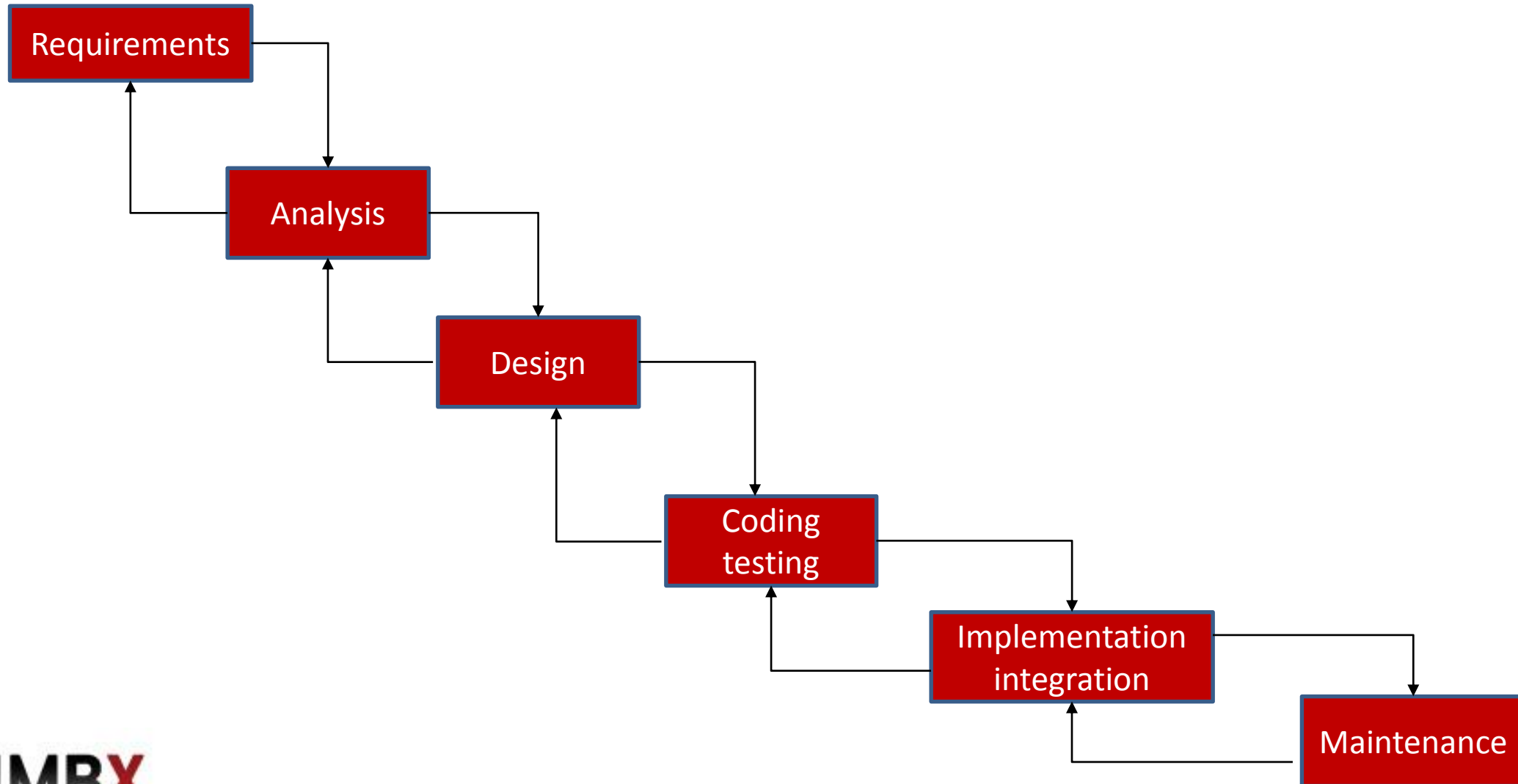# WEEK 4 COURSE HANDOUT

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WATERFALL SOFTWARE DEVELOPMENT MODEL

Waterfall model

SOFTWARE PROJECT MANAGEMENT

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Key software project management challenges

- Managing requirements scope creep
  - Managing customer requests
- Managing product stability
- How much to document
- Who is responsible for the success or failure of the project
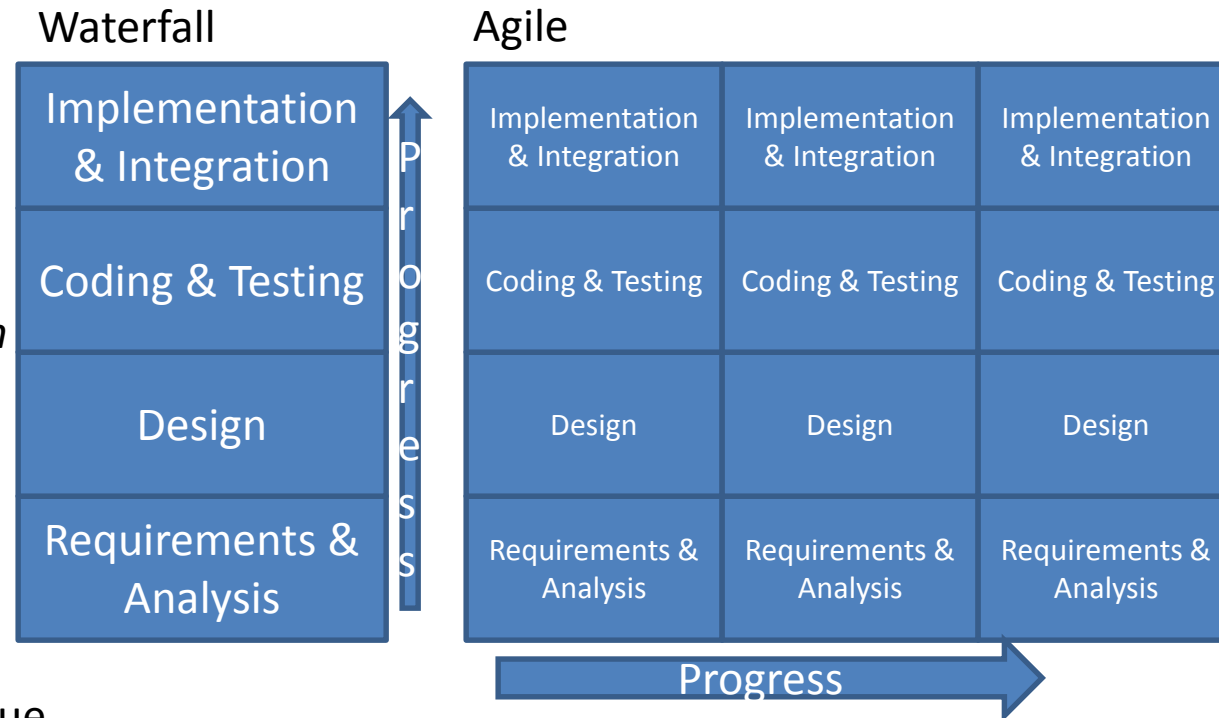
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AGILE SOFTWARE DEVELOPMENT MODEL

Agile Software Development

The Agile Manifesto

agilemanifesto.org

Individuals and interactions over processes and tools
Completed functionality over comprehensive documentation
Customer collaboration over contract negotiation
Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more…

Waterfall

Implementation & Integration
Coding & Testing
Design
Requirements & Analysis

Progress

Agile

Implementation & Integration	Implementation & Integration	Implementation & Integration
Coding & Testing	Coding & Testing	Coding & Testing
Design	Design	Design
Requirements & Analysis	Requirements & Analysis	Requirements & Analysis

Progress

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Scrum Programming

Roles
- Product Owner
- Scrum Master
- Developers
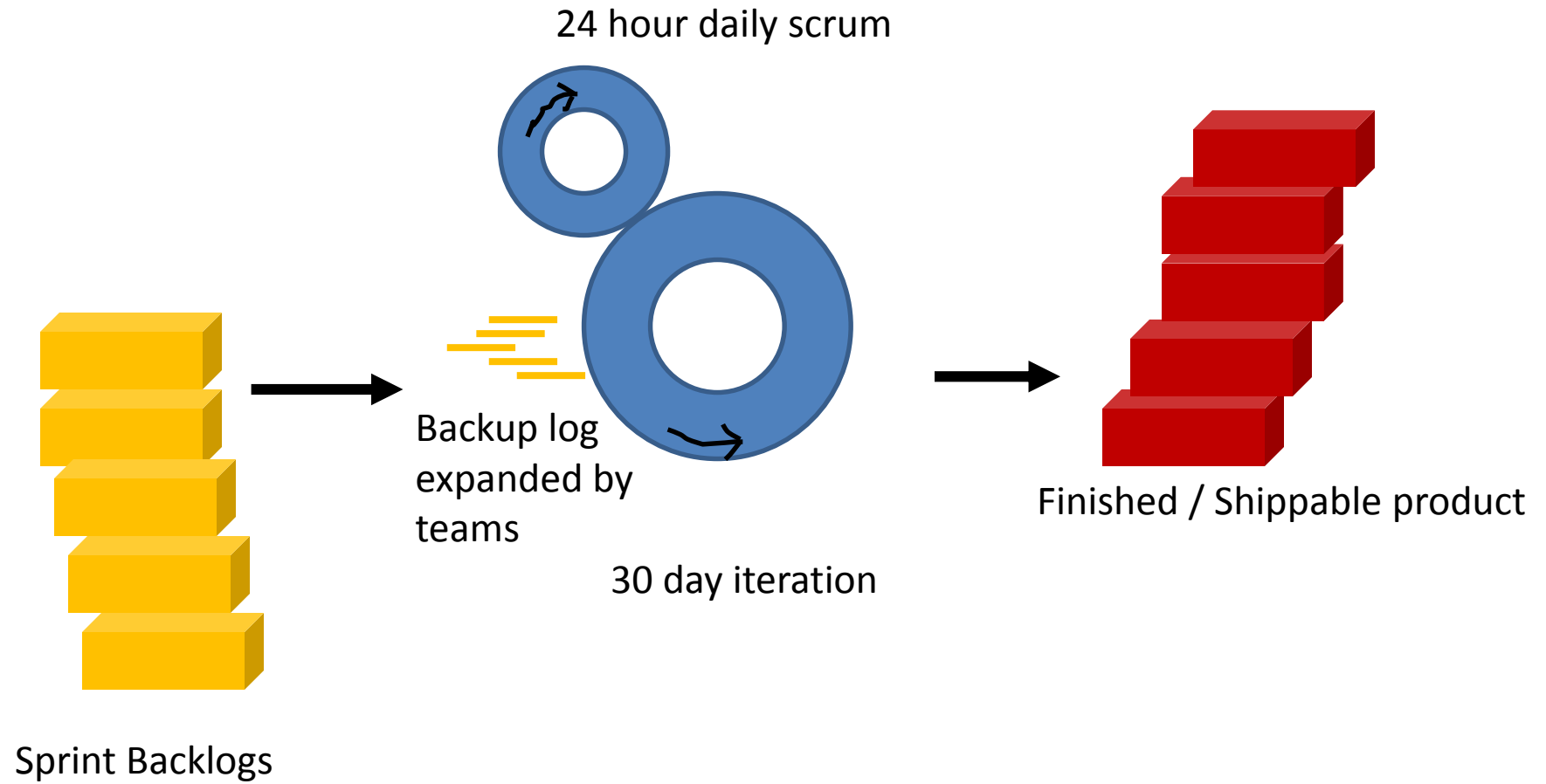- Stakeholders

Sprint Artifacts
- Product and Sprint Backlogs
- Burn-down chart
- Product Increment

Events
- Sprint
- Sprint Planning
- Daily Scrum
- Sprint Review
- Retrospectives

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Scrum Programming

24 hour daily scrum

Backup log expanded by teams

30 day iteration

Finished / Shippable product

Sprint Backlogs

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Sprint Planning

- Product Backlog grooming

- User story walkthrough

- Sprint backlog, Scrum Board & Sprint goal

- Estimation

- Select user stories based on Sprint Velocity

- Self-assignment by developers

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Sprint Execution

- Development Activities
  - A little bit of everything – requirements, design, coding, testing and deploy

- Daily scrum
  - Time-boxed, Stand-up
  - All are welcome
  - But only the scrum team can talk
  - Three questions

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Sprint Closure

- Sprint Review
  - Time-boxed
  - Demo of new features
  - Whole team participates
- Product feedback
- Groom product backlog for next sprint
- Sprint Retrospectives
  - Time-boxed
  - What worked and what didn't
  - Start / Stop / Continue

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