

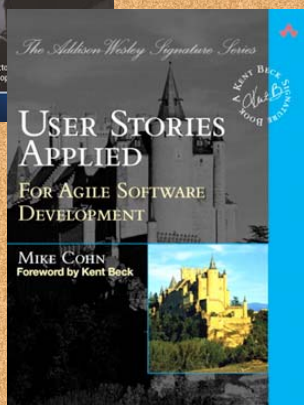
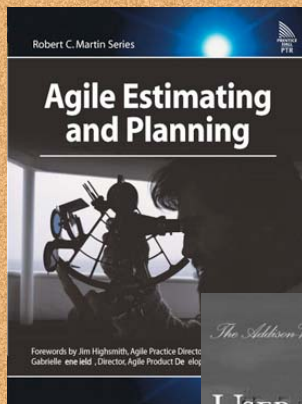
Prioritizing Your Product Backlog

Mike Cohn
April 15, 2008



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Mike Cohn - background



- Agile coach and trainer**
- Founding member and director of Agile Alliance and Scrum Alliance
 - Founder of Mountain Goat Software
 - Ran my first Scrum project back in 1995
 - Typical programmer to manager etc. progression



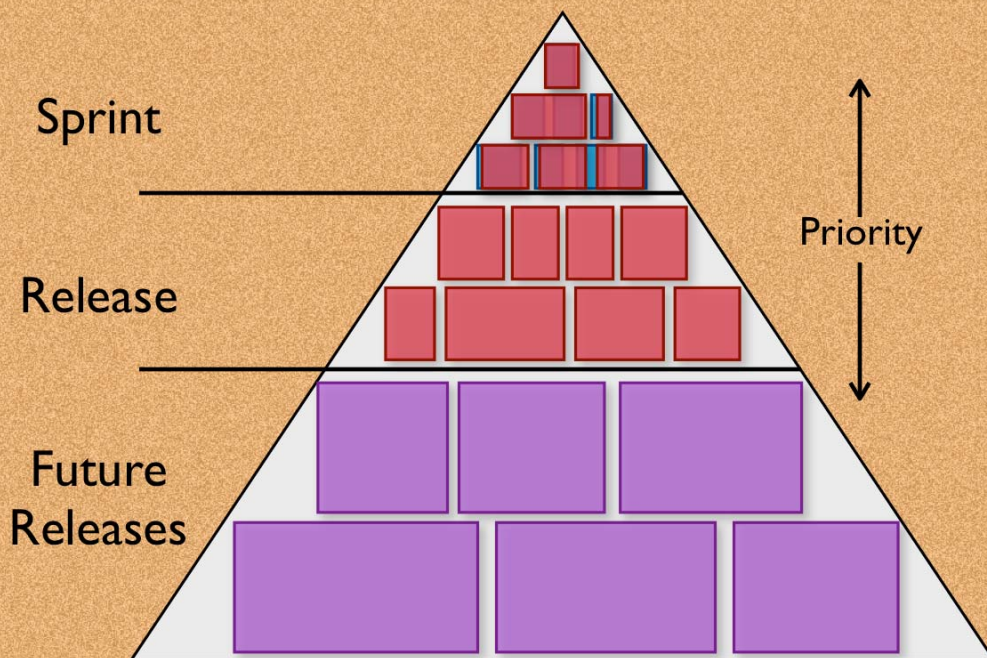
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The right level
for prioritization

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The product backlog iceberg



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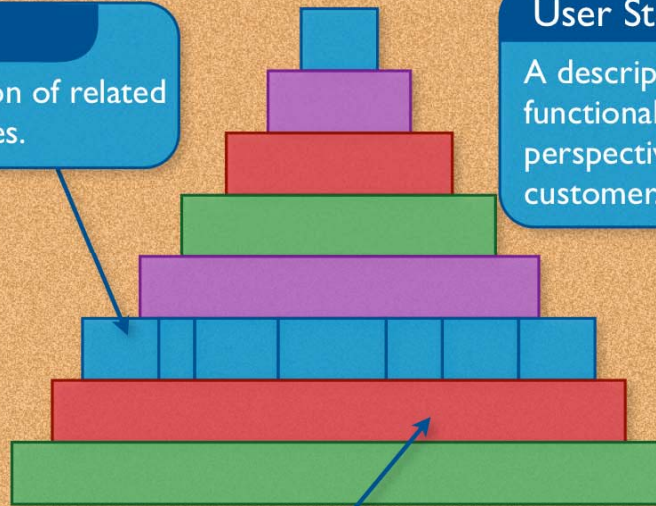
Stories, themes and epics

Theme

A collection of related user stories.

User Story

A description of desired functionality told from the perspective of the user or customer.



Epic

A large user story.



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An example

As a VP Marketing, I want to review the performance of historical promotional campaigns so that I can identify and repeat profitable ones.

Clearly an epic

As a VP Marketing, I want to select the timeframe to use when reviewing the performance of past promotional campaigns, so that I can identify and repeat profitable ones.

Epics??

As a VP Marketing, I can select which type of campaigns (direct mail, TV, email, radio, etc.) to include when reviewing the performance of historical promotional campaigns.



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An example

As a VP Marketing, I want to see information on **direct mailings** when reviewing historical campaigns.

As a VP Marketing, I want to see information on **television** advertising when reviewing historical campaigns.

As a VP Marketing, I want to see information on **email** advertising when reviewing historical campaigns.



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Prioritize at the theme level

- Why?
- Often individual stories cannot be prioritized against each other
 - What's more important in a word processor?
 - The A key or the E key?
 - Tables or undo?
 - What's more important on a car?
 - The left front wheel or the right front wheel?
 - Increased leg room or a larger engine?



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Techniques for prioritizing

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Choosing your approach

	Expert Opinion	User Interview
Kano analysis	✓	✓
Theme screening	✓	
Theme scoring	✓	
Relative weighting	✓	

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Kano analysis

Three types of features

Exciters /
Delighters



Features a user doesn't know
she wants, until she sees it

Linear



The more of it, the better

Mandatory /
Baseline



Must be present in order for
users to be satisfied



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Surveying users

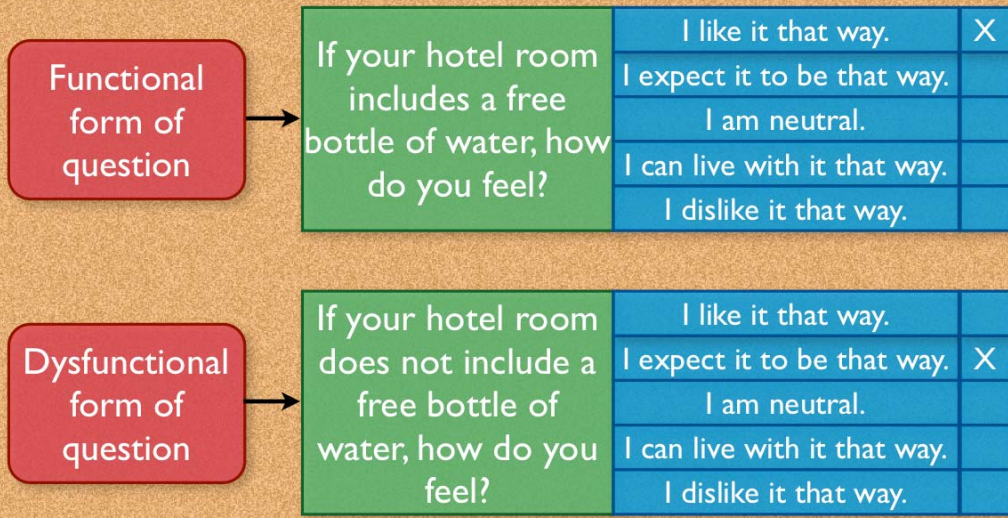
- To assess whether a feature is baseline, linear, or exciting we can:
 - Sometimes guess
 - Or survey a small set of users (20-30)
- We ask two questions
 - A functional question
 - How do you feel if a feature is present?
 - And a dysfunctional question
 - How do you feel if that feature is absent?



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Functional and dysfunctional forms



Categorizing an answer pair

		Dysfunctional Question				
		Like	Expect	Neutral	Live with	Dislike
Functional Question	Like	Q	E	E	E	L
	Expect	R	I	I	I	M
	Neutral	R	I	I	I	M
	Live with	R	I	I	I	M
	Dislike	R	R	R	R	Q

M Mandatory
 L Linear
 E Exciter
 Q Questionable
 R Reverse
 I Indifferent



Aggregating results

Theme	Exciter	Linear	Mandatory	Indifferent	Reverse	Questionable
Apply formatting themes	3	11	31	1	3	2
Automate report execution	4	22	20	4	1	0
Export reports to PowerPoint	21	9	14	5	1	1



What to include

- All of the baseline features
 - By definition, these must be present
- Some amount of linear features
- But leaving room for at least a few excitors



Theme screening

- Identify 5-9 (approximately) selection criteria for what is important in the next release
- Select a baseline theme
 - Likely to be included in the next release
 - Understood by most team members
- Assess each candidate theme relative to the baseline theme



Theme screening: an example

Selection Criteria	Themes						
	Theme A	Theme B	Theme C	Baseline Theme	Theme E	Theme F	Theme G
Importance to existing customers	+	+	-	0	-	+	0
Competitiveness with ABC Corp.	+	-	0	0	0	0	0
Starts us integrating product lines	+	0	0	0	+	-	+
Generates revenue in Q2	0	0	0	0	+	0	+
Net score	3	0	-1	0	1	0	2
Rank	1	4	5	4	3	4	2
Continue?	Y	N	N	Y	Y	N	Y

+ = better than
 0 = same as
 - = worse than



Theme scoring

- Like theme screening but selection criteria are weighted
- Need to select a baseline theme for each criteria
- Avoids compression of a category
- Each theme is assessed against the baseline for each selection criteria

Much worse than reference	1
Worse than reference	2
Same as reference	3
Better than reference	4
Much better than reference	5



Theme scoring: an example

Selection Criteria	Weight	Theme A		Theme B		Theme C	
		Rating	Weighted Score	Rating	Weighted Score	Rating	Weighted Score
Importance to existing cust.	.25	3	0.75	1	0.25	4	1.00
Competitive. with ABC	.10	2	0.20	3	0.30	3	0.30
Starts us integrating...	.15	3	0.45	4	0.60	4	0.60
Generates Q2 revenue	.50	5	2.50	2	1.00	3	1.50
Net score		3.90		2.15		3.40	
Rank		1		3		2	
Continue?		Yes		No		Yes	





Prioritizing MyCookSpace.com

- Assume we have a minimally functional site up with 4,000 registered cooks
 - We want 400,000 cooks
- Identify 3-4 themes that will help get more cooks to register on the site.
- Identify some selection criteria
 - What's important to the company in making this decision?
- Complete a theme screening or theme scoring worksheet



Intentionally blank



Relative weighting

- Assess the impact of having a story/theme from 1-9
- Assess impact of NOT having it from 1-9
- Calculate the value of each story or theme relative to the entire product backlog
 - This gives you the relative value of that story or theme
- Estimate the cost of each story theme
- Calculate the cost of each story or theme relative to the entire product backlog
 - This gives the relative cost of that story or theme
- Priority is given by (Relative Value ÷ Relative Cost)



Relative weighting: an example

		Relative Benefit	Relative Penalty	Total Value	Value Percent	Estimate	Cost Percent	Priority
Themes	More investment choices	8	6	14	40	64	44	91
	Portfolio rebalancing	9	2	11	31	40	27	115
	Comply with new law	1	9	10	29	42	29	100
Total				35	100	146	100	

$$\text{Total Value} = \text{Relative Benefit} + \text{Relative Penalty}$$

$$\text{Value Percent} = \text{Total Value} / \sum (\text{Total Value})$$

$$\text{Cost Percent} = \text{Estimate} / \sum (\text{Estimate})$$



An example with weights

		Weight →						
		2	1					
		Relative Benefit	Relative Penalty	Total Value	Value Percent	Estimate	Cost Percent	Priority
Themes	More investment choices	8	6	22	41	64	44	93
	Portfolio rebalancing	9	2	20	38	40	27	141
	Comply with new law	1	9	11	21	42	29	72
Total				53	100	146	100	



Relative weighting MyCookSpace.com

- Using the relative weighting worksheet provided, prioritize the themes you've previously identified for MyCookSpace.com.



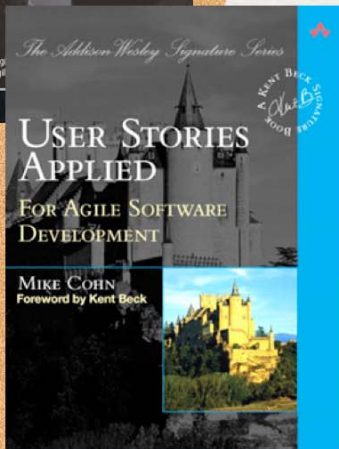
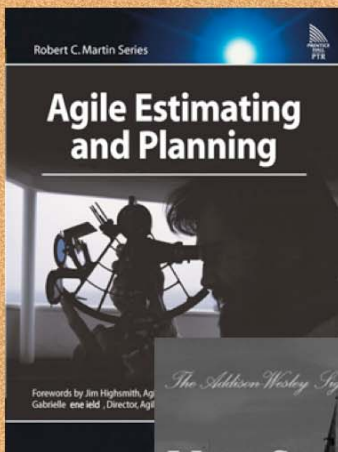
Comparison matrix

	Person Weeks	Cost	3-Year Return	NPV	IRR	D. Payback (Quarters)
Theme A	25	\$150	\$1,085	\$448	133%	2
Theme B	32	192	\$2,109	\$940	172%	4
Theme C	90	\$540	\$2,537	\$883	89%	2
Theme D	48	\$288	\$1,360	\$443	76%	4
Theme E	55	\$330	\$900	\$191	48%	2
Theme F	79	\$474	\$1,365	\$331	56%	4
Theme G	90	\$540	\$5,964	\$2,519	139%	5
Theme H	50	\$300	\$2,415	\$1,023	146%	2
Theme I	15	90	\$1,600	\$747	221%	1
Theme J	30	\$180	\$640	\$182	65%	2
Theme K	75	\$450	\$516	(\$104)	5%	NA
Theme L	40	\$240	\$171	(\$110)	(12%)	NA
Theme M	80	\$480	\$1,025	\$142	36%	3
Theme N	18	\$108	\$185	\$7	24%	2
Theme O	6	36	\$155	\$53	90%	1
Theme P	12	\$72	\$1,505	\$748	355%	1



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