# ACTING LIKE A DESIGNER

# Topics

# Topics

- **The Iterative Process of Design**

# Topics

- **The Iterative Process of Design**
  - **Analysis**

# Topics

- **The Iterative Process of Design**
    - **Analysis**
    - **Design**

# Topics

- **The Iterative Process of Design**
    - **Analysis**
    - **Design**
    - **Implementation**

# Topics

- **The Iterative Process of Design**
  - **Analysis**
  - **Design**
  - **Implementation**
  - **Testing**

# Topics

- **The Iterative Process of Design**
  - **Analysis**
  - **Design**
  - **Implementation**
  - **Testing**
  - **Iteration!**

# Topics

- **The Iterative Process of Design**
    - **Analysis**
    - **Design**
    - **Implementation**
    - **Testing**
    - **Iteration!**

- **Innovation**

# Topics

- **The Iterative Process of Design**
  - **Analysis**
  - **Design**
  - **Implementation**
  - **Testing**
  - **Iteration!**
- **Innovation**
- **Brainstorming and Ideation**

# Topics

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

# Topics

- **The Iterative Process of Design**
  - **Analysis**
  - **Design**
  - **Implementation**
  - **Testing**
  - **Iteration!**
- **Innovation**
- **Brainstorming and Ideation**
- **Changing Your Mind**
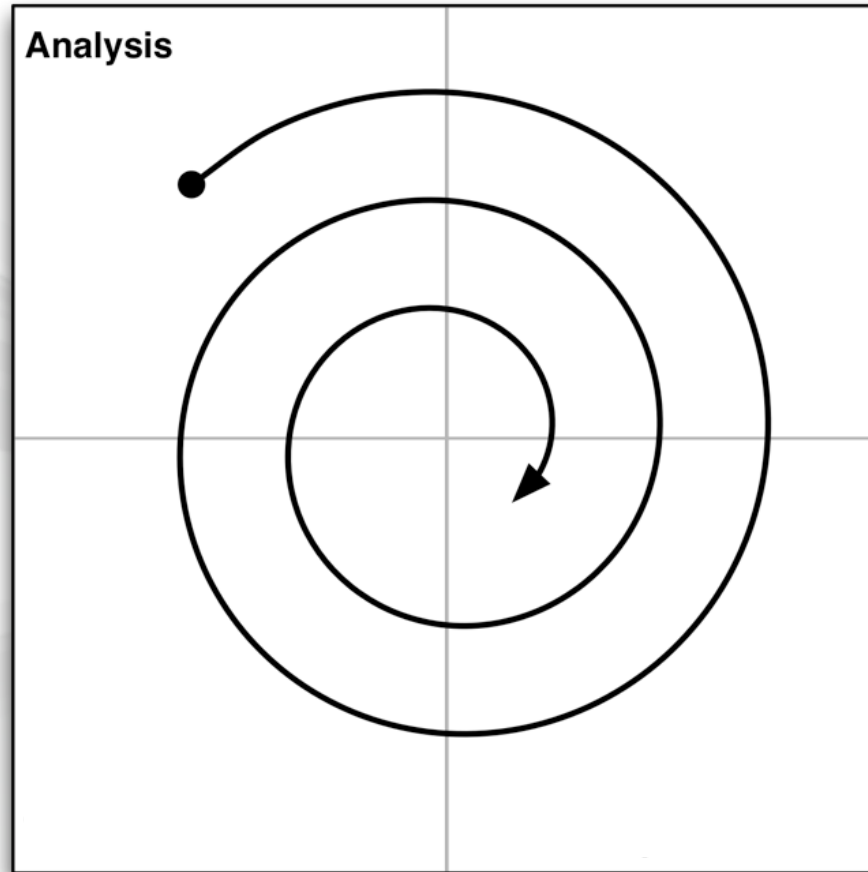- **Professional Development Phases**

# Topics

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

# The Iterative Process of Design

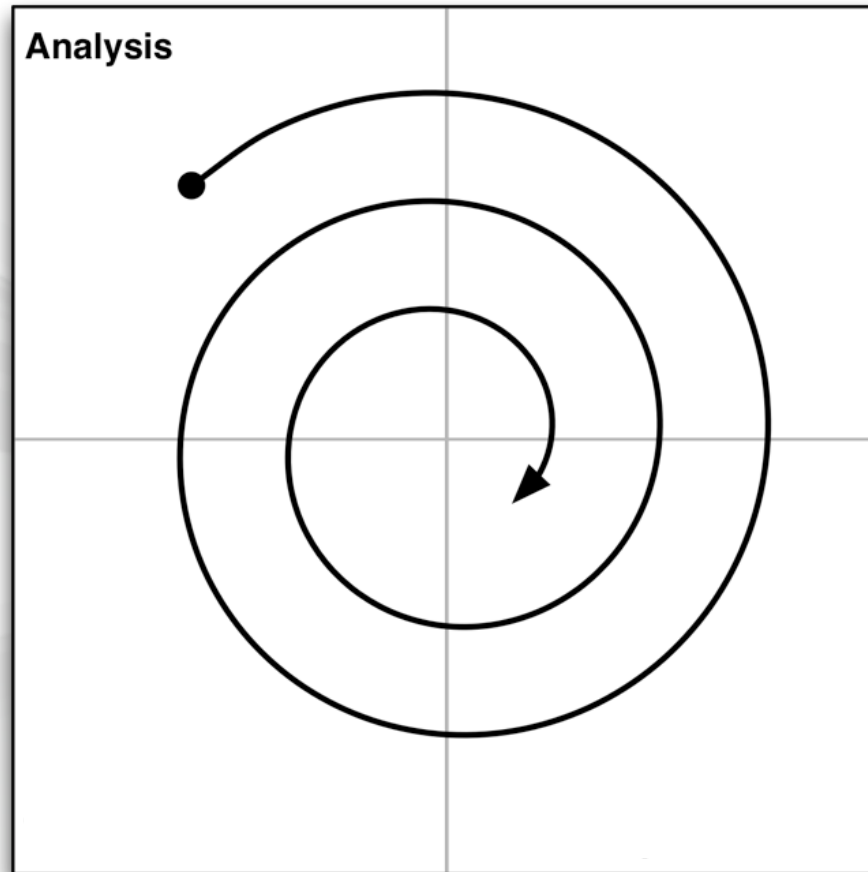**"Game design is 1% inspiration and 99% iteration"**

**– Chris Swain**

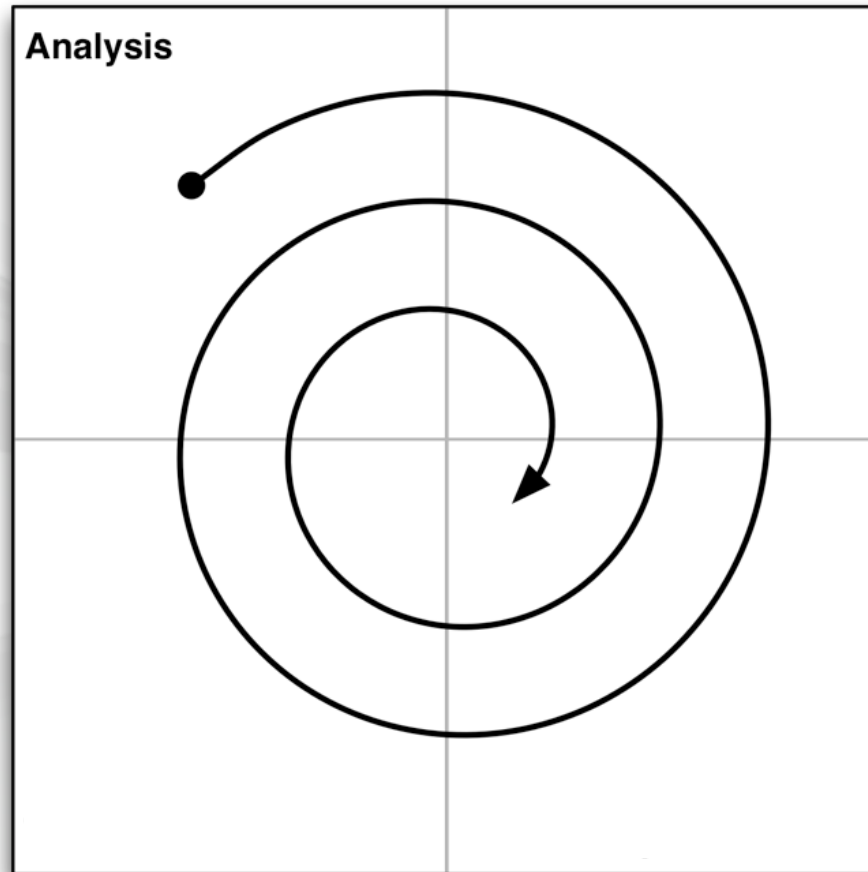# The Iterative Process of Design



- **Analysis**

# The Iterative Process of Design



Analysis

- **Analysis**
  - **Understand where you are and what you want to accomplish**
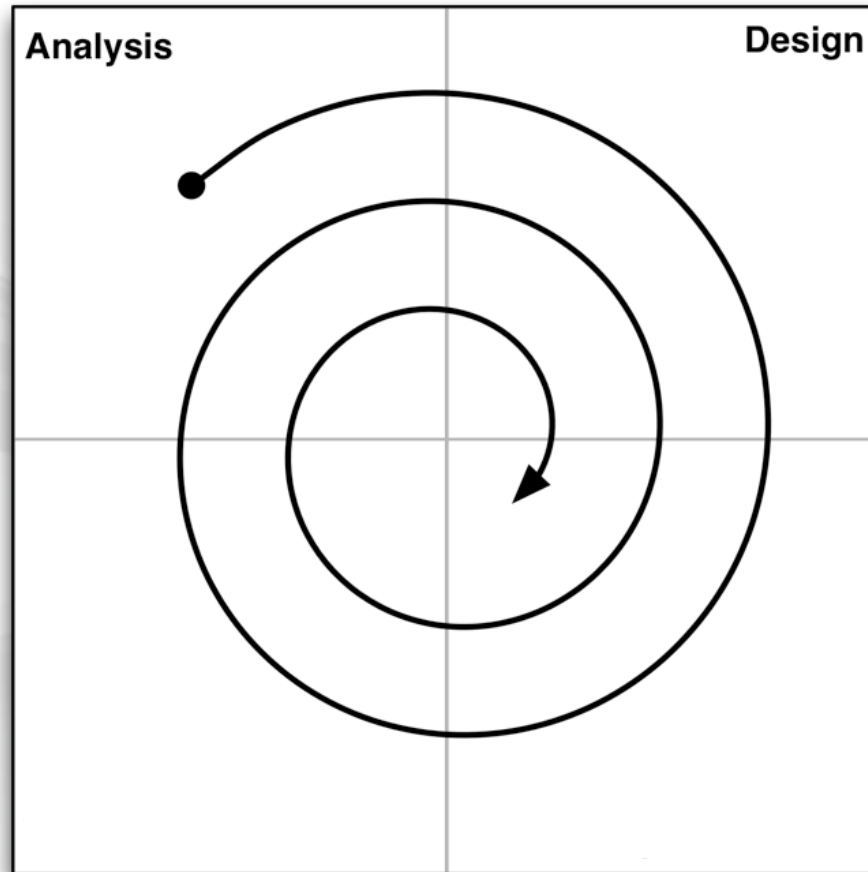
# The Iterative Process of Design
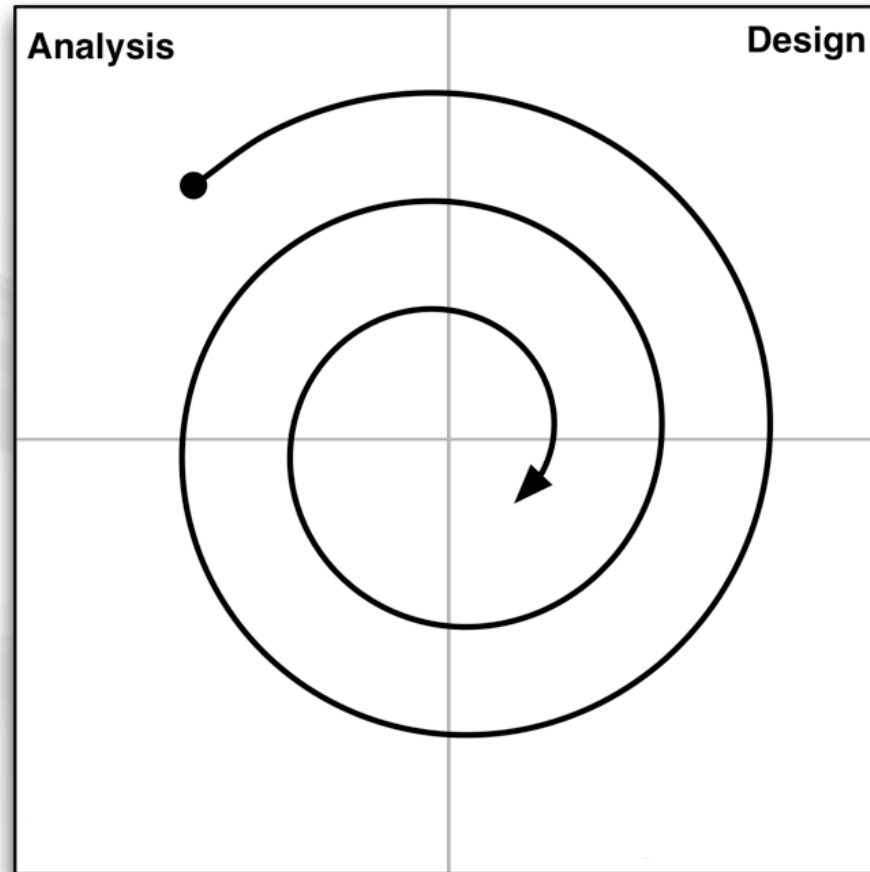


- **Analysis**
  - Understand where you are and what you want to accomplish
  - Think about your available resources and time

# The Iterative Process of Design



- **Design**

# The Iterative Process of Design



- **Design**
  - – Create a design that solves the problem or fits the opportunity

# The Iterative Process of Design
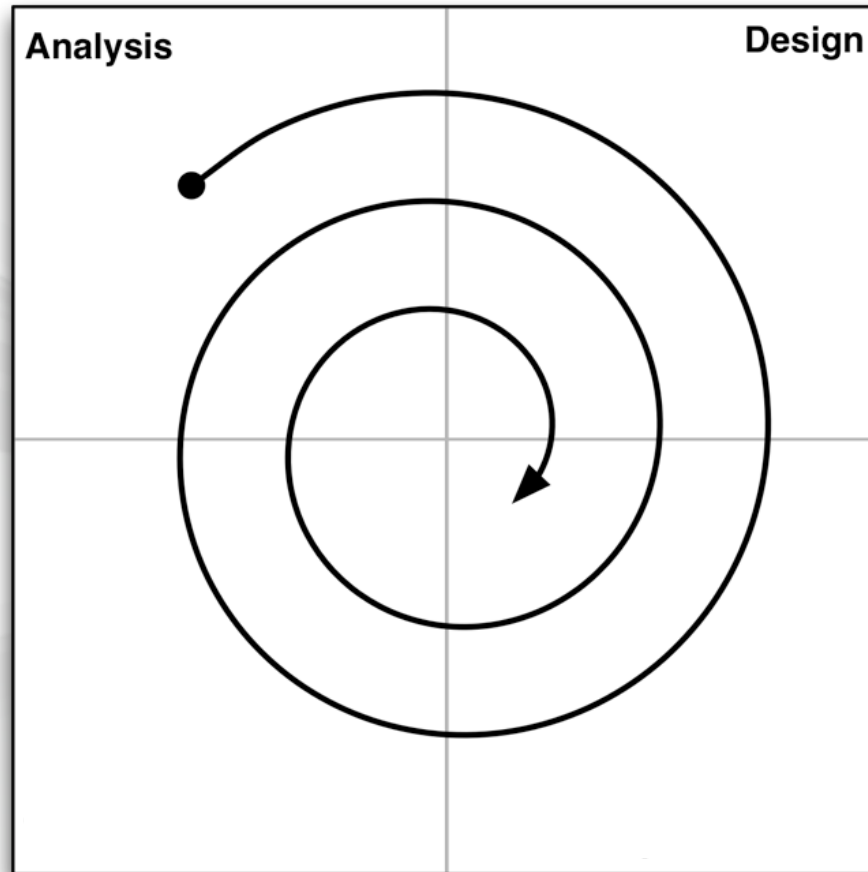


- **Design**
  - Create a design that solves the problem or fits the opportunity
  - Starts with brainstorming. Ends with a plan for implementation.

# The Iterative Process of Design
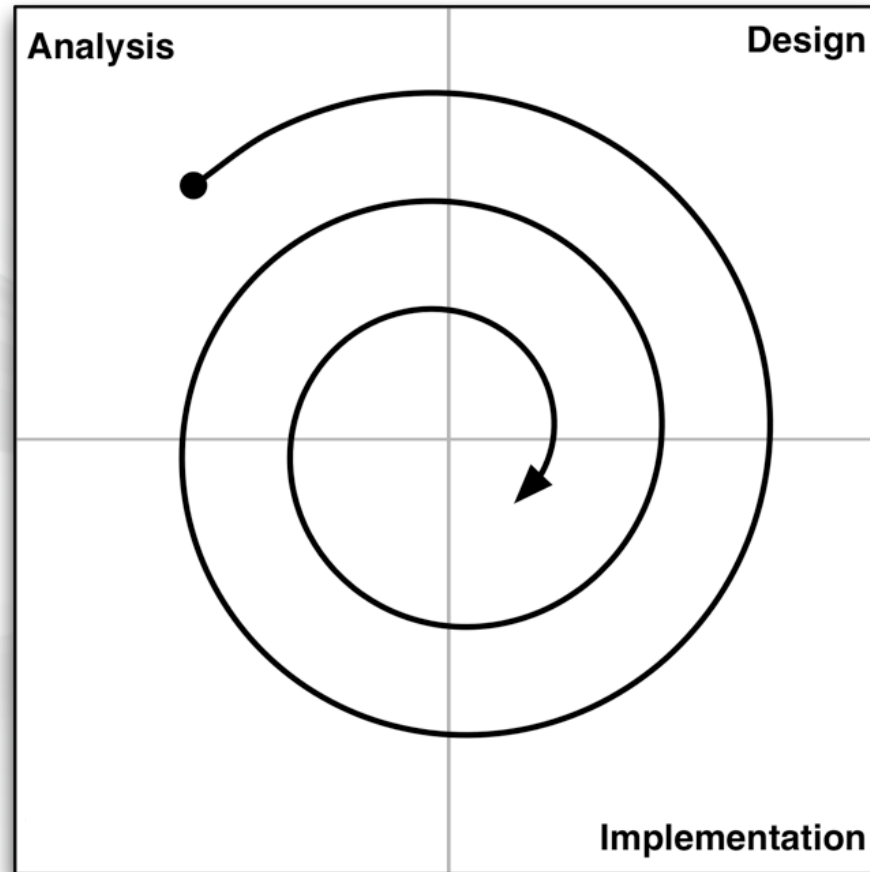


- **Implementation**

# The Iterative Process of Design
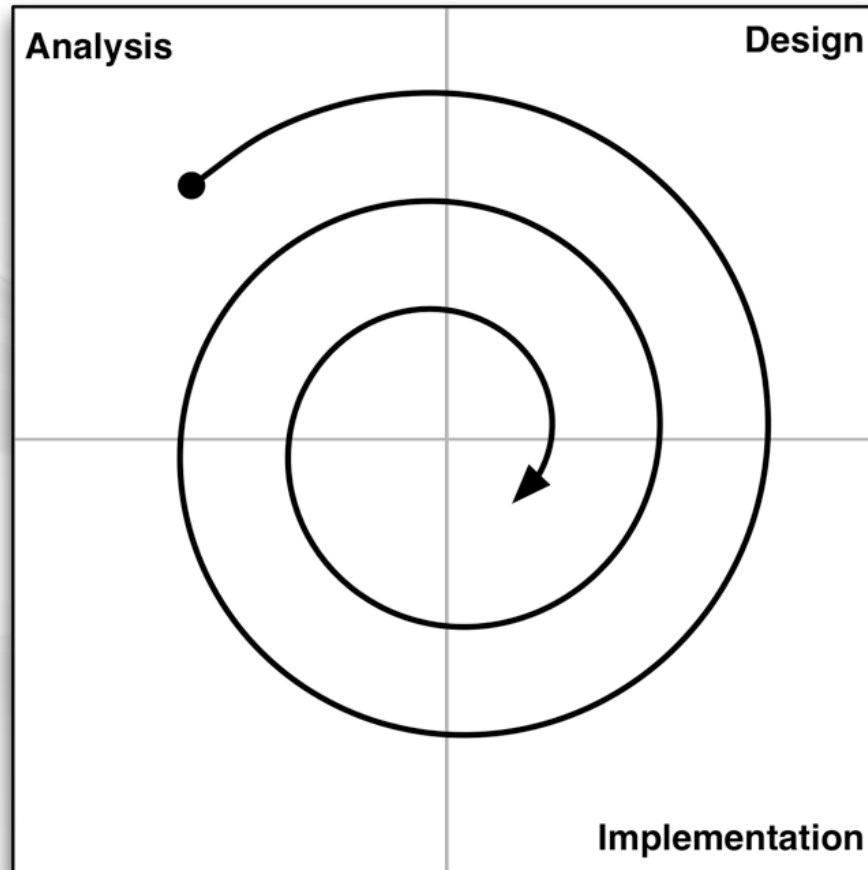


- **Implementation**
  - Execute on your plan. Make a working game prototype.

# The Iterative Process of Design
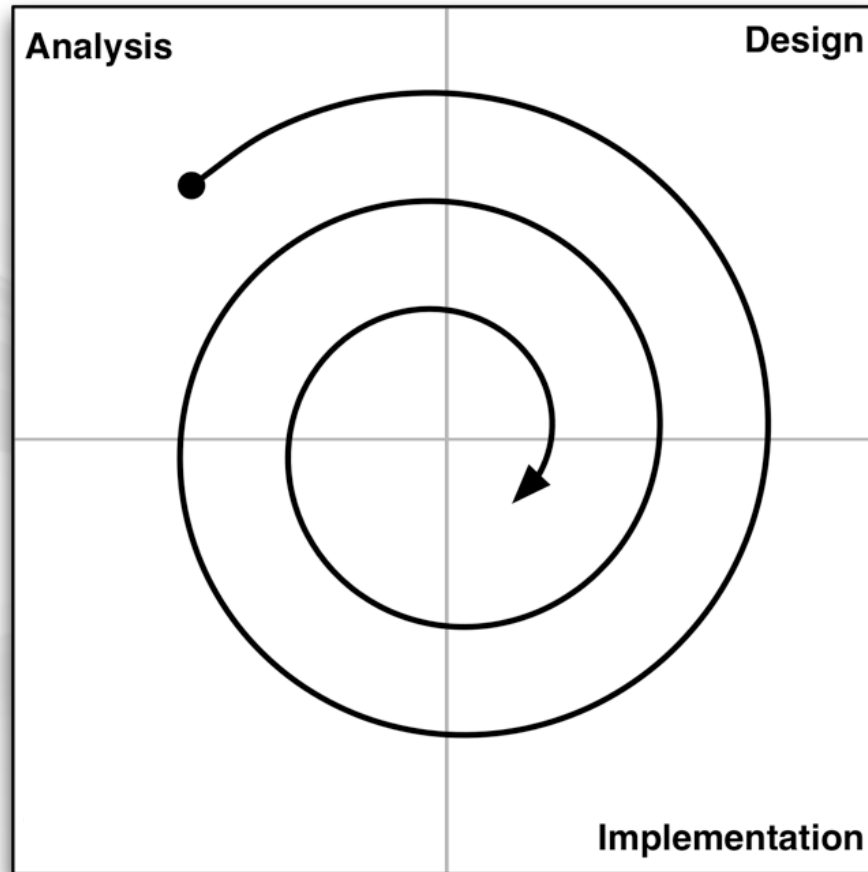


- ## Implementation
    - – **Execute on your plan. Make a working game prototype.**
    - – **What is the shortest path to something playable / testable?**

# The Iterative Process of Design
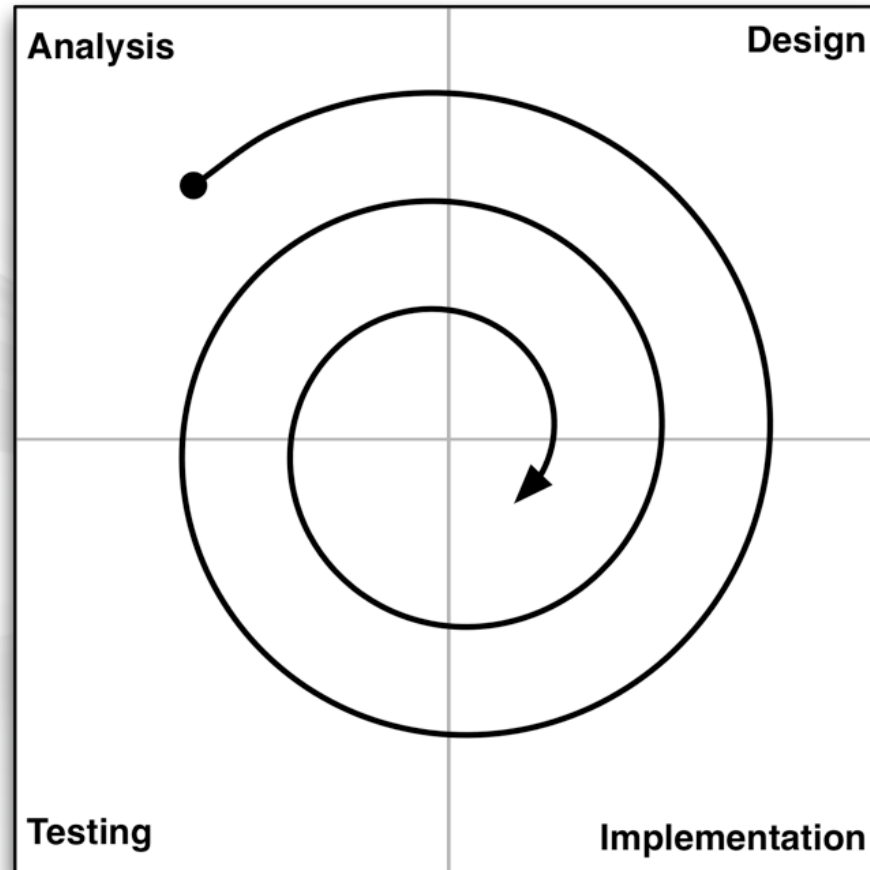


- **Testing**

# The Iterative Process of Design
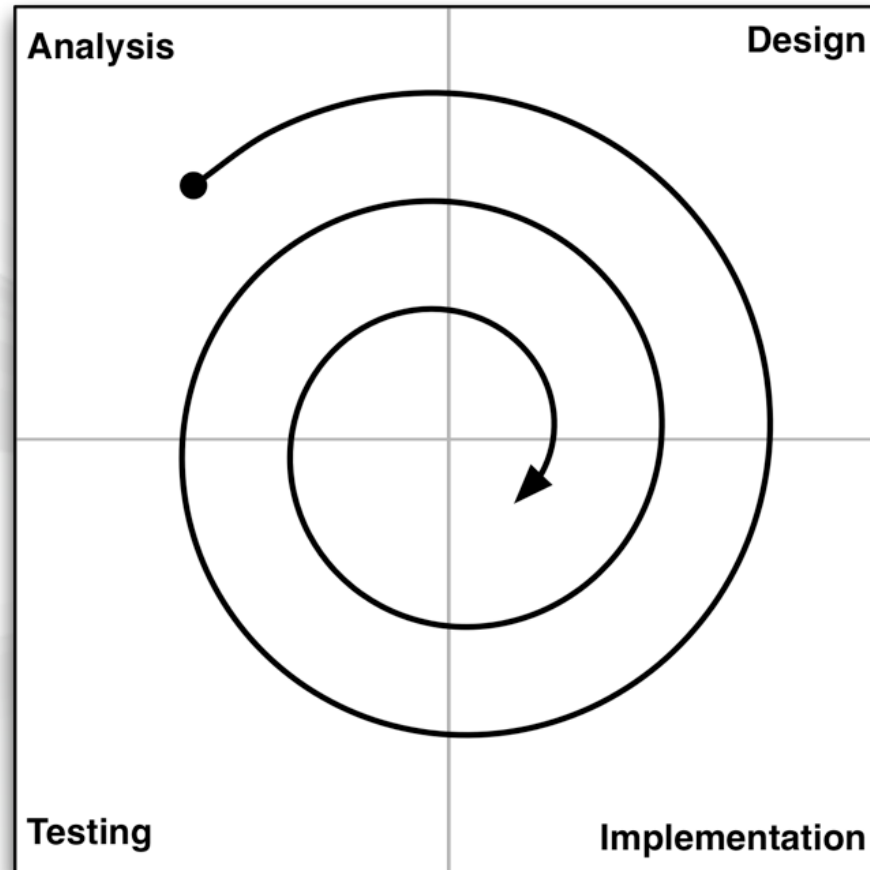


- **Testing**
  - Have people actually play your game and get reactions!

# The Iterative Process of Design



Analysis | Design

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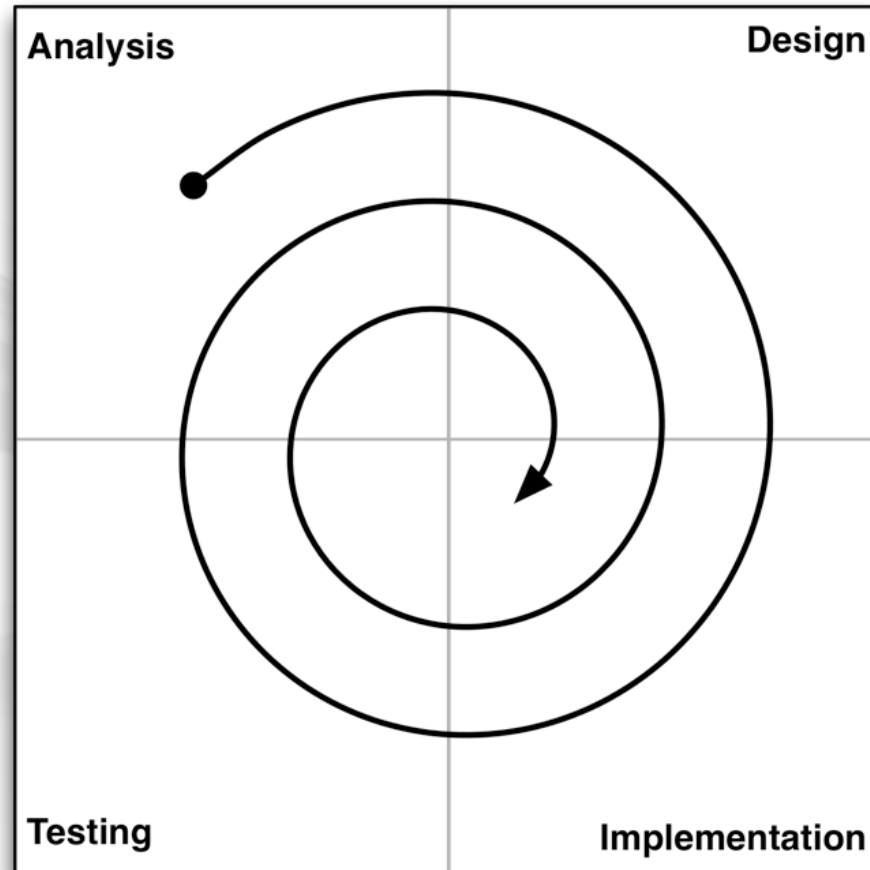
- **Testing**
  - Have people actually play your game and get reactions!
  - Testing is critically important to this process!

# The Iterative Process of Design
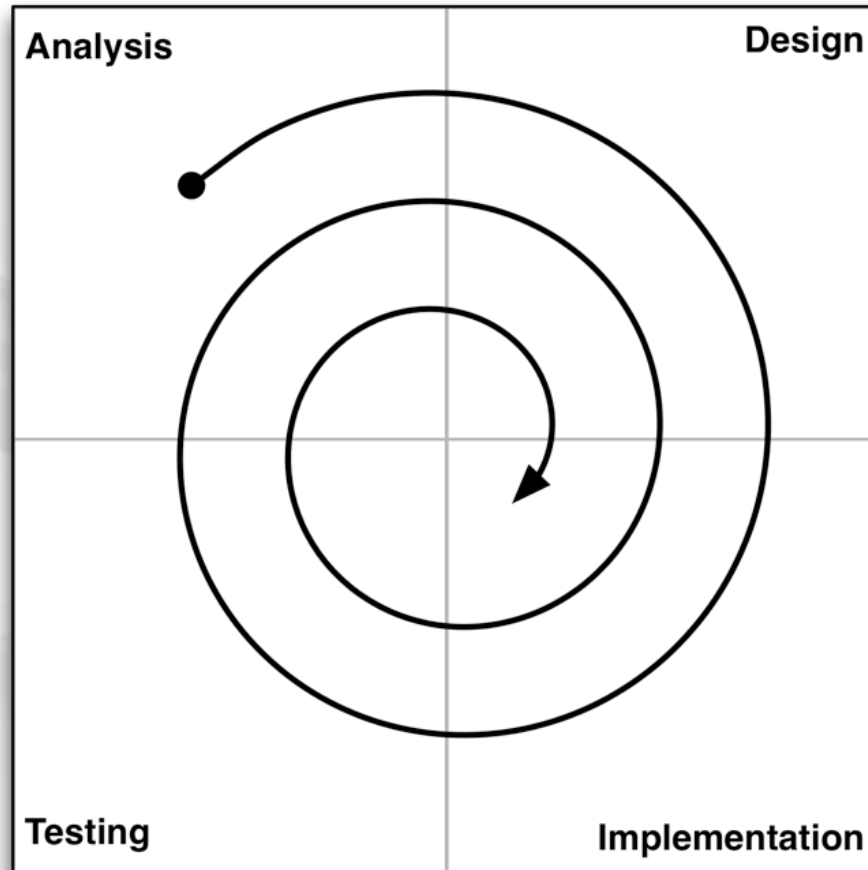


- **Iteration!**

# The Iterative Process of Design
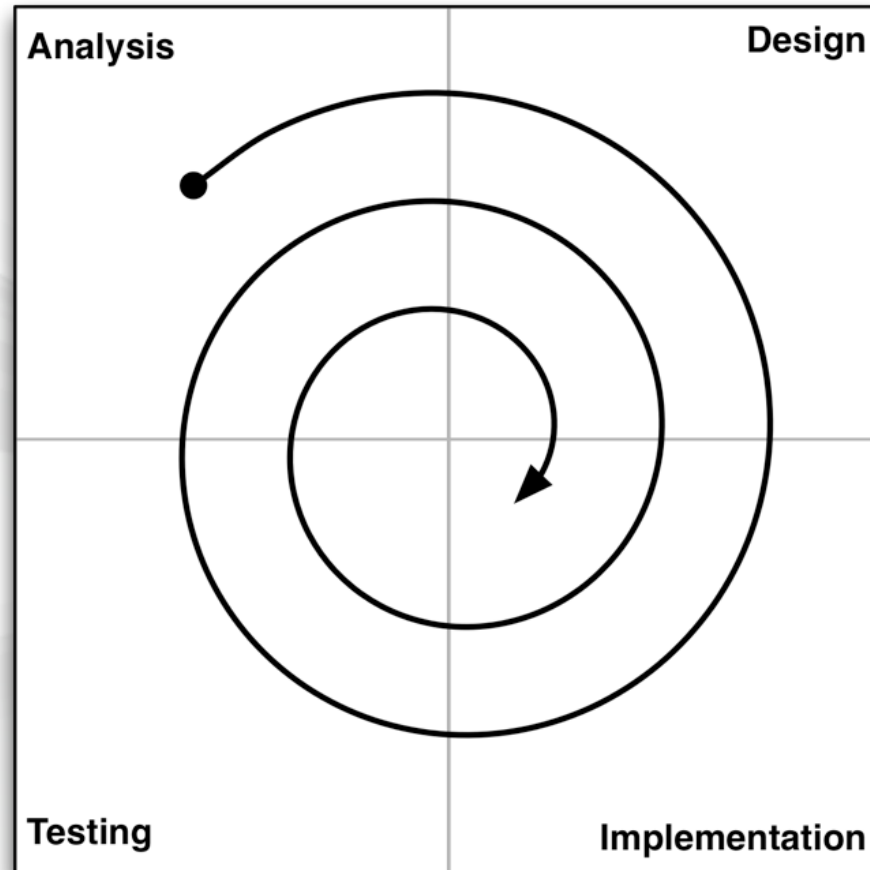


- **Iteration!**
  - Analyze the results of your game testing

# The Iterative Process of Design
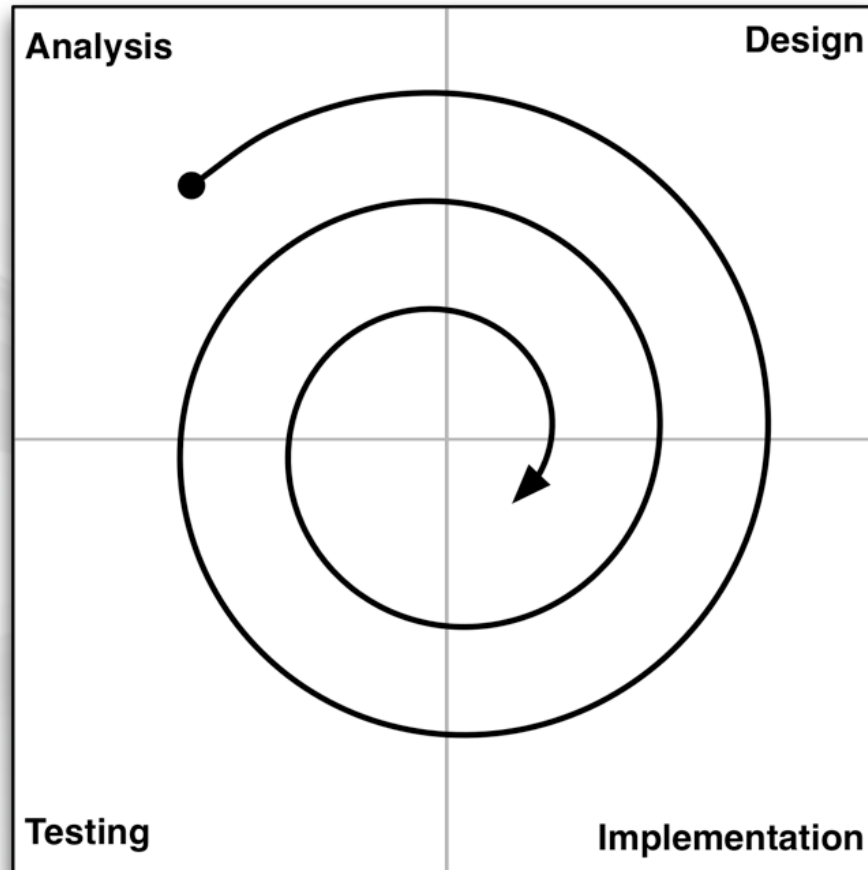


- **Iteration!**
  - Analyze the results of your game testing
  - Modify your design, implement, test again!

# The Iterative Process: Analysis

# The Iterative Process: Analysis

- **Analysis is about asking the right initial questions**

# The Iterative Process: Analysis

- **Analysis is about asking the right initial questions**
  - **For whom are you designing this game?**

# The Iterative Process: Analysis

- **Analysis is about asking the right initial questions**
  - **For whom are you designing this game?**
    - Demographic information

# The Iterative Process: Analysis

- **Analysis is about asking the right initial questions**
  - **For whom are you designing this game?**
    - Demographic information
    - Target platform

# The Iterative Process: Analysis

- **Analysis is about asking the right initial questions**
  - **For whom are you designing this game?**
    - Demographic information
    - Target platform
    - You're almost never designing the game for yourself!

# The Iterative Process: Analysis

- **Analysis is about asking the right initial questions**
  - **For whom are you designing this game?**
    - Demographic information
    - Target platform
    - You're almost never designing the game for yourself!
  - **What are your resources?**

# The Iterative Process: Analysis

- **Analysis is about asking the right initial questions**
  - **For whom are you designing this game?**
    - Demographic information
    - Target platform
    - You're almost never designing the game for yourself!
  - **What are your resources?**
    - Team members, budget, timeline

# The Iterative Process: Analysis

- **Analysis is about asking the right initial questions**
  - **For whom are you designing this game?**
    - Demographic information
    - Target platform
    - You're almost never designing the game for yourself!
  - **What are your resources?**
    - Team members, budget, timeline
    - Time is the most important resource!

# The Iterative Process: Analysis

- **Analysis is about asking the right initial questions**
  - **For whom are you designing this game?**
    - Demographic information
    - Target platform
    - You're almost never designing the game for yourself!
  - **What are your resources?**
    - Team members, budget, timeline
    - Time is the most important resource!
  - **What prior art exists?**

# The Iterative Process: Analysis

- **Analysis is about asking the right initial questions**
  - **For whom are you designing this game?**
    - Demographic information
    - Target platform
    - You're almost never designing the game for yourself!
  - **What are your resources?**
    - Team members, budget, timeline
    - Time is the most important resource!
  - **What prior art exists?**
    - What other games exist in this space?

# The Iterative Process: Analysis

- **Analysis is about asking the right initial questions**
  - **For whom are you designing this game?**
    - Demographic information
    - Target platform
    - You're almost never designing the game for yourself!
  - **What are your resources?**
    - Team members, budget, timeline
    - Time is the most important resource!
  - **What prior art exists?**
    - What other games exist in this space?
    - This is often ignored by novice designers, but it's critically important!

# The Iterative Process: Analysis

- **Analysis is about asking the right initial questions**
  - **For whom are you designing this game?**
    - Demographic information
    - Target platform
    - You're almost never designing the game for yourself!
  - **What are your resources?**
    - Team members, budget, timeline
    - Time is the most important resource!
  - **What prior art exists?**
    - What other games exist in this space?
    - This is often ignored by novice designers, but it's critically important!
  - **What is the fastest path to a playable and testable game?**

# The Iterative Process: Analysis

- **Analysis is about asking the right initial questions**
  - **For whom are you designing this game?**
    - Demographic information
    - Target platform
    - You're almost never designing the game for yourself!
  - **What are your resources?**
    - Team members, budget, timeline
    - Time is the most important resource!
  - **What prior art exists?**
    - What other games exist in this space?
    - This is often ignored by novice designers, but it's critically important!
  - **What is the fastest path to a playable and testable game?**
    - How can you get your game up and running ASAP?

# The Iterative Process: Analysis

- **Analysis is about asking the right initial questions**
  - **For whom are you designing this game?**
    - Demographic information
    - Target platform
    - You're almost never designing the game for yourself!
  - **What are your resources?**
    - Team members, budget, timeline
    - Time is the most important resource!
  - **What prior art exists?**
    - What other games exist in this space?
    - This is often ignored by novice designers, but it's critically important!
  - **What is the fastest path to a playable and testable game?**
    - How can you get your game up and running ASAP?
    - Mechanics are absolutely the most important element in this phase

# The Iterative Process: Design

# The Iterative Process: Design

- A lot of design is about having an attitude of listening

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to your audience**

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to your audience**
    - Think about your audience when designing a game

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to your audience**
    - Think about your audience when designing a game
    - Listen to their feedback when you get it

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to your audience**
    - Think about your audience when designing a game
    - Listen to their feedback when you get it
  - **Listen to your team**

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to your audience**
    - Think about your audience when designing a game
    - Listen to their feedback when you get it
  - **Listen to your team**
    - Listen to the other people who are working with you

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to your audience**
    - Think about your audience when designing a game
    - Listen to their feedback when you get it
  - **Listen to your team**
    - Listen to the other people who are working with you
      - Especially when they disagree with you

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to your audience**
    - Think about your audience when designing a game
    - Listen to their feedback when you get it
  - **Listen to your team**
    - Listen to the other people who are working with you
      - Especially when they disagree with you
  - **Listen to your client**

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to your audience**
    - Think about your audience when designing a game
    - Listen to their feedback when you get it
  - **Listen to your team**
    - Listen to the other people who are working with you
      - Especially when they disagree with you
  - **Listen to your client**
    - If someone is paying you to design a game, you need to listen to them

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to your audience**
    - Think about your audience when designing a game
    - Listen to their feedback when you get it
  - **Listen to your team**
    - Listen to the other people who are working with you
      - Especially when they disagree with you
  - **Listen to your client**
    - If someone is paying you to design a game, you need to listen to them
    - This often makes them more likely to pay you and hire you again

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to your audience**
    - Think about your audience when designing a game
    - Listen to their feedback when you get it
  - **Listen to your team**
    - Listen to the other people who are working with you
      - Especially when they disagree with you
  - **Listen to your client**
    - If someone is paying you to design a game, you need to listen to them
    - This often makes them more likely to pay you and hire you again
  - **Listen to your game**

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to your audience**
    - Think about your audience when designing a game
    - Listen to their feedback when you get it
  - **Listen to your team**
    - Listen to the other people who are working with you
      - Especially when they disagree with you
  - **Listen to your client**
    - If someone is paying you to design a game, you need to listen to them
    - This often makes them more likely to pay you and hire you again
  - **Listen to your game**
    - Some brilliant ideas just don't fit in the game you're currently designing

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to your audience**
    - Think about your audience when designing a game
    - Listen to their feedback when you get it
  - **Listen to your team**
    - Listen to the other people who are working with you
      - Especially when they disagree with you
  - **Listen to your client**
    - If someone is paying you to design a game, you need to listen to them
    - This often makes them more likely to pay you and hire you again
  - **Listen to your game**
    - Some brilliant ideas just don't fit in the game you're currently designing
    - Save these for later

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to yourself**

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to yourself**
    - **Listen to your gut** – Sometimes you'll get a gut feeling about something before you consciously figure it out

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to yourself**
    - **Listen to your gut** – Sometimes you'll get a gut feeling about something before you consciously figure it out
    - **Listen to your health** – Take care of yourself and stay healthy

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to yourself**
    - **Listen to your gut** – Sometimes you'll get a gut feeling about something before you consciously figure it out
    - **Listen to your health** – Take care of yourself and stay healthy
      - Pulling all-nighters and stressing out decreases your creativity

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to yourself**
    - **Listen to your gut** – Sometimes you'll get a gut feeling about something before you consciously figure it out
    - **Listen to your health** – Take care of yourself and stay healthy
      - Pulling all-nighters and stressing out decreases your creativity
      - Eat well and exercise

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to yourself**
    - **Listen to your gut** – Sometimes you'll get a gut feeling about something before you consciously figure it out
    - **Listen to your health** – Take care of yourself and stay healthy
      - Pulling all-nighters and stressing out decreases your creativity
      - Eat well and exercise
      - Take breaks when you need to

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to yourself**
    - **Listen to your gut** – Sometimes you'll get a gut feeling about something before you consciously figure it out
    - **Listen to your health** – Take care of yourself and stay healthy
      - Pulling all-nighters and stressing out decreases your creativity
      - Eat well and exercise
      - Take breaks when you need to
    - **Listen to how you sound to other people**

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to yourself**
    - **Listen to your gut** – Sometimes you'll get a gut feeling about something before you consciously figure it out
    - **Listen to your health** – Take care of yourself and stay healthy
      - Pulling all-nighters and stressing out decreases your creativity
      - Eat well and exercise
      - Take breaks when you need to
    - **Listen to how you sound to other people**
      - When you say things out loud, think about how you're coming across

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to yourself**
    - **Listen to your gut** – Sometimes you'll get a gut feeling about something before you consciously figure it out
    - **Listen to your health** – Take care of yourself and stay healthy
      - Pulling all-nighters and stressing out decreases your creativity
      - Eat well and exercise
      - Take breaks when you need to
    - **Listen to how you sound to other people**
      - When you say things out loud, think about how you're coming across
      - Do you sound respectful?

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to yourself**
    - **Listen to your gut** – Sometimes you'll get a gut feeling about something before you consciously figure it out
    - **Listen to your health** – Take care of yourself and stay healthy
      - Pulling all-nighters and stressing out decreases your creativity
      - Eat well and exercise
      - Take breaks when you need to
    - **Listen to how you sound to other people**
      - When you say things out loud, think about how you're coming across
      - Do you sound respectful?
      - Do you sound like you care about the other person?

# The Iterative Process: Design

- **A lot of design is about having an attitude of listening**
  - **Listen to yourself**
    - **Listen to your gut** – Sometimes you'll get a gut feeling about something before you consciously figure it out
    - **Listen to your health** – Take care of yourself and stay healthy
      - Pulling all-nighters and stressing out decreases your creativity
      - Eat well and exercise
      - Take breaks when you need to
    - **Listen to how you sound to other people**
      - When you say things out loud, think about how you're coming across
      - Do you sound respectful?
      - Do you sound like you care about the other person?
      - People who demonstrate care and respect for others tend to do better in life, especially in creative fields

# The Iterative Process: Implementation

# The Iterative Process: Implementation

- **The goal of implementation is to get from design to testing as quickly and efficiently as possible**

# The Iterative Process: Implementation

- **The goal of implementation is to get from design to testing as quickly and efficiently as possible**
  - Sometimes you don't even have to make a digital prototype

# The Iterative Process: Implementation

- **The goal of implementation is to get from design to testing as quickly and efficiently as possible**
  - **Sometimes you don't even have to make a digital prototype**
    - For GUI (Graphical User Interface) testing, sometimes a paper prototype will do just fine

# The Iterative Process: Implementation

- **The goal of implementation is to get from design to testing as quickly and efficiently as possible**
    - **Sometimes you don't even have to make a digital prototype**
        - For GUI (Graphical User Interface) testing, sometimes a paper prototype will do just fine
        - Make pages showing various states of your menu system and test them on people
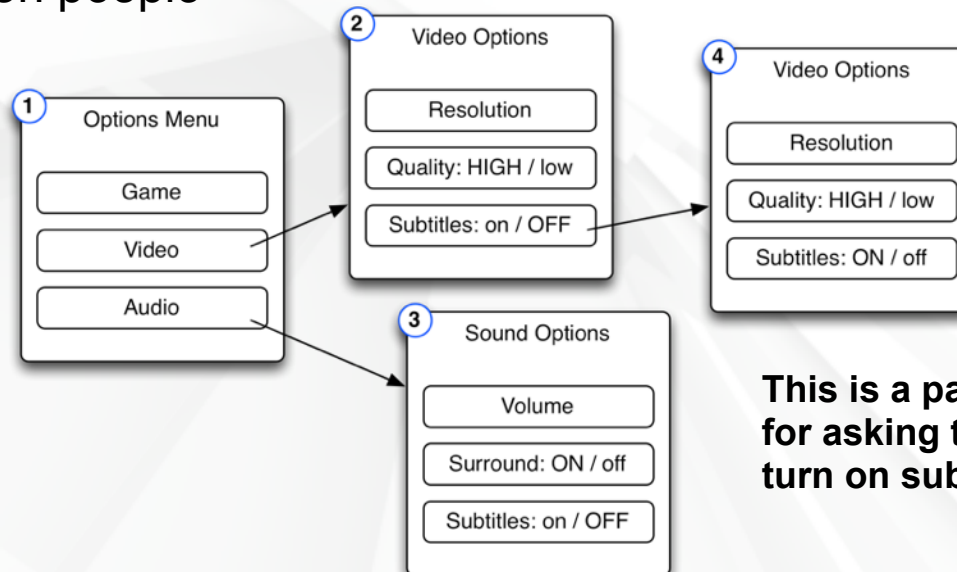
# The Iterative Process: Implementation

- **The goal of implementation is to get from design to testing as quickly and efficiently as possible**
  - **Sometimes you don't even have to make a digital prototype**
    - For GUI (Graphical User Interface) testing, sometimes a paper prototype will do just fine
    - Make pages showing various states of your menu system and test them on people



**This is a paper GUI prototype for asking the player how to turn on subtitles**

# The Iterative Process: Implementation

- **The goal of implementation is to get from design to testing as quickly and efficiently as possible**
  - Sometimes you don't even have to make a digital prototype

# The Iterative Process: Implementation

- **The goal of implementation is to get from design to testing as quickly and efficiently as possible**
  - Sometimes you don't even have to make a digital prototype
  - When making digital prototypes, focus on the Mechanics

# The Iterative Process: Implementation

- **The goal of implementation is to get from design to testing as quickly and efficiently as possible**
  - **Sometimes you don't even have to make a digital prototype**
  - **When making digital prototypes, focus on the Mechanics**
    - The most important thing to test in a digital game is usually the Mechanics

# The Iterative Process: Implementation

- **The goal of implementation is to get from design to testing as quickly and efficiently as possible**
  - **Sometimes you don't even have to make a digital prototype**
  - **When making digital prototypes, focus on the Mechanics**
    - The most important thing to test in a digital game is usually the Mechanics
    - The Mechanics are also the inscribed element that can't be tested by other means

# The Iterative Process: Implementation

- **The goal of implementation is to get from design to testing as quickly and efficiently as possible**
  - **Sometimes you don't even have to make a digital prototype**
  - **When making digital prototypes, focus on the Mechanics**
    - The most important thing to test in a digital game is usually the Mechanics
    - The Mechanics are also the inscribed element that can't be tested by other means
    - The Technology of your prototype will often be replaced by production code in the future

# The Iterative Process: Testing

- **You won't know anything about your game until someone else plays it**
  - Because you are the designer, your view of the game is drastically biased

# The Iterative Process: Testing

- **You won't know anything about your game until someone else plays it**
  - **Because you are the designer, your view of the game is drastically biased**
  - **You need other people to play the game and give you feedback**

# The Iterative Process: Testing

- **You won't know anything about your game until someone else plays it**
  - **Because you are the designer, your view of the game is drastically biased**
  - **You need other people to play the game and give you feedback**
  - **People will often try not to hurt your feelings**

# The Iterative Process: Testing

- **You won't know anything about your game until someone else plays it**
  - **Because you are the designer, your view of the game is drastically biased**
  - **You need other people to play the game and give you feedback**
  - **People will often try not to hurt your feelings**
    - **Schell recommends saying** "I need your help. This game has some real problems, but we're not sure what they are. Please, if there is anything at all you don't like about this game, it will be a great help to me if you let me know."

# The Iterative Process: Testing

- **Take good notes!**

| 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: Testing

- **Take good notes!**
  - **Where did the comment happen?**

| 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: Testing

- **Take good notes!**
  - **Where did the comment happen?**
  - **What did the playtester actually say?**

| 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: Testing

- **Take good notes!**
  - **Where did the comment happen?**
  - **What did the playtester actually say?**
  - **What do you think she meant?**

| 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: 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?**

| 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: 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

| 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: 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

# The Iterative Process: Iteration

- **After testing, analyze the feedback and iterate!**

# The Iterative Process: Iteration

- **After testing, analyze the feedback and iterate!**

- **Most games will go through this process many times**

# 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**

# 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**

# 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 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

# 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**

# 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**

# 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

# 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**

# 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!**

# Innovation

# Innovation

- **In *The Medici Effect*, Frans Johansson writes about two kinds of innovation:**

# Innovation

- **In *The Medici Effect*, Frans Johansson writes about two kinds of innovation:**
  - **Incremental - Making something slightly better**

# Innovation

- **In _The Medici Effect_, Frans Johansson writes about two kinds of innovation:**

  - **Incremental - Making something slightly better**

    - Example: The improvements in the Pentium chip in the 1990s

# Innovation

- **In *The Medici Effect*, Frans Johansson writes about two kinds of innovation:**

    - **Incremental - Making something slightly better**
        - Example: The improvements in the Pentium chip in the 1990s
        - Pros: Easy to convince investors that it will work, Predictable

# Innovation

- **In *The Medici Effect*, Frans Johansson writes about two kinds of innovation:**
  - **Incremental - Making something slightly better**
    - Example: The improvements in the Pentium chip in the 1990s
    - Pros: Easy to convince investors that it will work, Predictable
    - Cons: Only a slight innovation, Nothing revolutionary, Predictable

# Innovation

- **In *The Medici Effect*, Frans Johansson writes about two kinds of innovation:**
  - **Incremental - Making something slightly better**
    - Example: The improvements in the Pentium chip in the 1990s
    - Pros: Easy to convince investors that it will work, Predictable
    - Cons: Only a slight innovation, Nothing revolutionary, Predictable
  - **Intersectional - The combination of two different ideas**

# Innovation

- **In *The Medici Effect*, Frans Johansson writes about two kinds of innovation:**
  - **Incremental - Making something slightly better**
    - Example: The improvements in the Pentium chip in the 1990s
    - Pros: Easy to convince investors that it will work, Predictable
    - Cons: Only a slight innovation, Nothing revolutionary, Predictable
  - **Intersectional - The combination of two different ideas**
    - Example: *Magic: The Gathering* combined card games and collecting

# Innovation

- **In *The Medici Effect,* Frans Johansson writes about two kinds of innovation:**
  - **Incremental - Making something slightly better**
    - Example: The improvements in the Pentium chip in the 1990s
    - Pros: Easy to convince investors that it will work, Predictable
    - Cons: Only a slight innovation, Nothing revolutionary, Predictable
  - **Intersectional - The combination of two different ideas**
    - Example: *Magic: The Gathering* combined card games and collecting
    - Pros: Has the potential to create something new and exciting

# Innovation

- **In *The Medici Effect,* Frans Johansson writes about two kinds of innovation:**
  - **Incremental - Making something slightly better**
    - Example: The improvements in the Pentium chip in the 1990s
    - Pros: Easy to convince investors that it will work, Predictable
    - Cons: Only a slight innovation, Nothing revolutionary, Predictable
  - **Intersectional - The combination of two different ideas**
    - Example: *Magic: The Gathering* combined card games and collecting
    - Pros: Has the potential to create something new and exciting
    - Cons: High chance of failure, People won't believe it 'till they see it

# Innovation

- **In _The Medici Effect_, Frans Johansson writes about two kinds of innovation:**
  - **Incremental - Making something slightly better**
    - Example: The improvements in the Pentium chip in the 1990s
    - Pros: Easy to convince investors that it will work, Predictable
    - Cons: Only a slight innovation, Nothing revolutionary, Predictable
  - **Intersectional - The combination of two different ideas**
    - Example: _Magic: The Gathering_ combined card games and collecting
    - Pros: Has the potential to create something new and exciting
    - Cons: High chance of failure, People won't believe it 'till they see it

- **Johansson believes that the innovation in the renaissance was a result of the intersection of Eastern and Western cultures due to increased trade**

# 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**

# 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

# Brainstorming and Ideation

- **This brainstorming process is based on intersectional innovation**

# Brainstorming and Ideation

- **This brainstorming process is based on intersectional innovation**

- **It has worked well in both large and small groups**

# Brainstorming and Ideation

- **This brainstorming process is based on intersectional innovation**

- **It has worked well in both large and small groups**

- **Five Steps:**

# 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**
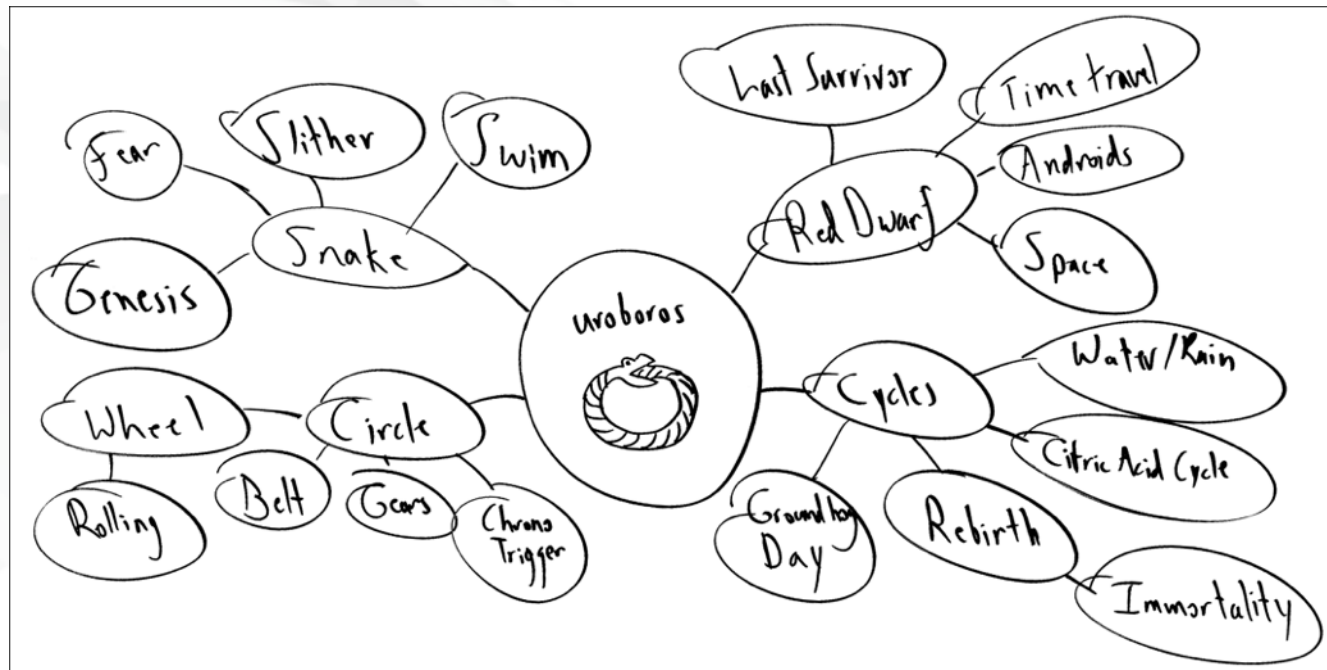
# Brainstorming and Ideation

- **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**

# 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**

# 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**

# 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
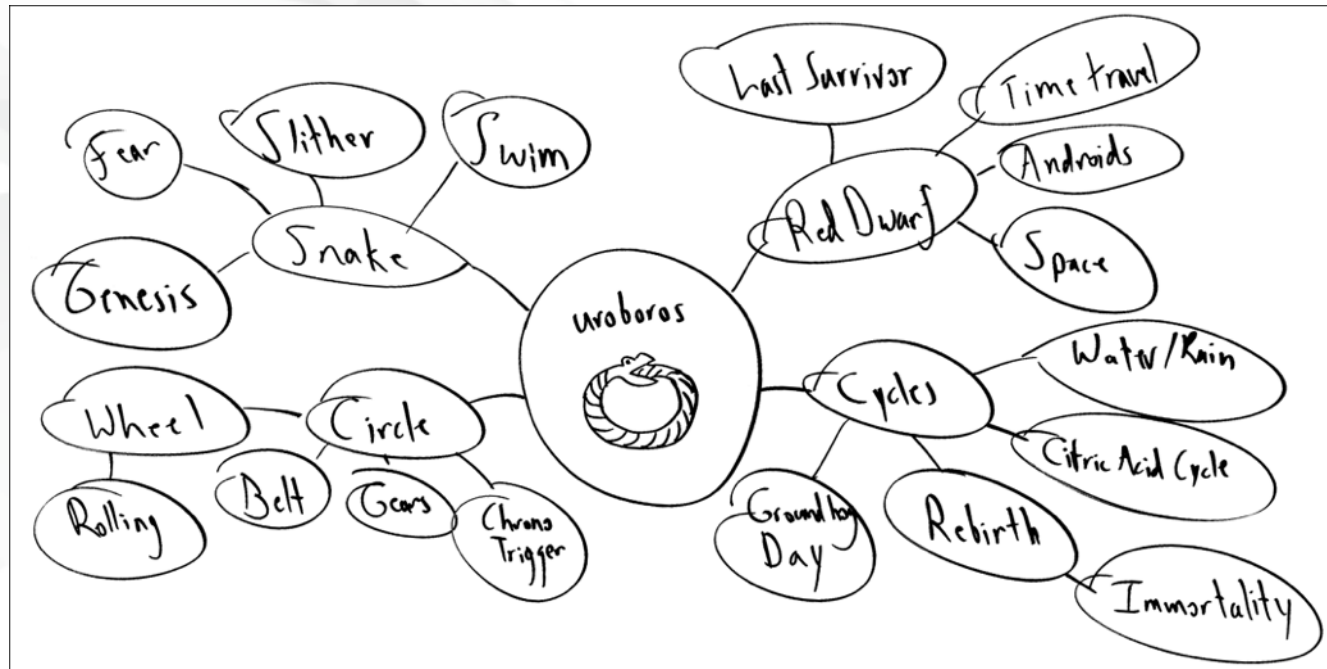
# Brainstorming and Ideation

- **Step 1: Expansion**
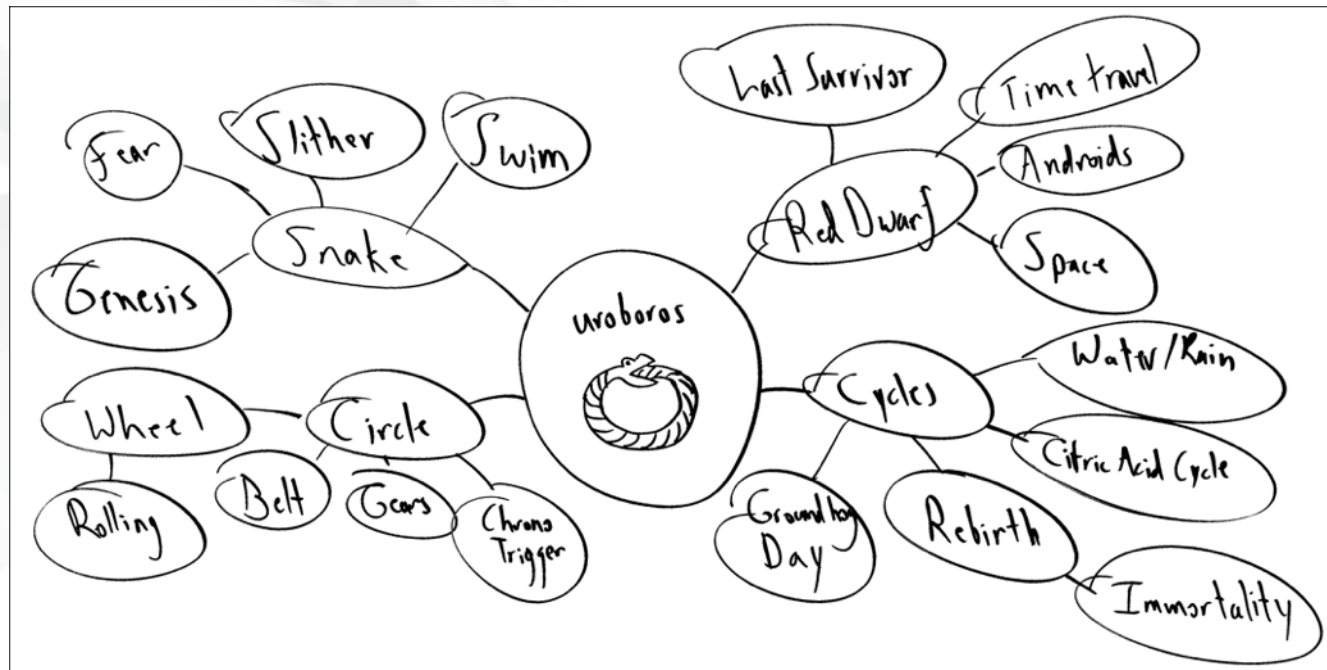
# Brainstorming and Ideation

- **Step 1: Expansion**
  - **Start with the core theme of your brainstorm in the middle of a whiteboard**
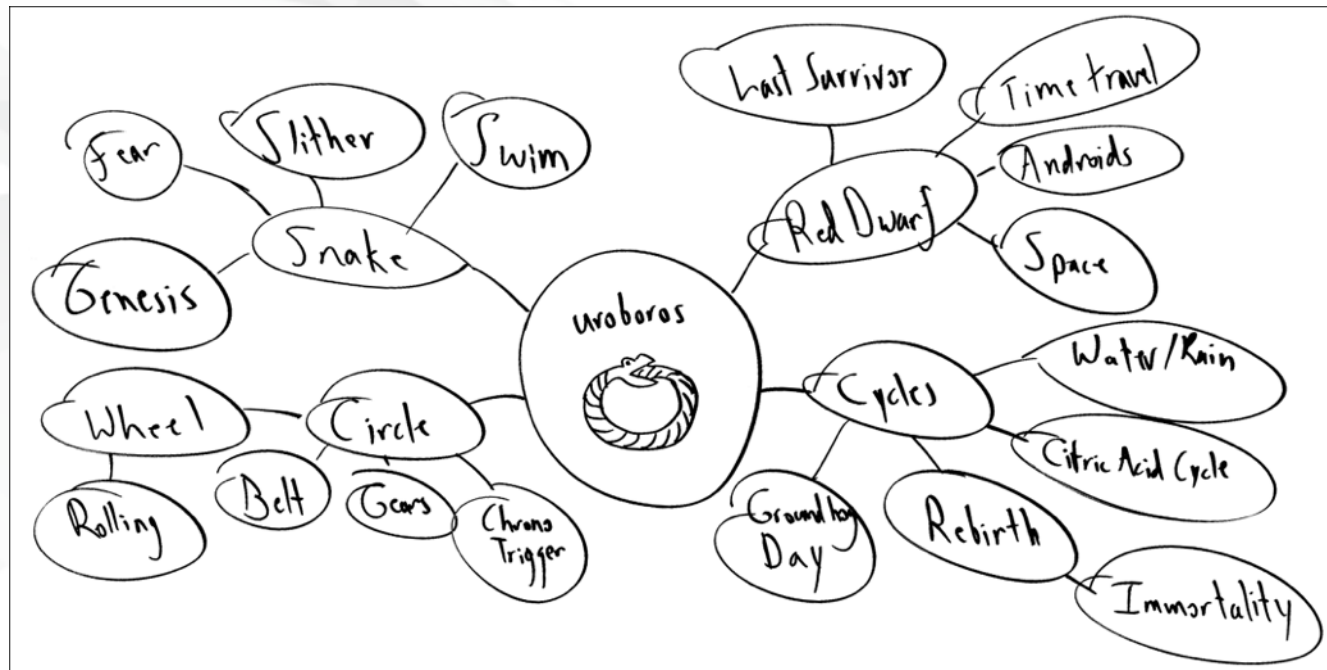
# Brainstorming and Ideation
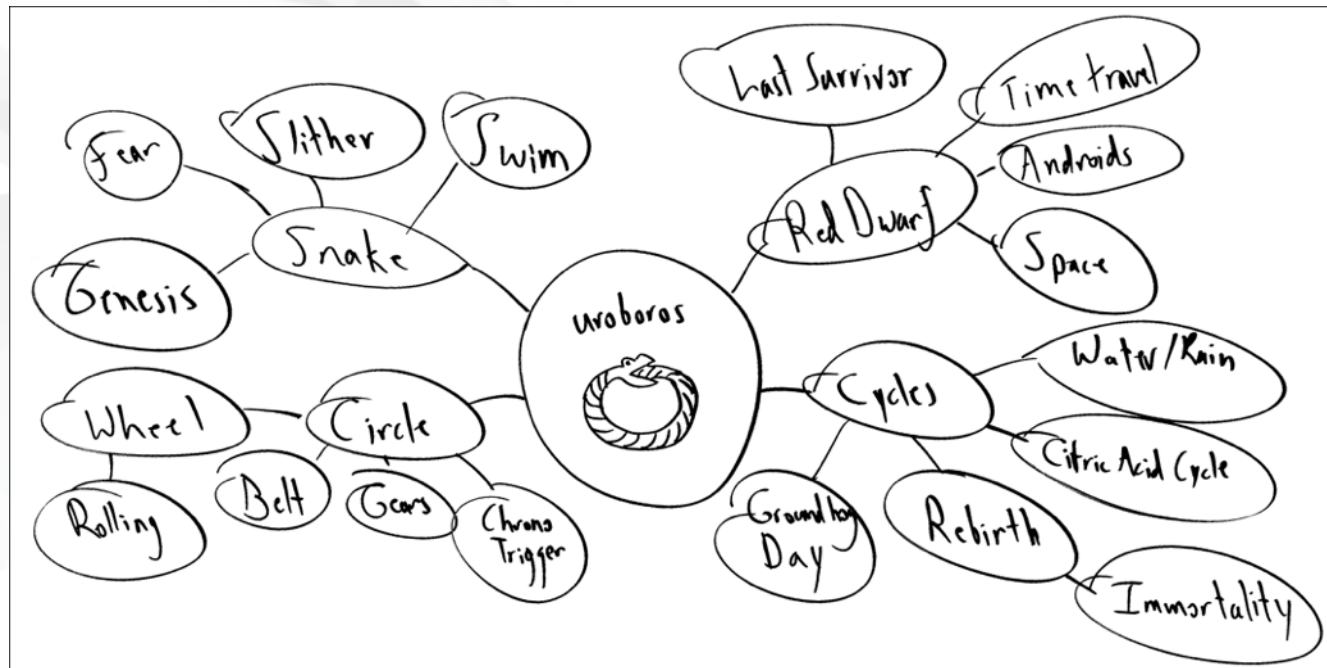
- **Step 1: Expansion**
  - Start with the core theme of your brainstorm in the middle of a whiteboard
  - Create as many ideas as possible around it

# 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

| | | | | | |
|---|---|---|---|---|---|
| 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 2: Collection**

| | | | | | |
|---|---|---|---|---|---|
| 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 2: Collection**

  – **Write down each node of the expansion phase on a 3x5 note card or a Post-it note**

| | | | | | |
|---|---|---|---|---|---|
| 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 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 | | |

# AN ASIDE ABOUT JOKES

**Two lithium atoms are walking along.**

Two lithium atoms are walking along.

One says to the other, "Phil, I think I lost an electron back there."

# AN ASIDE ABOUT JOKES

Two lithium atoms are walking along.

One says to the other, "Phil, I think I lost an electron back there."

So Phil says, "Really Jason, are you sure?"

# AN ASIDE ABOUT JOKES

**Two lithium atoms are walking along.**

**One says to the other, "Phil, I think I lost an electron back there."**

**So Phil says, "Really Jason, are you sure?"**

**And Jason replies, "Yeah, I'm positive!"**

Two lithium atoms are walking along.

One says to the other, "Phil, I think I lost an electron back there."

So Phil says, "Really Jason, are you sure?"

And Jason replies, "Yeah, I'm positive!"

- **Jokes (even bad jokes) are another form of intersectional innovation**

Two lithium atoms are walking along.

One says to the other, "Phil, I think I lost an electron back there."

So Phil says, "Really Jason, are you sure?"

And Jason replies, "Yeah, I'm positive!"

- **Jokes (even bad jokes) are another form of intersectional innovation**
  - Your brain is thinking in one direction and then is forced to make a connection between that and something unrelated

Two lithium atoms are walking along.

One says to the other, "Phil, I think I lost an electron back there."

So Phil says, "Really Jason, are you sure?"

And Jason replies, "Yeah, I'm positive!"

- **Jokes (even bad jokes) are another form of intersectional innovation**
  - Your brain is thinking in one direction and then is forced to make a connection between that and something unrelated
  - There is joy in that connection, which we perceive as humor

Two lithium atoms are walking along.

One says to the other, "Phil, I think I lost an electron back there."

So Phil says, "Really Jason, are you sure?"

And Jason replies, "Yeah, I'm positive!"

- **Jokes (even bad jokes) are another form of intersectional innovation**
  - Your brain is thinking in one direction and then is forced to make a connection between that and something unrelated
  - There is joy in that connection, which we perceive as humor

- **Creating new, innovative ideas is pleasurable in the same way**

# Brainstorming and Ideation

# Brainstorming and Ideation

- **Step 3: Collision**

# Brainstorming and Ideation

- **Step 3: Collision**
    - **Shuffle all the idea cards together**

# Brainstorming and Ideation

- **Step 3: Collision**
  - Shuffle all the idea cards together
  - Deal two to each person in the group

# 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

# 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

# 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:

# 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

# Brainstorming and Ideation

- **Step 4: Rating**

# 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**

# 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

# 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

# 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**

# 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

# Brainstorming and Ideation

- **Step 5: Discussion**

# Brainstorming and Ideation

- **Step 5: Discussion**
  - Given the information from Step 4, start discussing ideas

# 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

# 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!

# Changing Your Mind

# Changing Your Mind

- **No one every goes directly from idea to game**

# Changing Your Mind

- **No one every goes directly from idea to game**

**Idea**

# Changing Your Mind

- **No one every goes directly from idea to game**

Idea →

# Changing Your Mind

- **No one every goes directly from idea to game**

Idea → Game

# Changing Your Mind

- **No one every goes directly from idea to game**

Idea ———X———→ Game

# Changing Your Mind

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

**Idea**

**Game**

# Changing Your Mind

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

Idea → Prototype

Game

# Changing Your Mind

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

# Changing Your Mind

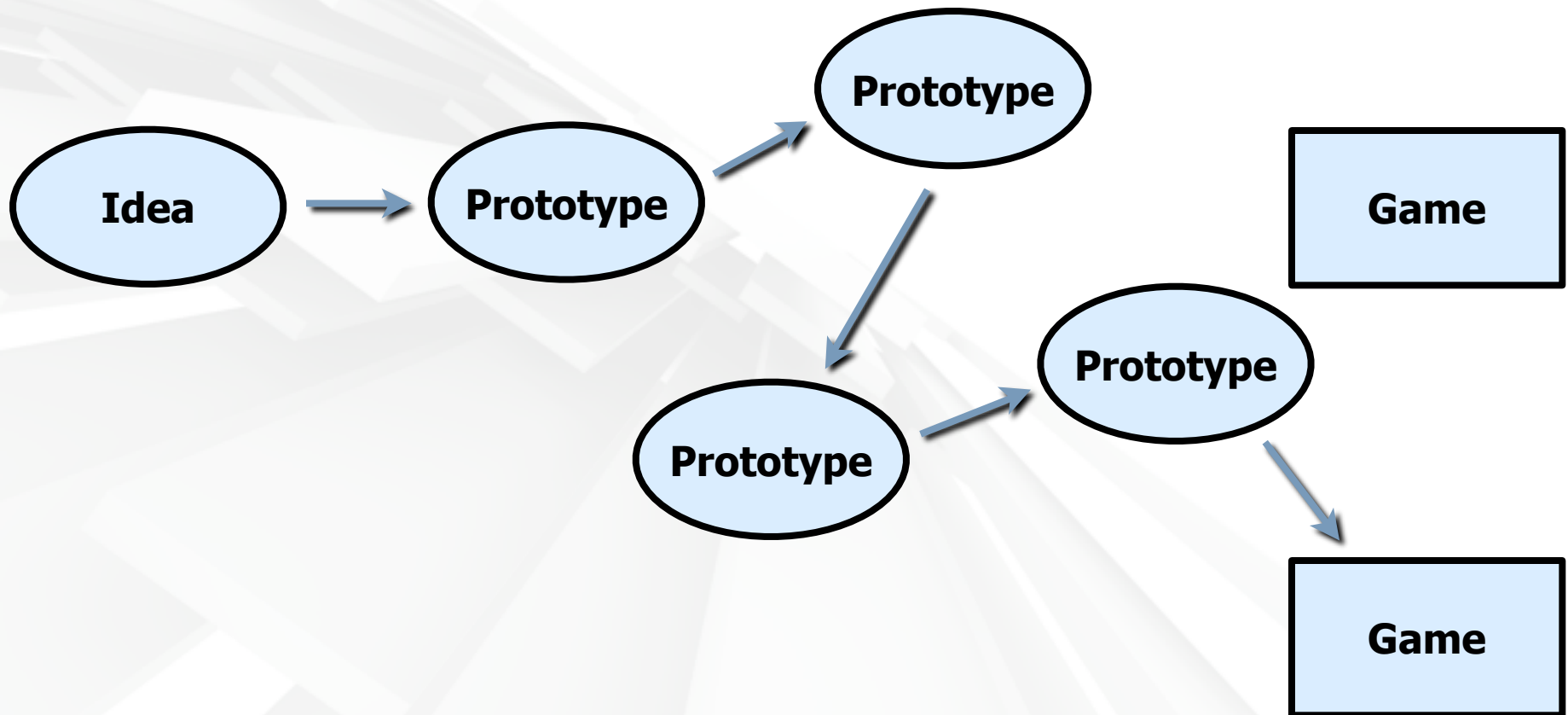- **The real process involves a lot of iteration and changing your mind**

# Changing Your Mind

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

# Changing Your Mind

- **The real process involves a lot of iteration and changing your mind**
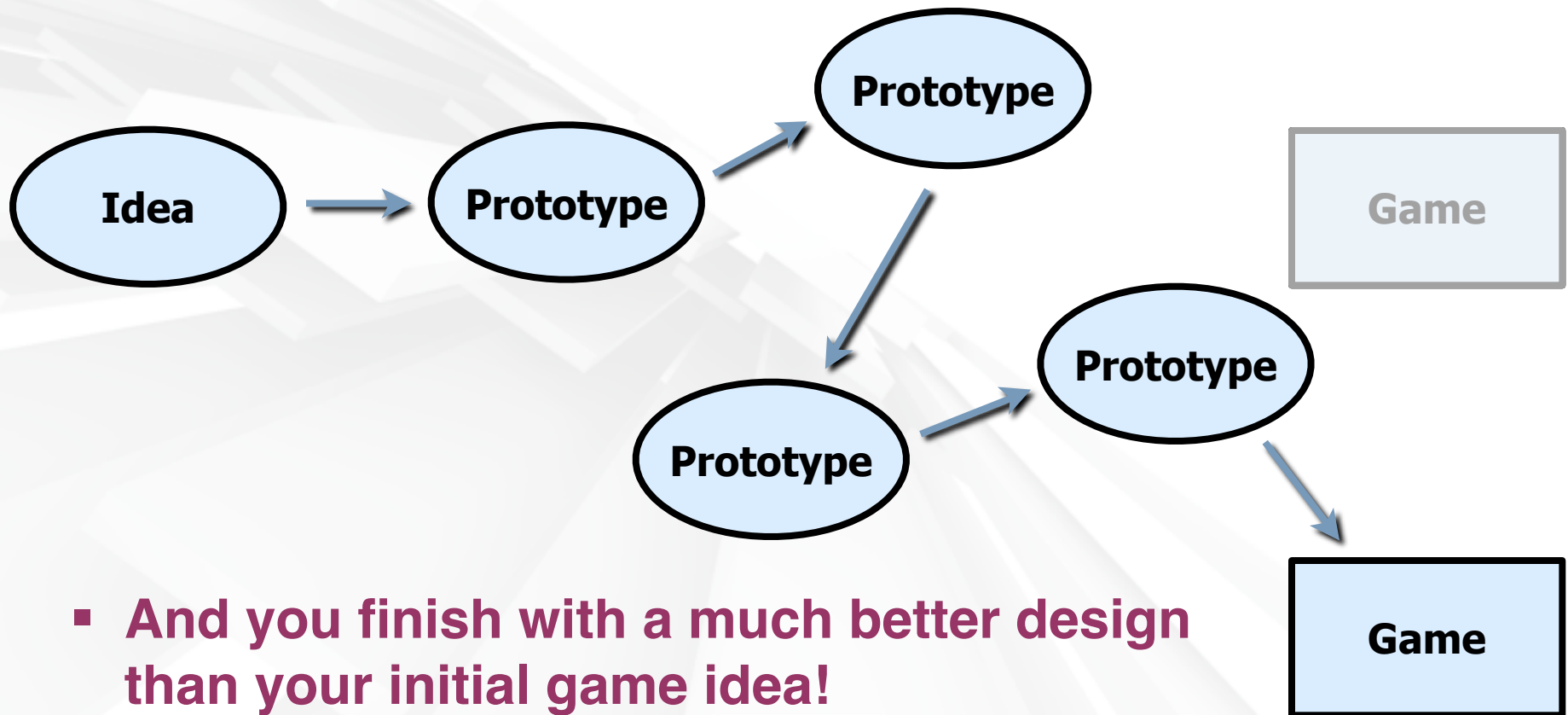
# Changing Your Mind
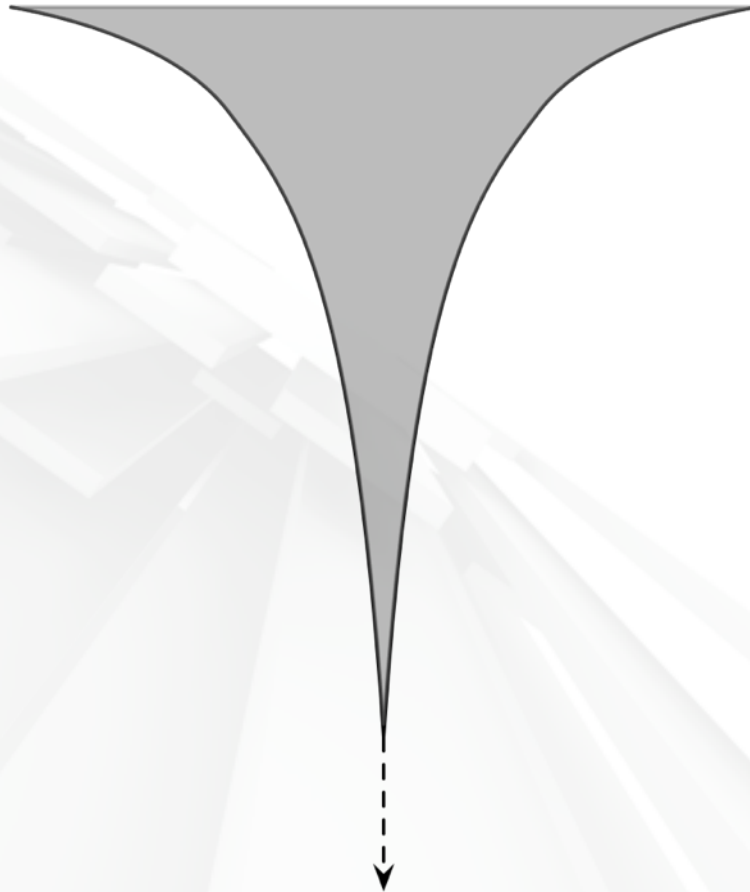
- **The real process involves a lot of iteration and changing your mind**



- **And you finish with a much better design than your initial game idea!**
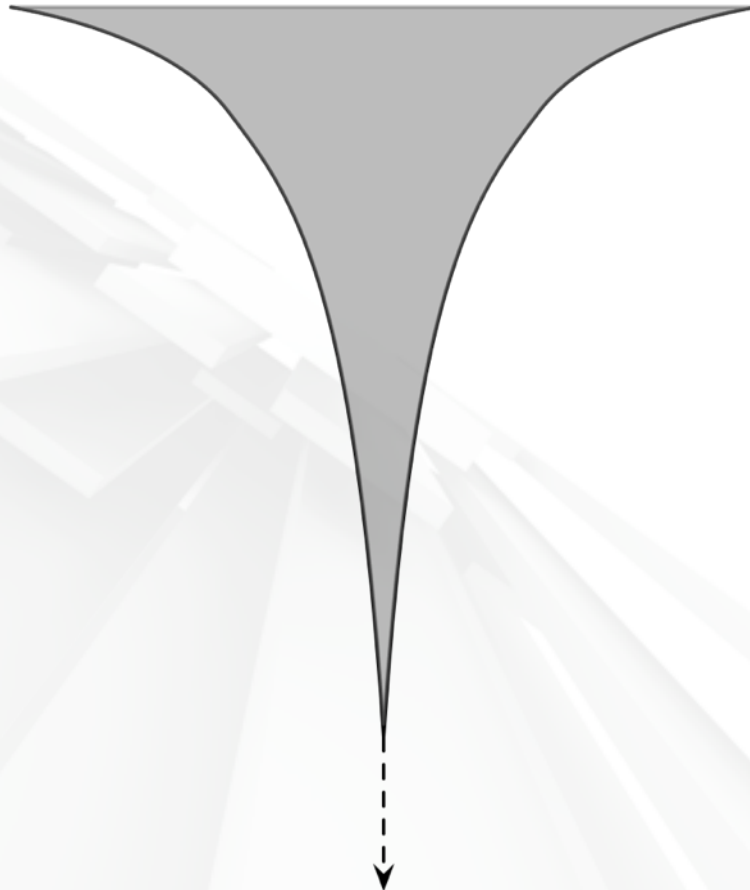
# Changing Your Mind

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

# Changing Your Mind

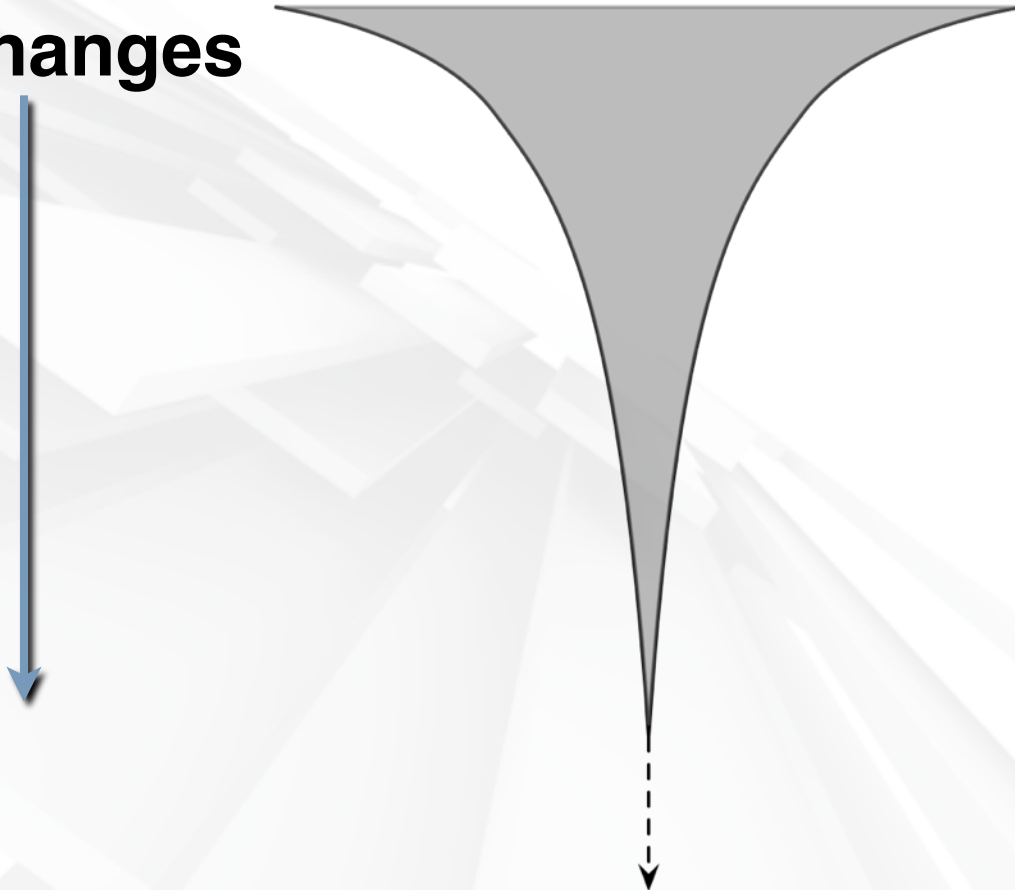- **However, as the project moves through development phases, you're more locked in to decisions**

**Big Changes**

# Changing Your Mind

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

**Big Changes**

# Changing Your Mind

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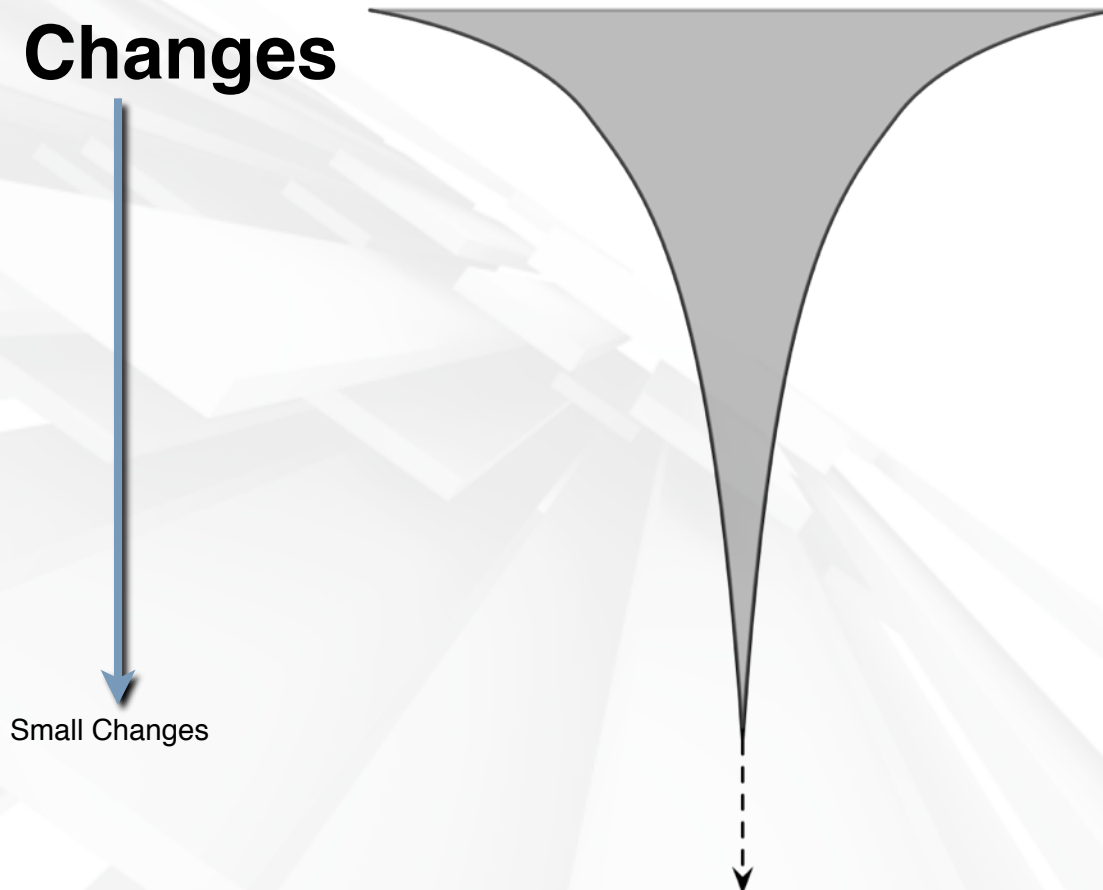
**Big Changes**

Small Changes

# Changing Your Mind

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

**Big Changes**

Preproduction

Small Changes

# Changing Your Mind

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

**Big Changes**

**Preproduction**

**Production**

Small Changes

# Changing Your Mind

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

**Big Changes**

Preproduction

Production

Alpha

Small Changes

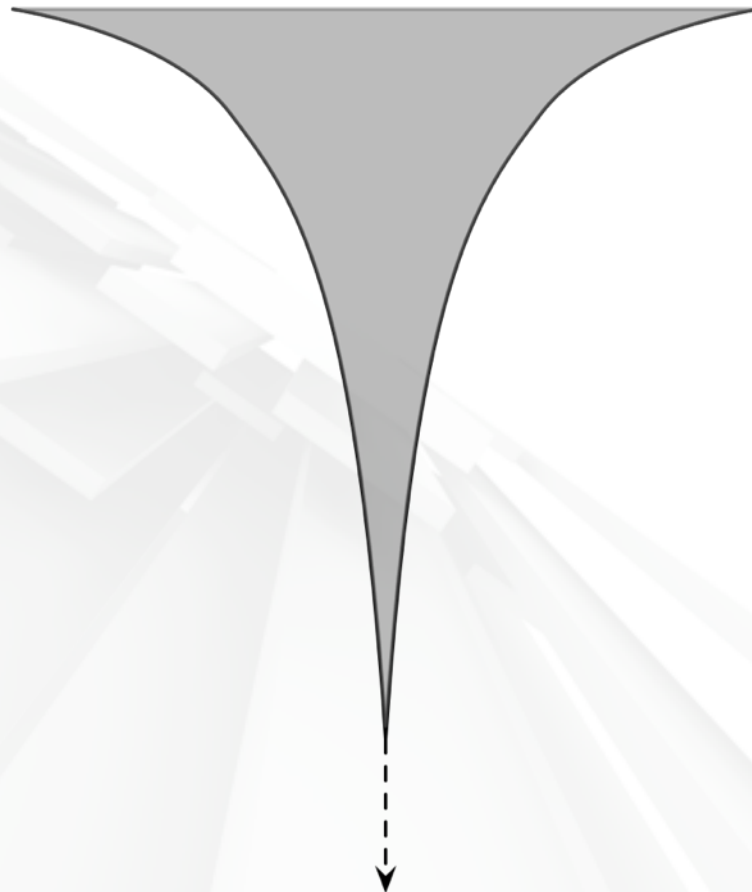# Changing Your Mind

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

**Big Changes**

**Preproduction**

**Production**

**Alpha**

**Beta**

Small Changes

# Changing Your Mind

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

**Big Changes**

Small Changes

Preproduction

Production

Alpha

Beta

Gold

# Changing Your Mind

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

**Big Changes**

Small Changes
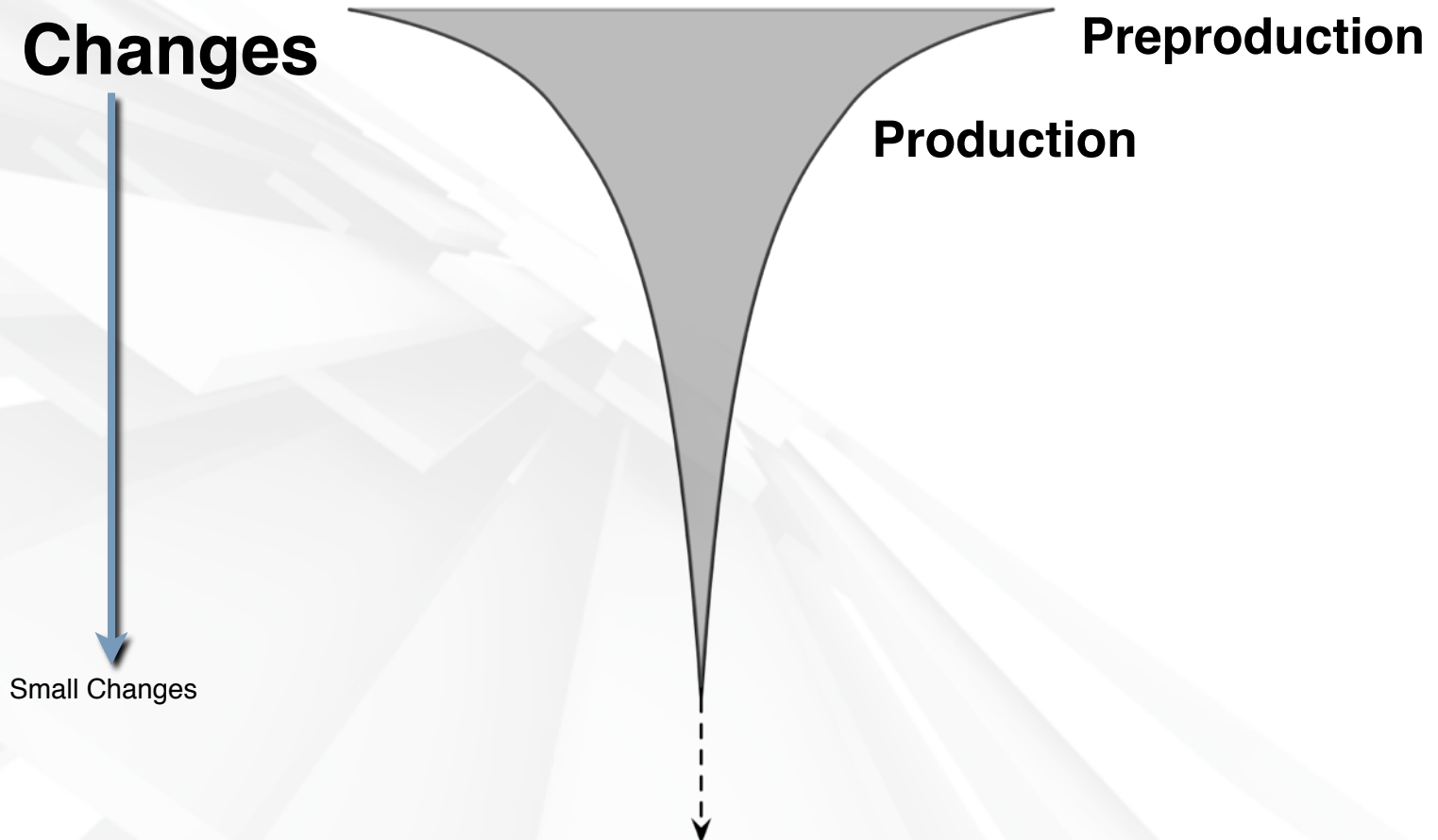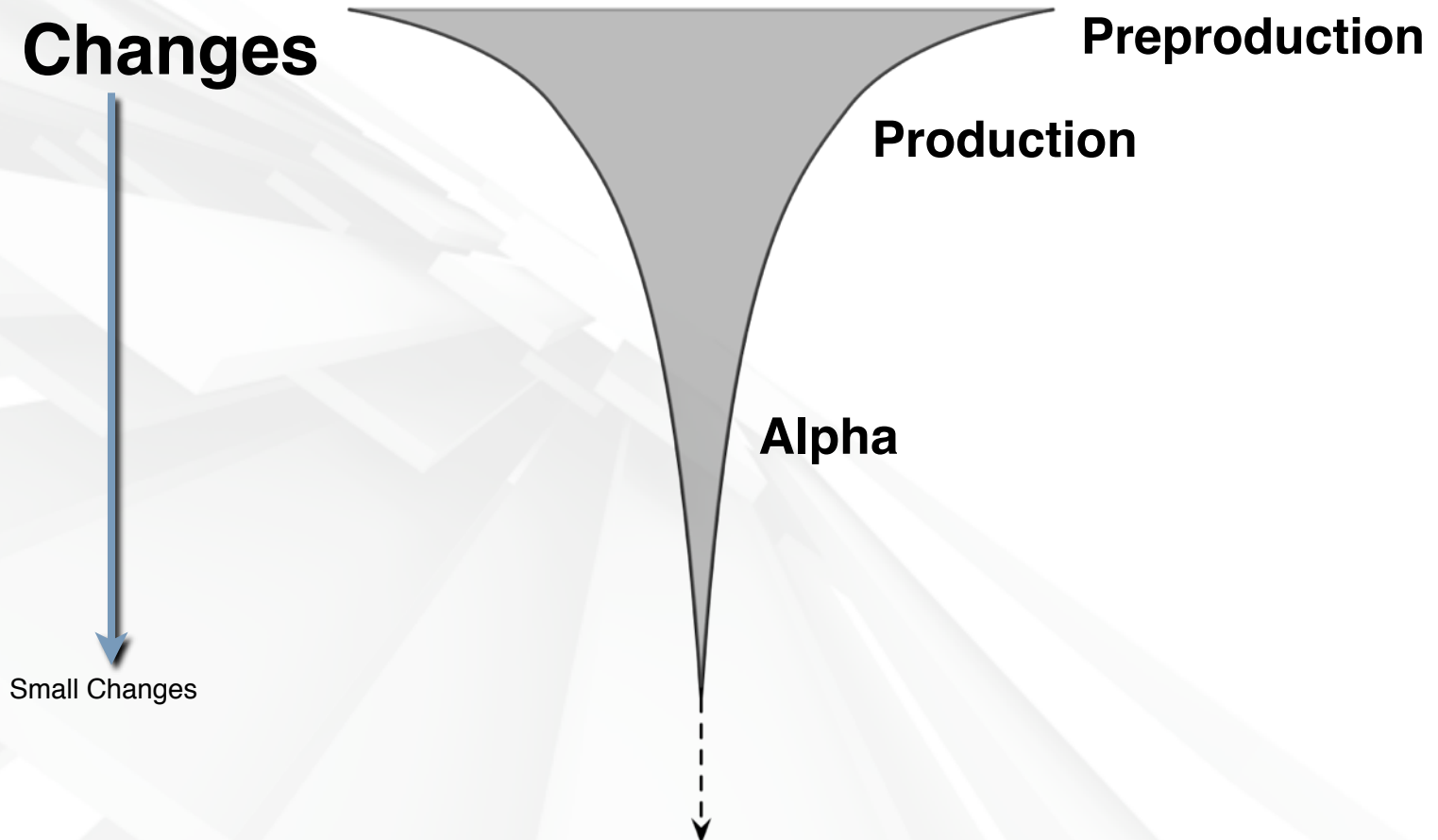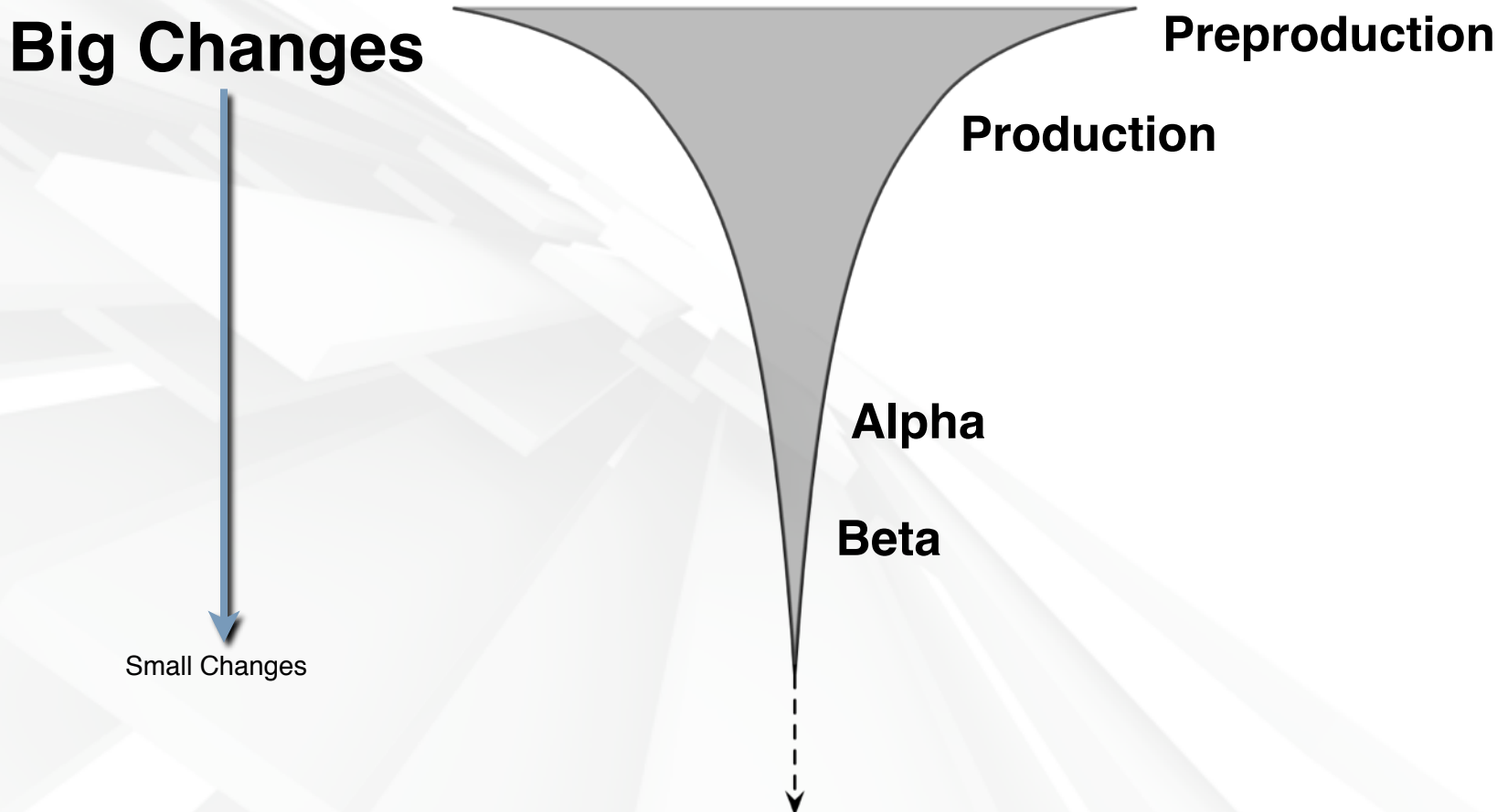
**Preproduction**

**Production**

**Alpha**

**Beta**

**Gold**

**Post-Release**

# Professional Development Phases

# Professional Development Phases

- **Preproduction**

# Professional Development Phases

- **Preproduction**
  - Small team (4-16 people)

# Professional Development Phases

- **Preproduction**
  - **Small team (4-16 people)**
  - **Lots of prototyping, lots of changes to ideas**

# Professional Development Phases

- **Preproduction**
  - Small team (4-16 people)
  - Lots of prototyping, lots of changes to ideas
  - Lots of playtesting by a trusted audience

# 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**

# 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**

# 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**

# 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)

# 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

# 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

# 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

# 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

# Professional Development Phases

- **Alpha**

# Professional Development Phases

- **Alpha**
  - Functionality and game mechanics are 100% locked

# Professional Development Phases

- **Alpha**
  - Functionality and game mechanics are 100% locked
  - No more changes to the systems design of the game

# 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

# 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

# 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

# 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

# Professional Development Phases

- **Beta**

# Professional Development Phases

- **Beta**
  - The game is effectively done

# Professional Development Phases

- **Beta**
  - The game is effectively done
  - Only minor bugs remain

# 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

# 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

# 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!

# 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**

# 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

# 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**

# 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

# 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)

# 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

- **Scoping is the process of limiting your design to what can be reasonably accomplished with the time and resources you have available**

# 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**

# 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**

# 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**

# 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**

# 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**

# 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**

# 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

# Chapter 7 – Summary

- **The Iterative Process of Design is *the* key to good design**

# Chapter 7 – Summary

- **The Iterative Process of Design is *the* key to good design**

- **Great innovations can come from combining disparate ideas**

# 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**

# 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**

# 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**

# 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!**

# 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:**

# 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**