

Business Environment and Technological Innovation – Emerging Trends

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ABSTRACT:

The companies doing business in global markets are now forced to do it in situations of everlasting and stormy changes. In order to prosper within that kind of environment in the long run, they are to innovate and to continuously support their own advanced strength. Reflection of acquisition its own original strength becomes top schedule issue of strategic companies. To that purpose, this paper presents the condensed results of a desktop theoretical research that has been undertaken to improve the innovative power of companies. The survey and ensuing investigation well-known related new corporate copies of companies, some of which temporarily offered, which now form the current trend.

KEYWORDS: Robotics and automation, Digital everywhere, Extended reality, Shifts in Investment. AI – enabled engineering and manufacturing, Cyber-security, Privacy-based computations, Big data, 5G, Technology and COVID-19

Emerging Trends in Business Environment and innovation and technology:

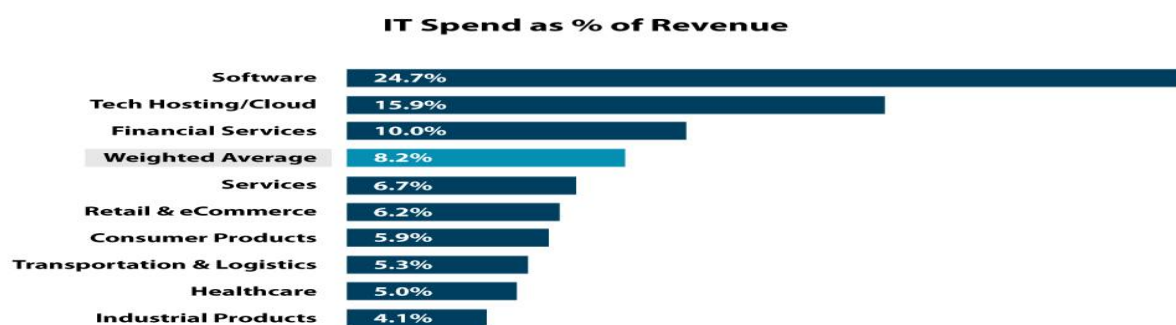
One learning from the pandemic is the need for a new concept and mental model for technology. In almost every industry, some form of technology will become the invention or an enabler to it. Those who cannot participate in digital revolution will be left behind.

Never again will IT departments be viewed as the people who only substitute aging equipment and connect desktop software. Technology departments of the future will be adept at installing custom applications that make companies more industrious and improve the customer involvement.

Central to the next wave of innovation and efficiency will be “third platform” knowledges — those that mark the conjunction of mobile, cloud, internet of things (IoT), block chain, artificial intelligence (AI), big data and robotics. Theconvergence of these technologies is completely fluctuating how we live and transact, and will eventually drive decisions on how we make money. Looking forward to 2021, management teams should recalibrate based on the following expertise trends.

Shifts in investment

The typical private company’s IT department does not have the resources or penetration to deploy third platform technologies like AI, which is costly to instrument. The IT department of the future will include higher-caliber, better paid technicians capable of workflow optimization. IT spending as a percentage of income exceeds 8 percent for all firms but is much lower in profitable and manufacturing companies (closer to 4 percent).



Source: Flexera 2020 State of Tech Spend Report

Digital everywhere

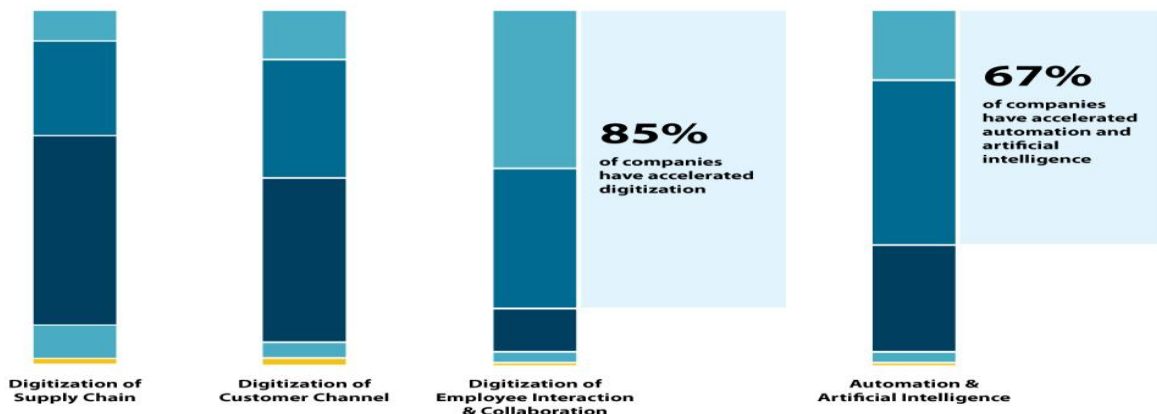
The most evident measure of digital transformation has been enhanced adoption of association software, CRM and other software applications that users require on demand on their devices. From sales to ops teams, users need all critical work data on any device at any time. Private companies are looking for solutions that are more sprightly than traditional ERP (enterprise resource planning) tenders. They can find such utility in a litany of apps that provide broadcasting in real time.

Providers are seeking out client-facing technologies that directly affect customers. Consider the app Zocdoc. It empowers you to find a doctor in your insurance network and see them the same day. The technology that brings the persistent to the physician is almost as appreciated as the service the physician provides.

Such interruption is ubiquitous. Restaurants who moved to numerical menus and touch less payments (such as McDonald’s) have managed better during the pandemic. Chipotle just launched its first “digital only” restaurant. Electronic payments are also expanding the value of digitization as providers have better access to customer evidence and their census data.

Robotics and automation

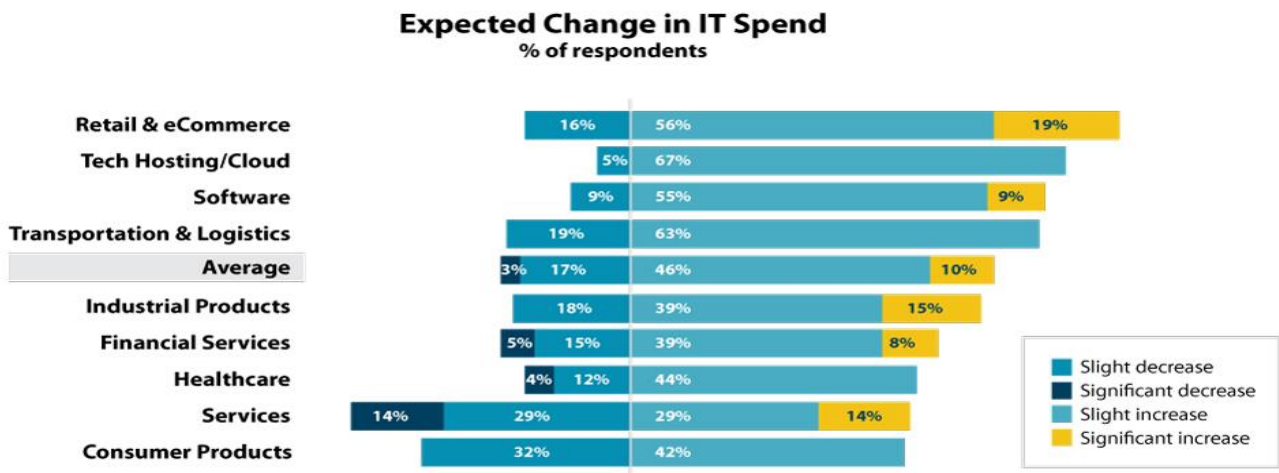
According to McKinsey, robotics and automation adoption histrionically increased during the shutdown, despite extensive delays as a result of COVID-19 protocols and shipments from Europe, Japan and Korea being interrupted.



In particular, providers pursued out technologies that replaced labor. Not only are robots faster, cheaper and more precise- they also don’t get sick. The first industrial robots were intended to substitute functions that were too costly or hazardous to be completed by humans. A new wave of “cobots” is projected to collaborate with humans.

Click and mortar

Among the companies investing the most are retailers in a race to organize omnichannel strategies. Eighty-five percent of retailers imagineto spend more on technology in 2020 — further than any other sector.



Source: Flexera 2020 State of Tech Spend Report

With ecommerce revenue up over 30 percent this year, retailers are cross-country to improve their expertise infrastructure. They have also had to adapt to original consumer needs such as curbside pickup, which coursed more than 200 percent in April. Self-serve kiosks that enable omnichannel communications will become the norm.

Retail is also under occurrence from cyber-criminals who have identified new “vectors.”

Extended reality (XR) – virtual and augmented reality (VR/MR)

Realism tools are making their way into segments such as education and healthcare. The pandemic has escalated remote operations and other healthcare submissions that may even include self-serve options. Today, technology occurs for a patient to have an eye exam through high resolution cameras and then be encouraged to a series of eyeglass options based on their treatment.

The commercial and industrial proposals of XR, VR and MR are endless. Many companies are already using amplified reality in training and customer service.

AI-enabled engineering and manufacturing

Artificial intelligence will not only strategy products, but make decisions about how they are to be acquired and produced. For example, today's expansion of new drugs relies principally on trial and error, and AI will fundamentally improve the cycle time to bring products to market. Data and analytics will forage decision making in real time. Intelligent algorithms will improve quality and input. It is projected that AI in manufacturing will reduce waste by 50 percent or more in some industrial environments.

Cloud

Cloud computation continues to drive assessment of technology firms. The pandemic spiked demand for public cloud apps and advance services. The Department of Defense bestowing a contract to Microsoft was the modern salvo as Microsoft and Amazon Web Services battle for web sovereignty. Forrester predicts that the cloud substructuremarket willphantastic by 35 percent in 2021, with Alibaba fetching the third largest provider. There is continued undertaking toward server less services.

Privacy-based computations

New explanations are emerging that combine three technologies. The first offers a platform for data such as bank account records to be switched. Then data is decentralized for dispensation, only for a third technology to then encrypt it for transmission.

Cyber-security

The pandemic was a reagent for cyber-attacks (up 238 percent in fintech). Phishing attacks result in about 80 percent of corporate security fissures, with 94 percent of malware being connected via email.

Hackers are also adjusting. As the industry has capitalized in mitigation techniques, state-sponsored actors are organizingransomware attacks, with more than 50 percent involving “hands-on” hackers. Private companies are advancing in intranet, firewall, antivirus and malware resolutions to stem the tide.

Big data

Another trend augmented by the pandemic was a critical need for dashboards and real-time analytics. Private companies are cross-country to ensure incorporation and access to the right broadcasting tools. The rapid adoption of Microsoft Teams has also moved Power BI to the lead as an easy-to-use, plug-and-play analytics podium. Big data (the ability to pull data from multiple sources) is providing companies the prospect to improve key performance gauges (KPIs) that are critical in an age of dispersed work.

5G

As the U.S. and China remain entwined in rhetoric, it's hard to envisage the Biden administration pulling back on limitations placed on Huawei, a leading provider of 5G technology. Australia, Canada, Japan and the UK have also overturned course, citing security concerns. Nokia and Ericsson are substitute global suppliers, but a duopoly is viewed as bad for rivalry and origination. As U.S. cell carriers and manufacturers like Apple introduce a new cohort of phones, it has been reported that dispensation speeds and latency enhancements are dramatic. 5G will enable other technologies from IoT to self-directed vehicles (we cover electric vehicles in the conservation trends post in this series).

The FCC approved a \$9 billion satellite broadband for a 5G radiocommunication fund in rural areas. SpaceX's low-earth cables will serve this market.

Technology and COVID-19

The pandemic has permanently transformed the path of our businesses and how we think about workplace safety. The mashup of these knowledges will present solutions to mitigate the spread of COVID-19. Technologies today will allow a user to tactic their office building and check in online. Their employer's convention app will indicate whether they can enter the building safely. Devices will take

their temperature and log the results. The user's path will be charted based on social distance protocols. AI and machine learning will enable continuous development, and deliver a safer office situation.

The designers of these technologies face newfound mistakes in the U.S. and Europe. Amazon, Apple, Facebook and Google find themselves under the optical microscope amid concerns about privacy, security and corporate accountability. More regulations seem certain.

Let us not forget that before COVID-19 expanded our daily discourse, cybersecurity was top of mind for most business owners. In 2021, it will be life-threatening that businesses continue to participate in technology.

REFERENCES:

1. Akpakwu, G. A., Silva, B. J., Hancke, G. P., & Abu-Mahfouz, A. M. (2017). "A survey on 5G networks for the Internet of Things: Communication technologies and challenges" *IEEE Access*, 6, 3619- 3647.
2. Agiwal, M., Roy, A., & Saxena, N. (2016). "Next-generation 5G wireless networks: A comprehensive survey". *IEEE Communications Surveys & Tutorials*, 18
3. 1617-1655. [3] Osseiran, A., Boccardi, F., Braun, V., Kusume, K., Marsch, P., Maternia, M., ...&Tullberg, H. (2014). "Scenarios for 5G mobile and wireless communications: the vision of the METIS project". *IEEE communications magazine*, 52(5), 26-35.
4. Al-Quzweeni, A. N., Lawey, A. Q., Elgorashi, T. E., &Elmirghani, J. M. (2019). "Optimized energy-aware 5G network function virtualization." *IEEE Access*, 7, 44939-44958.
5. Pedreno-Manresa, J. J., Khodashenas, P. S., Siddiqui, M. S., &PavonMarino, P. (2017, July). "Dynamic QoS/QoE assurance in realistic NFV-enabled 5G access networks". In the 2017 19th international conference on transparent optical networks (ICTON) (pp. 1-4). IEEE