



Delivering value with BDD

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Hello!

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- Open knowledge sharing and learning community
 - Tech sessions, Workshops and Code kata
 - Blockchain, agile methodologies, JS frameworks, AI, ML, Big data & Analytics
 - <https://www.meetup.com/techtalkssg>

Agenda

- The curious case of software development
- A gentle introduction to BDD
- BDD in practice
- Tools and Techniques
- Q & A



What if?

- Eliminate the ambiguity from specifications
- Preserve information at a single source of truth
- Develop a common language across business and project team
- Focus on building the most valuable features
- Visualize in real time the progress of product development and provide feedback

Say Hello! to BDD

BEHAVIOR DRIVEN DEVELOPMENT

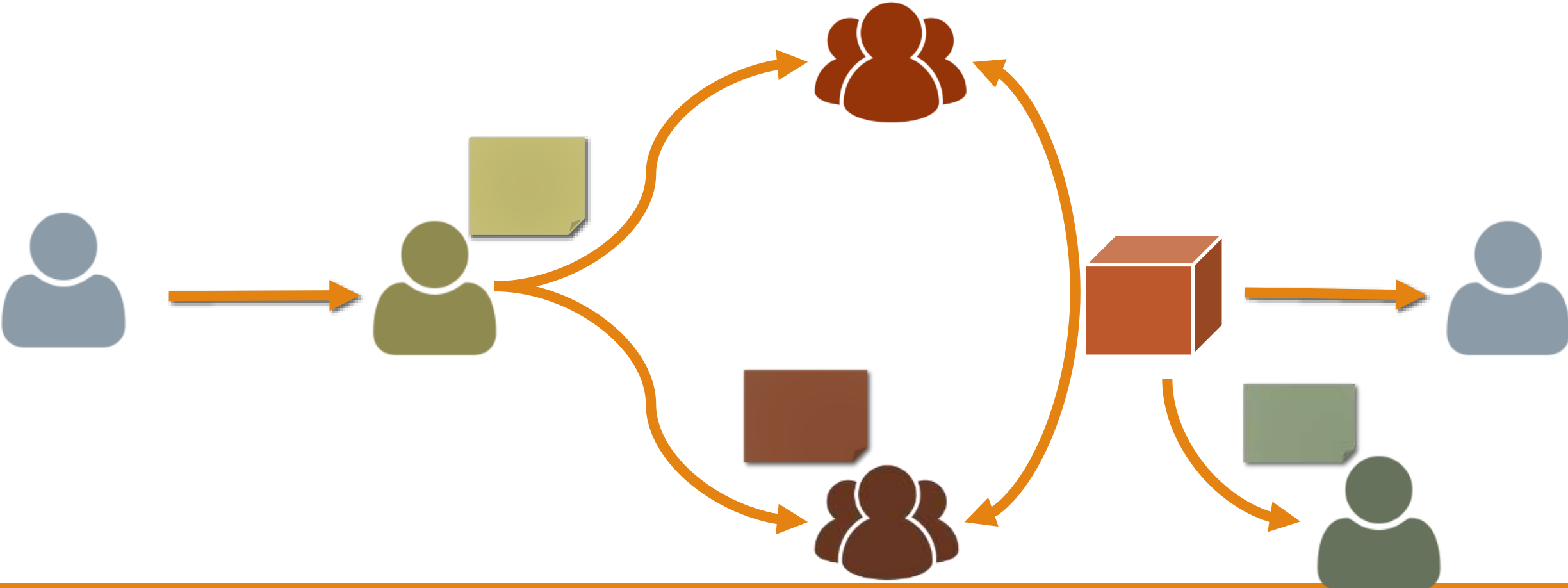
Set of techniques and patterns

Helps translating business knowledge to
software in an iterative manner

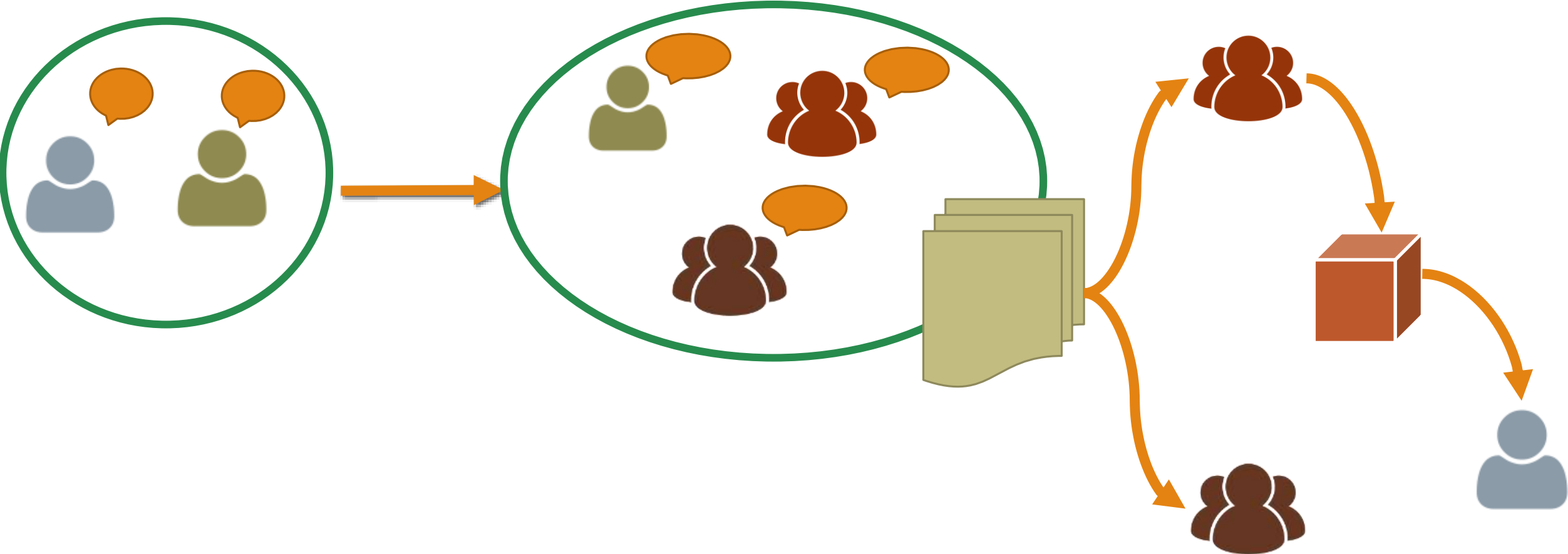
Focus on business value

Achieved through continuous collaboration
between business stakeholders & project teams

Traditional workflow



BDD workflow



Expressed with Gherkin

Gherkin specification

Feature: <>

Scenario: <>

Given :<>

And/But :<>

When :<>

And/But :<>

Then :<>

And/But :<>

Gherkin specification

Feature: Recording a session

Narrative: In order to replay it later for audience who could not attend, as a speaker, I want to record this session

Scenario: Start the recording

Given: I am a speaker at this session

And: I have placed a camera in the room

When: I start the recording

Then: The session should get recorded

Let's code



Code sample: <https://github.com/riteshmehrotra/BDD>

BDD deep dive



Whose behavior?

- Business
- Consumer
 - Customers/Beneficiaries
 - Staff
 - Govt. Agencies/Regulatory/Audit



What is value?

- Increase profit
- Protect profit
- Reduce cost
- Avoid future cost



Where is value?



Opportunity canvas

Opportunity Canvas			Title: _____	Date: _____
			Iteration: _____	
Users & Customers <small>What types of users and customers have the challenges that solution addresses?</small> <small>Look for differences in user's goals or ways that would affect their use of the product. Separate users and customers into different types based on those differences that make a difference. It's a bad idea to target "everyone" with your product.</small> <p style="text-align: center; font-size: 48px;">2</p>	Problems <small>What problems do prospective users and customers have today that your solution addresses?</small> <small>What needs, goals, or jobs-to-be-done does it address that your solution addresses?</small> <p style="text-align: center; font-size: 48px;">1</p>	Solution ideas <small>List product, feature, or enhancement ideas that solve problems for your target audience.</small> <p style="text-align: center; font-size: 48px;">1</p>	How will users use your solution? <small>In your target audience how your solution, what will they do differently as a consequence? And, how will that benefit them?</small> <p style="text-align: center; font-size: 48px;">5</p>	User Metrics <small>What specific user behaviors can you measure that will indicate they try, adopt, use, and place value in your solution?</small> <p style="text-align: center; font-size: 48px;">6</p>
	Solutions Today <small>How do users address their problems today?</small> <small>List competitive products or work-around approaches your users have for meeting their needs.</small> <p style="text-align: center; font-size: 48px;">3</p>		Adoption Strategy <small>How will customers and users discover and adopt your solution?</small> <p style="text-align: center; font-size: 48px;">7</p>	
Business Challenges <small>How do the customers' and users' and their challenges allow impact your business? If you don't solve these problems for your customers and users, will it hurt your business? How?</small> <p style="text-align: center; font-size: 48px;">4</p>		Budget <small>1. What might it cost your organization if you don't create the solution?</small> <small>2. What might your organization earn or save if you do?</small> <small>3. Given that, what would your organization budget to create the solution?</small> <p style="text-align: center; font-size: 48px;">9</p>	Business Benefits and Metrics <small>What business performance metrics will be affected by the success of this solution? These usually change as a result of users actually buying and using your solution.</small> <p style="text-align: center; font-size: 48px;">8</p>	

Download at: <http://pattonassociates.com/opportunity-canvas/>

Vision statement

For <target customer>
Who <has a certain problem>
The <product name>
Is a <product category>
That <will provide key benefits>
Unlike <alternative from competitor>
Our product <key difference>

Feature injection

Hunt the value

(Why?) * 5



RCA example

The system is currently down

Why?

The underlying authentication service is failing so we cannot log in

Why?

The authentication service cannot connect to repository

Why?

The connection parameters are incorrect

Why?

There was a change in database host name which was not updated in authentication service

Applied to goal discovery

We want to offer \$ 25 cashback for customers who do less than 10 withdrawals a month?

Why do you offer that?

A promotion will encourage more customers to do lesser withdrawals

Why do you want to encourage them?

By means of that, we want to promote cashless transactions

Why so?

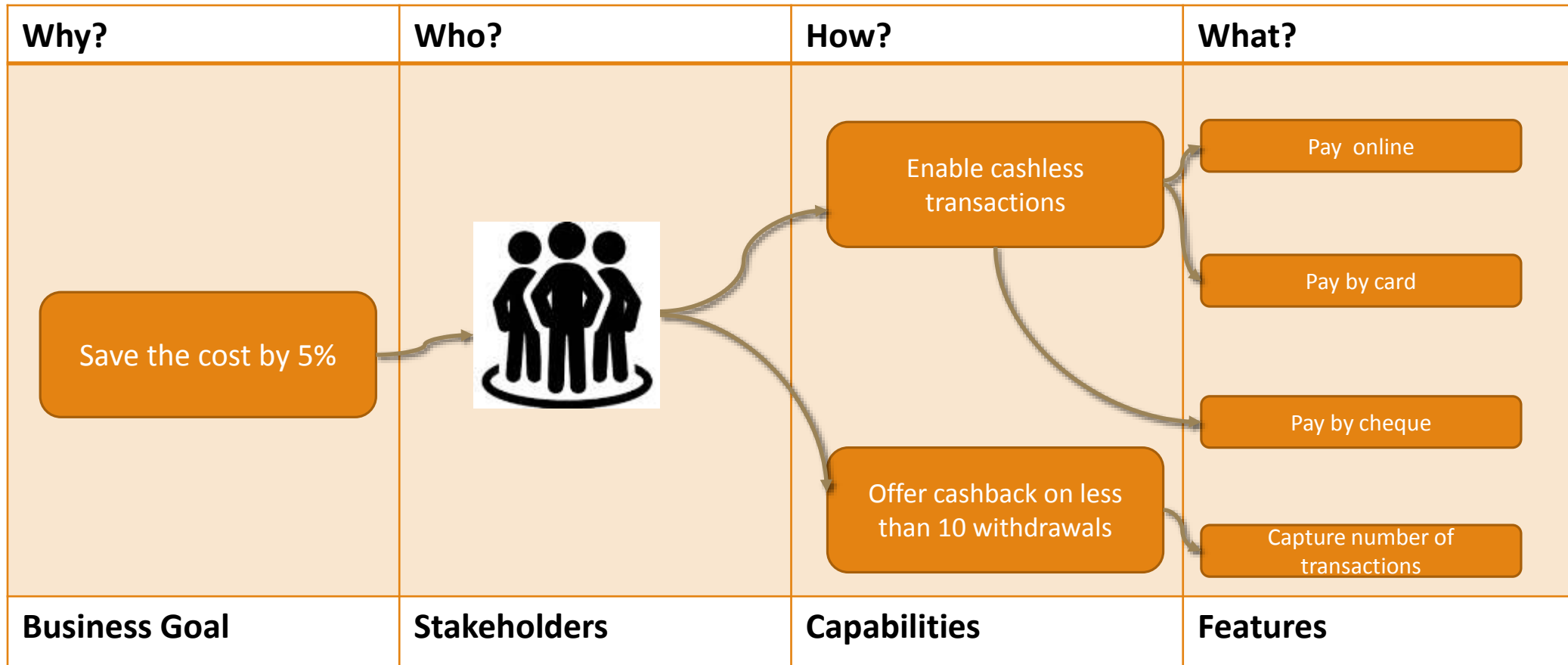
Because we want to reduce usage of ATM

Why?

Maintaining the ATMs is an additional cost, and our analysis suggests that we will be able to save cost by 5% by reducing usage

Injecting a feature

Impact map



Seek examples

Seek example

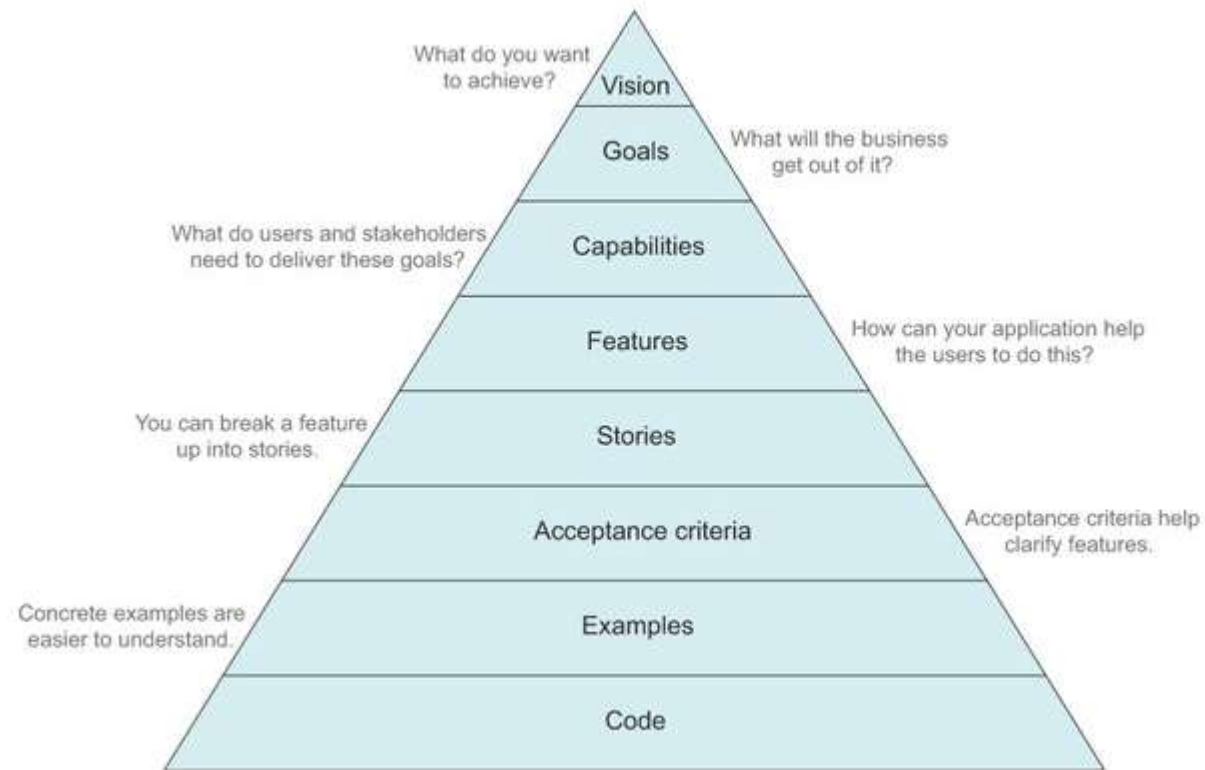
“Can you give me an example?”

Precise specifications so delivery teams avoid rework caused by ambiguity

Objective way to measure when work is complete

Described in book “Specification by Example” by Gojko Adzic

Approach



Source: BDD in action

Recap

- Enhanced business - IT collaboration
- Aligned to the business value
- A single source of truth – equally understood by business and development teams

References

BDD in action – James Smart Fergusen

Specification by example – Gozko Adzic



Meetup



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