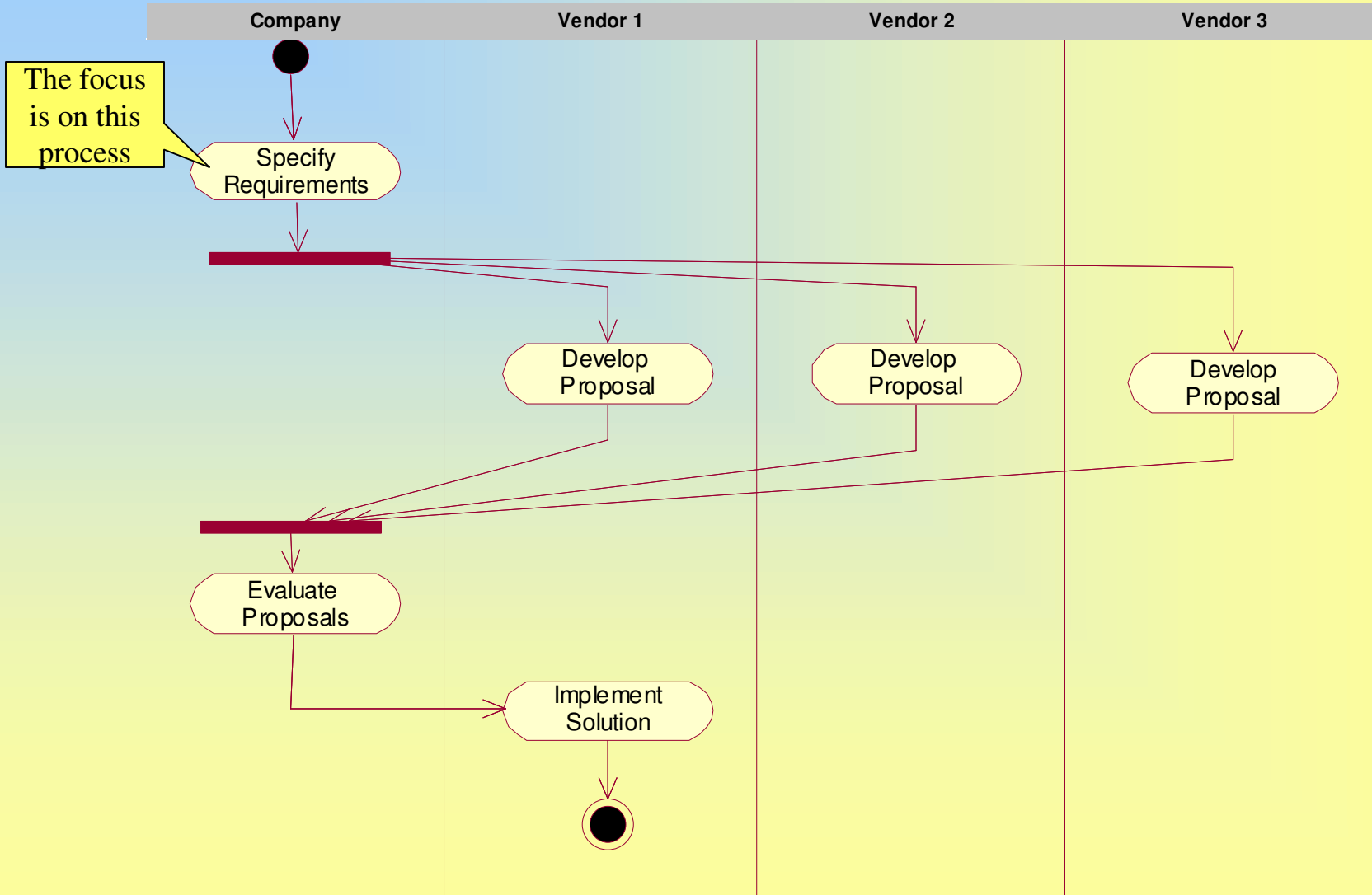


Agile Request For Proposal (RFP) Process

Jennitta Andrea

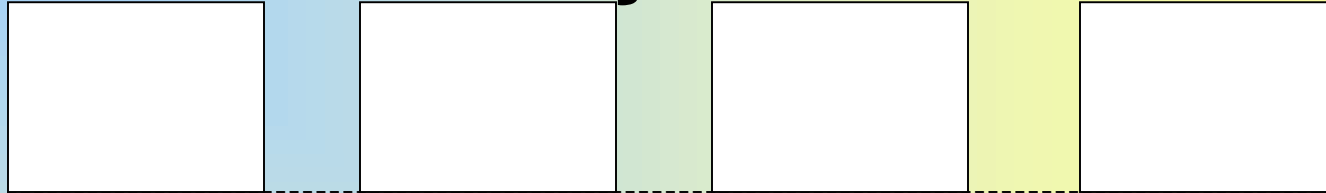
Agile Development Conference, 2003

RFP Process



Typical RFP Specification Process – Identify UC

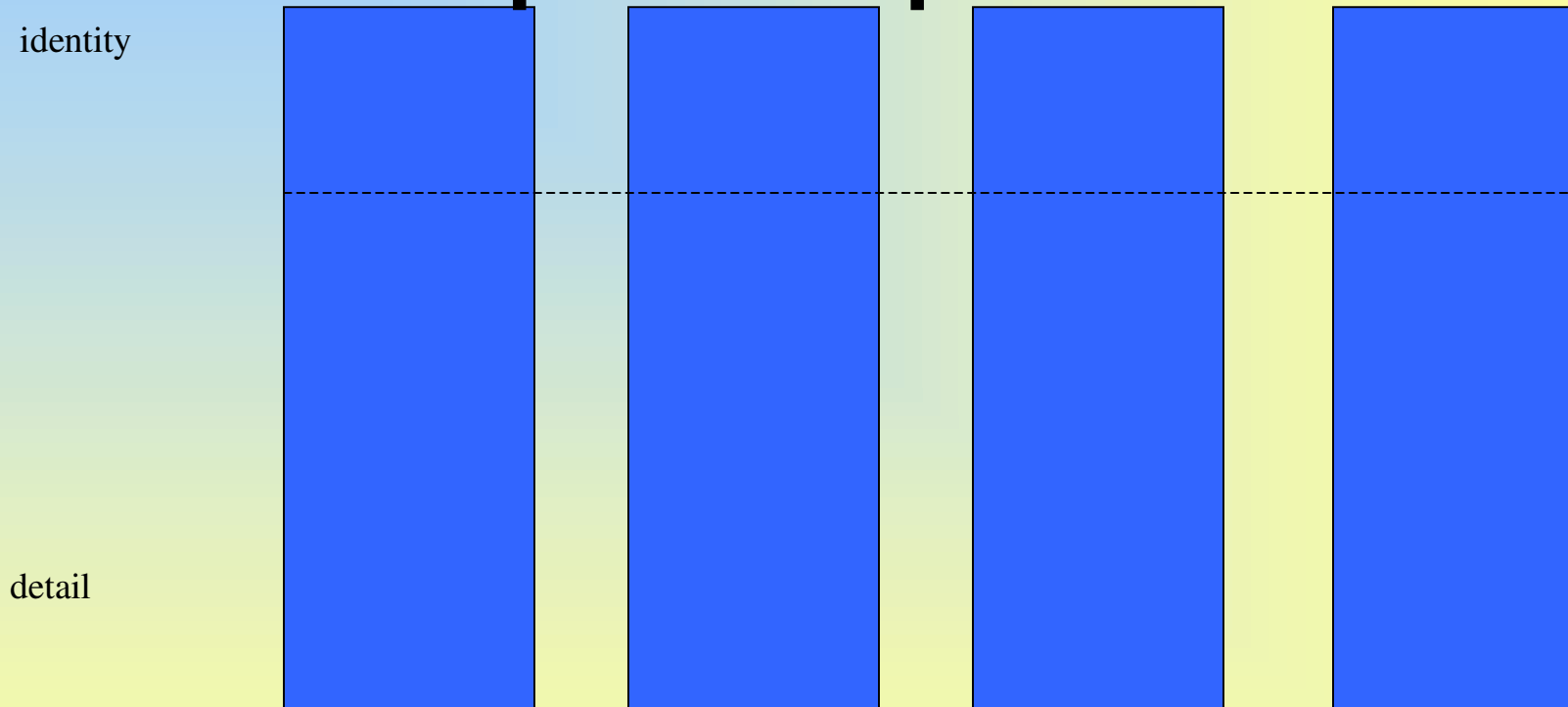
identity



detail



Typical RFP Specification Process – Complete Requirements



Can we make this any more agile?

Typical XP vs Typical RFP

	Typical XP Requirements Phase	Typical RFP Requirements Phase
When are requirements described?	Just in time	All up front
How are requirements communicated?	Face to face communication	Documents
What techniques are used?	Stories and acceptance tests	Use cases
How detailed are the requirements?	Promise for conversation --> acceptance tests	Variable: sometimes too much, sometimes too little

How Agile Can RFP Be?

	Typical XP Requirements Phase	Typical RFP Requirements Phase
When are requirements described?	Just in time	All up front
How are requirements communicated?	Face to face communication	Documents
What techniques are used?	Stories and acceptance tests	Use cases
How detailed are the requirements?	Promise for conversation --> acceptance tests	Variable: just enough

How do we ...

	Typical XP Requirements Phase	Typical RFP Requirements Phase
When are requirements described?	Just in time	All up front
How are requirements communicated?	Face to face communication	Documents
What techniques are used?	Stories and acceptance tests	Use cases
How detailed are the requirements?	Promise for conversation --> acceptance tests	Variable: just enough sometimes too much, sometimes too little

How do we merge these together?

How do we decide how much is enough?

Stories vs Use Cases

	Stories	Use Cases
Represents	Business Value	User Goal
Describes	A chunk of the system that has business value	All scenarios related to the user goal
Provides 'big picture'?	No	Yes
Good for Planning?	Yes	No, both too big and too small.

Best of Both Worlds

	Stories	Use Cases
Represents	Business Value	User Goal
Describes	A chunk of the system that has business value	All scenarios related to the user goal
Provides 'big picture'?	No	Yes
Good for Planning?	Yes	No, both too big and too small.

Break the info up into stories for planning

Package info together as use cases

Typical Use Case Template

<use case name> : <overview of user goal>	
Pre-Condition	<list of preconditions>
Success	<list of success end conditions>
Failure	<list of failure end conditions>
Main Scenario 1. <main step> 2. <main step> 3. ...	
[<main step #>] <alternate name> a) <alternate step> b) ... c) use case resumes at <main step#>	
[<main step #>] <alternate name> a) <alternate step> b) ... c) use case terminates	

Stories Embedded In Use Case

<use case name> : <overview of user goal>	
Pre-Condition	<list of preconditions>
Success	<list of success end conditions>
Failure	<list of failure end conditions>
Story	Description
<story #>.Basic Functionality	<ol style="list-style-type: none"> 1. <main step> 2. <main step> 3. ...
<story #>. <story name>	[<main step #>] <alternate name> <ol style="list-style-type: none"> a) <alternate step> b) ... c) use case resumes at <main step#>
	[<main step #>] <alternate name> <ol style="list-style-type: none"> a) <alternate step> b) ... c) use case terminates

Identity Level

Create Volume: A Volume is entered into the system for the first time. The user is prevented from creating a duplicate volume. If the box and/or chart specified by the user do not already exist, the system will create them as a side effect.

Pre-Condition	<ul style="list-style-type: none">• nothing
Success	<ul style="list-style-type: none">• Volume created (archived state) and associated with the specified Box, and Chart.• Box / Chart is created if it did not exist previously.• User name and date of action placed in audit log.
Failure	<ul style="list-style-type: none">• nothing

Outline Level

Create Volume: ...	
Pre-Condition	...
Success	...
Failure	...
Story	Description
S1.Basic Functionality	<ol style="list-style-type: none"> 1. User enters volume information. 2. User requests that the information be saved. 3. <i>System validates information. [F2. User Input Validation]</i> 4. System saves information in a new Volume and places Volume in archived state. 5. System adds the Volume to the designated Box. 6. System adds the Volume to the designated Chart. 7. <i>System records the transaction in the audit log [G1. Audit]</i>
S2. User Input Validation	[3] Duplicate Volume
	[3] Missing information

Detail Level

Create Volume: ...	
Pre-Condition	...
Success	...
Failure	...
Story	Description
S1.Basic Functionality	...
S2. User Input Validation	[3] Duplicate Volume a) System detects another Volume with the same chart number, volume number and site. b) System informs the user of the error. c) Use case terminates.
	[3] Missing information a) System informs the user of the missing fields. Use case terminates.

Acceptance Test Level

S1. Basic Functionality: Basic Success Test

Pre conditions

Box1	Exists, contains Volume1
Chart1	Exists, contains Volume1
Volume2	Does not exist

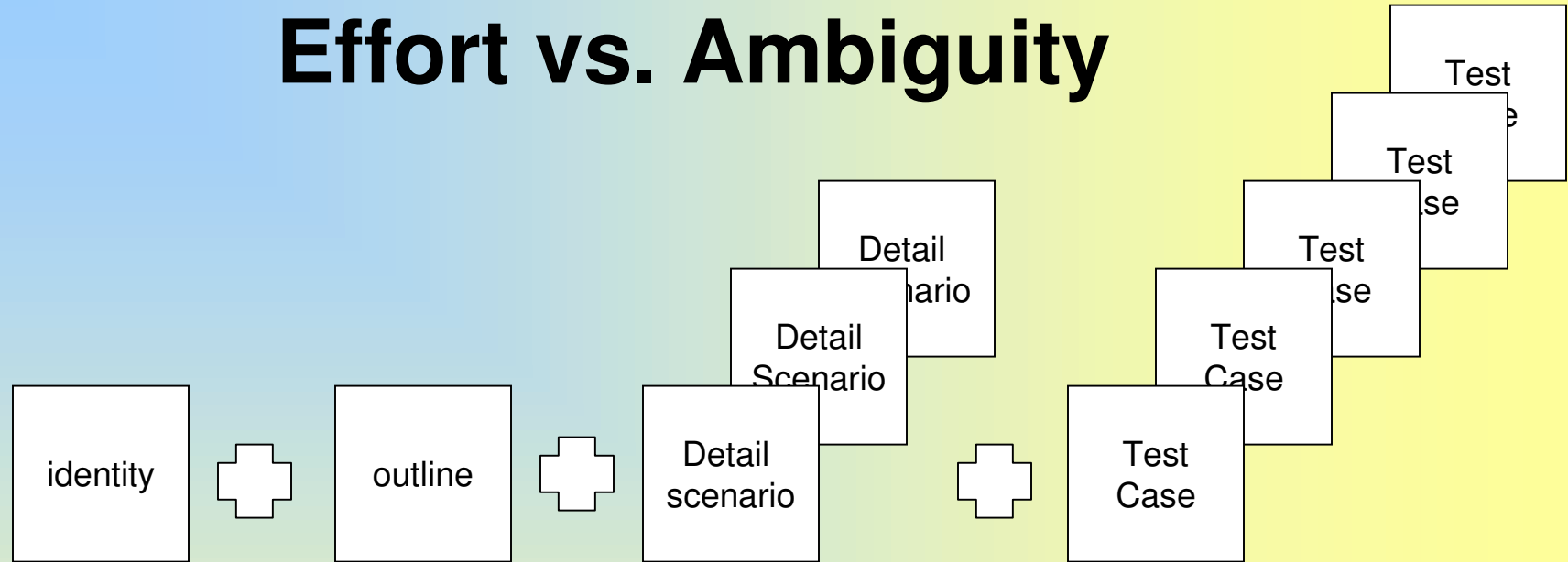
Process Parameters

Box #	1
Chart #	1
Volume #	2
Patient Name	<unique string>
Year Last Contact	<ten years ago>
Archive Date	<today>

Post conditions

Volume2	Exists with appropriate patient name, yr of last contact, archive date
Box1	Contains Volume1 and Volume2
Chart1	Contains Volume1 and Volume2

Effort vs. Ambiguity



Effort Increases

Ambiguity Decreases

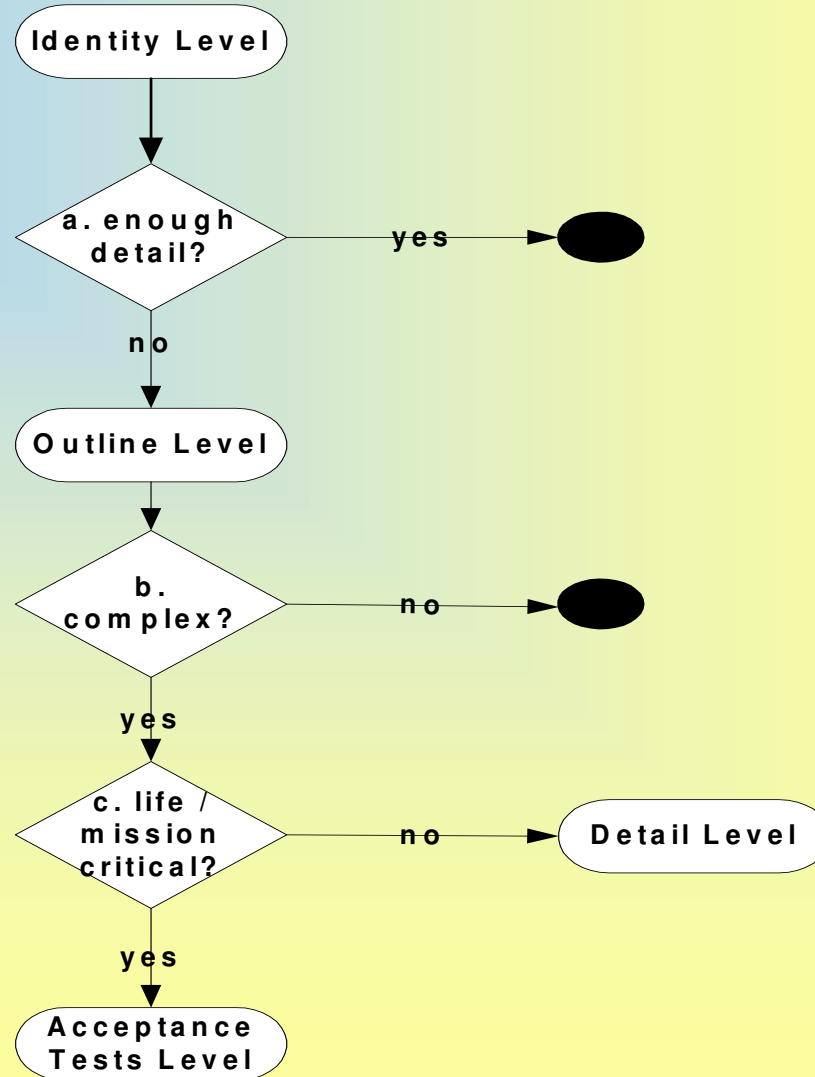
Estimate Accuracy Increases (for Complex Req's only)

Decision Tree Forces

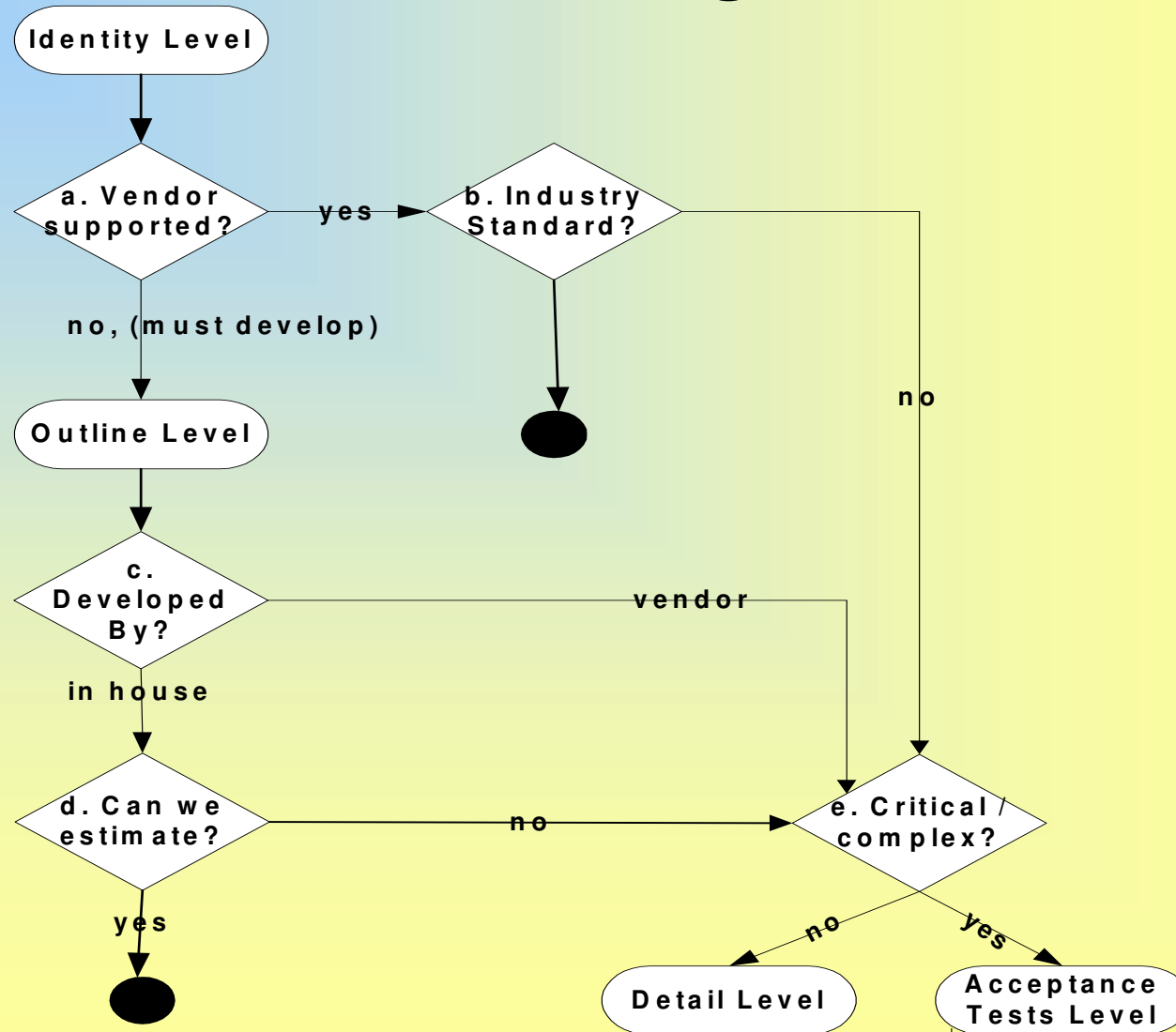
Choose target level of detail based on:

- **Familiarity of the team with the domain**
- **Uniqueness of the requirement**
- **Complexity of the concepts**
- **Business criticality of the system / requirement**
- **Life / safety criticality of the system / requirement**

Decision Tree – Custom Dev't

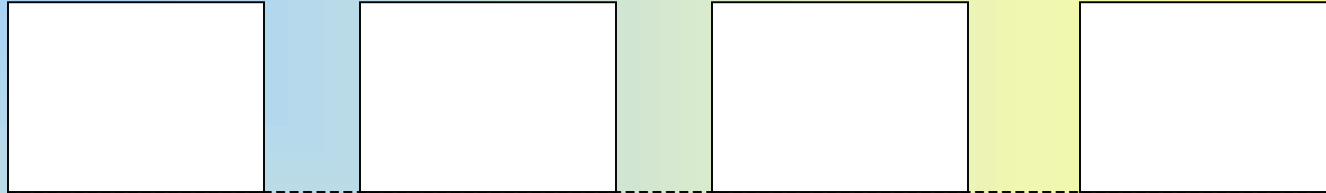


Decision Tree – Package Software

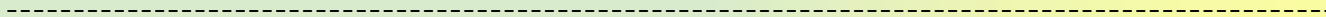


Agile RFP Specification Process – UC Identification

identity



outline

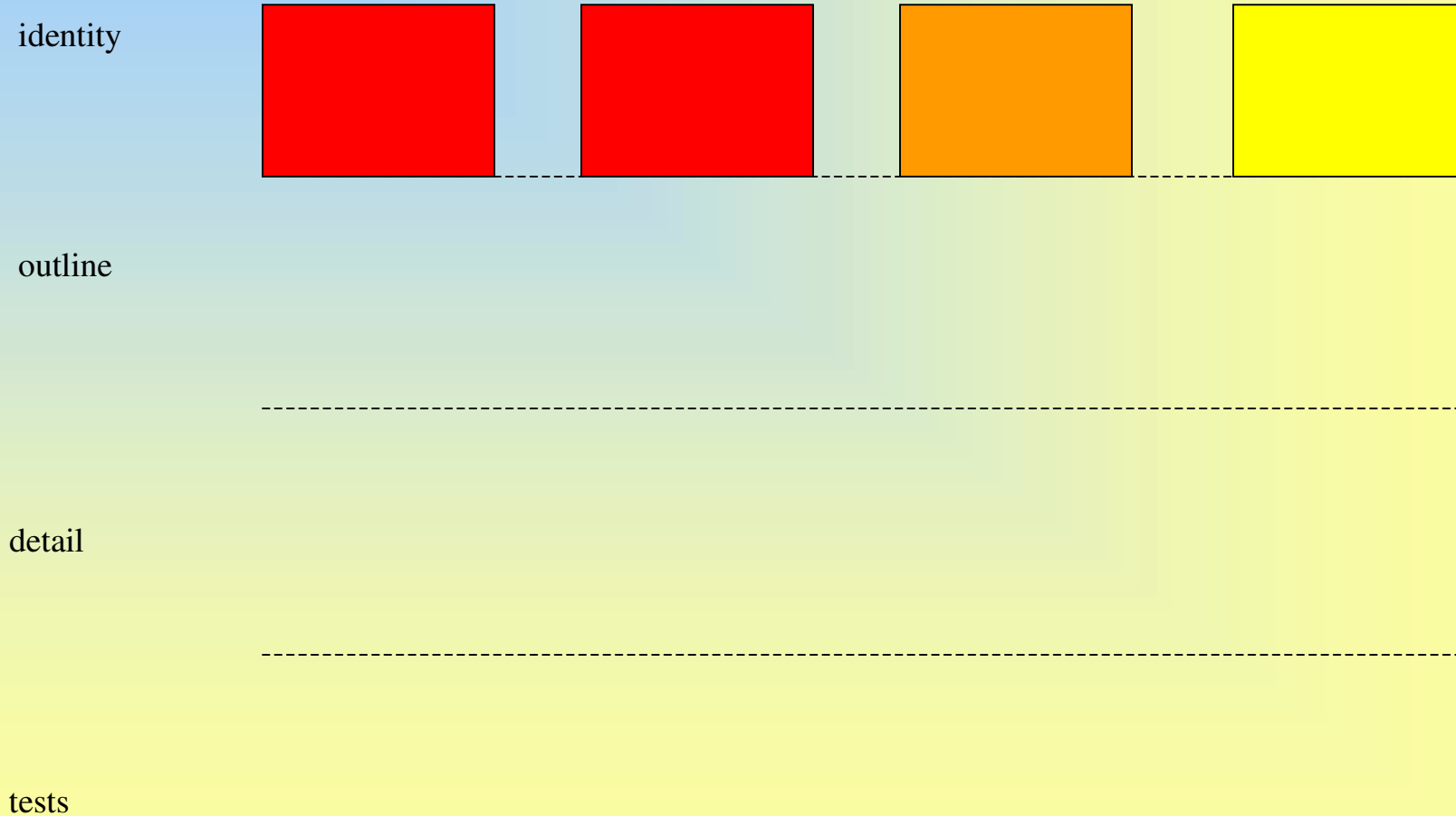


detail

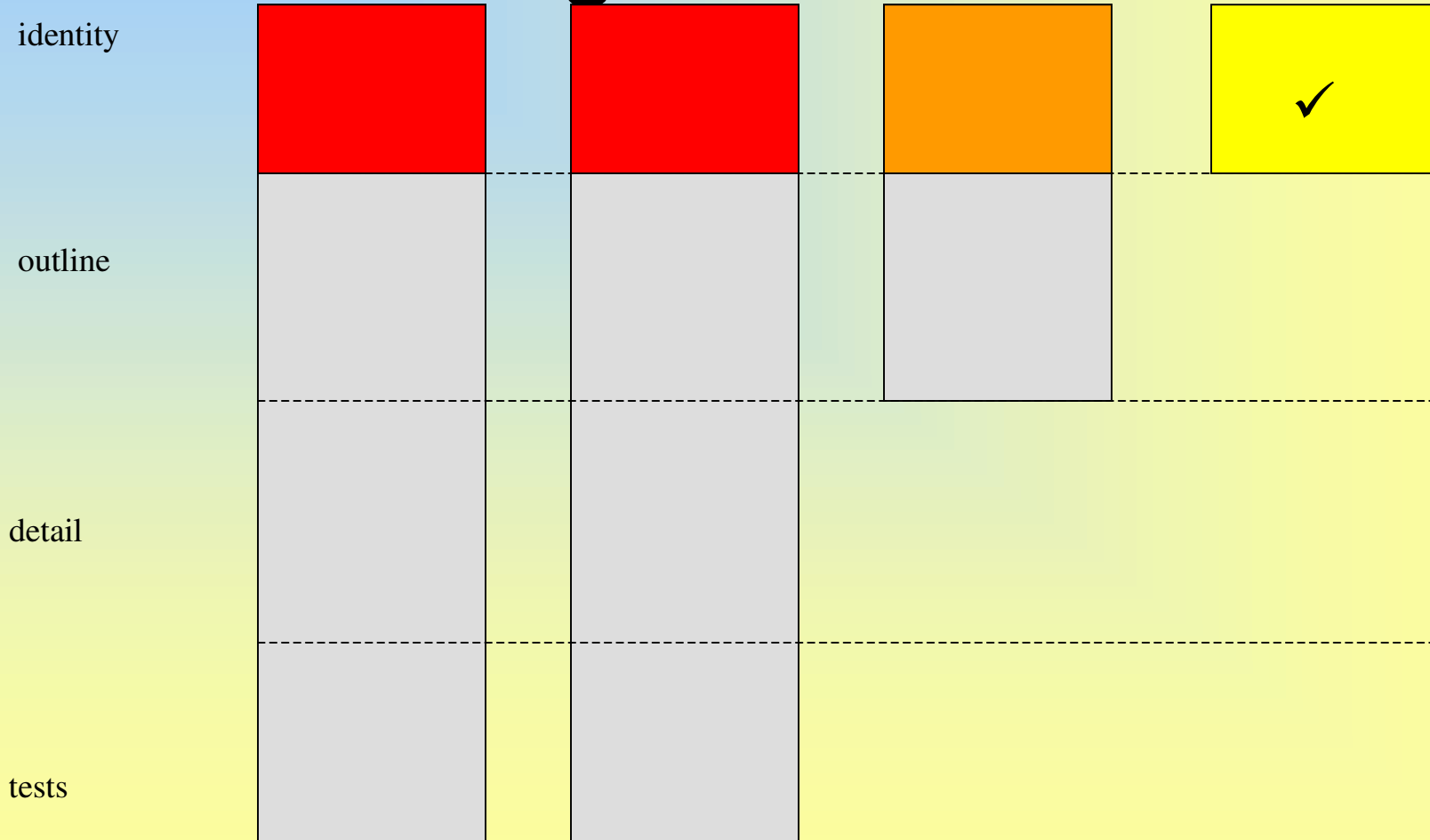


tests

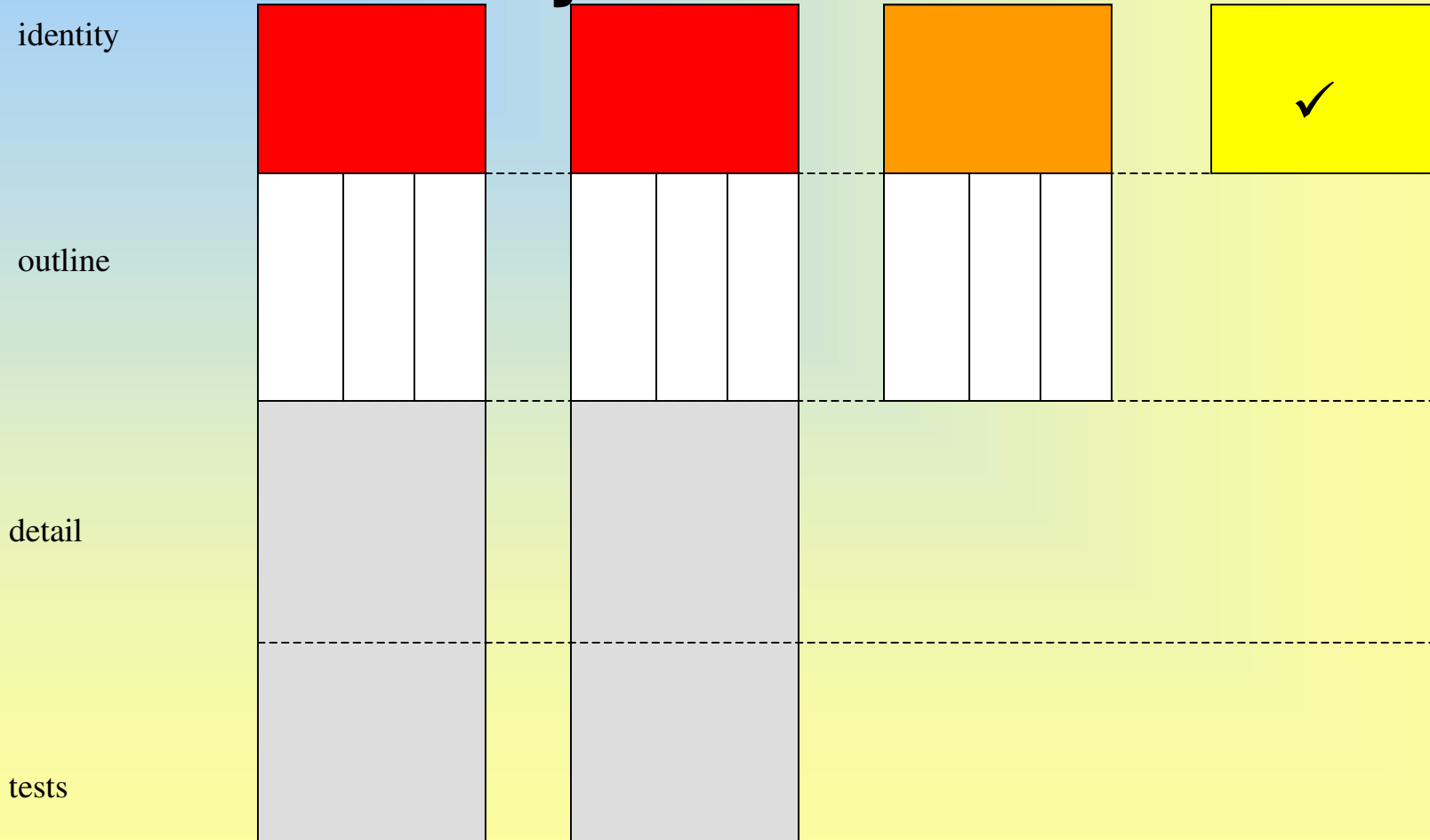
Agile RFP Specification Process – UC Prioritization



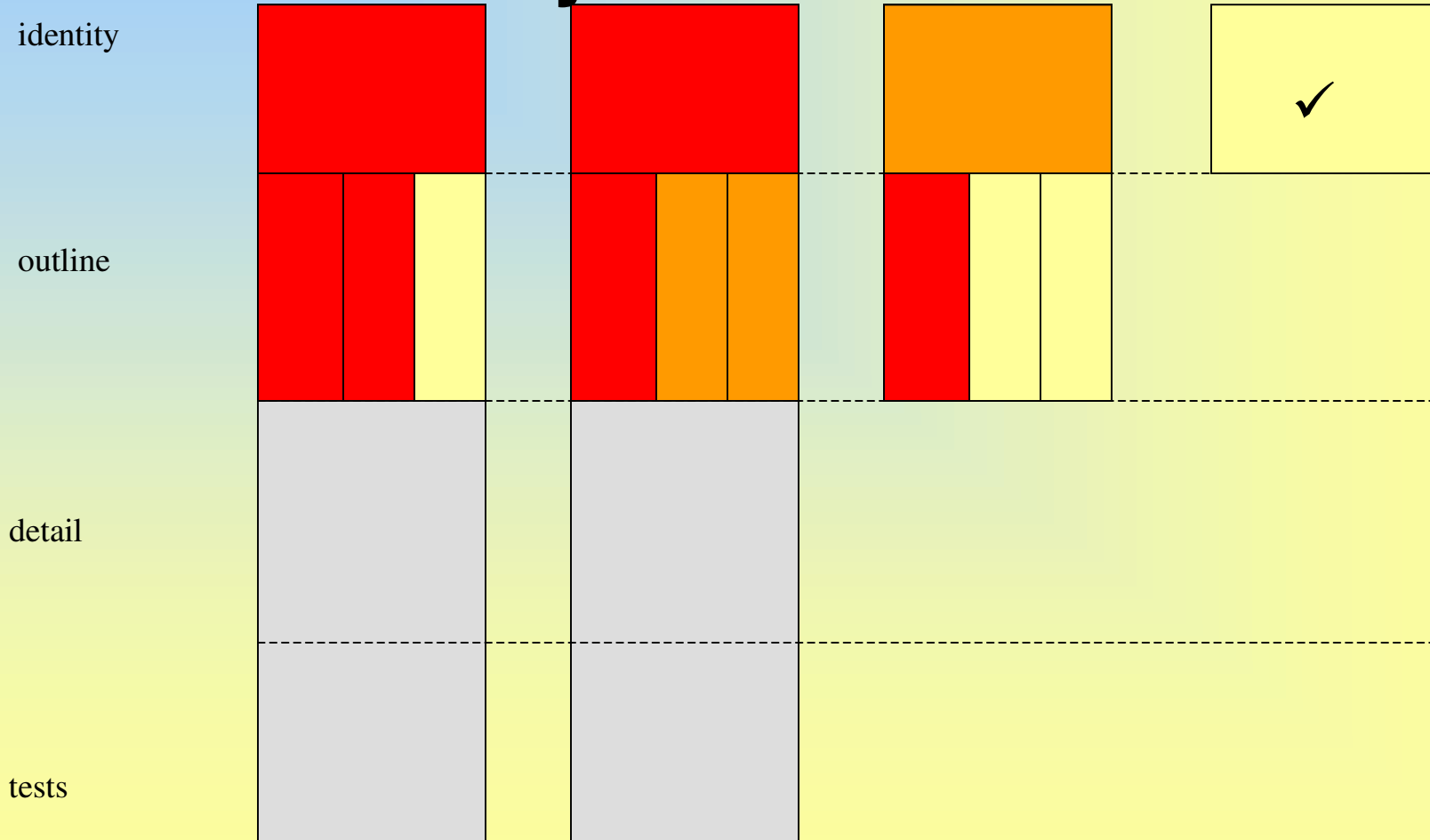
Agile RFP Specification Process – Target UC Detail



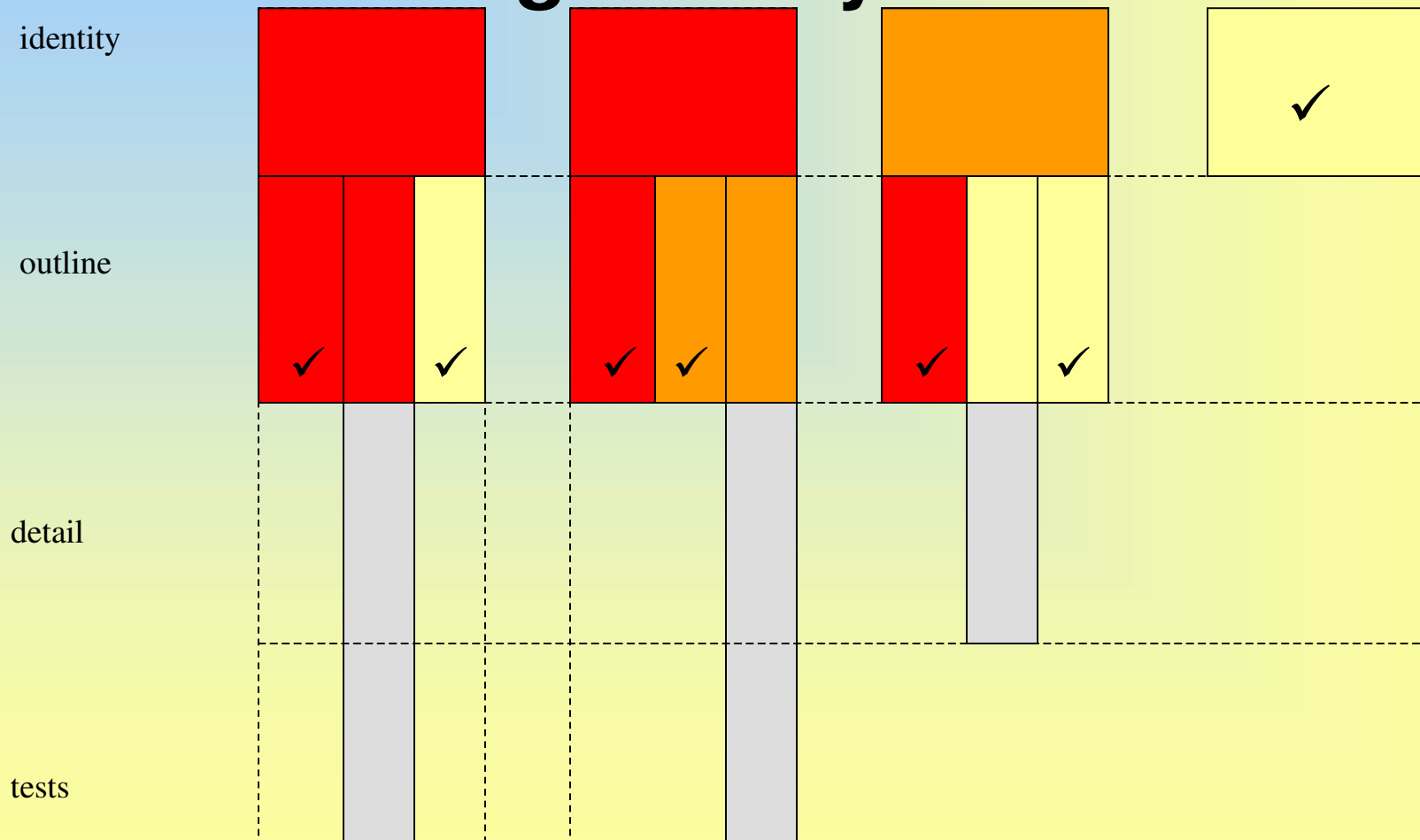
Agile RFP Specification Process – Story Identification



Agile RFP Specification Process – Story Prioritization



Agile RFP Specification Process – Target Story Detail



Before vs. After

Original RFP Specification Process

1. **Sketch the system**
 - a) Find all user-goal use cases
2. **Complete the requirements**
 - a) Write all use cases to full level of detail (main scenario and all alternate scenarios)

Agile RFP Specification Process

1. **Sketch the system**
 - a) Find all user-goal use cases
 - b) Write use cases to Identity Level
2. **Prioritize requirements**
3. **Assign target level of detail**
 - a) Develop decision tree
 - b) Assign levels to use cases
 - c) Anything > Identity Level taken to Outline Level
 - d) Assign levels to stories
4. **Complete the requirements**
 - a) Planning game
 - i. Assign work to iterations
 - ii. Prioritize stories if necessary
 - iii. Velocity, yesterday's weather, spike
 - b) Customer on-site
 - c) Pair development

Goal: Increase the Agility of the RFP Process

Sub-Goal	Accomplished By
Develop requirements to <i>just enough</i> detail	<ul style="list-style-type: none"> • Levels of detail <ul style="list-style-type: none"> – Stories embedded in use cases – Acceptance tests • Decision tree
Develop requirements <i>just in time</i>	<ul style="list-style-type: none"> • Business value • Planning game <ul style="list-style-type: none"> – Iterative, incremental development – Velocity – Yesterday’s weather – Spike
Improve the quality of the requirements	<ul style="list-style-type: none"> • Pair Development • On-site customer

Questions / Comments

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