


DEVELOP YOUR EXPERTISE

Agile Product Management

Mike Cohn
September 29, 2005

SD BEST PRACTICES CONFERENCE & EXPO 2005

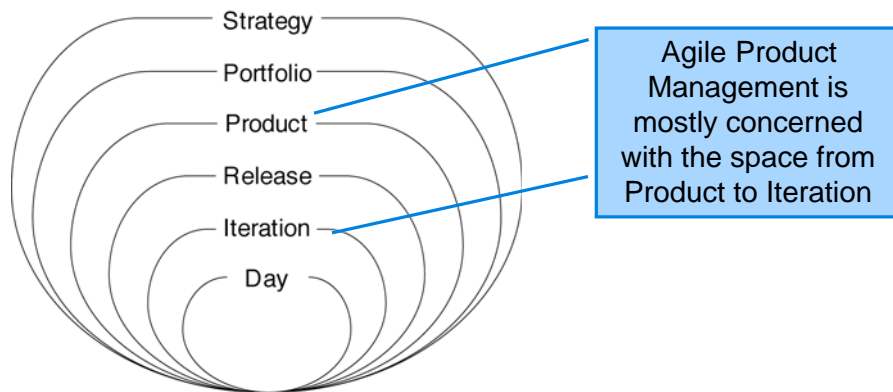
Mike Cohn—background



- Programming for 20 years
- Author of
 - *User Stories Applied*
 - *Agile Estimating and Planning*
 - Java, C++, database programming books
- Founding member and director of the Agile Alliance and the Scrum Alliance
- Founder of Mountain Goat Software
 - Process and project management consulting and training

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The planning onion



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Today's agenda

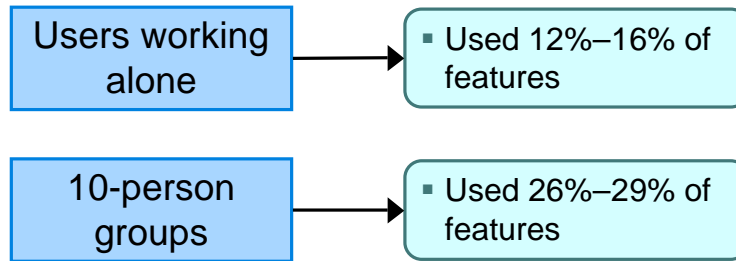
- Prioritizing
 - Project chartering
 - Working with the developers
 - Establish a financial model

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Prioritizing

- Why prioritize?

- Percent of features used in Word and PowerPoint:



Source: International Software Engineering Research Network Workshop (2000).

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Factors in prioritization

Business value trumps other factors...

...but there are other factors to consider

- Business value
- Risk reduction
- Change in relative cost
- Learning / uncertainty

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Learning / uncertainty

The purpose of a project is to:

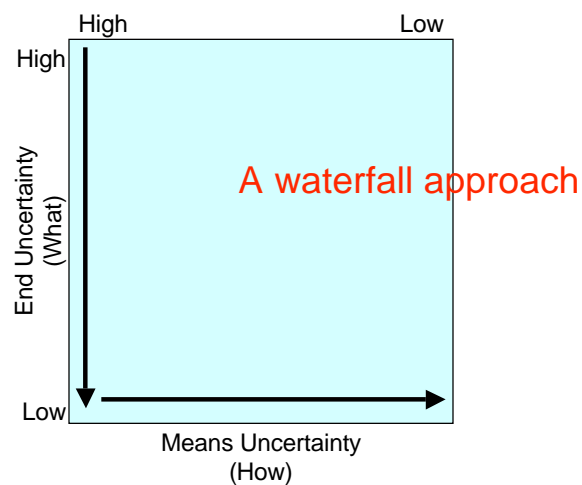
Deliver new capabilities

Generate new knowledge

- Product knowledge
 - What should we develop?
- Project knowledge
 - How should we develop it?

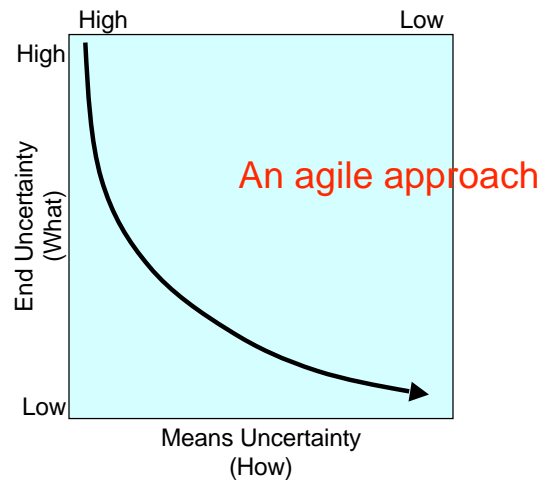
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One view of reducing uncertainty



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An agile approach to uncertainty



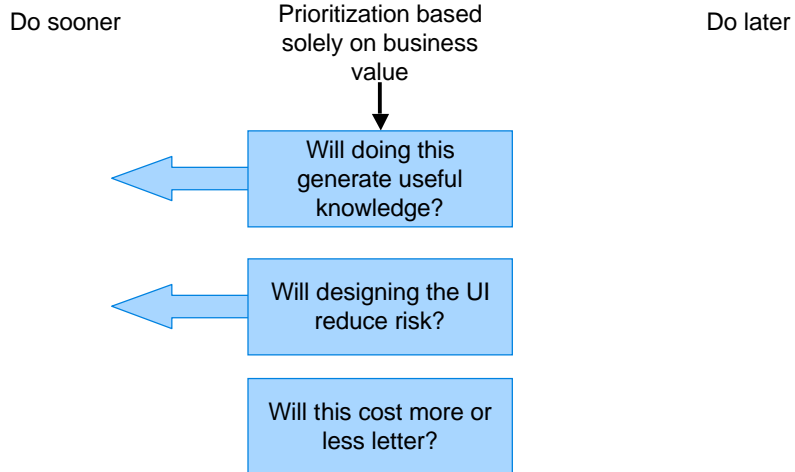
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Sliders

- Think of
 - risk reduction
 - knowledge generation
 - change in relative cost
- as sliders that move business priority forward or back

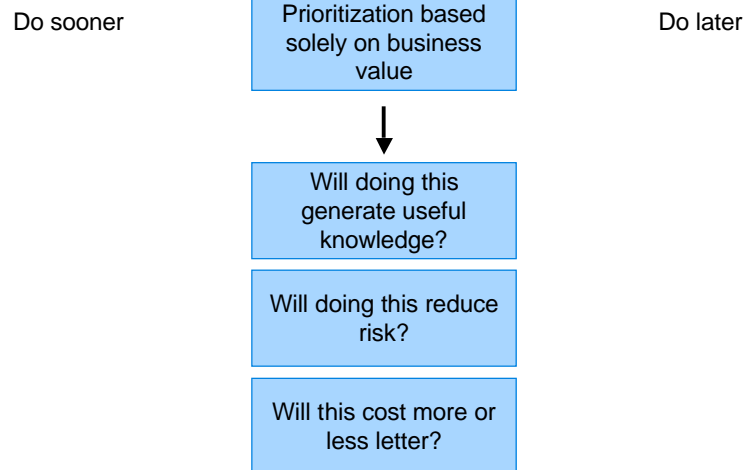
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Example: User interface design



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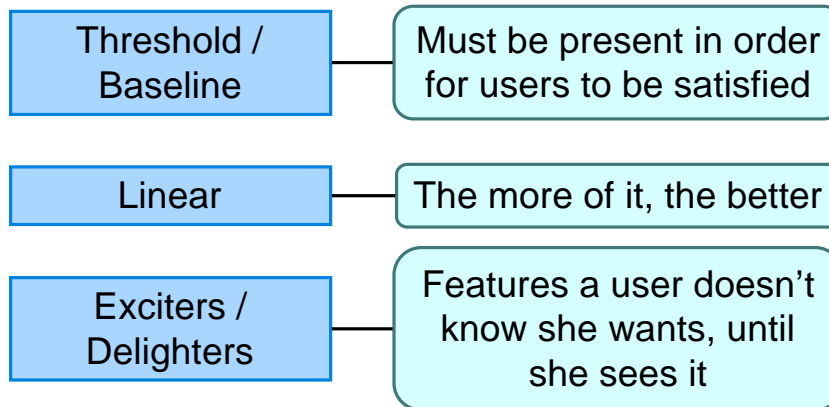
Example: a security framework



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Prioritizing with Kano analysis

- Three types of features



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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

Functional form of question	If your hotel room includes a free bottle of water, how do you feel?	I like it that way.	X
		I expect it to be that way.	
		I am neutral.	
		I can live with it that way.	
		I dislike it that way.	
Dysfunctional form of question	If your hotel room does not include a free bottle of water, how do you feel?	I like it that way.	
		I expect it to be that way.	X
		I am neutral.	
		I can live with it that way.	
		I dislike it that way.	

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Categorizing from a question pair

		Dysfunctional Question				
		Like	Expect	Neutral	Live With	Dislike
Functional Question	Like	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

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Aggregating results

Theme	Exciter	Linear	Mandatory	Indifferent	Reverse	Questionable
Apply formatting themes	6	21	62	2	5	4
Automate report execution	8	43	39	8	2	0
Export reports to PowerPoint	42	18	27	9	2	2

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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 some amount of exciters

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Today's agenda

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- ☐ Working with the developers
- ☐ Establish a financial model

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Establishing a shared vision

- Teams do best when they have a “clear, elevating goal” and “unified commitment”[†]
- It's the product manager's job to focus the team and find this clear, elevating goal
- Tools for establishing a shared vision:

Elevator statement[‡]

Vision box[‡]

Press release

Magazine review

Source: [†]*Teamwork* by Carl Larson and Frank LaFasto

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Elevator statement

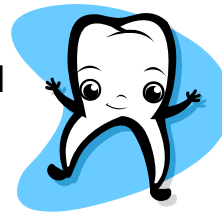
- A short statement of the product's positioning
- Explains the product to someone in 2 minutes
- Follows this syntax
 - For (**customer**)
 - Who (**statement of need or opportunity**)
 - The (**product name**) is a (**product category**)
 - That (**key benefit, compelling reason to buy**).
 - Unlike (**primary competitor**)
 - Our product (**statement of primary differentiation**).

Sources: *Crossing the Chasm* by Geoffrey Moore

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Example elevator statement

- **For** dentists and their assistants
who need to efficiently schedule appointments
Dental Clinic 2.0 is desktop and web-based
appointment scheduling software
that supports office and remote access.
- **Unlike** competitive products,
Dental Clinic 2.0 is easy to use and
aggressively priced.



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Product vision box

- Design a box for the software
 - Even if the software won't ship in a box
- Write 3-4 key bullet points to sell the software
 - Easier to come up with 15
 - The challenge is distilling the list to 3-4 key points

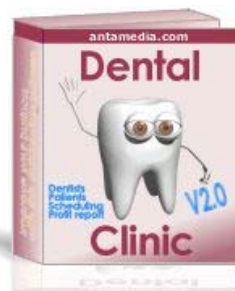


Sources: *Agile Project Management* by Jim Highsmith.

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Sample product vision box

- Easy integration with most insurance systems
- Support for multiple chairs with appointment setting by chair
- Multi-language support
- One click database backup



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Press release to come

- Collaboratively write the press release you'd like to see released at the end
 - What are the key points you'd make about the product
 - What quotes would you have and who would they be from?
 - CEO? Team members? Customers?

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Press release template

The _____ company announced today the successful completion of the _____ project. This project provides _____

_____. The customer for this project, _____, indicated in a recent interview that they selected _____ as their supplier due to the following key benefits:

1. _____
2. _____
3. _____

_____ also identified several features that they felt were particularly useful. These include:

1. _____
2. _____
3. _____

_____ noted that the single most important benefit of their successful project was “_____”

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Magazine review

- Write the review you'd like to see in PC Magazine
 - Use whatever magazine you'd like or even make one up
- What key features would be singled out?
- What will be said about your product compared to the prior version?
Competitors?

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Communicate the driving factor

- Be clear about what's driving the project
 - Usually date or features
 - But NOT both
- Feature-driven projects
 - Project will ship when the desired features have been developed
- Date-driven projects
 - Project will ship on the date, regardless of whether all desired features are included

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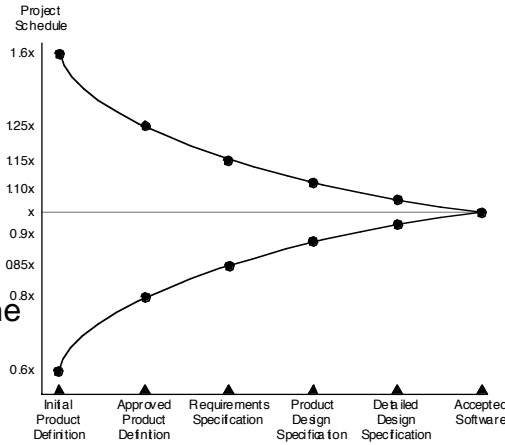
Example date-driven projects

- Tax software
- Software to comply with periodic changes in government regulations
- Software for fantasy football
- The Olympics

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Value-driven projects

- Making appropriate tradeoff decisions between date and features
- Committing to maximizing value
- Deferring tradeoff decisions
- Acknowledging uncertainty about the product and the project



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Tradeoff matrix

Tradeoff Matrix				
	Fixed	Firm	Flexible	Target
Scope	✓			300+ story points
Schedule		✓		4-5 months
Resources			✓	\$400k
Low Defects			✓	1 high bug per month

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Set high expectations

- You do not control HOW the development team does its work
- But you do get to say WHAT they produce and WHEN it's produced

■ I don't tell a mechanic how to fix my car, but I do ask for an estimate, say what type of parts to use, approve work, and may call for a progress report if it's a big job

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Some expectations you should have

"I want to be able to see progress at least once a month. And I'm only going to measure progress through working, tested features."

- Encourages iterations.
- Stresses importance of consistent focus on quality.
- Provides insight into progress.

"At least once a month, I want my hands on the keyboard to try out new features."

- Ensures a focus on user-visible features, not just frameworks and architecture.
- Avoids a demo of a *snake*.

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Some more expectations

“My computer runs automated tests when I turn it on. I expect this application to have similar automated tests.”

- Ensures team will automate tests.

Set realistic deadlines.

- Too aggressive or too lax are not motivating.
- Teams work fastest with realistic deadlines.
- Be careful of making it all about the date.

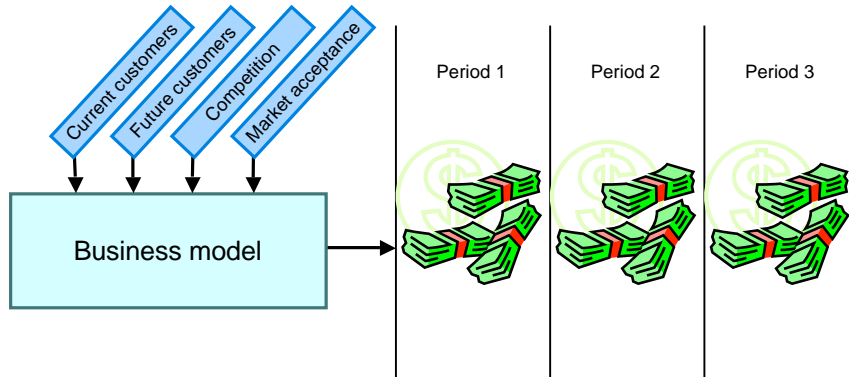
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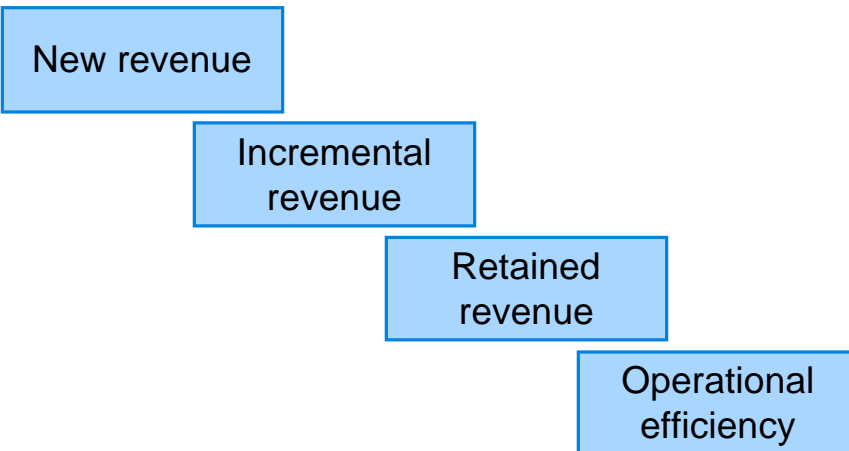
Understand product financials



Communicate this model to the whole team!

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Typical sources of return



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An example

Q	Dev. Cost	New Revenue	Incr. Revenue	Retained Revenue	Oper. Efficiencies	Net Cash Flow
1	-90,000	0	0	\$2,000	0	-88,000
2	-30,000	\$2,500	\$1,600	\$2,000	0	-23,900
3	0	\$3,750	\$5,000	\$2,000	\$7,500	18,250
4	0	\$3,750	\$7,500	\$2,000	\$7,500	20,750
5	0	\$7,500	\$10,000	\$4,000	\$7,500	29,000
6	0	\$7,500	\$10,000	\$4,000	\$7,500	29,000
7	0	\$7,500	\$10,000	\$4,000	\$15,000	36,500
8	0	\$7,500	\$10,000	\$4,000	\$15,000	36,500

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Useful financial measures

- Net present value
 - The present value of the money the project will earn
- Return on investment / internal rate of return
 - The rate of return earned by the project per a period of time
- Discounted payback period
 - The amount of time until a project pays back its initial investment

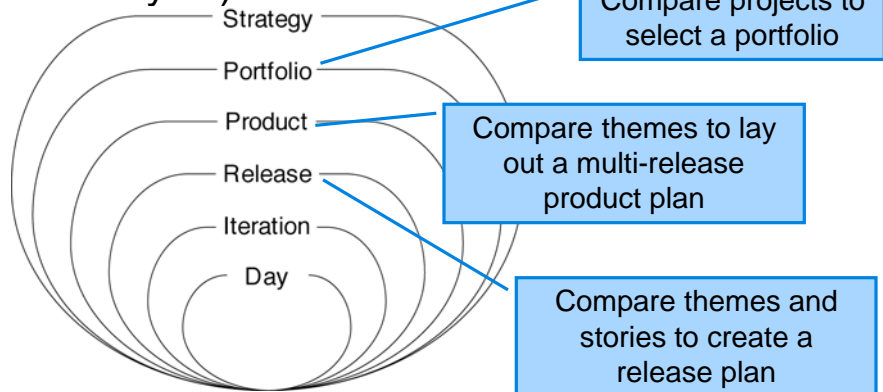
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Project (theme) comparison matrix

Theme	Story Points	Cost	3-Year Return	NPV	IRR	Payback
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%	4
Theme L	40	\$240	\$171	(\$110)	-12%	5
Theme M	80	\$480	\$1,025	\$142	36%	3
Theme N	18	\$108	\$185	\$7	24%	2
Theme O	35	\$210	\$423	\$50	33%	3
Theme P	24	\$144	\$188	(\$19)	12%	5
Theme Q	15	\$90	\$102	(\$20)	5%	5
Theme R	6	\$36	\$155	\$53	90%	1
Theme S	65	\$390	\$410	(\$105)	2%	4
Theme T	12	\$72	\$1,505	\$748	355%	1

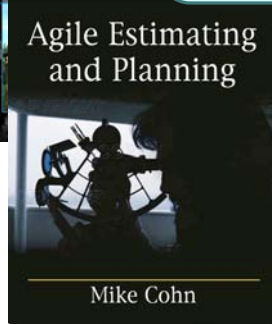
Themes and stories on the planning onion

- Compare financials and desirability (Kano analysis)



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