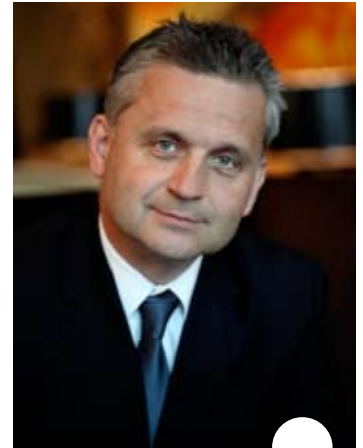


Artificial intelligence cannot replace human expertise

IT experts are in short supply in Slovakia. As companies from all lines of business embrace digital, they need specialists. Cisco helps to fill the job market gap with its successful program, Networking Academies, that creates thousands of graduates every year. But there is a catch. "IT knowledge alone is not enough anymore," says Marian Puttera, Public Sector Account Manager at Cisco Slovakia.



MARIAN PUTTERA
Public Sector Account
Manager, Cisco Slovakia



BIOGRAPHY

WORK EXPERIENCE

- Cisco, Public Sector Account Manager (Nov 2017 – present)
- Cisco, Area Sales Manager SP (March 2000 – Oct 2017)
- AT&T Slovakia, Country Manager (1999-2000)
- IBM Slovakia, Network Services Sales Manager (1998-1999)

EDUCATION

- Electrical Engineering, Microelectronics at Slovenská technická univerzita in Bratislava (1984-1989)

If you open any job portal, the trend is apparent. There is an obvious lack of IT experts. How serious is the situation?

There is high demand for IT experts. The current statistics say around 13,000 extra IT specialists are needed just in Slovakia. According to recent Eurostat research, more than half of Slovak companies are having problems finding IT experts for their projects. And not only coders, data scientists and security experts are also in short supply. And the demand isn't likely to slow down, just the opposite. Fortunately, both the state and the private companies understand the gravity of the situation and are adopting measures to deal with it.

So, what's the formula for filling the skills gap?

The key is to strengthen IT education and not only at the technical schools. All graduates need at least basic IT literacy. The STEM education (science, technology, engineering and mathematics) should be more attractive and accessible, starting at secondary schools. It should be stated that improving the quality of graduates for the demands of the current job market is not a role for the state or private companies alone. That's why I'm very happy about the Digital coalition in Slovakia. This joint project of the public sector and the biggest IT companies is already starting to have an impact.

How is Cisco contributing?

Cisco Slovakia can now fully put its extensive experience with education to use. We brought the global Networking

Academies program to Slovakia in 1999 with the first program at the Technical University in Košice. Since then, it has grown to 55 academies at high schools and universities and has seen more than 35,000 graduates becoming highly educated networking experts. Currently, there are more than 5,000 students and more than 150 instructors helping to fill the skill gap. And I'm glad to say, we are seeing an ever increasing share of female students.

Some say artificial intelligence and automatization will render many professions obsolete. Isn't this also the case for IT experts?

AI is indeed making giant leaps. And this is really needed. If you just take the projected number of connected devices into account: there are hundreds of billions. Not only computers, but also the so-called Internet of things devices - sensors, card readers, fire alarms, thermostats. Until recently, this was the work of the network administrator - to connect everything so it works. But the explosion of data and devices is outpacing IT capabilities. So, AI and machine learning is a necessity. Cisco recently launched its network of the future, built on these concepts. The so-called intuitive network does most of the mundane and repetitive tasks itself, the admins just have to set the intent and context.

What will be the role of the IT specialists?

Well, this is also developing. IT knowledge alone is not enough anymore. The specialists need to understand the processes at the company and need to offer technological solutions that will

help to achieve business goals. They can no longer just execute what they are told to, they need to become partners of company leadership and connect the world of technologies with the world of business. This is where AI cannot replace human expertise. The market needs specialists who can solve complex projects. That's one of the reasons why the content of the Networking Academies program is also changing. We train experts who are not only technically skilled, but can also creatively approach real-life tasks: installing a secure network on the factory floor, connecting a smart home or dealing with a customer who says, 'it's not working, do something'. The emphasis of the program is also shifting towards internet security, as this is becoming one of the biggest challenges for the connected world.

Why is security so important?

According to statistics, a new type of malicious software appears every 4.2 seconds. Cisco's security tools alone block 20 billion threats per day - that is six times the number of daily Google searches. Hackers are no longer just hooded nerds in a basement trying to hack their school grades. Cybercrime has become big business and it uses business methods for getting enterprise level revenues. Just one type of malware, ransomware, earns billion dollars per year globally for the perpetrators. According to FBI statistics, compromised business e-mails earned criminals more than five billion over a three-year time period. Today, cybercrime is highly automatized. The defenders face algorithms that

are becoming more and more sophisticated.

Is there a way to protect against the threat?

The most advanced threats cannot be faced without algorithms, AI, analytics and visibility. That's why the network is also becoming more and more important in cybersecurity. This is where all the data comes through. The security infrastructure needs to be integrated and to cover all the phases of the attack - before, during and after. This is possible thanks to global monitoring and analyzing of the global network traffic, using AI and machine learning to uncover even so far unknown threats and sharing this knowledge with other defenders across the globe.