



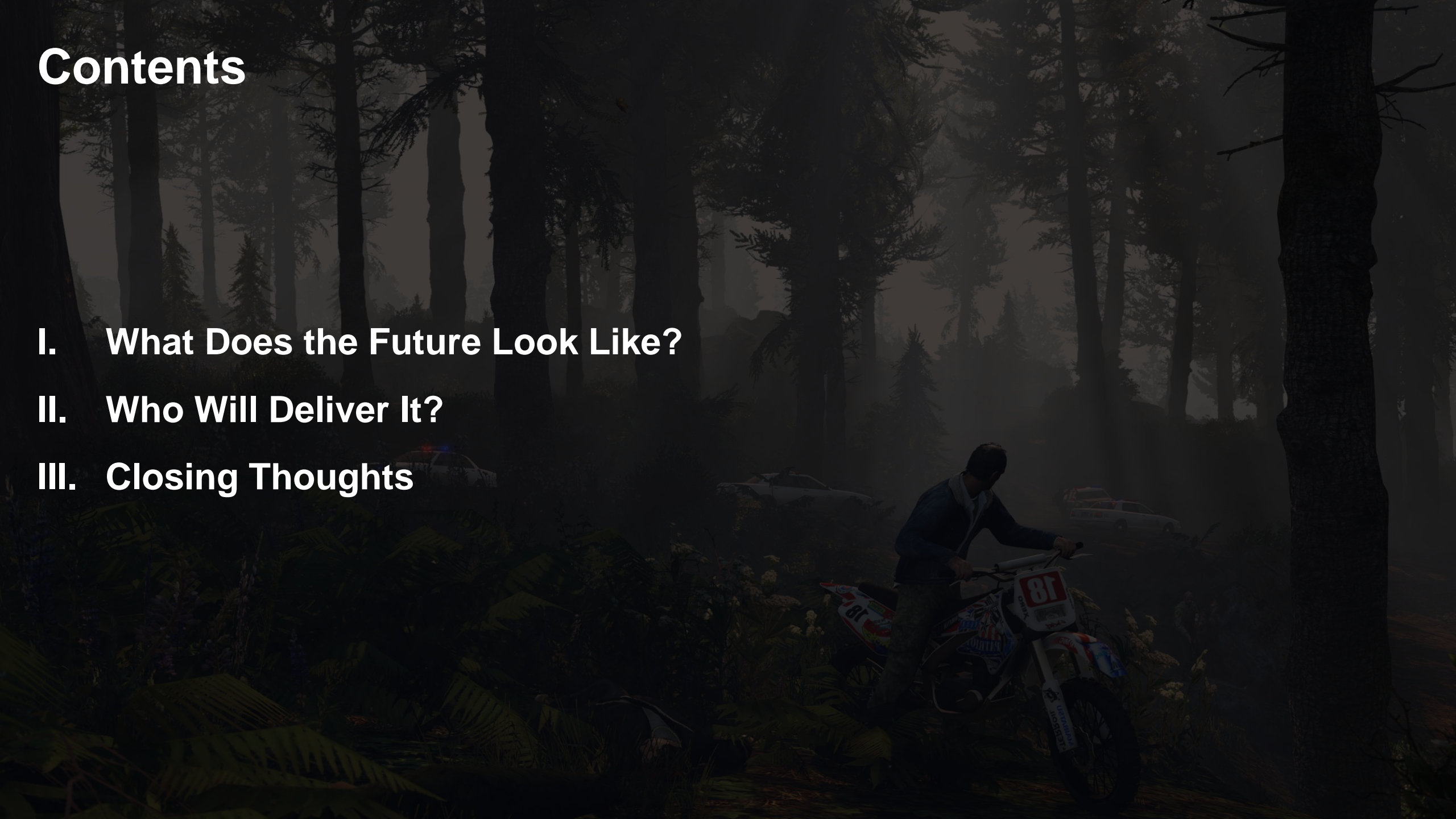
The Future of Storytelling

August 2020

For more information, please contact Ian D'Silva at iandsilva96@gmail.com

Contents

- I. What Does the Future Look Like?
- II. Who Will Deliver It?
- III. Closing Thoughts



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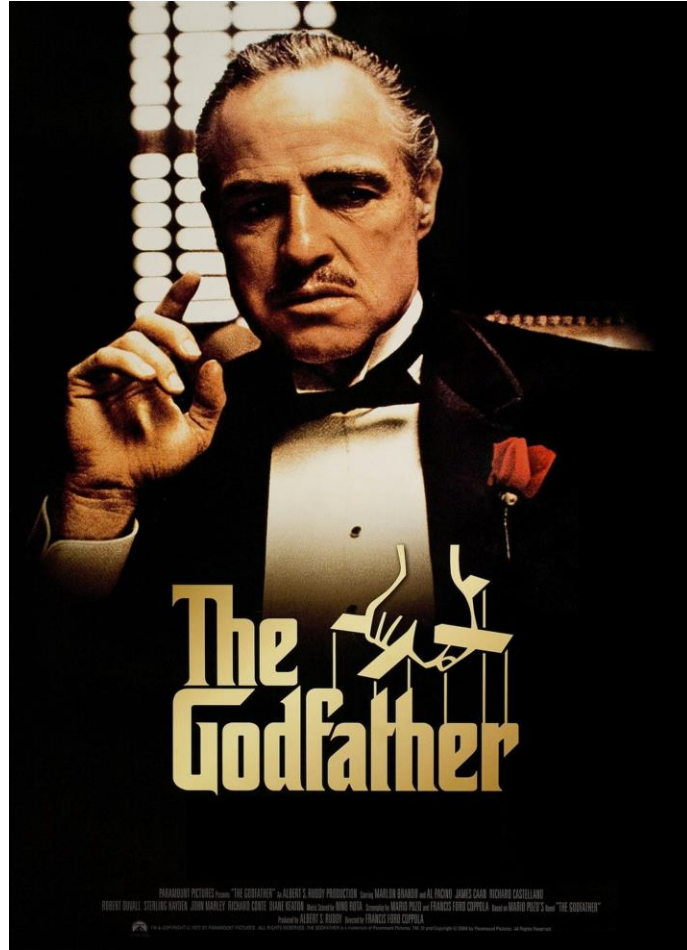
I. What Does the Future Look Like?

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Storytelling to Date – Stories fascinate us, but have not had a step-change improvement since the introduction of movies



1972

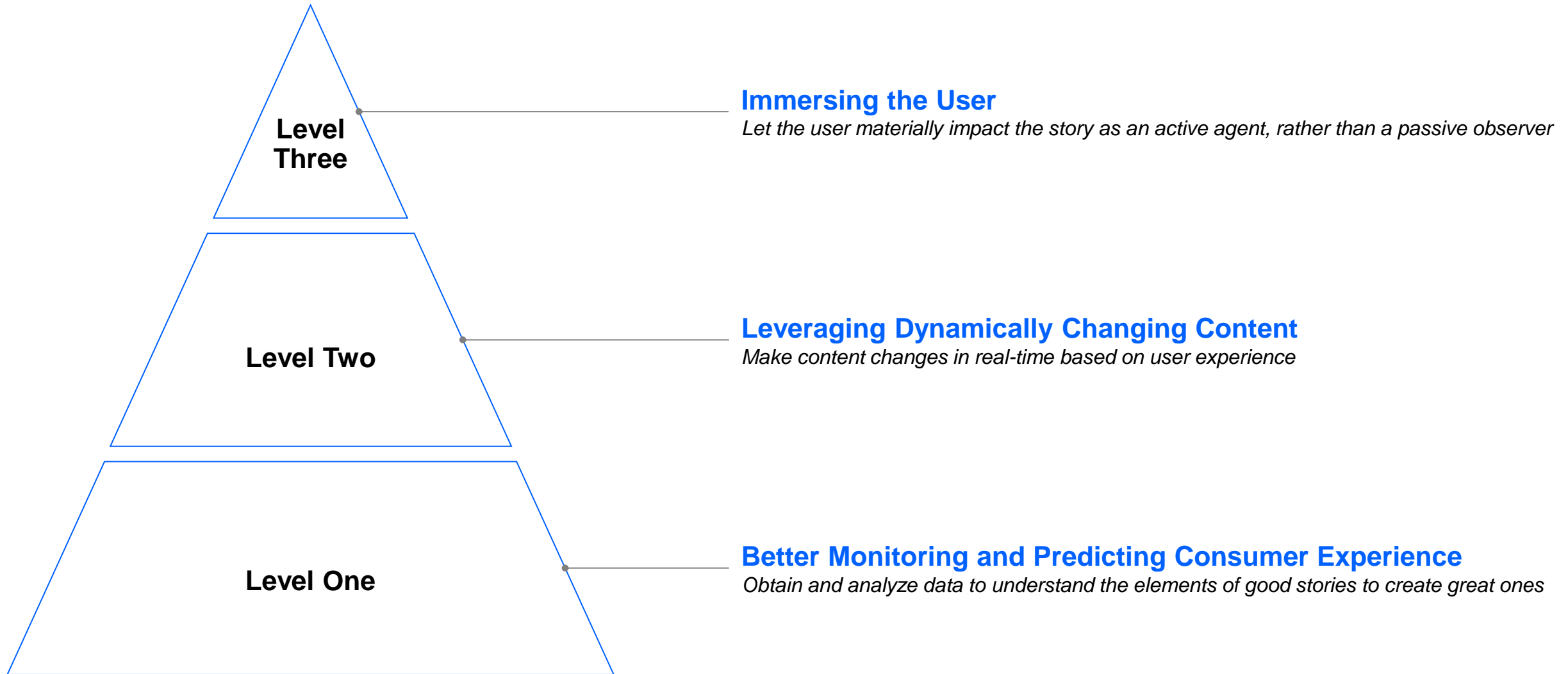


New, interesting stories may emerge, but entertainment improvements are marginal. While improvements in picture quality and CGI capabilities provide better viewing experiences, they do not change the game.

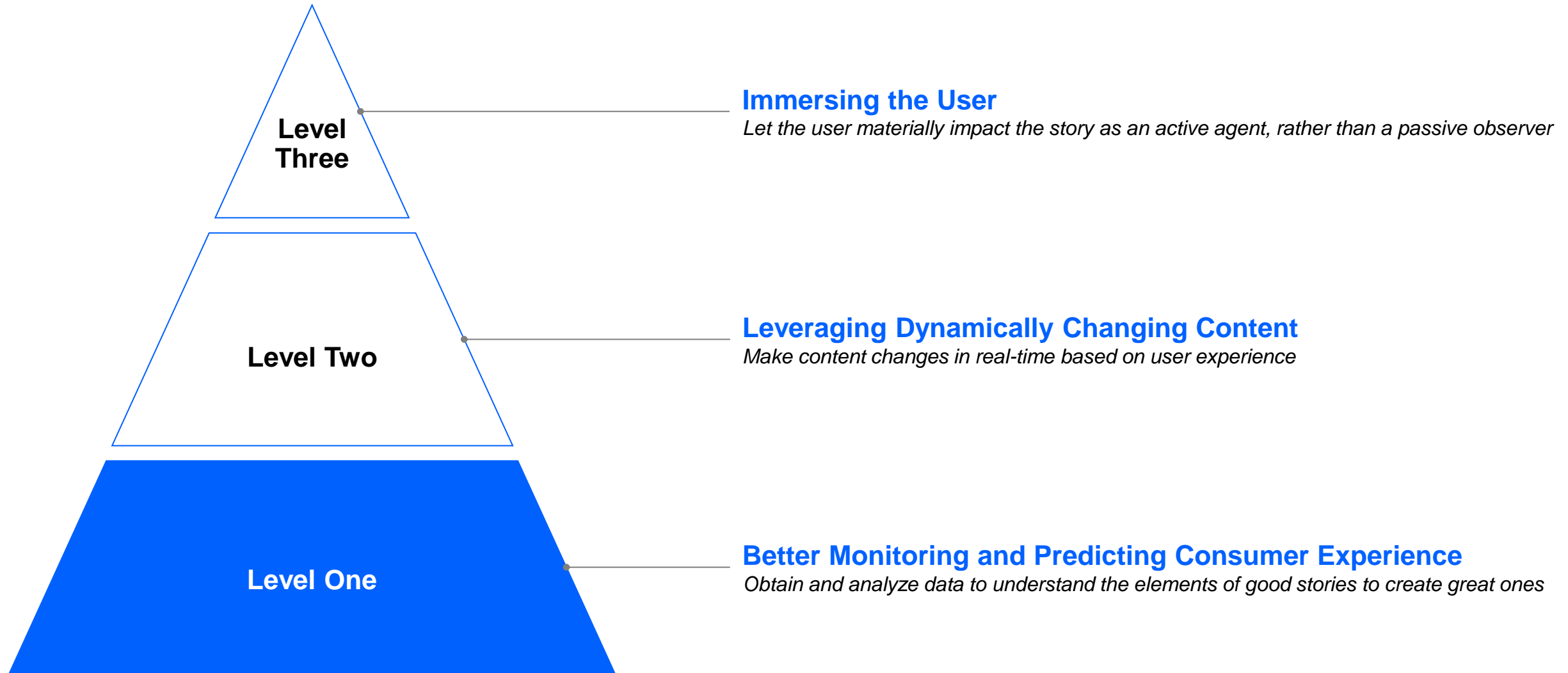


2019

Changing the Game – Evolving through three levels, interactive experiences will deliver a step-change improvement



Level One – Better Monitoring and Predicting Consumer Experience



Digital Media Feedback – User experience data can be improved to better inform what narratives are successful

Current State	Future State
<p>Data includes:</p> <ul style="list-style-type: none">• Box office results• Critic ratings• Viewership Duration• Netflix ★★★★★	<p>Data includes:</p> <ul style="list-style-type: none">• Eye tracking*• Heart rates*• Facial expressions*
<p><i>Companies don't have a deeper sense of exactly how viewers reacted and how that drives overall viewer satisfaction.</i></p> <p><i>Think about all those times you put on The Office and had it running in the background, but were not paying attention to it.</i></p>	<p><i>With more data to understand how audiences will react to story lines, content producers will be able to:</i></p> <ol style="list-style-type: none"><i>1. better predict what stories will be successful with artificial intelligence; and</i><i>2. employ artificial intelligence to deliver better content.</i>

**Better data will provide tremendous insights on content response, but privacy concerns will be the main driver of how this information is obtained and to what level this is possible.*

Employing AI – Artificial intelligence can play a role in narrative development

As its capability develops, artificial intelligence can play a larger role in not just serving as a validator of a story's likelihood of success, it can start to make recommendations to tweak story lines or even develop narratives of its own.



2016



2018

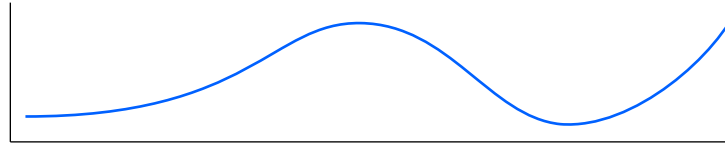
How It Works – Double down on understanding player engagement as it pertains to the storyline

Break Down the Narrative



- Break down the narrative into component parts in a variety of ways (by level of action, character shown, scenery, etc.)
- Develop this into a data-friendly format for an algorithm to be able to process

Deeply Analyze User Engagement



- Maximize your understanding of viewer enthusiasm during playtime through high fidelity data
- Correlate user engagement and happiness with different parts of the narrative to understand successful parts and where areas for improvement lie

Inform Future Content



- Initially, inspect by hand where creatives can improve stories based on findings from the analysis
- Build a capability for AI/ML technologies to understand the findings and make suggestions for creatives to incorporate into the story

If not done already, understand where successes and failures within its stories in a data-driven approach to inform how to improve engagement with its stories

Call to Action – Consider evaluating an investment in Parrot Analytics, a firm that collects data on viewer “enthusiasm” in addition to viewer count

Parrot Analytics

Stage: Series A // **Total Raised to Date:** \$15M

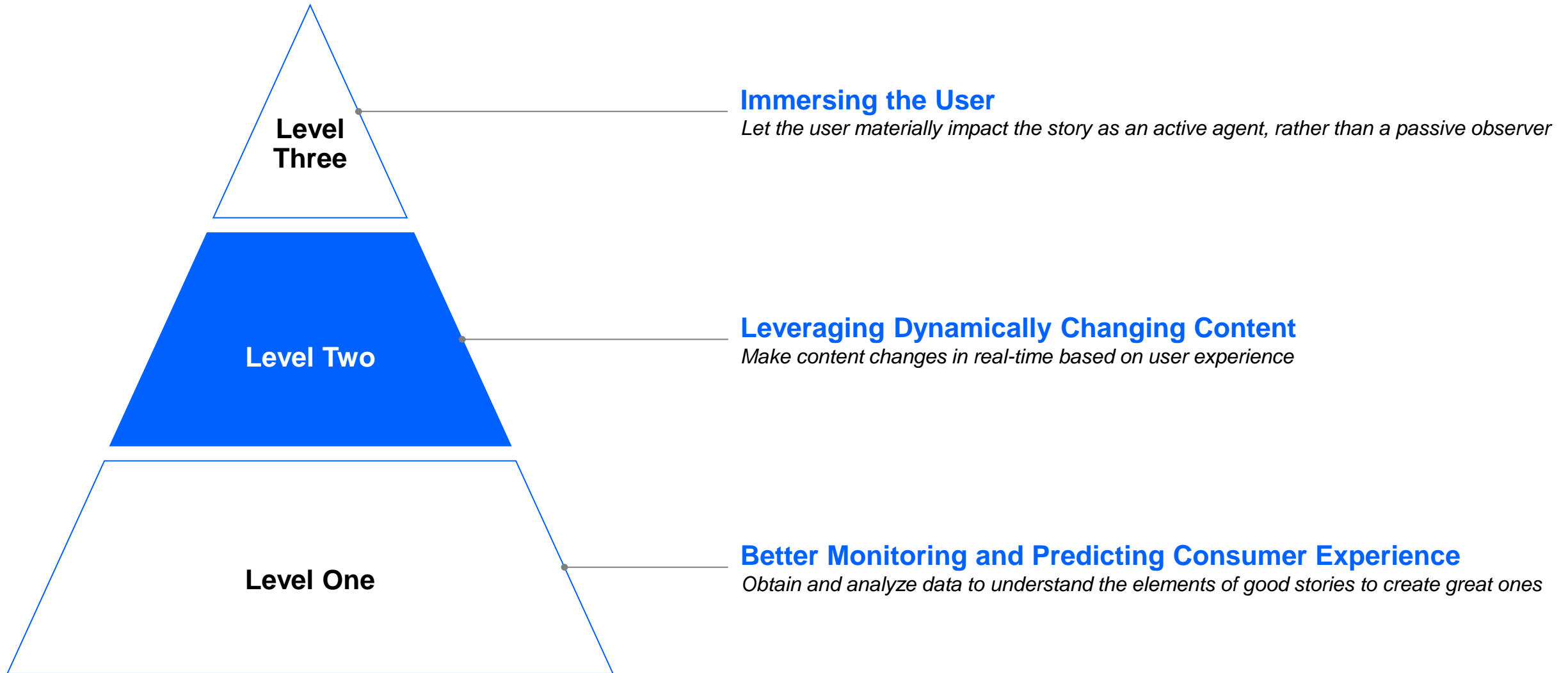
Description: Parrot Analytics measures and predicts global demand for content, across all platforms, around the world.

Ian’s Investment Review: [Link](#)

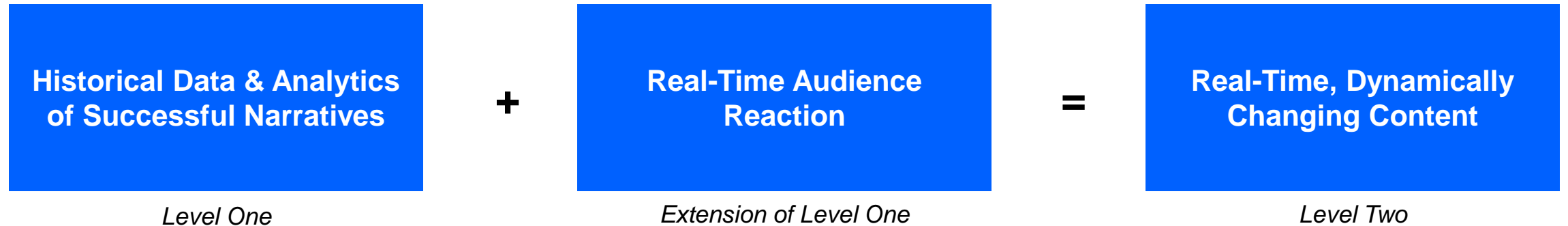
Parrot Analytics helps media companies better understand the performance of their content and forecast what content might perform well, to deliver better top-line results. Going beyond viewership counts that legacy competitors like Nielsen offers, Parrot Analytics can gauge more important metrics like viewer enthusiasm and its effect on customer subscription or cancellation decisions. By directly providing value to the profit engine of media companies, they should be paid handsomely for their work.



Level Two – Leveraging Dynamically Changing Content




Real-Time Changes – Narratives will change in real time to optimize for user outcomes as computational power increases



Level One in Real Time – Develop capabilities to autonomously develop narratives using AI/ML technologies

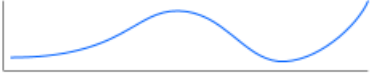
Call to Action – Double down on understanding player engagement as it pertains to the storyline

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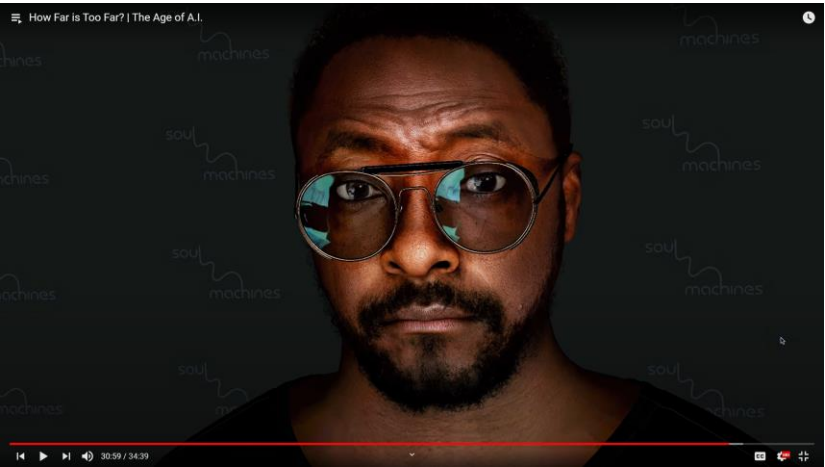
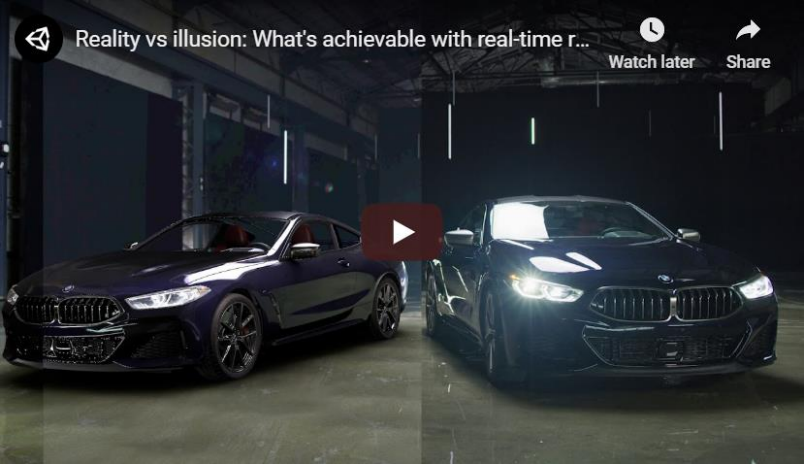
Performed in
Real Time

Technology Today – Currently, real-time content leverages references frames, but is suggestive of a photorealistic future



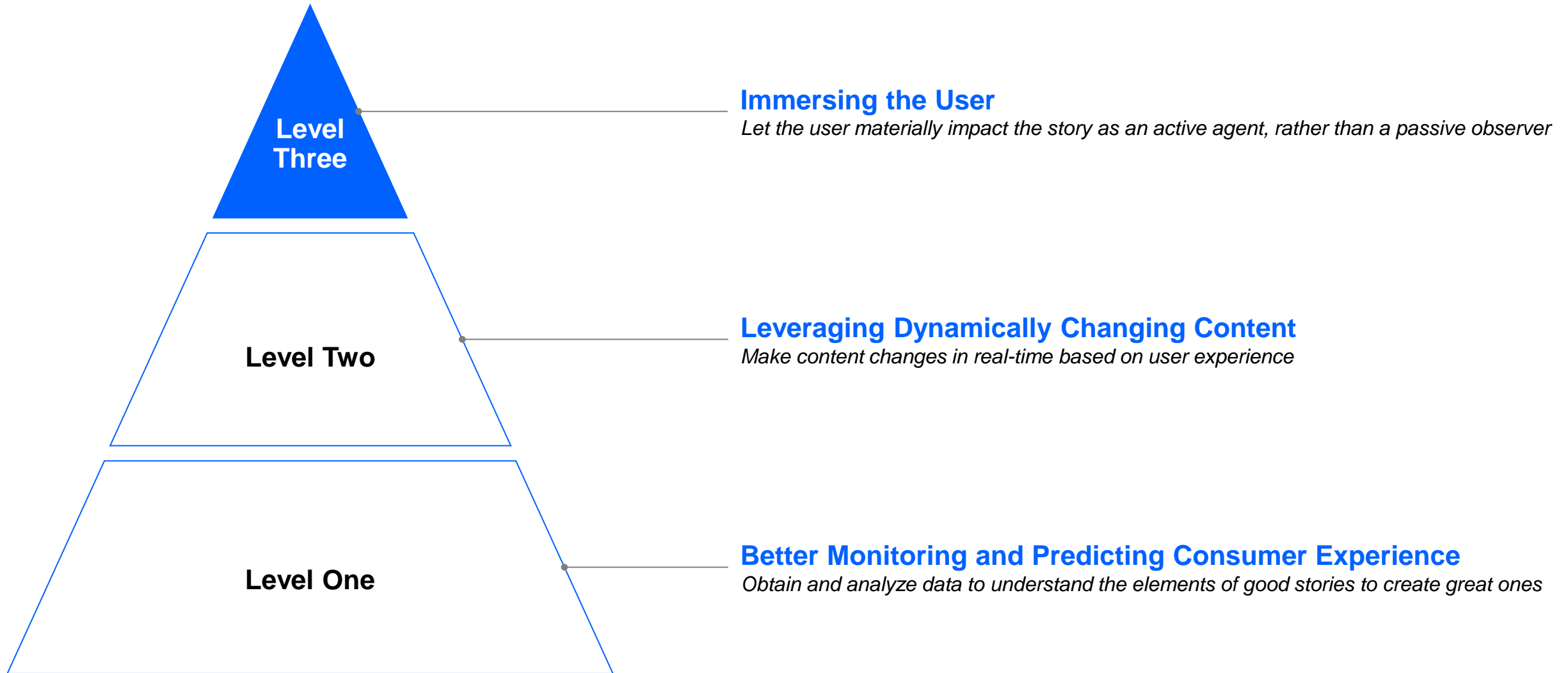
NVIDIA has created an AI-generated, interactive world based on video references of our world

BMW augments visuals of its cars with real-time light ray tracing on top of a reference video



Soul Machines is creating a digital will.i.am

Level Three – Immersing the User



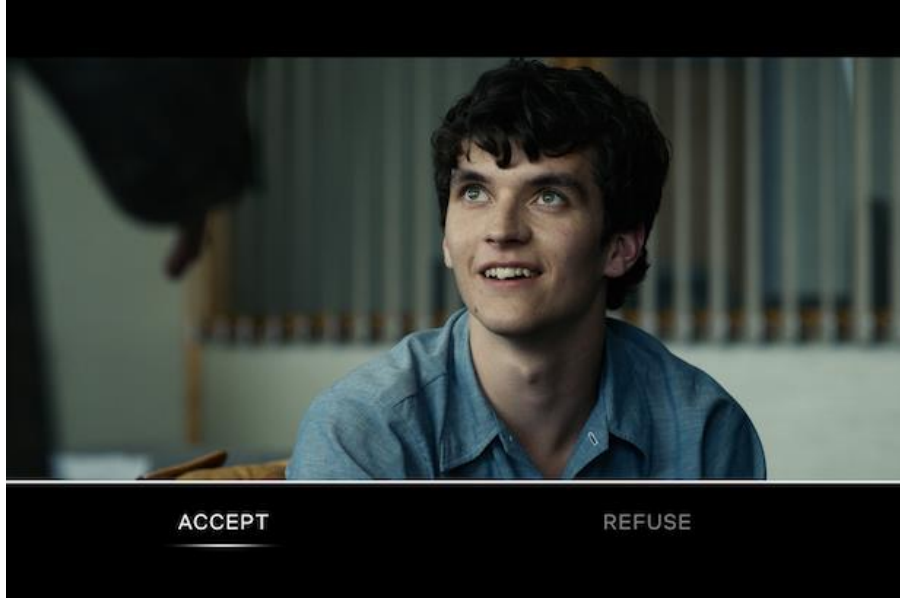
A Digital Theme Park – In Disneyland, you optimize for the experience best for you, not what Disney thinks is

“Disneyland is an experience involving many moving parts in harmony, like an orchestra. Everything has to be tuned, what you hear, what you smell, what you see,” how you see it, the speed at which you assimilate all of that, just like a film, is choreographed.

[Disney doesn’t] control the camera, because the camera is you — it’s you when you come to Disneyland”.



Jumping to Interactivity – From passive experiences, media will jump to *Bandersnatch* and *Westworld* like experiences



Netflix released, through the *Black Mirror* series, *Bandersnatch*, a story with decision points that produce different outcomes in the story. Viewers make decisions for the main character, the young programmer Stefan Butler, who is adapting a fantasy gamebook into a video game in 1984.



Westworld is an exclusive theme park where those who can afford a ticket can live without limits. The world has lifelike robots that pass for humans called hosts. The operators create narratives for these hosts to repeat each day while interacting with guests

Limitless, Dynamic Choose Your Own Adventures

Technology Yesterday – Dynamic choose your own adventures are nascent, but potential shows

You are Bebop, a survivor trying to survive in a post apocalyptic world by scavenging among the ruins of what is left. You have a hatchet and a hunting rifle. You live in a small community of survivors who have managed to build a piece of civilization after the bombs fell. You are talking to one of the leaders of the community when you hear a noise outside.

"What is it?" The leader asks. "It sounds like an earthquake."

> What will you do?..

play.aidungeon.io using GPT-2

Technology Today – Released in June, implementations of GPT-3 to write interactive narratives are already spectacular

You arrive at a small wooden store with sheet music in the window. The door is locked so you knock. The music suddenly stops and you hear footsteps coming to the door.

"Hello?" A voice says behind the door.

"I'm looking for the book of essence," You say.

"What do you want it for?" The voice answers, a bit of an edge to it.

> You tell them you are a humble seeker of knowledge.

"I am a humble seeker of knowledge," You answer.

"Ah, I see. You seek to learn about the essence of reality, and the universe." The voice says. "I know of this book. I am the guard of this library. The only way you can get to it, is if you get past me. Are you up for the challenge?"

> You ask them what the challenge is.

"The challenge is, you have to win a game of chess against me. If you win, then you may try to take the book. I will get the board." The door unlocks and opens.

> You go inside and play chess against the person.

You go inside and see a beautiful woman with long blond hair. She wears a purple dress and a silver tiara. You have seen this woman before. In fact, you have seen her many times before in pictures and statues.

> You try to remember who she is.

You have a sudden realization of who this person is. This is the lost queen of the kingdom! She was thought to have been killed by bandits, along with her husband, but it looks like she survived.

> You express your surprise and ask her why she let people believe she is dead.

"I am surprised you did not know, with all your wizard knowledge. Let's just say I am hiding from someone. If people thought I was dead, then they wouldn't be looking for me." She says.

> You ask her who she is hiding from.

"If you want to challenge me to a game, then play. If you want to pry into my personal life, then you can leave."

You decide not to press the issue, so you sit down and start a game of chess. The

You open the book and begin to read:

The Essence is within us all. We use it every day for simple things like language and thought, but true masters can manipulate this essence to become gods among men. To become a master, you must first hone basic abilities such as mind reading, influencing the weak minded, and simple spells. Once you become experienced, you can try more challenging feats of mental prowess. Remember, students, the strong-minded survive, the weak-minded perish.

> You learn how to read minds from the book.

You open the book again and begin to read:

Thoughts are the building blocks of our world. With practice, you can read the basic thoughts of someone. To read the complex thoughts of someone, you must be within five feet of that person. The thoughts of someone are a jumble of images, sounds and feelings. Listen to these thoughts and learn.

> You practice by trying to read Eliza's thoughts.

You walk over to Eliza. She looks at you with a raised eyebrow.

"Yes?" She asks.

"Can I try something?" You ask.

She shrugs. "I suppose."

You look into her eyes. You try to focus on her thoughts. You hear a series of disjointed words and images: father, home, needle, sleep, tired.

"Well?" She asks.

"You... miss your father," You say, "You want to go home, you think about your home a lot, you had an accident with a needle when you were little, and you're very tired."

"That's correct," She nods.

play.aidungeon.io using GPT-3

Call to Action – Consider evaluating an investment in Latitude, the creator of AI Dungeon

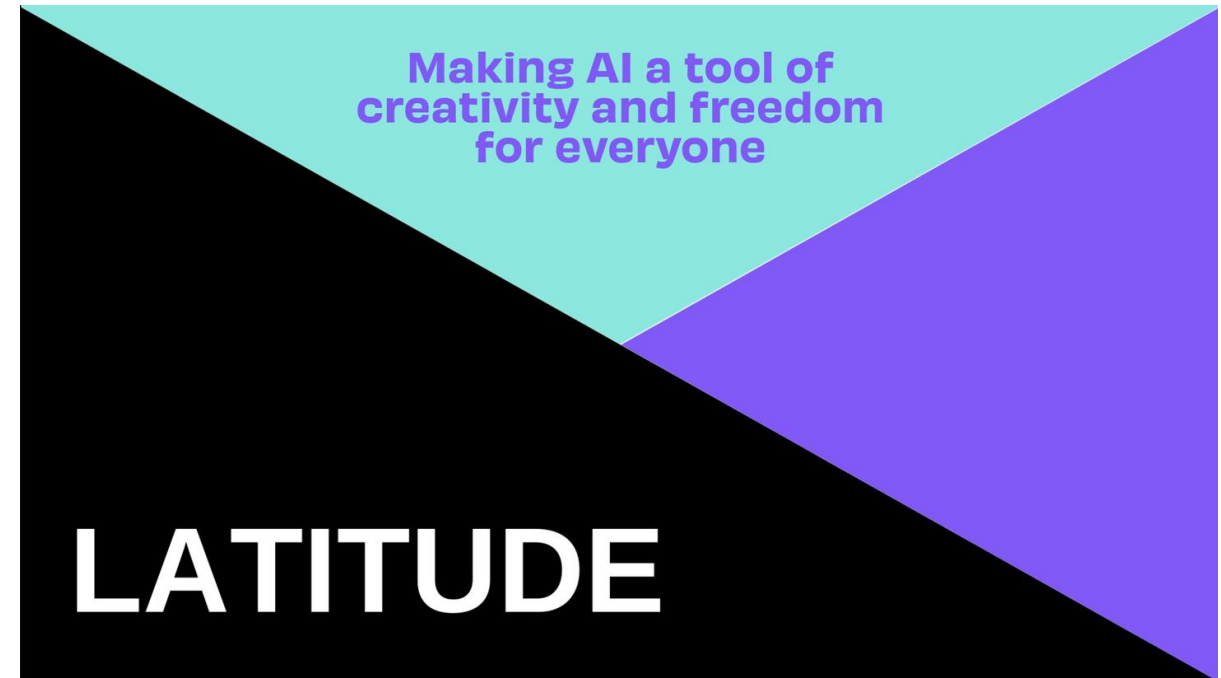
Latitude

Stage: Seed // **Total Raised to Date:** Unknown

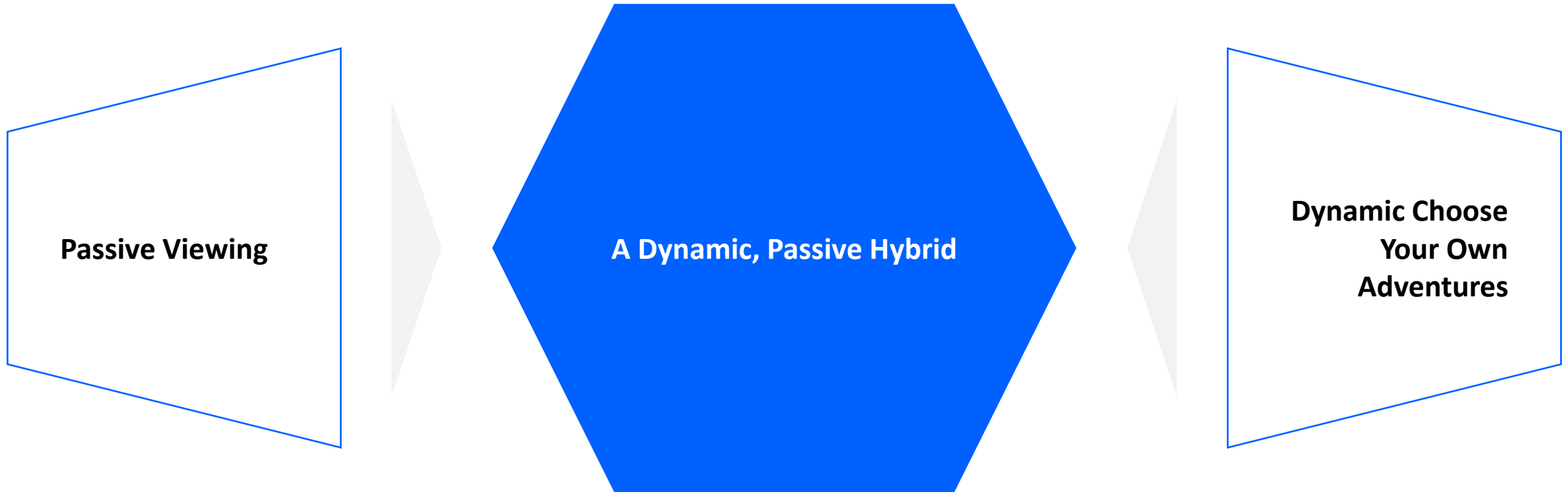
Description: Latitude creates limitless, self-guided entertainment game worlds, powered by AI.

Ian's Investment Review: [Link](#)

Latitude is creating the future of storytelling by using artificial intelligence to produce dynamic and interactive narratives in real time. This is part of a broader trend of making more interactive storytelling media, but while others are focused on the video/graphical aspects of producing content, not much attention is being paid to autonomously develop story lines. Latitude is doing so through its game, AI Dungeon, and is seeking to serve as the underlying infrastructure for creators to use narratives created by AI in their stories. The team has already executed spectacularly on technological development, user acquisition, and monetization, setting them up for success.



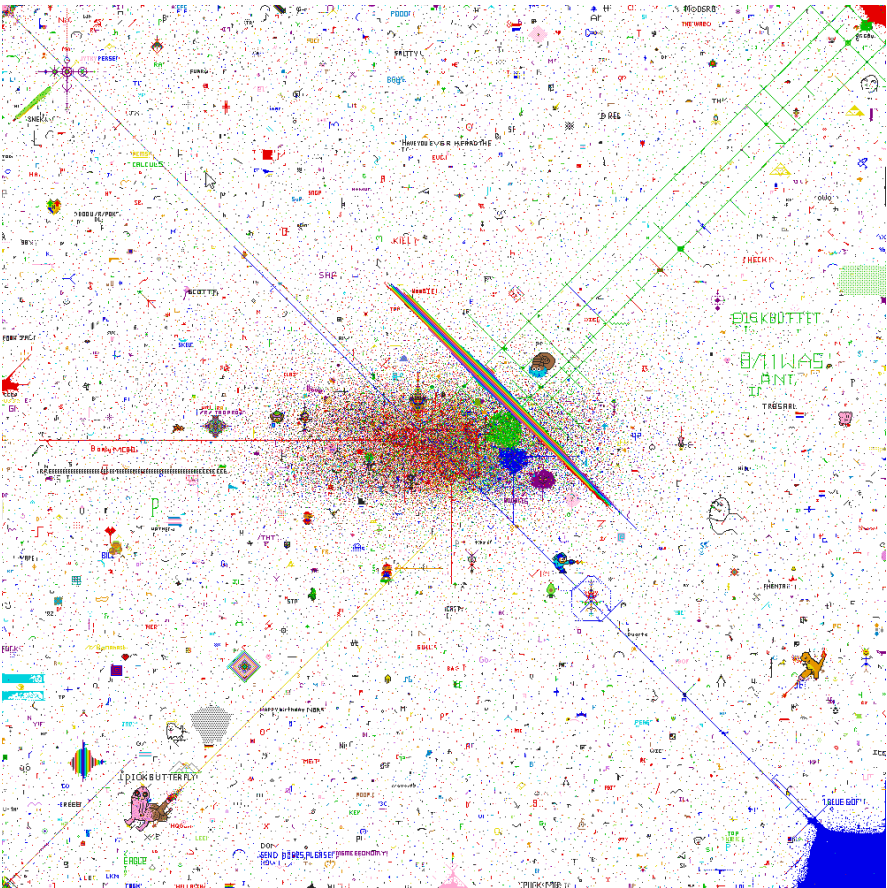
The Reality of Level Three – Sometimes, passive experiences are preferable to active, engaging ones



More immersion is not always preferred— a lot of media is consumed passively, sometimes as a background activity to another task. Put simply, consumers will choose what content they consume based on the amount of attention they are able to give to it. Though likely a fluid spectrum, viewing options can be bucketed as above.

Optionally Engaging Experiences – MILEs give the benefits of engagements and ease of passive viewing through immersion optionality

Massively Interactive Live Events (MILEs) are like Netflix’s Bandersnatch, except every decision is made by the collective viewers live in real time, changing what everyone sees and permanently impacting the story.



Reddit's Place



Twitch Plays Pokemon

The Experience – The collective decision making will create edge-of-your-seat stories and be “can’t miss” events

Immersion

In shows and movies, there are so many moments where key decisions are made that influence the trajectory of the story line.

In *The Dark Knight*, imagine if the audience gets to choose whether Batman should save Harvey Dent or Rachel or decide whether one of the ferries will blow up the other.



FOMO of Live Events

Those that are not able to tune in for the live event can watch at a later time, but will lose the ability to interact.

This will increase the hype and FOMO, much like the phenomenon of watching sporting events live, versus a replay, further ingraining the TV show or movie into everyday culture and society.



Call to Action – Consider evaluating an investment in interactive live-streaming infrastructure provider Genvid Technologies

Genvid Technologies

Stage: Series B // **Total Raised to Date:** \$53M

Description: Genvid Technologies tools and services let you create immersive, interactive live streams.

Ian's Investment Review: [Link](#)

Genvid Technologies plays at the intersection of video games and media to create interactive experiences, riding the tailwinds of the large and growing video game, e-sports, and live streaming markets. Their products solve important problems on both the provider and consumer sides and have the monetization capabilities to fuel future growth. Execution will be important, but the company is led by seasoned cloud gaming team.



Call to Action – Consider an investment in FourFront, which combines real-life actors and AI to create social & cinematic experiences

FourFront Media

Stage: Seed // **Total Raised to Date:** Unknown

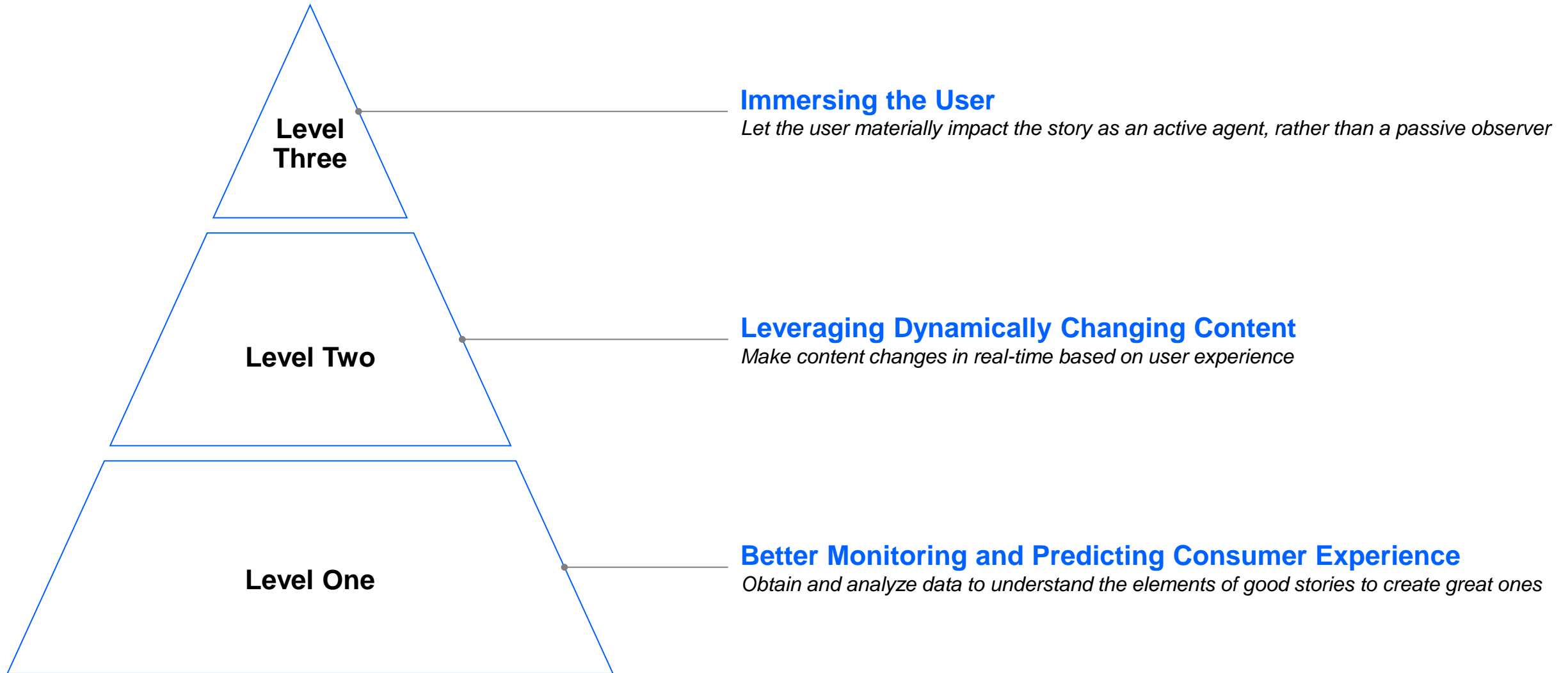
Description: FourFront combines real-life actors and AI to create social and cinematic experiences.

Ian's Investment Review: [Link](#)

FourFront Media tells stories where consumers are by leveraging artificial intelligence to interact with the audience at a personal level through social media platforms. This rides a larger tailwind of stories going trans-media to reach consumers anywhere, as seen with the launch of Star Wars' The Mandalorian TV show and Netflix's The Witcher TV show. The product to date has focused on influencers telling stories, but has the potential to expand to even larger media producers. The team is led by Ilan Benjamin and Anna Melamed who have storytelling backgrounds, but their willingness to be agile in finding product-market fit will drive their success.



Changing the Game – Evolving through three levels, interactive experiences will deliver a step-change improvement



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I. What Does the Future Look Like?

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Disruption of Traditional Media— The video game industry will deliver these experiences, not HBO or Disney

Movies & TV Shows



While Pixar produces incredible movies, it takes 24 hours to render a single frame. In a world where frames need to be created in real-time, there is a large capability gap.



Video Games



When you do something (e.g., move your character, shoot a gun, etc.) in a video game, you are creating a new frame, one that has never been created anywhere before in 1/60th of a second. Solving for this constraint is already baked into the technological development of the video game industry, giving them a head start over traditional media firms.

A Case Study – In *The Mandalorian*, what producers bring to the table is diminishing

Epic Games' Unreal Engine is being used to produce scenes for Disney's *The Mandalorian*.

Currently Epic is just creating backdrops, but when video game companies can seamlessly drop in photorealistic characters and autonomously develop narratives, is there anything left for producers to bring to the table?



The Head Start Is Large – Video games create simulations of reality that traditional media cannot “just build”



Matthew Ball  @ballmatthew · Jun 28

Replying to @ballmatthew

2/ Game engines have long lagged the visual fidelity of CGI tools use for film/TV because they are focused on reproducing specific real world things (e.g. motion capture, a building) in a very specific way (e.g. Thanos doesn't parachute, Avengers Tower from angle x & distance y)



1



4



24



Matthew Ball  @ballmatthew · Jun 28

3/ Game engines focus on a far more difficult task: simulations.

They must not only process enormous amounts logic from up to dozens of concurrent users, and do so in real-time and without hiccups, and with severe limits to what is predictable and how far out it can be predicted



1



4



29



Matthew Ball  @ballmatthew · Jun 28

9/ This is why, today, these engines are the most sophisticated/capable simulation tools in the world. Unreal is used by the military for simulations, Hong Kong International Airport was designed in Unity to better plan for impact of weather, model passenger traffic, emergencies



1




8



37



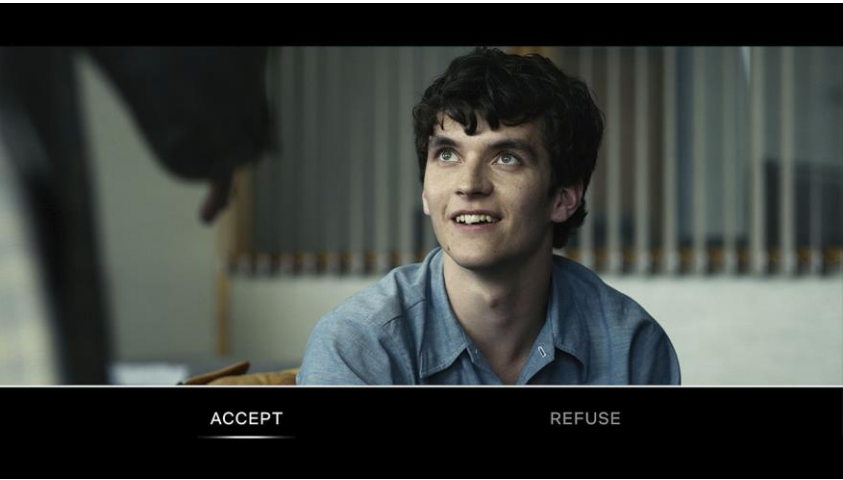
Matthew Ball  @ballmatthew · Jun 28

10/ There isn't really a business case to build custom tools for such specific applications. Consider the rope. Not only is that incredibly sophisticated, it requires SO much prior logic around physics (e.g. how fast it's moved, how hard it's thrown, how it affects what it hits)

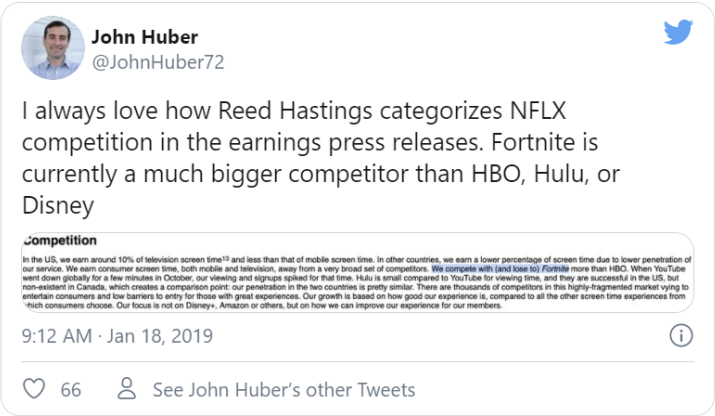


Netflix Is Trying to Keep Up – Remarks by management, the release of *Bandersnatch*, and company patents show push in interactive media

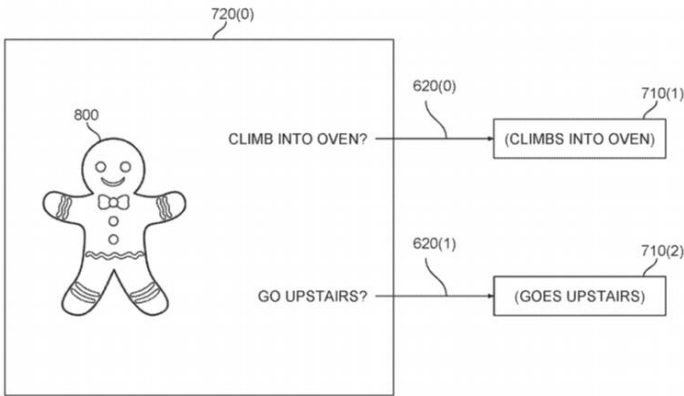
Increasing focus on interactive media in Netflix strategy



Bandersnatch Release, December 2018



Reed Hasting's View of Fortnite, January 2019



Interactive Media Patent, August 2020

Video Games Have Not Won (Yet) – They still need produce more dynamic narratives and lower the minimum attention required to engage

The Dynamic Narrative Gap



Pre-written, deterministic narrative forks



Dynamic, un-scripted, and limitless narrative options

Video games do have dynamic narratives with somewhat meaningful impact, such as those in Grand Theft Auto V and Assassin's Creed Odyssey. However, video games need to improve them in both how often they trigger narrative changes and how they produce content for them. In this regard, they share the same challenge as traditional media in examples like Bandersnatch.

The Minimum Attention Required Gap



Hyper-focused, hyper-stimulating experiences



Casual, yet immersive, experiences

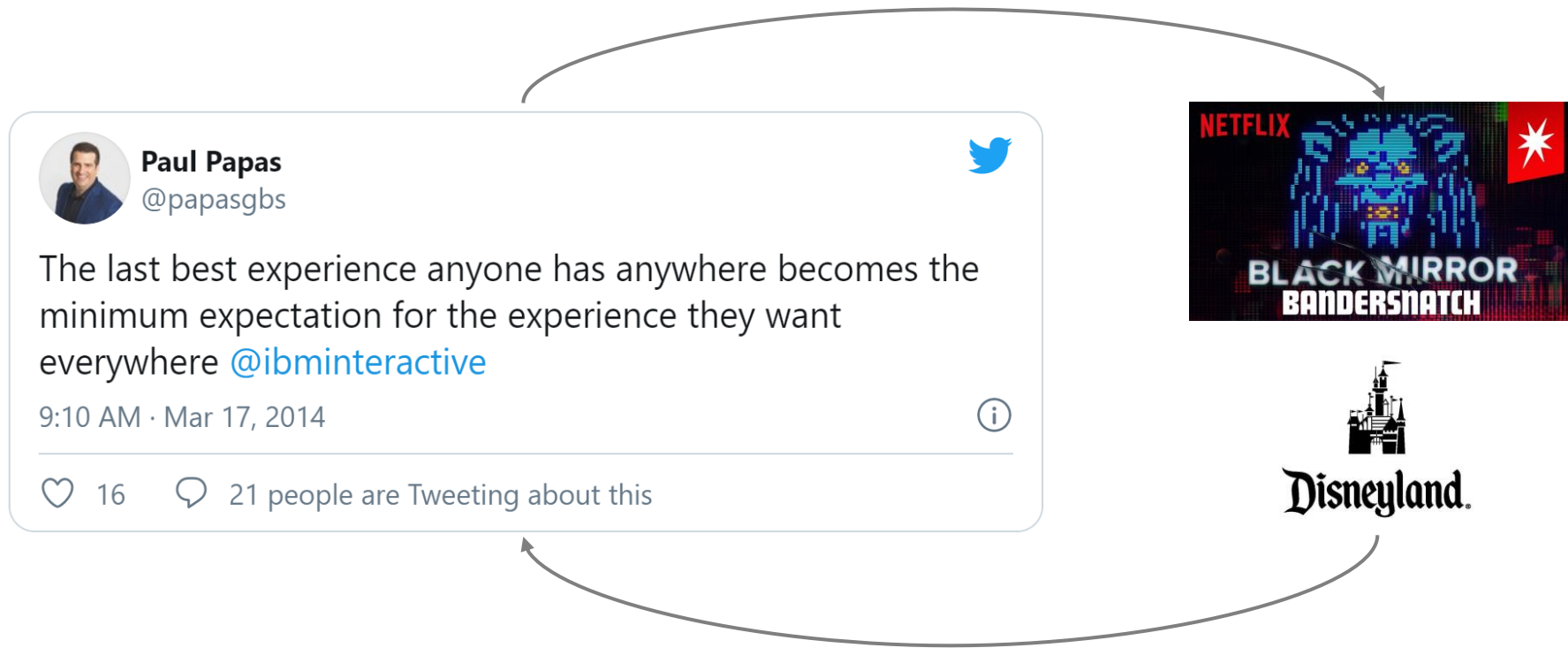
Nearly all, if not all, of the most successful AAA, high-end video games demand 100% of the user's attention. Video games must expand their attention requirements to also include less intensive options to be able to capture a larger audience. Multitasking or passive consumption is difficult if not impossible — for example, it is impractical to enjoy a video game while eating dinner.

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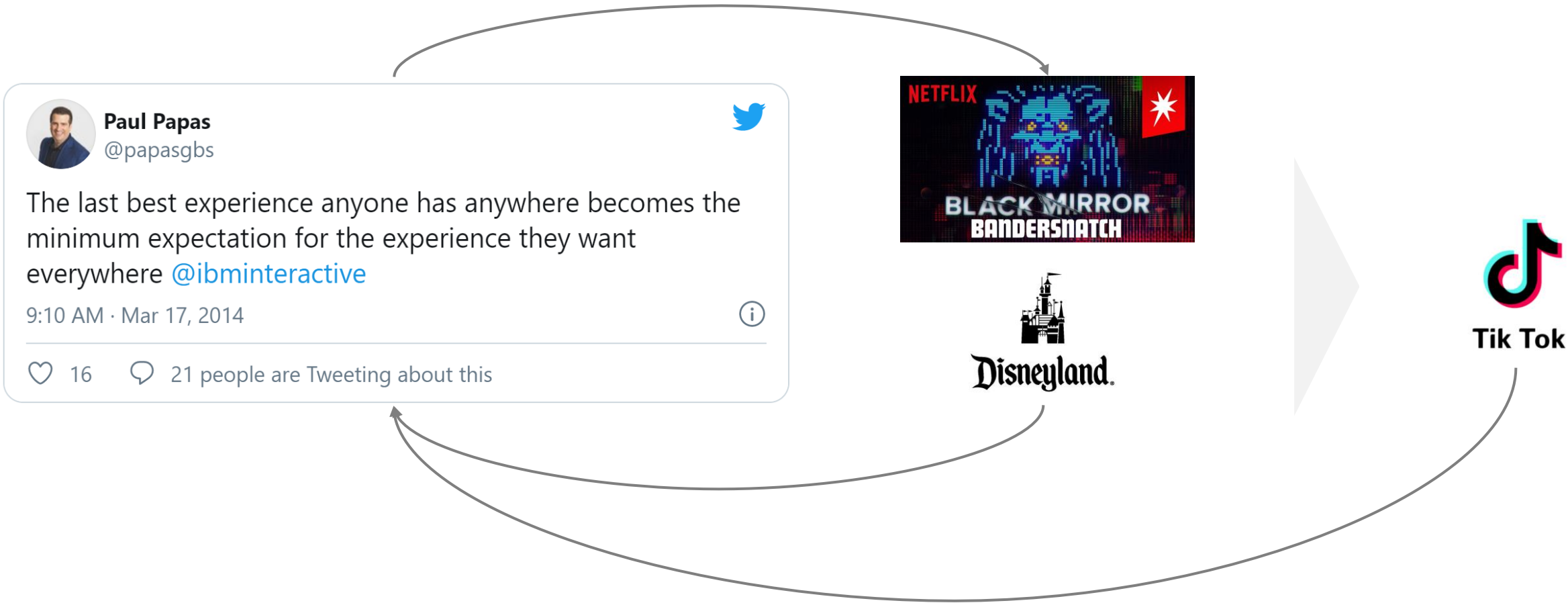
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Self-Driving Loop – People will have better experiences with personalized content as technologies mature, driving further innovation



Beyond Storytelling – People will perpetually crave similar experiences everywhere, even beyond the scope of storytelling



APPENDIX

A person wearing a hat and a jacket is standing on a rocky, grassy hillside, holding the reins of a brown horse. They are looking out over a vast, mountainous landscape under a cloudy sky. The scene is dimly lit, suggesting dusk or dawn. The word "APPENDIX" is overlaid in white, bold, sans-serif capital letters in the center of the image.

More Information

This presentation was based on an essay on the future of storytelling media:

Long-form Article: <https://bit.ly/388XCQj>

Due to it's length, shorter summaries are also available:

Twitter Thread Summary: <https://bit.ly/326a9Tq>

Short-form Article: <https://bit.ly/3ifRNoA>



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The Future of Storytelling Media: Changing the Game and the Implications



Ian D'Silva

Jun 29 · 22 min read



Companies To Watch – Consider evaluating emerging interactive media investment opportunities



Stage: Series B
Total Raised to Date: \$53M

Genvid Technologies tools and services let you create immersive, interactive live streams. They currently offer four main products: (1) e-sports viewing experiences, (2) clickable live streams, (3) individual viewing experiences, and (4) embedded personalized ads.

Genvid has an opportunity to take advantage of the rise of streaming by making them more interactive. This benefits both sides of the table as users get a more engaging experience and platforms can monetize at a better rate and magnitude due to their more engaged and larger audience.

Company Website: [Link](#)
Ian's Investment Review: [Link](#)



Stage: Series A
Total Raised to Date: \$15M

Parrot Analytics measures and predicts global demand for content, across all platforms, around the world.

Unlike uninformative viewership counts from Nielsen, Parrot Analytics can measure viewer enthusiasm. This underlying data is paramount to informing AI/ML technologies on how content is performing and how to make improvements.

Company Website: [Link](#)
Ian's Investment Review: [Link](#)



Stage: Seed
Total Raised to Date: Unknown

Latitude is the creator of AI Dungeon. They produce limitless, self-guided entertainment, powered by AI. Their vision is to leverage AI to power vast, living game worlds where your actions matter and leave lasting effects.

Media companies are focusing on writing good scripts and video game companies are focused on producing virtual simulations of reality. Latitude can disrupt traditional media companies and partner with video game companies to deliver dynamic experiences.

Company Website: [Link](#)
Ian's Investment Review: [Link](#)



Stage: Seed
Total Raised to Date: Unknown

Four Front combines real-life actors and AI to create social and cinematic experiences. They create a mix of branching narratives (like *Bandersnatch*) and automated conversations (chatbots) that are hyper-accessible through social media apps like Instagram and Snapchat.

An important part of the future of media is social experience. Four Front offers a unique way of interacting with people and following a storyline natively in social media apps.

Company Website: [Link](#)
Ian's Investment Review: [Link](#)

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