

## Toward the Extinction of Human Jobs

In the last decade the **Fourth Industrial Revolution** has caused a widespread disruption to labour markets, with enormous change in the skill sets needed to thrive this new landscape. Many sectors have seen a complete replacement of human labor by **machines, robots and automation**, with a parallel **increase in productivity**. Despite this, humans have been able to create and train for **new jobs**, adapting to this new world they did: jobs which concern intellectual charge and management or control positions; jobs which are performed – after many battles – in **shorter work days**, proving that it has been an impact on performances and on the well-being of workers. Thanks to the achievement of important milestones, such as the **Universal Basic Income**, now adopted by an increasingly number of countries worldwide, people have finally started to cultivate their passions and interests, dedicating themselves to the development of **cognitive and creative abilities**, without fearing that robots will cause their financial collapse – like many did just about 10 years ago.

### Big and Fast

Data production is expanding at an astonishing pace, arriving nowadays to almost 200 zettabyte.

The huge amount of data combined with the increasing development of Machine Learning, have bring to a new paradigm of work, where efficiency and security are now ensured by AI.

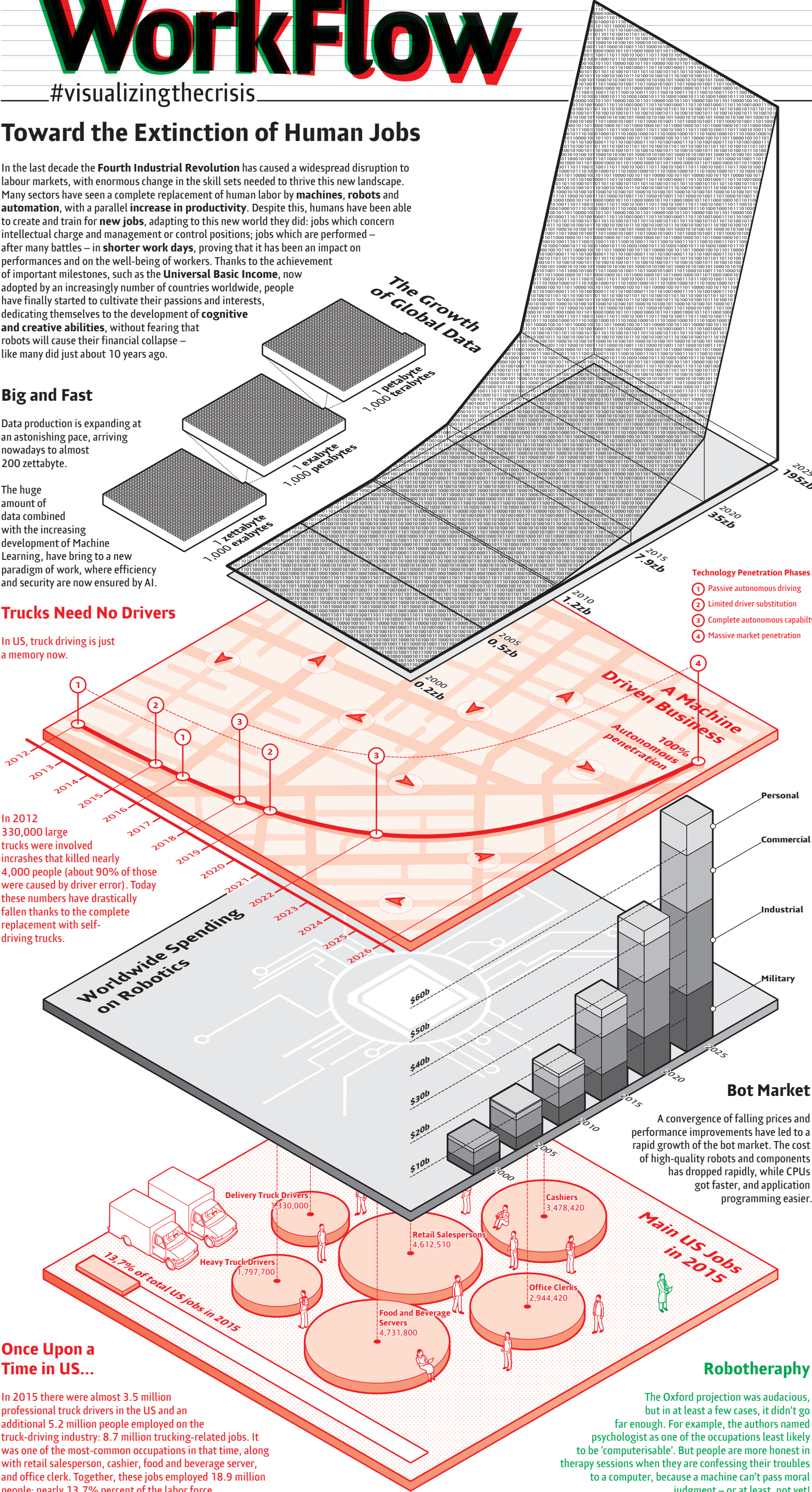
### Trucks Need No Drivers

In US, truck driving is just a memory now.

In 2012 330,000 large trucks were involved incrases that killed nearly 4,000 people (about 90% of those were caused by driver error). Today these numbers have drastically fallen thanks to the complete replacement with self-driving trucks.

### Once Upon a Time in US...

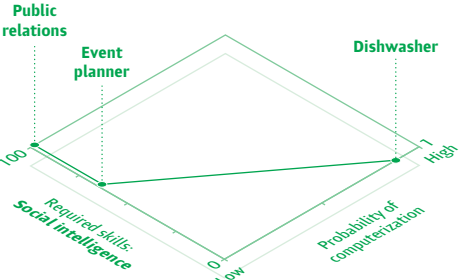
In 2015 there were almost 3.5 million professional truck drivers in the US and an additional 5.2 million people employed on the truck-driving industry: 8.7 million trucking-related jobs. It was one of the most-common occupations in that time, along with retail salesperson, cashier, food and beverage server, and office clerk. Together, these jobs employed 18.9 million people: nearly 13.7% percent of the labor force.



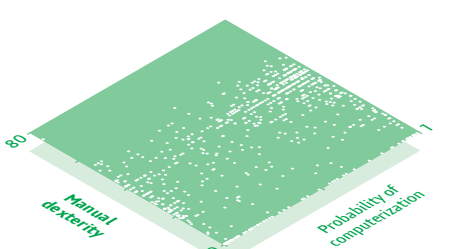
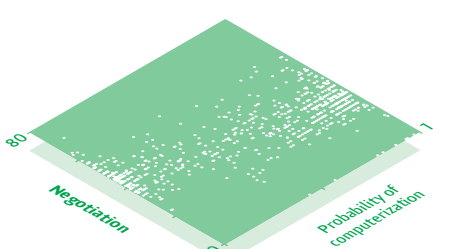
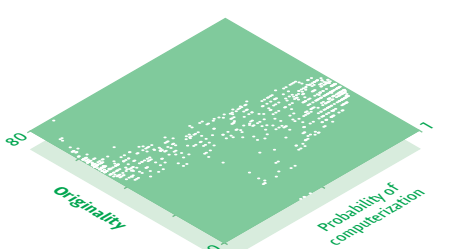
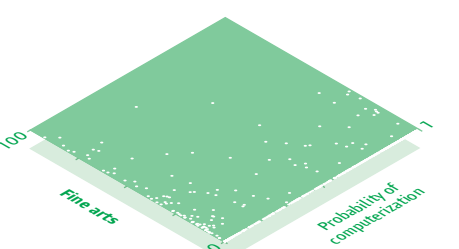
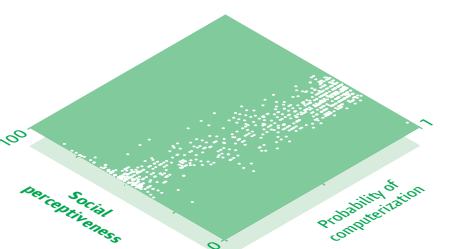
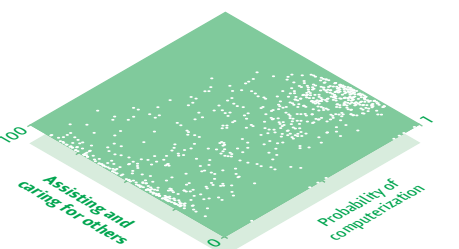
## The Future of Employment According to Oxford University

In 2013, Oxford University researchers forecast that machines might be able to perform 47% of all US jobs in the following two decades. The authors examine how susceptible jobs are to computerisation, by implementing a novel methodology to estimate the probability of computerisation for 702 detailed occupations, using a Gaussian process classifier.

Sketch of how the probability of computerisation might vary as a function of bottleneck variables.



Distribution of occupational variables as a function of probability of computerizations. Each occupation is a unique point.



### Bot Market

A convergence of falling prices and performance improvements have led to a rapid growth of the bot market. The cost of high-quality robots and components has dropped rapidly, while CPUs got faster, and application programming easier.

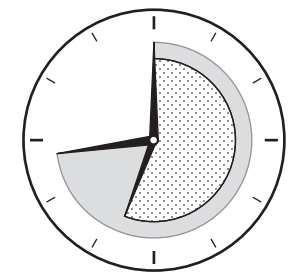
### Robotherapy

The Oxford projection was audacious, but in at least a few cases, it didn't go far enough. For example, the authors named psychologist as one of the occupations least likely to be 'computerisable'. But people are more honest in therapy sessions when they are confessing their troubles to a computer, because a machine can't pass moral judgment – or at least, not yet!

Taking Big Steps

Ireland Has Joined the Six-Hour Club

Ireland has succeeded in obtaining the six-hour working day. After countries like Scandinavia, U.K. and large part of US, Ireland workers have switched to the six-hour working day for the same wage.



According to a Morgan McKinley survey 73% of Irish employees used to work longer than their contracted hours, but around 80% of them were not compensated for working in excess.

Six is a Magic Number – for Now

The standard working hours has now gone down to an average of 6 hours per day in the European Union. The evident results in the increase of productivity of people working fewer hours have led more and more companies to reduce the number of contracted hours, which is projected to decrease to 4 hours in the next 15 years.

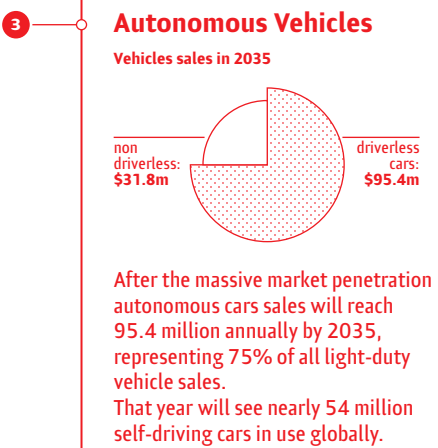
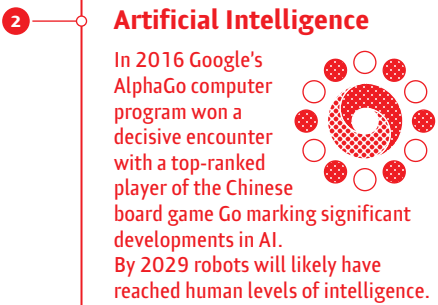
Standard Working Hours per Day in EU

It's not just the working hours: the number of people employed full-time jobs is gradually decreasing, causing a relentless rise of the unemployment rate.

Tech Gives, Tech Takes

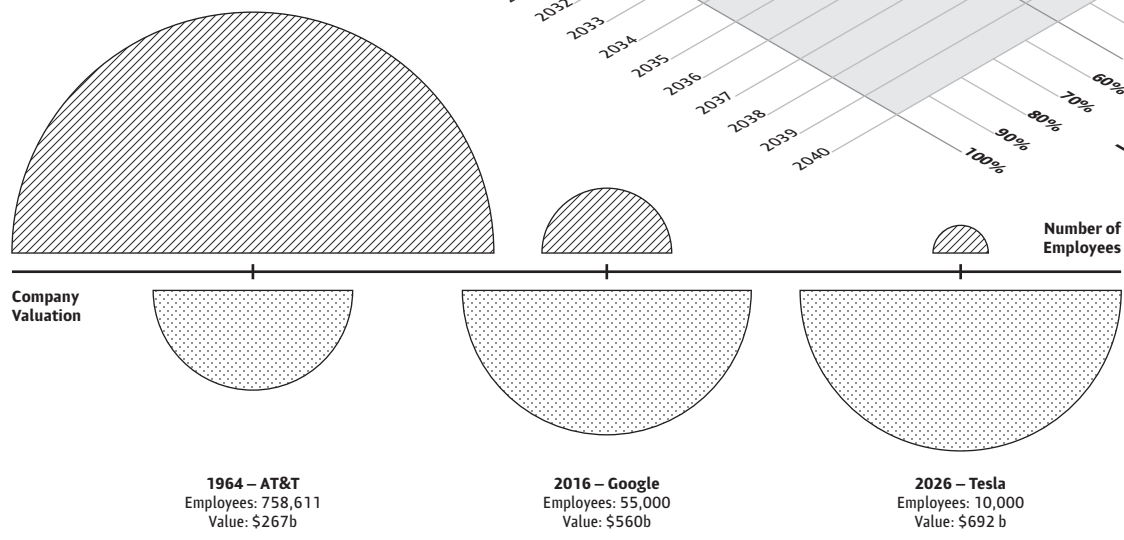
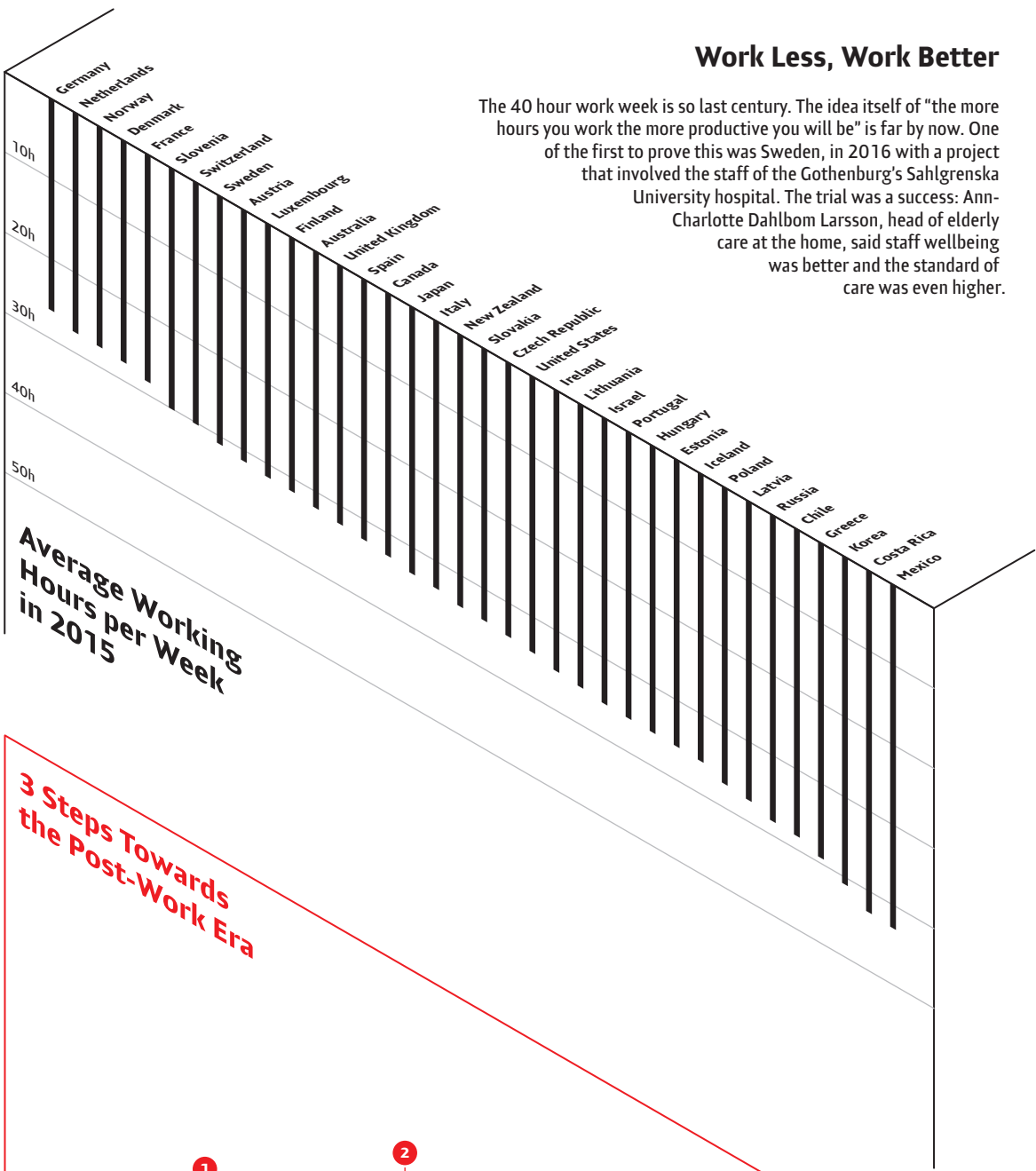
There will always be jobs in tech and science, but the skills needed to enter these industries are so specialized and difficult to attain that they won't save the masses from unemployment. Moreover, the biggest tech and science companies tend to employ a very small number of employees in relation to the revenues they generate. In 1964 the most valuable US company, AT&T, was worth \$267 billion and employed 758,611 people. Google, in 2016, was worth \$560 billion, but had only about 55,000 employees. Today Tesla, which employed just 10,000 people, worth \$692 billion.

How We Got Here



Work Less, Work Better

The 40 hour work week is so last century. The idea itself of "the more hours you work the more productive you will be" is far by now. One of the first to prove this was Sweden, in 2016 with a project that involved the staff of the Gothenburg's Sahlgrenska University hospital. The trial was a success: Ann-Charlotte Dahlbom Larsson, head of elderly care at the home, said staff wellbeing was better and the standard of care was even higher.



Editors' Note

This ISSUE represents a possible scenario for the near future of work. For centuries, experts have predicted that machines would make workers obsolete. That moment may finally be arriving. Robots might free us from 'bullshit jobs' and let us focus on our cognitive capacities. But the 'technological unemployment' might as well cause a financial catastrophe if we don't start thinking about possible solutions.

The rise of robots could be either a good or a bad thing, now it's only up to us!