

# Agile Acceptance Testing with Fitnesse

Michel Grootjans  
Pascal Mestdach

# Biography Presenters

## ▶ Michel Grootjans

- Enterprise Architect
- **Linked in** <http://www.linkedin.com/in/michelgrootjans>
- [michel.grootjans@ilean.be](mailto:michel.grootjans@ilean.be)



## ▶ Pascal Mestdach

- Solution Architect
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- [pascal.mestdach@infohos.be](mailto:pascal.mestdach@infohos.be)



## ▶ Download material:

- On google code:
  - <http://code.google.com/p/agileacceptancetesting/>
- Checkout in svn:
  - <https://agileacceptancetesting.googlecode.com/svn/trunk>

# Agile Acceptance Testing with Fitness

- ▶ *Specification Workshop*
- ▶ Setup Fitness
- ▶ Iteration 1
- ▶ Iteration 2
- ▶ What's in it for you?

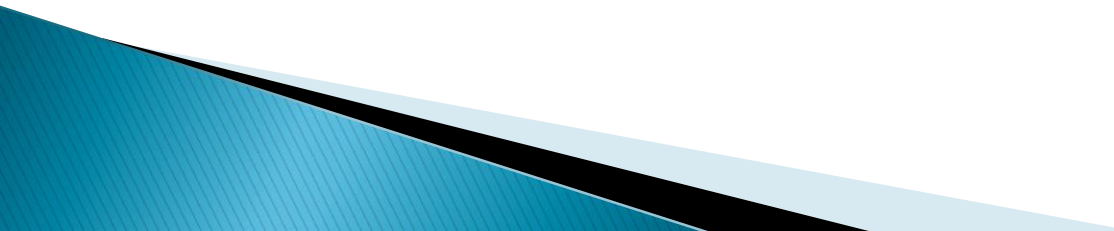


# A wonderful opportunity

Mr W. Fall, CEO of BDUF Development:

*“Our developers are working 14 hours a day to get our latest project delivered on time.”*

*“We need an application where they can order pizza’s, beverages, snacks,... as their evening dinner! So they can work longer!”*



# An agile Approach

- ▶ We agree with Mr W. Fall to make a very basic implementation and put it into production as soon as possible.
- ▶ A little sketch 😊

# Manage Users & Credits

A Web Page

http://intranet.bduf.be

SNACKS-R-US [Register](#) | [Log On](#)

Account Information

Username

Password

☐ Remember me?



A Web Page

http://intranet.bduf.be/snacks/users

SNACKS-R-US

Welcome pascal [Log Off](#)

You have €5 in your account

Manage Users & Credits

Name	Email	Credit
pascal	pascal@ihc.be	€ 5 <a href="#">Add</a>
michel	michel@ilean.be	€10 <a href="#">Add</a>

[Create new User](#)

# Order a snack & show orders

A Web Page

← → × 🏠  🔍

SNACKS-R-US      Welcome michel [Log Off](#)  
You have €2.0 in your account

Order a new snack

▼

Current Orders

Qty	Snack	Unit	Total
1	Club Sandwich	€ 3.5	€3.5
1	Tiramisu	€ 4.5	€4.5

Total €8.0



A Web Page

← → × 🏠  🔍

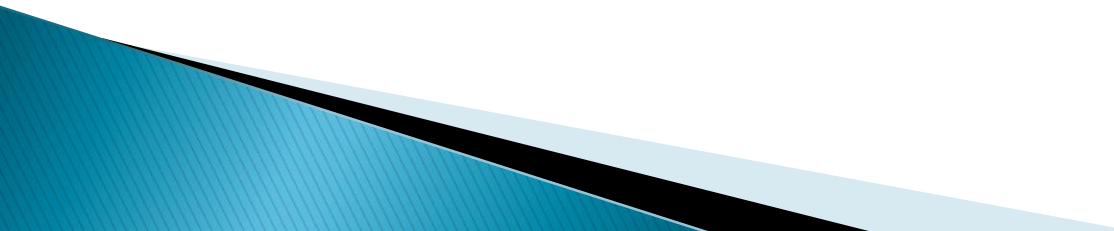
SNACKS-R-US      Welcome pascal [Log Off](#)  
You have €5.0 in your account

Orders placed today

Qty	Snack	Unit	Total
1	Club Sandwich	€ 3.5	€3.5
1	Tiramisu	€ 4.5	€4.5

Total €8.0

# An agile Approach

- ▶ We define a product backlog with estimated user stories for planning purposes.
  - ▶ We prioritize the product backlog together with Mr W. Fall.
  - ▶ An agreement is made to develop following user stories in the first iteration of 2 weeks:
- 



**As a developer I want to order a snack because I need more energy to write code in the evening**

Backlog Nr 3



**How to demo:**

Order snacks as 'Michel' until he runs out of credits. Then get the list of ordered snacks.

**Acceptance criteria:**

Developers who have enough credits can order a snack. The price of the snack is deducted from their credit. Credits can't be negative.

Estimation

8

Business value

800

Check DoD

**As a secretary I want to manage the credits of our developers because they need credits to order snacks**



Estimation
3

Business value
400

Check DoD
-----------

**How to demo:**

Log in as 'Pascal', and add € 10 to Michels account.


**Acceptance criteria:**

Developers can't manage their own credit. The saldo should always be correct when adding, deducting credits.

# Specification Workshop (10')

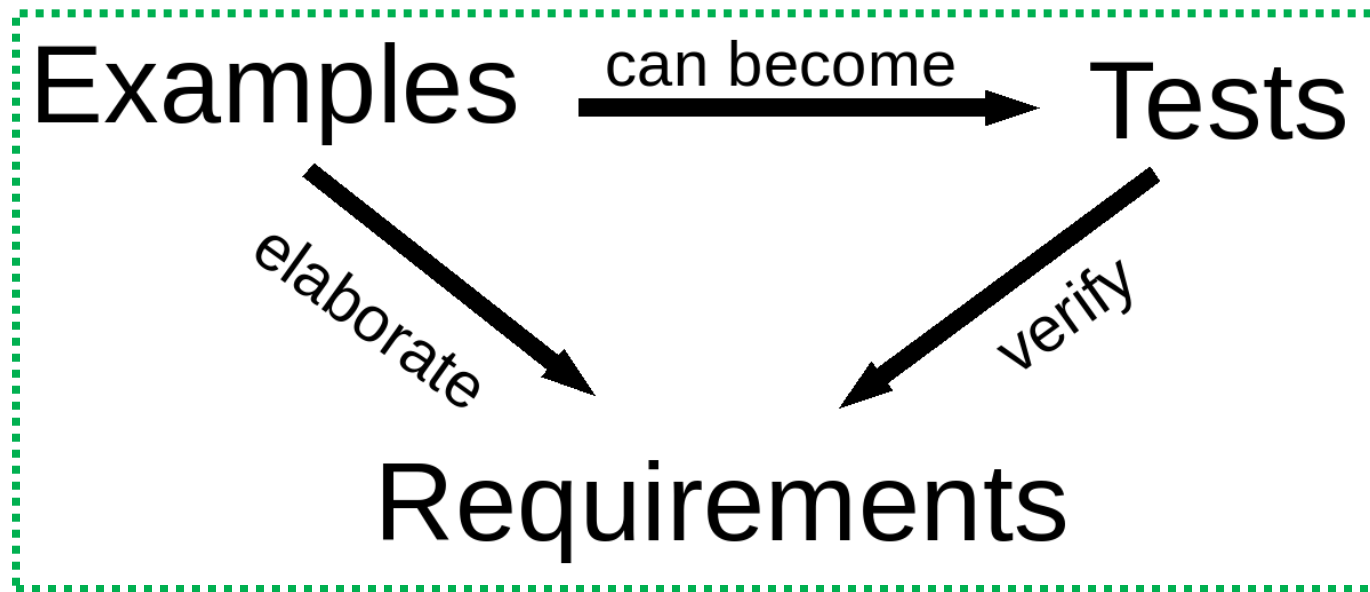
- ▶ Goal: Nail down the scope of the user stories with real world examples, which we all agree on.
- ▶ Workshop Outputs:
  - Enough realistic examples to start working
  - Shared understanding of the domain
- ▶ Some tips:
  - Involve the whole team
  - Don't over complicate things
  - Also identify edge cases and negative paths
  - Stay focused on the user story
  - Describe what, not how
  - Communicate intent, explain why

# Did you notice?

- ▶ Realistic examples make us think harder
  - ▶ **Customers** or functional analysts typically think about the happy path
  - ▶ **Developers** focus on edge cases and alternative scenarios
  - ▶ **Testers** want to break / cheat the system
  - ▶ *So, Involve the whole team!*
- 

# Executable specifications

- ▶ Scope of the user story is nailed down with real world examples



- ▶ Welcome FitNesse!

# Agile Acceptance Testing with Fitnesse

- ▶ Specification Workshop
- ▶ *Setup Fitnesse*
  - Setup Fitnesse from the zip download
- ▶ Iteration 1
- ▶ Iteration 2
- ▶ What's in it for you?



# Agile Acceptance Testing with Fitness

- ▶ Specification Workshop
- ▶ Setup Fitness
- ▶ *Iteration 1*
- ▶ Iteration 2
- ▶ What's in it for you?



# ColumnFixture:

## Testing values Easily

```
public class OrderSnack : ColumnFixture
```

Order Snack			
Qty	Snack	For user	Result?
1	Pizza Hawaii	michel	Success
1	Pizza Hawaii	michel	You don't have enough credit. You need €0,6 extra.

```
public double Qty { get; set; }  
public string Snack { get; set; }  
public string ForUser  
public string Result { get; set; }
```

```
public override void Execute()
```



# RowFixture:

## Batch comparisons

```
public class GetTodaysOrders : RowFixture
```

Get todays orders			
Qty	Snack Name	Snack Price	Total Price
1	Pizza Hawaii	5,3	5,3

```
public override Type GetTargetClass()
```

```
public override object[] Query()
```

# Agile Acceptance Testing with Fitnesse

- ▶ Specification Workshop
- ▶ Setup Fitnesse
- ▶ Iteration 1
- ▶ *Iteration 2*
- ▶ What's in it for you?



# DoFixture:

## Your own test language

```
public class ManageUsersCredit : DoFixture
```

Manage users credit			
Add	10	Credits for	micHEL

```
public void AddCreditsFor(string credit, string userName)
```

```
graph TD; subgraph Table [Manage users credit]; direction LR; T1[Add] --- T2[10] --- T3[Credits for] --- T4[micHEL]; end; subgraph Code; direction TB; C1[public class ManageUsersCredit : DoFixture]; C2[public void AddCreditsFor(string credit, string userName)]; end; T1 --> C2; T2 --> C2; T3 --> C2; T4 --> C2; T1 -.-> C1;
```

# Organising FitNesse:

- ▶ 3 Suites in Fitnesse
  - Prepared Test Suite – tests for next iterations
  - Work In Progress – doesn't break the build
  - Acceptance Suite – breaks the build!

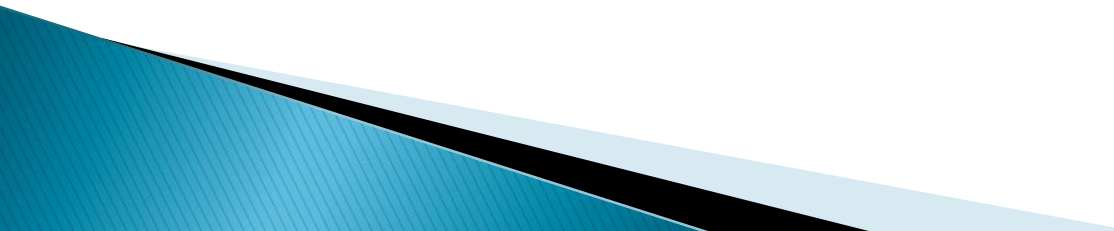
# Agile Acceptance Testing with Fitness

- ▶ Specification Workshop
- ▶ Setup Fitness
- ▶ Iteration 1
- ▶ Iteration 2
- ▶ *What's in it for you?*



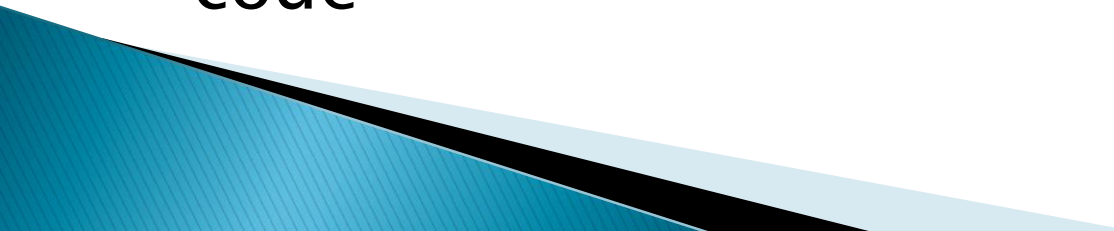
# What's in it for you?

## ScrumMaster / Product Owner

- ▶ Developers will actually read the specifications
  - ▶ They will understand the stuff correctly
  - ▶ They will not skip parts of the spec
  - ▶ You can track the development progress
  - ▶ Save time on acceptance/smoke testing
- 

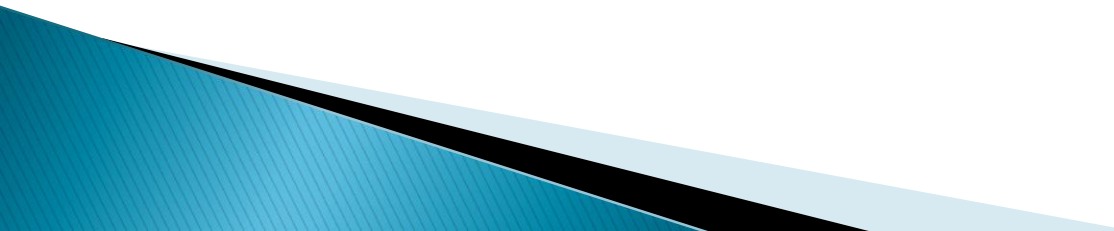
# What's in it for you?

## Developer

- ▶ Requirements will be unambiguous and without functional gaps
  - ▶ Business analysts will really understand those special cases you mentioned
  - ▶ You will have automated tests to guide development
  - ▶ It will be easier to take-over and hand-over code
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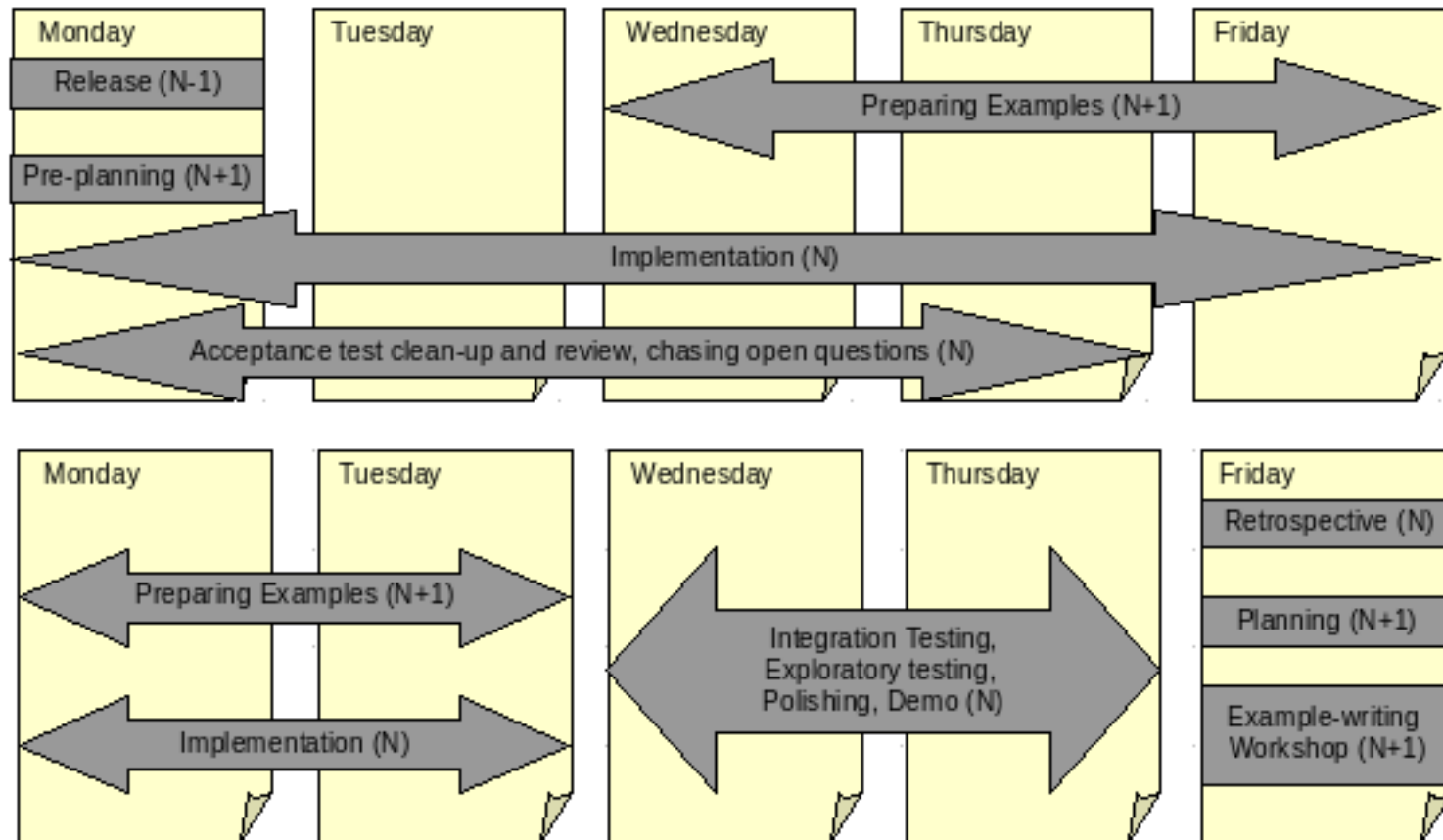
# What's in it for you?

## Tester / Business Analyst

- ▶ Finally stop those guys from making the same mistakes over and over
  - ▶ Avoid doing the same stuff all the time
  - ▶ Build quality in from the start
  - ▶ Verify business rules by a click on a button
- 



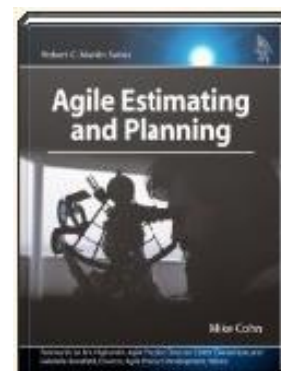
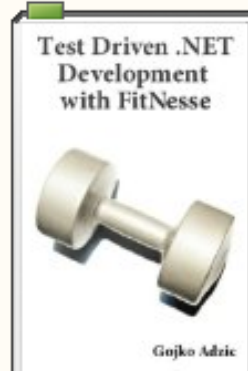
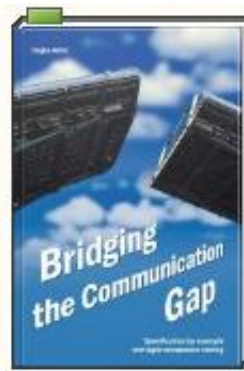
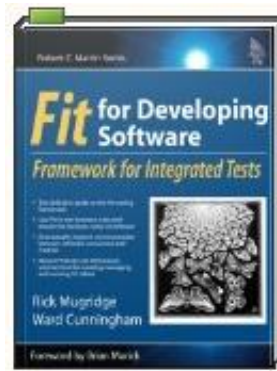
# Iteration Flow (just a suggestion)



<http://gojko.net/2008/09/17/fitting-agile-acceptance-testing-into-the-development-process/>

# Resources

## ▶ Books



## ▶ On the web

- <http://fitnesse.org/>
- <http://sourceforge.net/projects/fitlibrary/>
- <http://gojko.net/>
- [http://codebetter.com/blogs/ian\\_cooper/archive/2008/10/13/fitnesse-and-the-three-way.aspx](http://codebetter.com/blogs/ian_cooper/archive/2008/10/13/fitnesse-and-the-three-way.aspx)

## ▶ Yahoo Group

- <http://tech.groups.yahoo.com/group/fitnesse/>

# Questions?

