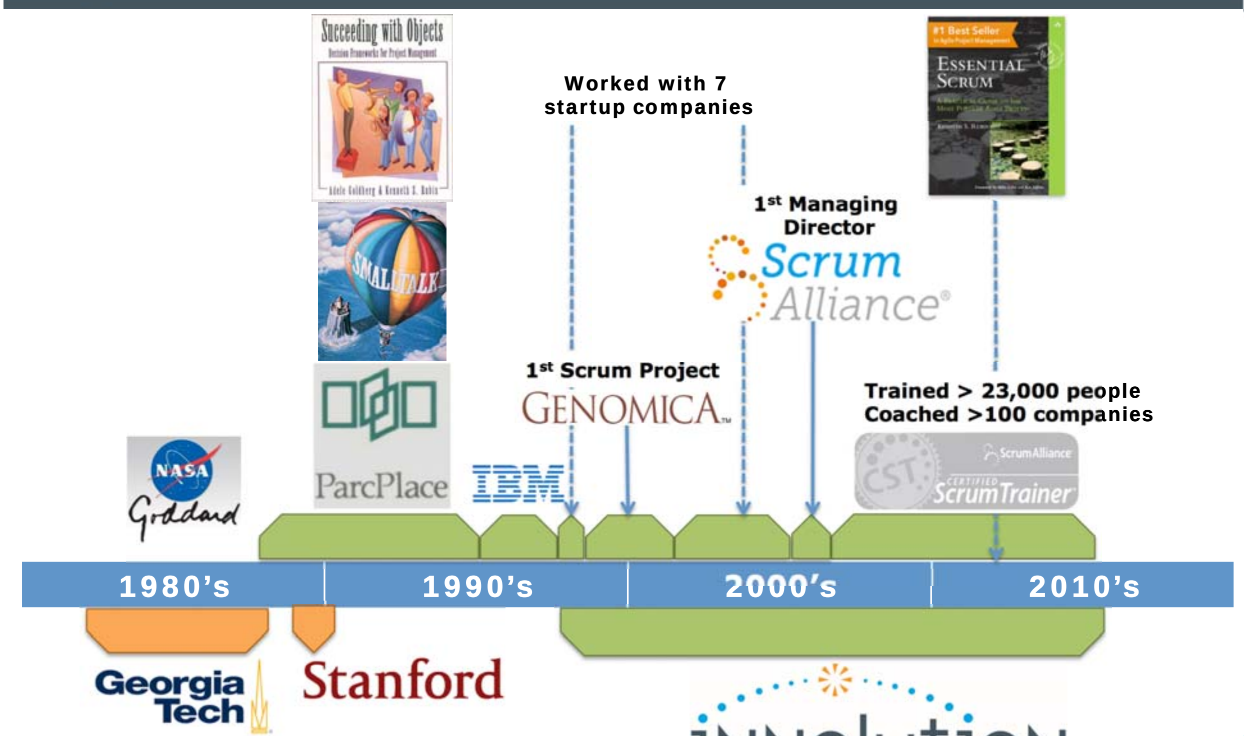
Beyond Agile Pilot Stage?
Time to Embrace Agile Budgeting, Planning, and Cost Accounting!
London Scrum Users Group
February 9, 2016
London, UK
by Ken Rubin

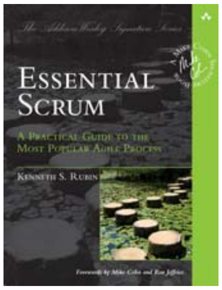
www.innolution.com

Ken Rubin Overview

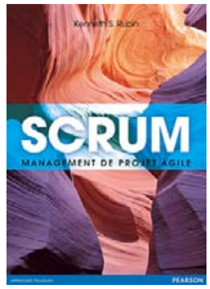


Essential Scrum in six languages

English



French



German

Chinese

Japanese

Polish

Agenda

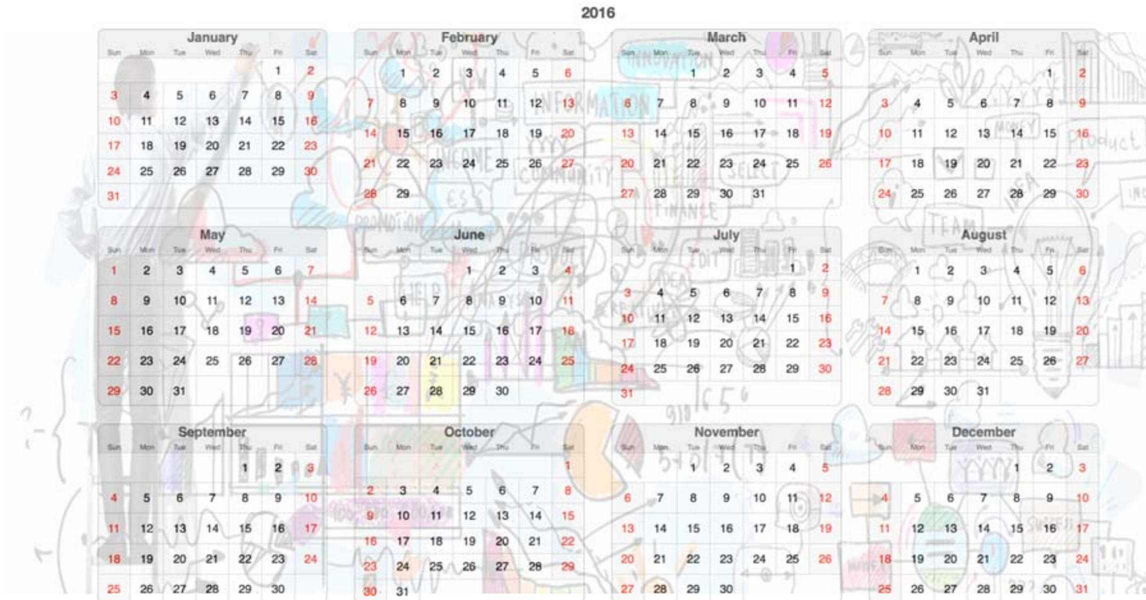
- Traditional Budgeting and Planning
- Agile Budgeting and Planning
- Agile Cost Accounting

Issues with traditional budgeting

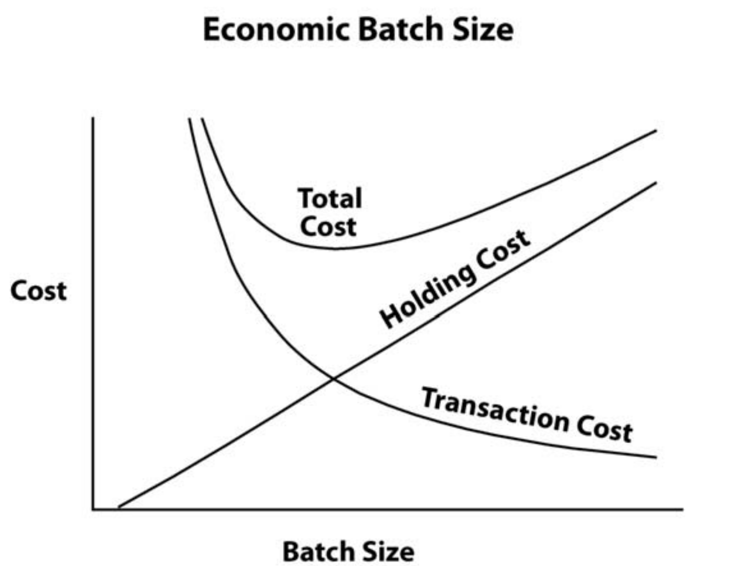
- Requires detailed up-front financial projections and business plans
- Promotes greed for finite resources
- Instills a use-it-this-year or lose-it-next-year mentality
- Leads to utilization-based planning and execution
- Fosters rigidity – budgets can be hard to change
- Complicates things in a project-based environment where projects touch many cost centers
- Biases teams towards least-risky solutions

Annual planning assumes long-term stability in a complex world

Planning the entire next fiscal year up to 15 months in advance!

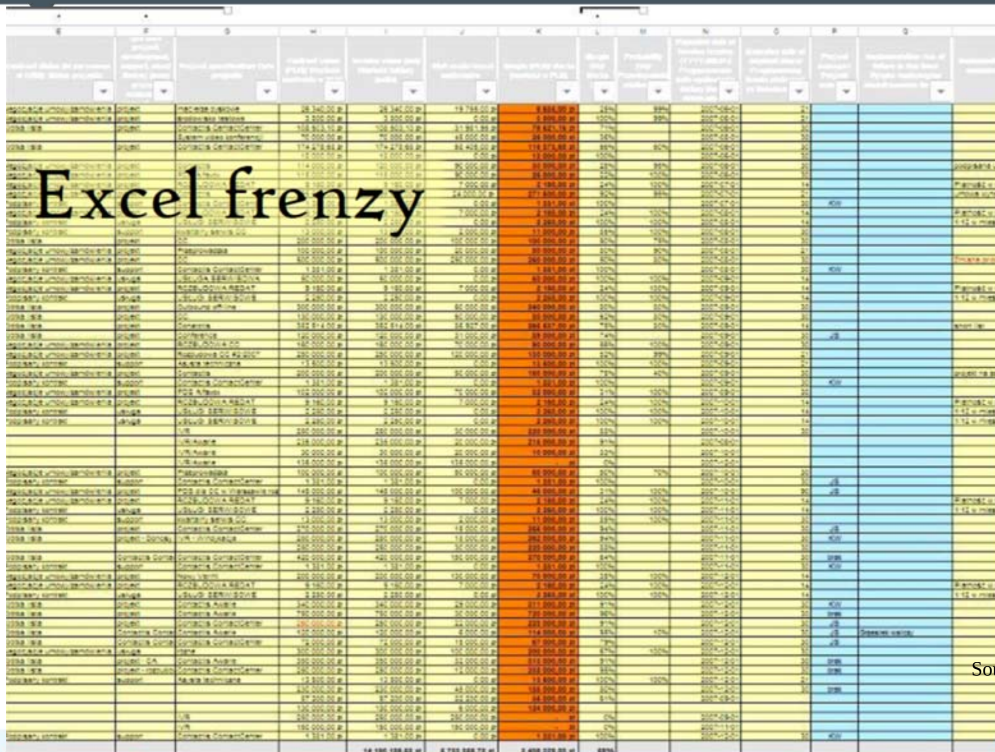


Belief that planning in one large batch has economies of scale



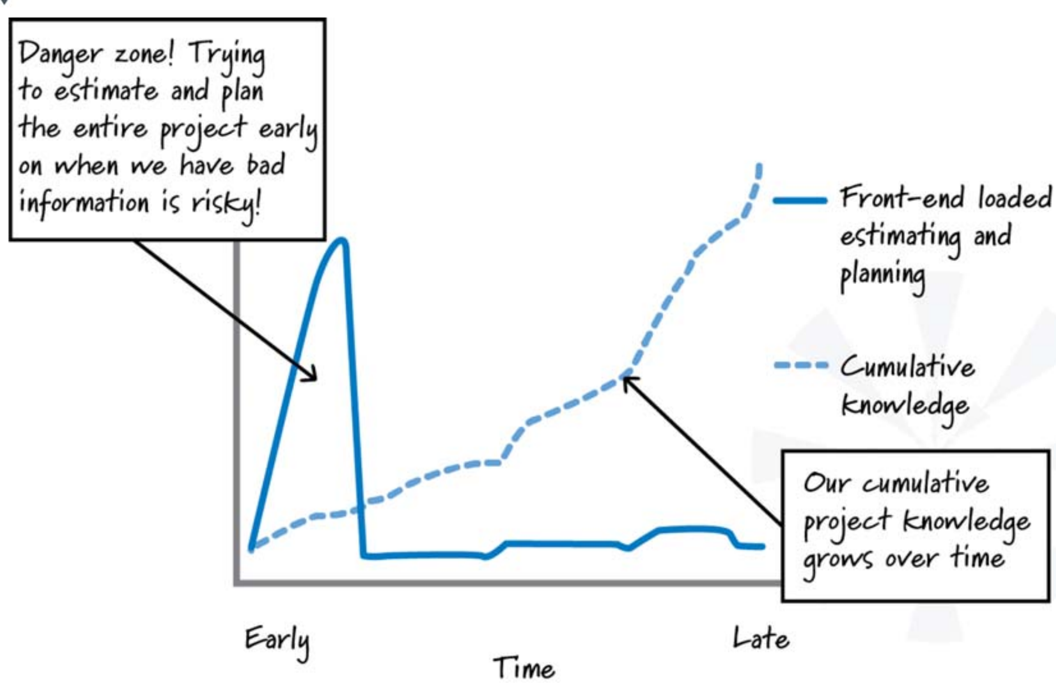
From "The Principles of Product Development Flow," by Donald G. Reinertsen.
Celeritas Publishing: 2009. Copyright 2009, Donald G. Reinertsen

Assumes master budget / portfolio

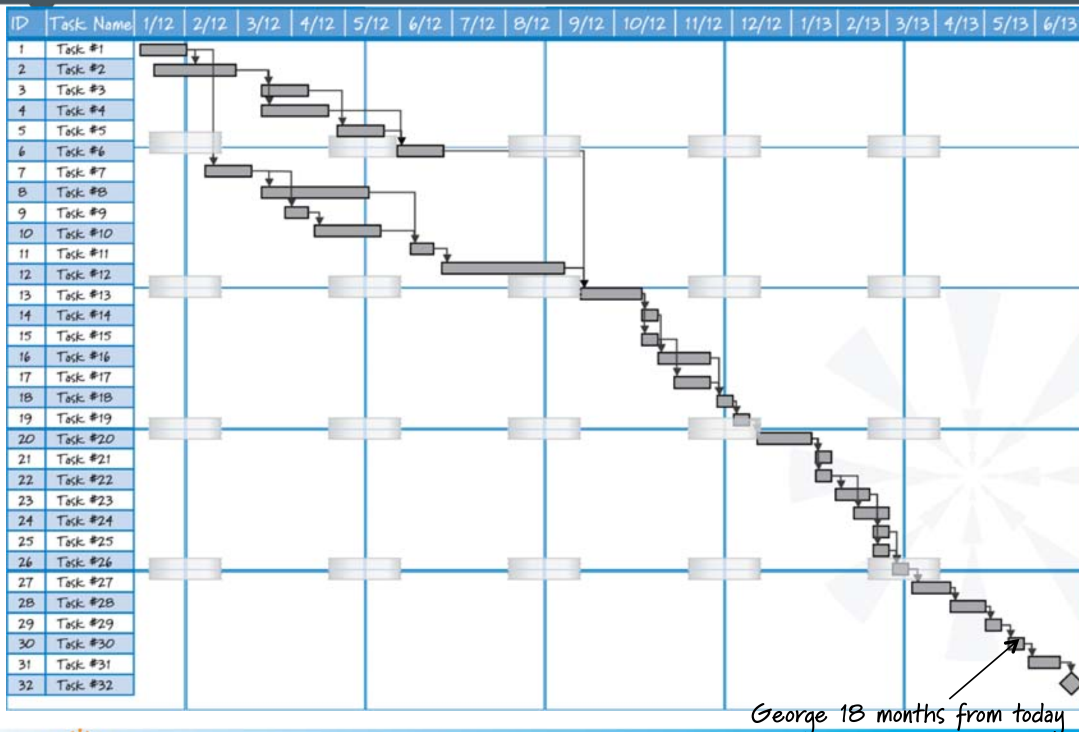


Source: Pawel Brodzinski

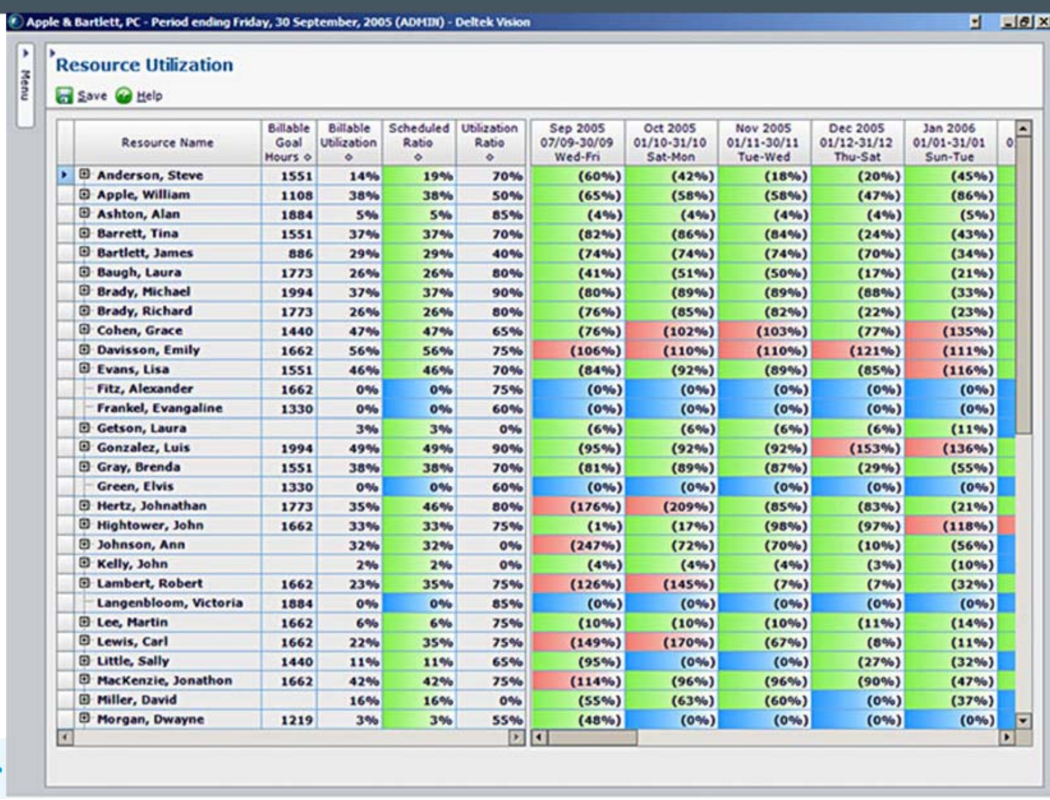
And, we are doing all this work when we have the worst possible information



Assumes we got it right!



To derive master budget / plan, we need to understand complete resource allocation


Apple & Bartlett, PC - Period ending Friday, 30 September, 2005 (ADMIN) - Deltek Vision

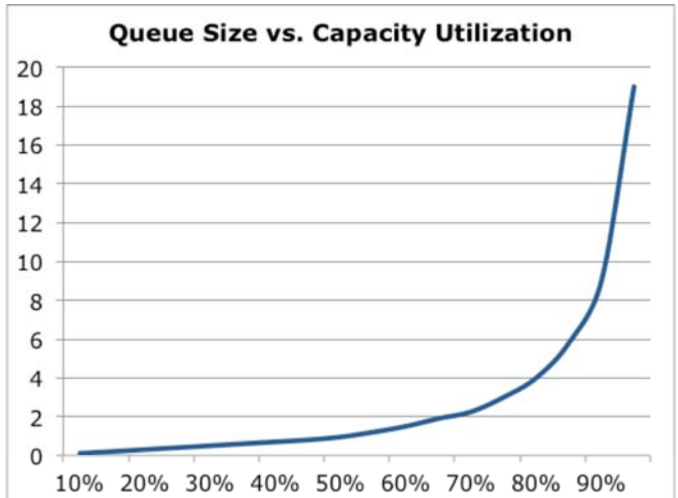
Resource Utilization

Save Help

Resource Name	Billable Goal Hours	Billable Utilization	Scheduled Ratio	Utilization Ratio	Sep 2005 07/09-30/09 Wed-Fri	Oct 2005 01/10-31/10 Sat-Mon	Nov 2005 01/11-30/11 Tue-Wed	Dec 2005 01/12-31/12 Thu-Sat	Jan 2006 01/01-31/01 Sun-Tue
Anderson, Steve	1551	14%	19%	70%	(60%)	(42%)	(18%)	(20%)	(45%)
Apple, William	1108	38%	38%	50%	(65%)	(58%)	(58%)	(47%)	(86%)
Ashton, Alan	1884	5%	5%	85%	(4%)	(4%)	(4%)	(4%)	(5%)
Barrett, Tina	1551	37%	37%	70%	(82%)	(86%)	(84%)	(24%)	(43%)
Bartlett, James	886	29%	29%	40%	(74%)	(74%)	(74%)	(70%)	(34%)
Baugh, Laura	1773	26%	26%	80%	(41%)	(51%)	(50%)	(17%)	(21%)
Brady, Michael	1994	37%	37%	90%	(80%)	(89%)	(89%)	(88%)	(33%)
Brady, Richard	1773	26%	26%	80%	(76%)	(85%)	(82%)	(22%)	(23%)
Cohen, Grace	1440	47%	47%	65%	(76%)	(102%)	(103%)	(77%)	(135%)
Davisson, Emily	1662	56%	56%	75%	(106%)	(110%)	(110%)	(121%)	(111%)
Evans, Lisa	1551	46%	46%	70%	(84%)	(92%)	(89%)	(85%)	(116%)
Fitz, Alexander	1662	0%	0%	75%	(0%)	(0%)	(0%)	(0%)	(0%)
Frankel, Evangaline	1330	0%	0%	60%	(0%)	(0%)	(0%)	(0%)	(0%)
Getson, Laura		3%	3%	0%	(6%)	(6%)	(6%)	(6%)	(11%)
Gonzalez, Luis	1994	49%	49%	90%	(95%)	(92%)	(92%)	(153%)	(136%)
Gray, Brenda	1551	38%	38%	70%	(81%)	(89%)	(87%)	(29%)	(55%)
Green, Elvis	1330	0%	0%	60%	(0%)	(0%)	(0%)	(0%)	(0%)
Hertz, Johnathan	1773	35%	46%	80%	(176%)	(209%)	(85%)	(83%)	(21%)
Hightower, John	1662	33%	33%	75%	(1%)	(17%)	(98%)	(97%)	(118%)
Johnson, Ann		32%	32%	0%	(247%)	(72%)	(70%)	(10%)	(56%)
Kelly, John		2%	2%	0%	(4%)	(4%)	(4%)	(3%)	(10%)
Lambert, Robert	1662	23%	35%	75%	(126%)	(145%)	(7%)	(7%)	(32%)
Langenbloom, Victoria	1884	0%	0%	85%	(0%)	(0%)	(0%)	(0%)	(0%)
Lee, Martin	1662	6%	6%	75%	(10%)	(10%)	(10%)	(11%)	(14%)
Lewis, Carl	1662	22%	35%	75%	(149%)	(170%)	(67%)	(8%)	(11%)
Little, Sally	1440	11%	11%	65%	(95%)	(0%)	(0%)	(27%)	(32%)
MacKenzie, Jonathon	1662	42%	42%	75%	(114%)	(96%)	(96%)	(90%)	(47%)
Miller, David		16%	16%	0%	(55%)	(63%)	(60%)	(0%)	(37%)
Morgan, Dwayne	1219	3%	3%	55%	(48%)	(0%)	(0%)	(0%)	(0%)

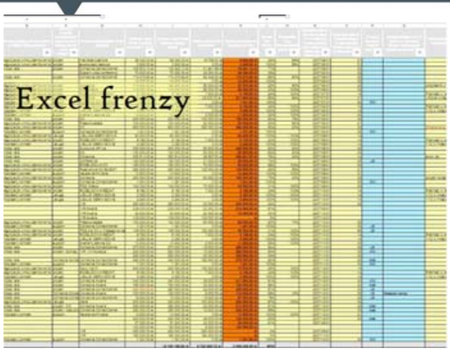
Assumes utilizing people 100% is economically sensible

Watch the Baton Not the Runners†

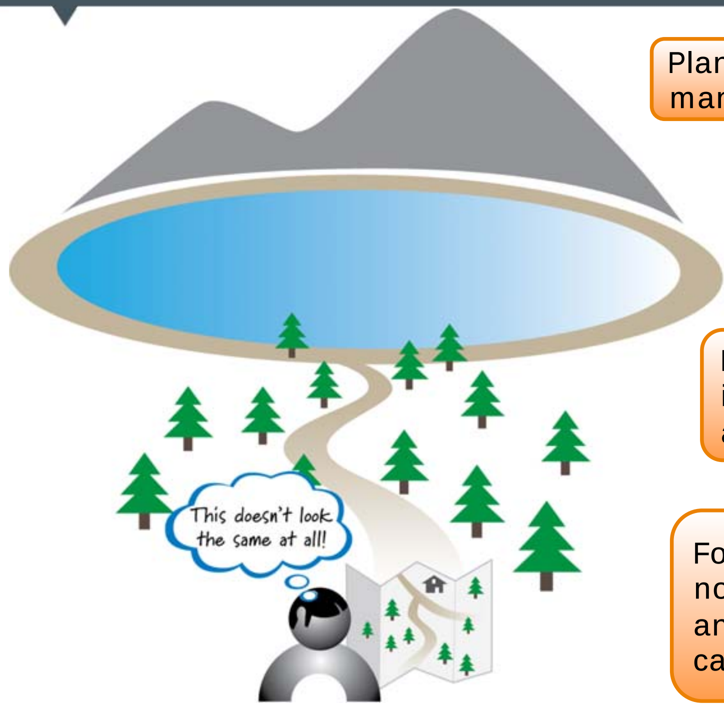


†Source: Larman & Vodde

And, it's expensive to maintain all of that budgeting / planning inventory



Assumes budget and plans are correct, so stick with them



Plan deviations are result of poor management and execution

Ignore insights that are generated as conditions constantly change

Experimentation might show initial assumptions about cost and value are wrong

Following an original plan – no matter how well conceived and how skillful its execution – can be a recipe for disaster

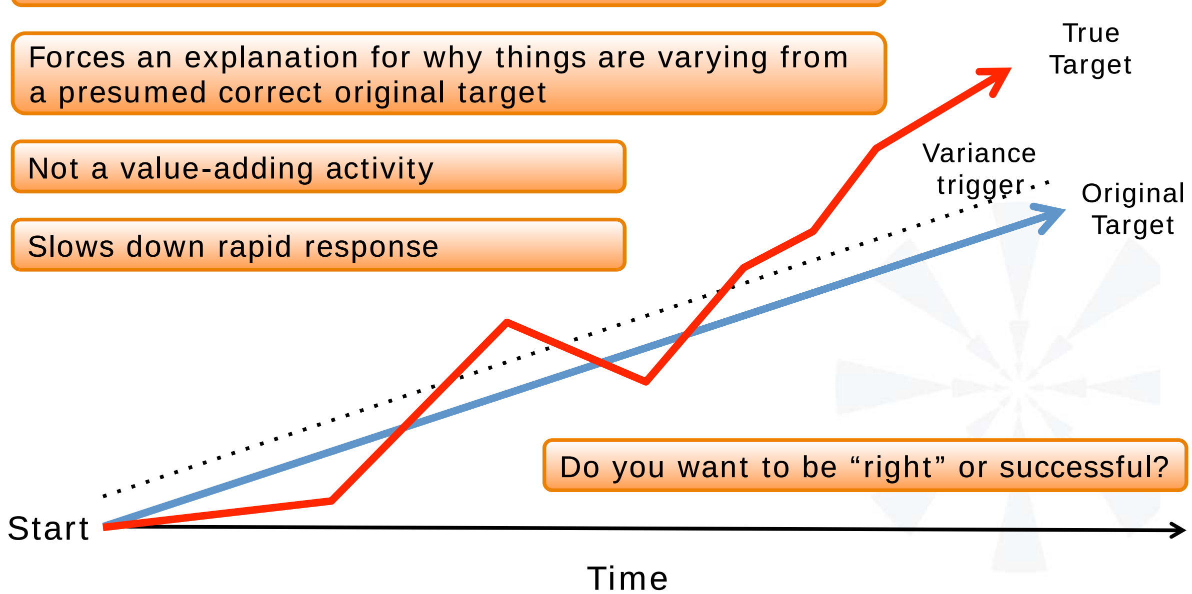
Leads to time consuming and often misfocused variance analysis

Reactive – only takes place if variance is large enough

Forces an explanation for why things are varying from a presumed correct original target

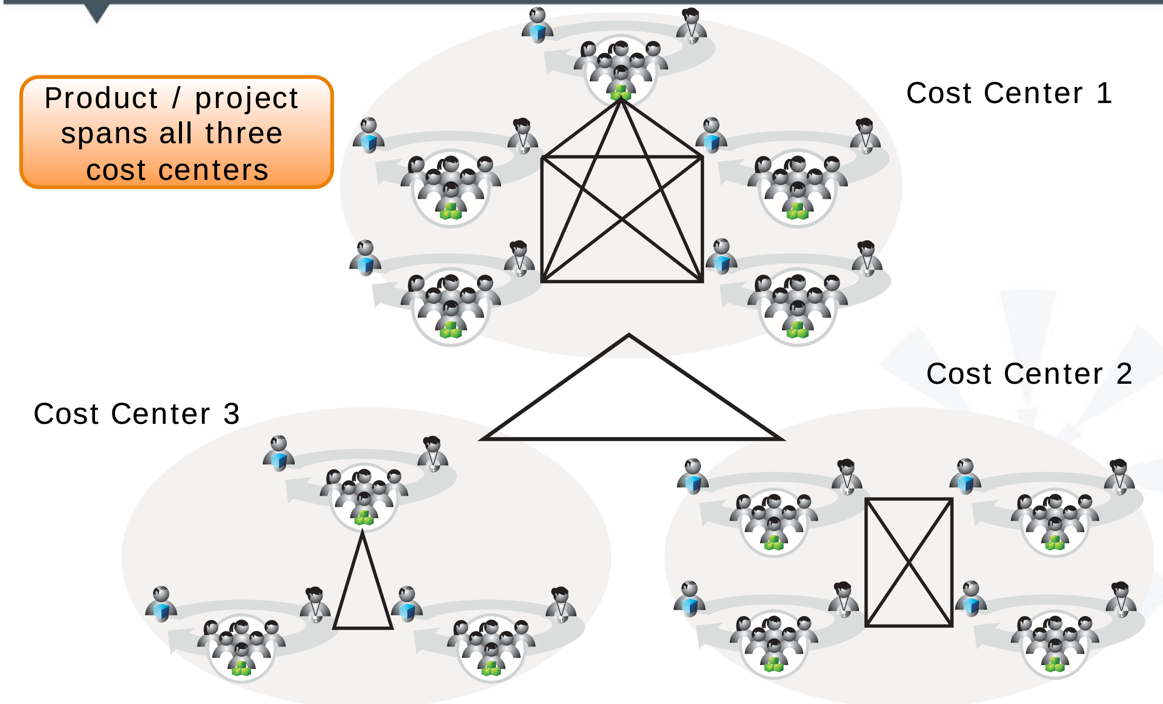
Not a value-adding activity

Slows down rapid response



Do you want to be “right” or successful?

Budgets often align with cost centers – but projects can span cost centers



Agile budgeting / planning – dealing with uncertainty

- Can’t get budgets and plans right up front
- Up-front budgeting and planning should be helpful without being excessive
- Keep budgeting and planning options open until the last responsible moment
- Plan roughly for the long-term and more accurately for the short-term
- Prefer experimentation (knowledge acquisition) over a desire for precision
- Focus more on adapting and re-budgeting and re-planning than conforming to the original budget or plan

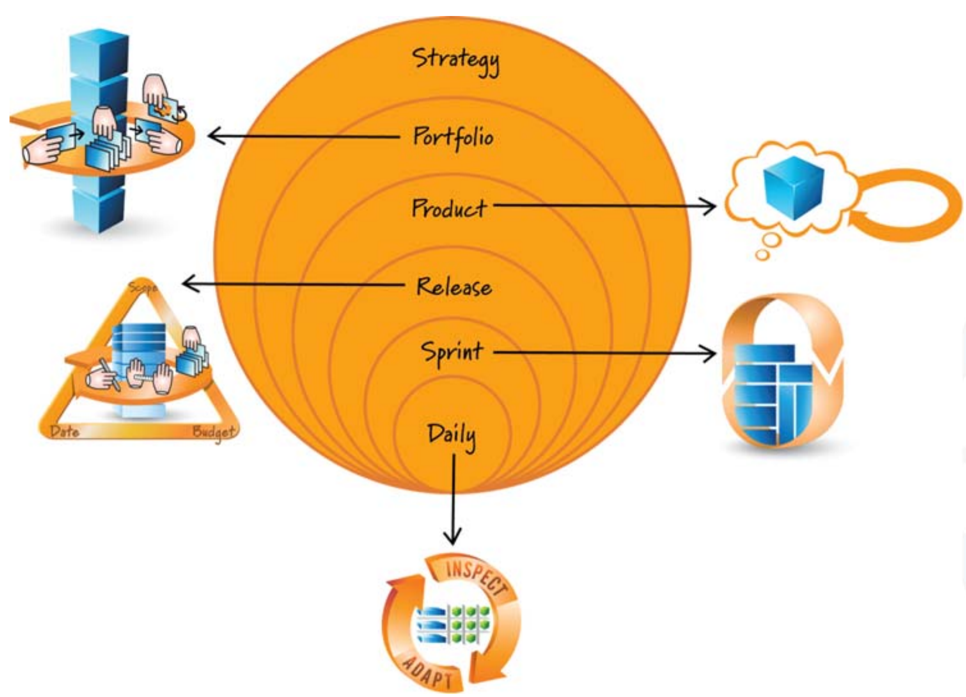
Agile budgeting / planning – batch size

- Budget and plan in smaller batches with horizon-adjusted precision
- Correctly manage budget and planning inventory – reduce costs
- Budget and plan in more frequent increments (releases)
- Optimize budgeting and planning at levels above teams and projects

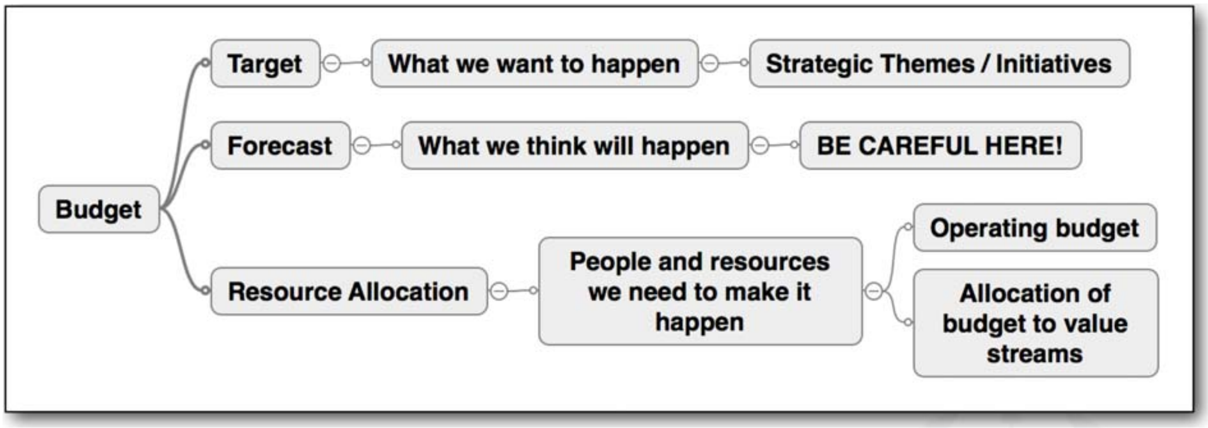
Agile budgeting / planning – decentralized decision making

- Empower “mission command” – fast, additive, decentralized decision-making rather than having teams delay waiting for permission to proceed
- Trust replaces need for wasteful and ineffective top-down command and control
- Culture of transparency regarding what we know and what we don’t know
- Fast and flexible resource allocation to swarm to emergent value
- Focus on removing bottlenecks rather than explaining variances to original effort estimates

Different levels of planning

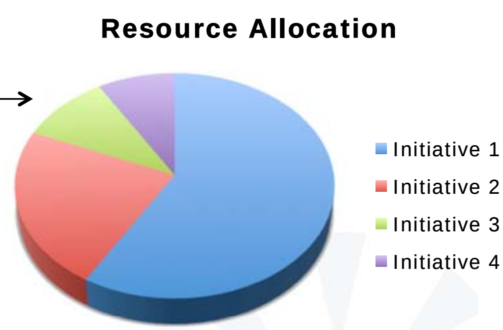


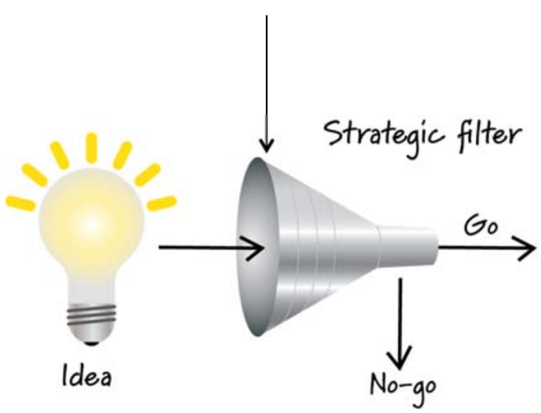
Elements of a "budget"



Strategic initiatives drive filtering and resource allocation

- Strategic Initiatives
  - Initiative 1
  - Initiative 2
  - Initiative 3
  - Initiative 4
  - ...



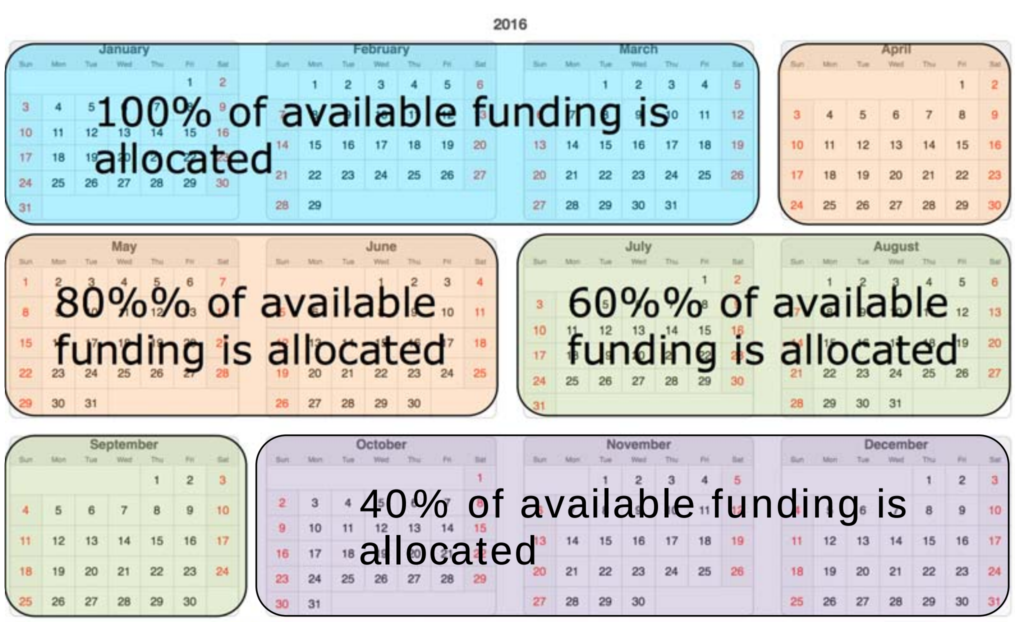


Resource allocation

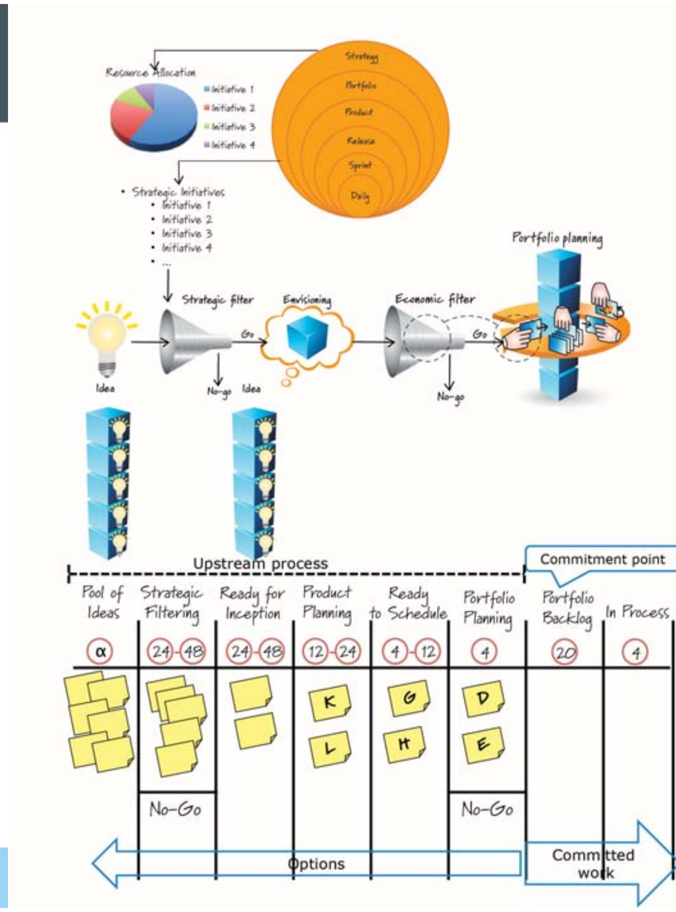
Allocate funding at the value stream or product level

Allow for dynamic reallocation of budgets across value streams / products

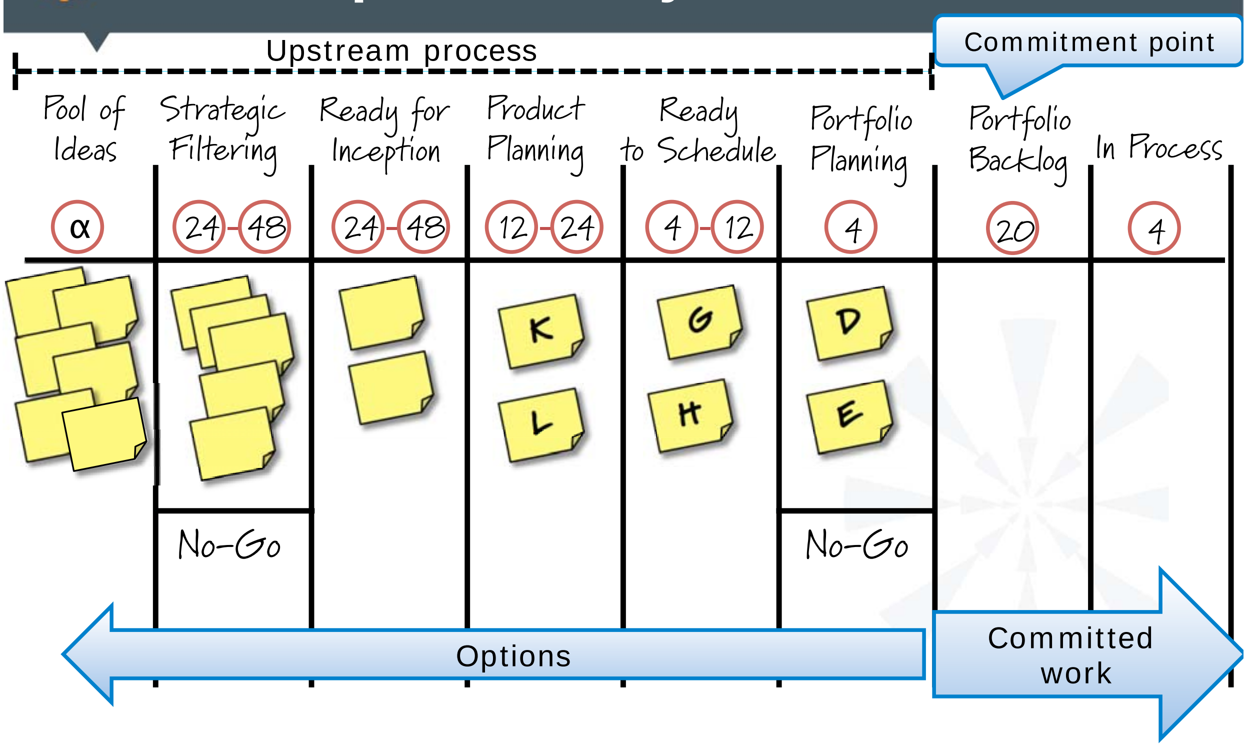
An approach – rolling budgeting



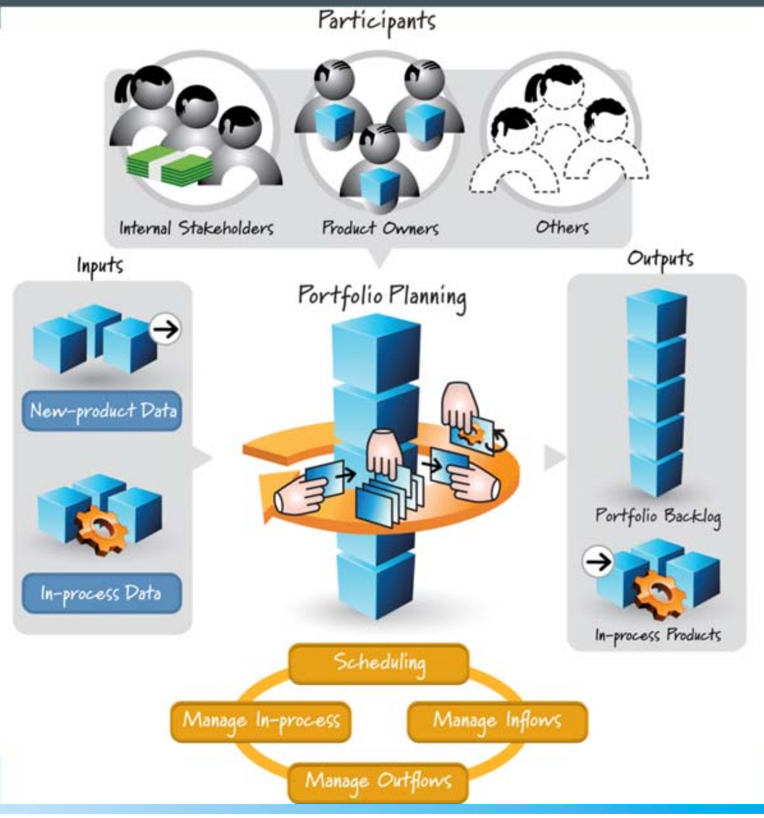
Strategic planning outputs feeding a portfolio kanban system



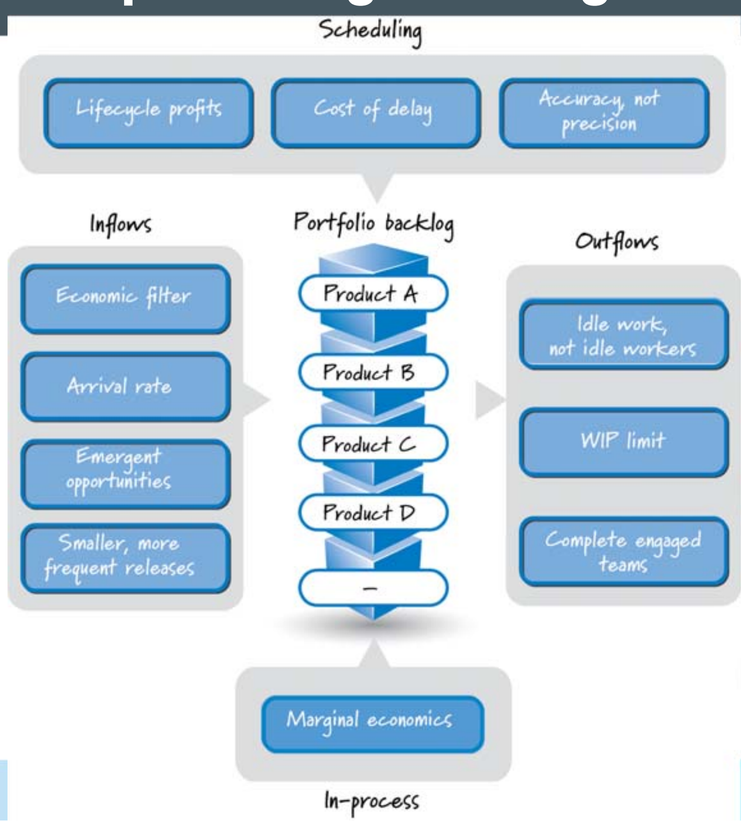
Kanban portfolio system



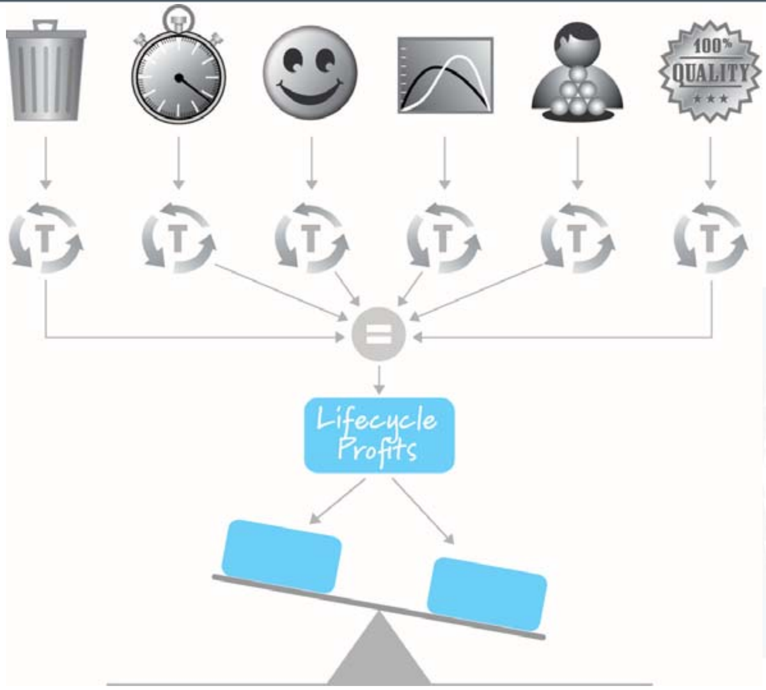
Portfolio planning



Portfolio planning strategies

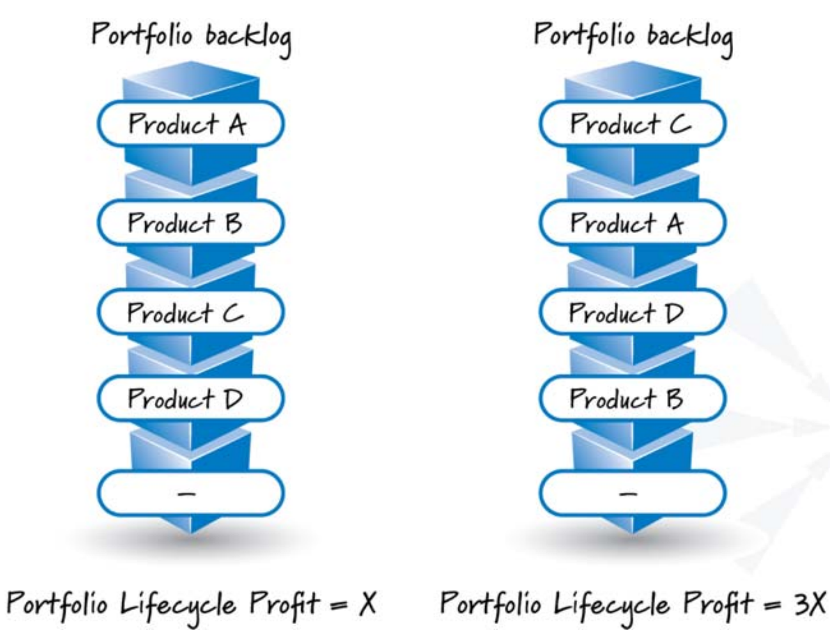


We need an economic framework



Based on Reinertsen "The Principles of Product Development Flow: Second Generation Lean Product Development"

Sequence portfolio to maximize portfolio-wide lifecycle profits



Cost of delay is the time dimension

Cost of delay is not the only factor to consider when prioritizing items in the portfolio

It is the time dimension that must be considered because it affects all other prioritization variables such as cost, benefit, knowledge, and risk

Estimate for accuracy not precision

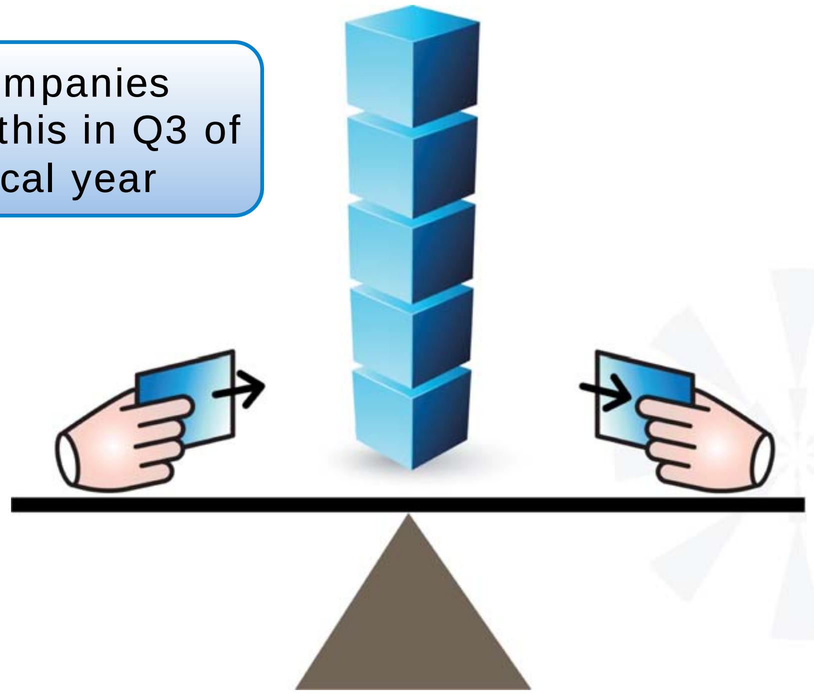
T-shirt size estimating

Size	Rough Cost Range
Extra Small (XS)	£10k to £25k
Small (S)	£25k to £50k
Medium (M)	£50k to £125k
Large (L)	£125k to £350k
Extra Large (XL)	>£350k

(an example)

Need to balance portfolio inflow and outflow rates

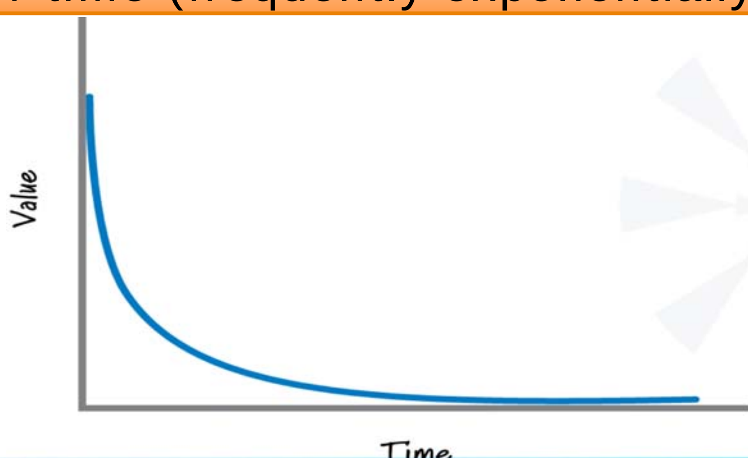
Most companies violate this in Q3 of their fiscal year



Deal with emergent opportunities quickly

Emergent opportunities arrive continuously and randomly

They are perishable—their values decay over time (frequently exponentially)

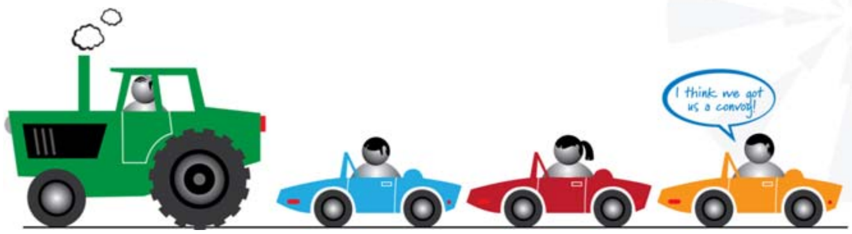


Size affects performance

Product/project size affects overall portfolio performance

What happens if you get behind the large farm vehicle on a single lane country road?

How do the lifecycle profits of a product compare between one large release and multiple, smaller releases?

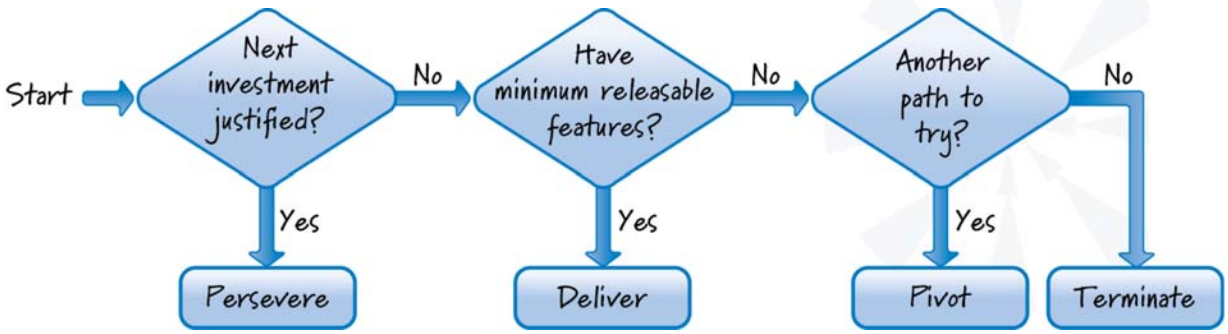


The importance of a WiP limit

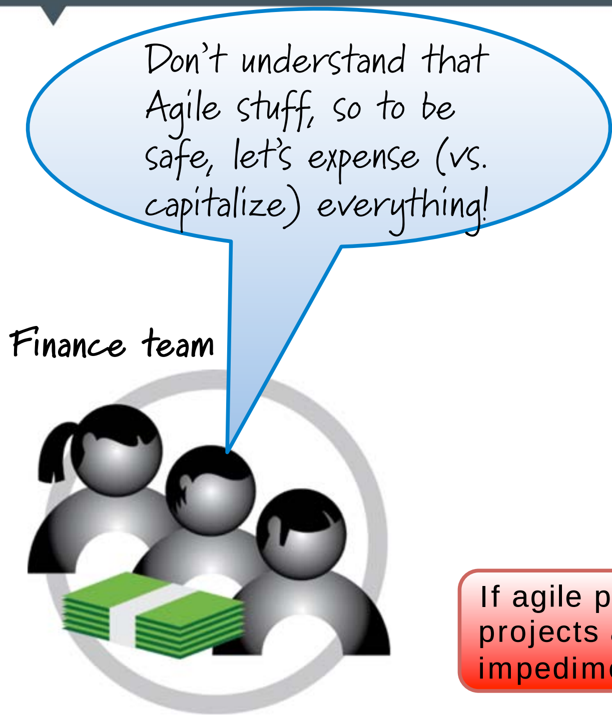
Why should a good restaurateur not seat paying customers at an available table if 30% of the servers called in sick that evening?

Marginal economics enables fail fast

If you start working on a product/ project and you subsequently decide it is not worth finishing it, will you kill it?



Misalignment with Finance team on classifying development costs



Classifying everything as expense results in overpaying taxes and understating value

Accounting standards use Waterfall examples to explain capitalization rules

If agile projects are expensed and waterfall projects are capitalized, this a major impediment to adopting agile!

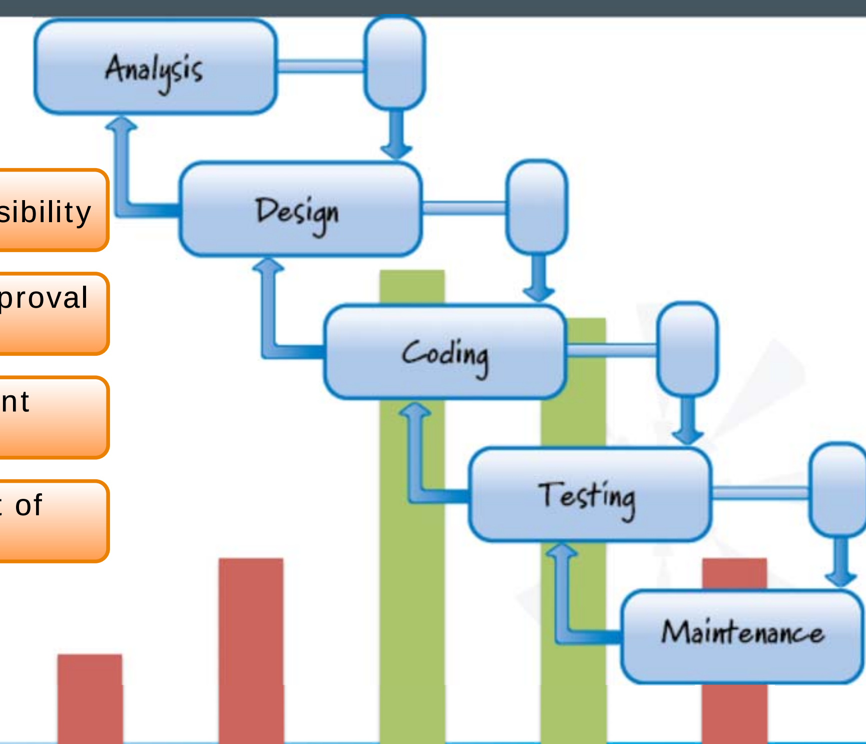
Standard software capitalization process

Achieved technical feasibility

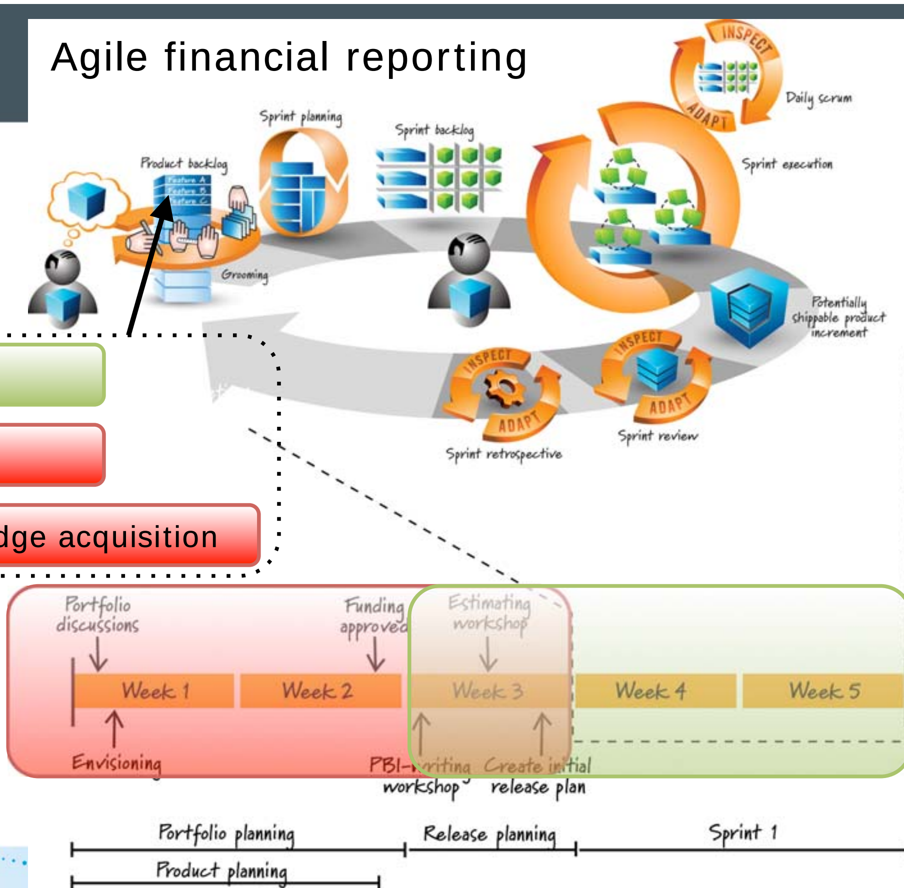
Written managerial approval to develop

Committed development resources

Management confident of success



Agile financial reporting



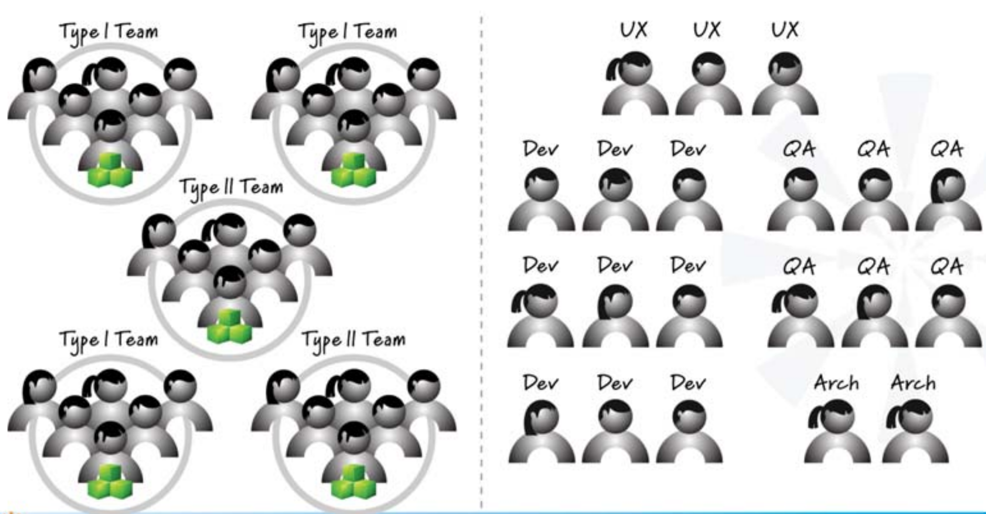
Features

Defects

Knowledge acquisition

Agile teams are units of capacity

We favor long-lived teams that as a unit have a known capacity to deliver value



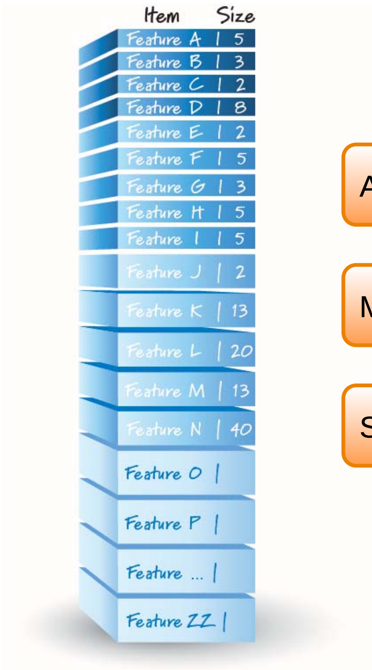
The BIG question!

Do we need to track individual task hours?

The issues with hours

- Individual contributors HATE it
- People often fill out their time card at the end of the week to achieve the target number
- Hours above threshold limit (e.g., 40 hours/week) may or may not be accounted for
- Gives the illusion of precision
- Ignores the fact that the team is the unit of capacity

Use "story points" (product backlog size estimates)

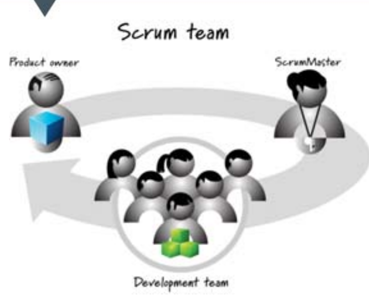


Addresses cost at a much more meaningful level

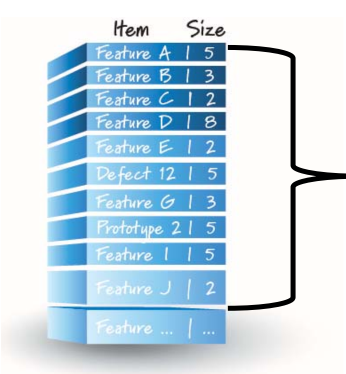
Many teams already use them

Simple, reliable, and easily verifiable

Example using story points



Has a fixed cost per sprint (e.g., £20,000/sprint)



Bring 40 points of work into sprint

30 points are new features

5 points are defects

5 points are knowledge acquisition

Capitalize = £20k * (30/40) = £15k

Expense = £20k * (10/40) = £5k

Challenge Question #1

How do you account for people who work across Scrum teams (i.e., one person on multiple teams)?

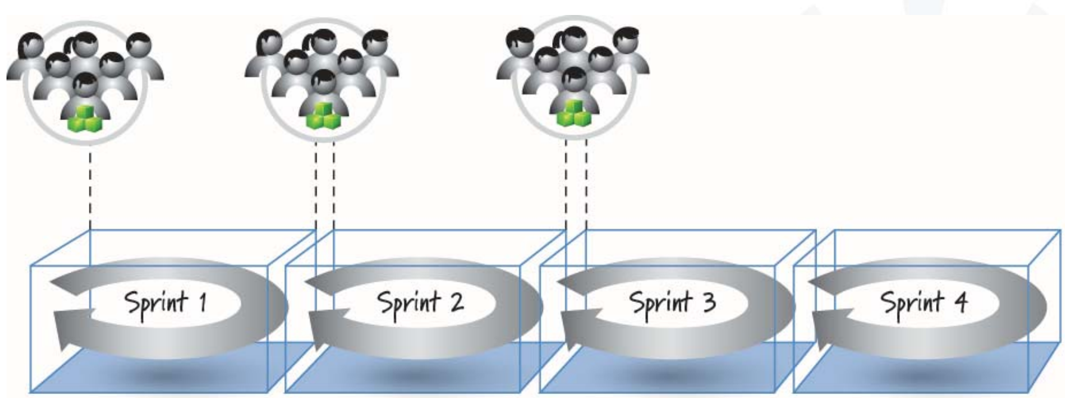
Track at the aggregate level instead of how many hours did a person spend on each team

Typically the DBA spends 40% on Team 1 and 60% on Team 2

Challenge Question #2

How do you keep up with team composition changes that could occur from sprint to sprint?

Unit of capacity is the team so the economics favor long-lived teams



Challenge Question #3

Auditor wants to pick a developer and ask what he was doing on September 12th! If there is no timesheet with hours, how can we answer this?

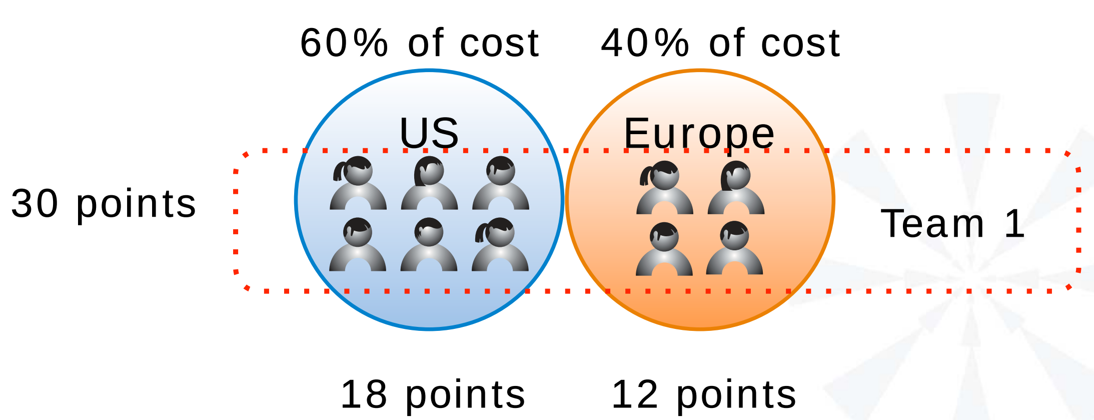
Would you really get written up for this? Validate the assumption!

Developer X acted as member of a Scrum team where he worked along with his colleagues doing whatever needed to be done on September 12 to help his team accomplish its goal!

Re-asserting that the unit of capacity in agile is the team and not the individual, so the auditors should be focusing on how the core assets of the company (high-performance agile teams) are being utilized (cost) to deliver business value (benefit)

Challenge Question #4

How do you do the math when the same team has people who reside in different countries?



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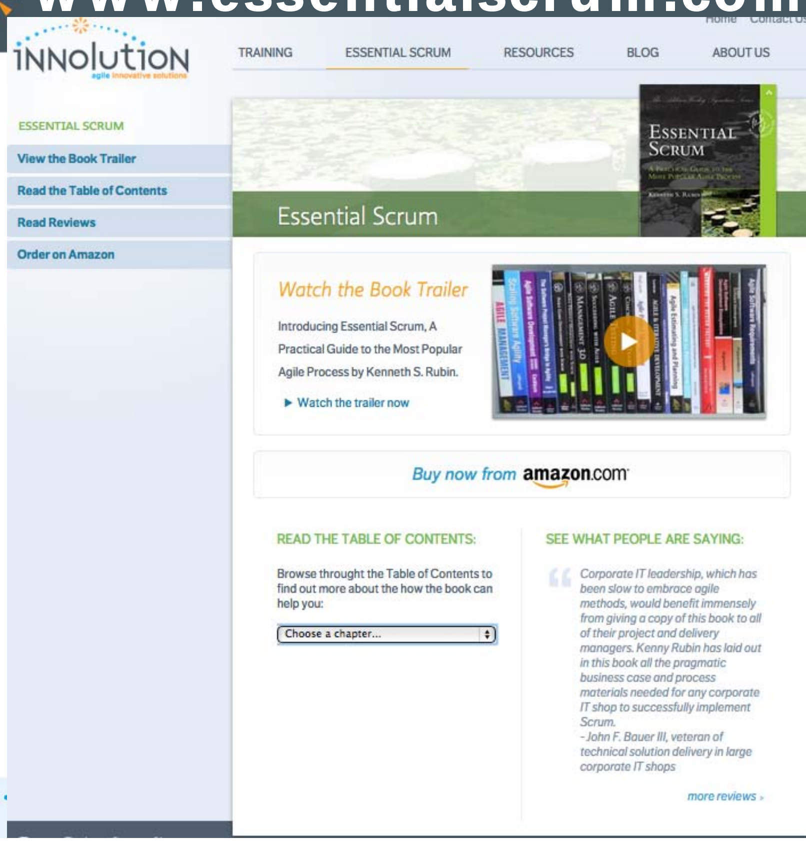

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