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SOFTWARE DEVELOPMENT LIFE CYCLE

Experience improves us

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Software Development Methodologies

- Waterfall Model
- Prototype Methodology
- Agile Methodology
- Rapid Application Development
- Dynamic System Development Model Methodology
- Spiral Model
- Extreme Programing Methodology

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Which methodology is better?

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1. Estimation should be done by team not manager

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2. Plan the time when product will be released

3. Project is split to small tasks with clear

4. Close team collaboration

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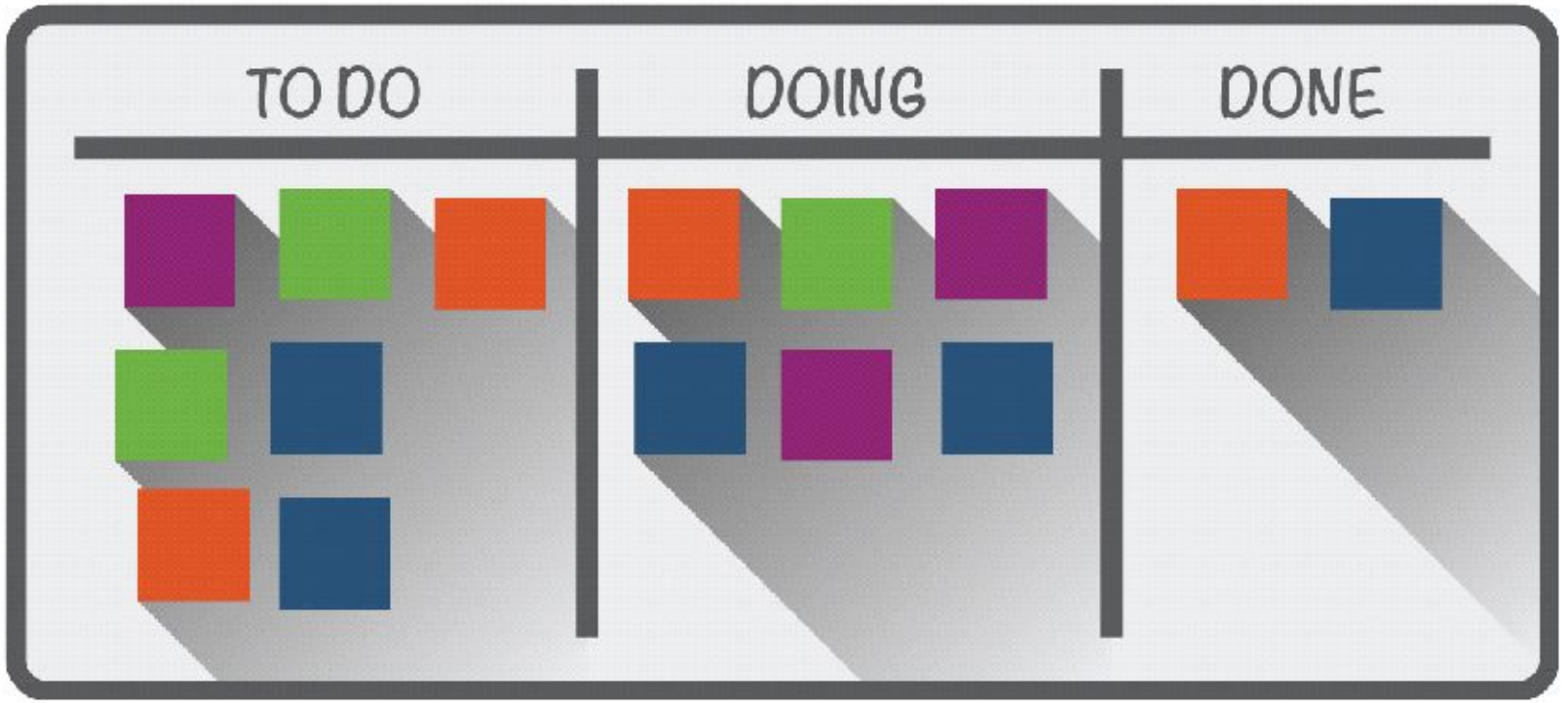
5. Add some buffer time

6. Don’t hurry up or cut time for development

7. Document your plan using some tool



8. Put priorities and concentrate on the main

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Software development methodology

In software engineering, a software development methodology is a division of software development work into distinct phases (or stages) containing activities with the intent of better planning and management.

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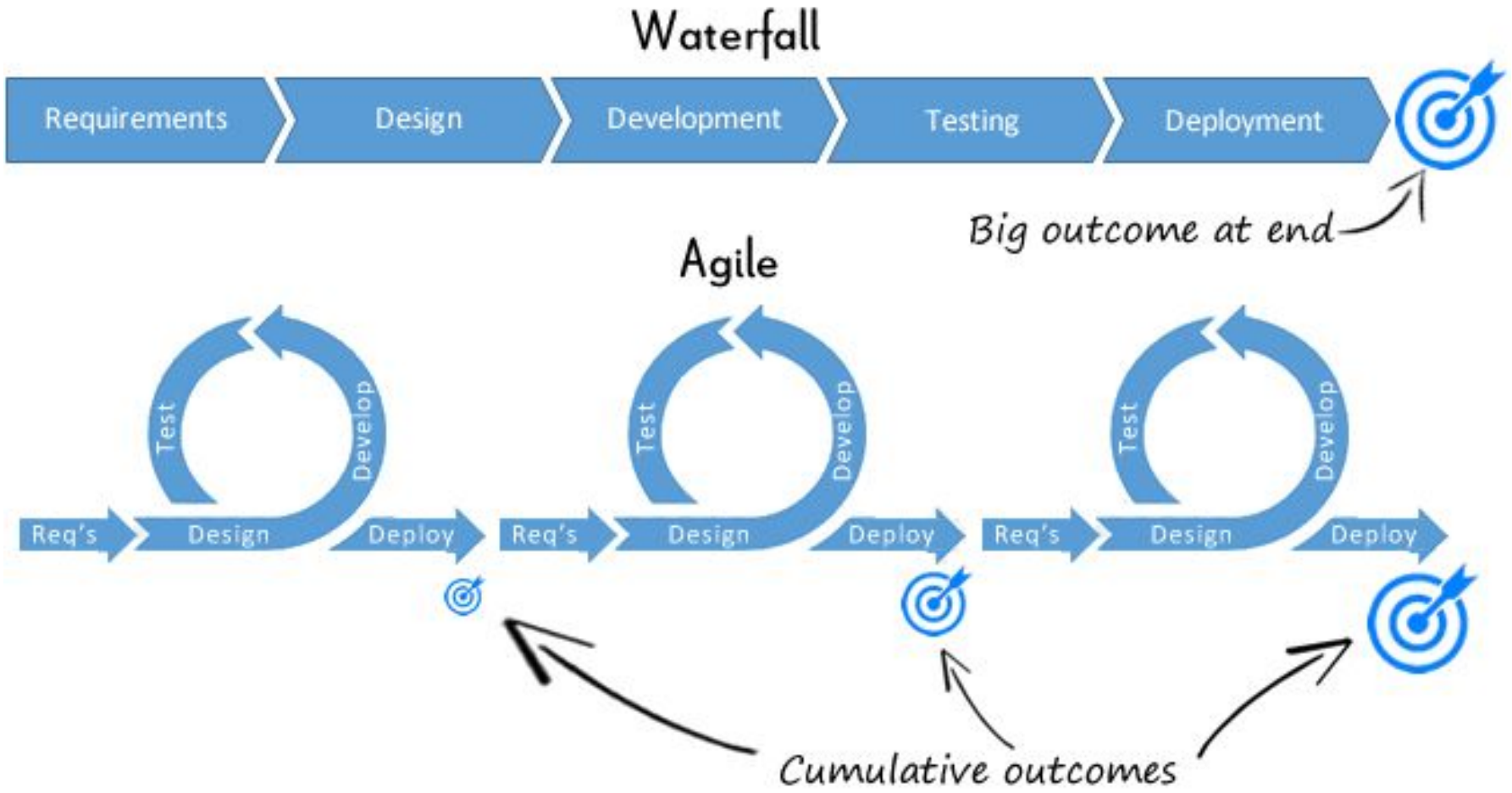

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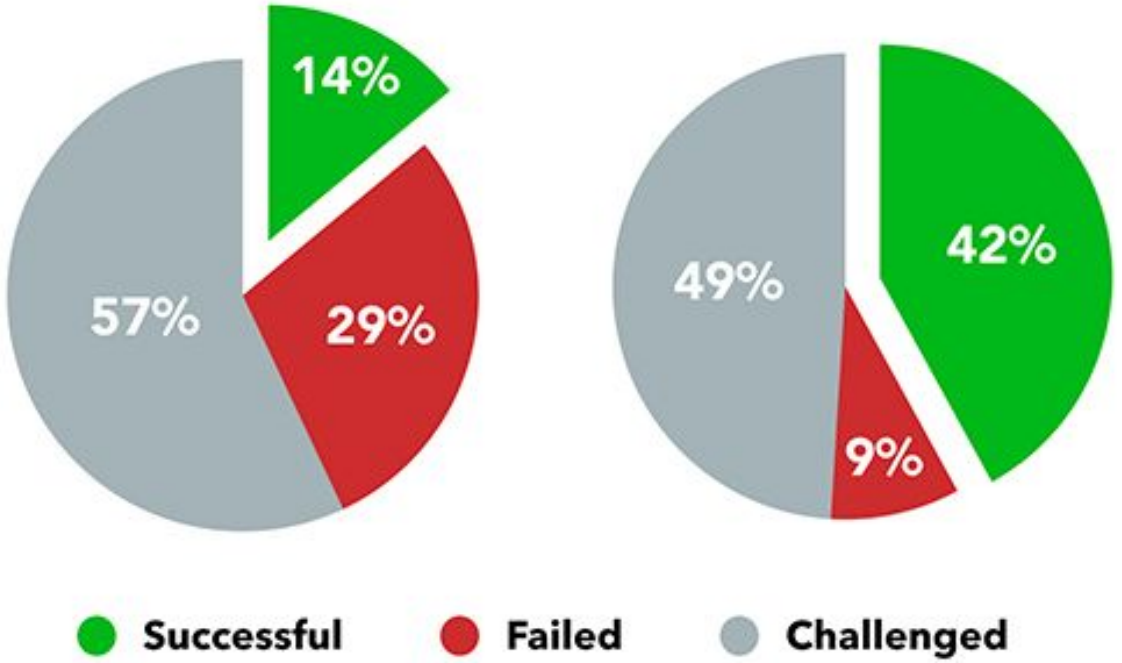
Waterfall vs. agile software delivery success



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The Agile Manifesto – a statement of values

Individuals and interactions	over	Process and tools
Working software	over	Comprehensive documentation
Customer collaboration	over	Contract negotiation
Responding to change	over	Following a plan

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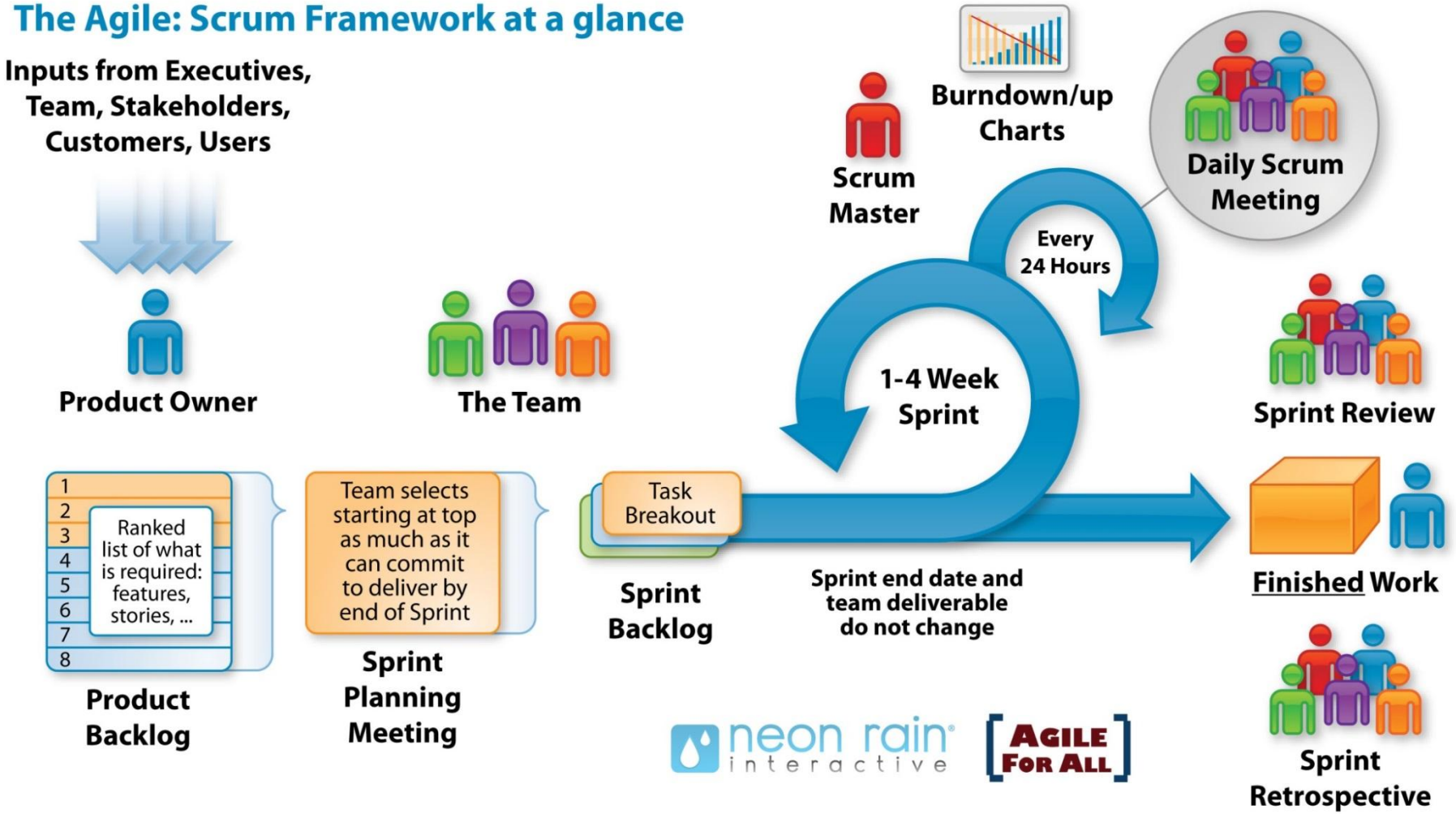
The Agile: Scrum Framework at a glance



The Scrum Team

- The Scrum Team

The Product Owner

The Development Team

The Scrum Master

The Scrum Master

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Scrum
Master

Meeting

Planning Meeting

- What is a Product Backlog?
- What can we do?
- Further details?
- Who will do it?
- How long will it take?

Daily Standup Meeting

- Daily 15 minutes
- Issues:
  - What have I done?
  - What will I do?
  - What is my problem?

Sprint Review

- For the Product Owner
- For the customers.
- At the end of each sprint

Sprint Retrospective

- Analysis of the work done
- At the end of sprint

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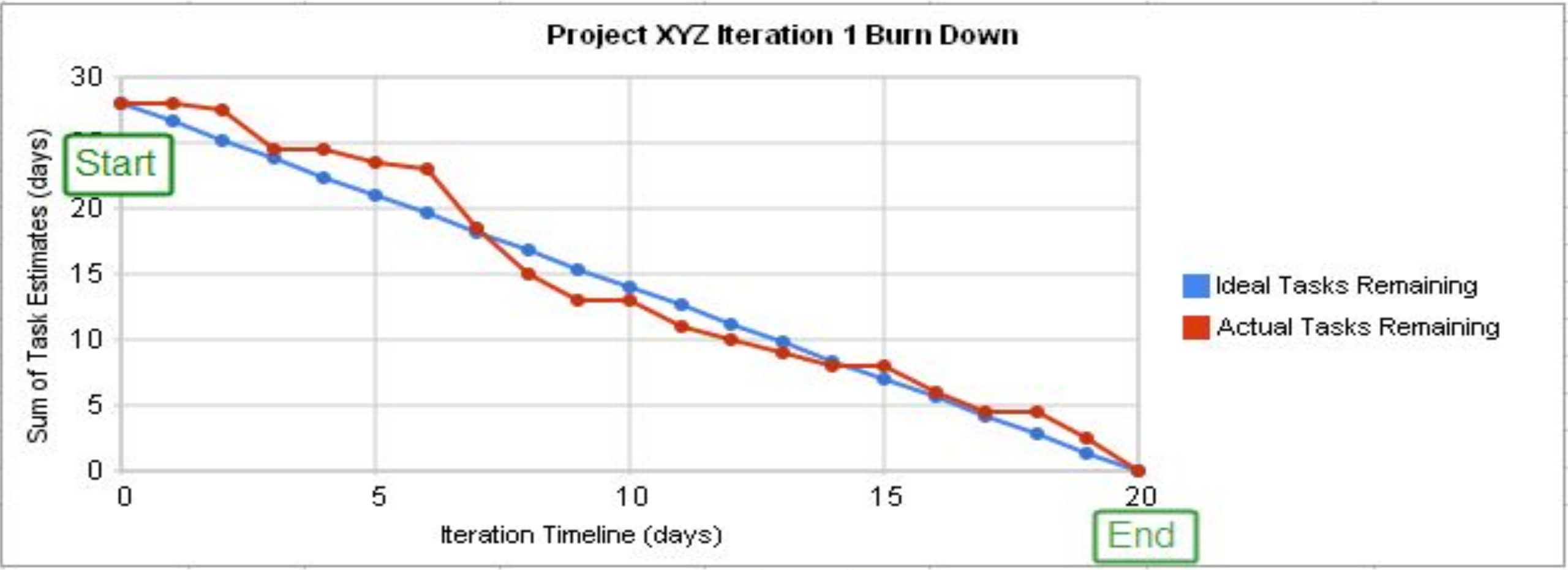
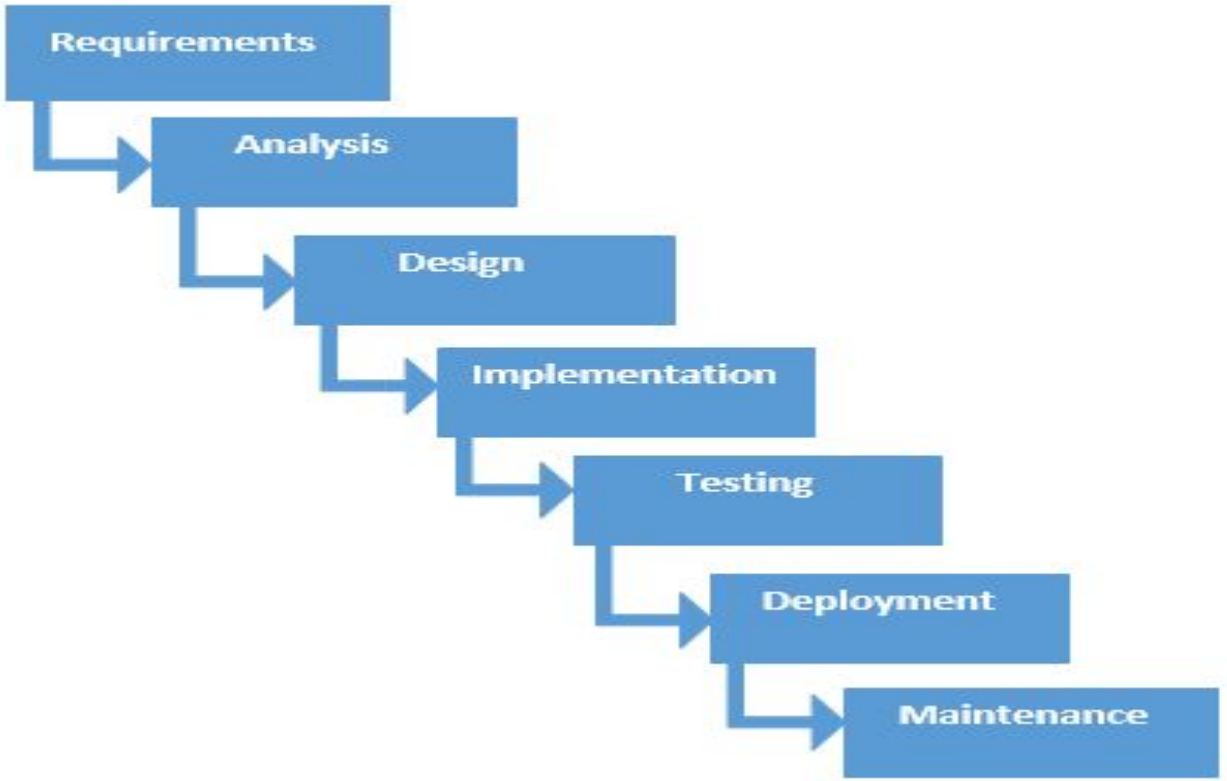
Burn Down Chart



- https://www.youtube.com/watch?v=502ILHjX9EE

Waterfall


Requirements
Analysis
Design
Implementation
Testing
Deployment
Maintenance

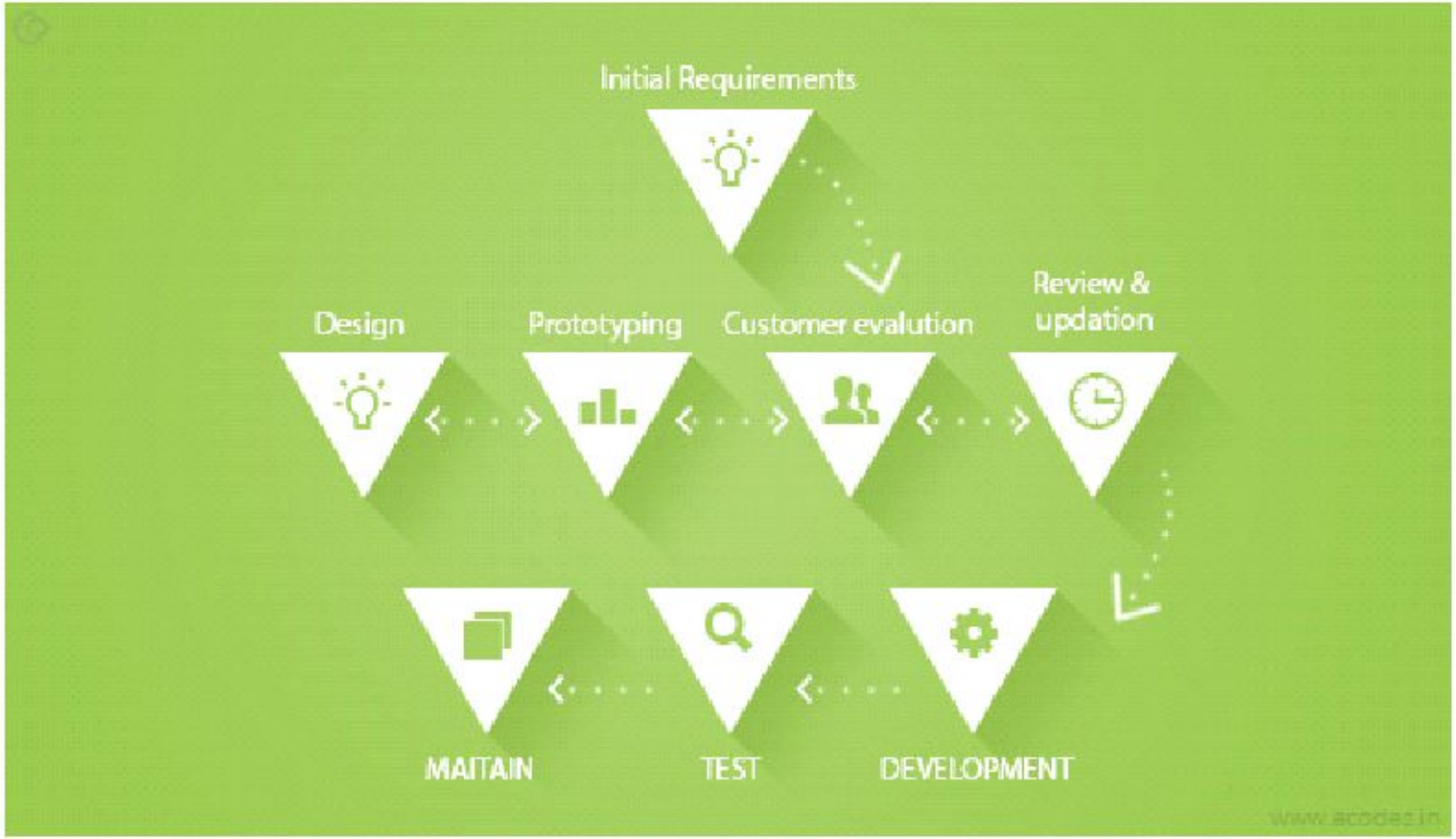
Pro[illegible]ments are very well

Watchlist

Consider to high risk of changing [illegible] the life cycle.

Waterfall

Prototype Methodology



Prototype Methodology

Prototype Methodology

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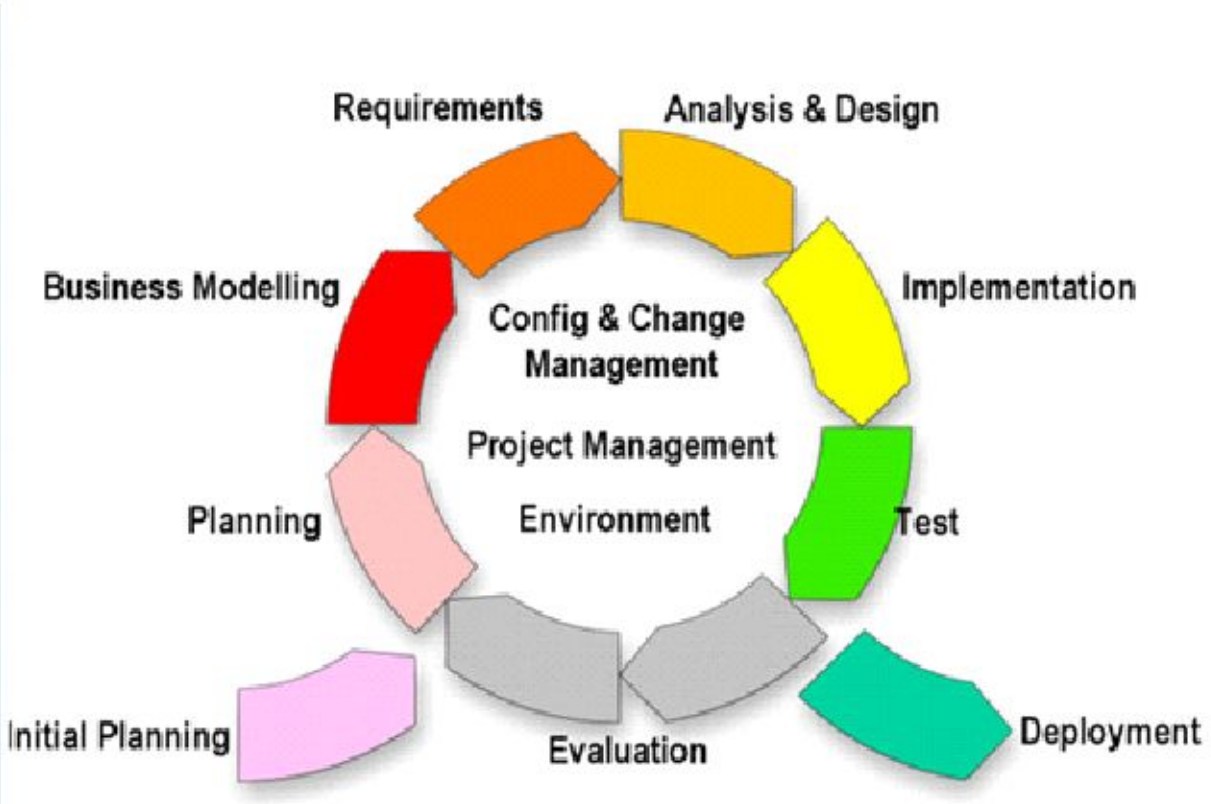
More prescriptive — More adaptive

RUP (120+)	XP (13)	Scrum (12)	Kanban (3)	Do Whatever (0)
• Architectura Reviewer • Business Designer • Business Model Reviewer • Business Process Analyst • Capsule Designer • Change Control Manager • Code Reviewer • Configuration Manager • Course Developer • Database Designer • Deployment Manager • Design Reviewer • Designer • Graphic Artist • Implementer • Integrator • Process Engineer • Project Manager • Project Reviewer • Requirements Reviewer • Requirements Specifier • Software Architect • Stakeholder • System Administrator • System Analyst • Technical Writer • Test Analyst • Test Designer • Test Manager • Tester • Tool Specialist • User-Interface Designer • Architectural analysis • Assess Viability of architectural proof-of-concept • Capsule design • Class design • Construct architectural proof-of-concept • Database design • Describe distribution • Describe the run-time architecture • Design test packages and classes • Develop design guidelines • Develop programming guidelines • Identify design elements • Identify design mechanisms • Incorporate design elements • Business use case realization • Business use-case model • Business vision • Change request • Configuration audit findings • Configuration management plan • Data model • Deployment model • Deployment plan • Design guidelines • Design model • Development case • Development-organization assessment • End-user support materials • Glossary • Implementation model • Installation artifacts • Integration build plan • Issues list • Iteration assessment • Iteration plan • Manual stylguide • Programming guidelines • Quality assurance plan • Reference architecture • Release notes • Requirements attributes • Requirements management plan • Review record • Risk list • Risk management plan • Software architecture document • Software development plan • Software requirements specification • Stakeholder requests • Status assessment • Supplementary business specification • Supplementary specification • Target organization assessment • Test automation architecture • Test cases	• Whole team • Coding standard • TDD • Collective ownership • Customer tests • Pair programming • Refactoring • Planning game • Continuous integration • Simple design • Sustainable pace • Metaphor • Small releases	•ScrumMaster •Product Owner •Team •Product backlog •Sprint backlog •Sprint planning meeting I + II •Daily Scrum •Sprint review •Sprint retrospective •Sprint •Definition of Done	•Visualize the workflow •Limit WIP •Measure and optimize lead time	

Rational Unified Process Methodology (RUP)



Rational Unified Process Methodology (RUP)

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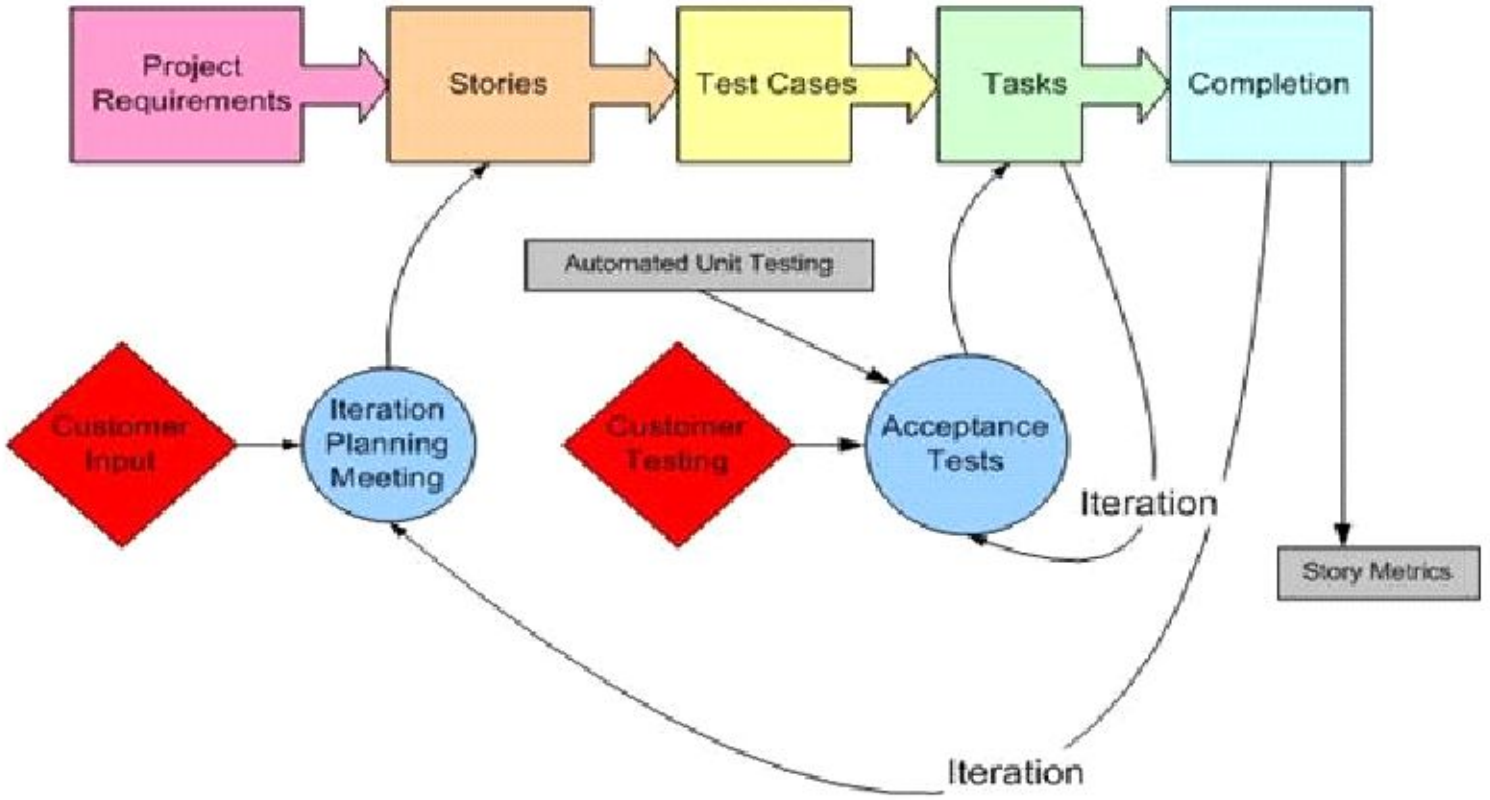
Rational Unified Process Methodology (RUP)

It is chiefly used for crafting software within a very unbalanced atmosphere.

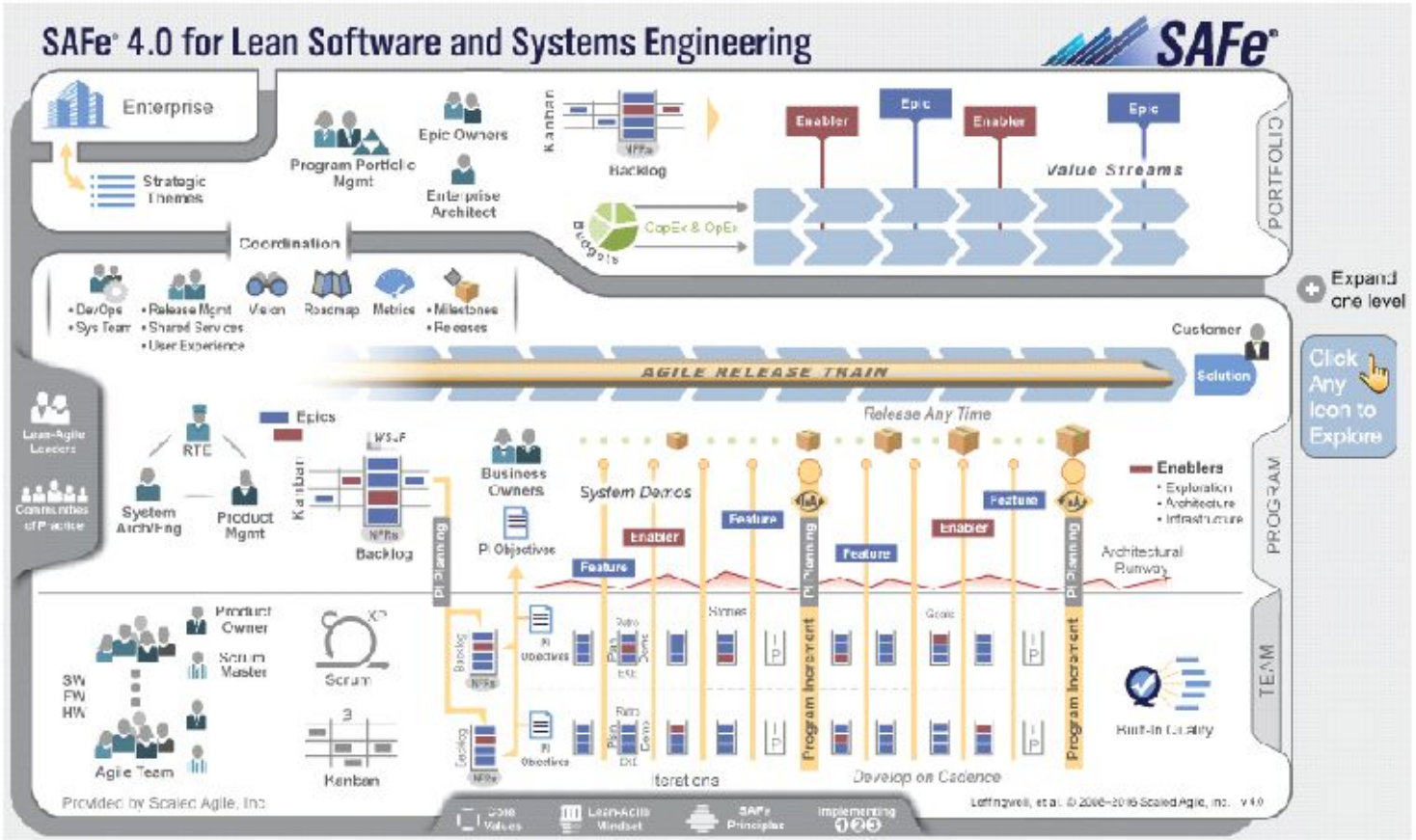
Extreme Programing Methodology (XP)



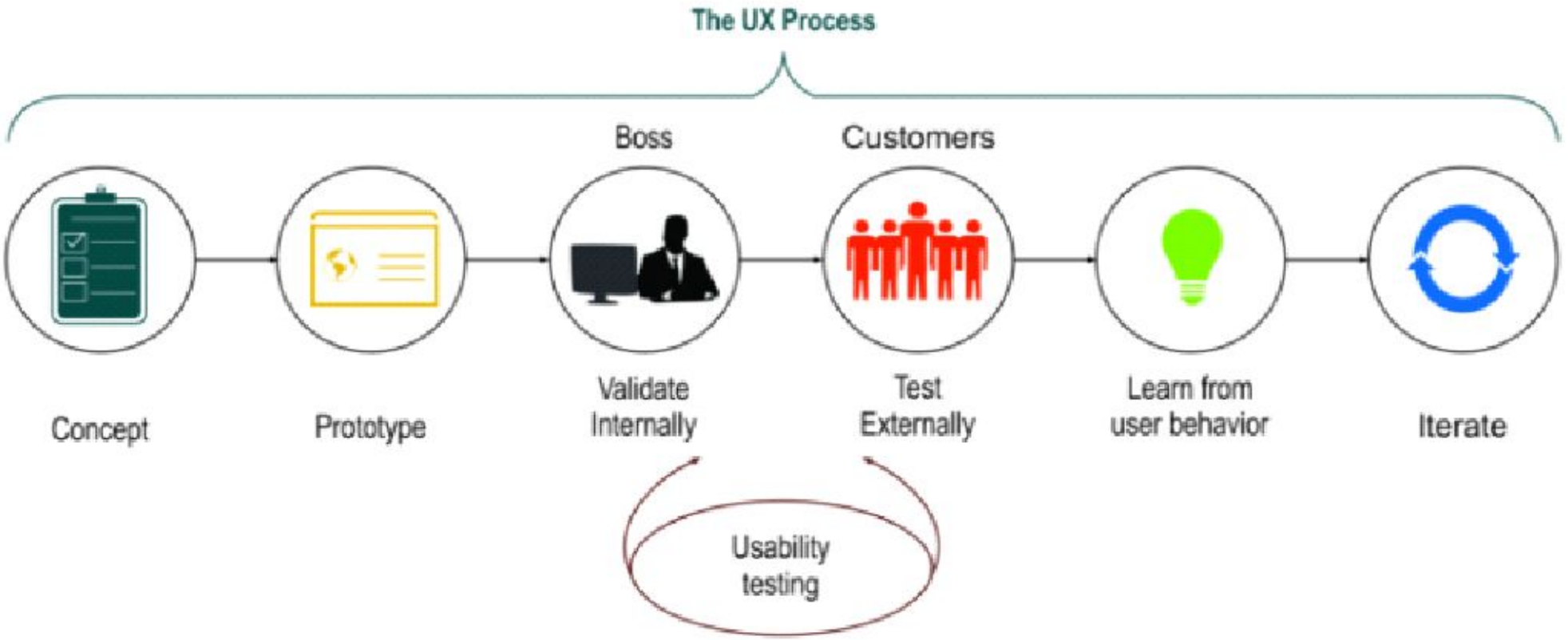
Pros: Extreme Programming Methodology (XP)

http://www.scaledagileframework.com

Scaled Agile Framework (SAFe)



Lean Development Methodology



Lean Development Methodology

Lean Development Methodology

- Kanban

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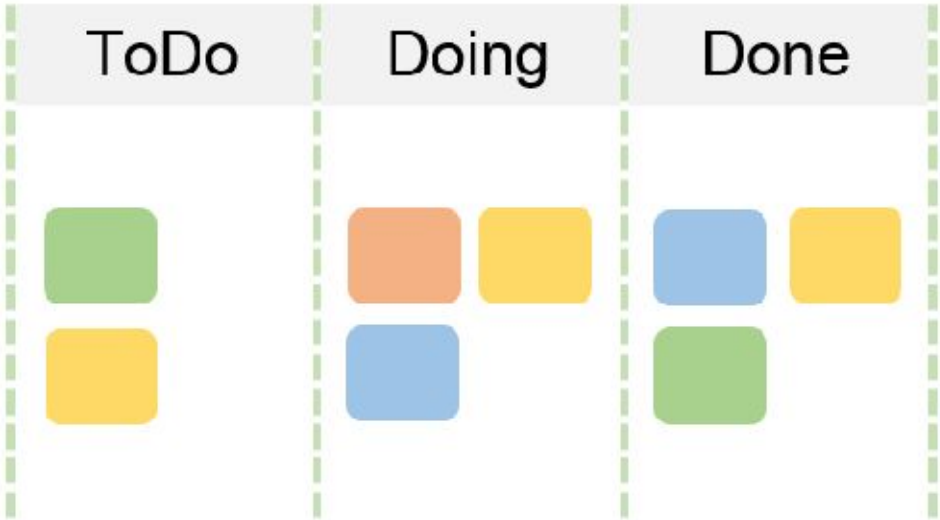

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