

Game Design

4

Game Design Management

Managing Game Design

- Games take a long time to build
 - Many features
 - Sequential features
- Teams are usually large
 - Diverse talents
 - Split into smaller groups

Managing Game Design

PRODUCT MANAGER

#partylikeaproductmanager



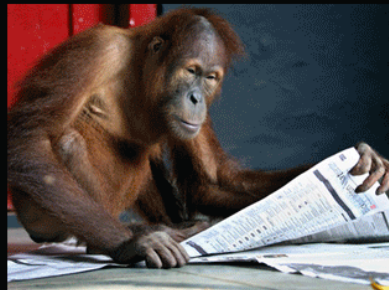
What my friends think I do



What my mom thinks I do



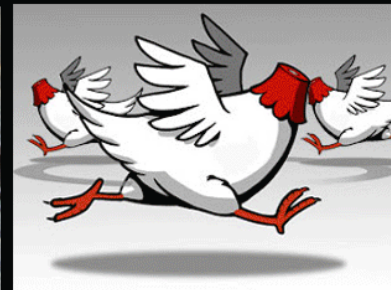
What society thinks I do



What my colleagues think I do



What I think I do



What I actually do

Managing Game Design

- We need a method to our madness
 - What have we done so far?
 - What do we need to do?
 - How do we do it?

Managing Game Design

- What have we done so far?
 - Report on your activity
- What do we need to do?
 - Document your goal
- How do we do it?
 - Choose a methodology

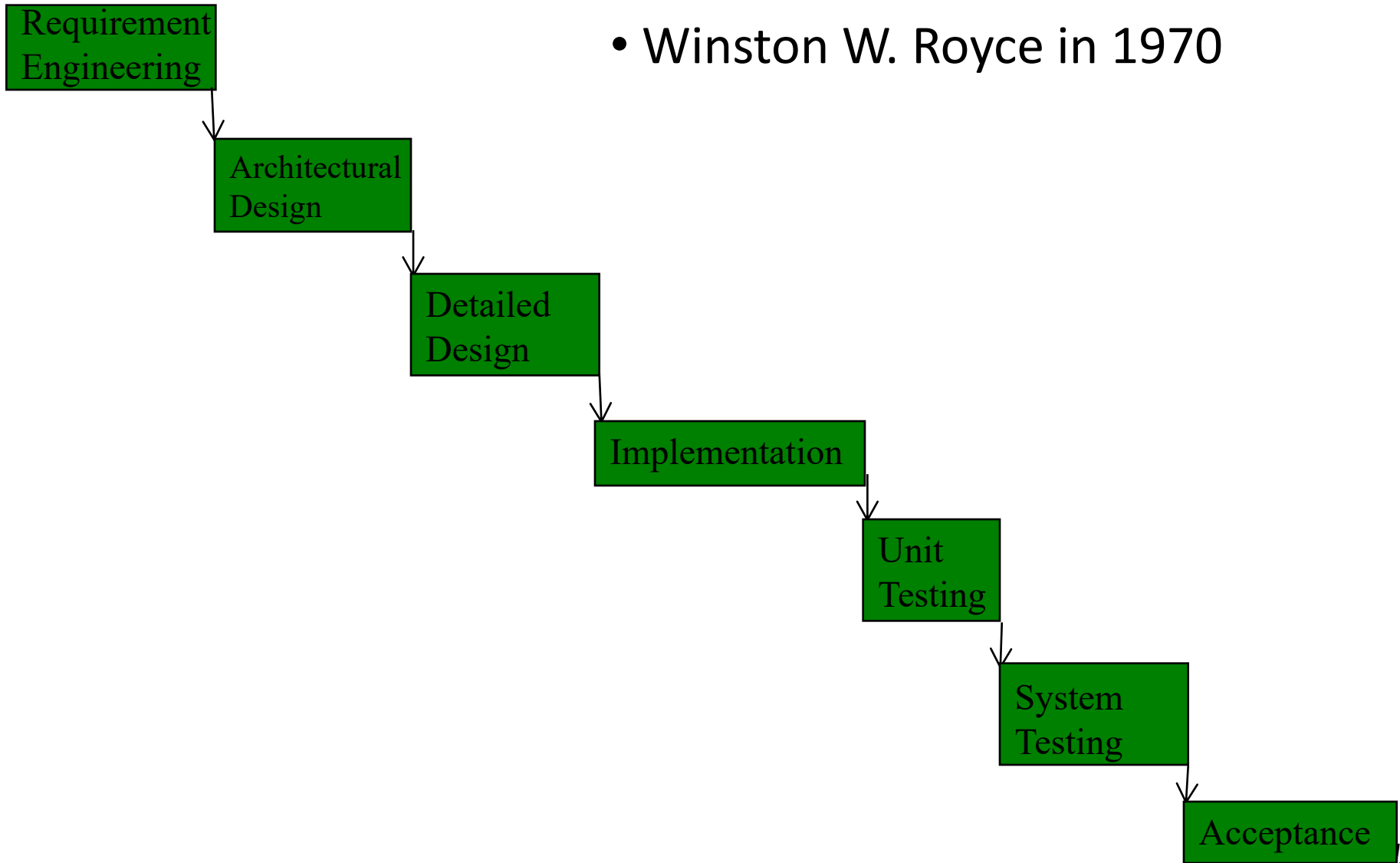
Choose a Methodology

Development models

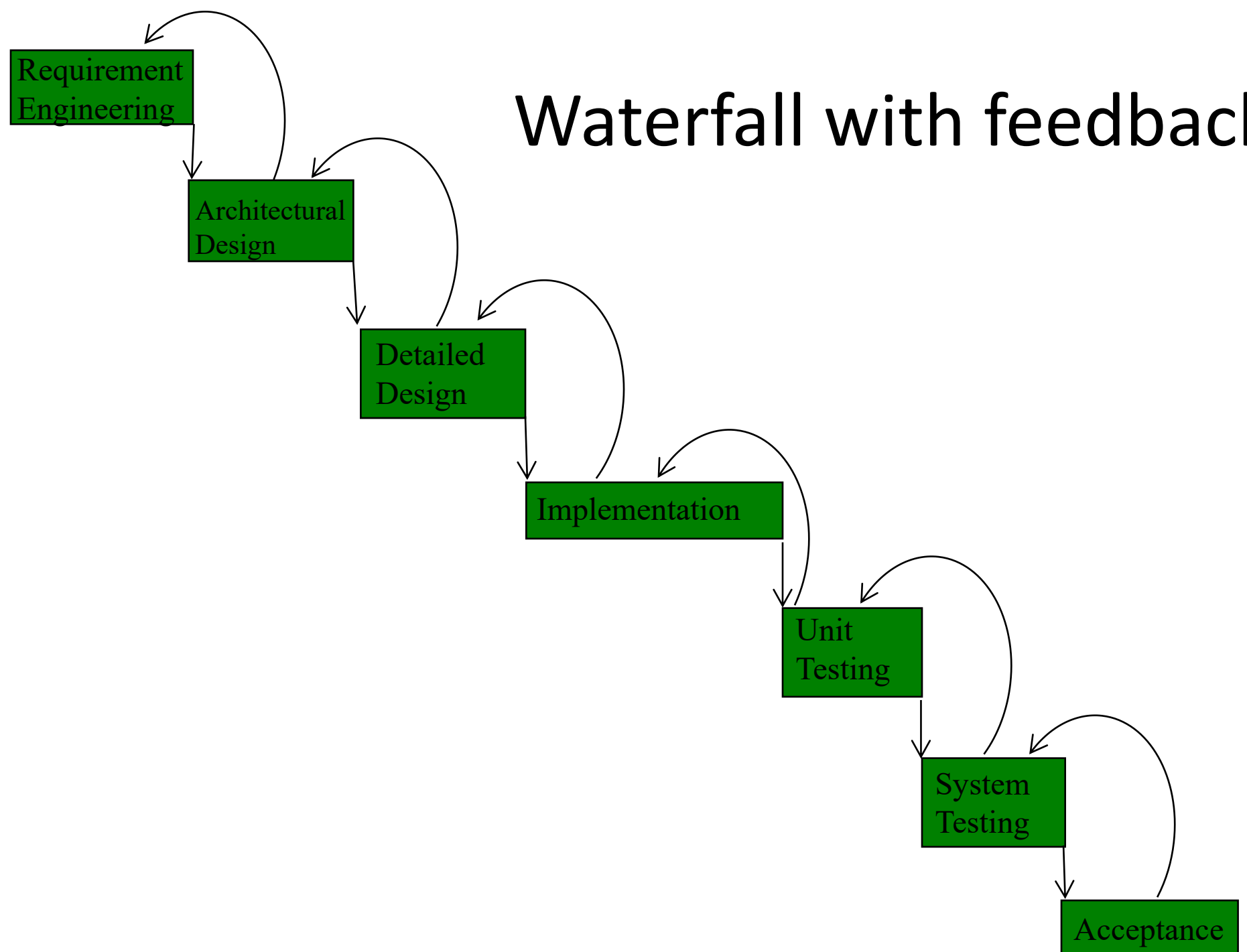
- *How to perform those activities specified by the stages of software development*
- *Examples of development models:*
 - *Ad hoc: manage as best you can*
 - *Waterfall (with feedback)*
 - *Prototyping*
 - *Spiral*
 - *RUP (Rational Unified Process)*
 - *V-Model*
 - *XP (Extreme Programming)*
 - *Agile, Lean, Scrum*
 - *MDD, AMDD*
 - *TDD*

Waterfall

- Winston W. Royce in 1970



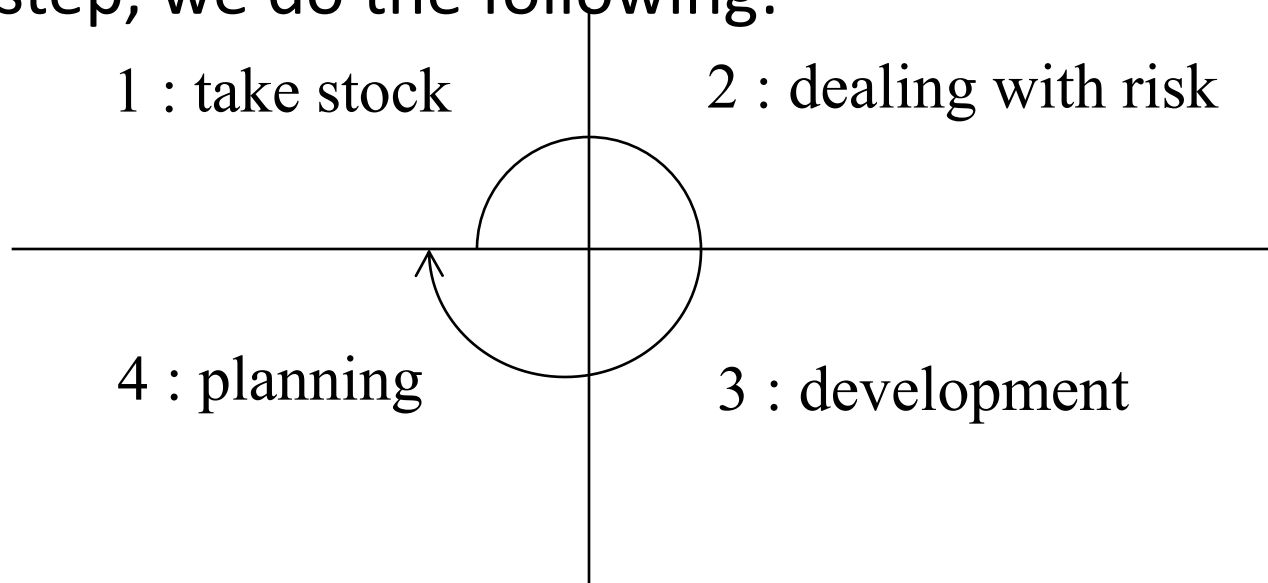
Waterfall with feedback



Spiral

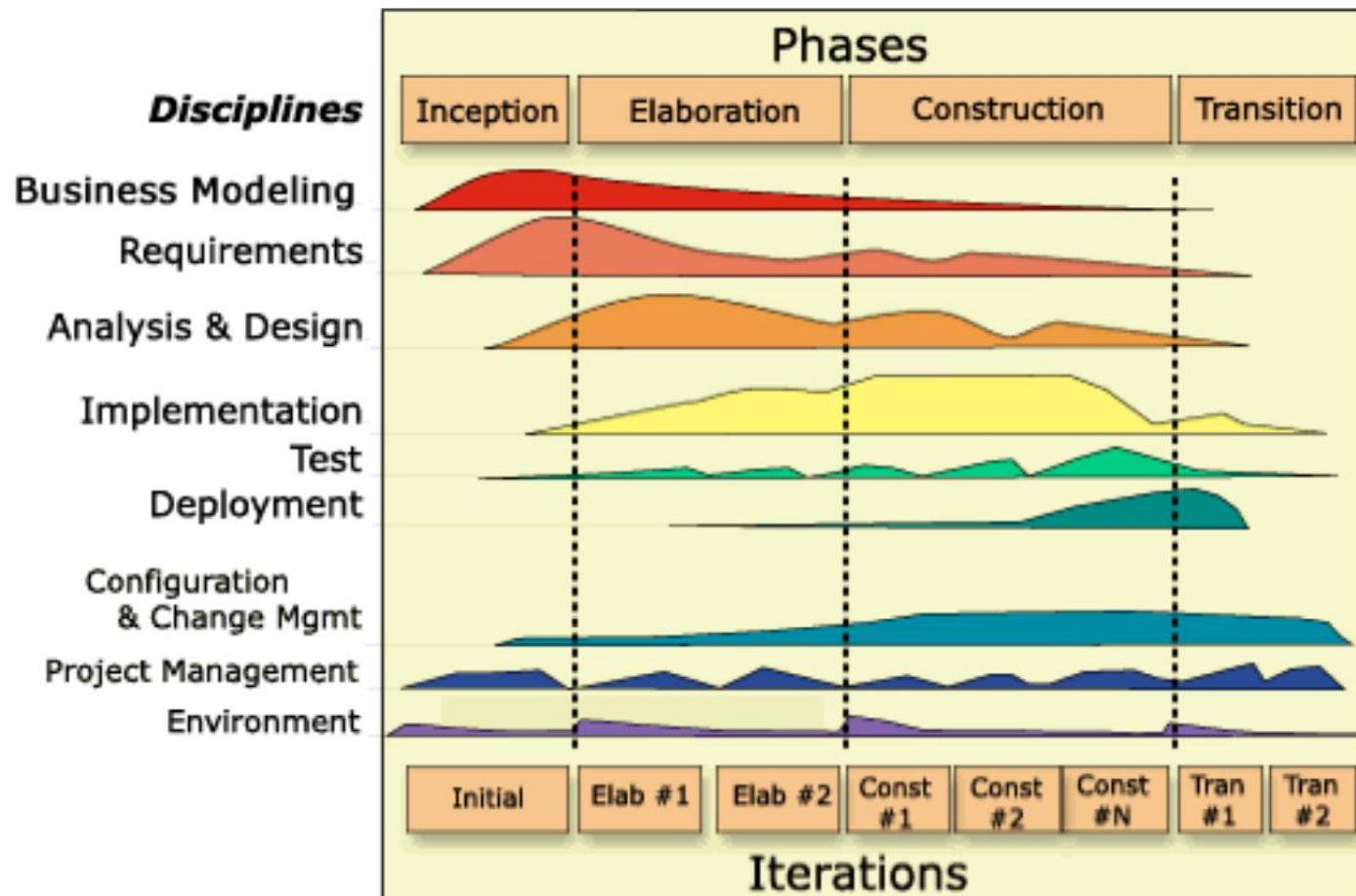
- Feasibility study
- Requirements analysis
- Architectural design
- Implementation

At each step, we do the following:



RUP

- Rational Unified Process - IBM



XP



Agile

Manifesto for Agile Software Development

We are uncovering better ways of developing software by doing it and helping others do it.
Through this work we have come to value:

Individuals and interactions over processes and tools

Working software 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.

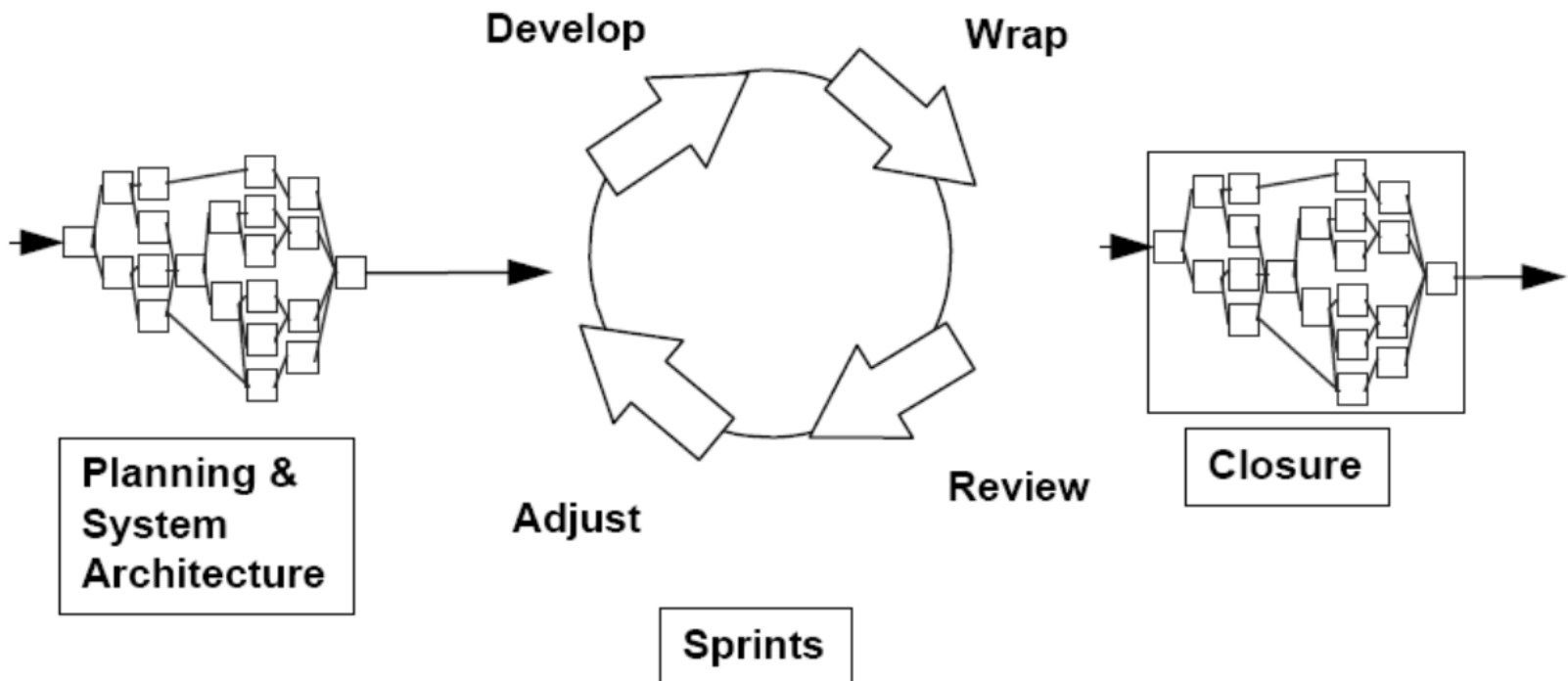
Kent Beck
Mike Beedle
Arie van Bennekum
Alistair Cockburn
Ward Cunningham
Martin Fowler

James Grenning
Jim Highsmith
Andrew Hunt
Ron Jeffries
Jon Kern
Brian Marick

Robert C. Martin
Steve Mellor
Ken Schwaber
Jeff Sutherland
Dave Thomas

Scrum

SCRUM Methodology



Iterative Game Design

- As discussed in Course 3,
 - You now have an idea for a game!
- So, what do you do now?
 - Try it out!
 - OK, but how do you do that?

Iterative Game Design

- For a simple game
 - Go for it, it'll be done quickly and easily
 - You can change design without prohibitive costs



Iterative Game Design

- If the game is complex, however...
 - You can't build a quick prototype
 - You need to iterate
 - You can't know in advance how many loops you need
 - “The Rule of the Loop: The more times you test and improve your design, the better your game will be.” [1]

Iterative Game Design

- The Game Design Loop (informal) [1]
 - 1. Think of an idea.
 - 2. Try it out.
 - 3. Keep changing it and testing it until it seems good enough.

Iterative Game Design

- The Game Design Loop [1]
 - 1. State the problem.
 - 2. Brainstorm some possible solutions.
 - 3. Choose a solution.
 - 4. List the risks of using that solution.
 - 5. Build prototypes to mitigate the risks.
 - 6. Test the prototypes. If they are good enough, stop.
 - 7. State the new problems you are trying to solve, and go to step 2.

What Are We Building?

- In order to build something properly, we need to know what we are building... right?
 - Well, yes... but not all at the beginning and not all at once
- So, we need a living, evolving and collaboratively edited document/ set of documents
 - Game Design Document(ation)

Game Design Documentation

- “A GDD is any method of documentation that gives sufficient specifications for building a game or feature.” [2]
 - Does not have to be a document
 - Multiple documents
 - Wiki
 - Etc.
 - Developers need to access enough to build features properly

Game Design Documentation - Content

- According to [3]
- Project description
 - Summary of the idea of the game
 - Should clarify the genre and type of game
 - A few paragraphs long
- Characters
 - Describe PCs and NPCs
 - Add artwork if necessary

Game Design Documentation - Content

- Story
 - Describe the main events of the game
 - “An important part of the art of storytelling is to create characters that the guests can empathize with easily, for the more the guests can empathize with the characters, the more interesting the events become that happen to those characters.”
[1]

Game Design Documentation - Content

- Theme
 - What is the game about; comedy, drama, etc.
- Story progression
 - How does the story unfold

Game Design Documentation - Content

- Gameplay
 - Most important bit of the documentation
 - Should be split up in sections
 - Goals
 - What does the player need to achieve in the game?
 - Skills
 - What are the player skills required?
 - Mechanics
 - How does the player interact with the game world?
 - Add as many details as possible

Game Design Documentation - Content

- Gameplay
 - Items and Buffs
 - What can be added to the game to make the core experience more fun/ engaging?
 - Progression
 - Game difficulty curve and player improvement curve
 - Losing

Game Design Documentation - Content

- Art Style
- Music and Sound
- Technical matters
 - Platform, input controls, etc.
- Marketing
 - Demographics
 - Platform
 - Localization

Game Design Documentation - Content

- Other ideas
- Closing comments

What Have We Done so Far?

- For every iteration, each member of the team must provide written documentation of their activities
 - What features were implemented
 - What the test results were
 - Etc.

Bibliography

- [1] Schell, J. The Art of Game Design, 3rd edition, 2019
- [2] Hiwiler, Z., Players Making Decisions: Game Design Essentials and the Art of Understanding Your Players, New Riders, 2016
- [3]https://www.gamasutra.com/blogs/LeandroGonzalez/20160726/277928/How_to_Write_a_Game_Design_Document.php