Planning for Value

Value Based Planning

A #NoProjects production

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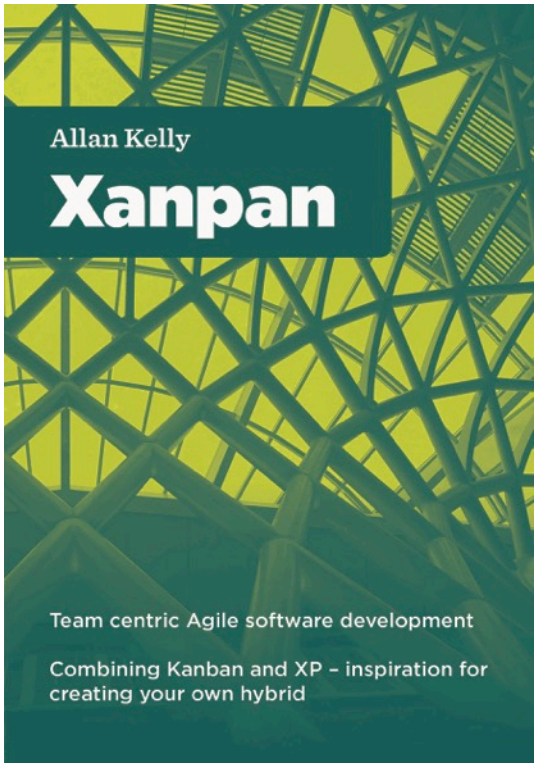
Allan Kelly…

- Training for Agile
- Advice on
  - Agile, adopting Agile
  - Organizing teams



Author

- **Xanpan**: Team Centric Agile Software Development https://leanpub.com/xanpan (2014-2015)
- **Business Patterns for Software Developers** (2012)
- Changing Software Development: Learning to be Agile (2008)

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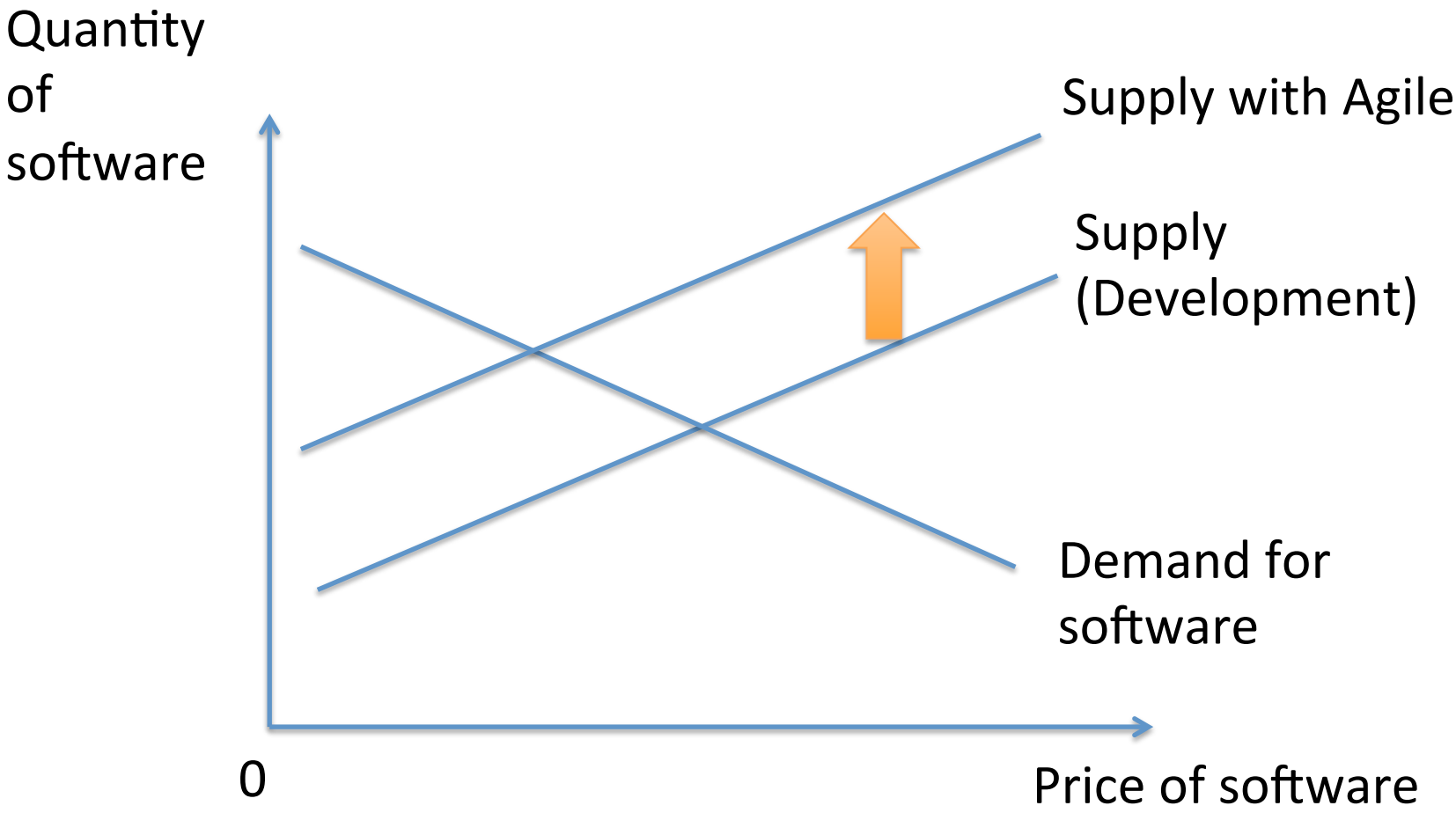
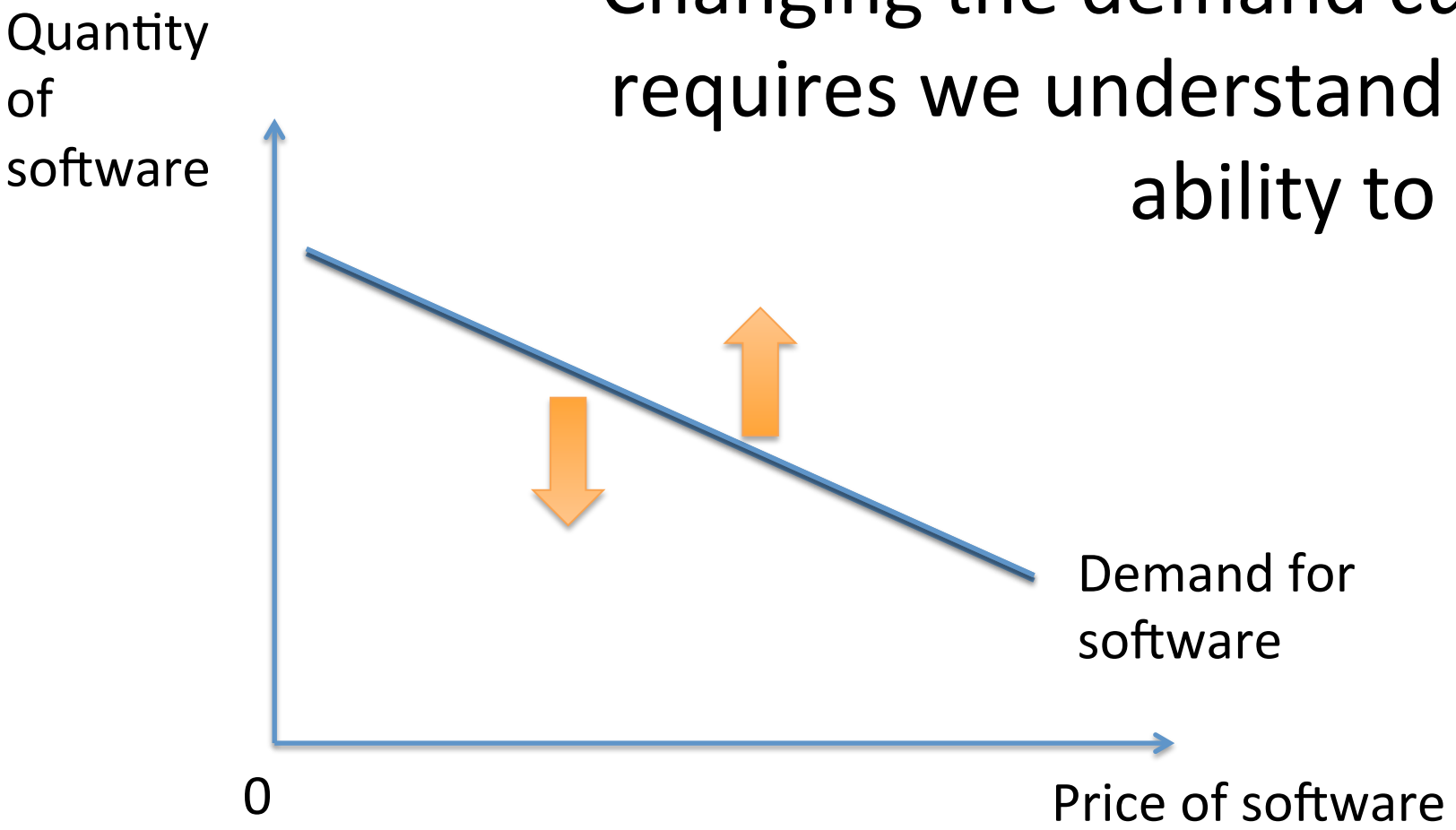


Agile toolkit helps boost supply but has little to address demand

Changing the demand curve requires we understand the ability to pay



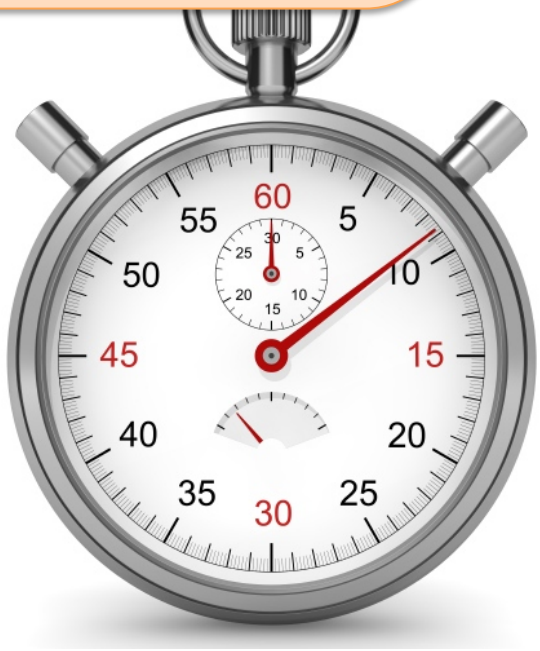
Assumption: Business pays = Benefit – Profit = Cost

“The Business” wants
to know when something will be done

Rational end dates?

In the US more than half of the large projects … predetermined end date is selected, and it is forced on the project by arbitrary decree.

Capers Jones, 2008



The problem

“The Business” wants

~~to know when something will be done~~

it done by a date

Project Success Criteria

- On Schedule
- On Budget
- On Quality (Features)

Where's the value?
£ $ €

Success Criteria

- Delivers benefit to one or more stakeholders
- Stakeholders define value
  - Money
  - More money
  - Improved health
  - Better education, knowledge, …

Value = Benefit to someone defined in their own terms

The usual problem

"The Business" wants

~~to know when something will be done~~

~~it done by a date~~

to make money

Exercise

- You have been asked to build an online shopping site
  - Imagine you are a software provider
- Small groups
- 4 minutes
- See story handout
- **Suggest**:
  - approach, time, people, bid

As a multinational widget maker

I want an online sales platform to sell my new line of widgets direct to customers over the internet

So that I can make money for shareholders.

We expect to make $1m in the first year of online widget sales rising to $20m by year 4 and expect to break even on an EBITD basis in year 2.

Our provisional budget for this work is $1.2m.

As a home based widget maker

I want an online shop to sell my homemade widgets to customers directly over the internet

So that I can give up my day job and just make widgets.

I expect to make $20,000 in the first full year of sales if I can launch in time for the Christmas market. I need to clear $100,000 by year 3 in order to service the loan I will take out to fund web development.

My accountant tells me that $5,000 is more than enough for a professional WordPress website but he cannot advise on how much I should allow for the online shopping system.

Value is an input

Solution must be built to:

a) Obtain as much of the value as possible

b) For a cost which leaves some profit

How much profit is made
and
How much value is extracted
are negotiable.

How do you get to value?

- Ask your stakeholders
- Do the analysis
- Estimate

Regular deliveries are good because…

- Give more opportunities for feedback
- Tighter feedback loops
- Allow for changing requirements
- Improve quality
- Reduce risk

- They increase value
- They make more money ££$

(O, and reduce risk, improve quality, etc. etc.)

Agile folk get it wrong!

Cost-Benefit
Return on Investment (ROI)
Net Present Value (NPV)

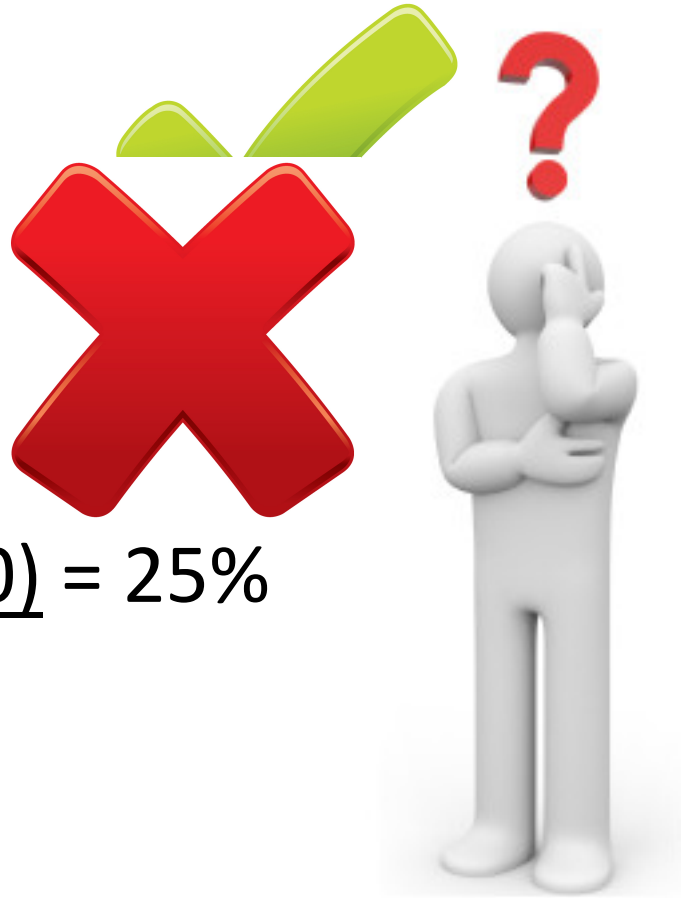
Expected costs $1,000,000

Expected revenue $1,250,000

12 months to develop

Therefore:

$$ROI = \frac{(1{,}250{,}000 - 1{,}000{,}000)}{1{,}000{,}000} = 25\%$$



Simplistic ROI using NPV

	Cost	Return	Net
Jan	$ 1,000,000	$ 0	-$ 1,000,000
Feb	$ 0	$ 0	$ 0
March	$ 0	$ 0	$ 0
April	$ 0	$ 0	$ 0
May	$ 0	$ 0	$ 0
June	$ 0	$ 0	$ 0
July	$ 0	$ 0	$ 0
August	$ 0	$ 0	$ 0
Sept	$ 0	$ 0	$ 0
Oct	$ 0	$ 0	$ 0
Nov	$ 0	$ 0	$ 0
Dec	$ 0	$ 1,250,000	$ 1,250,000
Total:	$ 1,000,000	$ 1,250,000	$ 250,000

Over 12 months

25% is too simplistic

Also need to know

- "Risk free" rate
  - i.e. bank rate
- Assume 5%

Then

NPV = $193,309

19.3%

Cash gets spent month by month

	Cost	Return	Net
Jan	$ 83,333		-$ 83,333
Feb	$ 83,333		-$ 83,333
March	$ 83,333		-$ 83,333
April	$ 83,333		-$ 83,333
May	$ 83,333		-$ 83,333
June	$ 83,333		-$ 83,333
July	$ 83,333		-$ 83,333
August	$ 83,333		-$ 83,333
Sept	$ 83,333		-$ 83,333
Oct	$ 83,333		-$ 83,333
Nov	$ 83,333		-$ 83,333
Dec	$ 83,333	$ 1,250,000	$ 1,166,667
Total	$ 1,000,000	$ 1,250,000	$ 250,000

Big bang delivery

$83,000 per month

$1.25m at end

Risk free rate 5%

NPV = $215,725

<u>21.6%</u>

Monthly deliveries

	Cost	Return	Net
Jan	$ 83,333	$ 104,167	$ 20,833
Feb	$ 83,333	$ 104,167	$ 20,833
March	$ 83,333	$ 104,167	$ 20,833
April	$ 83,333	$ 104,167	$ 20,833
May	$ 83,333	$ 104,167	$ 20,833
June	$ 83,333	$ 104,167	$ 20,833
July	$ 83,333	$ 104,167	$ 20,833
August	$ 83,333	$ 104,167	$ 20,833
Sept	$ 83,333	$ 104,167	$ 20,833
Oct	$ 83,333	$ 104,167	$ 20,833
Nov	$ 83,333	$ 104,167	$ 20,833
Dec	$ 83,333	$ 104,167	$ 20,833
	$ 1,000,000	$ 1,250,000	$ 250,000

Per month

$83,000 per/month

$104,167 value/month

Risk free rate 5%

NPV = $243,359

24.34%

Properly modeling NPV

Increases value by $50,000

Adds 5% to return

Follow the money

Is this project right for Agile?
Or is Waterfall better here?

Who cares about *right*?
Agile will make more money

Which story first?

As a toy retailer I want an app that allows kids to select from my special range so that their parents can buy.

Value = $355,000

Time to delivery = 4 weeks

As a toy retailer I want an app that allows kids to make lists of toys they want so their parents can buy.

Value = $1,060,000

Time to delivery = 6 weeks

Which story first?

As a toy retailer I want an app that allows kids to select from my special **HALLOWEEN** range so that their parents can buy.

Value = $355,000

Time to delivery = 4 weeks

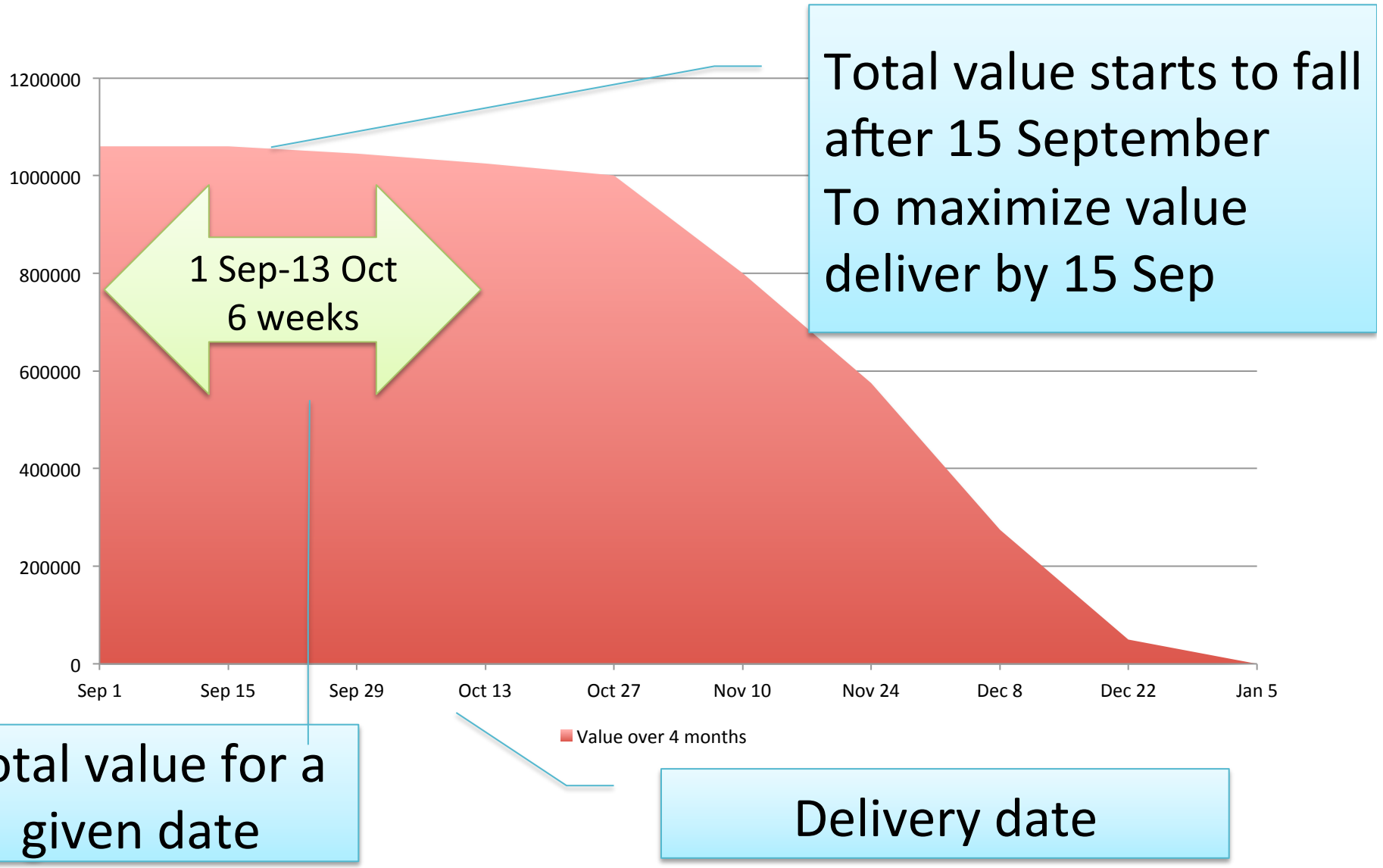
As a toy retailer I want an app that allows kids to make lists of toys they want **SANTA TO BRING** so their parents can buy.

Value = $1,060,000

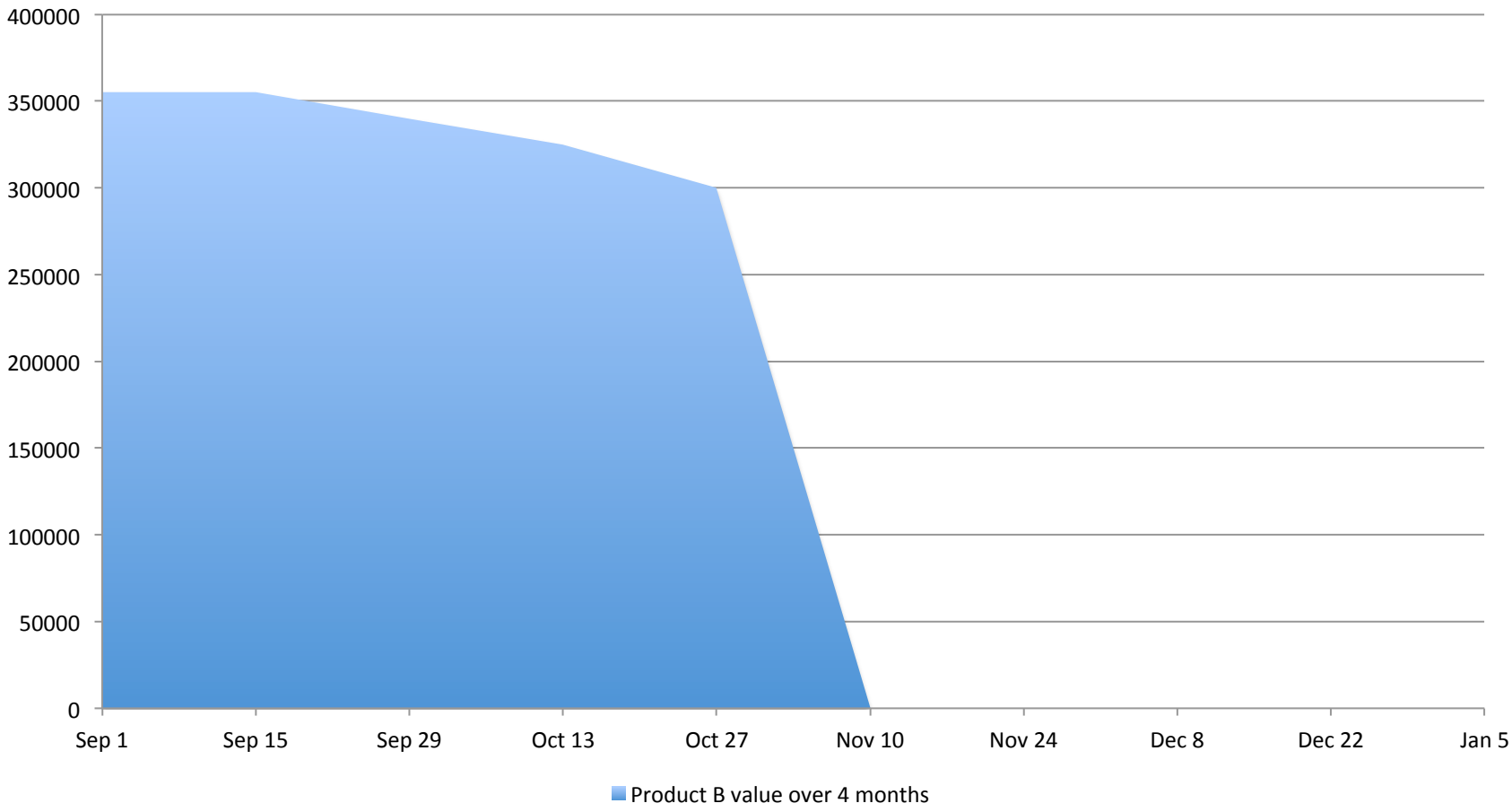
Time to delivery = 6 weeks

Today is 1 September

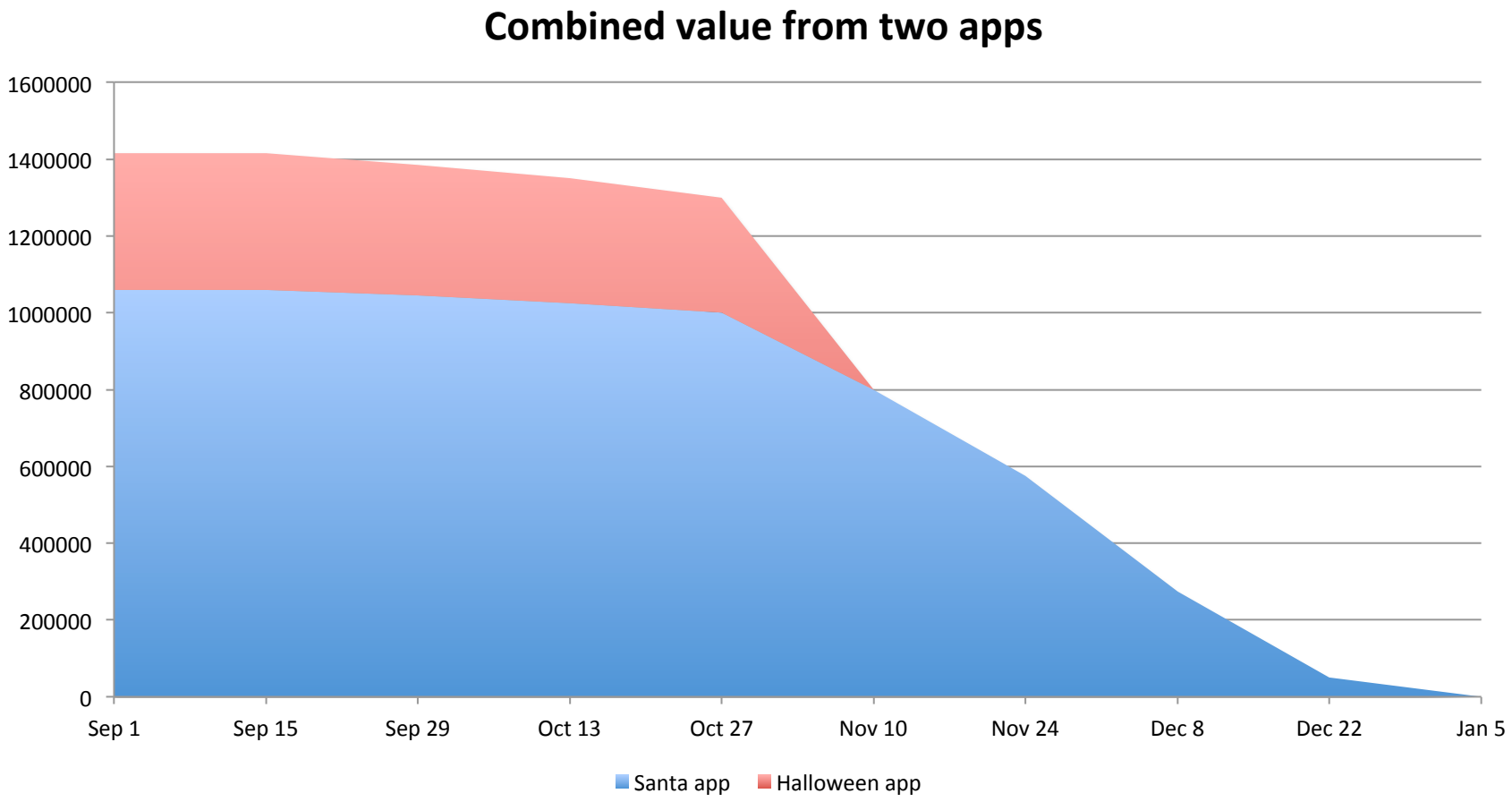
Santa app total value over 4 months



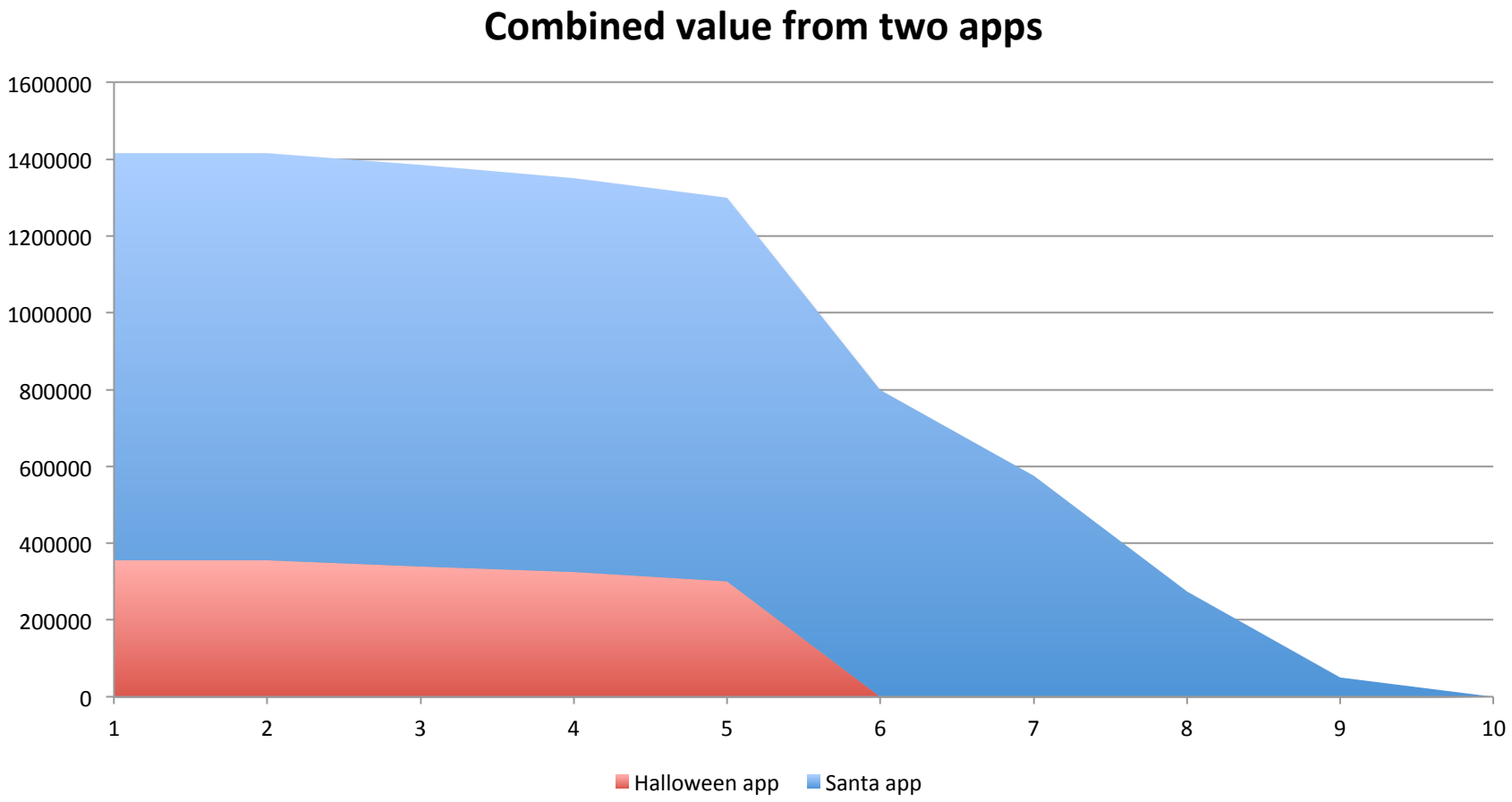
Halloween app value over 4 months



Together


Combined value from two apps
1600000
1400000
1200000
1000000
800000
600000
400000
200000
0
Sep 1
Sep 15
Sep 29
Oct 13
Oct 27
Nov 10
Nov 24
Dec 8
Dec 22
Jan 5
Santa app
Halloween app

Together


Combined value from two apps
1600000
1400000
1200000
1000000
800000
600000
400000
200000
0
1
2
3
4
5
6
7
8
9
10
Halloween app
Santa app

What do you want to do?

A. Do Halloween & forget Santa
B. Do Santa & forget Halloween
C. Change the estimates
D. Do both and pray
E. Add more people
F. Walk away
G. None of the above

Santa first

App makes $1,025,000

- $35,000 lost because it was not ready by 13 October

Halloween app makes $0

Total = $1,025,000

Halloween first

Halloween app makes $340,000

- $15,000 lost because not ready before 29 September

Santa makes $800,000

- $225,000 lost because it is not ready until 10 November

Halloween comes first

Santa first

Total = $1,025,000

Halloween first

Total = $1,140,000

$115,000 more

Cost of Delay

- Extra costs incurred because delivery is late
  - e.g. temporary staff, priority shipping, penalty fines
- Revenue foregone:
  - Not being in the market (less time on sale)
  - Not being available before critical date
  - Not being in the market before competitors

Time is money?

More time -> More costs

More time -> Less revenue

Revenue is inversely proportional to time to delivery

"6 month delay can be worth 33% of life cycle profits"

McKinsey (Reinertsen) 1983

Today's Lesson

Know the Time-Value Profile of the thing you are building

How does the value change over time?

Deadlines are elastic by value

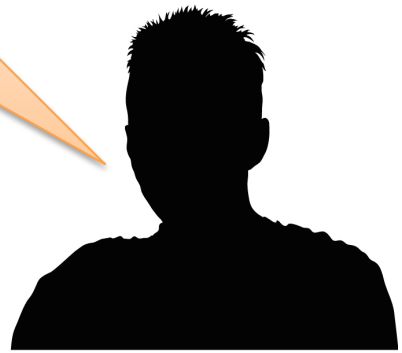
- We think of deadlines as binary
  - All or nothing on a date
- But deadlines are analogue
  - Different dates result in different values

Explain this…

I need this and I need it YESTERDAY

If all the value accrued yesterday then it is lost

O dear, I don't have a Tardis but maybe I can get it for you tomorrow?



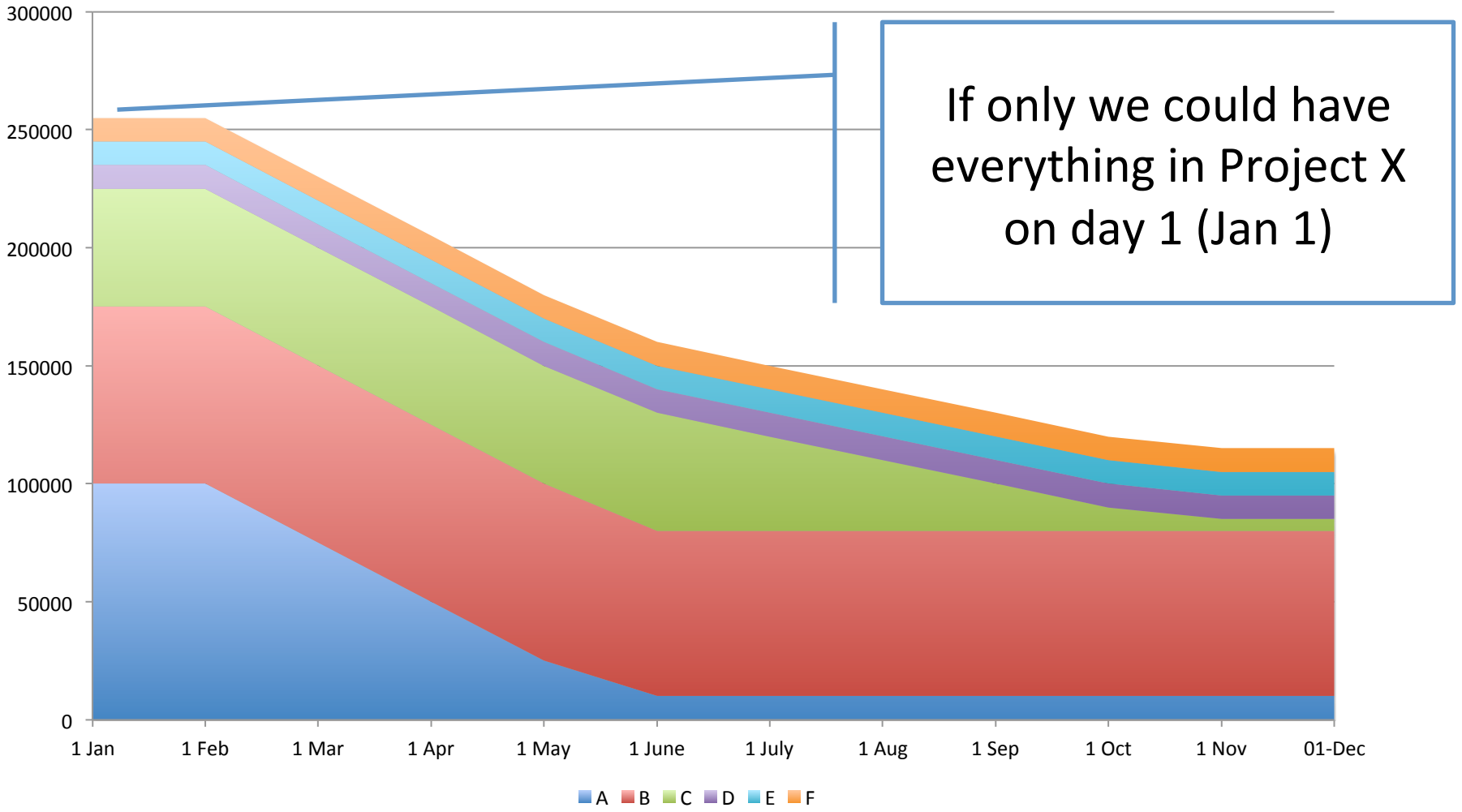
Brilliant, I knew I could count on you

If value still exists then it might be worth doing

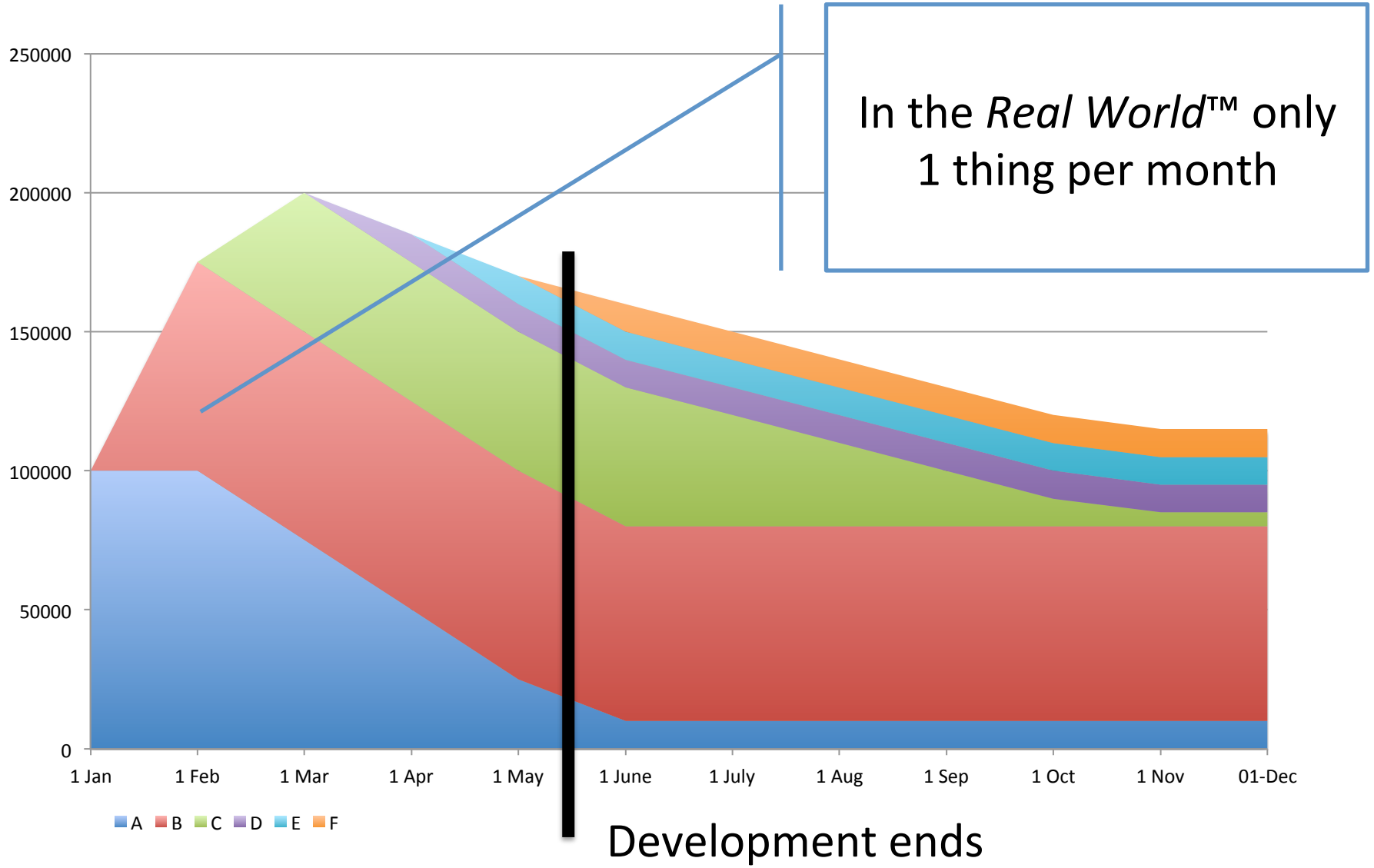
The Project problem

- You have one team
- You have one year
- You have two projects
  - Projects have similar value-time profiles
  - Projects are a collection of value adding features

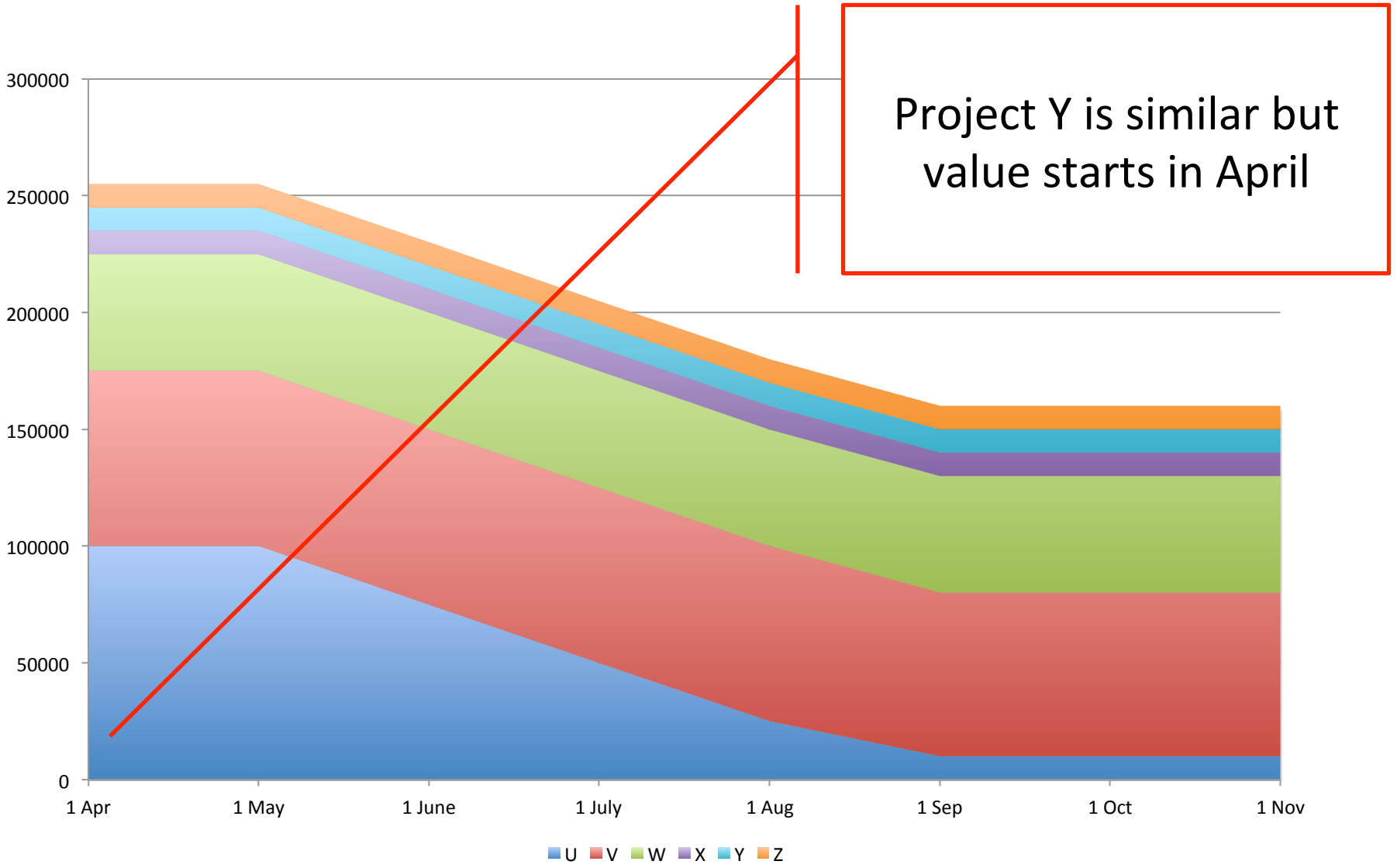
Project X Idea – Everything on 1 Jan



Project X Ideal – Reality, monthly releases

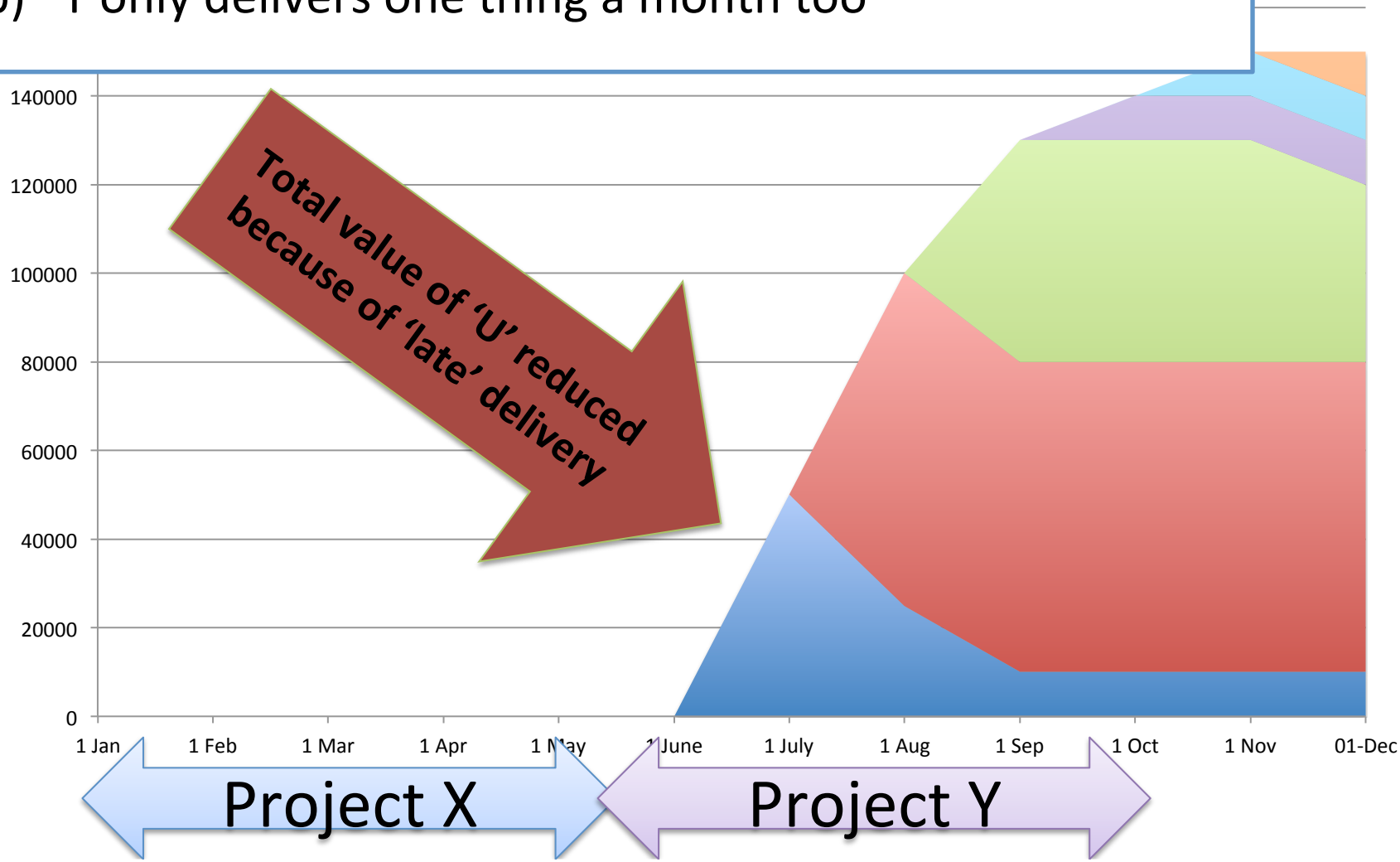


Project Y Ideal – Everything on 1 April



Project Y Actual – after project X

a) Project Y cannot start until June (when X has finished)
b) Y only delivers one thing a month too



Feature U: Time-Value Profile

	Delivery	
	April	July
1 Apr	£100,000	
1 May	£100,000	
1 June	£75,000	
1 July	£50,000	£50,000
1 Aug	£25,000	£25,000
1 Sep	£10,000	£10,000
1 Oct	£10,000	£10,000
1 Nov	£10,000	£10,000
1 Dec	£10,000	£10,000
Total:	£390,000	£115,000

Is very time sensitive

April-July sales worth:

£275,000

Other features in Project Y do not suffer same cost of delay

The Problem…

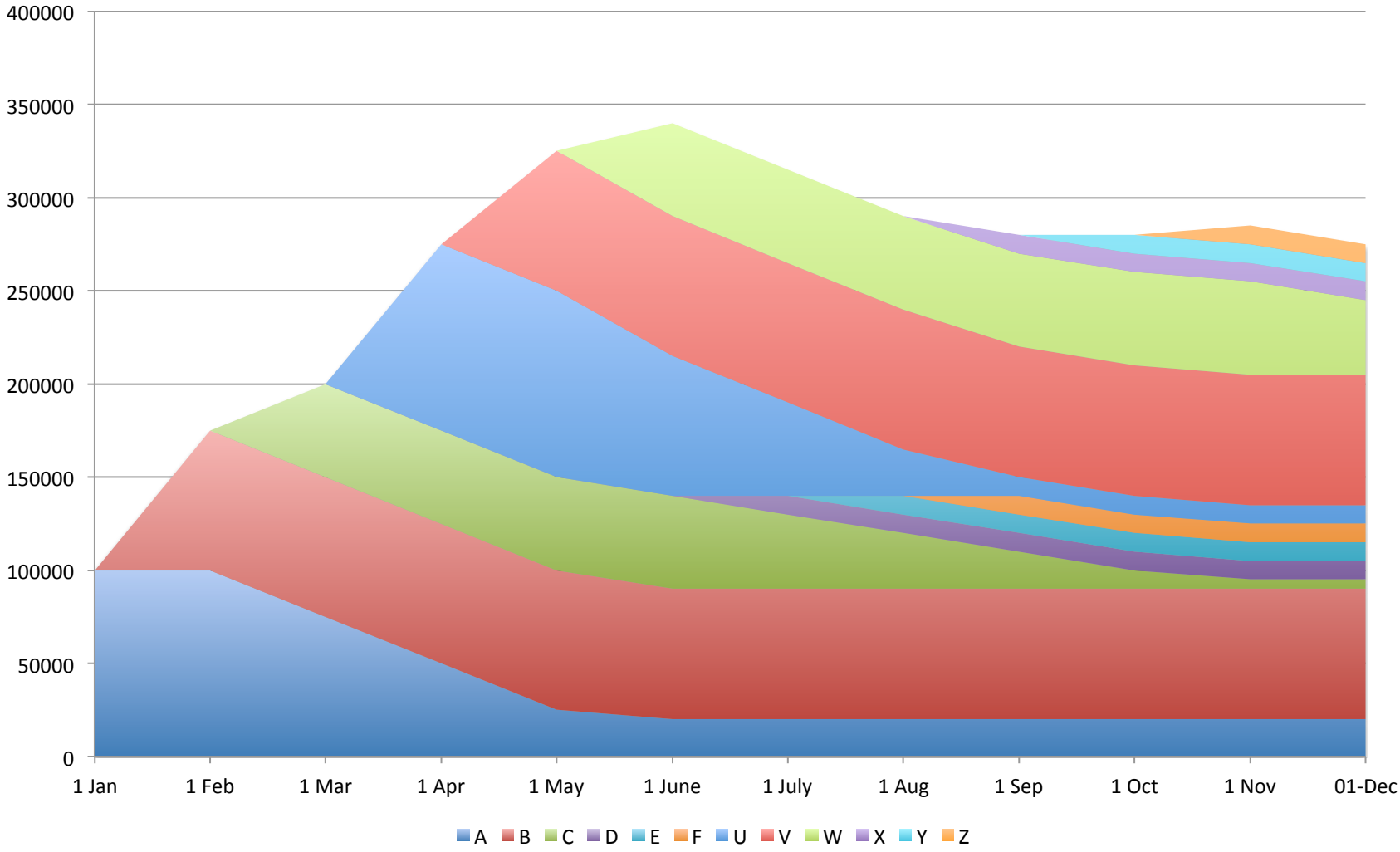
Y could deliver lots of value in April

But

The team is finishing low value items from X in April

- Project X - Features D, E & F total worth £240,000
- Project Y – Feature U lost value alone £275,000

Overlap projects



Planning

Planning work ahead requires:

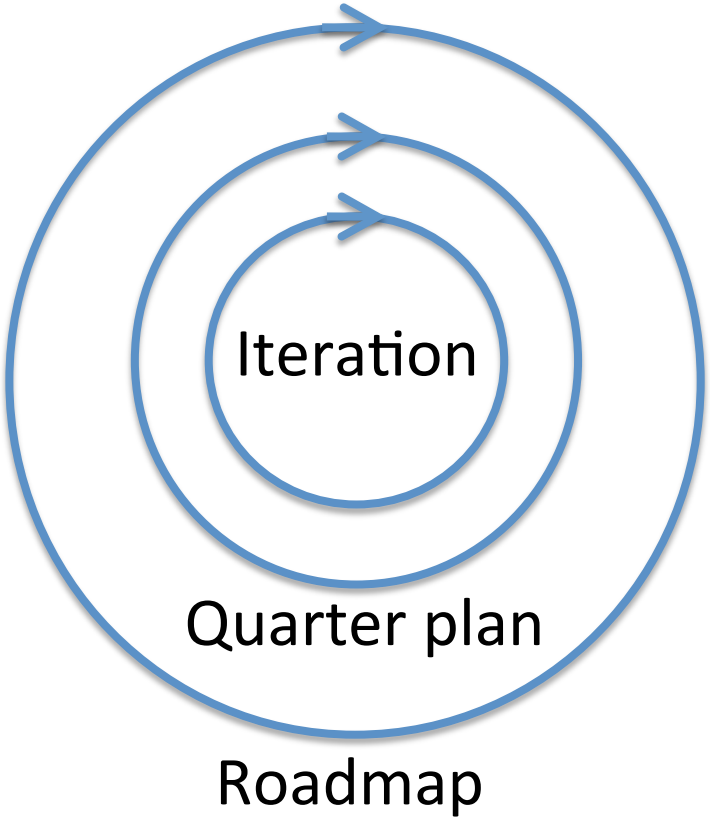
- Knowing what is wanted
- Knowing the value of the requests
- Knowing the value over time profile

Planning

Rolling planning

- Planning bit is a little long winded
- Good for a tutorial
- But the break seem a bit abrupt and rushed
- Need to work them together

3 Planning Horizons



- Iteration (Sprint)
  - 2-4 weeks ahead
- Quarter plan (Release)
  - Next quarter
  - 2-6 Iterations - Max 12 wks
  - (2-6 releases ahead)
- Roadmap
  - 1-2 years by quarter
  - 2-5 year ahead

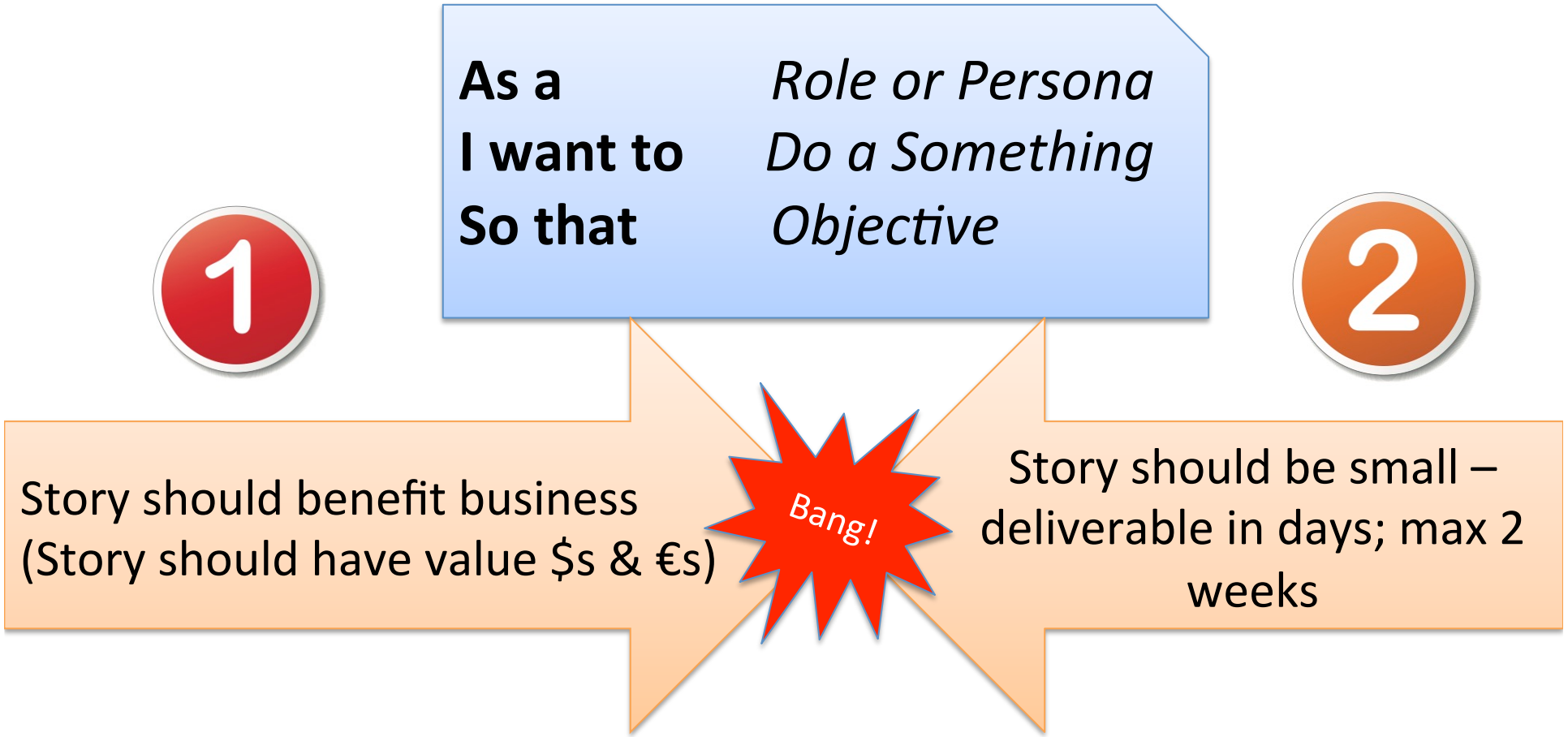
Our unit of work is…

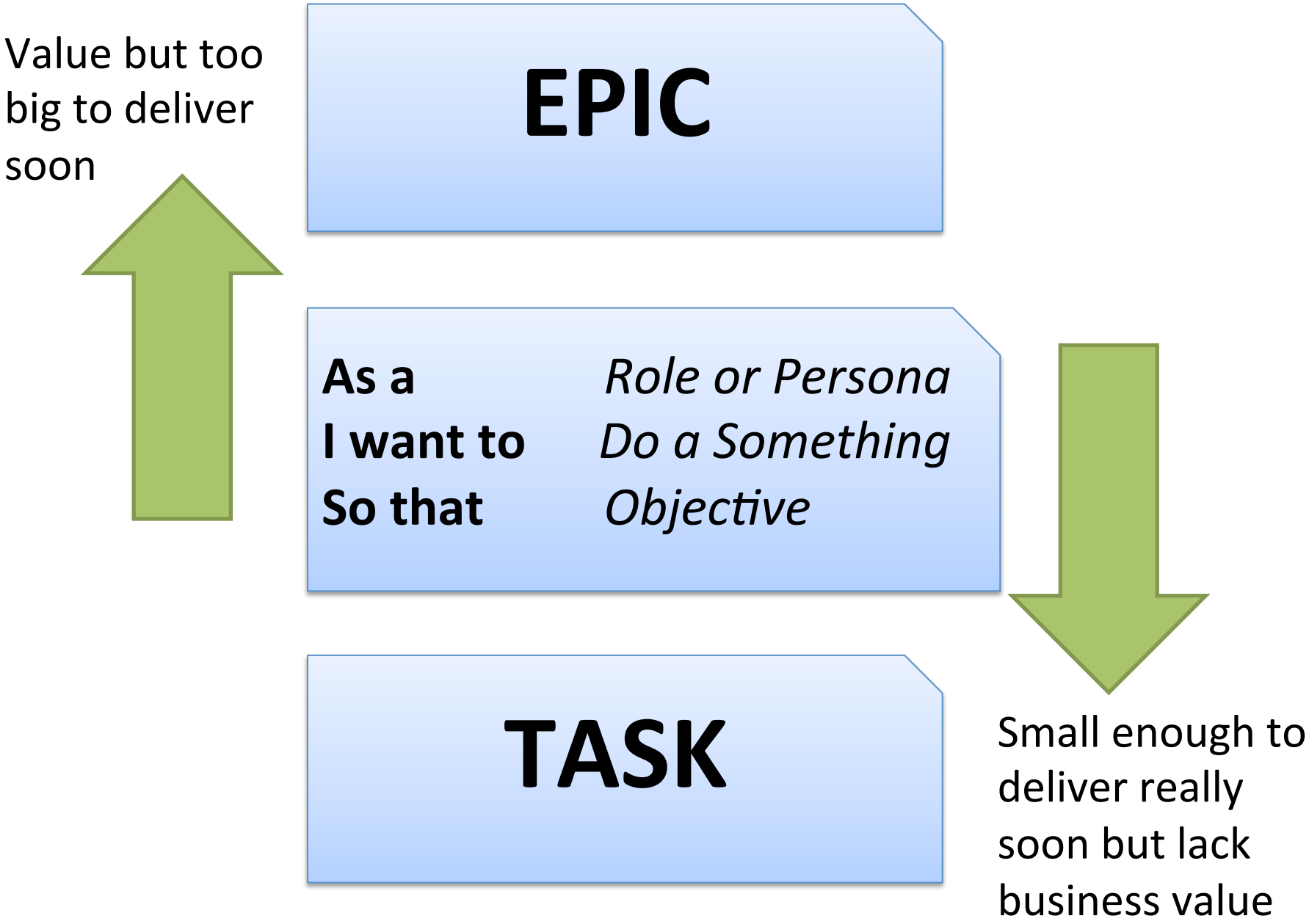
As a	*Role or Persona*
I want to	*Do a Something*
So that	*Objective*

- Story
- User story
- Use case
- Ticket

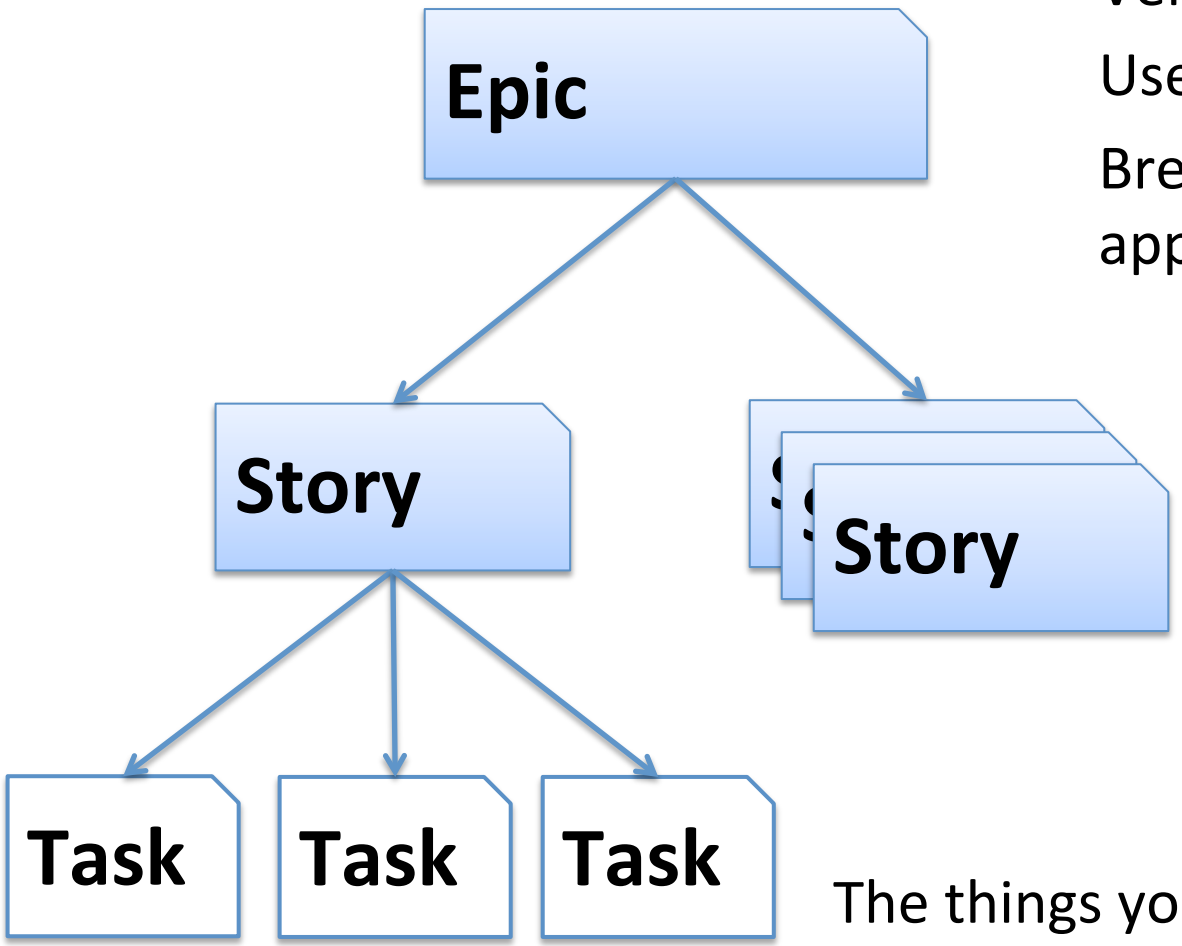
- Product Backlog Item
- MMF, QoV, etc.
- A Blue

2 Golden Rules




Value but too big to deliver soon
EPIC
As a Role or Persona
I want to Do a Something
So that Objective
TASK
Small enough to deliver really soon but lack business value

Epic-> Story-> Task



Very valuable but BIG

Used for forward planning

Breakdown to stories as they approach

Stories have value & add acceptance criteria

The things you do to build a story
Very small but no business benefit

3 Planning Horizons

Iteration

plan at Task level

Quarter (Release)

plan with Stories

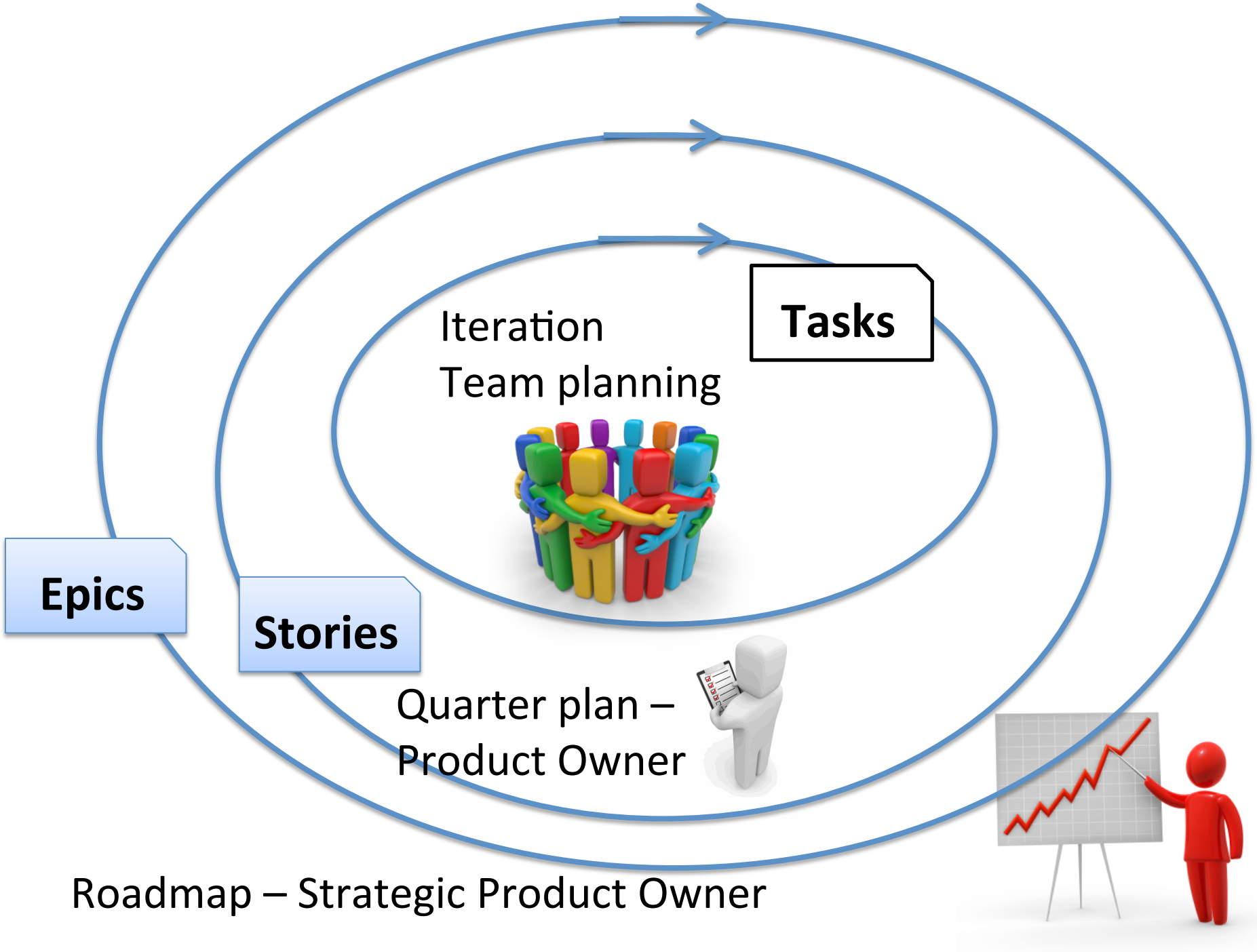
Roadmap

plan with Epics

Choose which Epics to breakdown to stories based on value

Assign value before effort

Only estimate effort after value

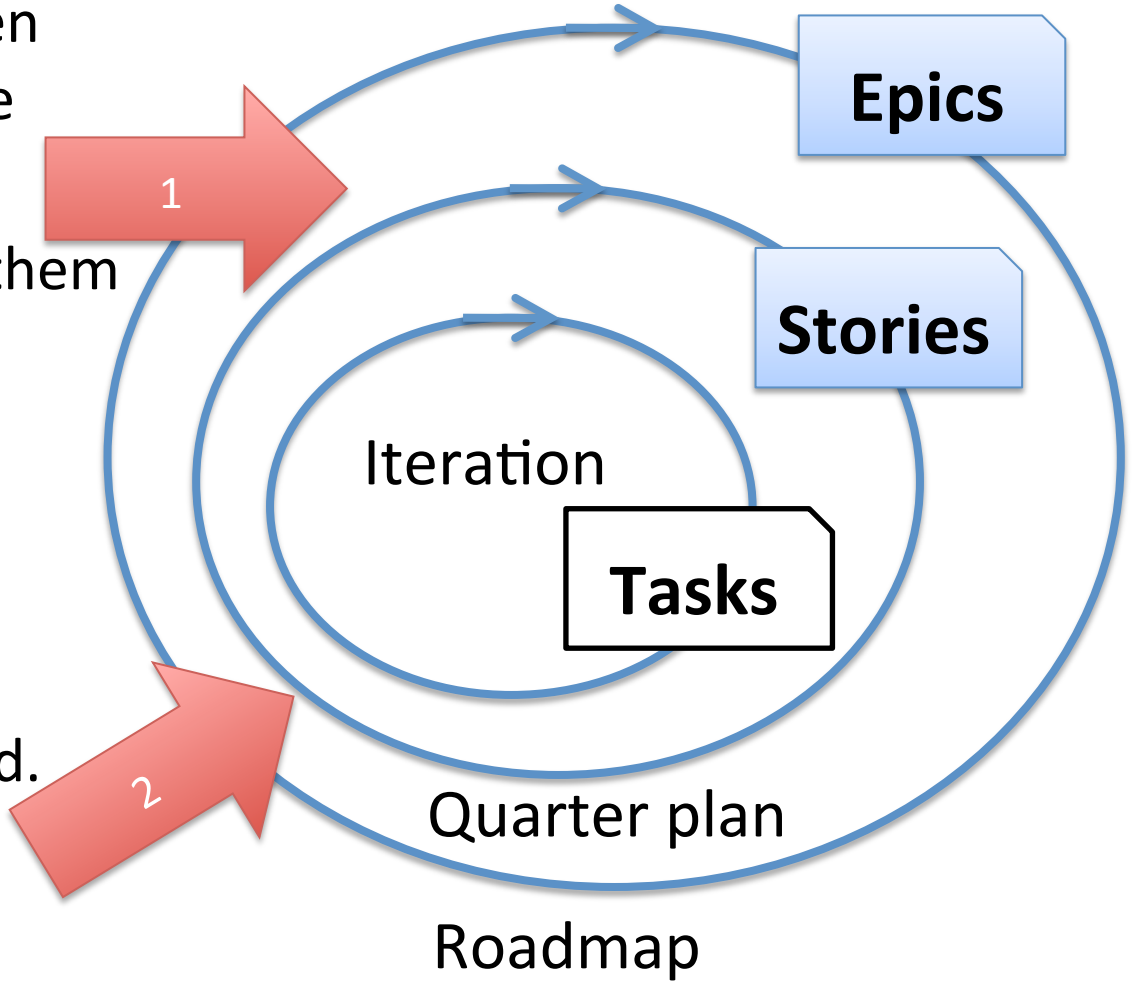

Tasks
Iteration
Team planning
Epics
Stories
Quarter plan –
Product Owner
Roadmap – Strategic Product Owner

3 Planning Horizons

	Iteration plan	Quarter plan	Roadmap
Context	Operational	Tactical	Strategic
Who	Team	Product Owner (Tactical)	Product Owner (Strategic)
Horizon	1 to 4 weeks forward	Max 12 weeks forward	Three months to many years forward
Detail level	Task	Story	Epic / *Customer Problems*
Frequency	Every 2 weeks	Ongoing, at least every 2 weeks	Regular, ad hoc
Certainty	High	Probable	Low
Reason	Action work	Prepare work	Scenario thinking Identify opportunities

Epics only move from Roadmap to Quarter when value is known & they are needed within 12 weeks.

When they move, break them down to stories



Stories move from quarter to iteration plan when they are scheduled.

Break down to tasks if helpful

- Know the **Time-Value profile**
- Know your target profit
- Know how much you can spend
- Work back to date & burn rate
- Now engineer

Questions?

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