

ACTING LIKE A DESIGNER

Topics

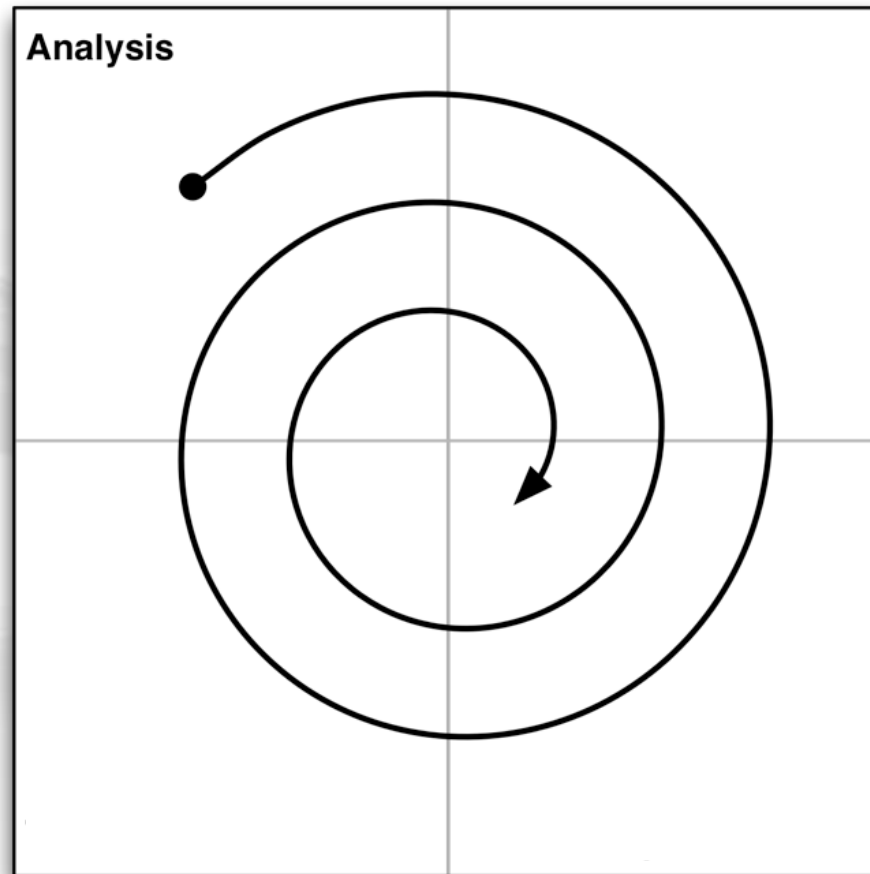
- **The Iterative Process of Design**
 - Analysis
 - Design
 - Implementation
 - Testing
 - Iteration!
- **Brainstorming and Ideation**
- **Changing Your Mind**
- **Scoping**

The Iterative Process of Design

**"Game design is 1% inspiration
and 99% iteration"**

– Chris Swain

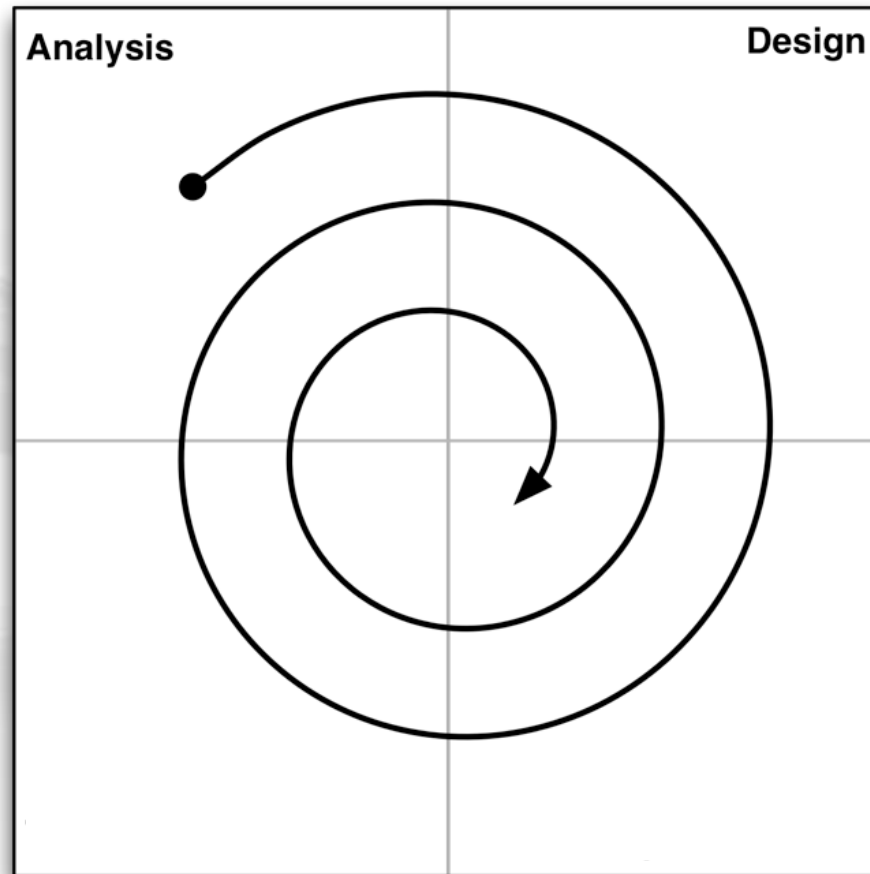
The Iterative Process of Design



■ Analysis

- Understand where you are and what you want to accomplish
- Think about your available resources and time

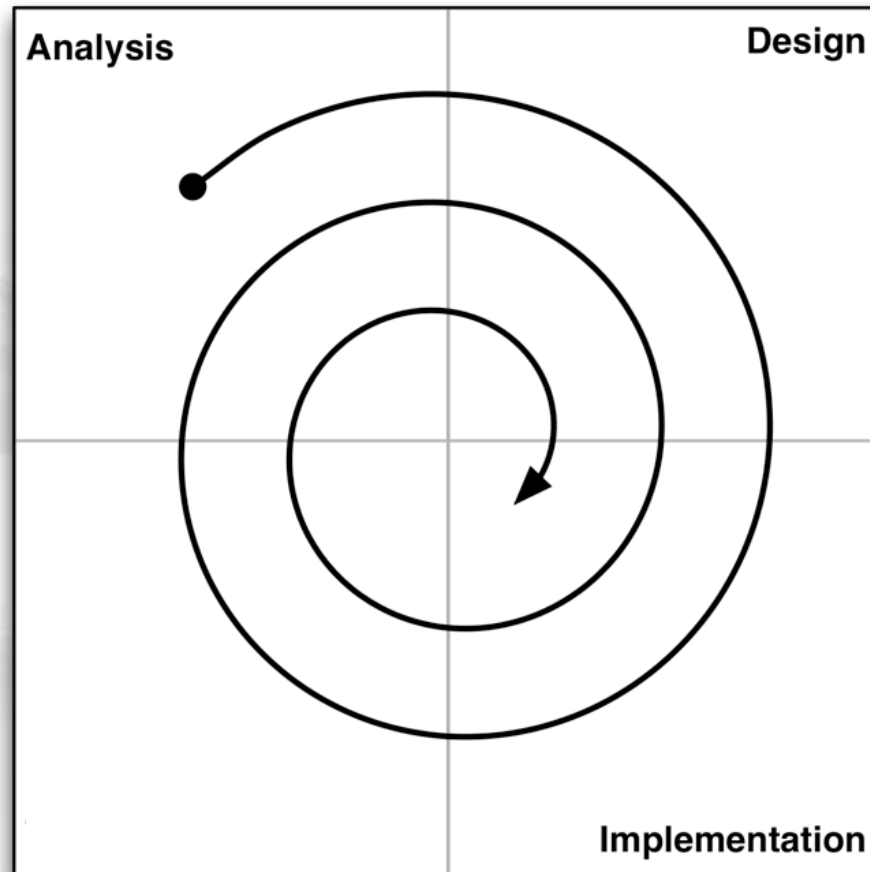
The Iterative Process of Design



■ Design

- Create a design that solves the problem or fits the opportunity
- Starts with brainstorming. Ends with a plan for implementation.

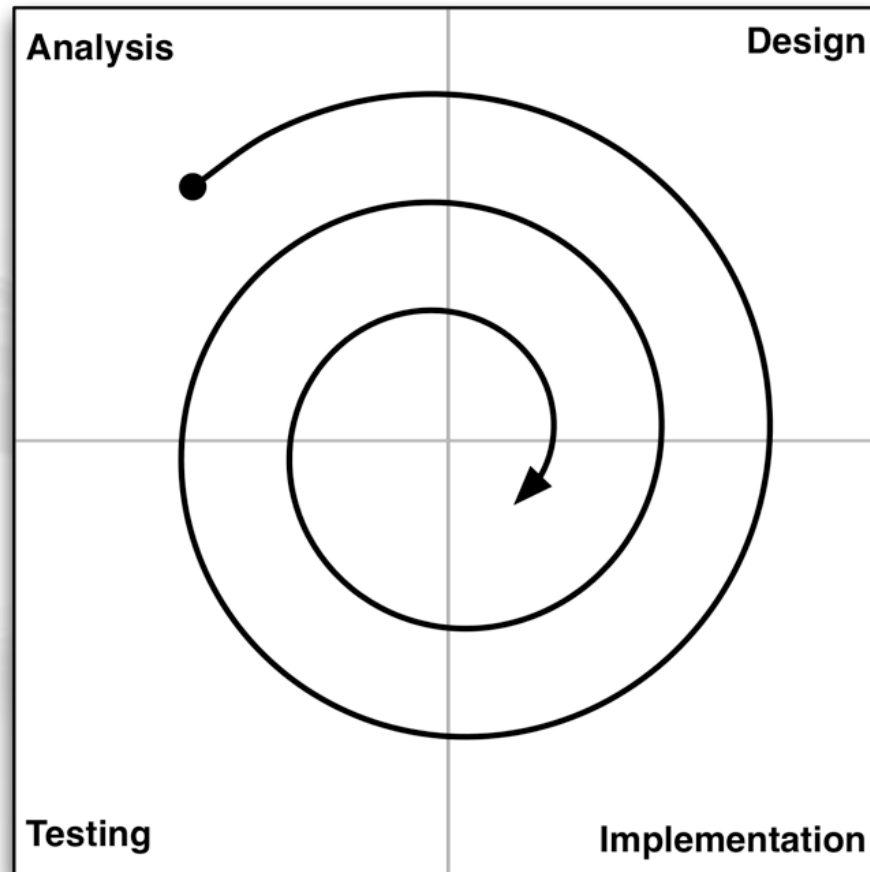
The Iterative Process of Design



■ Implementation

- Execute on your plan. Make a working game prototype.
- What is the shortest path to something playable / testable?

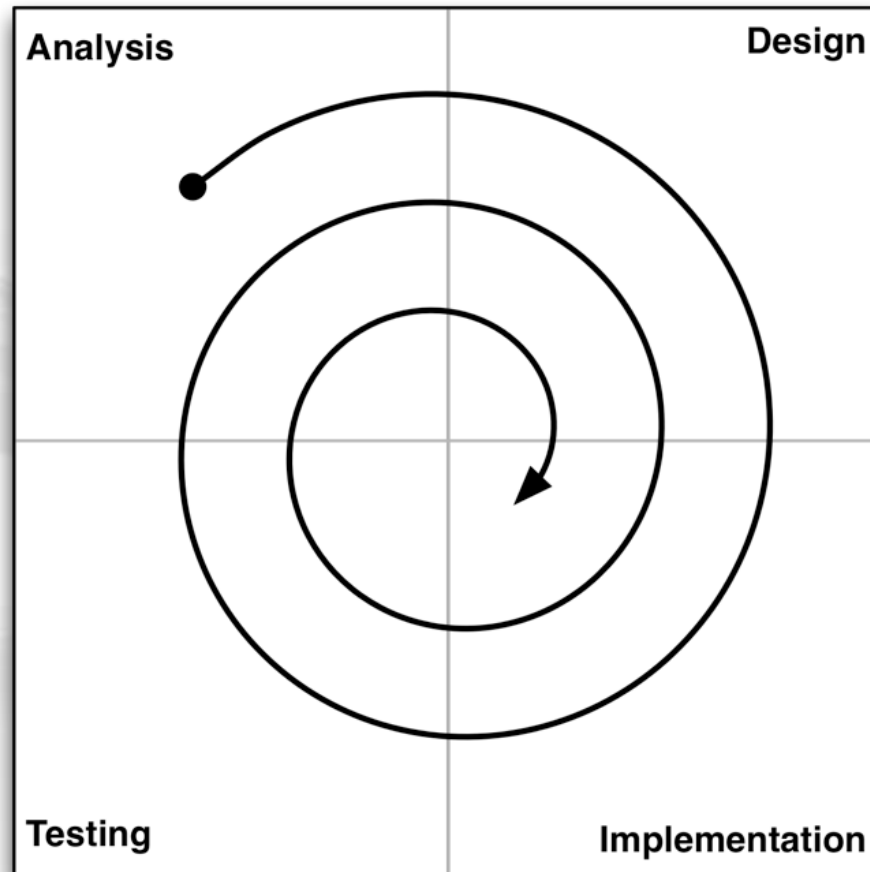
The Iterative Process of Design



■ Testing

- Have people actually play your game and get reactions!
- Testing is critically important to this process!

The Iterative Process of Design



■ Iteration!

- Analyze the results of your game testing
- Modify your design, implement, test again!

The Iterative Process: Testing

■ Take good notes!

- Where did the comment happen?
- What did the playtester actually say?
- What do you think she meant?
- How severe is the issue?
 - Not all issues can be fixed
- What is your proposed solution?

Where	Feedback	Underlying Issue	Severity	Proposed Solution
Boss1	"I didn't know what to do after the first boss." "Where do I go now?" "Ok, now what?"	Players are not sure what the next step is after the first boss fight. The play has been really directed up to this point, but now they don't know what to do.	High	The mentor character could return after the boss is defeated and give the player her 2nd mission.

The Iterative Process: Iteration

- **After testing, analyze the feedback and iterate!**
- **Most games will go through this process many times**
- **Board game projects at USC were four weeks long**
 - **Week 1: Students are assigned to teams of four people**
 - **Week 2: Students arrive in lab with a playable game**
 - The game is tested by various players for two hours
 - **Week 3: Students bring a 2nd iteration of the game to lab**
 - **Week 4: Students bring a 3rd iteration of the game to lab**
 - Then students had a weekend to finalize the game and turn it in
- **Even for a student board game project, we iterated on the game four times before it was turned in**
 - **Digital games take much more iteration!**

Brainstorming and Ideation

"The best way to have a good idea is to have a lot of ideas and throw out all the bad ones."

– Linus Pauling

Pauling is the only person to have won both the Nobel Prize in Chemistry and the Nobel Peace Prize as an individual.

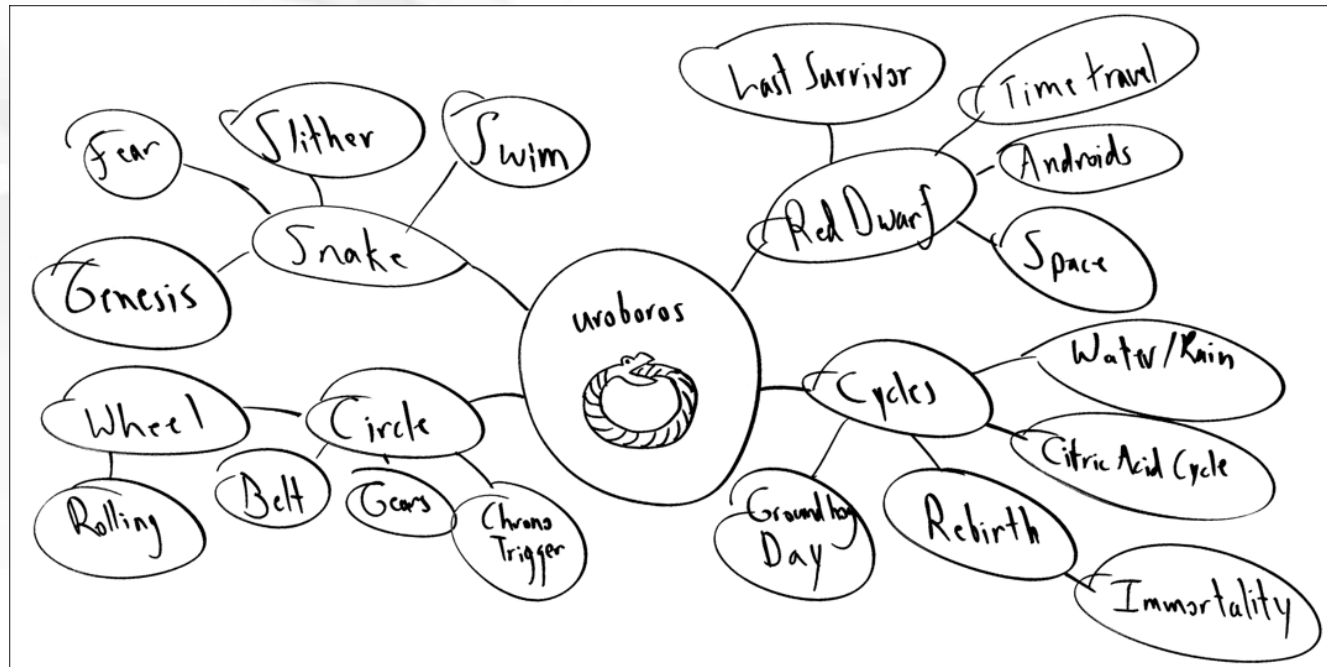
Brainstorming and Ideation

- **This brainstorming process is based on intersectional innovation**
- **It has worked well in both large and small groups**
- **Five Steps:**
 - **Step 1: Expansion**
 - **Step 2: Collection**
 - **Step 3: Collision**
 - **Step 4: Rating**
 - **Step 5: Discussion**

Brainstorming and Ideation

■ Step 1: Expansion

- Start with the core theme of your brainstorm in the middle of a whiteboard
- Create as many ideas as possible around it
- Don't censor at all in this phase



Brainstorming and Ideation

■ Step 2: Collection

- Write down each node of the expansion phase on a 3x5 note card or a Post-it note
- These are "idea cards"

Fear	Slither	Swim	Genesis	Last Survivor	Time Travel
Androids	Space	Water/Rain	Citric Acid Cycle	Immortality	Groundhog Day
Chrono Trigger	Gears	Belt	Rolling	Snake	Red Dwarf
Cycles	Rebirth	Circle	Wheel		

Brainstorming and Ideation

■ Step 3: Collision

- Shuffle all the idea cards together
- Deal two to each person in the group
- Each person takes the two idea cards up to the whitboard and reveals them to the group
- The group collectively comes up with three game ideas inspired by the collision of the two cards
- Again, don't censor too much in this step

Brainstorming and Ideation

■ Step 3: Collision

– Examples:

Groundhog
Day

Gears

1. Gardener building crazy contraptions to trap a groundhog that's been eating her garden.
2. Gears of War-style shooter where soldiers must relive a battle until they get it perfect (like in the movie Groundhog Day).
3. A time-management game (e.g. Diner Dash) where the player must manage the weather so that each season accomplishes its goals and transitions to the next on time.

Belt

Snake

1. Classic game of Snake (snake eats apples and grows but must avoid running into itself), but on a moving conveyor belt.
2. A snake must move across a room camouflaged as people's belts by jumping from waist to waist.
3. A snake hypnotizes a person but can only control them to do very simple things. As the person's belt, the snake must swing and platform them through a dangerous level to escape the zoo.

Brainstorming and Ideation

■ Step 4: Rating

- Each person should pick the two ideas from Step 3 that she feels have the most merit and write them on the whiteboard
- If someone has already written one of your top ideas, just write your 3rd choice
- Wait for everyone to finish doing this
- Then, each person in the group should simultaneously put a mark on the board next to the three ideas that they like the most
 - Some ideas will have many marks next to them, while others will have only a few

Brainstorming and Ideation

■ Step 5: Discussion

- Given the information from Step 4, start discussing ideas
- Start with the most popular ideas, but don't be afraid to mix in some of the other ideas as well
- Combine the best ideas into something really great!

头脑风暴课堂练习

■ 4人一组 (5min)

- **5个阶段：拓展，收集，碰撞，评分，讨论**
- **1.白板画联想图； 2.卡片写关键词； 3：每人发2张卡片，大家一起为每一组卡片想3个游戏点子； 4.每人选出步骤3中最好的2个点子； 5.修改并整合评分最高的3个点子**
- **发言分享（10min）**

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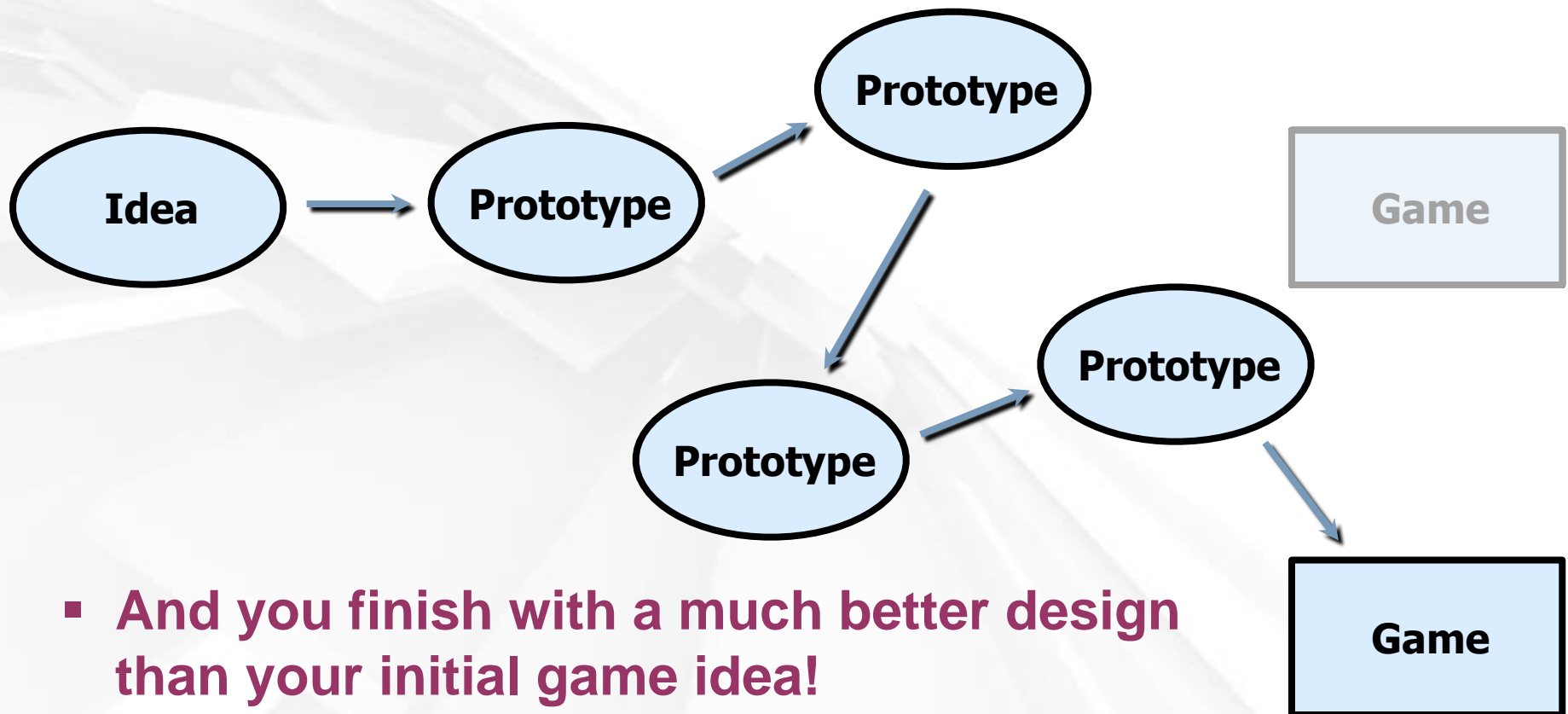
Changing Your Mind

- No one every goes directly from idea to game



Changing Your Mind

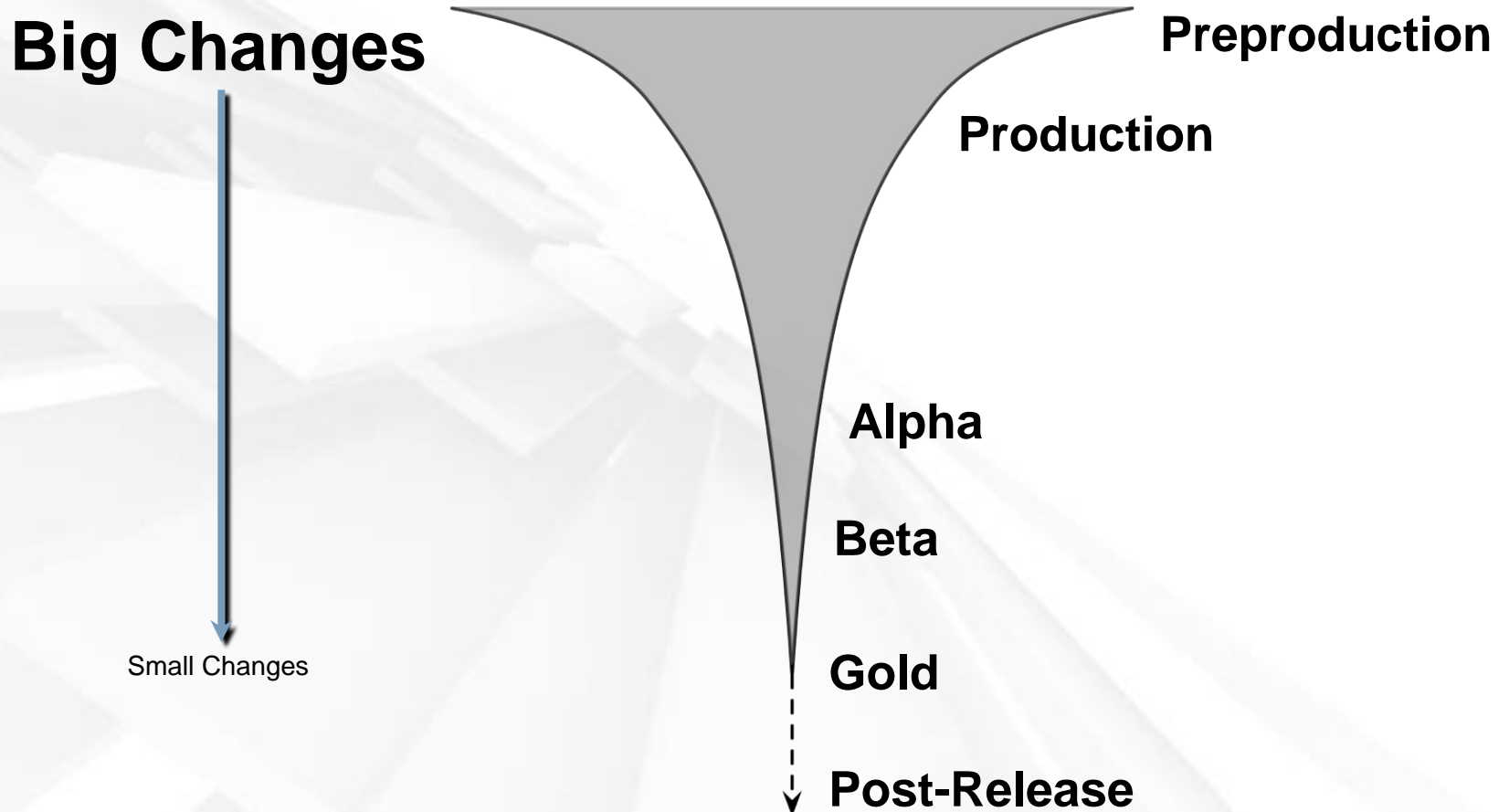
- The real process involves a lot of iteration and changing your mind



- And you finish with a much better design than your initial game idea!

Changing Your Mind

- However, as the project moves through development phases, you're more locked in to decisions



Professional Development Phases

■ Preproduction

- Small team (4-16 people)
- Lots of prototyping, lots of changes to ideas
- Lots of playtesting by a trusted audience
- The topic of most of this book
- Ends in a high-quality "vertical slice" of the game

■ Production

- Massive team growth (up to 100-300 people)
- Systems design needs to be locked down very quickly
- Changes cost a lot more, so there are fewer changes
- Expands the vertical slice quality to the rest of the game
- Playtesting continues (somewhat expanded audience)

Professional Development Phases

■ Alpha

- **Functionality and game mechanics are 100% locked**
- **No more changes to the systems design of the game**
- **Only make changes in response to specific problems found through testing**
- **Extensive QA (Quality Assurance) testing in this phase by professional QA teams**
- **Some bugs (errors in programming) remain, but all should have been identified**
- **Alpha ends when you believe that all high-level bugs have been resolved**

Professional Development Phases

■ Beta

- The game is effectively done
- Only minor bugs remain
- Purpose of this phase is to find and fix any remaining bugs
- No design changes, just fixes
- Lots of testing!

■ Gold

- The game is ship-ready

■ Post-Release

- In the Internet age, games can have a post-release phase
- A little bug-fixing for very rare bugs (encountered by players)
- DLC (DownLoadable Content) production

Scoping

**Overscoping is the #1 killer
of game projects.**

Scoping

- **Scoping is the process of limiting your design to what can be reasonably accomplished with the time and resources you have available**
- **Most AAA professional games have**
 - **Teams of hundreds of people**
 - **Budgets of millions of dollars**
 - **A two-year development timeline**
- **Think realistically about what you have available when making your games**
- **Look to independent game festivals like IndieCade for inspiration**
 - **Even some indie games have large teams and budgets**

Chapter 7 – Summary

- The Iterative Process of Design is *the* key to good design
- Great innovations can come from combining disparate ideas
 - A good brainstorming process can help you do this
- Prototypes exist to help you hone your designs
- But you can only make major design changes early in the game development process
- Carefully consider the scope of your game design!
- Next Chapter:
 - We explore several goals that you can have as a designer