مؤسسة دبي للمستقبل
DUBAI FUTURE FOUNDATION

ملتقى دبي للذكاء الاصطناعي
Dubai Assembly for Generative AI

Shaping Future

Economies, Regulation, and Application

Contents

03 Chapter 1

- Introduction to Generative AI
- What is Generative AI?
- How is Generative AI Different From Traditional AI?
- What is the potential impact of generative AI?
- How can this full impact be realised?
- What are some limitations we should keep in mind?

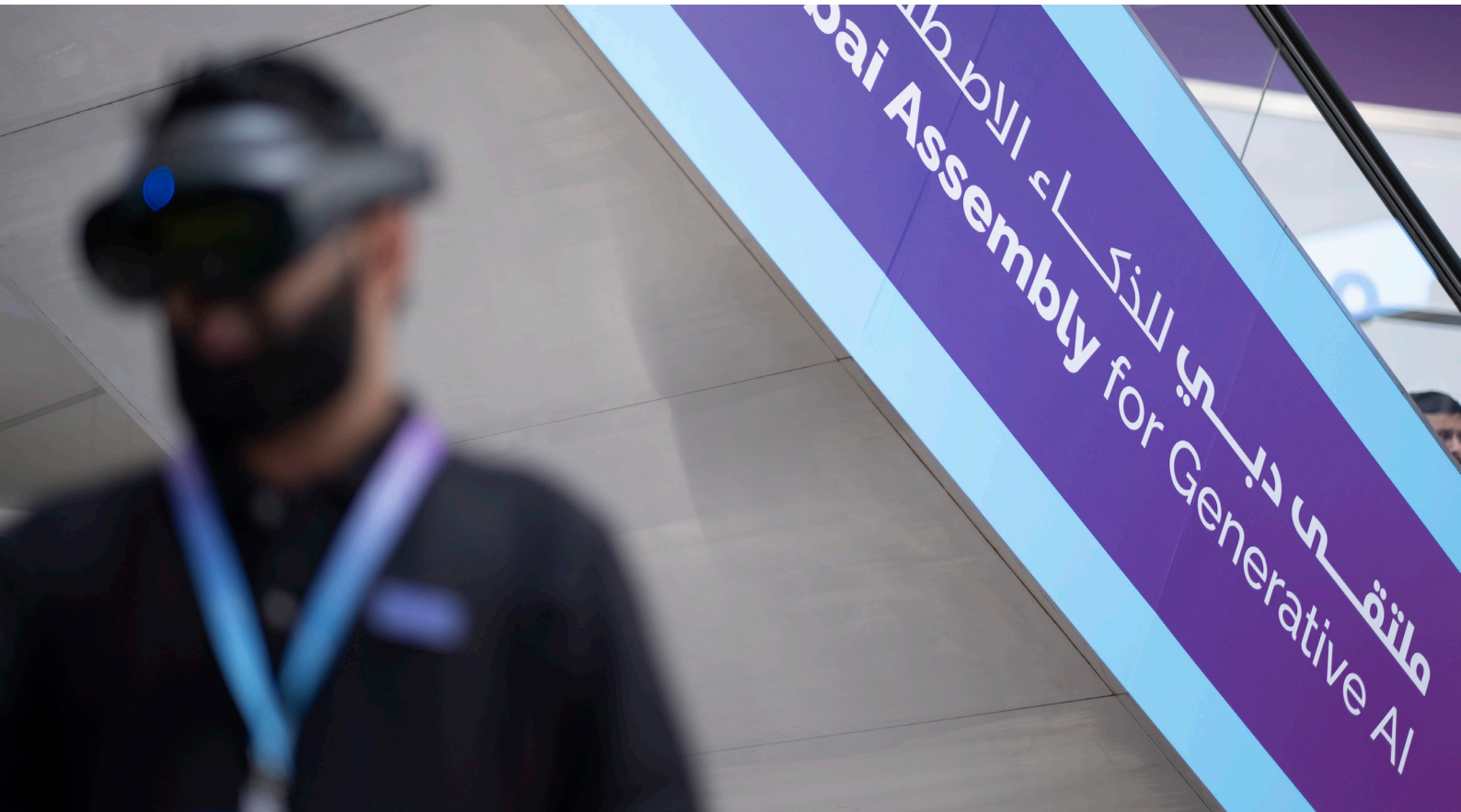
13 Chapter 2

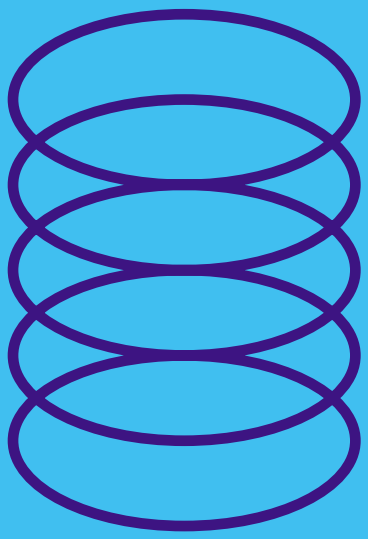
- Generative AI – A DFF perspective

18 Chapter 3

- Playback of the Sessions Conducted

42 Conclusion



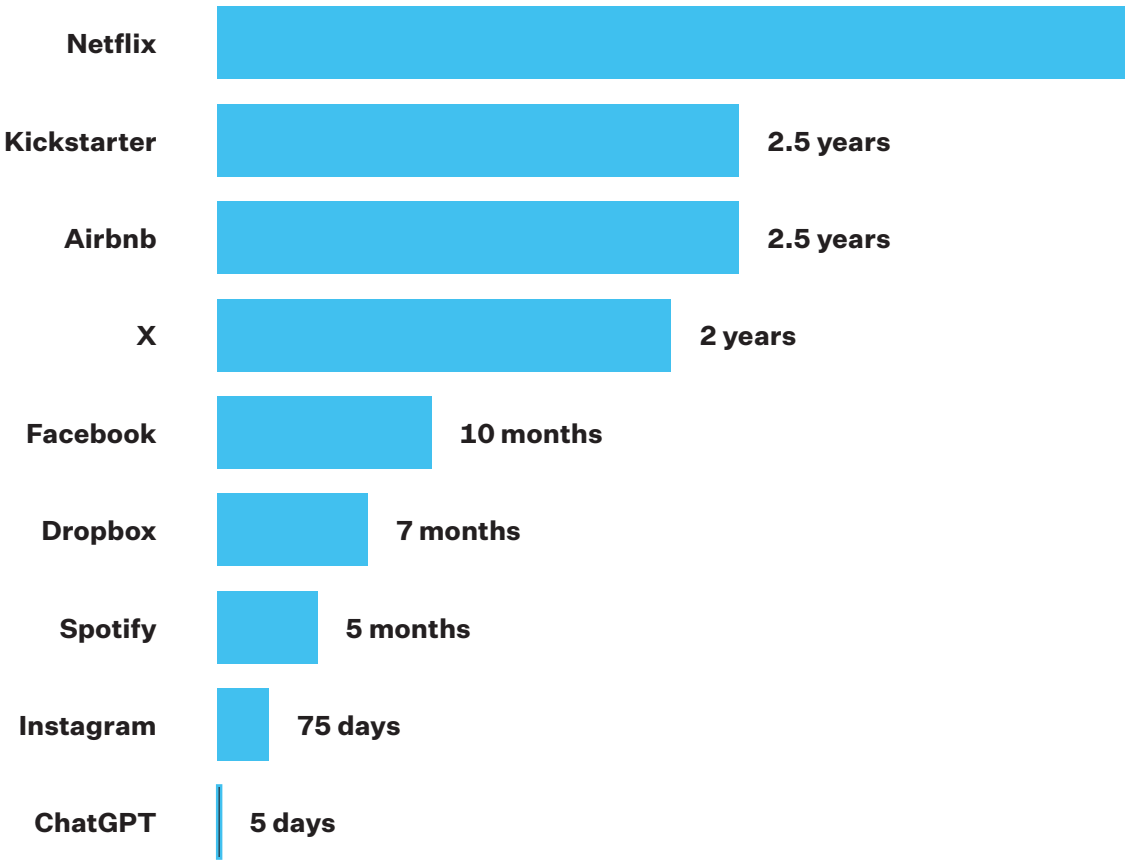


Chapter 1
Introduction to Generative AI

Chapter 1
Introduction to Generative AI

In November 2022, the debut of ChatGPT generated significant global interest and represented a development in the field of generative AI. Amidst the vast technological landscape, ChatGPT's feat stands out, amassing 1 million users within just five days – a testament to its swift embrace and widespread appeal in the market.

Figure 1. Time to reach 1 million users



This milestone signified a turning point in the world of AI, as it demonstrated the capacity to craft fresh content from unstructured data. To grasp the generative AI value chain, it is essential to understand the fundamental concepts and distinctions that set it apart from "traditional" AI.

(Source: https://www.mckinsey.com/capabilities/quantumblack/our-insights/exploring-opportunities-in-the-generative-ai-value-chain; https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-top-trends-in-tech#tech-trends-2023; https://www.mckinsey.com/about-us/new-at-mckinsey-blog/revving-up-analytics-in-latin-america-with-quantumblack)

At present, governments, businesses, and individuals are primarily focused on **five key questions:**

01 What is generative AI?

02 How is generative AI different from traditional AI?

03 What is the potential impact of generative AI?

04 How can this full impact be realised?

05 What are some limitations we should keep in mind?

01
What is Generative AI?

Generative AI technologies are cutting-edge algorithms designed to create and reshape diverse content by interpreting specific input-output configurations. They illustrate versatility in bridging and transforming various forms of content in five key ways.

Text-to-Text
Transforms text input into new text, used for translation, paraphrasing, and text summarisation.

Text-to-Image
Converts text descriptions into visual representations, popular in art and design.

Image-to-Text
Analyses images to generate descriptive text, commonly used for image captions.

Image-to-Image
Takes image input and produces modified or new images, used for photo enhancement, style transfer, and image synthesis.

Text-to-Sound
Turns text into audible speech, applied in text-to-speech systems, audiobook creation, and voice assistants.

[Prompt that generated the image through Midjourney: Advanced and thriving Dubai in the year 2100, Eco-friendly urban environment, buildings designed with energy efficiency in mind]

02

How is Generative AI Different From Traditional AI?

The primary difference between generative AI and "traditional" AI lies in generative AI's capacity to create original content spanning text, such as articles or responses, images resembling photographs or artwork, videos, and 3D visuals, as in video games. In contrast, traditional AI focuses on specific analytical tasks including but not limited to predicting types of attrition, estimating product demand, and offering optimal next-best-action recommendations.

The emergence of generative AI has paved the way for novel and practical applications adopted by early users. During its initial phase, many organisations are harnessing generative AI as a valuable aid in creating initial drafts, formulating hypotheses, and boosting the productivity of specialists. A few examples of these applications include:

Create new content

Users can now generate content first versions of content faster with Gen AI. For example, a user may use Gen AI to develop a resume for a job role they want to hire for, or generate an ad copy for an advertisement they wish to publicise.

Summarise information

Gen AI can be used to summarize vast amounts of information quickly and succinctly. This can be especially helpful in situations where users would typically have needed to parse through vast amounts of information. Instead, they can now leverage Gen AI to summarize information for them.

Write code

Users can use Gen AI to write, update, or transform code. While the application of code still requires testing and tweaking, the ability to write code at the speed that Gen AI allows can have a significant impact on how coding is done going forward.

Engage customers

Gen AI offers the ability to personalize engagement with customers or users of services. For example, the UAE government's "U-Ask" chat bot for citizens provides information on government services in one place.

These use cases share common features. They often require expert validation to ensure the quality and accuracy of the generated content. However, the ability to integrate these use cases into existing workflows, makes adoption straightforward and efficient.

03

What is the potential impact of generative AI?

Impact on Economy

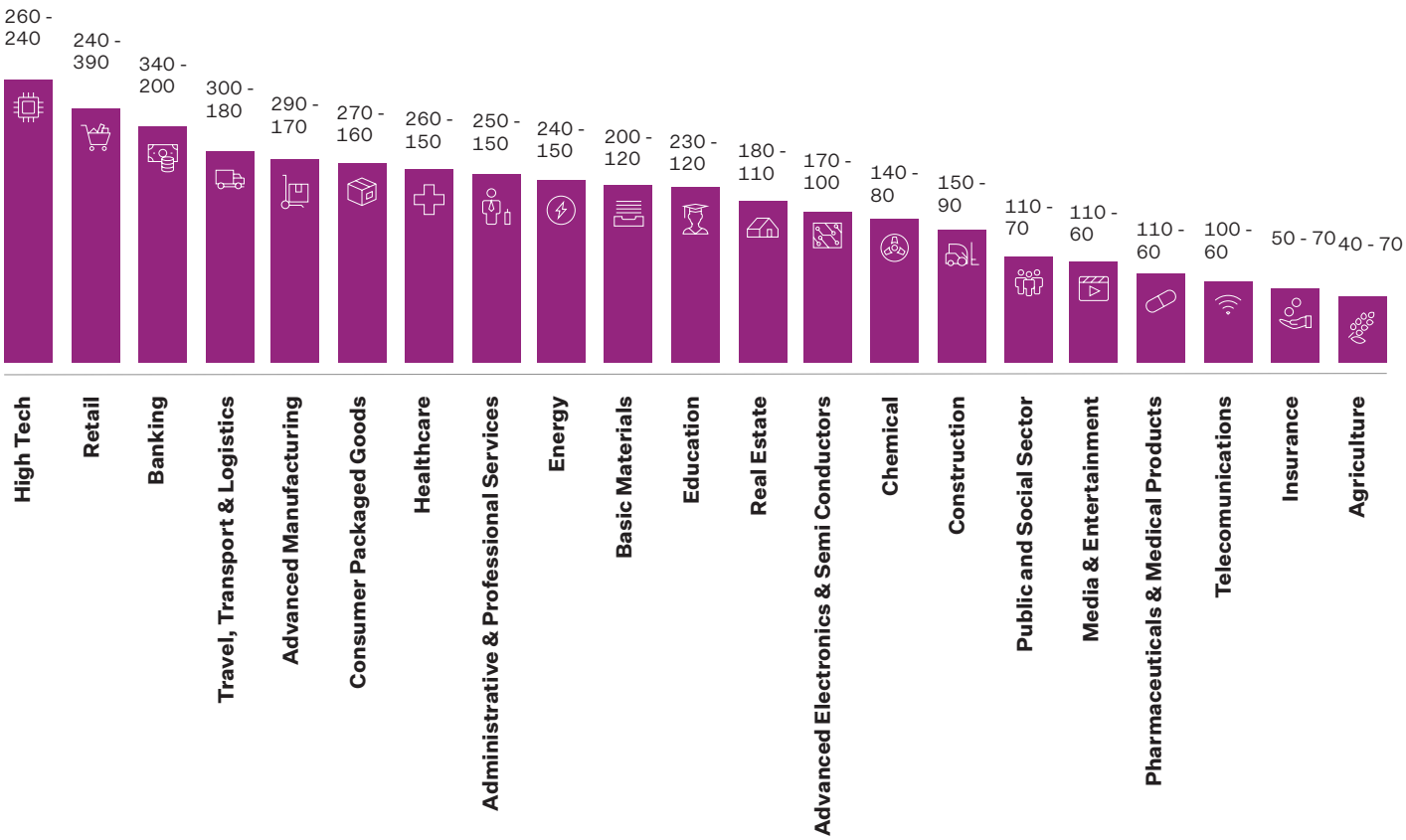
As foundational understandings of generative AI grow and application enhances, diving deeper into the economic impact these technologies could offer becomes imperative. Understanding the economic implications is a key component of capturing the transformative potential inherent in these technologies.

In a study published in June 2023, **McKinsey** states that **generative AI** could contribute **trillions of dollars to the global economy.** Across the 63 use cases McKinsey has identified and analyzed, they estimate that "generative AI could add the equivalent of $2.6 trillion to $4.4 trillion annually. About **75 percent of the value** that generative AI use cases could deliver falls across four areas: customer operations, marketing and sales, software engineering, research and development (R&D).

*Generative AI has the potential to create a **significant impact across all industry sectors:** banking, high tech, retail, and life sciences are among the industries that could witness the most significant change as a percentage of their revenues from generative AI. In the banking industry, for example, the technology could deliver value equal to an "additional $200 billion to $340 billion annually if the use cases were fully implemented."*

(Source: https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier)

Figure 2. GenAI productivity impact by sector (Total, $ billion)



Impact on Workforce

Generative AI has the potential to transform the **nature of work** by enhancing worker abilities through the automation of specific tasks. According to **McKinsey**, present-day generative AI and related technologies could potentially automate 50 percent of the activities currently occupying 70 percent of the global workforce. **This acceleration in automation potential is predominantly attributed to generative AI's enhanced natural language comprehension.** Consequently, generative AI significantly influences knowledge-intensive roles, especially those with elevated wage and educational prerequisites, more than other job categories. This impact has the potential to positively influence how and where employees spend their time, becoming more productive over time.

(Source: https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier#introduction)

04

How can this full impact be realised?

As part of efforts to harness the full potential of Generative AI, companies may assess how value goes beyond just the foundational models. While these models are essential, they are not complete on their own. Foundation models act as the core engine driving Generative AI, but merely having access to them won't guarantee success, especially in a context where models are becoming commonplace. To unlock the full value of Generative AI, four distinct elements are needed, each with its distinct focus and purpose:

1. Data architecture will be critical, including access to large bodies of unstructured data:

The foundation for generative AI success involves robust data architecture for seamless data ingestion, processing, and retrieval. Access to vast and diverse unstructured data is vital, with a focus on data management, quality control, and governance.

2. Cloud infrastructure will be in high demand:

To meet the intensive computational needs of generative AI models, cloud infrastructure offers scalable computational power. It enables the training and deployment of models, flexibility for scaling based on demand, and the use of specialised hardware accelerators optimised for AI tasks.

3. UI/UX and applications to get GenAI into production at scale with the right UI/UX interface is critical:

Ensuring that generative AI can be used effectively at scale emphasises the importance of user interface and user experience design. A user-friendly interface is crucial to facilitate human-AI interaction enhancing accessibility, user engagement, trust, and satisfaction.

4. Processes and people implications will be critical to address for GenAI to unlock its full potential ("human in the loop"):

Integrating generative AI into business processes has significant implications for workflows and roles. Proactive management is essential, including training and upskilling for employees, workflow adjustments to effectively incorporate AI outputs, and the incorporation of a "human in the loop" approach when needed, ensuring AI-generated content is accurate, ethical, and context-sensitive.

Beyond the right elements to enable Gen AI use cases, organisations also need to consider use case delivery in a methodological fashion to help unlock value. For example, QuantumBlack, an AI company by McKinsey, structures use case delivery across five stages:

Ideation: Collaborates with organisations to define the problem, project scope, and goals. This stage includes mapping the client's value chain and identifying high-value analytics use cases.

Intelligence: Collect and analyse data to uncover insights using techniques like machine learning and statistical analysis. This phase refines opportunities by assessing data and validating potential value.

Inception: Formulates a problem-solving plan, identifying key drivers and developing a hypothesis. This step transforms raw data into actionable business insights through feature engineering and modeling.

Intervention: Implement the plan, testing and adjusting as necessary while using data to monitor effectiveness. Changes can be made to capture performance gains identified during the inception stage.

Independence: Transitions project to relevant teams providing training and support to ensure the ongoing use of insights for business value. This stage involves transferring skills and technology, allowing the client to fully own the transformed analytics capability.

(Source: https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier#introduction)

05

What are some challenges we should keep in mind?

While the potential and economic impact of generative AI are evident, adopting this technology also entails risks, ethical considerations, and regulatory challenges that a variety of stakeholders will have to consider:

Data Ownership: Uncertainty surrounds rights to original training data sets and AI-generated information.

Intellectual Property: Protecting creations from generative AI, often a result of human-machine collaboration, poses unique challenges.

Cybersecurity and Privacy: Risks include data leakage and cyber-attacks as AI processes large volumes of data.

Ethical Considerations: Responsible generative AI use involves data governance, fairness, accountability, and user-friendly explanations.

Regulation and Compliance: Evolving regulations will inform how research and gen AI use cases develop.

Environmental Impact: The environmental consequences are a concern, especially as models demand more computational resources and energy while growing in complexity and data requirements.

(Source: https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/what-every-ceo-should-know-about-generative-ai#/ ; https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-top-trends-in-tech#tech-trends-2023)

Chapter 2
Generative AI – A DFF perspective

Chapter 2

Generative AI – A DFF perspective

Generative AI's popularity has brought back Artificial Intelligence to the forefront of the transformative technology scene once again. Already riding the wave of advanced technology, Dubai Future Foundation (DFF) hosted the Dubai Metaverse Assembly in 2022, which focused on the proliferation of the Metaverse and Web 3. The Foundation realised the importance of convening the Dubai Assembly on an annual basis and covering the most prominent technological theme for each year.

To fully grasp the Dubai Assembly and its objectives, it is essential to highlight DFF's strategic role within the Dubai government framework and its interaction with the broader public sector, as well as its influence on the city's dynamic mix of multinationals, startups, academic entities, and investment bodies.

Dubai Future Foundation is tasked with reimagining, inspiring and designing Dubai's future in collaboration with public and private sector partners. The aim is to make Dubai one of the world's foremost cities of the future. This objective is pursued through dedicated programs aimed at developing the skills and mindsets of government leaders and personnel, preparing them for the demands of the future. It also involves a unit focused on in-depth research and foresight studies on the world's most pressing challenges and opportunities. Finally, the future design and acceleration units focus on turning Dubai into a testing ground for new technologies and new approaches to solving multi-industry challenges.

The government in Dubai is uniquely positioned as the service provider and regulator in most sectors. This puts more pressure on these entities to stay tuned and preferably ahead of advancements in technology, business models, etc. To achieve this goal, the government entities, with DFF, created innovation teams to constantly experiment with, test emerging technologies and new business models with the aim to improve performance and government services. Through the Dubai Future Accelerators program, under DFF, the entities are given the space to regulate business models underpinned by emerging technologies, sandboxing and deploying new government services.

Additionally, DFF recently launched the Dubai Centre for Artificial Intelligence (DCAI) which will be responsible for the local AI mandate and experimentation. The Centre will focus on three verticals to ensure government entities are prepared to take on this new revolution in technology and work on careful adoption, rather than fall behind. The first vertical is training and capacity building for government around Generative AI to ensure there is a capable cohort of employees who can merge usecases and generative AI. The second is focused on building policies, regulations and ethics around Generative AI. The third vertical covers economic and business usecases, assessing how to convert them into pilot projects that leverage generative AI. At the time of writing, the Centre has already launched its first program, focused on identifying relevant AI startups that can help government entities build new government services.

With this mandate, DFF's scope needs to include the private sector, academia, investment agencies to deliver on its objectives. The same is true for the Dubai Assembly, a two-day exclusive gathering that brings leaders from government and enterprise together, with global experts and entities to help them better understand the opportunities, challenges, and global best practices with emerging technologies. Every year, the Dubai Assembly focuses on the most prominent tech theme for the year and builds an engaging agenda based on the following verticals:

01 A deep dive into the technology

02 Economic and business usecases

03 Role of government, regulators and policy makers

04 Impact on other emerging technologies

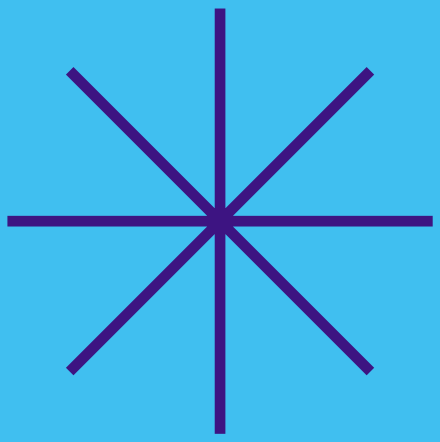
05 Role of big and emerging technology companies

This year, the Dubai Assembly focused on Generative AI and explored the above verticals with global speakers from big technology companies, enterprise and industry leads, government, small technology companies and academia to discuss the impact, economic usecases and implications for regulators and policy makers, as well as live showcases of the technology.

Generative AI presents a huge opportunity for Dubai government and its various entities. To assist Dubai government in understanding the current landscape of Generative AI, the Dubai Assembly team scanned the global landscape and identified the most relevant entities and individuals in the space.

Written by:

Ghaith Rahman
Senior Project Manager,
Dubai Future Foundation



Chapter 3
Playback of the Sessions Conducted

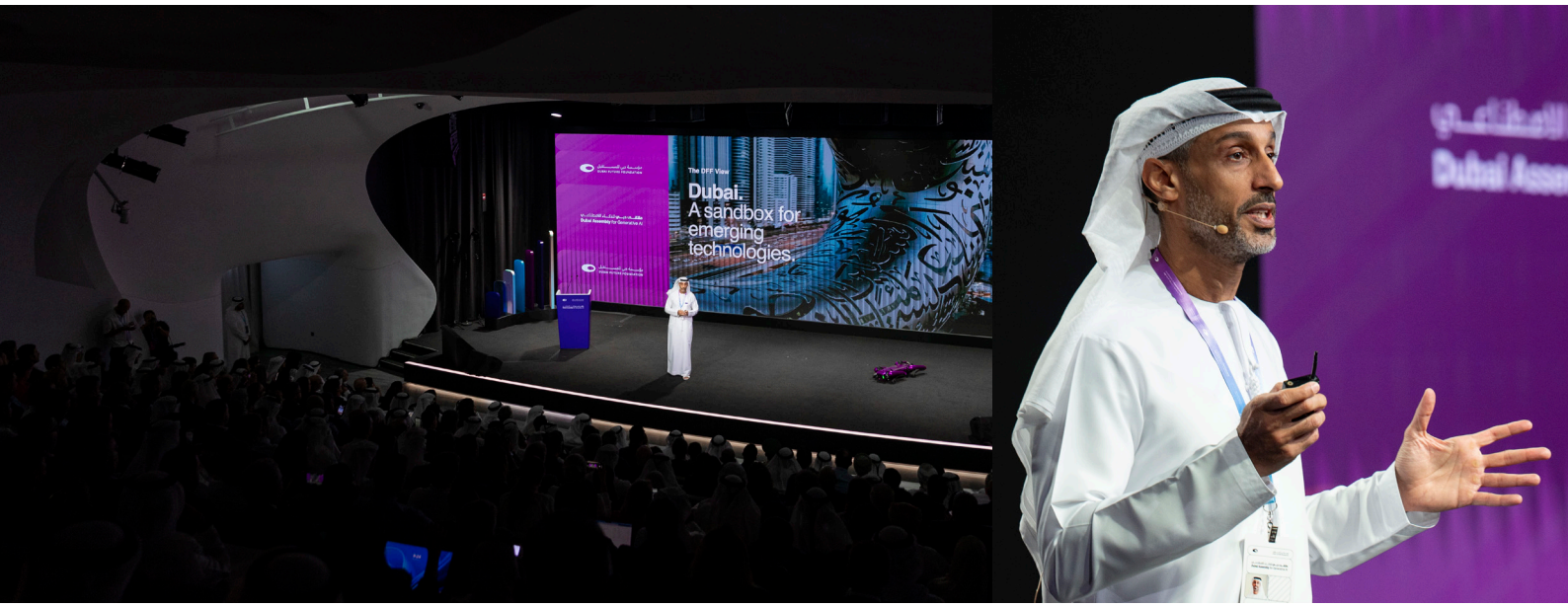
Chapter 3

Playback of the Sessions Conducted

1

Keynote

Dubai Future Foundation's Drive to Demystify Gen AI



Speaker(s)

HE Khalfan Belhoul
Chief Executive Officer, Dubai Future Foundation

Key messages

How to create a global effort to test GenAI and other emerging technologies with global partners?

Session summary

HE Khalfan Belhoul, CEO of Dubai Future Foundation, emphasised the UAE's secret sauce: its diversity and inclusivity, which nurture a collaborative spirit among over 200 nationalities. He highlighted the DFF's mission to institutionalise future foresight and set a global benchmark. He discussed the potential power stemming from the convergence of robotics, Gen AI, and Quantum Computing, foreseeing profoundly transformative effects on sectors like banking, energy, health, and media. The UAE's commitment to shaping a future where innovation thrives within a globally collaborative, diverse, and inclusive framework was emphasized. For this, the UAE was missioned to answer the question: "How can we create an ecosystem that accepted failure in a risk-mitigated way, created sandboxes, worked collaboratively with the world, and piloted projects, with decision-makers having direct access to the innovators themselves?"

Keynote

Microsoft: A Complete Gen AI Story

Speaker(s)

Ali Dalloul
Vice President, Azure AI, Microsoft

Key messages

Microsoft's holistic approach to Gen AI integrates cutting-edge technology, mindful governance, and ethical considerations, ensuring a transformative impact while prioritising accessibility and ethical concerns.

Session summary

At the heart of Ali Dalloul's keynote was the profound impact of AI technology, particularly in bustling hubs like Dubai. He delved into the core drivers of the AI era: accessible, high-quality data, unparalleled computational abilities, and foundational models like deep learning architectures. He outlined Microsoft's three-pillared approach: foundational productivity infrastructure, AI and automation, and high-performance organisational frameworks. Dalloul showcased Microsoft's innovative solution, the Co-pilot, a human-centric AI approach addressing the challenges posed by digital debt. While emphasizing AI's transformative potential, he underscored the critical importance of mindful governance and ethical considerations. Key elements for companies and countries aiming for future success were highlighted: leader-led transformation, optimized data utilisation, and a readiness to embrace change.

> **Today, you have the entirety of human knowledge at your fingertips – on any connected device, anywhere in the world.**
>
> *Costi Perricos*

Panel
Gen AI Today, AGI Tomorrow

Speaker(s)

Stephen Anderson (Partner, PwC)
Ali Hosseini (Chief Digital Officer, PwC)
Jane Witherspoon (Euronews)

Key messages

The panel highlighted the immediate practicality of Gen AI, showcasing its potential across various business functions and emphasising the need for rapid adaptation and enthusiasm for its adoption.

Session summary

Anderson and Hosseini orchestrated a compelling demonstration illustrating generative AI's practical applicability and efficiency today. They outlined a scenario where they aimed to launch a virtual company in Dubai within just a few moments using various generative AI tools, encompassing the entire process, from creating business strategies to product design and technical development. The discussion examined businesses' eagerness to adopt AI technologies, exploring three levels of AI adoption: AI augmentation, AI automation, and AI at the core. The dialogue emphasized the rapid evolution of AI technology, underscoring the importance of enthusiasm, keen learning, and adaptability in keeping pace.

Keynote

Synthetic Data: The Next Wave of Privacy Solutions

Speaker(s)

HE Younus Al Nasser
CEO – Dubai Data and Statistics Establishment, Digital Dubai

Key messages

Synthetic data ensures privacy and quality in data-driven technologies, offering innovative solutions for regulatory challenges and real-time data collection.

Session summary

HE Younus Al Nasser, the CEO of Digital Dubai, underscored the pivotal role of synthetic data in digital transformation. He emphasised the constant evolution of data-driven technologies, stressing the need for innovative strategies to fuel this transformation. HE highlighted the primary global concern with Generative AI: the privacy and confidentiality of personal data. Synthetic data emerge as a solution, addressing regulatory challenges, ensuring data quality, and providing a continuous supply of data, especially when collecting real-time high volumes becomes complex. Al Nasser showcased practical applications of synthetic data across the public sector in Dubai, including initiatives with Dubai Airports, Dubai Police, and DEWA.

Keynote

GenAI in Action: What Industries are Witnessing the Most Disruption?

Speaker(s)

Costi Perricos (Partner, Global Generative AI Leader, Deloitte Digital Dubai)

Key messages

Generative AI, exemplified by OpenAI's GPT-3, has transformative potential, revolutionizing content creation, image generation, music, and coding. Ethical concerns call for responsible adoption, given that Generative AI is poised to significantly influence the global economy and fundamentally change our approach to AI utilisation.

Session summary

Perricos discussed the profound impact of Generative AI, exploring its delayed widespread recognition until OpenAI's GPT-3 launch in 2020. Factors such as computational intensity, cloud-based infrastructure, and ethical considerations hindered its earlier release. The session drew insights from numerous generative AI projects, over 100 CXO conversations, and Deloitte's internal transformation journey. Generative AI's potential applications range from efficient content creation and photorealistic image generation to revolutionising music and coding. However, the talk emphasized inherent risks: these algorithms can't differentiate truth from fiction, necessitating human validation, among many more. Ethical concerns abounded, highlighting the need for responsible usage, especially in intellectual property protection and privacy. Despite the challenges, the session underscored Generative AI's transformative power and pivotal role in reshaping various sectors, urging responsible adoption and ethical considerations in its advancement.

Generative AI expected to increase global GDP by $7 trillion, with a 1.5% growth in labor productivity.

Keynote

Digital Dubai: A City-Level AI Product

Speaker(s)

HE Matar Al Hemeiri (Chief Executive Officer, Digital Dubai Government Establishment, Digital Dubai)

Key messages

The keynote outlined Dubai's 20-year digital transformation journey, from e-government services to initiatives like Smart City and Dubai Data Law. It introduced key products such as UAE Pass and Dubai AI, a groundbreaking city-level platform powered by generative AI offering personalized services across various domains and marking a significant leap in Dubai's digital landscape.

Session summary

HE Matar Al Hemeiri, CEO of Digital Dubai Government Establishment, highlighted Dubai's impressive two-decade-long journey in digital transformation, which began in 2000 with the launch of shared services and e-government and progressed through initiatives like the implementation of the Smart City initiative and Dubai Data Law. These efforts propelled Dubai to global recognition, particularly in online services and telecommunication infrastructure. HE introduced three pivotal city-level products: UAE Pass, the Paperless Initiative, and Dubai Now. Additionally, HE unveiled the Dubai AI project, a transformative city-level platform powered by generative AI technology. This innovative initiative, portrayed in a shared video, demonstrated Dubai AI's role as a city concierge, providing comprehensive information and services across various domains such as health, education, and business. The platform ensured a seamless, interactive, instant, and personalised experience for all city customers, marking a significant leap in Dubai's digital services landscape.

Panel

GenAI and Existential Questions for Government

Speaker(s)

Christian Gleich (Global Head of Emerging Tech Governance Strategy, European Blockchain Association), **HE Dr. Moza Suwaidan** (Chief Executive Officer, Digital Applications and Platforms Sector, Digital Dubai Government Establishment, Digital Dubai), and **Faisal Hamady** (Managing Director and Partner, BCG)

Key messages

The session emphasised the necessity of cautious regulation and proactive enablement, fostering a collaborative approach between governments, industries, and citizens to harness the potential of AI while addressing its challenges.

Session summary

In an increasingly digital world, there is a balancing act between the convenience of digital technologies and concerns related to intellectual property (IP) liability and privacy. Policymaking and regulation are approached cautiously, recognizing the potential risks and hazards; however, overregulation is also seen as a potential hindrance to innovation. The session aimed to discuss the benefits and opportunities presented by AI systems while being mindful of the risks and the need for mitigation to ensure responsible and ethical development. Varied global perspectives on data and AI regulation were discussed, highlighting the importance of tailoring strategies to national objectives, as well as the roles and responsibilities of various actors (e.g., governments, consumers, corporations). There was a consensus on the need for co-creation, continuous learning, and adaptation to new tools and security measures, emphasising the importance of agility and proactivity in adopting AI technologies.

> **“Governments are enablers, not operators. Our main role in the future will be more focusing on enablement and regulations instead of operations.”**
>
> ***— HE Dr. Moza Suwaidan***

Panel

Navigating the Gen AI Frontier: A UAE Perspective

Speaker(s)

HE Omar Sultan Al Olama (Minister of State for Artificial Intelligence, Digital Economy and Remote Work Applications, Director General of the Prime Minister's Office), and **Eleni Giokos** (CNN)

Key messages

HE Omar Sultan Al Olama emphasized the challenges and opportunities of AI adoption, advocating for tailored governance balancing innovation and privacy rights. The conversation stressed the inevitability of AI and the notion that rejecting AI would be detrimental, while also highlighting the need for an ethical framework in diverse societies like the UAE.

Session summary

In his fireside chat with Eleini Giokos, UAE's Minister of State for Artificial Intelligence, Digital Economy, and Remote Work Applications, HE Omar Sultan Al Olama highlighted crucial facets of AI governance and technology adoption. He stressed the challenges AI presents across sectors and the need for a balanced approach, weighing innovative applications against individual privacy rights. He advocated for proactive governance tailored to specific use cases, acknowledging AI's multifaceted nature. The conversation shifted to AI's integration in professional realms, emphasising its inevitability. Rejecting AI was seen as detrimental, and an ethical framework was highlighted, crucial in diverse societies like the UAE.

> **"If you adopt AI in your life, you will be Complete. If you do not, you will be Finished. And if you try to reject it all together, you will be Completely Finished."**

The panel acknowledged job displacement fears but pointed to historical trends where technology birthed new employment opportunities. The discussion concluded optimistically, exploring AI's role in addressing global challenges. The emphasis remained on embracing AI and fostering a collective movement toward a positive future.

> **"You can't govern AI – it is impossible, and whoever tells you that you can, is out of their mind."**

Keynote

The State of AI in 2023: Generative AI's Breakout Year

Speaker(s)

Chiara Marcati (Partner – Data, Advanced Analytics and Generative AI, QuantumBlack, AI by McKinsey)

Key messages

Gen AI's potential for productivity enhancement is substantial, but its successful adoption requires strategic planning, a focus on real-world applications, and a balance between ambition and practicality.

Session summary

Marcati introduced Generative AI and its surge in November 2022, linking this outcome to the convergence of technology evolution and data availability. The primary utilities of Generative AI encompass providing concise summaries, aiding in coding, generating content, and enhancing customer engagement. Contrary to fears about AI-induced job losses, Marcati discussed the results from leaders' interviews and surveys indicating AI's productivity boost, channeled towards value addition rather than job reduction. With generative AI's potential financial value estimated at $4.4 trillion globally, the focus shifted to its implementation challenges. Success with Generative AI demanded robust data architecture, effective cloud infrastructure, an intuitive user interface, and seamless human-technology integration. However, most applications tended to fail, primarily because of an overemphasis on the model and neglect of other critical factors. To successfully adopt Generative AI, leaders had to map out their data, technology, and talent landscapes while navigating the necessary change management. Marcati stressed the importance of starting with small projects that align Generative AI initiatives with tangible business issues. Generative AI was not a silver bullet and should be adopted with a mix of ambition and caution.

"Thinking big, starting small, and acting quickly."

Keynote

SAP: Future-Proofing Organisations with Gen AI

Speaker(s)

Dr. Martin Heinig (Senior Vice President, Head of New Ventures and Technologies and Managing Director SAP Labs)

Key messages

SAP's approach revolves around ethical use, strategic partnerships, and data integration, aiming to harness GenAI's potential for intelligent, self-evolving systems and address global challenges effectively.

Session summary

In his keynote, Dr. Martin Heinig, SAP's Senior Vice President, explored the dual nature of Generative AI technology, balancing its transformative potential in reshaping machine-human interaction with concerns about control and ethics. He underscored governance and ethical use, highlighting SAP's vision for intelligent, self-evolving systems enhancing business insights and employee productivity. SAP introduced 'Joule,' an AI co-pilot aiding businesses with contextualised insights.

Heinig emphasised partnerships with tech giants and startups, which are crucial for embedding specialised technologies. He stressed data integration's importance for reliable AI responses, citing use cases like document processing and demand planning. Heinig acknowledged Generative AI's power and accessibility in handling complex tasks, urging its use as a tool to address global challenges, including sustainability. Despite its complexities, he called for collective engagement and exploration of opportunities, emphasising collaborative efforts to build the future with Generative AI.

Keynote

What's Next in AI for Business: Generative AI

Speaker(s)

Mostafa Zafer (Vice President, IBM Data & AI and Automation, IBM)

Key messages

IBM's approach revolves around use-case governance, ensuring competitive advantage, scalability, and trustworthiness while exploring Gen AI's vast potential in various business domains.

Session summary

During his keynote, Mostafa Zafer, Vice President of IBM Data & AI and Automation, discussed the transformative impact of Generative AI in the business landscape. He addressed key challenges organisations face: explainability, ethics, bias, and trust. IBM's approach focused on use-case governance, emphasising competitive advantage, scalability, and trustworthiness. Their platform, Watsonx, integrated various models, prioritising data accessibility and governance throughout the AI lifecycle.
Zafer identified five application domains for Gen AI: digital labor, IT automation, cybersecurity, sustainability, and application modernisation. He emphasised that with appropriate governance, Gen AI's potential applications were limitless, offering innovative solutions across diverse organisational domains.

> **"It's not about the governance of technology. It's about the governance of use cases."**

Fireside Chat

Hugging Face: Democratising Gen AI for Everyone

Speaker(s)

Julien Simon (Chief Evangelist, Hugging Face)

Key messages

Hugging Face's unique approach centers around transparency, open-source practices, and community collaboration, driving innovation and experimentation in the Gen AI landscape.

Session summary

Julian Simon, Chief Evangelist for Hugging Face, discussed the company's mission during a virtual fireside chat. Hugging Face, known as the "GitHub of machine learning," focused on open-source, state-of-the-art AI. Their Hugging Face Hub platform enabled model and dataset sharing, emphasizing transparency and openness. Hugging Face's offerings included pre-trained models and API integrations, providing agility for startups and innovation opportunities for large enterprises leveraging vast data. Hugging Face distinguished itself through open-source practices, ensuring users had insights into models, architecture, and training data. The company's community fostered collaboration among individual developers and major tech organisations. Hugging Face anticipated breakthroughs in model size, performance, hardware acceleration, and diverse data applications, encouraging experimentation and innovation in the evolving Gen AI field.

"Models come and go, but data will remain forever."

"It's never been easier to start experimenting, and I would encourage everyone to do it."

Panel

How Could Gen AI Fuel Growth in Aviation?

Speaker(s)

Adel Al Redha (Chief Operations Officer, Emirates), **Tom Isherwood** (Senior Partner, Digital and Analytics, McKinsey), **Aysar Yousef** (Data and AI Lead, Microsoft UAE), and **Laura Buckwell** (Euronews)

Key messages

Panelists revealed that Gen AI's potential in aviation lies in personalised and efficient services, but collaborative efforts and privacy considerations are essential to overcome challenges and ensure successful implementation.

Session summary

The panel discussion focused on AI and Gen AI technology's current state and future possibilities within aviation, emphasizing the need to shift from fragmented AI applications to seamless Gen AI utilisation. The panelists stressed the imperative of employing Gen AI to provide personalised and efficient services to customers, enhancing booking experiences and addressing customer inquiries in real time. This transformation aimed to offer seamless, accurate, and highly personalised experiences, ensuring customers received precise information promptly.

Despite the enormous potential of Gen AI, the panel acknowledged challenges, particularly privacy concerns. Collaborative efforts between airlines and technology providers were deemed crucial. The discussion underscored the significant impact Gen AI could have on revolutionising customer experiences and operational efficiency within the aviation industry, emphasising the need for collaborative approaches to address challenges and ensure successful implementation.

> **"We want to use Gen AI to give the customer the experience they deserve and provide companies the efficiency they've been asking for."**
>
> *— Adel Al Redha*

2

Panel

QuantumBlack's Perspective: Gen AI in Action Across Key Sectors

Speaker(s)

Eoin Leydon (Partner and Leader, Life Sciences, QuantumBlack), **Larry Lerner** (Partner and Leader, Banking Taskforce on Generative AI, QuantumBlack), **Alex Cosmas** (Partner and Leader, Advanced Analytics in Travel, Transport and Logistics, QuantumBlack), and **Tom Isherwood** (Partner, Digital and Analytics, Quantum Black)

Key messages

Generative AI is reshaping industries. In Life Sciences, it is unlocking research possibilities amidst challenges, marking 2023 as a pivotal year. In Travel and Hospitality, increased AI investments are driving innovative customer experiences, while in Banking, it promises efficiency and improved customer relations amid regulatory hurdles. Navigating these challenges will pave the way for scalable and human-centric AI solutions.

Session summary

In Life Sciences, Generative AI's use has surged recently, particularly in medical writing, with a goal to improve patient care. Leydon highlighted its potential in decoding biology and chemistry languages, leading to new research opportunities. However, challenges like data biases, accuracy, and privacy persisted. Leydon believed 2023 was a landmark year for AI, suggesting a need for more scalable AI solutions in the future.

In the Travel and Hospitality sector, there has been a significant increase in AI-focused venture capital. Cosmas noted a transition from traditional chatbots to advanced AI-driven ones, emphasising Generative AI's potential to tailor customer experiences. With intense competition in various consumer sectors to gain loyalty, Cosmas anticipated both advancements and learning opportunities from mistakes in the near future.

In Banking, Generative AI's adoption spanned from front-office tasks to content creation. Lerner discussed its role in efficiently utilising old data and generating synthetic data. However, the real challenge resided in the human adoption of these technologies. While the potential rewards for banks were vast, regulatory shifts posed obstacles. Lerner envisioned a future where banks harnessed AI to improve customer relations and drive revenue growth.

"Over the next 12 months, I expect to see efficiency as the first wave of impact, and then innovation, growth, and patient impact on the longer term"

– Eoin Leydon

Keynote

Google: Rising to the Gen AI Challenge

Speaker(s)

Alessio Bagnaresi (Director AI & Advanced Analytics, Google Cloud)

Key messages

Google is making advancements in AI across Biology, Cloud Technology, Healthcare, and Cybersecurity. Additionally, the company is addressing global challenges like material sourcing and flood detection while developing products with a strong focus on safety, privacy, and societal benefits.

Session summary

Bagnaresi showcased the evolution of AI at Google, emphasising its integral role in the company's various technologies, from influencing search engines to the creation of "Transformers" in 2017, foundational for large language models. By 2023, "Bard" was introduced for consumer use in Google search, with "Palm" as its enterprise counterpart. All Google products were developed adhering to six core principles, including safety, privacy, high scientific standards, bias protection, social benefits, and accountability.

Shifting to innovations in biology, Bagnaresi highlighted Google's DeepMind development of AlphaFold, revolutionising protein structure prediction and aiding drug discovery. Additionally, with its integrated AI solutions, Google Cloud had become indispensable for startups, with 70% of unicorns relying on it. In healthcare, Google's AI breakthrough "Med-PaLM" demonstrated clinical reasoning comparable to expert doctors. Google had also ventured into piloting AI in emergency rooms in partnership with HCA Healthcare. In the realm of cybersecurity, Google used AI for threat detection and training, with HSBC benefiting from Google AI's Anti Money Laundry solution, reducing false positive alerts by 60%.

Lastly, Bagnaresi presented ways in which Google was addressing global challenges: in collaboration with Unilever, they were monitoring raw material sourcing from suppliers (e.g., palm oil usage), and they were developing advanced flood detection models to provide extended forecasts.

Keynote

Responsible AI: Role of Open Source, Collaboration and the Opportunities for Gen AI

Speaker(s)

Evelyn Miller (Vice President of Data and Privacy Policy, Meta)

Key messages

In this keynote, two vital things for Meta were highlighted: 1) global AI standardisation and open-source models, and 2) commitment to fostering a global AI research community, launching forums, and providing grants for AI innovation, while emphasizing safety and responsibility in AI.

Session summary

Miller opened her session by highlighting AI's role in surmounting language barriers and introducing Meta's "No Language Left Behind" AI product aimed to translate lesser-known languages, underscoring AI's global connectivity potential. Miller emphasized the significance of global AI standardisation and championed open-source AI models. She highlighted this by mentioning the "Driving Data for Good" initiative – a partnership between Meta and the UAE government. She introduced Llama 2, Meta's foundational language model, which boasted over 30 million downloads. Various aspects of Llama were discussed including the crucial role of community feedback, a diverse group of global collaborators, and the introduction of resources like the "Responsible Use Guide" to ensure safe and ethical AI deployment. Going deeper into Llama's operational dynamics, Miller mentioned the practice of "red-teaming"—a methodology to unearth model vulnerabilities. The necessity of a diverse testing team and periodic assessment of mitigation approaches was emphasized. Recognising collective knowledge's significance, Meta was fostering an AI research community, launching forums, and offering grants to non-profits for innovative AI applications. Looking forward, Meta envisaged expanding into multi-modal experiences, like voice and audio, while persistently prioritizing safety and responsibility.

"Today, we have 300b+ users across the world and we want them to express their own content, themselves, and their own communities."

Panel

Can Regulators Maneuver the Gen AI Challenge?

Speaker(s)

Stephen Almond (Executive Director, Regulatory Risk, Information Commissioner's Office, UK Government), **Dr. Akram Awad** (Partner, BCG), **John Marshall** (Executive Director, World Ethical Data Foundation), **Mustafa Al Rawi** (CNN Business Arabic)

Key messages

While there was consensus on the need for responsible AI, its practical application in terms of ethics and regulations remained a nuanced and context-dependent discussion.

Session summary

The speakers navigated the intricate world of AI regulation, spotlighting tech industry apprehensions about the balance between clear guidelines and potential overregulation. They underlined the complexities, from the very definition of AI to the responsibilities within its supply chain, highlighting the significant regulatory differences between AI applications, such as a cinema chatbot and a medical advice bot. Other regulatory challenges associated with AI pointed to stringent data rules that particularly affected sectors like healthcare insurance. The conversation on data sovereignty emerged as a pressing concern, with countries exhibiting varied regulations on data handling. Furthermore, the ethical application of AI became multifaceted when considering regional variances, as universally accepted AI ethics principles could be interpreted differently based on cultural and economic backgrounds. In light of recent advancements, existing AI regulatory principles like fairness and transparency remained pertinent. Marshall accentuated the ethical dimensions of data usage and the necessity of technology explainability in relation to individual rights. Dr. Awad underscored the essence of being forward-thinking in AI, advocating for proactive measures against the unforeseen challenges of emerging technologies.

Panel

More Breakthrough Moments: How Agile Companies are Leveraging Gen AI

Speaker(s)

Hrish Lotlikar (Co-Founder and Chief Executive Officer, SuperWorld), **Wael Salloum** (Vice President of Data and AI, Careem), **Muhammed Atef Hassouna** (Senior Director of Machine Learning, Algorithms and AI, Talabat), **Tom Urquhart** (Dubai Media Inc.)

Key messages

Gen AI offers immense potential for businesses, especially in content creation, advertising, and virtual real estate. However, its rapid advancement necessitates a strong ethical and regulatory framework to ensure its responsible and beneficial application in society.

Session summary

A panel discussion featuring leaders from prominent startups explored the integration and impact of generative AI in business. Hrish Lotlikar, the CEO of SuperWorld, discussed the potential of augmented reality in allowing users to monetize content in a virtual world that overlays the Earth. Careem, represented by its Vice President of Data and AI, Wael Salloum, utilised generative AI to enhance company productivity and innovate customer engagement strategies. Muhammed Atef Hassouna from Talabat highlighted the use of AI in improving customer experiences, particularly by analysing text data from menus. Looking to the future, generative AI possesses transformative potential. However, the imperative remained to balance this innovation with ethical considerations, such as privacy and creator protection. As the technology advanced, regulatory measures would become increasingly vital. Yet, there was caution against over-regulation, which might hinder the growth of startups and new businesses.

Panel

Gen AI: Fueling Growth for Creative Clusters

Speaker(s)

Georg Wolfart (Head of Public Policy, Snap Inc.), **John Dabill** (Director of Product Operations, HTC Vive), **Lenah Hassaballah** (CNN Business Arabic)

Key messages

Is generative AI a Catalyst or a Threat? Both Wolfart and Dabill viewed generative AI as a catalyst for growth. They stressed the importance of trust and the ability to distinguish between human and AI-generated content.

Session summary

The central theme of this session was generative AI's role in enhancing human creativity versus potentially replacing it. Both panelists acknowledged the global variations in AI adoption and regulation: while regions like the UK were proactive in identifying technological areas for growth, others were still catching up. Still, there was a global push towards AI integration. A sentiment resonating throughout was that AI's main objective was to complement, not replace, human creativity. Both Snap and HTC Vive made products that helped people easily create and share their own content.
Trust and transparency in AI practices stood out as a shared concern. With AI's profound integration into businesses, ensuring transparent practices became imperative to foster trust among users. Furthermore, localising AI models will be significant in the coming years, emphasizing the importance of region-specific models. Both panelists were optimistic about AI's continued relevance in future discussions and headlines, given its recognised potential globally.

> **"The fear of AI taking over is not justified, as uniqueness still comes from humans at the end of the day."**
>
> *— Georg Wolfart*

Keynote

Testing AI's Limits: Mimicking Human and Analytical Thinking

Speaker(s)

Sean Kennedy (Head of AI Lab Research, Nokia Bell Labs)

Key messages

Nokia Bell Labs aims not to create perfect systems but to develop continually improving and responsible AI systems.

Session summary

Kennedy emphasized the importance of human involvement and responsibility in AI systems. While living in what many called the "age of AI," with its immense potential, it was essential to be aware of its societal impacts and deliver these technologies responsibly. He highlighted several challenges with current AI, such as biases leading to harmful outcomes and the inability of AI systems to continually adapt to environmental feedback. Drawing inspiration from Daniel Kahneman's two human thinking systems theory (System One: Fast and intuitive thinking, which often operates unconsciously; System Two: Slower and deliberate thinking, requiring conscious effort), Kennedy believed AI should evolve towards a more deliberate and conscious model, akin to Kahneman's System Two. Looking ahead, Kennedy revealed that Nokia Bell Labs was working on assessing AI risks and optimising high-stakes AI applications to ensure accuracy, relevance, and accountability. To responsibly develop AI, Nokia adhered to the "six pillars of responsible AI," which served as their framework: (Fairness, Reliability, Privacy, Transparency, Sustainability, and Accountability.

Fireside Chat

Can Gen AI be a Catalyst for the Fourth Wave of Entrepreneurship?

Speaker(s)

Daniil and David Liberman (Founders, Humanism), **Josh Wilson** (Chief Strategy Officer, Binj)

Key messages

The latest entrepreneurial trend emphasizes the collaboration between innovators and large corporations (e.g., OpenAI and Microsoft). While Dubai's AI sector is growing, it faces issues keeping talent. Addressing ethical issues in AI and focusing on human-centric innovation is essential for continued development.

Session summary

In a discussion on innovation and entrepreneurship, the spotlight was on the so-called fourth wave of entrepreneurship, likened to the transformative shift initiated by the semiconductor era, which paved the way for modern computing. The consensus was that while groundbreaking innovations often emerged outside big corporations, these corporations were still crucial, primarily because of their financial power. This synergy was exemplified by collaborations such as OpenAI and Microsoft. The AI sector, rapidly evolving with vast potential, offered both opportunities and challenges. Notably, places like Dubai were fostering conducive environments for AI growth. However, talent attraction and retention remained challenging, with regions like Silicon Valley standing out due to their supportive approach towards startups. As venture capitalists pivoted from traditional finance-focused perspectives to understanding AI's technical complexities, there was also a growing need to address ethical concerns, such as AI-powered surveillance. For AI entrepreneurs, the emphasis was on human-led innovation and adopting a long-term, safety-centric mindset in this fast-evolving domain.

Fireside Chat

The UAE Amidst the Gen AI Revolution

Speaker(s)

Dr. Ebtesam Almazrouei (Executive Director and Acting Chief AI Researcher, Technology Innovation Institute), **Kelsey Warner** (UAE Editor, The Circuit)

Key messages

The discussion highlighted the crucial role of AI in shaping the future, stressing the need for responsible innovation and a diverse, inclusive approach to maximise its benefits.

Session summary

The discussion touched upon various aspects of AI, from its development and applications to the ethics surrounding its use and the importance of gender equality in the field. Dr. Ebtesam Almazrouei shed light on Falcon, a recent entrant in the AI world that stirred attention. Contrary to the perception of it being a sudden emergence, she elaborated on Falcon's origins, tracing it back to the Arabic language model introduced in 2022. Released as an open-source model, Falcon aimed to benefit global sectors such as healthcare and education, promoting transparency, inclusivity, and innovation. The AI model supported multiple languages, and its applications spanned areas like drug discovery and personalised learning, showcasing its potential to revolutionize industries by saving time and offering custom solutions. The ethical dimensions of AI took center stage during the discussion, emphasising the developers' responsibility to produce unbiased training data for Falcon. The tool, while powerful, was a means whose use and outcomes depended on the user. Dr. Almazrouei emphasised the progressive nature of the Technology Innovation Institute, portraying it as an international hub that boasted gender balance and promoted inclusivity.

Conclusion

The Dubai Assembly for Generative AI served as a vibrant platform where visionaries and innovators gathered to unravel the intricacies of Generative AI. Within this dynamic exchange of ideas and discussions, several recurring themes emerged, illuminating the multifaceted landscape of this transformative field. This analysis delves into the recurring trends and motifs discussed during the Main Agenda sessions, offering a comprehensive overview of the ten key themes shaping the event:

Generative AI's Transformative Potential:

At the core of the assembly's dialogue was the profound recognition of Generative AI's transformative power. Discussions resonated with the acknowledgment of its potential to revolutionise diverse sectors, from content creation and coding to healthcare and aviation. The consistent theme underscored the technology's pivotal role in reshaping industries and processes.

Ethical Considerations and Responsible Innovation:

Ethical considerations were at the heart of most discussions. Speakers underscored transparent practices, governance, and the mitigation of biases, emphasising the imperative of responsible adoption. The discourse highlighted the pivotal role of developers in ensuring the ethical deployment of Generative AI; a refrain echoed by all.

Human-Centric Innovation:

In a world of advanced technology, the importance of human-led creativity stood out. Partnerships were highlighted between human innovators and companies, showcasing the harmony between human insight and machine abilities.

Data Privacy and Synthetic Solutions:

Against the backdrop of looming data privacy concerns, the focus turned to synthetic solutions. Synthetic data emerged as a viable option, ensuring privacy and regulatory compliance while addressing the challenges of real-time data collection. This innovative approach marked a paradigm shift in data utilisation.

Regulatory Challenges and Global Variances:

Collaboration emerged as a propelling force. Open-source initiatives and collaborations between industry giants and startups were highlighted as integral for the move forward to realise full potential. The shared knowledge, resources, and responsible AI practices emphasised the collective responsibility in AI development.

AI-Powered Creativity and Innovation:

Celebrating AI-powered creativity was a prominent trend. Generative AI emerged not merely as a tool but as a source of innovation, inspiring new realms in art, design, literature, and scientific discoveries. AI was hailed as a muse, augmenting human creativity rather than supplanting it, embodying a profound synergy.

User Experience and Human-Machine Interaction:

Highlighting the blend of technology and humanity, the spotlight was on user experience. Discussions emphasised seamless, intuitive interactions between humans and AI, humanising AI interfaces, and ensuring AI-driven products enhance user experiences.

Inclusivity and Diversity in AI Development:

Inclusivity and diversity in AI were acknowledged as essential. The assembly emphasised the need for diverse perspectives in AI development teams, promoting gender equality and encouraging underrepresented minorities in technology.

Ethical Considerations and Responsible Innovation:

Sustainability will become a focal point, envisioning AI's role in environmental conservation and sustainable practices. From optimising energy consumption to aiding climate modeling, AI emerged as a potent ally in combating climate change.

The Dubai Assembly for Generative AI displayed the peak of AI innovation and emphasised the vital significance of ethics, human-focused innovation, and teamwork. These new trends act as guiding lights, directing future AI efforts. They guarantee that progress is revolutionary, socially inclusive, environmentally aware, and profoundly human-centered. As Generative AI evolves, these themes will shape the path of AI innovation, moving us toward a future where technology truly serves humanity.

Acknowledgement

Dubai Future Foundation would like to express gratitude to McKinsey & Company for participating in the Dubai Assembly for Generative AI and providing sector insights.

ملتقى دبي للذكاء الاصطناعي
Dubai Assembly for Generative AI

مؤسسة دبي للمستقبل
DUBAI FUTURE FOUNDATION