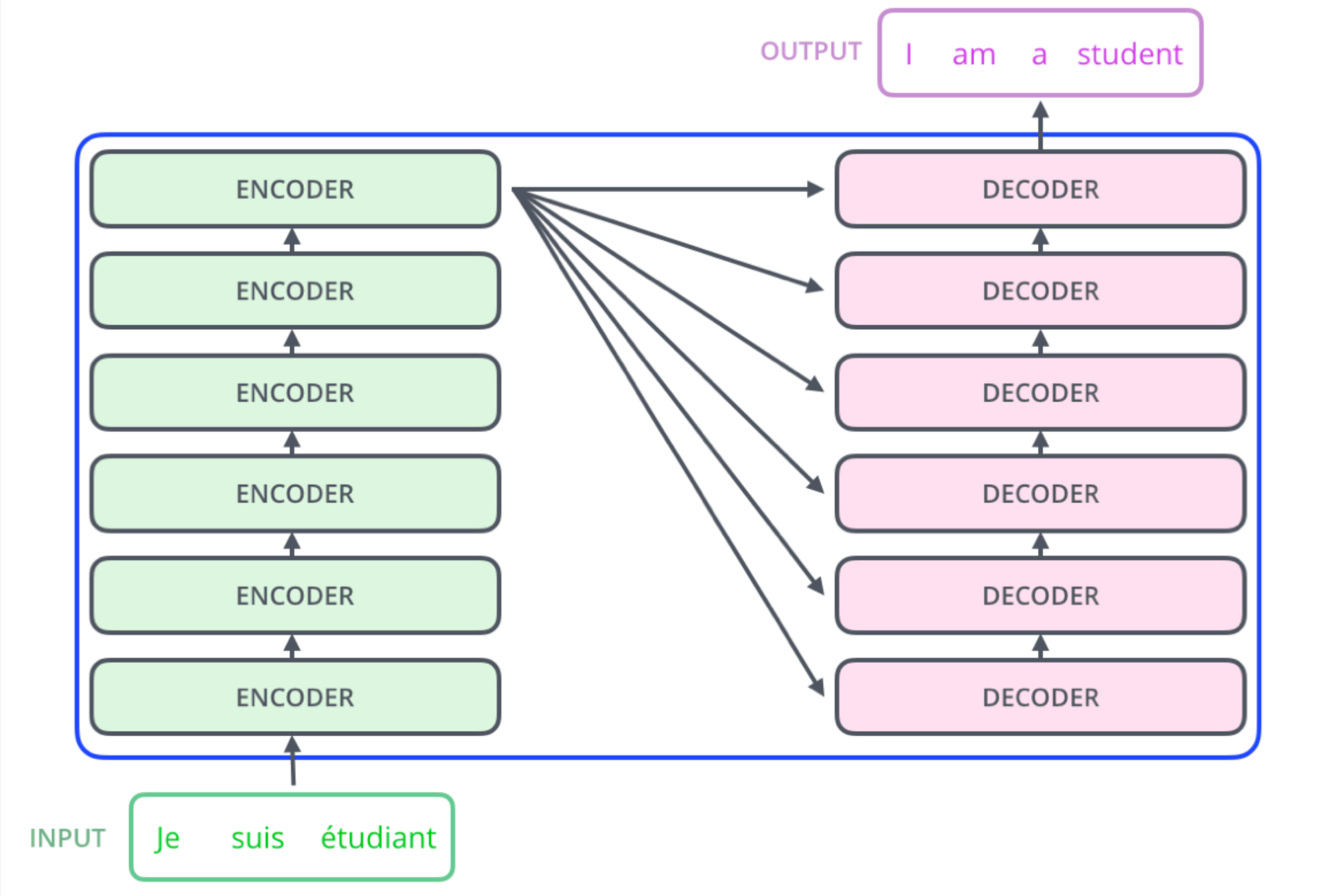
GENERATIVE AI: THE GOOD, THE BAD, THE UGLY

YVES BERGQUIST

ENTERTAINMENT TECHNOLOGY CENTER etc

WHAT IS HAPPENING IN THE AI FIELD RIGHT NOW?

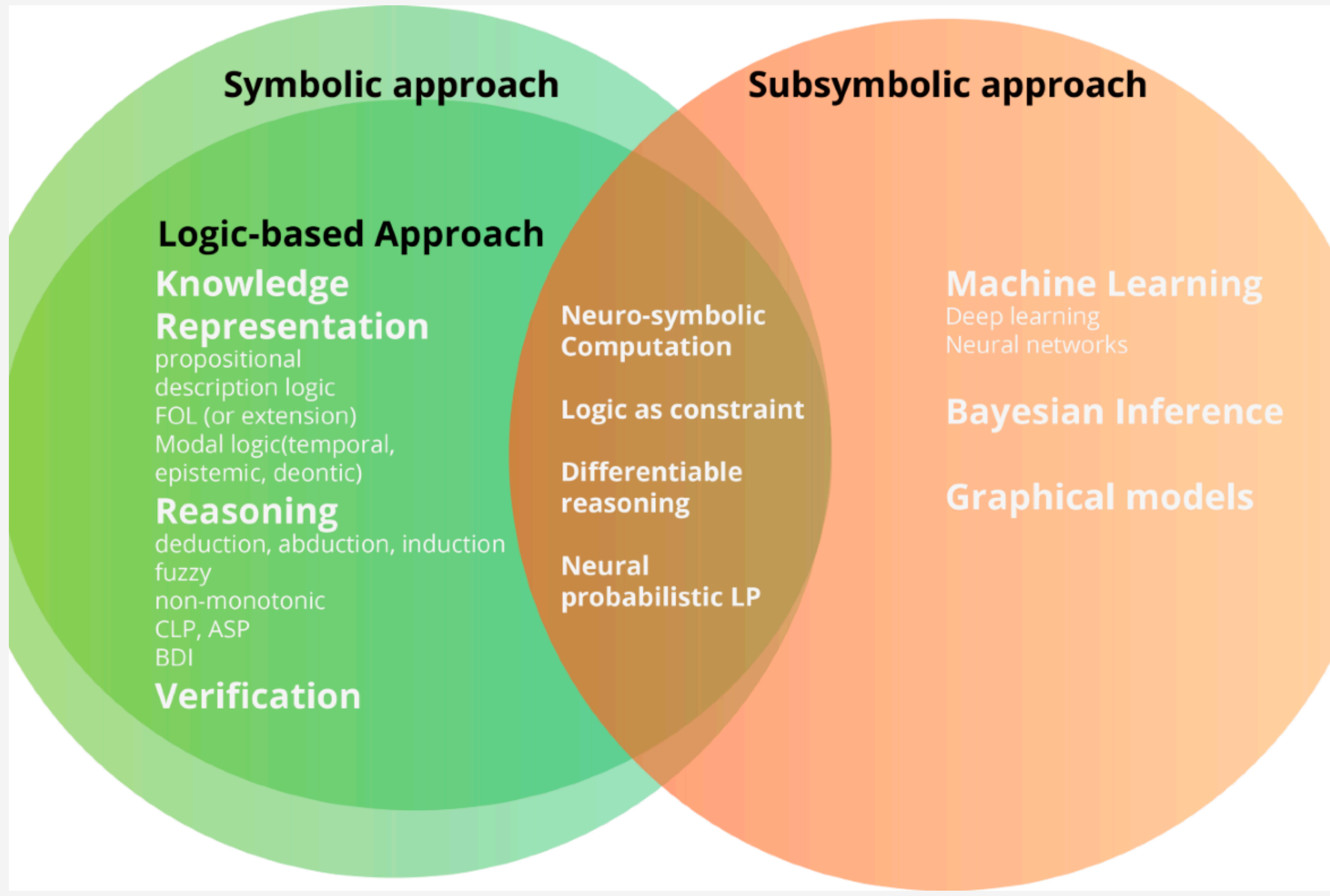


ML METHODS ARE BECOMING MORE SOPHISTICATED

Enormous $$$ spent + talent = rapid innovation = transformers + Reinforcement Learning + Human input = highly capable applications (LLMs, text-to-image, text-to-video, text-to-audio). Machine learning researchers are getting more and more creative and mixing models and architectures (transformers are an example). This has accelerated the development of human-ready AI applications. The ability for generative models to write computer software, for example, is potentially very disruptive.

LOTS OF LIMITATIONS, ETHICAL QUESTIONS, AND CONFUSION ABOUT WHAT'S NEXT

Models are still too inaccurate to be fully trusted and integrated into products. Lots of ethical questions, and lots of confusion about how to bridge the chasm between sophisticated learning and true intelligence. Copyright lawyers are sharpening their knives. Regulators are going to step in. Traditional organizations are nowhere near ready. Media corporations need to move forward now, but carefully.

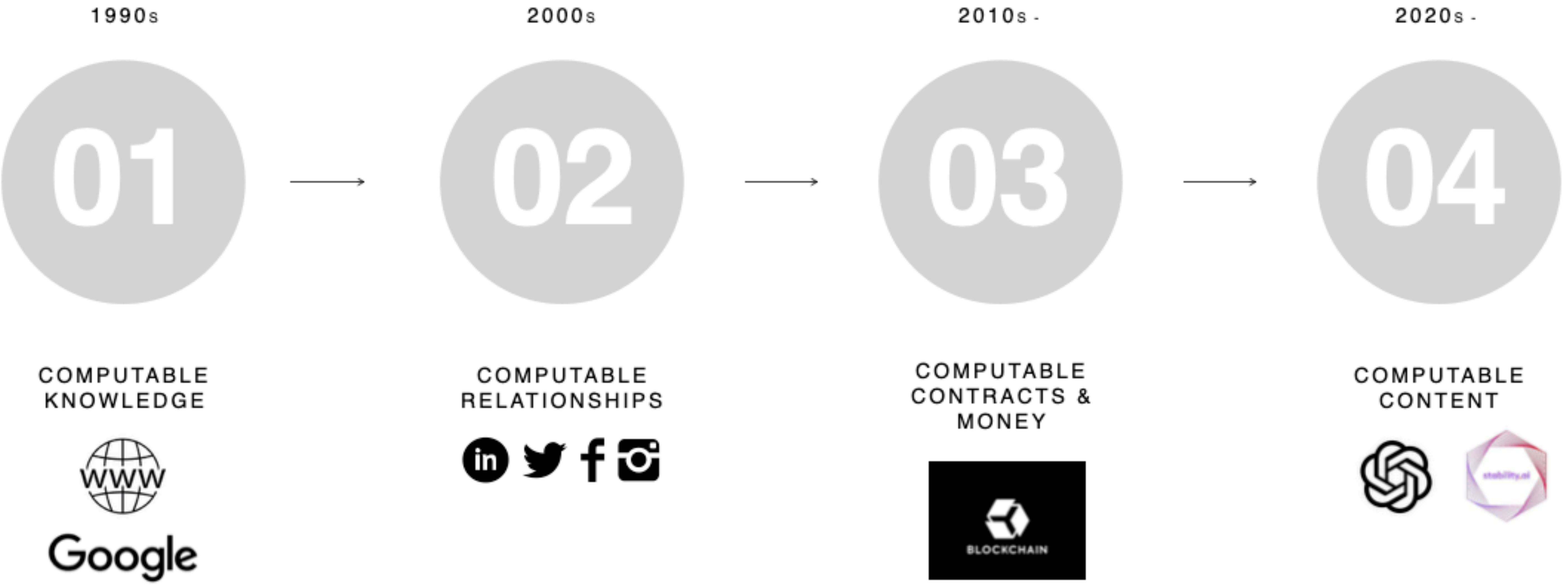


BUT HYBRID METHODS ARE EMERGING AND WE NEED TO GET READY

Deep Neural Nets + Knowledge Graphs + Human-Built Symbolic Reasoning are going to accelerate the capabilities of traditional ML systems. In other words, machines will contribute scale in computation (still out of reach for humans) and humans will contribute nuance and context (still out of reach for machines). The hybrid human-machine continuum has started, and new skills are required to manage it.

MAKING CONTENT COMPUTABLE

ZOOMING OUT: WE ARE IN THE ERA OF "COMPUTABLE EVERYTHING"



EVERYTHING GETS DEMOCRATIZED

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The economics of the media industry (stable demand, exploding supply) dictate that competitive advantage is derived from the ability of content producers and distributors to fit their product to a dynamic, multi-segment market.

Traditional media companies do this linearly, one product at a time. <u>Their content is not computable, in the sense that it is scarce, whole, long-form (feature-length vs social videos), and unstructured (its narrative DNA is not yet machine-readable).</u>

Social media companies do this programmatically (algorithmically) by leveraging their large and dynamic content libraries to serve niche, featurized products to niche audiences. Their content is computable in the sense that it is both featurized (it is parsed for visual DNA) and optimized through millions of real-time transactions (watch, like, share, comment) with audiences.

Generative AI impacts the media industry less by disrupting its traditional content creation process and more by giving social content creators the tools to make large amounts of truly cinematic, studio-like content, which would be computable, free, and a substantial threat to studios' market share.

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GENERATIVE AI IS TAKING
MAKING OUT OF CREATING
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GENERATIVE AI SEEKS TO OPTIMIZE THE CRAFT AND EMPOWER CREATIVE DECISION-MAKING

What is happening in the media industry is roughly similar to what's been happening in the manufacturing industry: automation of the craft of making a product (ie making the product computable).

Here the creative process is divided in 3 parts:

(1) **Zeitgeist intelligence**: this is where development and creative executives or writers/producers/directors "sense" what audiences want or need to see.

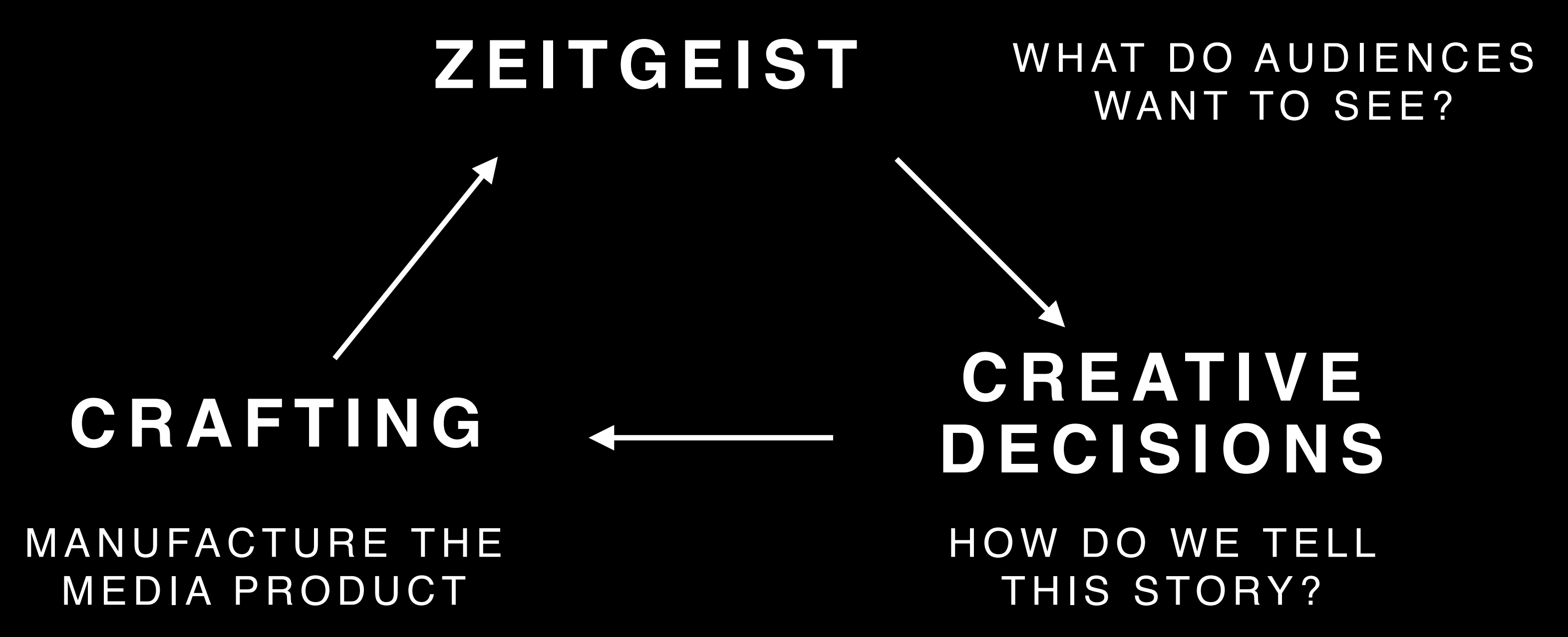
(2) **Creative decisions**: this is the core of the creative process, where creatives define their voices and make strategic decisions about what product will be crafted.

(3) **Crafting**: this is where the product is crafted.

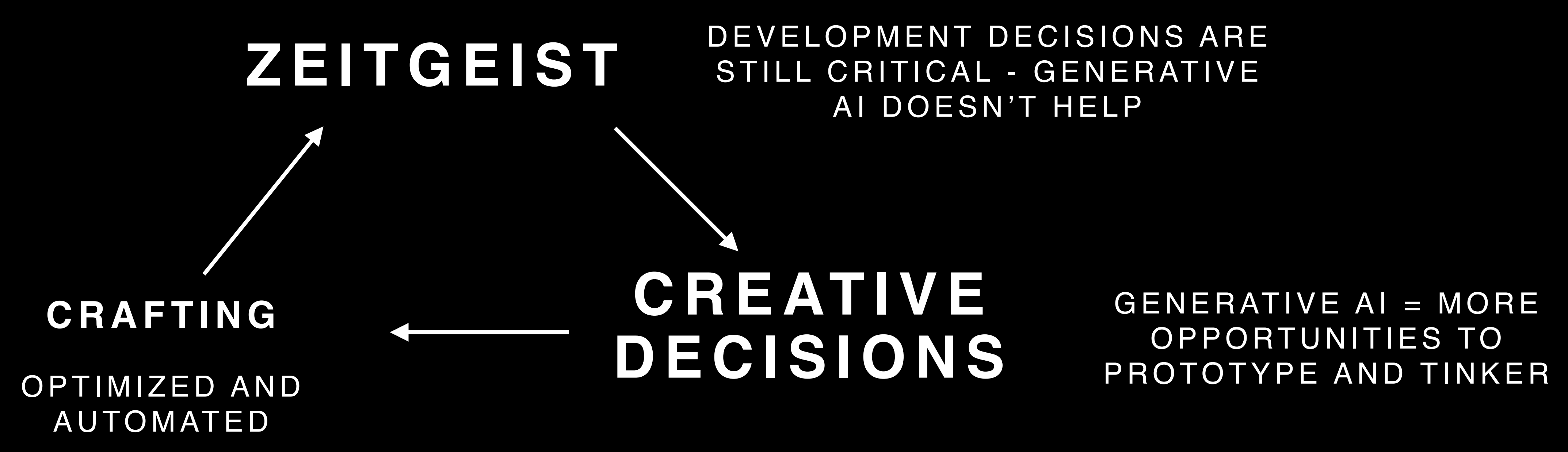
By automating the third pillar, Generative AI not only puts more emphasis on Zeitgeist-sensing and creative decision-making, it gives creative decision-makers tools to quickly and cheaply tinker, experiment, and prototype.

But in the process, traditional media companies risk losing their monopoly on the craft of high-quality content.

THE CREATIVE PROCESS TODAY:



THE CREATIVE PROCESS TOMORROW:



THE QUESTION THEN IS:

Does taking knowledge of the craft out of creative work affect creative decisions and creative output overall?

Does knowing the craft make a creative a better decision-maker?

In the era of computable content, understanding (at a feature/craft-level) what semantic features of content resonate with what audience segments could be a way forward for large media organizations.

SOCIAL CONTENT: "GOOD ENOUGH"

ZEITGEIST

CREATIVE DECISIONS

CRAFTING

ZEITGEIST INTELLIGENCE IS CROWDSOURCED -> RECOMMENDATION ALGORITHMS FIND THE "BEST PRODUCT-AUDIENCE FIT". CONTENT IS FULLY COMPUTABLE. THE SCALE OF CONTENT MEANS THAT THERE'S ENOUGH SUPPLY TO FIT EVERY AUDIENCE NICHE/TASTE

BUT THIS IS ZEITGEIST INTELLIGENCE BY DEFAULT (NO REAL INTELLIGENCE OF WHAT AUDIENCES WANT TO SEE, JUST BASIC CONTENT MATCH-MAKING)

GENERATIVE AI EMPOWERS SOCIAL CREATIVES TO QUICKLY AND CHEAPLY CRAFT "STUDIO QUALITY" CONTENT = THREAT TO TRADITIONAL STUDIOS

SAME LOGIC HERE: OCEANS OF CREATIVE COMBINATORICS -> RECOMMENDATION ALGORITHMS SURFACE THE CREATIVE DECISIONS WITH "THE BEST FIT"

STUDIO-STYLE CONTENT: INTEGRATED AND IMMERSIVE

ZEITGEIST

THERE'S STILL A PLACE FOR DELIBERATE BUT DATA-DRIVEN DEVELOPMENT DECISIONS ABOUT WHAT AUDIENCES WANT TO SEE

CREATIVE DECISIONS

GENERATIVE AI = MORE OPPORTUNITIES FOR CREATIVE DECISION-MAKERS TO PROTOTYPE AND TINKER

CRAFTING

OPTIMIZED AND AUTOMATED ACROSS PLATFORMS (GAME ENGINES)

WHERE LARGE CONTENT PLAYERS CAN WIN

The single biggest impact of Generative AI for large content producers and distributors isn't about disrupting the media-making process.

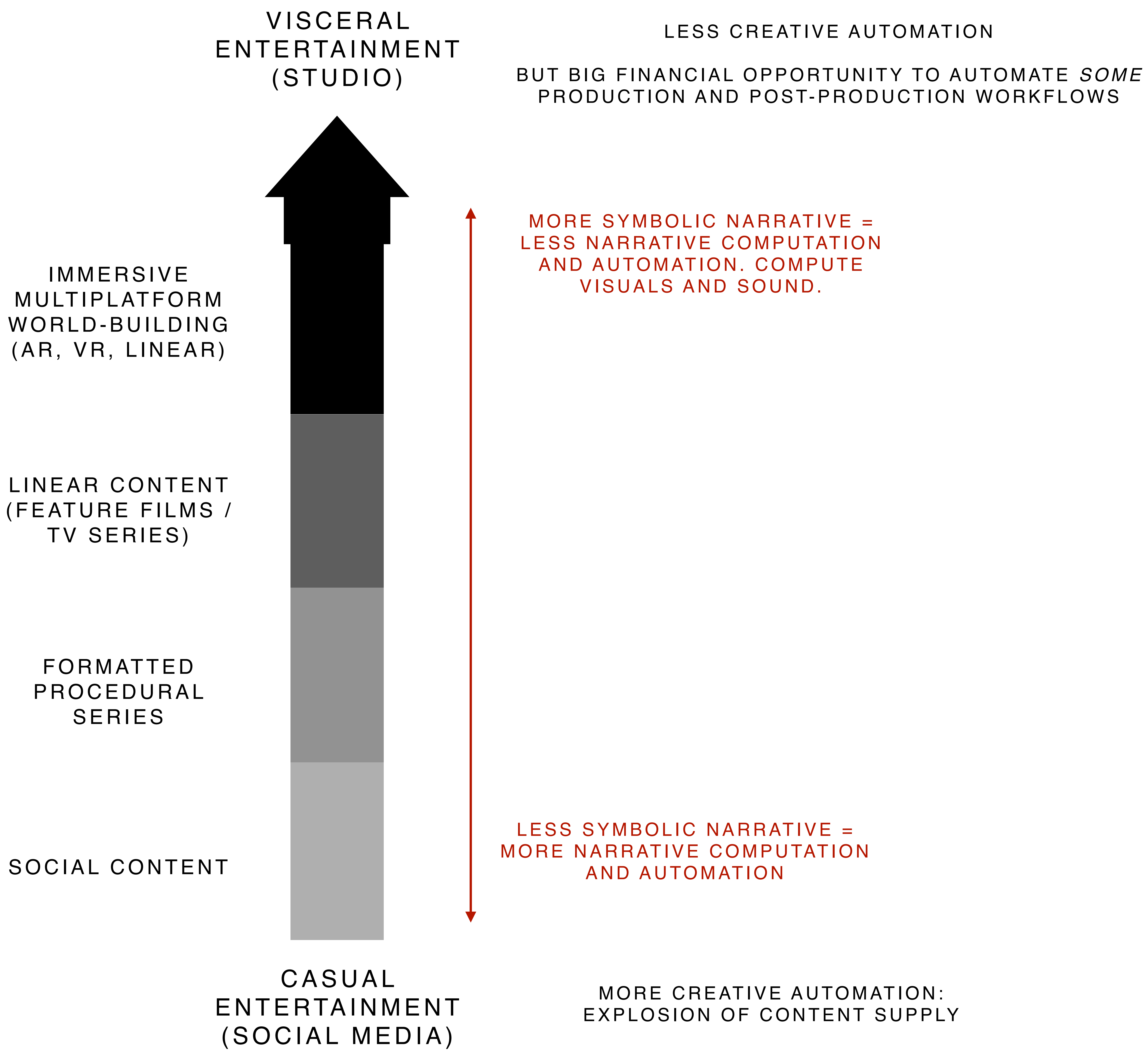
Its biggest impact is that it gives its fiercest competitors (content creators on free content platforms like YouTube and Tik Tok) more tools to eat further into the ~ 7 hours of our day that the media industry at large is battling for.

It potentially disrupts the already unfortunate economics of the media business: stable demand (never more than 24 hours in a day) and exploding supply.

By giving social creators more tools to create high production value, "studio-like" content, Generative AI makes this problem worse.

Traditional media players can leverage audience data and emerging tech platforms (AR, VR etc.) to create integrated, immersive and computable (personalized) multi-platform entertainment.

WHERE A BIG STRATEGIC SHIFT COULD HAPPEN



With generative AI bringing high production value tools to social creators, we can expect a new category of “short-form linear content” to emerge on social platforms.

As the market share for linear content gets further encroached by social creators, traditional media industry players will need to differentiate through immersive, multi-platform, world-building franchises.

This is the greatest opportunity for large media organizations to leverage virtual production and generative AI together to quicken and cheapen the cost of producing these multi-format immersive pieces. This new form of computable content will run on game engines.

It also revolutionizes the way stories are told, with integrated narratives across linear and immersive media products.

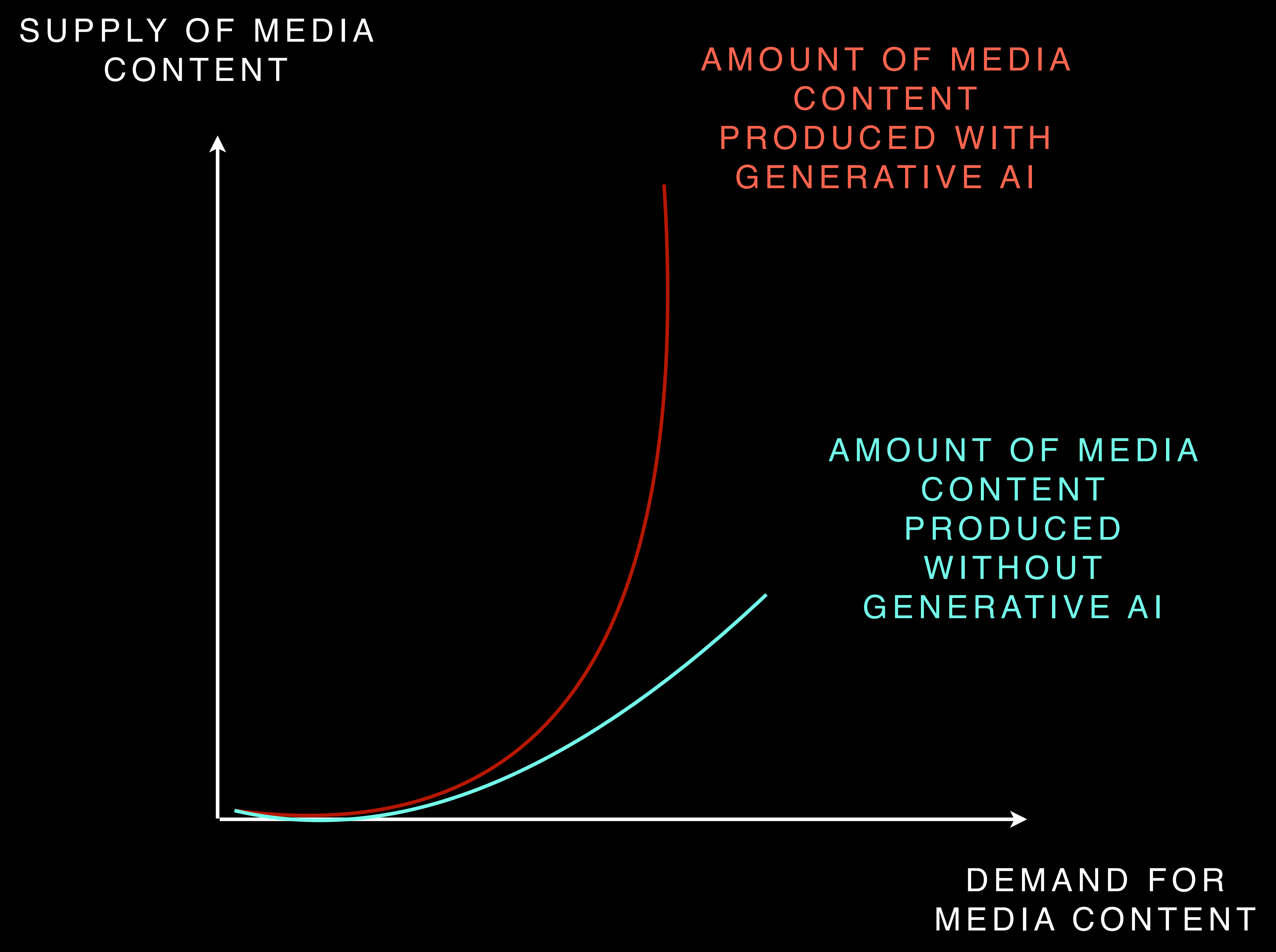
GENERATIVE AI IS CREATING A MASSIVE OPPORTUNITY FOR AI-ENABLED CONTENT CURATION

The economics of the media industry are tough: stable demand (never more than 24 hours in a day) and exploding supply (Tik Tok, etc.)

Generative AI is making this imbalance a lot worse for media creators. The explosion of high-production-value-content is going to increase an already skyrocketing competition for eyeballs.

To thrive in this high-competition environment, content creators will need insights into what kind of content to create to grow their audience and keep their attention.

This is what we already do for Hollywood studios, brands, and ad agencies.



41%

OF ALL DIGITAL MEDIA SPEND WAS WASTED IN 2022 (ADNEWS).

$5.5 BILLION

THAT'S $5.5 BILLION/YEAR, 2X FROM 2021.

$800 BILLION

IS WASTED IN THE $2 TRILLION GLOBAL MEDIA MARKET EVERY YEAR.

CONTENT PRODUCERS NEED INSIGHTS TO DRIVE STRATEGY AND DISTRIBUTION

Most of the world's attention is already away from traditional media (film and TV, advertising, videogames).

As eyeballs drift towards the Creator Economy (projected to grow to $200 Billion by 2026) and generative AI puts high-end production tools in the hands of everyone, content creators need insights into what content to produce to grow their audience.

With cookies going away, our methodology is the most sophisticated way to develop audience insights.

5 PLACES WHERE ORGANIZATIONS CAN DEVELOP COMPETITIVE ADVANTAGE IN AI

OWN KEY DATA:

OWN THE FOUNDATION

01

Whoever owns large, proprietary, and legally-sourced datasets material to training large text/vision models will hold a foundational advantage.

Until the AI field learns to design more "intelligent", less learning-focused and data-hungry models more akin to the human brain.

OWN KEY MODELS:

OWN THE INTELLIGENCE

02

Whoever can support large AI research organizations capable of designing proprietary models can develop competitive advantage, but it's unclear for how long (other could develop them and make them public).

OWN THE SCALE:

MASTER PRODUCTIZATION AND SCALE

03

Whoever can productize models at enterprise scale while keeping compute costs down will master AI at scale. This means developing some serious AI R&D capabilities to develop lighter and more "intelligent" (do more with less) models.

OWN THE INTERFACE:

MASTER UX

04

Whoever can design intuitive, "human-ready" and "business-ready" interfaces for AI models will master the human-machine interface, which continues to be the greatest bottleneck for AI in enterprise. Too often, organizations can't connect models and business needs.

OWN SPEED:

MASTER CULTURE

05

Whoever can redesign their organizations and workforce needs to best create a "culture" of AI and data will move faster than its competitors. Education is the largest opportunity in AI today.

5 PLACES WHERE MEDIA ORGANIZATIONS CAN DEVELOP COMPETITIVE ADVANTAGE IN AI

OWN KEY DATA:

OWN THE FOUNDATION

01 ✓

This is already the business model for most media organizations, which libraries constitute not only content assets but data assets, which can, should, and will be monetized as such. Streamers also own very valuable minute-by-minute audience data.

OWN KEY MODELS:

OWN THE INTELLIGENCE

02 ✗

Media organizations don't have a software culture, nor can they support large AI R&D assets. They could partner with (or acquire) key AI research organizations to leverage their data to create their own proprietary content and audience intelligence models, but this is a heavy lift.

OWN THE SCALE:

MASTER PRODUCTIZATION AND SCALE

03 ✗

With the rise of AI-optimized virtual and cloud production, media organizations are looking at exponential compute costs. Whoever can keep compute costs down can create not only competitive advantage, but key software IP.

Making models lighter at scale is a critical area of AI today. Media organizations are capable of this, but it's a heavy lift.

OWN THE INTERFACE:

MASTER UX

04 ✗

Media-facing software vendors need to create simple and elegant user interfaces for their customers in the media industry.

Some content studios will also develop in-house tools and can develop limited competitive advantage here.

OWN SPEED:

MASTER CULTURE

05 ✓

Whoever can redesign their organizations and workforce needs to best create a "culture" of AI and data will move faster than its competitors. Education is the largest opportunity in AI today.

MEDIA INDUSTRY: WHO CAN OWN WHAT STRATEGIC ASSET?

OWN KEY DATA:

OWN THE FOUNDATION

01

CONTENT STUDIOS

OWN KEY MODELS:

OWN THE INTELLIGENCE

02

CLOUD ML COMPANIES THAT PROFIT OFF OF USAGE & COMPUTE

OWN THE SCALE:

MASTER PRODUCTIZATION AND SCALE

03

COMPUTE SERVICES & VFX COMPANIES THAT PROFIT OFF OF LICENSING AND SERVICES (NOT COMPUTE)

OWN THE INTERFACE:

MASTER UX

04

SOFTWARE VENDORS

OWN SPEED:

MASTER CULTURE

05

EVERYONE

WHERE MEDIA ORGS CAN & CAN'T WIN

PHASE 01

DEVELOPMENT

COMPETE ON DATA

Media organizations, especially those with a streaming service, have both the data and a unique capability to understand the cultural Zeitgeist. They can use AI to better "know" what audiences want

PHASE 02

PRE-PRODUCTION

DON'T COMPETE

Here large media organizations are unlikely to produce substantial AI IP, especially since a lot of off-the-shelf tools are available

PHASE 03

PRODUCTION

COMPETE ON AI PRODUCT DEVELOPMENT AND CULTURAL INTEGRATION

Here large media organizations have the financial backbone to create highly integrated and replicable AI-driven virtual production workflows

PHASE 04

POST-PRODUCTION

COMPETE ON CULTURAL INTEGRATION

Here large media organizations would compete (perhaps unnecessarily) with third-party software vendors

PHASE 05

COMPETE ON DATA

Audience and Zeitgeist data

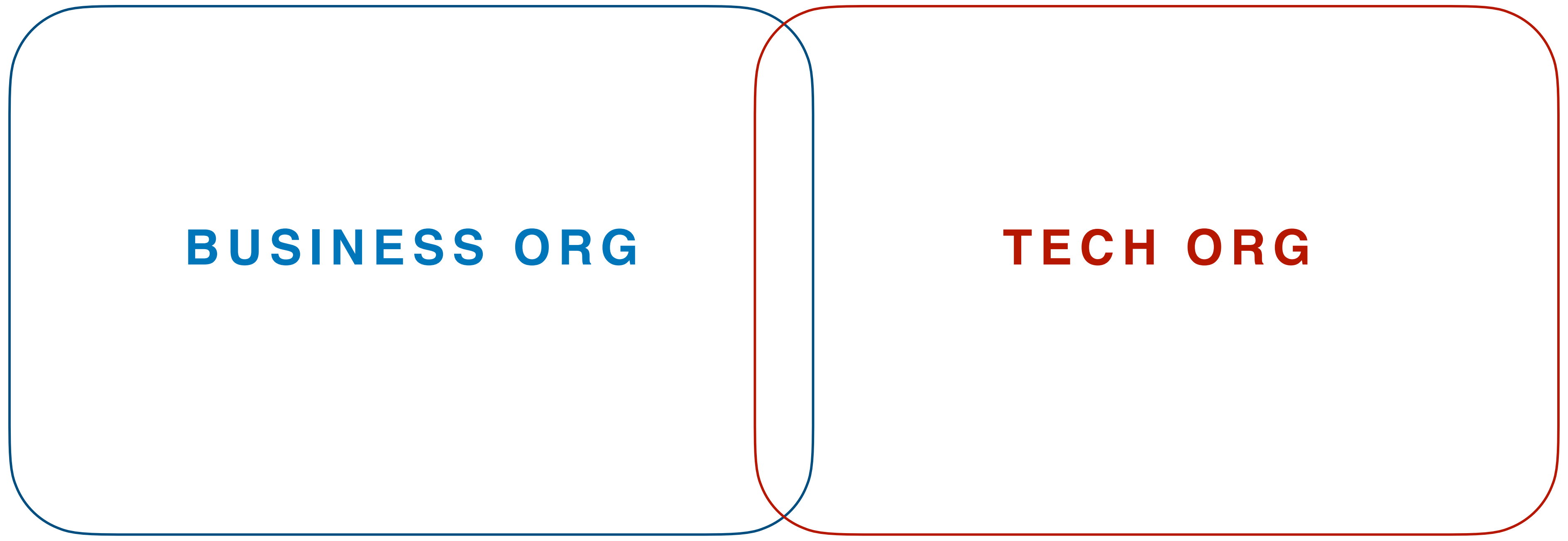
PHASE 06

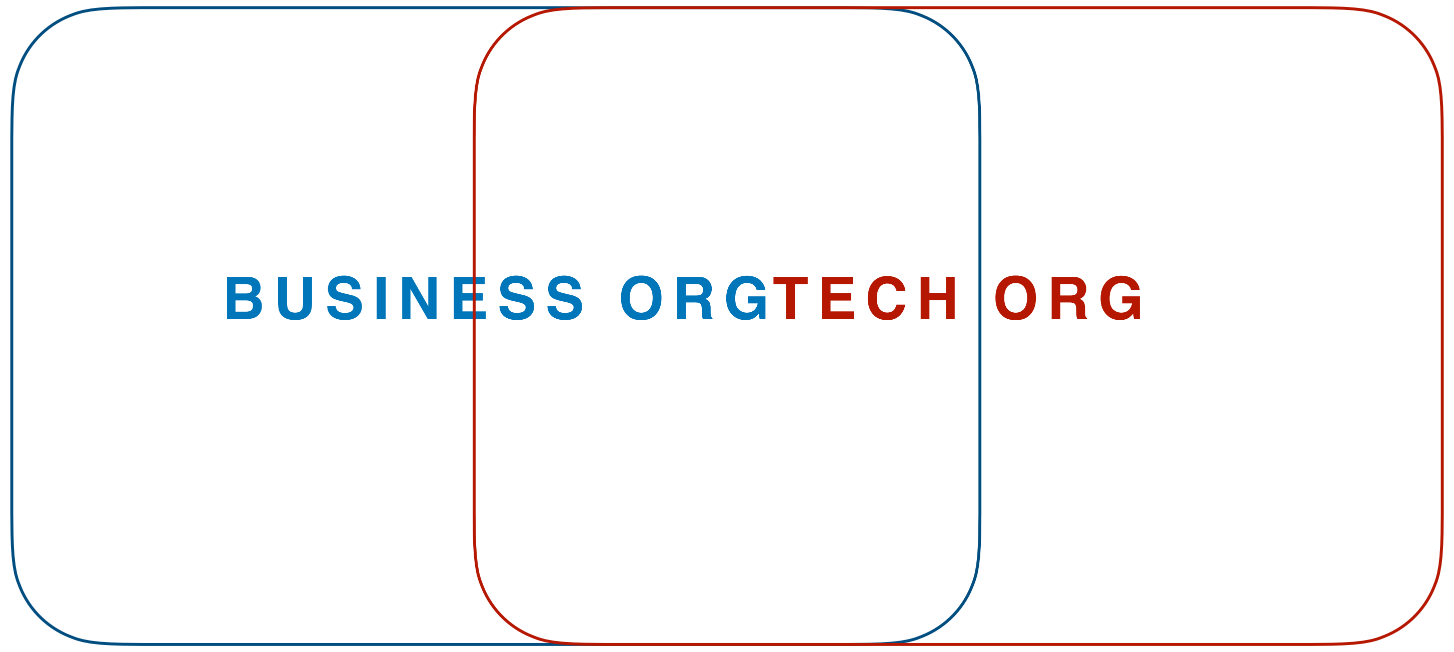
COMPETE ON NARRATIVE

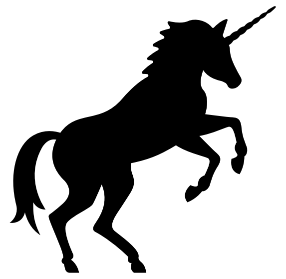
Ability to develop integrated and immersive narratives across multiple platforms

BUSINESS & TECH ORGS MERGE: “THE HACKER” EMERGES

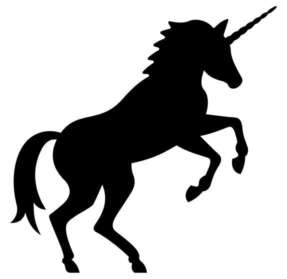
IN OUR AI FUTURE, THE TECHNOLOGY BECOMES EMBEDDED IN THE BUSINESS ORGANIZATION, AND VICE-VERSA







“THE HACKER” BRINGS THE TWO TOGETHER



EXPANSION AND SPECIALIZATION OF INTERNAL DATA & TECH INNOVATION ECOSYSTEMS

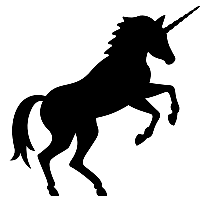
DATA & ANALYTICS

THESE ROLES

TECH INNOVATION

WILL BE BROKEN DOWN INTO THESE ROLES

- KNOWLEDGE REPRESENTATION
- DATA UNIFICATION
- MODEL MANAGEMENT (INCL. ETHICS)
- INTERNAL AI COMMUNICATION
- COMPETITIVE EXPERIMENTATION
- KNOWLEDGE MANAGEMENT
- UPSKILLING



"THE HACKER"

MANAGES THE ENTIRE ECOSYSTEM BUT IS SINGLE POINT OF CONTACT FOR COMMUNICATIONS WITH C SUITE

Who is the hacker?

A profile

Deep AI knowledge: credible with the AI team

Can code but hates it, knows developers pet peeves

Curious problem-solver

Great speaking, writing, and presentation skills

A data scientist who loves business

Hacker means loves to solve linear problems with computation

Knows how to fail without turning off the spigot

Strong grounding in AI governance & ethics

<u>TRUST BUILDER</u>

The Hacker is the quarterback of the data and AI function

WANT TO KNOW MORE?

SIGN UP FOR OUR SYNTHETIC MEDIA SUMMIT, JUNE 8 ON THE USC CAMPUS

www.eventbrite.com/e/etcs-synthetic-mediasummit-at-the-university-of-southerncalifornia-tickets-610331466847