Redefining Business with Generative AI & the Future of Merging Technologies

Daniela Rittmeier

Head of Data & AI
Center of Excellence

Teradata Accelerate Munich 2023 | May 11th 2023

CAPGEMINI IS A TRUSTED GLOBAL BUSINESS PARTNER DELIVERING END-2-END SUSTAINABLE DATA & AI SOLUTIONS & TRANSFORMATION.

Our BRANDS

Capgemini

Capgemini invent

Capgemini engineering

frog Part of Capgemini Invent

sogeti Part of Capgemini

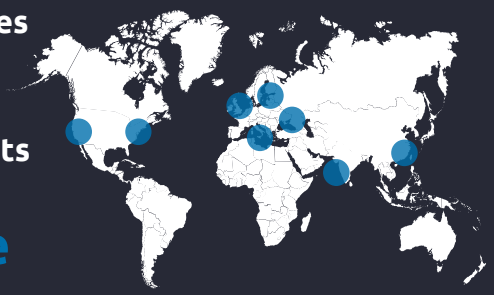
Selected ACCOUNTS

BMW, STELLANTIS, VOLKSWAGEN AKTIENGESELLSCHAFT, Johnson&Johnson, VOLVO, SIEMENS, Boehringer Ingelheim, AIRBUS, BOSCH, Henkel, DAIMLER

> 375,000 Capgemini experts in +50 countries

> 25,000 Data & AI experts

> 25,000 Manufacturing & High-tech experts



Long-standing & global network of

Data & AI Center of Excellence

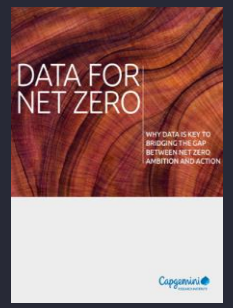
We are recognized as a **Leader**

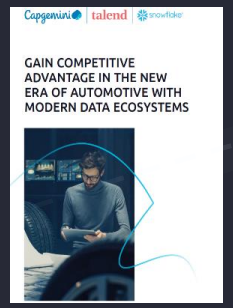
Gartner: 6 years **Leader** in Gartner 2022 Quadrant: Data & Analytics service providers

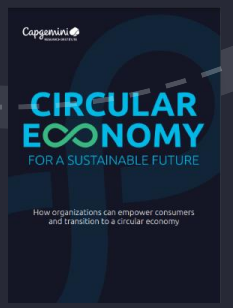
ISG: 2021 **Leader** in ISG Analytics Services Provider Lens Study 2021 in the US and Germany

PEAK MATRIX: 2022 in Everest Group's first PEAK Matrix® for **Sustainability** Enablement Technology Services

And thought leadership excellence







CAPGEMINI DATA & AI RESEARCH

We are lifting your Data Value Chain sustainable from Data to Analytics to Intelligence.

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ARTIFICIAL INTELLIGENCE IS THE KEY TECH OF THE 21ST CENTURY.

TECHNOLOGY

AI FIRST STRATEGY CHINA 2030
2 Billion US$ R&D Invest / a

US R&D INVESTMENTS AI &
QUANTUM ML 3 Billion US$ / a

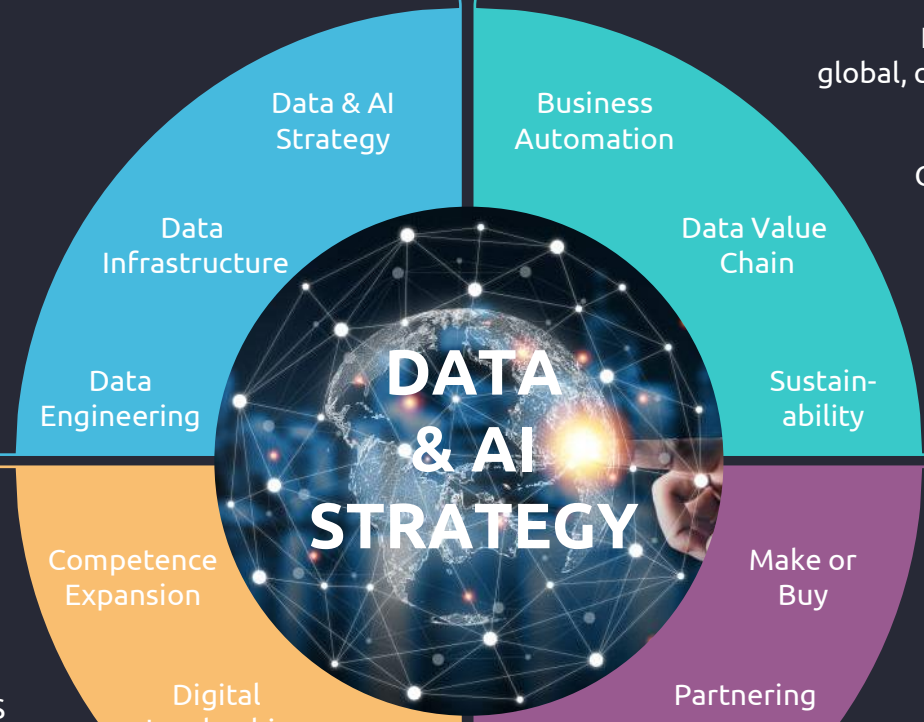
EU AI STRATEGY 2020 Upgrade
to 5 billion US$ next years

HUMAN

INCREASING TRUSTWORTHINESS
49% 2020 versus 30% in 2018

RISE OF AI ETHIC + 25 LEGISLATIONS
fivefold increase trustworthy AI publication

NEED 50% RESKILLING UNTIL 2025
97 Mio. new Data & AI & 85 decreasing jobs

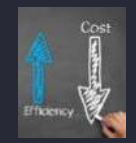


DATA VALUE

INCREASING INDUSTRIALIZATION & ROI
global, cross business & along entire value chain

GENERATIVE AI & PRETRAINED MODELS
11/2022 ChatGPT society participation
03/2023 GPT4 multimodal approach

DECREASE TO AFFORDABLE COSTS
-64% image classification cost & +95%
performance of training since 2018



PARTNER

5 HYPERSCALE'S IN WORLD TOP 10
sum 6097 billion US$ market capitalization 2021

+303 % MERGE & ACQUISITIONS 2021
72 billion US$ versus 22 in 2020
Microsoft invest 10 billion in OpenAI 01/2023

+103% START-UP INVESTMENT 2021
97 billion US$ versus 46 in 2020

Data Driven developments are a crucial prerequisites to be & stay competitive.

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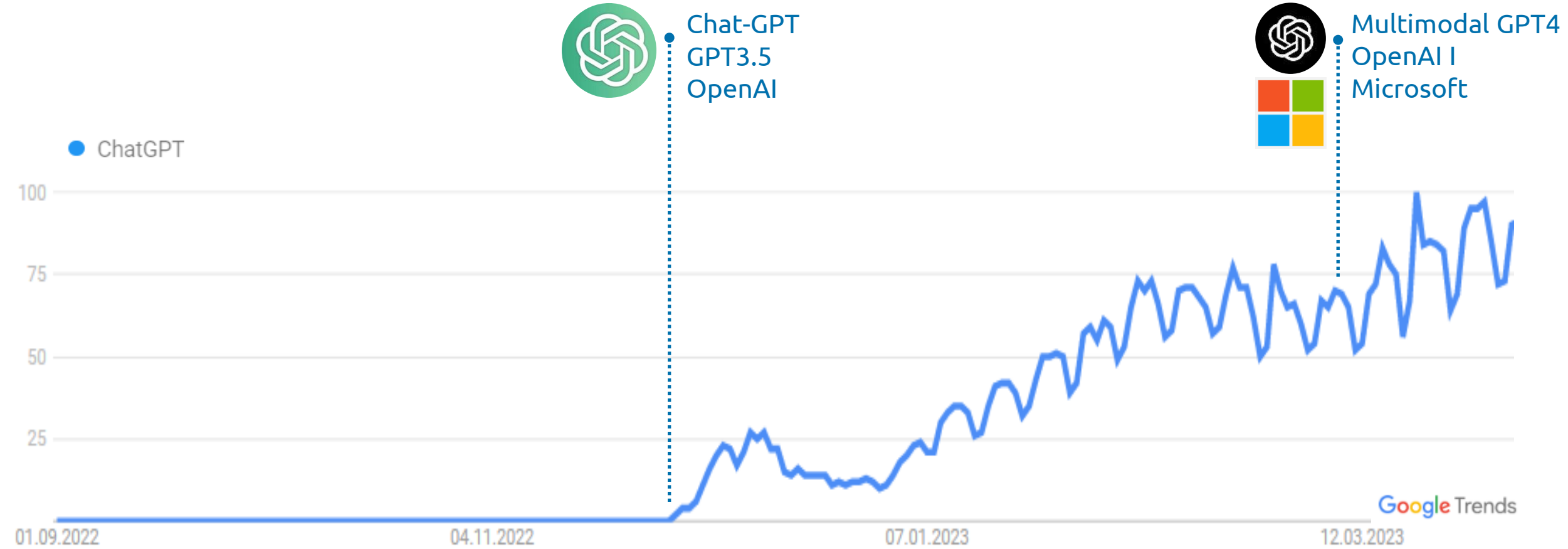
EVERYBODY IS TALKING ABOUT & TESTING OPEN AI CHAT GPT



Just another AI hype before a winter or ready for value creation in Intelligent Industry?

Source: Google Trend ChatGPT

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THE MARKET & CLIENTS ARE WAITING TO CREATE DATA VALUE ADD BY INTEGRATING GENERATIVE AI ALONG THE ENTIRE VALUE CHAIN.

17.4 B USD

MARKET POTENTIAL 2024

The market still considers Generative AI as novelty but is looking for guidance & rapid adoption.

+35% CAGR

COMPOUND ANNUAL GROWTH RATE

2030 a Generative AI market of 109 B USD is expected based on 34.6% CAGR & 2024's addressable market.

ME & FS

ACCELERATOR

19% of the Market 2021 was Media & Entertainment. Financial Services is forecasted to be the fastest growing industry.

Just another AI hype before a winter or ready for value creation in Intelligent Industry?

Source: Grand View Research (2023)

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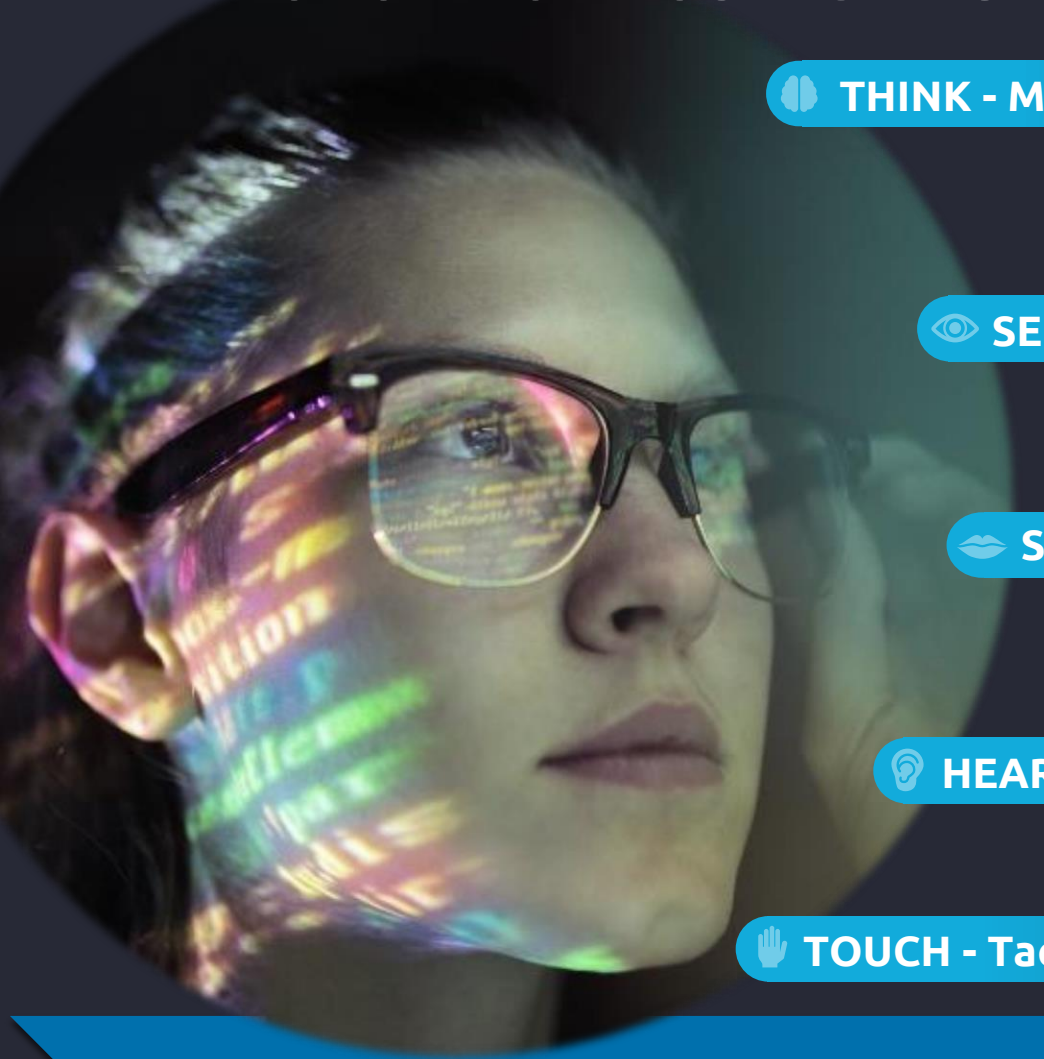
DEMYSTIFYING GENERATIVE AI – A BRIEF CLASSIFICATION & THE FUTURE OF FUSING TECHNOLOGIES FROM HUMAN PERSPECTIVE



THINK - Machine Learning

Deep Learning

Convolutional Neural Networks

Graph Neural Networks

Generative AI

SEE - Computer Vision

Visual

Image Generator

Video Generator

Design Generator

SPEAK - Natural Language Processing

Text

Text Generator

Speech Generator

Code Generator

HEAR - Acoustic Analytics

Audio

Voice Generator

Music Generator

TOUCH - Tactile Robotics

To ensure the future viability we have to master the merging data driven AI technologies

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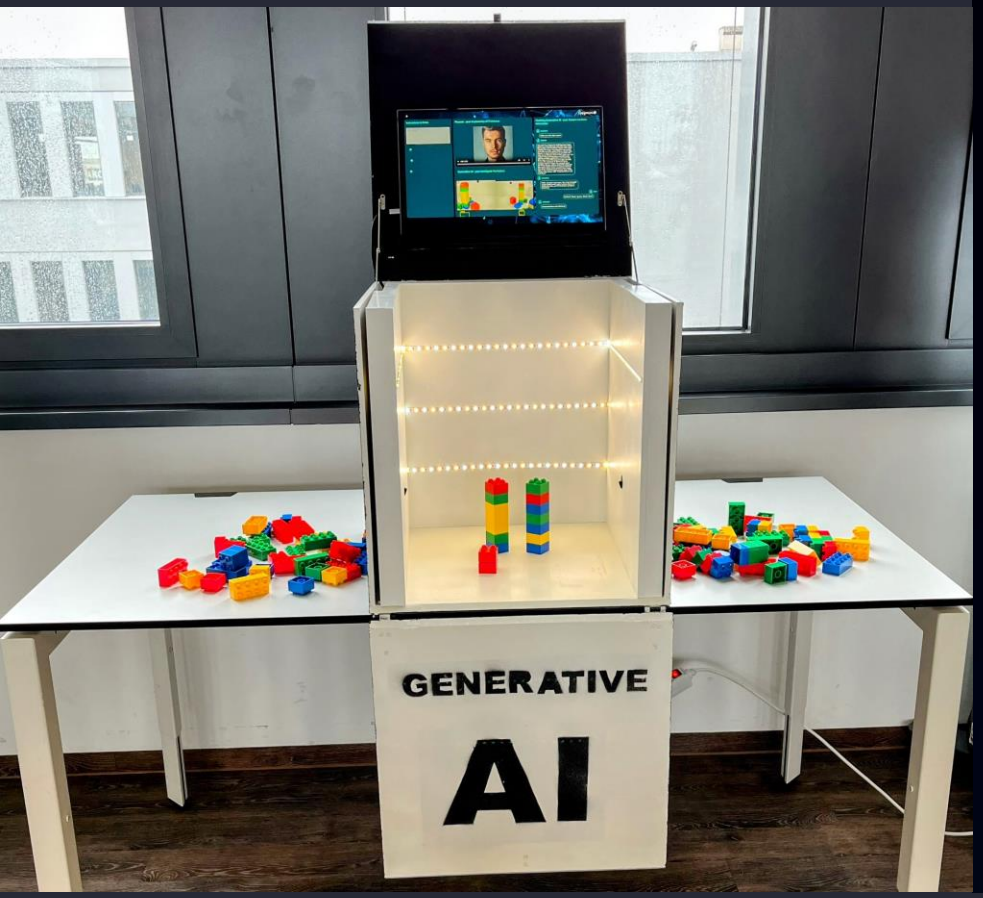
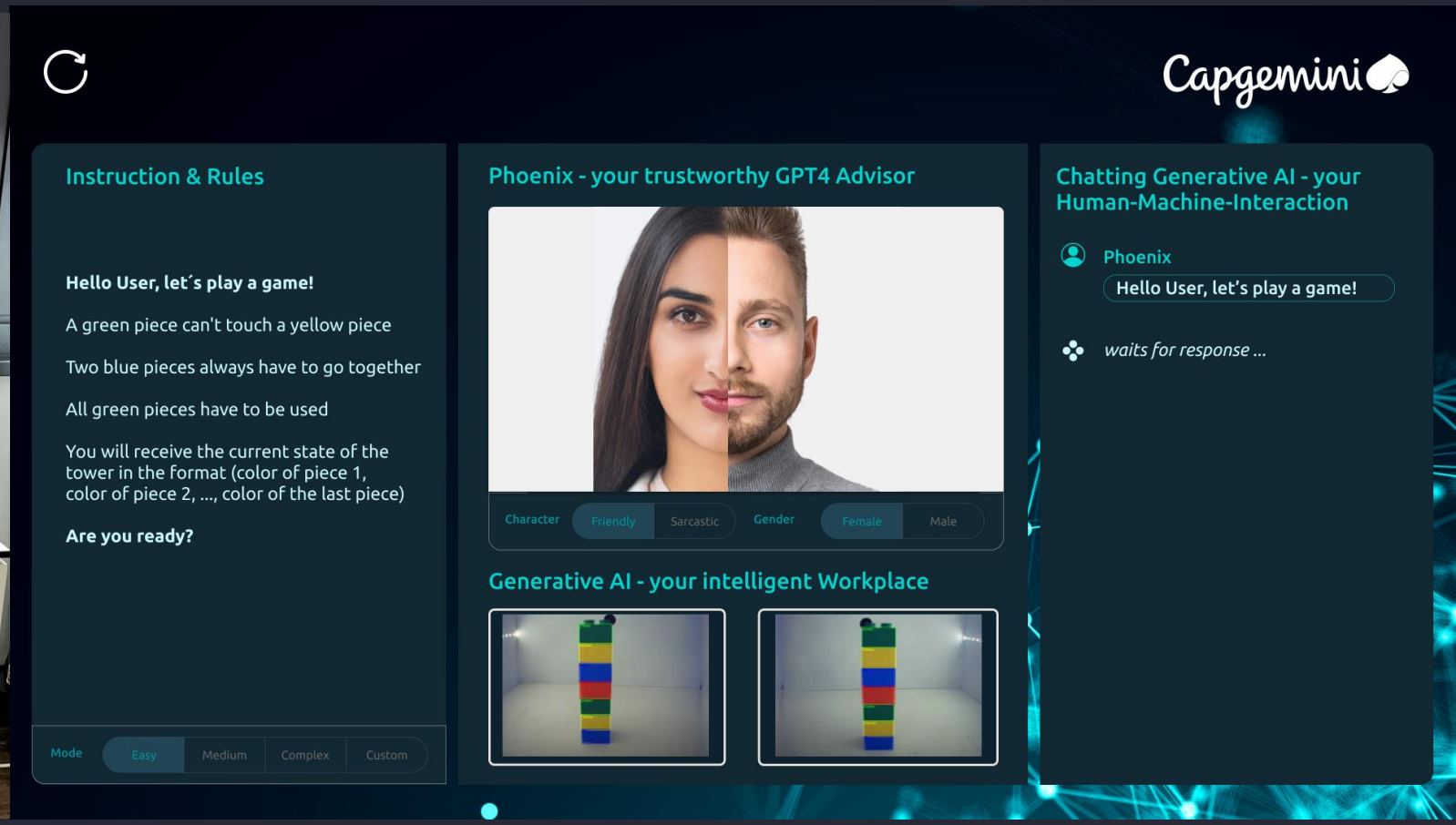
MAY I OPEN THE AI BLACKBOX & INTRODUCE YOU TO PHOENIX





Let’s explore Phoenix - your trustworthy GPT4 advisor

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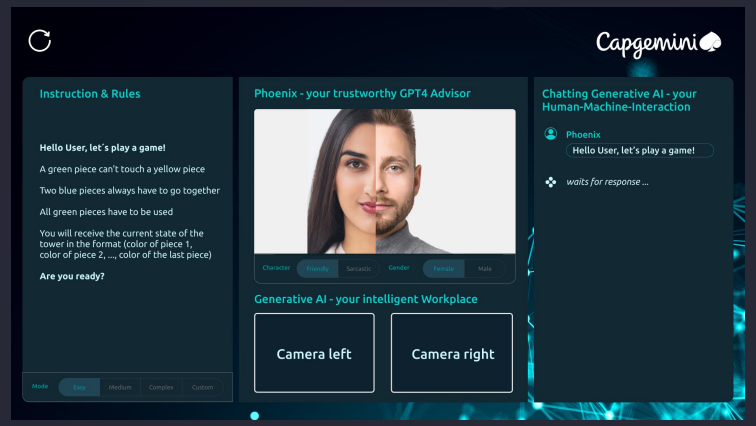
THE TECHNOLOGICAL ARCHITECTURE OF PHOENIX IS MULTIMODAL - OBJECT DETECTION + TEXTUAL RULE FOLLOW + AUDIO-VISUAL AVATAR

CAMERA 1



and more...

ADAPTIVE ASSIST 4
Avatar & Speech Module

2 **SENSE**
Object Detection Module

Dynamic Rules

3 **INTERPRET**
Logic & Textual Rule Following

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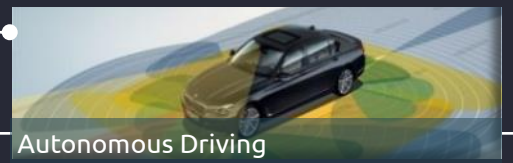
GENERATIVE AI & THE FUTURE OF MERGING TECHNOLOGIES WILL REDEFINE BUSINESS ALONG THE ENTIRE VALUE CHAIN.

CURRENT VALUE CHAIN

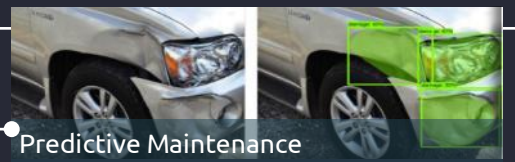
- Research & Development
- Procurement
- Supply Chain
- Manufacturing
- Sales & Marketing
- Aftersales & Service
- Intelligent Features
- Support & Administration

DIGITAL TRANSFORMATION



Autonomous Driving
Synthetic Data I Simulation I Fusion

Quality Control Platform
Image Generator I Generative Design

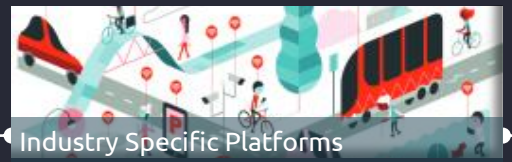


Predictive Maintenance
Cost Generator I Automated Reporting

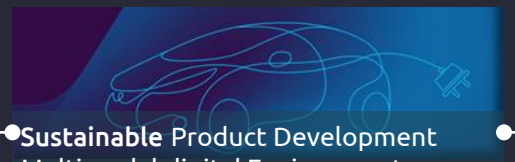
Workflow Automation
LLM I Translation I Chat-Bot-Assistant

Sustainable Supply Chain
ESG Monitoring I Auto Alert

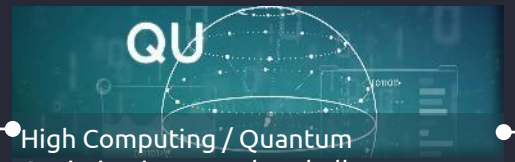
Virtual Factory & Robotics
Fusion I Digital Twin I HMI I Circularity



Industry Specific Platforms
Catena-x I Manufacturing-x



Sustainable Product Development
Multimodal digital Environment



High Computing / Quantum
Optimization complex challenges

Metaverse
Conversational AI I VR I AR I Meta

DAI across Industry Platforms &
Knowledge Transfer x

FUTURE VALUE CHAIN

To ensure the continuous technology integration you need a sustainable DATA & AI framework.

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THANK YOU FOR YOUR ATTENTION!
FEEL FREE TO ASK & CONTACT ME

DANIELA RITTMEIER
Head of Data & AI CoE

About Capgemini

Capgemini is a global leader in partnering with companies to transform and manage their business by harnessing the power of technology. The Group is guided everyday by its purpose of unleashing human energy through technology for an inclusive and sustainable future. It is a responsible and diverse organization of over 300,000 team members in nearly 50 countries. With its strong 50-year heritage and deep industry expertise, Capgemini is trusted by its clients to address the entire breadth of their business needs, from strategy and design to operations, fueled by the fast evolving and innovative world of cloud, data, AI, connectivity, software, digital engineering and platforms. The Group reported in 2020 global revenues of €16 billion.

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