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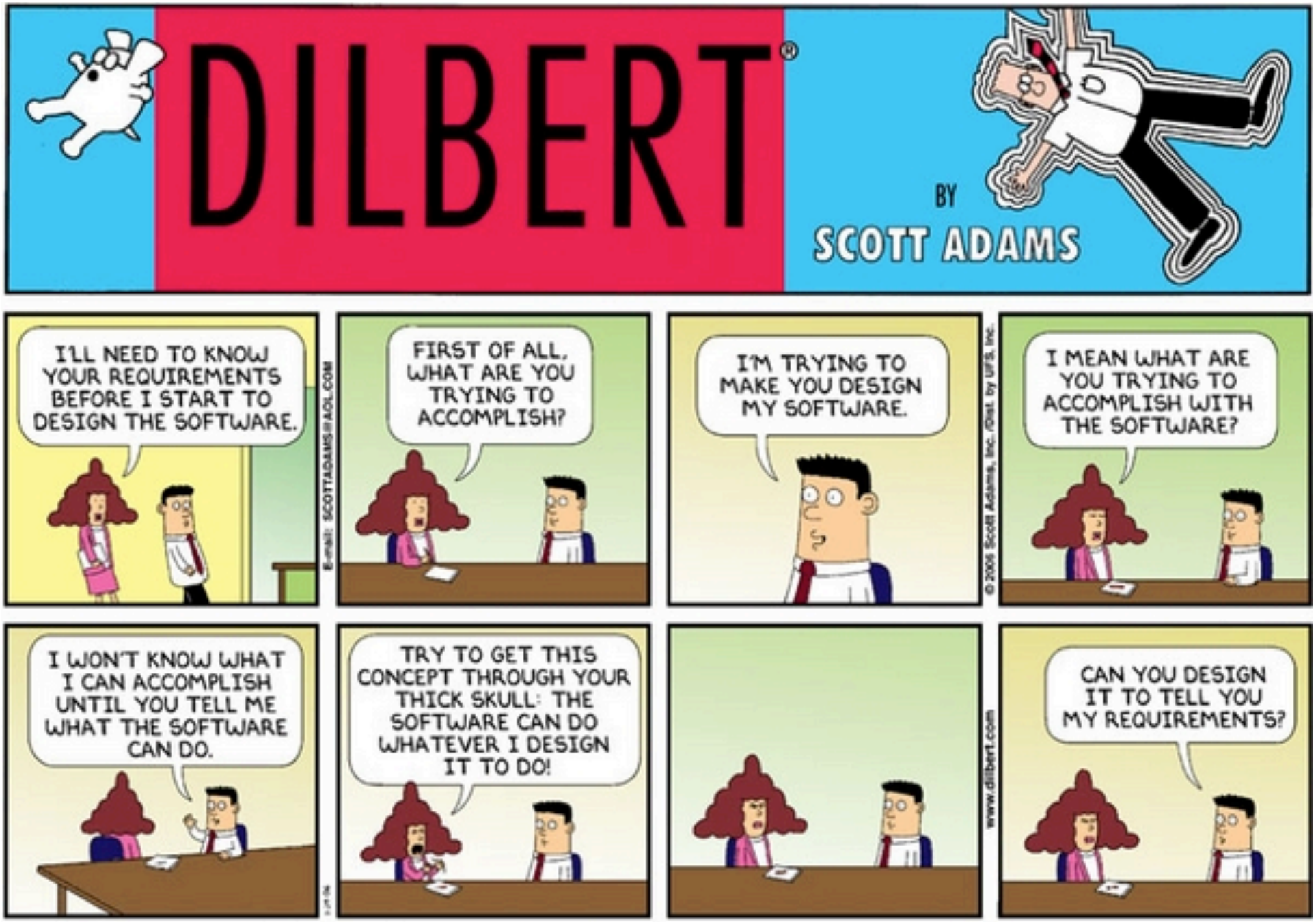
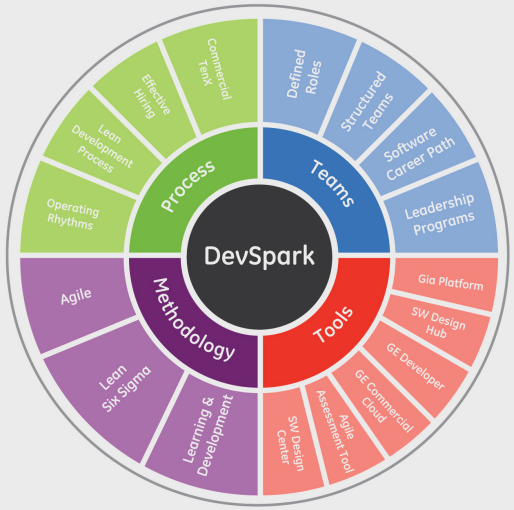
Writing Effective User Stories

Eric Switzer



Writing User Stories



1. What is a User Story?
2. How to write a good user story
3. User Story Splitting Techniques

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What is a User Story?

story (n)

A story is a concise description of a customer's requirement on a card, used as a unit of work on an Agile project that can be tracked. It serves as a placeholder for a collaborative conversation between the customer and the team. Its completeness is verified by confirmation with the customer's criteria.

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The INVEST Guideline for Story Writing

INVEST in a good story

Independent

Negotiable

Valuable

Estimable

Small

Testable

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Independent

Negotiable

Valuable

Estimable

Small

Testable

Stories are easiest to work with if they are *independent*. That is, we'd like them to not overlap in concept, and we'd like to be able to schedule and implement them in any order.

- ✓ Do not overlap your stories in concept
- ✓ When sequencing stories, try to find their natural order

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Independent

Negotiable

Valuable

Estimable

Small

Testable

A good story is *negotiable*. It is not an explicit contract for features; rather, details will be co-created by the customer and programmer during development. A good story captures the essence, not the details. Over time, the card may acquire notes, test ideas, and so on, but we don't need these to prioritize or schedule stories.

- ✓ Stories are negotiable…and negotiated
- ✓ Your story is the essence of the requirement and not an explicit contract.
- ✓ Sign off stories with working software

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Independent
Negotiable
Valuable
Estimable
Small
Testable

A story needs to be *valuable*. We don't care about value to just anybody; it needs to be valuable to the customer. Developers may have (legitimate) concerns, but these framed in a way that makes the customer perceive them as important.

- ✓ Your stories need to be valuable to and understandable by your customer (Product Owner)
- ✓ They need to be framed from your customer's perspective

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Independent

Negotiable

Valuable

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- ✓ Your stories should have boundaries so you know when your are “done” and what is required to be “done”.
- ✓ Your stories should be digestible by the team so they can size them.
- ✓ Keep your stories understandable and of consistent granularity.
- ✓ “Spike” stories that your team has difficulty understanding.

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Independent

Negotiable

Valuable

Estimable

Small

Testable

- ✓ Keep you stories small enough to be measured and tracked.
- ✓ Keep your story descriptions short and concise.

*You should be able to complete a user story in days not weeks

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Independent
Negotiable
Valuable
Estimable
Small
Testable

- ✓ To know when your story is done, it needs to be testable.
- ✓ Define acceptance criteria that are clear and precise so you know when you are done and have delivered value.

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User Story Formatting

The Narrative

As a <persona>
I want <goal>
So that <value>

Typical format

In order to <goal>
As a <persona>
I want <value>

Feature Injection

As a <who>
<when> <where>,
I <What>
Because <Why>

5 Why's

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User Story Formatting

Acceptance Criteria

Given <some initial condition>
When <an event occurs>
Then <ensure some outcomes

Typical format

- ✓ Probably the most common format to break down a story into acceptance criteria
- ✓ Can be used to break down a larger story into specifics
- ✓ Can help with BDD (Behavior Driven Development)

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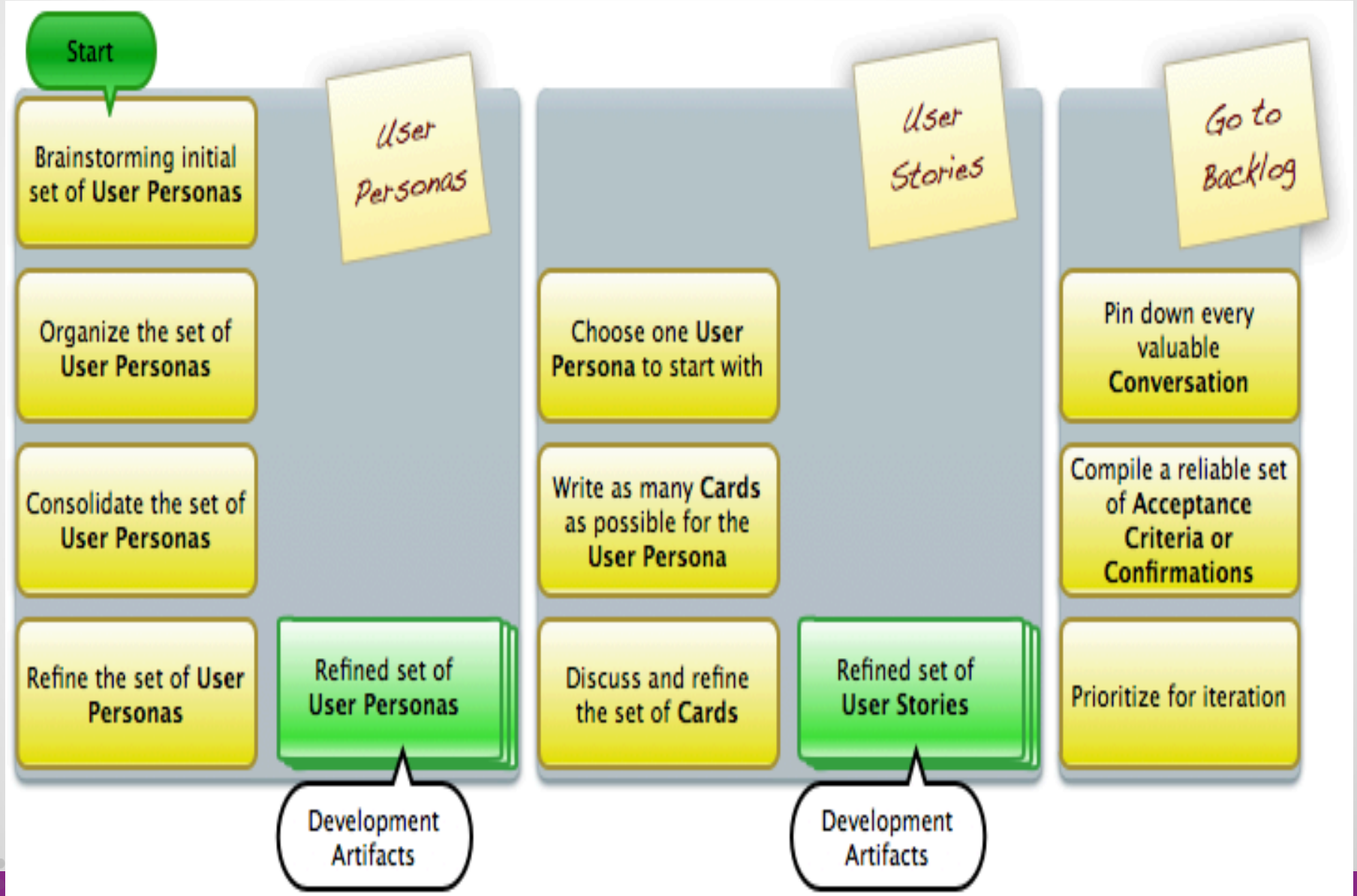
User Story Process



Building the Backlog

Epic

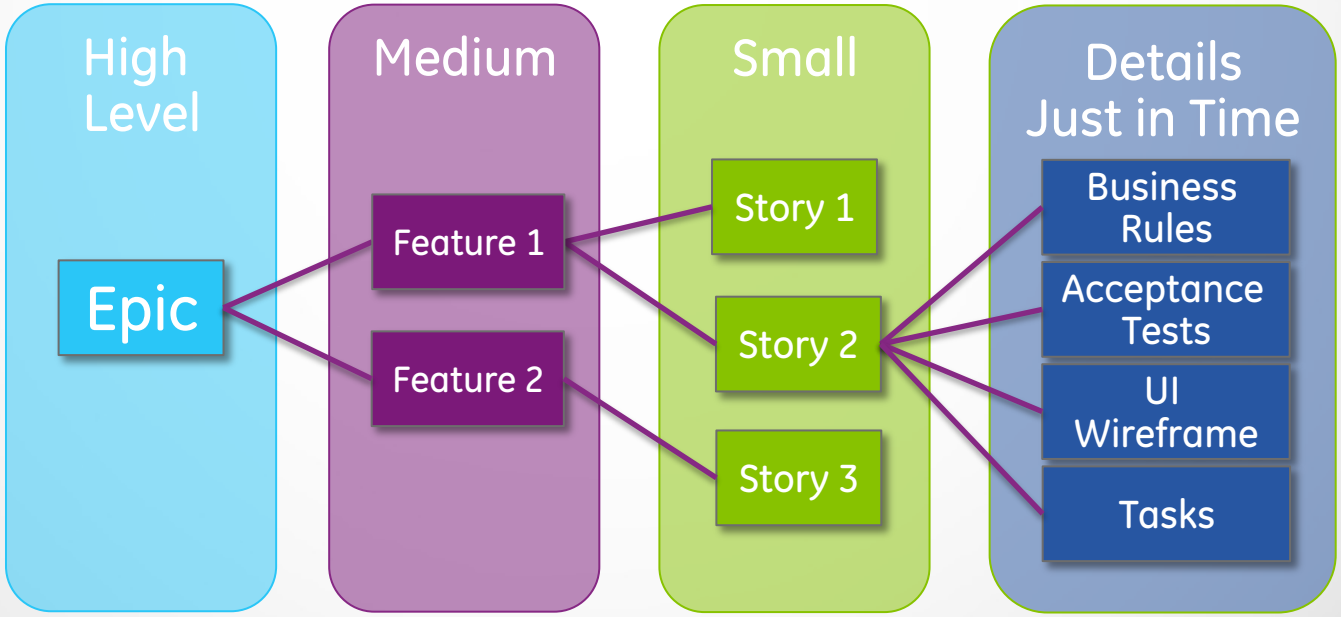
Epics collections of features, typically 1-3 months in duration. Epics span releases. Epics can span more than one team. These are the things the market cares about.

Feature

Features are smaller than epics, typically 2-4 weeks in duration. Features are contained within releases. Ideally, features are contained within a team. These are what the Product Owner will typically relate to.

User Story

User Stories are the smallest increment of value, typically less than a week. User Stories are contained within sprint.



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What Sizing Considers

Complexity

- How many moving parts are involved in delivering this?

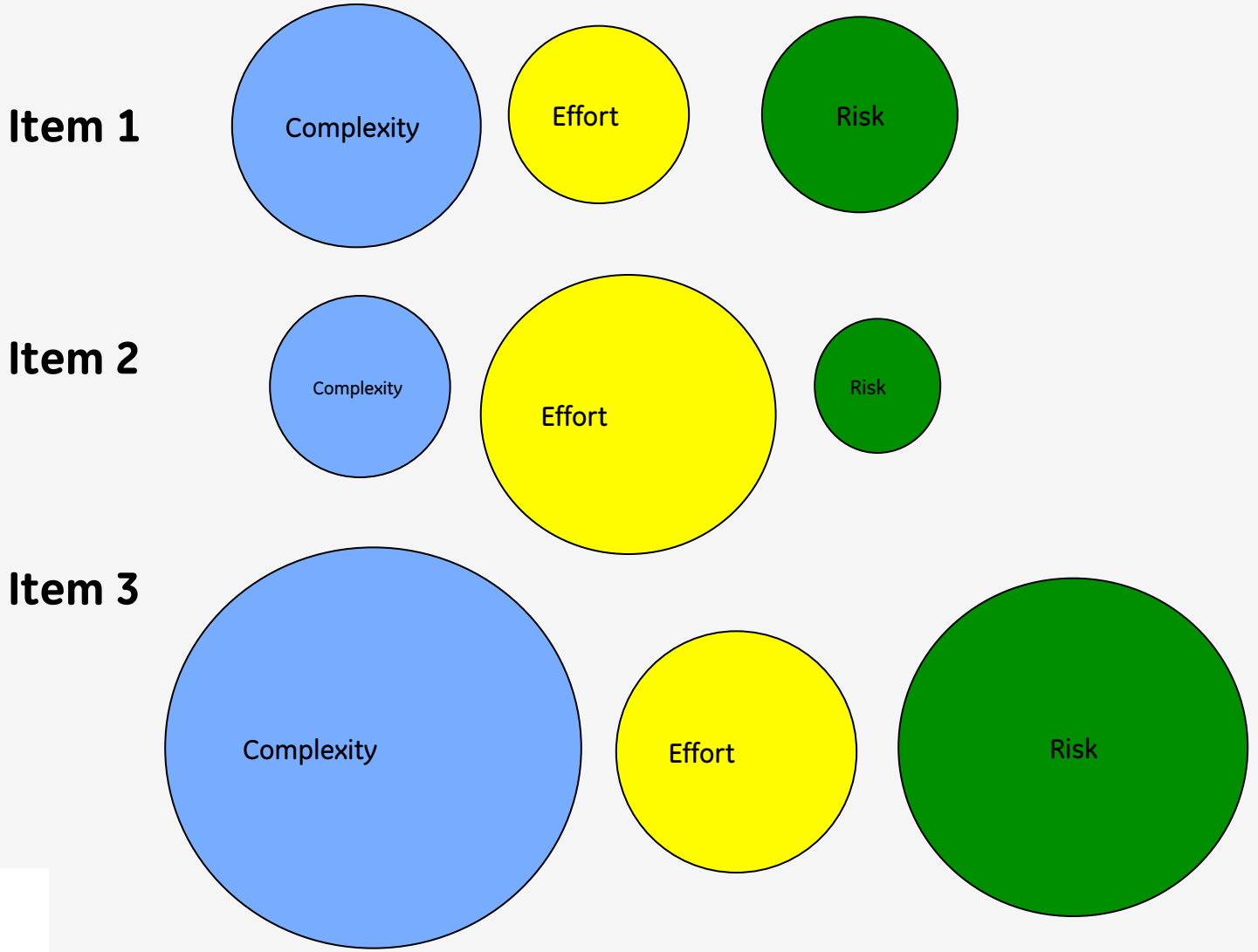
Effort

- How much effort will it take to get it done?

Uncertainty/Risk

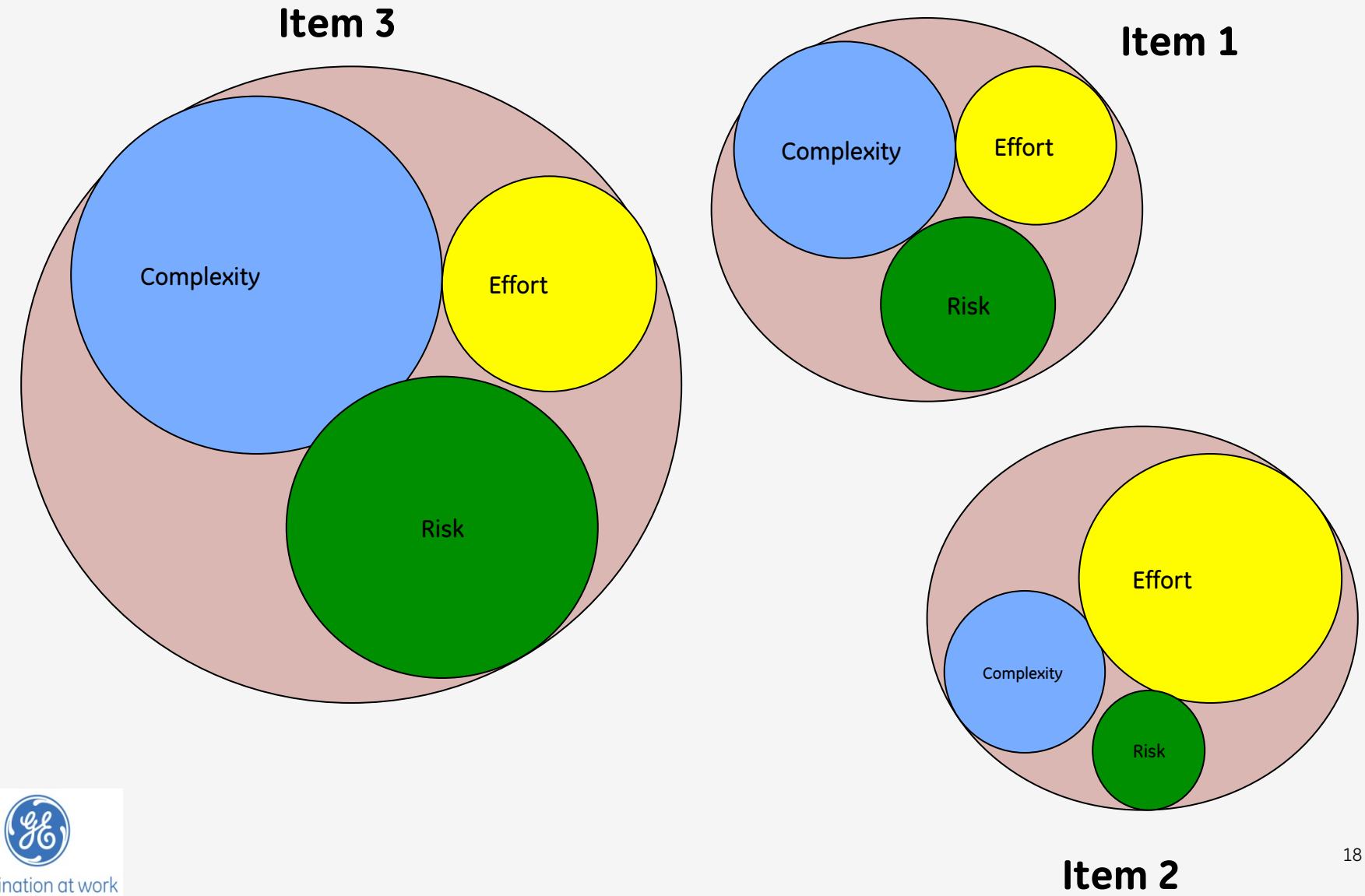
- Are there things about this that because we don't yet know, we are worried about?

3 Items in the Product Backlog



imagination at work

Relative Sizing Emerges



imagination at work

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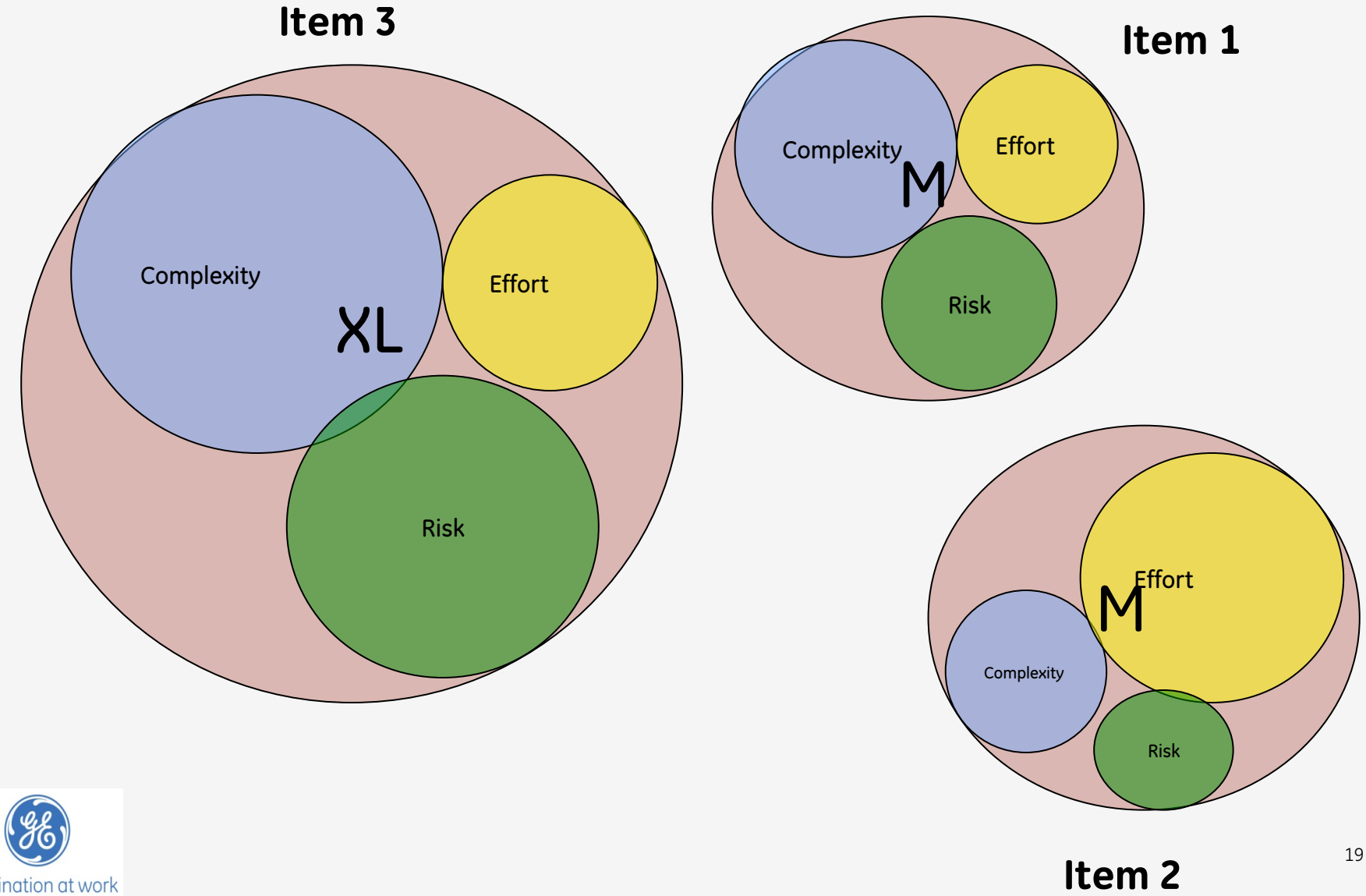
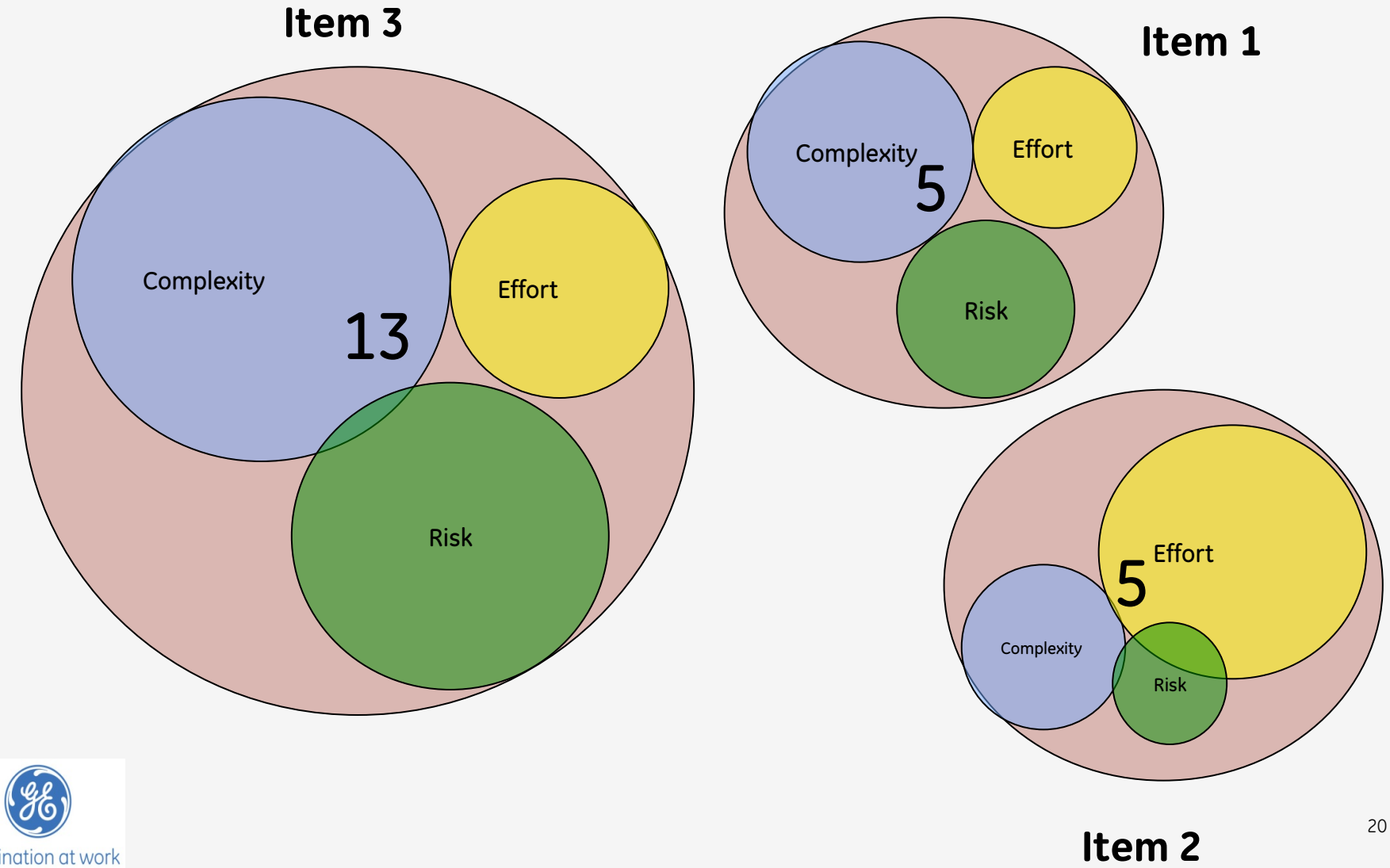
What If We Used T-Shirt Sizes?

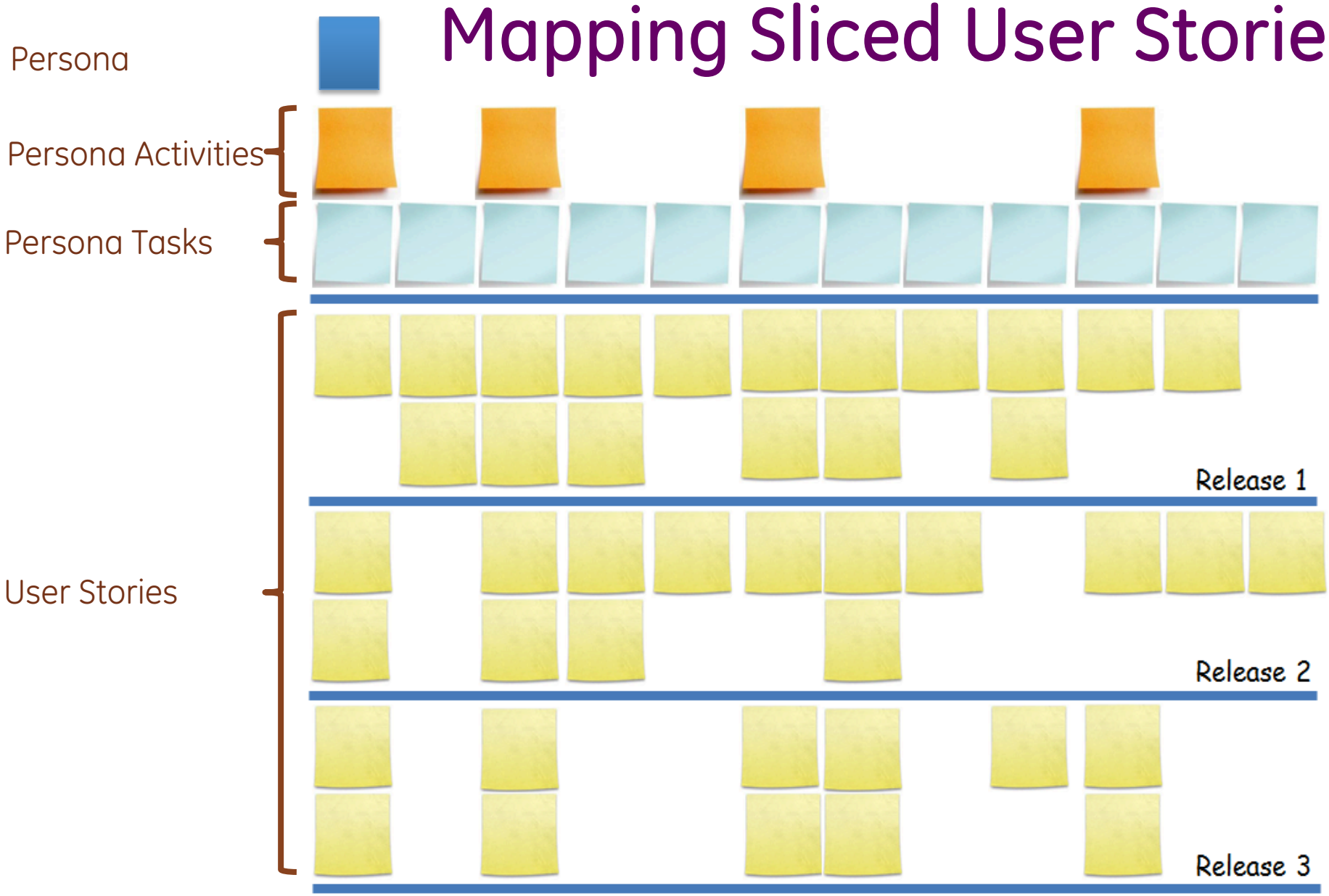


Or We Could Use Relative Numbers ("Points")



imagination at work

Mapping Sliced User Stories



Outcome: Demonstrate the ability to create a User Story Map

18 ways to slice a user story

High Level Splits

	How?
Research First	Literature search, spike, prototype, etc., to quickly identify fruitful paths
Manual Labor	Substitute human effort for automation.
Build or Buy	Off the shelf solutions may save much work; you may build where you can add unique value.
Defer Roles and Stories	Address less critical roles and features later
Walking Skeleton	Focus on the essence of the application (and architecture) first.

18 ways to slice a user story

User Experience Splits

	How?
Batch it up	Process several things at a time in batchmode; this lets you tolerate more variance on each item.
Single User	Handle the main path before worrying about conflicts between users.
API First	API first; Drive the application "headless" (has risk that API won't guess right about what the user interface will need.
Simplified User Interface Style	Can you use a form interface or command line rather than a graphical user interface?
Generic User Interface	Can you quickly deliver an inferior but functional layout before delivering a customized one?

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18 ways to slice a user story

"Ilities" Splits

	How?
Start Static	Rather than updating views dynamically, take a snapshot and update them on demand.
Simplify Persistence	Can you use flat files? In-memory structures (that go away when the application exits)?
Lower Fidelity	Especially for real-world data, can you get by with a less accurate representation (e.g., fewer colors, lower sampling rate, and so on)?
Improve Performance Iteratively	Address performance in steps.

18 ways to slice a user story

Behavioral Splits

	How?
Happy Path First	Address the main flow before alternatives and exceptions.
Many, 1 - 0	When you would allow multiple things, simplify it to 1 or 0.
Base Cases First	Handle base cases before recursive cases. (May go back and forth.)
Data Diet	Manage less data.

Guidelines for slicing user stories

Slice each user story so as to produce software that:

1. Works
2. Delivers Value
3. Can potential generate user feedback

I.N.V.E.S.T. in good user stories that are able to be completed in less than one Sprint

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How teams learn to split user stories

1. Splitting stories along process lines
2. Splitting stories along architectural lines
3. Splitting stories along procedural lines
4. Splitting stories into smaller stories **

Increasing value of slicing

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Splitting along process lines

Example.

1. Design
2. Code
3. Write programmer tests
4. Write acceptance tests
5. document

Poor way to slice user stories!

Splitting along architectural lines

Example.

1. Test drive the UI
2. Test drive the business logic
3. Test drive the database client
4. Write acceptance tests
5. document

Poor way to slice user stories!

Splitting along procedural lines

Example.

1. Collect registrant information
2. Integrate paypal.com
3. Email registrant after payment
4. Email organizer after payment

Getting better!

Splitting into smaller stories

Example.

1. Register with just e-mail
2. Collect more information from registrant (name, address, phone)
3. Notify both registrant and organizer after registration

INVEST Criteria is met!

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Patterns for Splitting Stories

1. Workflow Steps

As a content manager I can publish a new story to the corporate website.

...I can publish a news story directly to the corporate website.

...I can publish a news story with editor review.

...I can publish a news story with legal review.

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Patterns for Splitting Stories

2. Business Rule Variations

As a user I can search for flights with acceptable dates.

...as "n days between x and y."

...as "a weekend in December."

...as "± n days of x and y.

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Patterns for Splitting Stories

3. Major Effort

As a user, I can pay for my flight with VISA, MasterCard, Diners Club, or American Express.

...I can pay with one credit card type (of VISA, MC, DC, AMEX).

...I can pay with all four credit card types (VISA, MC, DC, AMEX).

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Patterns for Splitting Stories

4. Simple / Complex

As a user, I can search for flights between two destinations.

...specifying a max number of stops.

...including nearby airports.

...using flexible dates.

...etc.

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Patterns for Splitting Stories

5. Variations in Data

As a content manager, I can create news stories.

...in English.

...in Japanese.

...in Arabic.

...etc.

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Patterns for Splitting Stories

6. Data Entry Methods

As a user, I can search for flights between two destinations.

...using simple date input.

...with a fancy calendar UI.

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Patterns for Splitting Stories

7. Data Performance

As a user, I can search for flights between two destinations.

...(slow - just get it done, show a "searching" animation).

...(in under 5 seconds).

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Patterns for Splitting Stories

8. Operations

As a user, I can manage my account.

...I can sign up for an account.

...I can edit my account settings.

...I can cancel my account.

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Patterns for Splitting Stories

9. Break out a Spike

As a user, I can pay by credit card.

Investigate credit card processing.

Implement credit card processing (as one or more stories).

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