

GOAL WORKSHOP (A-TDD):

The goal is to help the team to increase the software development productivity.

The team's productivity is based on understanding, developing, testing and delivering the story.

The main focus will be on testing. The next elements are mandatory for success

Clear on what is tested by the team

Maintainable by the team

and fun.

AGENDA

- Introduction to A-TDD
- Running a requirements workshop
- Test overview and approach

AGENDA

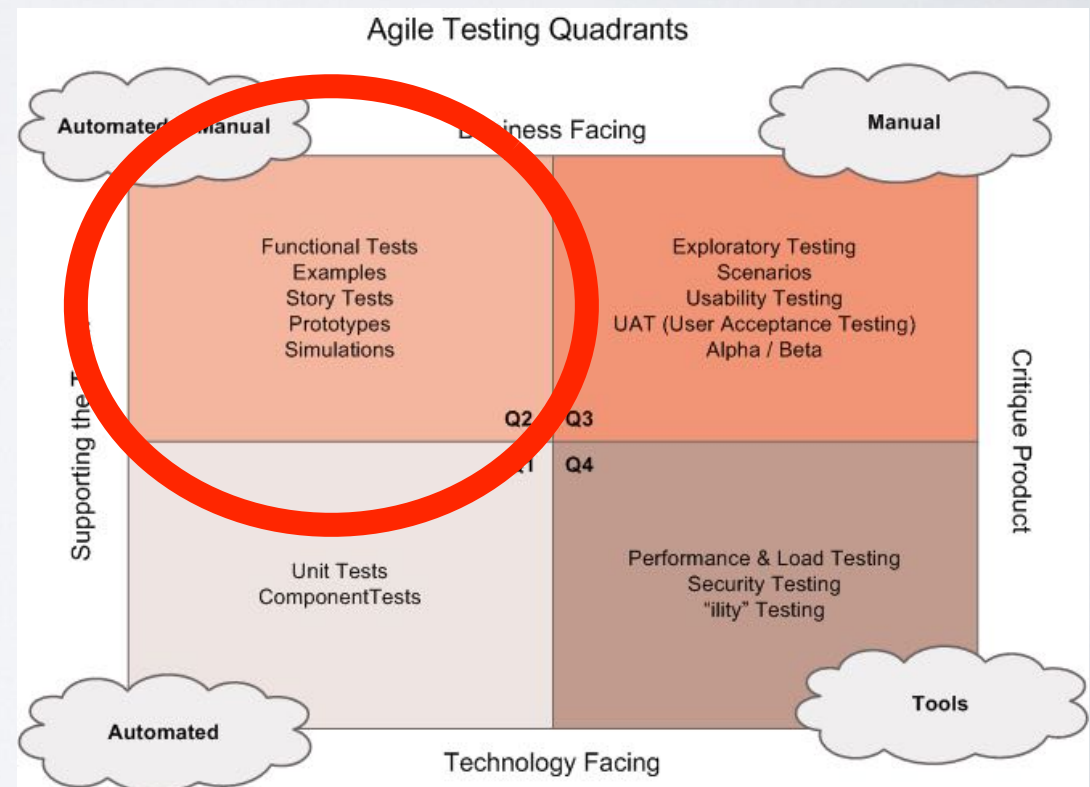
- **Introduction to A-TDD**
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OBJECTIVES

- How ATDD helps collaboration between customer / tester and developer
- What are acceptance tests?
- Why use them?
- How and where are they created

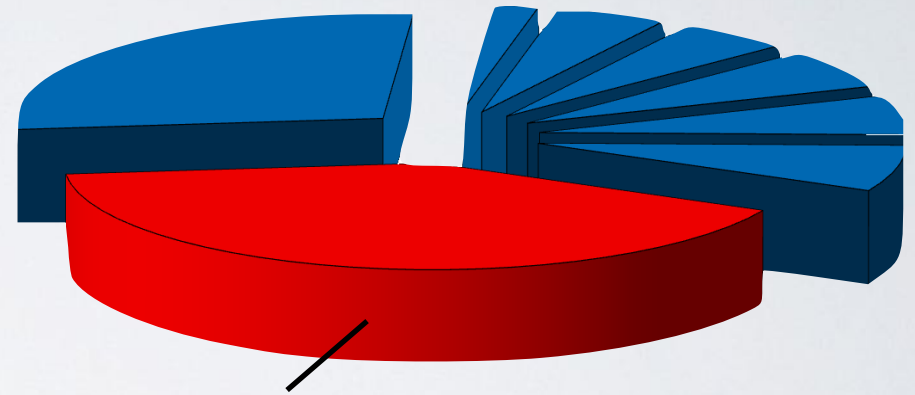
WHAT ARE AGILE ACCEPTANCE TESTS?

- Acceptance tests
 - From the customers point of view
 - Focus is on behaviour
- Examine externally visible effects
 - Business rules
 - Flows
 - Interactions
- Implementation Independent



WHY USE THEM?

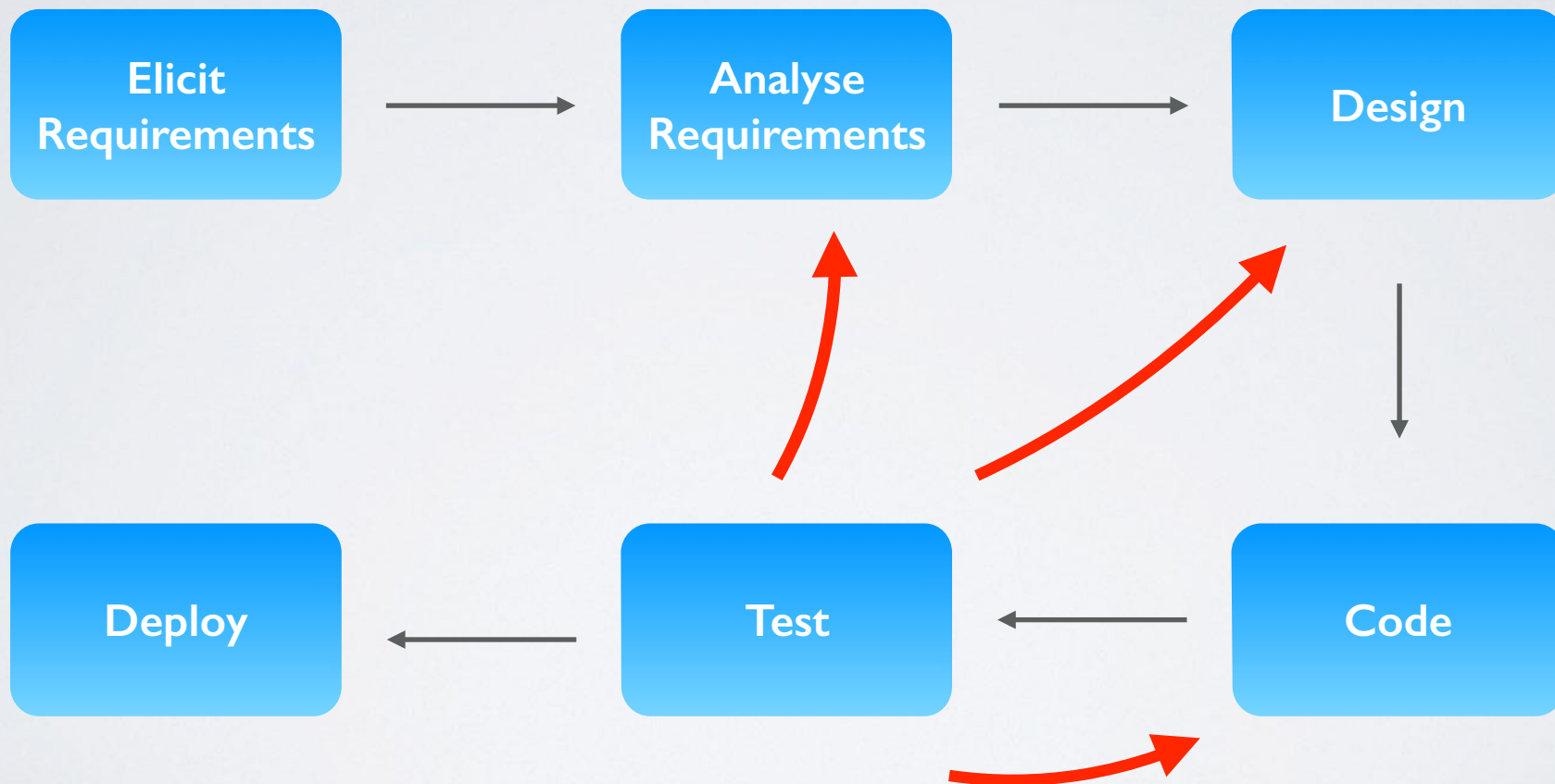
- Move from FEATURE builders to VALUE deliverers.
- Reduce communication errors and defect introduction.
- Improve productivity.
- Increase business involvement to build the thing right.
- Use intellect of all people involved.



REQUIREMENTS ERRORS 41%

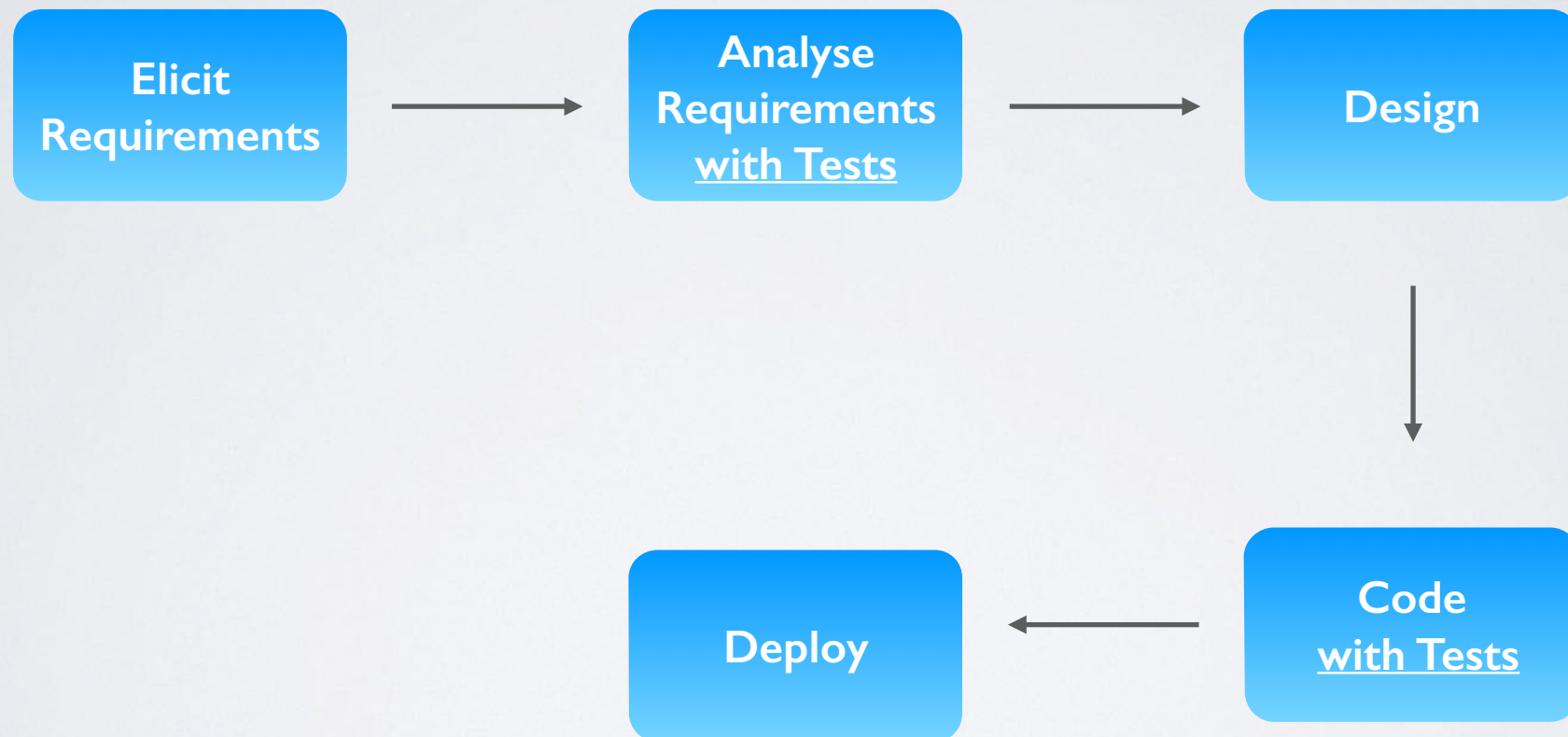
SOURCE: TOM GILB, 2002

WHY DO WE HAVE THESE LOOPS?



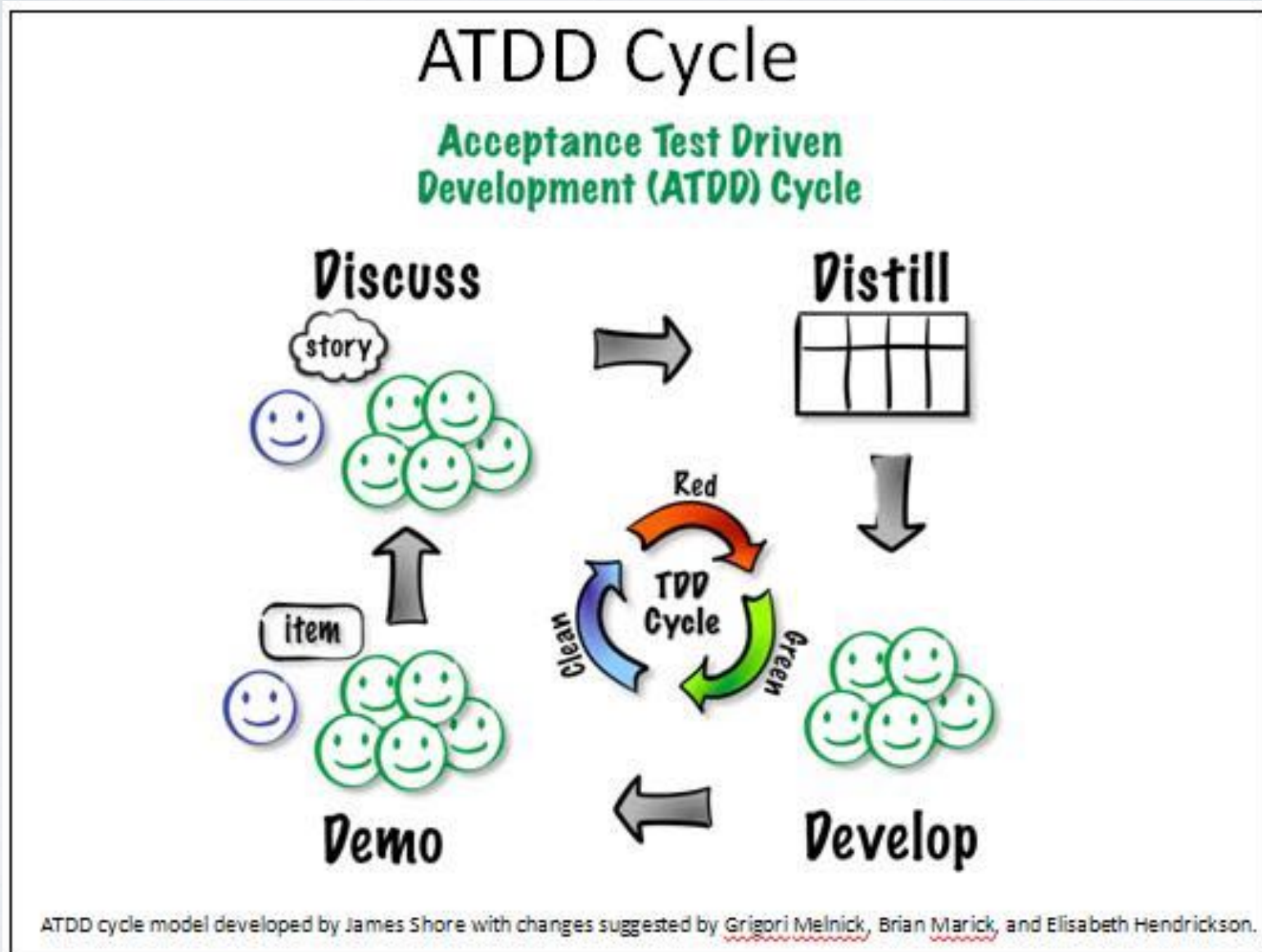
source: Ken Pugh

TESTS DRIVE DEVELOPMENT



source: Ken Pugh

WHAT IS A-TDD?



AGILE ACCEPTANCE TESTS

- Owned by the customer.
- Can be run by anyone involved.
- Written together with the customer, developer, and tester.
- About the what and not the how.
- Expressed in the language of the problem domain.

NOT a replacement of User Acceptance Testing!

LAB 0

- A temperature service
 - Input: degrees in Celsius
 - Output: degrees in Fahrenheit

Which acceptance tests would you write?

Celsius	Fahrenheit	Notes
0	32	
100	212	Needed?
-273.15	-459.7	Precision?
-273.151	Error	Below 0 Kelvin
500	932	Maximum – Needed?

source: Ken Pugh

AN EXAMPLE STORY

As a financial administrator

I want to see the cancellation penalty when a reservation is cancelled

So that I can create an invoice

THE DISCUSSION

Acceptance criteria

- The later you cancel the higher the penalty you have to pay.
- Verify that the invoice contains the right penalty and description.
- All-in agreements pay a penalty over the total amount. Foods and drinks is included.
- Custom agreements pay a penalty over the amount for the office space rented. Food en drinks is excluded.
- Normal customers get a 1% penalty discount for any reservation.
- Premium customers get a 8% penalty discount if the total amount is more the 5000. Otherwise a 3% penalty discount if the amount if more then 2000.
- Reservations above 5000 get a 5% penalty discount.

THE DISTILLATION

Cancellation policy for reservations

- Cancellation more than 6 months before arrival, No costs
- Cancellation more than 3 months before arrival, 10% of the total price
- Cancellation more than 2 months before arrival, 15% of the total price
- Cancellation more than 1 month before arrival, 35% of the total price
- Cancellation more than 14 days before arrival, 60% of the total price
- Cancellation more than 7 days before arrival, 85% of the total price
- Cancellation less than 7 days before arrival, 100% of the total price

LAB I

- We have a customer who has a 5001 euro custom reservation. No food is reserved. He cancels 14 days before arrival.

What is the penalty discount he gets?

TEST SCRIPT

- Login as a normal user
- Select items to make a reservation of 500 | euros
- Set a arrival date of more then | 4 days.
- Complete the reservation
- Cancel the reservation today.
- Check if the discount is correct.
- Logout.

Repeat this for much more examples.

IN CODE

```
@Test
public void CancellationPenaltyDiscountOfNormalUserCancelled14DaysBefore() {
    CancellationPolicy policy = new CancellationPolicy();
    DateTime now = new DateTime();
    DateTime arrivalDate = now.plusDays(14);

    double penaltyDiscount = policy.calculatePenaltyDiscount(5001, now,
        arrivalDate, User.NORMAL);

    assertThat(penaltyDiscount, equalTo(37.50));
}
```

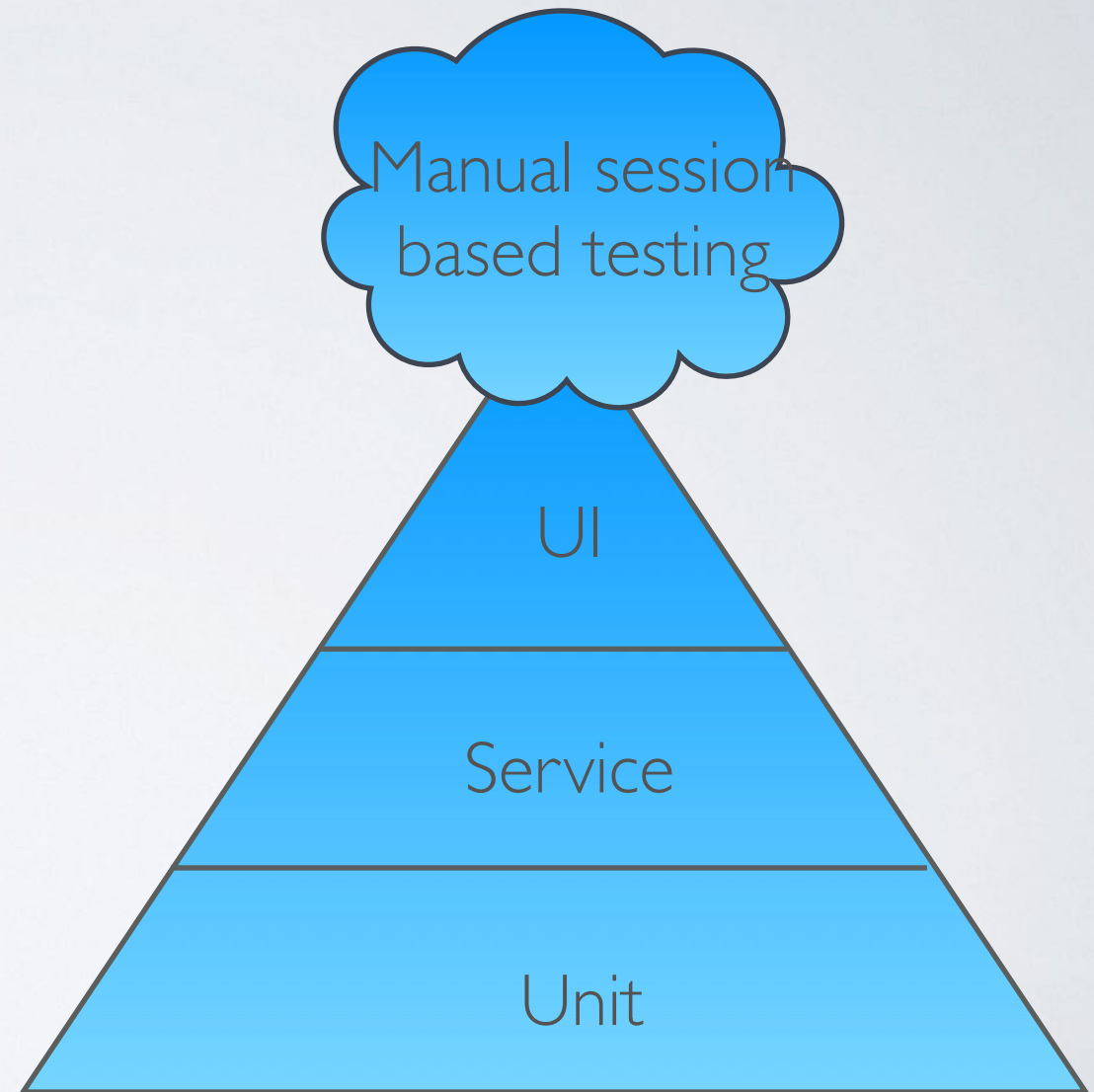
IN FITNESS

Calculate the penalty discount

Customer	Reservation	Days before arrival	Discount?
Normal	5001 Euro	14	37.50
Normal	5001 Euro	15	[37.50] expected [150.03]

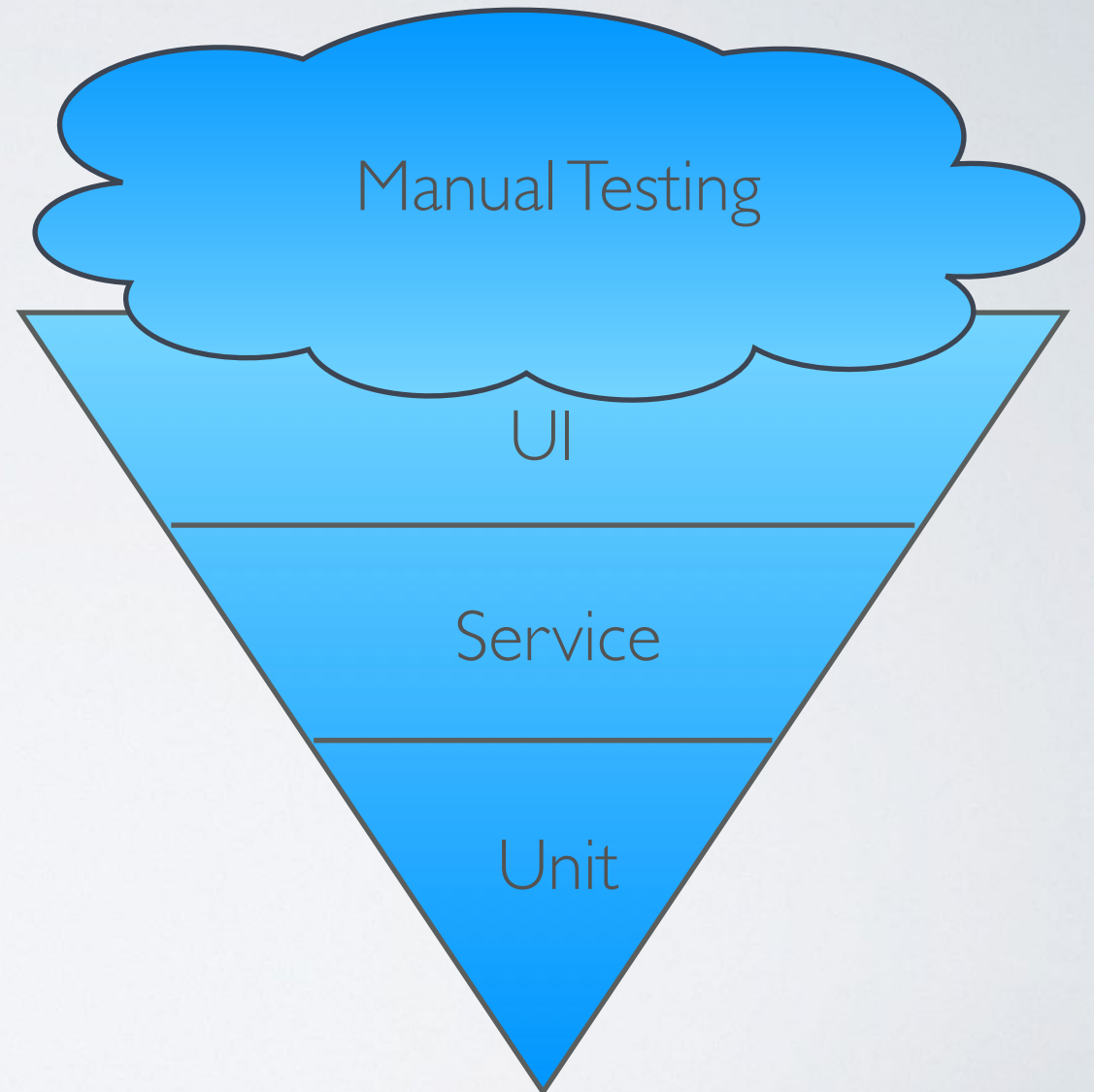
A TEST STRATEGY

- UI layer is for usability UI functionality and confidence.
- Service layer is for business rules and story acceptance criteria.
- Unit layer is the basis for finding errors quickly and quality code



PROBLEM OF GUI TESTS

- Slow and increase build times.
- Very brittle as the GUI changes often.
- Expensive to write.
- You often loose trust in them.



BENEFITS OF A-TDD

- Developers will read and understand the specifications
- You will have automated tests to guide development and provide real progress metrics
- Build up a regression suite to save time on end user acceptance and smoke testing.
- Verify business rules by a click on a button
- Requirements will be unambiguous with in the team shared knowledge and without functional gaps

TESTED MEANS

?????

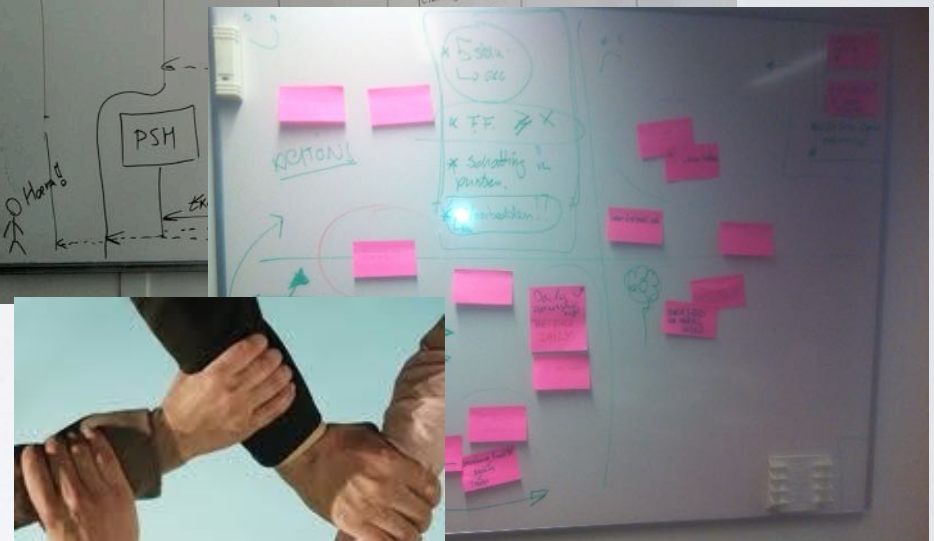
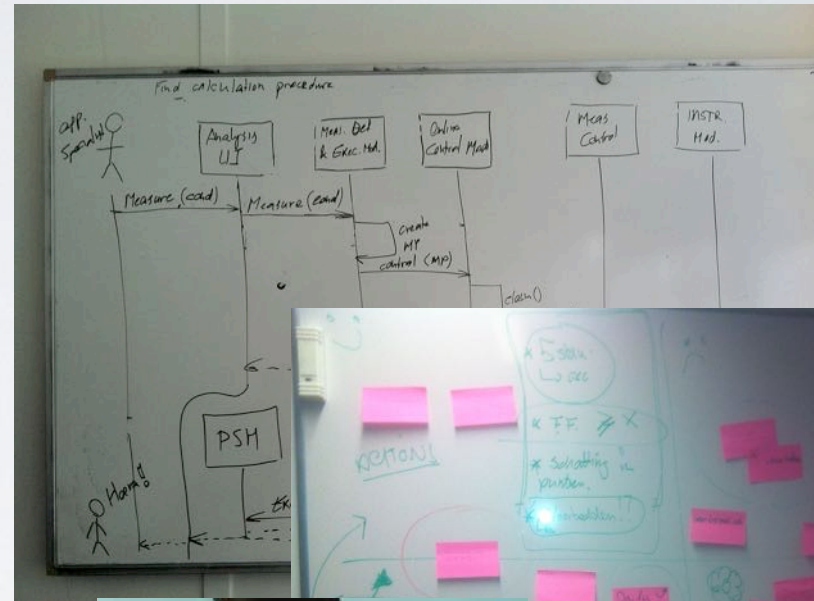
THOUGHTS?

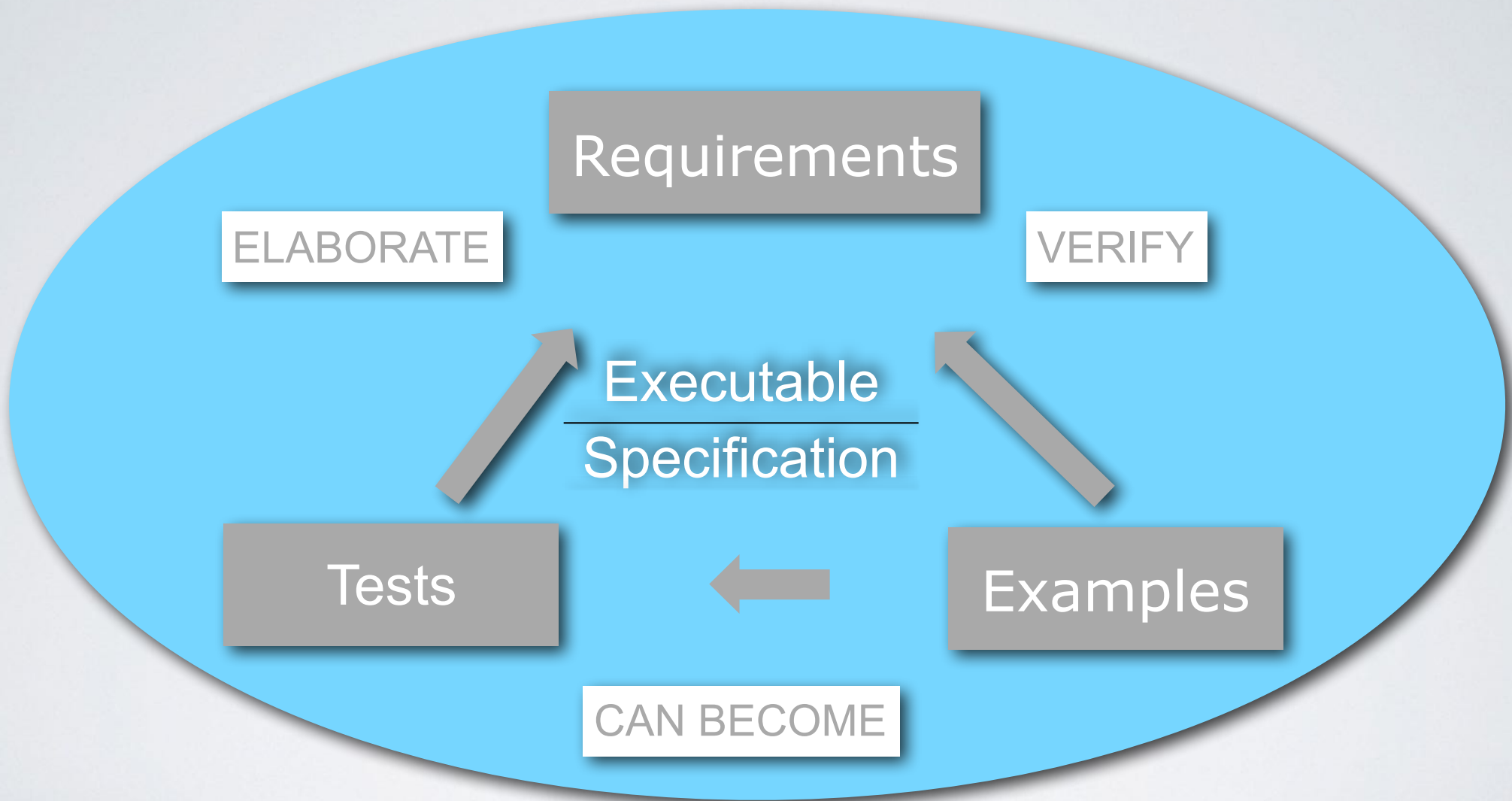
AGENDA

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- **Running a requirements workshop**
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REQUIREMENTS WORKSHOP

- Create a common understanding of the upcoming stories
- Use everybody's intellect to discover possible solutions
- Active workshop not a meeting.
- Discuss, design, break down big user stories.
- Write acceptance tests and estimate PBI's.
- Use sketches, prototypes,



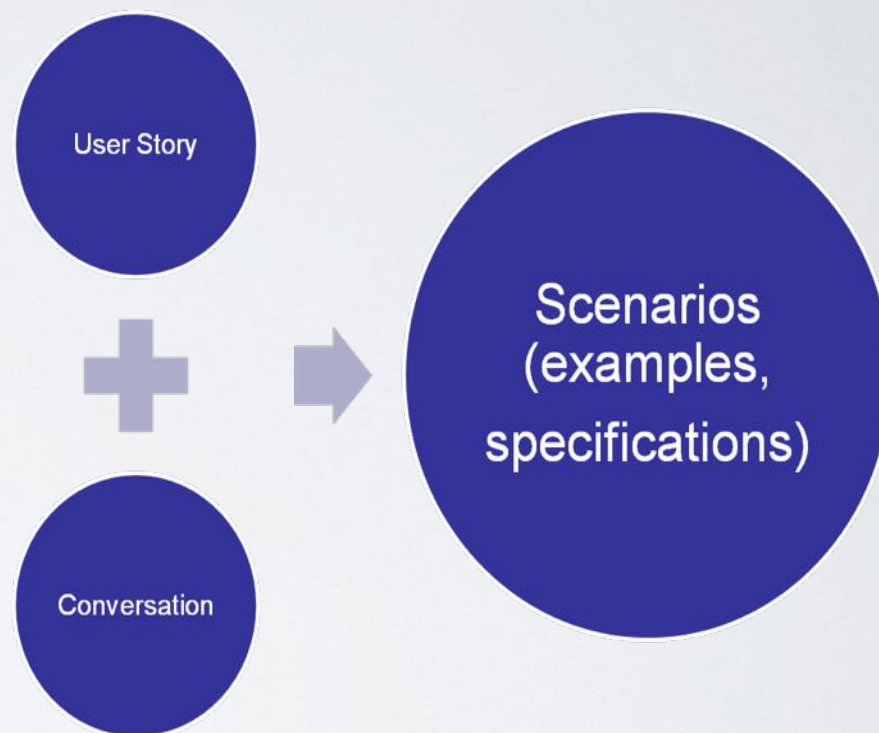


POSSIBLE OUTPUTS

- Acceptance tests
- Ordered estimated release backlog
- Open questions
- Essential use cases
- Domain models
- UI sketches
- Change cases
- New stories either emerged or the result of breaking up themes

WORKSHOP OUTLINE

- Identify coming sprint goal and supporting stories.
- Determine value - what are the outcomes?
- Discuss acceptance criteria – what are the outputs?
- Break up into groups and write acceptance examples
- Get together, discuss and capture results.



A WAY TO DISCOVER THE OUTCOMES

- Is story telling.
Are narratives that transmit what you want to achieve. A story engages others and sparks their creativity, inspiration and emotions.
- Stories are not requirements!
they are a promise to have a conversation later when it comes into scope.



STORY WORKSHOP “STEPS”

WHY? Are we building the RIGHT thing!

1. *Check In*
2. Understand the business value
3. Understand the customer value
4. Distill Acceptance Tests
5. Define Exploratory Test Charters
6. *Closing*

WHY? Are we building the thing RIGHT!

See also serious games for tester presentation

YOU DO NOT START WITH

As a ...

I want ..

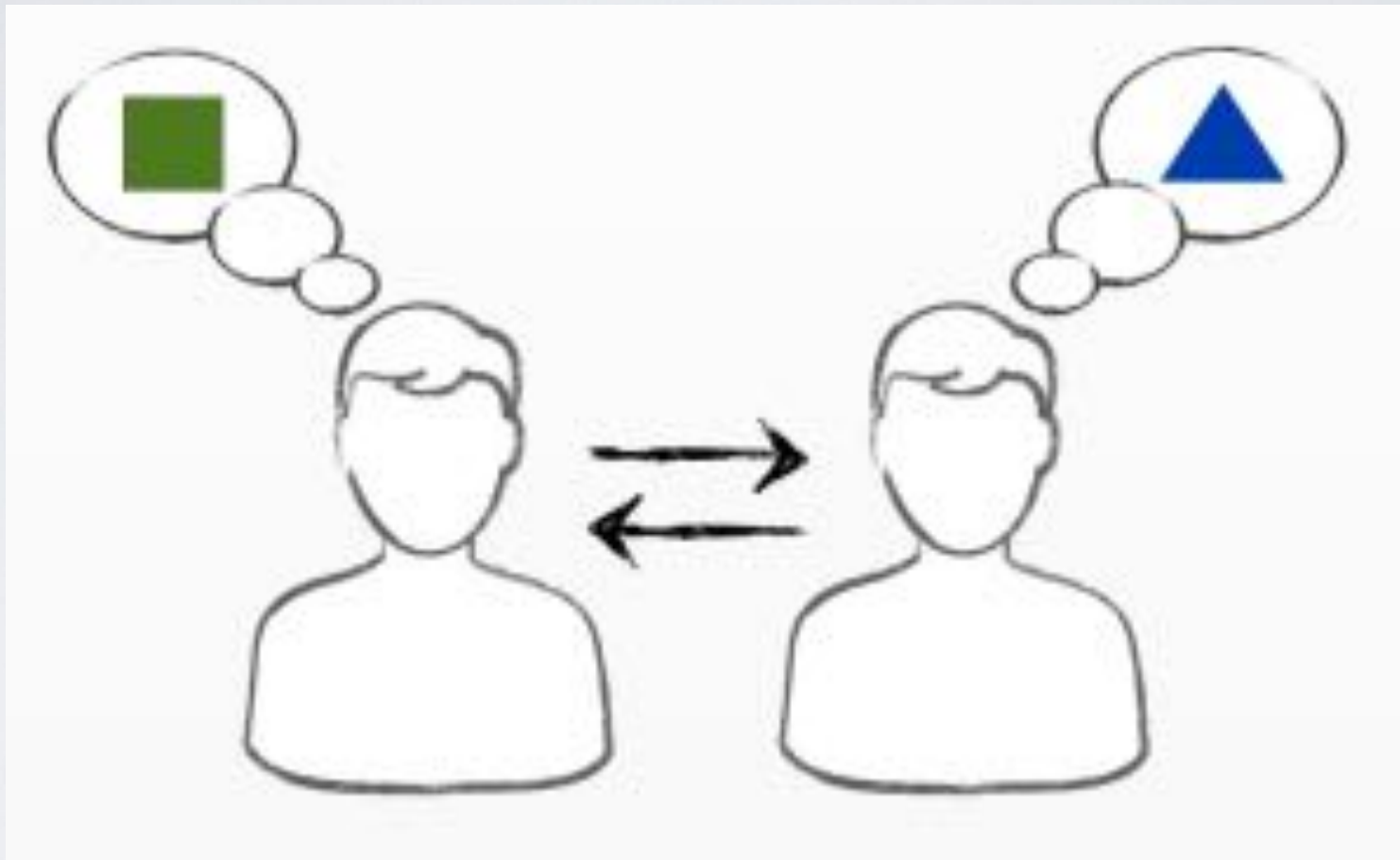
So that ..

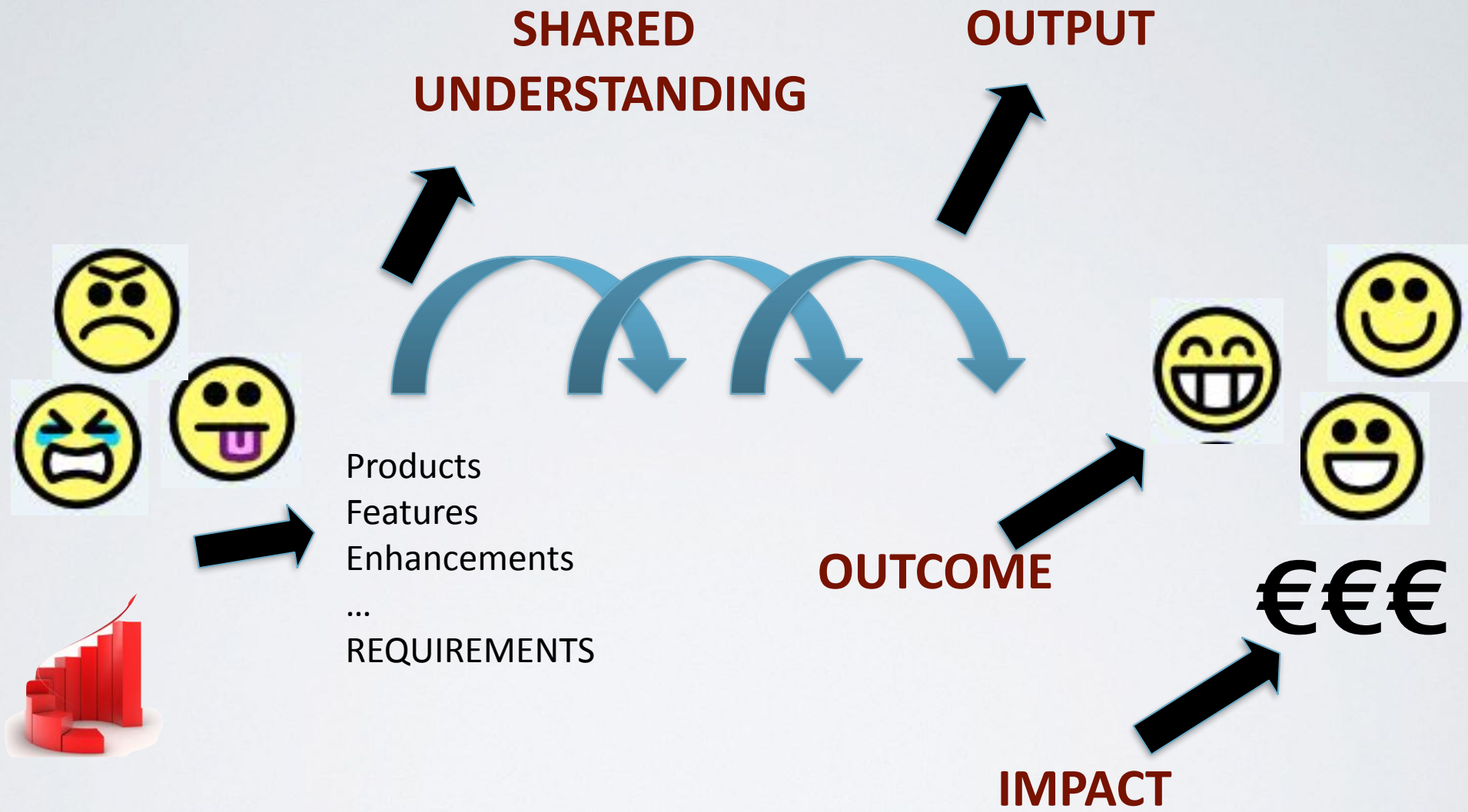


It is the Title (the goal of the story)

It is the one liner that triggers me to remember the story.

SHARED UNDERSTANDING





WORKSHOP TIPS

- Can you give me an example?
- How else can you verify this works?
- Is there anything else that should happen?

- Discuss corner cases.
- Discuss large and small inputs & outputs

- Try to distill implied concepts from your examples when they become complex and hard to understand.

- Prepare with things like UI prototypes, real data sets, bring customers, system as is, etc.

WORKSHOP PITFALLS

- Yes/No answers in your examples.
 - You loose understanding of the complete example
- Using invented data
 - Real data has lots of surprises you want to know!
- The use of abstract/unrealistic examples like 'person A' or 'less then 10'.
 - Harder to test and creates misunderstandings on 'obvious' requirements.
- Exploring many combinations of the same example.
 - Creates little new understanding.



LET'S TRY IT

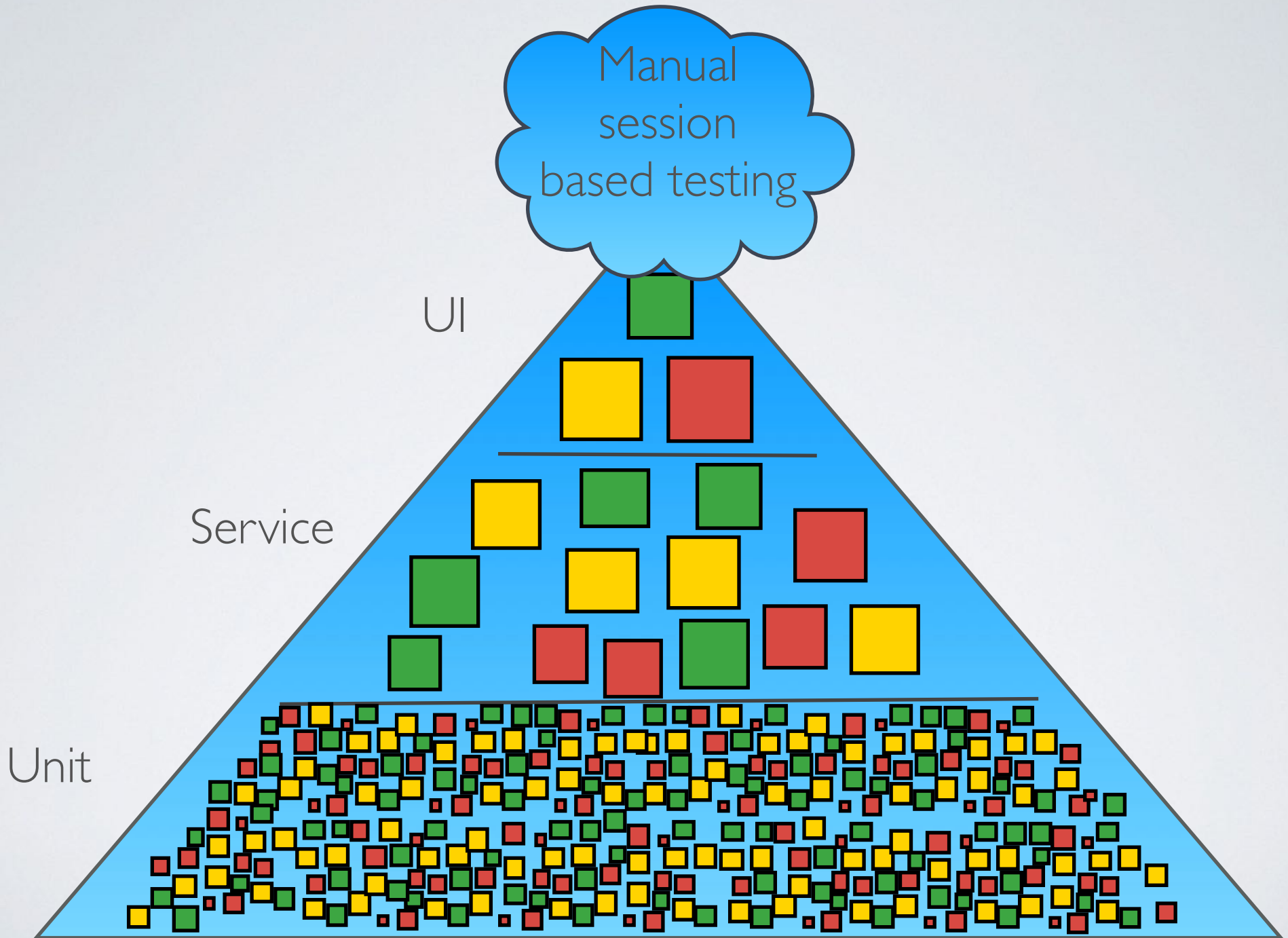
- Break up into groups of 4 to 5 people
- Choose a real life story
- I will help to facilitate the workshop.
- Regroup and discuss the results

- Approx 20 min.



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EXAMPLE

Afspraak maken

Afspraak type: Consult Status: Open

Afspraak soort: Consult, enkel (10 min)

Contactsoort: C - consult

Begin Datum/Tijd: 24-04-2014 08:00 Afspraak duurt hele dag

Eind Datum/Tijd: 24-04-2014 08:10

Terugkeerpatroon:

Onderwerp: Pagel, T, (M)

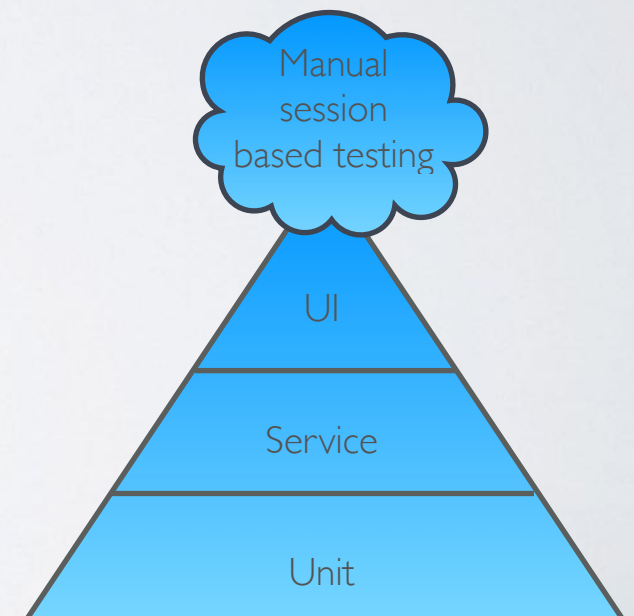
Focus on

Afspraak type

- consult
- visite
- telefonisch
- ...

Afspraak soort

- Consult (10 min)
- Consult (15 min)
- Consult (20 min)
- ...



UNIT LEVEL

Do the we (C)RUD Afspraak type with

- consult
- visite
- telefonisch
- ...

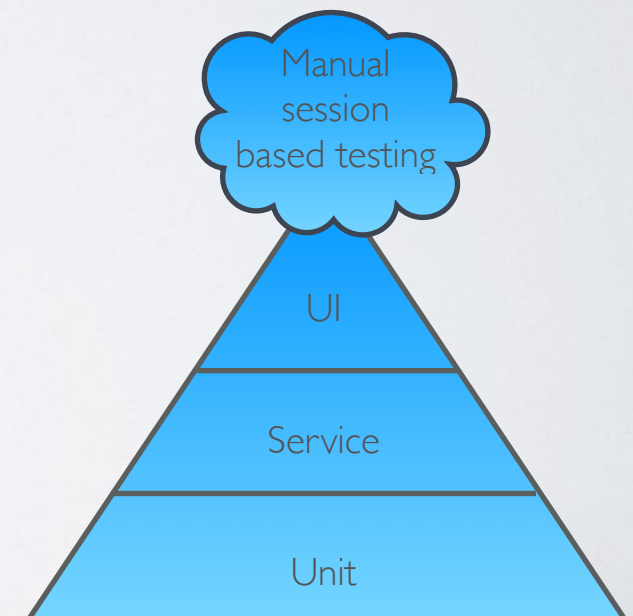
Can we CRUD Afspraak soort

- Consult (10 min)
- Consult (15 min)
- Consult (20 min)
- ...

Can we link the Afspraak soort to Afspraak type

Afspraak maken

Afspraak type	Consult	▼
Afspraak soort	Consult, enkel (10 min)	▼



SERVICE LEVEL

Afspraak maken

Afspraak type	Consult	▼
Afspraak soort	Consult, enkel (10 min)	▼

An “Afspraak” should be stored with Afspraak type consult.

An “Afspraak” should be read with Afspraak type consult.

An “Afspraak” should be edit and stored with Afspraak type consult to Afspraak type visite

The list of Afspraak type is a sorted list default the next list in available. Standaard means it is selected as default value of the selection.

exercise9.AfspraakType	
Rank Number	Afspraak Type In The List?
standaard	consult
2	visite
3	telefonisch
4	[incorrect] expected [rook signalen]

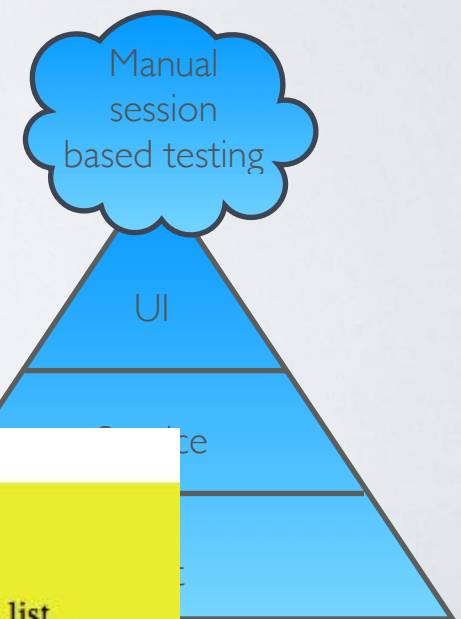
▼ Feature: Cucumber sample

▼ Scenario: afspraak type

Given afspraak type is available

When I select afspraak type

Then I expect the consult at top of the list

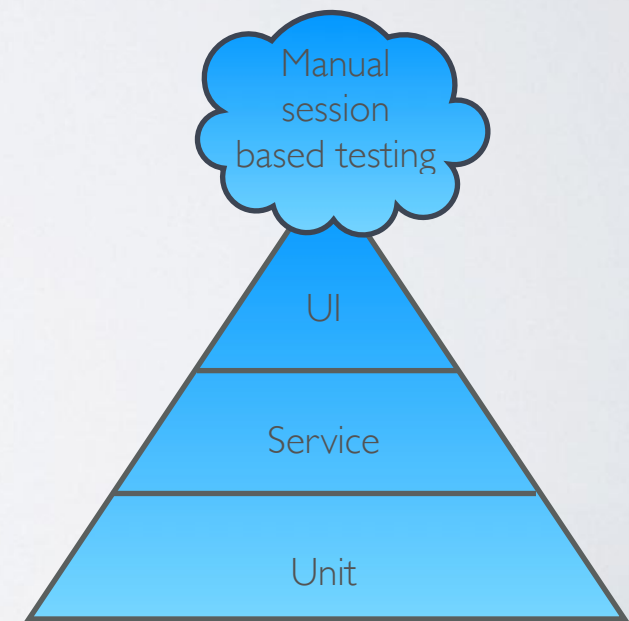


UI LEVEL

Create an “Afspraak” with Afspraak type consult and Afspraak soort Consult (10 min) via the UI.
Test if an Afspraak can be created and stored via the UI.

Afspraak maken

Afspraak type	Consult	▼
Afspraak soort	Consult, enkel (10 min)	▼



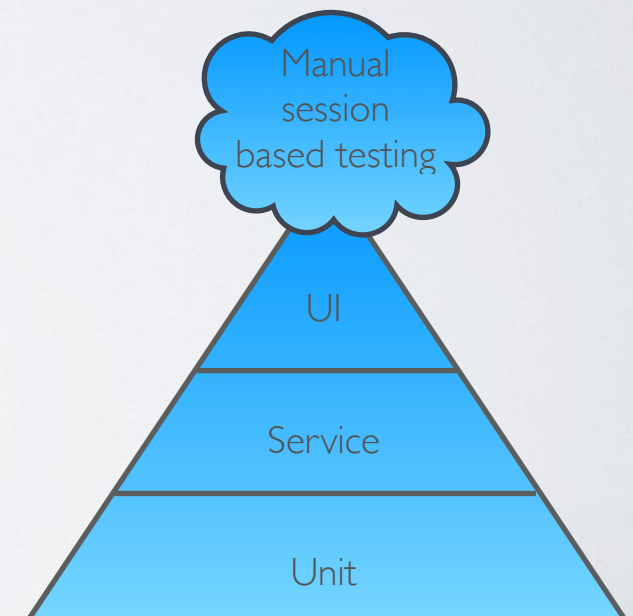
MANUAL TEST EXAMPLE

Afspraak maken

Afspraak type	Consult	▼
Afspraak soort	Consult, enkel (10 min)	▼

2 charters:

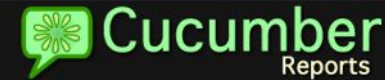
1. Discover how Time influences the Afspraak
2. Take a DATA tour session (Fed-ex)
How is the data stored.
Where is Afspraak also used.



ATDD TOOLS

The list of Afspraak type is a sorted list default the next list in available. Standaard means it is selected as default value of the selection.

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Rank Number	Afspraak Type In The List?
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Tag Overview Fea

Feature Result for Build: 1

Feature	Scenarios			Steps					Duration	Status
	Total	Passed	Failed	Total	Passed	Failed	Skipped	Pending		
Favorites Repository	2	2	0	6	6	0	0	0	94 ms	passed

▼ Feature: Cucumber sample

- ▼ Scenario: afspraak type
 - Given afspraak type is available
 - When I select afspraak type
 - Then I expect the consult at top of the list

The list of Afspraak type is a sorted list default the next list in available. Standaard means it is selected as default value of the selection.

exercise9.AfspraakType	
Rank Number	Afspraak Type In The List?
standaard	consult
2	visite
3	telefonisch

Test Results Requirements Progress Capabilities Stories History

75% Passing, 13% Pending, 12% Failing

Child Requirements: 4

- Child requirements without tests: 1

Tests: 4

- Passing tests: 1
- Failing tests: 1
- Pending tests: 2

Estimated unimplemented tests: 4

Capabilities (2)

Show 10 entries

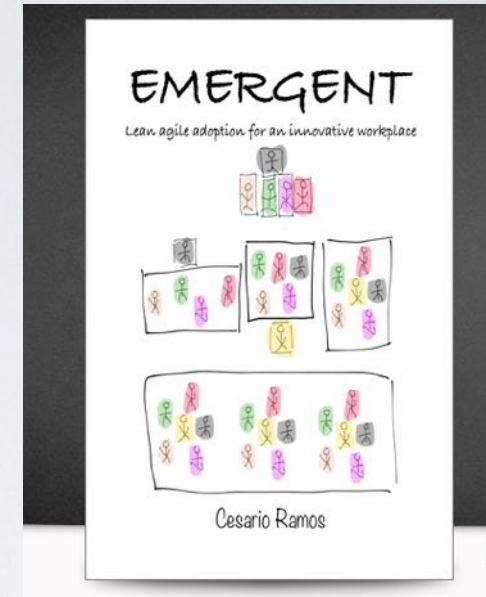
Search:

ID	Capability	Stories	Tests	Pass	Fail	Pend	Coverage
1	Learn the meaning of a word <i>In order to learn the meaning of a word that I don't know As an online reader I want to be able to find out the meaning of the word</i>	2	4	1	1	2	25%
2	Update definition <i>In order to keep the dictionary definitions up to date and accurate As the dictionary maintainer I want to be able to update definitions in the dictionary</i>	0	0	0	0	0	0%

Showing 1 to 2 of 2 entries

This is what we do:

- Agile adoptie
- Professional Agile Tester
- Professional Agile Coach
- Innovationgames
- PSM
- PSPO
- Artikel Serious games for testers



AGENDA

- ROTI => DONE