



ai&us

2023 Recap

A series of deep dives covering the impact of Gen-AI across key sectors



Prompt: "Gen-AI at work"



The largest platform shift since cloud and mobile, generative AI is taking over the world by storm. In 'ai & us', we highlight specific use cases & industries being disrupted by generative AI

Artificial Intelligence has come a long way since the field was given its name in a Dartmouth University Paper in 1955. The streets may not be full of self-driving cars and delivery robots yet but the smartphones in our pockets and the laptops we use are increasingly changing the way we live our lives.

The day is not far for science fiction to become a reality. Today, enterprises, small and big, across sectors and geographies are increasingly crystal balling the future and preparing for the unprecedented shifts in innovation and automation unleashed by AI. Preparing for this future, is perhaps the single biggest mandate for boards and management leaders across the world.

India's workforce grew up in an internet/cloud-first world. Its ability to assemble solutions from combinations of legacy, cloud, and SaaS components is world-class. Today, we are home to more than 500K+ AI engineers, accounting for 16% of the AI talent in the world, which places us among the top three contributors. Our contribution is only expected to grow further with support from National Education Policy, which has committed to holistically include AI and ML across every stage of education in India.

Like everyone else, we are in the business of future of unknowns and young entrepreneurs are the best placed shape this future sooner for the better. We seek to partner with those bold and daring souls that are attempting this endeavour. If you are a founder, shoot us a note at ai@kalaari.com.



\$1.4T

Global Economic Impact of AI by '30

\$1.3B+

Total VC Funding in Gen-AI
platforms and startups

600+

Number of Global AI first-startup



Section A

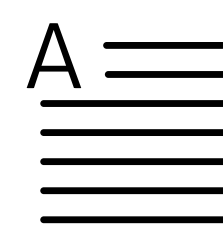
Setting the context

"We are at the cusp of the next era of digitisation and automation"

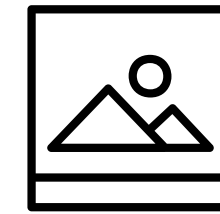
❖ What is Generative AI?



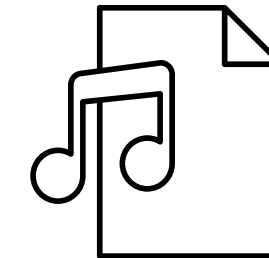
Generative AI is a type of Artificial intelligence that can generate novel and original data. This includes but is not limited to text, image, videos, sounds, music and even code.



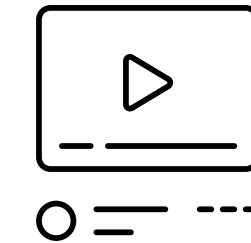
Text



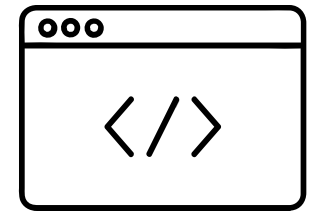
Image



Music

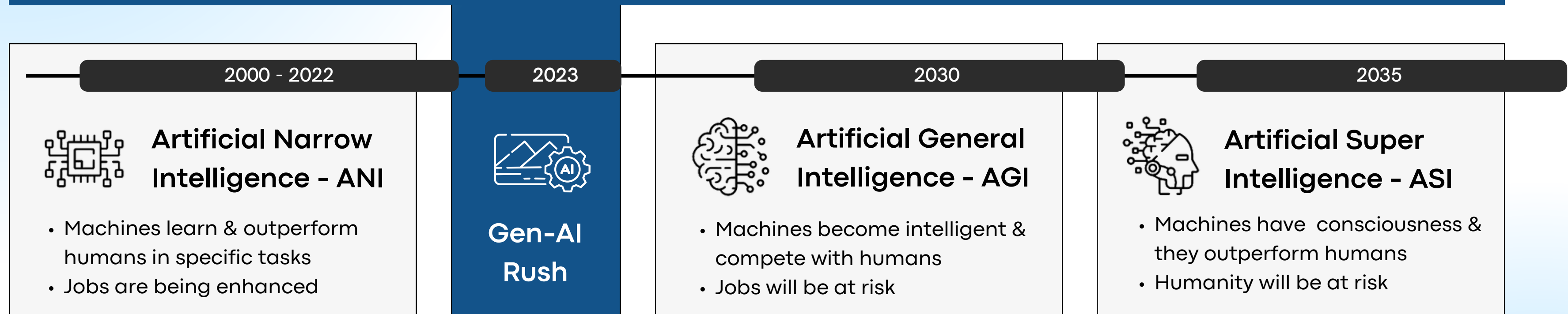


Video

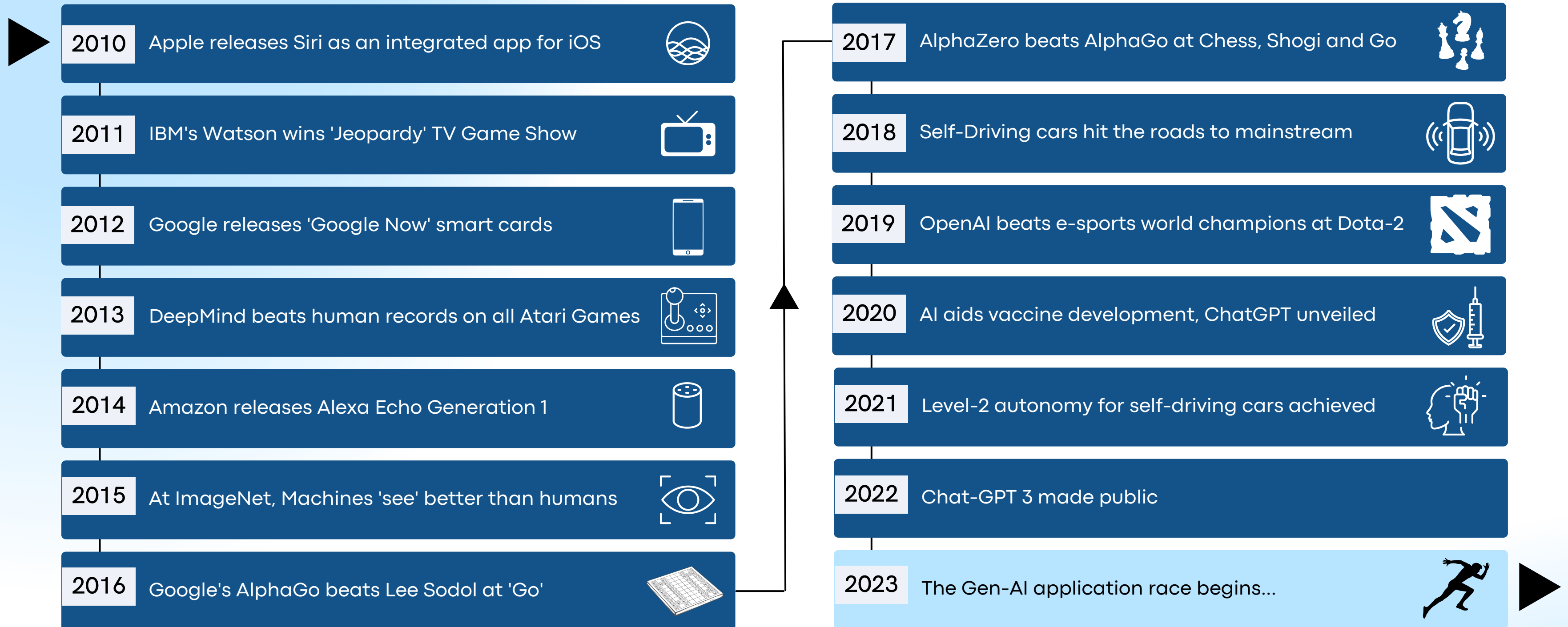


Code

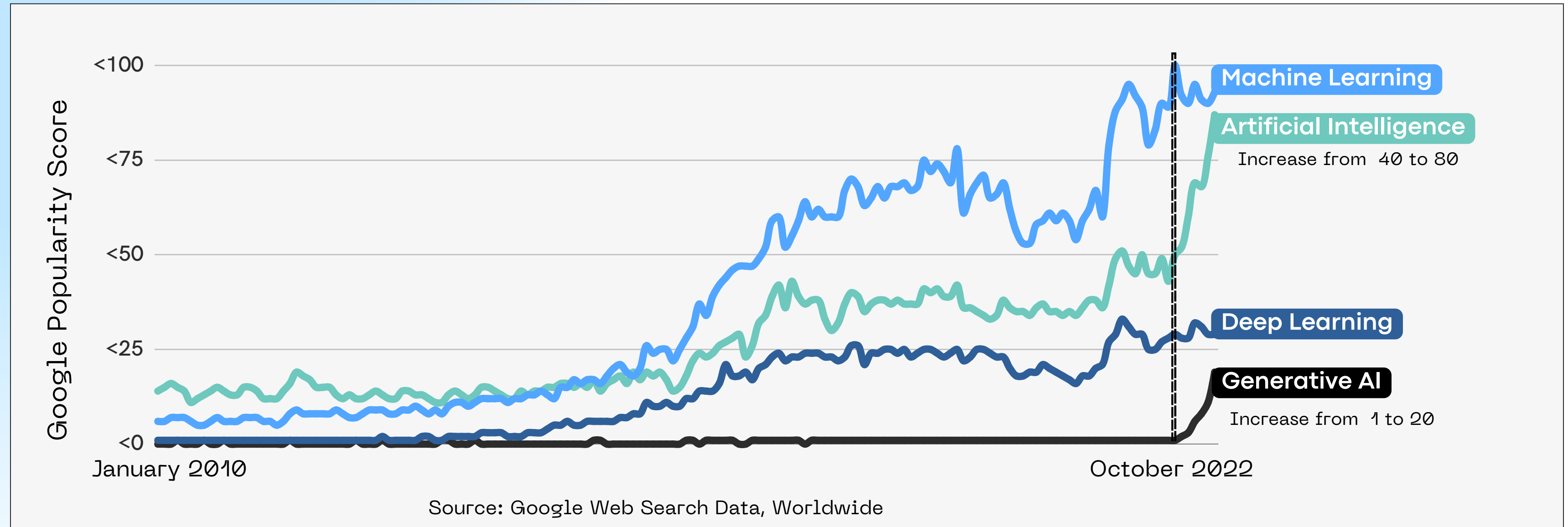
The perfection of Gen-AI is a critical milestone in our pursuit of developing a super intelligent digital being that does everything we can imagine.



❖ AI has come a long way over the last decade



✦ Global interest turbocharged by the release of Chat-GPT ✦



Despite all the breakthroughs that were made in AI over the last decade, interest in Gen-AI remained subdued until late last year, when OpenAI's ChatGPT 2 went viral upon its release, becoming the first platform of its kind to be accessible by anyone around the world, not just AI-devs and innovators.



✦✦ Gen-AI platforms are showing the potential to scale faster than most of the world's largest consumer tech platforms



>120M

of people that have signed up on an AI-first application since October 2022



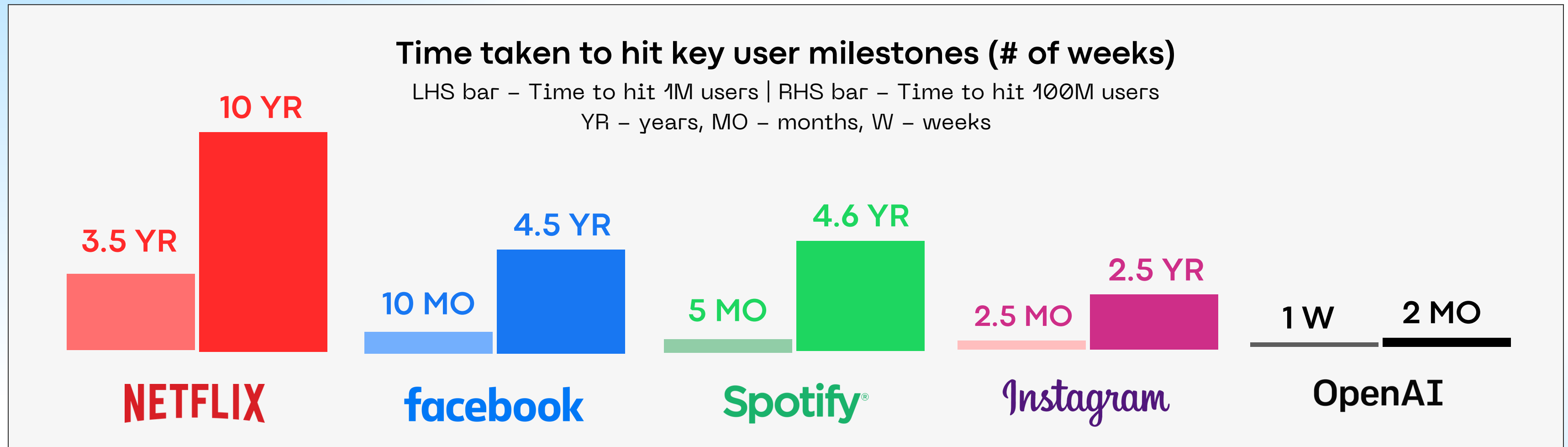
ChatGPT

DALL-E 2



Midjourney

stability.ai



✦✦ With every passing day, early adopters are pushing the limits of Gen- AI platforms to generate interesting content...



'Politician Premier League' by Madhav Kohli



Majestic Temples by Madhav Kohli



Solar System Knolling by Alizer027



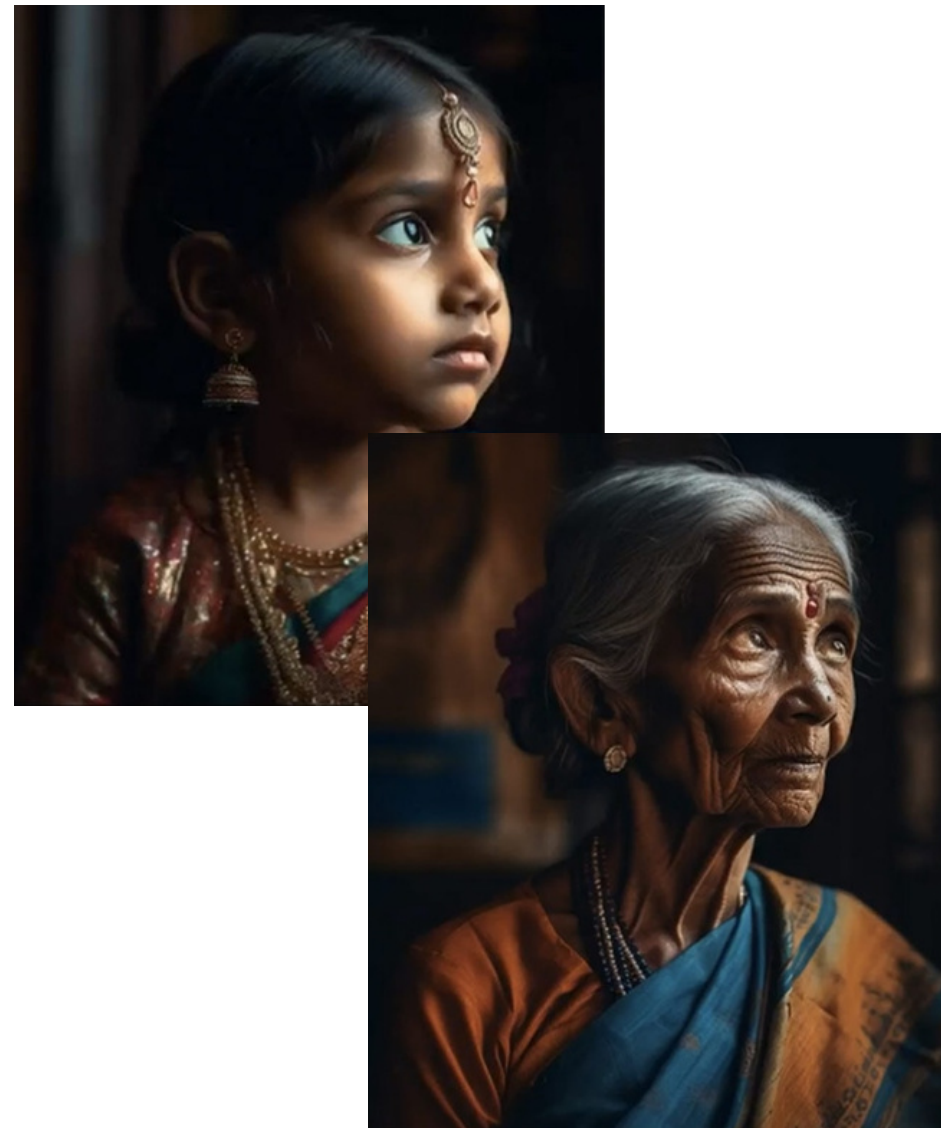
✦✦ ... which has resulted in numerous art collections and libraries going viral across social media platforms



'Messi by Michaelangelo' on Midjourney



Ageing Woman via Stability Diffusion



Mr Bean in History by Sahid



✦ Gen-AI will fully unravel itself by 2030...



	Pre-2020	2020	2022	2023	2025	2030
Text	Spam Detection Translation Basic Q&A	Basic copywriting First drafts	Longer form Secondary drafts	Vertical Fine Tuning gets good (scientific papers)	Final draft gets better than human average	Final drafts better than professional writers
Code	1-line auto complete	Multi-line generation	Longer form Better accuracy	More languages, more verticals	Text to product (draft)	Text to product (final) better than full time devs
Image	-	-	Art Logos Photography	Mock-ups (product design, architecture)	Final drafts (product design, architecture)	Final drafts better than professional artists, designers
Video	-	-	First attempts at 3D Video models	Basic/first draft videos & 3D files	Second drafts	AI Roblox, Video Games & Movies personalised

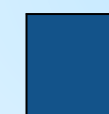
Source: Generative AI – A creative new world



First attempts

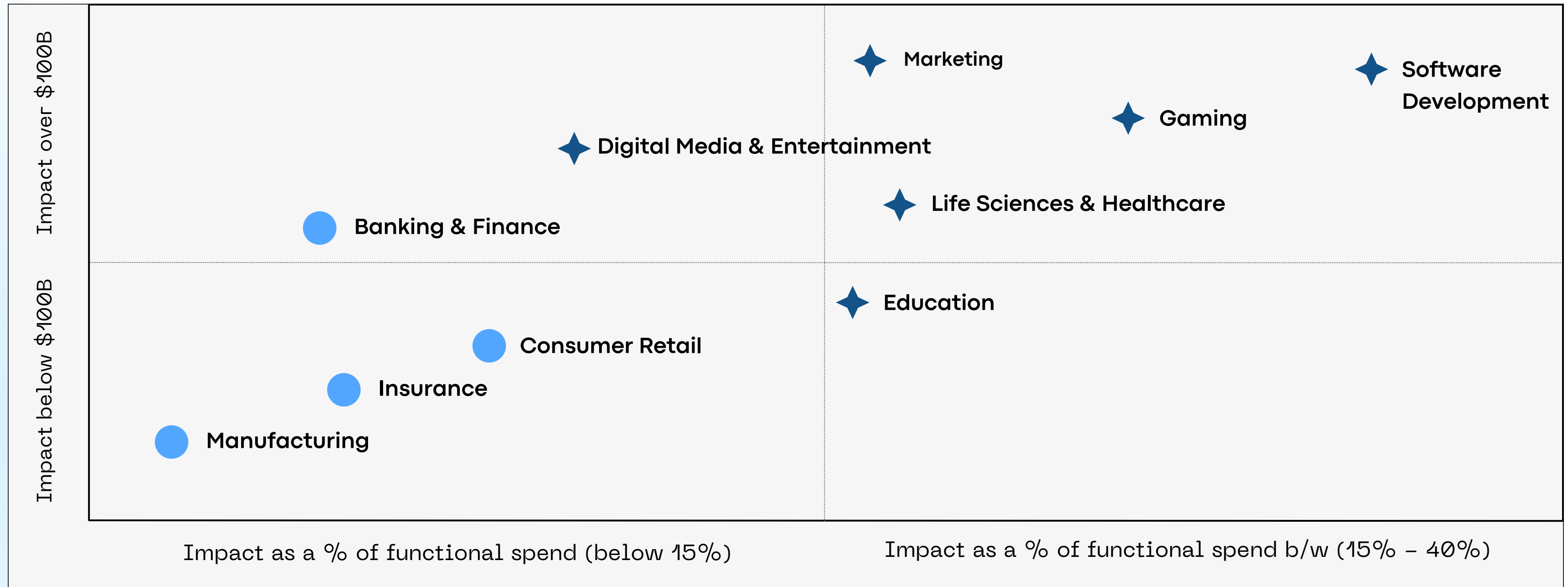


Almost there



Ready for prime time

✦✦...Potentially transforming major industries along the way



Level of activity - Funding, Startups



Low to Moderately active



Highly active



Part 1: Marketing



Section 1.1

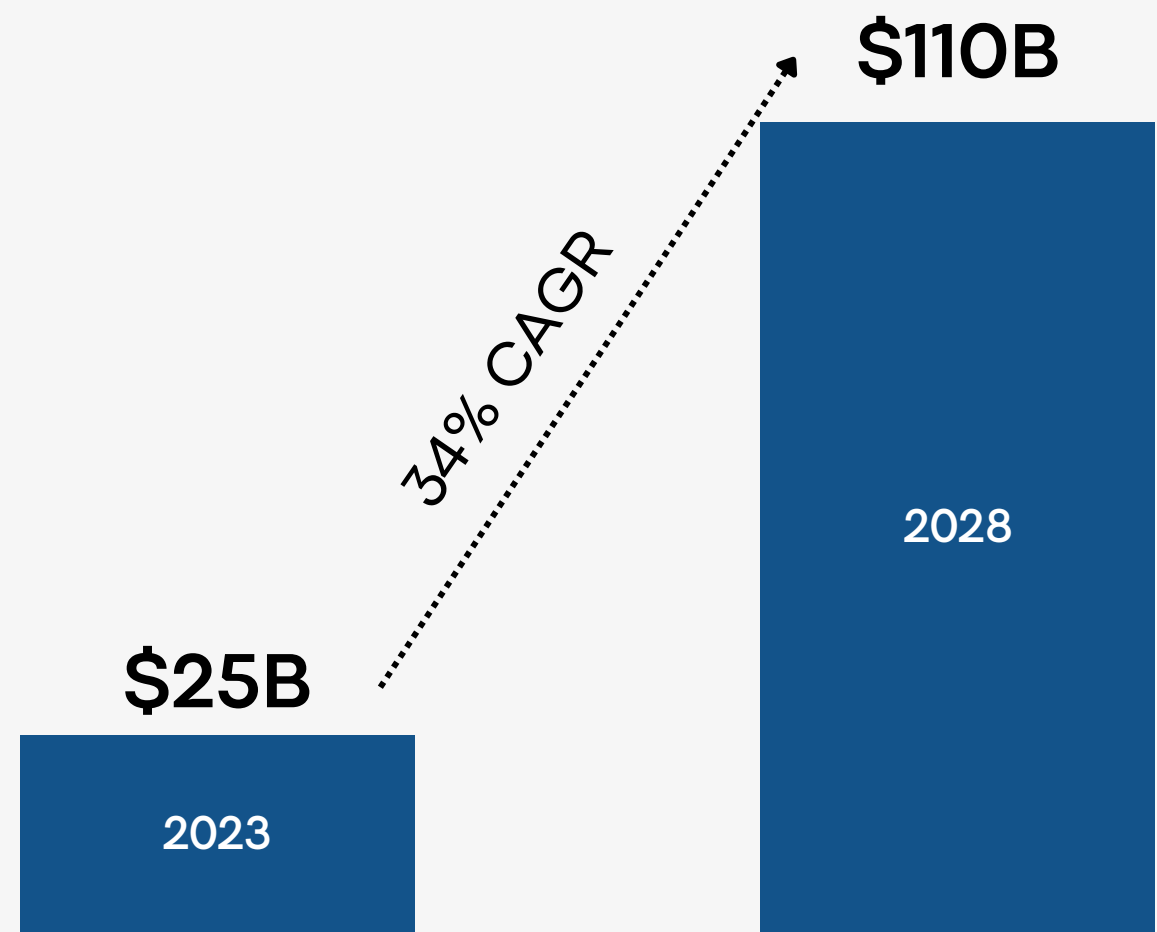
The Impact of Gen-AI on Marketing

"Thanks to Gen-AI, Marketing will never be the same again"

✦✦ Gen-AI is primed to re-shape the future of marketing



Market Value for AI-based Marketing tools to 4x by 2028



Gen-AI will increase productivity for marketers by over 10%

+18M

of people employed across marketing functions globally

Copy Writers

Graphic Designers

Copy/Graphic Promoters

34B Man Hours

Annual time spent by marketers at work



4B Man Hours

Job time that will be reduced by Gen-AI

Gen-AI's impact on marketing across specific use-cases



Major impact

	Description	Cost Reduction	New Features & Functionality
Branding & Ad-Campaign Production	From ideation of concepts to creating test drafts, dubbing b/w languages, translation, automating compliance	Yes	
Multi-Channel Content Migration	Re-purposing of content for different channels, different formats		Yes
SEO Optimisation	Re-purposing content, meta-tags, keywords for SEO		Yes
Automated Customer Support	Contextual chatbots, responses - with more flexibility and freedom	Yes	
Content Localization	Re-purposing content for different audiences, tying multiple storylines into a single content piece	Yes	Yes
Campaign Optimisation	Automating campaign testing, editing based on real-time performance		Yes
Personalised Ads	Re-purposing ads based on individual preferences, tastes and choices across same format		Yes

❖❖ Three core ways that Gen-AI enhances marketing



1 Efficient & effective content creation

Will significantly reduce the time required for ideation & content drafting. Also facilitate consistency across different pieces of content, ensuring a uniform brand voice, writing style, & format.

2 Enhanced use of customer data

Help marketers better use data such as territory performance, synthesized customer feedback, & customer trends to develop data-informed marketing strategies such as targeted customer profiles & channel recommendations.

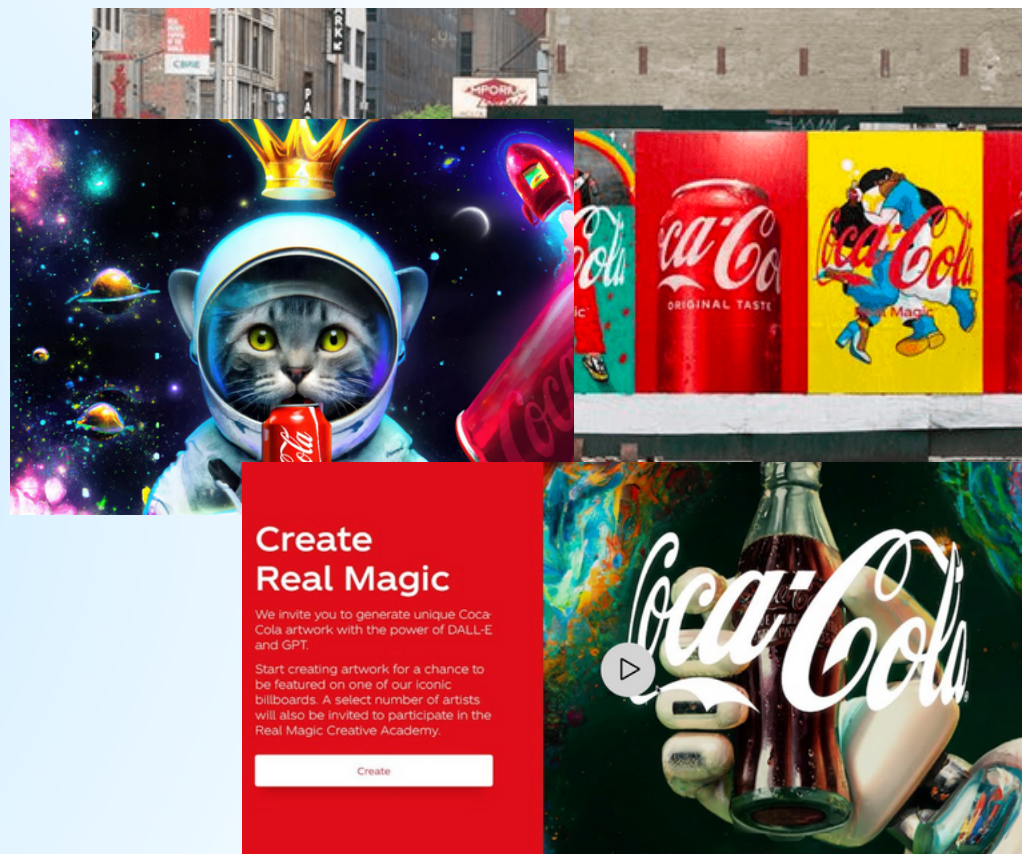
3 Creation of mass personalized content

Will allow teams to significantly enhance the personalization of marketing messages aimed at different customer segments, geographies, & demographics. Mass email campaigns will be instantly translated into as many languages as needed, with different imagery & messaging depending on the audience.

✦✦ Iconic global brands are already experimenting with Gen-AI for their advertising campaigns



Coca Cola's AI Ad contest for billboard artwork



Heinz's ad campaign for AI generated ketchup bottles



Kit Kat's Ad agency created the 'Have a Break' using AI campaign



✦✦ Adoption from marketing professionals and stakeholders is also on the rise



Gen-AI tools are already being used by a large proportion of marketers

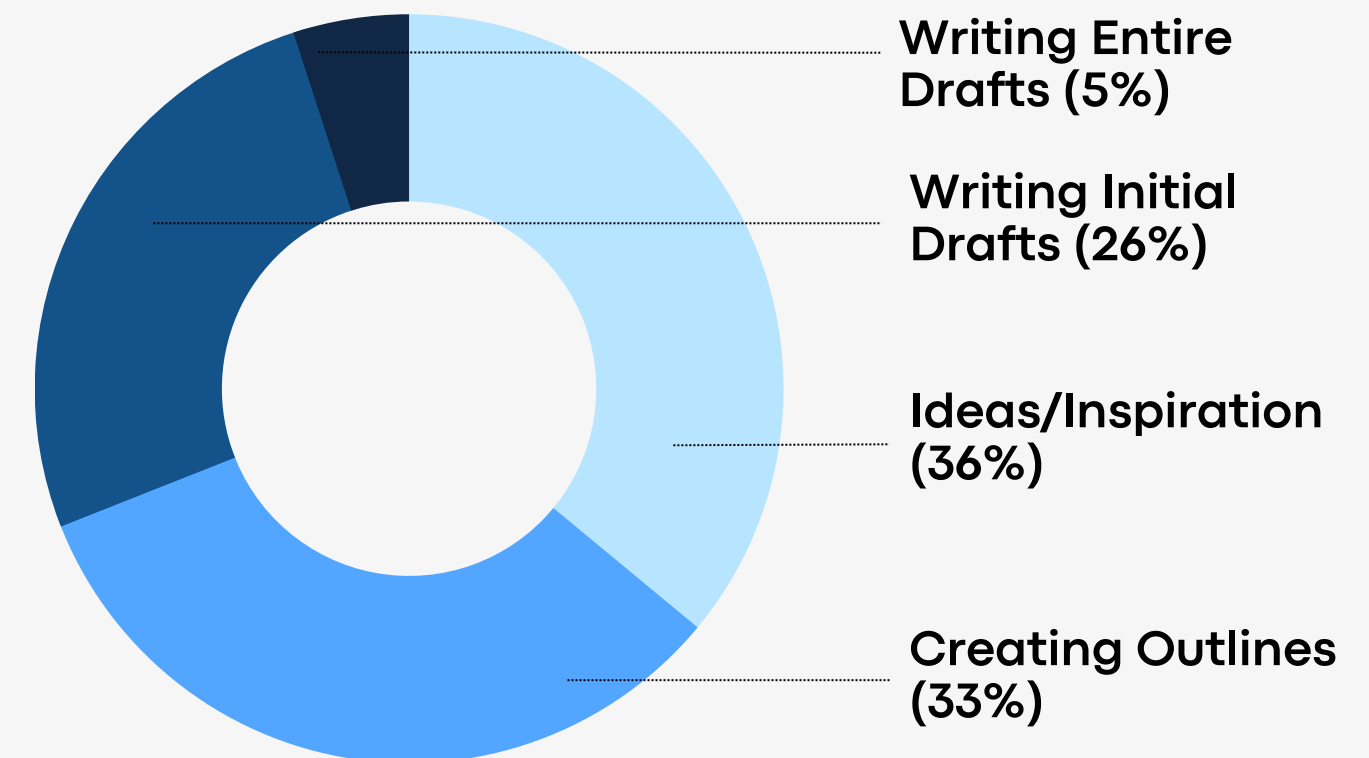
89%

% of marketers using Gen-AI tools to create content feel that the overall quality of their output has increased

>3 Hours

Average time per day that a marketer saves using Gen-AI tools

Over time, marketing writers are expected to use Gen-AI for drafting complete content pieces








✦✦ Gen-AI impacts each function of the marketing funnel



AWARENESS		Marketing teams efficiently gather market trends & customer information from unstructured data sources. Customers see campaigns tailored to their segment, language, & demographic.
	CONSIDERATION	Customers can access comprehensive information, comparisons, and dynamic recommendations, such as virtual “try ons” of clothes
	CONVERSION	Virtual sales reps or chat-bots enabled by Gen-AI emulate humanlike qualities—such as empathy, personalised communication — to build trust and support with customer purchases.
	RETENTION	Customers are more likely to be retained with customized messages & rewards. Customer support is managed through chatbots, with fewer escalations to human agents.

✦ Leading marketing-focused Gen-AI platforms



Company	Target Users	What they do	Funding	Valuation
 Lightricks	Creators & Influencer Marketing Teams	Empowers creators to improve visual content, and brands to collaborate on marketing campaigns.	\$330M	\$1.8B
 Jasper	Content Writers	Helps write blogs, social media posts, SEO optimized content and more.	\$125M	\$1.5B
	Marketing/ Website Teams	Helps marketers to tailor websites to the needs of their customers & boost their sales.	\$72M	\$600M
	Digital Marketing Copy Writers	Digital advertisement tool that saves time & increases conversion rates for marketing writers.	\$14M	\$50M
	Performance Marketing Teams	Tool for businesses to enhance performance marketing & tailor personal ads to each customer.	\$10M	\$50M



Section 1.2

India Market Landscape

"Startups focused on building from the sub-continent for the world"

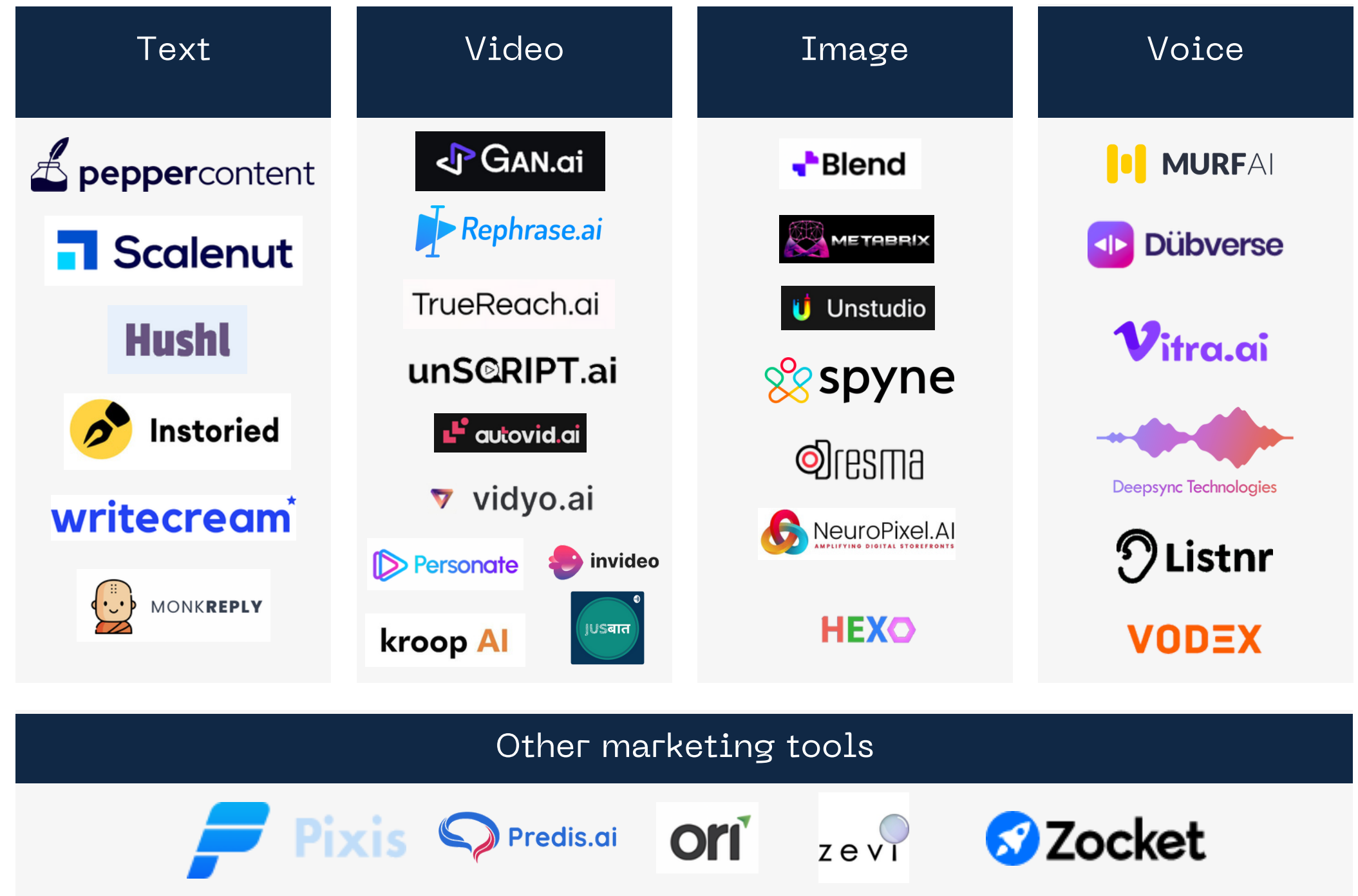
Emerging Marketing focused Gen-AI companies in India

\$155M+

Venture Funding till date

~35

Total # of Startups



❖❖ Zocket transforms an SMB's product catalog into exceptional omni-channel ads in seconds

- A marketing platform that automates digital marketing using 24+ AI models across ad copies, targeting & optimisation.
- It essentially creates omni-channel ads auto-generated & auto-refreshed based on real-time engagement data to increase ROAS

How it works

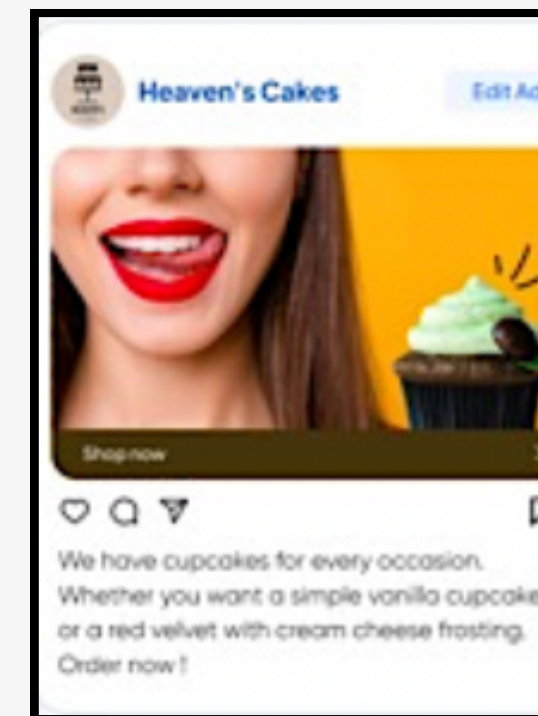


Content + parameters added

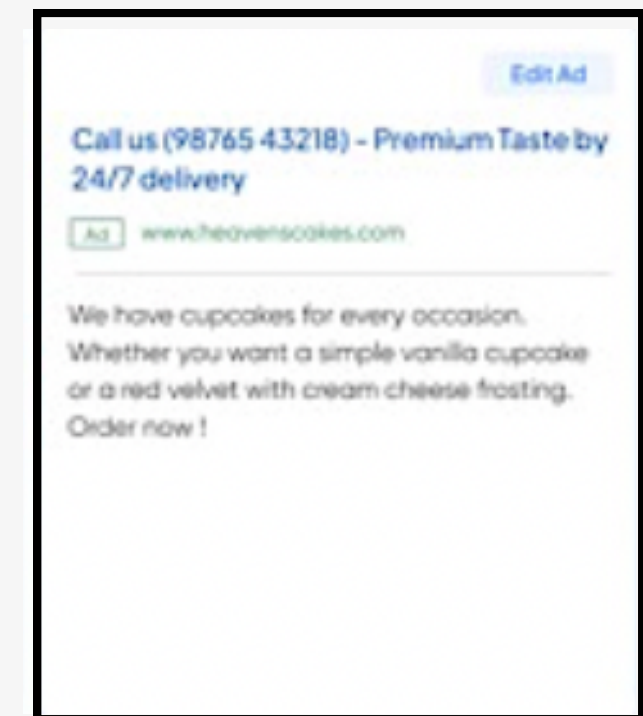
Transforms simple content to ads in
3 seconds



Facebook Ad

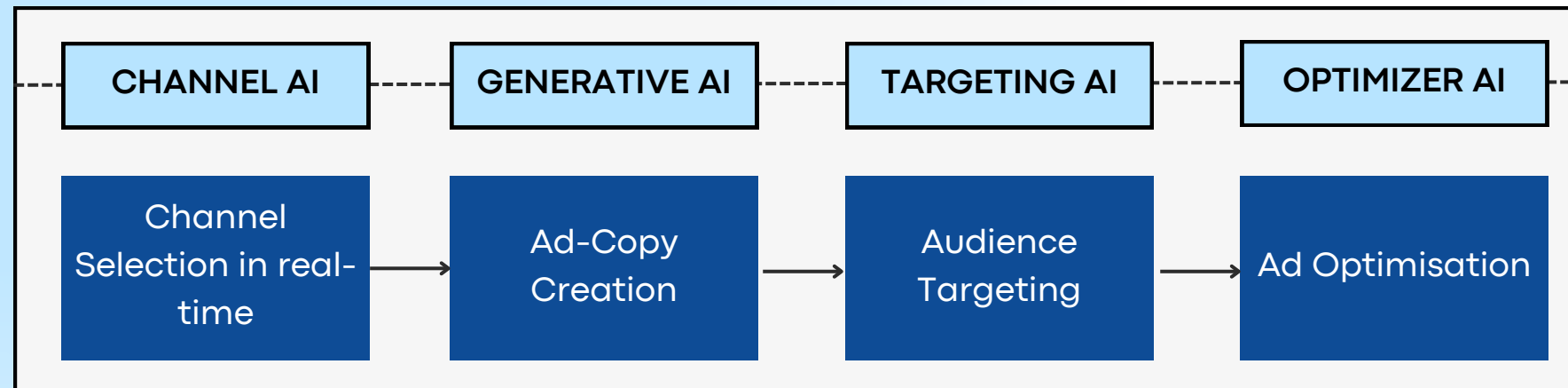


Instagram Ad



SEO placement

❖❖❖ Zocket is being leveraged due to it's differentiated full-stack platform



Channel AI

Cross platform budget routing & optimisation based on which ad platforms delivers results at lowest CPL

Content Generation AI

Generates 54 ad copies across platforms in 3 seconds using models trained on 500Mn+ parameters

Targeting AI

Creates various custom audience cohorts using AI models trained to deliver max CTR ad copy wise

Optimisation AI

Minimises ad spend wastage by sunseting low-performing ads and refreshing high performing ads



Sundar, Mukund, Karthik, Nanda (Left to right) are seasoned 2x founders, having successfully exited their previous venture, GoBumpr. The founders have seen the digital marketing problem up close and have spent a lot of time understanding the needs of today's SMB owners.



[Read our thesis](#)

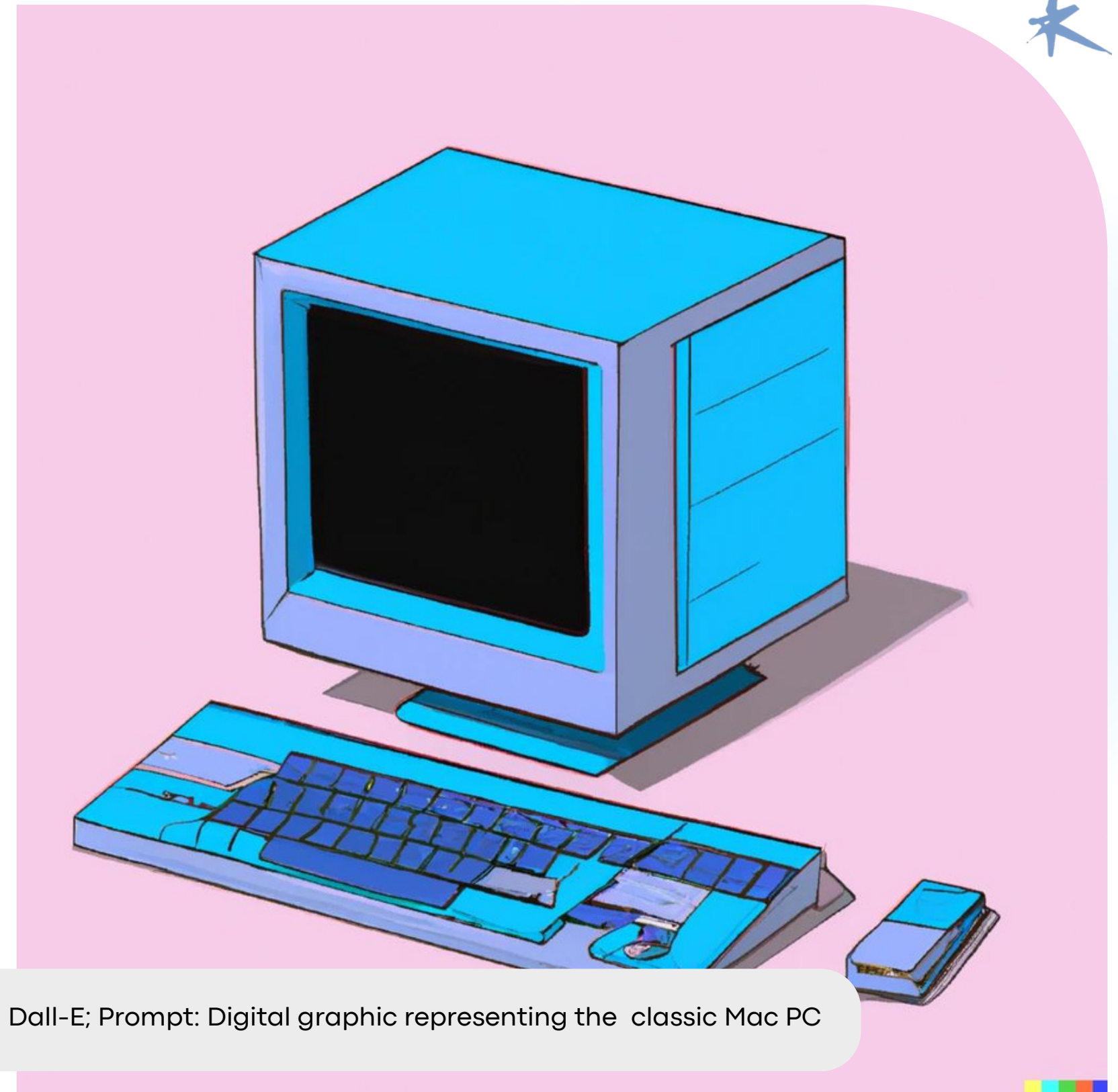


[Connect with the founders](#)

Suggested Readings

- [The State of Generative AI](#)
- [Things Marketers should know about Generative AI](#)
- [Generative AI - Key use cases for marketing](#)
- [Marketing & GenAI - Salesforce POV](#)
- [HBR: How AI is changing creative work](#)

PS - Open AI's Dall-E helped us co-create images and content for this series



Credits: Dall-E; Prompt: Digital graphic representing the classic Mac PC



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Part 2: Gaming

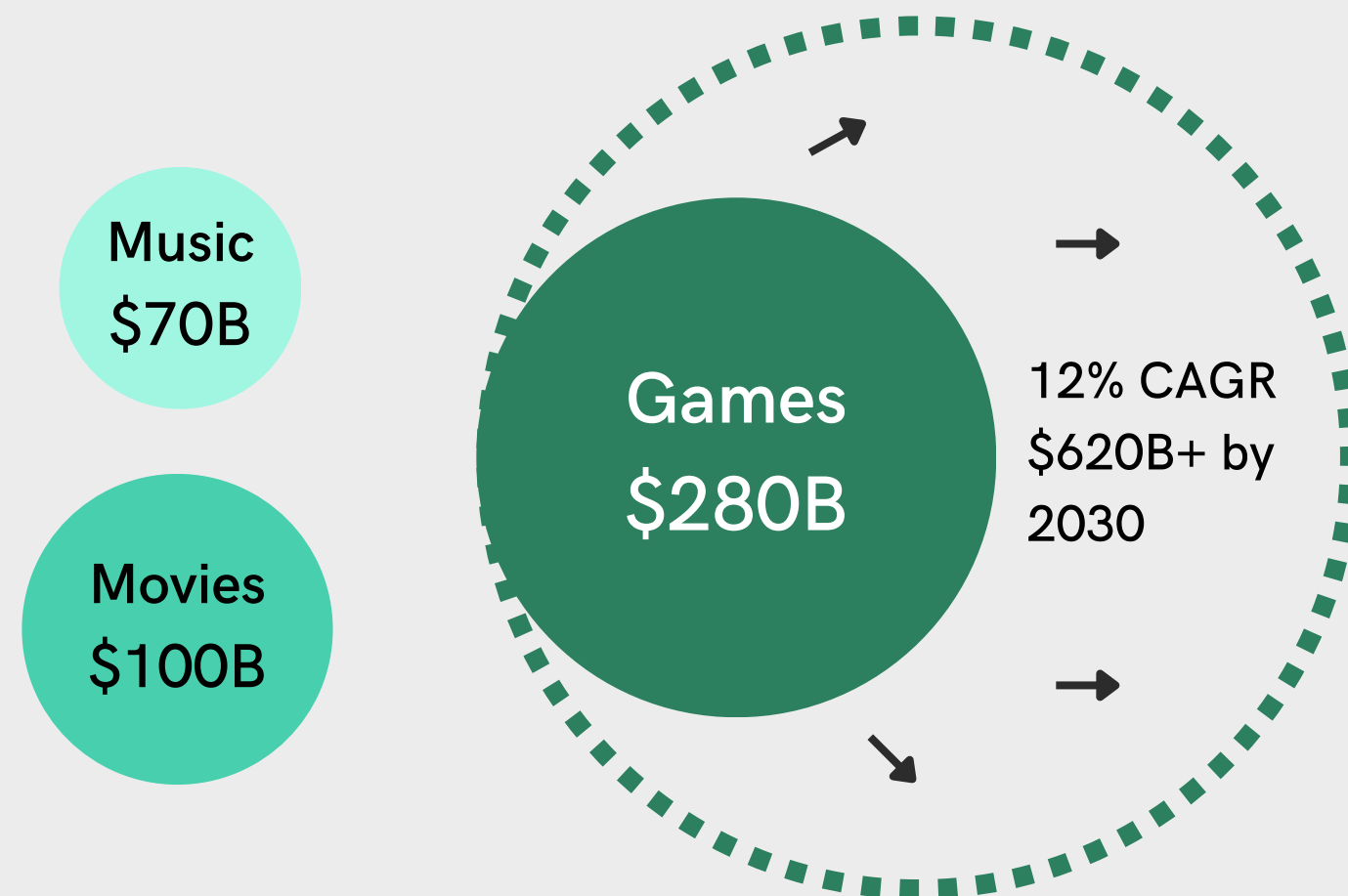


Section 2.1

Setting the context

"Games sure are fun to play, but they sure aren't as much fun to develop"

❖ The Gaming industry is bigger than movies & music

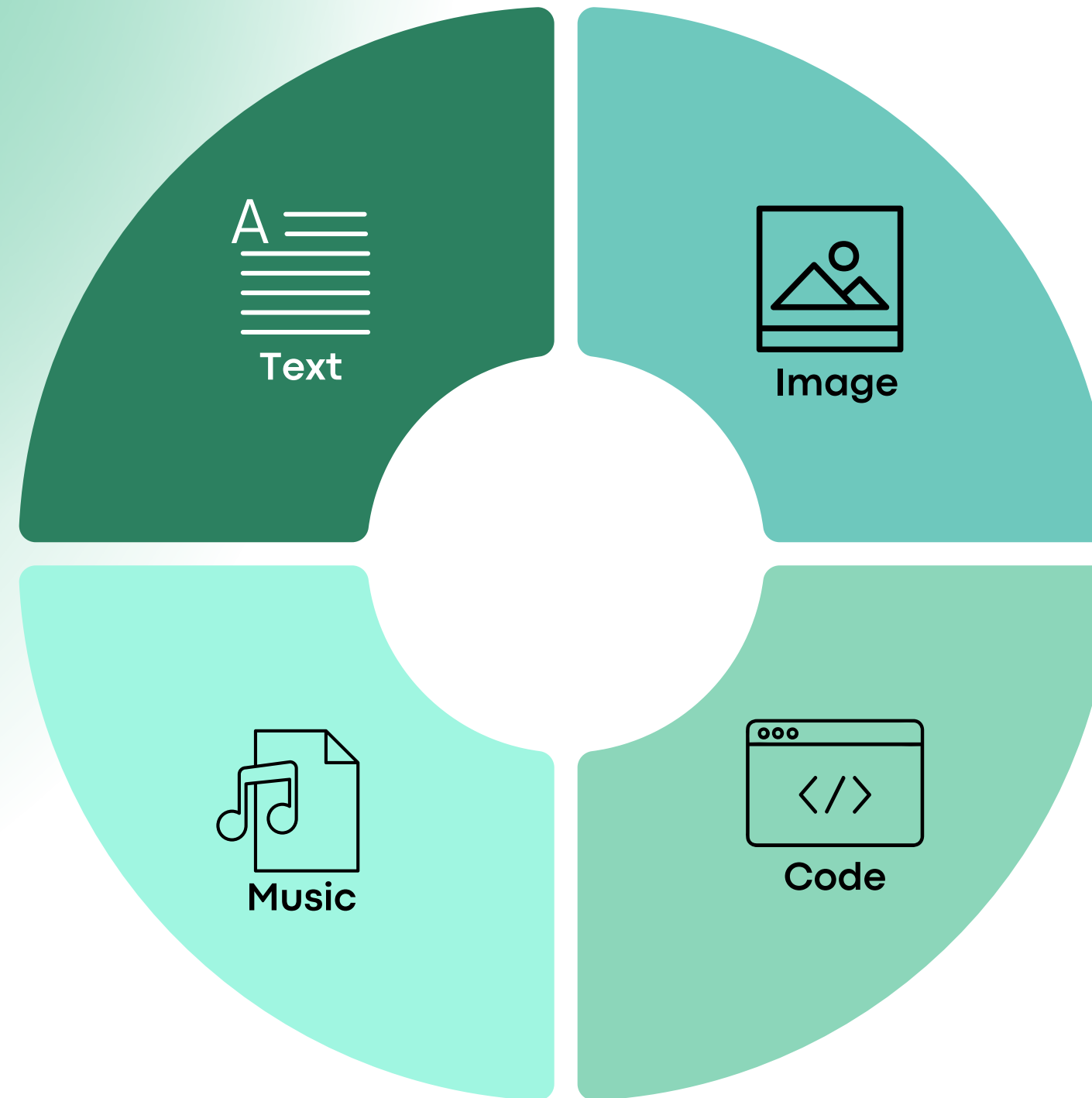


Interesting fact: The top 5 highest grossing games of all time have generated over \$94B in revenue, that is almost 1.5x the revenue generated cumulatively by the top 50 grossing movies of all time (\$65B).

Top 10 highest grossing games of all time	Year Platform	Gross
Dungeon Fighter Online	2005 Multi	\$22.1B
Pac-Man	1980 Multi	\$19.3B
Space Invaders	1978 Multi	\$19.2B
Street Fighter 2	1991 Multi	\$18.7B
Honour of Kings	2015 Mobile	\$15.6B
Lineage	1998 Multi	\$15.4B
League of Legends	2009 Multi	\$15.2B
PUBG	2017 Multi	\$14.8B
Crossfire	2007 PC	\$13.1B
World of Warcraft	2004 PC	\$11.3B

✦ Today, we can produce and enjoy near-life like gaming experiences ✦

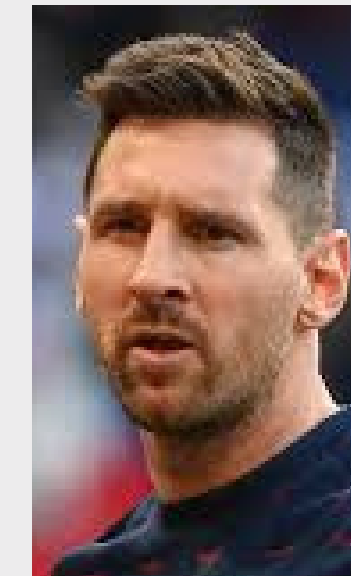
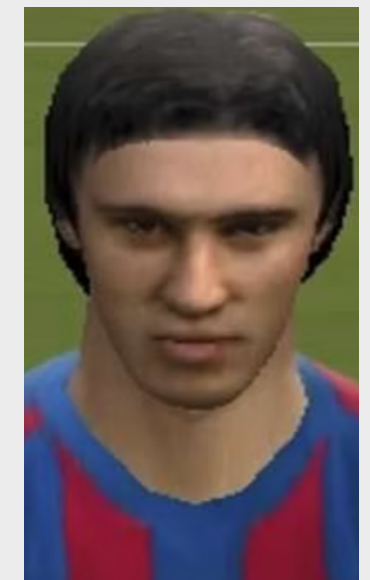
"A game is nothing but a conscious meshing of multiple data types stitched together to **produce an immersive, interactive and engaging experience** that responds to a player's commands in real-time"



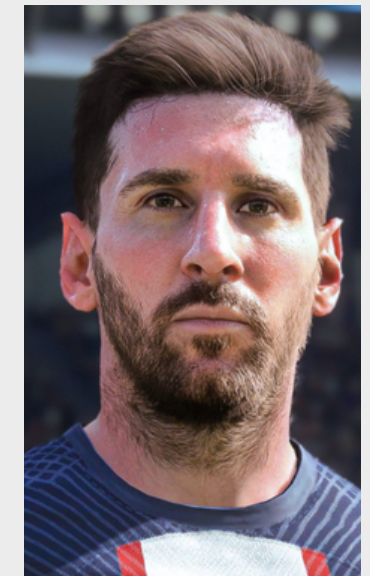
The evolution of Messi in EA Sports marquee FIFA game series



2006



2023



❖ But, building games is a complex, multi-step process...



The level of complexity depends upon the type of game being developed

Platform

Mobile AR/VR Headset PC Console

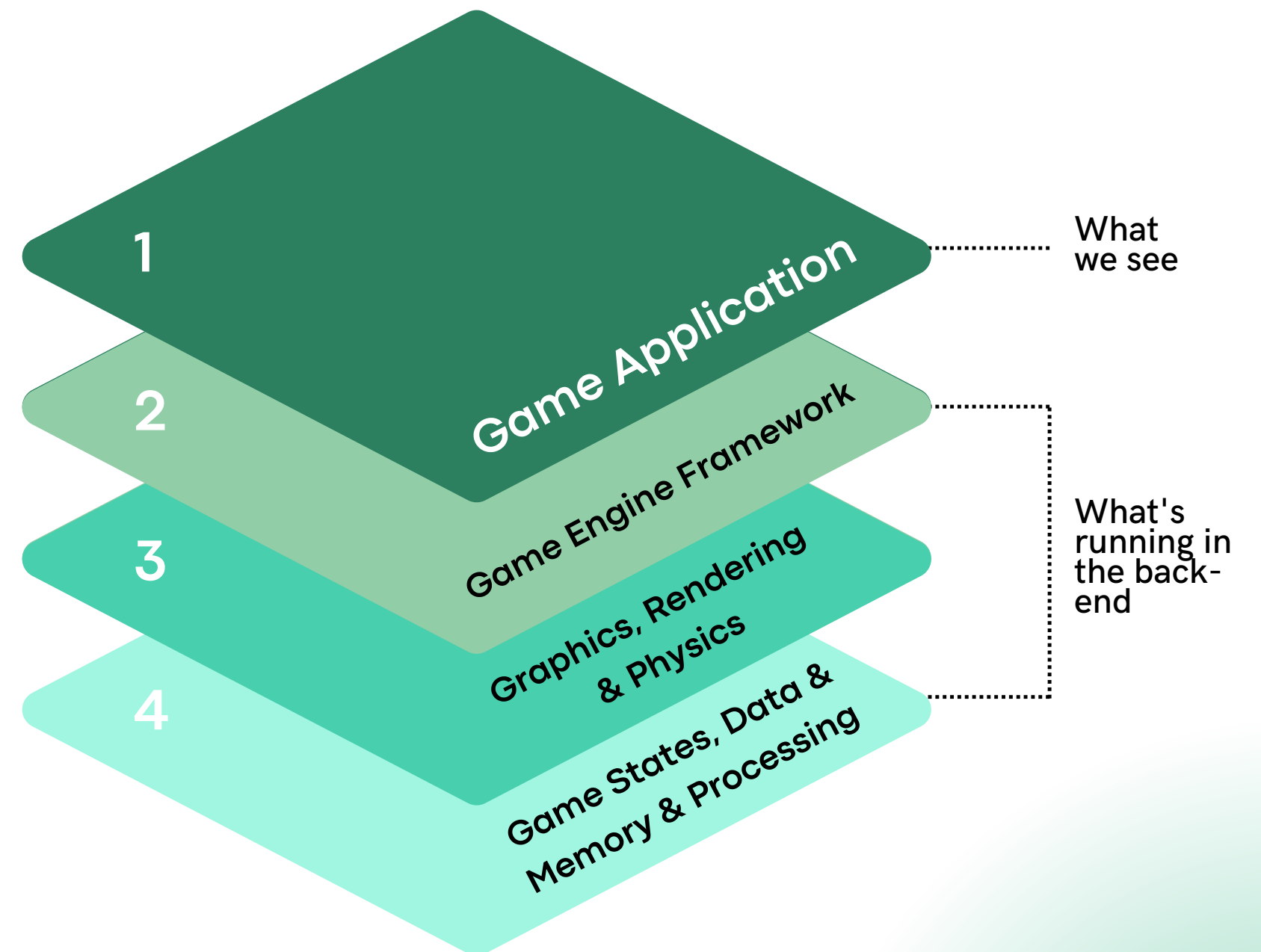
Level of complexity →

Game type

Casual RMG Midcore Hardcore

Level of complexity →

The Architectural Layers of a Video Game



✦✦ ...that requires a significant volume of time and money



Cyberpunk 2077



\$316M



9 years



GTA - 5



\$265M



3 years



Call of Duty: Modern Warfare 2



\$250M



3 years



Read Dead Redemption 2



\$225M



8 years



Elden Ring



\$215M



4 years



Battlefield 4



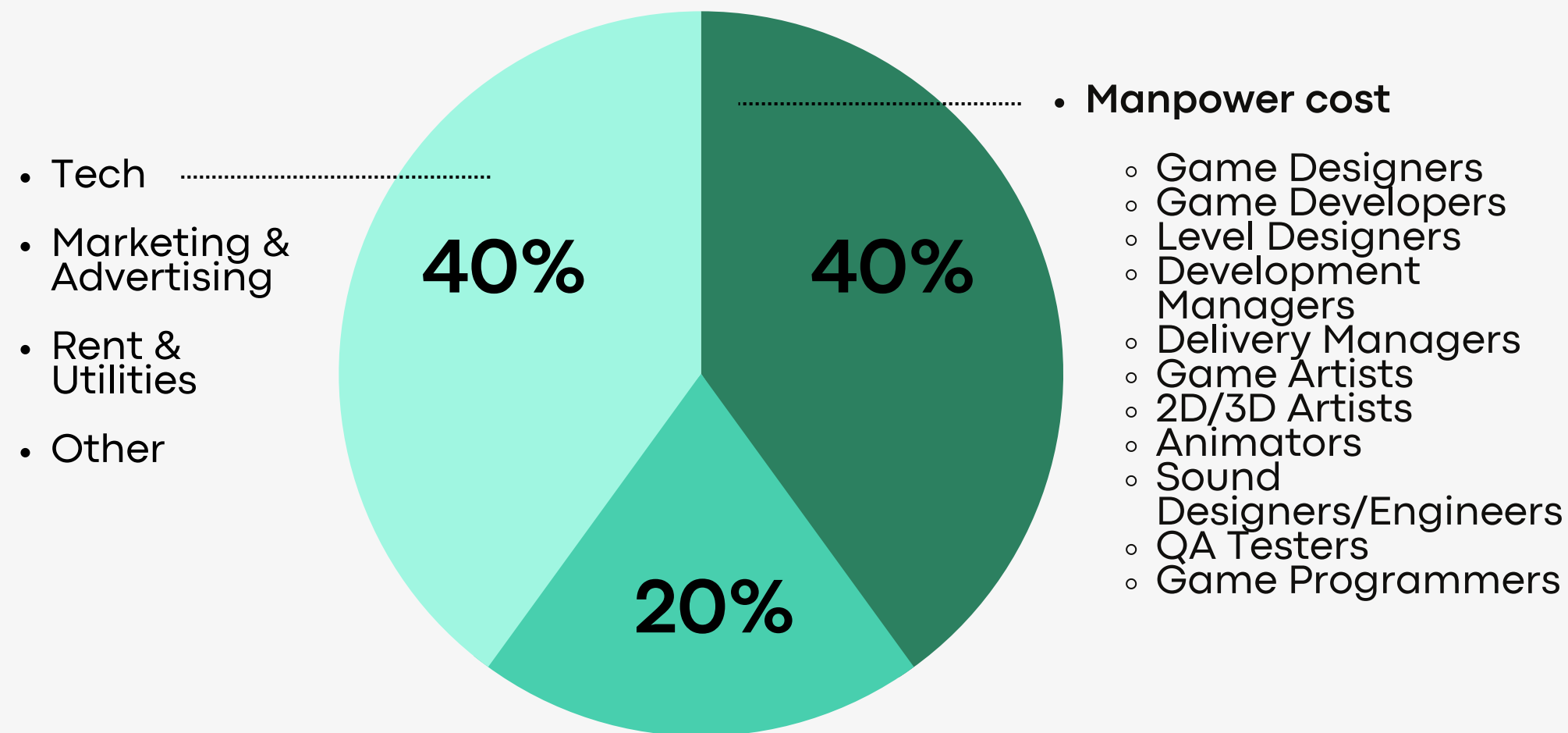
\$100M



2 years

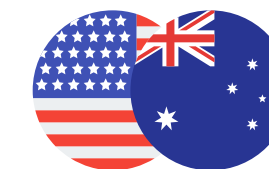
❖❖❖ Manpower costs account for the highest proportion of a studio's budget ❖

Manpower costs typically account for 40-60% of a studio's total budget



Free-flowing budget that can be divided on either side depending on scope & size of project. For smaller studio's this typically goes to manpower. For larger studios it can be allocated to Marketing or Tech.

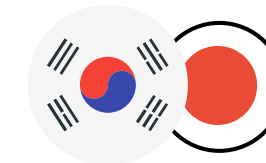
Outside India, typical game developer profiles can cost between \$100-\$300K per year



\$60-\$150 per hour



\$50-\$90 per hour

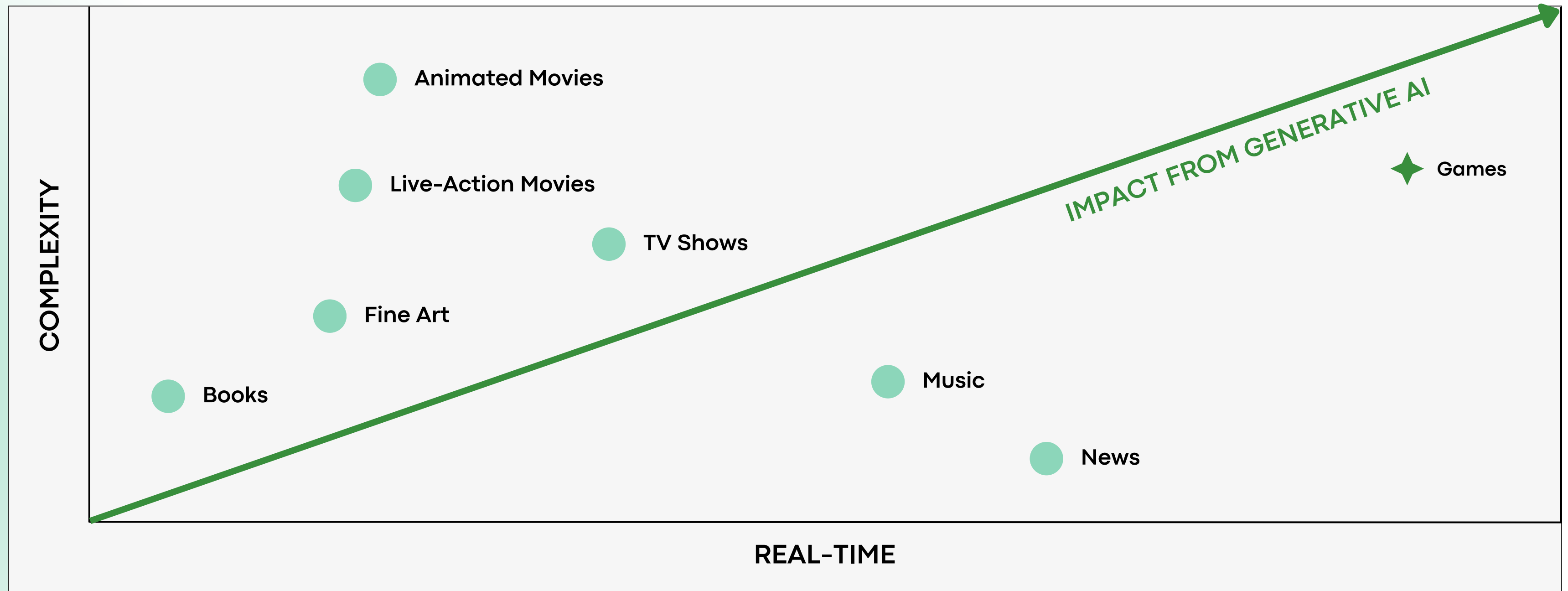


\$30-\$60 per hour



\$10-\$30 per hour

✦ Generative AI will impact Games more than it will impact any other creative content type





Section 2.2

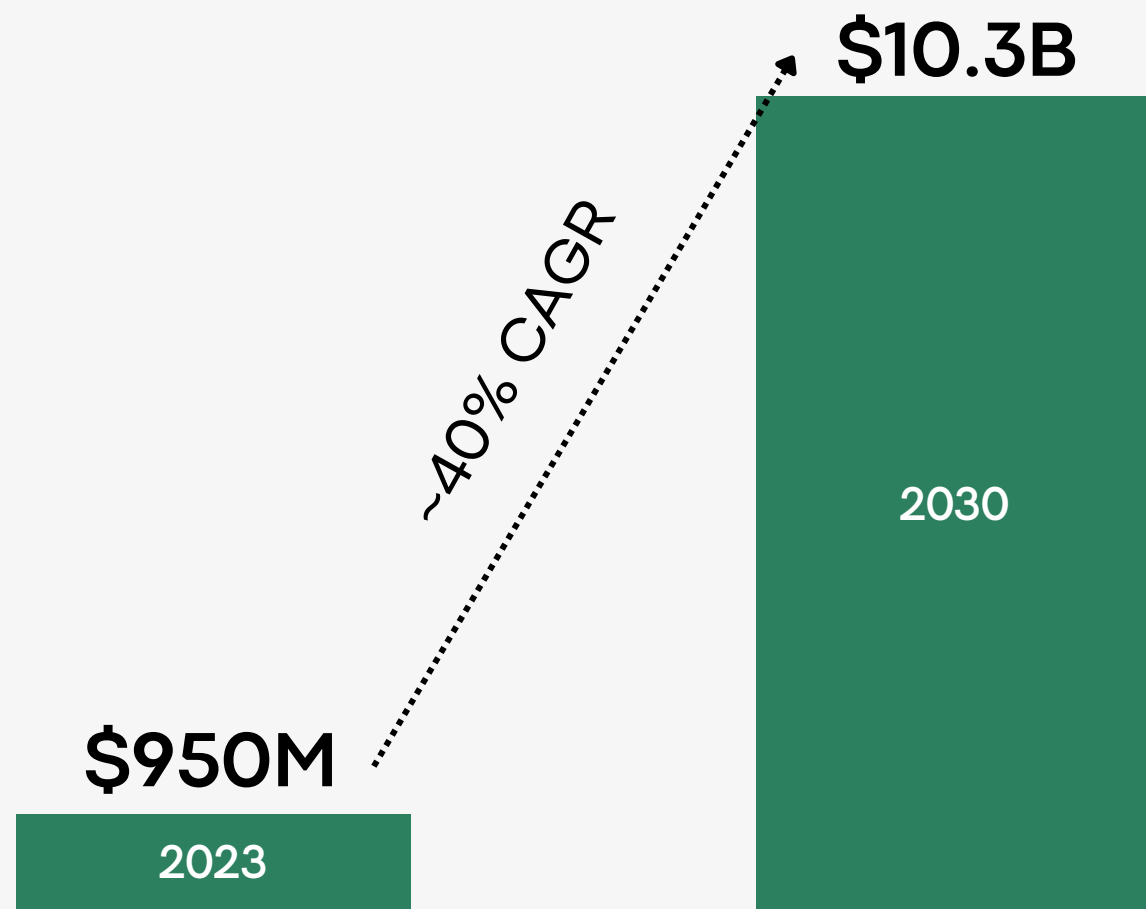
The Impact of Gen-AI on Gaming

"Game development is about to become a whole lot easier"

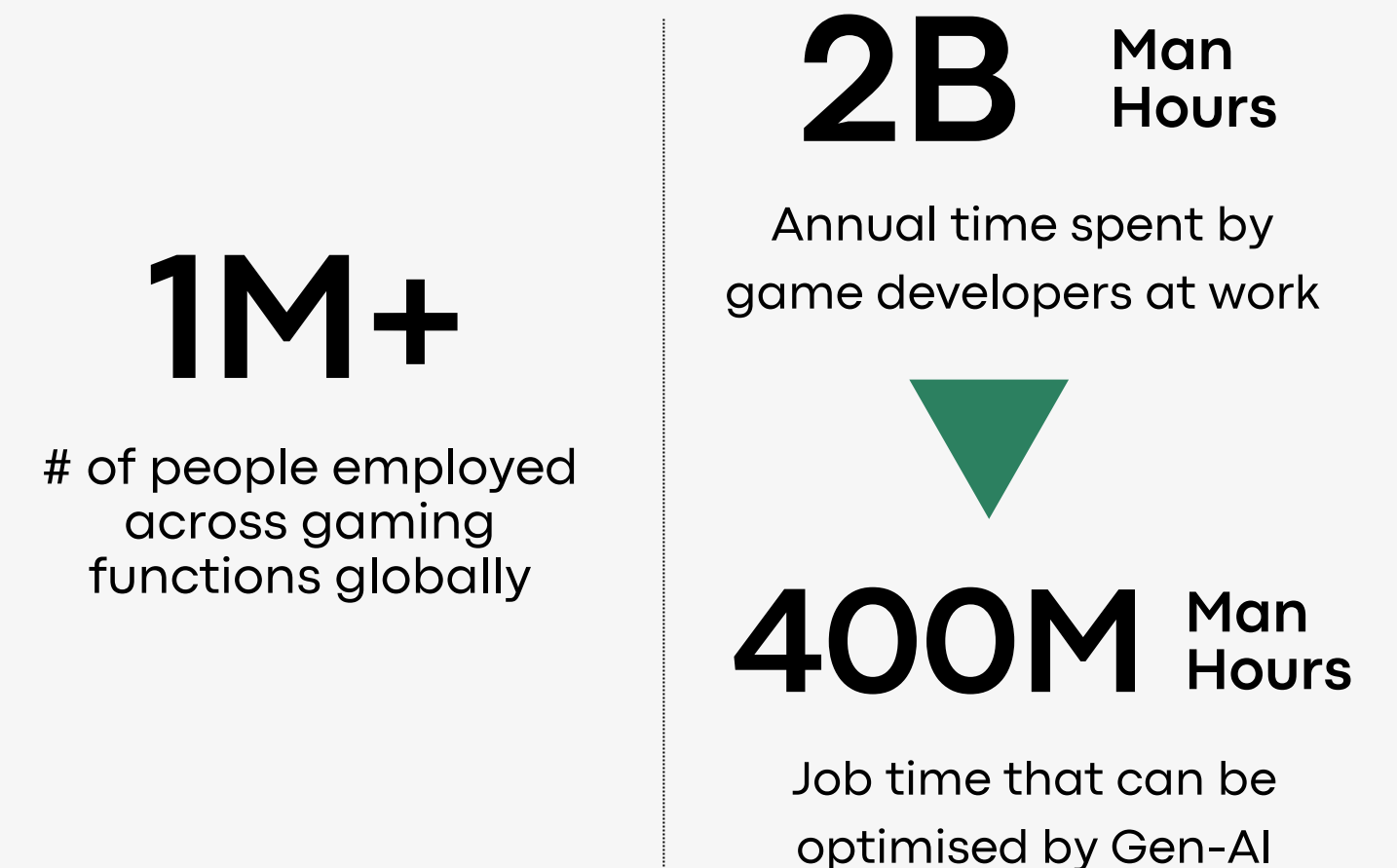
✦✦ Gen-AI is primed to re-shape the future of Game Dev



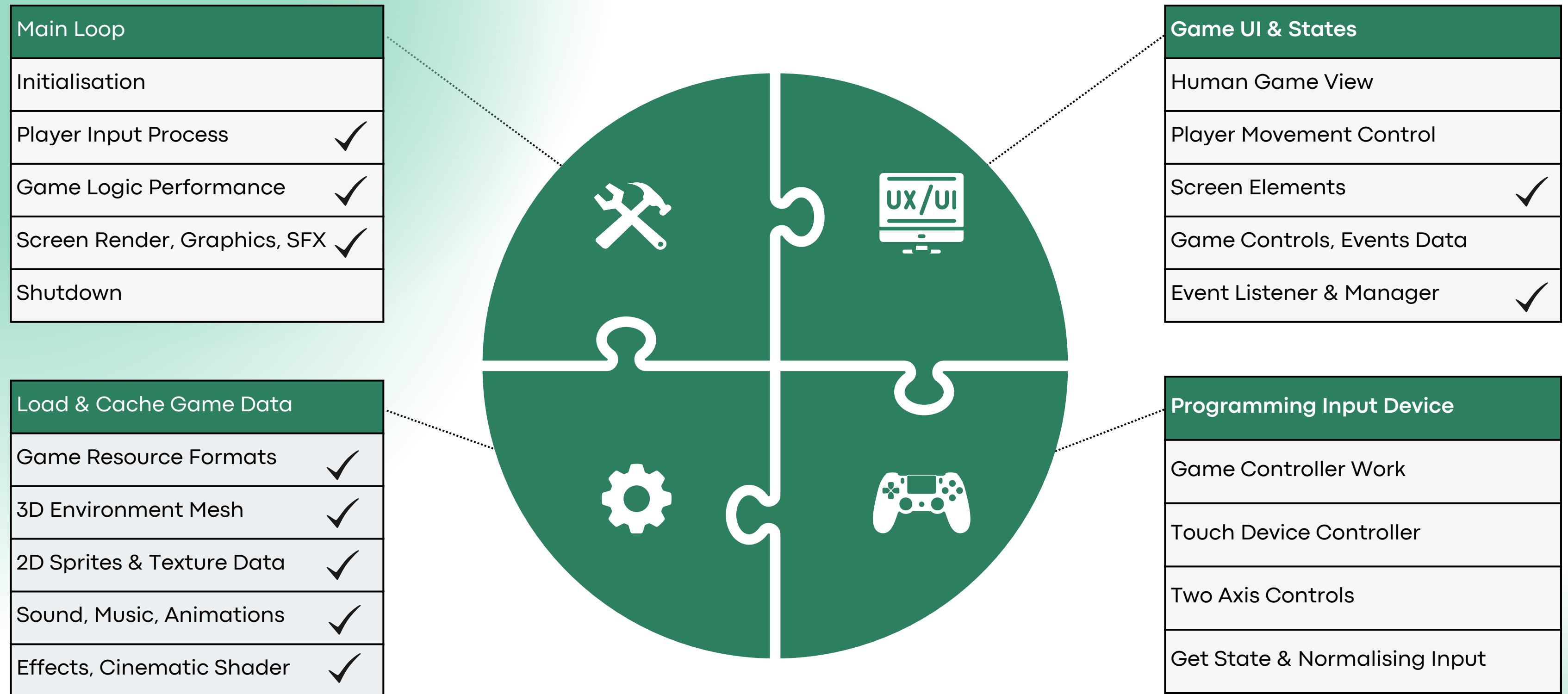
Market Value of AI-based Game Dev Tools will account for over 1% of the total gaming market



Gen-AI can increase productivity for game developers by over 20%



✦✦ Gen-AI impacts several core development elements



✦✦ Gen-AI will lead us to the 'Direct from Imagination' Era



	Description	Level 0	Level 1	Level 2	Level 3	Level 4	Level 5
Studio as creator	Developers create and dictate the experience using tools that lie outside a particular game framework	No automation, own engine & backend	Off the shelf tools and code	Non-Tech tools for creative inputs	Gen-AI tools used for pipeline, human-heavy	Automation of 1+ creative pipes, prompt to output	Multiple generative pipes used smoothly
Game as creator	The Game loop itself creates generative experiences and content, in real-time	Set gameplay, no variations	Rule-based procedural content	Limited 'live' generated content	Extensive 'live' generated content	Personalisation based on player inputs	Game designer friend optimising fun
Modder as creator	Creativity happens within a game system but outside the core game loop	No inherent modding	Limited game provided tools	API to build mods	Conditionally generative AI Pipes	Integrated Generative Tooling	Complete mods from prompts
Player as creator	Players express themselves within the core-game loop	Limited creativity	Player as content, but no big impact	World-building by players	Actions affect persistent content	Integrated Generativity, Modding in loop	Dream it, prompt it
				2023		▶	2030?

✦ Specific use-cases that Gen-AI has opened up in Gaming



Major impact

	Description	Cost Reduction	New Features & Functionality
End-to-End Content Generation: Pre-release and procedural	Game creators will be able to go beyond human intelligence for creating a wide range of game elements, either from scratch (ideation) or by training models to replicate on foundational elements - maps, levels, characters, background scores, everything.	Yes	Yes
Enhance NPC Behaviour	There are select games where AI models are powering NPC behaviour, but Gen-AI takes this a notch above allowing NPC's to act more genuinely and organically, leading to greater immersive, interesting and unique gameplay experiences.		Yes
Simplified Testing & Debugging	Testing and debugging is a herculean task especially with AAA and Hardcore games. Gen-AI models will be able to analyse and detect errors, run multiple scenarios and potentially even fix bugs.	Yes	Yes
Personalized Gameplays	Gen-AI will allow studios to offer far more personalised player experiences, depending on interest, engagement levels and in-game player behaviour. The Game engine framework could come up with variations in real-time across elements - characters, levels, difficulty and more.		Yes
Re-purpose Games for different platforms	Migrating game titles designed for a particular platform to another is often a repetitive albeit consuming task for development teams. Here, specific tools could automate specific development processes and reduce time-to market significantly.	Yes	Yes

✦✦ Adoption of AI tools is on the rise, expected to flow top-down from large AAA studios to smaller mobile gaming studios



87%

Studios currently using 1 AI tool in development

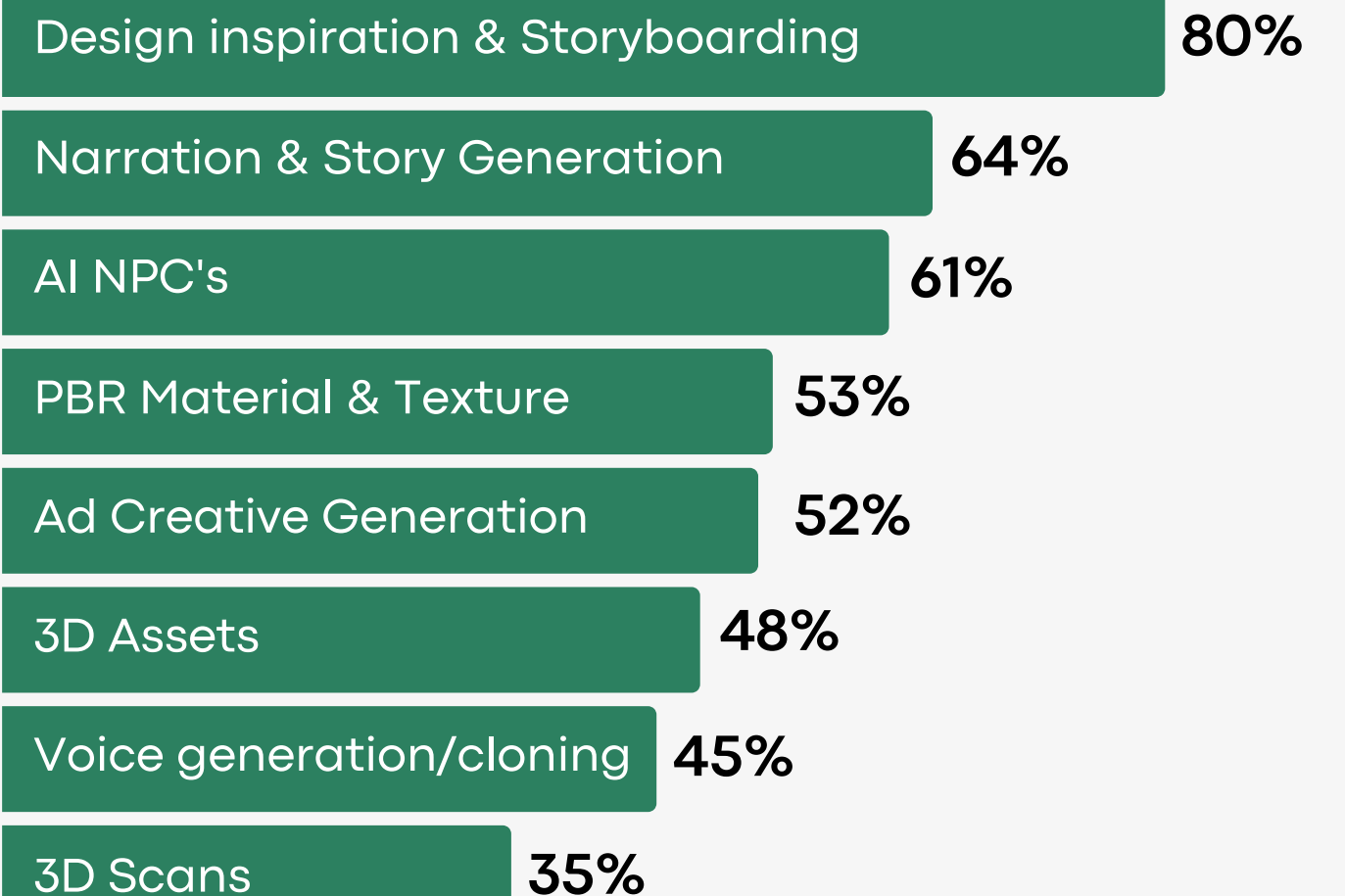
64%

Studios planning to fine-tune and train their own proprietary models

48%

Studios use Unity/Unreal as their primary engine, likely to utilise in-built AI features

% of studios planning to leverage AI on their next project for





Section 2.2

Market Landscape

"The companies and platforms making breakthroughs and creating waves as early movers"

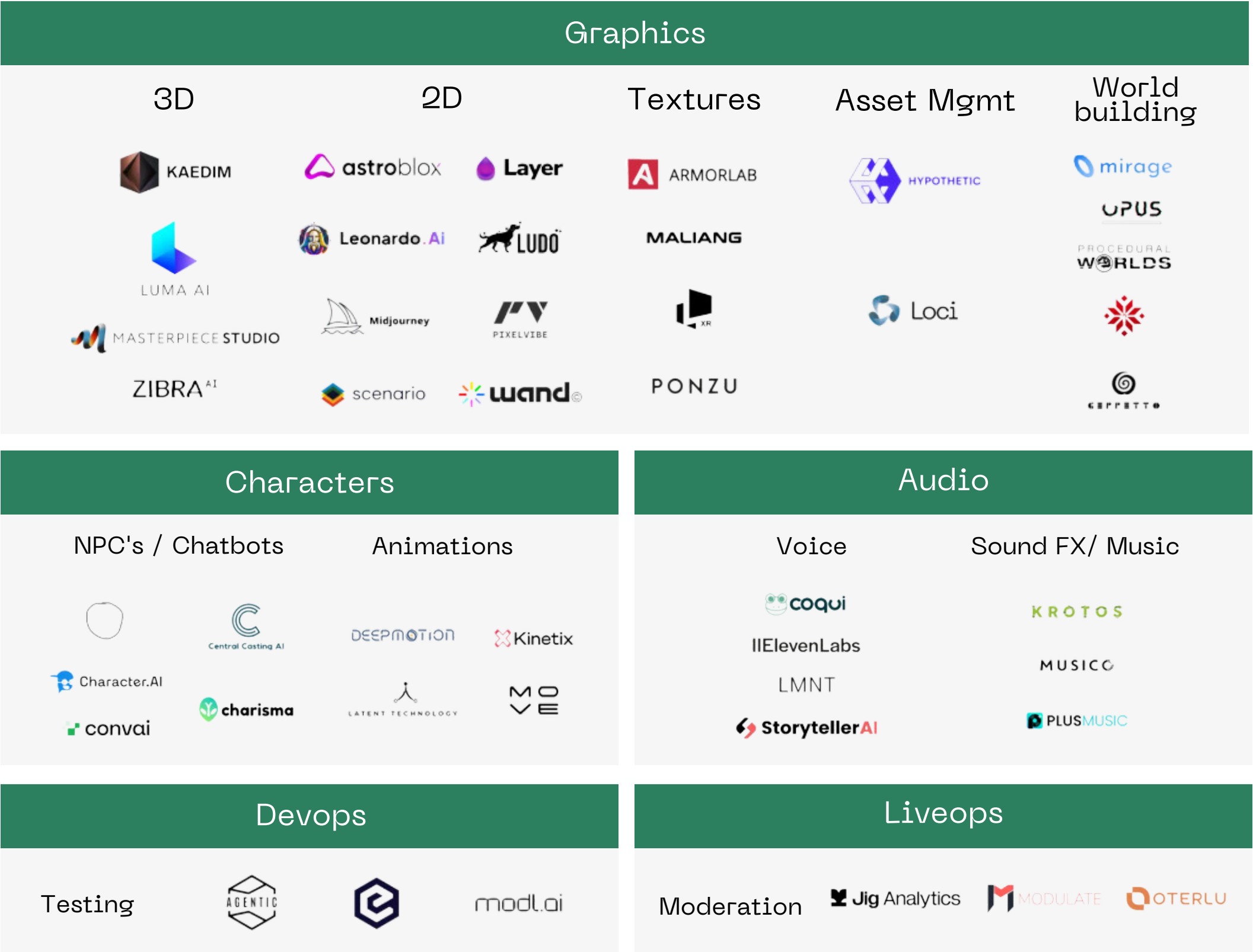
Emerging Global Vertical Gaming focused Gen-AI companies

\$300M+

Venture Funding till date

~75






Total # of Vertical AI
Gaming Startups



The market map is not exhaustive, reach out to us at ai@kalaari.com if we have missed a company in the space.

✦ Leading Vertical Gaming-focused Gen-AI startups



Company	What they do	Funding
	Inworld is a Character Engine for AI NPCs that goes beyond LLMs. It adds contextual awareness and multimodal expression of personality using advanced AI to build generative characters whose personalities, thoughts, memories, and behaviors are designed to mimic the deeply social nature of human interaction.	\$120M Bitkraft, Lightspeed, Kleiner Perkins, M12
	rct AI is providing AI solutions to the game industry and building the true Metaverse with AI generated content. It uses cutting-edge technologies, especially deep learning and reinforcement learning within it's game engine platform truly dynamic and intelligent user experience both on the consumers' side and production's side.	\$15M Galaxy Interactive, Y Combinator
	Hidden Door is a game technology studio building the first narrative AI — a platform that transforms any work of fiction into an infinite social roleplaying experience, bringing together players, authors and other creators.	\$7M Northzone, Makers Fund
	Scenario offers an AI-based platform that allows developers to generate high-quality, style-consistent 2D assets for games.	\$6M Play Venture, Anorak Ventures
	Regression Games is building an accessible and enjoyable experience esports ecosystem for players to create game AIs, code characters, train models, and compete in their favourite games.	\$4M NEA, a16z

✦✦ Exciting Areas of Opportunity for Indian Game Developers



Studio Plays

AI-first Indie Studios

Leveraging and incorporating AI into their own development pipe aggressively (casual/midcore)

Service Studios

Leveraging and incorporating AI to serve other studios more effectively and efficiently

GameDev SaaS Plays

Unity/Unreal extensions

GameDev SaaS Tools and extensions that are distributed via Unreal Marketplace or Unity Asset Store

Proprietary Platforms

GameDev SaaS Platform that solved for a development function, potential to scale end-to-end. Will likely change development approach.

✦✦ Additional Resources



- [The Generative AI Revolution will enable anyone to create Games - a16z \(Article\)](#)
- [The NeverEnding Game: How AI will create a new category of Games - a16z \(Article\)](#)
- [Gaming x AI \(The Infinite Power of Play\) - Lightspeed \(Article\)](#)
- [How AI is helping Build, and Humanise, Virtual Worlds - Bitkraft \(Article\)](#)
- [AI is rewriting the Rules of \\$200B Games Industry - Bloomberg \(Article\)](#)
- [Five Levels of Generative AI for Games - Jon Radoff \(Article\)](#)
- [The Generative AI Revolution in Games - a16z \(Article\)](#)

- [Computational Creativity, Building the Metaverse - Jon Radoff \(Article\)](#)
- [The Future is Now - the AI Gaming Revolution - Justin Yuan \(Substack\)](#)
- [Generative AI in Games: A Builder's Perspective - Synthetic Futures \(Video\)](#)
- [Creating NPC's with Generative AI and OpenUSD - Nvidia Omniverse \(Video\)](#)
- [Gaming AI with Haiyan Zhang - Microsoft Research \(Podcast\)](#)
- [Unlocking the Power of AI in Gaming with Unity's Marc Whitten: For Your Innovation \(Podcast\)](#)
- [Unity AI Explained - Samson Vowles \(Video\)](#)



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Part 3: Software Development



Section 3.1

Setting the context

ai&us SOFTWARE DEVELOPMENT



source: news reports, [LifeArchitect.ai](https://life-architect.ai)
* = parameters undisclosed // see the data

❖ Generative AI has garnered significant attention from some of the world's largest organizations, who have recently made substantial investments in the field. ✨

Models

10+

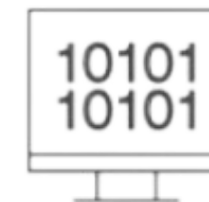
Organisations have built LLM models from scratch



Datasets

5+

Organizations have built integrated datasets



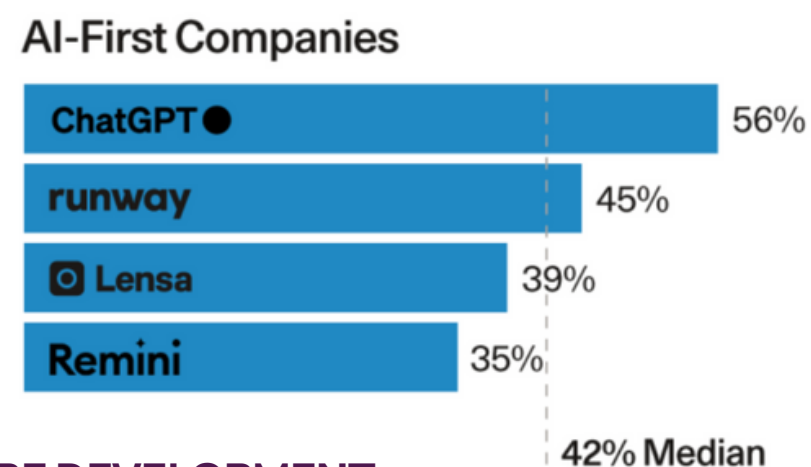
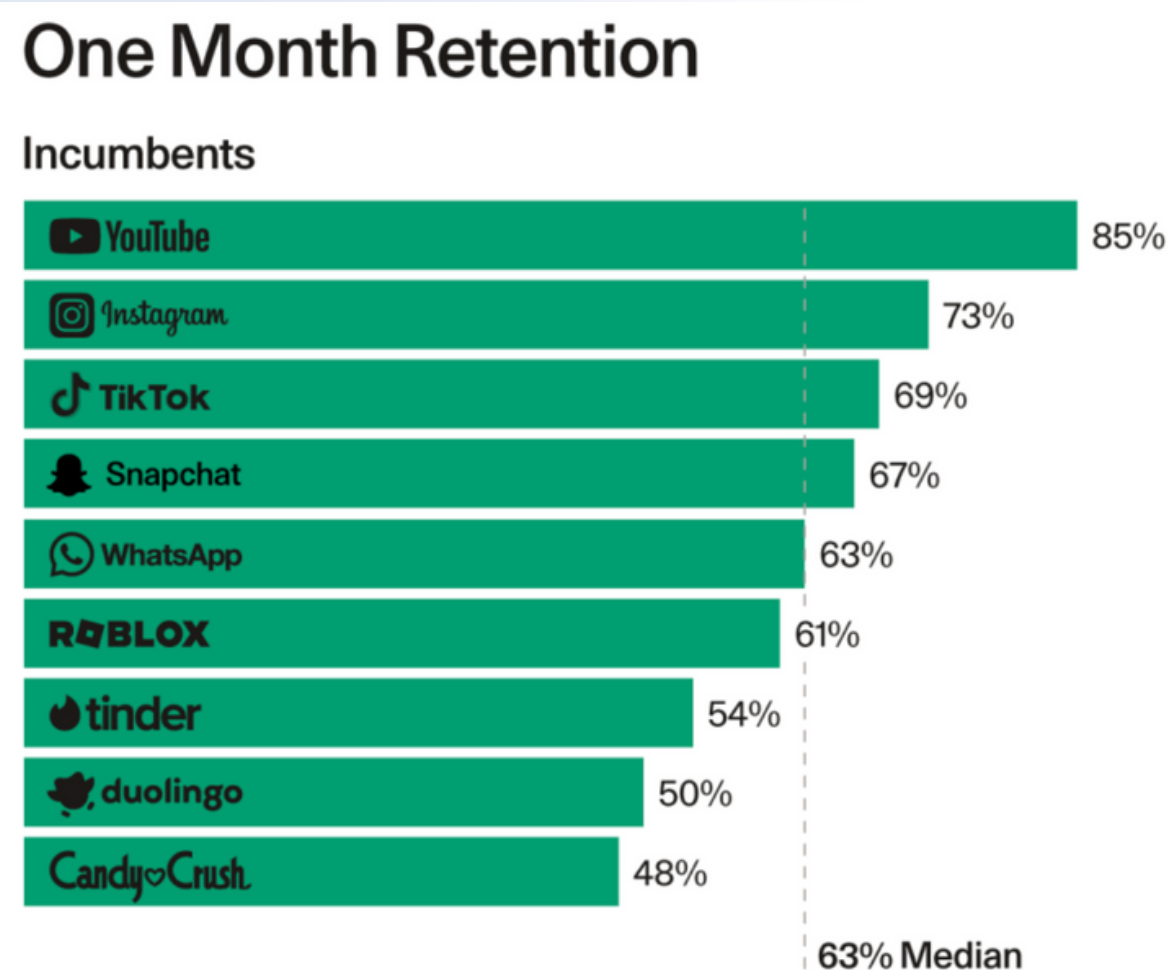
Applications

20+

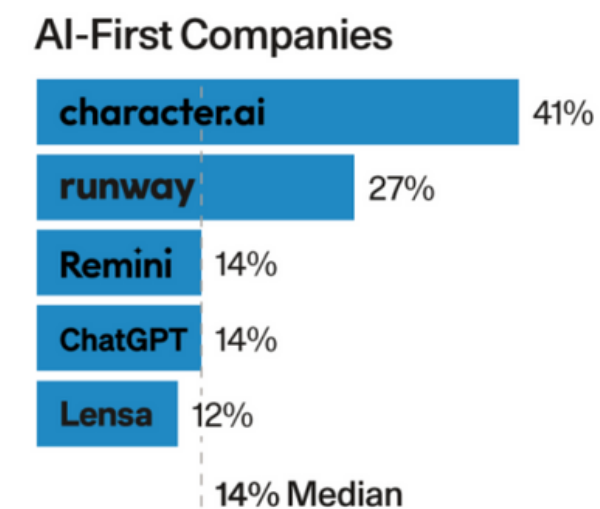
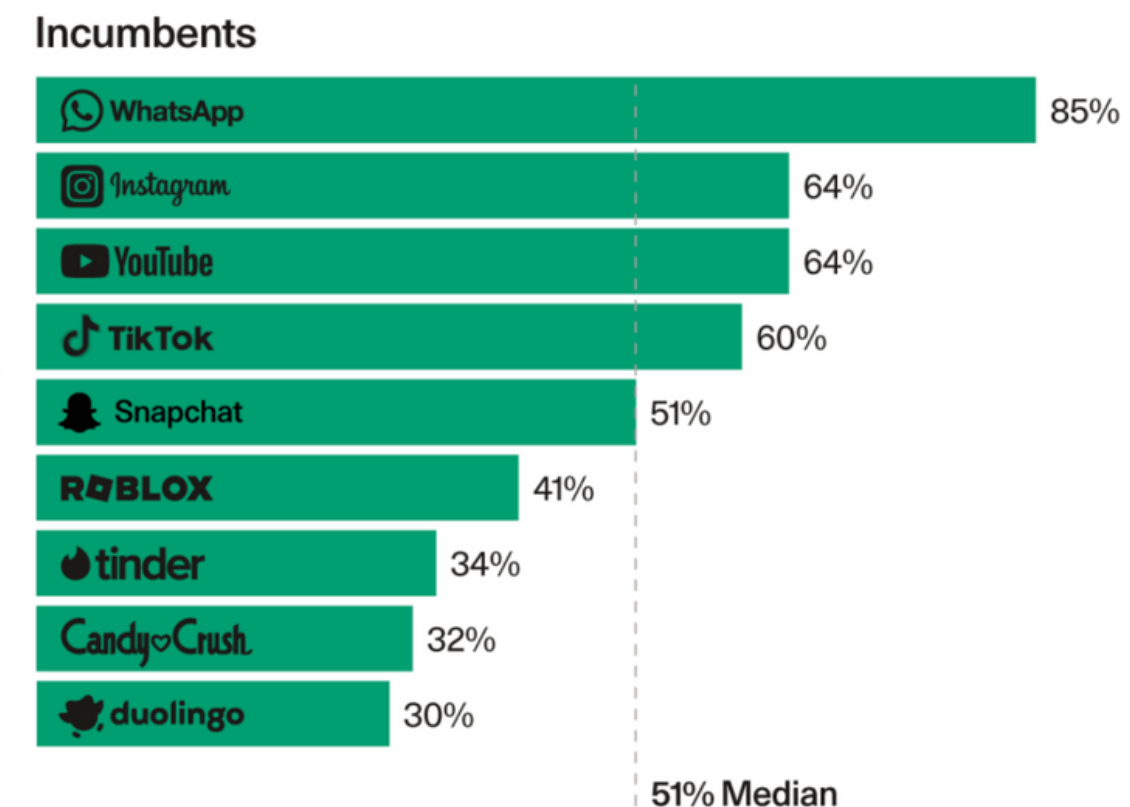
Organizations have generative AI powered applications



✦ Although consumer-facing Gen-AI tools lag behind incumbents on retention & engagement..



DAU/MAU



Data from mobile apps only.
Averaged over the past 12
months of cohorts in the US.

Data from mobile apps only.

❖ Software Dev Gen-AI tools have received enormous enterprise adoption, and seem capable of solving real-world business problems right away...

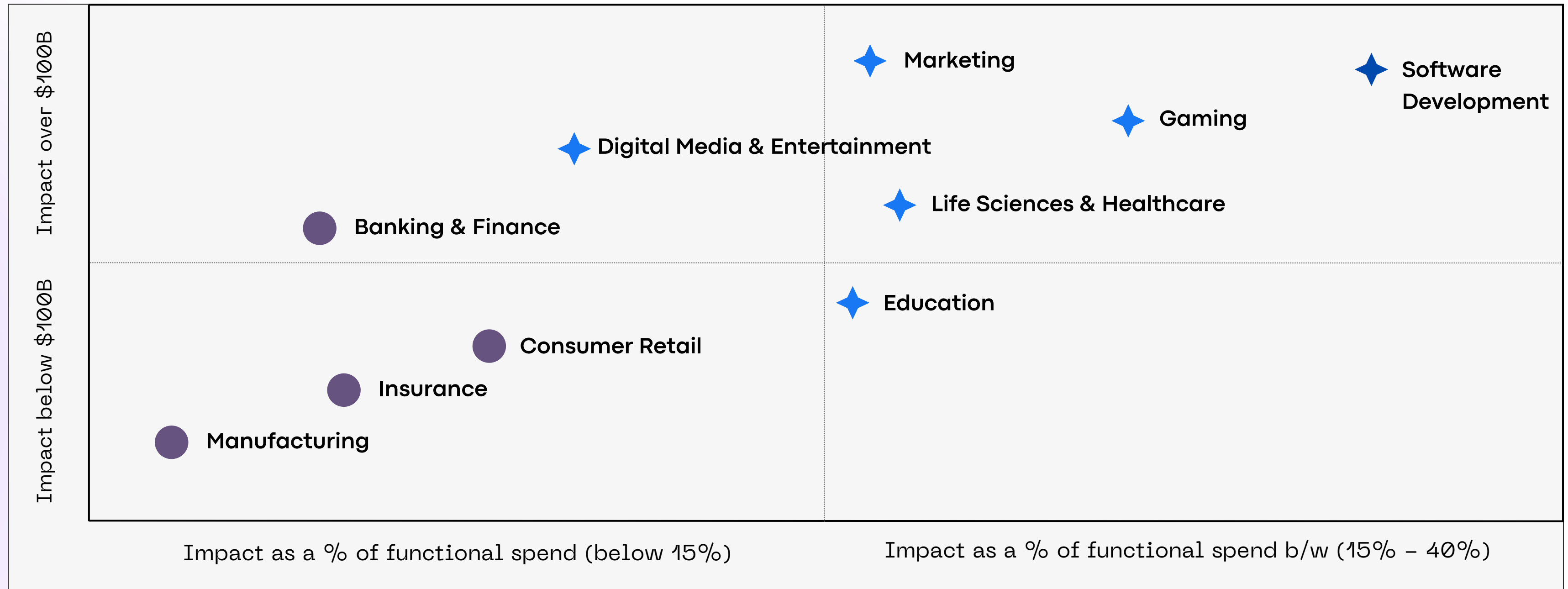


```
TS arrays.ts 2 •
TS arrays.ts > testFlattenedDepth
1 // Utility functions for working with arrays
2
3 function flatten(arr: any[]) {
4   return arr.reduce((flat, toFlatten) => {
5     return flat.concat(Array.isArray(toFlatten) ? flatten(toFlatten) : toFlatten);
6   }, []);
7 }
8
9 function arrayDepth(arr: any[]) {
10  return arr.reduce((depth, toCheck) => {
11    return Math.max(depth, Array.isArray(toCheck) ? arrayDepth(toCheck) + 1 : 0);
12  }, 0);
13 }
14
15 // Take an array, flatten it, and check that the depth is zero
16 function testFlattenedDepth(arr: any[]) {
17   const flattened = flatten(arr);
18   expect(arrayDepth(flattened)).toBe(0);
19 }
```

Microsoft's GitHub Copilot coding program, built with generative artificial intelligence from ChatGPT maker OpenAI, suggests code for developers, who have the option to accept the suggestion, as shown above.

In contrast to ChatGPT, whose usefulness in the enterprise some **technology leaders have questioned**, AI coding tools like Copilot, which was first launched for public use last summer by Microsoft-owned coding-collaboration platform GitHub Inc., seem to be capable of solving some real-world business problems right away. **The AI model behind Copilot is trained on data from GitHub, which houses a popular open-source community where developers contribute and share code.**

✦✦ Of all functional areas, software development will be one of the most impacted by generative ai



Level of activity - Funding, Startups



Low to Moderately active



Highly active

❖ Innovation in Software Dev & how Gen-AI is different



Automation	Rules-based logic	Machine learning	Generative AI
You know what needs to be done, and you know of a reliable way to get there every time.	You know the end goal, but there's more than one way to achieve it.	You know the end goal, but the amount of ways to achieve it scales exponentially.	You have big coding dreams, and want the freedom to bring them to life.
Automate code validation using a CI/CD tool like GitHub Actions to ensure that new code follows formatting specifications before merging to the main branch.	Detecting SQL injections in code can be time-consuming, but tools like Code QL automate the process using a system of rules to identify patterns.	Code QL, a coding tool that uses machine learning, can help detect both known and new SQL injection vulnerabilities. It is trained to recognize patterns similar to those of injections, increasing the recognition of confirmed vulnerabilities and predicting new ones.	Generative AI coding tools, like GitHub Copilot, use machine learning to predict coding sequences and generate new answers. These tools can help reduce the need to search for boilerplate code, allowing developers to focus on higher-level strategic decision-making and reflect on the code they want to build rather than how to build it.



Section 3.2

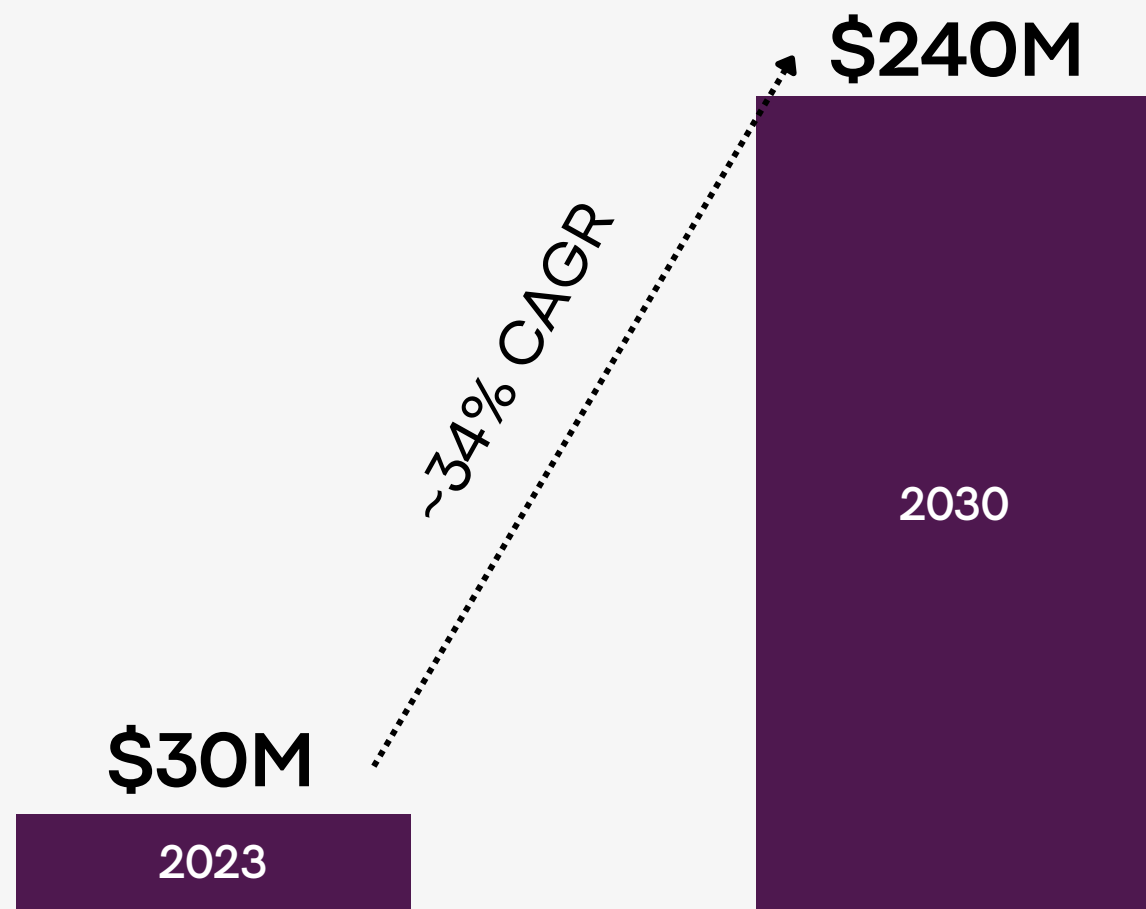
The Impact of Gen-AI on Software Dev

“In 2023, natural language has emerged as the fastest programming language.”

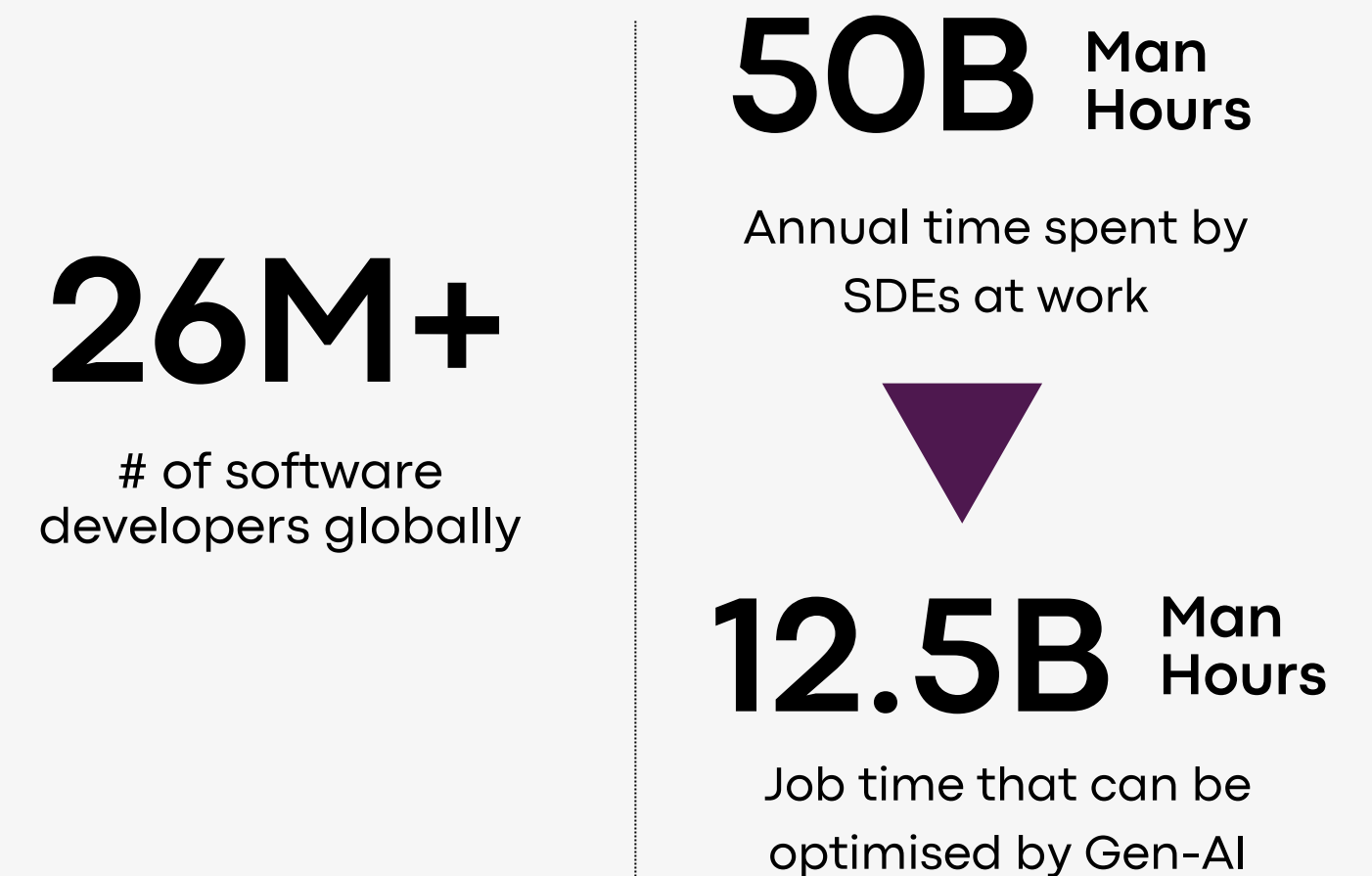
✦✦ Gen-AI is primed to re-shape the future of Software Dev



Global spend on Gen-AI software development tools



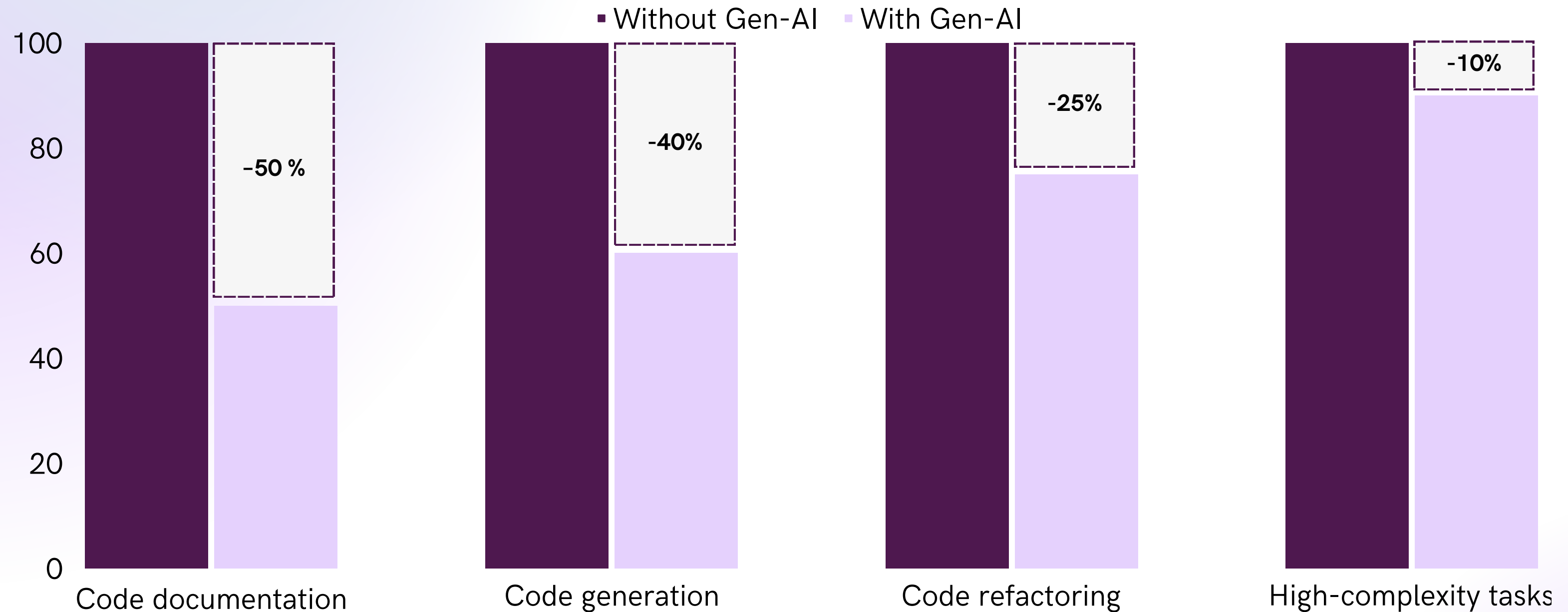
Gen-AI can increase productivity for software developers by over 25%



✦ Gen-AI is increasing developer speed...



Task completion time using generative AI, %

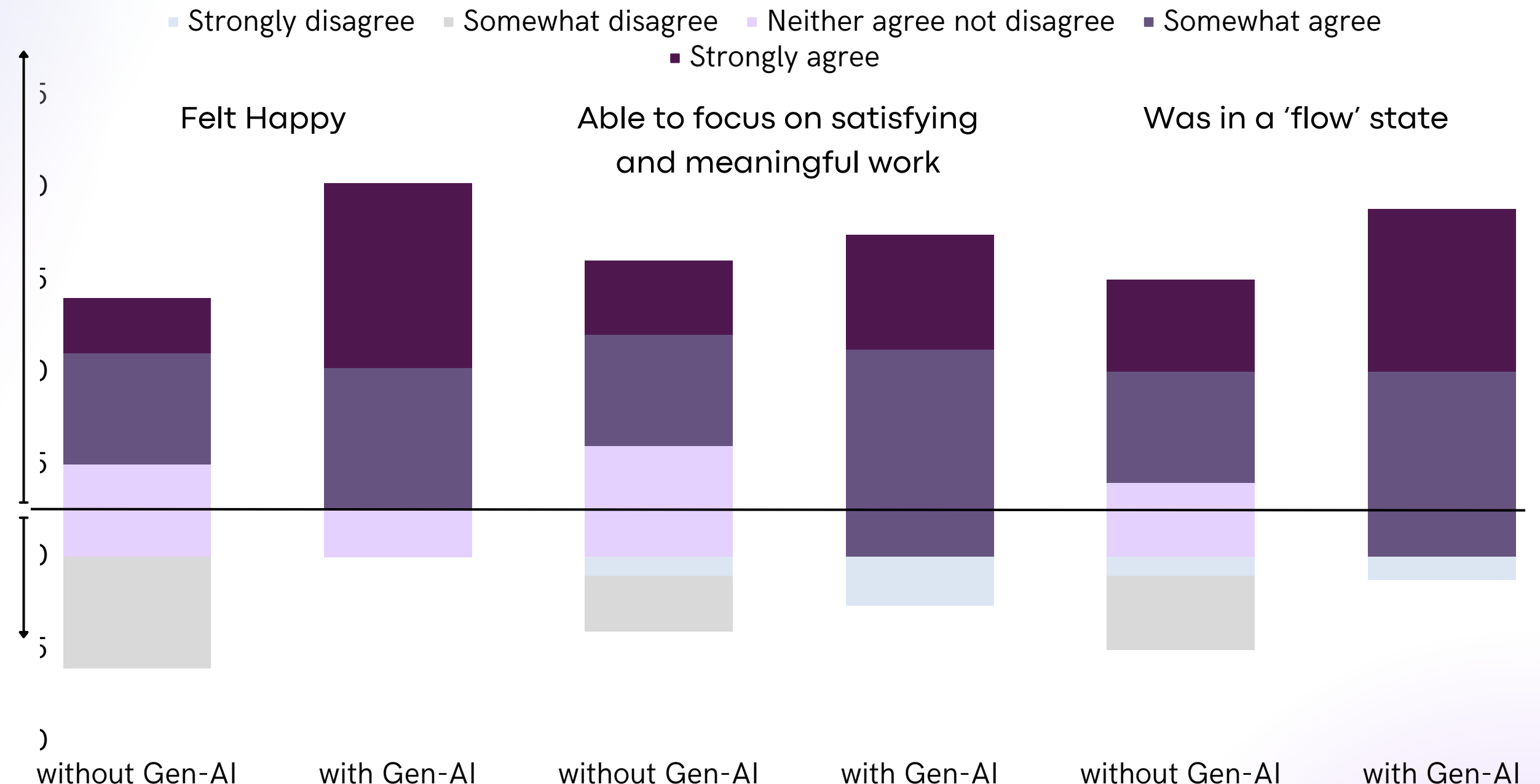


✦ ... And improving the developer experience



According to research, providing developers with generative AI-based tools can improve their experience and increase their overall happiness, fulfillment, and productivity. These tools automate tedious tasks and provide faster access to information, allowing developers to focus on more satisfying work.

Developer sentiments, % of respondents

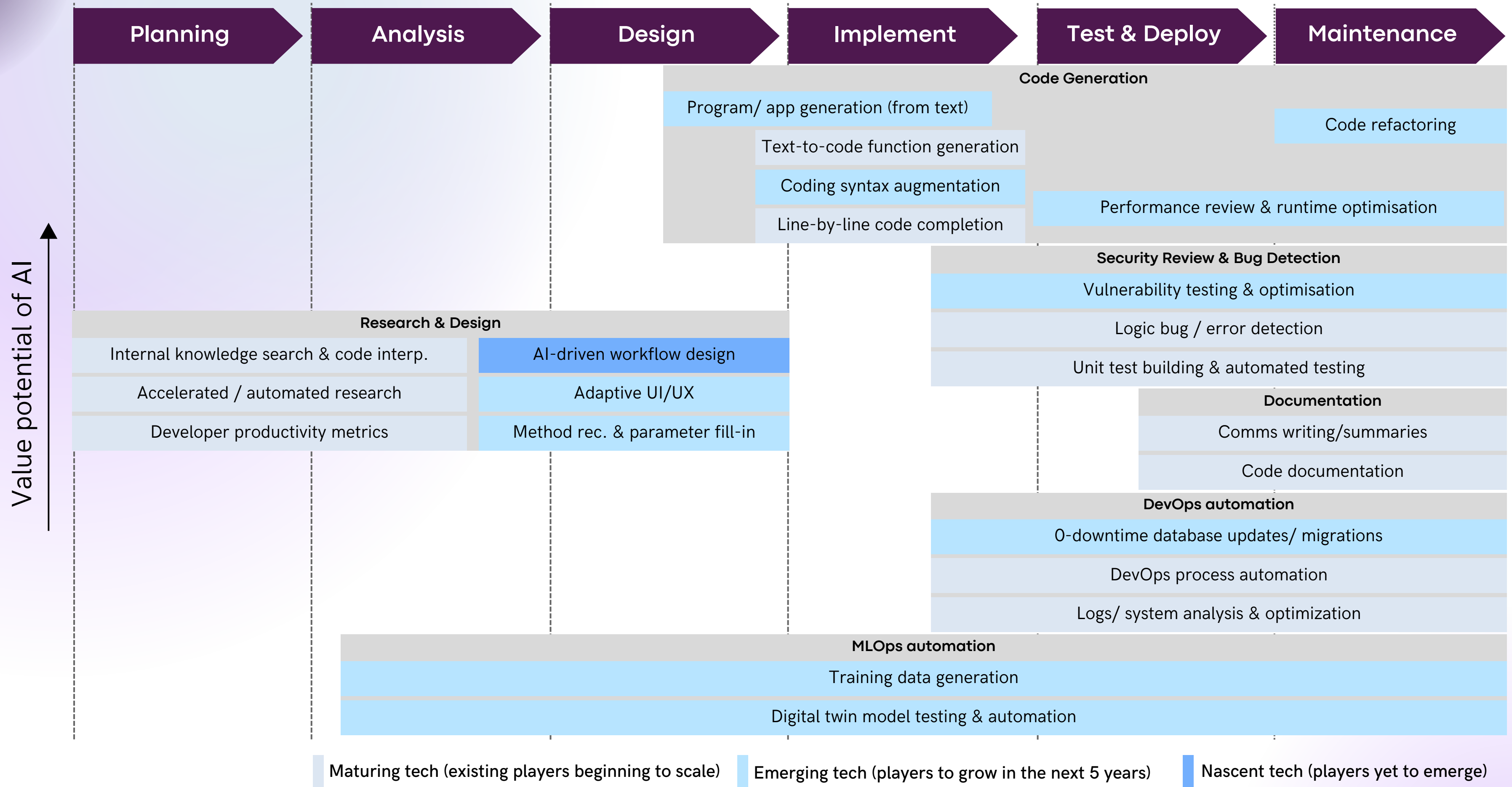


❖ Software Dev teams will be required to evolve



	Current Work	Evolved Work	New Responsibilities
Product Manager	Product ideation & conduction user research & interviews	Evaluate human-AI co-created ideas & test PMF	<p>“Generative AI squad” focused on building use cases & timebound deployment projects</p> <ul style="list-style-type: none"> • Data engineer • Data science • Cloud engineer • AI ethics / security specialist <p>Responsibilities</p> <ul style="list-style-type: none"> • Evaluate gen-ai use-cases • Build solutions for use cases • Build and fine tune models • Enable security guardrails
Architects	Design architecture, ensure software quality, security etc.,	Integrated gen-ai into existing architecture, ensure gen-ai risk policy compliance	
Full Stack Dev	Review & integrate E2E code	Integrate gen-ai models & datasets to build apps over LLP outputs	
Business Analyst	Generate data-backed insights to improve products/ CX	Validate auto-generated insights	
UI/UX Designer	Develop interface wireframes	Design multi-user interface for generative AI apps	
Frontend/Backend Dev	Coding and debugging manual documentation	Review & contextualize auto-generated code and documents	
Quality Eng	Run quality tests, documentation	Focus on edge cases, review for potentially-exploitable code, refine auto-generated docs	
DevOps/ Security Eng	Manage infrastructure & deployment processes	Optimize infrastructure configurations by leveraging gen-ai recommendations	

Gen-AI across the software development lifecycle





Section 3.3

Market Landscape

"The companies and platforms making breakthroughs and creating waves as early movers"

Emerging Global Software Development Gen-AI companies

\$300M+

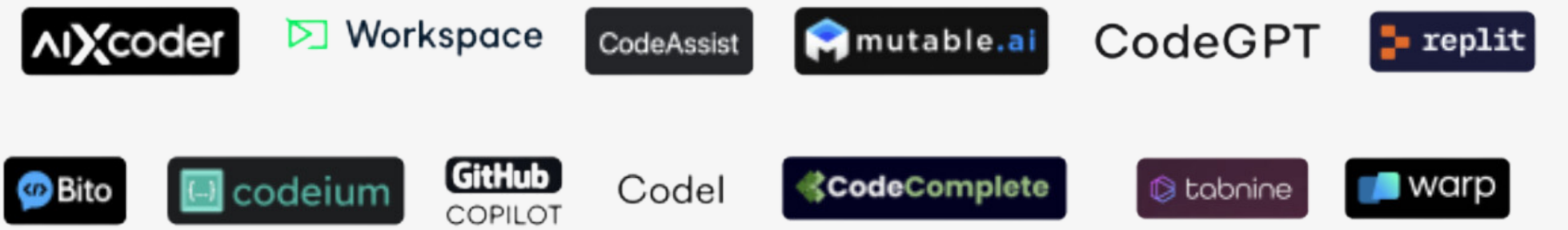
Venture Funding till date

~75

Total # of AI Software
Development Startups

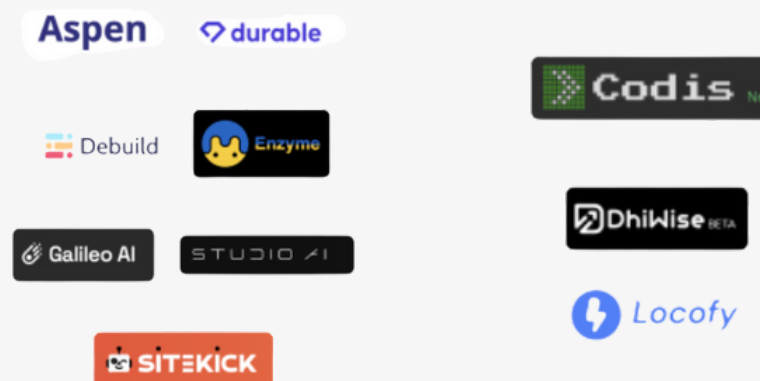


Code Generation / Completion

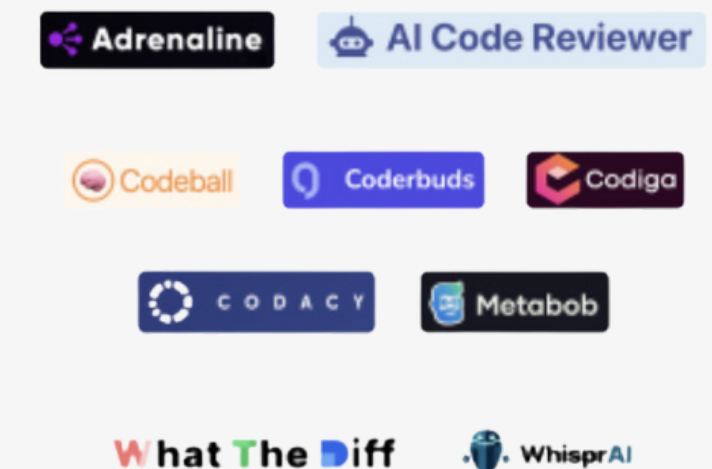


Website Generation

From Text From Figma Designs



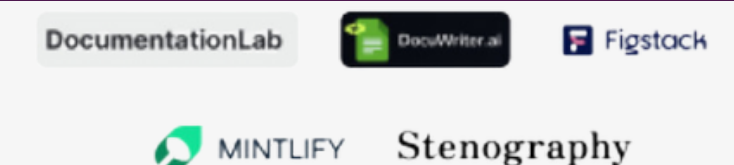
Code Analysis/ Dev Intelligence



Website Personalization

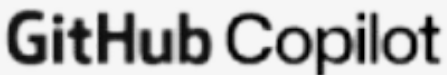


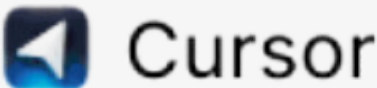




Documentation Generation



❖ Leading Software Development Gen-AI tools



Company	What they do	Funding / Other Metrics
	GitHub Copilot is a machine learning-powered tool that generates code for developers based on their comments and commit history. It was introduced by Microsoft and is integrated with Visual Studio and other development tools.	+\$100M Annualized Revenue
	Replit AI enables you to debug, autocomplete, and turn natural language into code with one-click.	+\$100M a16z, Khosla, Coatue, YC
	Cody (by SourceCraft) answers technical questions and writes code directly in your IDE, using your code graph for context and accuracy.	+\$100M Redpoint, Sequoia, a16z
	Cursor (by Any Sphere) helps build software faster in an editor designed for pair-programming with AI	\$11M OpenAI Startup Fund, Angels
	Warp AI is fully integrated with your terminal so you always know which command to run next	+\$70M Sequoia, Google Ventures
	Enterprise privacy-first AI assistant that speeds up delivery and keeps your code safe	\$55M Acquired by Codota

Suggested Readings



- [Leveraging AI for Software Development](#)
- [Unleashing Developer Productivity with Gen-AI](#)
- [How Gen-AI is changing the way devs work](#)
- [Github Copilot capabilities](#)
- [Generative AI: Developer Tools & Infrastructure](#)
- [AI Impact on Software Development with GitLab's David DeSanto](#)
- [An explosion in software engineers using AI coding tools?](#)

PS - Open AI's Dall-E & ChatGPT helped us co-create images and content for this series

Thank you



Kalaari is committed to playing a pivotal role in helping Indian entrepreneurs make a global impact in the field of AI.



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