

## Product Risk Analysis Workshop

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#### Contents of the Workshop

The theory of Product Risk Analysis

Workshop

Report Back



# Risk & Requirement Based Testing



Experience the commitment®

#### Risk & Requirement Based Testing

#### Risk and requirements analysis are two, independent activities

- Risk analysis:
  - Identified by "all" stakeholders
  - Analysis byond defined features and functions
- Requirements analysis
  - Functional
  - Non-functional
- Risk & Requirements Matching leads to a set of requirements that
  - Have a functional priority
  - Are linked to product risks and
  - Have a risk priority





#### Risk Analysis

Project Risks?

Product Risks?

Risk Analysis!











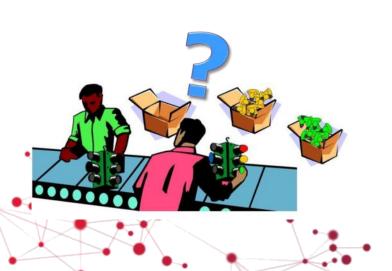




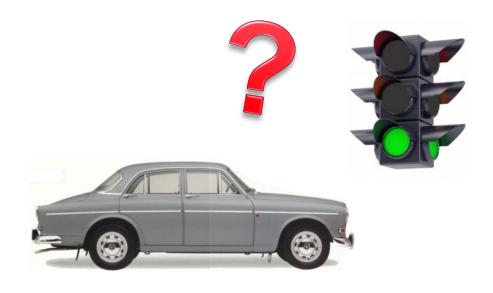
















## Project Risk versus Product Risk



Lack Insuf Uncl	oct overrun in time & budget of system standards ficient resources ear requirements enplete documentation	mitigation measures in the test plan



,	Product risks	Unsatisfactory quality Incorrect functionality	Test strategy based on product risks
,		Not user-friendly Difficult to maintain Low efficiency Difficult to install	





## Risk Prioritization



#### Relative Priority

#### Compare:

# Mobile phone backlight malfunction versus Space shuttle fuel system malfunction













...financial consequences for our customers.



...financial consequences for our customers.

**All customers** 



...financial consequences for our customers.

**All customers** 

Must test



**All customers** ...financial consequences for our customers. **One customer** If this goes wrong it will have

Must test



...financial consequences for our customers.

**All customers** 

**One customer** 

Must test

Should test



...financial consequences for our customers.

... no financial consequences for our customers

**All customers** 

One customer

Must test

Should test



If this

goes

wrong

it will

have

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for our customers.

If this

... no financial consequences for our customers

...financial consequences

**All customers** 

One customer

**All customers** 

One customer

Must test

Should test

Should test

Could test



goes

wrong

it will

have



If this goes wrong it will

. . .

have

...financial consequences for our customers.

... no financial consequences for our customers

... financial consequences for our department.

**All customers** 

One customer

**All customers** 

One customer

No workaround

Workaround

Must test

Should test

Should test

Could test

Could test

Won't test



Must test All customers ...financial consequences for our customers. Should test One customer If this Should test All customers ... no financial goes consequences Could test for our customers One customer wrong it will Could test No workaround ... financial consequences have for our department. Won't test Workaround Could test No workaround ... no financial consequences Won't test for our department. Workaround



## Stakeholder analysis



#### Stakeholders

A stakeholder is a person or organization that has a legitimate interest in a product or service





#### Stakeholders

# A stakeholder is a person or organization that has a legitimate interest in a product or service

Who is responsible?

Who has a problem when things go wrong?

Who needs the system for normal operations?

Who will use the system?

Who sets regulatory rules?





#### Stakeholders - Examples

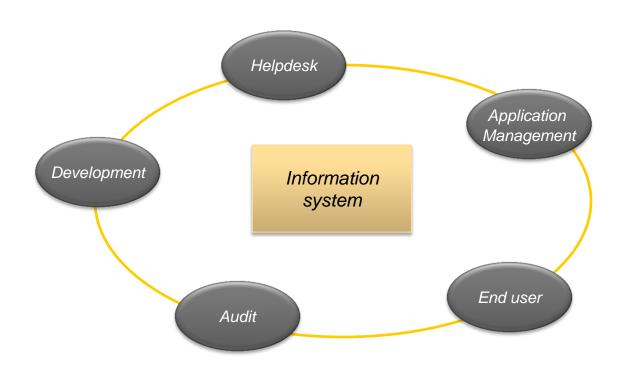
- Legal authorities like AFM, DNB, ECB,
   Represented by Compliance & Legal department
- Helpdesk
- Operations
- Application Management
- (End-) users
- Marketing
- System development
- Testers

. . .





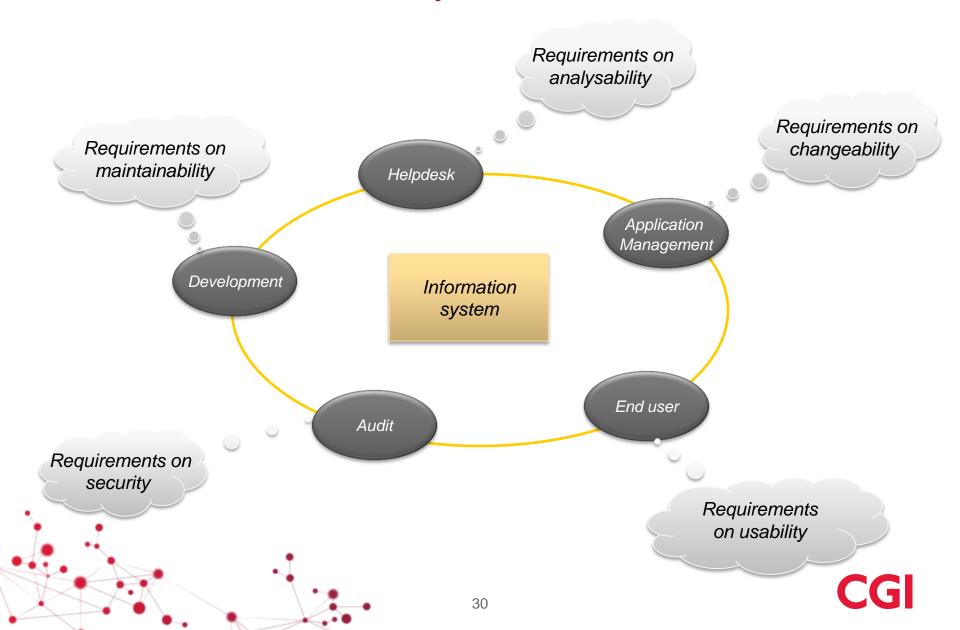
#### Stakeholders & Quality Attributes



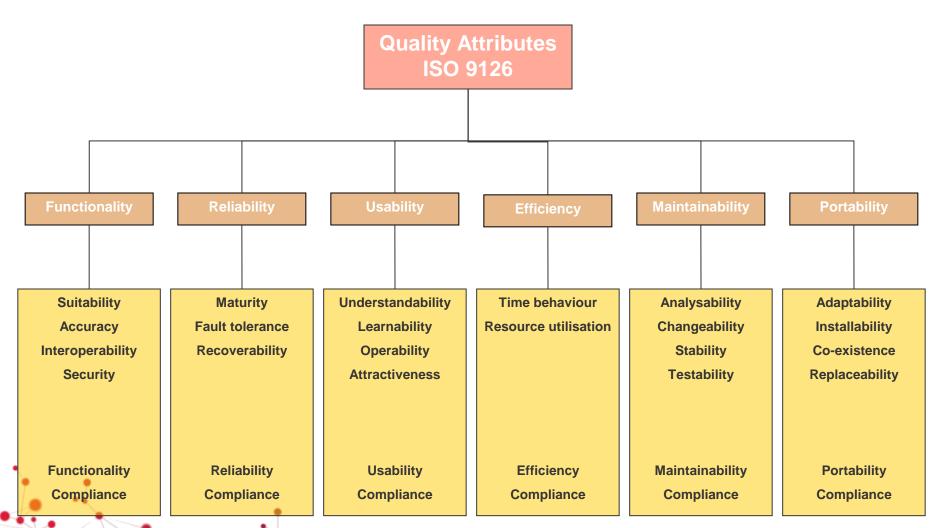




#### Stakeholders & Quality Attributes

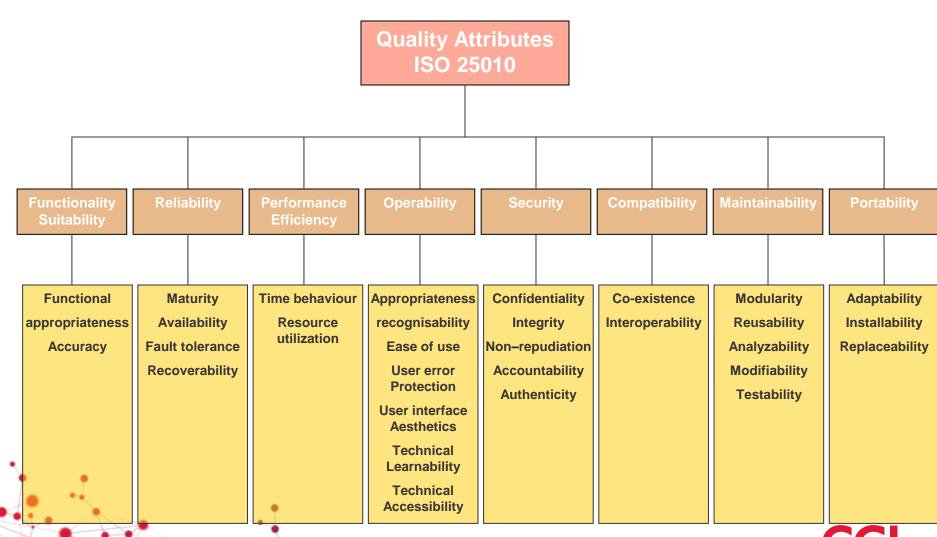


#### Quality Attributes ISO9126





#### Quality Attributes ISO 25010



# The Product Risk Analysis Workshop



#### The domain and the question

- Financial organization selling mortgages
- Direct writer and via independent intermediates
- New mortgage proposal system
- Company Policy
  - Raise of market share
  - Low cost, high quality
  - Turnover up 10%
  - Operational excellence

The question is: what are the risks related to an IT system used within the mortgage domain



## Stakeholder analysis



#### Stakeholders

Stakeholder	Responsibility
Marketing & Sales	Defines and sells mortgages
Application management	Functional/technical management of the system
Legal	Represent the legal authorities
System development	Develop and maintain the system
Tester	Test the system
Operations	Keeps the system up and running
Client Relations	Represents the end-user community





#### **PRAW Planning**

Determine the type of PRA In case of a PRAW:

- Plan the workshop
  - Requirements experts
  - Stakeholders
  - Scribe
- Collect documentation
  - High level definition study
  - Business Requirements Specification\*)
  - Checklists and Rule sets
    - Customize to fit application type

\*) Is used during matching phase, not before!



**Elicitation** 

Logging

**Balancing** 

**Prioritization** 

**Matching** 

Exit

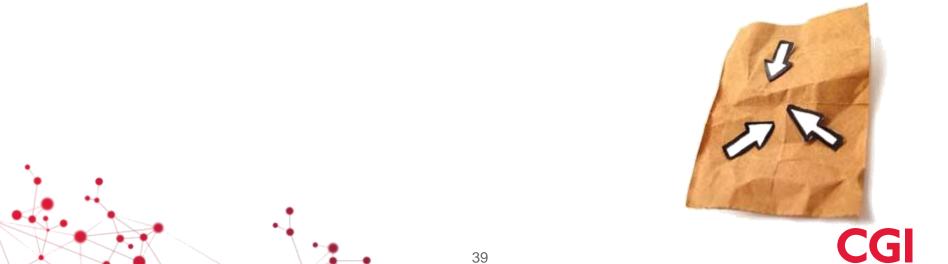


## Risk Elicitation



#### **Brown Paper Session**

A Brown Paper Session is a session where experiences, needs and ideas from different points of view are brought together (on large sheets of brown paper).



#### "Copafijth" aspects

#### COPAFIJTH is a Dutch acronym that indicates all aspect of an organisation

- Communicatie (Communication)
- Organisatie (Organisation)
- Personeel (Staff)
- Administratieve Organisatie (Administrative Organisation)
- Financieel (Financial)
- Informatie (Information)
- Juridisch (Legal)
- Techniek (Technical)
- Huisvesting (Housing/logistics)

This list will support the risk elicitation process





# Risk Balancing Assignation of priorities



#### MoSCoW: an example

All customers Must test **Financial** customer impact Should test One customer Should test All customers Non-financial If this customer impact Could test failure One customer occurs, Could test it has No workaround Financial impact own department Workaround Won't test Could test No workaround Non-financial impact own department Workaround Won't test



## Report Back Your experiences



#### The result

The result of a product risk analysis is an agreed and complete list of product risks and their related priorities





#### The result

The result of a product risk analysis is an agreed and complete list of product risks and their related priorities

#### But what's the use?





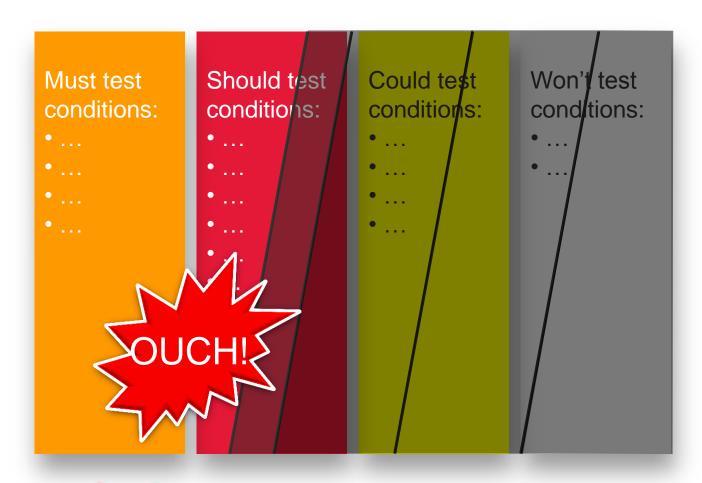
#### First advandtage: Risk & Requirement Matching

## Risk, no requirement:

- Add requirement
- Leave out risk



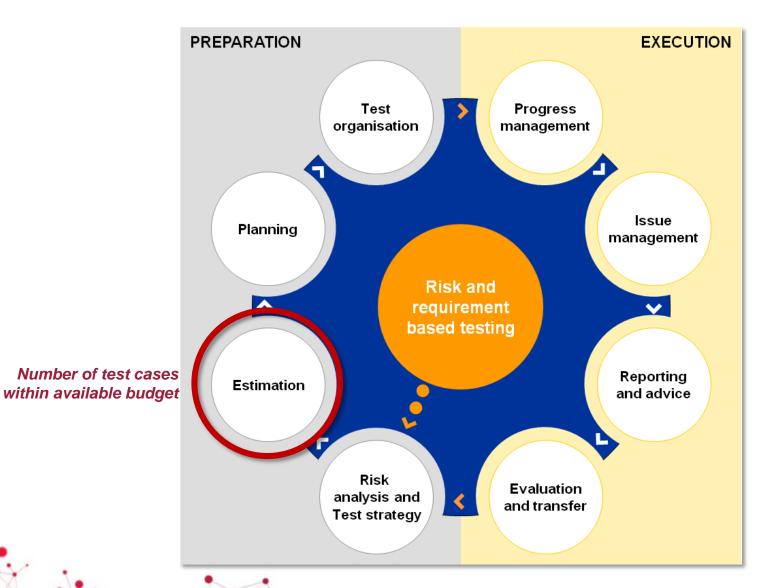
## Second advantage: Strategic Test Slicing Method (STSM)



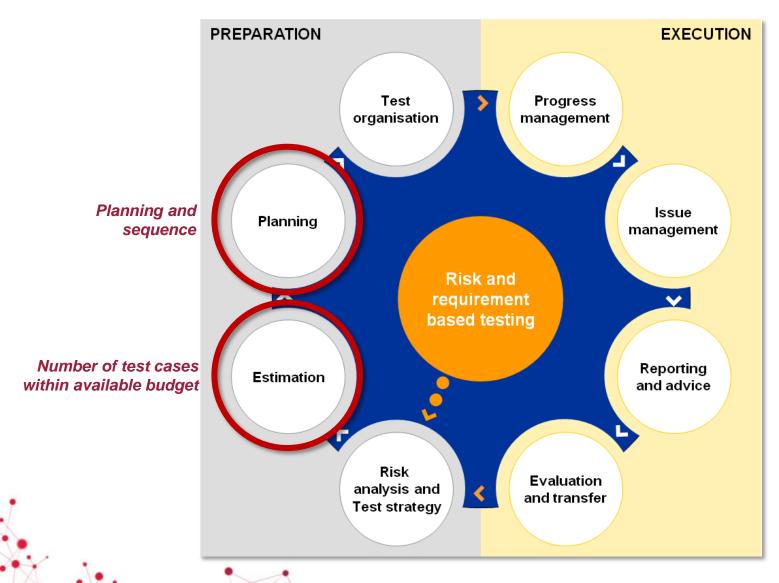




















Status in budget and quality

Which defect will be solved and which is postponed?

Number of test cases within available budget





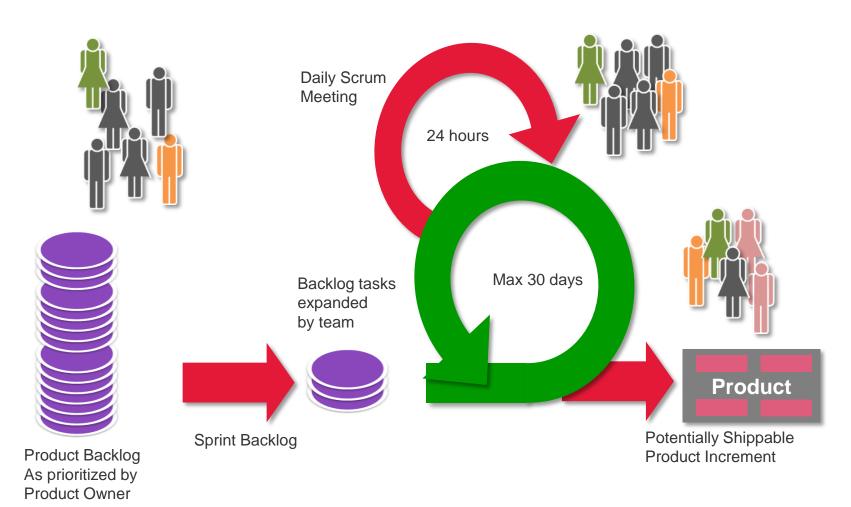
Status in budget and quality

Which defect will be solved and which is postponed?

Are all risks mitigated: can we deploy?



#### Risk priorities in the development process





Source: Adapted from *Agile Software Development with Scrum* by Ken Schwaber and Mike Beedle.



#### **Risk Matrix**

Must Test	ShouldTest	WouldTest
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Product risk	PR								
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Product risk	PR	PR	PR	PR	PR	PR	PR	PR	PR
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Must Test | ShouldTest | WouldTest



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Product risk	PR								
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#### **Risk Matrix**

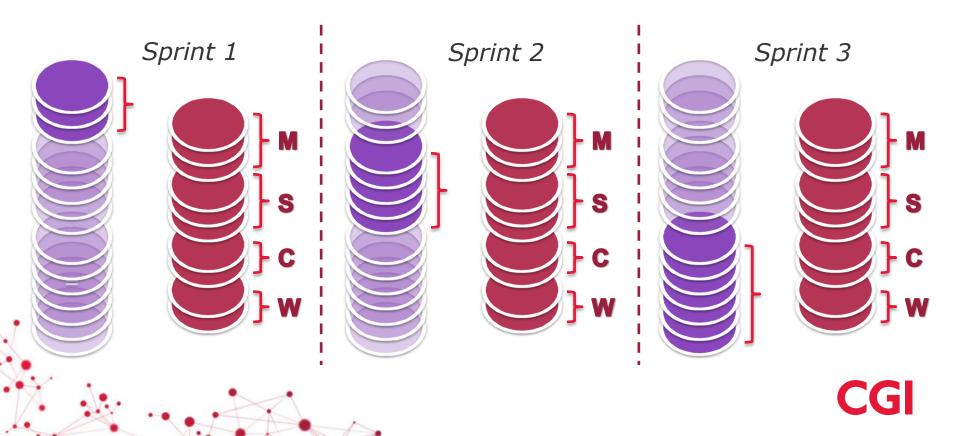
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Product risk	PR								
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REQ 04		M	M						
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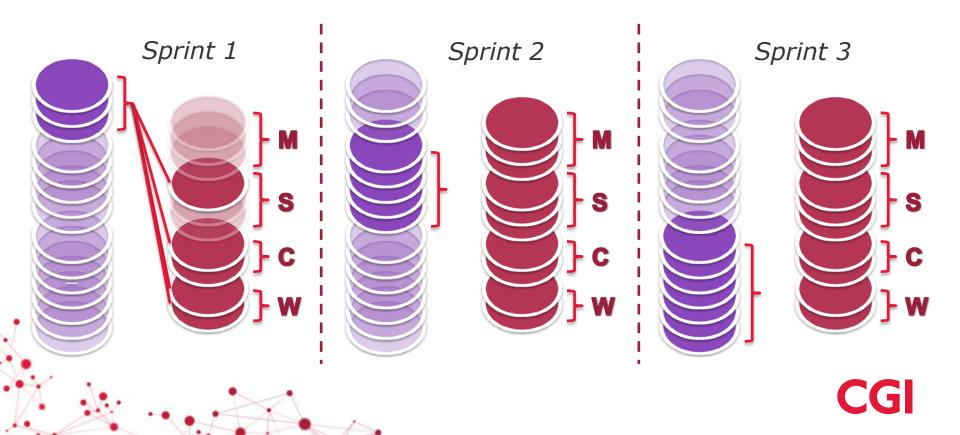
Should Have Would Have



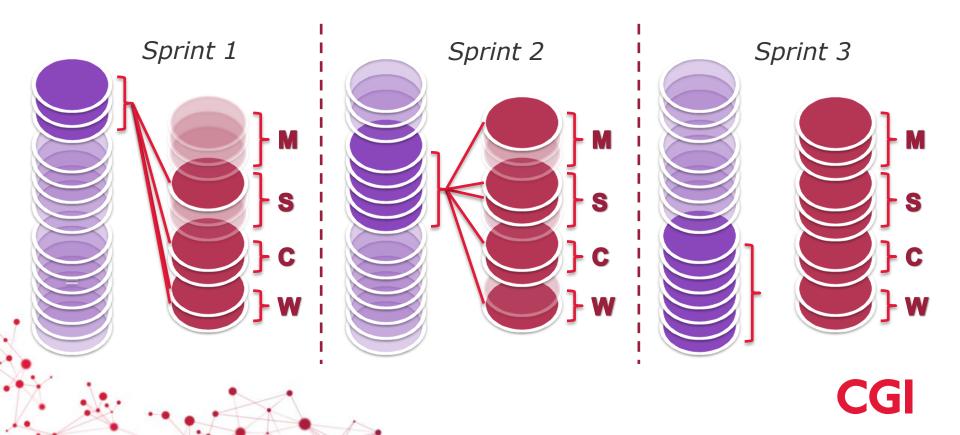
- Risks relate to story points
- Combining user stories efficiently



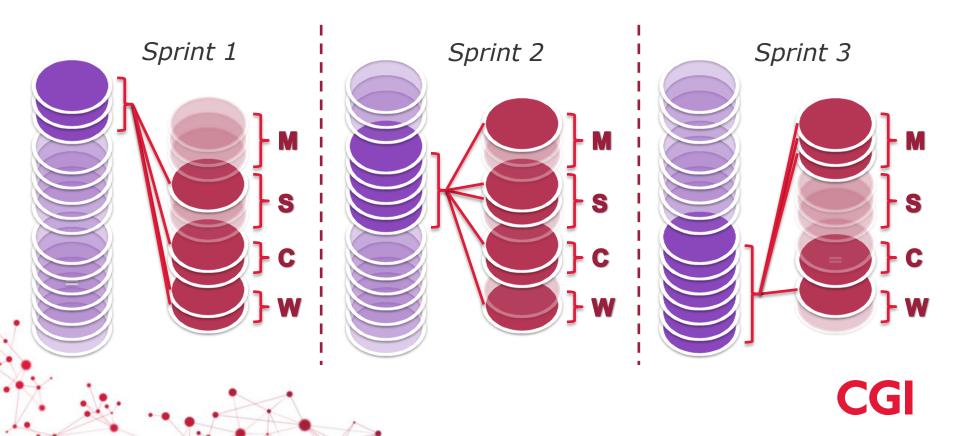
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- Combining user stories efficiently



- Risks relate to story points
- Combining user stories efficiently



Risk & Requirement Based Planning

	-					Must	Test	Should	Test	Would	dTest
	Product risk Requirement	PR 01	PR 02	PR 03	PR 04	PR 05	PR 06	PR 07	PR 08	PR 09	
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Risk & Requirement Based Planning

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Risk & Requirement Based Planning

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Risk & Requirement Based Planning

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Would Have

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**Just Have** 

Risk & Requirement Based Planning

Must Test ShouldTest WouldTest

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Would Have

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#### Risk & Requirement Based Reporting

Product risk	
Requirement	
REQ 05	<b>©</b>
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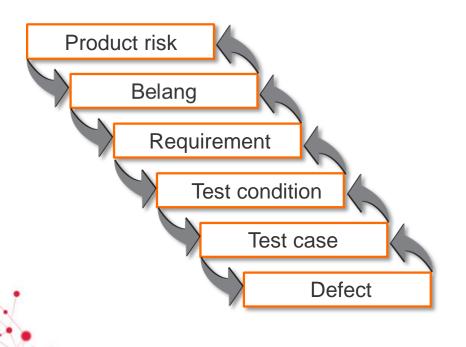
Product risk Requirement	PR 01	PR 02	PR 03	PR 04	PR 05	PR 06	PR 07	PR 08	PR 09	
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#### So, when do we use the PRA?

#### During the test process

- Planning/estimation
- Traceability
- Reporting
- Go/No-go decision



#### Within the (agile) development proces

- Planning/estimation
- Rankschikking of the backlog
- Progress
- Rapportage







## Evaluation

