# 02 Game Documentation

Tvorba a dizajn počítačových hier (FMFI)

Návrh a vývoj počítačových hier (FIIT)

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# Documents related to Game Design

- Concept Document
- Game Proposal Document
- Game Design Document (GDD)
- Technical Design Doc
- Art Style Guide / Art Design Doc
- Project Plan & Schedule
- Test Plan

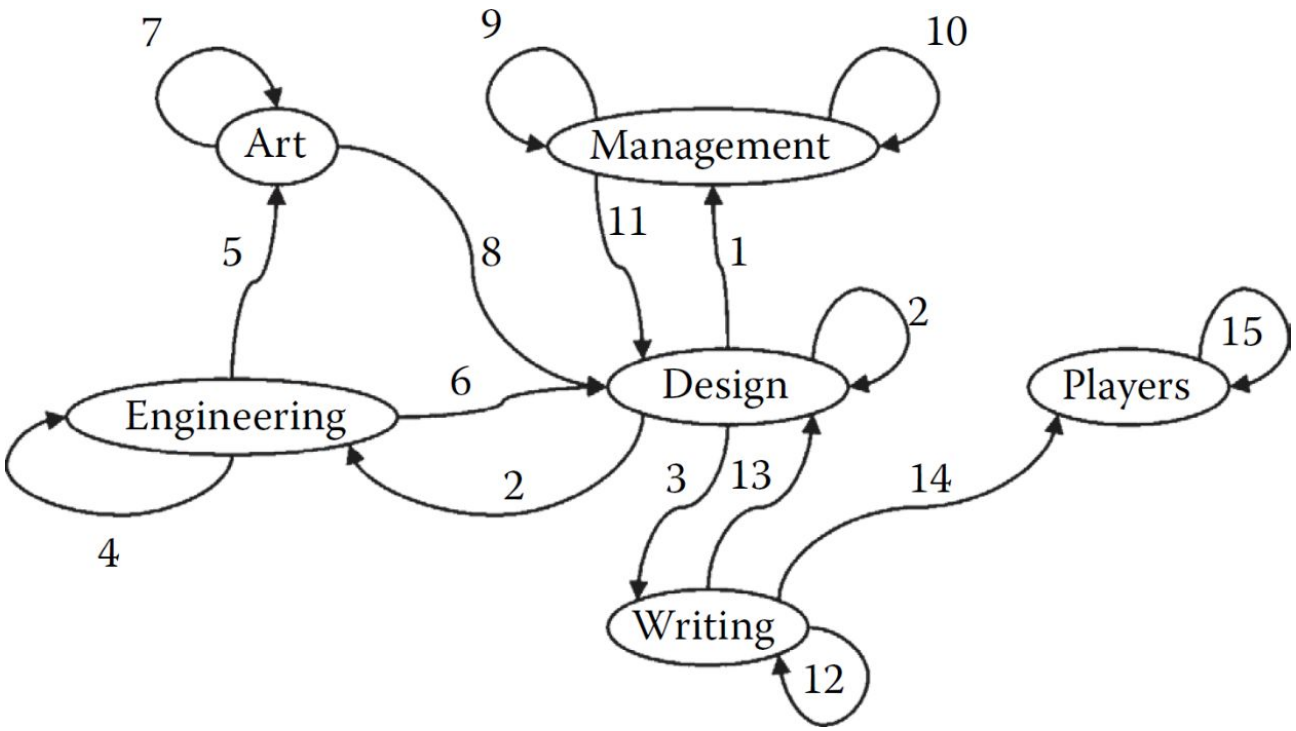



Image from *The Art of Game Design: A book of lenses*

# Pitch Deck (or Concept Doc)

- Convey the goal and purpose of the game
- For management level to help “sell” the game
  - Assess viability, budget, scope & timeline
  - Sell to management/investors/publishers/co-founders
- Usually a presentation, with ~10 slides
  - Concept doc can be 1-2 pages, max. up to 5
- Written by the producer/creative director
- No well-defined form
  - List key things you want to communicate
  - Sort by importance
  - Most important first (since nobody might read the whole thing)

# Pitch Deck contents

1. **Premise** – high level concept, describe your game and how it is unique in a few sentences
2. **Player motivation** – what will motivate the players? How do they win?
3. **Hook/Unique Selling Points** – Why will players pick YOUR game?
   - What makes it different from the rest
4. **Target Market** – Age, Gender, Motivators, Platform, Genre, HW requirements…
   - Target rating (mature content, violence, …)
5. **Competitor & market analysis**
6. **Budget, scope, timeline, revenue projections**
7. **License**

# Pitch Decks

- Loot River: Prototypovanie a príprava pitch decku | Miro Straka, Straka Studio
  - https://www.youtube.com/watch?v=oJ8BJI3uxgQ
- The 10-20-30 rule of PowerPoint
  - https://guykawasaki.com/the_102030_rule/
- Pitch Deck examples
  - https://www.notion.so/Pitch-Decks-f56e38c13fe6417f8379859e74367e1a
- How to pitch your game to a publisher or anyone
  - https://www.tinybuild.com/how-to-pitch-your-game

# Game Design Document (GDD)

- Similar to a *software requirements specification*
- Complete description of the software
  - All functional requirements
  - Detailed description of features
  - Should answer all questions about the game
- The GDD must contain
  - Complete gameplay description – mechanics, interactions
  - Description of all game elements (creatures, NPCs, items, classes, story…)
- Can be extremely long – 50 – 200 pages
- It’s a **living document**
  - Updated throughout development (but some teams stop updating it later on)
  - When a design change occurs, the designer should update the GDD

# GDD

- The GDD is used mainly by the production team
  - **Artists** when creating art
  - **Programmers** when programming features
  - **Designers** when creating new mechanics or improving existing ones
- Should be the “ground truth” for the team
  - When something is unclear, the GDD should have the answer
  - If it does not, the designer should update it
- The form is relatively loose
  - Certain sections are irrelevant for certain games
  - There is no magic template
- Purposes: **memory** and **communication**
  - You make lots of decisions and you might forget them

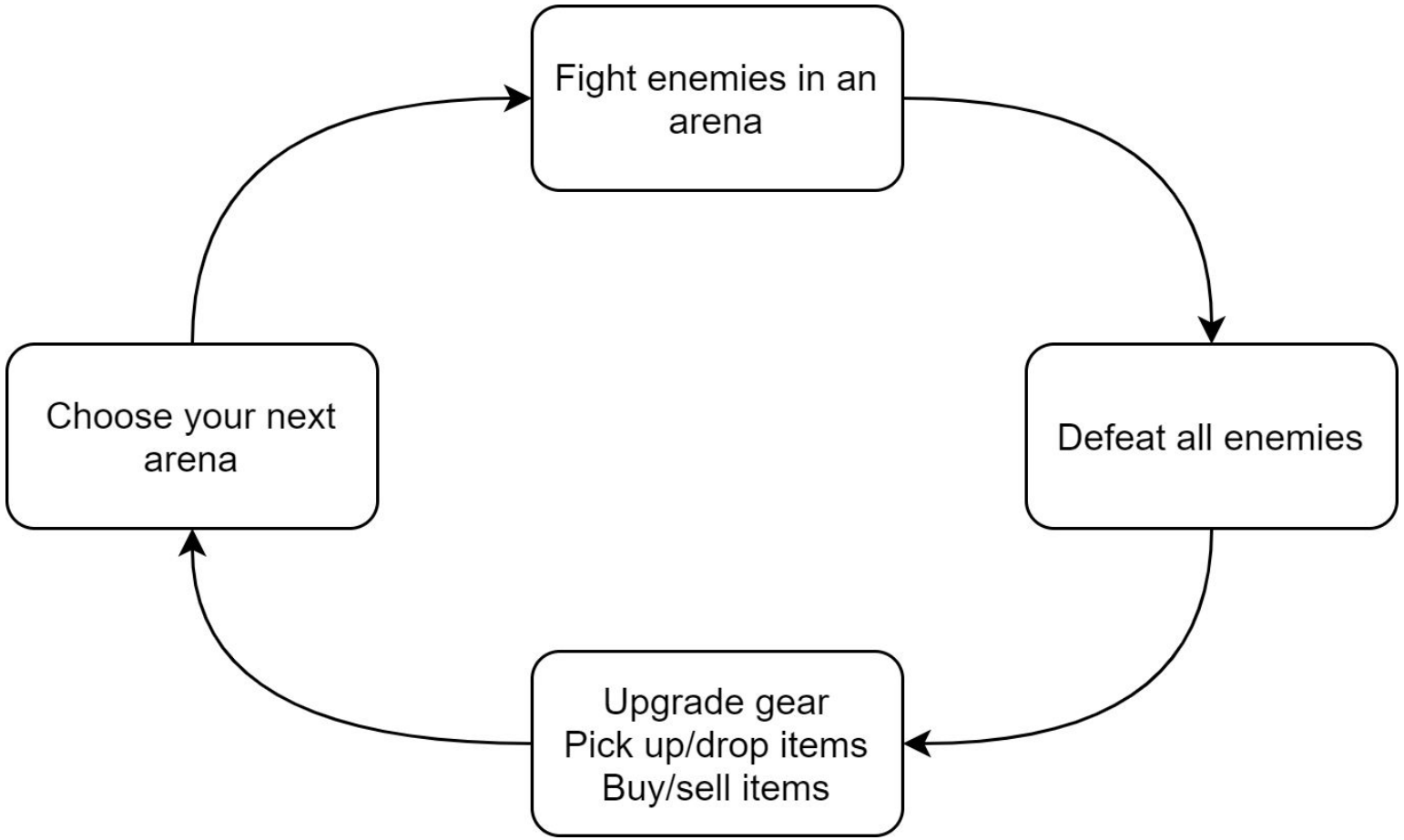
# GDD forms

- Google Docs/Notion
  - **Pros:** Easily shareable, can link to any section, quick to prepare, all in one place
  - **Cons:** Google Docs struggles with larger documents (50+ pages with images), linear reading
  - My experience: people use a ton of separate Google Docs and link between them
- Wiki system
  - **Pros:** More structured, can link very well, quickly editable, good revision history
  - **Cons:** Does not have everything in one place, slower setup, might be harder to edit/maintain
- Miro (single visual board)
  - **Pros:** Everything in one place, more visual, less structured, *able to integrate detailed documentation into diagrams*
  - **Cons:** If you do not maintain structure, it can be very confusing and hard to navigate

# GDD Structure

- Core gameplay description
- Core game loop
- Character, Controls, Camera
  - Player tools
  - Challenges (problems to solve)
- Game World
  - All static & dynamic objects and their behavior
    - Pickups, weapons, enemies, enemy AI…
  - List of levels/locations
- User Interface
  - All screens, UIs, HUDs
- Story, Lore, NPCs…

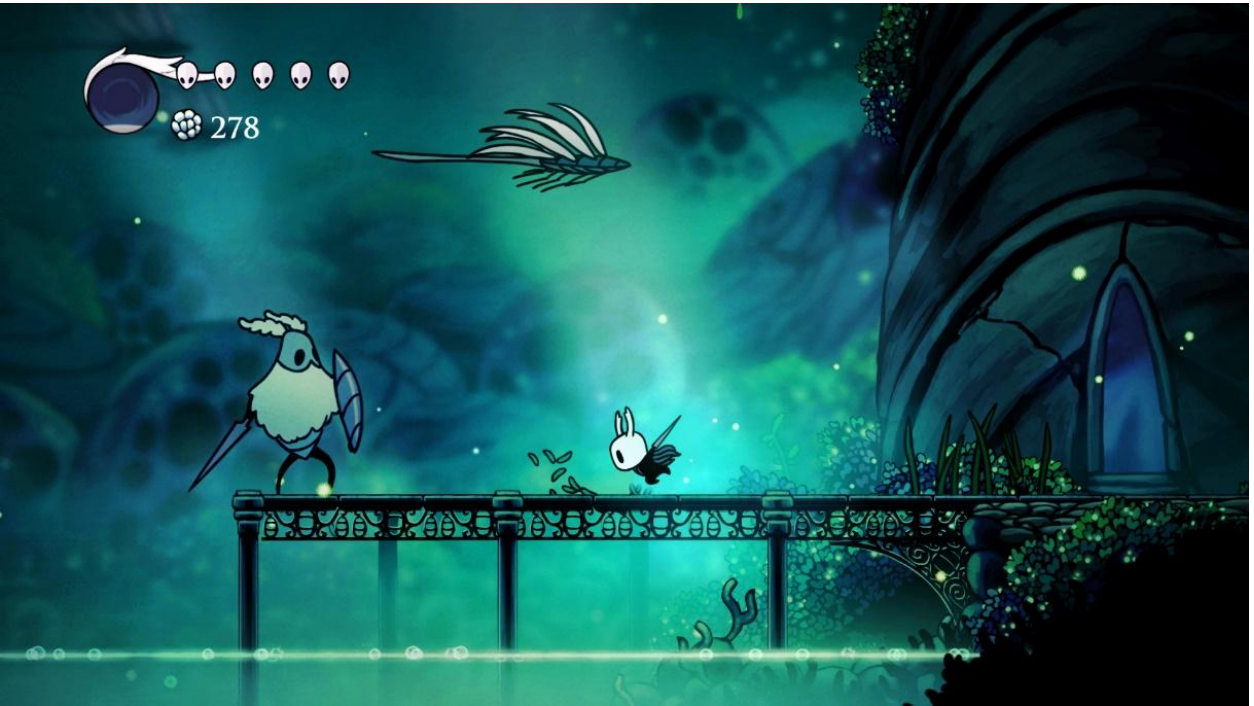
# Core game loop



# 2D Camera

Isometric

Side-scroller



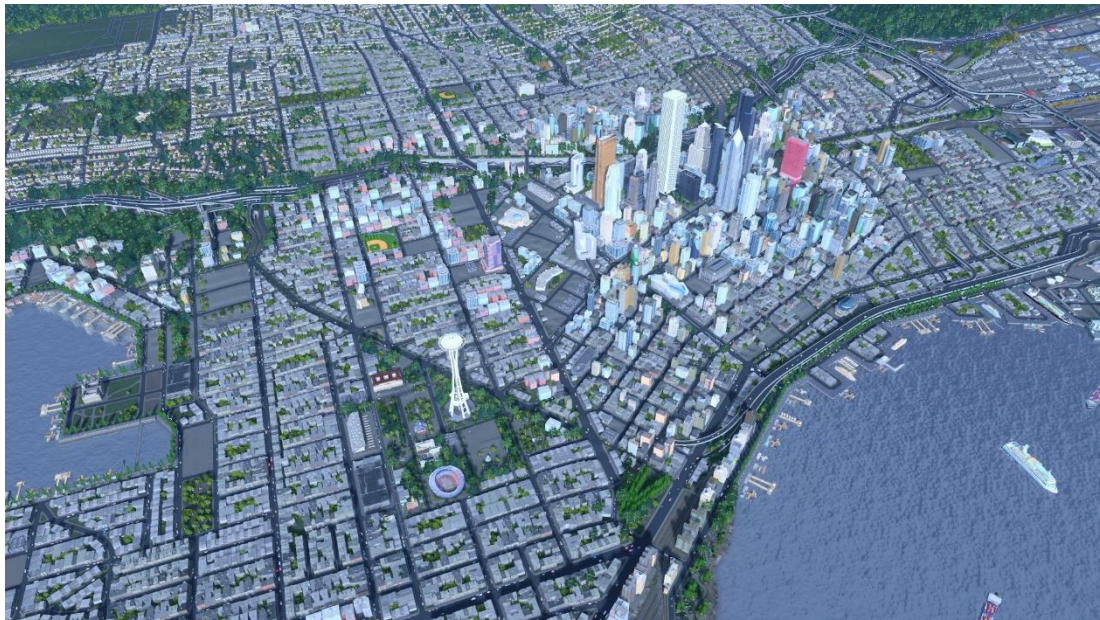

Top-down

# 3D Camera

1st person

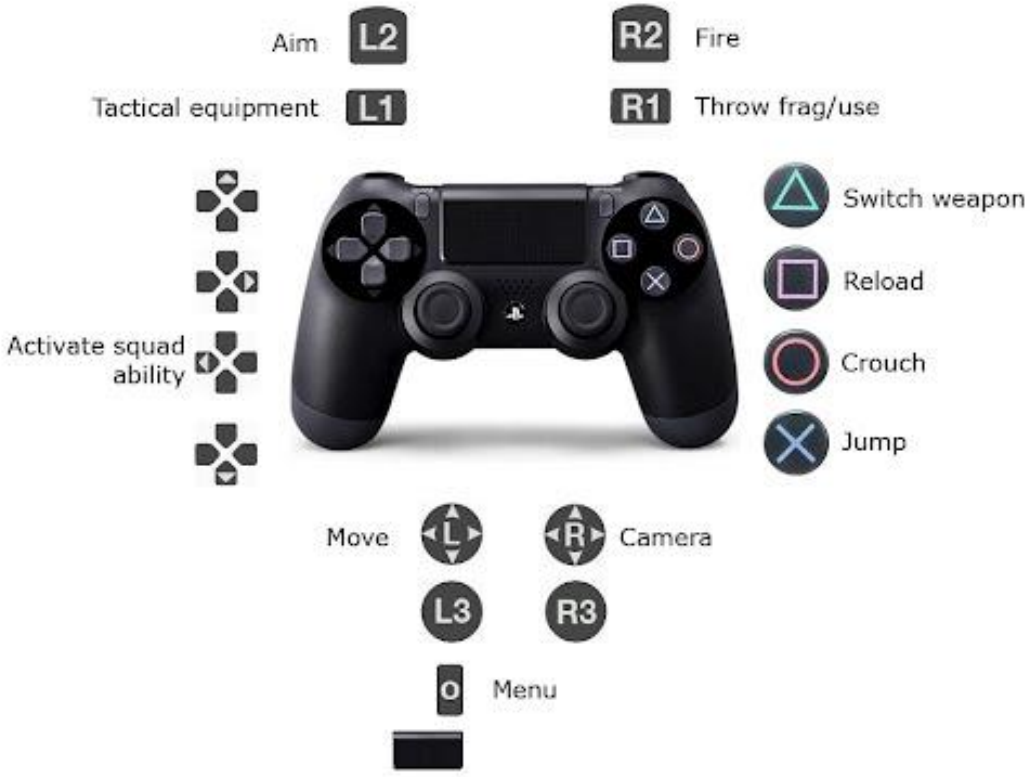
3rd person

Top-down



# Controls

- PC or Console or Touchscreen or VR or Gyro or GPS or …
- What is controllable & how




Call of Duty. WWII by GameControls.net

# Characters

- Single character (avatar) – one person
- Multi character – party
- Lots of units – commander

# Characters

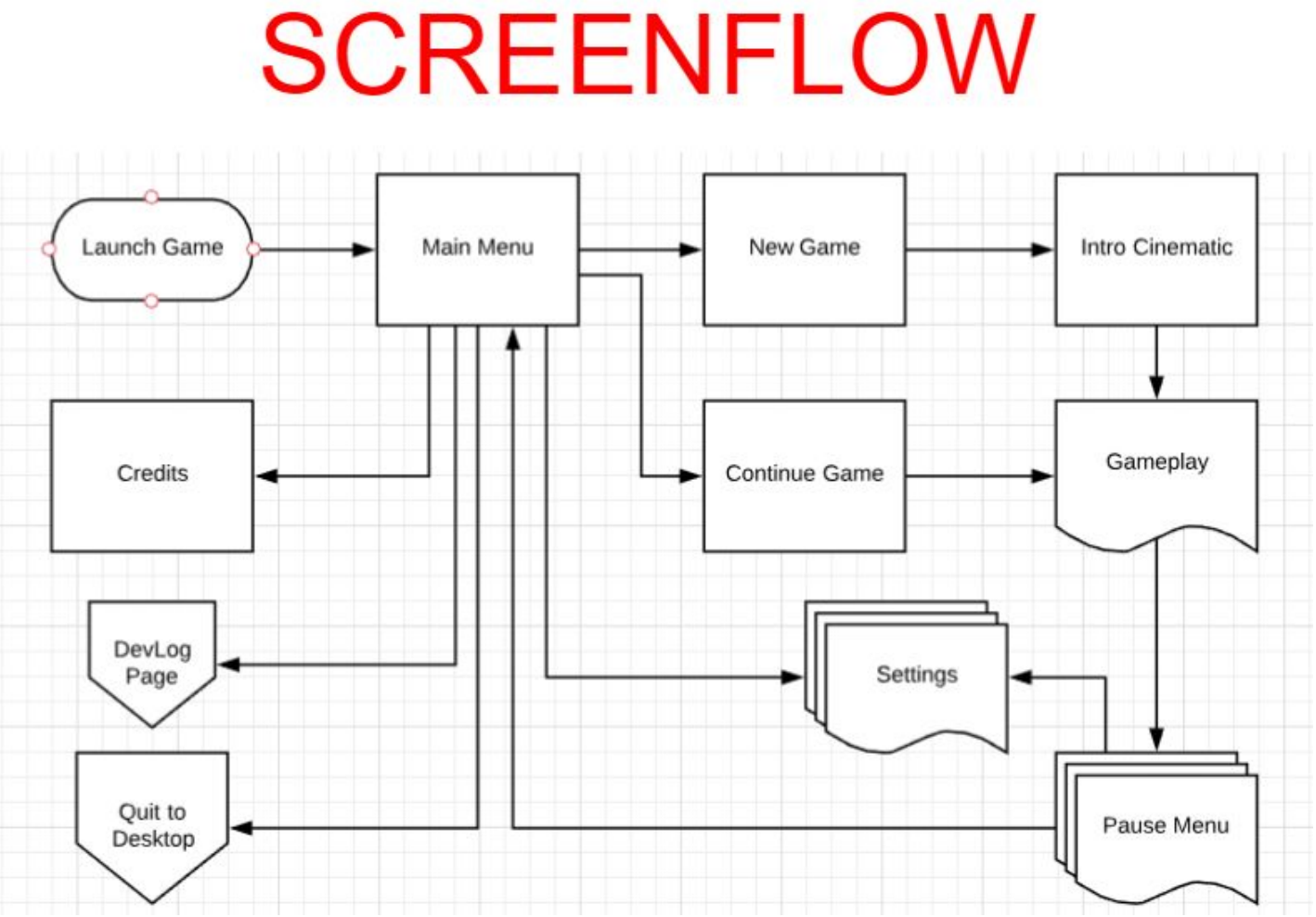
- Specific or customizable?
  - Visuals
  - Stats

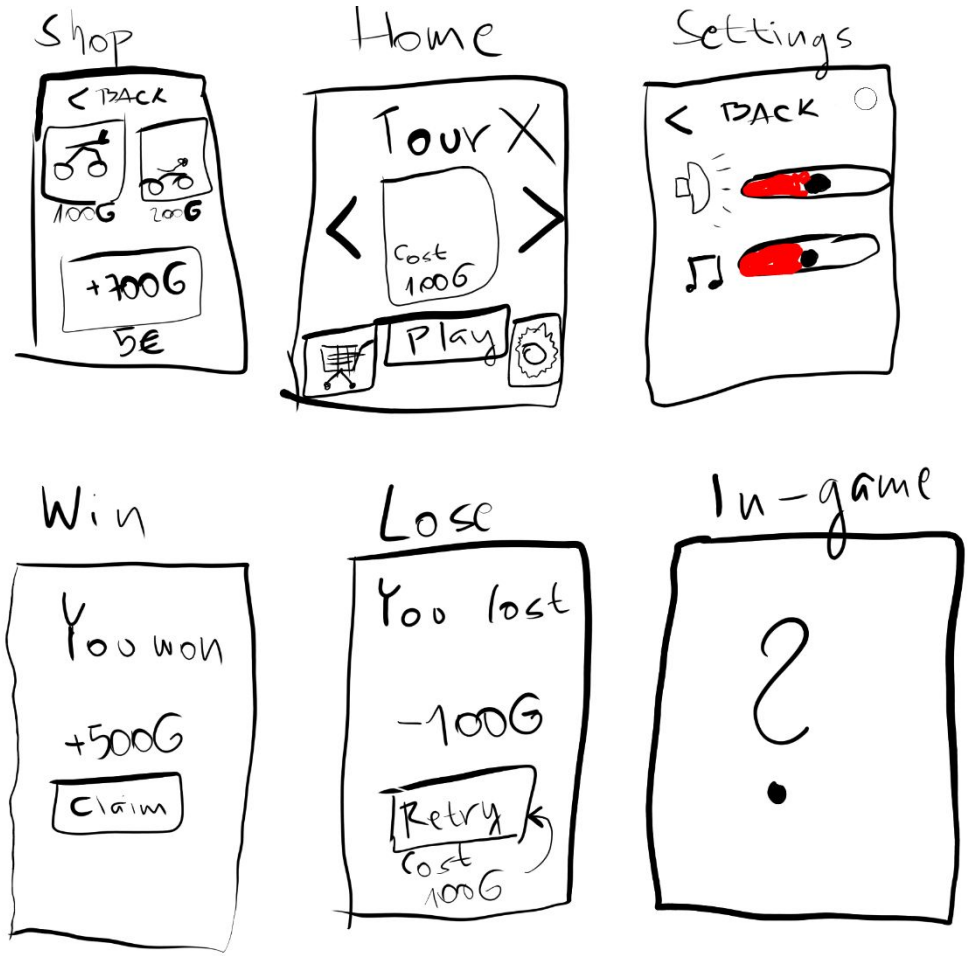
# What are the verbs?

- First person shooter
  - **Run**
  - **Walk**
  - **Jump**
  - **Shoot**
  - **Aim**
  - **Pick up** weapon
  - **Reload…**

- Real-time Strategy
  - **Build** building
  - **Upgrade** units
  - **Command** armies
  - **Attack** enemy bases
  - **Strategize**
  - **Plan**…

# UIs


SCREENFLOW
Launch Game
Main Menu
New Game
Intro Cinematic
Credits
Continue Game
Gameplay
DevLog Page
Settings
Quit to Desktop
Pause Menu


Shop
< BACK
100G
200G
+700G
5€
Home
Tour X
Cost 100G
Play
Settings
< BACK
Win
You won
+500G
Claim
Lose
You lost
-100G
Retry
Cost 100G
In-game
?

# 1 Picture > 1000 words

# Art Design Document (ADD)

- Describe art that will be used throughout the game
- Art style, mood boards
- Color palettes
- 2D sprites, 3D models
- Animation
- Techniques, software, workflows, limitations
- Visuals & audio

# Technical Design Document (TDD)

- Describes the engine/technical solutions on which the game will run
- Comparison to other engines on the market – why did we pick our engine
- Technology production path
  - How they will get from concept to software
- Specific requirements and features, HW & SW
- Refers to the GDD/ADD
- Closer to the software requirements specification
- Farther from the concept document

# Production Plan

- Required team & allocation
- Tasks & time estimates
  - Gantt chart
- When will we ship?
- Marketing strategy
- Post-launch plan
  - DLCs, LiveOps...

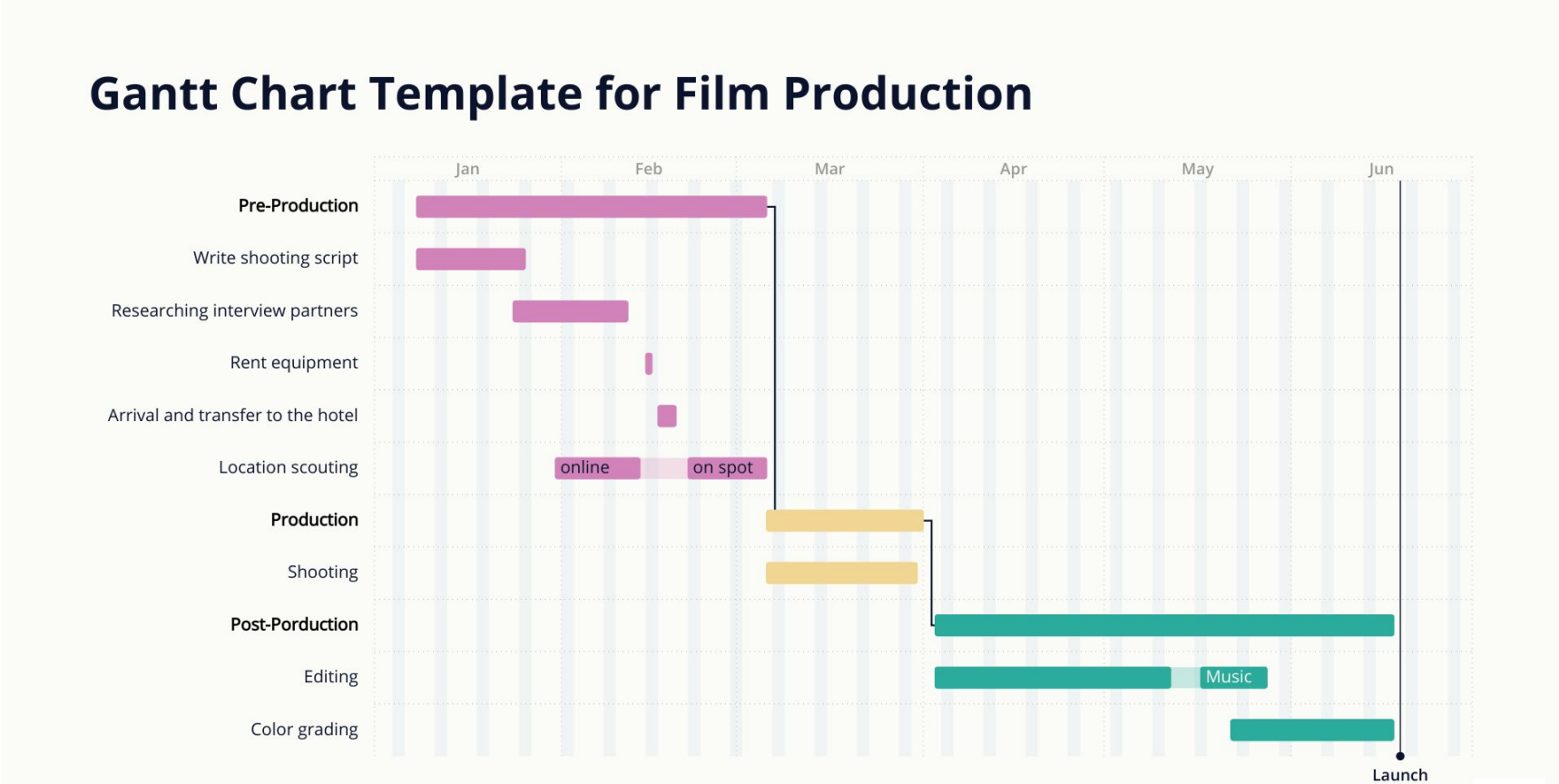
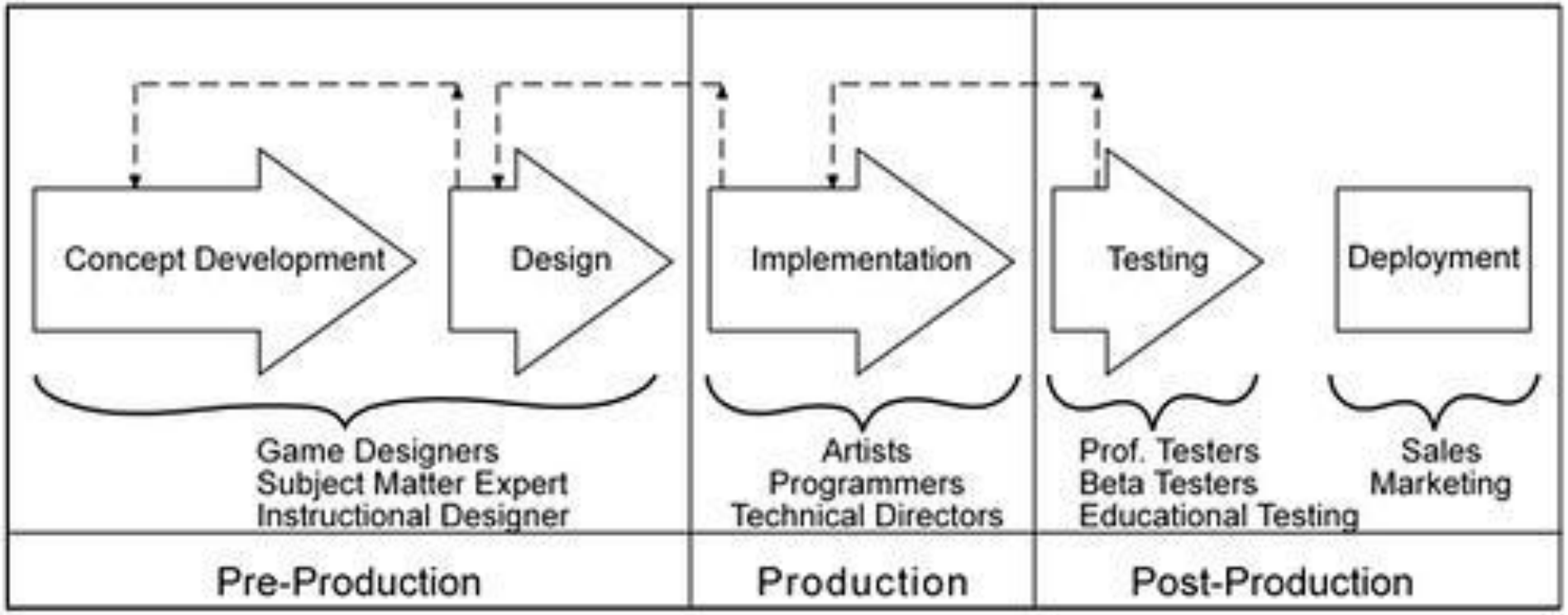



Image from https://commons.wikimedia.org/wiki/File:Gantt_Chart_Template_for_Film_Production.png

# Game Development Stages




- Image from https://digitalworlds.wordpress.com/2008/04/10/the-process-of-game-creation-the-game-design-document/

# Development phases

- **Concept –** Start with a small team, work on a concept document
- **Prototype** – not only gameplay, also art
  - *“A working piece of software that captures onscreen the essence of what makes your game special, what sets it apart from the rest, and what will make it successful.”*
- **Pre-production –** Create GDD, TDD, ADD, mechanics
- Production – create all content
- Alpha, Beta, Gold
- Post-production

# Problem & Solutions

- Waterfall is not cool – tons of issues, especially for gamedev
- Moving towards Agile/Scrum – very cool
- Game Development is inherently iterative
- Need to test various systems
  - **Do players like XYZ?**
  - Are the graphics good?
  - Is the music suitable?
  - Are the controls good?
- **Build-Measure-Learn**
  - Read “Agile Game Development with Scrum”

# Example Concept Documents and GDDs

Super Mario, Race’n’Chase, BioShock, …

# References


- http://www.gamasutra.com/view/feature/131791/the_anatomy_of_a_design_document_.php
- http://www.gamedev.net/page/resources/_/creative/game-design/tom-slopers-format-for-game-design-specifi-r243
- http://sloperama.com/advice.html
- http://www.cs.tufts.edu/comp/150CIS/AnAntsLife/AnAntsLife-GameDesignDocument.pdf
- http://www.scribd.com/doc/53563149/Grand-Theft-Auto-Design-Document
- http://www.gamepitches.com/
- http://code.tutsplus.com/articles/effectively-organize-your-games-development-with-a-game-design-document--active-10140

# References (2)


- Novak, J. (2012). *Game Development Essentials : An Introduction*. Clifton Park, N.Y: Delmar. 3rd ed.
  - Chapters 1, 2, 3, 4, 11
  - Further reading: Chapters 10, 12
- Adams and Dormans (2012). *Game Mechanics: Advanced Game Design (Voices That Matter)*.
  - Chapter 1 – Designing Game Mechanics
- Keith, C. (2010). *Agile Game Development with Scrum*. Addison-Wesley
  - Just read the whole book!
- Schell, J. (2014). *The Art of Game Design: A Book of Lenses*. A K Peters. 2nd ed.
  - **Must read for every single game dev**