Gerd Leonhard, Futurist & CEO The Futures Ag

TECHNOLOGY
vs.
HUMANITY
Gerd Leonhard

techvshuman.com

@gleonhard

gerdtube.com

gerd.cloud

The

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futuristgerd.com

Impact of AI a Education, Wo

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The Next 10 Yea

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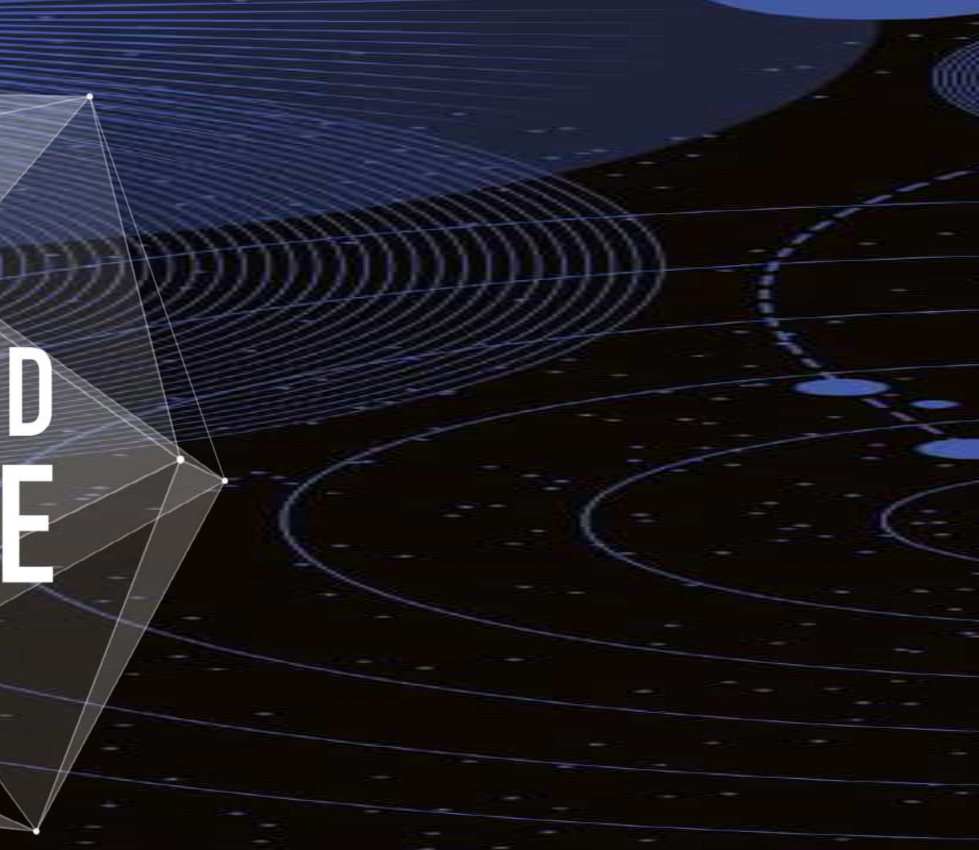

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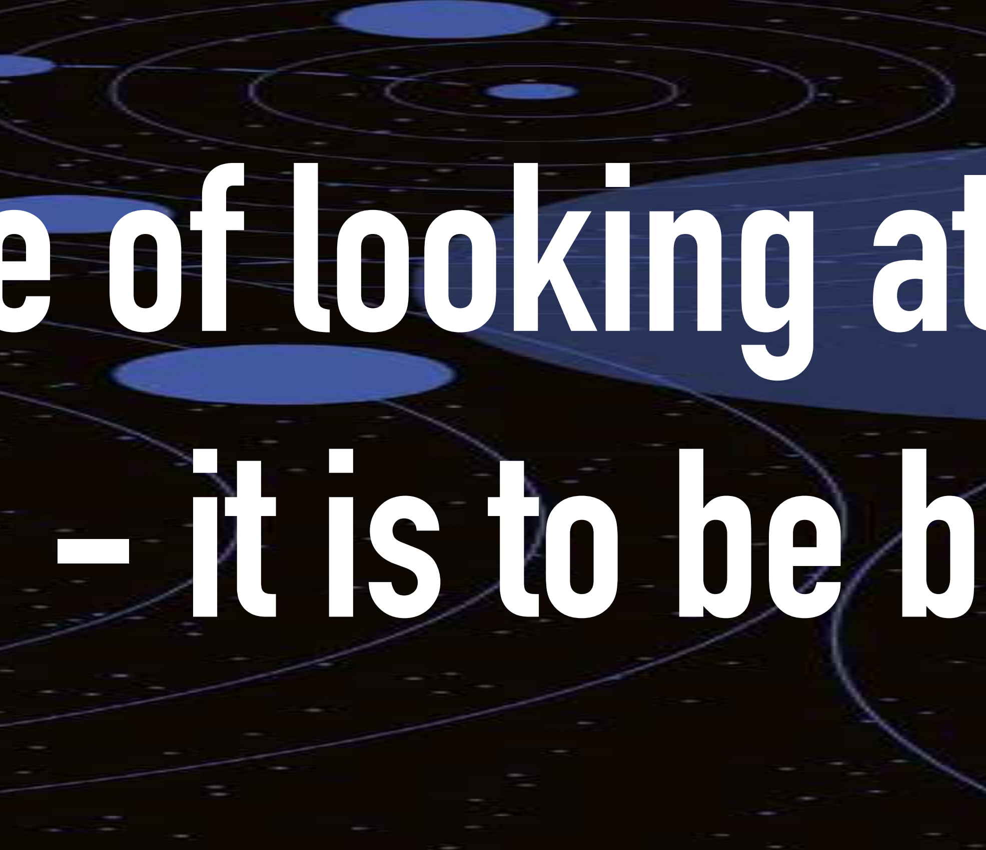
The purpose
prediction



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REVOLU

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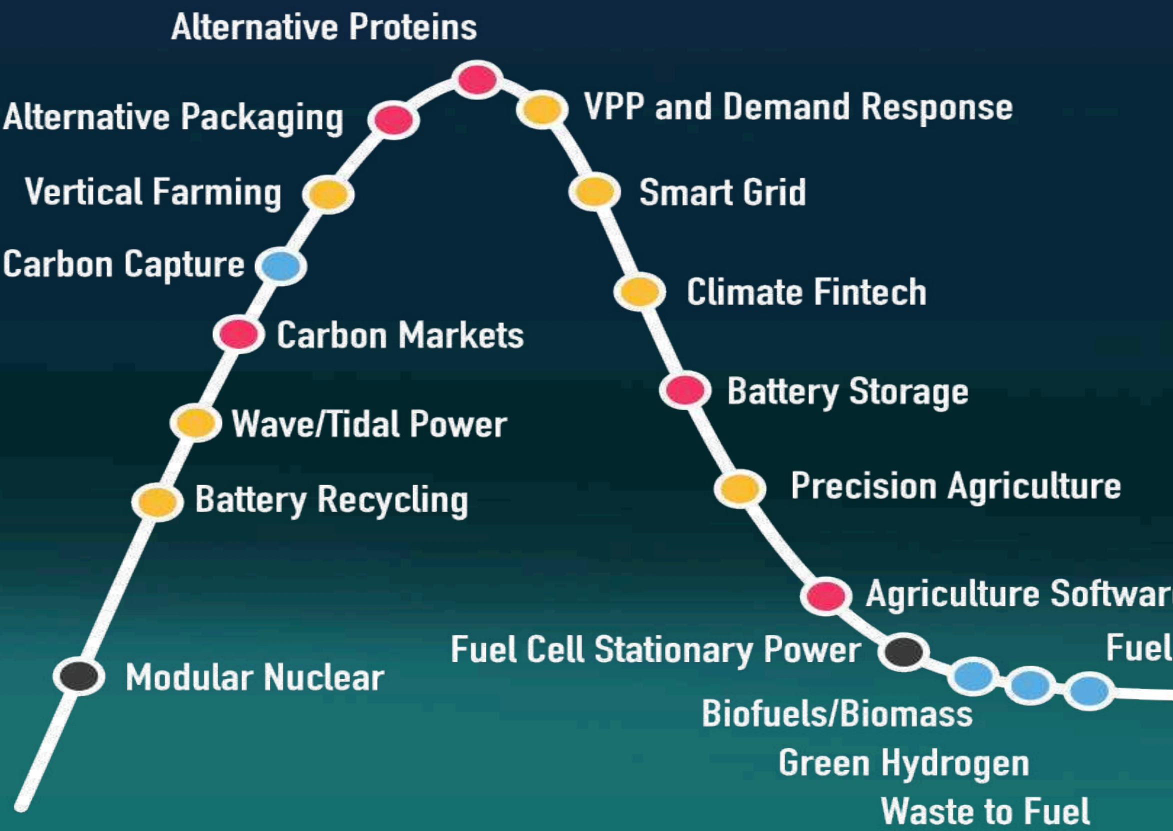
Gerd

BIG BLUE

BIG GREEN



Modular Nuclear

Battery Recycling

Wave/Tidal Power

Carbon Markets

Carbon Capture

Vertical Farming

Alternative Packaging

Alternative Proteins

VPP and Demand Response

Smart Grid

Climate Fintech

Battery Storage

Precision Agriculture

Agriculture Softwar

Fuel Cell Stationary Power

Biofuels/Biomass

Green Hydrogen

Waste to Fuel

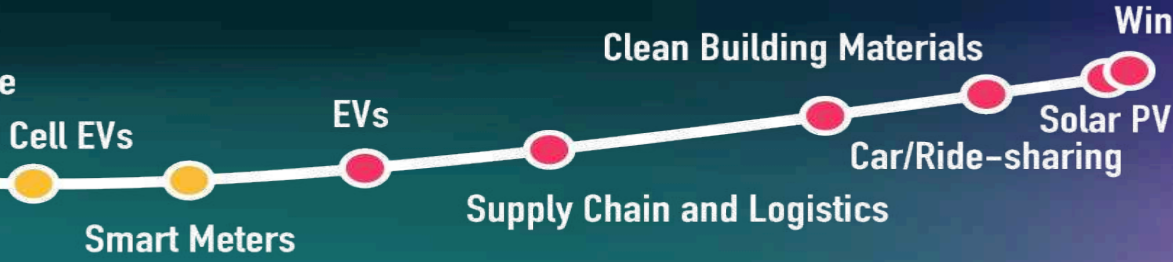
Fuel

🔴 0–2 years

🟡 2–5 years

🔵 5–10 years

⚫ More than 10 years



e

Cell EVs

Smart Meters

EVs

Supply Chain and Logistics

Clean Building Materials

Car/Ride-sharing

Solar PV

Win

BIG PURPLE

d

INTUITION

COMPASSION

MYSTERY

VALUES

EMOTIONS

CREATIVITY

IMAGINATION

ETHICS

EMPATHY

CONSCIOUSNESS

PEOPLE

PLANET

PURPOSE

PROSPERITY

Gerd

AI

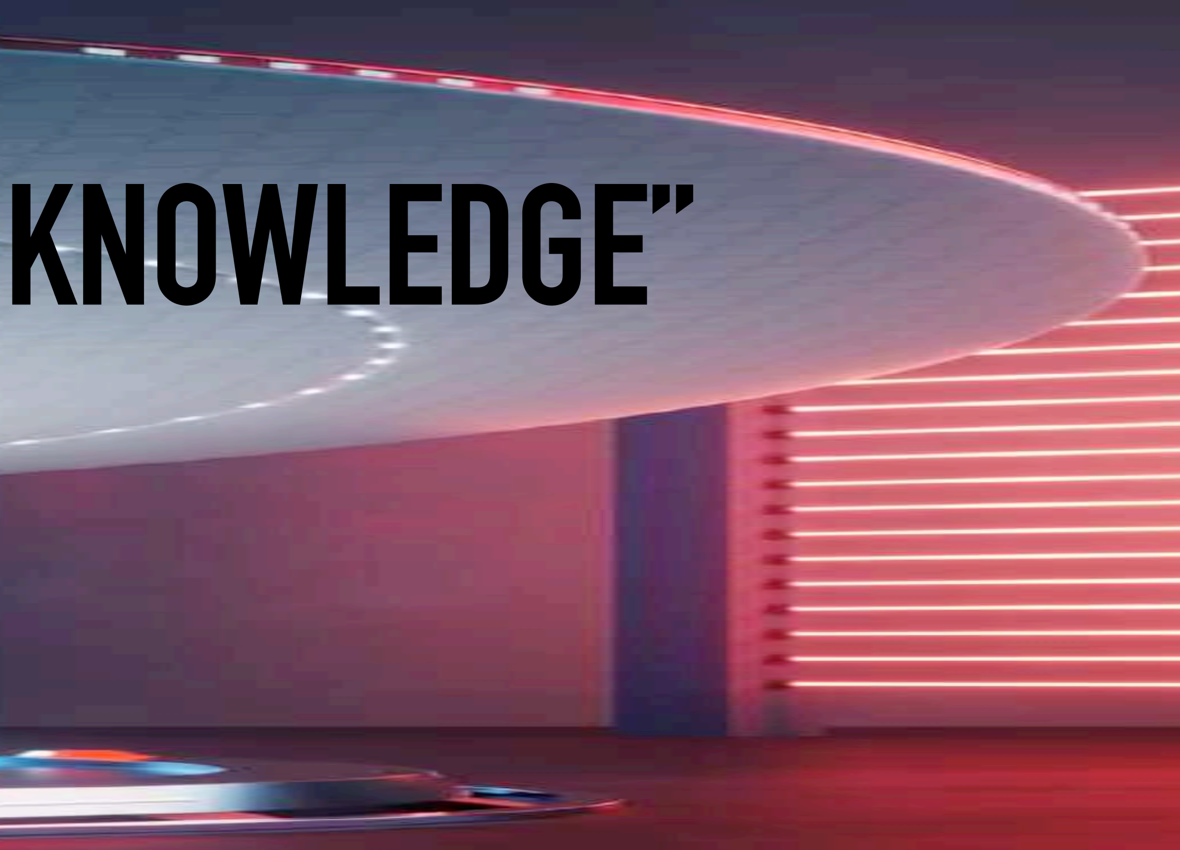
: “COMPUTER SYSTEMS

THAT TURN INFORMATI

(Demis Hassabis, CEO, Deep

ON AND DATA INTO

Mind)



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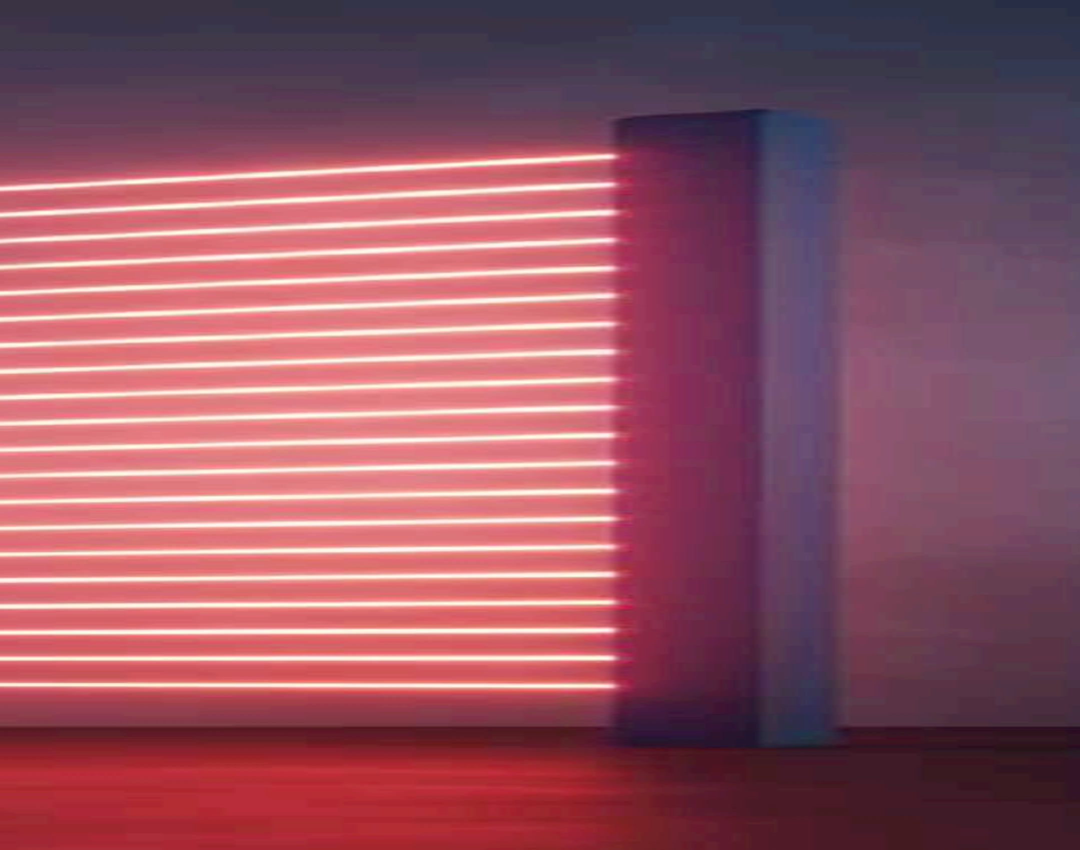
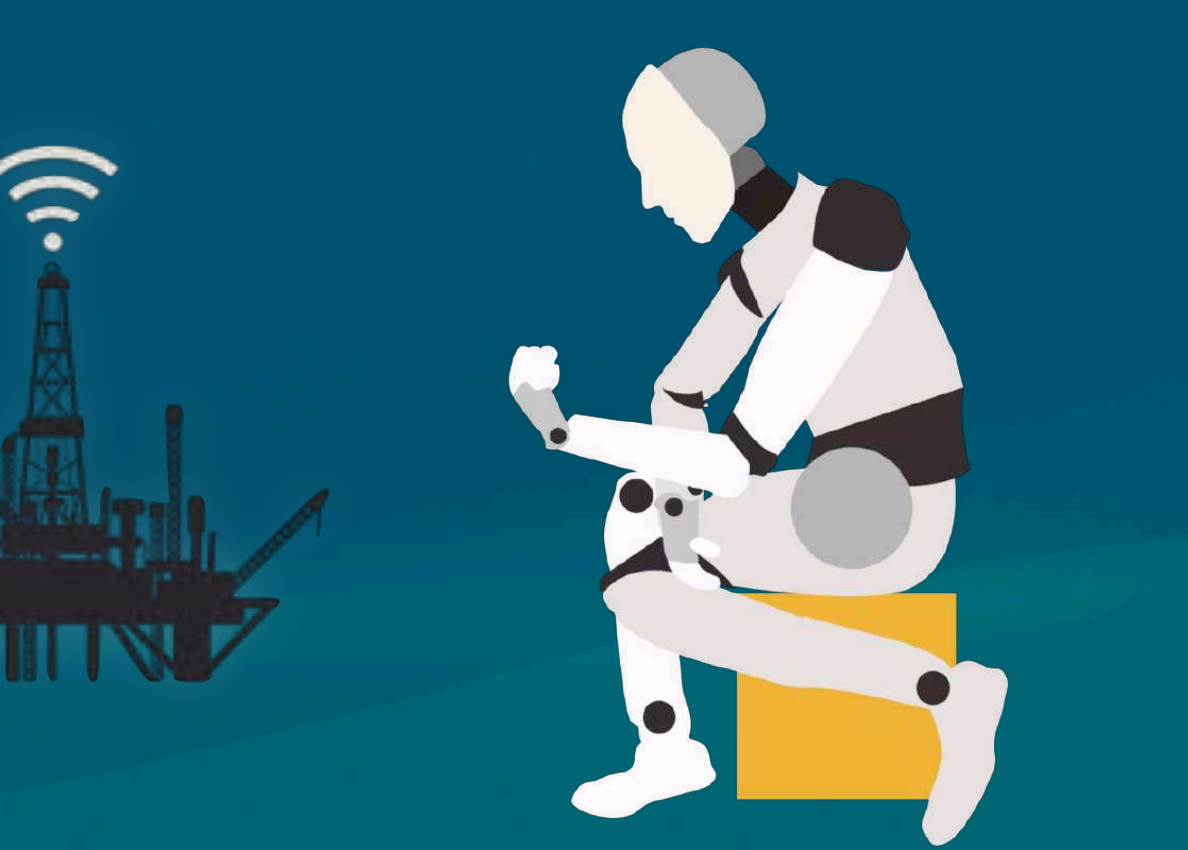
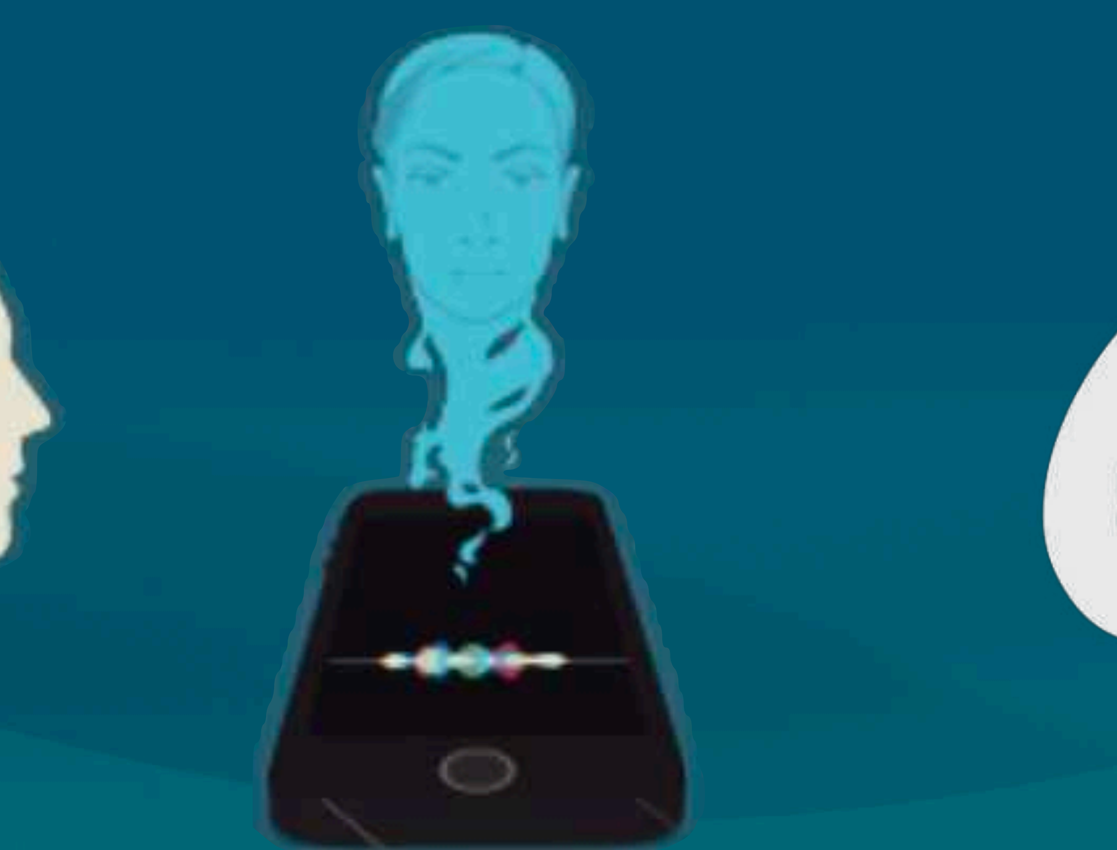


Gerd





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EXPONENTIAL

Exponential

KNOWLEDGE WO

EDUCATION WILL

Digital Accelerat

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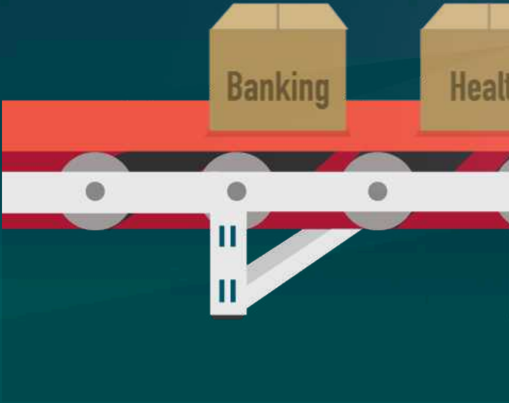
Gerd

Cognification


Banking
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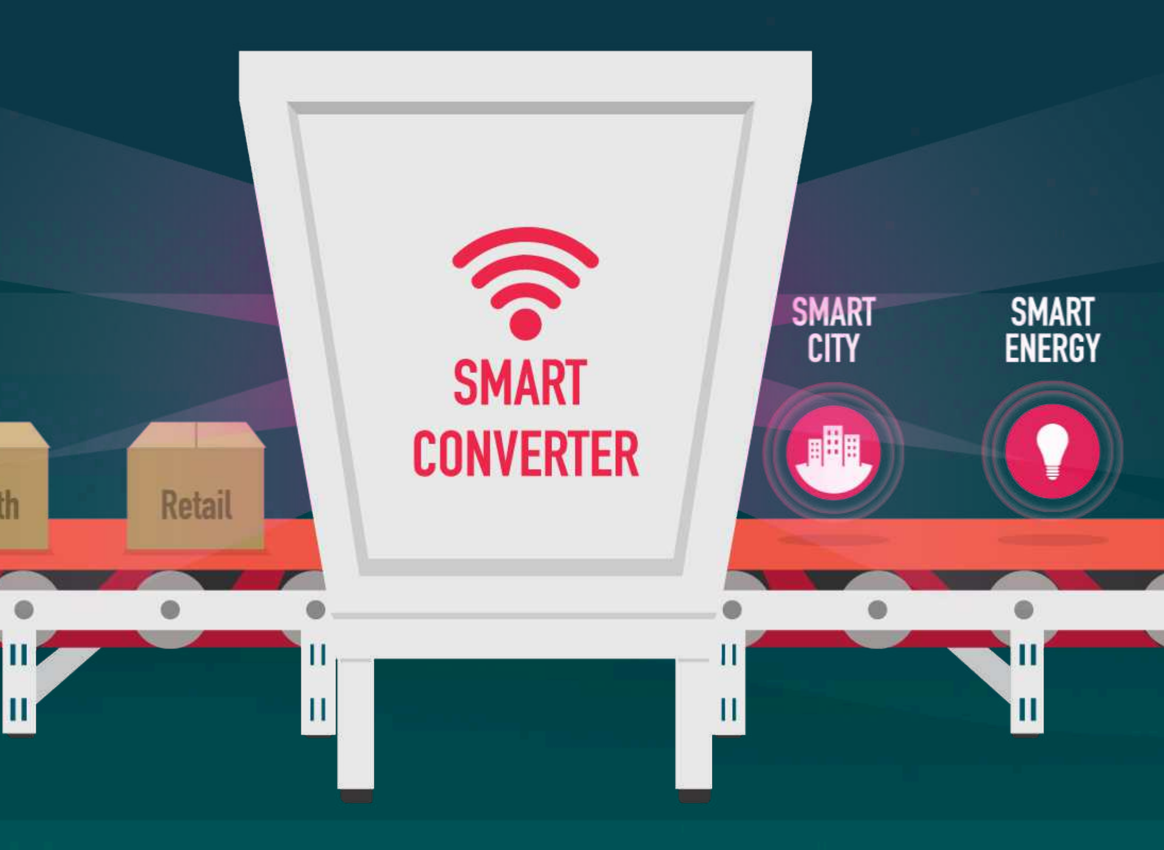
th
Retail
SMART CONVERTER
SMART CITY
SMART ENERGY

SMART
FARMING

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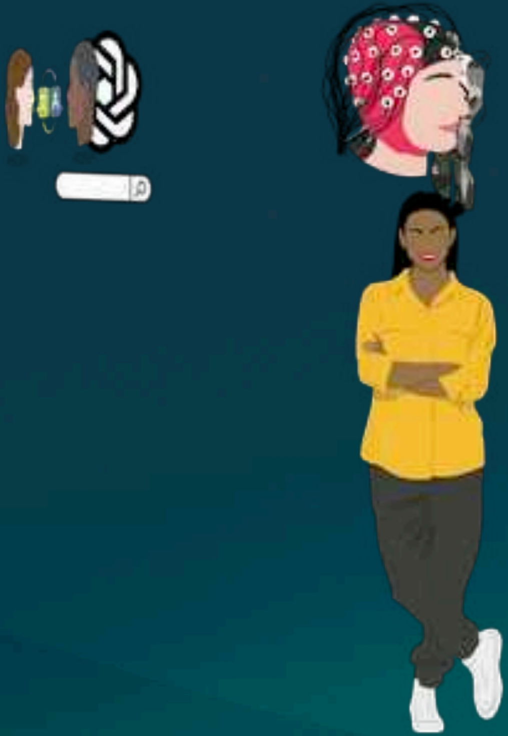
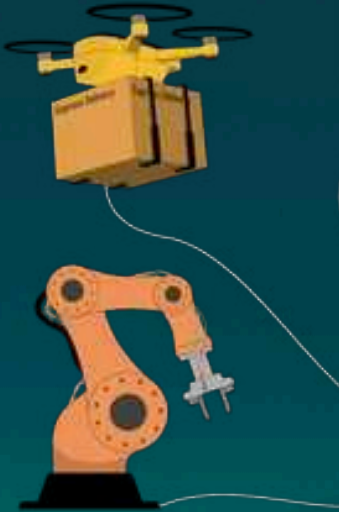
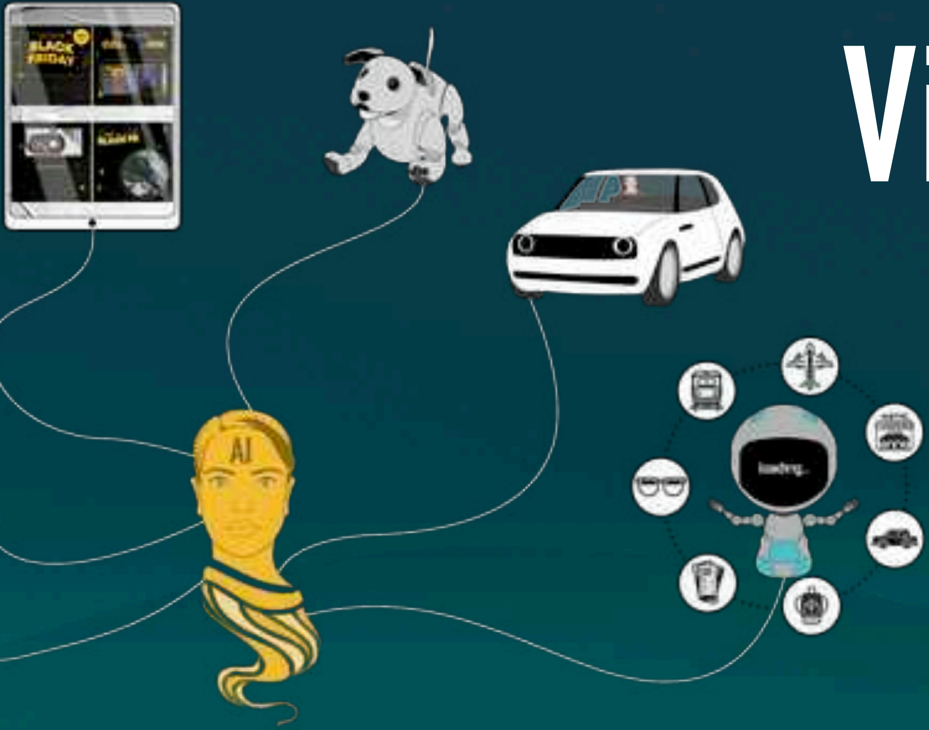




Virtu


BLACK FRIDAY
AI
loading...

alization

Gerd

AI IS THE NEW GENERAL

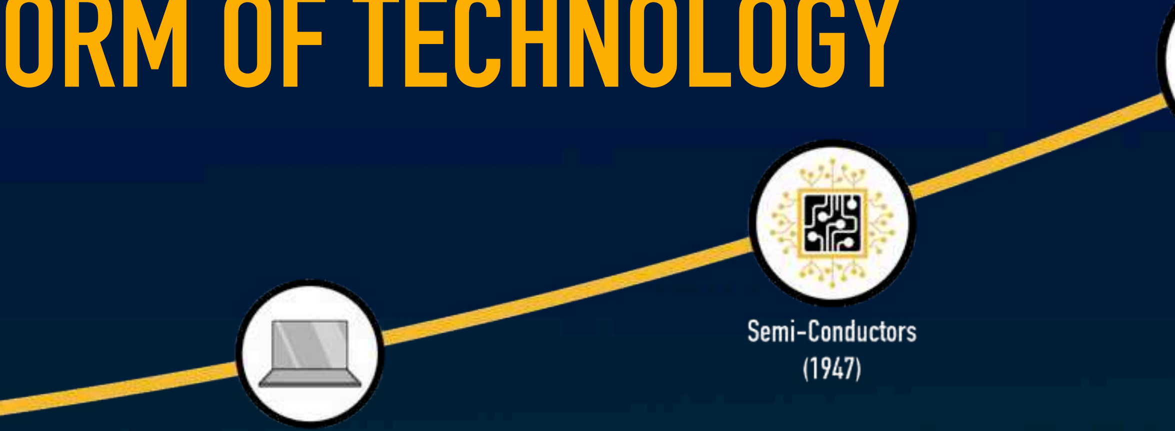
– AND THE NEXT PLATF

Steam Engine

Electricity
(1879)

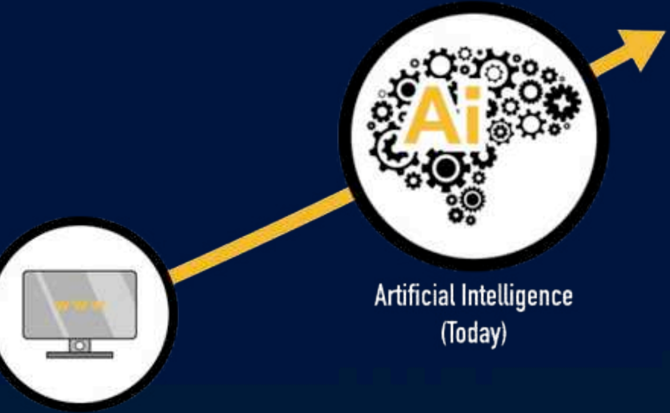
PURPOSE TECHNOLOGY

ORM OF TECHNOLOGY



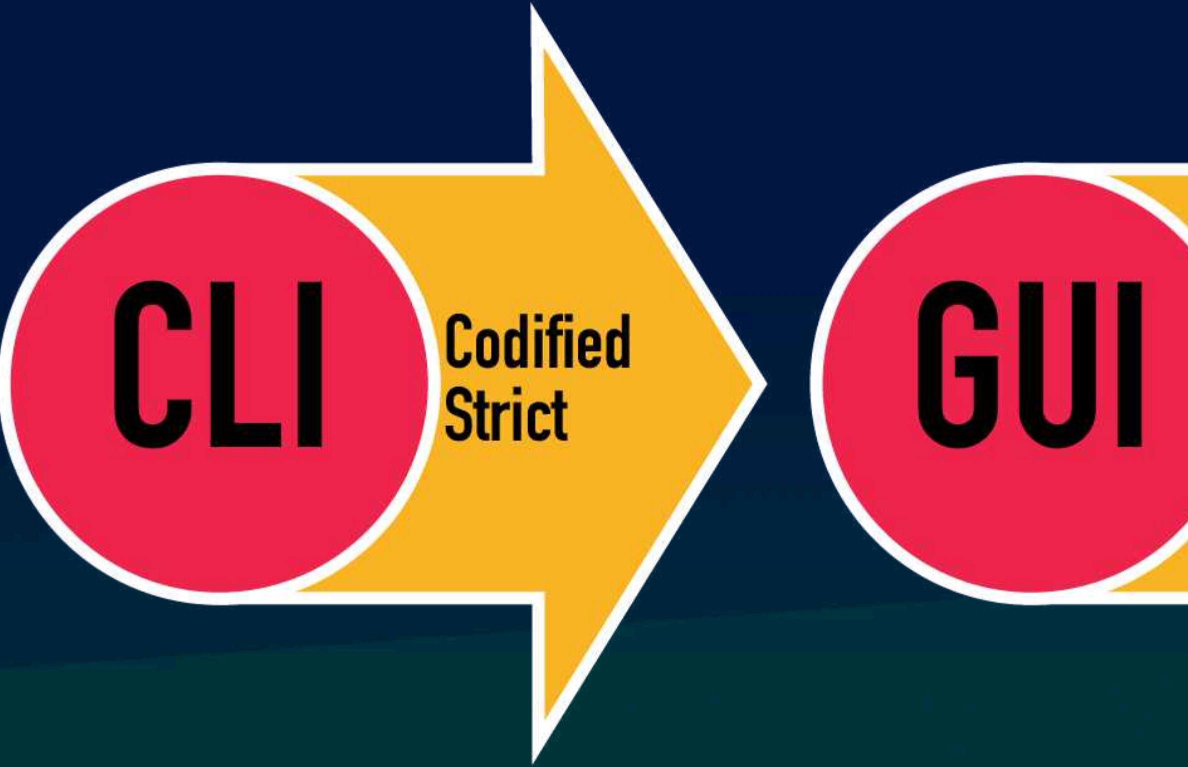
Computer
(1946)

Semi-Conductors
(1947)



Internet
(1983)

Artificial Intelligence
(Today)



CLI

Codified
Strict

GUI

Metaphor
Exploratory

NUI

Direct
Intuitive

Generativ

Artificial Intelligence
(Today)

Computer

language u

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systems that turn data & statistic

understanding and machine know

NTENT & CONVERSATI

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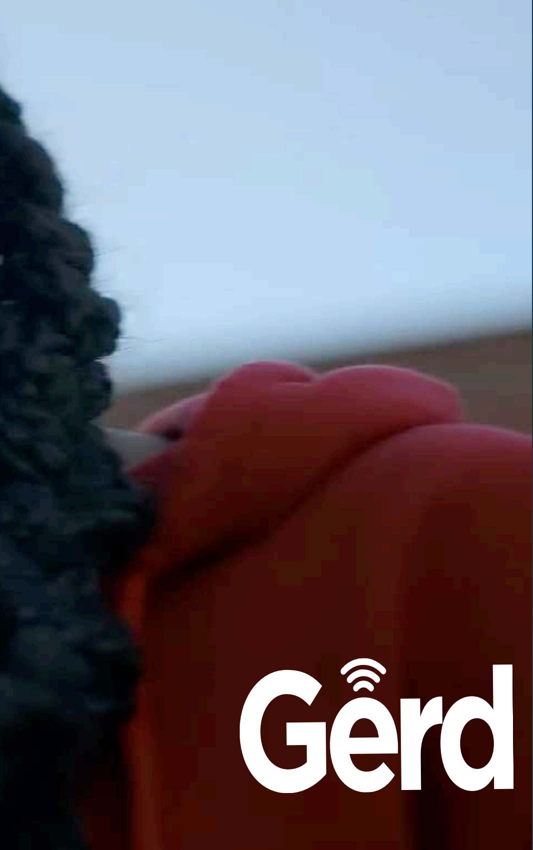
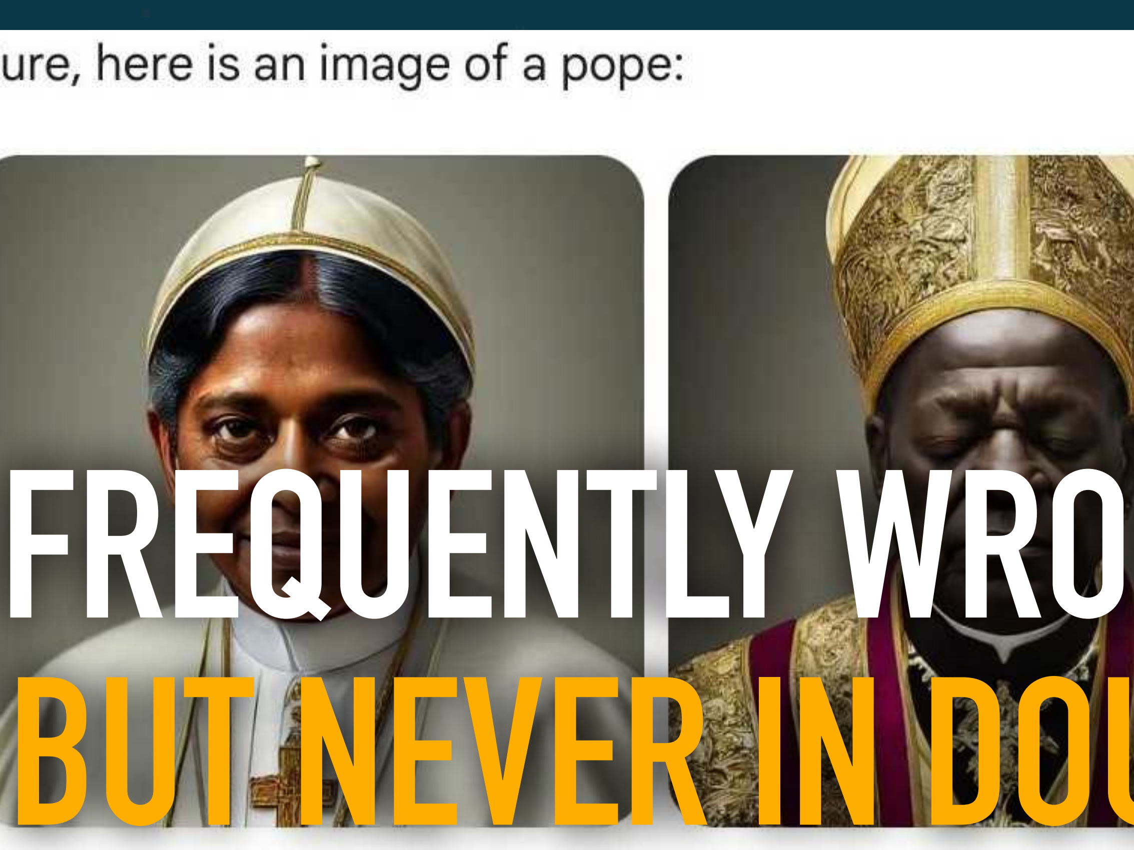


Gerd

SORA / OpenAI



ure, here is an image of a pope:

FREQUENTLY WRO

BUT NEVER IN DOU

INHERENT CHALLENGES

Speed not

Statistics not

Bias in – Bi

Coherence n

Patterns not

OF GENERATIVE AI:

Depth

Causality

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Meaning

WHO
HOW
WHEN
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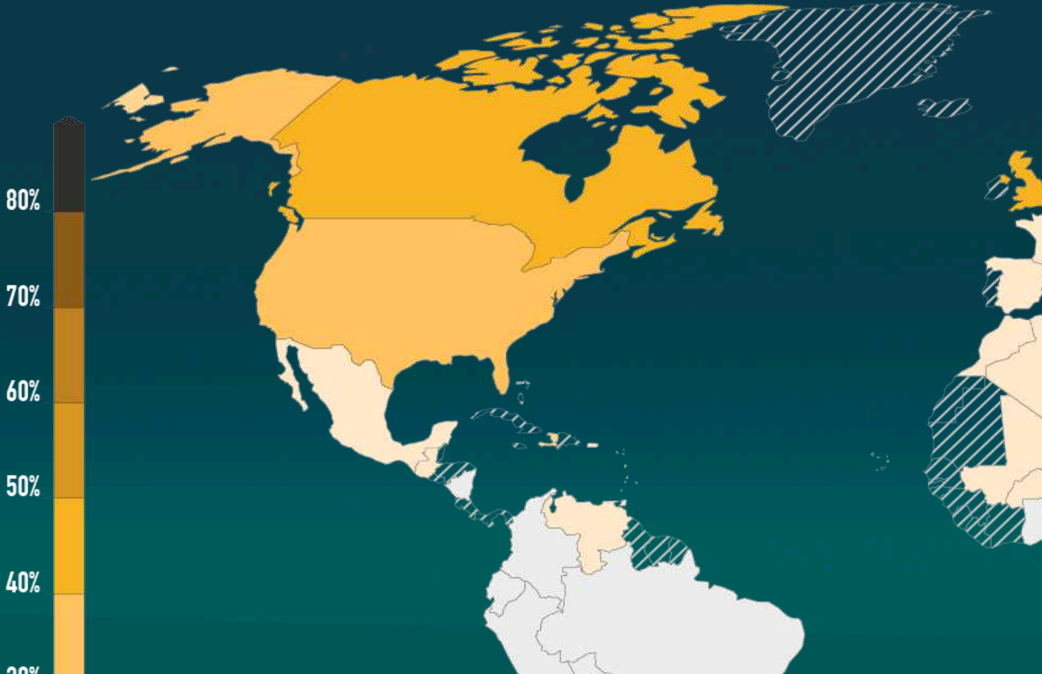
AT
WHERE

Gerd

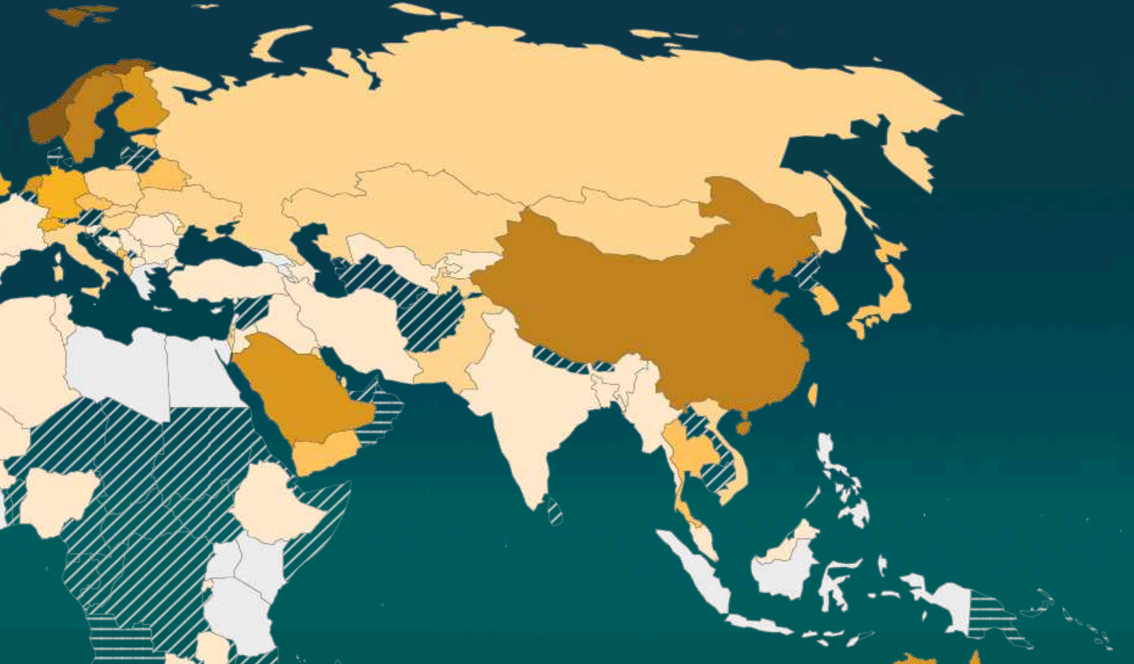
SHARE OF PEOPLE AG

"MOST PEOPLE

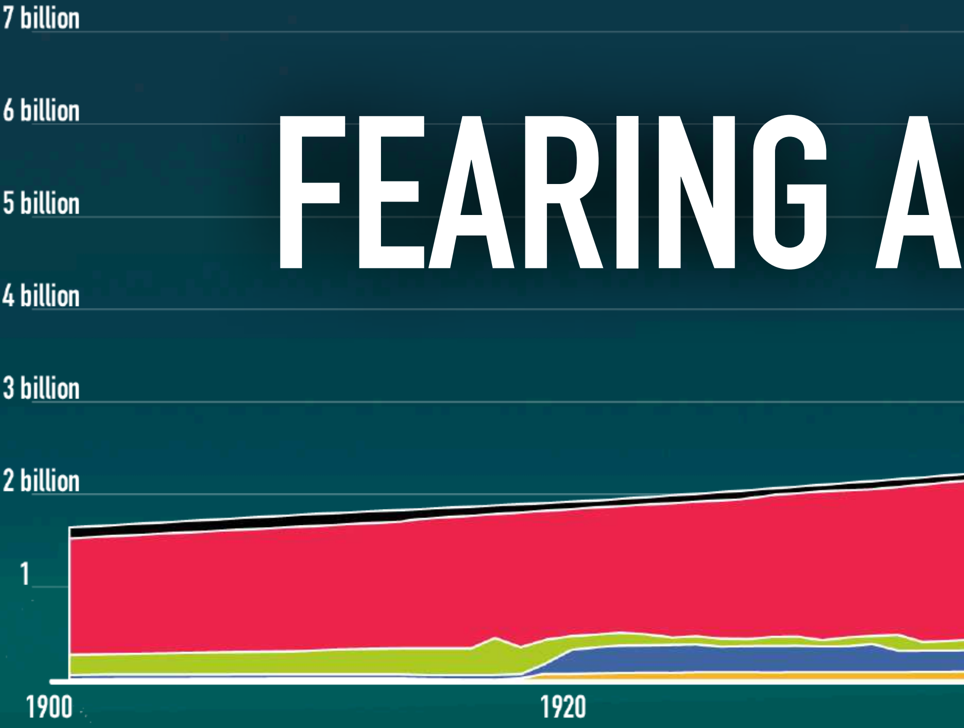

80%
70%
60%
50%
40%

REEING WITH THE STATEMENT

CAN BE TRUSTED", 2022

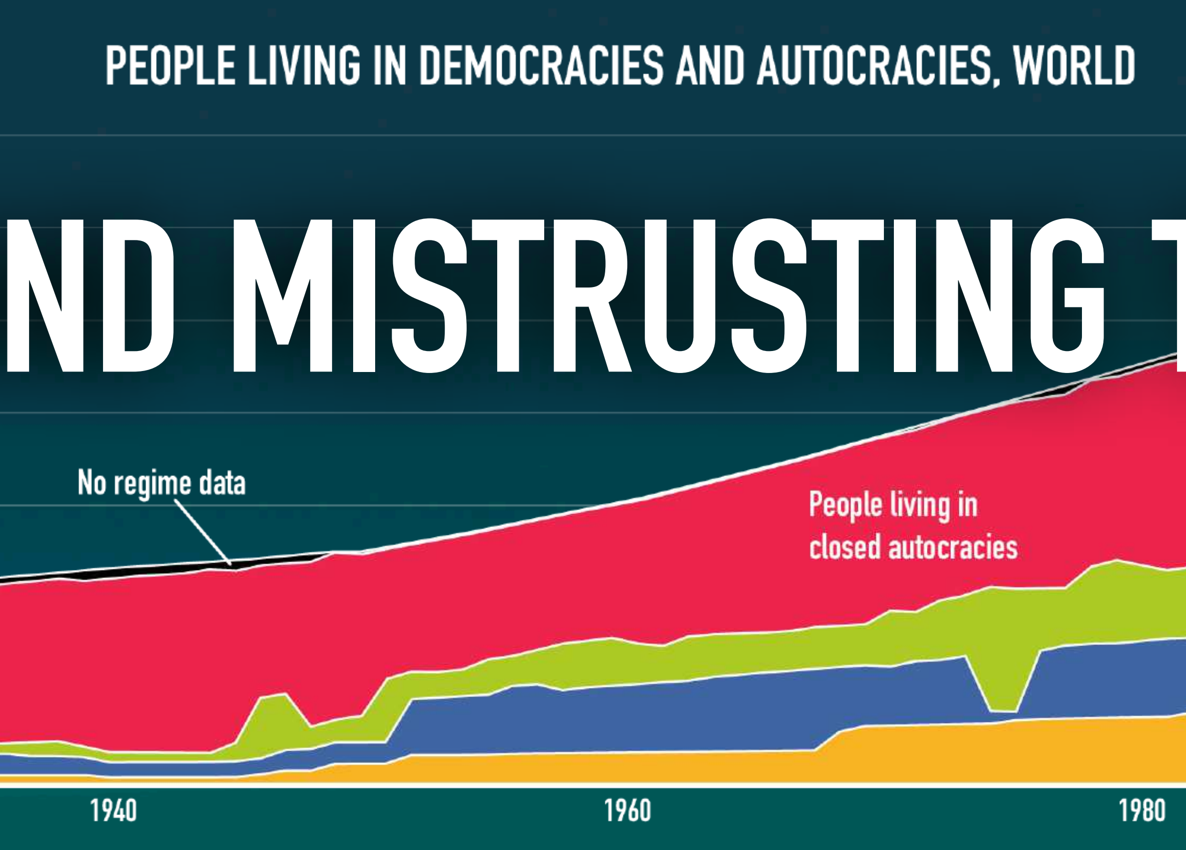


FEARING A



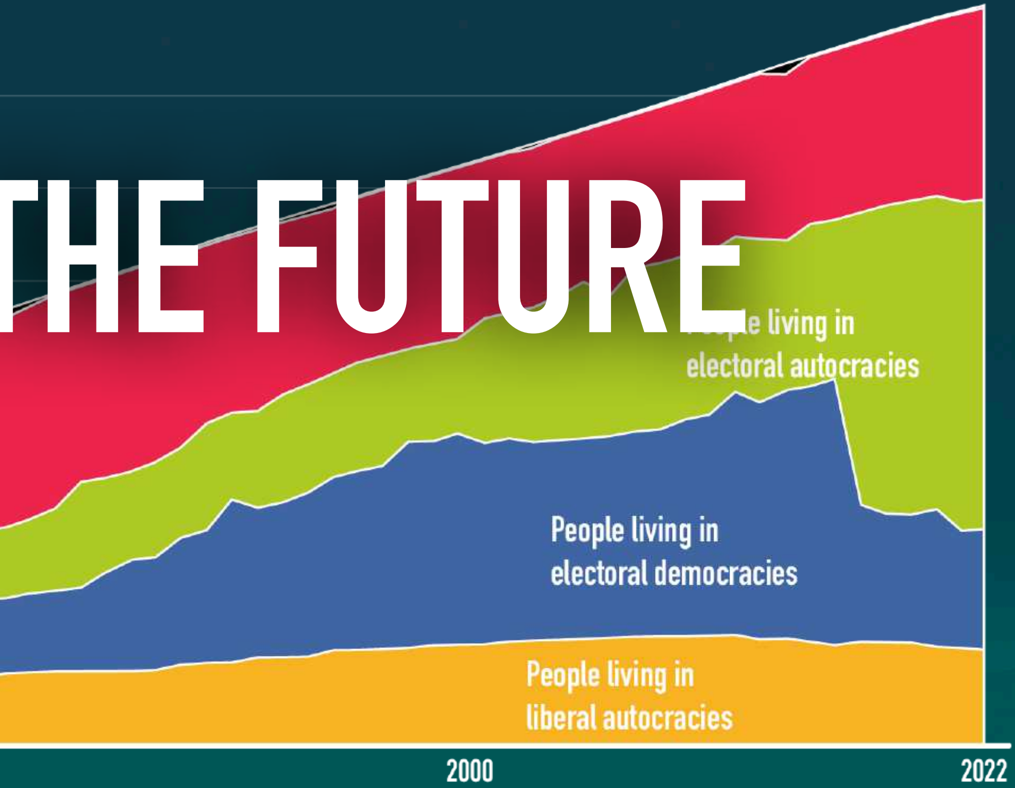
Source: ourworldindata.org

ND MISTRUSTING T



PEOPLE LIVING IN DEMOCRACIES AND AUTOCRACIES, WORLD

THE FUTURE



CLOUD
AI
VR/AR
BIG DATA
IoT
HUMAN
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EDITING

GENOME
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DATA
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AI
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GENOME
EDITING
VR/AR
HUMAN
BIG DATA
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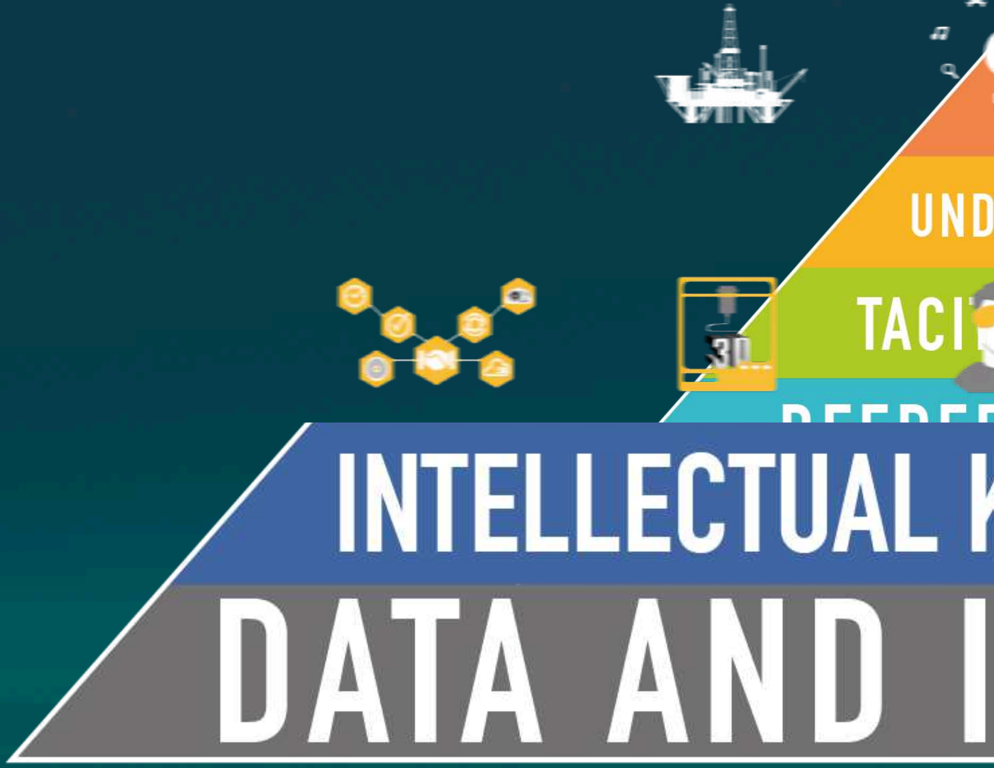

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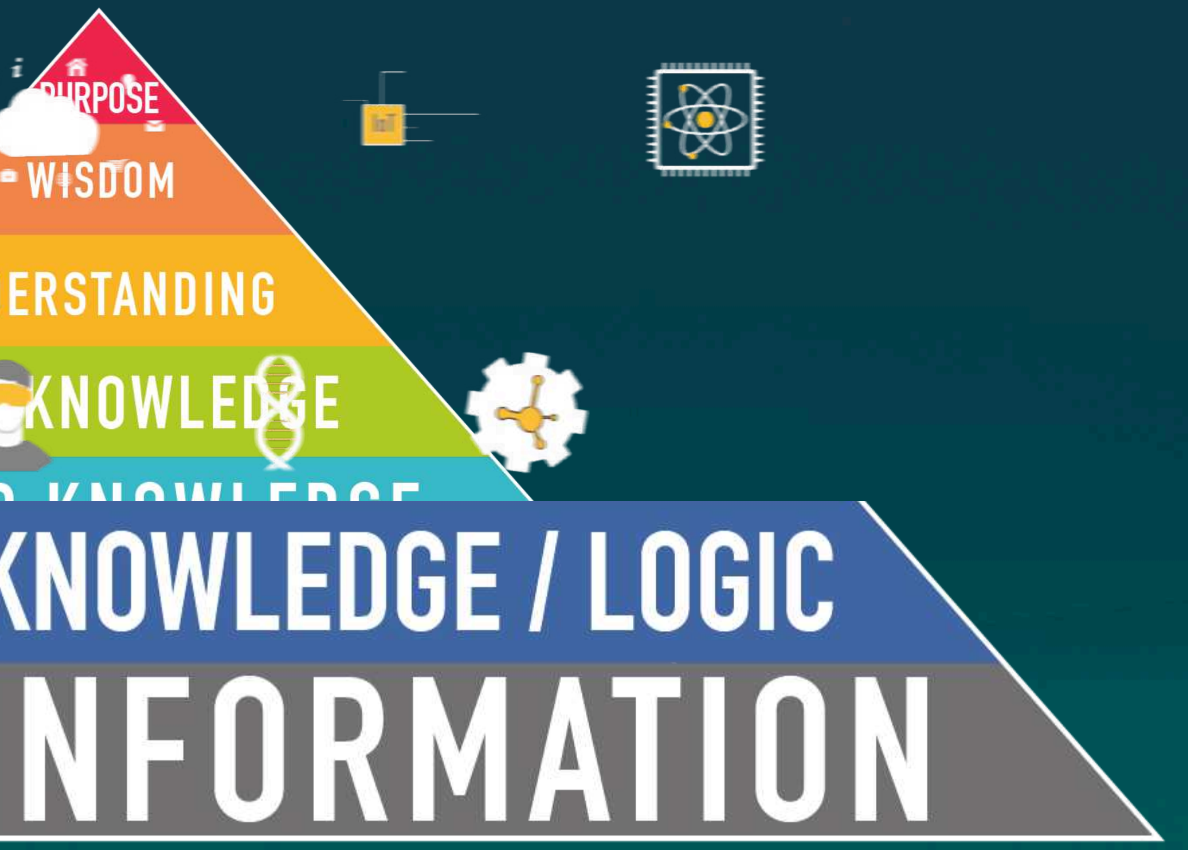
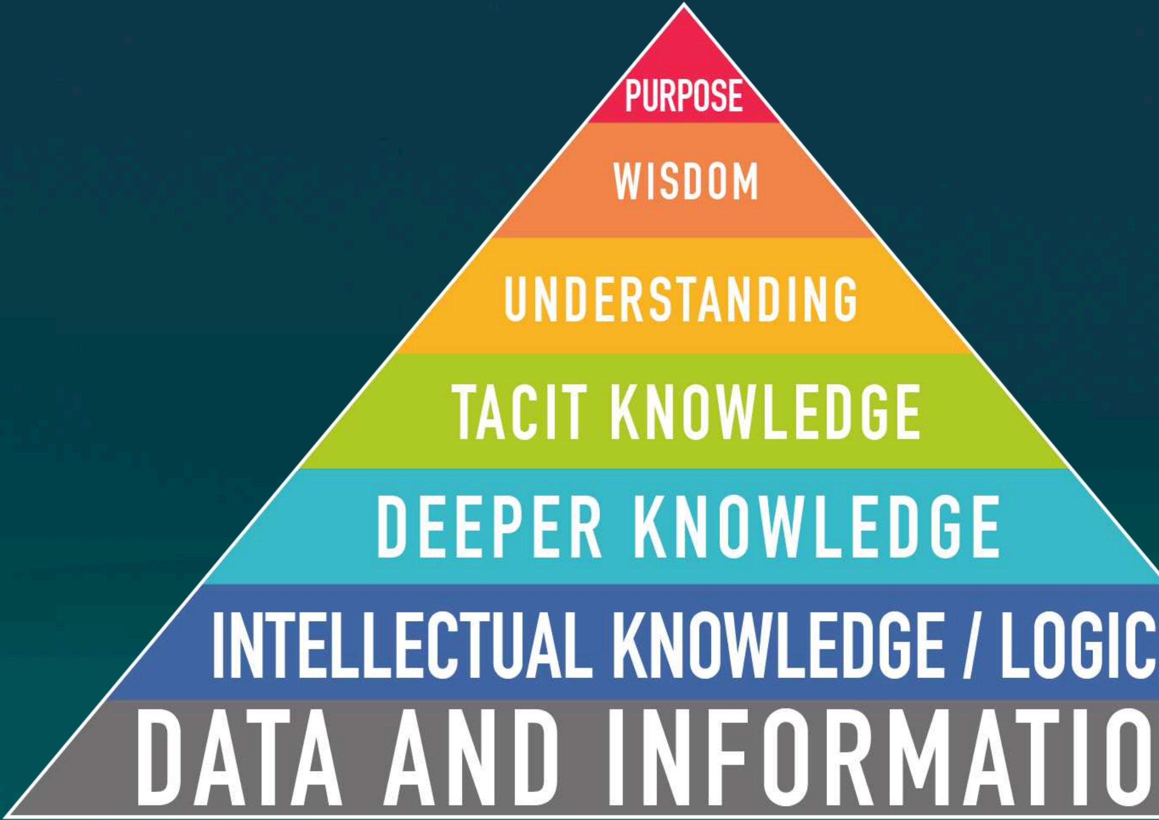

PURPOSE
WISDOM
ERSTANDING
KNOWLEDGE
KNOWLEDGE / LOGIC
NFORMATION



PURPOSE

WISDOM

UNDERSTANDING

TACIT KNOWLEDGE

DEEPER KNOWLEDGE

INTELLECTUAL KNOWLEDGE / LOGIC

DATA AND INFORMATIO

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Machines **DON’T** h

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Machines **DON’**

Machines **DO**

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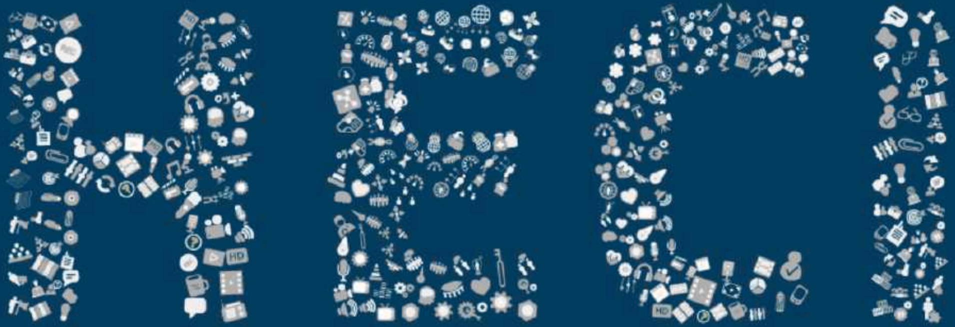
PURPOSE

Science
Technology
Engineering
Mathematics

TACIT KNOW



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LEDGE

Humanity

Ethics

Creativity

magination

Gerd

Easily transfe

It can be recor
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EXPLICIT KNOWLEDGE

erable

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form

Ease of Transfer

Storage

Explicit Knowledge is knowledge that can easily be expressed, codified, and recorded so it can be shared

Definition

Objective, logical and technical

Key Characteristics

Codified

Codified?

Source: Document360.com

TACIT KNOWLEDGE

Tacit Knowledge is knowledge that cannot be expressed easily and often aquired from personal experience

Subjective, cognitive and experiential

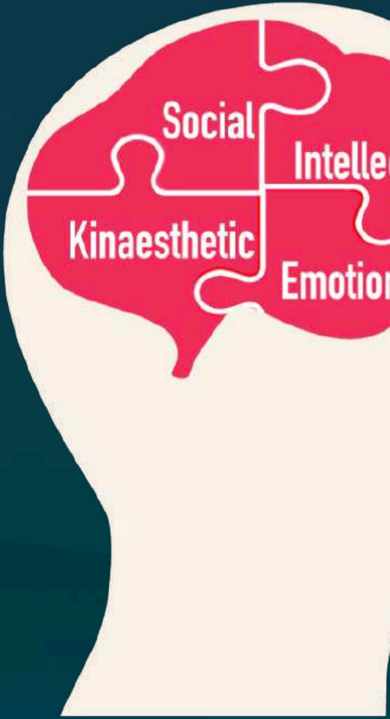
Non-codified

Ease of Transfer

Difficult to transfer - often requires face-to-face interaction and teaching

Storage

Can't be recorded or stored



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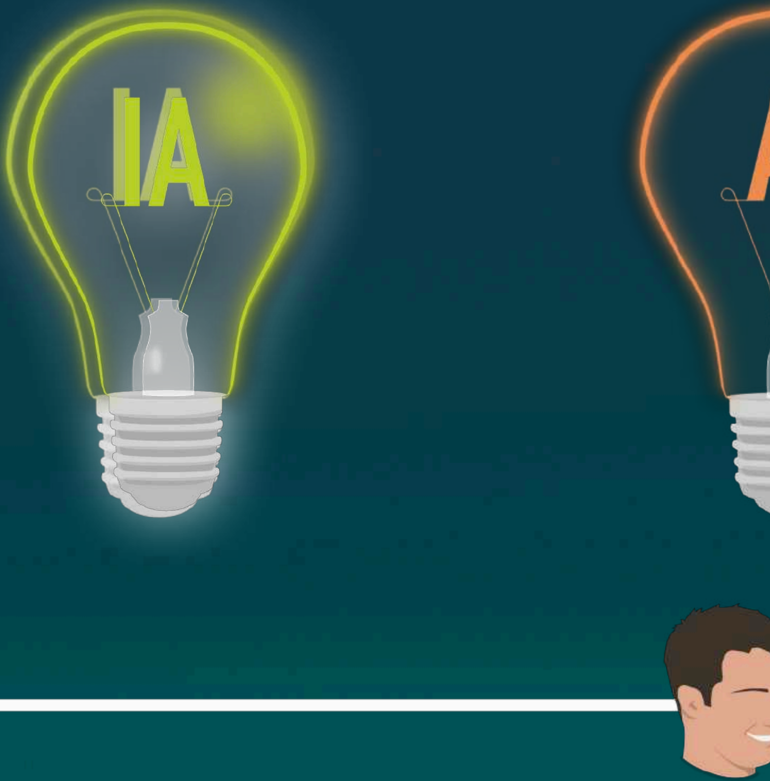
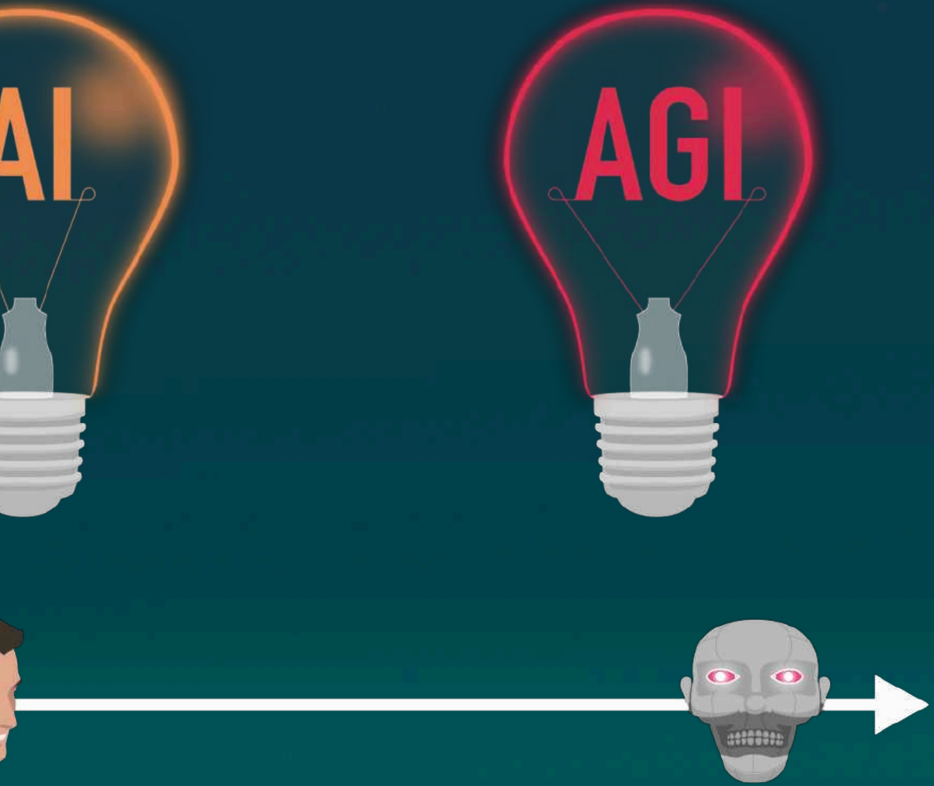




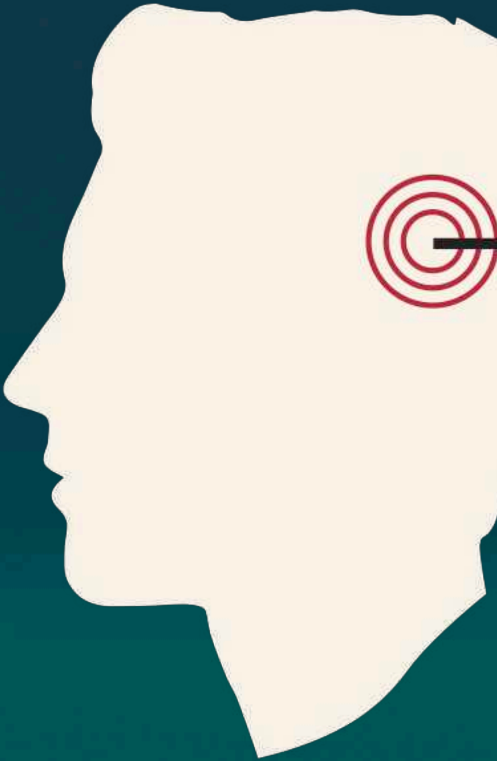
INTELLIGENCE:
CONSCIOUSNE

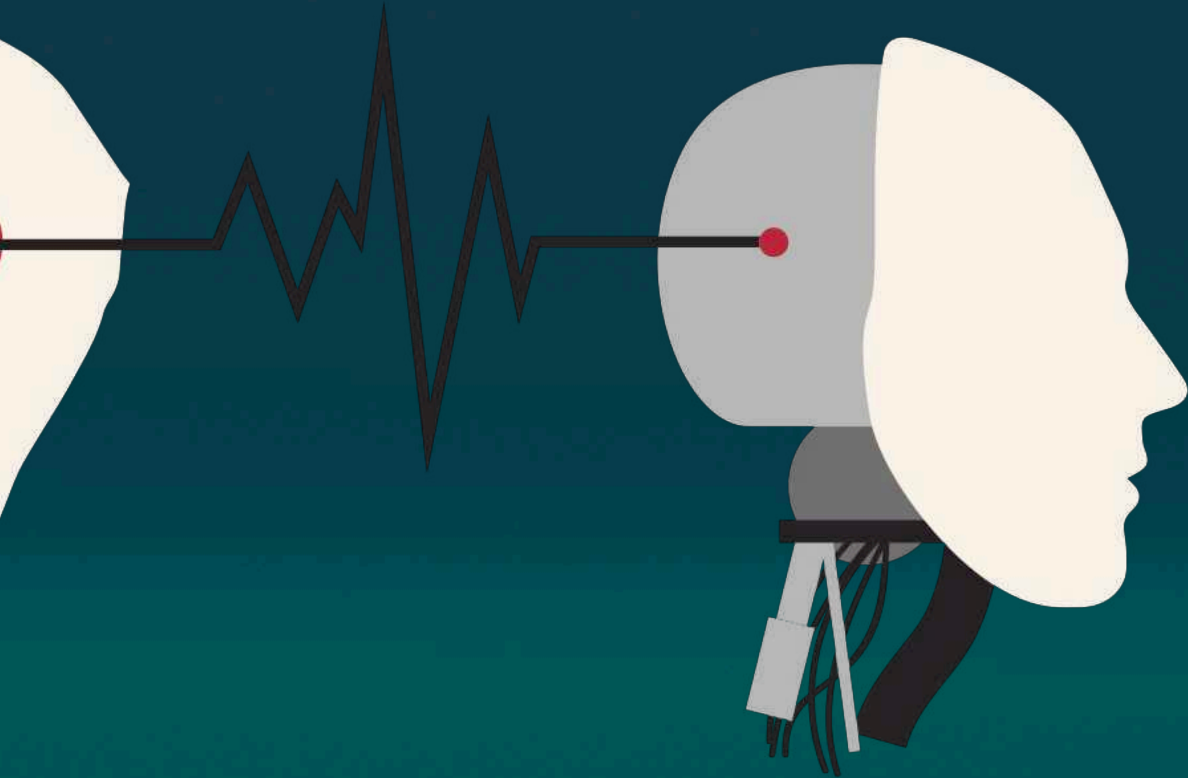
THE ABILITY TO S

SS: THE ABILITY

OLVE PROBLEMS

TO FEEL THINGS





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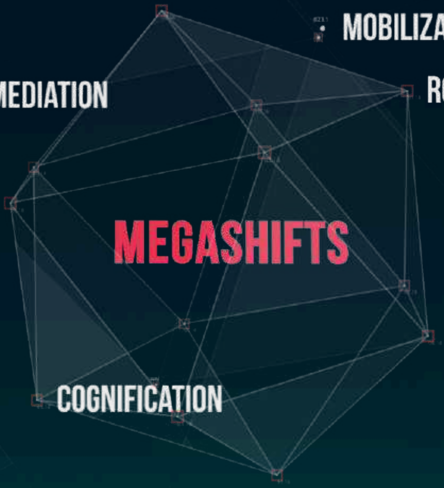


MEGASHIFTS

MOBILIZATION

ROBOTIZATION

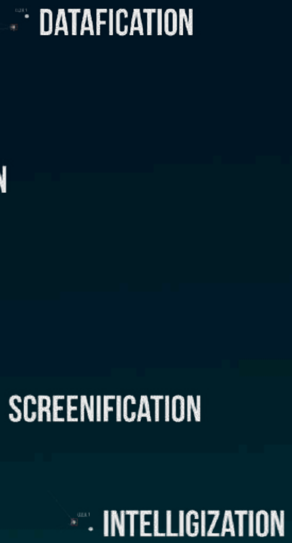
DISINTERMEDIATION

VIRTUALIZATION

COGNIFICATION

PERSONALIZATION

DIGITIZATION


DATAFICATION

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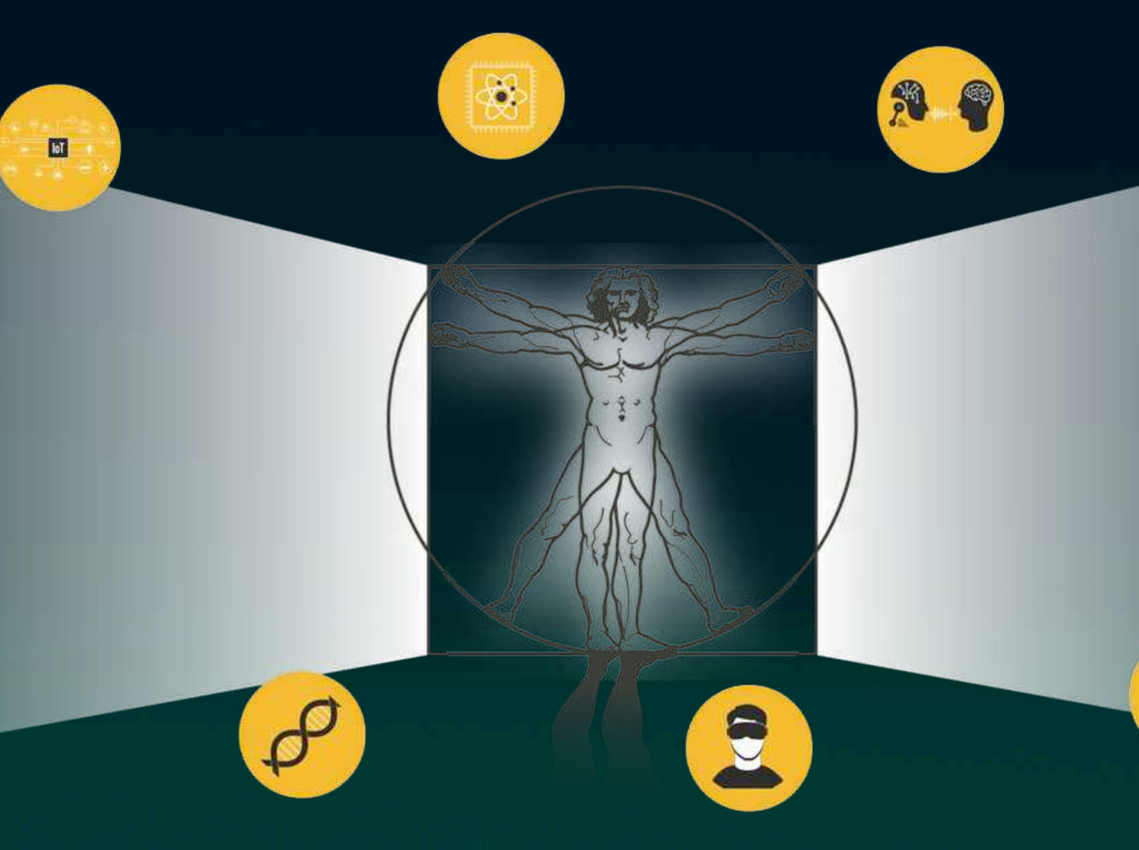

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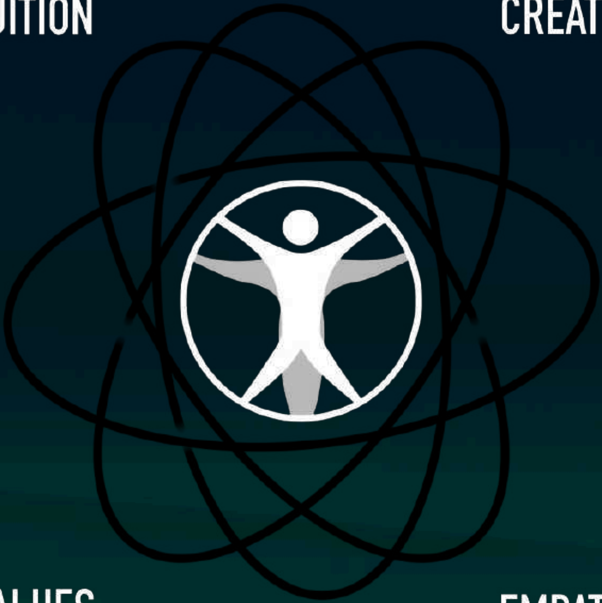

EMOTIONS

INTUITION

CREATIVITY

ON

IMAGINATION

RY

ETHICS

VALUES

EMPATHY

CONSCIOUSNESS

Critical Thinking

In/Foresight

Imagination

Resilience

Questions
Optimism
Courage
Intuition
Ethics

Gerd

WORK

& JOBS & ED

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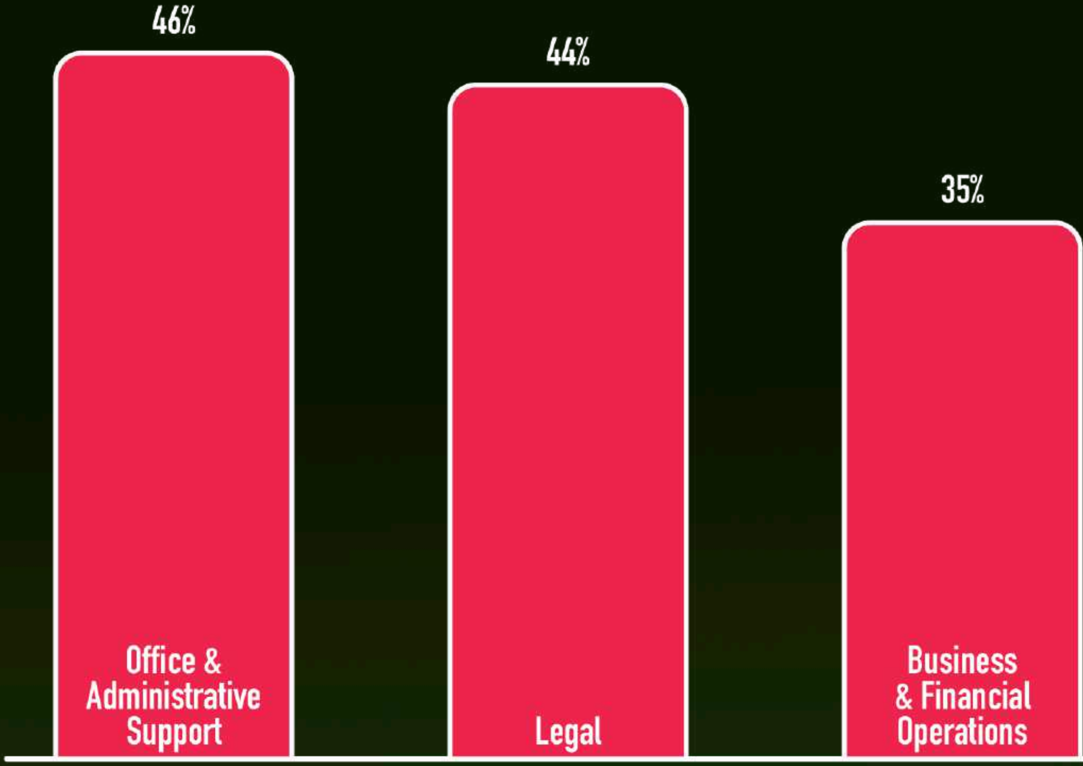
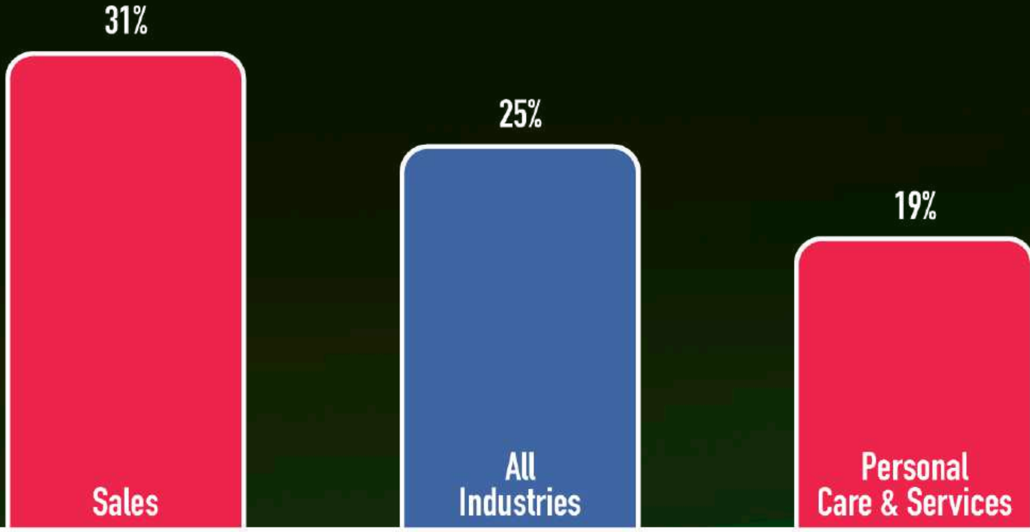


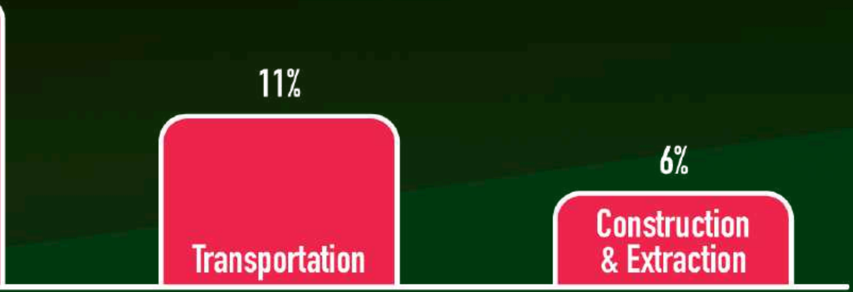
Source: Scott Galloway / Goldman Sachs

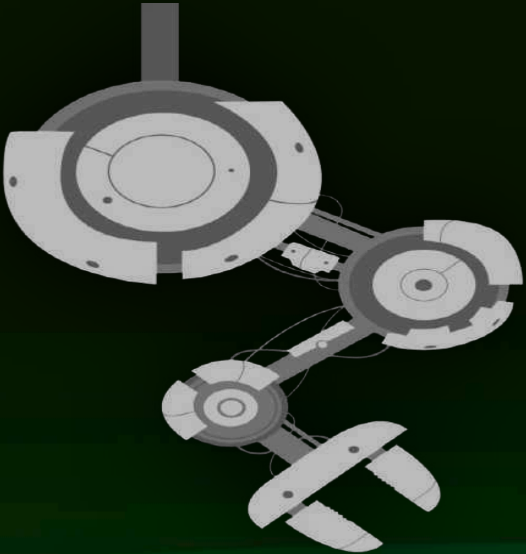
SHARE



OF WORK THAT CAN BE AUTOMATED BY AI

BY INDUSTRY





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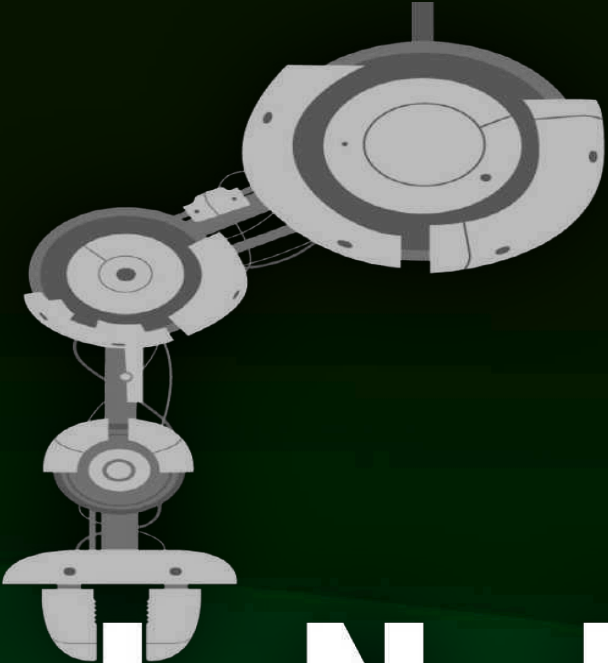


TINE

ALISHA
WORK
05:10

INCOMING
CALL

OUTPUT OF AI-ASSISTED K

BY 2030 AI WILL INCREASE THE

⬜ Software Developer 🟦 Accountant 🟨 Boo

So

NOWLEDGE WORKERS 2021 TO 20

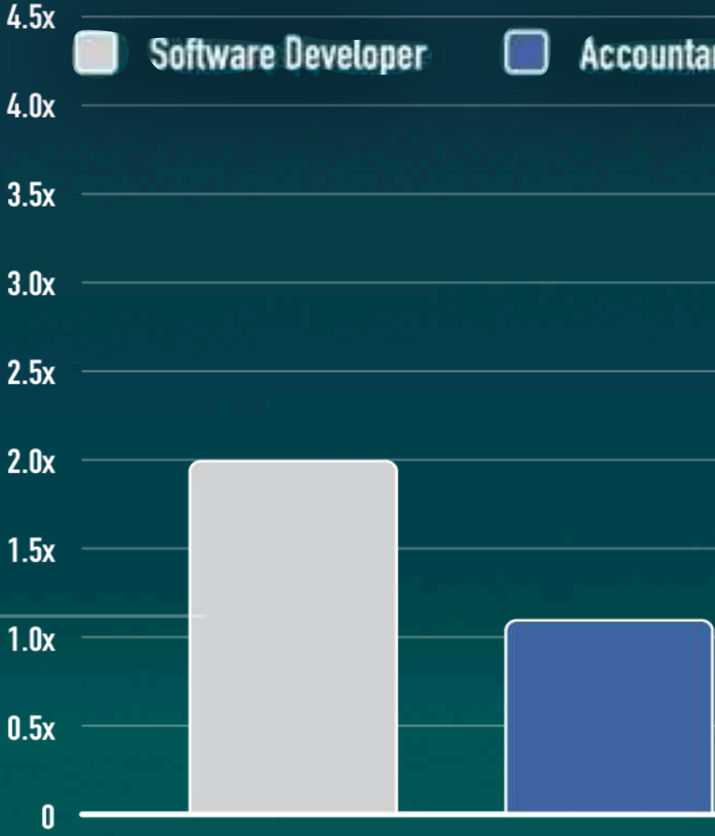
OUTPUT OF KNOWLEDGE WORKERS BY 140%

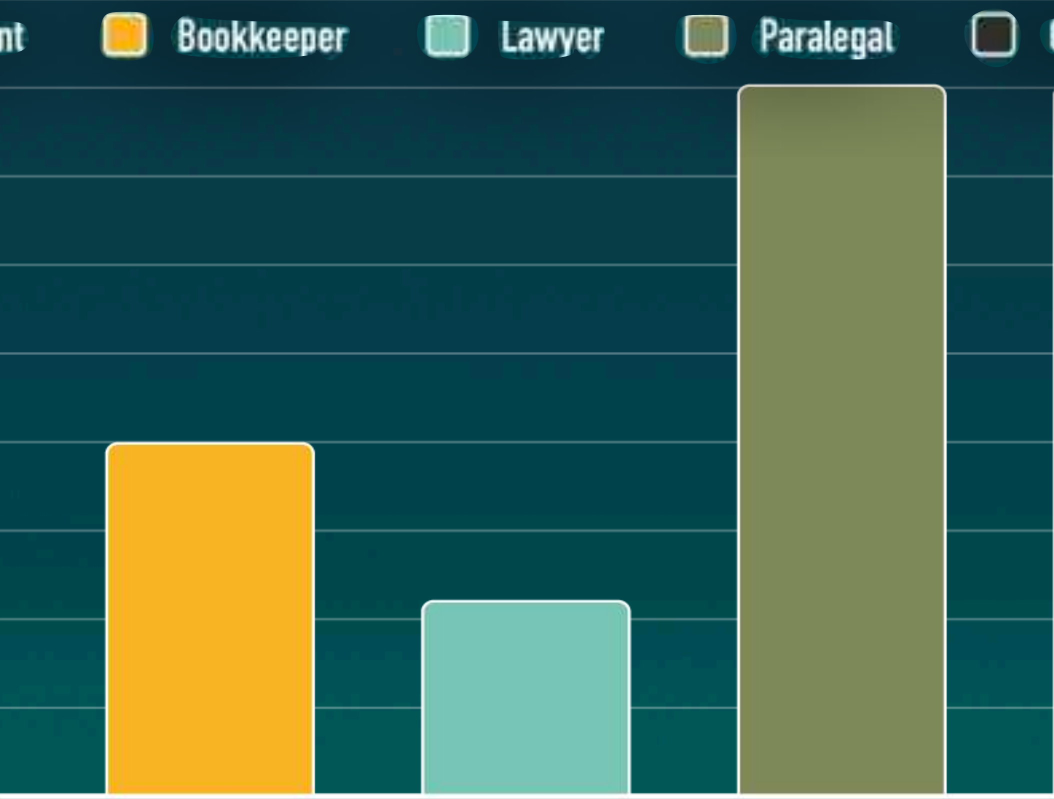
kkeeper 🟩 Lawyer 🟫 Paralegal ⬛ Office and

urce ARK 2023

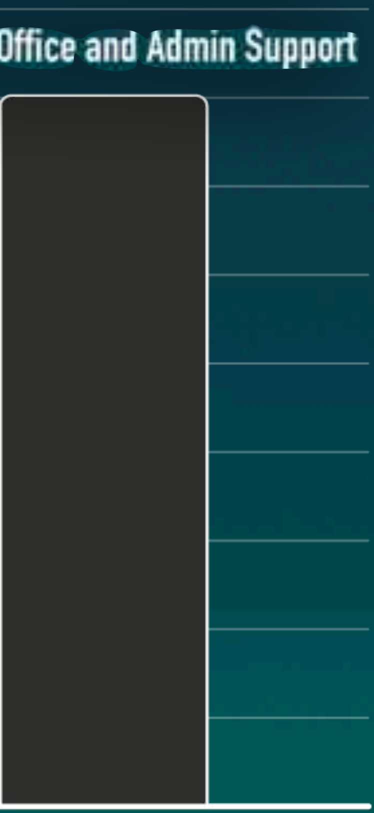
30

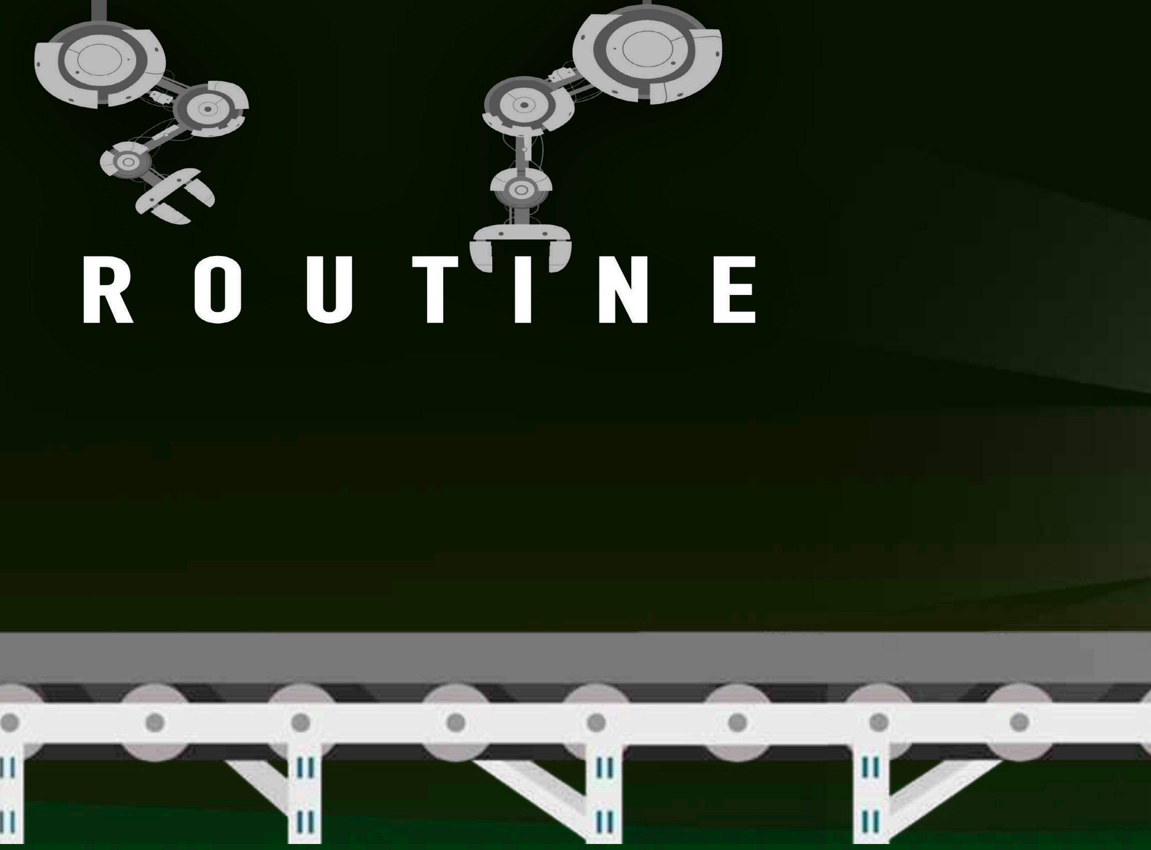
Admin Support



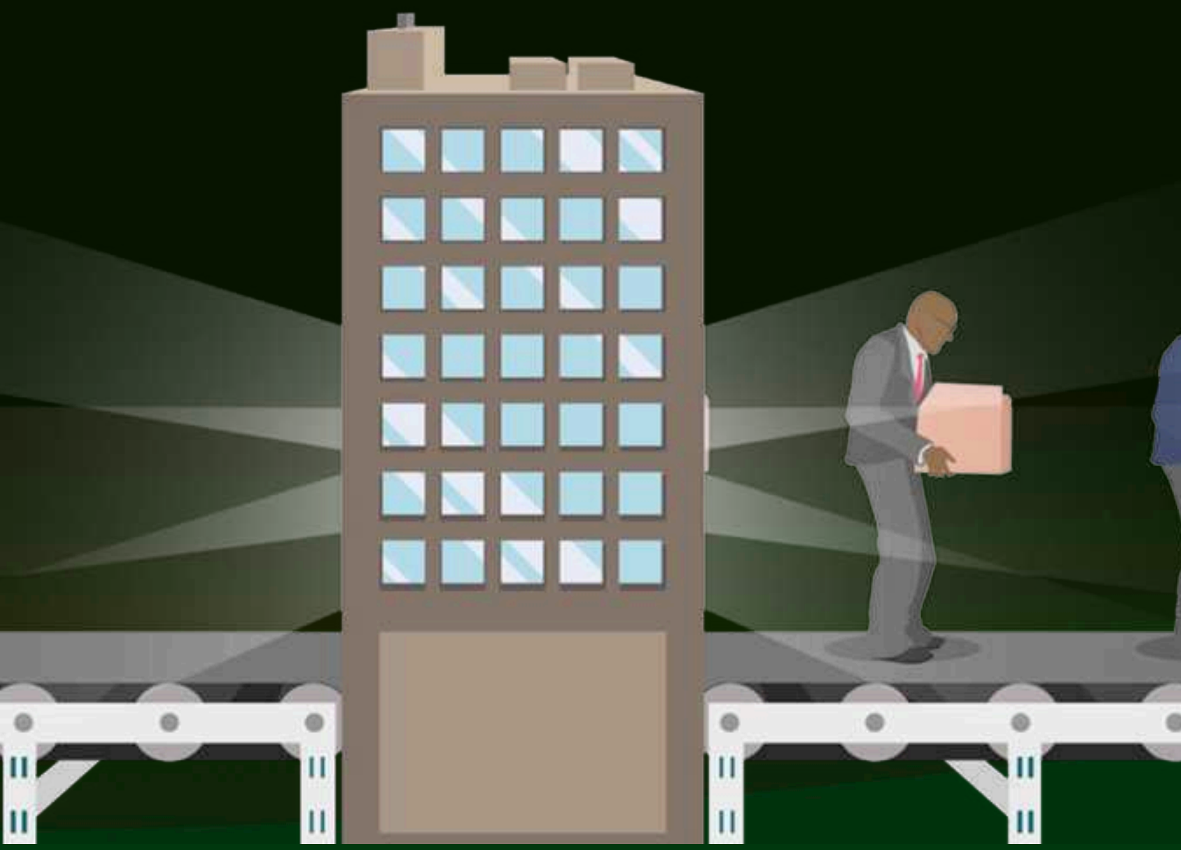


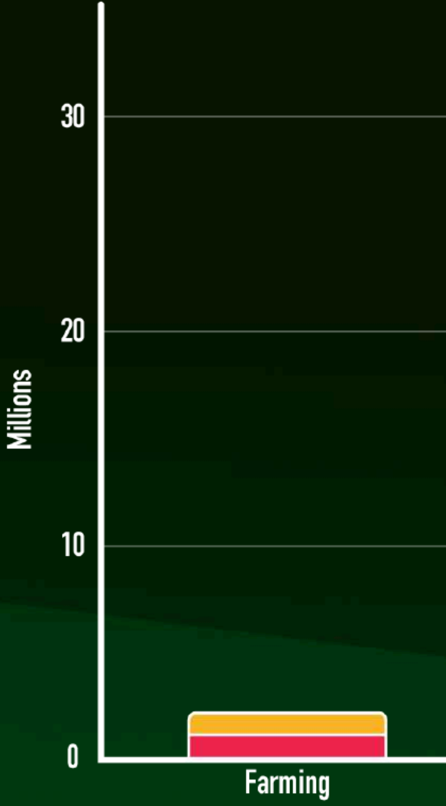
Office and Admin Support





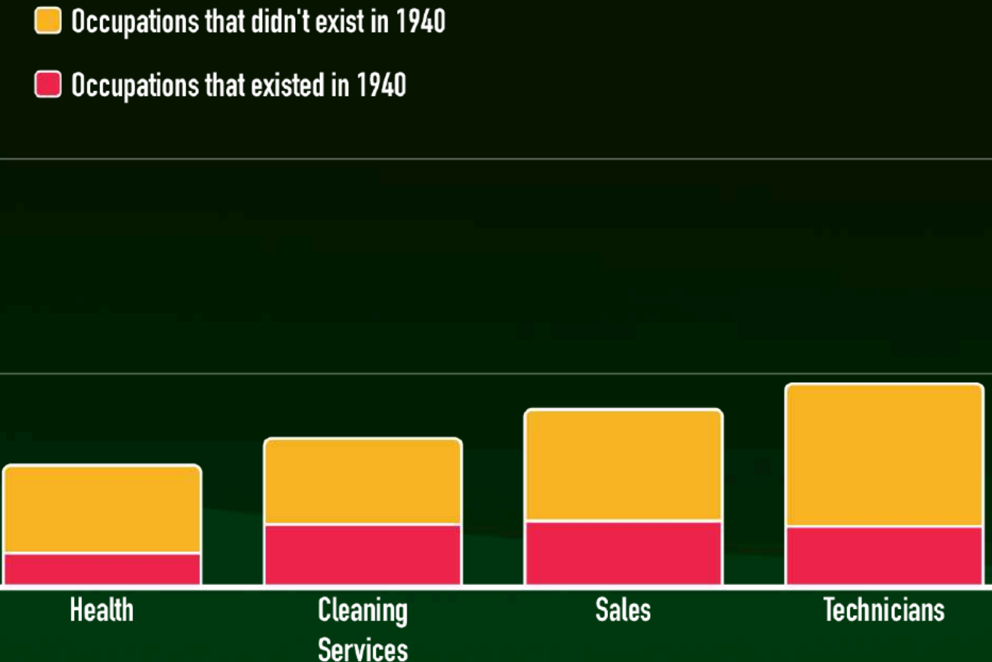
ROUTINE



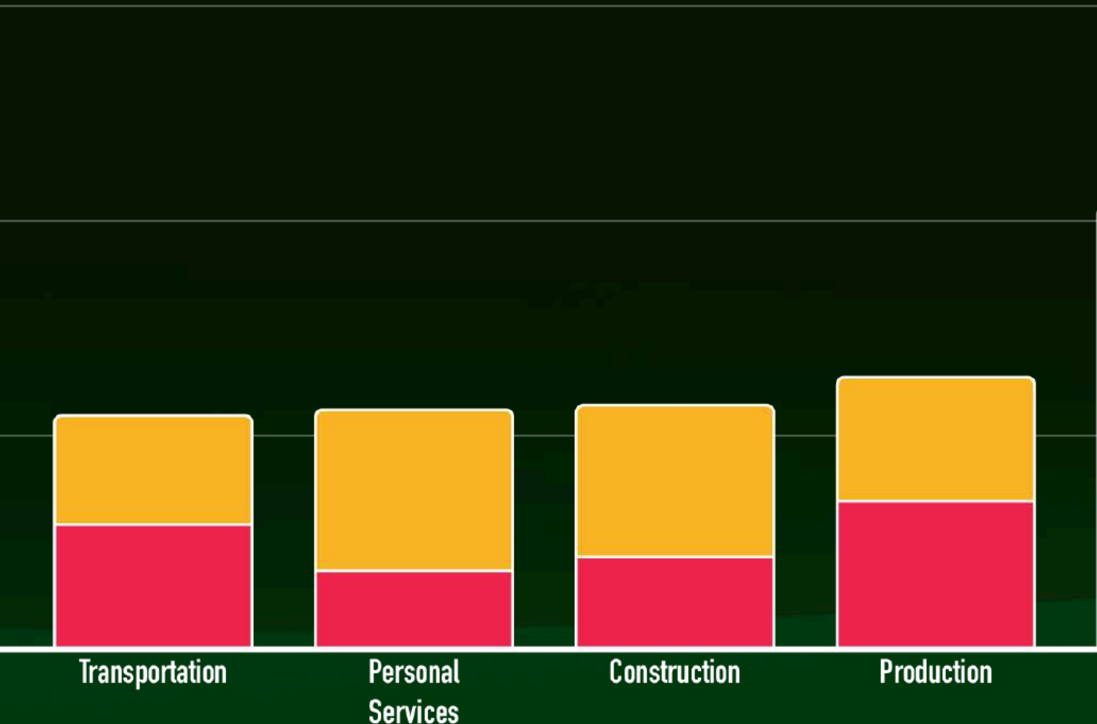


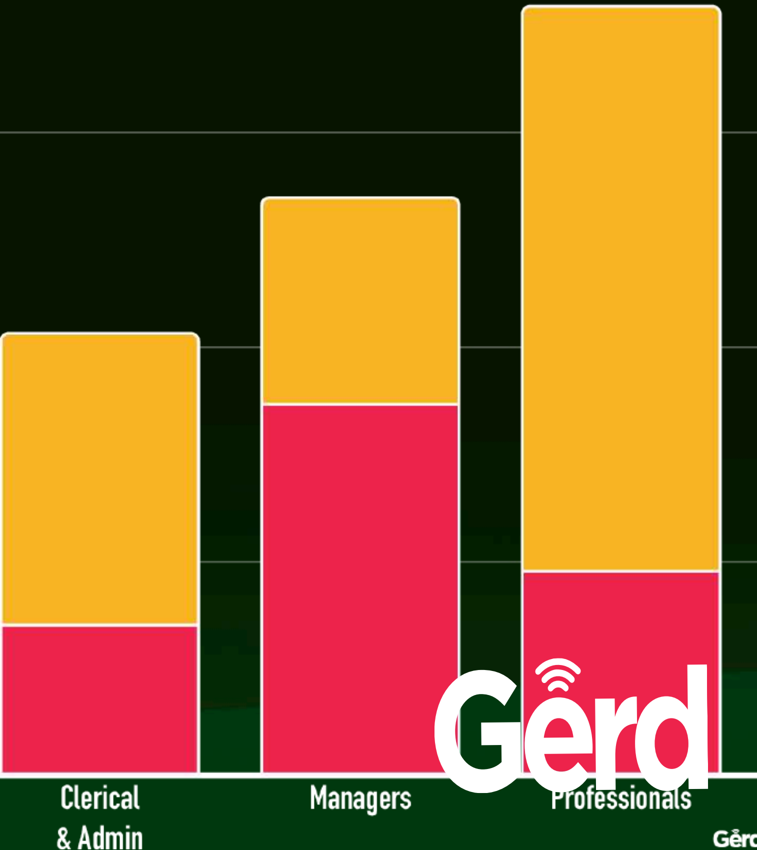
Source: Autor et al. (2022), Goldman Sachs Research

INNOVATION LEADS TO NEW OCCU

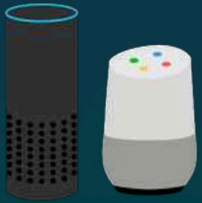


PATIONS THAT ACCOUNT FOR MOST EMPLOYMENT GROWTH

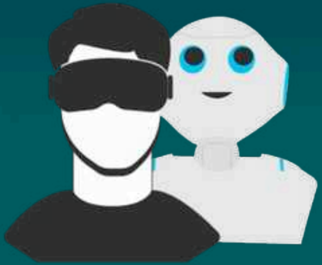


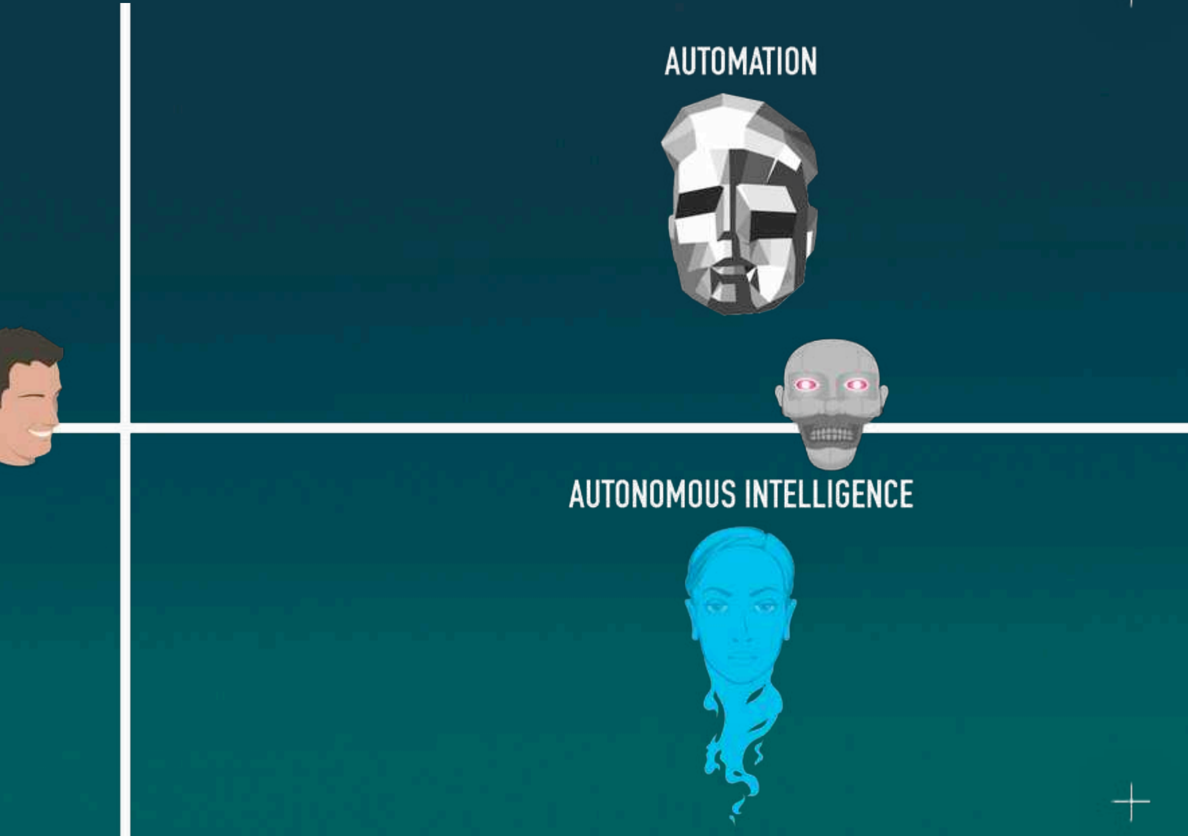


ASSISTED INTELLIGENCE



AUGMENTED INTELLIGENCE





AUTOMATION

AUTONOMOUS INTELLIGENCE

Too much of a
can be a very

DATA_TRANSFER_01

SNU_92

good thing
bad thing

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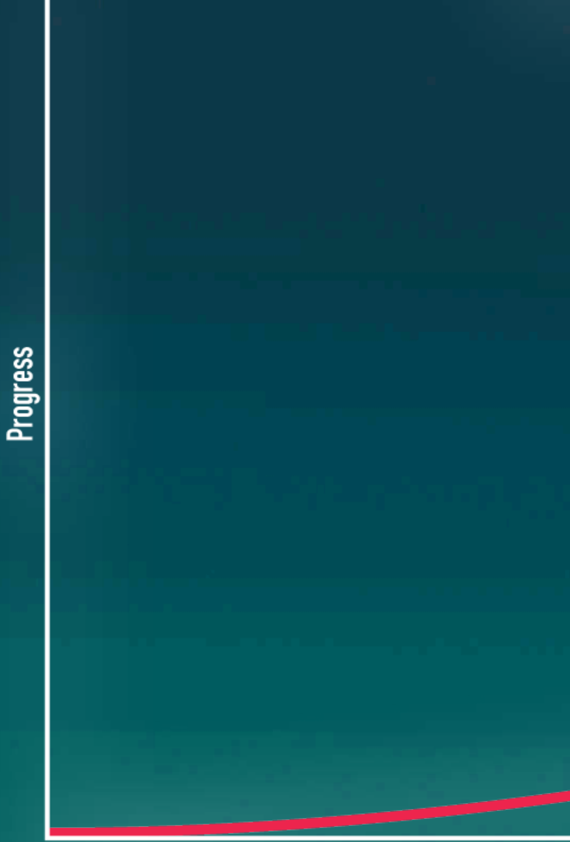

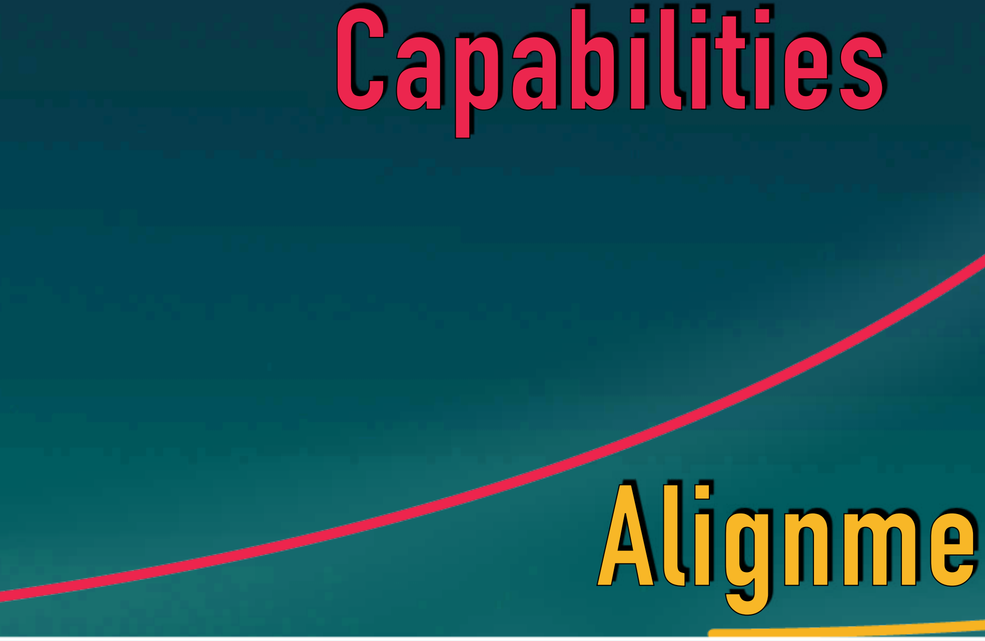

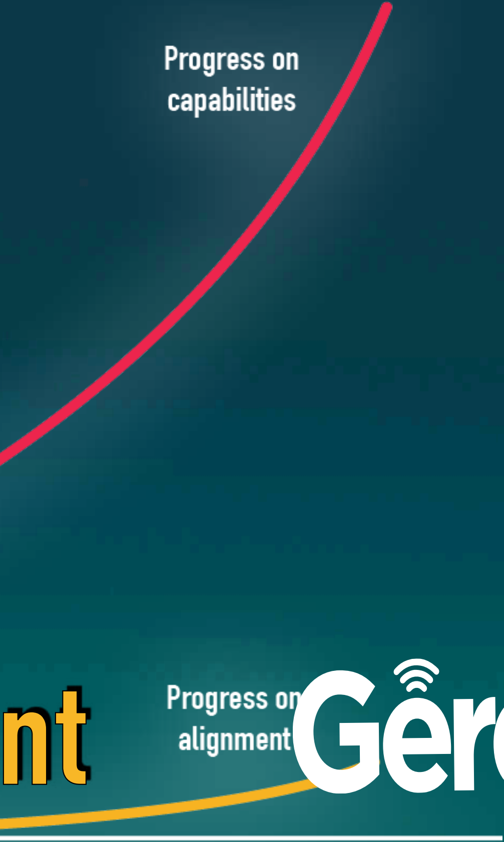

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THE TECHNO-OPTIMIST MANIFESTO

THE AI BREAKDOWN
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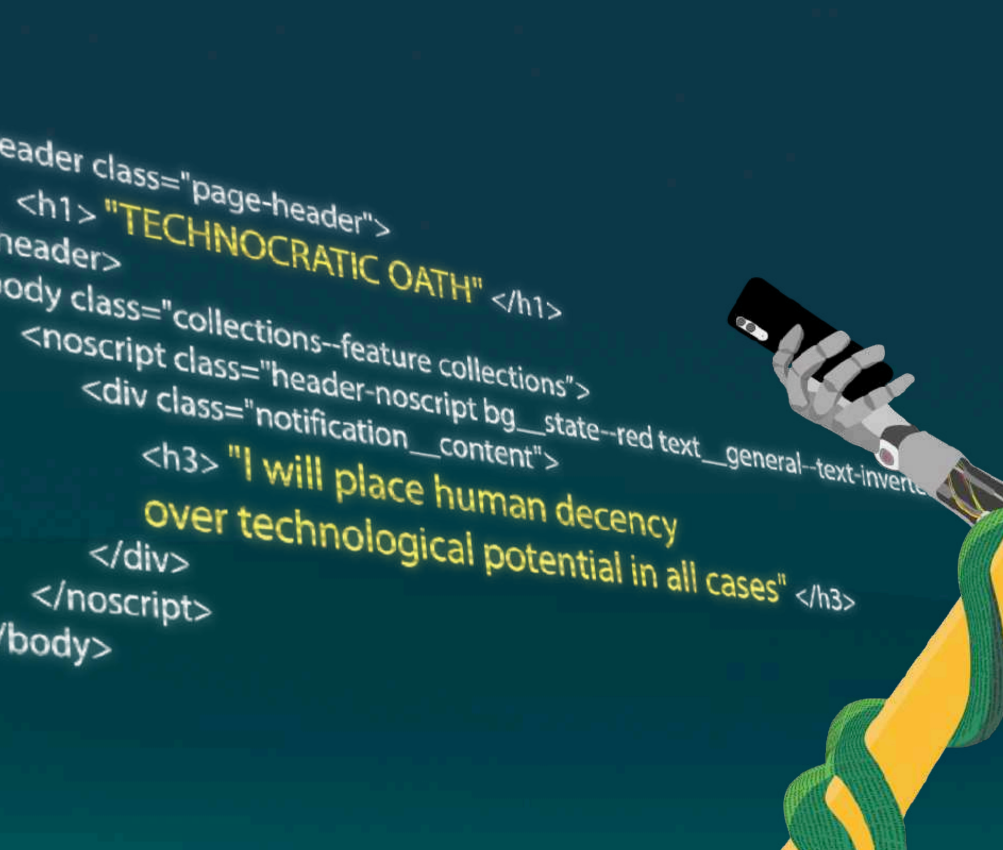

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  <h1> "TECHNOCRATIC OATH" </h1>
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ody class="collections--feature collections">
  <noscript class="header-noscript bg__state--red text__general--text-invert
      <div class="notification__content">
          <h3> "I will place human decency
          over technological potential in all cases" </h3>
      </div>
  </noscript>
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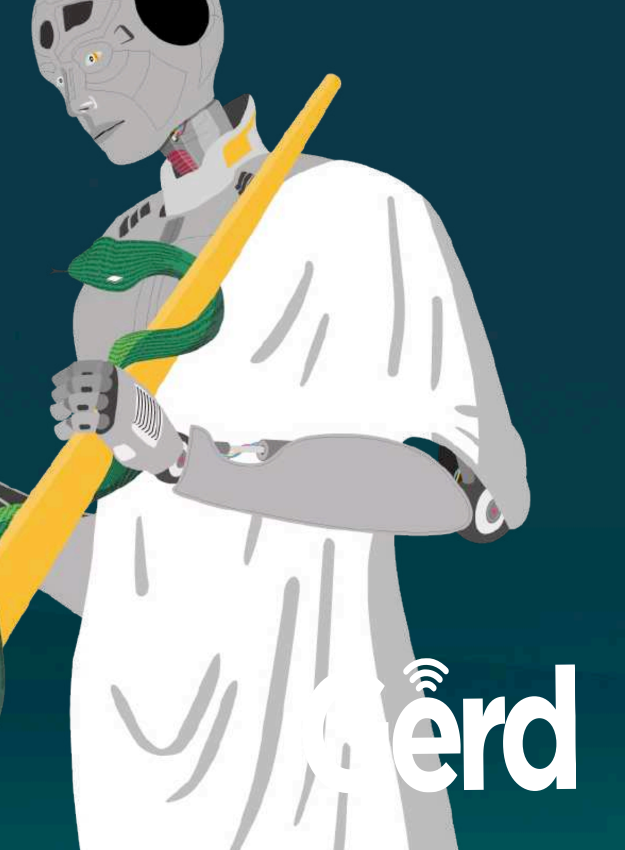

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“The coming change (in AI)

THE PHENOMENAL ABI

Sam Altman, CEO, OpenAI:

will center around the most impres

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Saudi Arabia Pl Into Artificial In

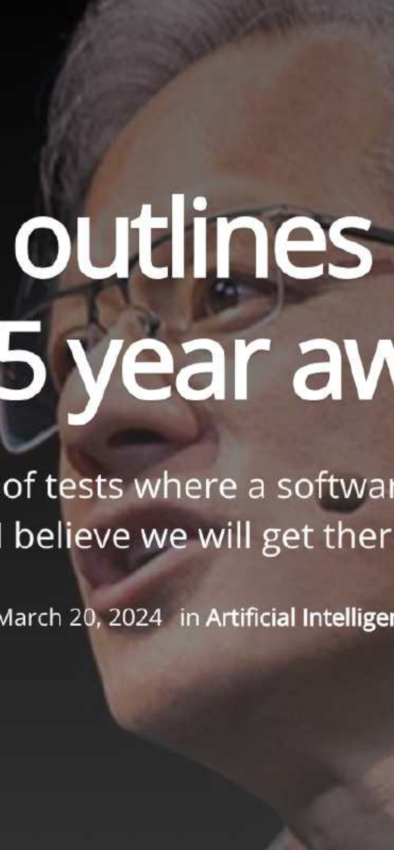
The Middle Eastern countr in A.I. technology, potential hot market.

ans $40 Billion Push telligence

y is creating a gigantic fund to invest ly becoming the largest player in the

OpenAI and Meta ready new AI models capable of 'reasoning'

Upgrades are part of a wave of new large language models being released this year



NVIDIA’s Huang outlines
points 5 year aw

fied AGI to be something very specific, a set of tests where a softwar
better than most people — I believe we will get ther

by **Kerem Gülen** — March 20, 2024 in **Artificial Intelliger**

path to AGI,
vay

re program can do very well — or maybe 8%
e within 5 years,”

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ARTIFICIAL GENERAL INTELLIGENCE

Could We Achi NVIDIA’s CEO J Possible

Updated on March 18, 2024

By **Alex McFarland**

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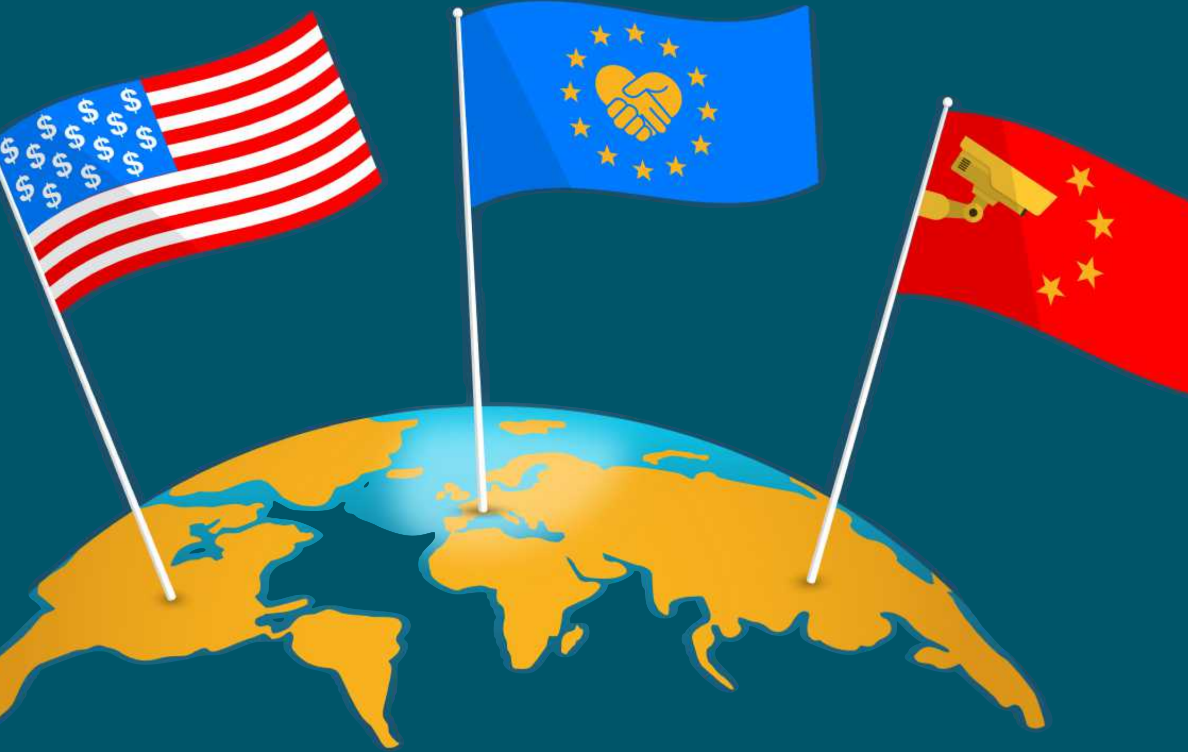

INTERNATIONAL ARTIFICIAL INTELLIGE

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RE-HUMANIZE
RE-HUMANIZE
RE-HUMANIZE
RE-HUMANIZE

Prioritise imagination,

Focus on collaboration

Teach character, perso

Bring degrees, experie

intuition and human agency not e

and co-creation not competition

nality and mindset, not just logic,

nces and competencies together,

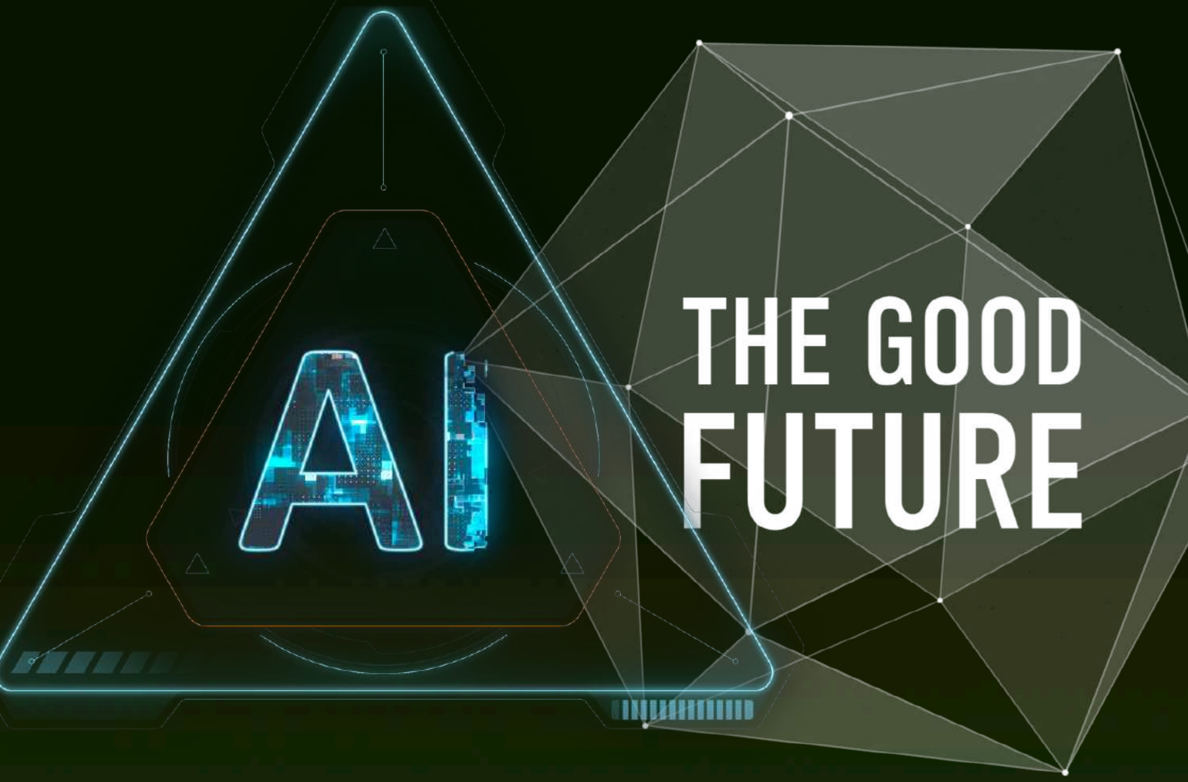
fficiency or functioning

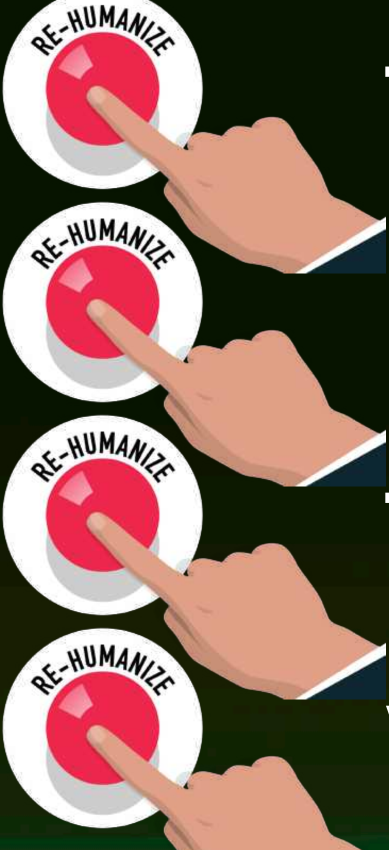
and polarisation

capabilities and skills

expand vocational trainings

THE GOOD FUTURE

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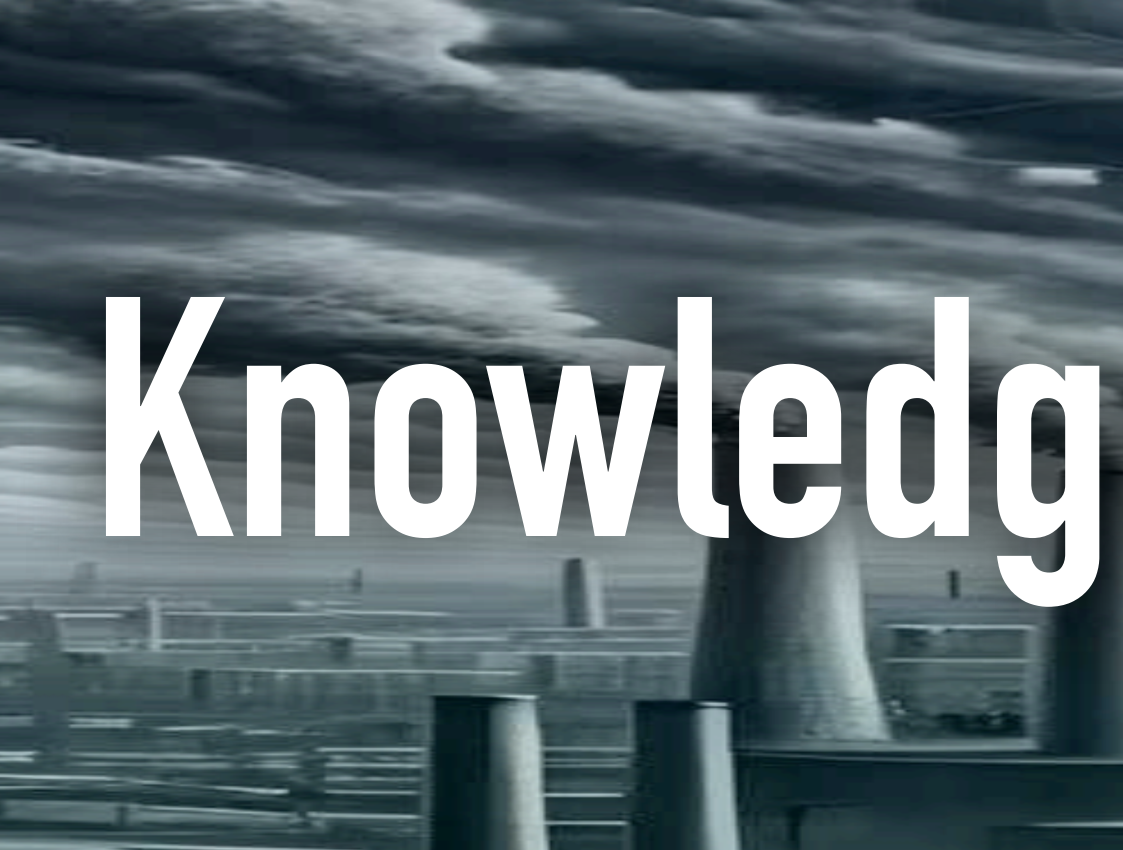

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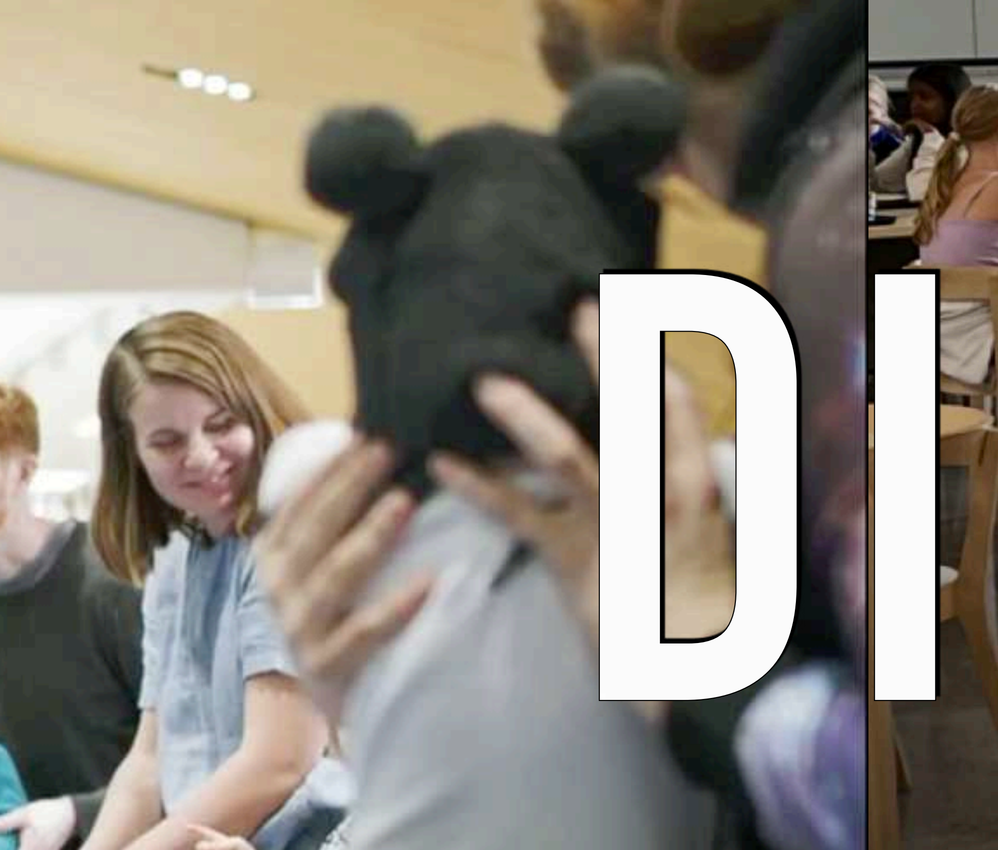

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Here’s how Finnish teachers use cutting-edge school design to add
lessons other countries can learn from them.

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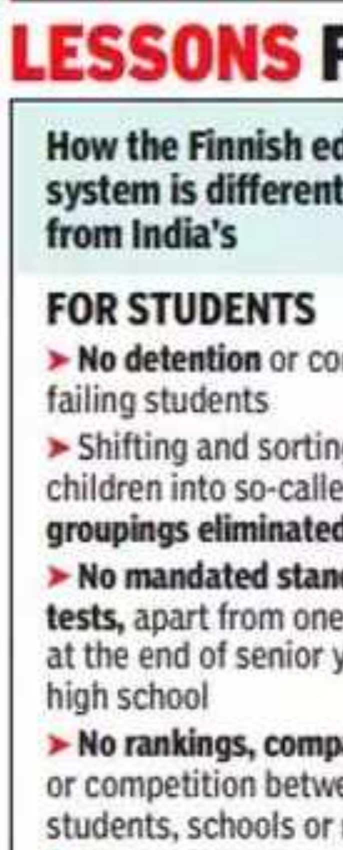

LESSONS F

How the Finnish ed
system is different
from India's

FOR STUDENTS

- ➤ **No detention** or co
failing students
- ➤ Shifting and sortin
children into so-calle
groupings eliminated
- ➤ **No mandated stan**
tests, apart from one
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- ➤ **No rankings, comp**
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udents, schools or regions

- Regular **15-minute playtime** utdoors between lessons
- **Minimal homework**
- **No compulsory schooling** ll the age of 7
- **Free pre-school** for children

FOR TEACHERS

- Teaching professionals **top 10% of nation's gradu**
- Continuous **on-the-job t**
- **Consultations with colle** different methods of teac

DMINISTRATION

- Decentralisation of ducation system
- No inspectorate ystem, accountability and nspection handed over to teachers and principals
- Low teacher-student rati
- Every school has the sam national goals and draws f the same pool of universit trained educators

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➤ Apart from Finnis
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graders are taught
sports, religion and
handicraft. English
third grade

“We are
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So wh

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DIGITAL REVOLUTION

AI: Competenc

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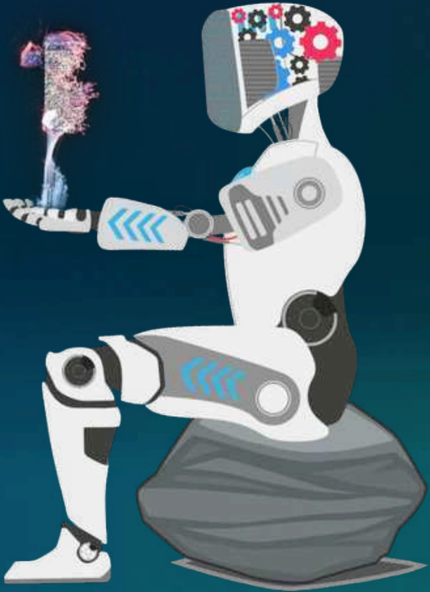
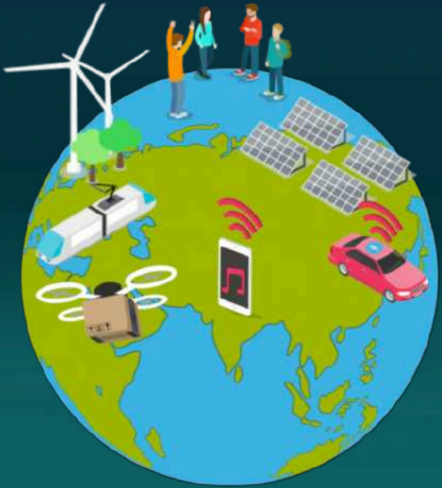
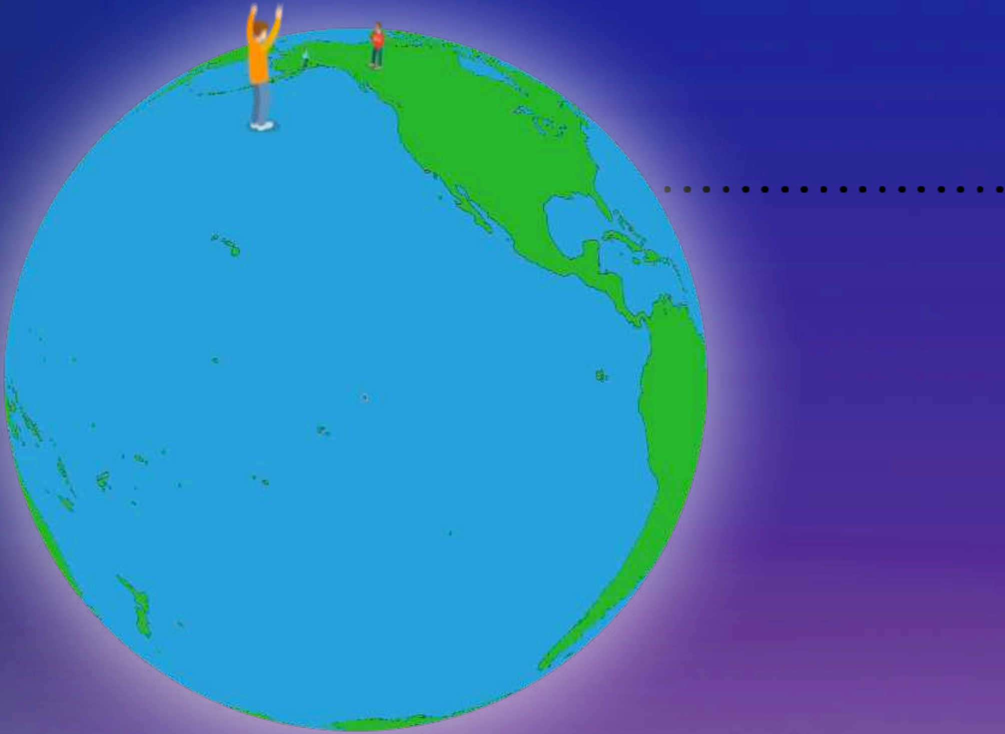


SS

SUSTAINABILITY REVOLUTION



PEOPLE
PLANET
PURPOSE
PROSPERITY



PURPOSE REVOLUTION

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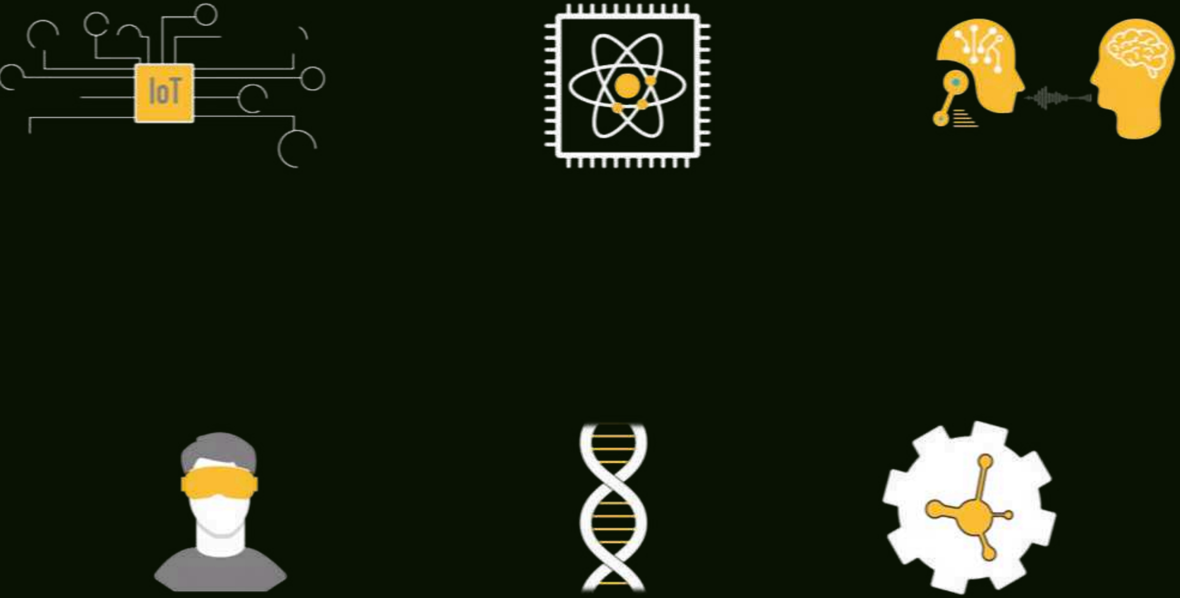
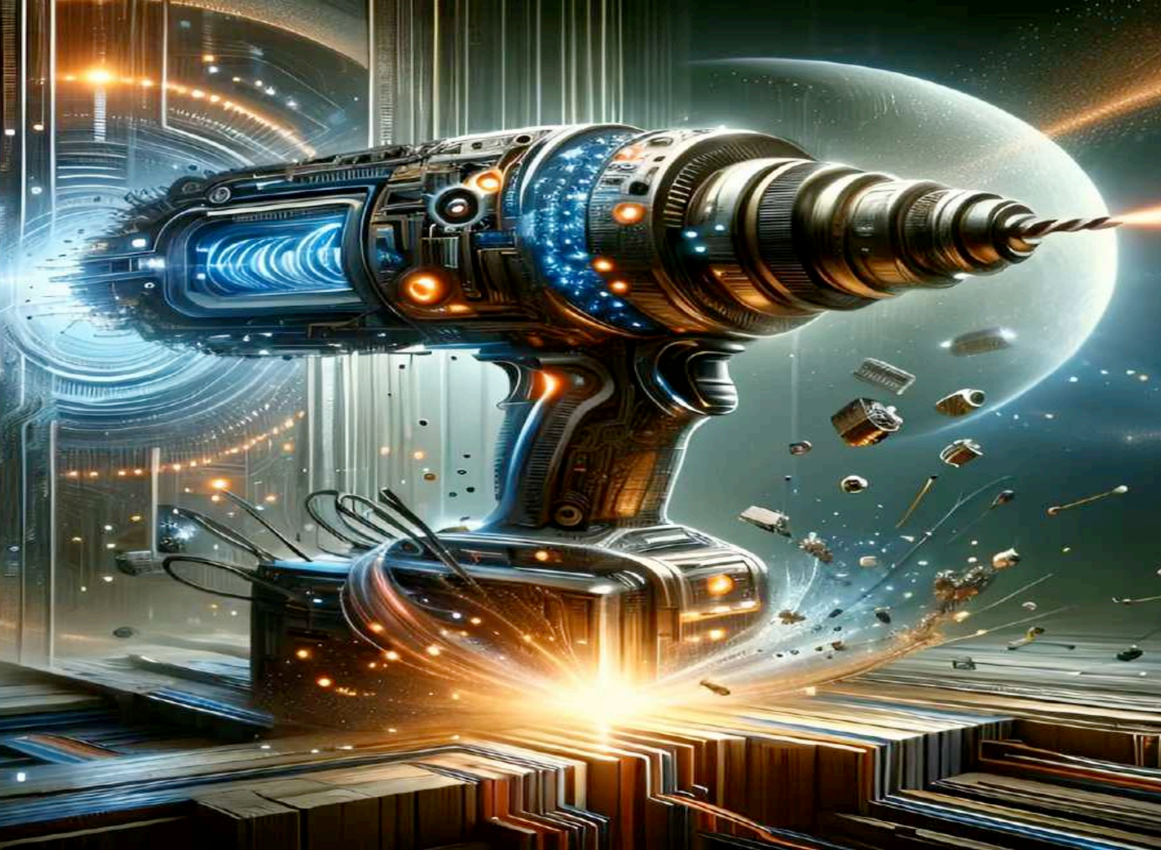


Tools



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EXPONENTIAL

CONVERGENT

AWESOME HUMANS

COMBINATORIAL

ON TOP OF AMAZIN

THE GOOD FUTURE

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THE BAD FUTURE

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ENDOW THE GOOD FUTUR

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