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Seven Trends That Will Change Your Future—Part One

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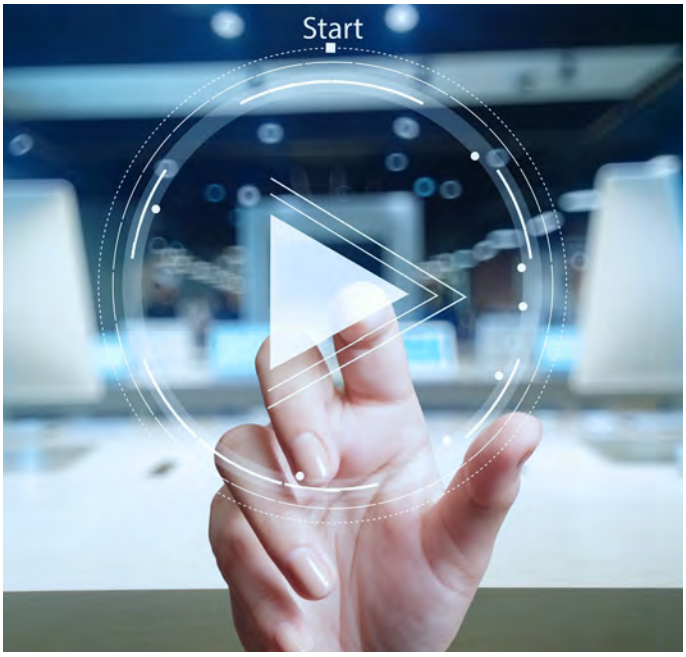

What do data, technology, offices, skills, and cultural perspectives all have in common? Significant transformation.

Technology, robotics, cognitive computing, and AI exponentially advance every year. Data constantly expands with an influx of new numbers and figures converging into a higher resolution picture of the world. Cultural perspectives are shifting alongside priorities and preferences of the population. Lastly, offices are no longer simply clusters of cubicles dotted with cabinets and desktops.

The Exponential Professional team analyzed seven trends to foresee the financial professional of the future, particularly the actuary, and how to make the most of it. These trends are Technology is Everywhere; Tsunami of Data; Artificial Intelligence (AI), Cognitive Computing, and Robotics; Jobs Vulnerable to Automation; Diversity/Generational Change; Careers 100-Year Life; and Explosion in Contingent Work. Part one of this two-part feature focuses on the first three trends.

SECTION 1: TECHNOLOGY IS EVERYWHERE

What's Trending

Technology makes up the canvas of the world. It operates day and night in all facets of daily life. In our current world of about 7.8 billion people, about 3.5 billion own a smartphone, and the number is projected to grow to 3.8 billion by 2021.[1] On average, Americans spend 11 hours per day watching, reading, listening to, or simply interacting with media.[2] Between 2017 and 2022 globally, virtual reality (VR) and augmented reality traffic will increase 12 times, and traffic from internet videos viewed through TV will increase three times.[3] For example, in 2018, the "League of Legends" World Championship drew the eyes of 100 million online viewers, compared to the 2018 Super Bowl's 98 million viewers.[4]

With the rise in technological advances and in the expectation to do more work in less time, professionals, especially actuaries, are experiencing shifts in how they work. For example, we have already been seeing an increase in the number of remote professionals, and given the current COVID-19 health crisis, this number has grown significantly, adding surmounting pressure for professionals to perform efficiently as well as raising the question of the future of physical workplaces.

10 Years From Now

We expect to see a growing number of professionals working remotely, especially on production-related projects such as financial reporting. Nearly 4 million employees worked remotely at least half of the time in 2015; this represents about 3 percent of the U.S. workforce, a 115 percent increase since 2005.[5] However, while the benefits of working remotely provide flexibility, increasingly empty offices and dwindling office culture absorb the costs. Corporations can emphasize developing culture and sense of belonging through regular social events,[6] and continually tailor and design the office space to suit traditional office workers and remote workers alike.[7] Just as importantly, organizations should improve employees' digital experiences with their laptops and technology pieces. Such actions can maintain or even improve the employee engagement and enhance productivity.

Alongside the workplace evolution is the technology transformation. All actuarial vendor platforms will be run from the cloud with very little instances of desktop versions of the software. Actuaries and finance professionals will utilize other vendor applications as part of business as usual (e.g., Workiva, SaS, Alteryx). Experience studies will be performed using neural network technologies developed by data scientists and analytics individuals. Users will be able to complete actuarial-related tasks using their mobile devices and tablets; reports showing results of production runs will be available on mobile devices with the ability to accept or decline production, and users will easily run scenarios at the swipe of a few key strokes. Quantum computing will be utilized for several actuarial activities. Additionally, blockchain will help improve security in transactions, be used as data storage, and enable automation of complex transactions. These will allow actuaries to better predict and manage risk by collecting more data points more quickly, improving reserve setting and pricing assumptions. Consequently, actuaries will be expected to shift their roles to collaborate with coders and guide the development process with their actuarial and financial expertise. This shift will allow actuaries to increase their capacity to deliver more impact and have a bigger say in key business decisions, i.e., when financial results deviate from forecasted results; augmented reality and data visualization will allow for actuaries to quickly drill down into the driving components.

SECTION 2: TSUNAMI OF DATA

What's Trending

Anything can be decomposed into data nowadays—demographics, behavior, and characteristics never thought of a decade ago. With proliferating mobile devices, expanding cloud computing traffic, and burgeoning new technologies such as the Internet of Things (IoT), the collecting of large and complex data is easier and more accessible. In the last two years alone, nine times more data has been collected than was collected in all of human history.[8] However, companies are struggling to capture, clean, and use the data. Of all the data in the world, only 0.5 percent of it is ever used.[9] It will be important to find ways to use this data as the global big data market is forecasted to grow to 103 billion U.S. dollars by 2027, more than double its expected market size in 2018.[10] When used correctly, this tsunami of data can enable advanced analytics tools, such as predictive modeling and data mining, to generate business insights.

10 Years From Now

Reflecting this trend, professionals will collect and analyze data from not only traditional sources, but also wearables, mobile apps, social media, and IoT devices.[11] Data is no longer just collected within the function, but with outside vendors such as Google, AWS, and Microsoft. Data will need to be cleansed and validated, and actuaries will play a key role in simplifying data analysis and creating predictive models at a faster rate. Actuaries will also be responsible for data integrity, as data will need to be continuously monitored and validated to ensure compliance to regulations and enterprise risk profiles. Hybrid jobs will emerge as professionals partner with vendors to develop the data ecosystem from motion-tracking devices such as Fitbit and Citibike. The fascinating new categories of data will transform experience studies and help better price and measure risk: research shows that physical activity, currently defined steps per day, is one of the biggest indicators of mortality risk and is 10 times more indicative than smoking status.[12]

With big data and greater computational power, actuaries will price "pay-as-you-go" life insurance that dynamically adjusts the premium pricing based on real-time life choices and other behavioral patterns collected through connected devices. Actuaries also envision a dynamic marketing model that sells insurance products like Amazon—providing indicative quotes for all suitable life insurance products within the same internet window without the need for customers to key-in much additional information.[13] In the future, actuaries could evolve into roles where they combine psychology, data analysis, and behavioral science to design customer influencing strategies to drive healthy living habits for policyholders and increase profitability for insurers. Yet risks associated with the use of data include data privacy, unauthorized sharing, regulatory compliance, and third-party data credibility.[14]

SECTION 3: AI, COGNITIVE COMPUTING, ROBOTICS

What's Trending

In Deloitte's 2019 Global Human Capital Trends survey, the majority of the respondents predicted growth in automation, robotics, cognitive technologies, and AI.[15] Even nowadays, Deloitte uses VR to allow new hires to visit Deloitte University virtually to attend virtual classrooms and perform hands-on simulations of real-life job scenarios. International Data Corp. forecasts that annual corporate spending on AI will grow to about $52 billion by 2021.[16] AI is beating humans in more than just poker and chess games, it is better and faster than doctors in interpreting medical exam results and paralegals in conducting due diligence.[17] Will actuaries and financial professionals, at some point, be displaced by technologies and are there any other implications to the actuarial workforce?

10 Years From Now

Labor intensive functions may be eliminated—companies will use cognitive computing and gamification to understand the impact of events on financial planning and analysis; experience studies will be developed based on neural networks and quantum computing; actuarial reserving will be based on regression analysis and predictive models; document reviewing of reinsurance agreements will be ingested and standardized using natural language processing; natural language generation will produce tailored actuarial reports for financial reporting and asset liability management; chat bots will help actuaries complete root cause analysis in real time using visualization.

However, actuaries should not narrowly define themselves based on function, whether it be reserving or pricing; rather, they could take a broader role from a business perspective, for the benefit of the policyholders and shareholders.[18] Technology is more than automation of the current practice, it can be a combination of the strength of humans and machines. Actuaries will develop risk profiles based on data and cognitive computing to price life insurance within minutes, so they can build more enhanced products while also developing technical tools to acquire, underwrite, cross-sell, and retain business. Actuaries will develop products using data and technology that will be the main driver of competitive advantage; this innovation will mute the competition purely on price, which may no longer be the central driving force in consumer decision making given the changing generational buyer landscape.

TAKEAWAYS

It is important to note that with these ever-evolving practices in the workplace, it is vital for companies and professionals to be adaptable and add human touches to steer the technologies used at work. With the vast amount of data available and disruptive technological forces at work, actuaries face an increasing pressure to finish more work quicker and effectively. However, with this increase in change comes an increase in possibilities if we are willing to adapt, evolve, and learn. Specifically, actuaries have a great opportunity to redefine their role to one that is more value added and strategic, with a new focus on productivity, business insights, and performance.

Part Two of this two-part series will delve further into how automation and current cultural pieces are impacting and transforming the workforce. ■

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Endnotes

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