

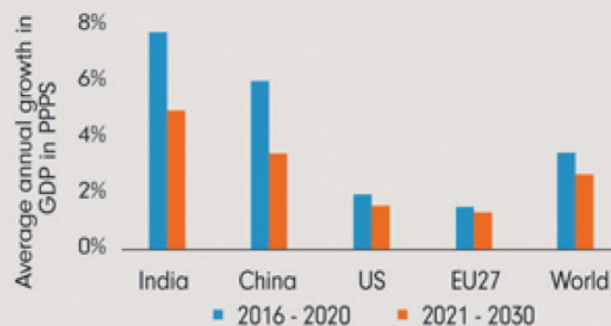
# The face of change

As the fast-growing emerging economies mature over the next 10 years, the globe will be introduced to a new wave of consumers. They'll provide new opportunities for travel and tech businesses, but also challenges in the form of increased risks to the environment.

## Economy

### What will the economy look like?

The next 10 years will bring maturity to the larger and more dynamic emerging economies, slowing down their rates of growth.



Source: PWC World in 2050, Feb 2017

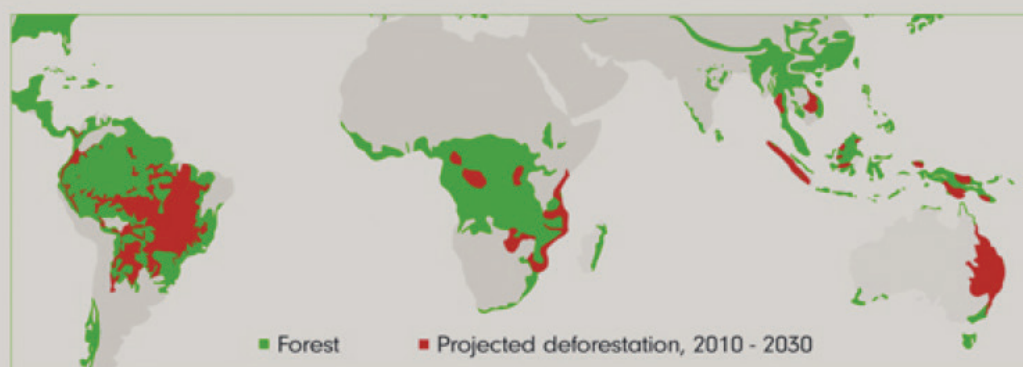
As these economies develop further, more people will be moved out of poverty. The number of people living on less than \$1.90 a day will fall by 25% to 480m.



Source: World Bank report, Piecing Together the Poverty Puzzle, Sept 2018

## Environment

### Vanishing forests

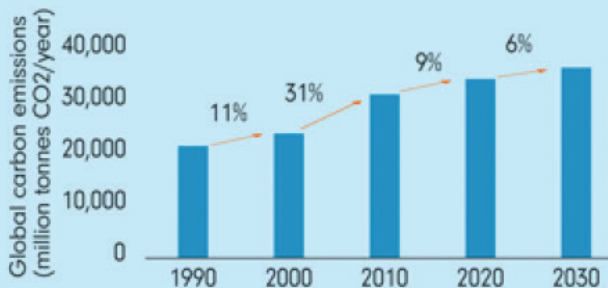


Less poverty brings with it increased consumption, particularly of meat, which presents an ecological risk. The world will lose 170m hectares of forest by 2030, reducing CO2 absorption and intensifying global warming.

Source: WWF Deforestation Fronts, Dec 2018

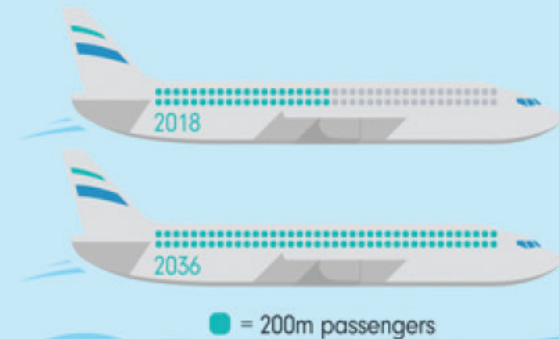
## Carbon vs air travel

With more consumers in the world, we will struggle to contain CO<sub>2</sub> emissions. They are likely to keep growing, albeit at a slower pace.



Source: BP 2018 Energy Outlook

The number of air travellers will grow at a rate of 3.6% a year, nearly doubling to 7.8bn by 2036.

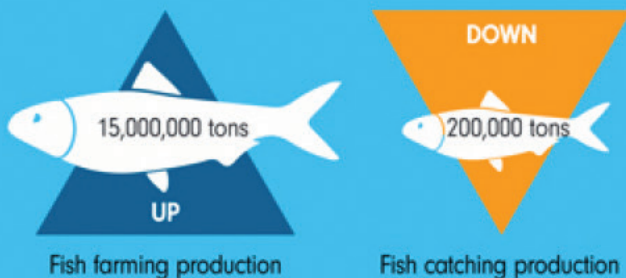


Note: For illustrative purposes only

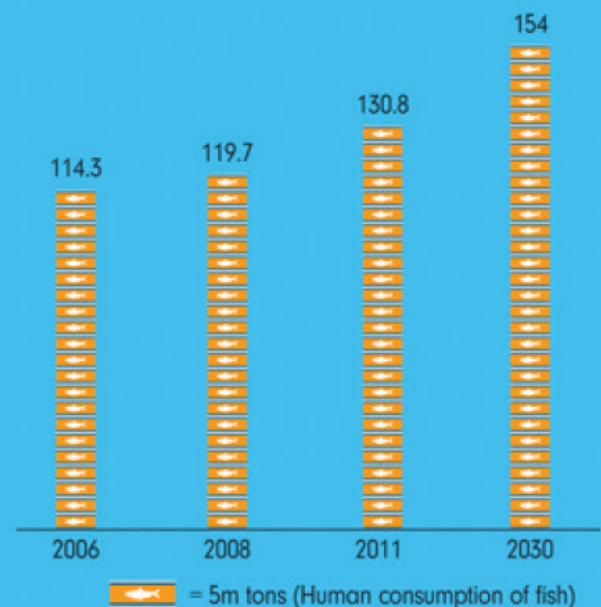
Source: International Air Transport Association, 20 Year Forecast, Oct 2017

## Raiding the seas

A growing food demand will put pressure on fish stocks, much of which will be absorbed by farmed, rather than caught, fish.



Source: World Bank Report, Prospects for Fisheries and Aquaculture, Dec 2013

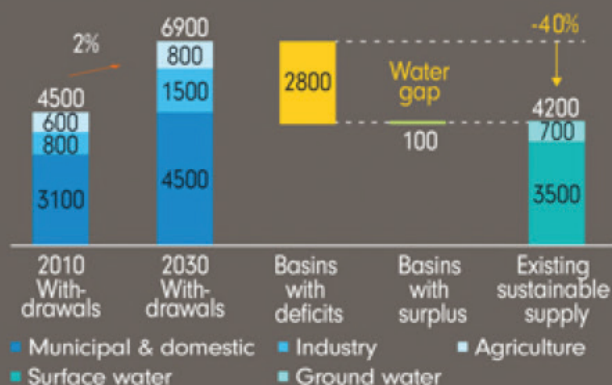


Note: For illustrative purposes only

Source: Bloomberg Philanthropies, 2018

## Bridging the water gap

Agriculture and industry are thirsty for water, and demand may exceed supply by 2030.



Source: McKinsey & Co., IFPRI, Fidelity International, Oct 2018

Highly populated areas may face water shortages, with the locations listed here most at risk.

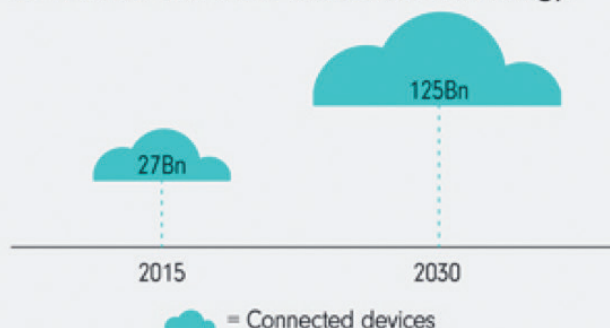
- 1 - Cape Town
- 2 - São Paulo
- 3 - Bangalore
- 4 - Beijing
- 5 - Cairo



Source: BBC News, Feb 2018

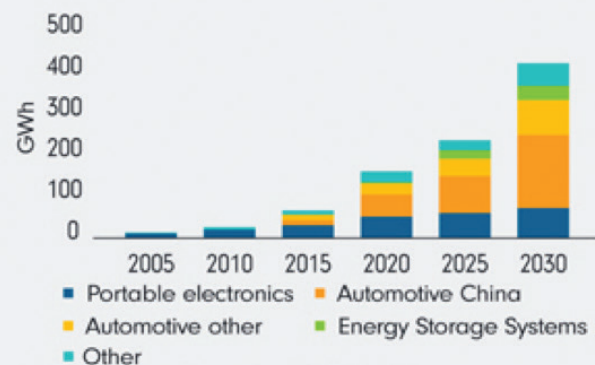
## Using technology

Demand for internet connected devices is set to grow 12% every year, riding a rising tide of consumers and more accessible technology.



Note: For illustrative purposes only  
Source: IHS Markit, Oct 2017

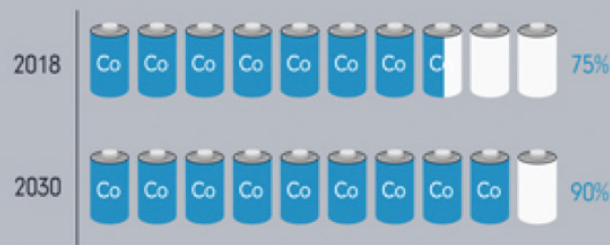
Cars join the ranks of phones and other electronics running on batteries.



Source: Energy storage white paper, Argus Media, March 2018

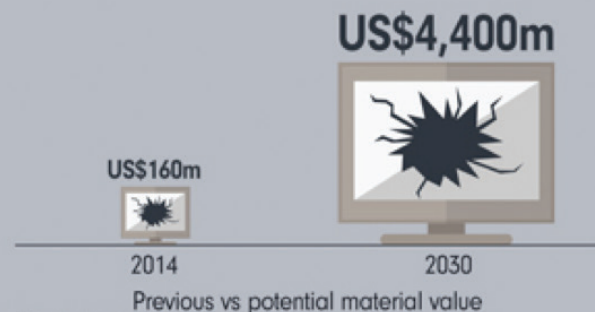
## Recycling technology

Cobalt is an essential part of lithium-ion batteries, and more devices will lead to a supply squeeze in the metal. By 2030, around 90% of mined cobalt will be used immediately.



Source: Energy storage white paper, Argus Media, March 2018

As the world's top tech producer, China needs cobalt. Extracting recyclable materials from scrap electric equipment will help ease constraints.

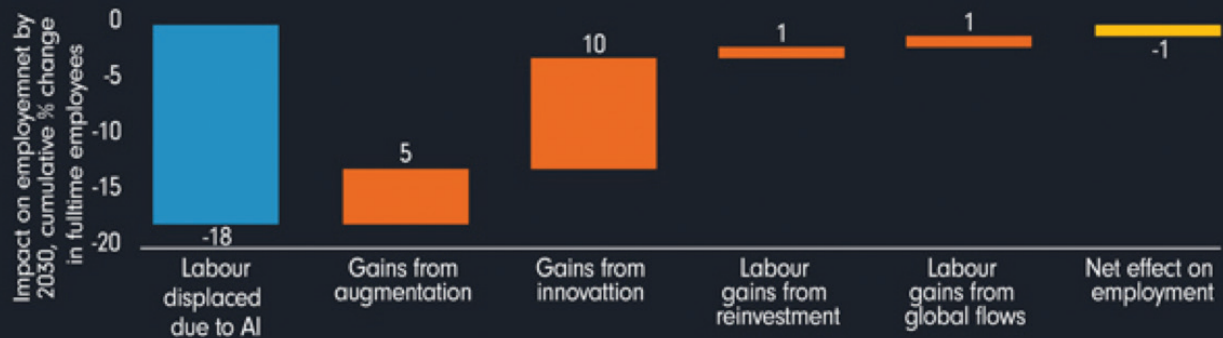


Note: For illustrative purposes only  
Source: World Economic Forum, Dec 2018



### Rise of AI and implications for human workers

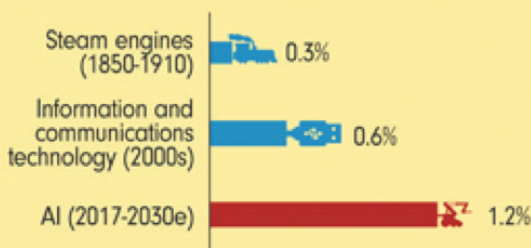
Artificial intelligence will displace some roles and create new ones. The net negative effect on employment levels will be negligible.



Source: McKinsey Global Institute's "Notes from the AI Frontier", Sep 2018

### AI will boost the global economy and take over our lives

AI could represent a bigger productivity boost to the global economy than the steam engine and the internet combined. It will boost GDP by roughly 1.2% a year, or \$13tn by 2030.



Source: McKinsey Global Institute's "Notes from the AI Frontier", Sep 2018

Few industries will be left untouched and everything from the military to motor vehicles will adapt to AI.



**20%**  
of cars globally will be autonomous<sup>1</sup>.



**25%**  
of US soldiers will be robots<sup>2</sup>.

Source: <sup>1</sup>Forbes, Oliver Wyman, Feb 2018

<sup>2</sup>Popular Science, US Army Training and Doctrine Command, 2014