

# Strategies for Agile Portfolio Management Agile 2013 Nashville, TN August 6, 2013 by Kenny Rubin

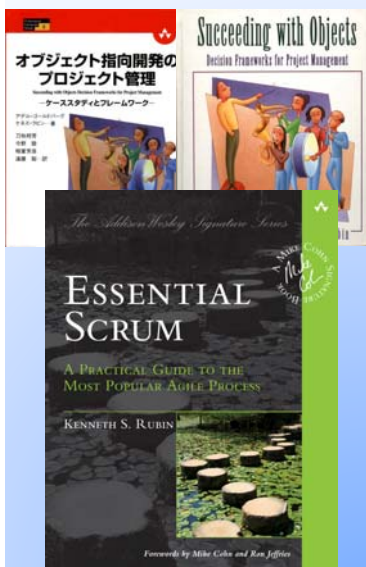
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## Background of Kenny Rubin

### Author



### Trainer/Coach

Trained more than  
**20,000 people** in  
Agile/Scrum, SW  
dev and PM

Provide Agile/  
Scrum coaching to  
developers and  
executives



### Experience

Former Managing  
Director



My first Scrum project was  
in 2000 for bioinformatics

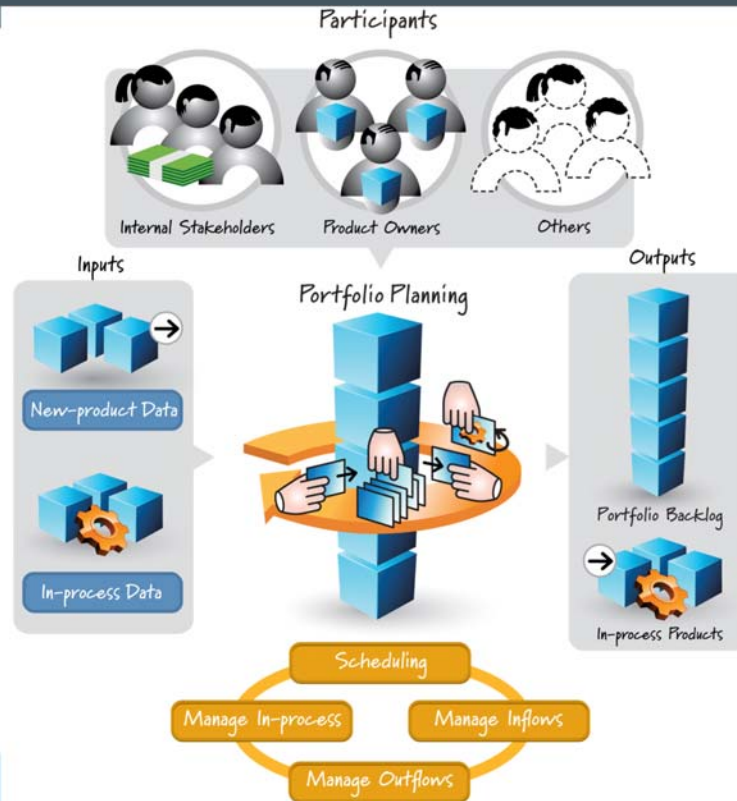
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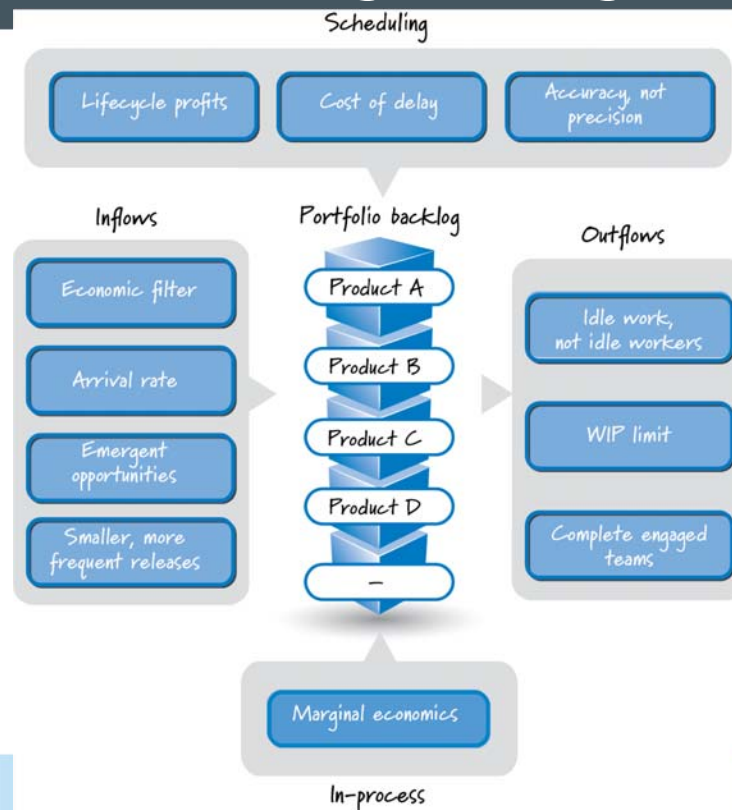
Executive



# Portfolio Planning



# Portfolio Planning Strategies





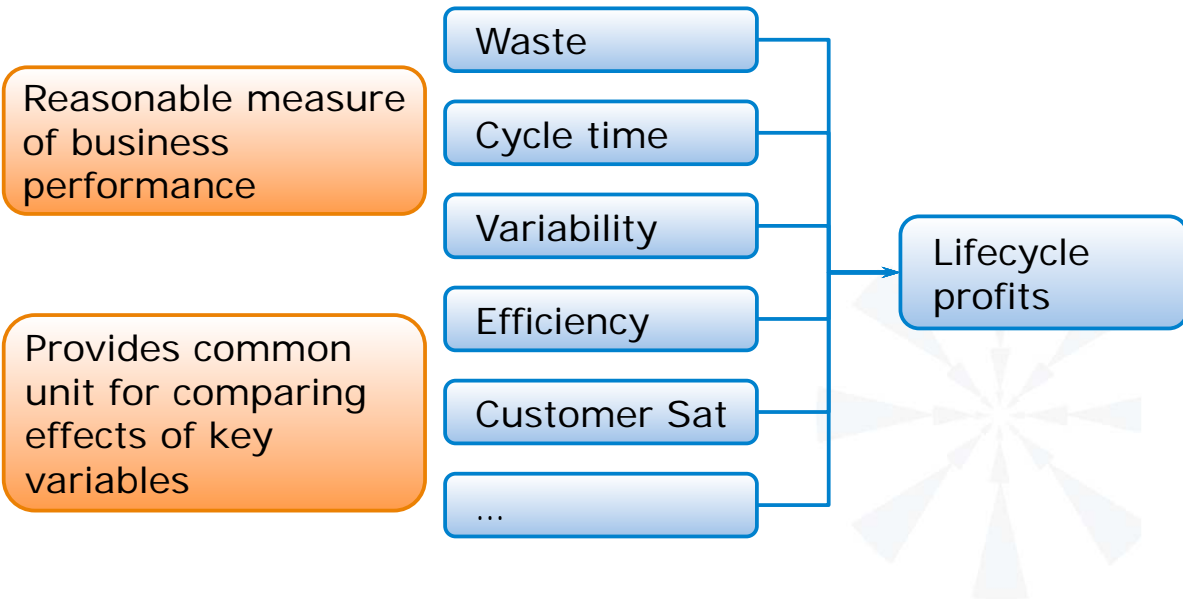
## Discussion Questions – Scheduling/Prioritization Variables

When prioritizing your portfolio, what are the principal variables that you use?

How do you compare variables to make economically sensible tradeoffs?



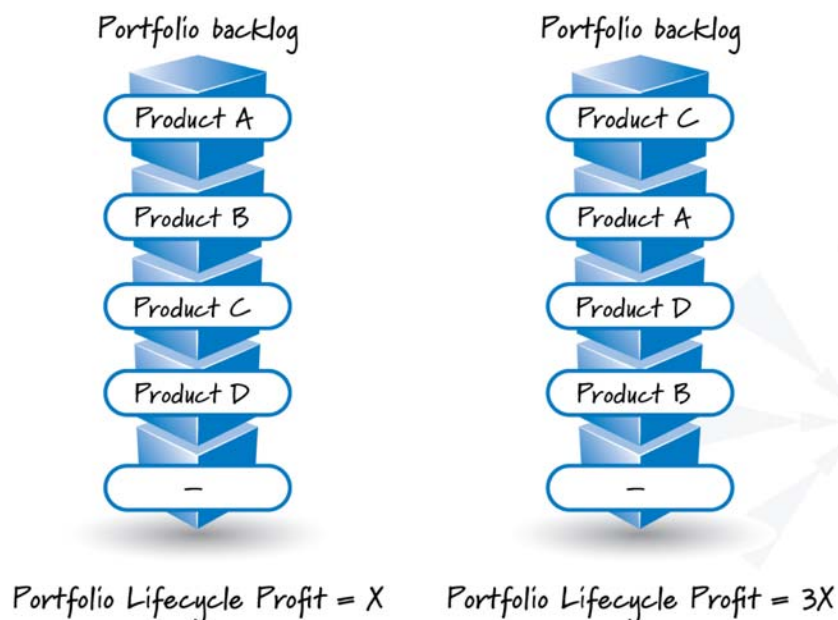
# Focus on Lifecycle Profits



Source: Donald Reinertsen



# Order Portfolio to Maximize Portfolio-Wide Lifecycle Profits







## Discussion Question – Cost of Delay

If you delay shipping your current project/product one month, what would be the cost of that delay (in lifecycle profits)?



## ✦ Issues with Cost of Delay

Rarely quantified (< 15% of the time)

Helps us decide if we should trade money for cycle time

Helps us decide if we should trade cycle time for variability



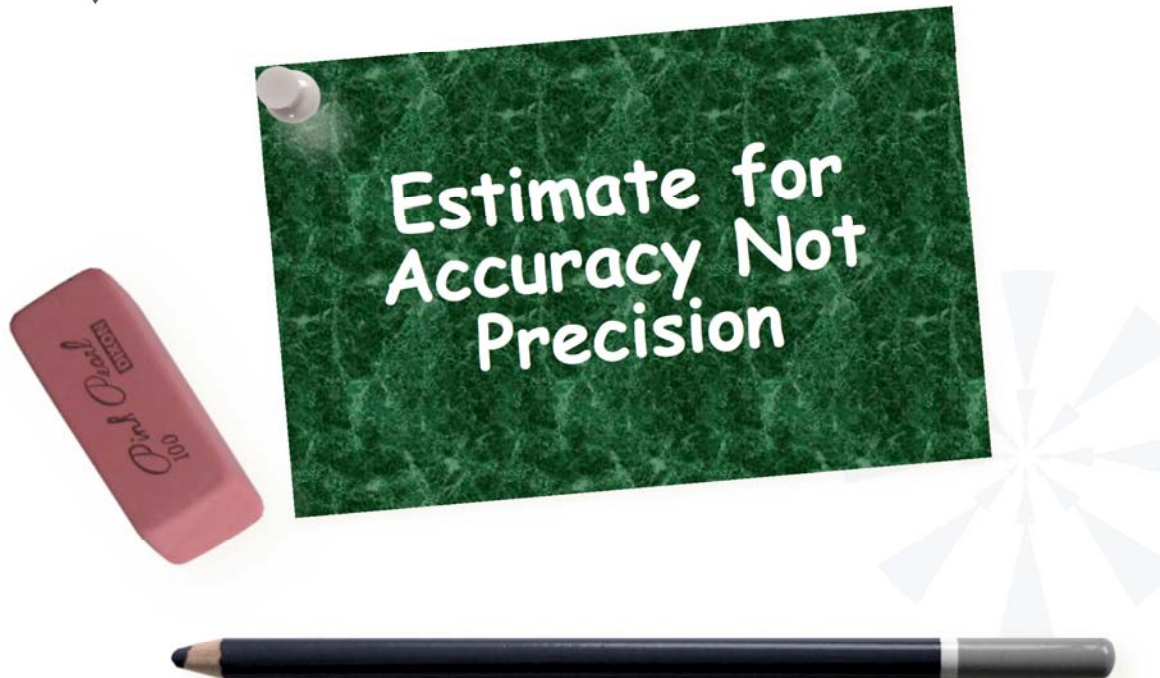
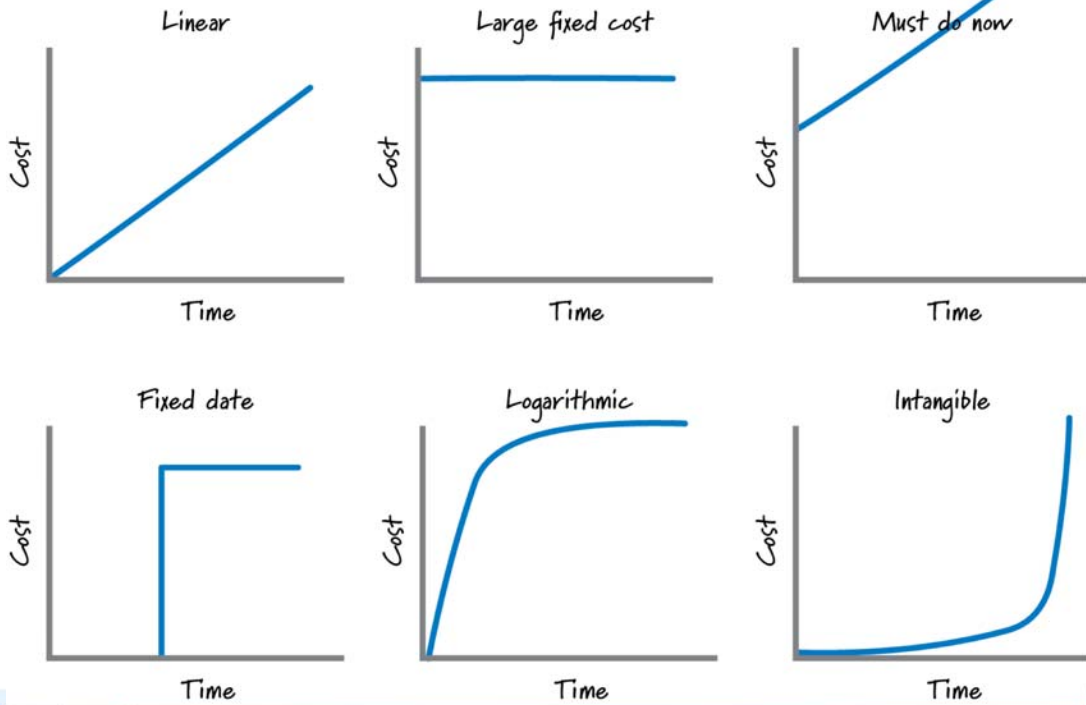
## ✦ Cost of Delay Example

Which project should we do first?

	Project A	Project B
Return on Investment	20%	15%
Cost of Delay (1 month)	\$5,000	\$75,000



# Cost of Delay Profiles



## Discussion Question – Accuracy Versus Precision

### Scenario:

- Organization does nine-month release cycles
- 100 candidate applications for each release cycle
- Marketing asks IT to produce LOEs (level of effort estimates) for all applications
- IT spends considerable time trying to make each LOE very precise
- Oh yeah, the organization will only include 50 projects in next release

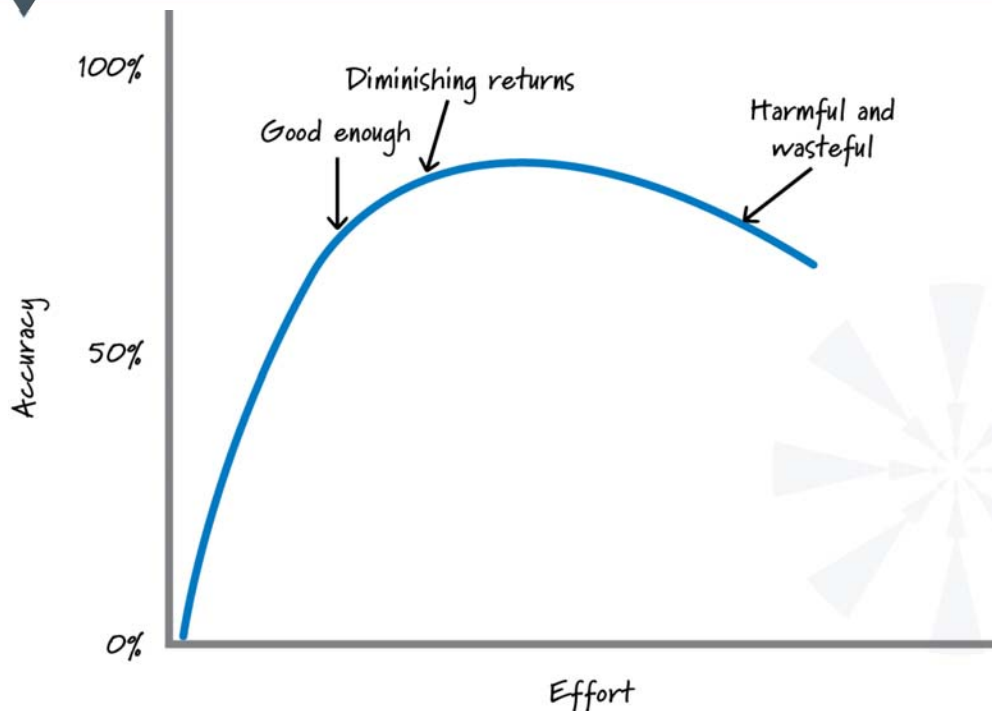
$$\pi = 3.1$$

$$\pi = 3.1415926535897$$
$$932384626433832$$
$$795028841971693$$

What are your thoughts on this scenario?



## Effort Versus Accuracy When Estimating





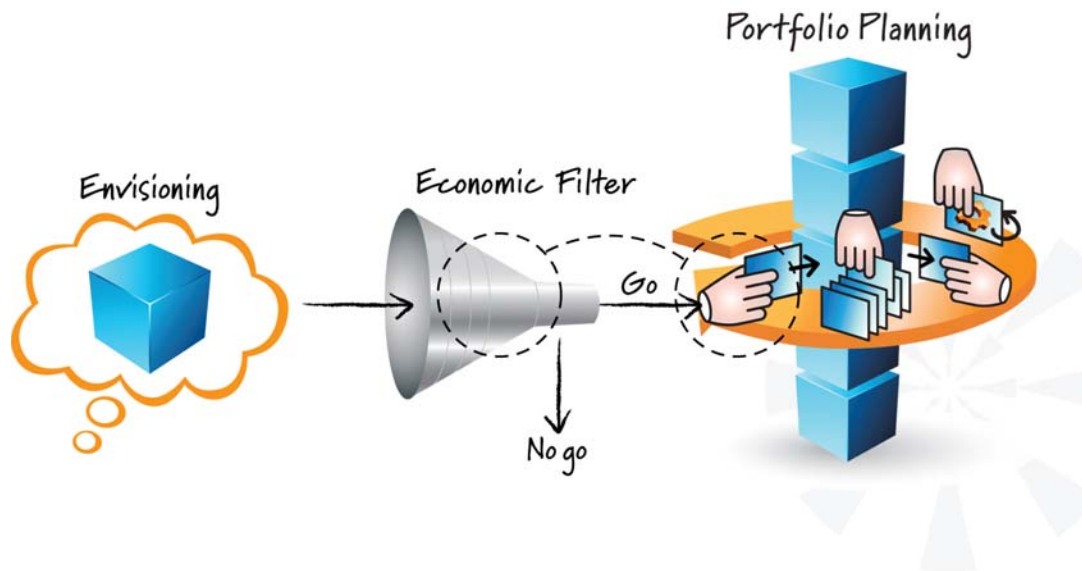
# T-shirt Size Estimating

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)



## ✦ Applying the Economic Filter



## ✦ Discussion Question – Economic Filtering

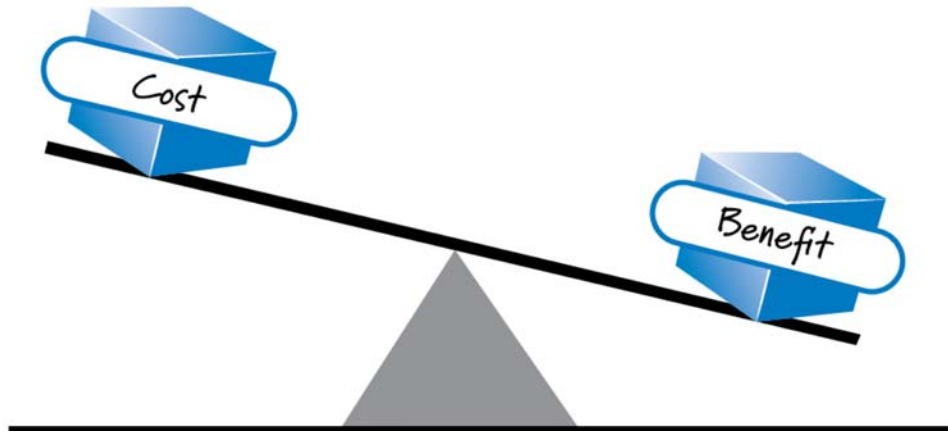
### ✦ Scenario

- ✦ A company is trying to decide if a development effort should be approved
- ✦ They are debating whether it will cost \$70k or \$75k. Apparently at \$70k it would be approved, at \$75k it would not

What is your assessment of this situation?



# Simple Economic Filter—Benefit Should Far Exceed Cost



## Discussion Question – Arrival Rate

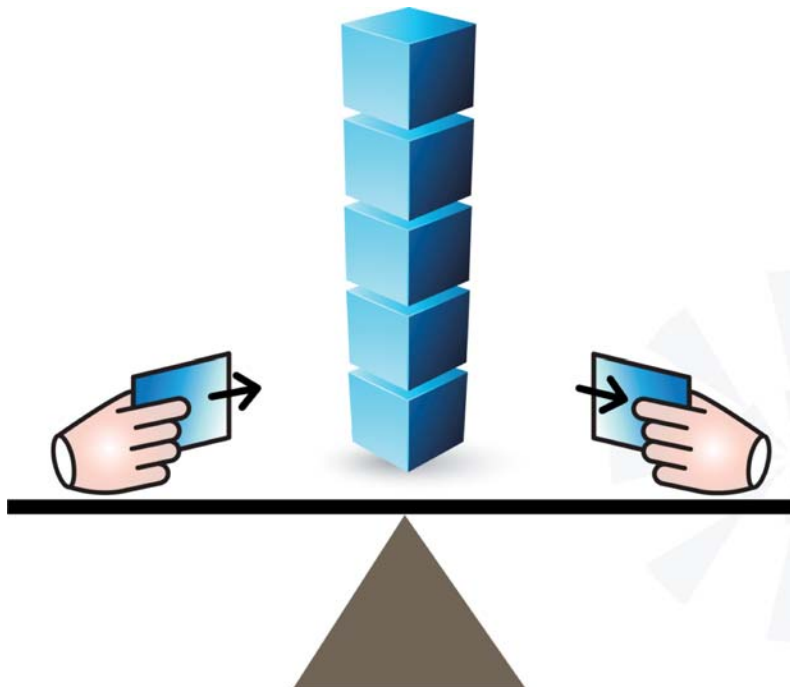
What happens to a restaurant if a tour bus of hungry seniors unexpectedly arrives at dinner time?



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## Want To Balance Portfolio Inflow and Outflow Rates



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# Annual Strategic Planning

## Scenario:

- Typically occurs in fiscal Q3
- All projects for next fiscal year are simultaneously dropped into the portfolio

What are the issues with this approach?

What would you do to address the problem?





## Discussion Questions – Emergent Opportunities

How quickly are you able to exploit an emergent opportunity?

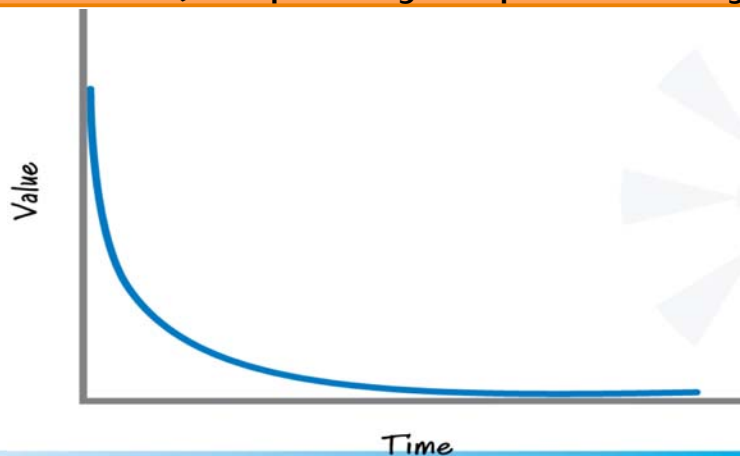
How disruptive are such opportunities to your portfolio-management process?



## Deal with Emergent Opportunities Quickly

Emergent opportunities arrive continuously and randomly

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





## Discussion Questions – Project Sizes

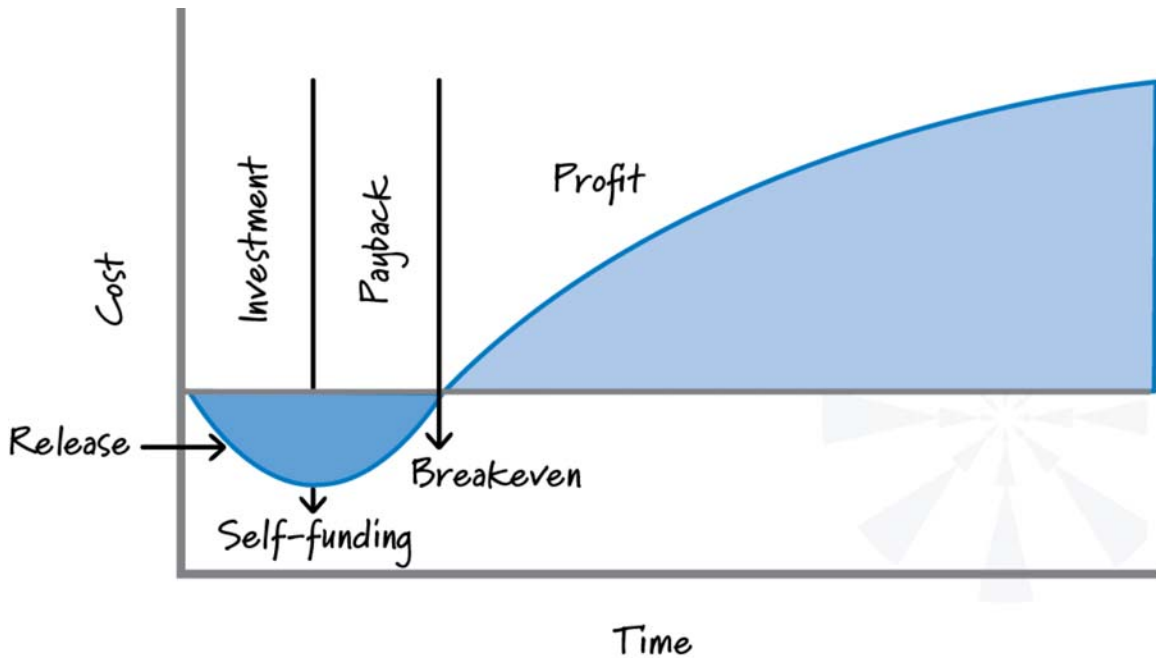
How does project size affect overall portfolio performance?

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

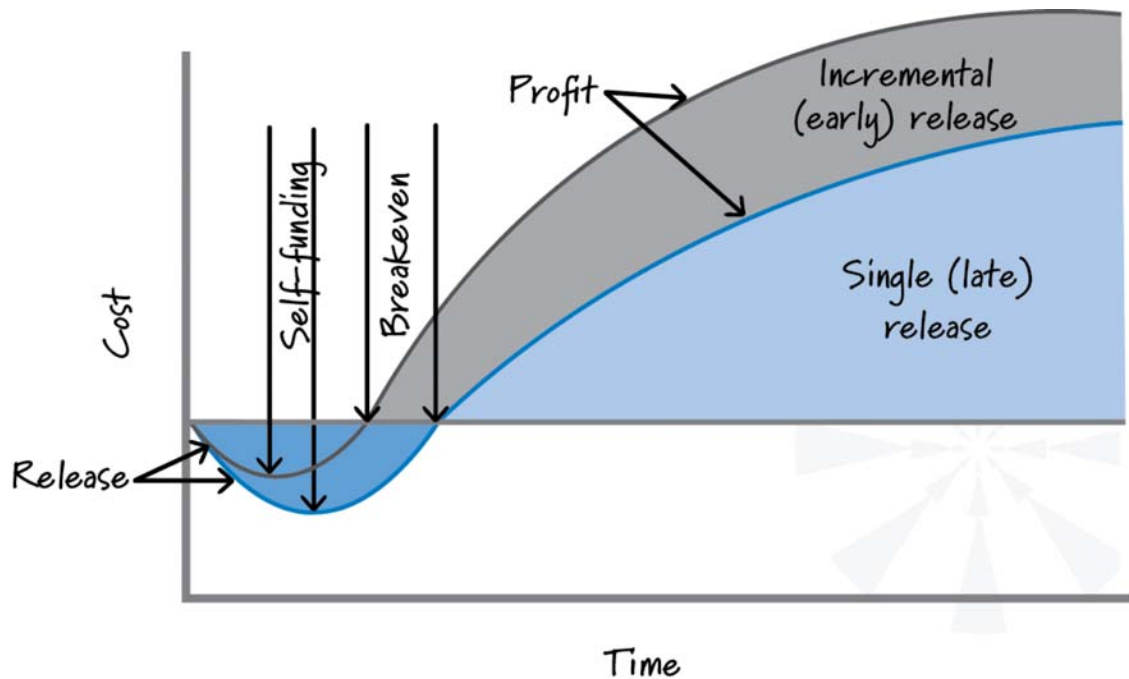
How do the lifecycle profits of a product compare between one large release and multiple, smaller releases?



## Single Release



## Multiple Releases





# Evaluating Return on Single Release Strategy

- \* Feature Value:
  - \* All features = \$300K/month
  - \* 1/2 features = \$200k/month
  - \* 1/3 features = \$150k/month
- \* Features begin earning money 1 month after release
- \* Each month of development costs \$100K
- \* Each release costs \$100K

## Single Release

12 months

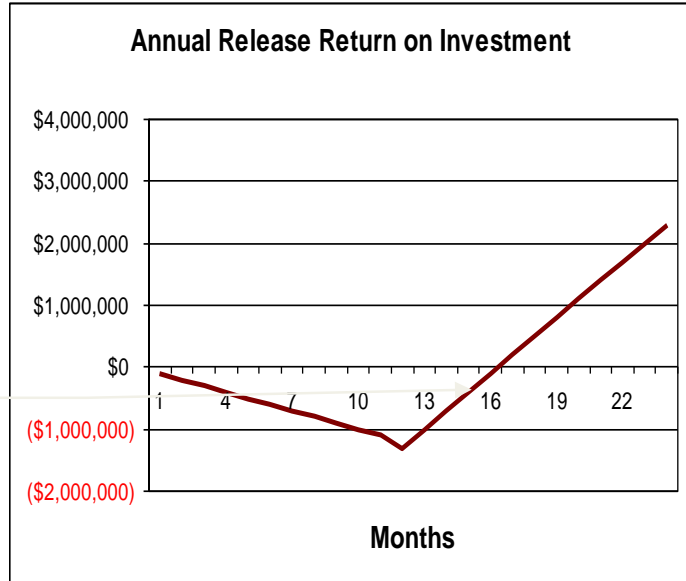
total cost: \$1.3 M

total 2 year return: \$3.6 M

net 2 year return: **\$2.3 M**

Cash Investment: \$1.3 M

Internal Rate of Return: **9.1%**



Example based on prior work by Jeff Patton



# Evaluating Return on Semi Annual Release Strategy

- \* Feature Value:
  - \* All features = \$300K/month
  - \* 1/2 features = \$200k/month
  - \* 1/3 features = \$150k/month
- \* Features begin earning money 1 month after release
- \* Each month of development costs \$100K
- \* Each release costs \$100K

## Semi Annual Release

6 month increments

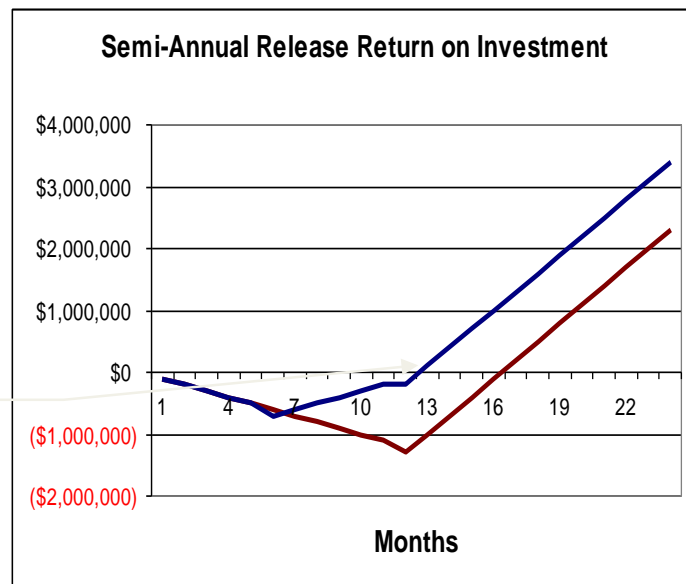
total cost: \$1.4 M

total 2 year return: \$4.8 M

net 2 year return: **\$3.4 M**

Cash Investment: \$.7 M

Internal Rate of Return: **15.7%**





# Evaluating Return on Quarterly Release Strategy

- \* Feature Value:
  - \* All features = \$300K/month
  - \* 1/2 features = \$200k/month
  - \* 1/3 features = \$150k/month
- \* Features begin earning money 1 month after release
- \* Each month of development costs \$100K
- \* Each release costs \$100K

## Quarterly Release

3 month increments

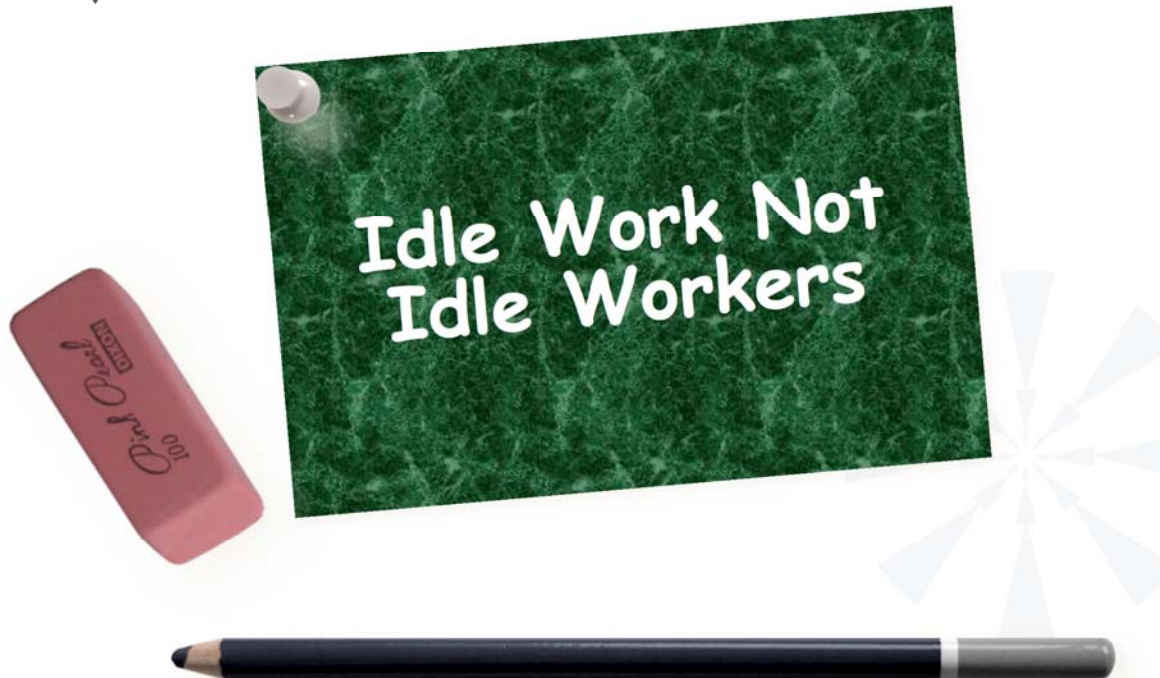
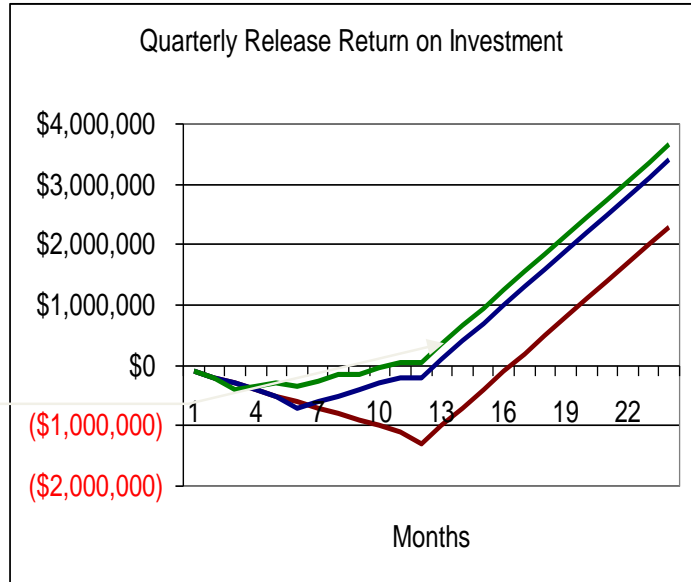
total cost: \$1.6 M

total 2 year return: \$5.25 M

net 2 year return: **\$3.65 M**

Cash Investment: \$0.45 M

Internal Rate of Return: **19.5%**



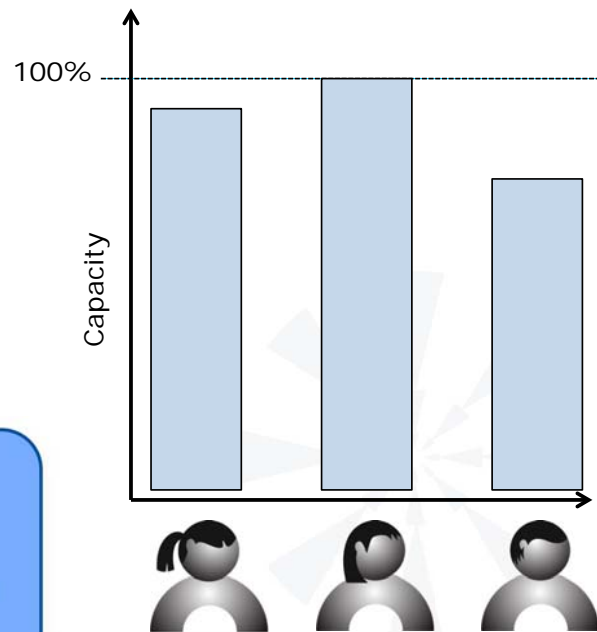


## Discussion Question – Addressing Available Capacity

### Scenario

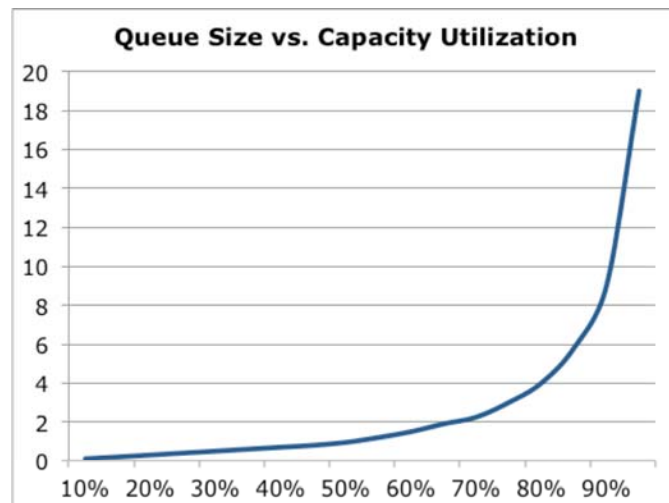
- We have started working on items in our portfolio, but we have some team members who are not yet at 100% capacity

Should we start more projects from the portfolio to get them to 100% capacity?



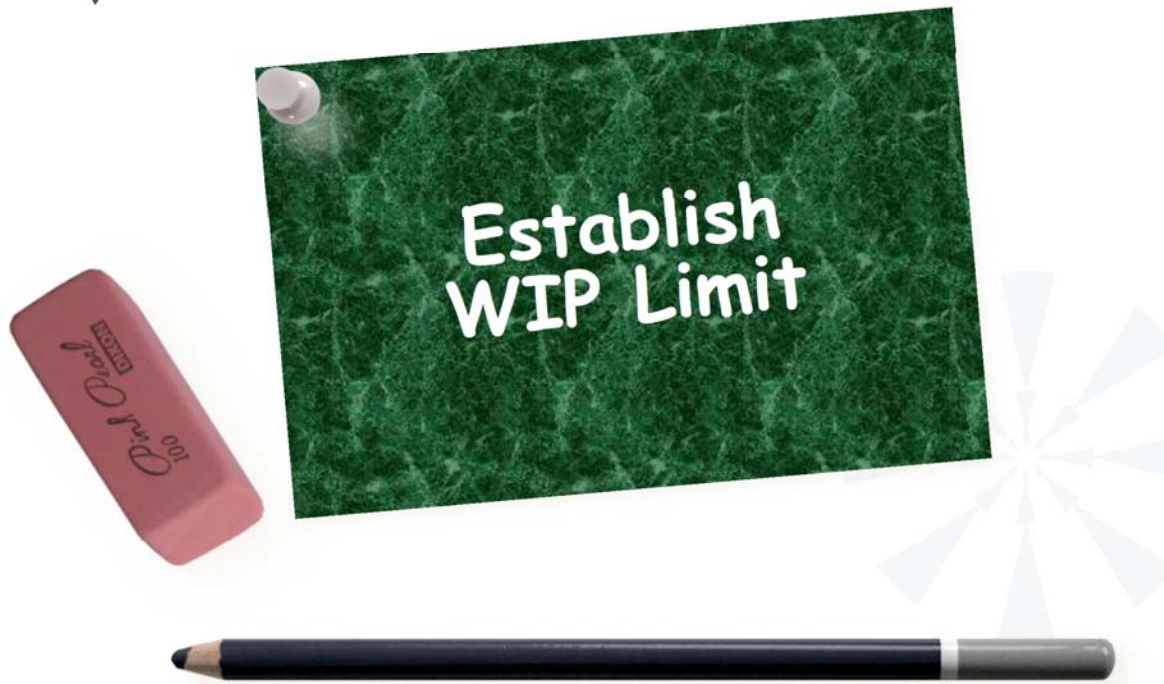
## Focus on Idle Work Not Idle Workers

Watch the Baton Not the Runners<sup>†</sup>



<sup>†</sup> Source: Larman & Vodde





## Discussion Question – 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?



## What is a WIP Limit?

A work-in-process (WIP) limit would state how many projects we are willing to have active at the same time

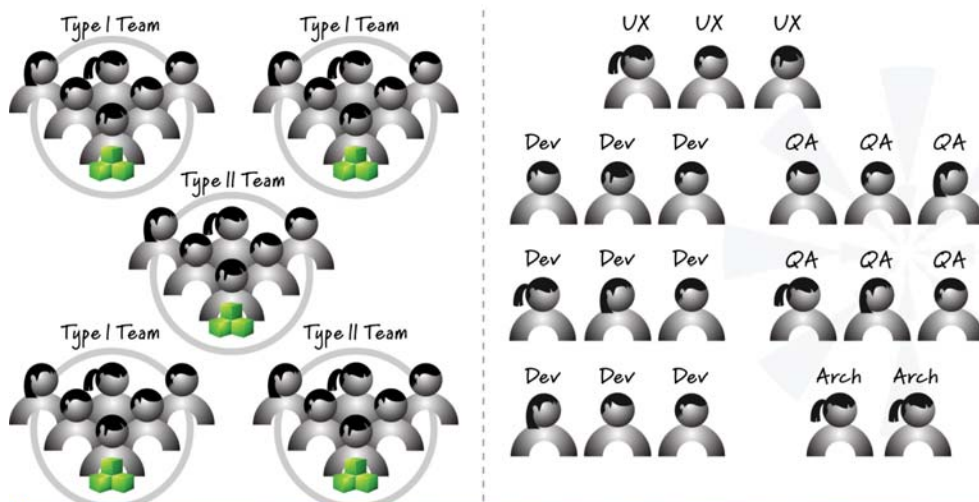
Goal is to match WIP with available capacity



## In Agile Portfolio Management, the Unit of Capacity is the Team

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

Determine capacity in terms of teams

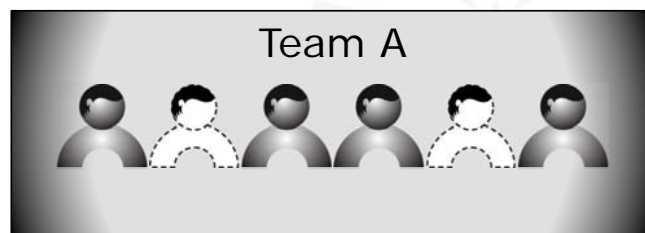




## Discussion Questions – Team Availability

Do you start a project before the full team is available to work on it?

If so, what are the consequences?







## Wait Until Complete Team is Available

Don't start a new project with a partial team

Wait until you have at least one full team

Preferably wait until you have all necessary teams



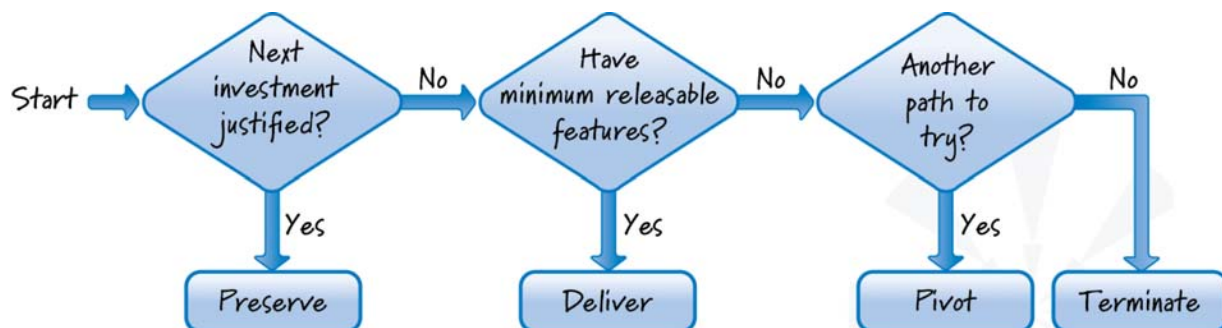


## Discussion Question – Would You Keep Spending?

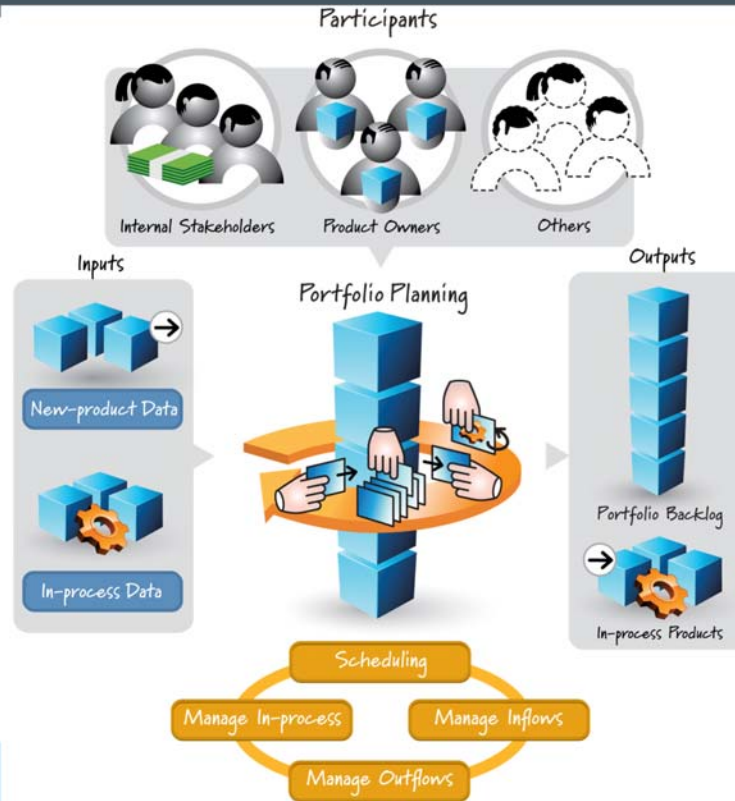
If you spend the first dollar on developing a product, is there any circumstance under which you would terminate development?



## Marginal Economics



# Summary



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## Based on Chapter 16 of the Book Essential Scrum, by Kenny Rubin

### Chapter 16

## PORTFOLIO PLANNING

Most organizations want or need to produce more than one product at a time. These multiproduct organizations need a way to make economically sound choices regarding how to manage their product portfolios. They also need their portfolio management or governance processes to align well with core agile practices; otherwise, there will be a fundamental disconnect with the agile approach being used at the individual product level. This chapter lays out 11 strategies for portfolio planning, grouped by scheduling, product inflow, and product outflow. It ends with a discussion of how to determine whether or not more work should be invested in in-process products.

### Overview

Portfolio planning (or portfolio management) is an activity for determining which portfolio backlog items to work on, in which order, and for how long. A portfolio backlog item can be a product, a product increment (one release of a product), or a project (if your organization prefers to plan work around projects). In this chapter I use the word *product* generically to mean all types of portfolio backlog items.

In my experience, most organizations (agile or otherwise) do a very poor job of portfolio-level planning. Many have portfolio-level planning processes that are fundamentally at odds with core agile principles. When this happens, decisions are made at the portfolio level that disrupt the fast, flexible flow of work. In this chapter I discuss how to avoid this disconnect by performing portfolio planning in a manner that is well aligned with core agile principles.

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LinkedIn:	<a href="http://www.linkedin.com/in/kennethrubin">www.linkedin.com/in/kennethrubin</a>
Twitter:	<a href="http://www.twitter.com/krubinagile">www.twitter.com/krubinagile</a>
Essential Scrum: A Practical Guide to the Most Popular Agile Process	<a href="http://www.essentialscrum.com">www.essentialscrum.com</a>
Comparative Agility Website	<a href="http://www.comparativeagility.com">www.comparativeagility.com</a>

