For decades, many of us have arrived at work at 9am, and then are done at 5pm. But this way of working is changing dramatically. Last year, Wisconsin-based company Three Square Market announced its plans to install rice-sized microchips in its employees. I’m on a mission to discover how the digital age is transforming the way we are working and how some companies are taking it to the extreme by microchipping their employees. In the old days, the coal mines broke the bodies of workers, but today the gig economy is breaking our minds. From the early factory jobs of the Industrial Revolution to the office-based jobs of today, workers have long been bound to an employer and a physical space, often for the entirety of their careers.

But the nature of work is changing, and so is the workforce. Today’s workers are more independent, entrepreneurial, tend to job-hop and want to work anywhere and anytime. Have you ever worked a 9 to 5 job? No, never. Our co-workers they can come anywhere, anytime they want. We don't really care as long as they get the job done. Experts are saying this change is due to two main trends, the digitalization of both work and workers. So, what does the digitalization of work mean? To find out more, I met up with Jeremy West at the OECD forum in Paris. He researches the economic and social effects of internet openness. The digital platform economy is something that makes it easier for users who want to interact with each other to do that. So, what it means is that there are a lot of new ways of work that we haven’t seen before and new forms of work. Being an Uber driver, for example, or being a freelancer who uses an online platform to find a gig, a task, that needs doing. Estimating the size of the global platform economy is difficult. But one piece of research compiled 242 of these digital platforms and found they’re worth a combined $7.2 trillion. And the top seven, the so-called ‘super platforms,’

are worth $4.9 trillion or 69% of the total worth of the platform economy. Because many jobs are migrating to these digital platforms, anyone with an internet connection and the right skillset can receive and take on job requests from around the globe. Those working here at the world’s largest startup campus are just a typical example of how global this new world of work is. Many of the 1,000 plus startups here in Paris are working with others across the world. In 2017, 24% of online freelance workers hailed from India. Bangladesh made up 16%, while 12% of these workers were from the U.S. And many industries are taking advantage of these online freelancers, from software development and sales support to writing and translation. But if workers are far apart from each other, then how are companies monitoring productivity? In a typical 9 to 5 office job, it’s pretty easy for your boss to make sure you’re working. But if you’re working remotely, companies have to either trust that you’re doing the tasks they’re paying you for, or monitor you in a different way. That brings me to the second major change happening in the world of work, the digitalization of workers. This means that they are being monitored digitally in order for companies to track their mood, their output and their movement.

Take Uber for example. The ride-hailing company has been known to closely monitor drivers’ working time, braking and accelerating speeds and more, to detect unsafe driving patterns. Surveillance can be a good thing. It’s a bit like a knife. It can be used for good or it can be used for bad. This is James Farrar. He’s a former Uber driver who fought to access what data the company had on him. This is the GPS trace for every job that I’ve ever done in London.

James was able to access this data because of the European Union’s General Data Protection Regulation or GDPR, a landmark piece of legislation passed back in 2018 to help consumers take control of their data. That same year, James founded a non-profit organization called Worker Info Exchange to help other workers on digital platforms access the data collected about them. What I’ve been doing through Worker Info Exchange is helping drivers access that data and then to be able to turn the tables and say, "Okay, now we understand how some people are getting work, and how others are not, how some people are being paid properly, or other people are not being paid properly." In a statement emailed to CNBC, Uber said that while its privacy team tries to provide data when requested, it is unable to do so under certain circumstances, subject to GDPR. Tracking contractors through their smartphones could just be the beginning. The experts I spoke to say microchipping could be next. I am freaked out by this but I’m more curious than anything else. So, let’s go and speak to the brains behind this new technology. BioTeq is a U.K.-based tech company that develops microchips as small as a pill, which can easily be inserted into our bodies to store data. Steven Northam is the company’s founder.

He’s showing me an x-ray image of the microchip inside his very own hand. We imagine in 10,15 years sort of time this could be very commonplace. Could you have one chip replace keys, money, passport and then you could just leave the house just with your hand. Once the 8kb chip is in your hand, it emits low-frequency signals read by a scanner that that identifies the unique ID in the microchip. Steven uses his microchip in the office, at home and even to start his car, but he’s not using it monitor his employees. But microchipping employees is gaining traction. Take U.S. company Three Square Market as an example. As of last year, 92 of its 196 employees have been microchipped. Three Square says employees can use the chip to pay for office snacks and to enter the building. But take it a step further, and chips could potentially track employees’ lunch breaks and if connected to a GPS, they could track their movements too.

That’s a red flag for the growing number of people concerned about the security of their personal data. But Steven tells me they’ve already thought that through. It can be easily read with a mobile phone. You can wipe the data, you can change it, you can encrypt it, password protect it.

So, from our point of view it’s probably safer than having your data in a cloud because it’s only in your hand, like a memory stick inside your body. The OECD says data is a critical resource and could globally drive economies of scale. But to truly realize those gains, instilling trust around our data is a must. And for that, it says governments need to put policies in place to protect individuals and their data. With the working world changing exponentially, only time will tell how these policies can adapt.