



Into the Breach Design Postmortem

Matthew Davis
Subset Games

GAME DEVELOPERS CONFERENCE

MARCH 18–22, 2019 | #GDC19

Subset Games
Matthew Davis
Programmer / Designer

Justin Ma
Artist / Designer

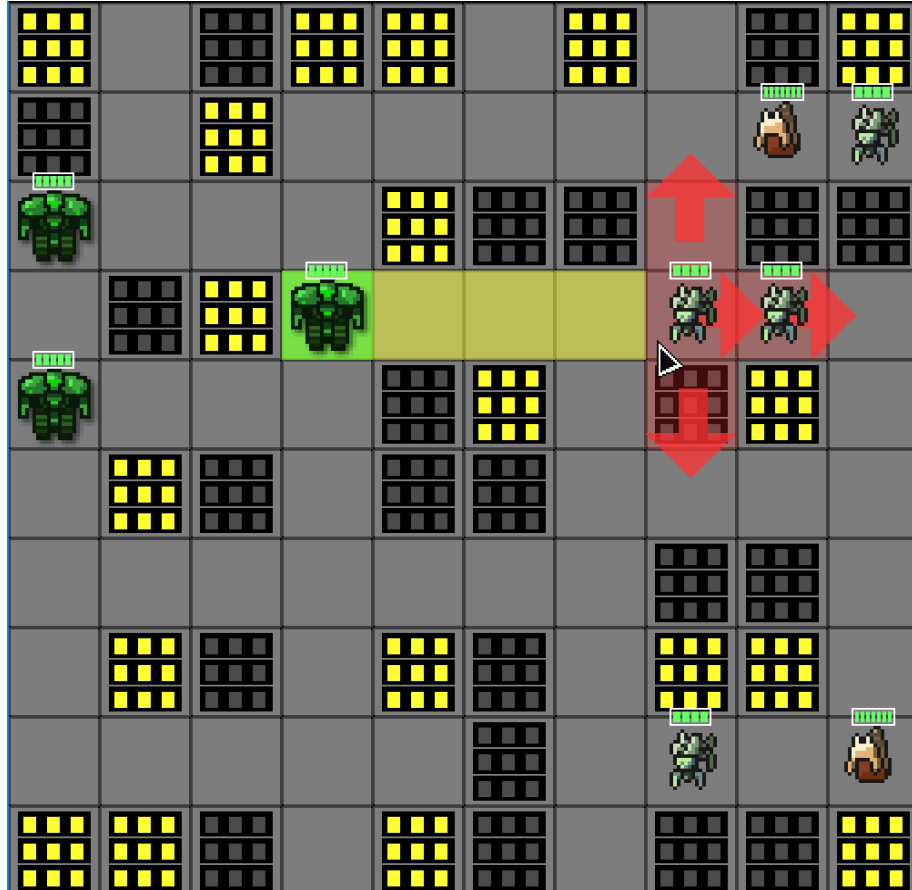
2011 - 2013 FTL + Advanced Edition

2014 – 2018 Into the Breach



Into the Breach Design Postmortem

Why did this take 4 years?



Original Prototype



Into the Breach

Designing with Constraints

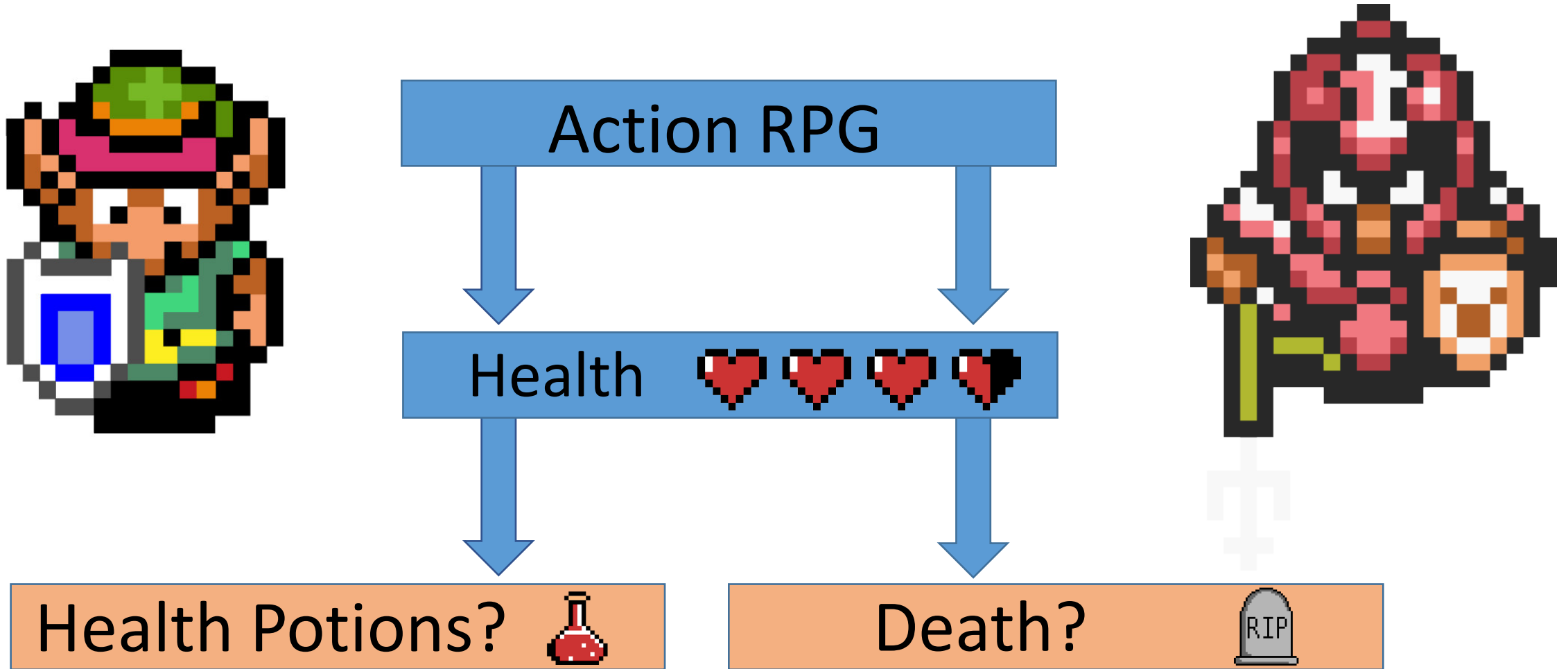
Introduction

- Find key designs to hold constant
- Follow the greater design mandated by those constants
- “Following Design” instead of “Creating Design”



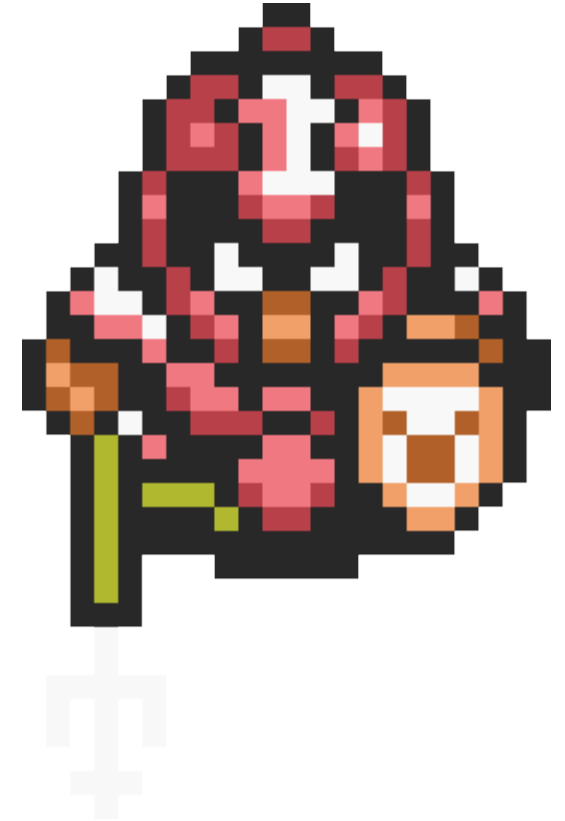
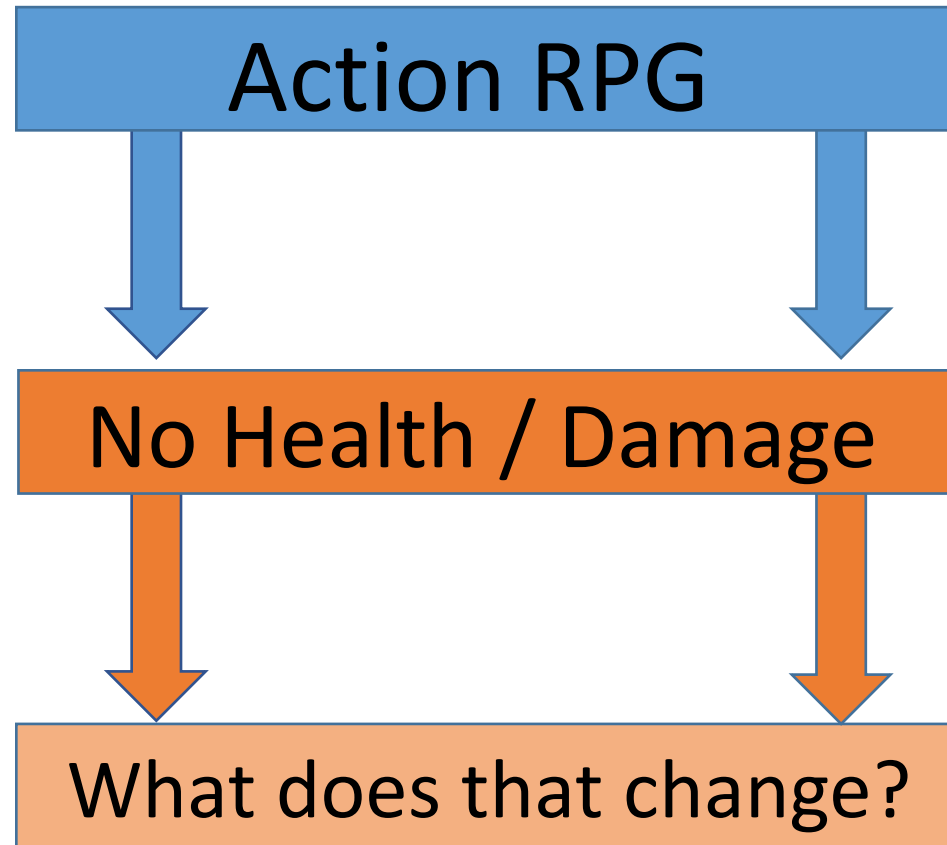
Designing With Constraints

A Trivial Example



Designing With Constraints

A Trivial Example



Combat

Finding the Constraint

Finding the Constraint

Subset Games Constraints

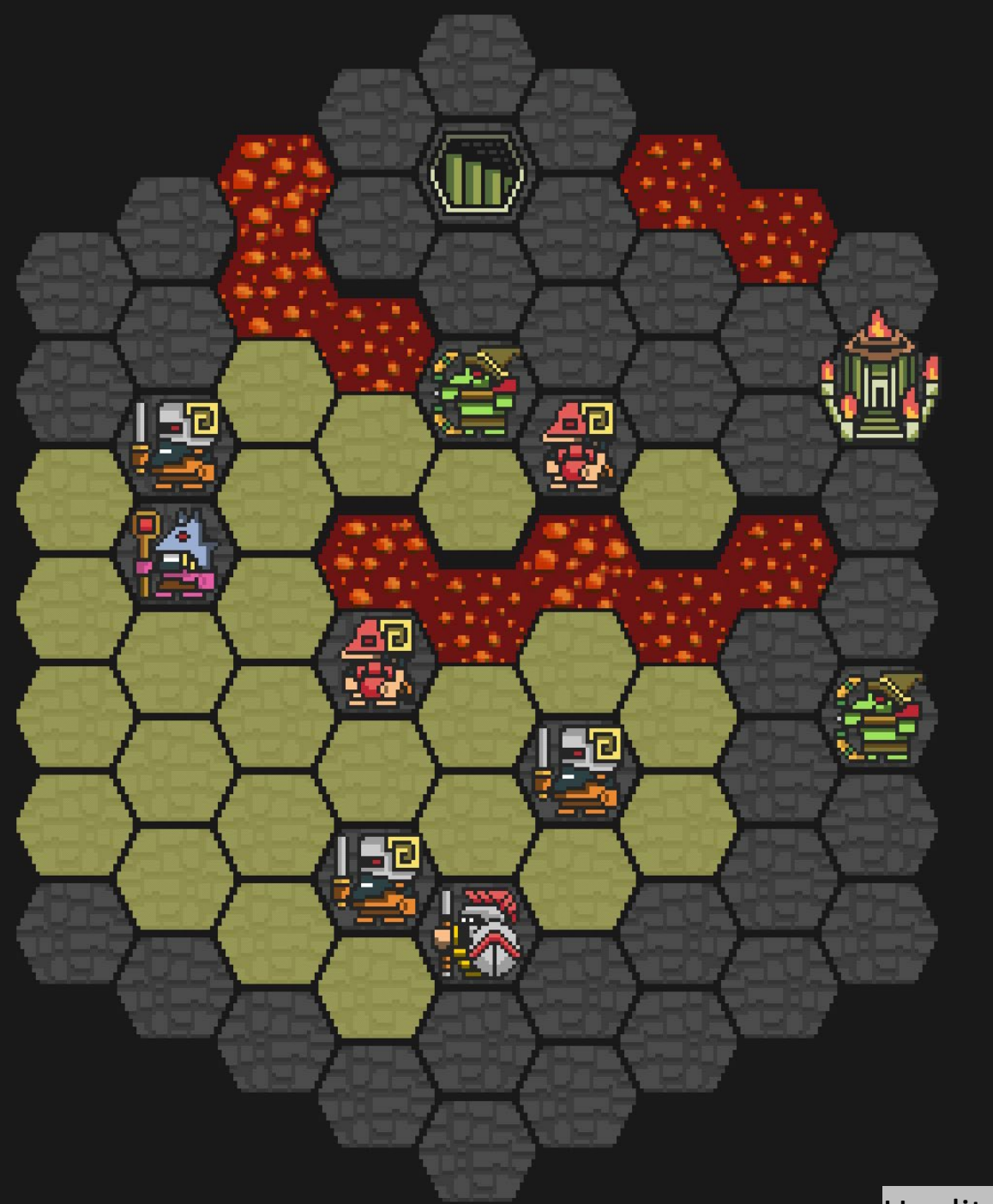
- Practical constraint: team size
- Subjective constraints:
 - Readability
 - Limited menus
 - Low-Numbers
 - Streamlined
 - Minimize Wasted Time
 - Short Experiences
 - Interesting Choices



Finding the Constraint

Core Game Idea

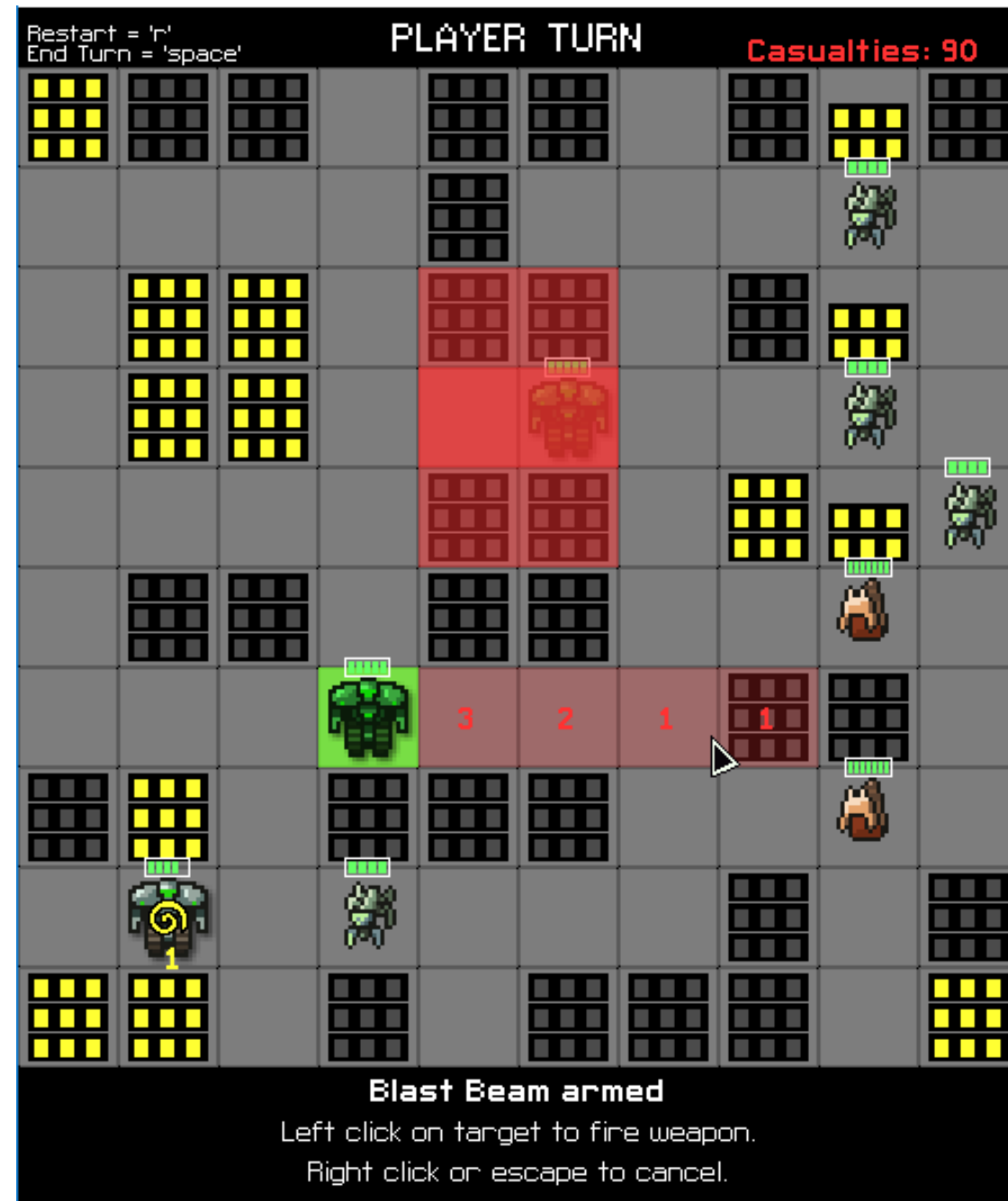
- Genre
 - Turn-based, Grid-base
 - Reduce Random Chance
- Thematic
 - Collateral Damage
 - Mechs Vs. Monsters



Finding the Constraint

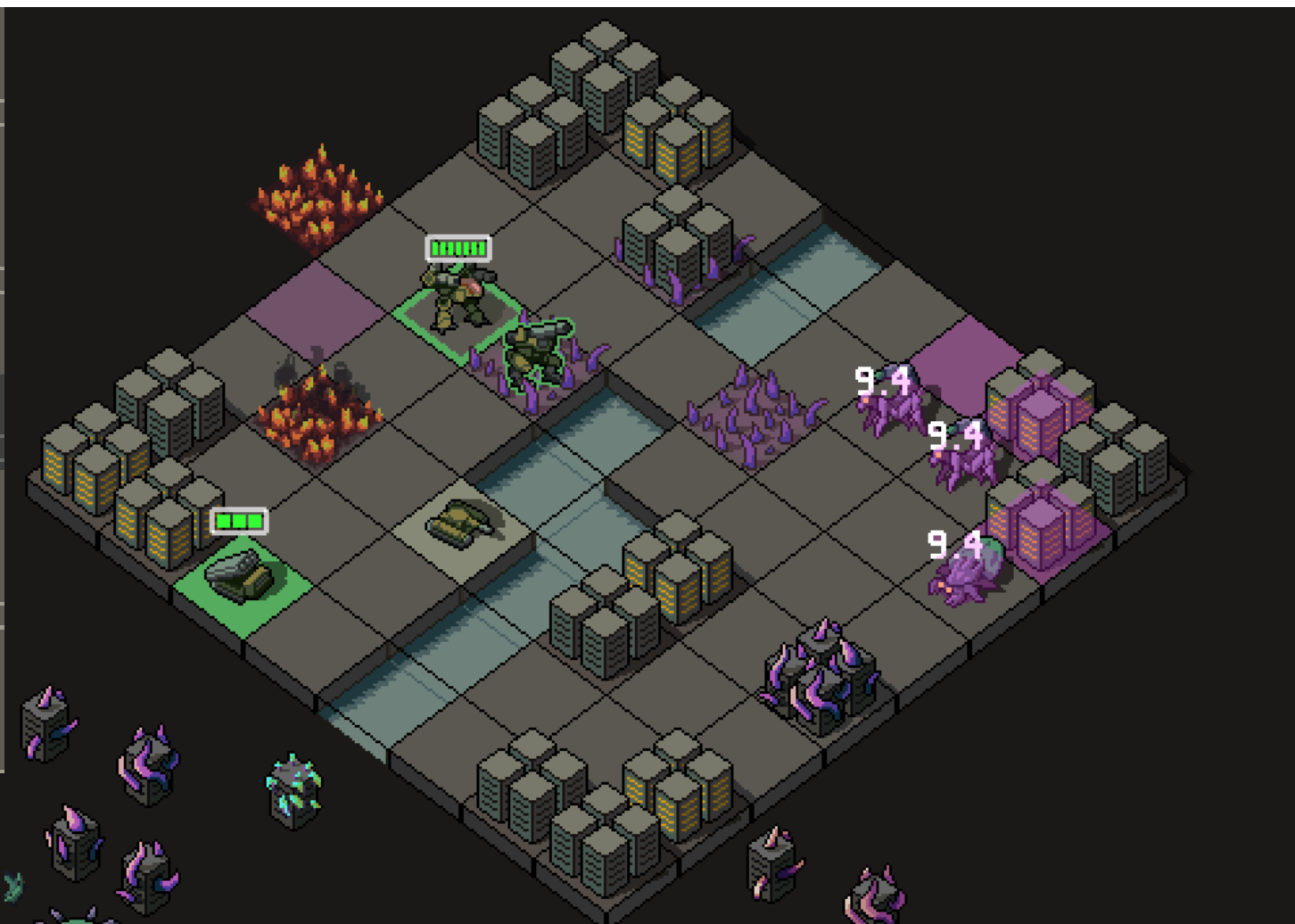
The Prototype

- Standard Tactics Formula
- Telegraphed attack existed
- Building damage was a factor
- Familiar weapon designs



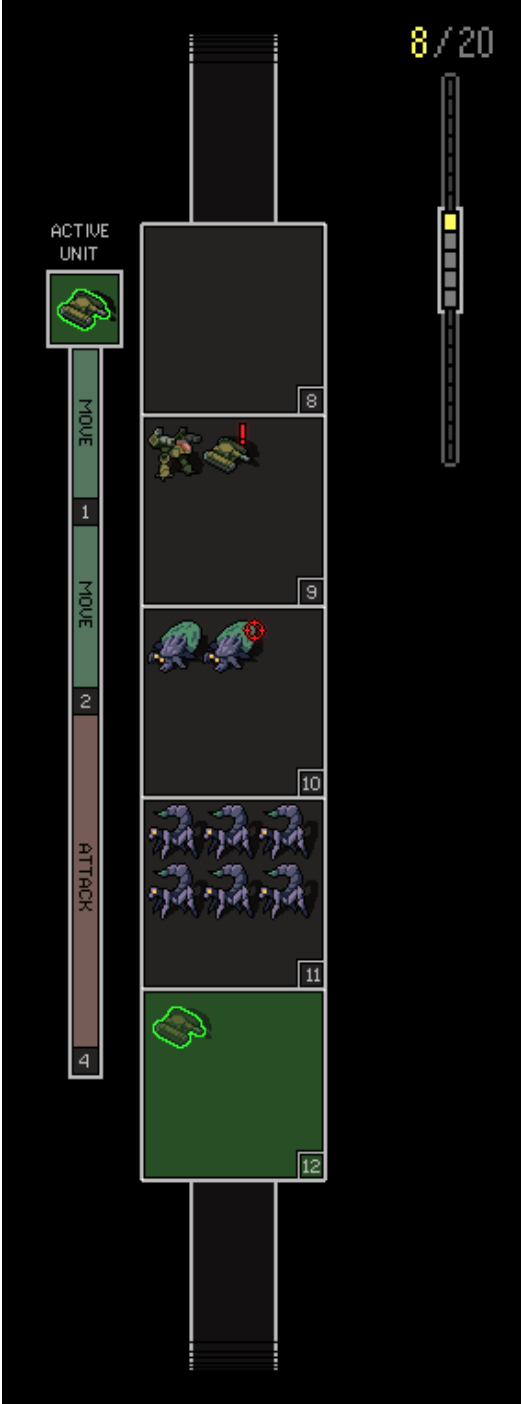
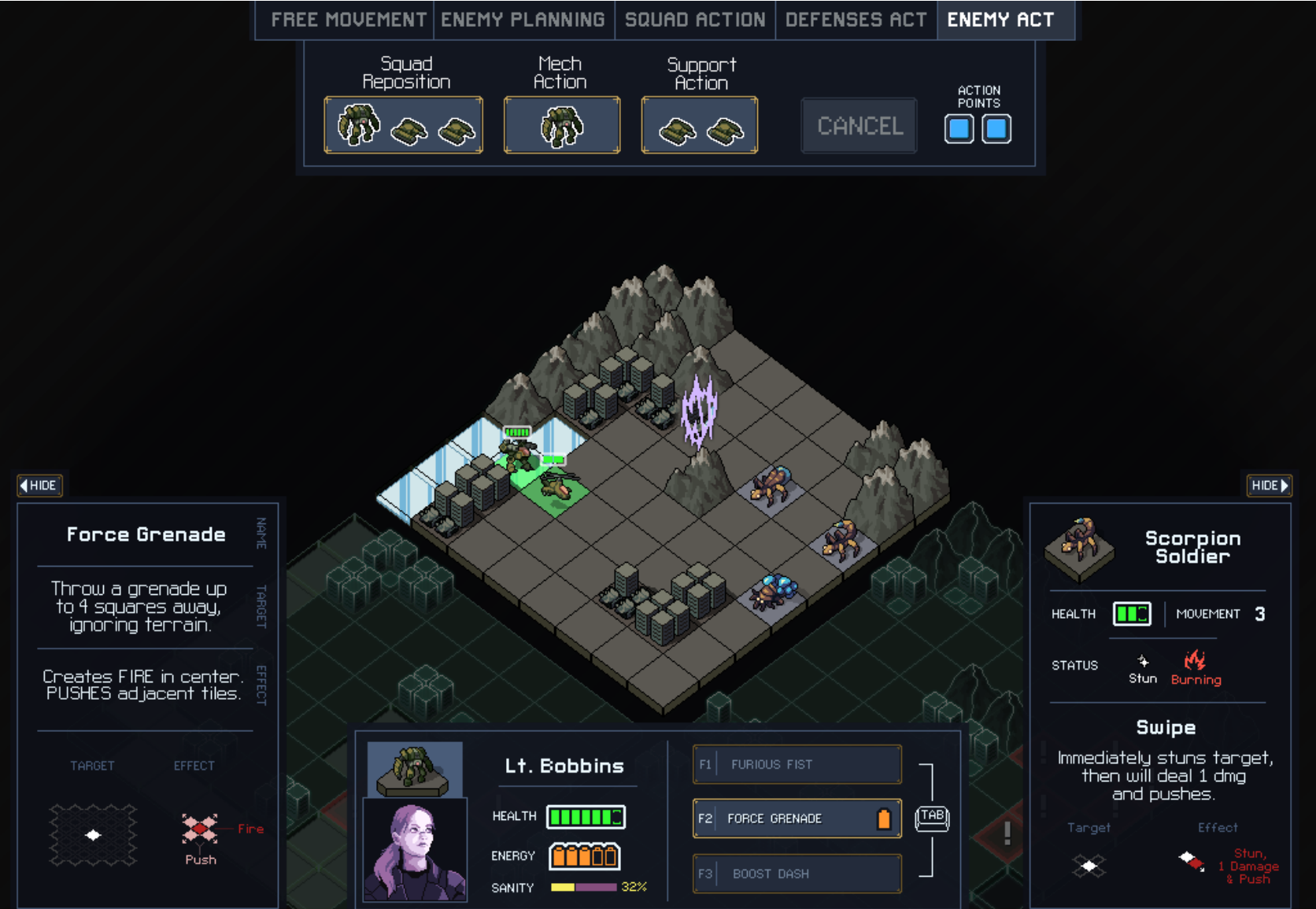
Finding the Constraint

Playing with Time



Finding the Constraint

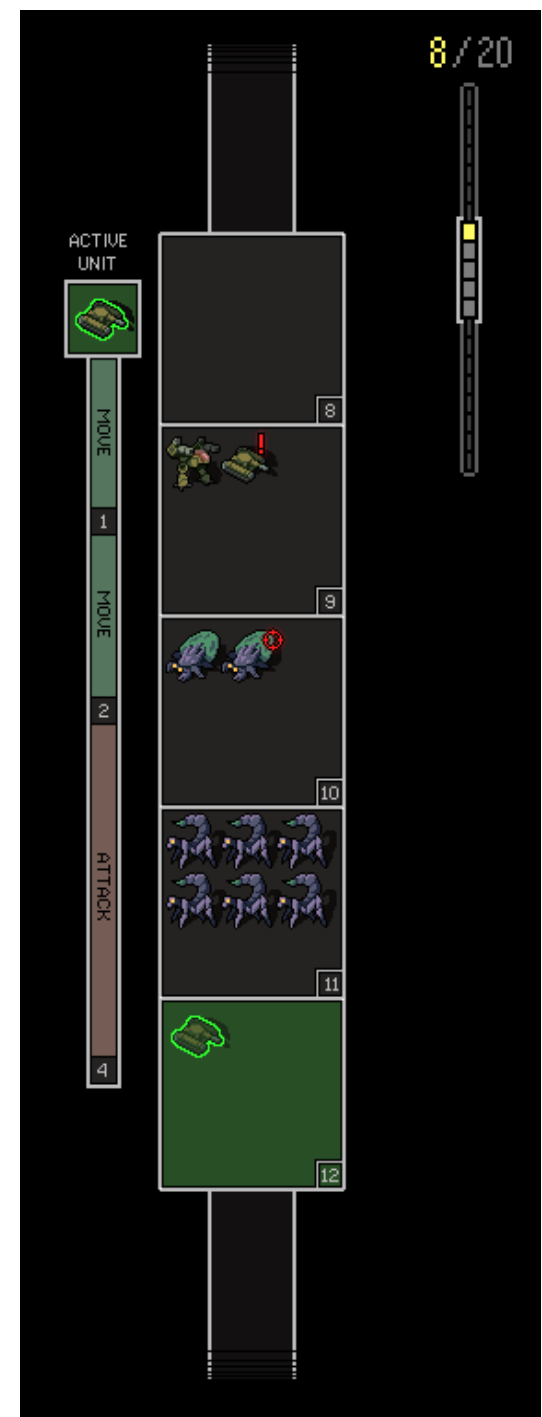
Playing with Turn Order



Finding the Constraint

Playing with Turn Order

- Complex rules, but not deep
- Genre Standards exist for a reason



Finding the Constraint

Telegraphed Attacks

- All enemy attacks shown
- No hit / miss chance
- Completely deterministic (during player turn)

-
- How does this guide the design?



Combat

Following the Design

Following the Design

Tactics Game Threat



Advance Wars



XCOM: Enemy Unknown

Following the Design

Telegraphed Attacks Changes Threat



Following the Design

Telegraphed Attacks Changes Threat

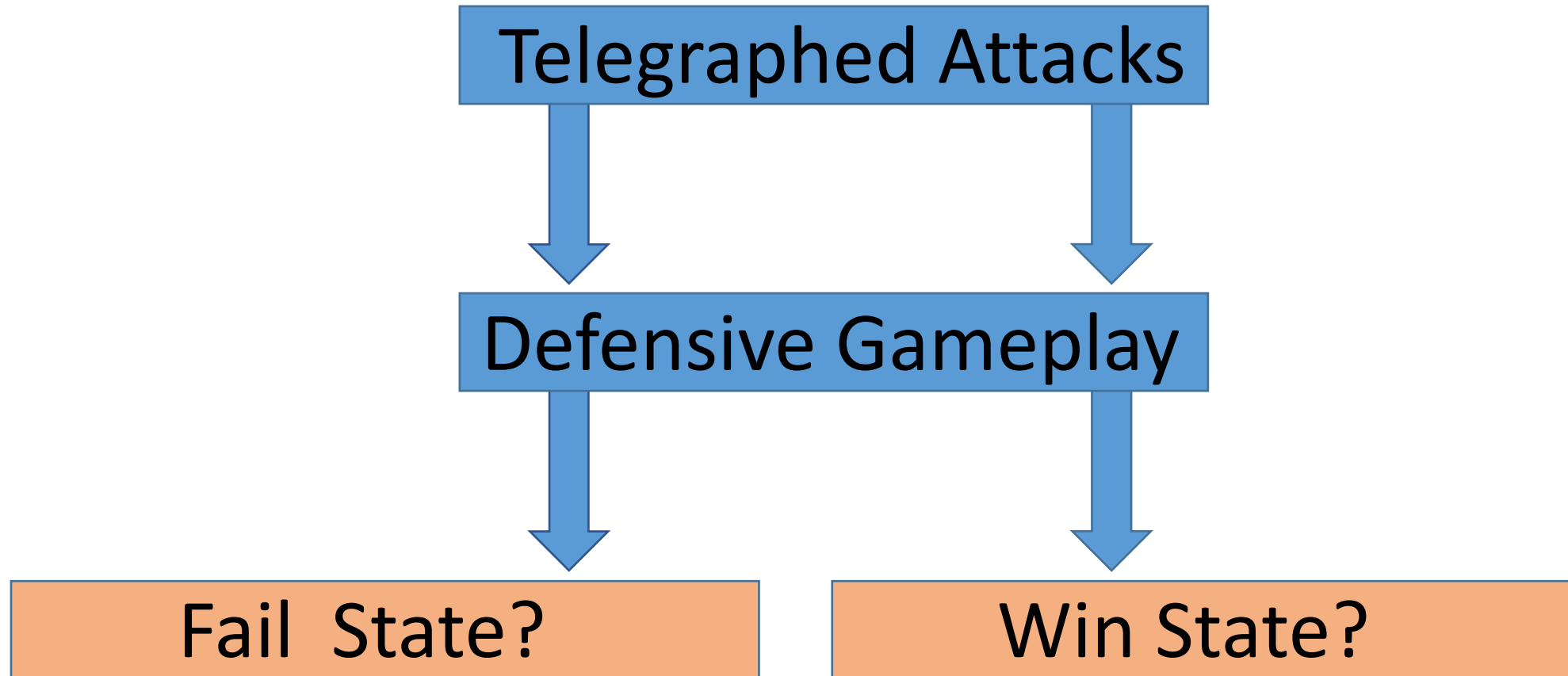


Following the Design

Defenseless Objects



Following the Design



Following the Design

Rethinking the Win-State



Killing enemies isn't as fun as manipulating them.

Following the Design

Turn Limit per Battle

- We could make more interesting, non-lethal weapons
- Bonus benefit of streamlining
- “Micro-battles” were fun



PLAYER TURN

2 Turns Remaining



Following the Design

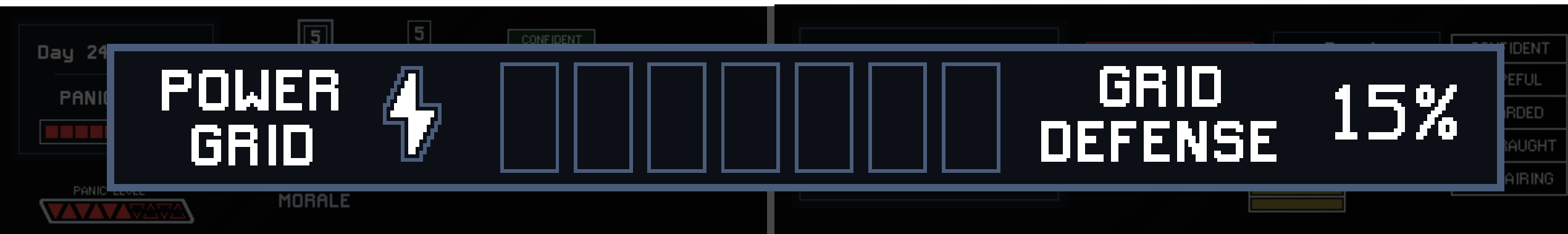
Redesigning the Fail-State



Following the Design

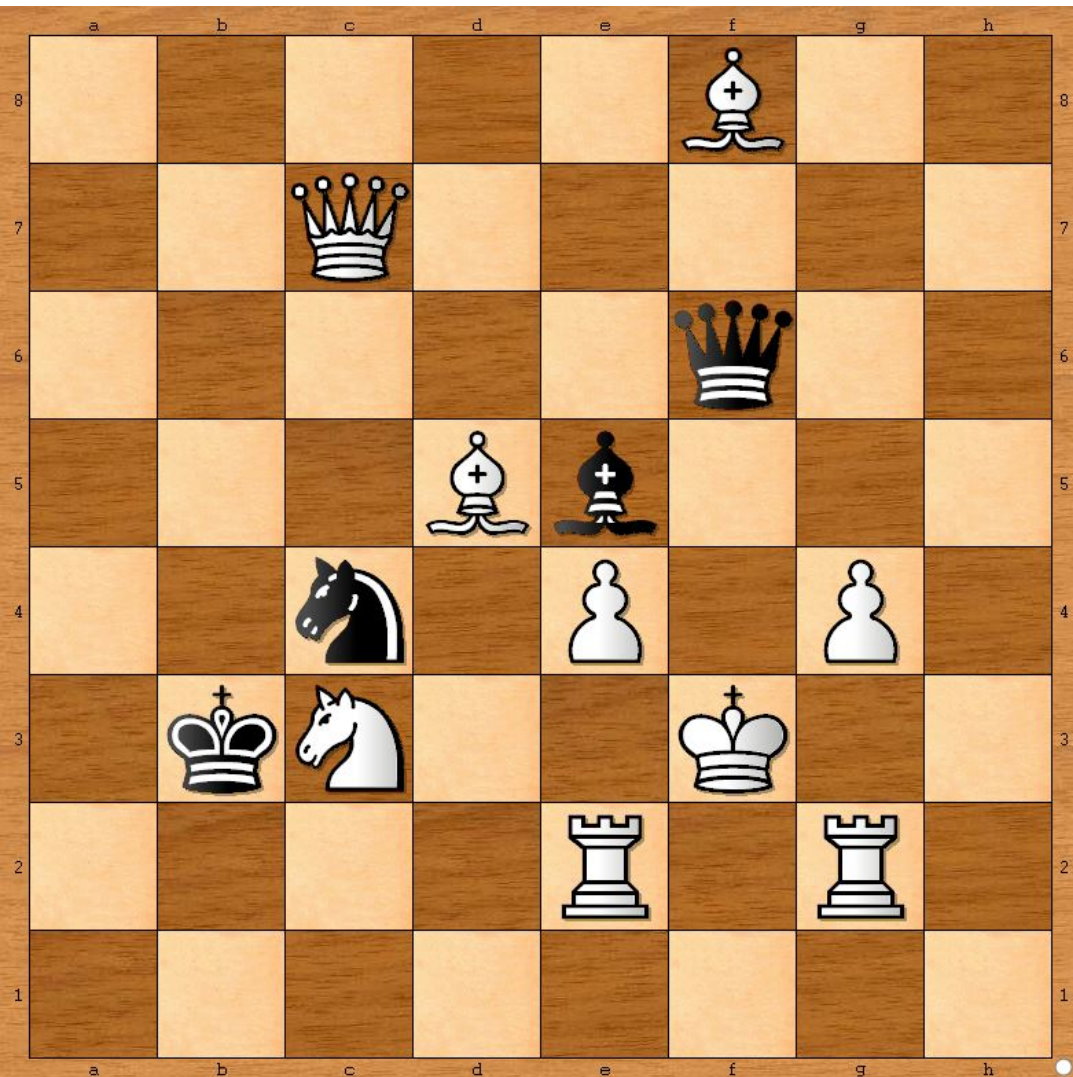
Thematic Wrapping

- Morale?
 - Critical Structures?
 - Energy?
-
- Use “Least bad” option!



Following the Design

Check-Mate



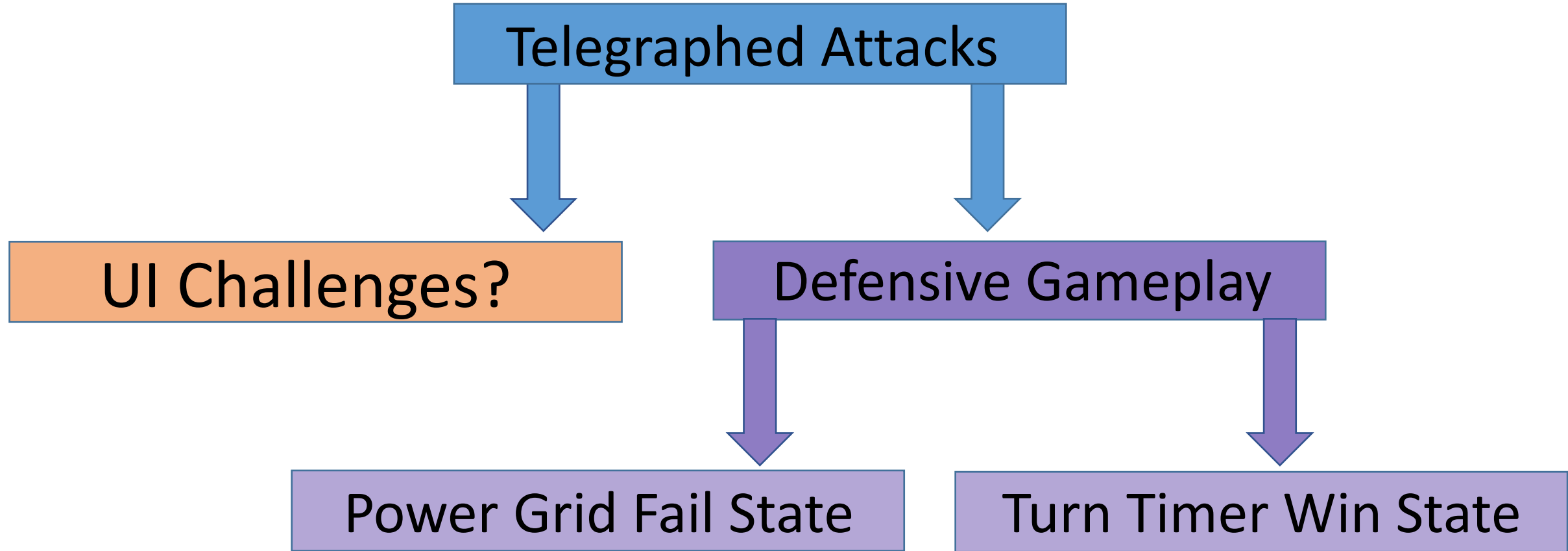
Following the Design

The Power Grid

- Inserted Randomness into a “deterministic” design
- Attached the new mechanic to additional systems
- Annoyed players



Following the Design

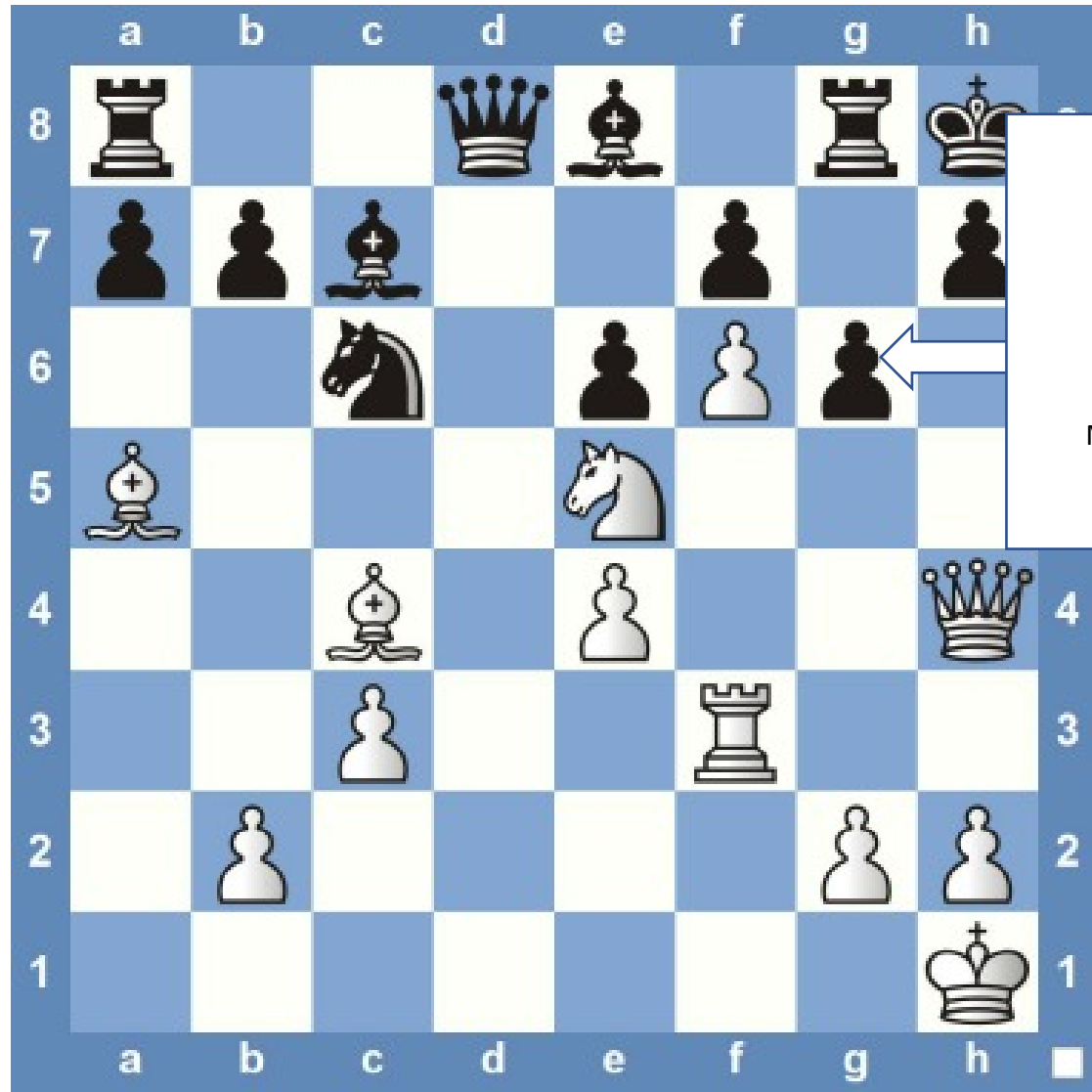


Combat

UI Guided Design

UI Guided Design

Chess-Like Interface



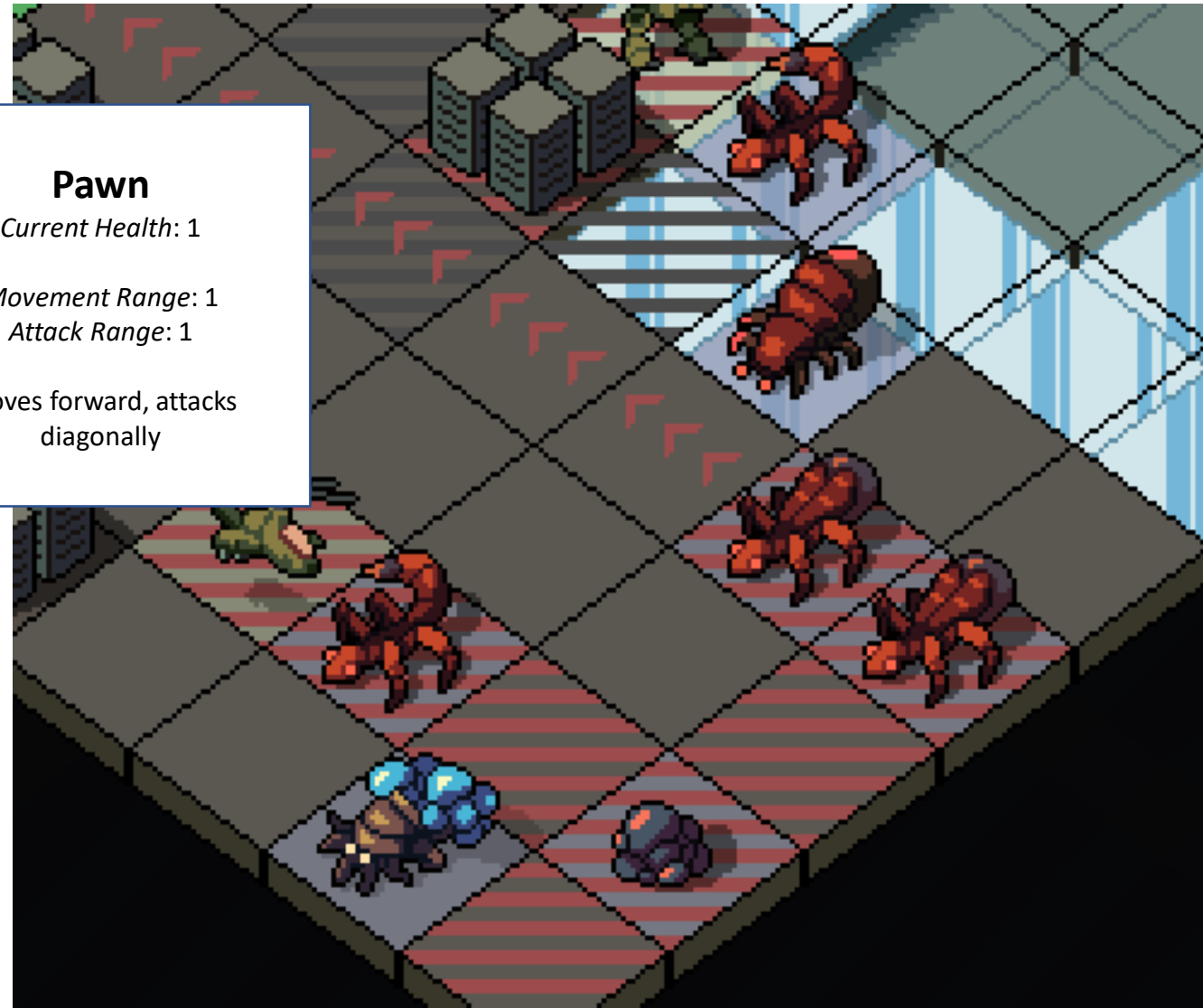
Pawn

Current Health: 1

Movement Range: 1

Attack Range: 1

Moves forward, attacks diagonally



UI Guided Design

Building out the Iconography



UI Guided Design

Finding More Constraints

- Show the **target** for each enemy
- Show the **attack type** for each enemy



UI Guided Design

New Constraints

Three attack types

Spitting Glands

Lob an artillery shot at a single tile.



Damage: **1**

Artillery

Stinger

Stab the target.



Damage: **1**

Melee

Accelerating Thorax

Launch a volatile mass of goo.



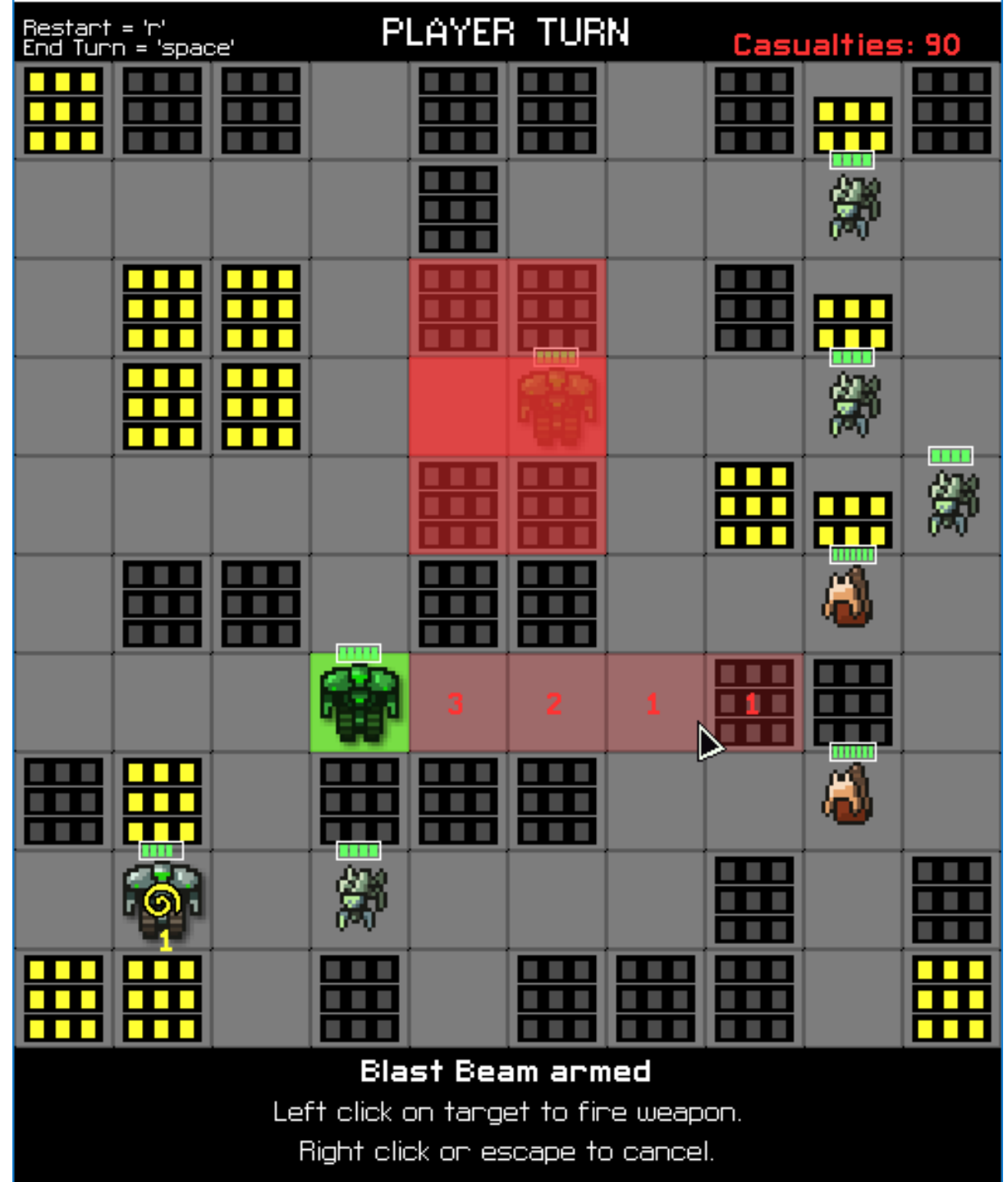
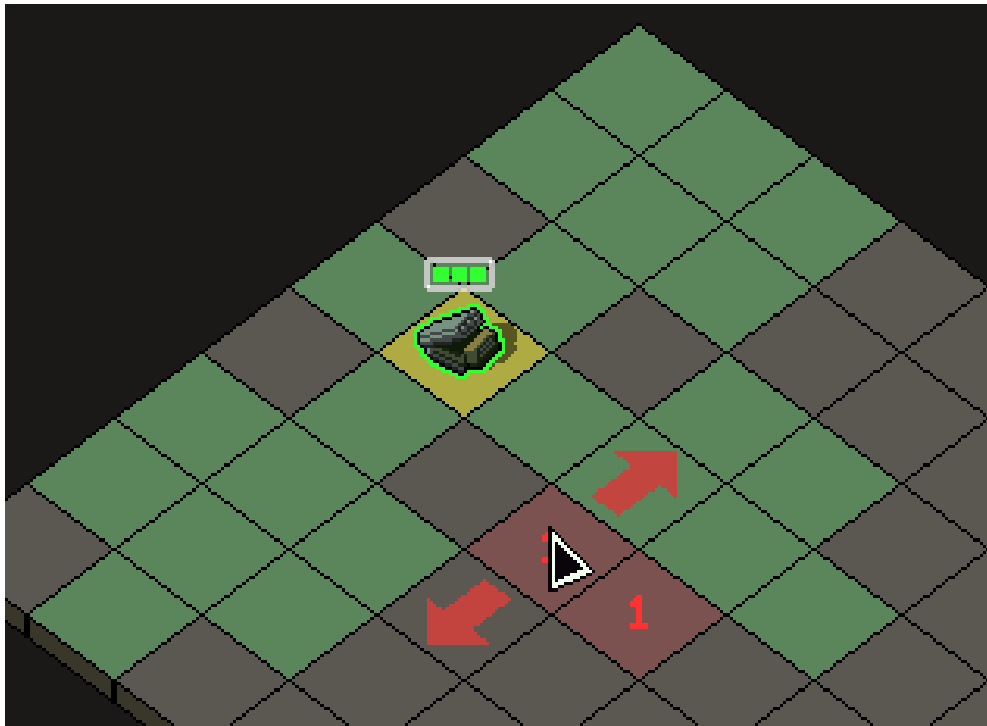
Damage: **1**

Projectiles

UI Guided Design

New Constraints

- Three attack types
- Limited attack zones?



UI Guided Design

New Constraints

- Three attack types
- **Orthogonal attacks**



UI Guided Design

New Constraints

- Three attack types
- Orthogonal attacks
- **Static enemy design**
 - Same Health
 - Same Weapon
 - Same Movement

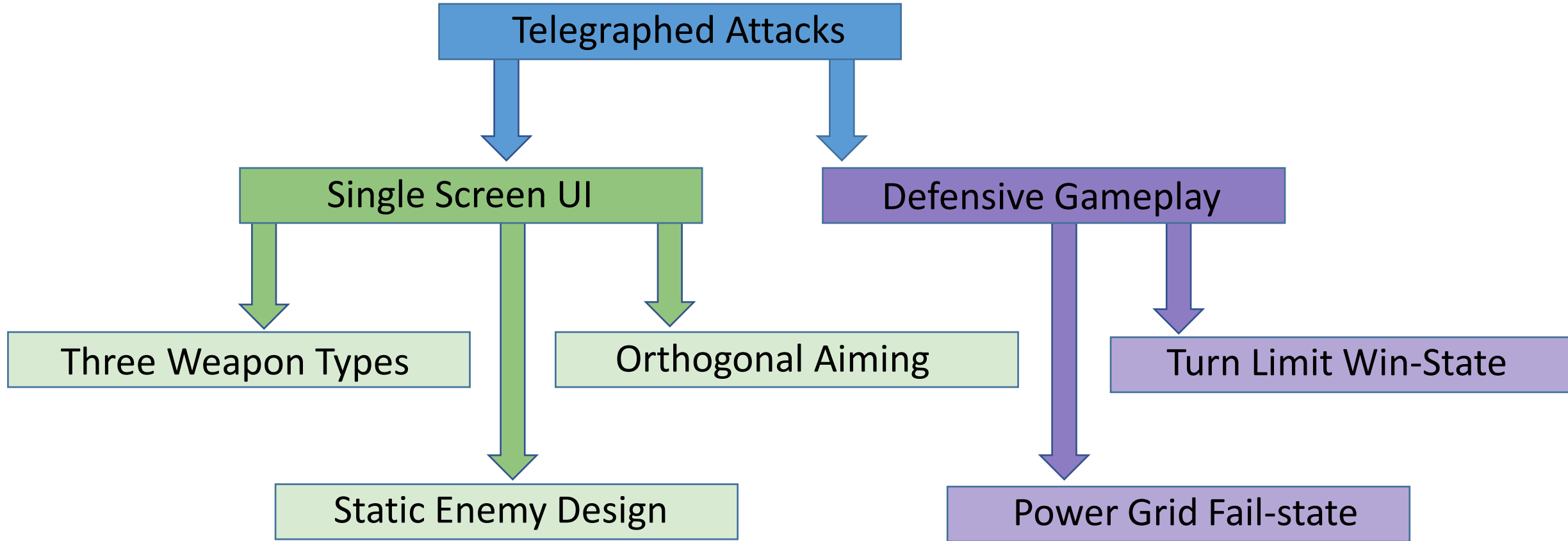


UI Guided Design

Massive cuts to Weapon Design



Following Design Constraints



Strategy Layer Design

Strategy Layer

Design Goals

- Make Player care about the pilots and the cities
- Resource Management
- Research technology with upgrade trees

XCOM: Enemy Unknown - 2012



Strategy Layer

Large scale world



- Too board gamey – too abstract
- Dull to chase enemies



- Didn't care about cities
- Large scale - long game

Strategy Layer

Small scale world



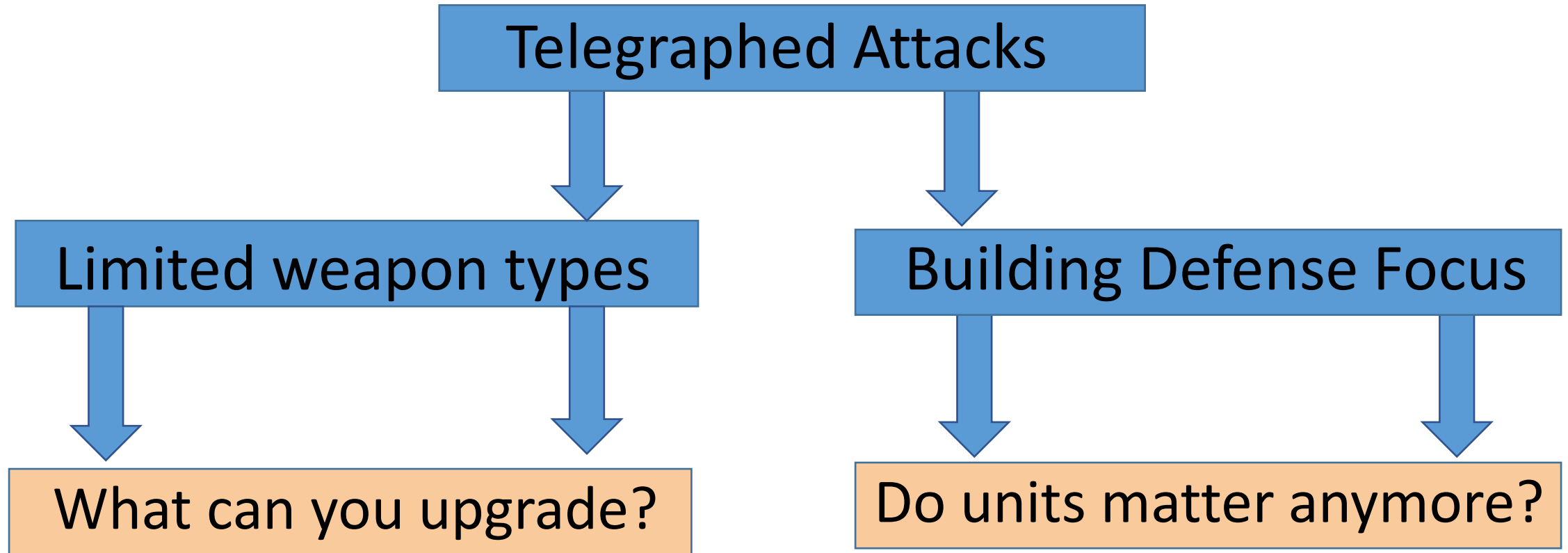
- Complex, but not “deep”
- Bad Research System

- Ambiguous Fail-State
- Text events did not work

Strategy Layer

Why was this failing?

We ignored the constraints imposed by the combat



Strategy Layer

No world

- Cut everything
- Have clear rewards
- Accept “least bad” option
- Build up from there



Strategy Layer

Small Islands



- How to keep the map visual?
- How to make choice interesting?

- How to pace the game?
- How hard to make the game?

Final Touches

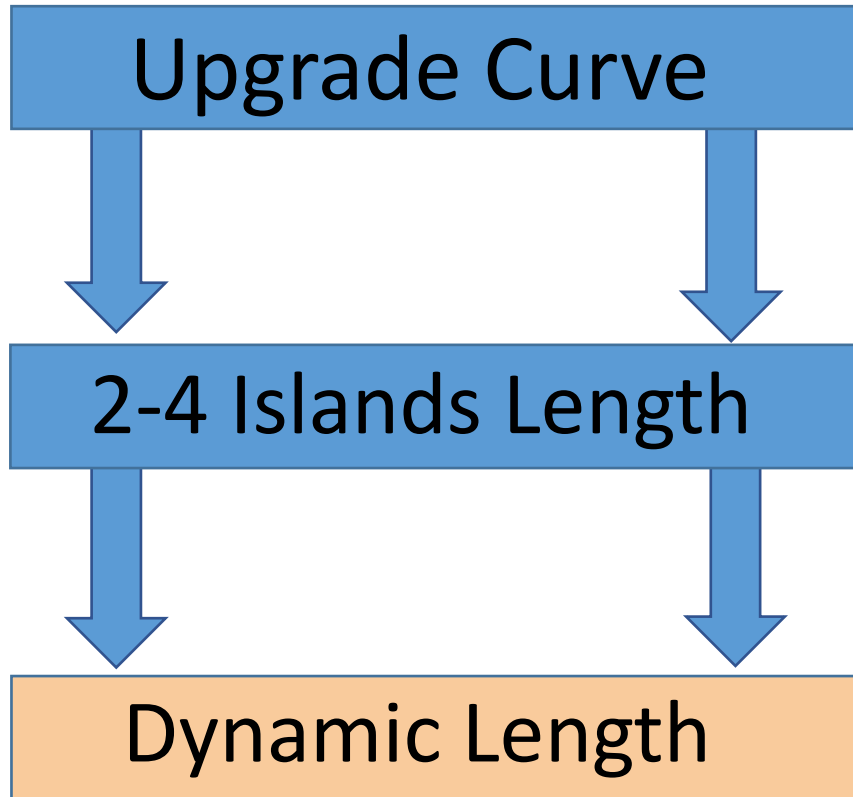
Resource Design

- Only three resources
 - Difficulty shown by resource count
 - Option to plan ahead
-
- Single Screen UI!



Final Touches

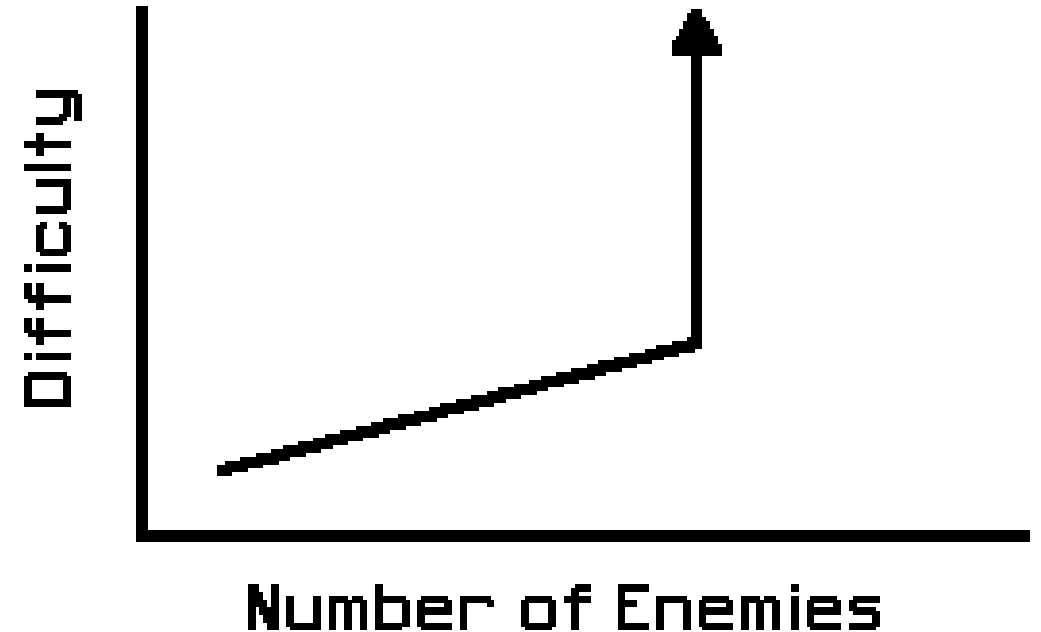
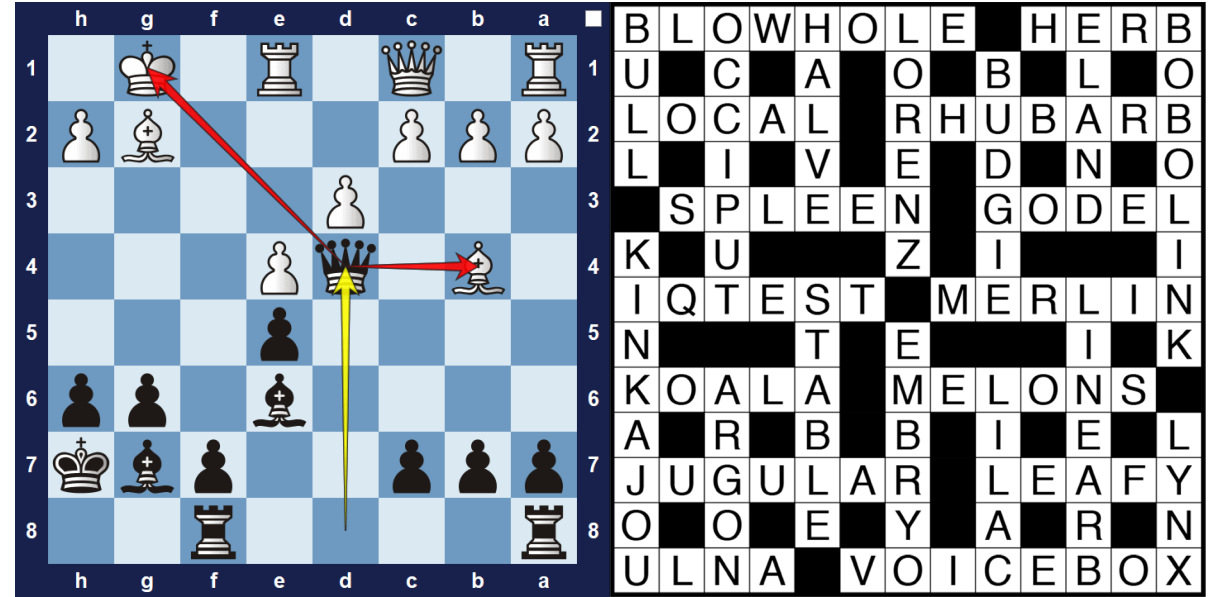
Game Length



Final Touches

Puzzle-Game Difficulty

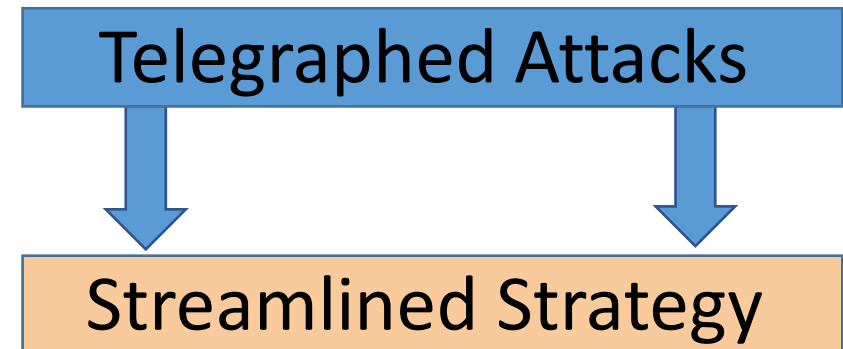
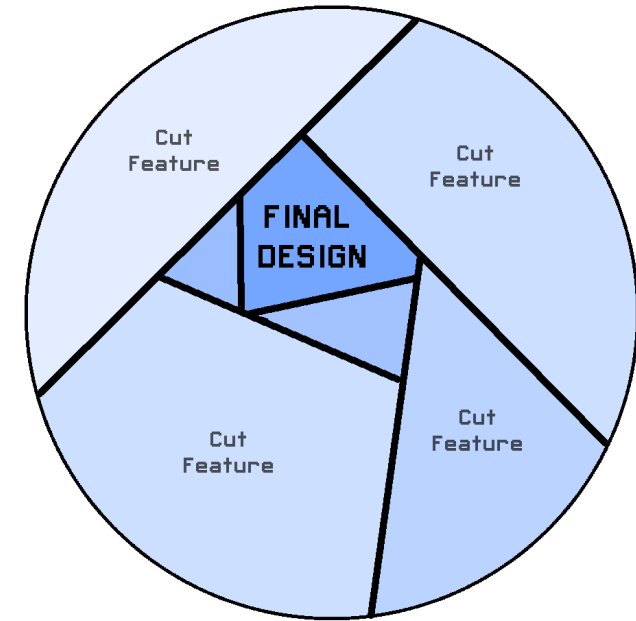
- Too hard becomes “unsolvable”
- Too hard threshold is a cliff
- Difficulty constrained by design
- Easy can be fun!



Final Thoughts

Lessons Learned

- Cutting bad design can be fun
- Realize when you're stuck in a genre
- Follow natural design constraints
- “Least bad” option can be ok



Thank you for listening!