

AUTOMATION REVOLUTIONIZE THE BUSINESS SERVICE INDUSTRY

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ÖSSZEFOGLALÁS

Az elmúlt évtizedekben jelentős diszruptív változások vették kezdetüket az automatizáció széleskörű elterjedésével. Számos munkakör változott meg vagy tűnt el, miközben újak születtek teljes mértékben az automatizációnak köszönhetően. A technológiai fejlődéssel együtt, az automatizáció elsősorban az iparban terjedt le, leginkább a gyártásban és az összeszerelés területén. A növekedés a jövőben várhatóan folytatódik, a kutatók 35 millió ipari robotot vizionálnak 2018-ra. Árnyalja a helyzetet, hogy 2015-ben átlagosan mindössze 69 robot jutott 10 ezer ipari alkalmazottra. A technológiai fejlődésnek köszönhetően az automatizációs trend más szektorokban is változásokat indított el.

Az automatizációnak számos előfeltétele van, amelyek a szolgáltató szektor nem minden területén általánosak. Az üzleti szolgáltatások szegmense az egyik leginkább alkalmas terület a szolgáltató szektoron belül. Ebben a szegmensben, az automatizáció igazi diszruptív változást hozott, amely átalakította a szektort a humán arbitrázs modellből egy magasabb hozzáadott értékű modellé. A kutatás célja, hogy feltárja a jelenség valódi hatását az üzleti szolgáltató szektorra és képet formáljon a technológiák nyújtotta jövőbeli lehetőségekről.

A tanulmány bemutatja a szolgáltatás automatizáció jelenlegi piacát, ismerteti a főbb trendeket és a hazai és nemzetközi kutatások eredményeit. A tanulmány igazolja, hogy az automatizációs forradalomnak hatalmas hatása van a magyar szolgáltató szektorra és a humán erőforrás piacra is. A tanulmány ezen túlmenően felvázolja az automatizáció lehetséges irányait és valódi lehetőségeit a magyar üzleti szolgáltató szektorra.

SUMMARY

In the last decadessignificant disruptive changesbegan with the extended use of automation. Many jobs are changed or disappeared and others were born totally with the automation. Together with the progress of technology, the automation was primarily spread in the industrial sector, mostly in the production and assembly lines. The growth maycontinue in the future further, researchers expect more than 35 million industrial robots globally by 2018. But it shades the situation that in 2015 globally there were only 69 industrial robots to 10 thousand human employees on average. Due to the progress of the technology, the automation trend began to change the service industry as well.

The automation has several preconditions to implement which is not common in every area of the service industry. One of the most suitable areas of services is the business service sector. In this sector, the automation will create a real disruptive change to transform the sector from the transactional human arbitrage model towards the higher value-added model. The

research aimed to reveal the real impact of the phenomenon on the business service sector and form a future picture with these new technologies.

The paper will show the current market of the service automation and introduce the main trends based on the results of some international and own national research on this current topic. The research proved that the automation revolution will have a huge impact on the Hungarian service industry and the human labor market as well. This research study reveals the possible directions and real opportunities for automation in the Hungarian business service sector as well.

1. INTRODUCTION

There is a new age of companies with the progress of digitization. Today, companies have to face with becoming digital. But what this term really means? Some argue that digitization is just extending automation. But Gartner uses “digitization” to emphasize that the goal is to create and deliver new value to customers, not just to improve what is already being done or offered. Some executives think about digital as a technology, others think as a new way of doing business and others still think it is a new way of engaging with customers. All of these definitions are correct but none of them is complete. The meaning of term depends on the use of digitization in the companies. Company leaders must have a clear understanding of exactly what digital means to them and what it means to their business. (Willcocks & Lacity, 2016)

Digitization can create value at different levels. Firstly, creating value at new frontiers means developing new business in adjacent categories like Internet of Things (IoT) that is start new opportunities for disrupters to use data for identifying flaws in existing value chains. (Dörner & Edelman, 2015)

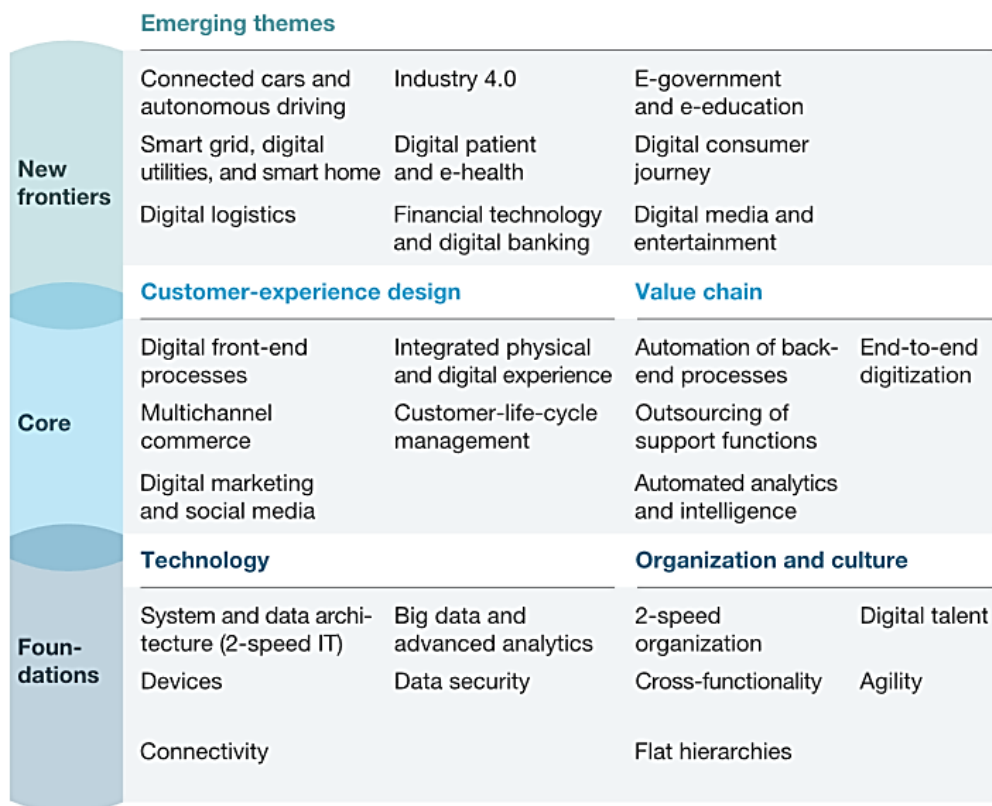


Figure 1: Impacts of digitization
Source: (Dörner & Meffert, 2015)

Secondly, digitization can create value with rethinking how new capabilities serve customers. It requires four core capabilities. The first is proactive decision making is based on intelligence, that deliver content and experiences that are personalized and relevant to the customer. The second is contextual interactivity that means analyzing how clients is interacting with a brand and use this information to improve the customer experience, like IoT technologies collect huge amount of data that is useful for developers. The third is real-time automation that means how companies use automating the supply chain and core business processes to drive down costs, but it's also crucial to providing companies with more flexibility to respond to and anticipate customer demand. The fourth is a journey-focused innovation that means new businesses and services that extend the relationship with the customer. (Dörner & Edelman, 2015) Digitization has the highest impact on service sector in this level. Automation of back-end processes, outsourcing of support functions, automated analytics and intelligence and end-to-end digitization all emerged in service sector and influenced its operation significantly.

The third level how digitization create value is building fundamental digital capabilities. It means technological and organizational processes that allow an enterprise to be agile and fast. It includes two elements: mind-sets and system and data-architectures. Mind-sets means institutionalizing cross-functional collaboration, flattening hierarchies, and building environments to encourage the generation of new ideas. System and data-architecture means change the legacy systems with new digitized IT that support fast-moving, often customer-facing interactions. (Dörner & Edelman, 2015)

The companies want to capitalize their new digital capabilities like connectivity, advanced analytics or automation that help them to build deeper relationships with clients, launch new business models, make their processes more efficient and make better decisions. But it is not easy to deploy digital tools and approaches organization-wide, because many times companies costly, complicated initiatives. A critical factor to success to have a common operating model for digital and IT tools and service delivery models. (Khan, et al., 2017)

2.EMERGE OF AUTOMATION TECHNOLOGY AS DISRUPTIVE CHANGE

The company use of the term digitization in different meanings, it encompasses digitization of assets, including infrastructure, connected machines, data, and data platforms, etc., or digitization of operations, including processes, payments and business models, customer and supply chain interactions and finally digitization of the workforce, including worker use of digital tools, digitally skilled workers, new digital jobs and roles. Based on it, the extent of digitization varies by company, but there is a large gap between digital leaders and the rest. (Manyika, et al., 2017)

The disruptive change is consequence of disruptive innovation. Disruptive means a break in current the status quo, create a new way that is different from the linear progress of a technology. (Buksa, et al., 2015)

We are in the new age of automation. Of course, the trend of automation in intellectual work is not a new phenomenon, but in turn really new is how the legacy enterprise technology solutions are complemented by automation to be less disruptive within the company. (Burnett, 2016) Nowadays robots are not only familiar with the factory floor and software routines but with the rapid development of artificial intelligence, machines could emerge activities previously require human judgment and experience. Automation has impacts on the human labor with elimination of it, but it also has several value like helping companies to get closer to the customers, improve their operations, optimize their knowledge work, or increase their speed and scale of discovery in areas such R&D. (Chui, et al., 2017)

Automation technologies have a wide spectrum. In general automation takes the robot out of the human but in the practice it means combinations of different fundamental technologies like robotic process automation or machine learning that exist in parallel. Automation technologies could be grouped how advanced it is as well. Basic automation means writing script in a specific software environment, robotic process automation mean an automation tool that automate routine tasks such as data extraction and cleaning through existing user interface. Finally intelligent process automation s an emerging set of new technologies that combines fundamental process redesign with robotic process automation and machine learning. It mimics human activities and learns to do them even better. The first two level means rule-based automation awider execution, the third means an automation augmented with decision-making capabilities thanks to advances in deep learning (algorithms that identify patterns in structured data, such as daily performance data, through “supervised” and “unsupervised” learning) and cognitive technology (technologies that combine machine learning and natural-language generation to build a completely virtual workforce that is capable of executing tasks, communicating, learning from data sets, and even making decisions based on “emotion detection”). It promises radically enhanced efficiency, increased worker performance, reduction of operational risks, and improved response times and customer journey experiences.(Berruti, et al., 2017)

Automation technology is a real disruptive innovator because it changes the operation of business services.We believe it will be a core part of companies’ next-generation operating models. Many companies have been experimenting that automation could automate 50 to 70 percent of tasks, could translate into 20 to 35 percent annual run-rate cost efficiencies, reduce in straight-through process time of 50 to 60 percent and bring return on investments most often in triple-digit percentages.(Berruti, et al., 2017)

3.RESEARCH QUESTIONS AND METHODS

Digitization and within the automation are changing the fundamental way of work. The progress of automation brings the promise of higher productivity, increased efficiencies, safety, and convenience. But these technologies also raise different questions about the main impacts of it. The research study aims to answer what are the main impacts of digitization technologies on the business service companies, how automation changes the operating model of business service segment. The research study use on primary and secondary databases in the use of automation technology and based mostly on literature reviews.

4.RESEARCH RESULTS

The digitization and automation are now key driving forces of the business process management (BPM). The top-performing companies focus their automation efforts on the well-defined processes to automatize them. Successful process automation programs could shorten the turnaround time of process significantly. (Catlin, et al., 2015)The RPA is an unattended automation approach, providing high-value creation opportunities (significant cost savings, improved service delivery and manageability, and faster value creation with lower risk because it is non-invasive and easier to renew). (Simonson & Chandrashekhar, 2015)

The robotics and business processes could be connected in a new and exciting ways to robotic process automation (RPA). The RPA is basically an automation that manages rule-based and repetitive activities without human intervention being non-monitored. (Simonson & Chandrashekhar, 2015)These activities have typically been carried out by humans.

Robotic Process Automation (RPA) is one of the most important type of technology using in the business service sector. RPA means a class of software robots that replicates the actions of a human being interacting with the user interfaces of other software systems. It enables many back-office functions without requiring expensive and difficult IT integration with interfaces. (Manyika, et al., 2017)

The repetitive tasks could as well be automated, measured and optimized. This in turn helps in streamlining operational functioning of companies. Through the automation, human labor need only to be dealt with the exceptions of the processes and the development of an automated processes, those that actually require a customer-oriented and human interaction. (Marciniak & Berend, 2017)

In a shared service organization, that is a typical business service organization, managers should ask some very important questions. Some of these questions are the followings (Chandok, et al., 2016):

- How does digitization change the value proposition of shared service organizations?
- How real are digital threats and opportunities in the view of the parent organization?
- How could shared service organization balance among traditional standardized operation, continuously improving transformative approach and disrupting new way of thinking?

Automation within the digitization has several huge impacts. The most important are the followings:

- The first is digitization could ease the need to find a new sourcing country where geographic advantages are. Digitization could be the next sourcing “country” and it changes the corporate sourcing strategies. Using the automation technologies, the companies do not need to change locations to be competitive but could endeavor towards process excellence.
- Automation changes the labor-arbitrage model that was the main driver of existence of business service organizations. Due to changing of repetitive human works with automation, business service organization could restructure their process architecture and reposition their value proposition. The employees could free-up from the dull and repetitive activities and focus higher value-added actions. It has an additional big motivation initiative for the talent retention programs.
- Automation could change the shoring tendencies as well. Nowadays companies use right-shoring (or Hub-and-Spoke) model that means companies combines outsourcing and shared service models and use multi-location operation with different levels of value-add service parts. In this right-shoring model, companies continuously monitor their processes and relocate the functions to optimize their operations. The automation will decrease the geographic advantages, mostly the human arbitrage, so not the offshoring or nearshoring phenomenon will increase. But it does not mean that it will strengthen the reshoring model when functions will come closer to the customers, but these functions will stay there at the current locations.
- Automation will change the process and work-flow in order to find new area of optimization. IT and business need to cooperate to discover specific areas in which to incorporate automation and robotics into their existing manual workflows. Automation could bring a new role for specific processes and employees working with them.
- Automation will change the HR strategies of companies. In today’s environment it is not easy for companies to find talents. Companies must build right incentives and clear career path for their talents. (Catlin, et al., 2015) With the progress of digitization, introduction of automation technologies, business service companies must make a radical shift in its talent-management strategies and programs. Company leaders

should focus on making changes in the following areas to adapt their cultures in ways that will appeal to both next-generation digital workers, who can bring fresh perspectives and innovation to companies, and conventional IT workers, who often carry with them years of valuable institutional knowledge (Khan, et al., 2017):

- attracting talents: companies need to make some cultural changes to attract next-generation workers as well, because the conventional methods used before is not suitable for the new graduates;
- retaining talents: companies need to recognize that new both digital and convention IT staffers should be motivated to do their best to ensure high-quality customer experiences and successful business outcomes but not with the same way;
- building capabilities: establishing an integrated technology operating model will gain benefit for the organization with finding new advantages and opportunities in both digital and conventional areas.

It is very important to recognize that digitization and automation technologies create new opportunities as well on each areas listed formerly. As technological change brought new challenges so as brought new opportunities as well. Digitization has impact not only on the low-level employers but on the C-level managers as well. Today at a big company, a new manager position emerged that is called chief digital officer (CDO). (Rickards, et al., 2015)

5.CONCLUSIONS

A business service organization with digitized and automated service delivery processes could ensure valuable capabilities for its service customers. From their back-end position, business service organization could move up on the value-chain to help service customers realizing their digital strategies, improve not only the back-office processes and methodologies but front-end customer interactions and increase internal productivities.

Organizations in the business service segment need to find a healthy balance among the different operational approaches. The normal way of business in the business service segment is when organizations endeavor to streamline their operation and want to reach the leading-edge process excellence. But this traditional way of operation could not be successful without continuously improvement approaches that want to find the new way of optimization with new management tools and technologies. The third approaches is the newest one that bring a disruptive thinking into the organizational management. It claims to incorporate a unique thinking that want to change traditional way of doing with totally new ways using new technological capabilities.

It is obvious that business service organizations need to widen the traditional focus areas in their operation to change to accommodate digitization. They have to change the traditional model of service factories, and should become centers of expertise, with less emphasis on completing lower-level manual tasks and more time spent devising and launching innovative and efficient service options. It means rather than hire low-cost, entry-level talent, business services organizations will need to look for expertise in areas such as point robotics, data analytics, and agile software development. To sustain value creation in companies, it is good idea to create a center of excellence (CoE) to govern the transformation and support the rapid deployment of automation solutions. ACoE should be centrally located and can be fairly small in size to support companies in introduction and execution of automation initiatives effectively.

ACKNOWLEDGMENTS

This research study was supported by the State of Hungary in the framework of ‘New National Excellence Program’.

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