



Goldilocks and the 3 Projects:

Behat, BDD & Getting Your
Specs “*Juuust Right*”

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Note.

- In what follows, Goldilocks is not the customer, nor the development team.
- We are *all* Goldilocks, together.
- The customer and the development team must work **together** to figure out the right solution to the customer's problem*.

*Paraphrased from [The Scrum Guide](#)

Who am I?



- Not actually a Drupal developer (shhh!)



- Not actually a Drupal developer (shhh!)
- But I play one on TV^H^H^H I have some really smart colleagues at Consensus you may know:

<https://consensus.enterprises/team>

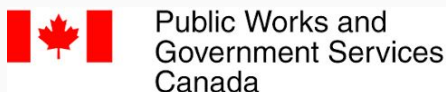


- ★ Open source web developers and programmers
- ★ Specializing in **Drupal**™  and  **Aegir**
- ★ Experts in end-to-end application lifecycle
- ★ Focus on social enterprises, non-profits, and public sector
- ★ <https://consensus.enterprises/team>

Some of our Partnerships



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- Web development since 1996
- Automating deployment pipelines since before “devops,” “config management”
- Test-driven development since the Agile Manifesto was newfangled



- These days: partner at Consensus
 - agile practices
 - devops



- These days: partner at Consensus
 - agile practices*
 - devops*
- * stubbornly lowercase



1. We Are All Goldilocks.
2. There is no Magic.
3. Watch Out for Bears.



1. We Are All Goldilocks.
The problem to be solved.
2. There is no Magic.
But there is technology!
3. Watch Out for Bears.
Or dragons, Or people.



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****lots and lots of technology***
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We Are All Goldilocks.

- We all know the traditional fairy tale
 - Goldilocks knows what she likes, and likes things “juuust right”; but...



We Are All Goldilocks.

- Trial & error: Goldilocks has to try every option before finding the one that's just right ("systematic experimentation")



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- Trial & error: Goldilocks has to try every option before finding the one that's just right ("systematic experimentation")
- She doesn't manage risk well - breaks a chair, burns her tongue, and eventually gets surprised by those bears coming home (project deadline?)



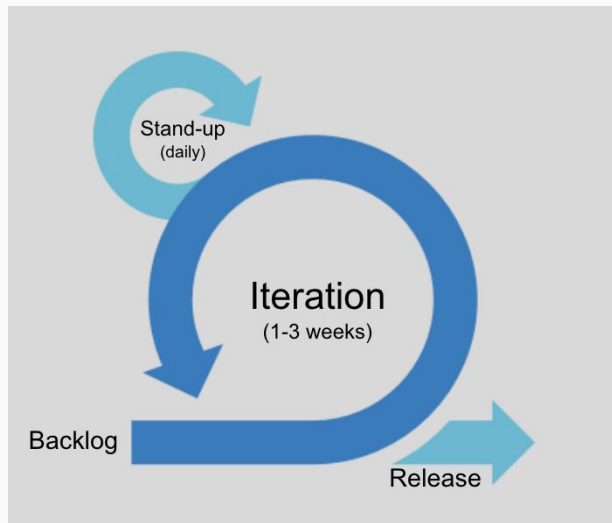
We Are All Goldilocks.

- Trial & error: Goldilocks has to try every option before finding the one that's just right ("systematic experimentation")
- She doesn't manage risk well - breaks a chair, burns her tongue, and eventually gets surprised by those bears coming home (project deadline?)
- She does, however, fail fast.

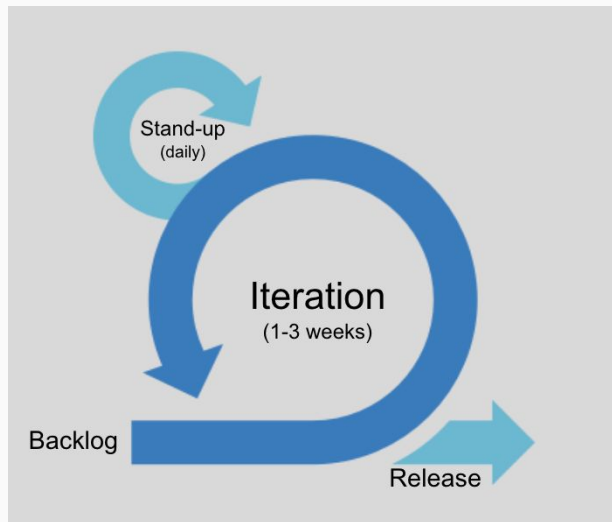


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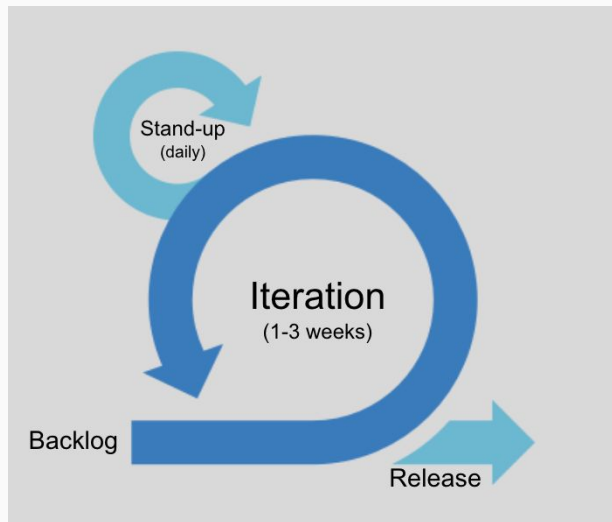
- What if Goldilocks had gotten an invitation to the bears' hut instead of breaking in?
- What if we took her to Sleep Country Canada or Leon's and asked her what kind of mattress she might like, what kind of chair?



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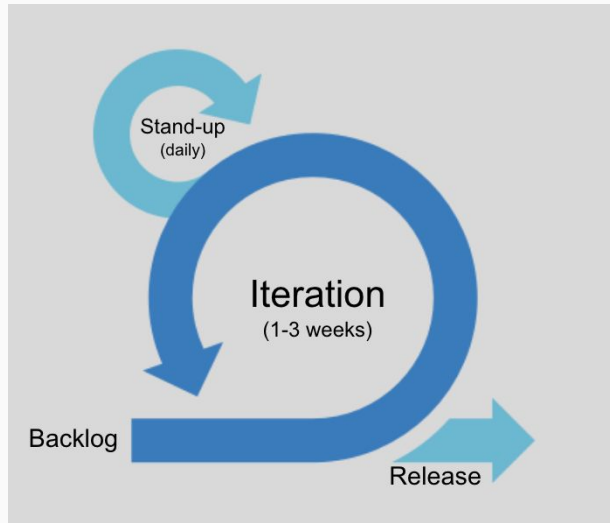


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Not Magic, BDD.

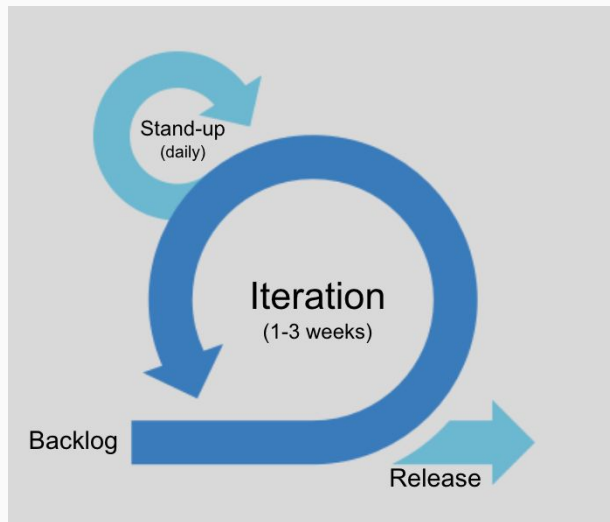
- Behaviour-Driven Development (google it!)
- Fusion of:
 - Business Analysis (figuring out what the customer wants), which benefits the customer, and
 - Test-Driven Development (ensuring what we are building actually works), which improves the development team's productivity.



Not Magic, BDD.

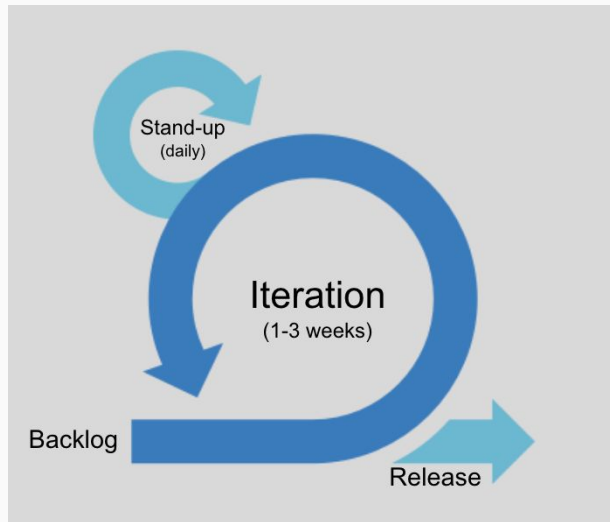
In other words, we:

- **Focus on what the customer wants**
- **Ensure we are actually providing it**



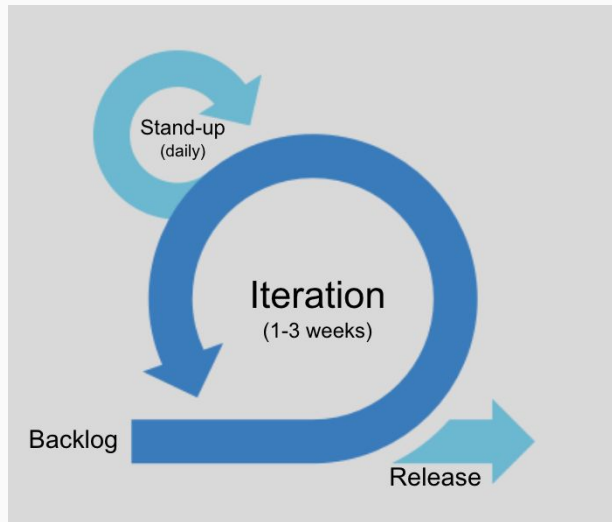
Why BDD?

- **Because we focus on what the customer wants, we:**
- Build in a regular process of customer involvement
- Deliver business value ASAP, continuously
 - Short iterations
 - Small feature sets
 - Fully deployed (“done”) every cycle
- Articulate tests in language the customer can understand



Why BDD?

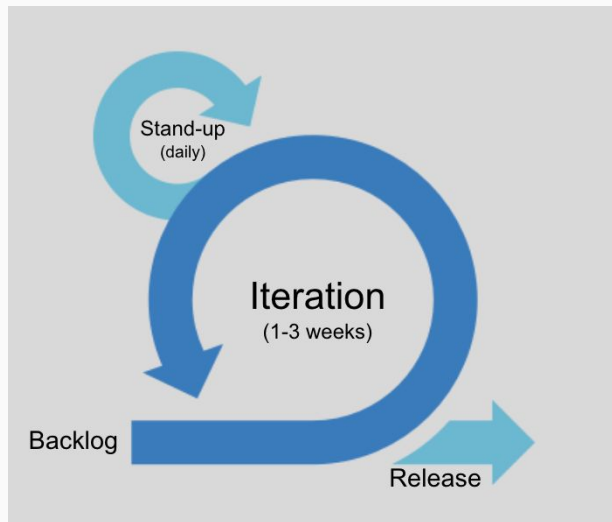
- Because we keep our tests focused on the ***behaviour*** of the product, not how it works “under the hood” (implementation),
- And since they are written in language the customer understands, in consultation with the customer, these tests...
- **Ensure we are actually providing what the customer wants.**



BDD: User Stories

- The basic building blocks of BDD
- Ideally, written by the customer:

As a (USER)
I want to (DO THIS)
So that I can (ACHIEVE
THAT)



BDD: User Stories

- We translate User stories into Scenarios that describe Behaviour.

Given (SOME CONDITION)

When I (DO SOMETHING)

Then (I SHOULD EXPECT A
SPECIFIC OUTCOME) .



Behat

- PHP framework for BDD
- Integrates with Drupal via an extension to the headless Mink browser emulator
- All the docs: <https://docs.behat.org/>



Behat

- Features in User Story format.
- Uses Gherkin, a “Business-readable domain specific language.”

```
@login
```

```
Feature: Login.
```

```
    In order to access administrative functions
```

```
    As a Power-user
```

```
    I need to be able to login to the site.
```




Behat

- Scenarios in “Given-When-Then” format.

Scenario: Login to the site.

Given I am not logged in

When I am on "/user/login"

And I enter "dev" for "Username"

And I enter "pwd" for "Password"

And I press "Log in"

Then I should be on "/user/1"

And I should see "Member for"



Drumkit

- Automation framework for Drupal/Behat devops (plus lots more: Hugo, Aegir, Ansible, Terraform...).
- Code etc.:
<https://gitlab.com/consensus.enterprises/drumkit>
- Extends Behat's Context class framework to provide command-line tests.



Behat/Drumkit (Examples)

```
untitled
1 Feature: Some terse yet descriptive text of what is desired
2   In order to realize a named business value
3   As an explicit system actor
4   I want to gain some beneficial outcome which furthers the goal
5
6   Scenario: Some determinable business situation
7     Given some precondition
8       And some other precondition
9     When some action by the actor
10      And some other action
11      And yet another action
12     Then some testable outcome is achieved
13      And something else we can check happens too
14
15   Scenario: A different situation
16     Given some precondition
17       And some other precondition
18     When some action by the actor
19      And some other action
20      And yet another action
21     Then some testable outcome is achieved
22      And something else we can check happens too
```



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Bears, or Dragons, or People

- It would be irresponsible not to point out that:

"You can't solve a people problem with a technical solution."



Bears, or Dragons, or People

- It would be irresponsible not to point out that:

"You can't solve a people problem with a technical solution."

- There is no magic.



Bears, or Dragons, or People

- None of these practices succeed without:
 - **Up front investment**
 - **Ongoing stakeholder engagement**



Not Optional!

- **Up front investment**
 - Build a great team
 - Solid test infrastructure
 - Automation
 - Organizational support



Not Optional!

- **Stakeholder engagement**
 - Product Owners (customer domain experts) must make themselves available throughout the project, or there is no meaningful consultation.



Not Optional!

- **Stakeholder engagement**
 - Product Owners must be empowered decision makers or the consultation is a waste of time.



Recap:

- The customer and the development team must work **together** to figure out the right solution to the customer's problem.
- They can do this by frequent consultation about behaviour, and allowing **behaviour to drive development through testing**.
- **Behat** and **Drumkit** are technical tools that can be helpful parts of the puzzle for Drupal teams,
- ...In combination with **up front investment** and **ongoing stakeholder engagement**.



In other words:

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Questions?