



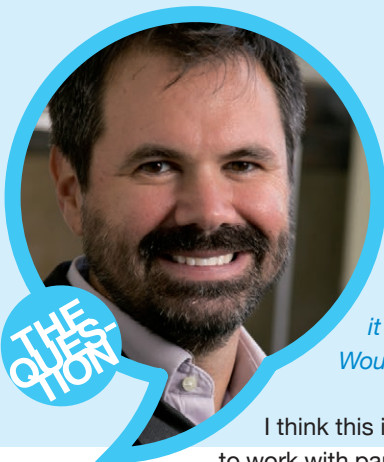
THE QUESTION

David Humprey,
Research Director Europe, ARC Advisory Group

Industry 4.0 has been characterized as a revolution. Whether you would agree or not, experts say it will be very difficult to find the right people to give Industry 4.0 a powerful start. Would you agree this could become a problem?

Industry 4.0 is much more of an evolution than a revolution. Other industries, from music to retail to health, have been through their digital evolution, and now it is industry's turn to evolve. But if revolution devours its children and evolution selects only the fittest, there is a danger that Industry 4.0 also will leave some people behind. In the industrial world, that's not necessarily a bad thing, because things happen at a slow pace. Ironically, it's the loss of the hands-on skills of the generation about to retire that many companies fear most.

After losing a generation of potential engineering graduates to the financial world, engineering and technology are once again cool. Today, the convergence of IT and automation is attracting young talent that wants to change how we work in industry rather than simply managing the status quo, as the retiring generation had to do. The digital transformation now underway in industrial companies will also be a generational transformation that will feed on and grow from the fresh and innovative ideas of young graduates. However, it will do so at a pace dictated by our conservative industry in which human skills and know-how will remain just as important as high-tech savviness.



THE QUESTION

Jeremy Rowley,
Executive VP of Emerging Markets, DigiCert

Industry 4.0 has been characterized as a revolution. Whether you would agree or not, experts say it will be very difficult to find the right people to give Industry 4.0 a powerful start. Would you agree this could become a problem?

I think this is exactly why companies need to work with partners like DigiCert. PKI experts (PKI = Public-Key-Infrastructure, Ed.) and resources are scarce. Finding the right person/team to fill this role is difficult. Although there is a large need in implementing security, that need diminishes over time. Therefore, companies should look to outsource a lot of these functions to dedicated experts, like DigiCert. We can come in, act as the PKI expert for a company,

implement the protocols necessary to secure connected devices and continue providing those services throughout the company's life, all at a cost that is usually less than having the resources on-staff. Fighting over technical resources ends up driving costs for companies, leading to detrimental effects on security. By outsourcing some of these functions to third parties, companies can effectively pool their resources and share costs on technical projects.

INDUSTRY 4.0 TRENDS

THE QUESTION

Steve Hegenderfer,
Director, Developer Programs at Bluetooth SIG

THE QUESTION



No matter how you look at it, Industry 4.0 stands for even more automation in manufacturing than already is the case. At the end of the day, will there still be any people left to manufacture goods, giving them the purchasing power they need? Are we not in for some deeply rooted changes?

Just like every industrial revolution before it, Industry 4.0 will inevitably bring about radical changes to the manufacturing sector. To fundamentally transform a labour force and have it take on something that has never been done is a bit scary.

But let's not kid ourselves: manufacturing jobs have been undergoing an exodus over the past three decades. Industry 4.0 is just the final nail in the coffin. The million dollar question is, "If we take people out of the work force and replace them with automated scenarios, what do those people do instead?"

The answer lies in education. I may have just painted a doom and gloom picture, but what Industry 4.0 provides us all with is an excellent opportunity to start investing in educating a work force around new industries. Sectors like alternative fuels, computing and space (and electronic engineering!) are all crying out for more talent. They would hugely benefit from the exodus of skilled engineers and workmen who are seeing their days in manufacturing come to an end.

We can't really put the genie back in the bottle, so to speak. So as a collective society, we have to embrace this fact and move forward. We must prepare ourselves and future generations for the type of industries that are becoming increasingly important.

Francisco Almada Lobo,
CEO Critical Manufacturing

No matter how you look at it, Industry 4.0 stands for even more automation in manufacturing than already is the case. At the end of the day, will there still be any people left to manufacture goods, giving them the purchasing power they need? Are we not in for some deeply rooted changes?

THE QUESTION



opportunities for success.

Allow me to disagree. Industry 4.0 is not about more automation – it is about combining the required levels of automation and productivity with the necessary flexibility and intelligence. There is no resource which is more intelligent and flexible than human resource. While certain job functions will disappear others will be created to shape the digital transformation, and unlock

Industry 4.0 cannot be implemented overnight, in fact, some experts have estimated that it will take another 10, 15 or even 20 years to happen. In 20 years, a completely new generation of workers will evolve with all the required aptitudes needed for the job. Others will be able to learn and adapt. This was the case for all the previous industrial revolutions and I believe the same will happen with this one.