Big Visuals, Small Budget: Get the most from a lean art team.

Vincent Perea
  Art Director @ Possibility Space

"Hello, and thank you for downloading the slides for my talk. I have sprinkled in my presenter notes in texts boxes like this throughout the presentation." - Vincent

#GDC23

How do you make a game with a standout visual identity when you have a small team or budget?
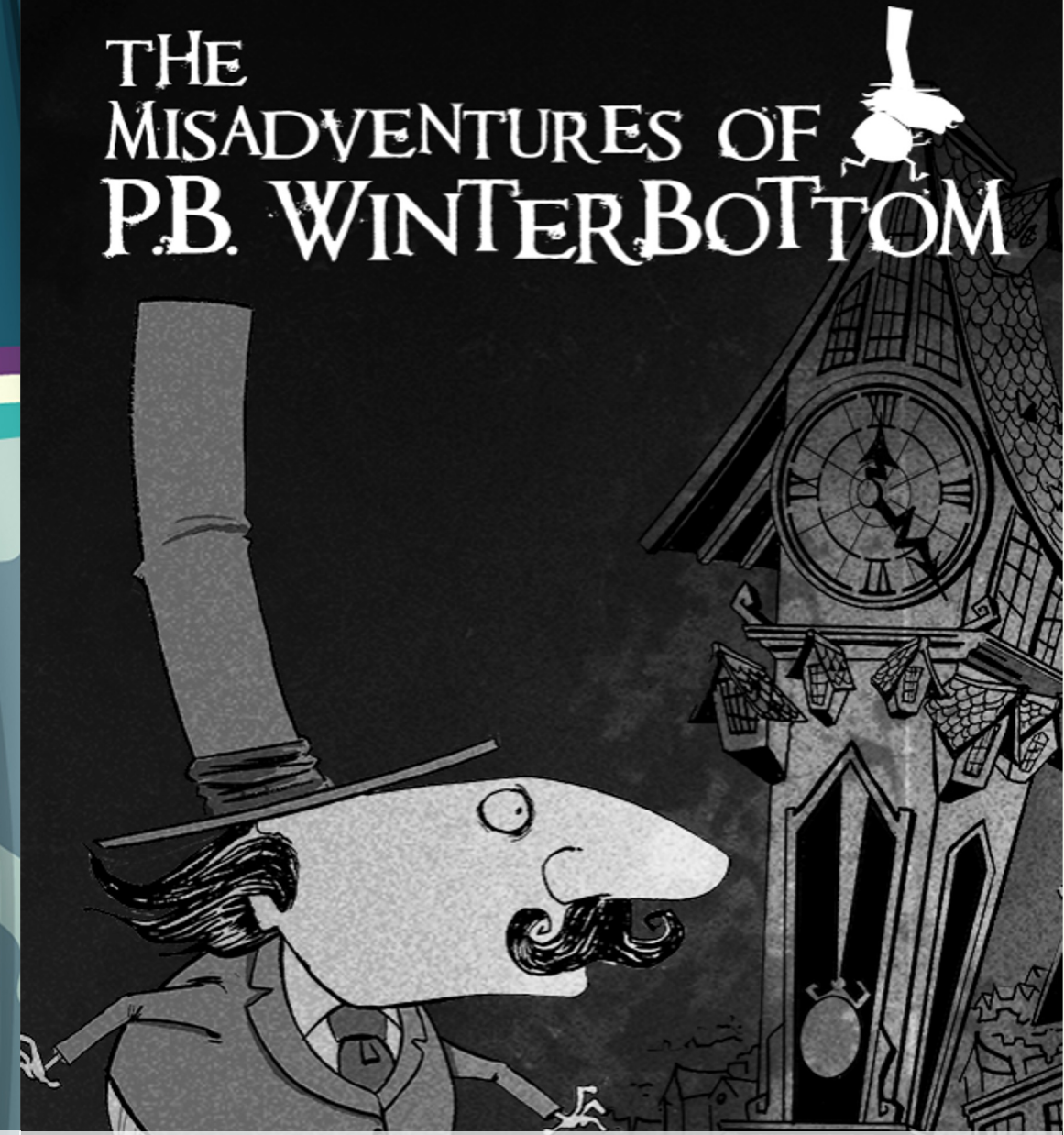
Who am I?

- 15 year career

- Worked with **Disney Interactive**, **Jam City , Riot Games**, **The Odd Gentlemen**, and **Chance Agency**.

- Experienced in Mobile and Indie Game development

- Shipped 11 games

- 3 as Art Lead

- 6 as Art Director.

I'll be using examples from these games :Neo Cab, Where's My Water and The Misadventures of PB Winterbottom. They all look different but what these all have in common is that they were made with small teams and limited budgets, but we still found a way to arrive at an "ownable" unique look.
I'll be using these games to loosely highlight three phases of production: Concept Development, Pre-Production, and Production

Defining "small"

I would consider the game/team/budget to be small if it has:

- Budget: under $1M
- Dev Team Size: 20 or less
- Art Team: 4 or less full timers

Every game I have ever worked on starts as an idea for a **seven-course meal** but ends as an amazing **entrée**.

Focus on the **entrée**, consider anything extra as desert.

Making a Kick Ass Entree

- **Prioritize Design Goals** and spend most of your time on what you absolutely need.

- **Complete a Visual Target** that forces you to design all crucial game design elements together.

- **Develop Clever Solutions**, work smarter not harder.

- **Work to Your Strengths** and hire for your weaknesses

- **Ship a Product Not a Vision** Keep a production mindset.

"In this section I'll discuss Neo Cab and I'll show how we prioritized our design goals during our concept development stage . Then I'll show how things worked out in the final game."

Prioritize Design Goals

Narrow your focus

"A game idea can pull you in a lot of different directions but through this process you must find some sort of focus to move forward.
Neo Cab is an emotional survival game about staying human in a world disrupted by automation. "

"You play Lina who is one of the last few human ride share drivers left. She moves to a big city to live with.."

"Savy who mysteriously disappears..."

"Stranded with low cash and no place to stay your only option is to start working…"

"This allows you to meet interesting people with knowledge of the city..."

"and earns you enough cash to continue looking for Savy…"

Game Design Goals

- Shed light on the difficulties of working in the gig economy

- Make a commentary on how technology robs us of our humanity.

- Tell a compelling story about human connection vs toxic relationships

- Bring the full world of Los Ojos to life with rich characters and memorable environments.

How to achieve this vision

- 100 Characters
- 3D semi-open world city
- 1st person perspective driving and navigation
- Dynamic Character Emotions

This is only one solution to the larger problem.

"It has been my experience that designers will often come to an art team with the solution to a problem, rather than the problem itself. I am not calling anyone out….this has been my experience on basically every game."

Art Team Size

But it was not a solution that worked for our team size.

"In this case the solution was design a AAA game. But the problem really was how do tell a narrative game about a big city with a small team?"

- 3 full time artists (2.5 Years)

Contractor Support:

- 1 contract animator for 3D hands (9 months)

- 2 contract environment illustrators (3 months)

- 2 contract graphic designers (1 year)

How do you Prioritize?

"It can be overwhelming when faced with trying to develop a whole world from scratch."
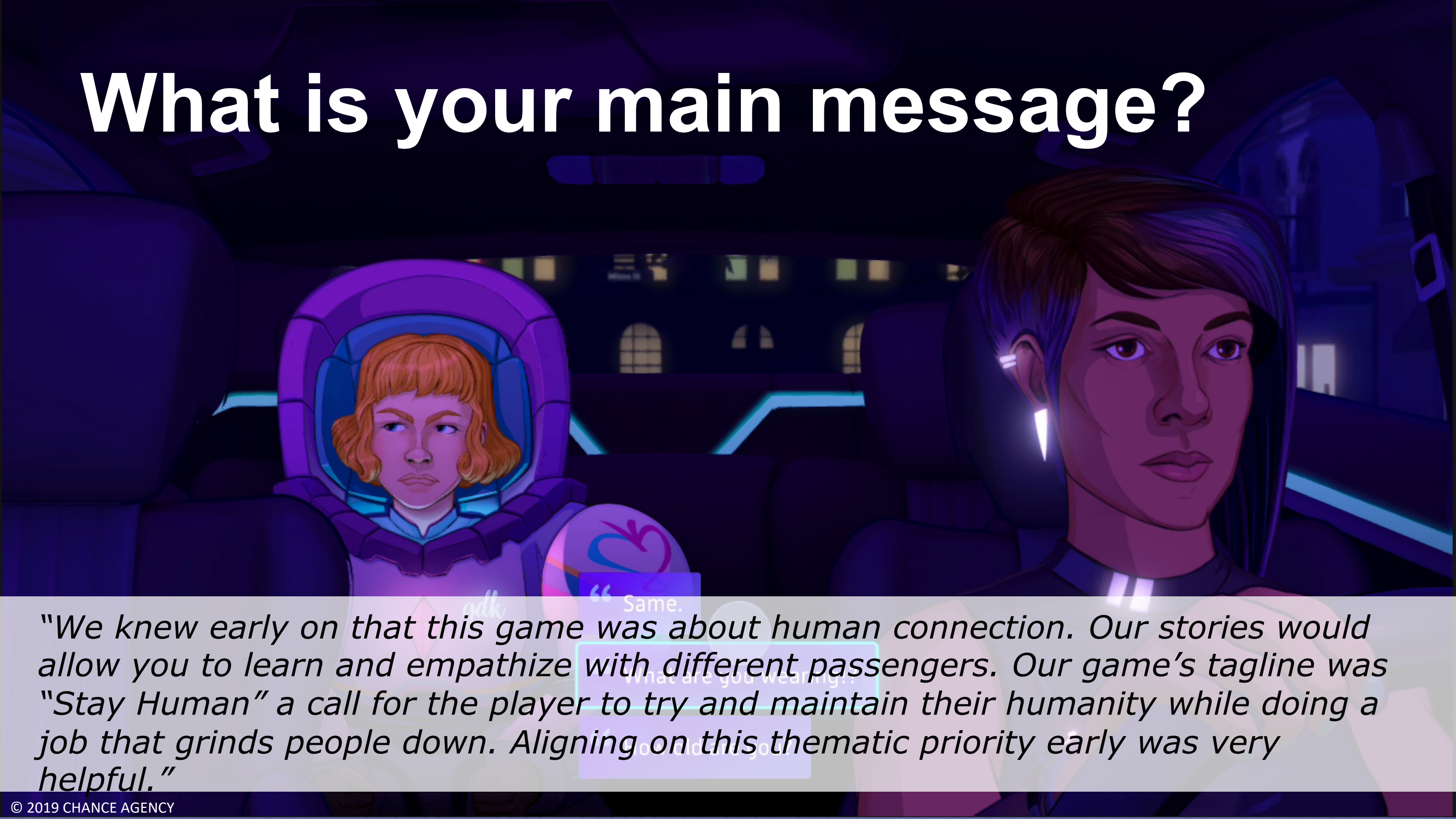
Focus on the practical problems you are trying to solve:

- What is your main message?

- What is supposed to be happening on screen?

- What is the player actively doing in the game?

This will help you separate the project **needs** from the team's **ambitions**.
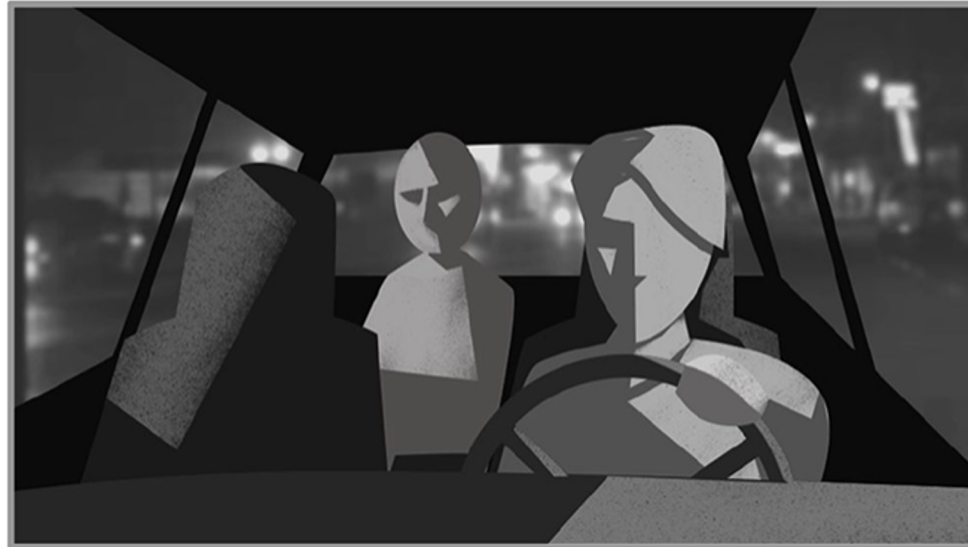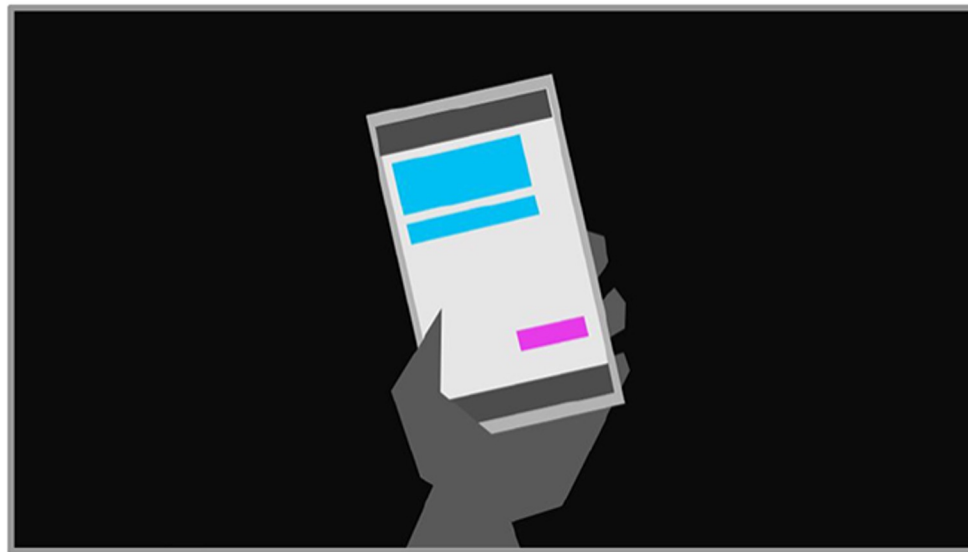
What is your main message?

"We knew early on that this game was about human connection. Our stories would allow you to learn and empathize with different passengers. Our game's tagline was "Stay Human" a call for the player to try and maintain their humanity while doing a job that grinds people down. Aligning on this thematic priority early was very helpful."

What is Happening on Screen?

"At the core of our game was this repeat experience. Lina picks up a passenger and drives them around as they talk. This is a very self-contained experience with limited needs.
You need two characters. The car interior and some sense that the city is moving around you."

What is the player actively doing?

"The player interacts with dialogue options to progress the story forward. That is their primary mechanical action in the game. But I realized early on that the player would ultimately spend a lot of time **reading.**

Players eyes will be drawn to text and faces."

What is the player actively doing?

Crap, that sucks.

"So, I could lean on the text to **describe** things happening in the world outside the car, rather than building them. A passenger might mention a restaurant you passed by, a protest in progress, etc… and the background doesn't change. Instead of focusing on trying to build the whole world we focused on making the repeat experience interesting and dynamic. At one point my mantra was "experience an entire city inside of a car"

She might not be the most reliable…

I'm sure it'll be fine.

Design Decisions

- 90% of the game takes place in the car

- All characters use the same rigs and base animations.

- Camera cuts and emote animations were triggered in story code (We used narrative engine Inkle).

- The city landscape is made of tiling chunks that sequence dynamically.

"These were intentional restrictions we committed to, which made the game more manageable. "

"You can see all of those moves working together in the final game (and over the next few slides)

These moves allowed us to have a repeat experience that was memorable, looked great and felt more rhythmic than repetitive. It brought the original scope of the game down from building an entire 7 course meal into one kick ass entrée of a scene that we could leverage again and again."

Any time we disrupted this flow it was a BIG DEAL. Our prioritizations approach allowed us more time to focus on our big wow moments like when Lina gets pulled over by the police or ends her shift at a hotel.

I need to see your license and registration.

Right, of course.

Here you go.

"You can see our little trick in this part where Lina is describing everything, she sees inside the hotel...which you never see, and my team never had to build."
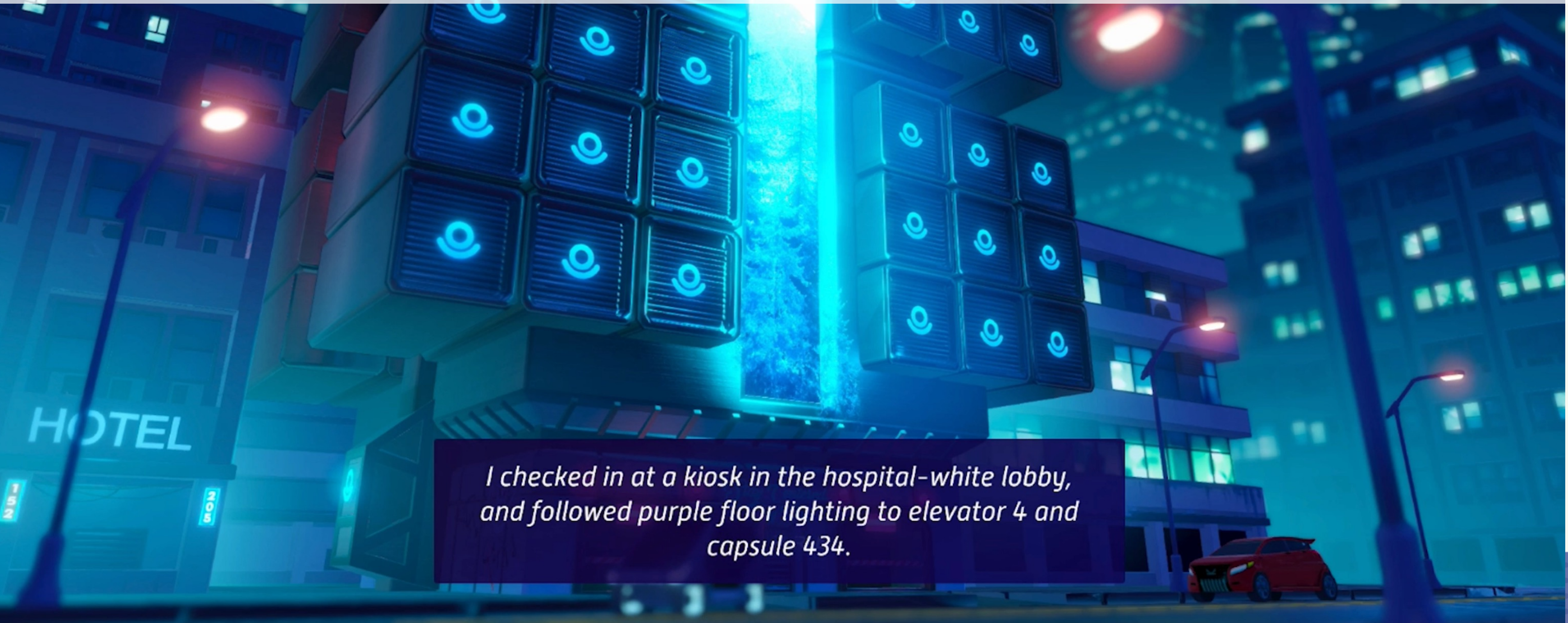
HOTEL

So not only did Savy stand me up, she had me giving money to Capra. My last resort.

"I would argue that this experience would not be better if I did. Because it relied on the player's "theater of the mind" to fill in gaps, which made the game more personal.
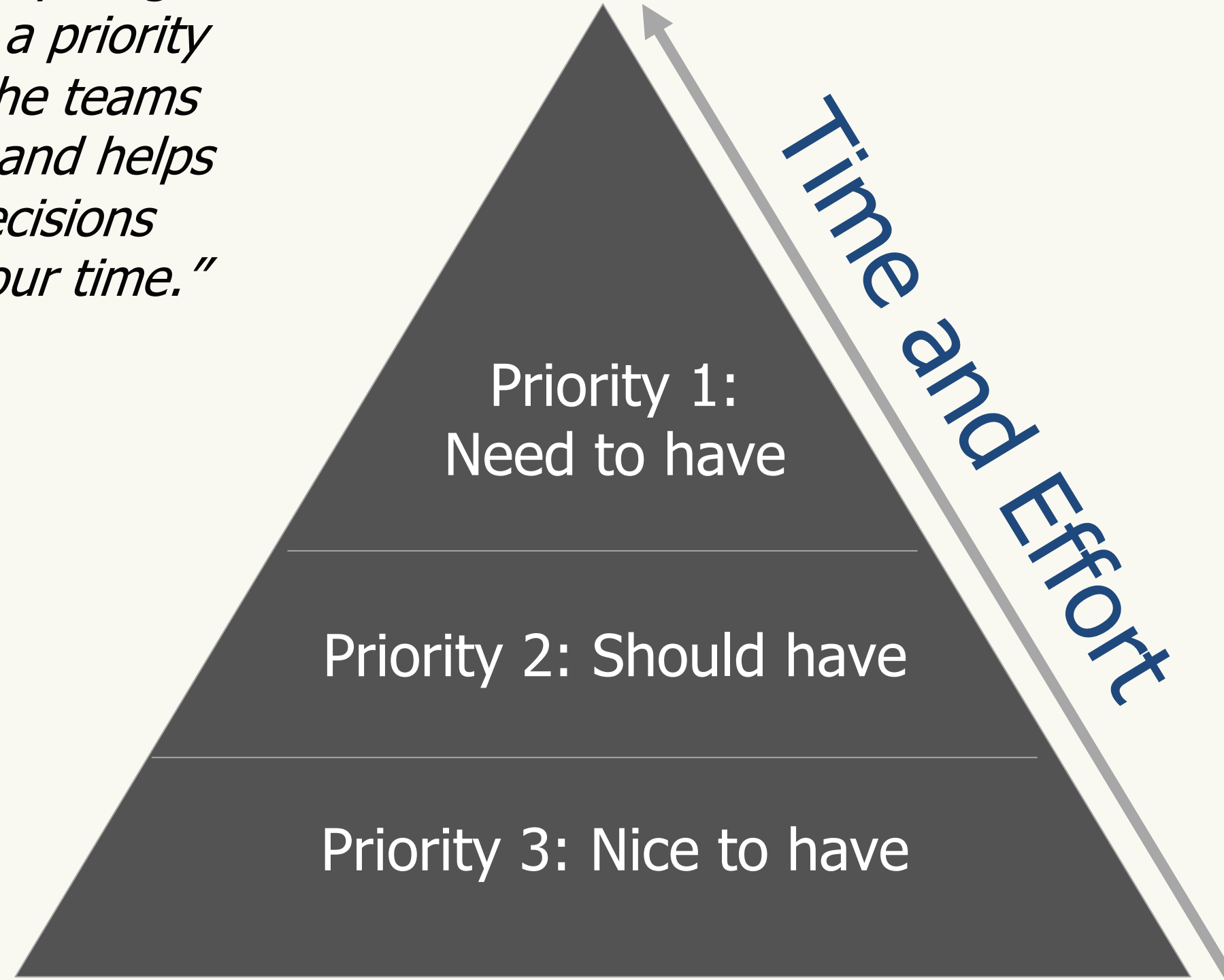
These techniques allowed us to tell an even bigger story than we could make."

HOTEL

I checked in at a kiosk in the hospital-white lobby, and followed purple floor lighting to elevator 4 and capsule 434.
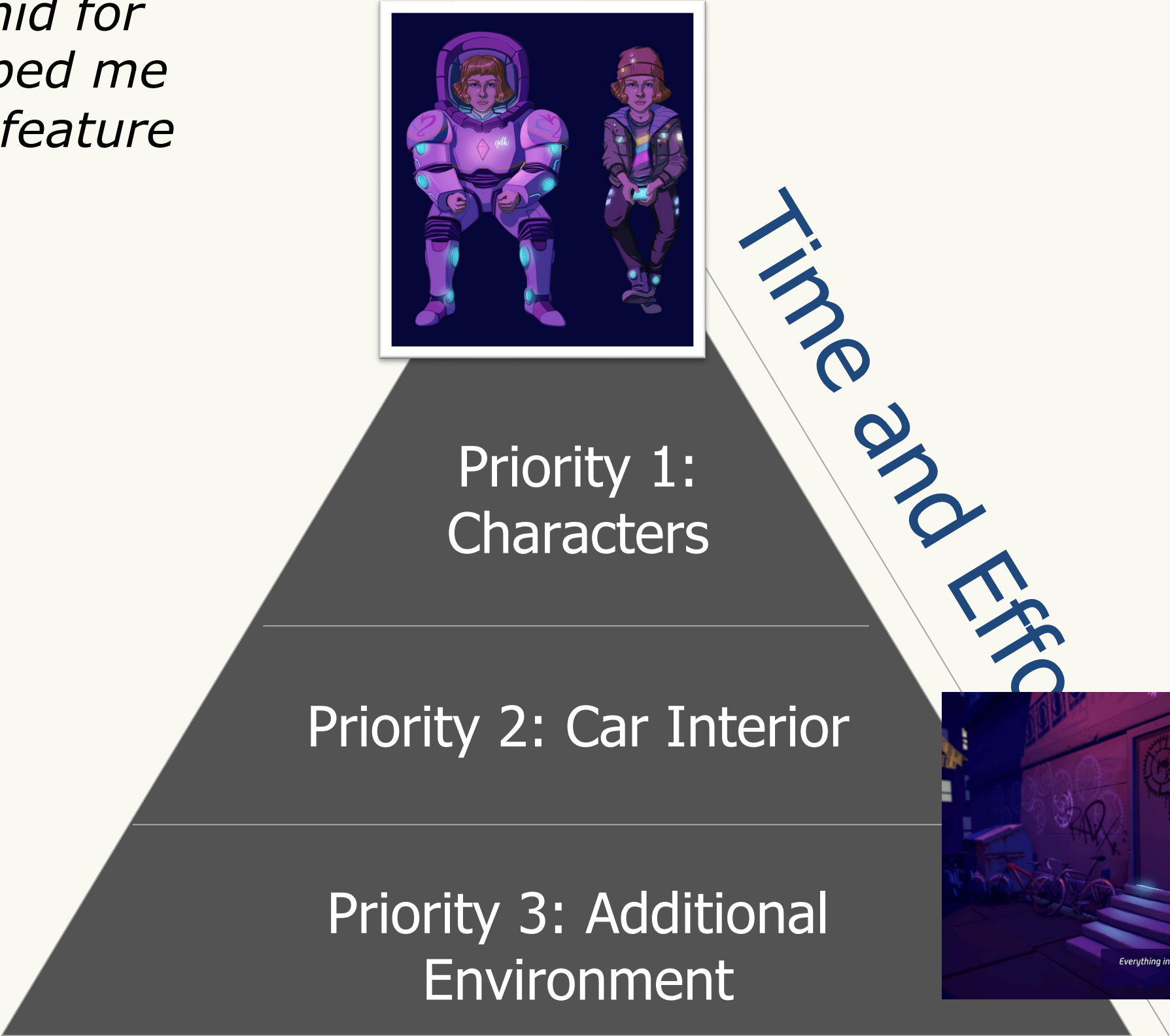
"You can't spend an equal amount of time on everything. A useful tool to make is a priority pyramid. This aligns the teams on their top priorities and helps you make the right decisions about where to put your time."

Time and Effort

Priority 1:
Need to have

Priority 2: Should have

Priority 3: Nice to have

"This was my pyramid for Neo Cab, and it helped me field a lot of design feature requests."

Time and Effort

Priority 1: Characters

Priority 2: Car Interior

Priority 3: Additional Environment

Example A:

"*Could This Character change outfits?*"

Yes, our rigs were set up to be able to swap assets. This feature is also reusable for other characters, so it is worthwhile to do. But that means this character is more expensive, so we need to cut another planned character.   We handled any costume changes off screen.

Everything in Azul's expression changed and they stood up straighter.

Example B:

"Can Lina enter a dance club to to meet up with someone?"

Environments are not a top priority so how can we make this more manageable. Does she need to go into the club?

A club environment is expensive to produce (think crowds of people. lights etc...). So, the compromise we made was that Lina would get stopped by a bouncer outside the club and learn what they needed to from that character. This then became a new system which we could reuse where a character stands in front of a single image backdrop and talks to Lina.

Game Design Goals

- Tell a compelling story about human connection vs toxic relationships

- Shed light on the difficulties of working in the gig economy

- Make a commentary on how technology robs us of our humanity.

- Bring the full world of Los Ojos to life with rich characters and memorable environments.

"I think despite our many compromises, we successfully hit all of these! Through strong prioritization of our characters and singular setting we were able to meet these goals."

How we achieved the vision

- 100 Characters
- Semi-Open World City
- 1st person perspective driving and navigation
- 3rd person dynamic emotions

- 20 Characters with 3-4 story arcs
- 1 set of endless city streaming chunks
- 8 unique one-off environments
- Auto driving
- One central rig and animation set

"I think if you play Neo Cab it is a great entrée of a game. Less characters meant the player got to have deeper more meaningful story arcs with each passenger (which hit our core theme of building human connections). If we had a 100 passengers their lives would have been a blur." The game's art style effectively tells the story.

Art Direction is about planning a production, not just crafting a visual style.

"It is about planning a production well so you can provide a meaningful experience to the player."

"Concept development is when you should get your priorities straight. Pre production is when you must figure out what your final game should look like. A visual target will help you solve that problem."

Complete a Visual Target

Design all elements together.

A **visual target** is a fake screenshot of your game that includes all the design elements of your game.

"Where's My Water? is a mobile game about an alligator, named Swampy, who likes to take showers, but his pipes get busted leaving him unable to engage in his favorite past time."

"The game itself is a puzzle game where the player "cuts" dirt to allow water to flow into Swampy's broken pipes. Each level presents new obstacles to that reoccurring goal.

Far from the heavy themes in Neo Cab, Where's My water was a game about having fun and feeling smart."

"It was also an original IP we created for Disney, which is rare, and comes with all the expectations one would expect. When people see that Disney branding, they have an expectation that the game will be appealing, family friendly and often cute!

This game was made in 2011 the early days of the app store, our competition was Angry Birds and Cut the Rope. This was pre free to play being the dominant player in the space."

WMW Game Design Goals

Focus on making a good mobile game:

- Players should feel smart when finishing a puzzle.
- Players can experience the game in small bites (waiting in line, on public transit etc..)
- Casual experience with enough depth that players would return.
- Make it look cute!

WMW Visual Design Goals

To reach the intended mobile game audience:

- Create an appealing art style worthy of the Disney Brand
- Design Gameplay Mechanics to be easy to read understand
- Create a central character for players to focus on.
- DON'T FORGET IT SHOULD BE CUTE!
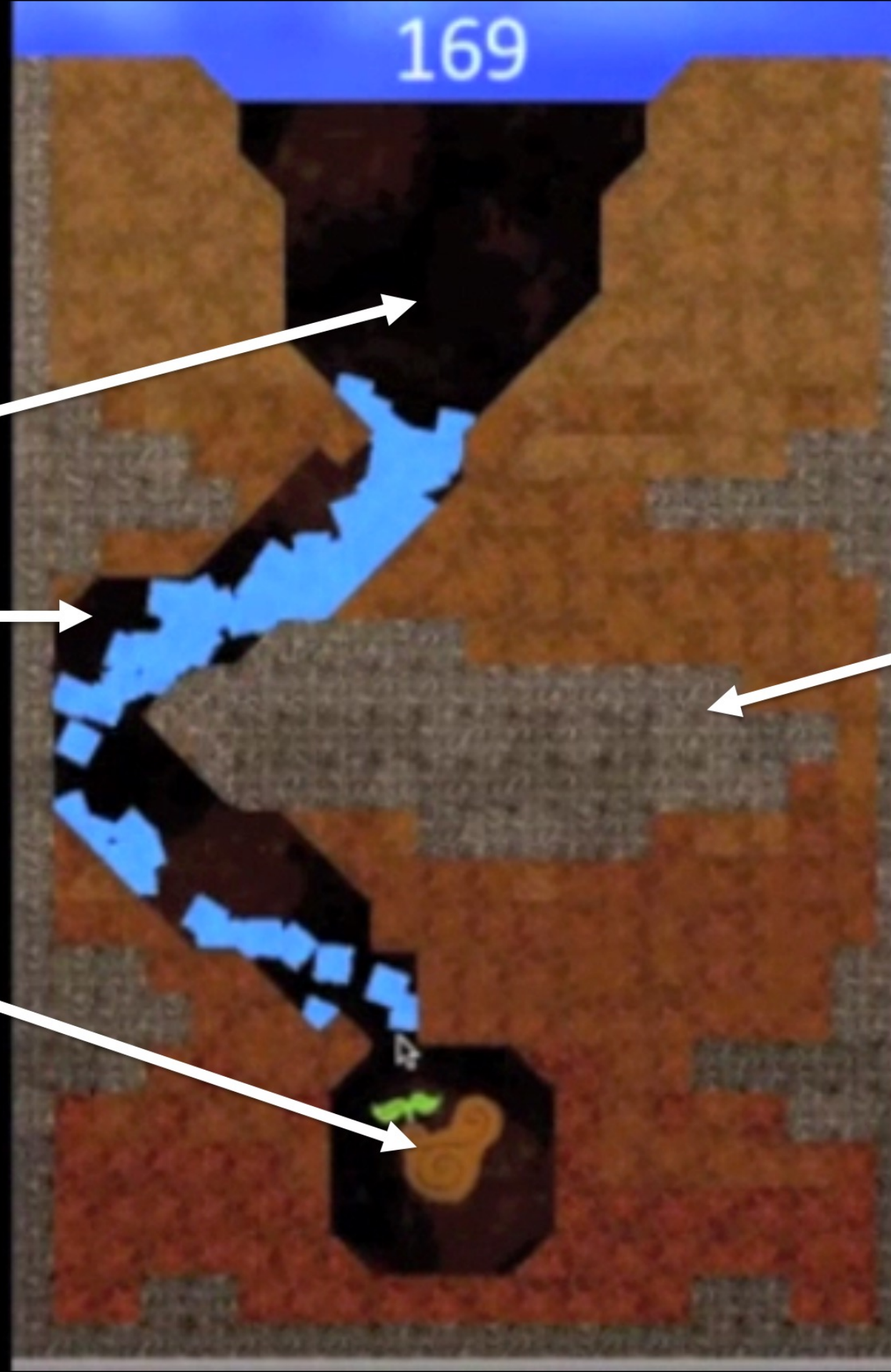
Water

Dirt

Goal

Obstacles

169

Water

Dirt

Goal

Obstacles

"When I joined the team, they had a working prototype but no art style. In this early prototype you can see that   The main elements are here. Water, obstacles, Dirt that the player can interact with and "cut", and an end goal for water."
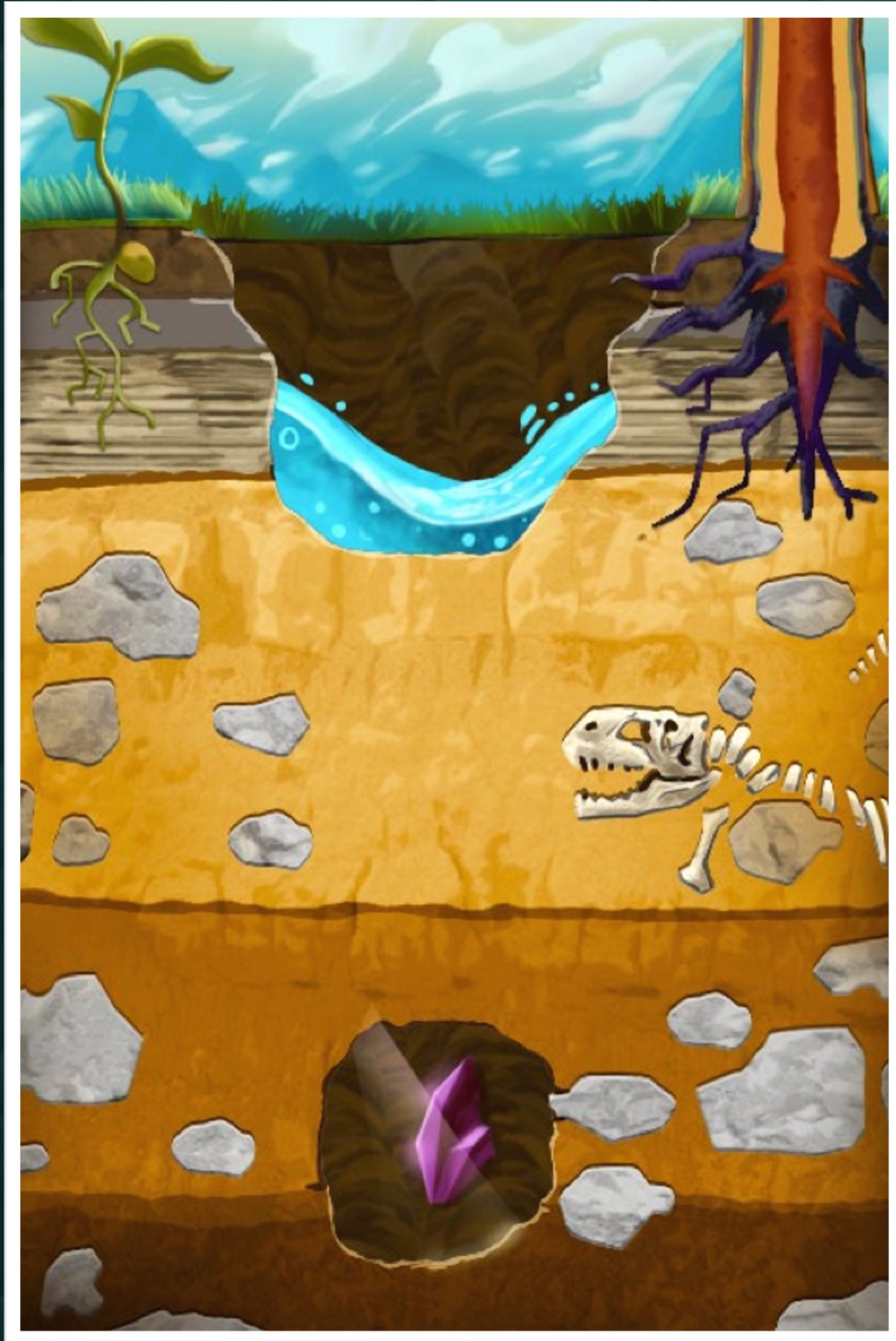
"Every level of Where's My Water? uses these elements.
At this point, the game was already "fun" .

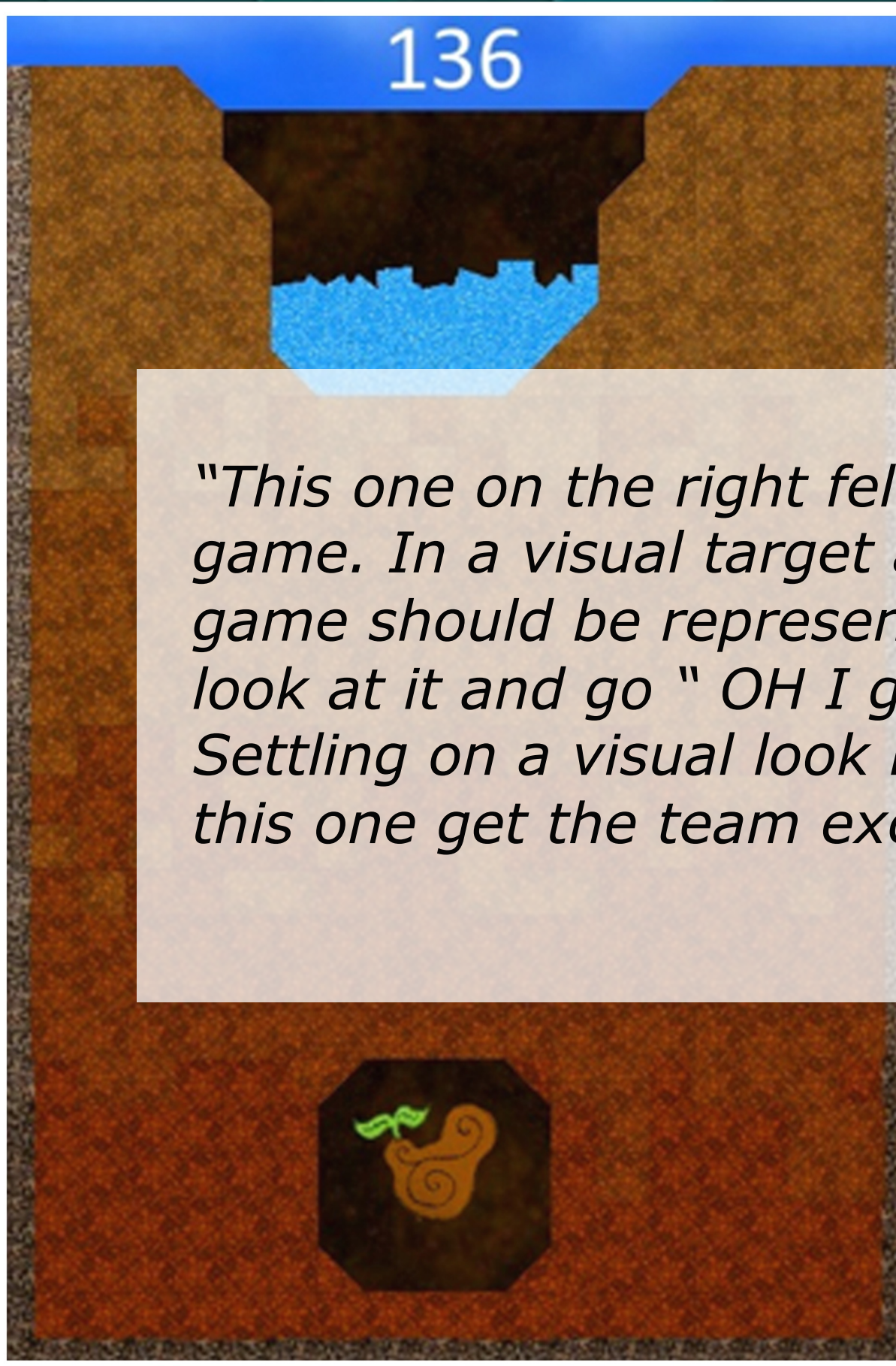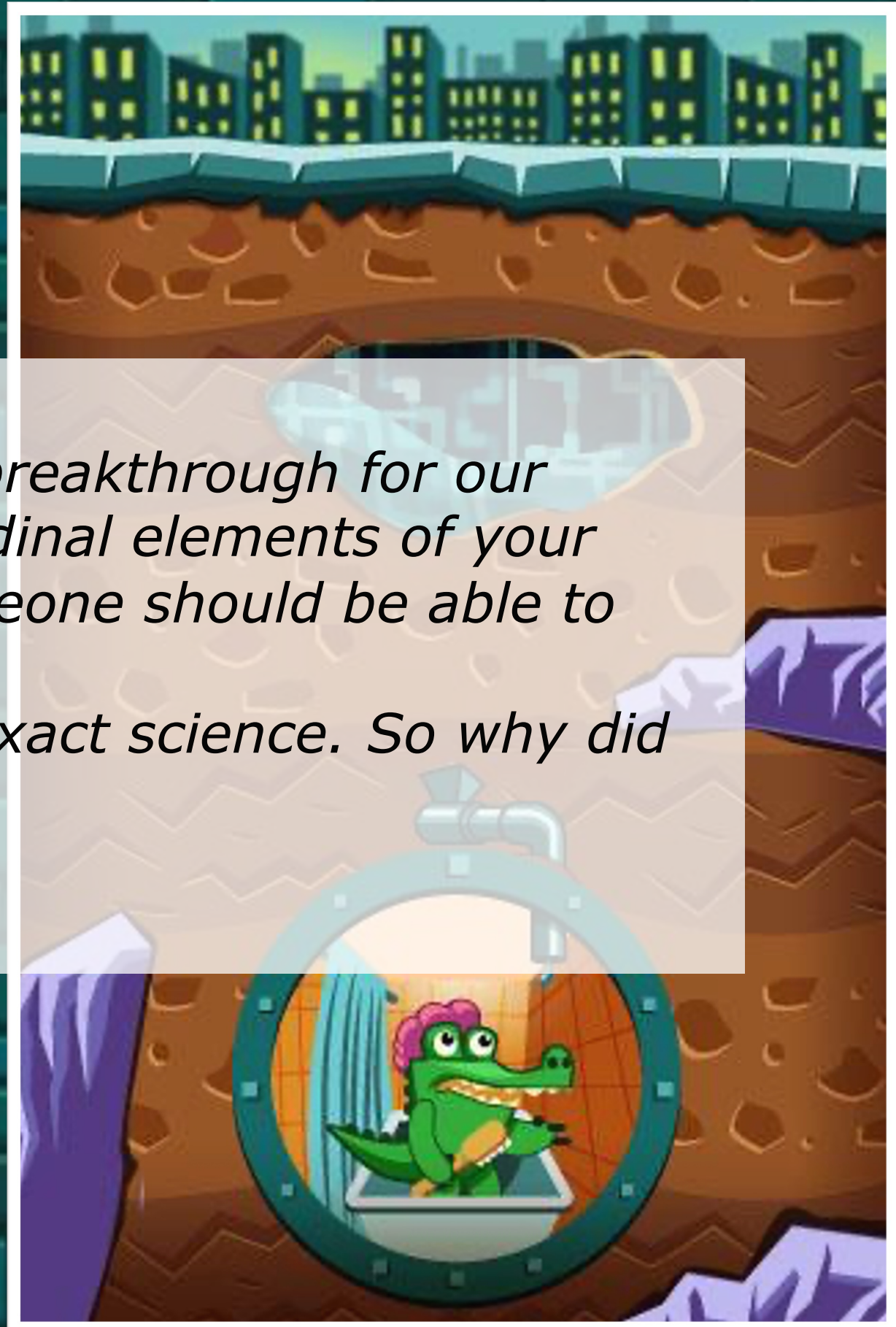But it needed a story and visuals to amplify the players enjoyment and take it from beyond a toy to a game."

"We did several concepts to find the style and story of the game. Each of these concepts tries to provide a design for our core elements."

"This one on the right felt like the breakthrough for our game. In a visual target all the cardinal elements of your game should be represented. Someone should be able to look at it and go " OH I get it!"
Settling on a visual look is not an exact science. So why did this one get the team excited?"

Why this direction?

- Clean reads on objects

- Sewer looks warm and inviting

- Dirt looks like cookie dough.

- Rocks look like candy

- Swampy's color stands out, he is easy to find.

- It's CUTE!

"*Having this image unblocked a lot of production lanes. We started improving the look of our your prototype using temp art. Here you can see how we pulled in our temp textures for dirt and a temp Swampy. This started making the prototype feel great.*"
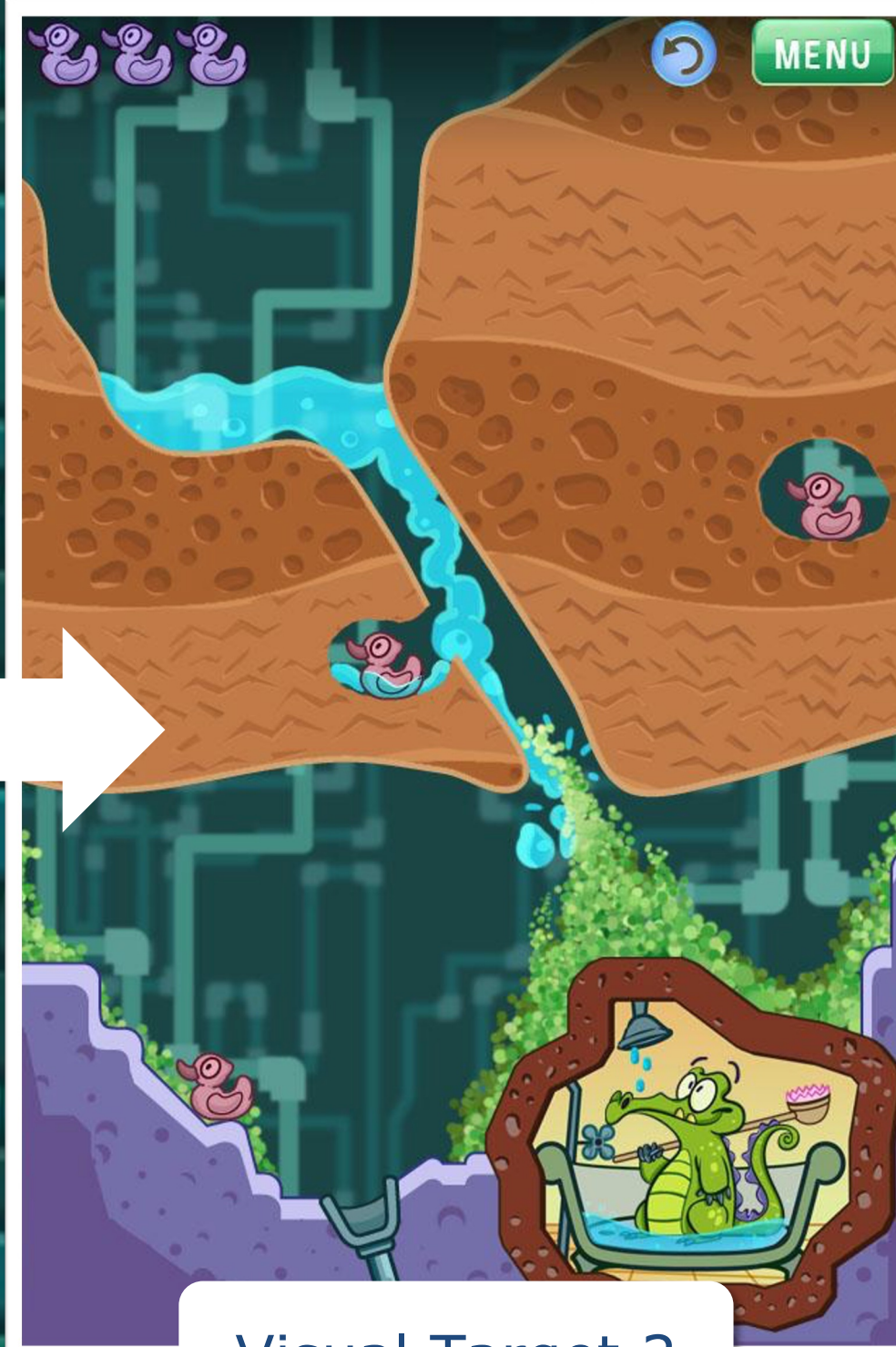

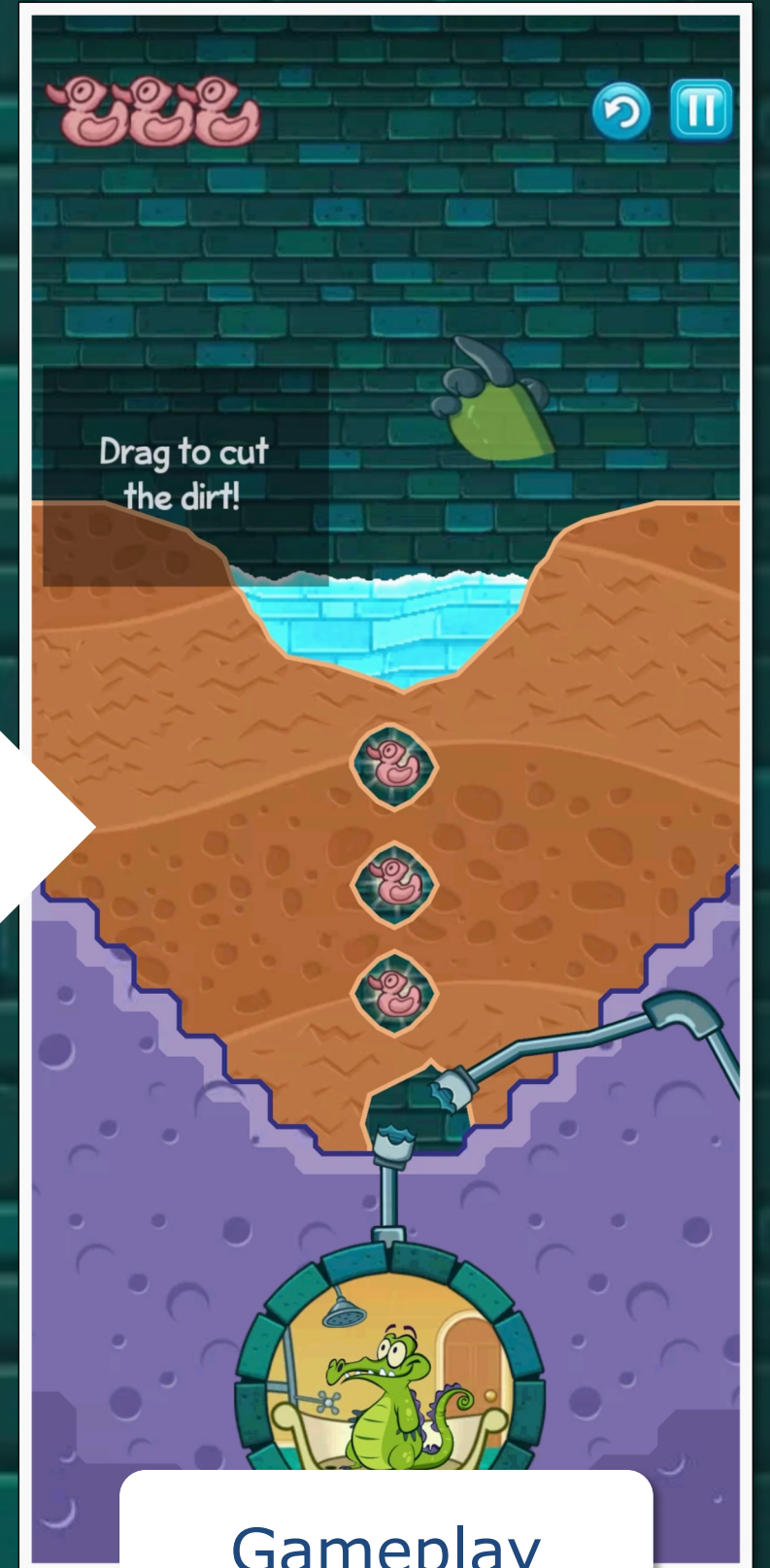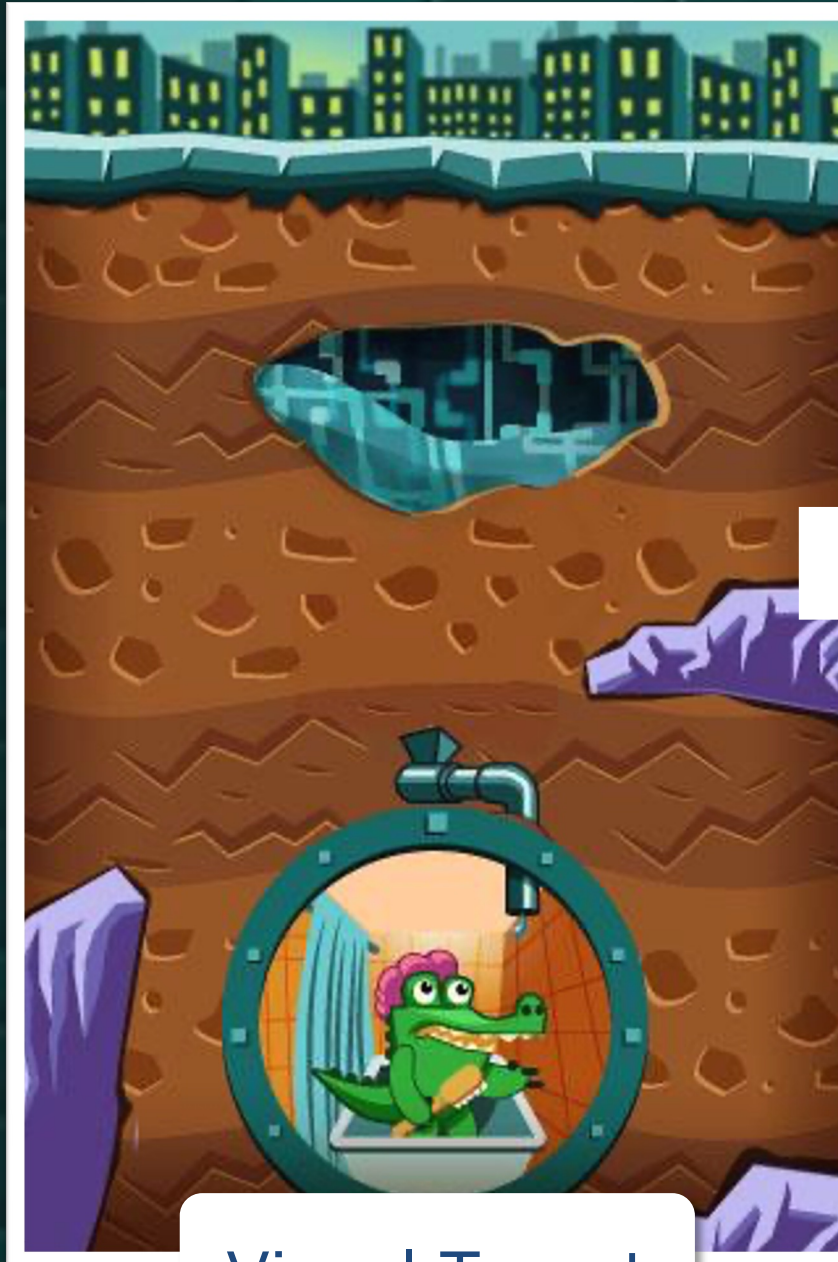Prototype 1.0

Visual Target 1

Prototype 2.0

Visual Target 1

Visual Target 2

Gameplay

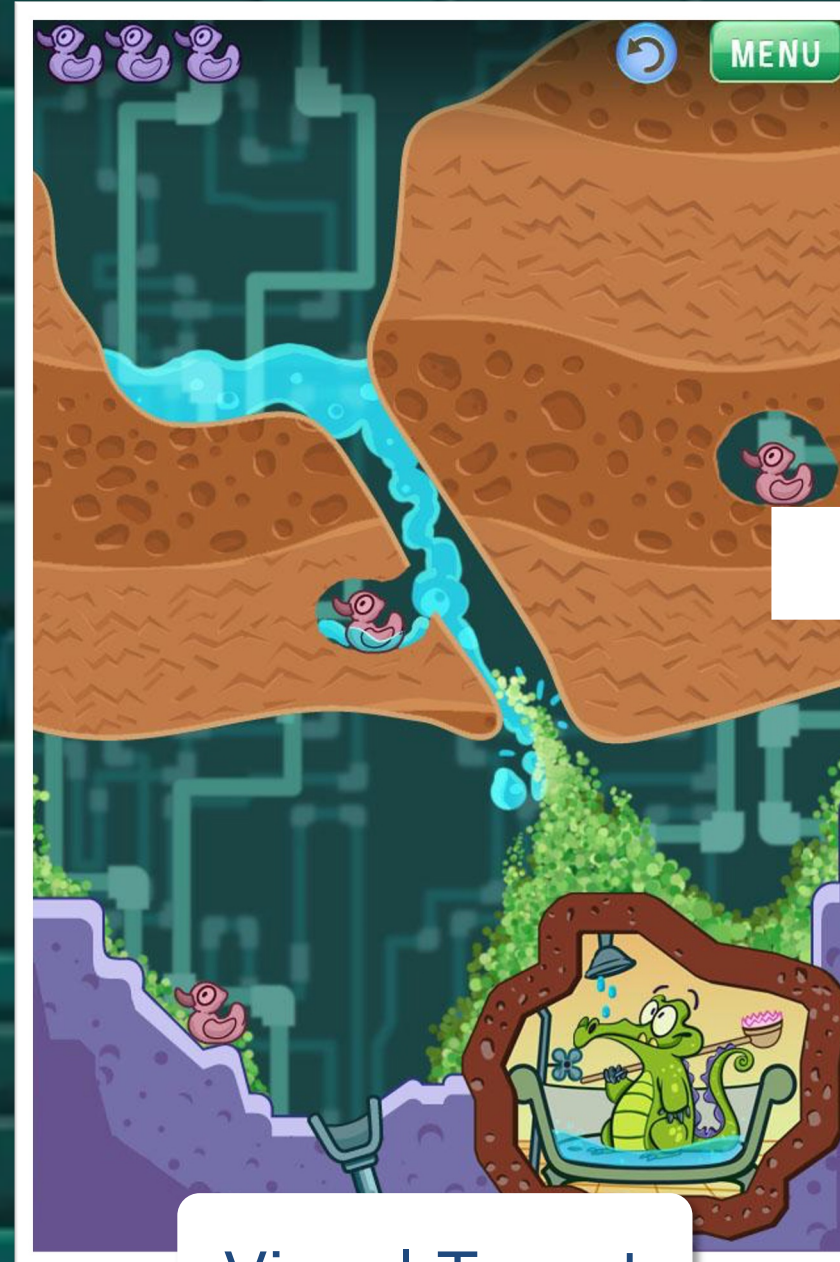Drag to cut
the dirt!

MENU

© DISNEY

"Having designed everything together then allows you to go and work on the individual elements with more focus in parallel with other team members. For example: Swampy's look got a major upgrade thanks to two-character designers Mike Kunkel and Shane Zalvin. I was able to integrate their work into my deeper dive on the level art and mechanics to create one cohesive visual direction. "
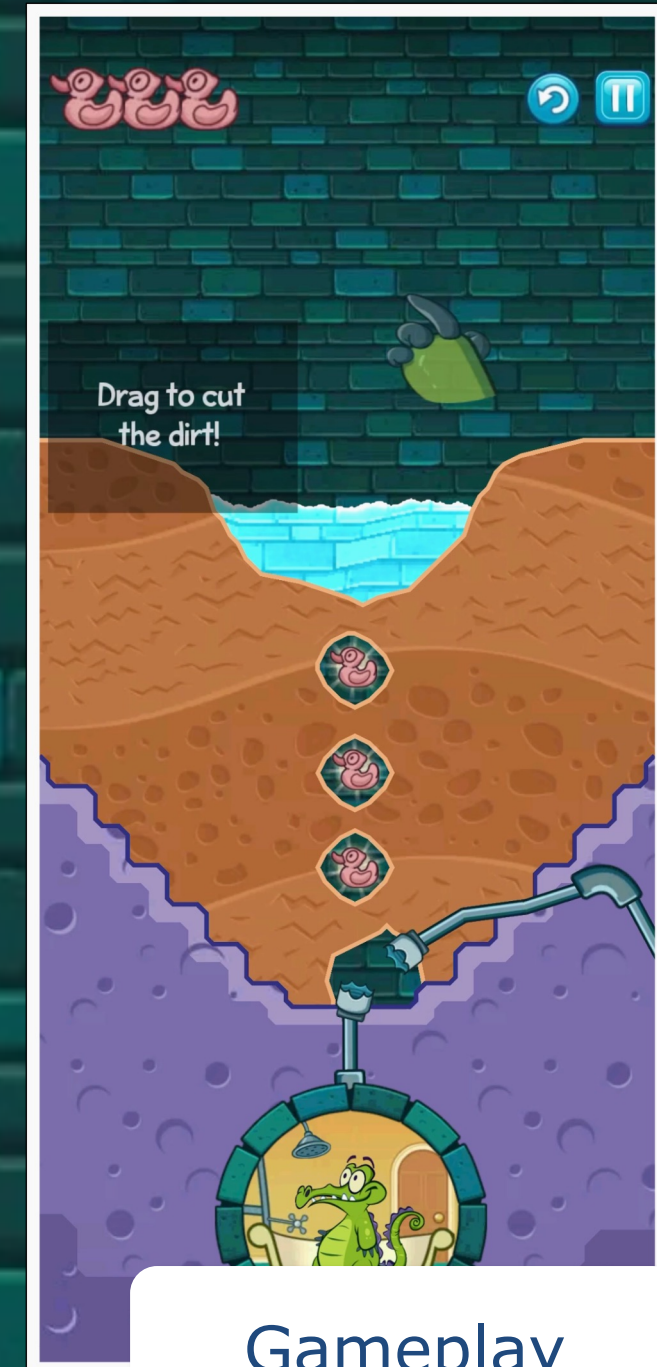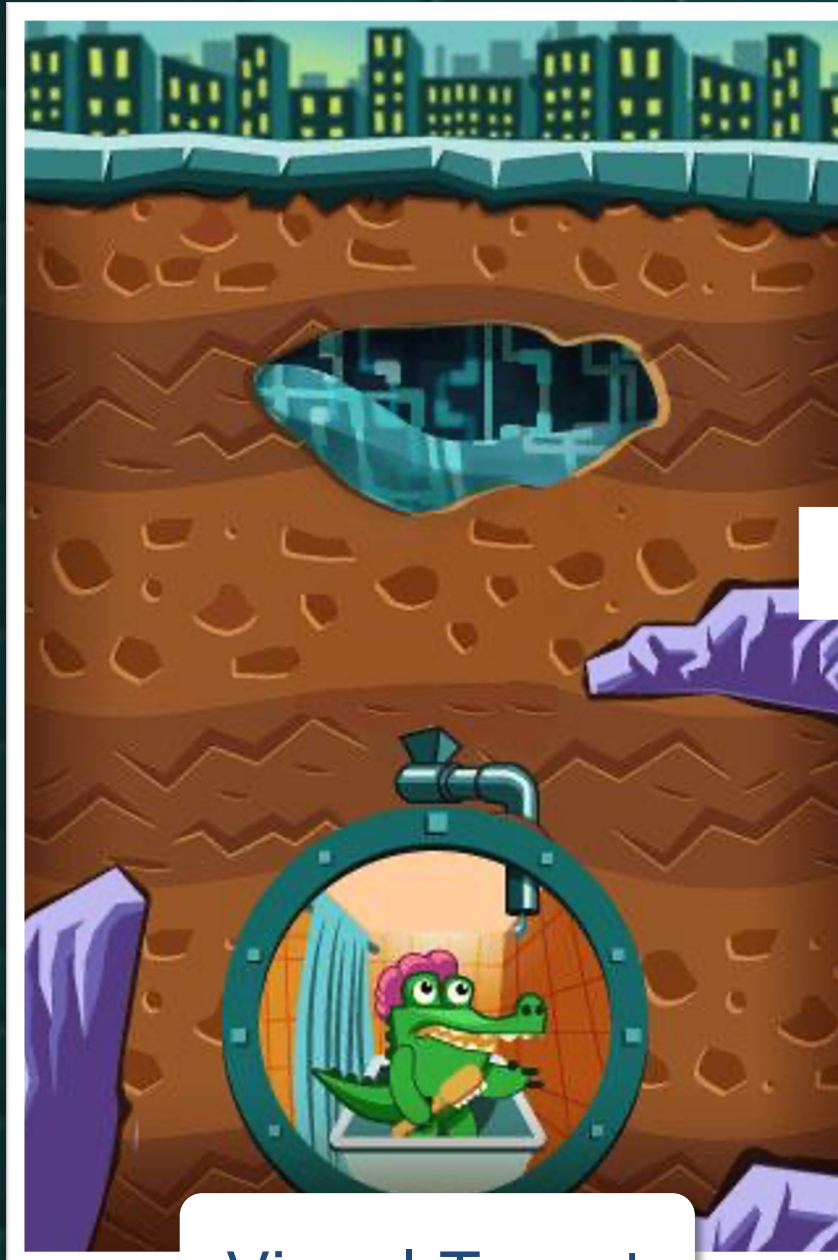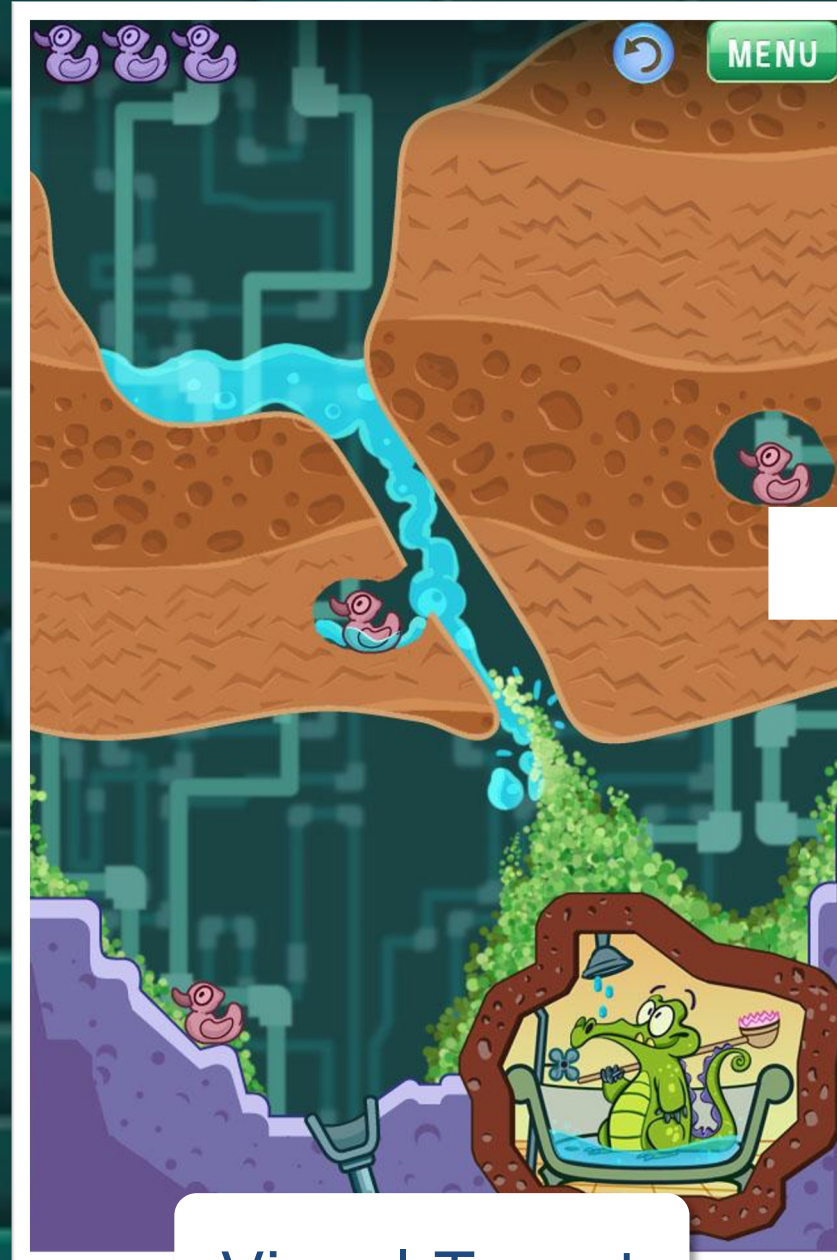

Visual Target 1

Visual Target 2

Gameplay

"Each step of the game becomes informed by the better decisions from your last target. You don't have to nail the final look right out of the gate.
*Using this approach, you can **iterate** yourself to a final look!"*
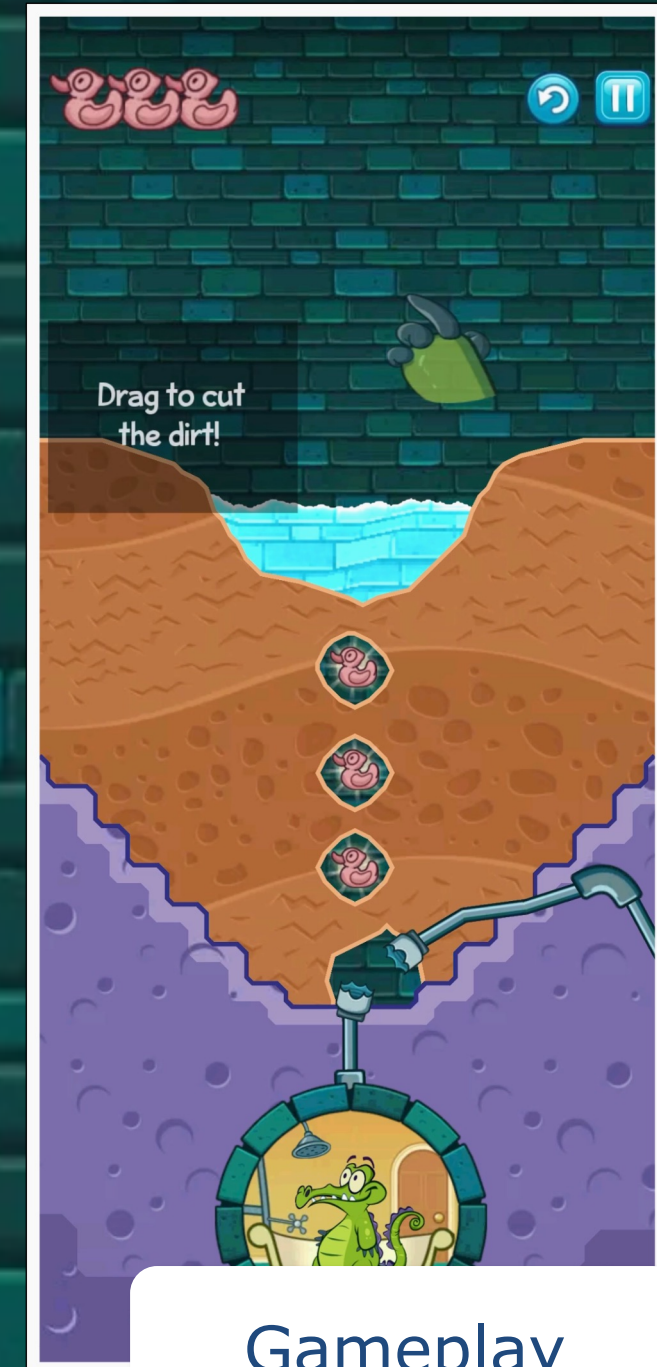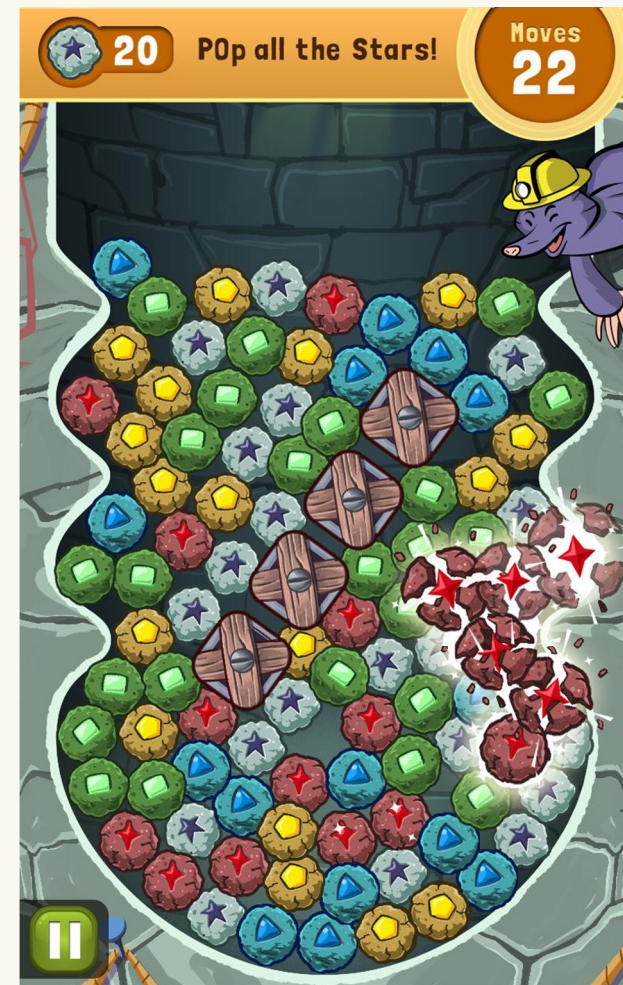

Visual Target
1

Visual Target
2

Gameplay

Examples of other visual targets

© DISNEY

Remember it is a "target", it is a road map of where you want to go, but where you end up will be somewhere different and more refined!

ANGELO: Driving Getaway, you can't make money this way.
ANGELO: You know what I do for money?

"Neo Cab was a different kind of game. But I still did a rough visual target early in our dev process. Having to recon with everything you need in a screenshot gets you thinking about how elements can work together."

You're an astronaut.

You're a chef.
You're an astronaut.
* You're a Getaway driver too.

"Now I want to talk about solving production challenges.

As a small team you have to be creative and strategic, not in your artwork, but in your approach."

Develop Clever Solutions

Work smarter not harder.

Clever Solutions

"PB Winterbottom is a puzzle game about a mischievous thief who gets unstuck in time by an evil pie."

The top left icon shows how many clones can exist at one time.

Clever Solutions

"The gameplay is that you can record clones of yourself. It has a wild Edward Gorey/ German expressionist art style."

The top left icon shows how many clones can exist at one time.

Clever Solutions

"This game had 3 artists. I was the illustrator/concept artist on the project, and it had 2 3D artists one serving as the production AD."

The top left icon shows how many clones can exist at one time.

PB Winterbottom Inspiration

"Our big inspirations for the game were silent era comedies films staring Harold Lloyd..."

"and German expressionist films like Cabinet of Dr Caligari…"

"The game is a platform puzzler, but we didn't just want it to be 2D. We wanted the look of a 3D game while avoiding the many trappings of a 3D game production. Traditional 3D would have taken too long to produce PLUS we would have had to worry about poly counts and texture limits which would hurt the style we were going for."

"A lot of those decisions had been made before I joined the team. Winterbottom was a student game being made at USC before it secured a publisher. When I joined the team my role was to help it's visual design evolve into a final product."

I inherited a lot of decisions that were immovable. An example is that how I kept trying to fix Winterbottom's head shape(Next Slide), making it smaller and more appealing. But Winterbottom's head wasn't just a head it was a platform. It had an iconic look but also a function I couldn't mess with.

Original Design
for Student Game

Development concepts

Final Design

Building images or assets

We thought we could hand paint our backgrounds, but this was way too much work and not flexible from a design standpoint.

So we rethought our approach and tested out the following workflow:

Model simple background pieces, bake AO onto them, then render them as 2d images

Then paint the lighting and texture info into these sprites.

The idea was to avoid the lengthy UV and texturing process. Thus, getting nice depth but with a shorter pipeline. This style was much quicker to produce.

"The production artists could then make a suite of fake 3D assets and pattern them together in a number of unique ways."

Use Left Arrow and Right Arrow to move this nuisance about.

"This helped us get a really unique look that had the same disorienting depth as german expressionist films...all for ½ the time of a 3D project."

The top left icon shows how many clones can exist at one time.

Have you no scruples sir? Press Z to smack, you destructive bugger!

"One big benefit was that this allowed us to have some wild set pieces that didn't have to be constrained by poly counts, since everything would be exported as a 2D sprite."

Applesauce and Marmadukes! What peculiar counting!

"*Cleverness is really being laser focused on solving the problem.*
By being clever it gave us more of a unique look than if we made it more "traditionally"
3D or traditionally 2D."

A mysterious scent...

A mysterious scent...

"*Another clever move we made was in how we handled our cut scenes and story transitions. We had a few big set piece moments like this.*"

What is this strange place?

For that mystical pie,
that untouchable tart,

P.B. leaped through the portal
(which wasn't too smart).

"But otherwise, we used interstitial illustrations to tell the full (poetic) narrative of our character."

Continue

The pie flew,
P.B. followed,
and reaching once more,

He plopped down in a spot
that he knew from before.

Continue

"These illustrations were a lot of work, but from a production standpoint they were a lot cheaper than a full cutscene. It is helpful to think in terms of "how many developers are needed" for specific features."
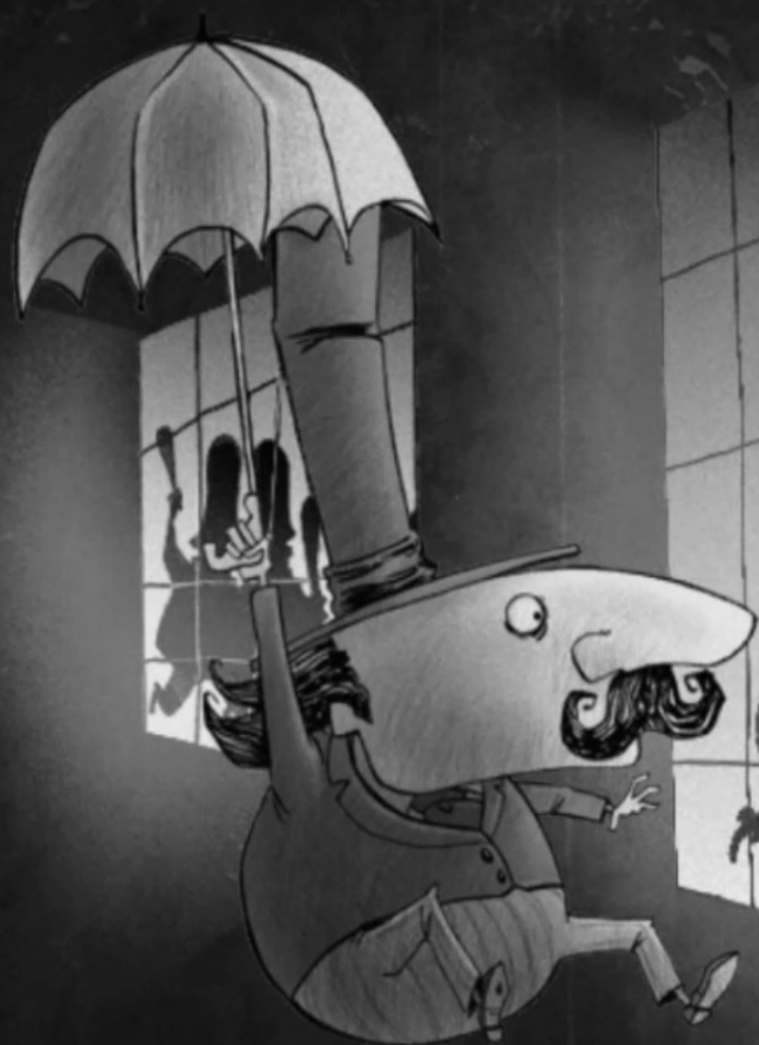
Déjà vu, Winterbum? Press Z to smack switches.

He had entered the past!
And this marvelous feat

Seemed an excellent chance
to steal something sweet.

Continue

*"An illustration takes one developer to do the production work.
A cut scene make take 2-3."*

But pursuing that pastry transformed our dear 'Bottom.

He gained powers (though no one's quite sure how he got 'em).

Continue

"I could do a whole talk on team building but to run through the basics..."

Work to your Strengths

hire for your weaknesses

"With a small team you need people who can play different roles."

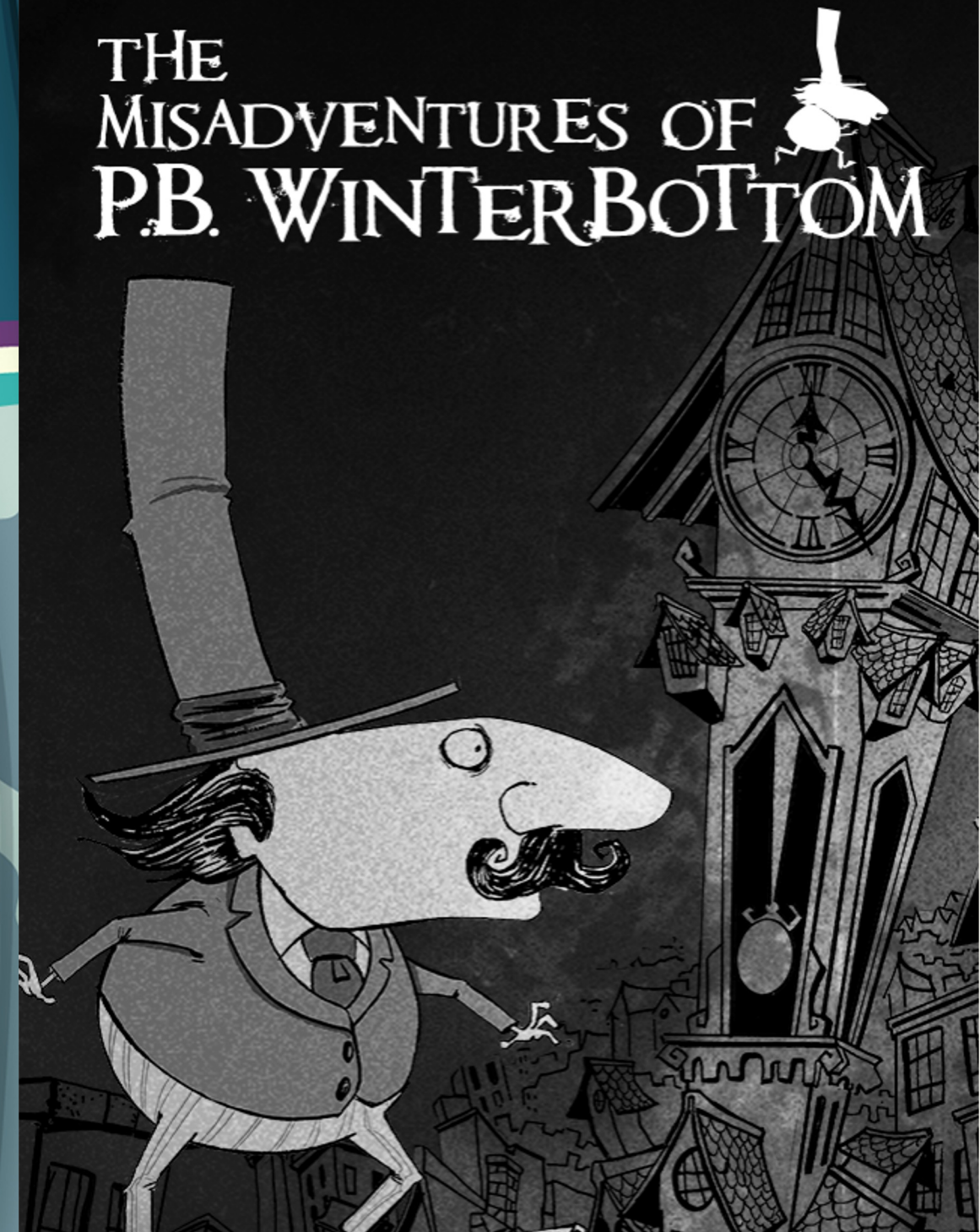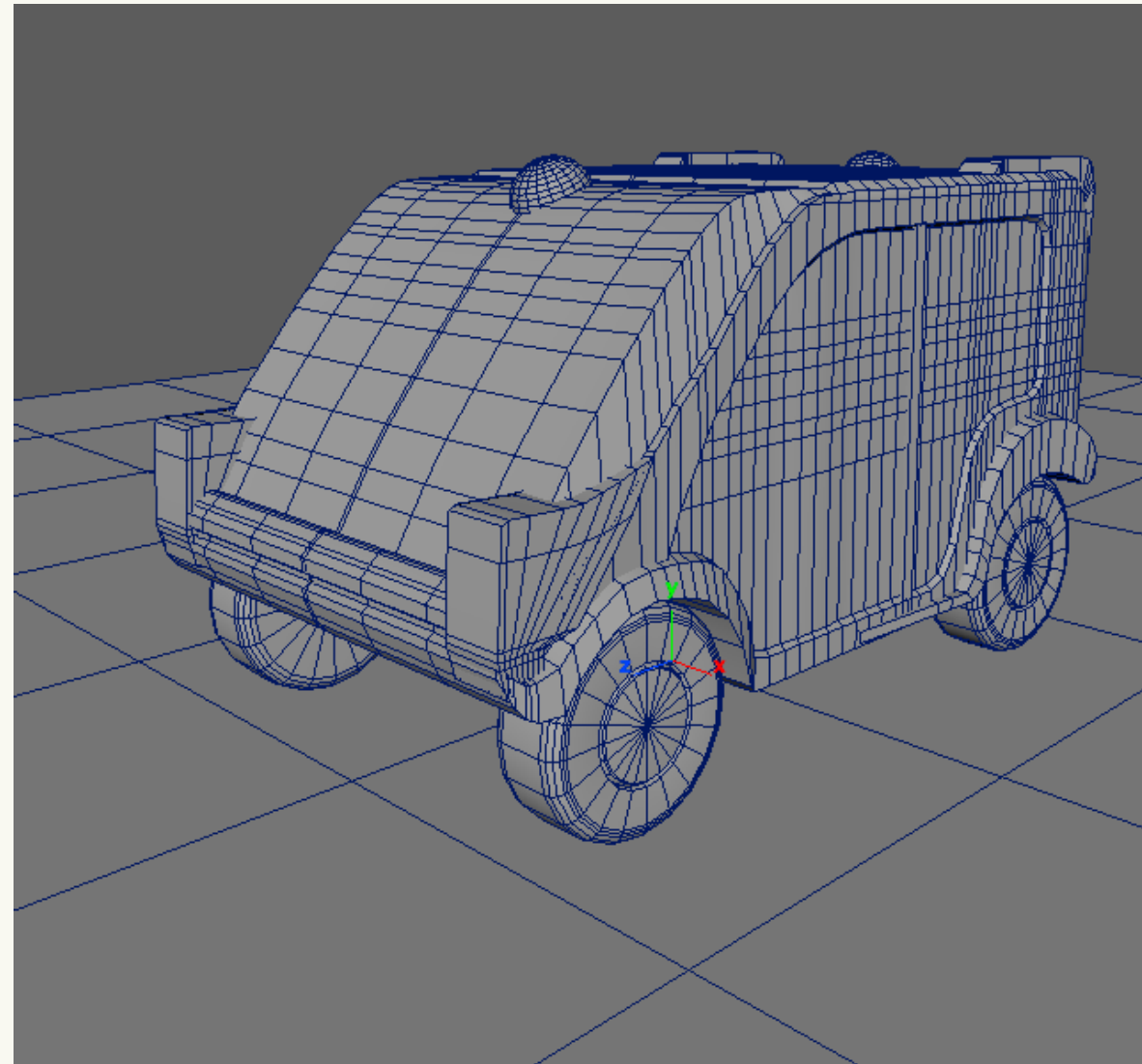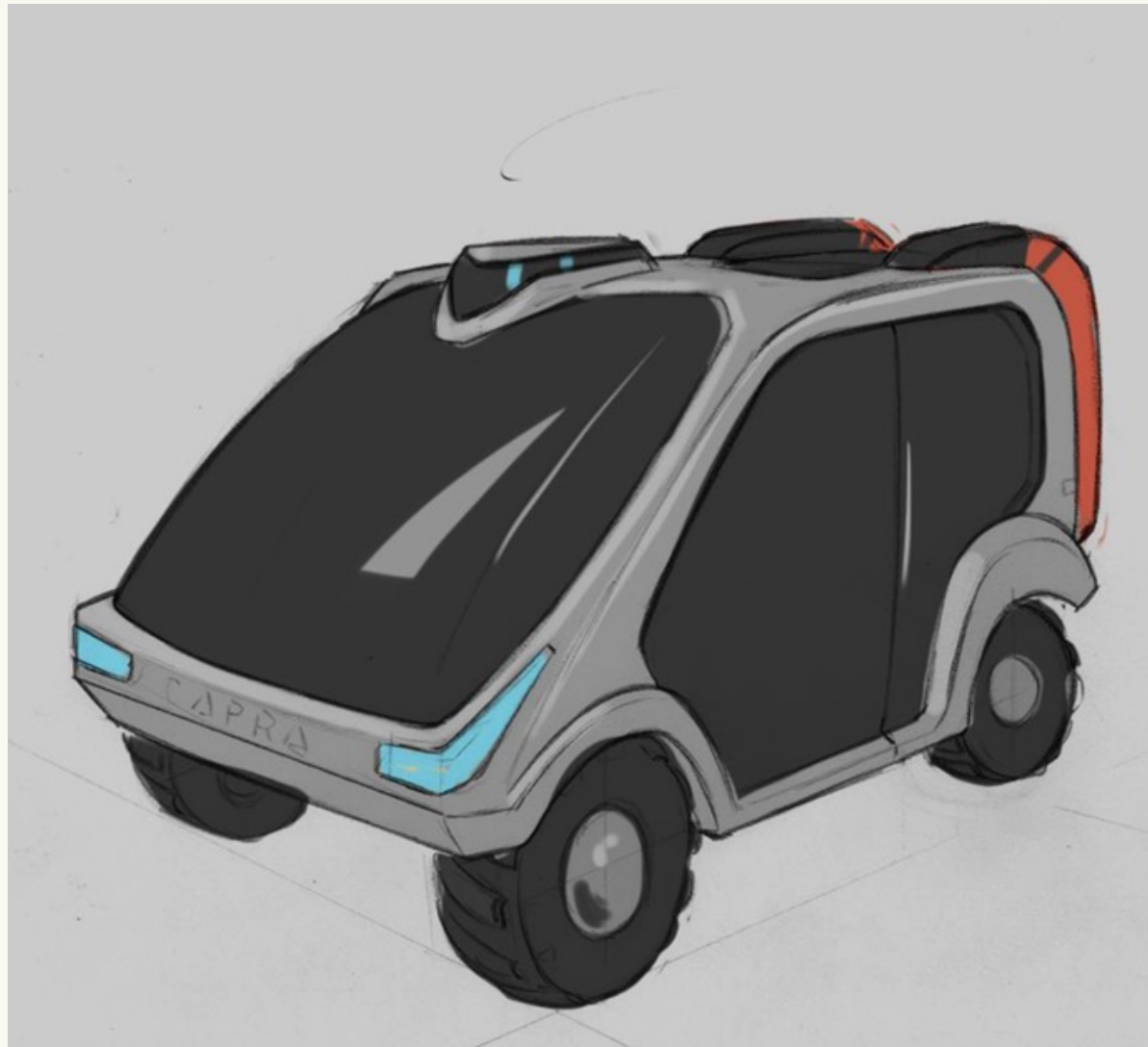Assembling the right team is the key to any game's success

"I am bringing this back up again to say I am a strong 2D artist. I lean on this skill in any game I art direct. Each game be it 2D or 3D I direct it to have a 2D aesthetic."

Play to your Strengths

"Art director to art director I will say that understanding what you are good at is crucial. I am a strong 2D artist and a very sub par modeler. So if I am going to work on a 3D game I need some firepower."

Hiring is your most crucial tool

Find great people who make up for your weaknesses.

3D Model: Lisa Fleck

"Diversity of skills is key as most of you will be doing three jobs. On Neo Cab I was character Designer, tech artist and art director.

You may only get a few artists to hire so make sure they have skills that compliment your own or fill necessary gaps."

If your team is lean, make sure everyone brings something new to the table!

Don't micromanage your team. Let them do what you hired them to do.

"Everyone has a role and if you try and take someone else's role on top of your job... Well, it isn't hard to figure out how things will turn out."

"A wise person (Felix Kramer) once told me that you can ship a product but not a vision. Having a great idea or big ambitions won't matter if you don't think about your game in realistic terms. At the end of the day your project needs to be a tactile thing. The entrée must be good enough that people will want to pay for it. All the creativity in the world won't will your project to into existence."

Ship a Product not a Vision

Keep a production mindset

You are not sailing to uncharted waters.

" Being on a small team can have a thrilling intoxicating feeling. You are all pirates together doing something wild and scrappy. You want to shed all the old rules that were holding you back at larger companies. You want to do things differently right?

However, many teams have made successful games before in conventional ways. "

Traveling without a map is a bad plan.

"Living by your own rules can also have its consequences. Don't disregard what works at established studios."

Reliable Production Practices

- **Daily team meetings** or check ins are a great way to stay in synch.

- **Using some tracking software** for tasks (Like Jira or Codecks) will help break down large features into manageable chunks.

- **Set deadlines!** Don't fall down a rabbit hole and work on a feature forever.

- **Exercise boundaries** and take breaks, holidays and time away from the game.
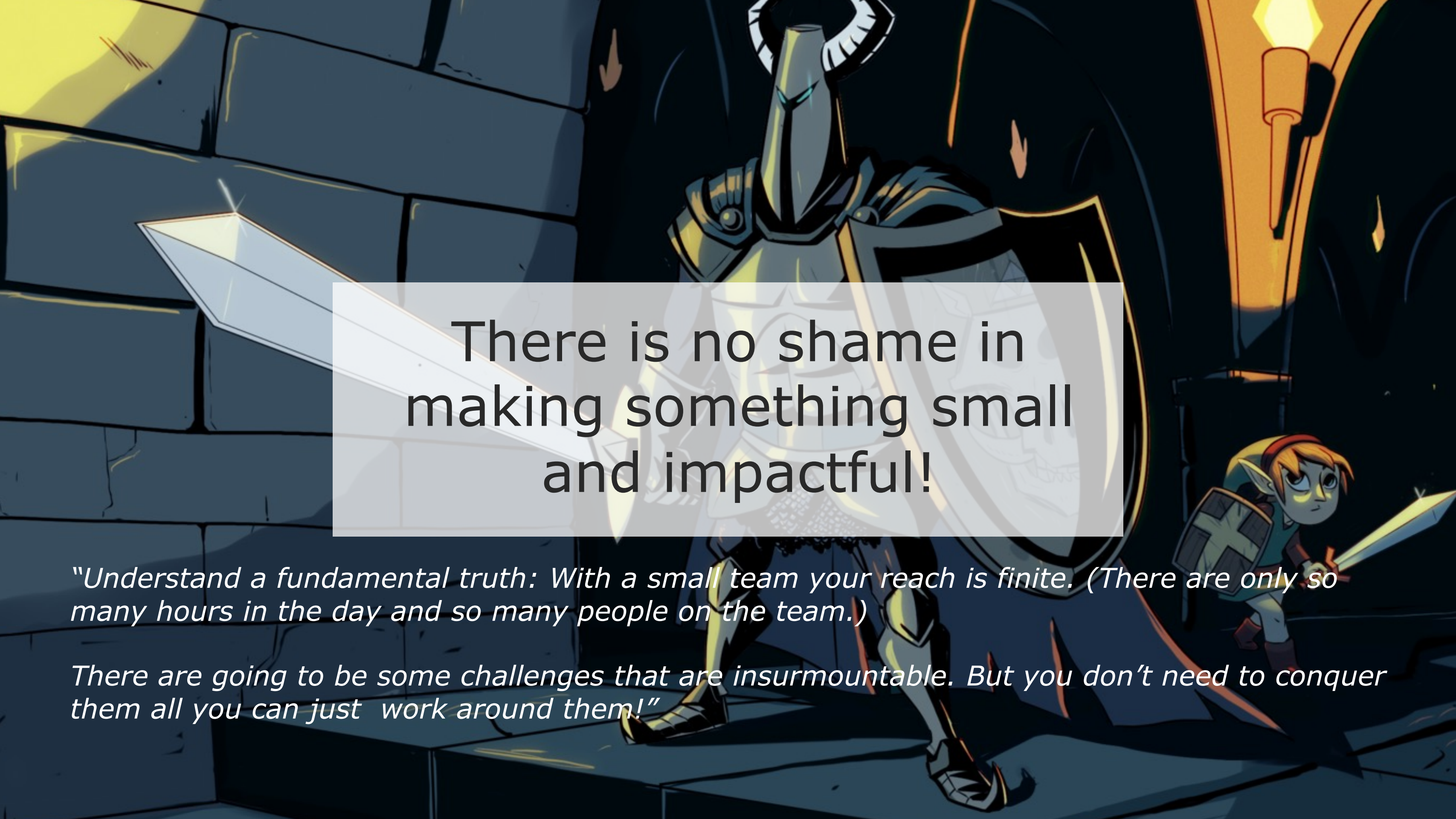
Final Takeaways

Go Get 'em Tiger

Key Takeaways

- Make a 5-star entrée not a 7-course meal of a game
- Prioritize game design goals EARLY
- Don't forget Art Direction is about planning a production.
- Focus on creative solutions
- A great art style can develop out of limited resources.

There is no shame in making something small and impactful!

"Understand a fundamental truth: With a small team your reach is finite. (There are only so many hours in the day and so many people on the team.)

There are going to be some challenges that are insurmountable. But you don't need to conquer them all you can just work around them!"

People don't play smaller games for the same experience as a larger game. So, focus on making your game more meaningful rather than plentiful.

People love an amazing **entrée**!

A finished project is better than a perfect product that doesn't release.

It's done.

Questions?

Reach out to
@vincentperea

Follow QR code for my website
with case studies on my games.

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@vincentperea