

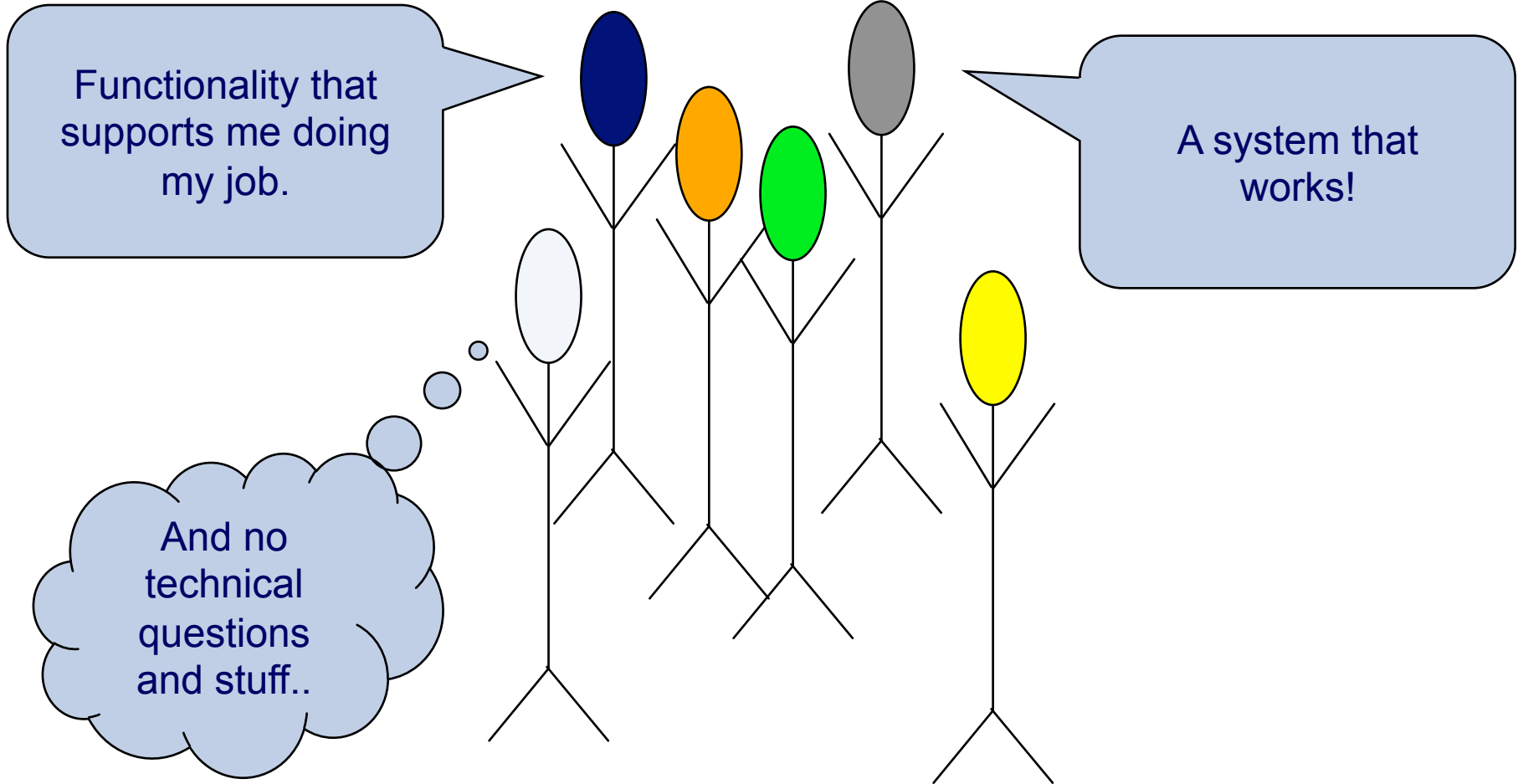
Risk Based Testing

A piece of cake?

2011

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What does the customer want?



Risk Based Testing

Risk

Measures

**Product
Risk
Analysis**

Product Risk Analysis

- **Several methods**

- PRISMA®, PRIMA®, TMAP Next®

- **Difficulties**

- Hard to determine initial set of risks
- Little time available
- Hard to match risks to the specifications at hand
- Not suitable in maintenance situations

- **Result**

- PRA is barely used

3 types of product risk

- **S**pecification

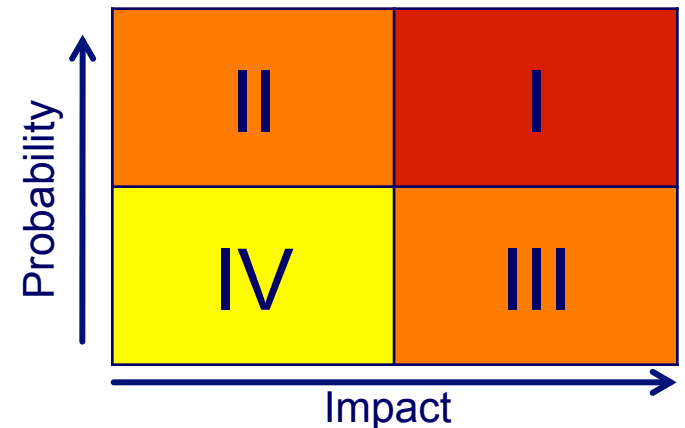
- Requirements, objects, changes,..

- **I**ntegral

- “Out of the box”, implicit

- **R**egression

- Unchanged items (both specification and Integral)



Example Loading railway timetables

Risks:

Specification

- Automatic loading of timetables daily at 2 am.

Integral

- Automatic loading process is interrupted by a manual instruction to load plans.

Regression

- Manual loading of plans.
- Usage of automatically loaded plans.

Test plan, cases & report:

Specification

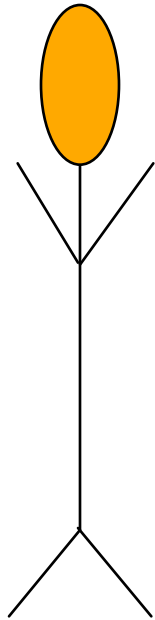
- Automatic loading of timetables daily at 2 am.

Integral

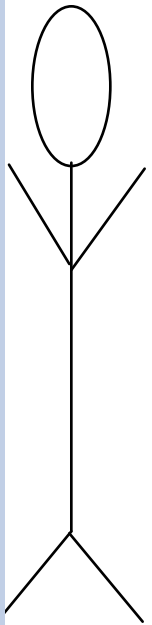
- Automatic loading process is interrupted by a manual instruction to load plans.

Regression

- Manual loading of plans.
- Usage of automatically loaded plans.



customer



tester

Riskmanagement throughout the process

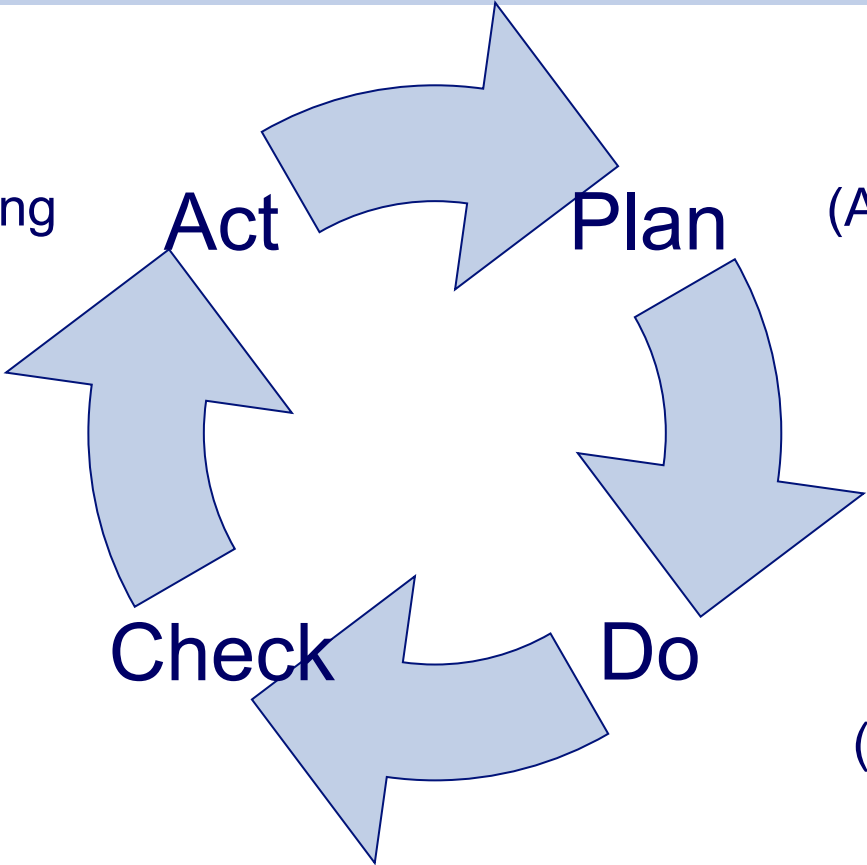
Descision

PRA

Test plan

(Also test synchronizing Dutch Summer time)

(Additional Integral risk)



Test report

Test specification

(Synchronizing Dutch Summer time)

Test execution
(Additional test cases)

Deming Circle



Risk based reporting

Type	Description	RK	RK'	Status
Specification	Automatic loading of plans at 2 am.	II		Green
Integral	Automatic loading process is interrupted by a manual instruction to load plans.	I		Red
Integral	Synchronizing Dutch Summer time		II	Green
Regression	Manual loading of plans.	III		Orange
Regression	Usage of automatically loaded plans.	IV		Green

Techniques

- **Use a combination of techniques!**
- **At start of a project**
 - PRIMA® or TMAP Next® or brainstorm
- **Before test execution starts (SIR)**
 - FMECA and/or brainstorm
 - PRISMA®
- **During test execution (SIR)**
 - 'progressive knowledge' (Context Driven Testing)

Conclusion

- **One list of product risks, SIR!**
 - **S**pecification
 - **I**ntegral
 - **R**egression

- **Suitable in almost every situation**
 - Maintenance
 - Traditional testing
 - Context driven testing / Agile testing
 - End2End testing

Questions



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