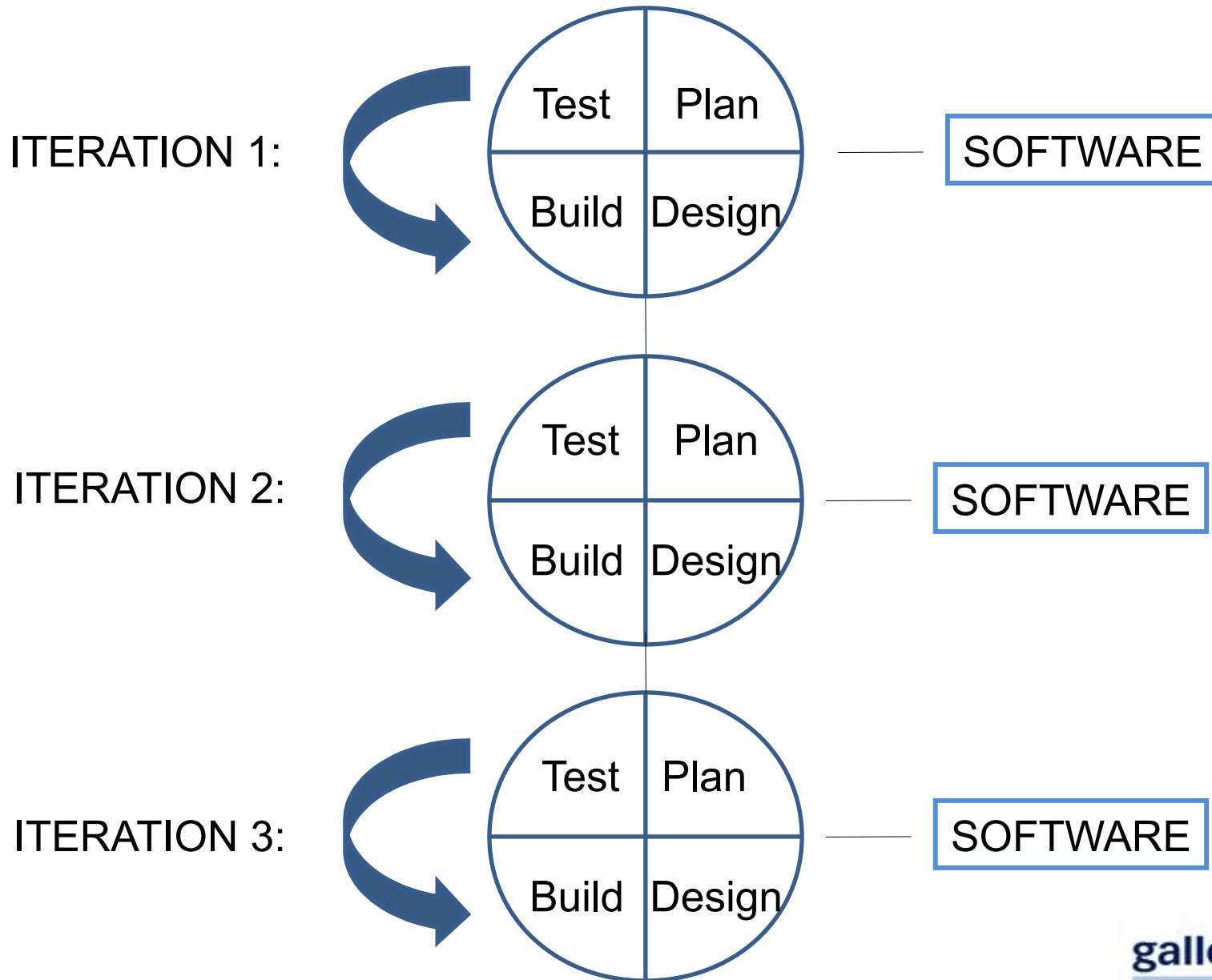


SOFTWARE DEVELOPMENT CONTRACTUAL ISSUES

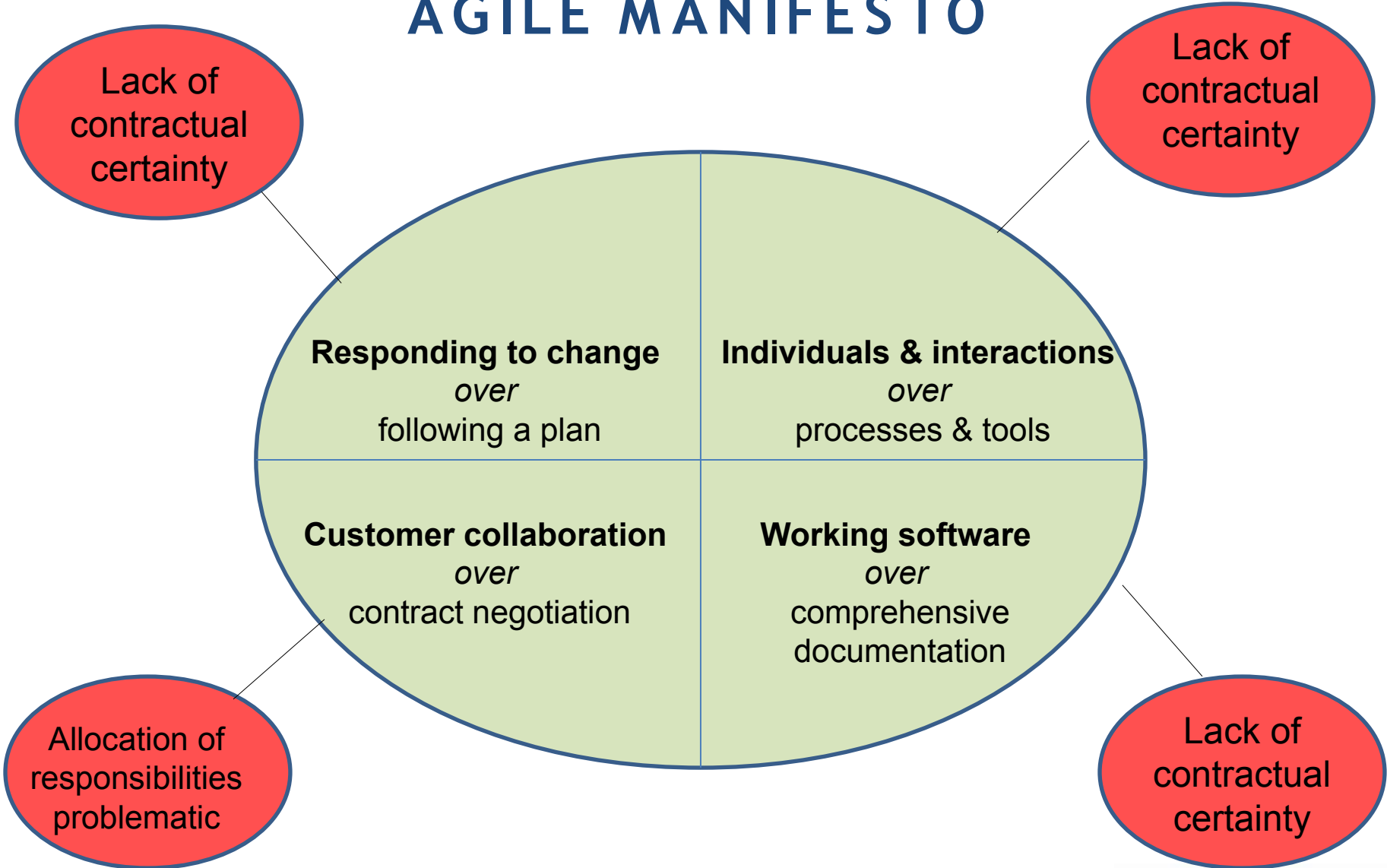
Susan Atkinson
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IFCLA 2010 Conference
Helsinki
11 June 2010

AGILE - ITERATIVE DEVELOPMENT



AGILE MANIFESTO



WATERFALL - SEQUENTIAL DEVELOPMENT

Requirements



Analysis



Design



Development



Testing



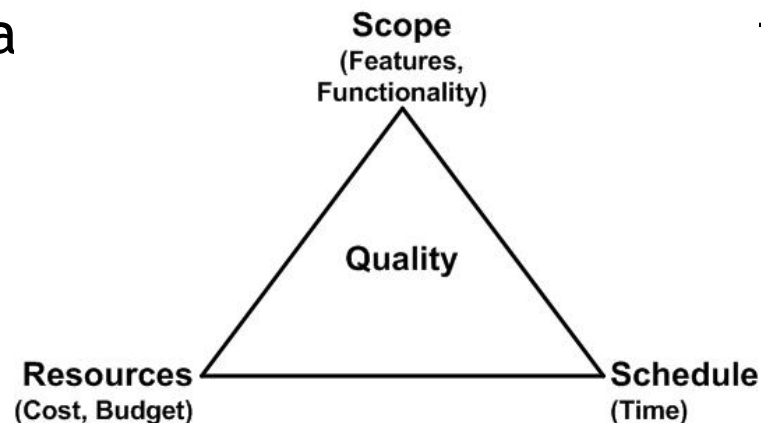
SOFTWARE

THE WATERFALL CONTRACT IS FLAWED

1. Requirements are fixed at the start of the project
2. Charges and key milestones are also often fixed at the start of the project
3. Analysis, design, development and testing occur sequentially
4. Testing is used as a contractual tool

5. The contract
goods

the supply of

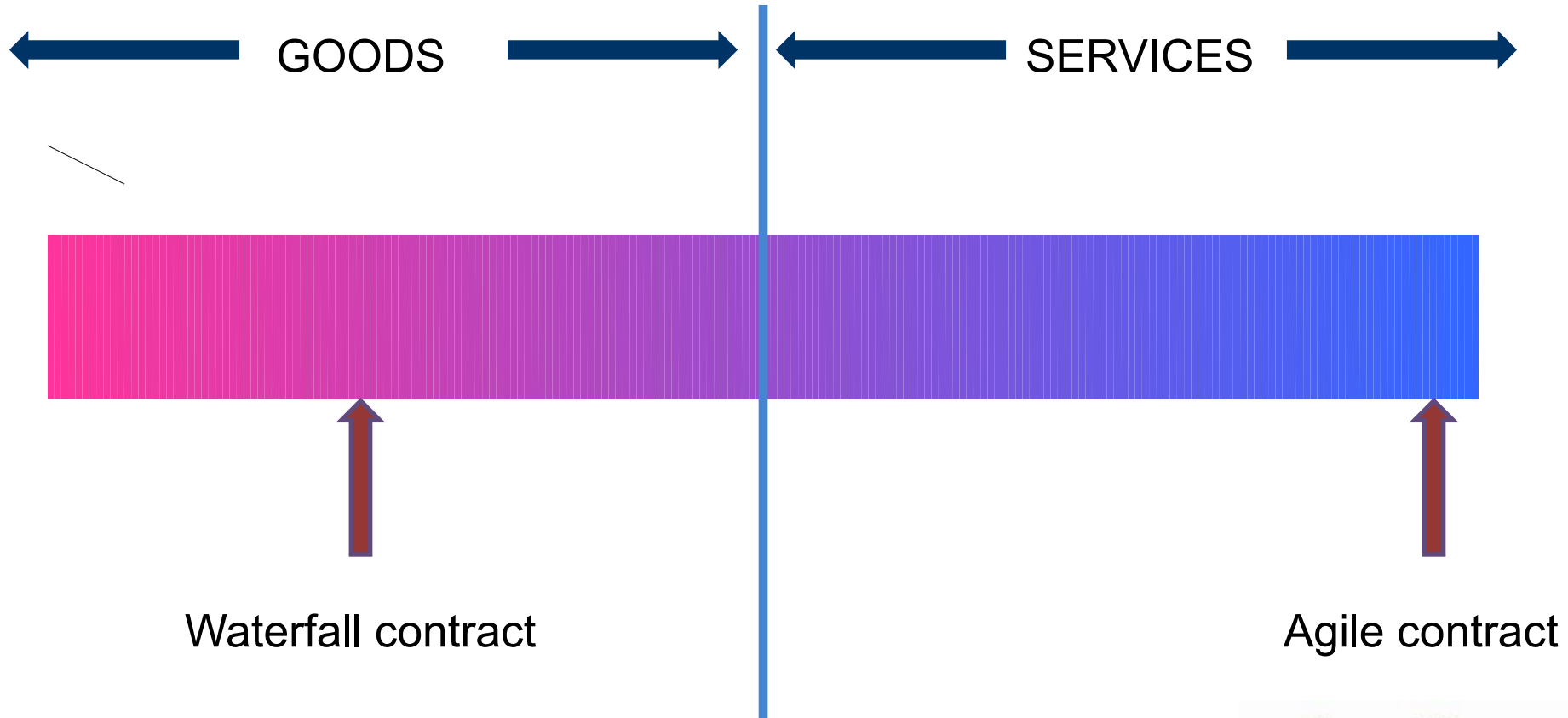


A COMPARISON OF AGILE AND WATERFALL CONTRACTS

Nature of a Waterfall Contract	Requirements for an Agile Contract
Requirements up-front	Requirements evolve
Change control mechanism for changes in requirements	Changes in requirements are accommodated as part of the development process
Often requirements, charges and key milestones are fixed at the start of the project	Only charges and key milestones are fixed at the start of the project
Analysis, design, development and testing occur sequentially	Time-boxed iterations of short duration with concurrent design and development cycles
Testing as a contractual tool	Testing forms an integral part of the development process
Measure against requirements only	Multiple metrics for gauging level of productivity and quality of code
Contract for the supply of goods	Contract for the provision of services

EIGHT FEATURES OF AN AGILE CONTRACT

1. CONTRACT FOR THE SUPPLY OF SERVICES



2. FRAMEWORK AGREEMENT

- Comprises multiple packages of work known as 'releases'
- Releases called off under a framework
- The aim of a release is to develop the 'Minimum Marketable Features' (MMF)
- Release completion date is agreed
- NOTE: A committed start-up phase may be necessary

3. ITERATIONS AND METHODOLOGY

- Methodology agreed at the outset of the project
- Methodology for an iterative process
- Each iteration comprises a design/development loop of *“plan it, do it, test it, measure it”*
- At the end of each iteration there should be fully tested software that is ready to be deployed

4. CAPACITY TRUMPS FEATURES

- For each release the supplier commits to deliver a certain amount of capacity by the date on which the release is to be completed
- At the start of each iteration the parties agree which features are to be worked on for that iteration
- Features for the current iteration are a firm commitment at a project level BUT not in the contract
- Features for all future iterations may - and probably will - be further refined
- No need for contract change mechanism

5. CUSTOMER INVOLVEMENT IS CONTRACTUAL REQUIREMENT

- Fully empowered 'Product Owner' available on a daily basis
- Roles of the Product Owner:
 - Prioritise features at the start of an iteration
 - Clarify features as and when required
 - Validate test criteria for all features
 - Provide feedback at the end of each iteration and throughout the project

6. CHARGING MECHANISMS

- Charges should not drive unwanted behavioural patterns
- Various mechanisms

7. CONTRACTUAL CERTAINTY

- For each release commitment to:
 - Capacity
 - Completion date
 - Charges



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8. KEY INDICATORS

- Metrics of productivity:
 - Velocity - rate of progress
 - Feature cycle time - speed of development
 - Development payload - proportion of 'value' delivered
- Metrics of the working software:
 - Defect density - accuracy of code
 - Unit test coverage - robustness of code
 - Cyclometric complexity - quality and elegance of code



SOFTWARE DEVELOPMENT CONTRACTUAL ISSUES

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