

Digitaliserings historia och framtid

Christer Berg
vd, Digitala lyftet

Vad har hänt... 2700 f.Kr.

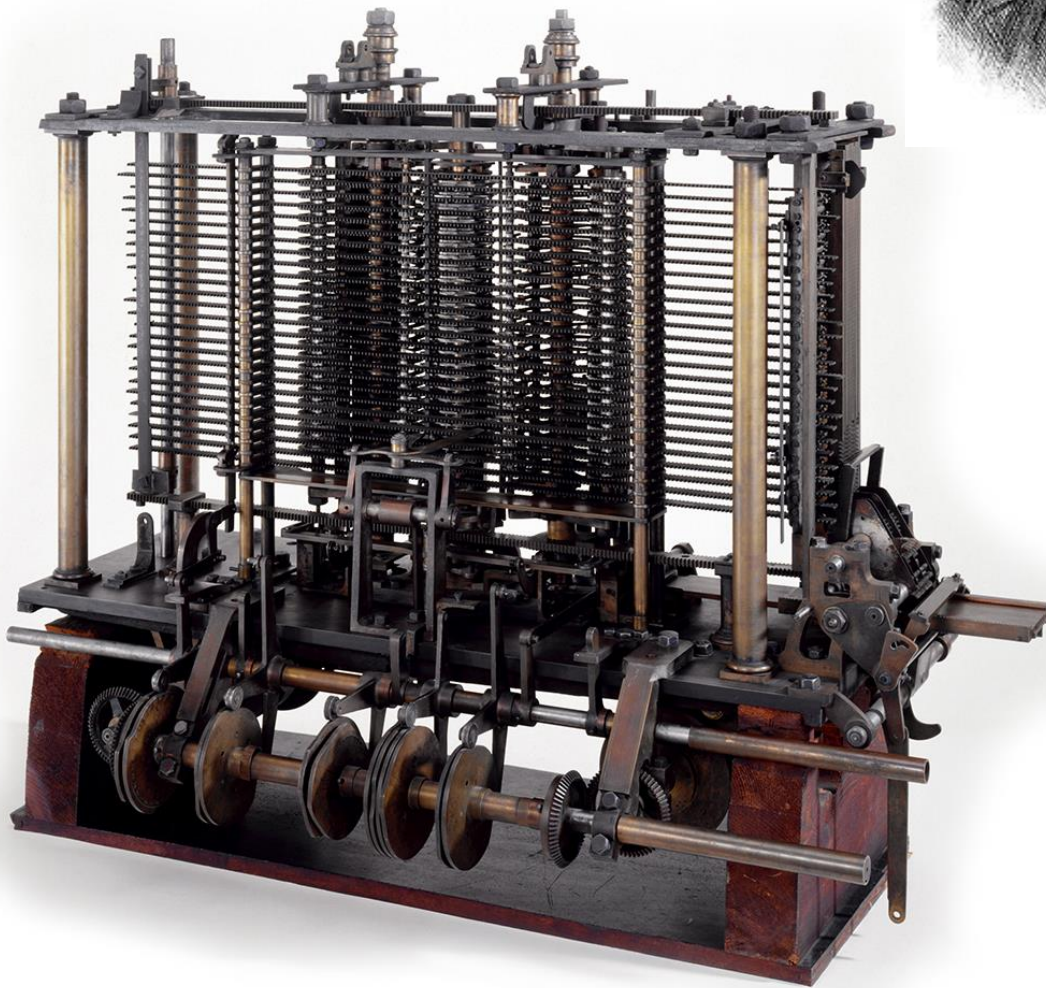
Det tidigast kända verktyget för beräkning är den sumeriska abakusen, som uppfanns i Babylon omkring 2700-2300 f.Kr.



Foto: Tor Svensson

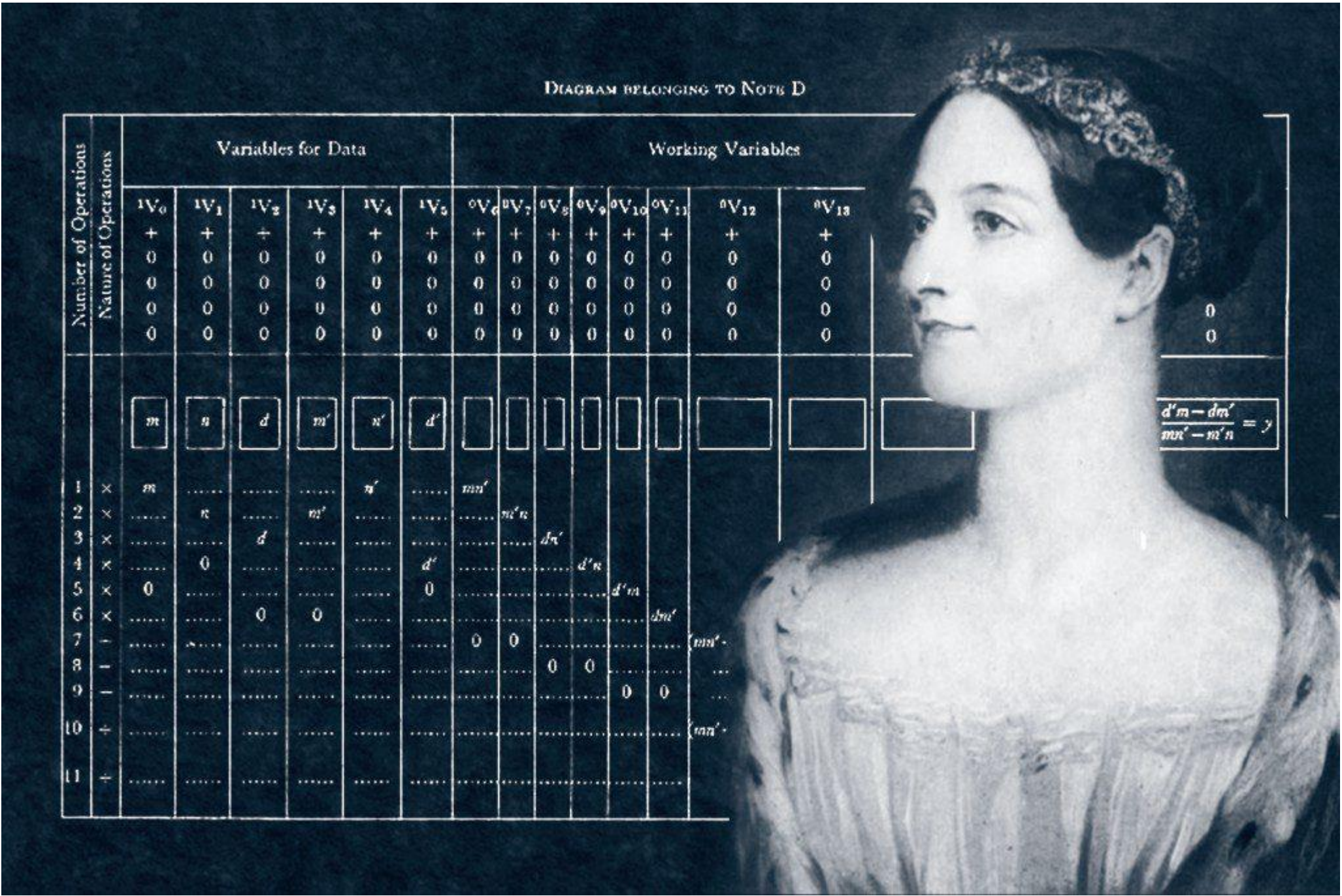
Vad har hänt... 1830

Charles Babbage utformade Analytical Engine, en föreslagen mekanisk allmän dator.



Bildkälla: Wikipedia

Ada Lovelace skrev den första algoritmen avsedd att implementeras på Charles Babbages Analytical Engine, vilket gör henne till världens första datorprogrammerare.



Bildkälla: Intel

Vad har hänt... 1890

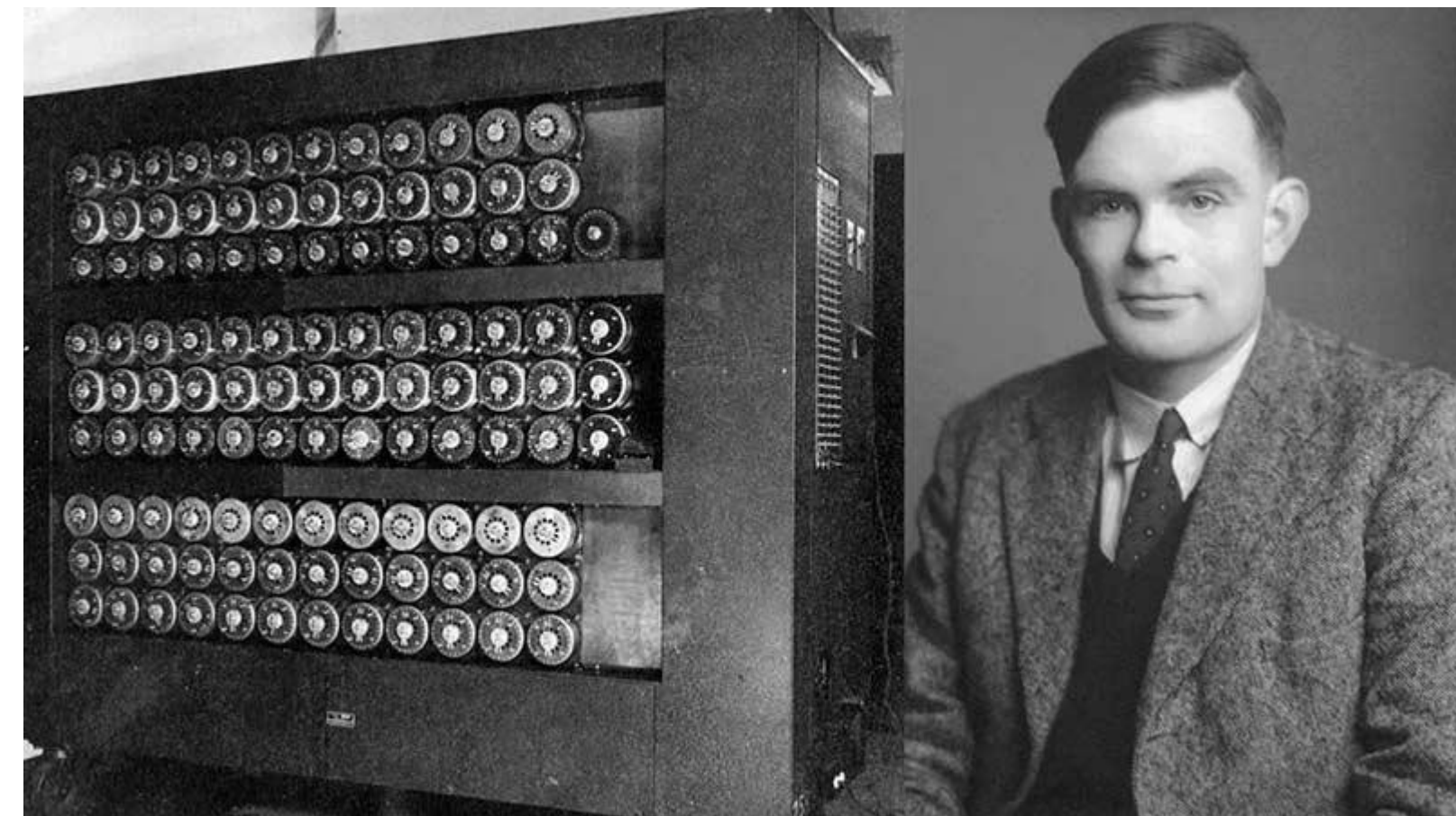


Herman Hollerith utvecklar ett system med hålkort för att tabulera USA:s folkräkning, vilket avsevärt minskar beräkningstiden. Denna teknik leder till bildandet av IBM.

Bildkälla: History-Computer

Vad har hänt... 1930

Alan Turing skapar Turingmaskinen, en konstruktion som lägger grunden för den moderna datorn.

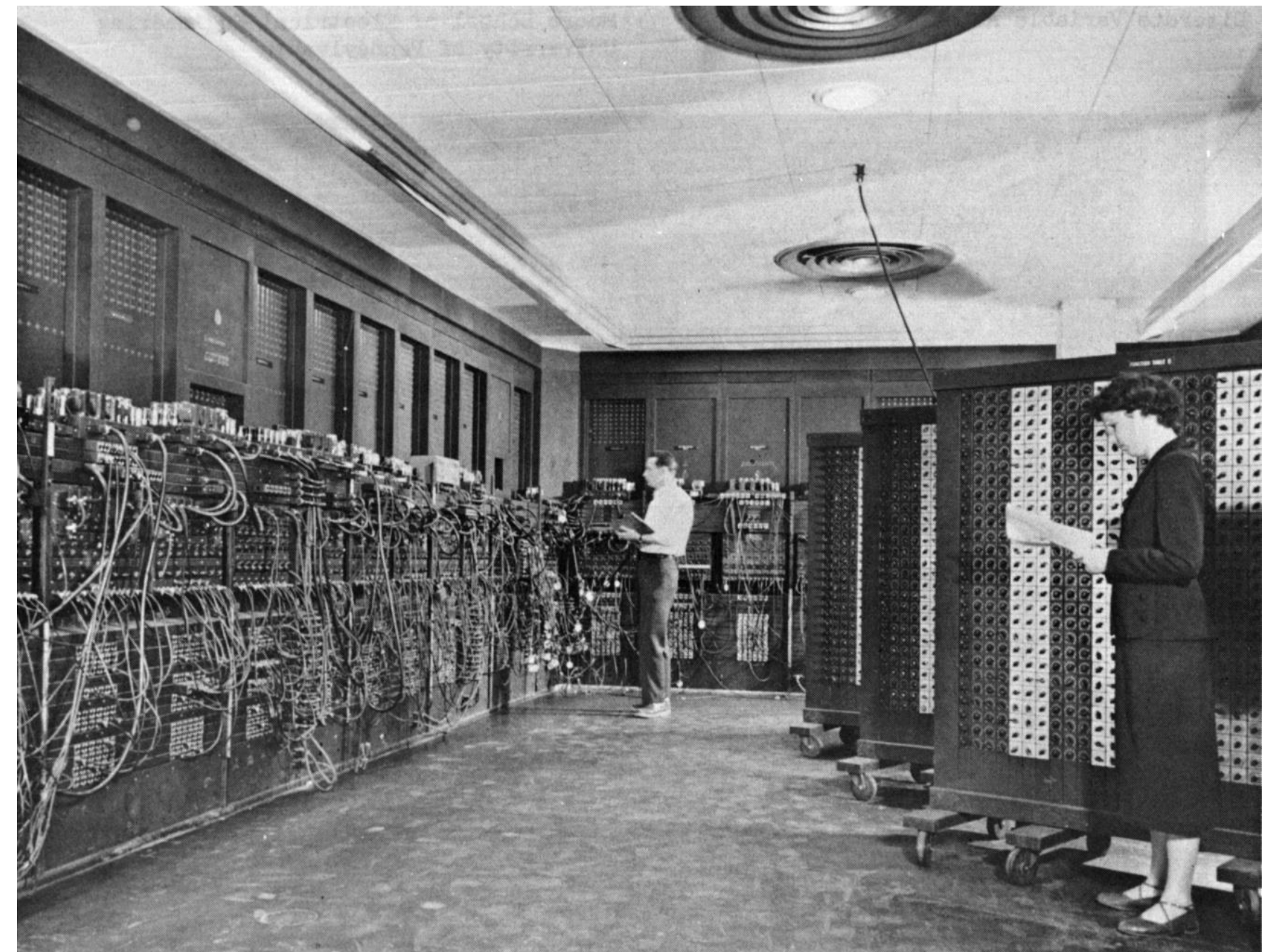


Bildkälla: thecrazyprogrammer.com

Vad har hänt... 1940

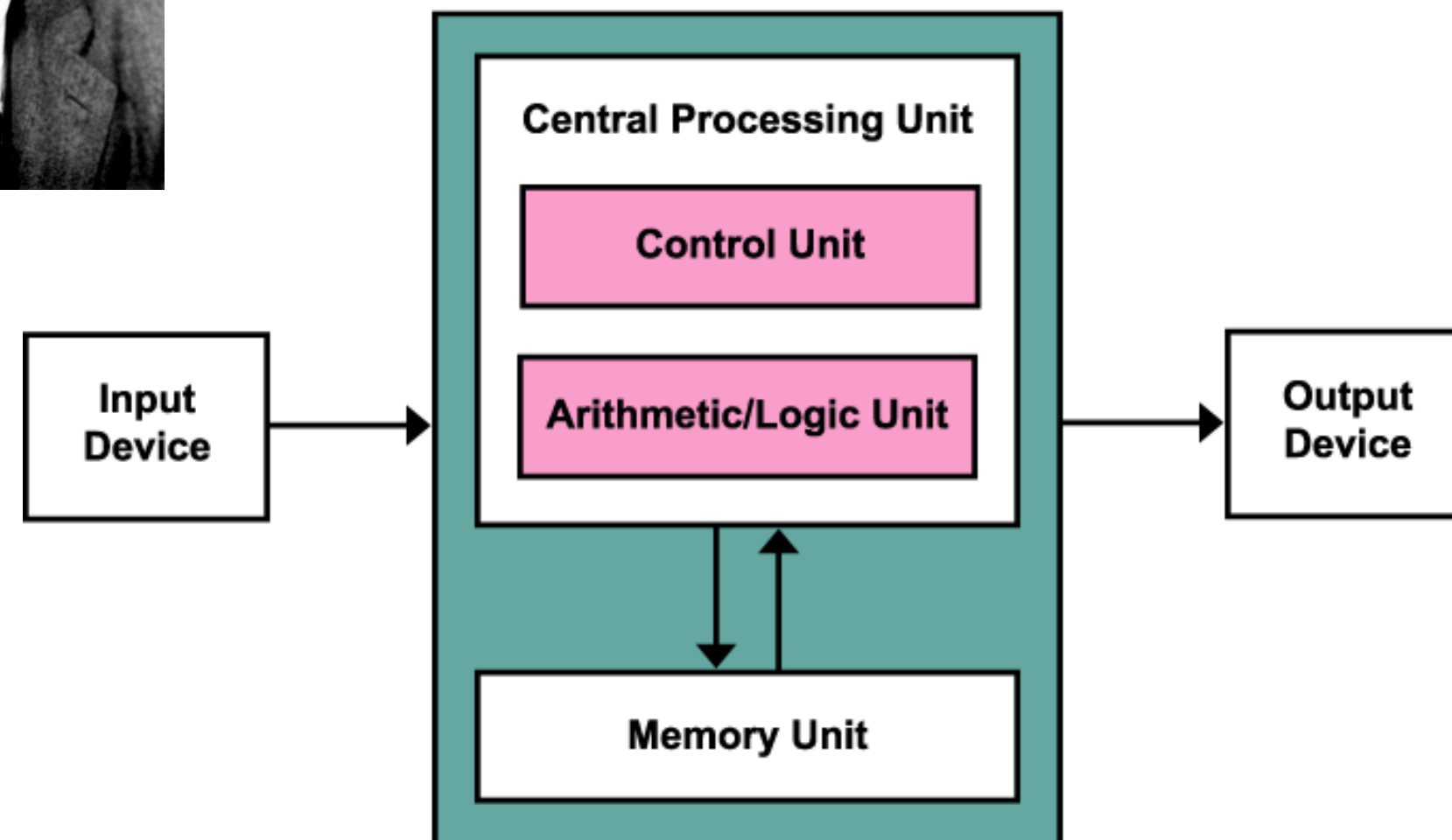
De första elektroniska datorerna:
Atanasoff-Berry-datorn (ABC), ENIAC och
Harvard Mark I. **ENIAC** är den första helt
elektroniska allmänna datorn.

ENIAC var 30 meter lång, 3 meter hög och 1 meter bred. Den
innehöll 17 468 elektronrör, 70 000 motstånd och 100 000
kondensatorer.



Bildkälla: Wikipedia

Vad har hänt... 1945

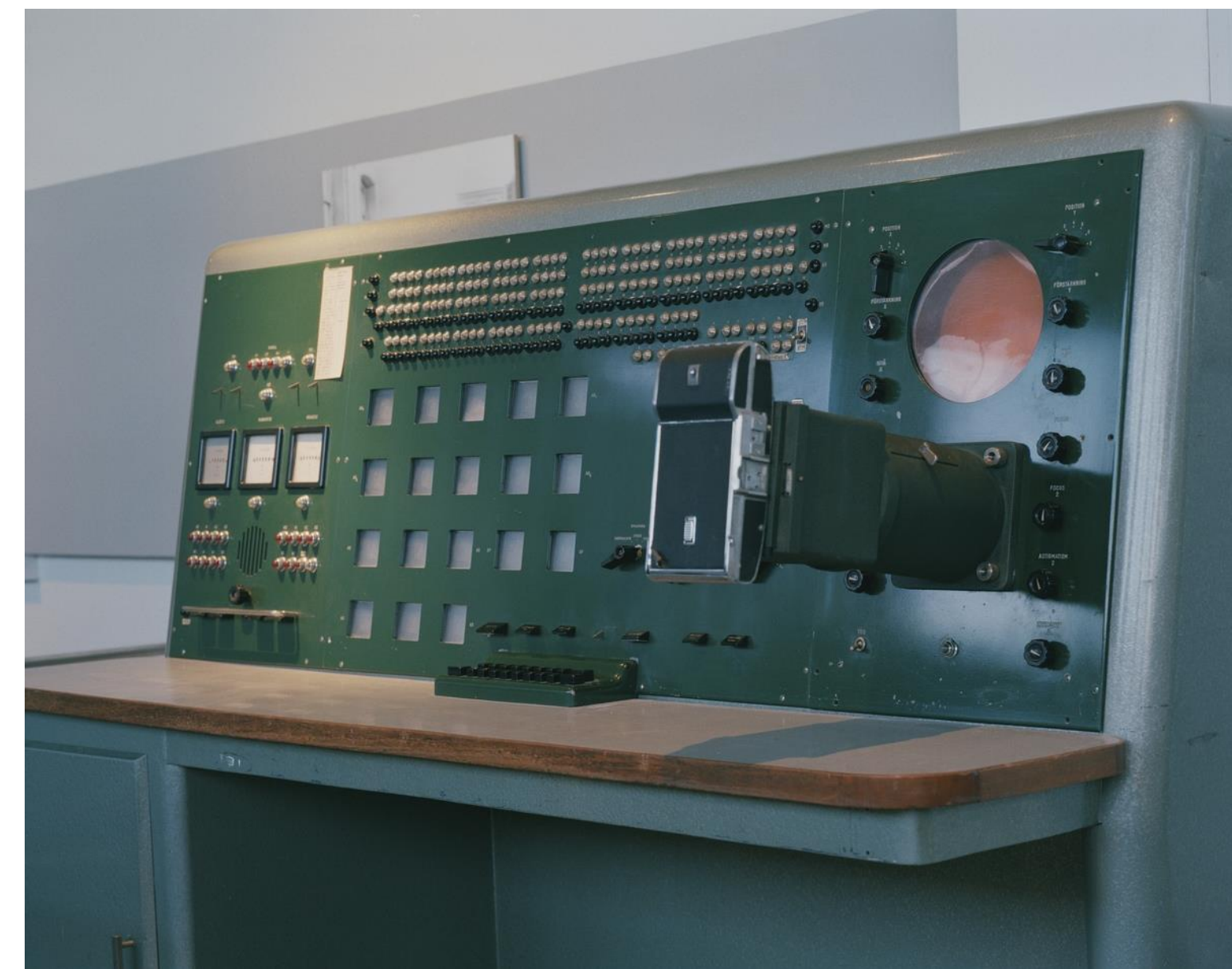


John von Neumann beskrev 1945 en arkitektur för digitala datorer, som fortfarande är dominerande.

Vad har hänt... 1950

Sveriges andra dator, BESK (den första var BARK). Under några veckor var BESK världens snabbaste dator! Startskottet för den svenska IT-branschen.

BESK (Binär Elektronisk Sekvens Kalkylator) innehöll 2 400 radiorör och 400 germaniumdioder.



Bildkälla: Wikipedia

Vad har hänt... 1948



Bildkälla: Wikipedia

Idén till **transistorn** presenterades redan 1925. Bell Laboratories tog 1948 fram en transistor baserad på germanium. Den första kiselbaserade fick de fram 1954.

Vad har hänt... 1964

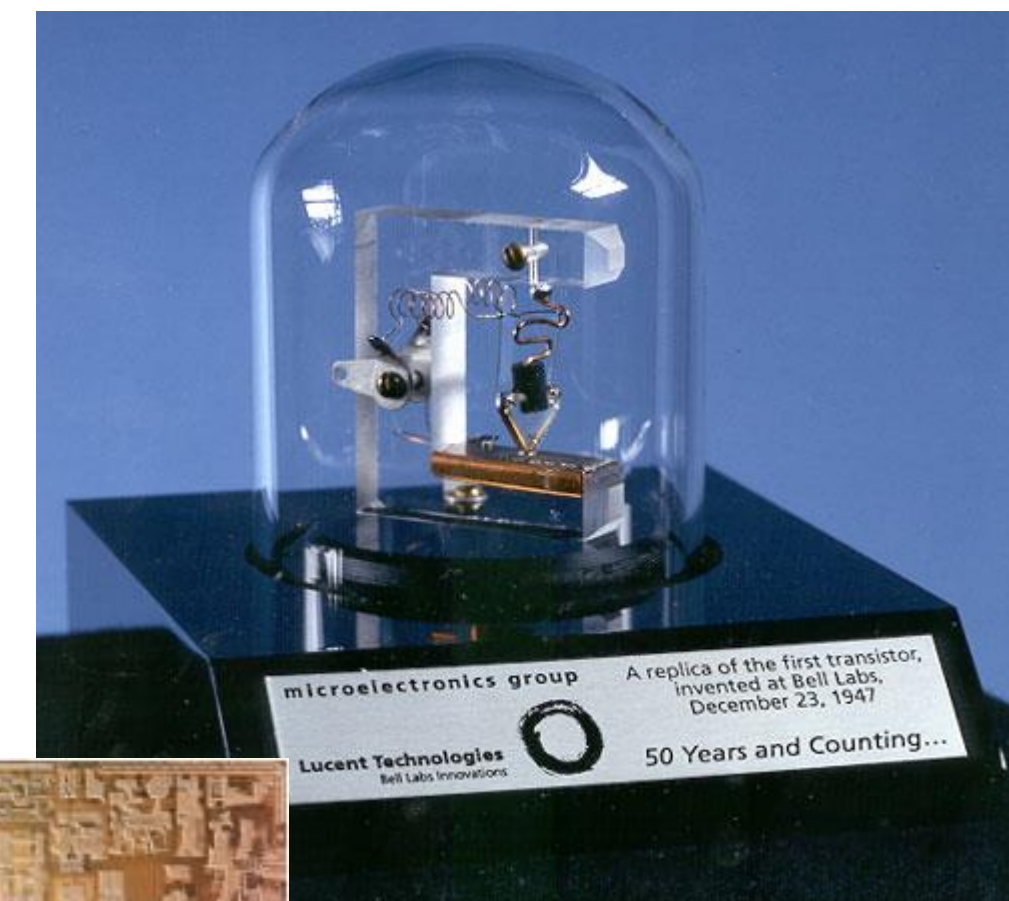
Stordatorerna innebar ett genombrott, för stora företag och offentliga verksamheter. IBM 360 lanserades 1964 och lades ner 1978.



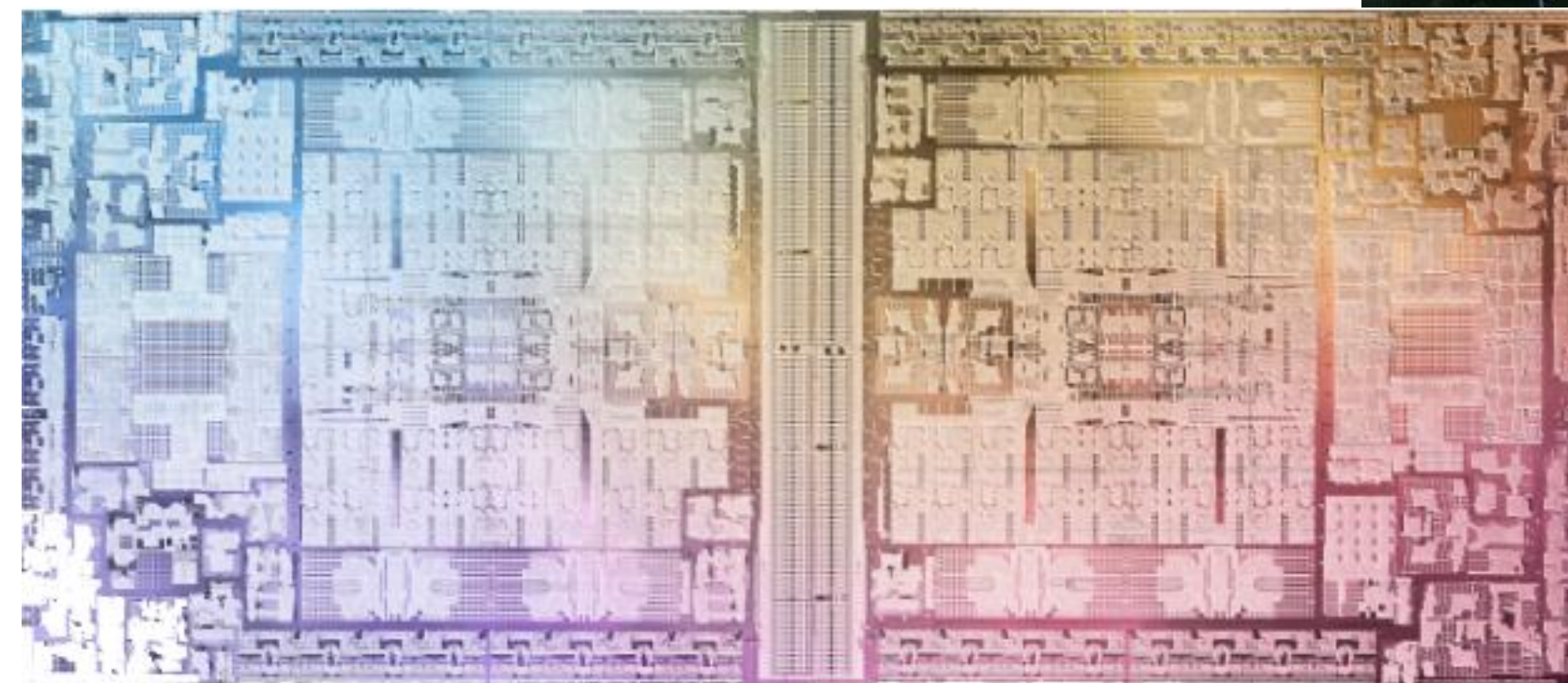
Bildkälla: IBM

Vad har hänt... 1960

Det första mikrochipet i historien skapades 1958 av **Jack Kilby** på Texas Instruments.



Bildkälla: Wikipedia



Apple M2 Ultra, 134 miljarder transistorer, 5 nm.

Bildkälla: Apple

Vad har hänt... 1960

Minidatorerna introduceras, här DEC PDP.
Nu blev datorkraften tillgänglig även för
mindre företag. PDP-11 blev legendarisk.



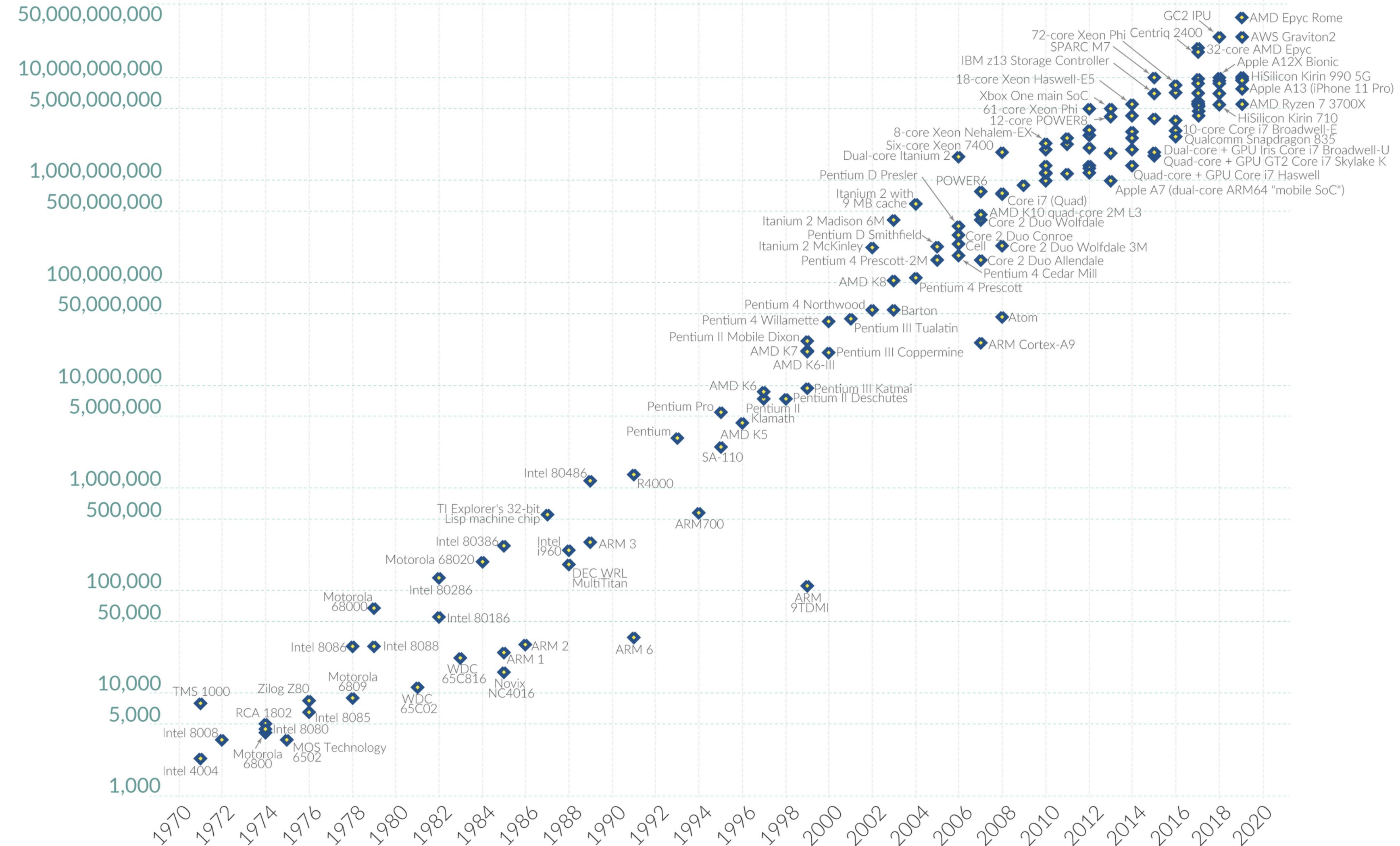
Bildkälla: LCM+L

Moore's Law: The number of transistors on microchips doubles every two years

Our World
in Data

Moore's law describes the empirical regularity that the number of transistors on integrated circuits doubles approximately every two years. This advancement is important for other aspects of technological progress in computing – such as processing speed or the price of computers.

Transistor count



Data source: Wikipedia (wikipedia.org/wiki/Transistor_count)

OurWorldinData.org – Research and data to make progress against the world's largest problems.

Licensed under CC-BY by the authors Hannah Ritchie and Max Roser.

Vad har hänt... 1970-

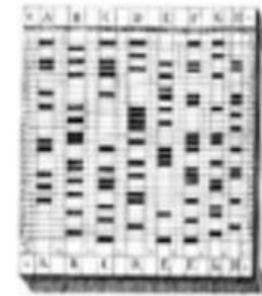


Vad har hänt... 1970-

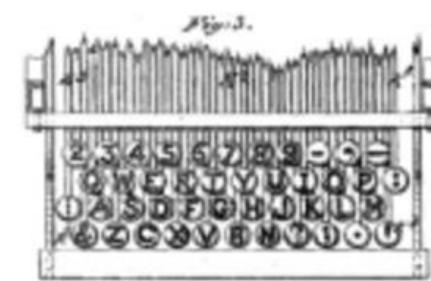


Bildkälla: Adobe Stock

Human-Computer Interaction (1830s – 2015), USA = Touch 1.0 → Touch 2.0 → Touch 3.0 → Voice



Punch Cards for
Informatics
1832



QWERTY
Keyboard
1872



Electromechanical
Computer (Z3)
1941



Electronic Computer
(ENIAC)
1943



Paper Tape Reader
(Harvard Mark I)
1944



Mainframe Computers
(IBM SSEC)
1948



Trackball
1952



Joystick
1967



Microcomputers
(IBM Mark-8)
1974



Portable Computer
(IBM 5100)
1975



Commercial Use of
Window-Based GUI
(Xerox Star)
1981



Commercial Use
of Mouse
(Apple Lisa)
1983



Commercial Use
of Mobile
Computing
(PalmPilot)
1996



Touch + Camera -
based Mobile
Computing
(iPhone 2G)
2007



Voice on Mobile
(Siri)
2011

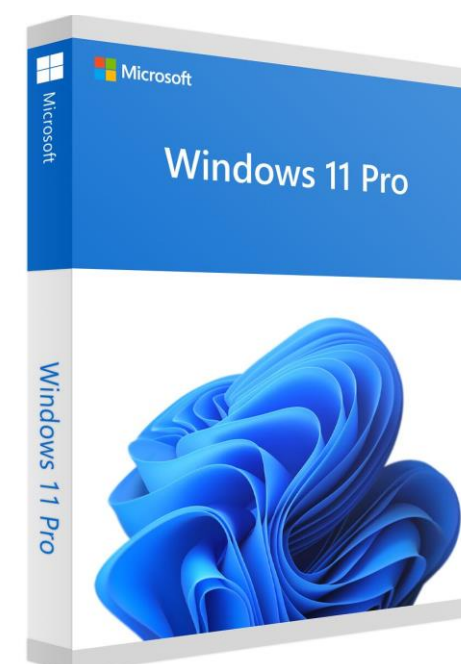
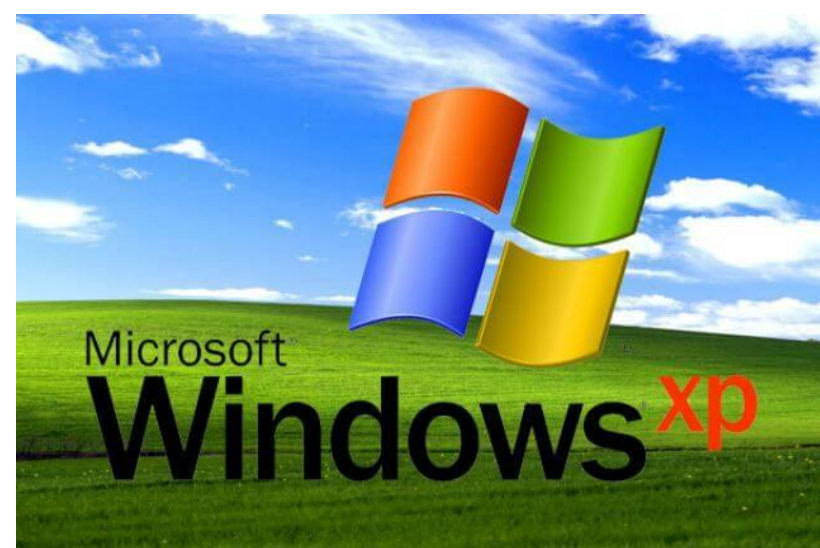


Voice on Connected /
Ambient Devices
(Amazon Echo)
2014

Vad har hänt... 1980-



Foto: Matthew Yohe, via Wikimedia Commons



Vad har hänt... 1980-

Daniel Singer Bricklin skapade tillsammans med Bob Frankston kalkylprogrammet VisiCalc.

C11 (L) TOTAL P1 25

	A	B	C	D
1	ITEM	NO.	UNIT	COST
2	MUCK RAKE	4	12.95	556.85
3	BUZZ CUT	1	49.95	101.95
4	TOFF TONER	25	49.95	12487.50
5	EYE SNUFF	2	4.95	9.90
6				
7			SUBTOTAL	13155.50
8			9.75% TAX	1282.66
9			TOTAL	14438.16

Bildkälla: Wikipedia

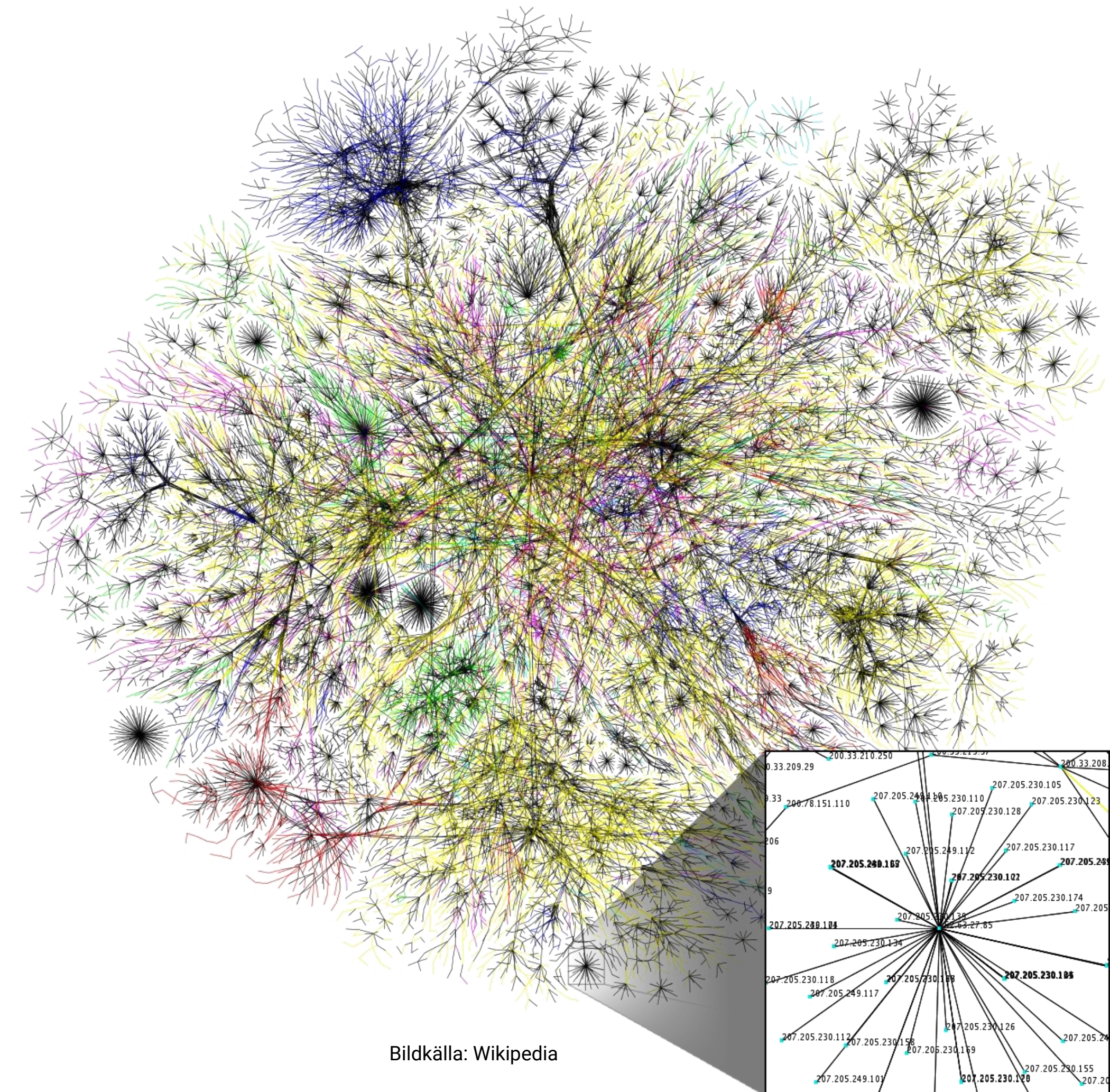


Foto: Betsy Devine

Vad har hänt... 1990-

Internet, som från början var ett militärt projekt, får spridning och blir snabbt en dominerande infrastruktur för information.

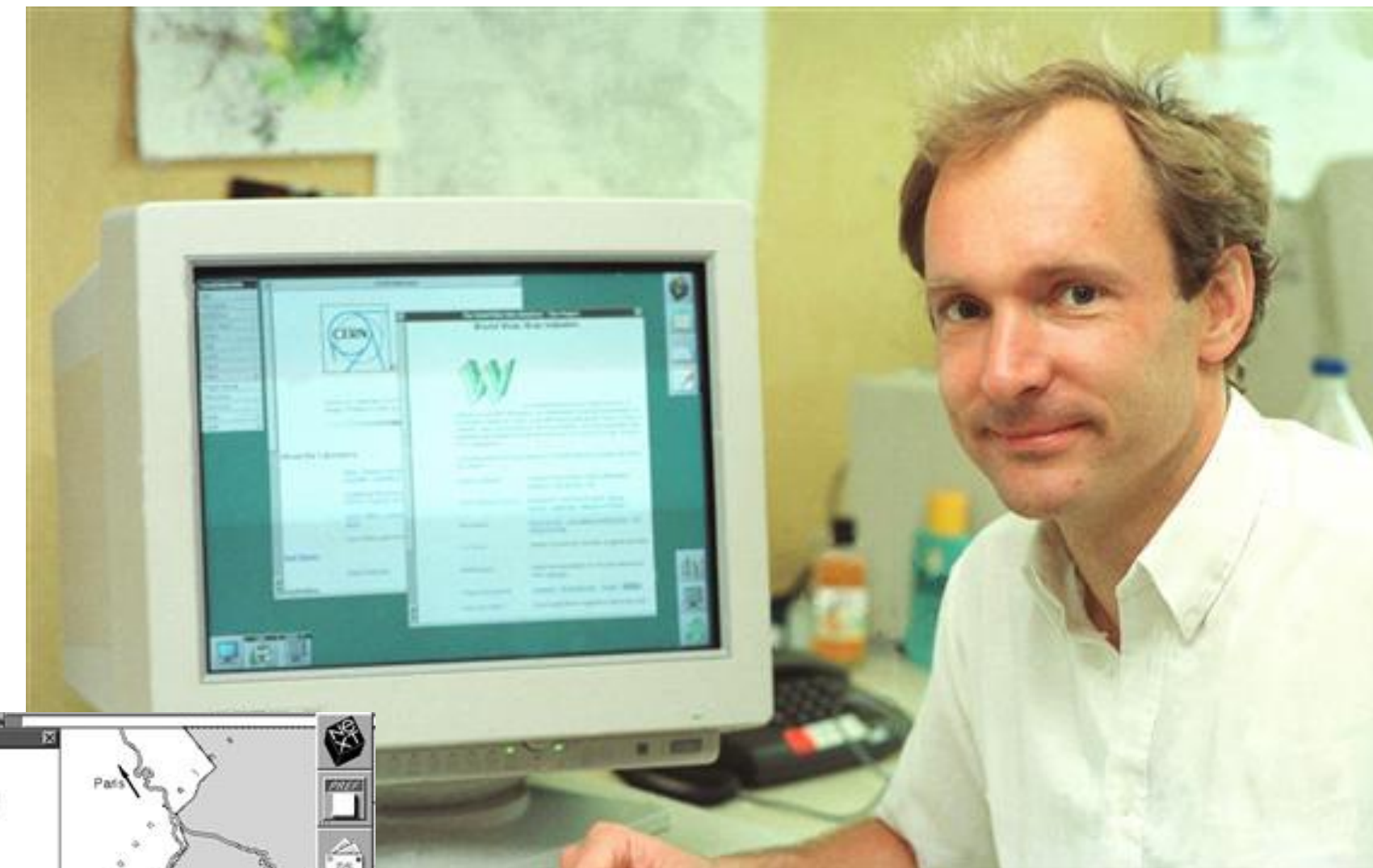
Idag finns över 50 miljarder webbsidor.



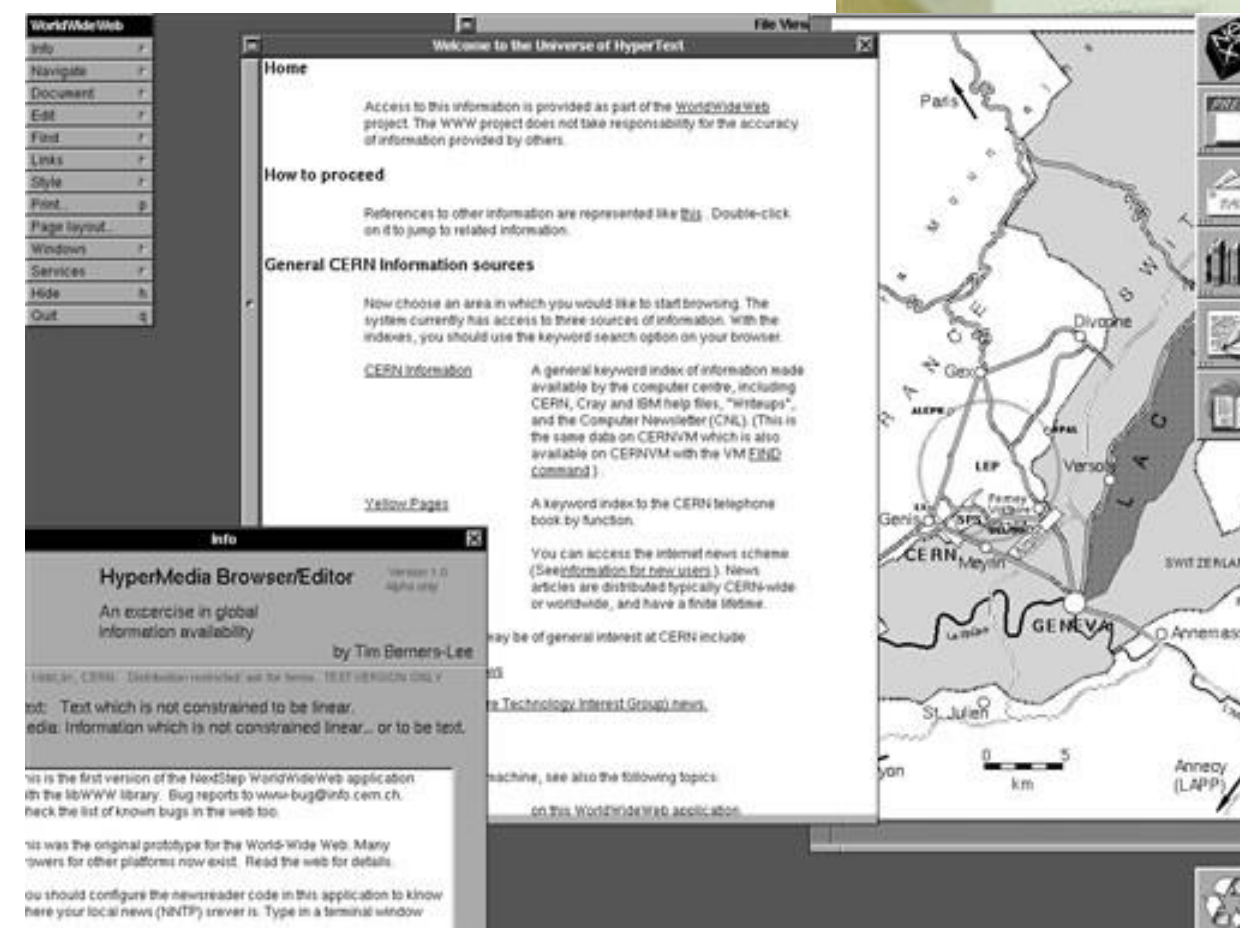
Bildkälla: Wikipedia

Vad har hänt... 1990-

1989 skapade **Tim Berners-Lee** World Wide Web.
Under 1990-talet exploderade spridningen av innehåll på Internet.

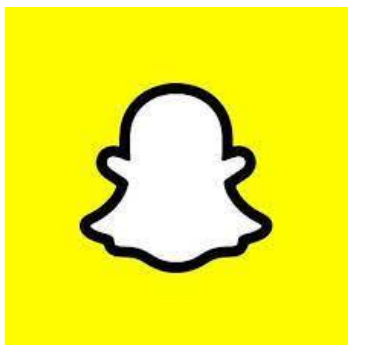


Bildkälla: CERN



Vad har hänt... 2000-

Söskmotorer, sociala medier
och e-handel tar fart.
Nya affärsmodeller uppstår.



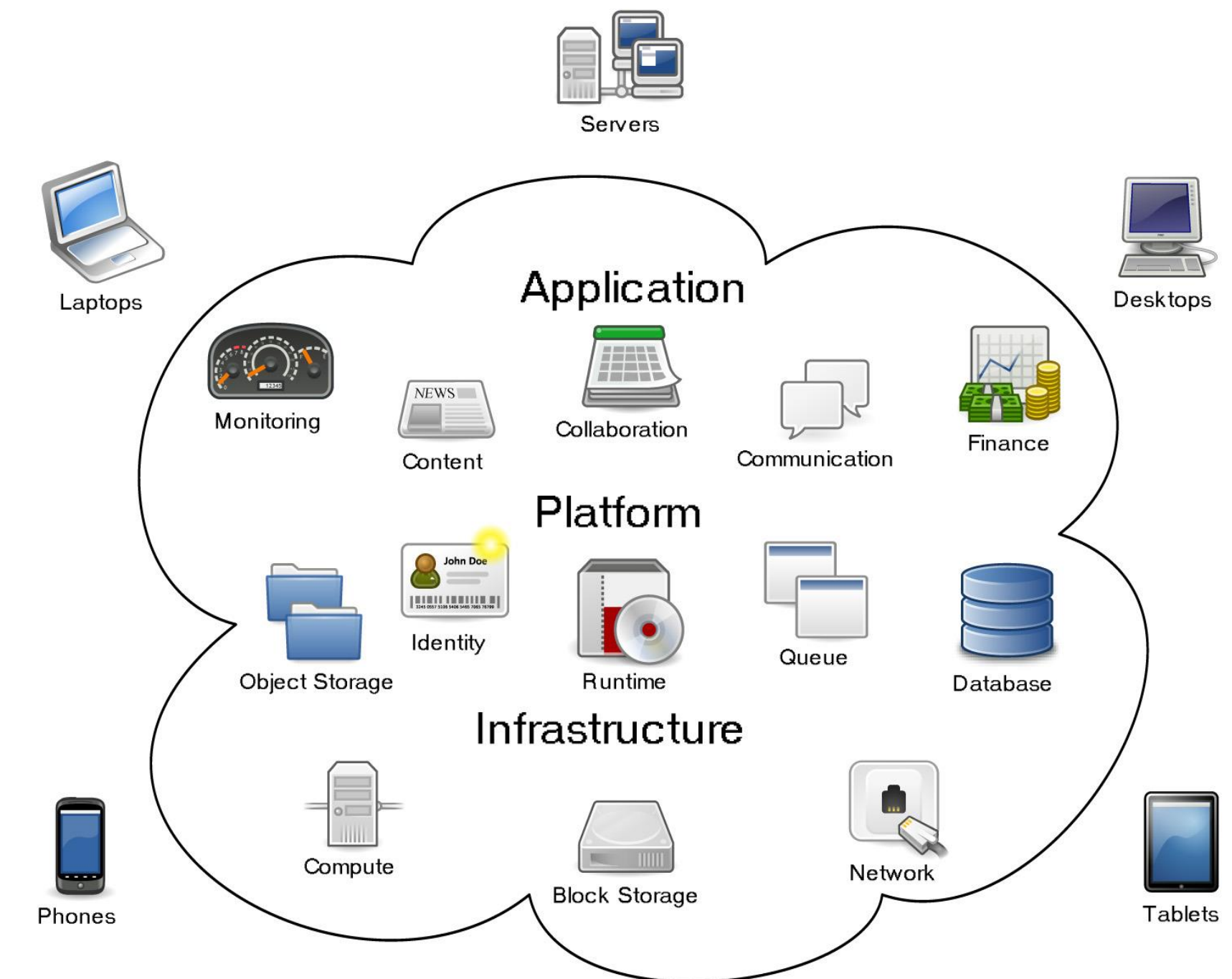
Vad har hänt... 2010-

Genombrott för **Cloud Computing** and **Big Data**.

Cloud Computing blir alltmer genomgripande, vilket ger åtkomst till beräkningsresurser och datalagring efter behov. Big Data gör det möjligt att bearbeta och analysera enorma mängder data, vilket driver innovationer inom olika områden.

- Varje dag skapas **328 miljoner terabyte** (18 nollor) data
- I år kommer vi skapa **120 zettabyte** data (21 nollor)
- 2025 kommer bli **181 zettabytes**
- Hälften av trafiken på Internet är video

Enligt John C. McCallum har ställt samman: År 1970 kostade 1 megabyte 734 000 dollar. År 1994 var priset nere på 37 dollar per megabyte och idag är priset 0,002 dollar per megabyte.

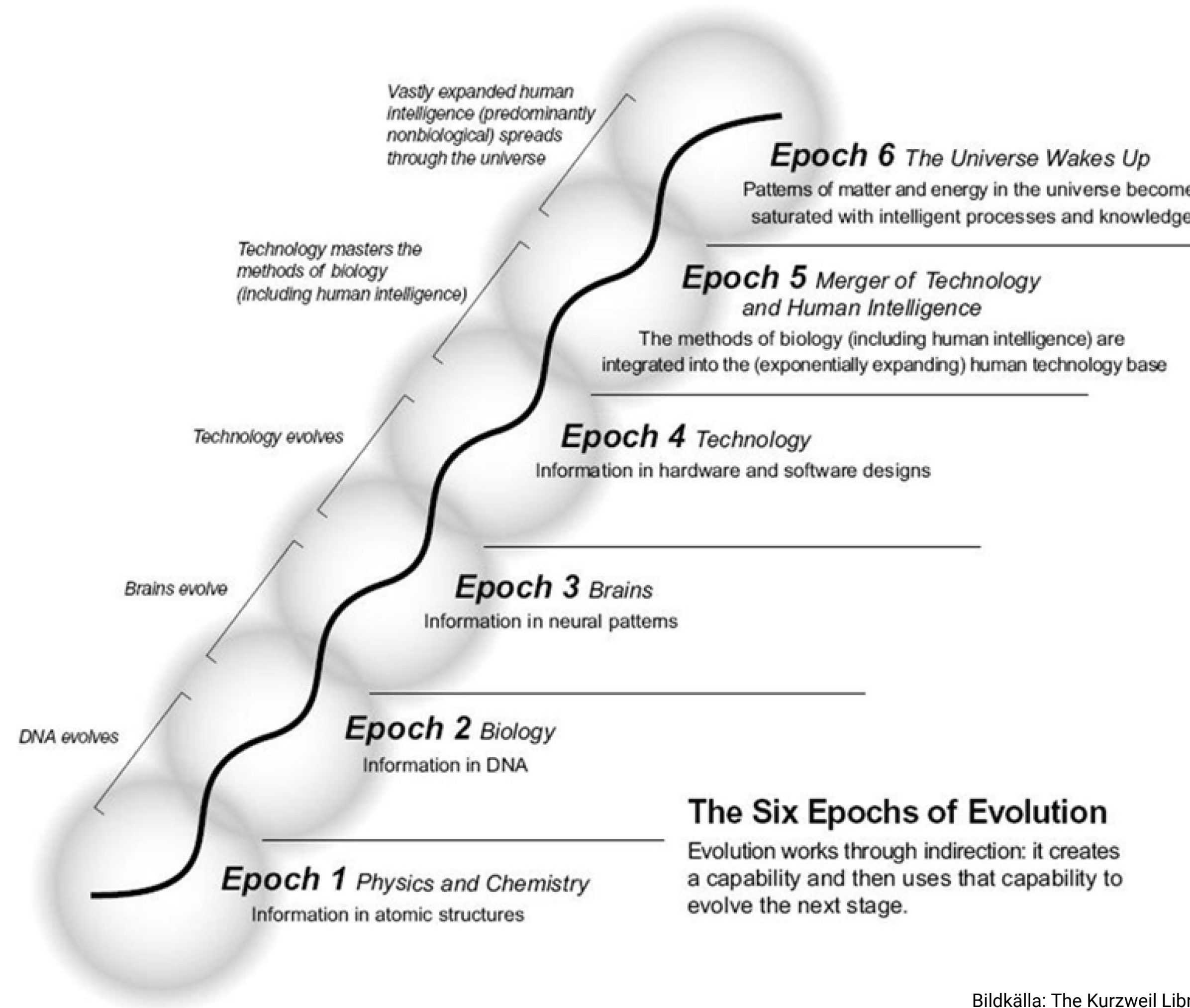


Bildkälla: Wikipedia

Vad är det för digitalisering vi har framför oss?

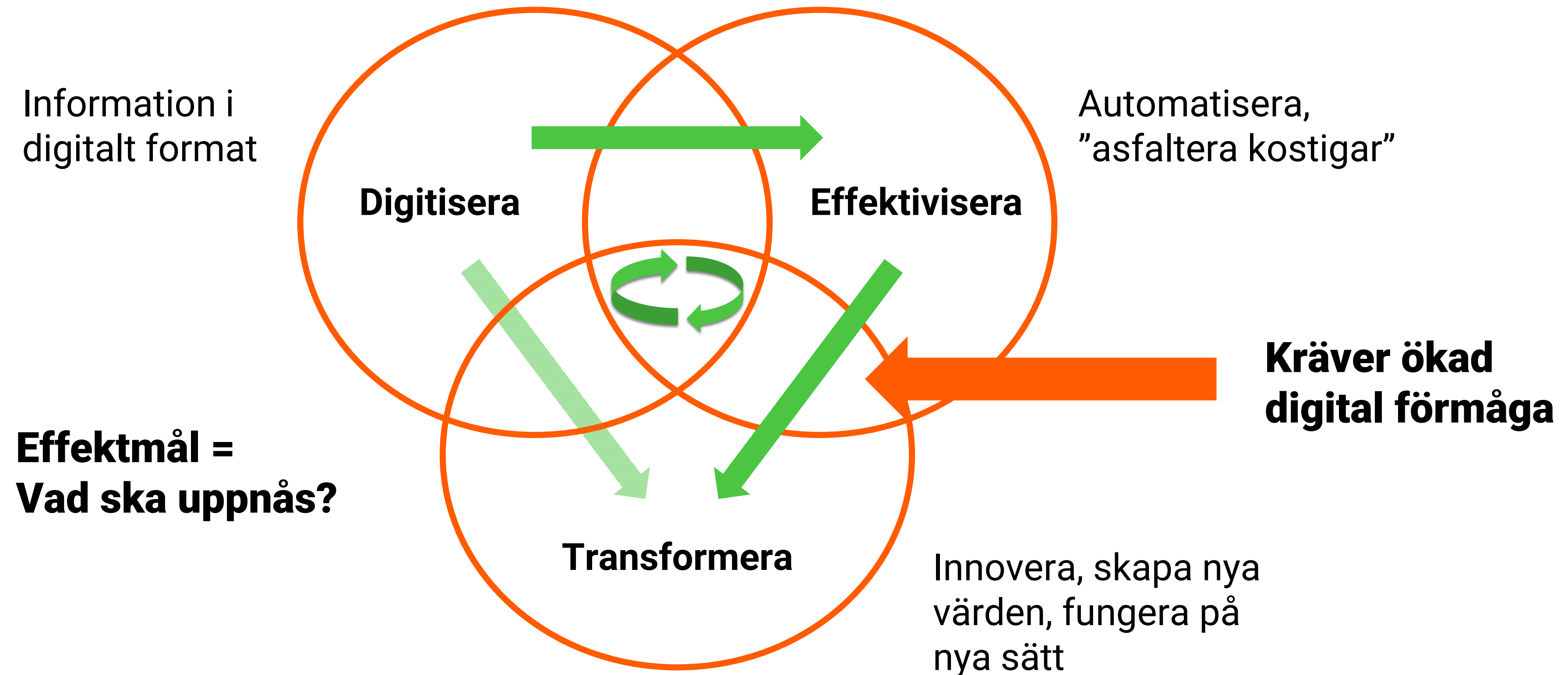
**Information
Intelligens
Interaktion**

Byggstenar för den digitala framtiden...

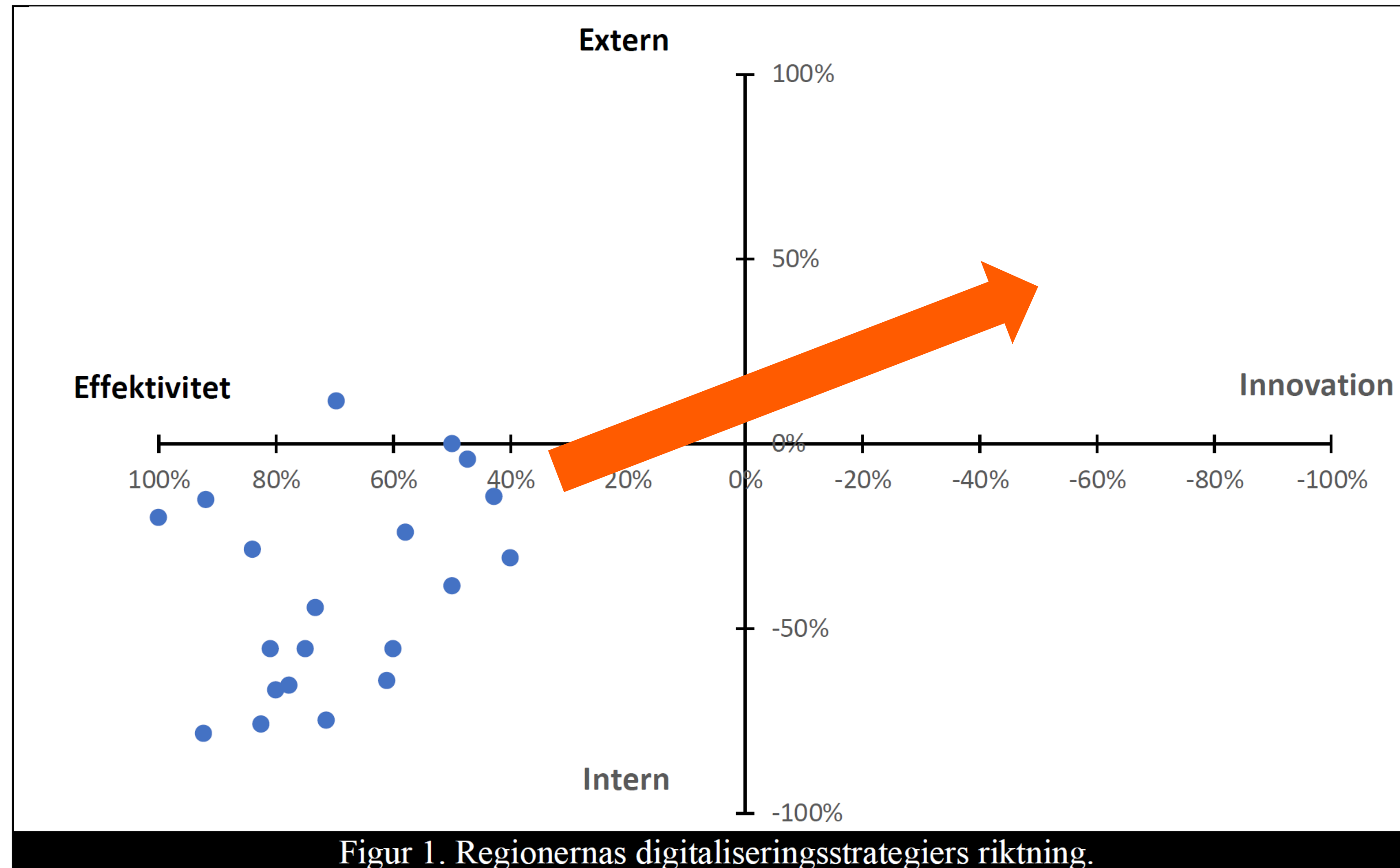


Digitala innovationer?

Använda digitalisering för att förenkla,
effektivisera, förädla och skapa nya värden



Utmaningen





The AI development is too fast for most of us to keep up with, and that is fine.

Daniel Akenine, Microsoft

AI

Den nya verktygslådan



AI

7 nivåer

1. Regelbaserade

Drar slutsatser från fördefinierade regler eller algoritmer.

2. Förstår sammanhang

Lär sig av interaktionen, kan till exempel förstå att "de" refererar till en grupp omnämnd i en tidigare mening. Kan ge svar som efterliknar hur en människa konverserar.

3. Domänspecifika

Är som experter och mästare inom ett område, väl över vad människor kan uppnå.

4. Resonerande

Följer inte enbart regler, utan kan resonera (deduktivt och induktivt) och dra slutsatser som efterliknar mänskligt tänkande. Kan också förbättra sin förmåga över tid, dock fortfarande inom en avgränsad uppgift eller given uppsättning data.

5. Generell intelligens – Artificial General Intelligence (AGI)

Förstår, lär sig och tillämpar kunskaper som en människa. Inte avgränsad till en uppgift, utan kan – precis som en människa – ta sig an nya tidigare okända uppgifter. Kan till exempel vara att lära sig ett nytt språk, utan tidigare erfarenhet av att lära sig ett språk. Kan också orientera sig i världen, så samma sätt som en människa.

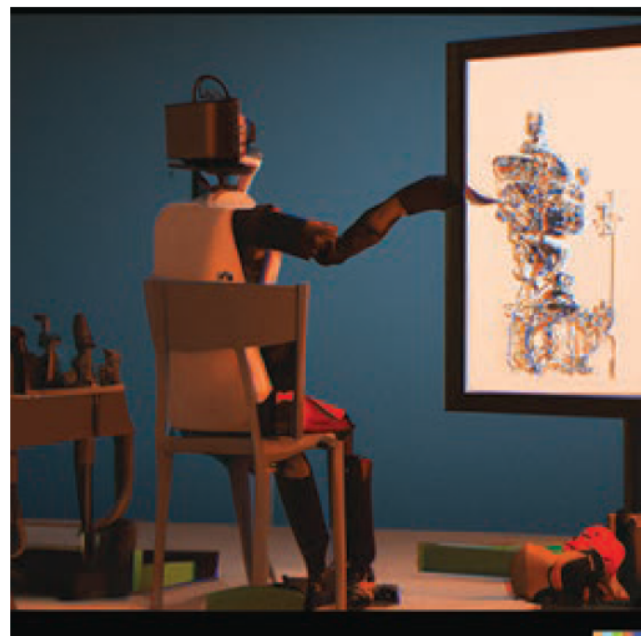
6. Överlägsen intelligens – Artificial Super Intelligence (ASI)

Har en kognitiv förmåga som är överlägsen människans. Kan vara kreativ och innovativ på sätt som vi som människor inte kan föreställa oss.

7. AI-singularitet

När AI i alla avseenden passerar mänsklig intelligens.

AI



AI that makes images

AI models that generate stunning imagery from simple phrases are evolving into powerful creative and commercial tools.

AMRITA MARINO, ERIK CARTER (AI)

OpenAI introduced a world of weird and wonderful mash-ups when its text-to-image model DALL-E was released in 2021. Type in a short description of pretty much anything, and the program spat out a picture of what you asked for in seconds.

DALL-E 2, unveiled in April 2022, was a massive leap forward. Google also launched its own image-making AI, called **Imagen**.

Yet the biggest game-changer was **Stable Diffusion**, an open-source text-to-image model released for free by UK-based startup Stability AI in August. Not only could Stable Diffusion produce some of the most stunning images yet, but it was designed to run on a (good) home computer.

By making text-to-image models accessible to all, Stability AI poured fuel on what was already an inferno of creativity and innovation. Millions of people have created tens of millions of images in just a few months. But there are problems, too.

Artists are caught in the middle of one of the biggest upheavals in a decade. And, just like language models, text-to-image generators can amplify the biased and toxic associations buried in training data scraped from the internet.

The tech is now being built into commercial software, such as Photoshop. Visual-effects artists and video-game studios are exploring how it can fast-track development pipelines. And text-to-image technology has already advanced to text-to-video. The AI-generated video clips demoed by Google, Meta, and others in the last few

months are only seconds long, but that will change. One day movies could be made just by feeding a script into a computer.

Nothing else in AI grabbed people's attention more last year—for the best and worst reasons. Now we wait to see what lasting impact these tools will have on creative industries—and the entire field of AI.

—WILL DOUGLAS HEAVEN

WHO

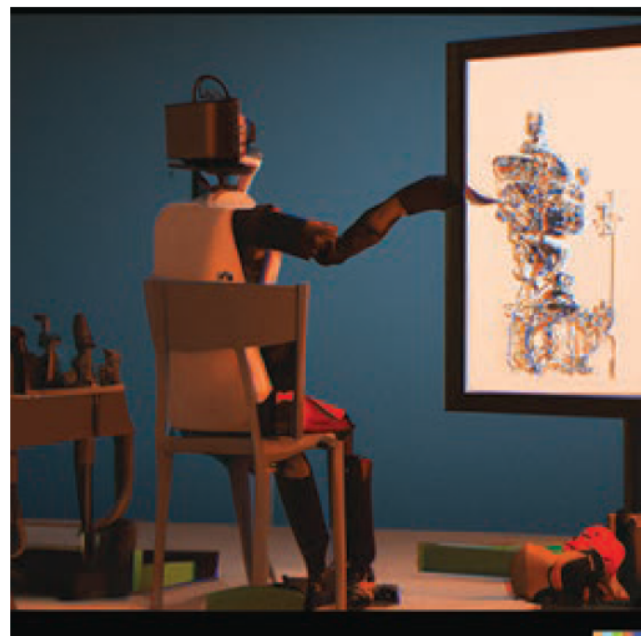
OpenAI,
Stability AI,
Midjourney,
Google

WHEN

Now

Källa: MIT Technology Review

AI



AI that makes images

AI models that generate stunning imagery from simple phrases are evolving into powerful creative and commercial tools.

AMRITA MARINO, ERIK CARTER (AI)

OpenAI introduced a world of weird and wonderful mash-ups when its text-to-image model DALL-E was released in 2021. Type in a short description of pretty much anything, and the program spat out a picture of what you asked for in seconds.

DALL-E 2, unveiled in April 2022, was a massive leap forward. Google also launched its own image-making AI, called **Imagen**.

Yet the biggest game-changer was **Stable Diffusion**, an open-source text-to-image model released for free by UK-based startup Stability AI in August. Not only could Stable Diffusion produce some of the most stunning images yet, but it was designed to run on a (good) home computer.

By making text-to-image models accessible to all, Stability AI poured fuel on what was already an inferno of creativity and innovation. Millions of people have created tens of millions of images in just a few months. But there are problems, too.

Artists are caught in the middle of one of the biggest upheavals in a decade. And, just like language models, text-to-image generators can amplify the biased and toxic associations buried in training data scraped from the internet.

The tech is now being built into commercial software, such as Photoshop. Visual-effects artists and video-game studios are exploring how it can fast-track development pipelines. And text-to-image technology has already advanced to text-to-video. The AI-generated video clips demoed by Google, Meta, and others in the last few

months are only seconds long, but that will change. One day movies could be made just by feeding a script into a computer.

Nothing else in AI grabbed people's attention more last year—for the best and worst reasons. Now we wait to see what lasting impact these tools will have on creative industries—and the entire field of AI.

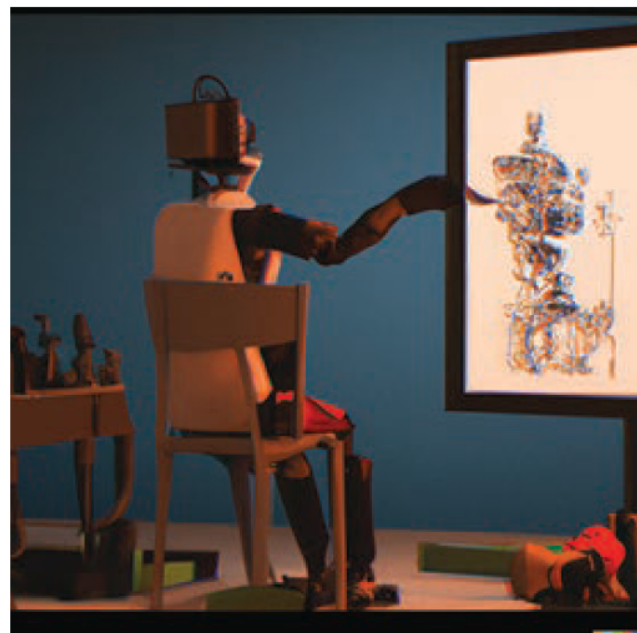
—WILL DOUGLAS HEAVEN

Källa: MIT Technology Review



"Théâtre D'opéra Spatial" by Jason M. Allen via Midjourney

AI



AI that makes images

AI models that generate stunning imagery from simple phrases are evolving into powerful creative and commercial tools.

AMRITA MARINO, ERIK CARTER (AI)

OpenAI introduced a world of weird and wonderful mash-ups when its text-to-image model DALL-E was released in 2021. Type in a short description of pretty much anything, and the program spat out a picture of what you asked for in seconds.

DALL-E 2, unveiled in April 2022, was a massive leap forward. Google also launched its own image-making AI, called **Imagen**.

Yet the biggest game-changer was **Stable Diffusion**, an open-source text-to-image model released for free by UK-based startup Stability AI in August. Not only could Stable Diffusion produce some of the most stunning images yet, but it was designed to run on a (good) home computer.

By making text-to-image models accessible to all, Stability AI poured fuel on what was already an inferno of creativity and innovation. Millions of people have created tens of millions of images in just a few months. But there are problems, too.

Artists are caught in the middle of one of the biggest upheavals in a decade. And, just like language models, text-to-image generators can amplify the biased and toxic associations buried in training data scraped from the internet.

The tech is now being built into commercial software, such as Photoshop. Visual-effects artists and video-game studios are exploring how it can fast-track development pipelines. And text-to-image technology has already advanced to text-to-video. The AI-generated video clips demoed by Google, Meta, and others in the last few

months are only seconds long, but that will change. One day movies could be made just by feeding a script into a computer.

Nothing else in AI grabbed people's attention more last year—for the best and worst reasons. Now we wait to see what lasting impact these tools will have on creative industries—and the entire field of AI.

—WILL DOUGLAS HEAVEN

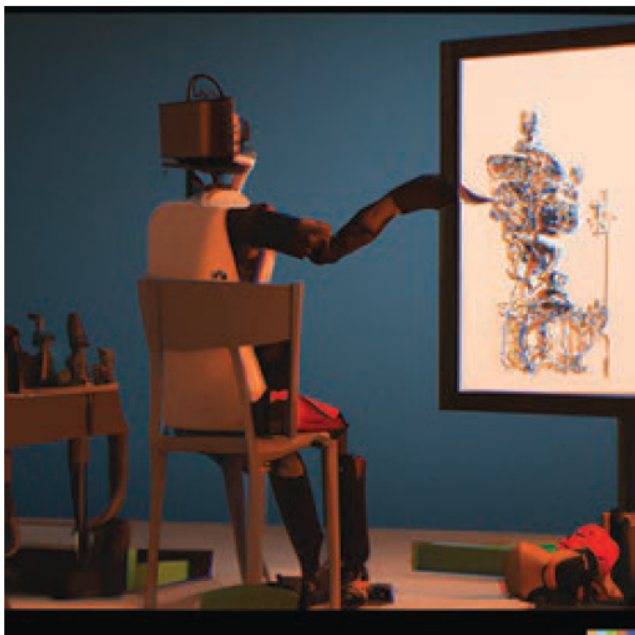
Källa: MIT Technology Review



"The Muse in the Machine," an original piece of artwork generated by the Stable Diffusion AI using a simple prompt and referencing the styles of several different artists. [-] ROB SALKOWITZ/STABLE

DIFFUSION

AI



AI that makes images

AI models that generate stunning imagery from simple phrases are evolving into powerful creative and commercial tools.

AMRITA MARINO, ERIK CARTER (AI)

OpenAI introduced a world of weird and wonderful mash-ups when its text-to-image model DALL-E was released in 2021. Type in a short description of pretty much anything, and the program spat out a picture of what you asked for in seconds.

DALL-E 2, unveiled in April 2022, was a massive leap forward. Google also launched its own image-making AI, called **Imagen**.

Yet the biggest game-changer was **Stable Diffusion**, an open-source text-to-image model released for free by UK-based startup Stability AI in August. Not only could Stable Diffusion produce some of the most stunning images yet, but it was designed to run on a (good) home computer.

By making text-to-image models accessible to all, Stability AI poured fuel on what was already an inferno of creativity and innovation. Millions of people have created tens of millions of images in just a few months. But there are problems, too.

Artists are caught in the middle of one of the biggest upheavals in a decade. And, just like language models, text-to-image generators can amplify the biased and toxic associations buried in training data scraped from the internet.

The tech is now being built into commercial software, such as Photoshop. Visual-effects artists and video-game studios are exploring how it can fast-track development pipelines. And text-to-image technology has already advanced to text-to-video. The AI-generated video clips demoed by Google, Meta, and others in the last few

months are only seconds long, but that will change. One day movies could be made just by feeding a script into a computer.

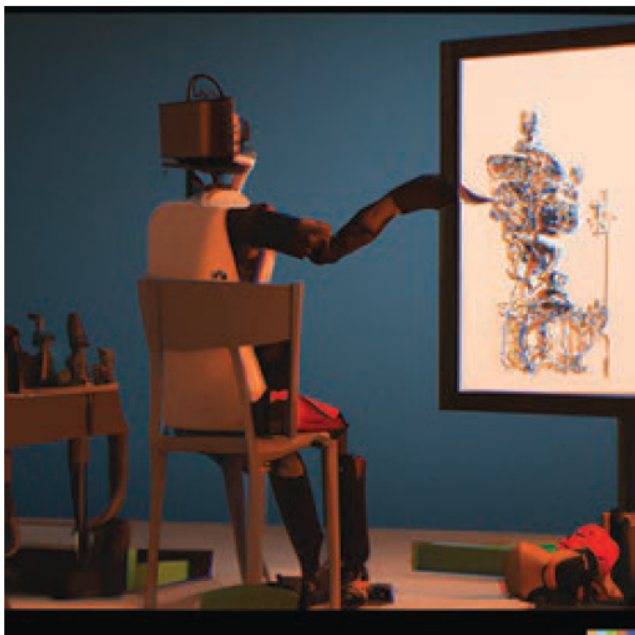
Nothing else in AI grabbed people's attention more last year—for the best and worst reasons. Now we wait to see what lasting impact these tools will have on creative industries—and the entire field of AI.

—WILL DOUGLAS HEAVEN

Källa: MIT Technology Review



AI



AI that makes images

AI models that generate stunning imagery from simple phrases are evolving into powerful creative and commercial tools.

AMRITA MARINO, ERIK CARTER (AI)

OpenAI introduced a world of weird and wonderful mash-ups when its text-to-image model DALL-E was released in 2021. Type in a short description of pretty much anything, and the program spat out a picture of what you asked for in seconds.

DALL-E 2, unveiled in April 2022, was a massive leap forward. Google also launched its own image-making AI, called **Imagen**.

Yet the biggest game-changer was **Stable Diffusion**, an open-source text-to-image model released for free by UK-based startup Stability AI in August. Not only could Stable Diffusion produce some of the most stunning images yet, but it was designed to run on a (good) home computer.

By making text-to-image models accessible to all, Stability AI poured fuel on what was already an inferno of creativity and innovation. Millions of people have created tens of millions of images in just a few months. But there are problems, too.

Artists are caught in the middle of one of the biggest upheavals in a decade. And, just like language models, text-to-image generators can amplify the biased and toxic associations buried in training data scraped from the internet.

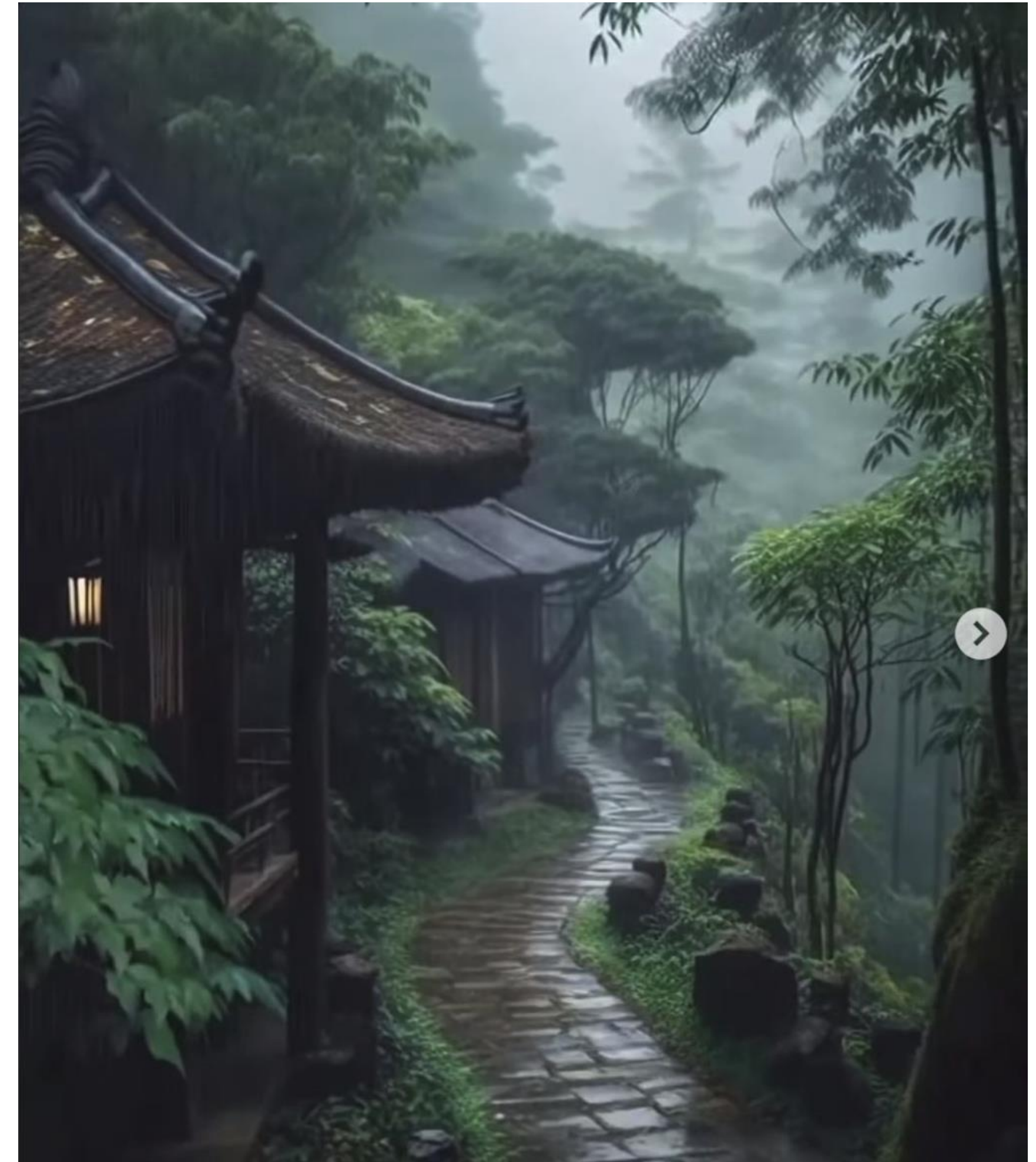
The tech is now being built into commercial software, such as Photoshop. Visual-effects artists and video-game studios are exploring how it can fast-track development pipelines. And text-to-image technology has already advanced to text-to-video. The AI-generated video clips demoed by Google, Meta, and others in the last few

months are only seconds long, but that will change. One day movies could be made just by feeding a script into a computer.

Nothing else in AI grabbed people's attention more last year—for the best and worst reasons. Now we wait to see what lasting impact these tools will have on creative industries—and the entire field of AI.

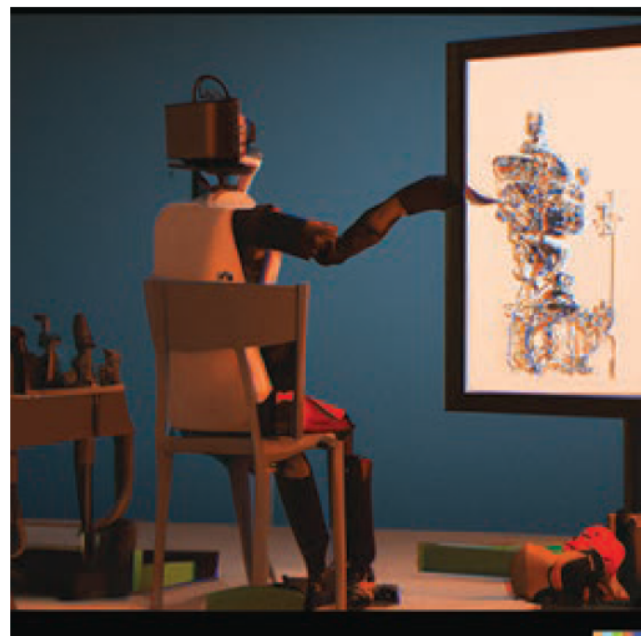
—WILL DOUGLAS HEAVEN

Källa: MIT Technology Review



Akerostudio

AI



AI that makes images

AI models that generate stunning imagery from simple phrases are evolving into powerful creative and commercial tools.

AMRITA MARINO, ERIK CARTER (AI)

OpenAI introduced a world of weird and wonderful mash-ups when its text-to-image model DALL-E was released in 2021. Type in a short description of pretty much anything, and the program spat out a picture of what you asked for in seconds.

DALL-E 2, unveiled in April 2022, was a massive leap forward. Google also launched its own image-making AI, called **Imagen**.

Yet the biggest game-changer was **Stable Diffusion**, an open-source text-to-image model released for free by UK-based startup Stability AI in August. Not only could Stable Diffusion produce some of the most stunning images yet, but it was designed to run on a (good) home computer.

By making text-to-image models accessible to all, Stability AI poured fuel on what was already an inferno of creativity and innovation. Millions of people have created tens of millions of images in just a few months. But there are problems, too.

Artists are caught in the middle of one of the biggest upheavals in a decade. And, just like language models, text-to-image generators can amplify the biased and toxic associations buried in training data scraped from the internet.

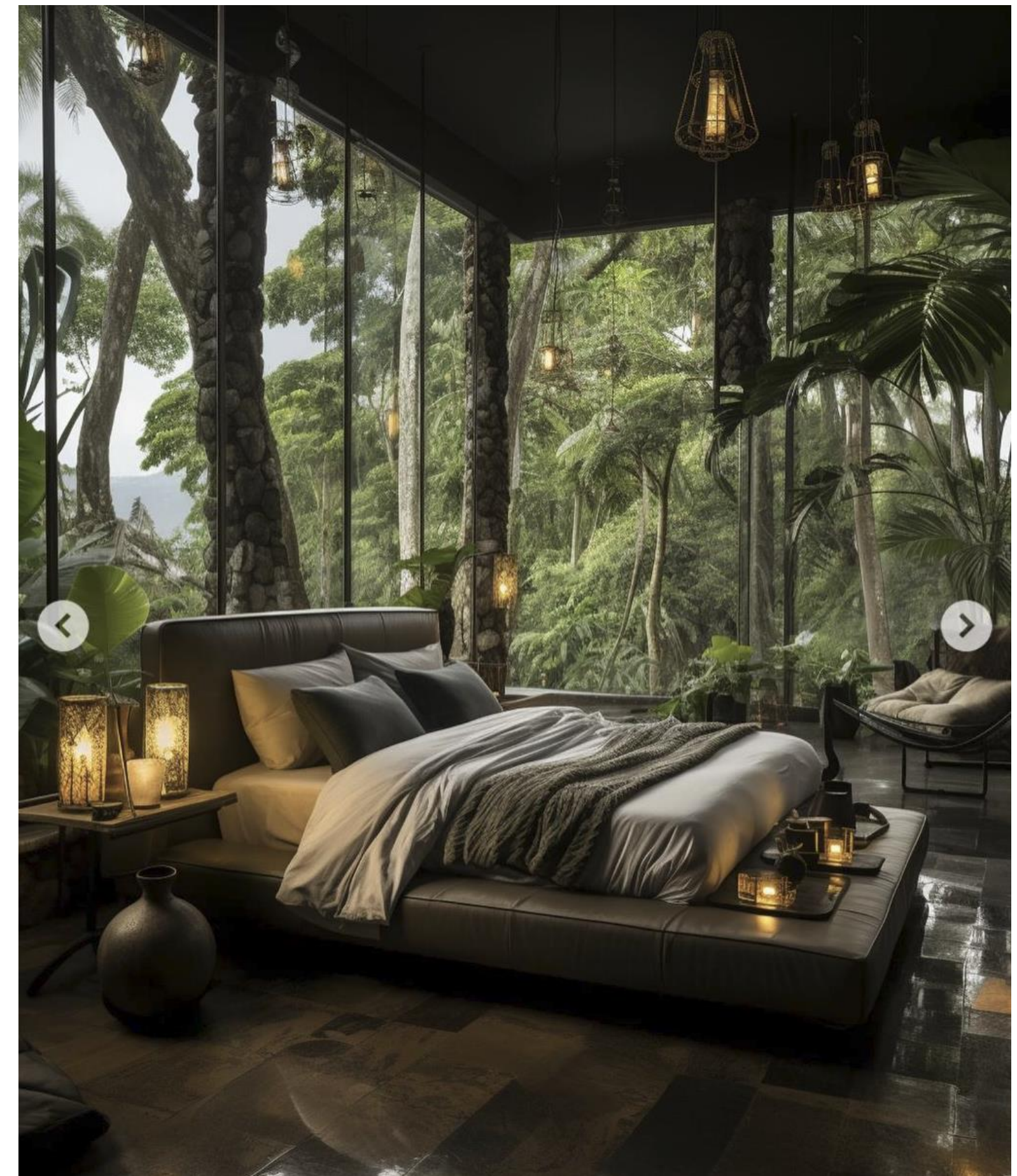
The tech is now being built into commercial software, such as Photoshop. Visual-effects artists and video-game studios are exploring how it can fast-track development pipelines. And text-to-image technology has already advanced to text-to-video. The AI-generated video clips demoed by Google, Meta, and others in the last few

months are only seconds long, but that will change. One day movies could be made just by feeding a script into a computer.

Nothing else in AI grabbed people's attention more last year—for the best and worst reasons. Now we wait to see what lasting impact these tools will have on creative industries—and the entire field of AI.

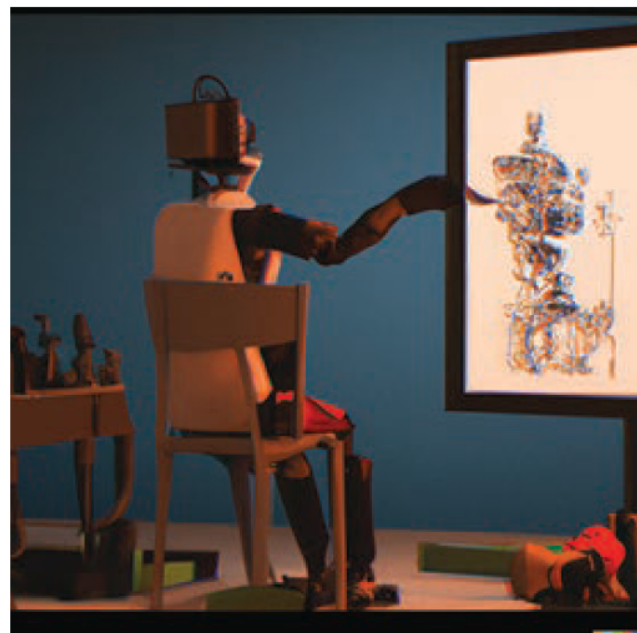
—WILL DOUGLAS HEAVEN

Källa: MIT Technology Review



Archdose

AI



AI that makes images

AI models that generate stunning imagery from simple phrases are evolving into powerful creative and commercial tools.

AMRITA MARINO, ERIK CARTER (AI)

OpenAI introduced a world of weird and wonderful mash-ups when its text-to-image model DALL-E was released in 2021. Type in a short description of pretty much anything, and the program spat out a picture of what you asked for in seconds.

DALL-E 2, unveiled in April 2022, was a massive leap forward. Google also launched its own image-making AI, called **Imagen**.

Yet the biggest game-changer was **Stable Diffusion**, an open-source text-to-image model released for free by UK-based startup Stability AI in August. Not only could Stable Diffusion produce some of the most stunning images yet, but it was designed to run on a (good) home computer.

By making text-to-image models accessible to all, Stability AI poured fuel on what was already an inferno of creativity and innovation. Millions of people have created tens of millions of images in just a few months. But there are problems, too.

Artists are caught in the middle of one of the biggest upheavals in a decade. And, just like language models, text-to-image generators can amplify the biased and toxic associations buried in training data scraped from the internet.

The tech is now being built into commercial software, such as Photoshop. Visual-effects artists and video-game studios are exploring how it can fast-track development pipelines. And text-to-image technology has already advanced to text-to-video. The AI-generated video clips demoed by Google, Meta, and others in the last few months are only seconds long, but that will change. One day movies could be made just by feeding a script into a computer.

Nothing else in AI grabbed people's attention more last year—for the best and worst reasons. Now we wait to see what lasting impact these tools will have on creative industries—and the entire field of AI.

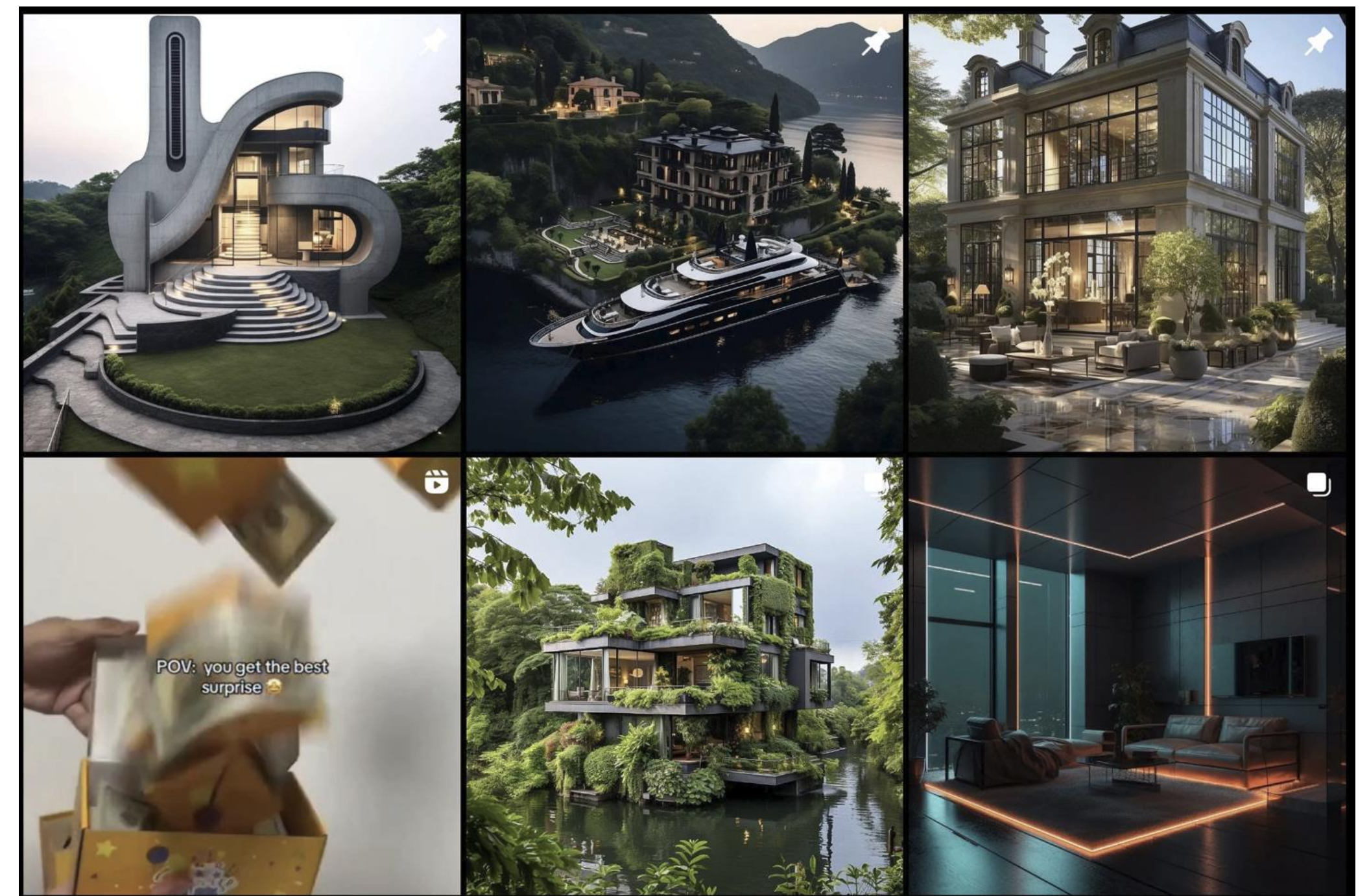
—WILL DOUGLAS HEAVEN

WHO

OpenAI,
Stability AI,
Midjourney,
Google

WHEN

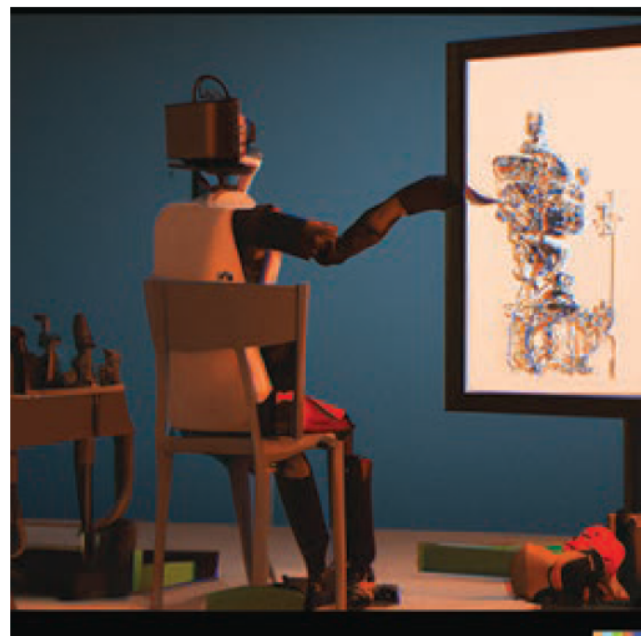
Now



Idreamhouse

Källa: MIT Technology Review

AI



AI that makes images

AI models that generate stunning imagery from simple phrases are evolving into powerful creative and commercial tools.

OpenAI introduced a world of weird and wonderful mash-ups when its text-to-image model DALL-E was released in 2021. Type in a short description of pretty much anything, and the program spat out a picture of what you asked for in seconds.

DALL-E 2, unveiled in April 2022, was a massive leap forward. Google also launched its own image-making AI, called **Imagen**.

Yet the biggest game-changer was **Stable Diffusion**, an open-source text-to-image model released for free by UK-based startup Stability AI in August. Not only could Stable Diffusion produce some of the most stunning images yet, but it was designed to run on a (good) home computer.

By making text-to-image models accessible to all, Stability AI poured fuel on what was already an inferno of creativity and innovation. Millions of people have created tens of millions of images in just a few months. But there are problems, too.

Artists are caught in the middle of one of the biggest upheavals in a decade. And, just like language models, text-to-image generators can amplify the biased and toxic associations buried in training data scraped from the internet.

The tech is now being built into commercial software, such as Photoshop. Visual-effects artists and video-game studios are exploring how it can fast-track development pipelines. And text-to-image technology has already advanced to text-to-video. The AI-generated video clips demoed by Google, Meta, and others in the last few

months are only seconds long, but that will change. One day movies could be made just by feeding a script into a computer.

Nothing else in AI grabbed people's attention more last year—for the best and worst reasons. Now we wait to see what lasting impact these tools will have on creative industries—and the entire field of AI.

—WILL DOUGLAS HEAVEN

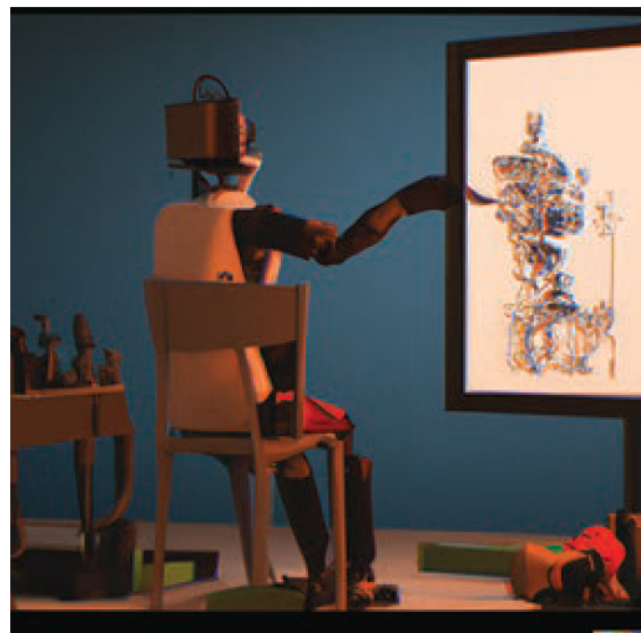
Källa: MIT Technology Review



(Image credit: John Mauriello)

Bildkälla: John Mauriello

AI



AI that makes images

AI models that generate stunning imagery from simple phrases are evolving into powerful creative and commercial tools.

OpenAI introduced a world of weird and wonderful mash-ups when its text-to-image model DALL-E was released in 2021. Type in a short description of pretty much anything, and the program spat out a picture of what you asked for in seconds.

DALL-E 2, unveiled in April 2022, was a massive leap forward. Google also launched its own image-making AI, called **Imagen**.

Yet the biggest game-changer was **Stable Diffusion**, an open-source text-to-image model released for free by UK-based startup Stability AI in August. Not only could Stable Diffusion produce some of the most stunning images yet, but it was designed to run on a (good) home computer.

By making text-to-image models accessible to all, Stability AI poured fuel on what was already an inferno of creativity and innovation. Millions of people have created tens of millions of images in just a few months. But there are problems, too.

Artists are caught in the middle of one of the biggest upheavals in a decade. And, just like language models, text-to-image generators can amplify the biased and toxic associations buried in training data scraped from the internet.

The tech is now being built into commercial software, such as Photoshop. Visual-effects artists and video-game studios are exploring how it can fast-track development pipelines. And text-to-image technology has already advanced to text-to-video. The AI-generated video clips demoed by Google, Meta, and others in the last few

months are only seconds long, but that will change. One day movies could be made just by feeding a script into a computer.

Nothing else in AI grabbed people's attention more last year—for the best and worst reasons. Now we wait to see what lasting impact these tools will have on creative industries—and the entire field of AI.

—WILL DOUGLAS HEAVEN

WHO

OpenAI,
Stability AI,
Midjourney,
Google

WHEN

Now

David Guetta says the future of music is in AI

🕒 1 day ago



Chart-topping DJ David Guetta has said "the future of music is in AI" after he used the technology to add a vocal in the style of Eminem to a recent song.

The DJ used two artificial intelligence sites to create lyrics and a rap in the style of the US star for a live show.

The French producer has said he will not release the track commercially.

But he said he thinks musicians will use AI as a tool to create new sounds in the future, because "every new music style comes from a new technology".

Speaking to BBC music correspondent Mark Savage at the Brit Awards, Guetta said: "I'm sure the future of music is in AI. For sure. There's no doubt. But as a tool."

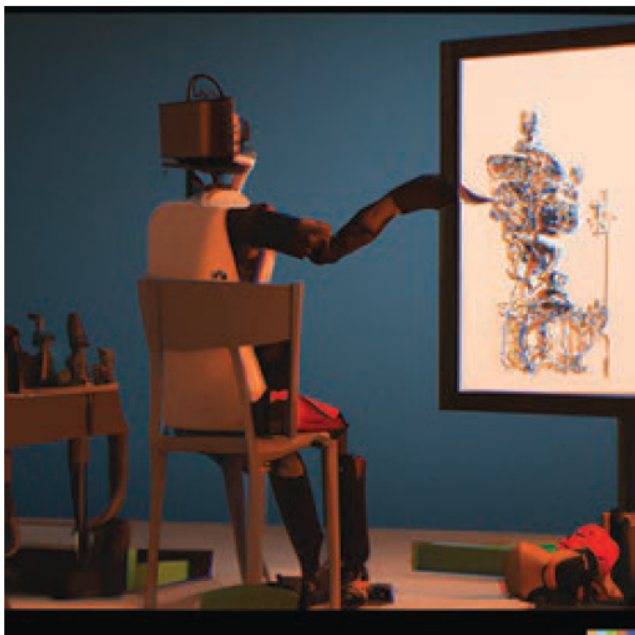
Guetta won the award for best producer at Saturday's ceremony.

"Nothing is going to replace taste," he said. "What defines an artist is, you have a certain taste, you have a certain type of emotion you want to express, and you're going to use all the modern instruments to do that."

Källa: MIT Technology Review

Källa: BBC News

AI



AI that makes images

AI models that generate stunning imagery from simple phrases are evolving into powerful creative and commercial tools.

AMRITA MARINO, ERIK CARTER (AI)

OpenAI introduced a world of weird and wonderful mash-ups when its text-to-image model DALL-E was released in 2021. Type in a short description of pretty much anything, and the program spat out a picture of what you asked for in seconds.

DALL-E 2, unveiled in April 2022, was a massive leap forward. Google also launched its own image-making AI, called **Imagen**.

Yet the biggest game-changer was **Stable Diffusion**, an open-source text-to-image model released for free by UK-based startup Stability AI in August. Not only could Stable Diffusion produce some of the most stunning images yet, but it was designed to run on a (good) home computer.

By making text-to-image models accessible to all, Stability AI poured fuel on what was already an inferno of creativity and innovation. Millions of people have created tens of millions of images in just a few months. But there are problems, too.

Artists are caught in the middle of one of the biggest upheavals in a decade. And, just like language models, text-to-image generators can amplify the biased and toxic associations buried in training data scraped from the internet.

The tech is now being built into commercial software, such as Photoshop. Visual-effects artists and video-game studios are exploring how it can fast-track development pipelines. And text-to-image technology has already advanced to text-to-video. The AI-generated video clips demoed by Google, Meta, and others in the last few

months are only seconds long, but that will change. One day movies could be made just by feeding a script into a computer.

Nothing else in AI grabbed people's attention more last year—for the best and worst reasons. Now we wait to see what lasting impact these tools will have on creative industries—and the entire field of AI.

—WILL DOUGLAS HEAVEN

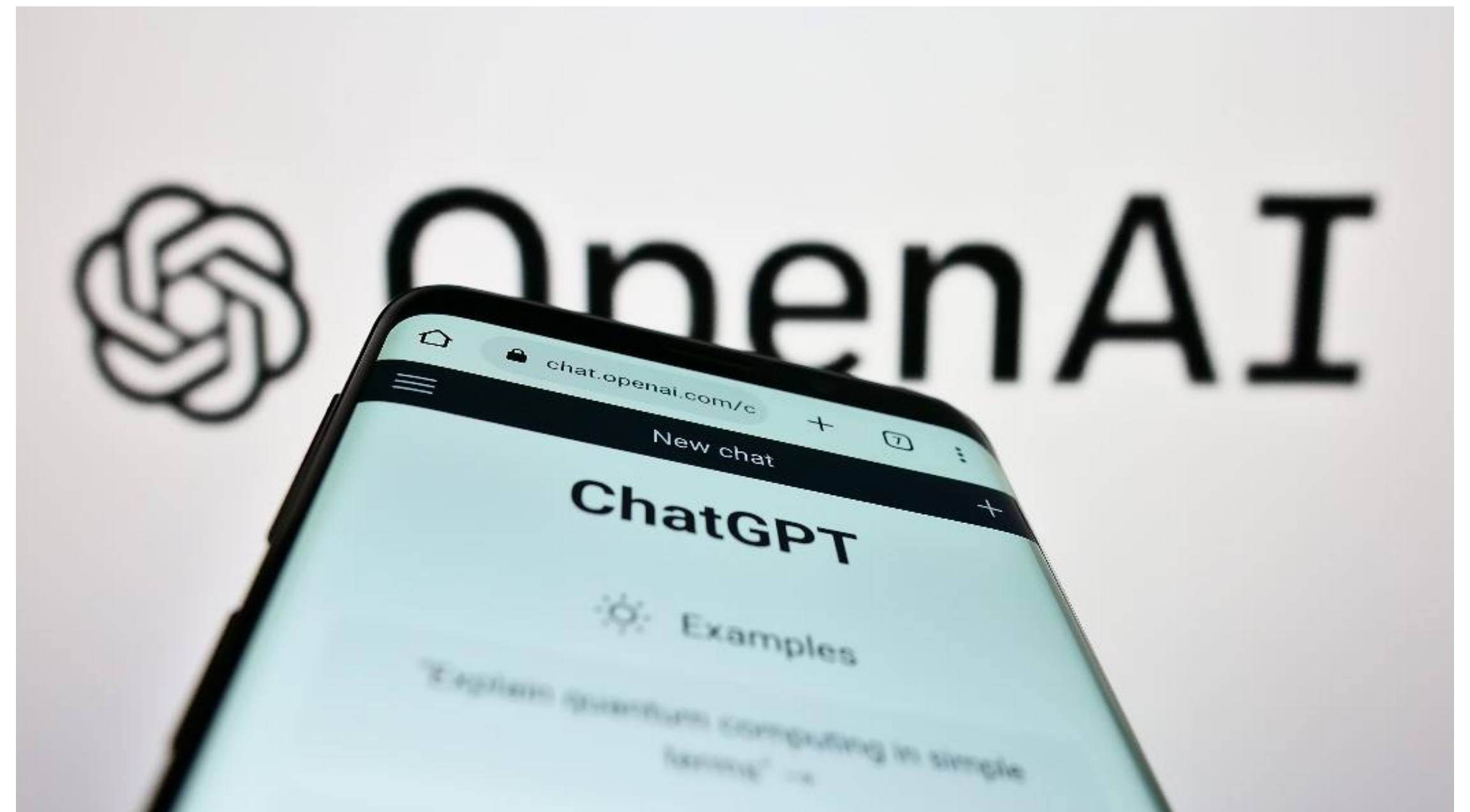
Källa: MIT Technology Review



Källa: Diep Nep, concept and deepfake by Bob de Jong

AI

Bearbeta texter, t ex förkorta
Sammanfatta texter
Analysera bilder
Skriva låttexter, dikter, romaner
Julrim...
Rådfråga...
Översätta
Skapa presentationer
...



CH

You

Vilken nytta kan seniorer ha av generativ AI?

**ChatGPT**

Generativ AI kan erbjuda flera fördelar för seniorer, både för underhållning och praktiskt stöd. Här är några exempel:

1. **Social interaktion och sällskap:** AI kan fungera som en social kompanjon för seniorer, särskilt för dem som lever ensamma. Genom att föra konversationer och erbjuda sällskap kan AI hjälpa till att minska känslor av ensamhet och isolering.
2. **Hjälp med vardagliga uppgifter:** AI kan ge påminnelser om mediciner, schemalagda aktiviteter, och hjälpa till med att organisera dagliga rutiner, vilket kan vara särskilt användbart för seniorer med minnesproblem eller demens.
3. **Hälsomonitorering:** Genom att integrera med smarta hem-enheter och bärbar teknik kan AI övervaka hälsotillstånd och varna vid potentiella hälsoproblem eller nödsituationer.
4. **Underhållning och lärande:** AI kan rekommendera böcker, musik, filmer eller spel baserat på personliga preferenser. Det kan också hjälpa till med att lära ut nya färdigheter eller hobbies, som språkinläring eller konst.
5. **Tillgänglighet och anpassning:** AI kan anpassas för att hjälpa seniorer med olika funktionsnedsättningar, till exempel genom röststyrning för dem med begränsad rörlighet eller anpassade gränssnitt för personer med synnedsättning.
6. **Mental stimulans:** Genom spel och kognitiva övningar kan AI bidra till mental stimulans, vilket är viktigt för att upprätthålla kognitiv hälsa.
7. **Informationssökning:** AI kan hjälpa seniorer att enkelt hitta information på internet, vilket kan vara särskilt användbart för dem som inte är vana vid digital teknik.
8. **Personlig assistent:** AI kan fungera som en personlig assistent, hjälpa till med att skicka meddelanden, organisera möten eller till och med handla online.

Genom dessa funktioner kan generativ AI förbättra livskvaliteten för seniorer och hjälpa dem att förbli oberoende och engagerade i sina samhällen.





Mike's mum had 4 kids; 3 of them are Luis, Drake and Matilda. What is the name of 4th kid?



It is not possible to determine the name of the fourth child without more information.



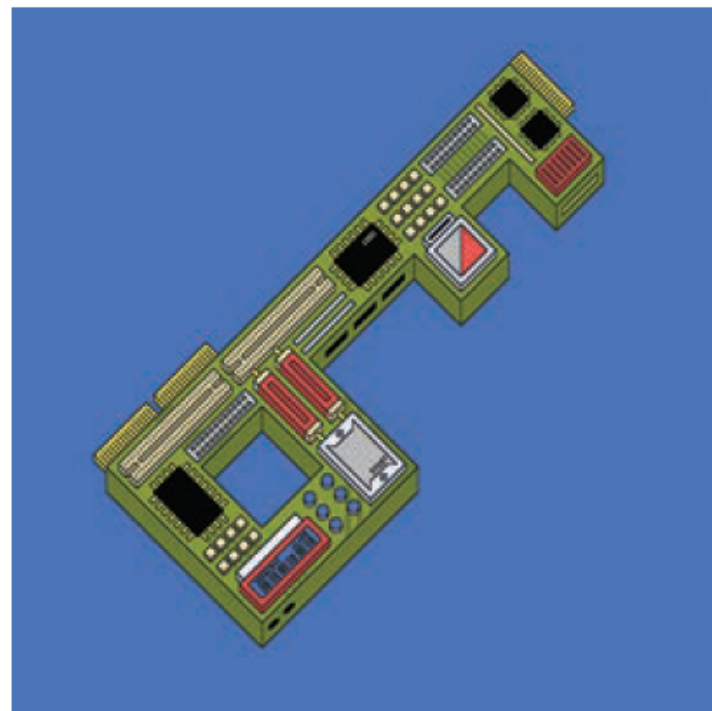
The answer is in the question



I apologize for the confusion. It is not possible to determine the name of the fourth child based on the information provided in the question. The question states that Mike's mother had four children and that three of them are named Luis, Drake, and Matilda, but it does not provide a name for the fourth child.



Chip-design



A chip design that changes everything

Computer chip designs are expensive and hard to license. That's all about to change thanks to the popular open standard known as RISC-V.

Ever wonder how your smartphone connects to your Bluetooth speaker, given they were made by different companies? Well, Bluetooth is an open standard, meaning its design specifications, such as the required frequency and its data encoding protocols, are publicly available. Software and hardware based on open standards—Ethernet, Wi-Fi, PDF—have become household names.

Now an open standard known as RISC-V (pronounced “risk five”) could change how companies create computer chips.

Chip companies such as Intel and Arm have long kept their blueprints proprietary. Customers would buy off-the-shelf chips, which may have had capabilities irrelevant to their product, or pay more for a custom design. Since RISC-V is an open standard, anyone can use it to design a chip, free of charge.

RISC-V specifies design norms for a computer chip’s instruction set. The

instruction set describes the basic operations that a chip can do to change the values its transistors represent—for example, how to add two numbers. RISC-V’s simplest design has just 47 instructions. But RISC-V also offers other design norms for companies seeking chips with more complex capabilities.

About 3,100 members worldwide, including companies and academic institutions, are now collaborating via the nonprofit RISC-V International to establish and develop these norms. In February 2022, Intel announced a \$1 billion fund that will, in part, support companies building RISC-V chips.

RISC-V chips have already begun to pop up in earbuds, hard drives, and AI processors, with 10 billion cores already shipped. Companies are also working on RISC-V designs for data centers and spacecraft. In a few years, RISC-V proponents predict, the chips will be everywhere. — SOPHIA CHEN

WHO
RISC-V
International,
Intel, SiFive,
SemiFive,
China RISC-V
Industry
Alliance

WHEN
Now

Neuron Processing Unit (NPU) market:

Video och audio

- Esperanto Technologies
- Tenstorrent
- Untether

Audio

- Atlazo
- DSP Group
- Syntiant
- Telink
- Eta Compute

Video och bild

- AI Storm
- Ambarella
- Mediatek
- Starfive
- Vastai
- Brainchip
- Recogni

Generella tillämpningar

- IBM
- Xilinx
- Flex Logix
- Deep Vision
- Mythic
- Synthara
- LG
- NXP
- GreenWaves
- Maxim

Computational capacity of the fastest supercomputers

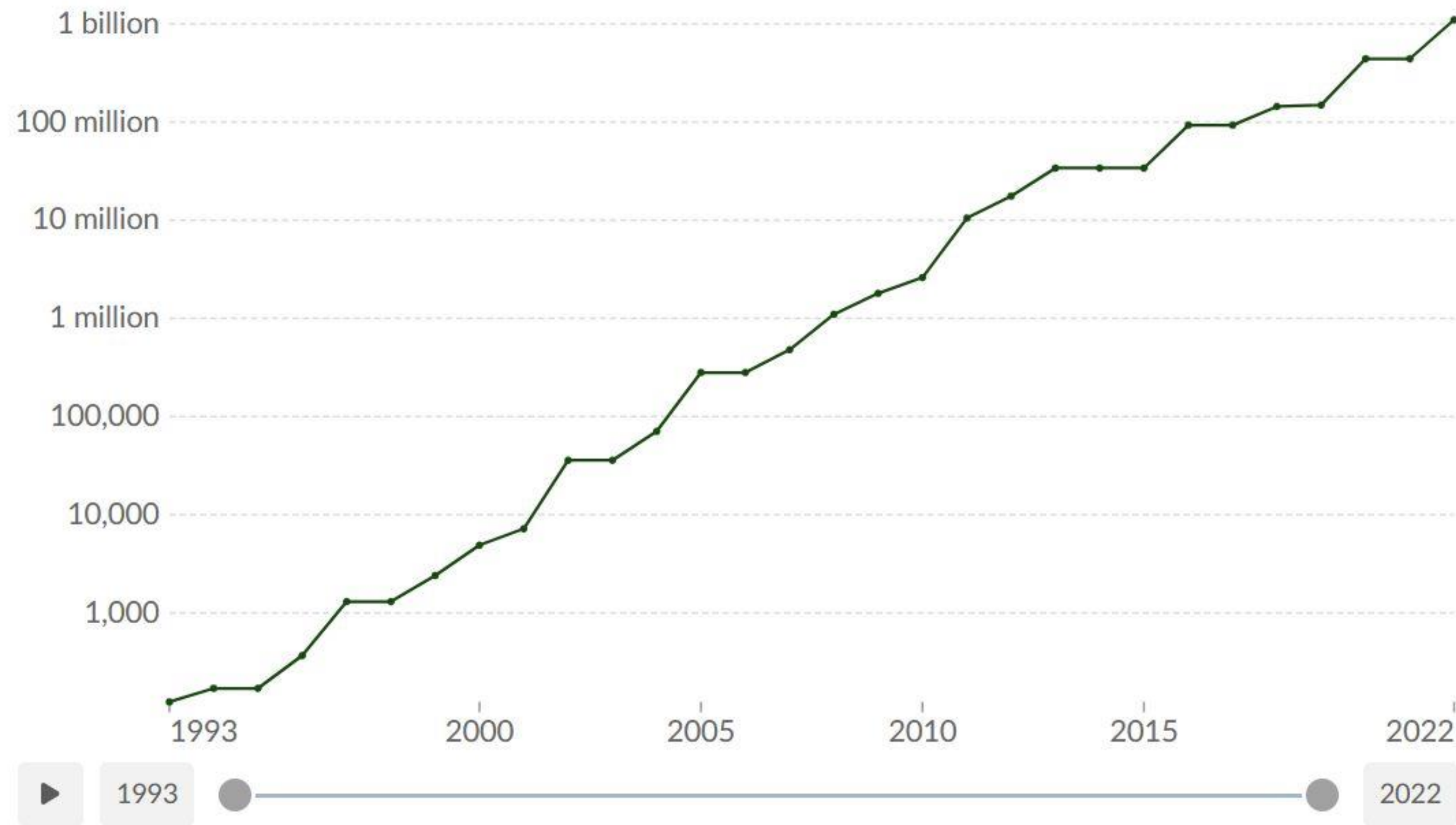
Our World
in Data

The number of floating-point operations carried out per second by the fastest supercomputer in any given year. This is expressed in gigaFLOPS, equivalent to 10^9 floating-point operations per second.

Table

Chart

Settings



Data source: TOP500 Supercomputer Database (2023) - [Learn more about this data](#)

OurWorldInData.org/technological-change | CC BY

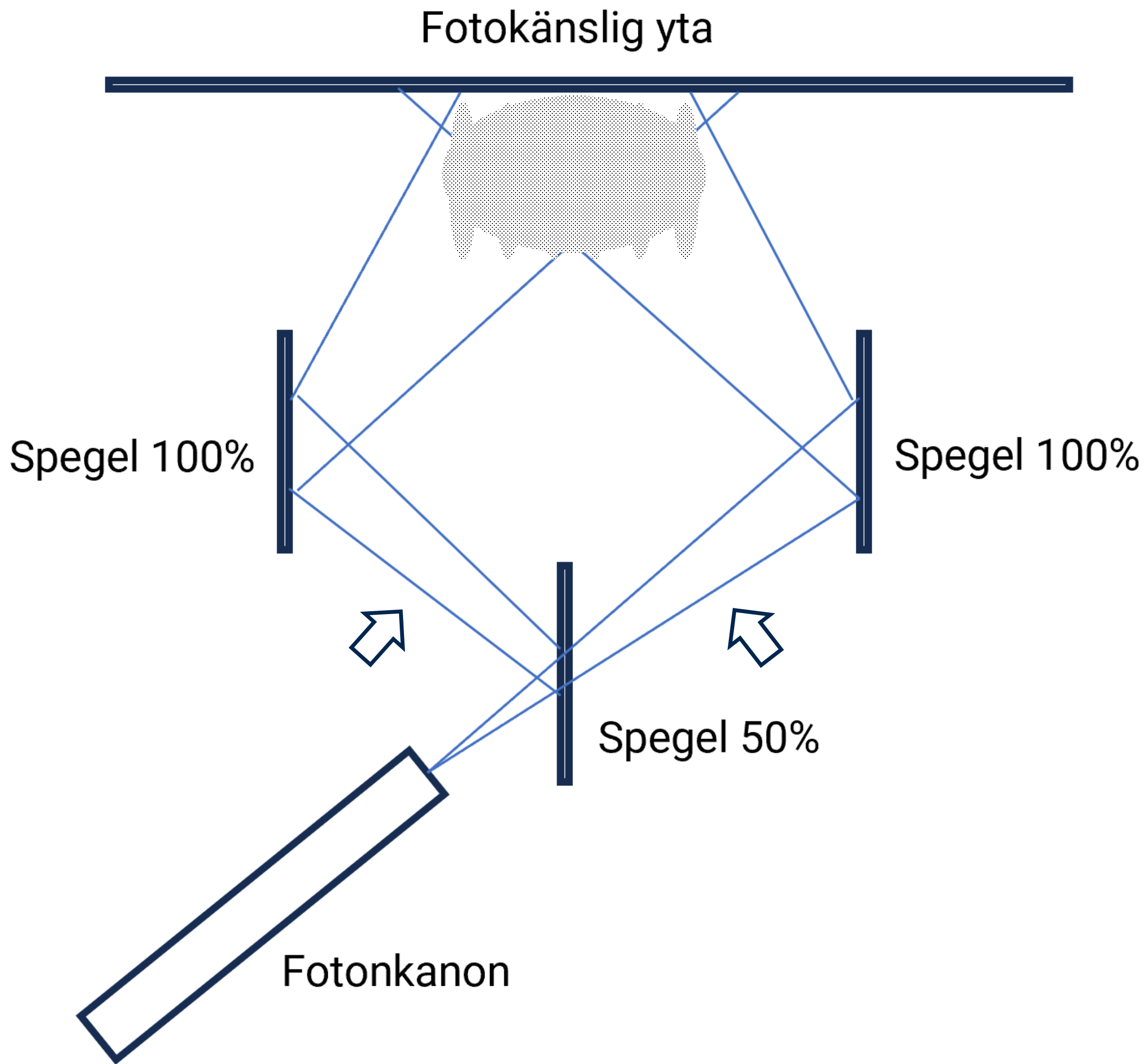




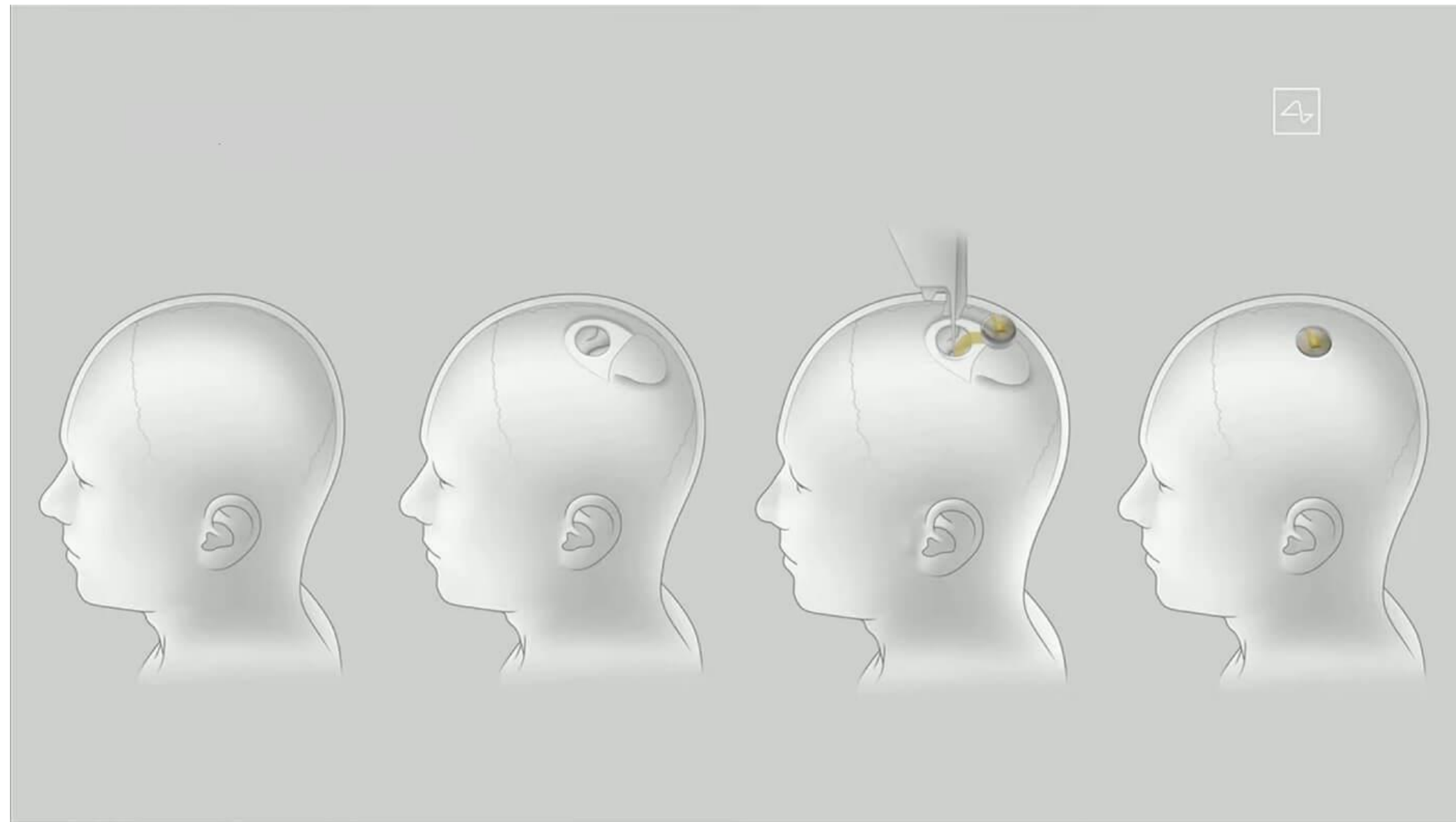
FEB. 13 / FEB. 20, 2023



time.com



Biohacking



Källa: Neuralink

The Neuralink App

The Neuralink app is being designed to allow you to control your keyboard and mouse directly with the activity of your brain, just by thinking about it.



BE IN CONTROL

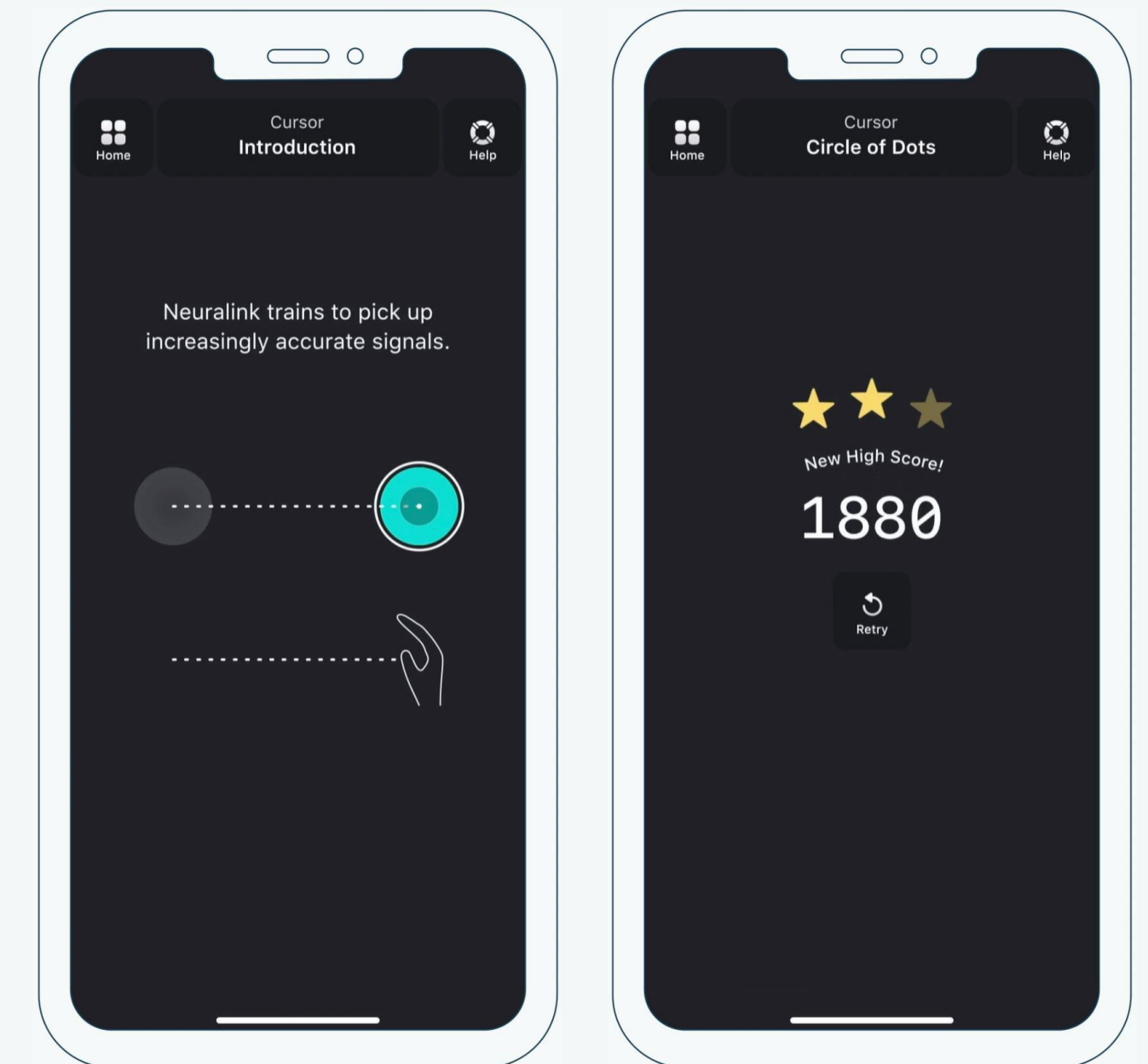
The Neuralink app would guide you through exercises that would teach you to control your device.

SIMULATION.
NOT FDA-APPROVED OR
AVAILABLE.



BE AUTONOMOUS

With a Bluetooth connection, you would be able to potentially control any mouse or keyboard with your thoughts.



<https://sverigesradio.se/artikel/forskare-aterskapade-pink-floyd-lat-fran-hjarnaktivitet>



Bildkälla: Mayo Clinic

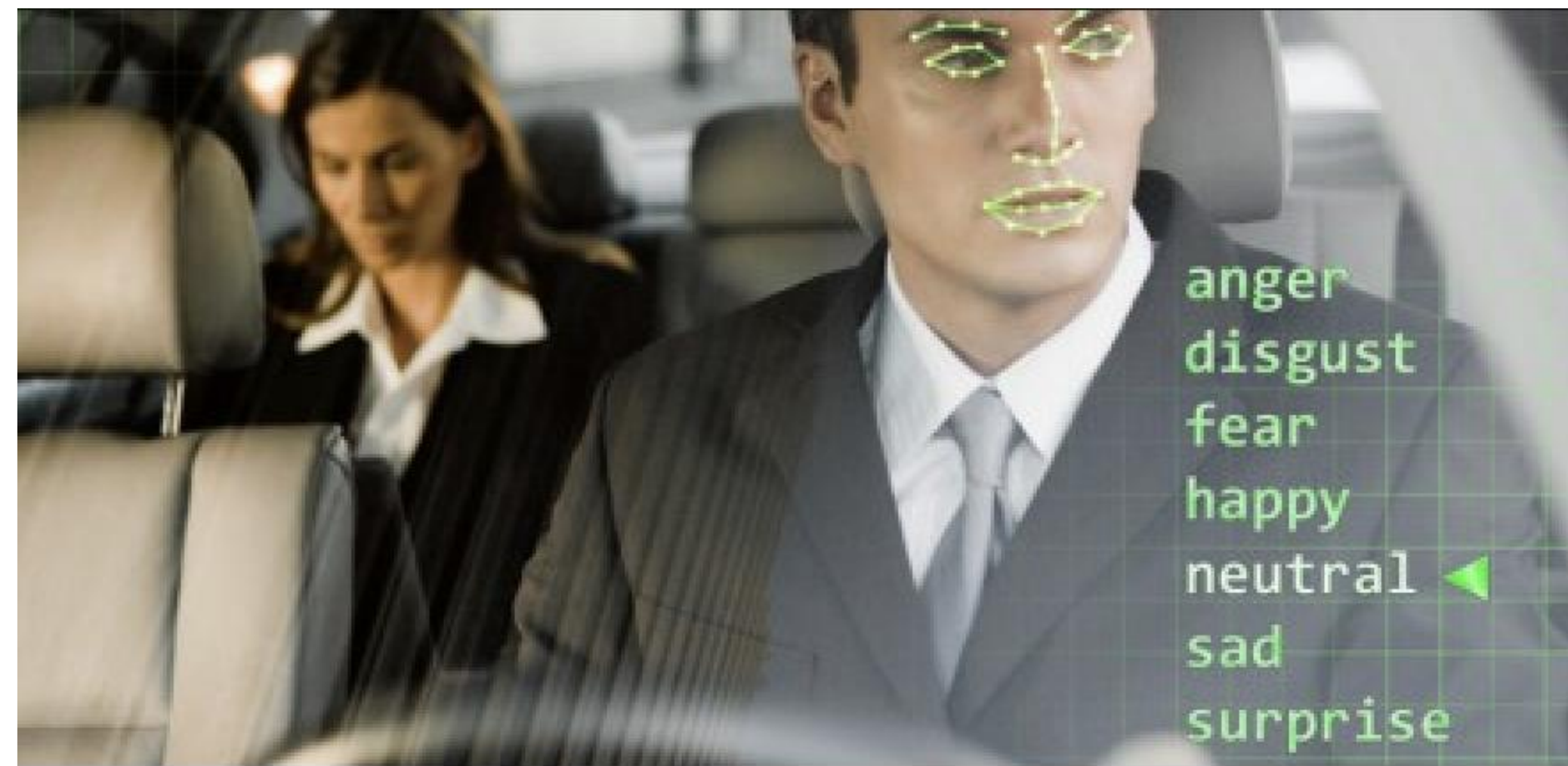
Allen Zderad med näthinneprotesen Second Sight Argus II inopererad. Second Sight uppköpta av Cortigent.



Bildkälla: Disney Research

Med TeslaTouch känns bilden som en tekanna av metall.

Affective computing



Bildkälla: Peugeot

Wearable computing (Quanified self)



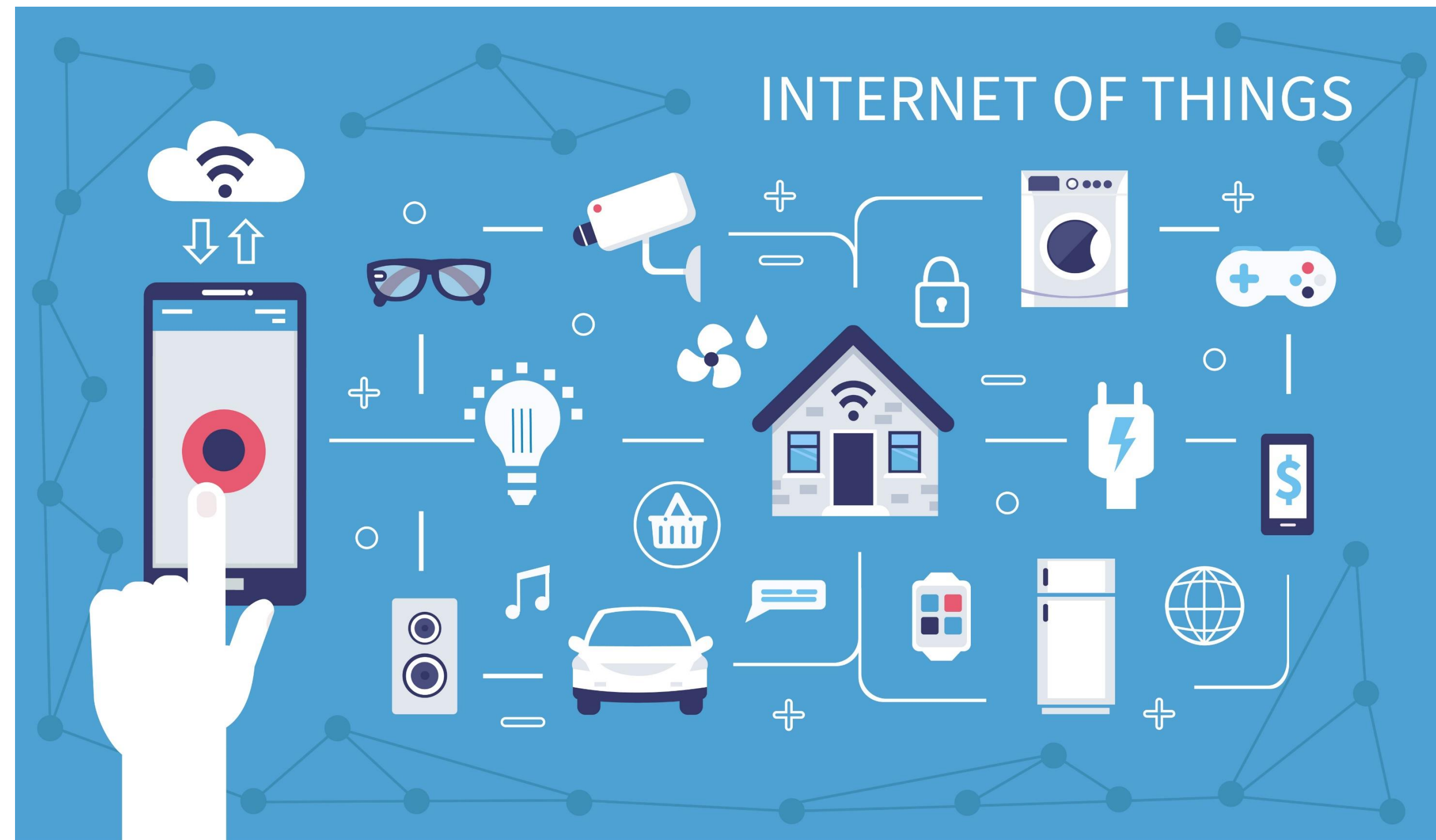
Bildkälla: Electricfoxy

Smarta uppkopplade prylar

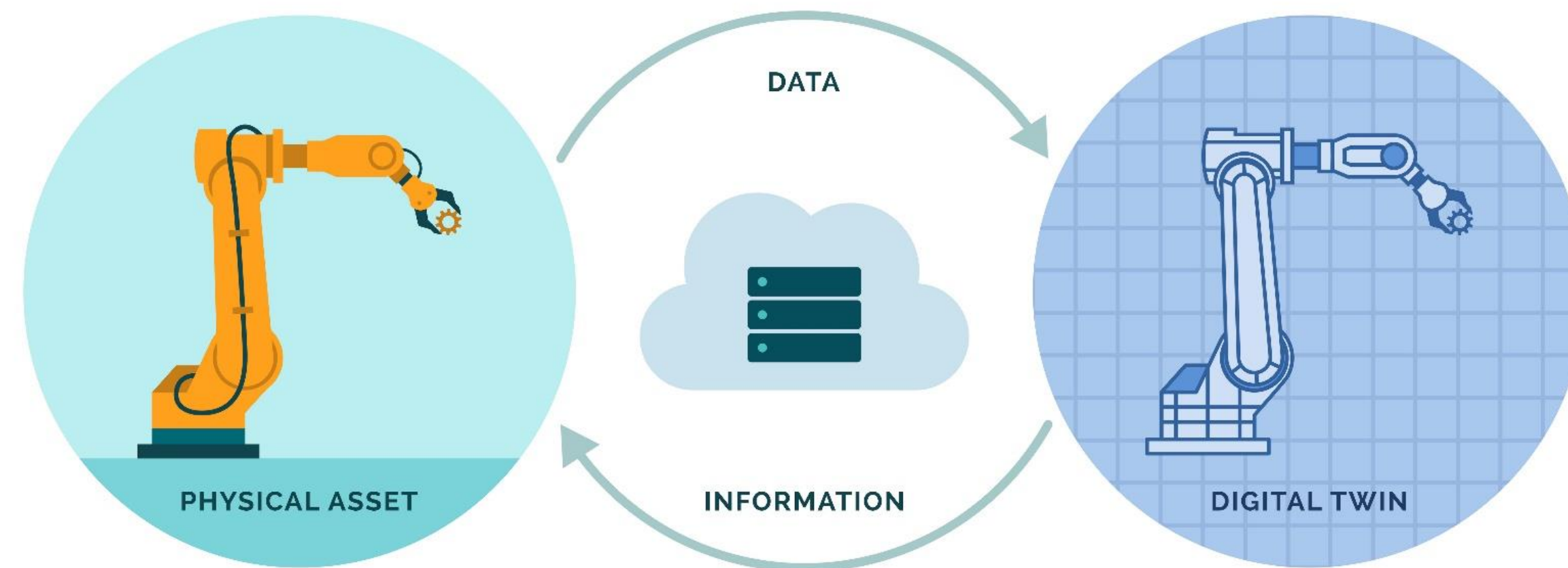
IoT och Matter

 matter
The Foundation for
Connected Things

One protocol to connect compatible devices and systems with one another. Smart home devices should be secure, reliable, and seamless to use. And with Matter, they are.



Digitala tvillingar





Artificial Intelligence . Latest News

From Buildings to Streets, Singapore Emerges as the Largest Digital Twin Country



Market Trends

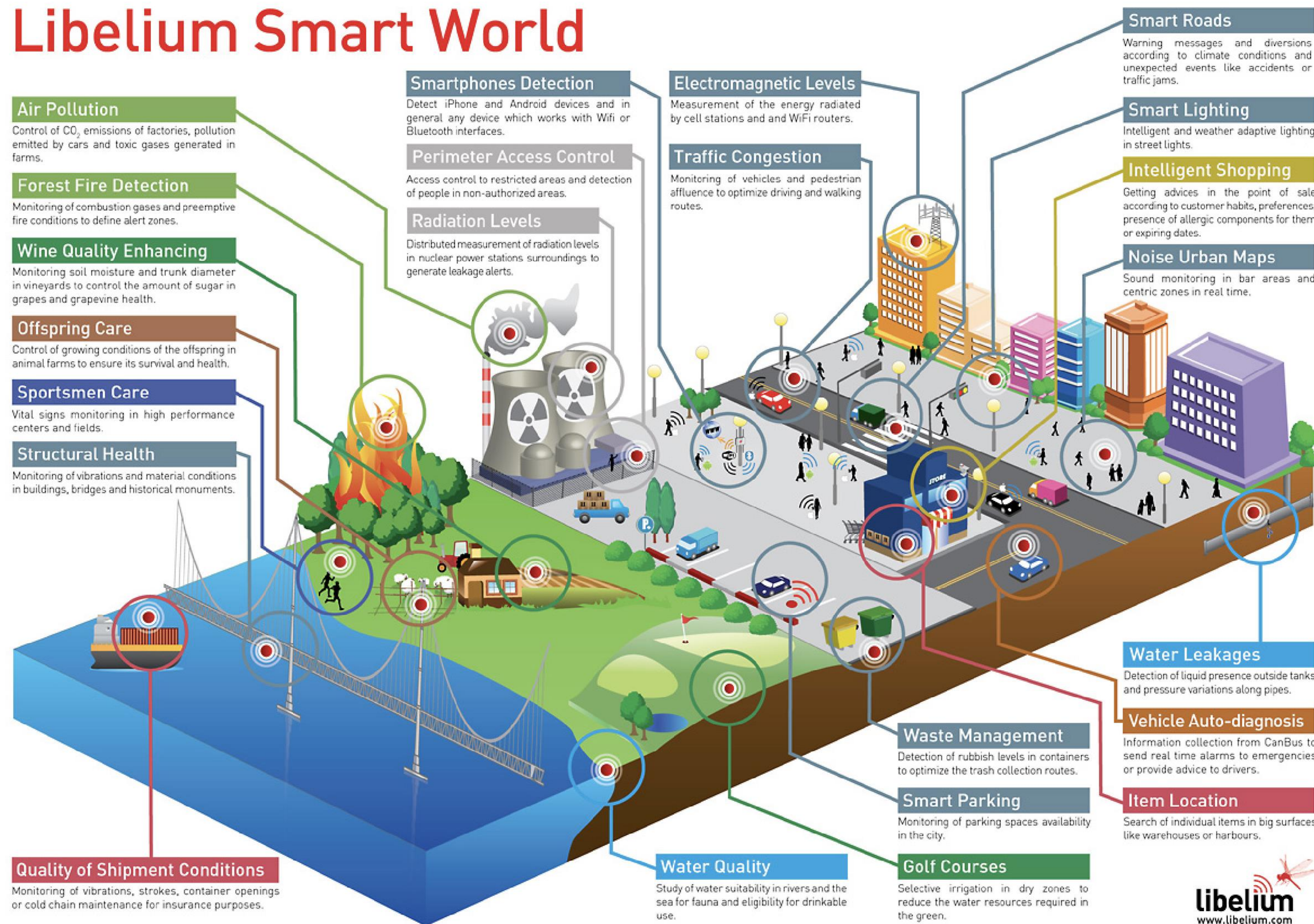
September 5, 2022 . 2 mins read



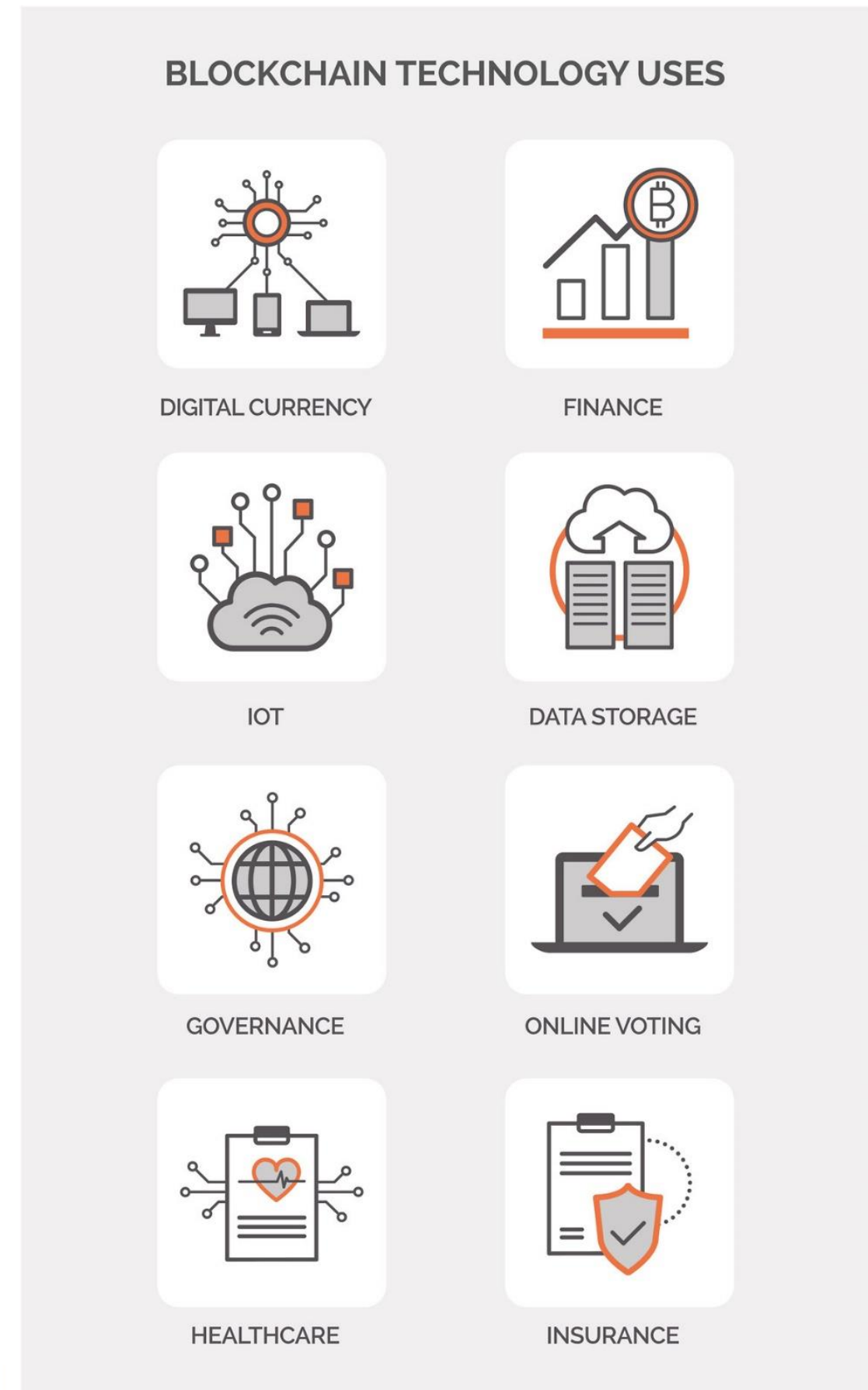
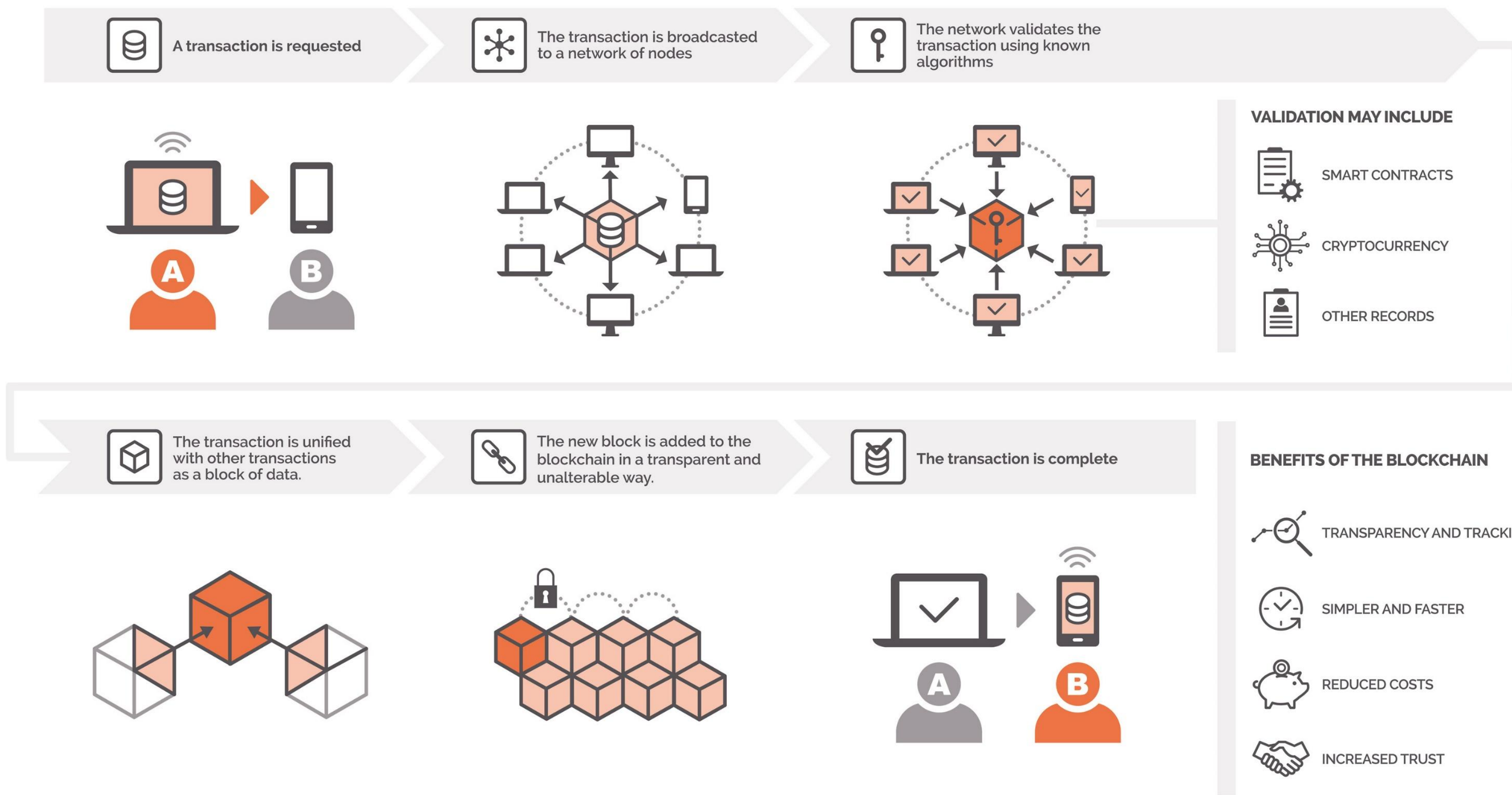
Singapore becomes the largest twin digital city,
with help of AI and Machine Learning; Vizzio
cloned the entire city.

Källa: Analytics Insight

Libelium Smart World



Blockkedjor





Kryptovalutor

- Det har bara börjat...
- Betalningar
- Automatiserade värdeflöden
 - Smarta kontrakt
 - DeFi, decentraliserade finansiella tjänster
- Värdeutvecklingar (HEX)



Bitcoin



Ethereum



Dogecoin



USD Coin



Solana



Uniswap



Shiba Inu



Polkadot



Monero



Zcash



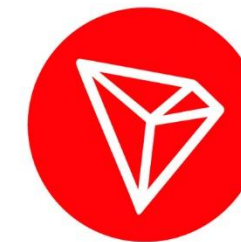
Avalanche



Polygon



Litecoin



Tron



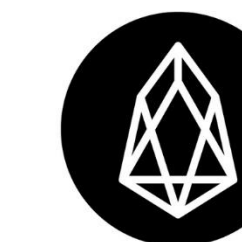
Algorand



Wrapped Bitcoin



VeChain



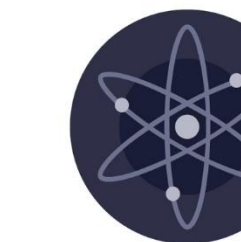
EOS



Tezos



Tether



Cosmos



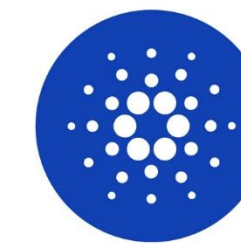
Axie



Bitcoin Cash



Binance



Cardano



Stellar Lumens



Bitcoin Core



Zcash



Ripple



Neo



Dash

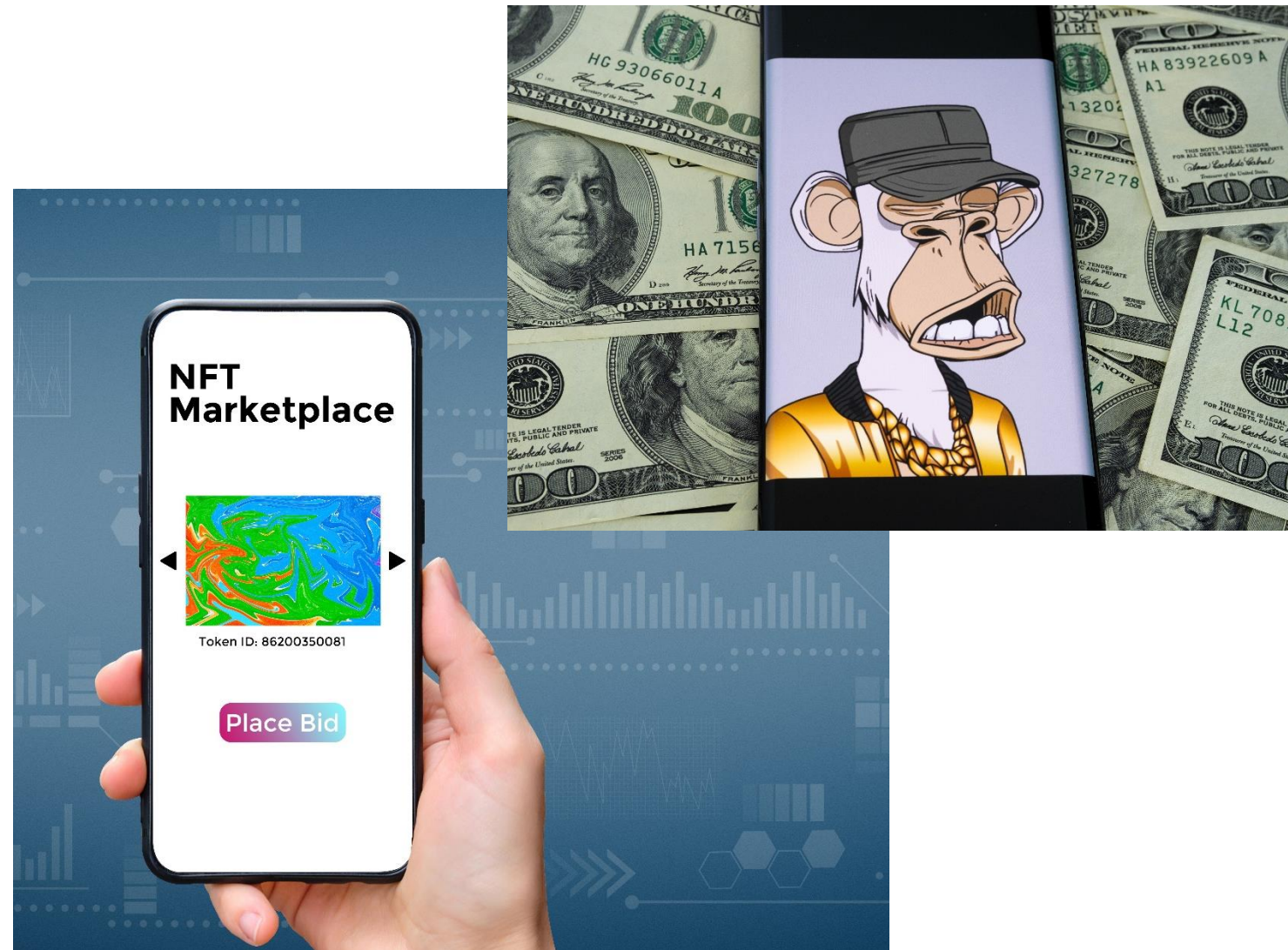


Chainlink



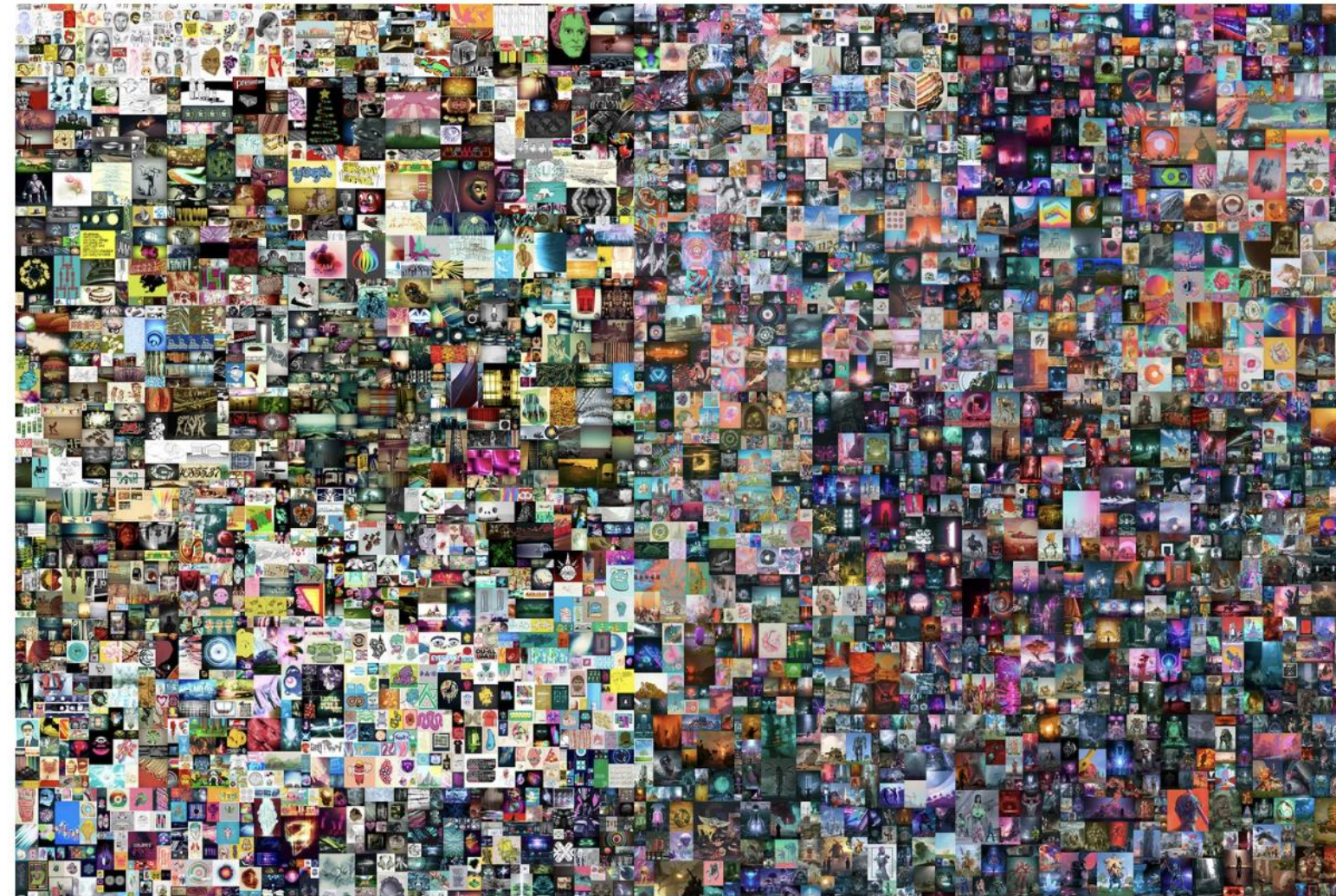
Binance USD

Blockkedjor + NFT



TECH / CREATORS / FEATURED STORIES

Beeple sold an NFT for \$69 million



/ Through a first-of-its-kind auction at Christie's

By [JACOB KASTRENAKES / @jake_k](#)

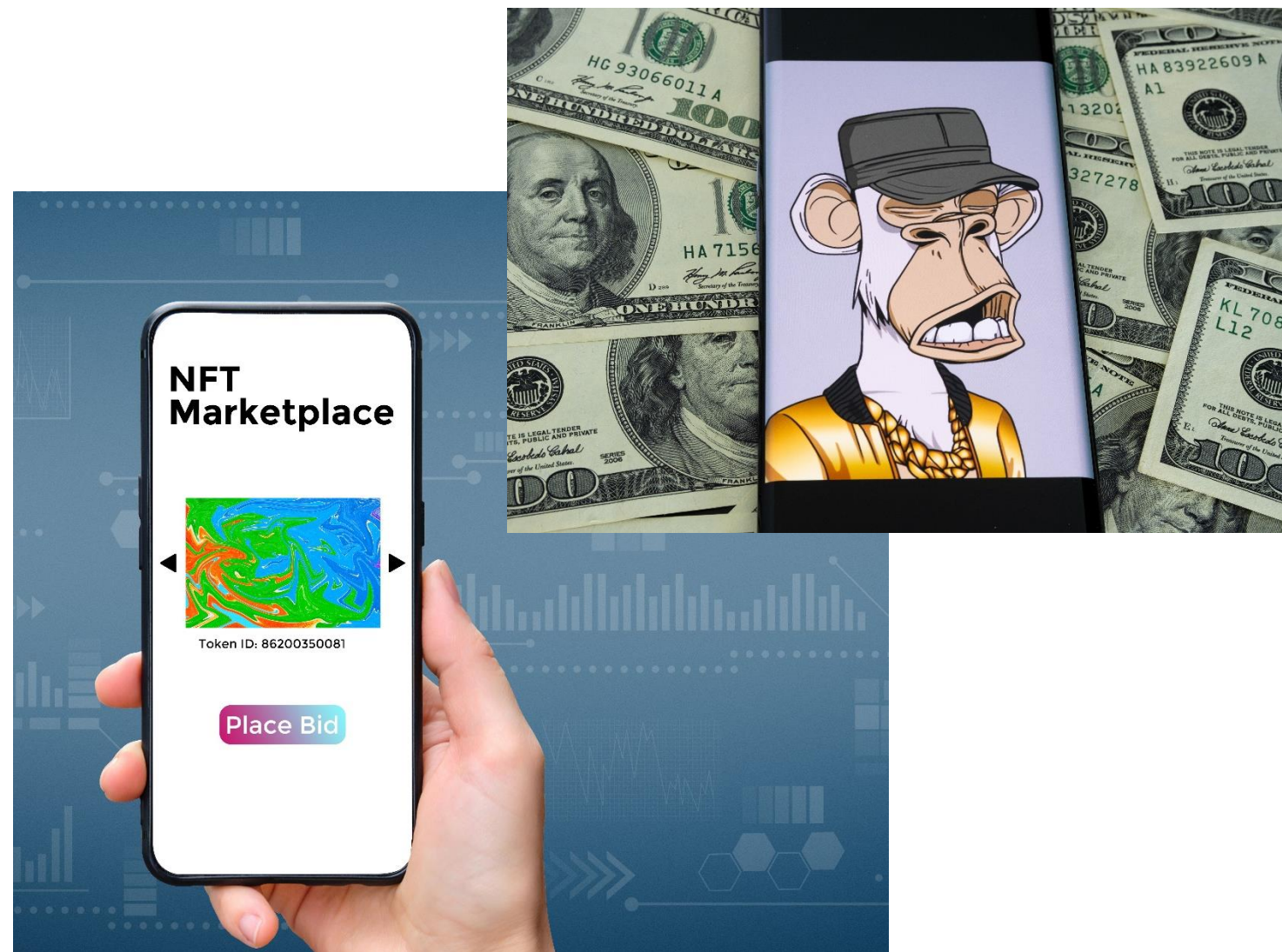
Mar 11, 2021, 4:09 PM GMT+1 | [0 Comments](#) / [0 New](#)



Beeple's collage, *Everydays: The First 5000 Days*, sold at Christie's. Image: Beeple

Källa: The Verge

Blockkedjor + NFT



Digitala original

- Det har bara börjat...

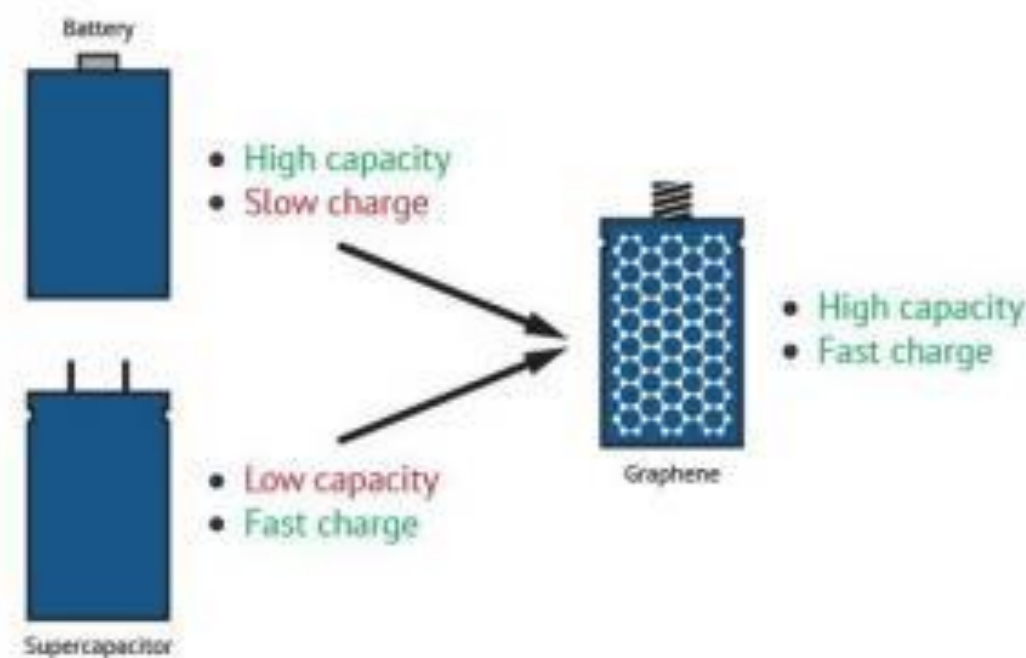
Exempel:

- Historiken är ett värde i sig
- Royalty vid varje vidareförsäljning
- Vad som händer med originalet i realtid

Phygital NFT:s – är detta framtiden för handel?

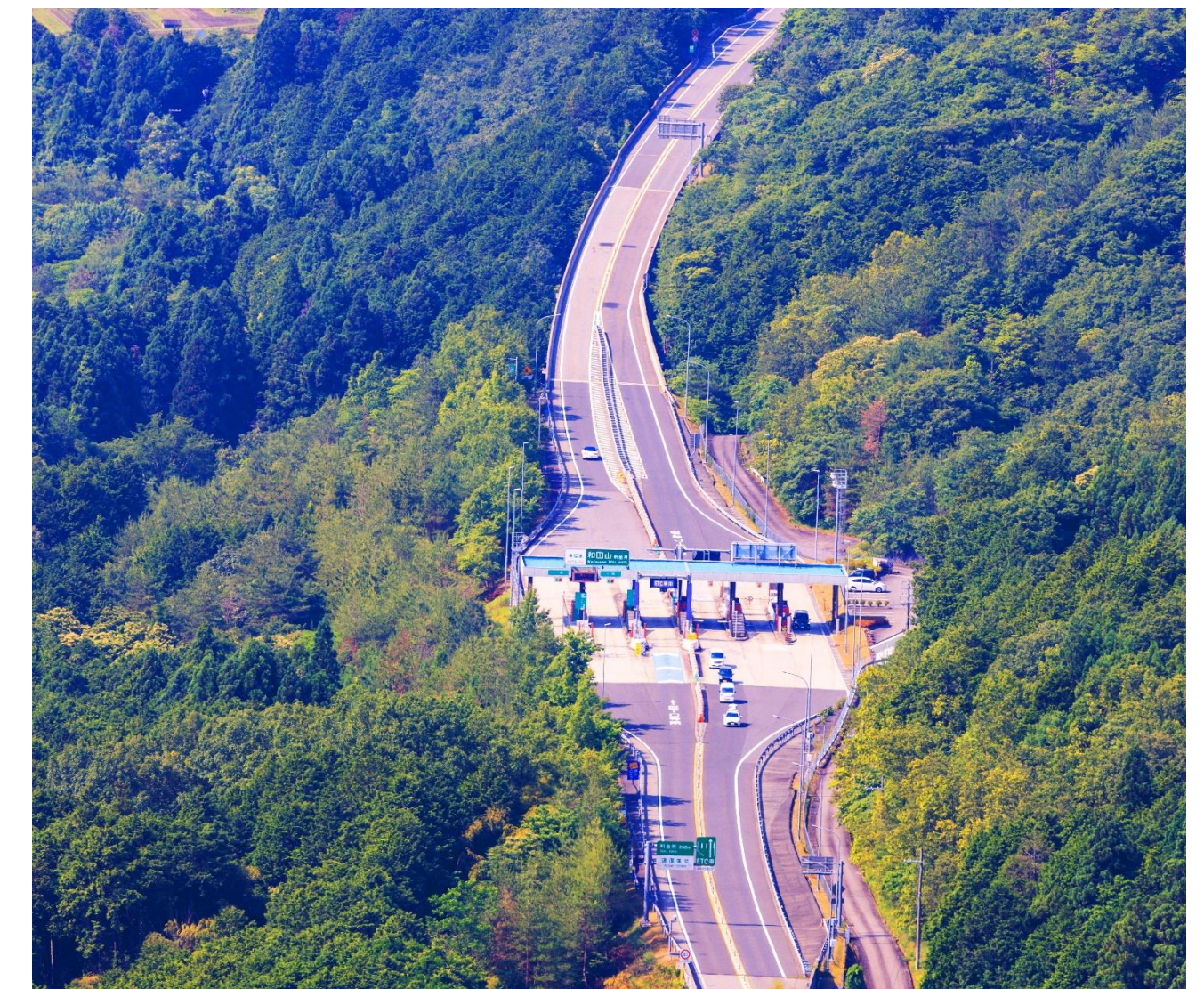
- Bevis på ägande av ett fysiskt föremål
- Förhindra olagliga kopior
- Nya digitala kuponger, växla in eller få vid köp (ex Nouns Vision)
- Lojalitetsprogram (ex Starbucks Odyssey, The Whiskey Barrel, Bstroy, Cult and Rain)

Elektrifieringen



Genombrott för batterier

- Grafenbatterier
 - 7,5 ggr dagens kapacitet
 - Korta laddtider
- Kvantbatterier
 - Omedelbar laddning
 - Drive-through charging

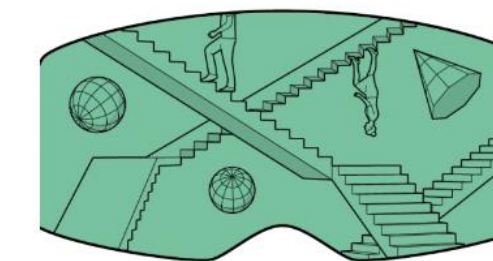


Metaverse



Nya gränssnitt

- VR, AR, MR
- Metaverse
- Biohacking



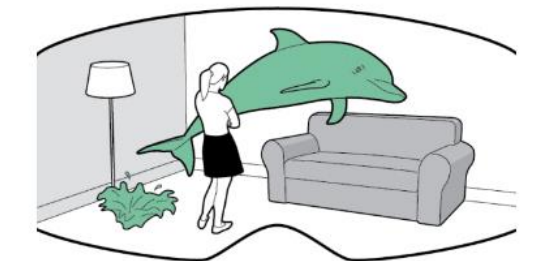
Virtual Reality

VR places the user in another location entirely. Whether that location is computer-generated or captured by video, it entirely occludes the user's natural surroundings.



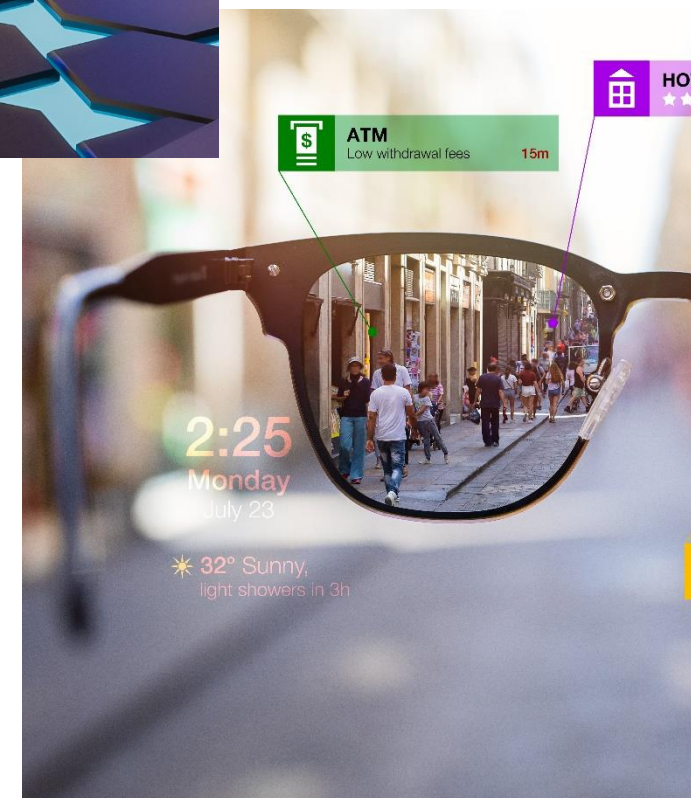
Augmented Reality

In augmented reality—like Google Glass or the Yelp app's Monocle feature on mobile devices—the visible natural world is overlaid with a layer of digital content.



Mixed Reality

In technologies like Magic Leap's, virtual objects are integrated into—and responsive to—the natural world. A virtual ball under your desk, for example, would be blocked from view unless you bent down to look at it. In theory, MR could become VR in a dark room.





Ikea Place

Framtiden större än delarna



Syn

Bearbeta och tolka bild och video

Utforskande

Analysera stora datamängder och hitta mönster och relationer

- Higher capacity
- Faster charging
- Light weight
- Flexibility
- High temperature range

BRAIN ACTIVITY MODEL

Framtida scenarier

Kritiska framgångsfaktorer allt mer kritiska



- Hantera ständiga kriser
- Väderkatastrofer, brist på vatten, brist på mat, social oro, lokala och globala konflikter, epidemier
- Tekniken har skapat många problem, tekniken kommer också att lösa många problem
- Problem = Business Opportunities!



Kommer ni att kunna möta framtiden utan förstå teknik?

Framtida scenarier



TEKNIK



ENERGI



KOMPETENS

Kommande genombrott

- Quantum Computing – 1000 cubits, 10 000 cubits...
- Supraledare/superconductor – 21 grader
- CPU:s, NPU:s ... baserade på supraledare
- Batterikapacitet – kvantbatterier -- game changer
- Batterikapacitet – närmast: grafenbatterier
- Biohacking – integrationer direkt med hjärnan
- Biohacking – simulering av sinnen
- AI – samtidig maskinlärning och tillämpning (i realtid)
- Nya material – som vi skapar på molekylär nivå

Samhällsutvecklingen är teknikdriven
Blir förmågan att kunna hantera digital teknik avgörande?



Konkurrens om kompetent arbetskraft

Reskilling needs



Source: Future of Jobs Report 2020, World Economic Forum.

Top 10 skills of 2025

Type of skill

- Problem-solving
- Self-management
- Working with people
- Technology use and development

-  Analytical thinking and innovation
-  Active learning and learning strategies
-  Complex problem-solving
-  Critical thinking and analysis
-  Creativity, originality and initiative
-  Leadership and social influence
-  Technology use, monitoring and control
-  Technology design and programming
-  Resilience, stress tolerance and flexibility
-  Reasoning, problem-solving and ideation

Source: Future of Jobs Report 2020, World Economic Forum.

Kontakt

Christer Berg
christer.berg@digitalalyftet.se
christer.berg@nextmoose.se

