

Artificial I

and Its Promise to Investors: Fad or Reality?

by | Estelle Métayer

To start realizing the promises of artificial intelligence (AI), trustees should begin educating and training themselves on its potential applications. The progression of this field will undoubtedly bring new opportunities and risks, including the potential automation of trustee operations. The author covers five reasons AI can be a treasure trove for employee benefit organizations and lists a series of questions trustees should be asking right now.

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The promise of artificial intelligence (AI) is enough to make anyone salivate—the ability to finally make sense of all the data that companies own, the algorithms that allow us to automate certain aspects of decision making so that our employees can finally focus on the insights that the data can bring, the prospects of taking personal or professional biases out of the equation, and so much more.

However, we also know that there currently is no project of AI at scale in most companies. While many are bragging about using AI as the key to unlocking investors' interest or to attracting new talent, in reality most organizations are far from having the ability to leverage it.

This article will introduce the field of AI and some of the data that proves so enticing, before listing five reasons it can be a treasure trove for employee benefit organizations. It will conclude with a series of questions that trustees should consider as they look to harness the power of AI for their pension funds.

Introduction to Artificial Intelligence

For the nonexpert, the AI field seems overwhelming: machine learning, quantum computing, knowledge engineering, smart algorithms—How do we make sense of the plethora of terms available?

Here is a simple way for trustees to comprehend what AI will be about. Take, for example, my grandfather. Born in 1932, he has never used a computer. He does not have Facebook, does not use a credit card and does not own a smartphone. For all intents and purposes, he does not have a digital life or

any data that marketers could mine. However, this does not matter. In a few years, marketers will be able to obtain data from men of all origins who share the same needs and/or purchasing behaviours as my grandfather. From the data they collect from those other individuals, they will learn patterns and be able to extrapolate to understand my grandfather as well as—or perhaps even better than—if they had access to his personal data.

An illustration of this concept is how companies analyzing DNA codes handle private data. When an individual sends a DNA sample to be analyzed, a company cannot take the DNA data it collects and sell it to an insurance company (which could then estimate the risks that individual is likely to incur in his or her health). It might, however, gain permission to sell data belonging to that individual's cousins or siblings, which could be relevant and then used to extrapolate to the individual's own health.

This kind of data is often called *orthogonal data* or *exhaust data*: highly valuable data that has been generated for a completely different purpose than the one you intend to use it for.

The Data Tsunami

The amount of data collected today about individuals and companies is staggering. The World Economic Forum has estimated that the entire digital universe is expected to reach 44 zettabytes in 2020—That is 40 times more than the number of stars in the observable universe.

Data is harvested by objects surrounding our daily routine (cell phones, security systems and smart meters in our homes) as well as a multitude of public data catchers (public cameras, beacons in retail stores, etc.). Canadians give up their personal data for convenience: We use weather apps that in turn sell our data to retailers who want to know how long we have stayed in front of the shaving cream shelf, and GPS apps such as Waze collect data and sell it back to cities and other private operators.

This is also true in the corporate world. With the use of easily accessible visualization software, foundations and private companies have started mapping the world of information available to companies. OpenCorporates, for example, visualizes the entire organizational structure of a company,

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allowing it to highlight the often complex network of tax-saving corporations set up in tax havens. Private players have used publicly available satellite photos to anticipate the financial results of big-box stores (by counting cars in car parks and extrapolating it to the income of individual stores), have accessed the complete data about goods being shipped by sea to anticipate a potential slowdown of the Asian economies, and have analyzed the shape of oil tank reservoirs to identify the exact inventory each oil company is holding. We can even use websites to follow the whereabouts of a CEO by tracking his or her corporate plane in real time.

Social media has also been a treasure trove to obtain otherwise inaccessible information about private companies. Glassdoor will lay out the salary offered to new hires, and there are databases outlining visa applications in the United States to help companies know how much a competitor is paying its employees.

A Treasure Trove for Employee Benefit Organizations

The promise of advanced analytics, combined with the accessibility of alternative data, could represent a unique opportunity to employee benefit plans. Following are five areas where this could be applied.

1. It could have a significant impact on the investment industry.

There has been much debate about robo-advisors and their advantages compared with large investment firms, especially for smaller organizations. In 2009, Quid used AI to choose where to invest based on data only, and it has resulted in successful investments in Evernote, Spotify and Zynga. For pension funds, this could lead to better ways to make investment decisions—especially for funds with trustees who are inexperienced or ill-equipped to ascertain the risk and potential return of investments—and allow for a more sophisticated, bias-free approach. Data seems to suggest that robo-advisors perform best—and better than their human counterparts—in conservative portfolios. In 2020, Nummo released a performance mapping showing that robo advisors underperformed the S&P 500 in the value and growth segments but outperformed it in the conservative category (maximum equity of 30%). Since many pension funds are looking for those conservative approaches,

Takeaways

- All of us are enticed by the promise of artificial intelligence (AI) and the ability to use the immense data being collected, but few organizations are truly prepared to leverage that ability.
- The implications of AI technology are significant for employee benefit plans. As one example for pension funds, robo-advisors have been found to outperform the S&P 500 when it comes to conservative portfolios. Since many pension funds seek these types of portfolios, many could switch to the use of robo-advisors for potentially better outcomes and lower service fees.
- Other areas in which AI could transform employee benefit plans include personalizing communications for more effective messaging and channels, matching pension schemes to participant behaviours and preferences, and simplifying the process of tracking beneficiaries.
- The use of automation could extend to trustee board operations, with machine learning that could make more sophisticated, bias-free investment decisions than human counterparts.
- For boards to take full advantage of the power of AI, trustees should pursue education and training. Among other actions, it is important to find a board chair to lead the adoption of these technologies, find board members with strong analytical and communication skills and, when needed, find trusted sources for outside expertise to help guide them in this process.

it is likely that organizations will increasingly turn toward automated investing, which in turn could lead to lower service fees.

2. It will allow for the personalisation of communications.

Data will be helpful when trying to understand how and when to best reach pension plan participants. As an illustration, the University of Virginia has been able to analyze how to best reach its plan participants after they retire. It has mapped when Facebook is useful (in bridging and identifying participants) and when other platforms such as Twitter would be more reliable. AI also can identify when communications are more likely to reach a person and on which channel: For example, some people are reachable via email during the day but turn to social media apps like Facebook Messenger in the evening. This type of knowledge can lead to more effective communications and increased response rates from participants.

3. It can help to explain the future behaviour of beneficiaries.

By analyzing data that illustrate future behaviour, an organization could help advise participants on the best pension schemes. Whether it is to understand future health patterns (based on nutrition, habits and preferences) or lifestyle choices (for example, preferring regional fly fishing to owning a large boat and moving to Florida), many of those needs can be spotted through data that individuals share publicly in social media and other sources. An illustration in the financial services sector has been the ability for banks to predict participants' future behaviour by mapping the number of trees in their neighbourhood—It has been proved that there is a correlation between the density of greenery in a neighbourhood and the ability of a borrower to pay back a mortgage. With satellite imaging, one could also analyze whether participants are organized by checking to see whether they cut their grass regularly or maintain their roof. Such behaviours are highly correlated with regular payments. There has been a surge of behavioural pattern analyses from a variety of other devices too: For example, telecom operations sell data on how regularly users charge their phone to determine how organized they are. It's easy to see a future in which data is used to match pension choices to participant personalities and preferences.

4. It will allow for effective automation and the use of robotics.

Chatbots will soon be essential to pension administration, potentially lowering costs of operations and offering a higher level of service to participants by, for example, reducing or eliminating the time they have to wait on a phone for information. Some futurists even make the hypothesis that our trustees might one day be automated. As humans, they are prone to making mistakes and might not always have all the data they need when making decisions. Some have therefore argued that automating trustee operations could be a solution. A robot director that uses software to make governance recommendations could be viewed as an extra resource. An automated trustee board could be used to test different hypotheses and find the best one. There would be little emotion, decision-making bias or risk that the robot director favours one side over the other—or even gets caught up in boardroom dynamics at all. In a distant future, since a robot director also could work nonstop, there may not be a need for board meetings.

5. It will track beneficiaries.

In another real-life example, a piece of luggage was left at Toronto Pearson Airport, and the airline could not identify who it belonged to. A passenger posted the photo on Facebook, the post went viral and the owner was promptly identified. The power of the crowd and the ability to track that information was unparalleled compared with what a customer service representative at the airline would be able to do. One could extrapolate this phenomenon to the tools at our disposal today to track beneficiaries. As an illustration, the organization RelSci allows organizations to identify who they know and build relationship capital. This can be done for organizations and for individuals. By retracing friends, family, colleagues, alumni and/or advisors, tracking beneficiaries could be highly simplified in the future.

BIO

Estelle Métayer is the president of Competia in Ottawa, Ontario. She has been a facilitator for strategic governance workshops on future trends and industry disruption. Métayer is an adjunct professor at McGill University and a guest lecturer at IMD (Switzerland).



She is an independent board member and member of the audit committee for BRP Inc. in Canada; a board member at Swiss watch company Audemars Piguet (Switzerland), where she chairs the investment committee; and a board member at Agropur (Canada). Métayer is an advisory board member for Ricardo Media (Canada), Groupe Sélection (Canada) and Lifescore (U.K.). She also is a board member and chair of the technology committee for the Institut des Administrateurs de Sociétés (ICD Quebec). Métayer is certified by the Institut des Administrateurs Français and is a reputed public speaker who spoke in Davos in 2012 on “Sensing Weak Signals.” She received her Drs. and M.B.A. degree from Nijenrode University in the Netherlands.

In Conclusion

To support those who wish to get up to speed, a number of programs exist today—including online certificates—that allow trustees to learn more about AI and its applications.

Trustees in particular should ask the following questions.

- Have we considered how AI could transform our support and services?
- Have we considered the potential efficiency and productivity benefits that may come with adopting AI?
- Do we have the computing power and infrastructure to support the use of AI? Do we have the digital skills and talent to move forward?
- How will we gain the trust of our stakeholders if we use AI?
- How can we ensure that biases do not alter AI decisions?

- Have we investigated the role of conversational computing in shaping the way we communicate with our participants?
- Do we have established practices and controls in place to minimize any reputational or other risks that could arise from the use of AI?

The implications of AI technology are significant for pension fund trustees, and this should trigger a few actions. Ensure that your board chair has the ability to lead, guide and challenge the adoption of these technologies. Find people with a strong pool of analytical and communication skills to serve on the board. If needed, find trusted sources for outside expertise to guide you in the process. And, as always, continue to seek out additional education and training for trustees. 🌐



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