

Summit Data

Who has contributed most to global CO₂ emissions?

Our World in Data

Cumulative carbon dioxide (CO₂) emissions over the period from 1751 to 2017. Figures are based on production-based emissions which measure CO₂ produced domestically from fossil fuel combustion and cement, and do not correct for emissions embedded in trade (i.e. consumption-based). Emissions from international travel are not included.

North America

457 billion tonnes CO₂
29% global cumulative emissions

USA
399 billion tonnes CO₂
25% global cumulative emissions

Canada
32 billion t
2%

Mexico
19 billion t
1.2%

Asia

457 billion tonnes CO₂
29% global cumulative emissions

China
200 billion tonnes CO₂
12.7% global cumulative emissions

Japan
62 billion t
4%

India
48 billion t
3%

South Korea
16 billion t
1%

Taiwan
8 billion t
0.5%

Thailand
7 billion t
0.45%

Uzbekistan
6 billion t
0.4%

Saudi Arabia
14 billion t
0.9%

Malaysia
5 billion t
0.33%

North Korea
5 billion t
0.32%

Pakistan
4.4 billion t
0.28%

UAE
4 billion t
0.28%

Indonesia
12 billion t
0.8%

Iraq
4 billion t
0.25%

Vietnam
3 billion t
0.2%

Azerbaijan
2.1 billion t
0.15%

Philippines
2 billion t
0.14%

Iran
17 billion t
1%

Kazakhstan
12 billion t
0.8%

Philippines
3 billion t
0.2%

Syria
2 billion t
0.14%

Kuwait
2 billion t
0.14%

South Africa
19.8 billion t
1.3%

Algeria
4.1 billion t
0.28%

Brazil
14.2 billion t
0.9%

Venezuela
7.6 billion t
0.5%

Australia
17.4 billion t
1.1%

Nigeria
3.6 billion t
0.24%

Libya
3 billion t
0.2%

Morocco
2.5 billion t
0.17%

Colombia
3.1 billion t
0.21%

Chile
2.7 billion t
0.18%

Egypt
3.6 billion t
0.24%

Argentina
8 billion t
0.5%

Syria
2 billion t
0.14%

Hong Kong
1 billion t
0.07%

Uzbekistan
6 billion t
0.4%

Africa
43 billion tonnes CO₂
3% global emissions

South America
40 billion tonnes CO₂
3% global emissions

Oceania
20 billion tonnes CO₂
1.2% global emissions

Europe

514 billion tonnes CO₂
33% global cumulative emissions

EU-28
353 billion tonnes CO₂
22% global cumulative emissions

Russia
101 billion tonnes
6% global emissions

Ukraine
19 billion t
1.2%

Turkey
9.6 billion t
0.6%

Switzerland
2.9 billion t
0.2%

Norway
2.9 billion t
0.2%

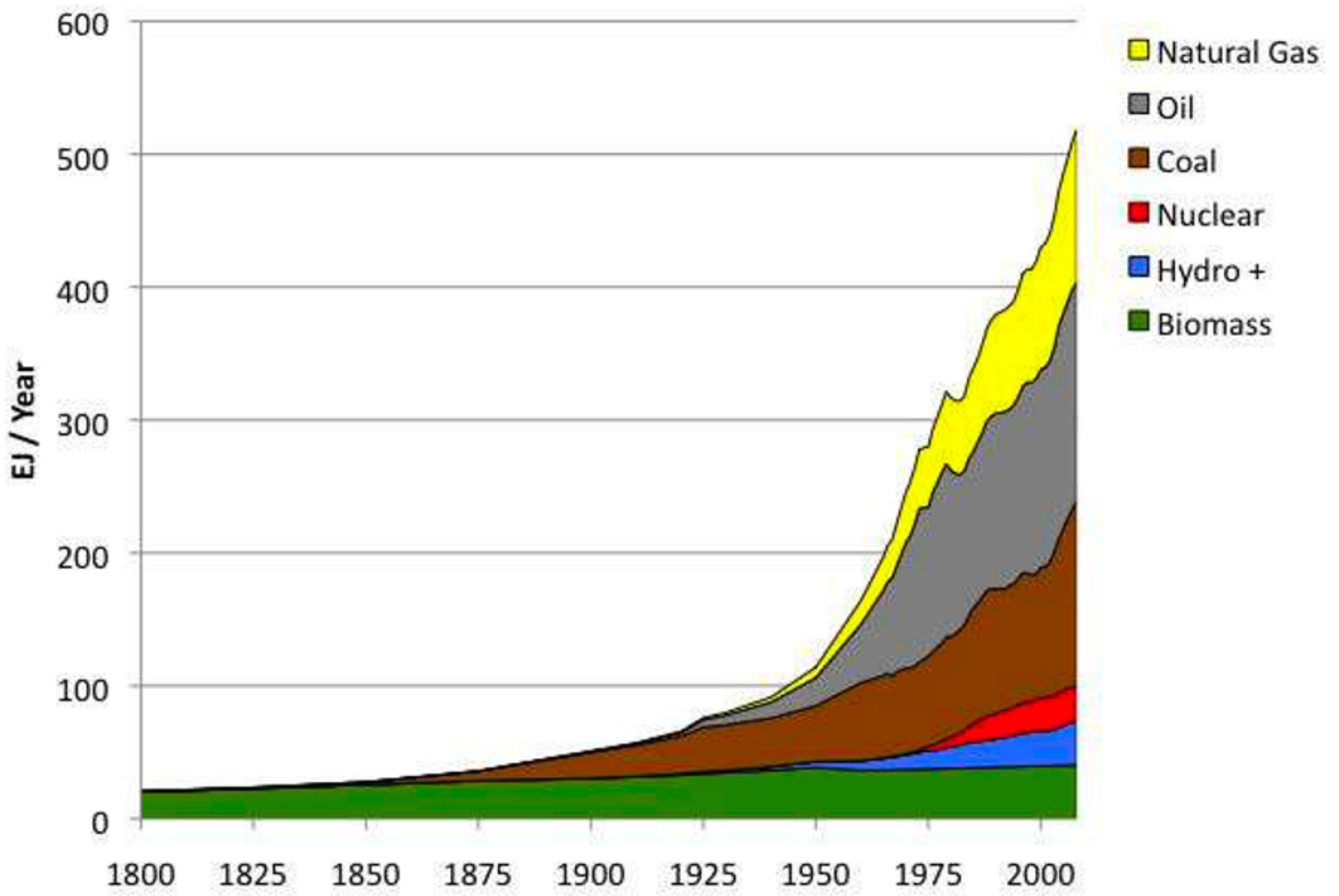
Algeria
4.1 billion t
0.28%

Libya
3 billion t
0.2%

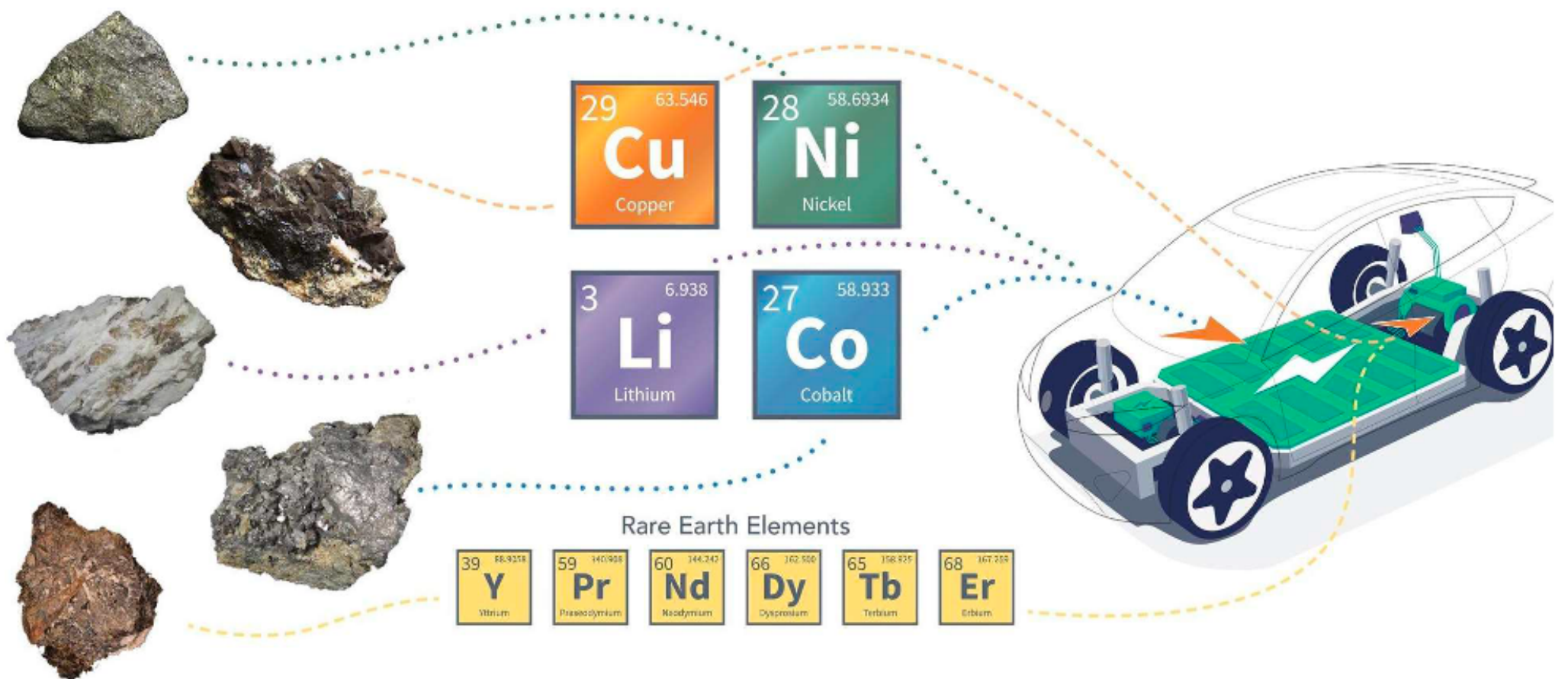
Morocco
2.5 billion t
0.17%

Colombia
3.1 billion t
0.21%

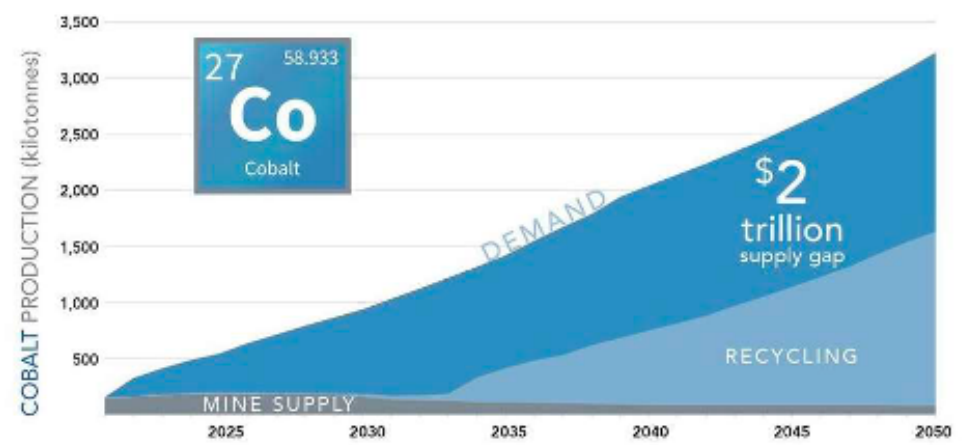
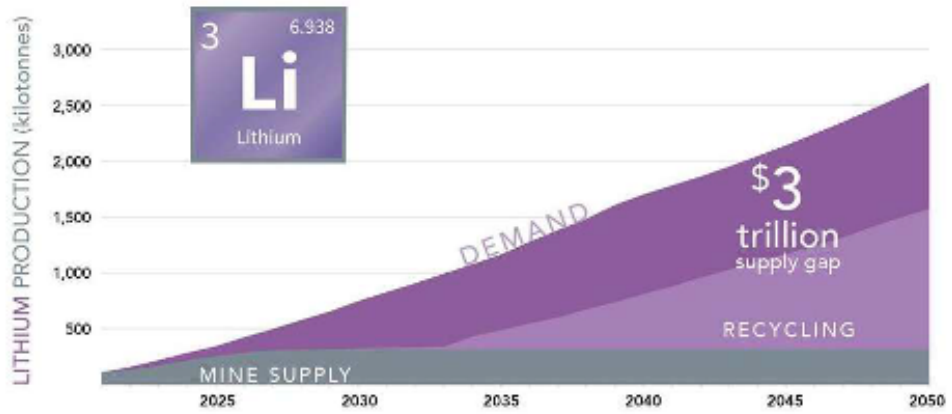
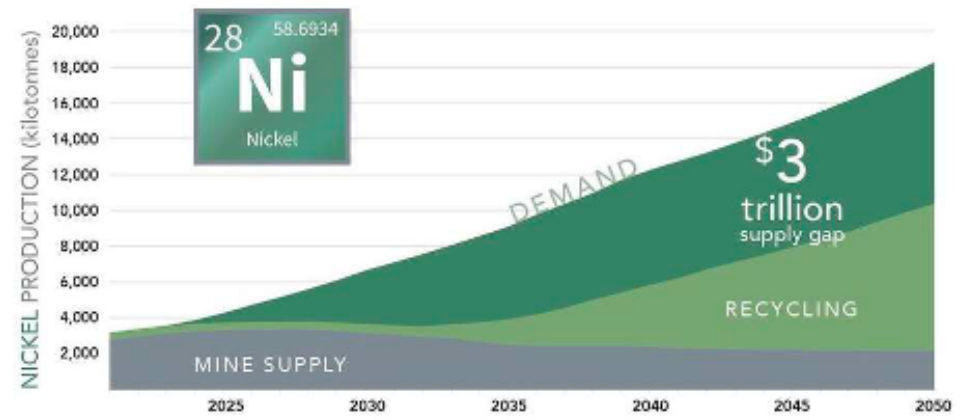
Chile
2.7 billion t
0.18%



The average 2023 EV contains ~140 kg and ~\$4300 of these critical materials



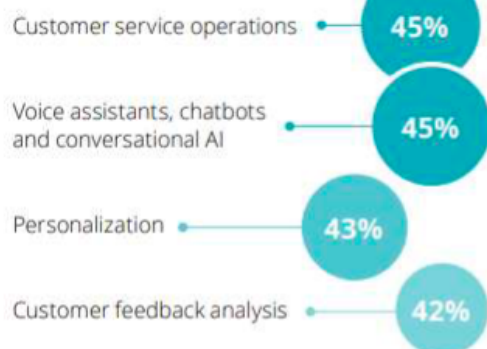
\$12 trillion supply gap



The "AI future" is already here [AI is already being put to use across the consumer products industry](#). Companies are using AI to automate a variety of both back office and customer-facing tasks. But many of these remain small scale proofs of concept. To understand where AI could go next, we need to understand how it works a bit better.

Processes currently using AI in operational / day-to-day use (Top 15)

Customer experience & Marketing



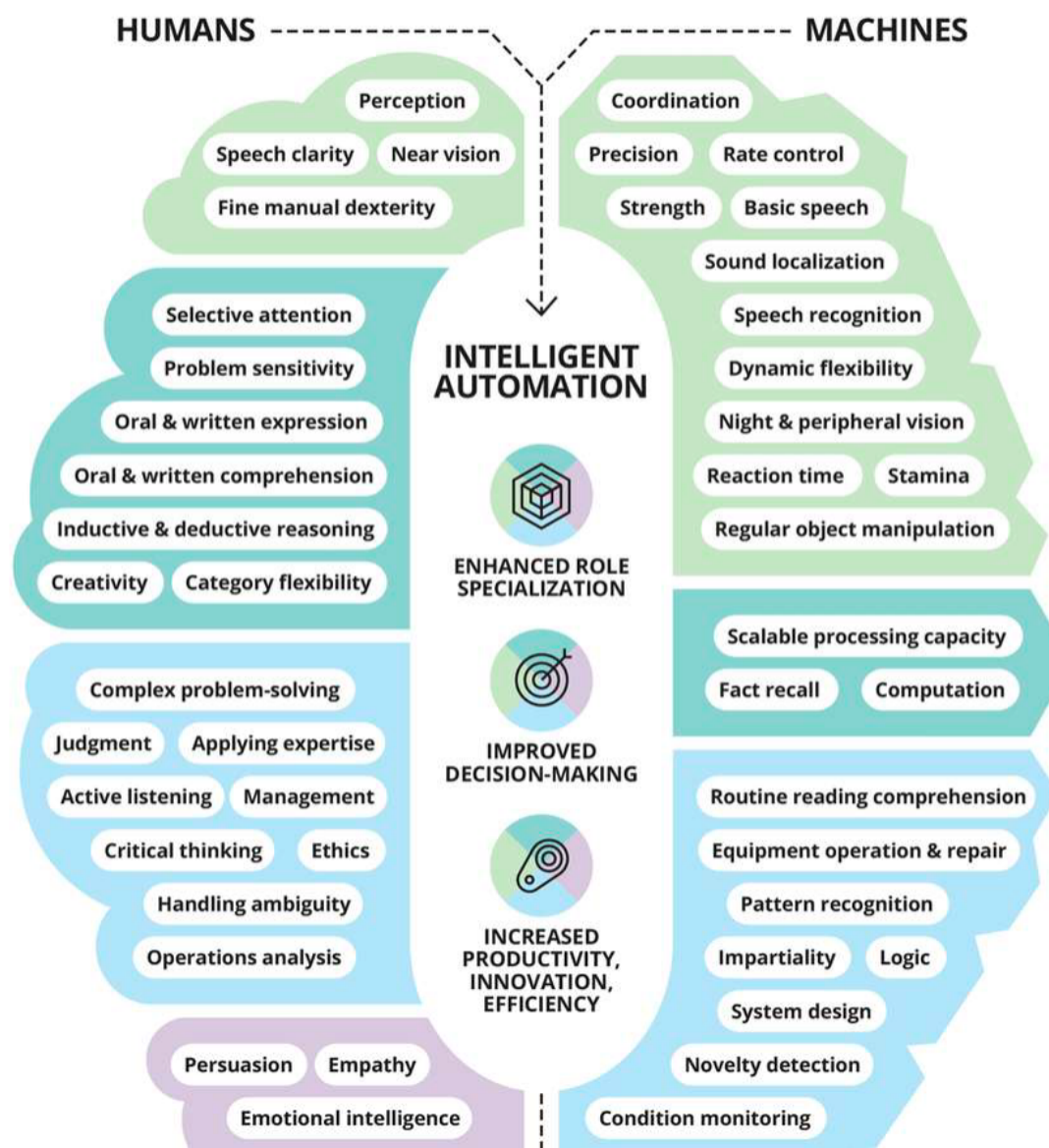
Workforce & HR



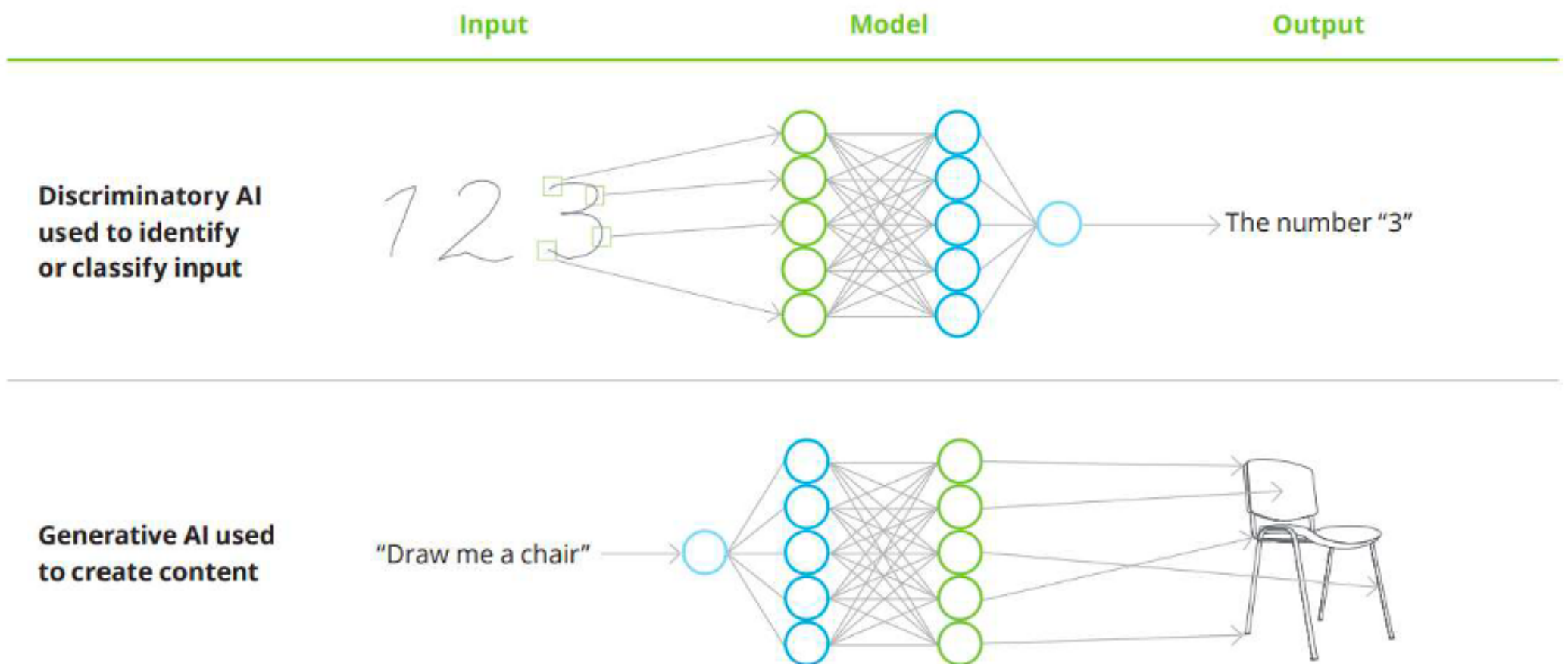
Operations & Finance



Consumer (N=525)



And different AI tools work differently too Generative AI, for example, works almost in reverse of more familiar ML models.

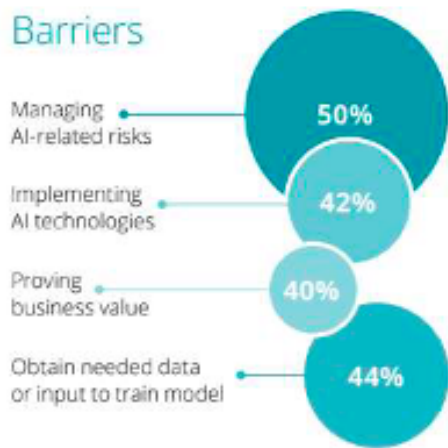


But significant transformations can bring significant barriers

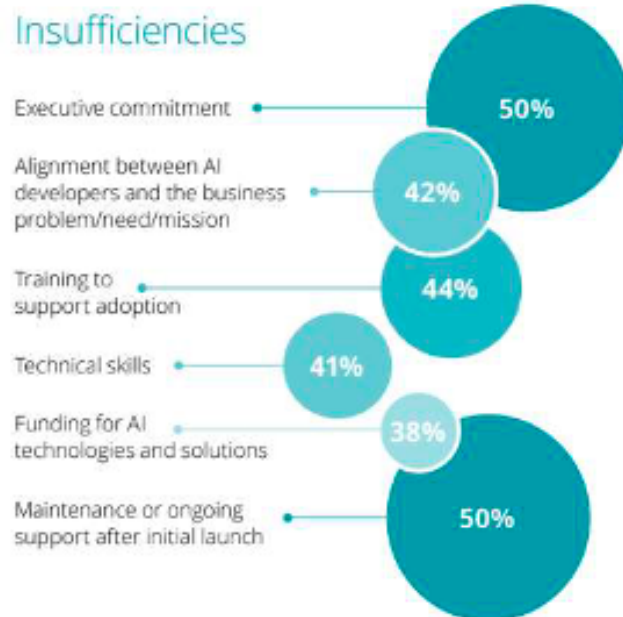
Challenges in scaling AI initiatives

N=2,620 respondents

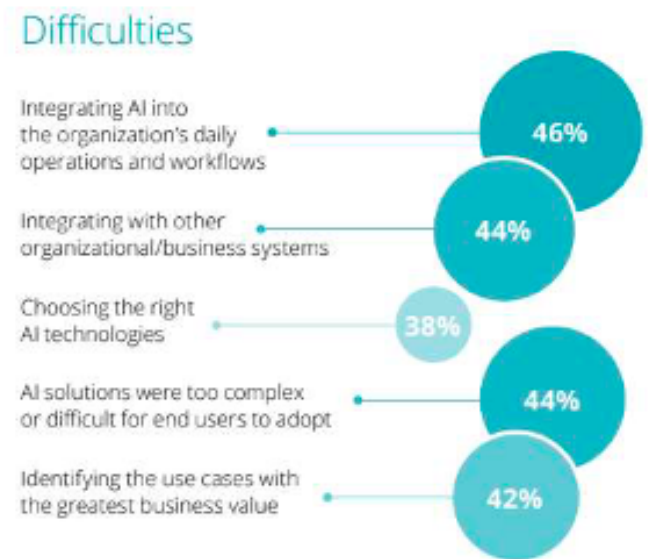
Barriers



Insufficiencies



Difficulties



- 90% of Gen Z believes companies must act to help social and environmental issues and 75% will do research to see if a company is being honest when it takes a stand on issues (Porter Novelli/ Cones 2019 Gen Z Purpose Study)
- 79% of consumers today state, it is important for brands to provide guaranteed authenticity like certifications, when they're purchasing goods (IBM 2020 Purpose and Provenance Drive Bigger Profits for Consumer Goods)
- 87% of Gen Z consumers believe companies have a responsibility to address environmental and social issues (The Future of Retail Report).
- A study from Nielsen showed that 73 %of Millennial respondents were willing to spend more on a product if it comes from a sustainable or socially conscious brand.
- According to a McKinsey study by 2025, 20-30% of global fine jewellery sales will be influenced by sustainability considerations from environmental impact to ethical sourcing practices. This is equivalent to as much as \$110 billion, which is a 3 to 4 time increase in sustainability-influenced purchases since 2019
- Artisanal and small-scale mines (ASM) account for about 20% of global gold supply, 80% of global sapphire supply and 20% of global diamond supply.
- The Jewellery Industry buys half the world's gold.

Quotes:

- "The Primary challenge facing all of us is the relationship between humans and earth."
- "How can we enjoy the fruit without destroying the world we live in?"
- "Conflict can be friction from the Government. It's not just war."
- "The old model of opacity isn't working."
- "The crisis you regret is the slow build one."
- "We tend to be short-termist when thinking about the future."
- "To demand 100% recycled metals is not sustainable."
- "We are creating a legacy, whether we realise it or not."
- "Everything can be reborn. Everything is energy."
- "It's about honouring the materials."
- "Just do what you can. Just do. Just move."
- "Sustainability shouldn't be about taking away the ability of Africa to sustain itself."
- "We have to get the stories out. We can't just let the noise dictate who we are."
- "Story telling takes a lot of emotional Intelligence. You have to be vulnerable."
- "A good story is a true story."
- "We overfocus on the environment in terms of sustainability. In 2003, there were 6.3 billion people. Now there are over 8 billion."
- "Politics is failing us and not just in this country but globally."
- "We need a culture that allows you to constantly renew yourself."
- "Culture eats strategy for breakfast."
- "The alphabet is the most successful technology in history."
- "Creativity should be considered the driver to change."
- "Careers in banks are considered more valuable than craftsmen."
- "Someone on \$2 a day has a very different view of sustainability than the average person."
- "Every breath we take is a gift from the earth."
- "You can't have a sustainable earth with poverty."

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