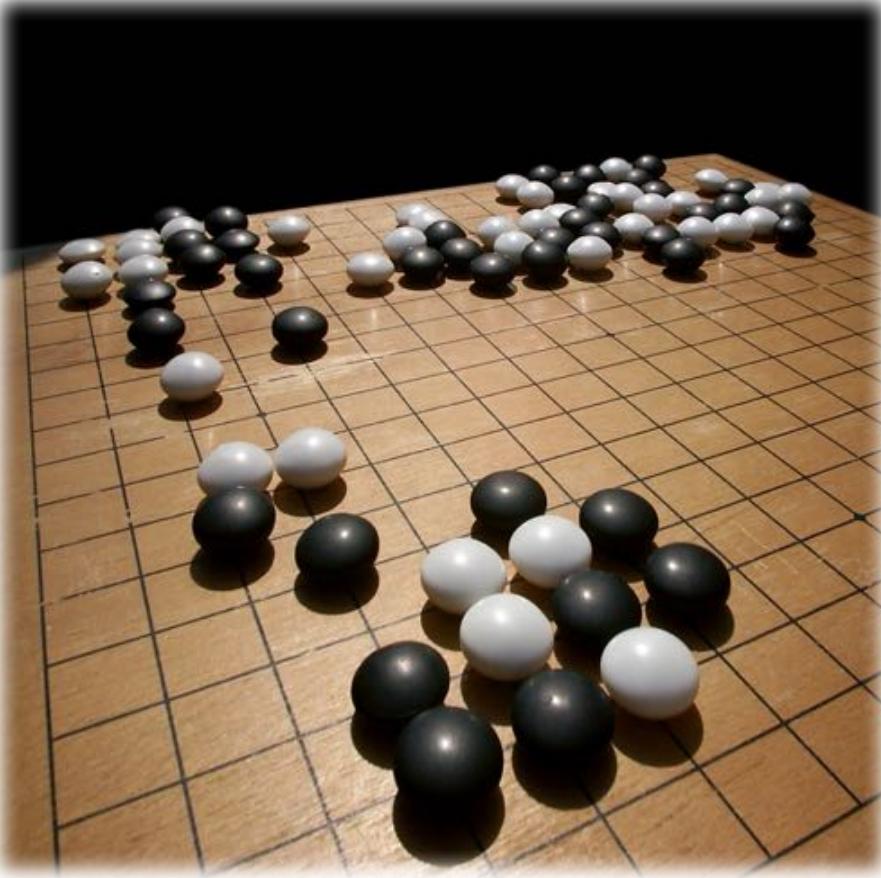
The more different relationships they supply, the more productive they become over time.

Ecosystem



And the less susceptible to catastrophe.

Ecosystem



The Chinese game of **Go** is a close analogy to business ecosystems.

Disconnected groups of stones starve and die as constraints evolve.

Successful Go ecosystems are only designed by “Whole Board Thinking”:

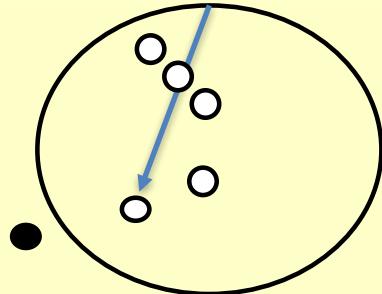
Find the space with the greatest development potential on the board.

Then narrow your focus. Breadth-first, iterative, contractive systems thinking.

Move after move, this is the only way to win. “Think globally, act locally”.

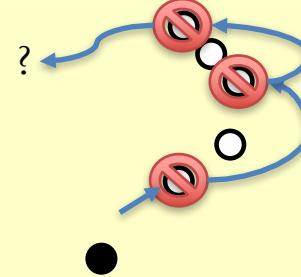
Ecosystem

Deductive Reasoning



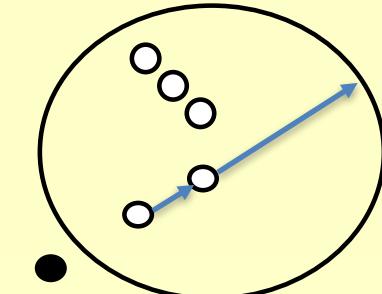
All swans are white.
I have a swan.
My swan is white.

Abductive Reasoning



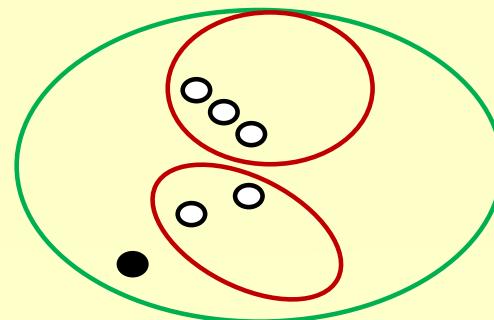
Is it a white swan? **No** but **Warm** ...
Is it a duck? Getting **Colder** ...
A chicken? **Colder** ...

Inductive Reasoning

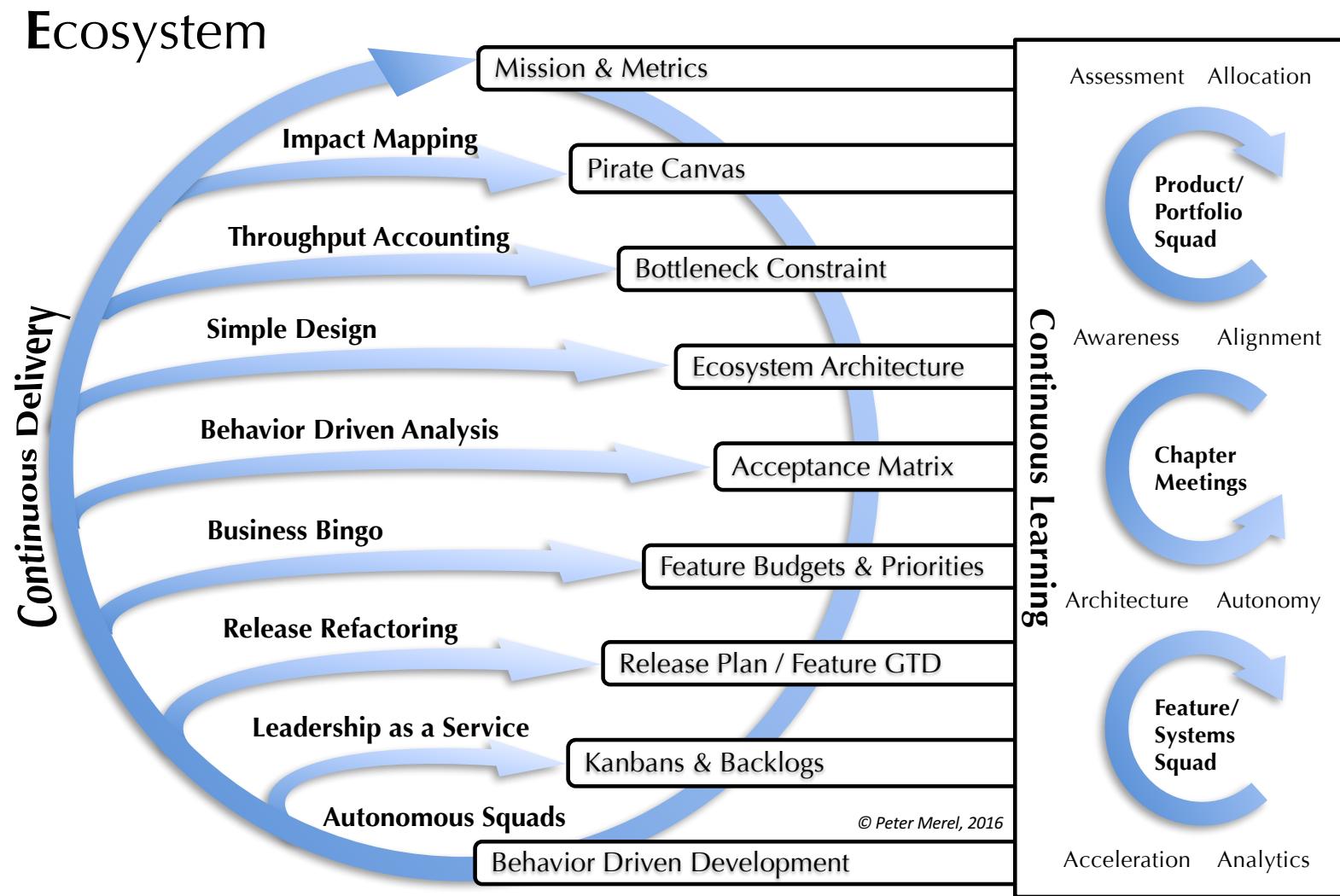


Grandpa swan is white.
Mama swan is white.
All swans are white.

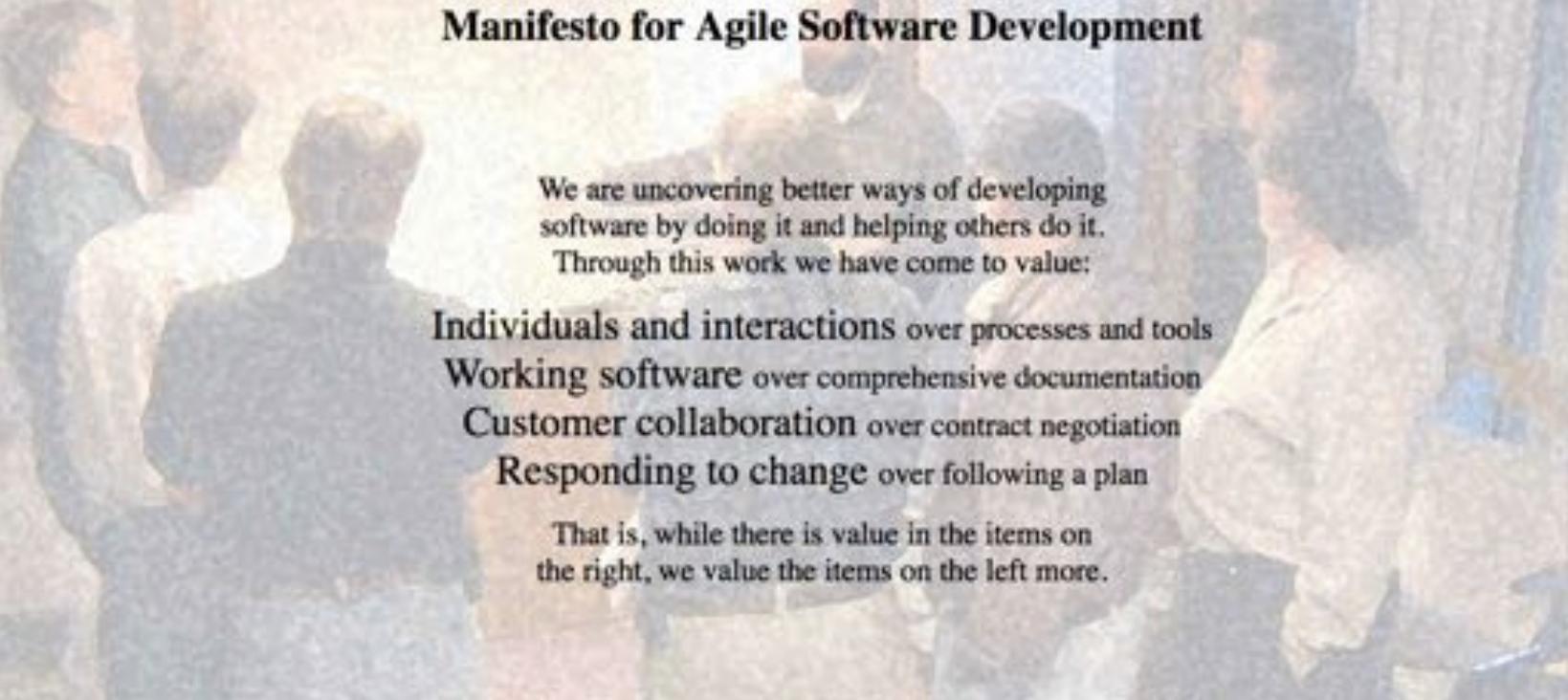
Reductive Reasoning



Can it swim? **Yes** ...
Size of a duck? **No** ...
Is it white? **No** ...



Generating an Agile Organization.
A feedback machine for the whole ecosystem



Manifesto for Agile Software Development

We are uncovering better ways of developing software by doing it and helping others do it.
Through this work we have come to value:

- Individuals and interactions** over processes and tools
- Working software** over comprehensive documentation
- Customer collaboration** over contract negotiation
- Responding to change** over following a plan

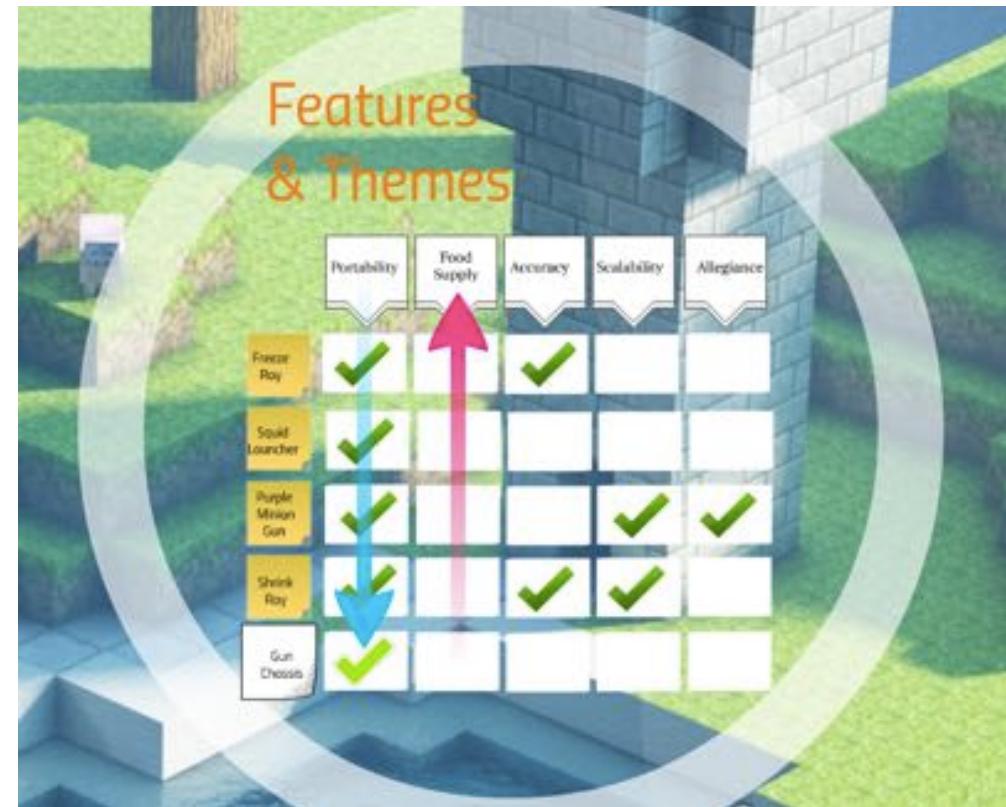
That is, while there is value in the items on the right, we value the items on the left more.

Agile Organizations are composed of Agile Teams. So the original Agile values and principles still hold true. XSCALE doesn't replace them. It inherits them.



Behavior Driven Analysis

Quick, Breadth-first Derivation of
Features & Acceptance Criteria



For each Pirate Canvas Epic

- (a **Why/Who/How/What**):

Generate a starter set of **Features**

- using **CEASAR** or **CRUDITE** pattern
- Create/Edit/Abort/Save/Accept/Request-Help
- Create/Read/Update/Delete/Import/Transform/Export

Pick **Themes** (key categories of acceptance criteria)

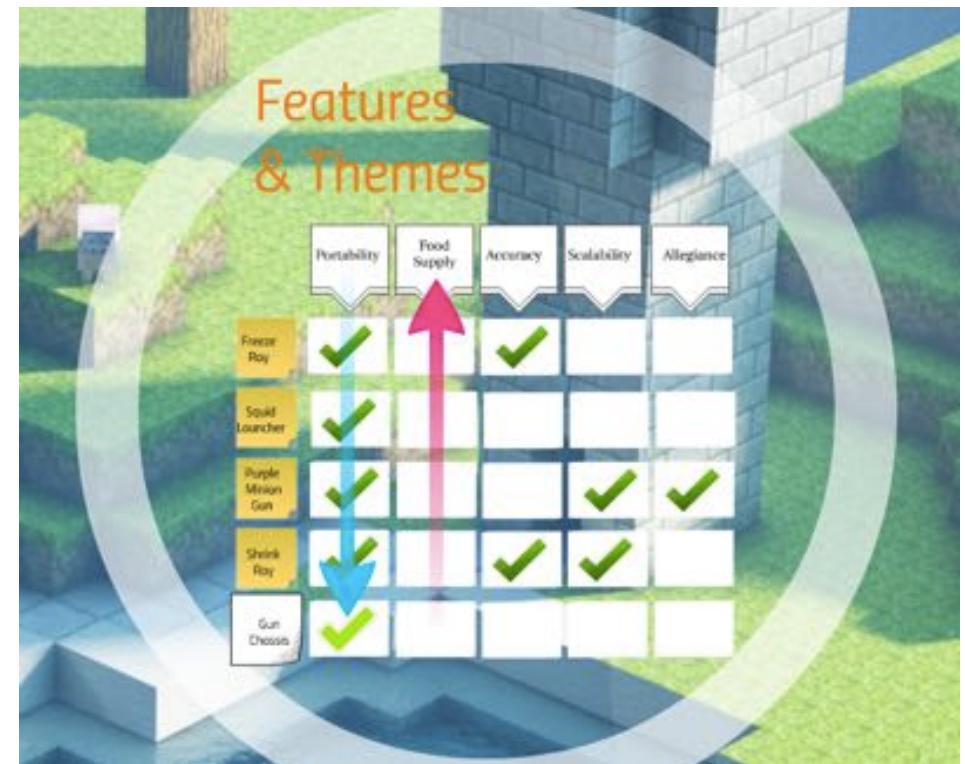
- UX Personas
- Architectural Components
- Non Functional Qualities
- Business Rules

For each Feature/Theme box, **mark it** if all agree:

- Acceptance criteria exist for that **Feature x Theme**
- Don't record detailed criteria – just go breadth-first

Sanity-checking questions generate matrix closure:

- For each Feature are there any missing Themes?
- For each Theme, are there any missing Features?
- If a Theme is all ticks, break out a Technical Feature





Business Bingo

Fast, Breadth-First Feature Budgets & Priorities



Lay out 10 Fibonacci Numbers to estimate Features per Epic

- Add the last 2 Fibonacci numbers to make the next
- We use Fibonacci because it makes people fight!
- Use DRIs & LaaS to get Consensus

Pick 3 "Budget Bears" – three pre-costed metric probes

- Not relative; "Feature Points" are actual budget/Feature
- Best Bears are previous Features everyone is familiar with
- Baby Bear "was easy, no surprises" – say 3 team days
- Poppa Bear big and hairy, ~20 times more expensive at 55
- Mamma Bear is the mode – about same as most features

Tech authorities estimate, Business & Design question!

- Compare feature cards one at a time vs. all on table
- Split large Features by Theme; ideally all < 21.

Record estimates on cards and do over ...

- Pick 3 previous "Business Value Bears"
- Baby Bear Feature just a bell or whistle
- Mamma is in 80% we could live without
- Poppa one of the 20% we use every day
- Business estimates, Design/Tech question

Record Business Value number and then ROI:

- $ROI = 1 + ((Value^2 - Budget) / Budget)$
- +1 prevents negative ROI when $B >> V$
- Squared Value prevents "ties" when $V=B$

Prioritize by descending ROI. Add COD if:

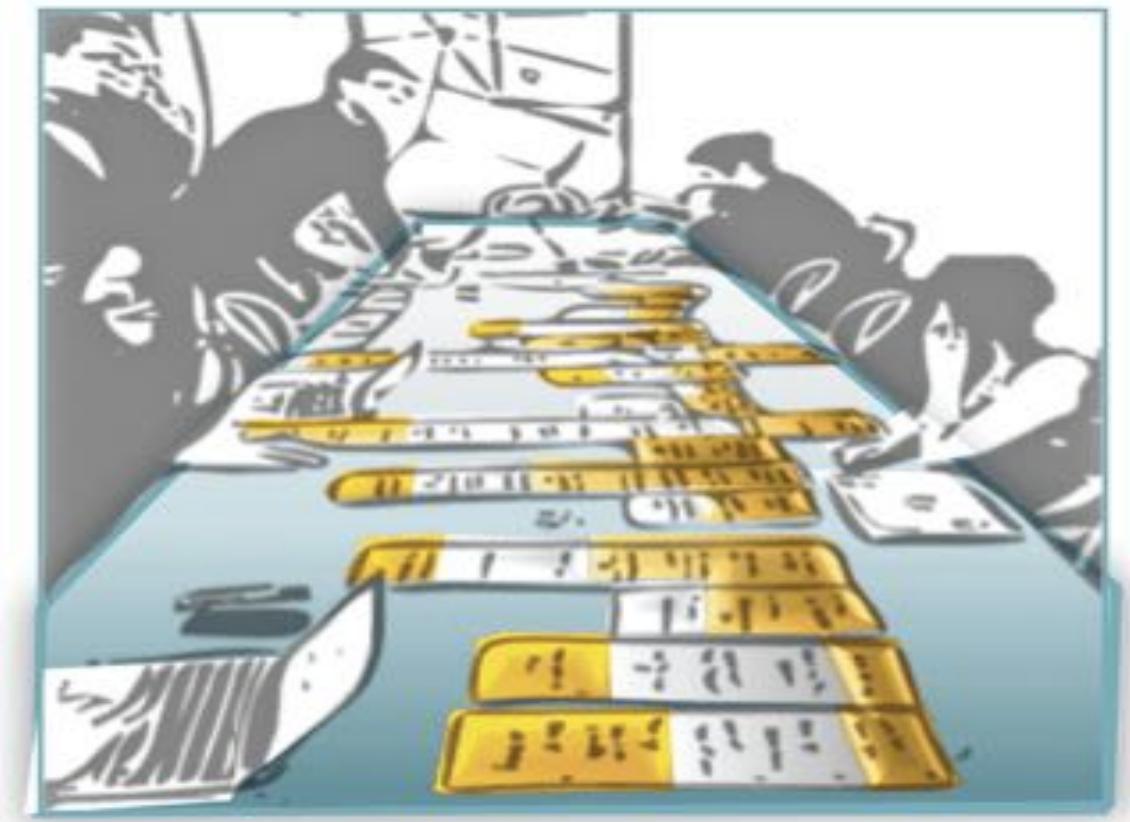
- Technical dependency trumps ROI or,
- Business forces trump ROI.





Release Refactoring

Quick, easy, reliable,
collaborative release planning.



Per Epic, lay out Features in descending ROI+COD priority

- To hit a specific date, calculate FPs you have by then given your resourcing. Otherwise calculate release dates after.

Per Epic, top-down, ask Business “could we include any of this Epic in our next Release without this Feature?”

- If not, this Feature is marked “Bronze”.

When you're out of Bronze, ask, “Would leaving this next Feature out significantly reduce the Impact of next Release?”

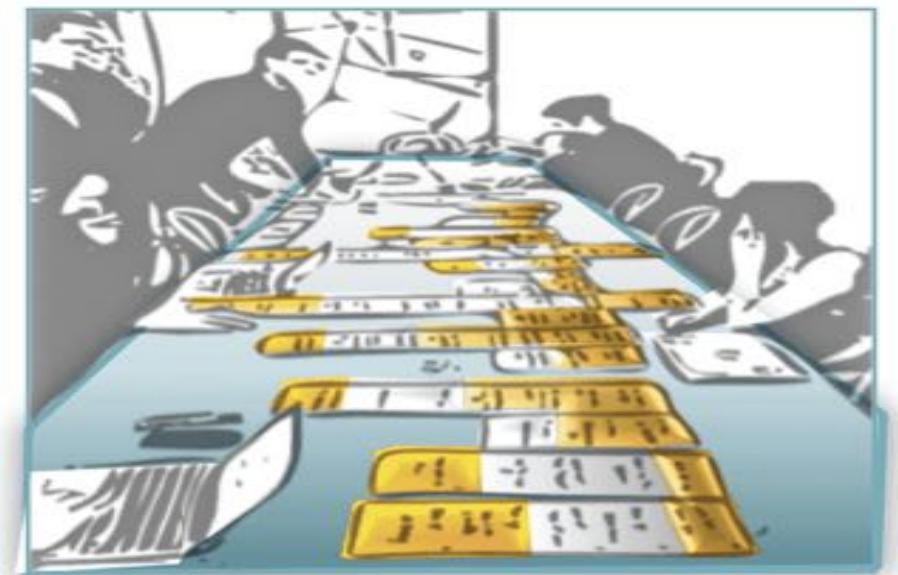
- If so, this Feature is marked “Silver”
- Otherwise it's marked “Gold”.

Now calculate how many total FPs and how much total ROI per each Bronze, Silver and Gold Group for each Epic.

To fit a Release Date, figure which mix of Bronze, Silver and Gold Groups > max ROI within the FP budget of the release.

- Assume Silver requires Bronze, and Gold requires Silver.

Otherwise determine Release Dates by grouping for business drivers. IE. RAT, MVP, Next Bottleneck, Next Market, etc.

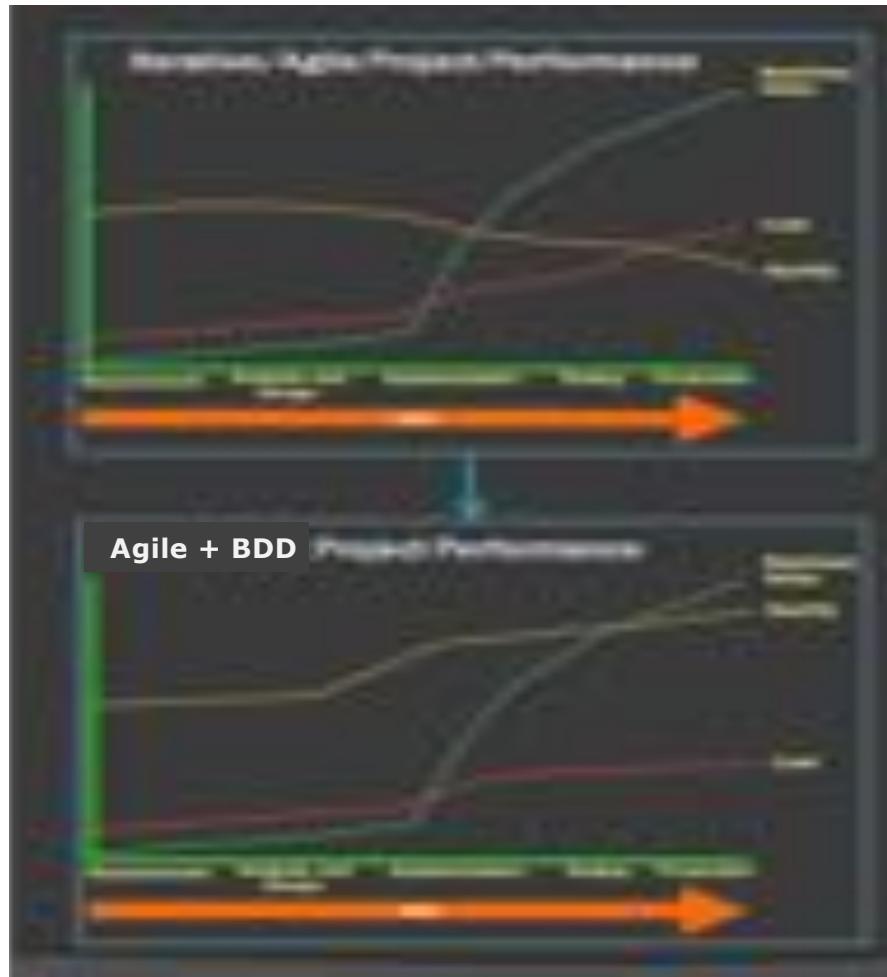




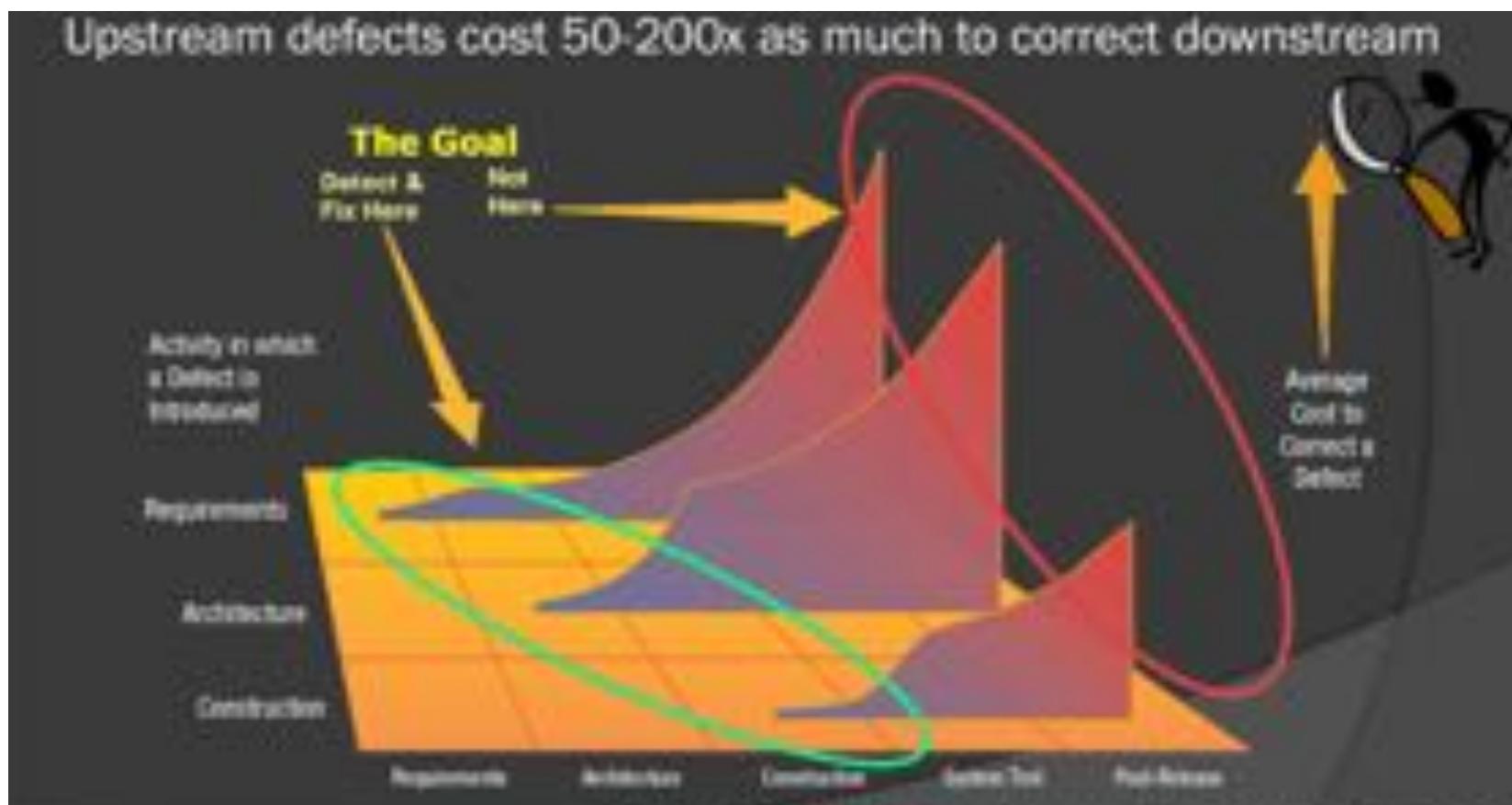
Optional:

Introduction to BDD in Gherkin.

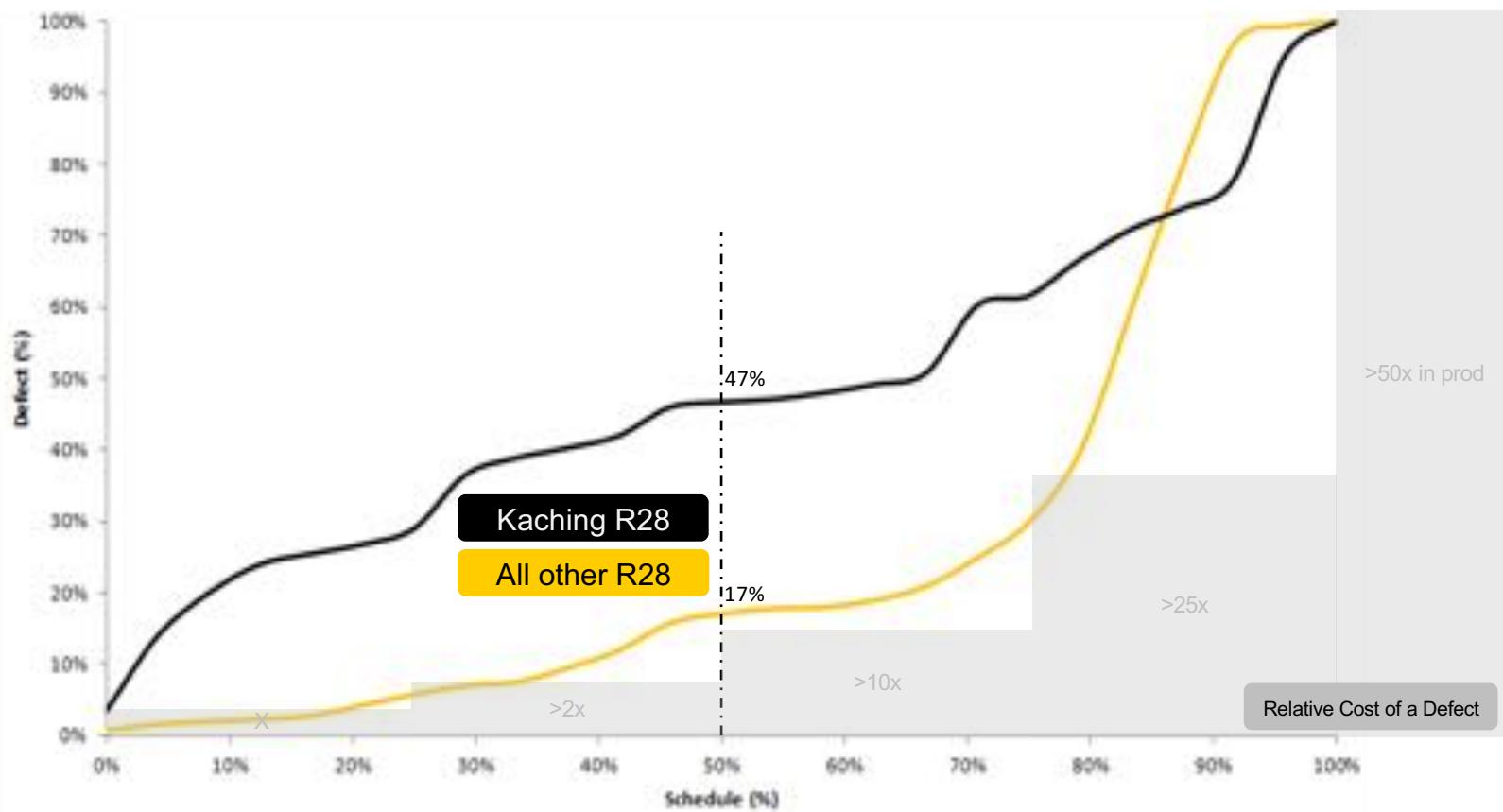
How does Product Management drive Delivery?



The cost of quality is not linear ...



Real numbers from CBA's first BDD program

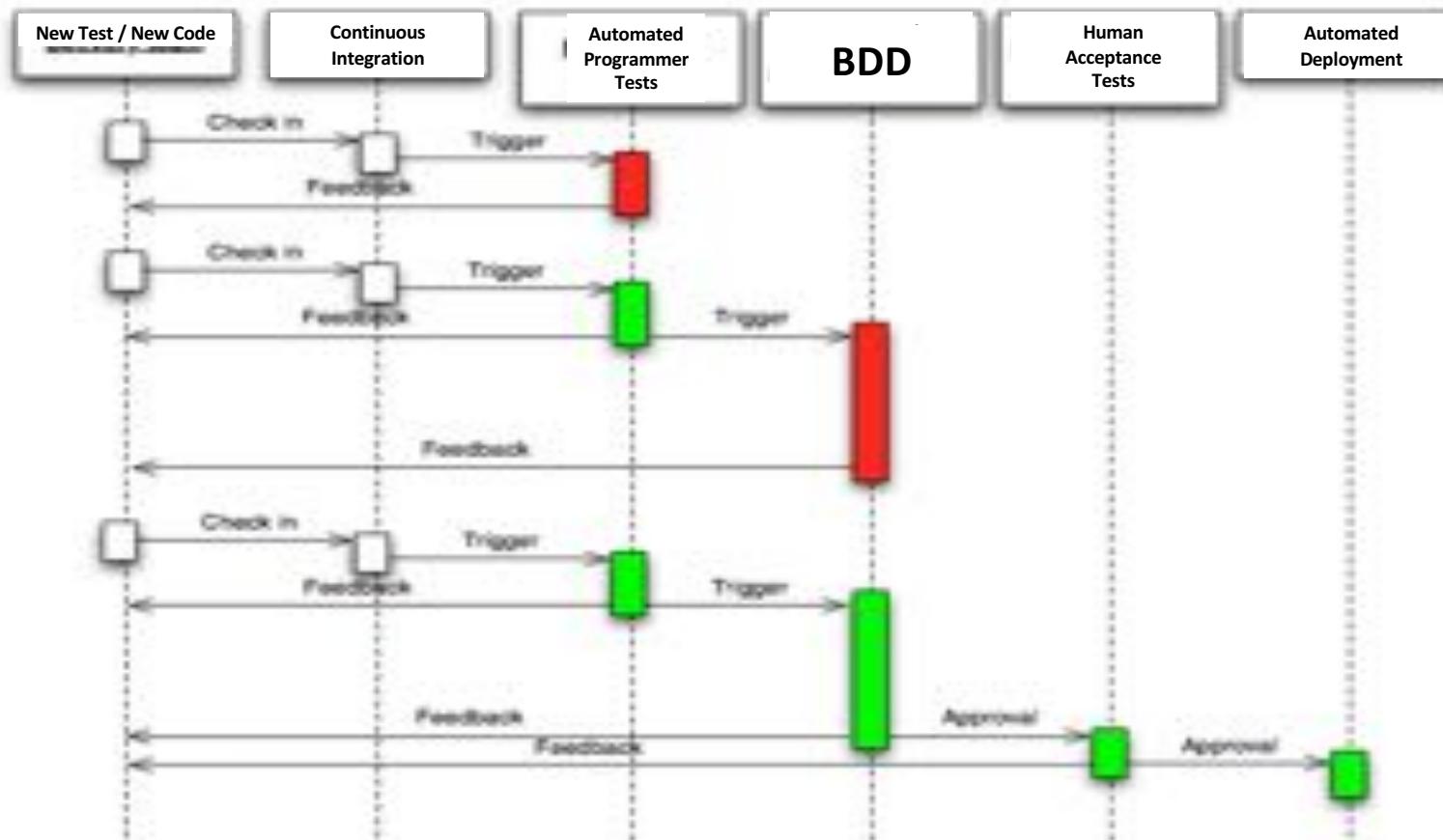


It's an old story ...

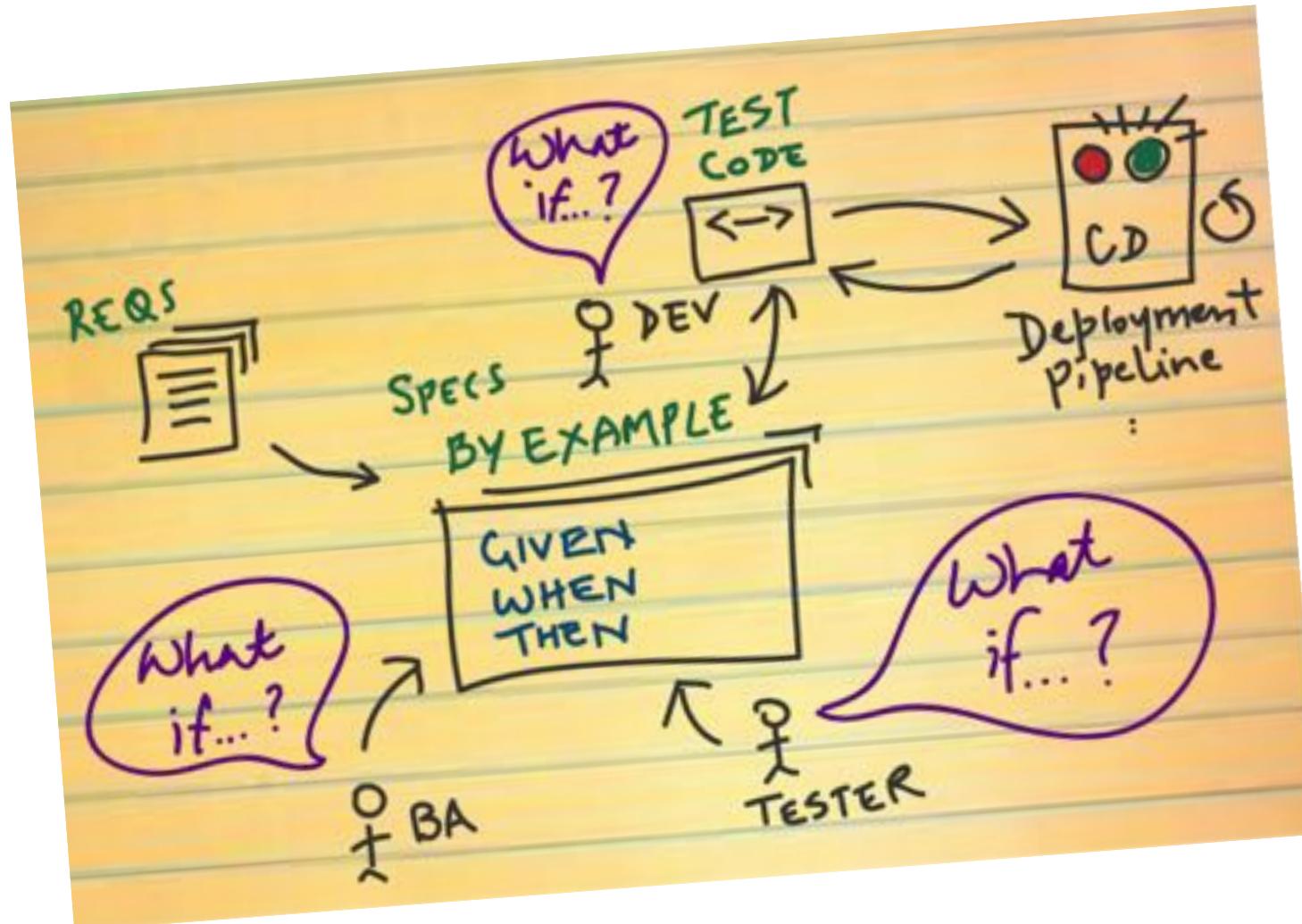
Toyota, 1965: Automated acceptance tests halt the line.
“Poka-Yoke” eliminates rework in manufacturing.



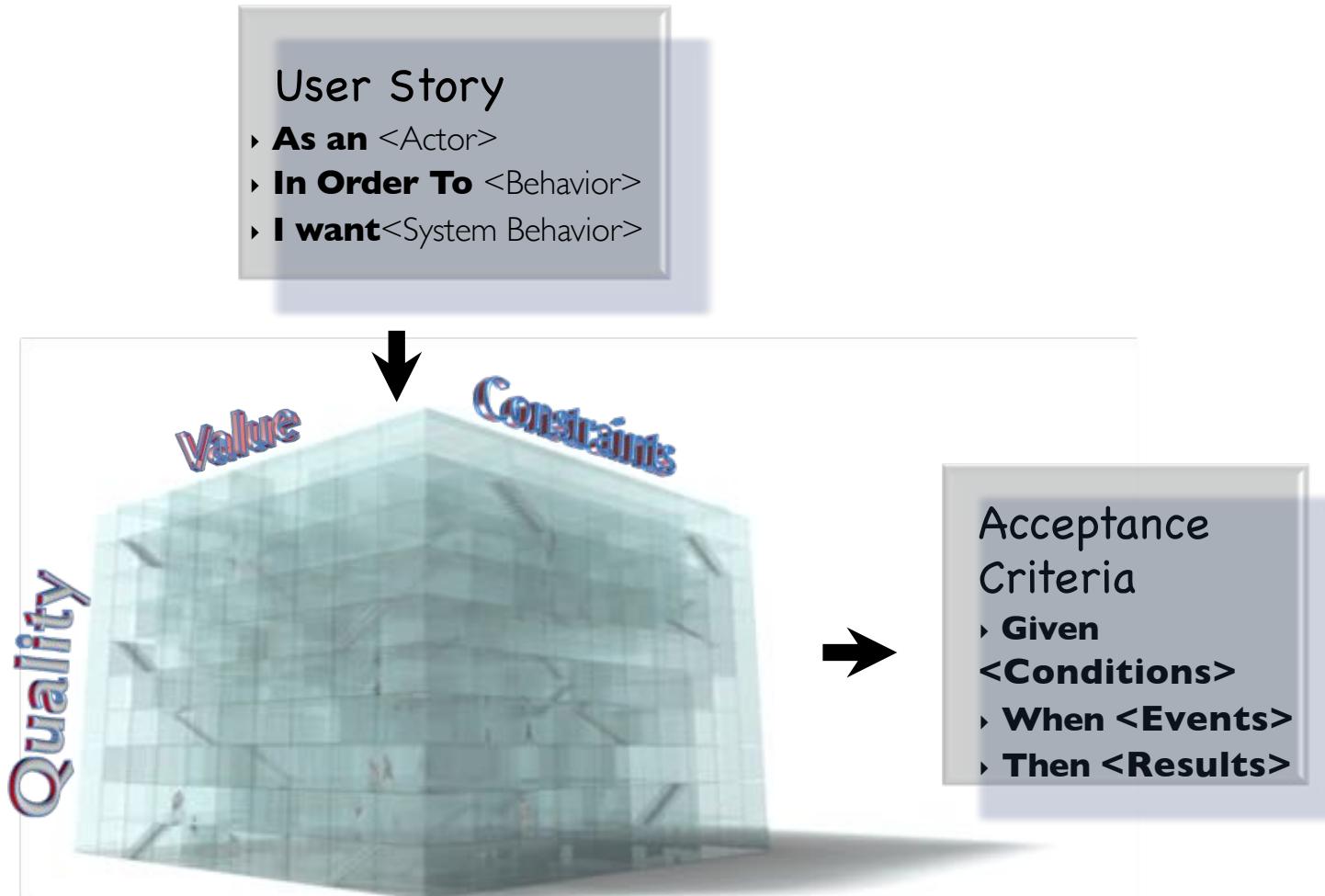
BDD eliminates rework in Software Delivery ...
More than that, it's how we align on "Done".



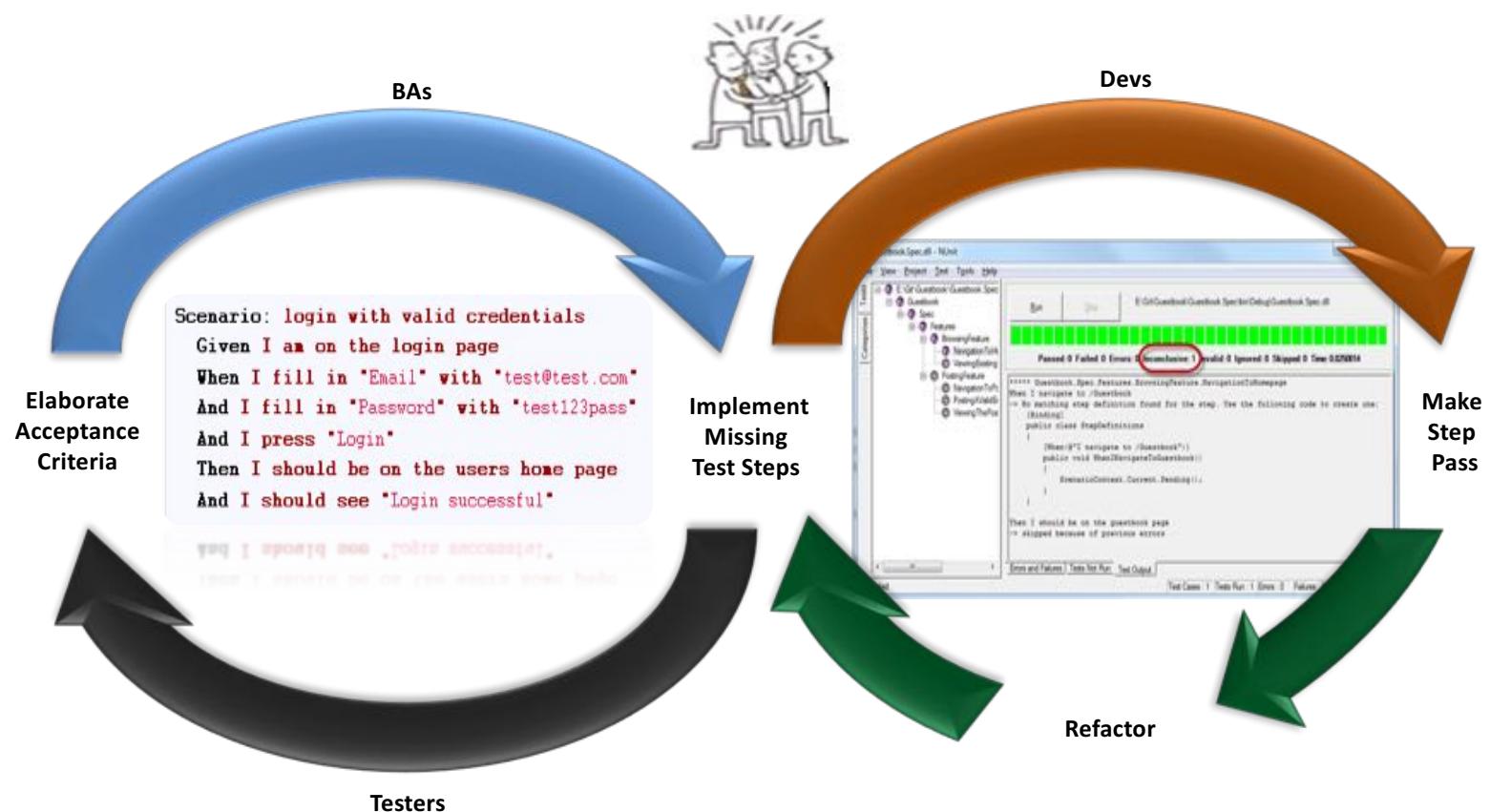
BDD is something we do together.



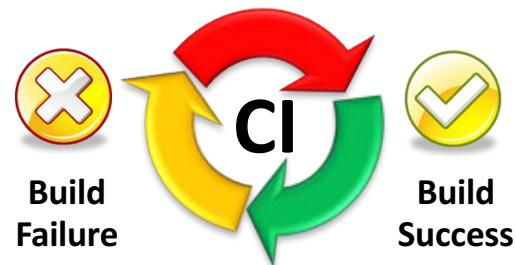
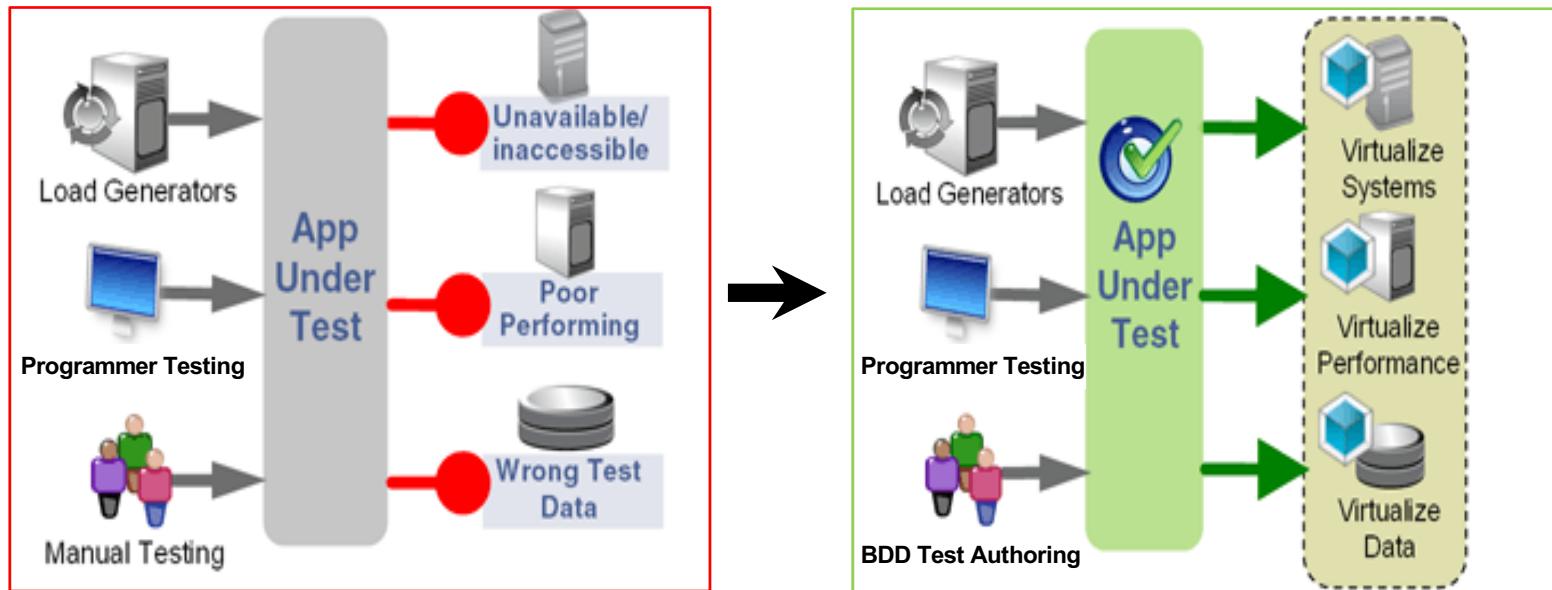
Acceptance criteria expand those ticks in the Features & Themes matrix.



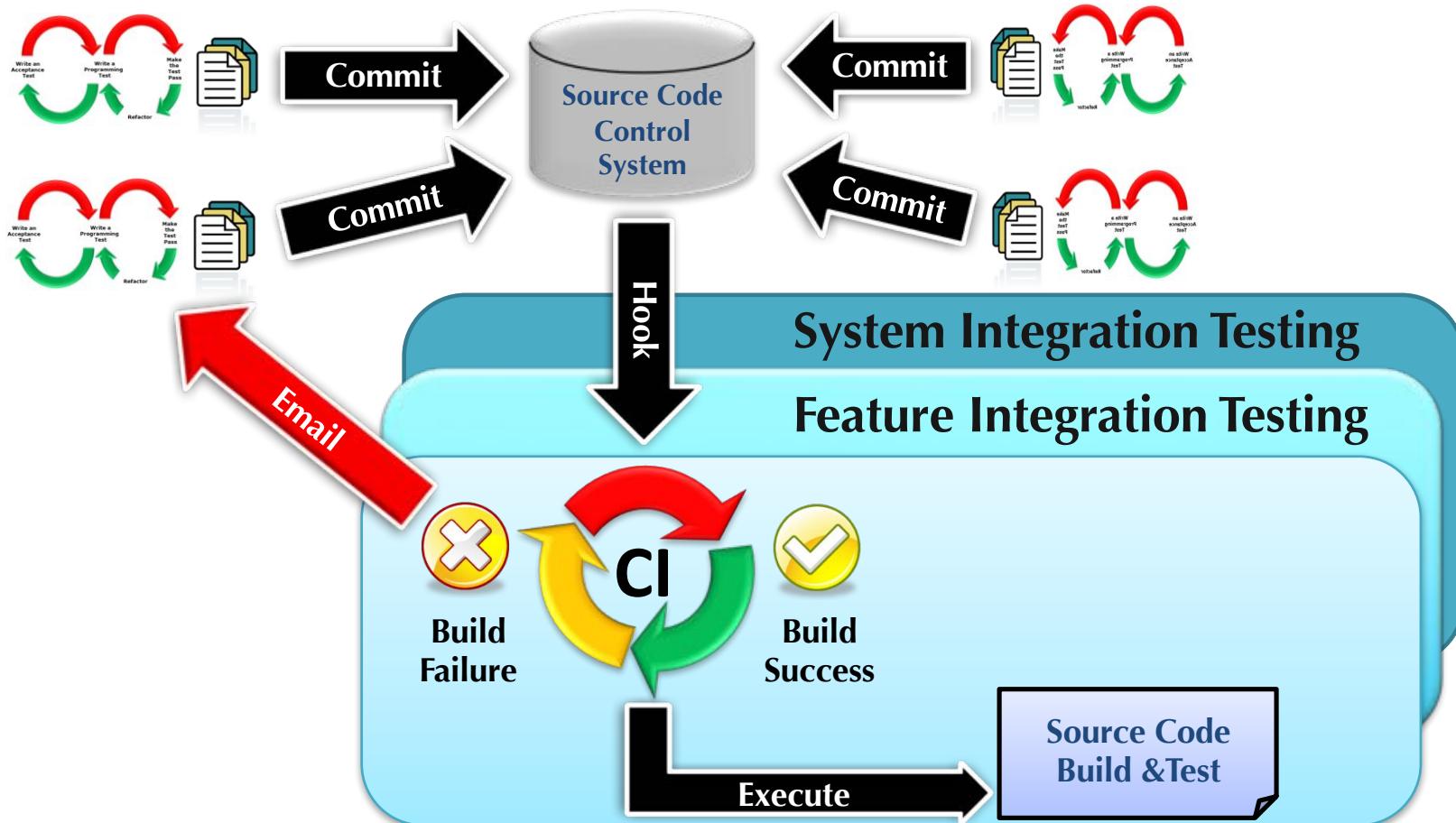
Acceptance criteria elaborated by “Three Amigos”
Delivery Teams collaborate on these little requirements.



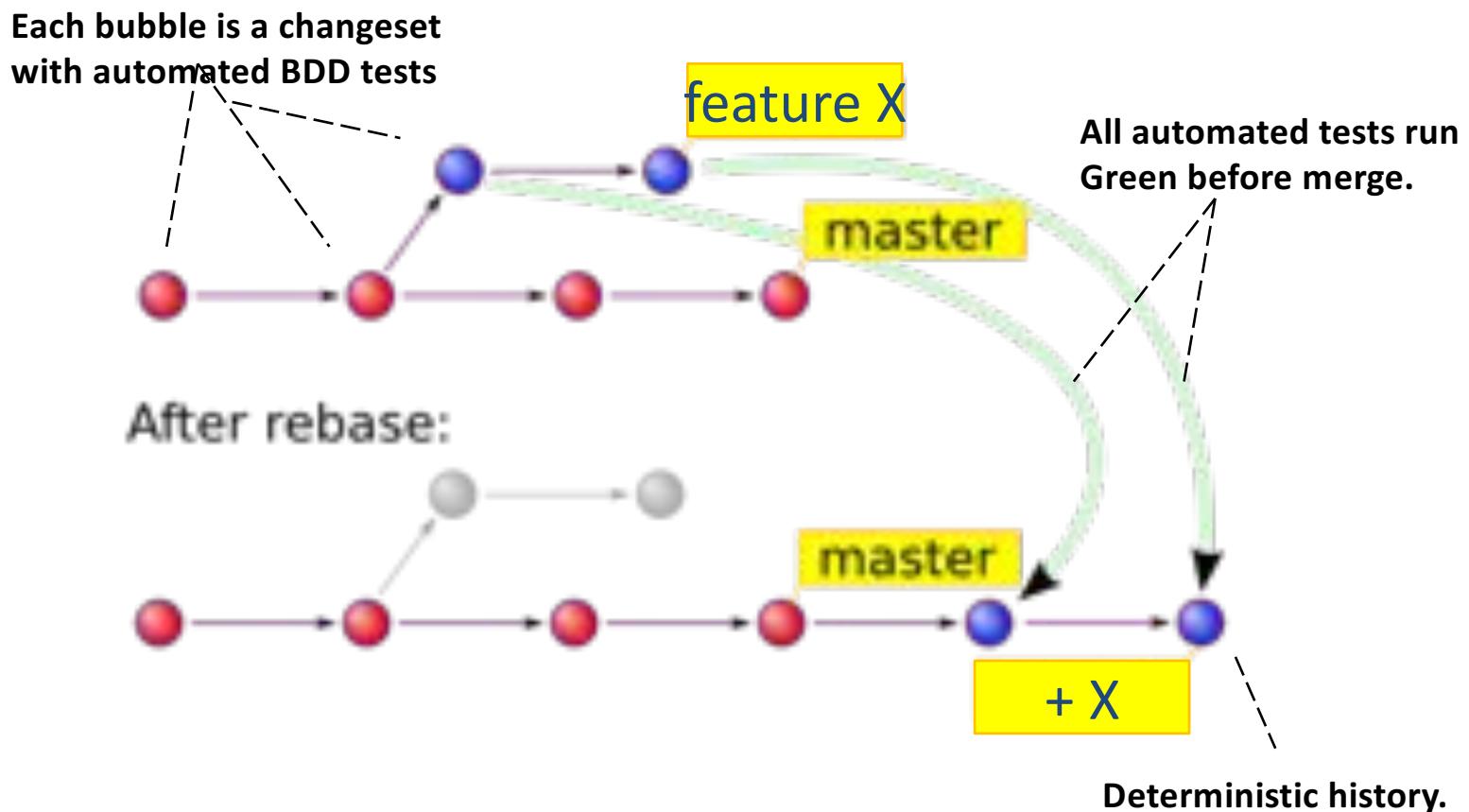
Virtualization enables BDD integration without collision.



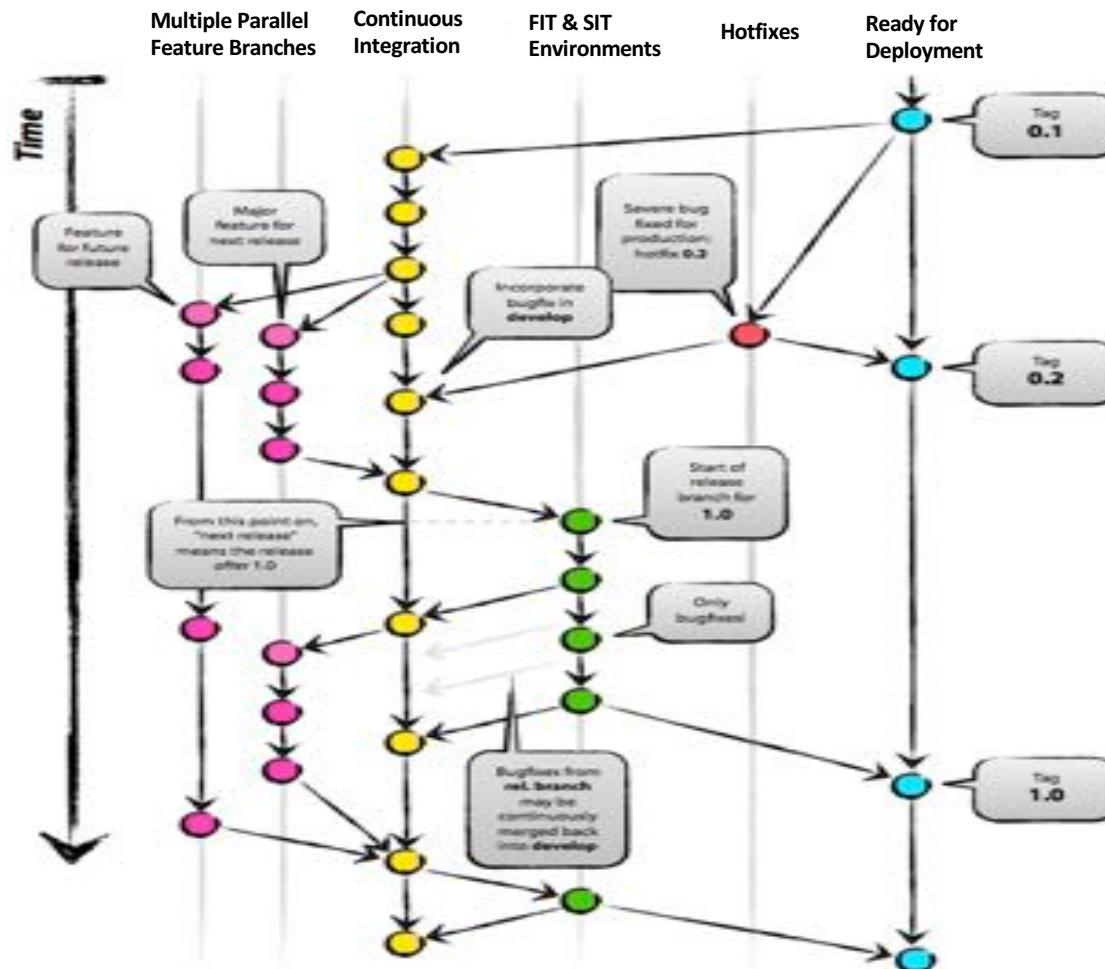
CI is the modern “Poka-Yoke”. Zero Defect Tolerance.



BDD + Git enables parallel feature development



BDD enables Continuous Delivery.



Acceptance Criteria

• Given, When, Then, And, But

- Given: put the system in a known state before the user (or external system) starts interacting with the system (in the When steps)
- Whens: describe the key action the user performs
- Then: observe outcomes related to the business value/benefit in your feature description. The observations should inspect the output of the system (a report, user interface, message, command output)
- And, But: If you have several Given, When or Then steps you can use And or But steps, allowing your Scenario to read more fluently:

Scenario: Multiple Givens

Given one thing

Given an other thing

Given yet an other thing

When I open my eyes

Then I see something

Then I don't see something else



Scenario: Multiple Givens

Given one thing

And an other thing

And yet an other thing

When I open my eyes

Then I see something

But I don't see something else

Gherkin Syntax

Backgrounds

- Backgrounds allows you to add some context to all scenarios in a single feature. A Background is like an untitled scenario, containing a number of steps.
- The difference is when it is run: the background is run before each of your scenarios





Practical: Pick a Feature, generate the Gherkin

Gherkin Syntax - Tables

Tables

- Tables as arguments to steps are handy for specifying a larger data set - usually as input to a Given or as expected output from a Then.

Scenario:

Given the following people exist:

name	email	phone
Aslak	aslak@email.com	123
Joe	joe@email.com	234
Bryan	bryan@email.org	456

Gherkin Syntax - Outlines

Scenario Outline

- Scenario Outlines allow us to more concisely express these examples through the use of a template with placeholders

The diagram illustrates the transformation of two separate Gherkin scenarios into a single scenario outline. On the left, two scenarios are shown:

Scenario: Eat 5 out of 12
Given there are 12 cucumbers
When I eat 5 cucumbers
Then I should have 7 cucumbers

Scenario: Eat 5 out of 20
Given there are 20 cucumbers
When I eat 5 cucumbers
Then I should have 15 cucumbers

A large blue arrow points from these two scenarios to the right, where the transformed scenario outline is shown:

Scenario Outline: Eating
Given there are <start> cucumbers
When I eat <eat> cucumbers
Then I should have <left> cucumbers

Examples:

start	eat	left
12	5	7
20	5	15

- The Scenario outline steps provide a template which is never directly run. A Scenario Outline is run once for each row in the Examples section beneath it (not counting the first row of column headers).

Gherkin Syntax - Tags

Tags

- Tags are a great way to organize your features and scenarios and to be able to report on different sets of scenarios, e.g. business critical scenarios @businesscritical, @highvolume
- A Scenario or Feature can have as many tags as you like, just separate them with spaces:

```
@billing
```

```
Feature: Verify billing
```

```
@important
```

```
Scenario: Missing product description
```

```
Scenario: Several products
```

```
@billing @bicker @annoy
```

```
Feature: Verify billing
```



Take existing scenarios and refactor with gherkin syntax.

- Background
- Step Table
- Scenario outline
- Example Table
- Tags



Lean Coffee Q&A

Exponential Product Management

- Why, Who, How & What?
 - The XSCALE Principles
- Game: Exponential Minty Machine
 - Throughput Accounting
- Practice: Pirate Canvas
 - Agile Contracts
- Game: Prioritizing Market Impact
 - Forming a Product Squad
- Practice: Behavior Driven Analysis
 - Using a Kanban to whip WIP
- Practice: Behavior Driven Design
 - Continuous Delivery
- Game: Set-based Logo Design
 - Ecosystem Design
- Product Squad Ceremonies
 - LaaS & DRIs
- Practice: Business Bingo
 - Change as a Product
- Practice: Release Refactoring
 - Lean Tea



XSCALE Alliance

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