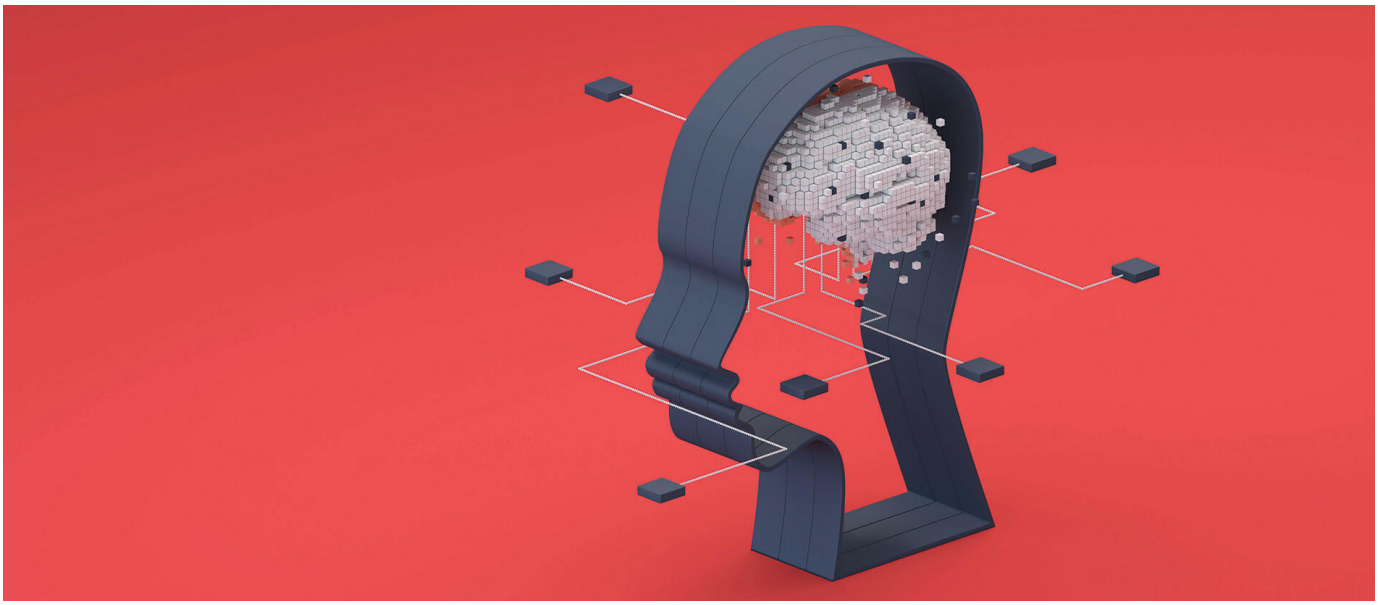
Digital transformation: how IT can shape the tax profession

General Features



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With technology becoming more accessible and affordable, we consider what it means for the future of the tax profession.

Key Points

What is the issue?

Core technology offerings, as well as more creative tech applications for tax, are emerging – such as providing automated tax advice, chatting with customers for routine tax questions or allowing intelligent searches within vast amounts of tax literature.

What does it mean to me?

The overall trend of democratising technology is levelling the playing field. With technology becoming more accessible and affordable, commercialised web-based solutions suitable for businesses of different sizes are plentiful.

What can I take away?

Focus on the underlying problems to be solved, instead of blindly adopting technology. Technology offers a plethora of tools; their effectiveness depends on how well they are applied to specific problems.

Robotic process administration, artificial intelligence, machine learning, large language models: the buzzwords just keep coming. As we find ourselves in a period of digital transformation within the tax profession, it’s worth reflecting on the technological advancements that are reshaping our industry.

The tax landscape is riddled with myriad challenges from BEPS Pillar Two to new reporting regimes like DAC7. Additionally, the tax department often needs to collaborate with other business units, guiding them on the tax implications of new business strategies or structural changes. The ever-evolving tax legislation and subsequent risks, audits and litigations further complicate the landscape.

The digital age, with its ever-evolving technological advancements, calls for adaptation and evolution. Although the challenges are many, the tools at our disposal promise a future of efficiency, precision and innovation. This article sheds some light on emerging tax technology and how it is shaping our future profession.

Types of problems faced by tax professionals

At our core, tax professionals specialise in solving tax problems for businesses. The world of tax is multifaceted, presenting challenges that range from routine tasks to complex issues.

On one end of the spectrum, we grapple with mundane responsibilities such as regular tax return calculations, reporting obligations and reconciliations. These repetitive tasks are essential yet consume a significant portion of time and

resources.

On the other end, we face responsibilities that demand human judgment and experience. Tasks such as anomaly detection, effective tax rate estimation and navigating an intricate web of ever-evolving tax legislation requires a depth of understanding and expertise in both business and tax law. Collaborating with other business units, providing guidance on tax implications and addressing risks, audits and litigations adds further layers of complexity to our roles. Meanwhile, we often rely on other business units to own and provide relevant data that enables us to focus on tax issues. The challenges are enormous.

The role of tax technology

In the face of various challenges, tax technology has emerged as a beacon of hope. Robotic process automation (RPA) tools use software ‘robots’ to automate tasks that are repetitive, computer-oriented and fundamentally rule-based by mimicking human mouse cursor movements on the screen and interacting with web browsers and other software to achieve a similar end result. RPA is revolutionising the way we handle routine tasks by delivering unparalleled efficiency and precision.

Nevertheless, technological advancements don’t stop there. Exploratory data analytics and machine learning are carving out a niche in areas that require deeper insights, predicting future outcomes with calculated uncertainty or offering fresh perspectives on challenges that once seemed insurmountable.

These techniques can analyse across a wide variety of historical data, using statistical methods to look for patterns within the data, and provide insightful observations that may be oblivious to the human eye. In some cases, they are also able to predict the most likely future outcomes based on past data.

Finally, the recent advent of Generative AI and Large Language Models (LLMs) is particularly promising. Generative AI is a type of artificial intelligence that uses machine learning algorithms to create new data similar to the existing data it has already seen. LLMs are a type of Generative AI designed to emulate natural language conversations between humans.

This type of technology is already used in applications such as text summarisation, and image and speech synthesis. However, we are increasingly seeing wider and more creative applications of such tools in many other fields. For tax, they have potential applications in advisory, compliance and research roles. As we stand at the cusp of this digital transformation, it’s evident that tax technology is not just an accessory; it’s an integral part of the future of our profession.

Real-world applications of tax technology

The realm of tax, once dominated by manual processes and traditional methodologies, is undergoing a paradigm shift. Leading tax practices and large corporations are embracing tax technological advancements to provide suitable solutions for both internal and external clients. Often, clients’ tax problems require one or more techniques and technologies to achieve desirable results. Successful solutions require experience and expertise from professionals who are fluent in both the languages of tax and technology, as well as soft skills such as project and product management.

RPA, for example, can be used for data entry and cleansing to ensure the production of high-quality data for further consumption by advanced statistical models. RPA tools are also useful for creating automated workflows and stitching multiple intelligent solutions together to provide user-friendly, end-to-end solutions. Classification algorithms, a type of machine learning technique, are reshaping the way we categorise and manage vast amounts of tax-related data. For example, we might use classification techniques to provide a first pass on expense items to determine tax deductibility or predict tax rate based on an item’s description. Predictive modelling, another machine learning technique, can have an uncanny ability to forecast effective tax rates, potential audit risks and tax trends, and is becoming an indispensable tool in the tax technology professionals’ arsenal.

With the rise of LLMs, more creative applications for tax are emerging, such as providing automated tax advice, chatting with customers for routine tax questions or allowing intelligent searches within vast amounts of tax literature. Together, these tools are setting the stage for a revolution, where tasks that once took days can now be completed in a dramatically shorter time span. These tools equip tax

professionals with high value insights allowing them to better serve the wider business. The real-world implications of tax technology are profound, with firms both large and small harnessing the power of technology to redefine their operations.

The impending impact on smaller practices and sole practitioners

The development of technology has revolutionised the way businesses operate, including those in the tax industry. However, the narrative surrounding tax technology often portrays large firms with vast resources as the primary beneficiaries. Smaller firms and sole practitioners may fear being left behind and unable to compete. This is far from the truth.

The overall trend of democratising technology is levelling the playing field. With technology becoming more accessible and affordable, there are many commercialised web-based solutions suitable for businesses of different sizes. This democratisation of technology is a game-changer for smaller firms and sole practitioners, who are now able to access and utilise the same technology that was once only available to those with plentiful of resources.

Most machine learning and AI techniques are accessible as high-quality free open-source software funded by research grants and corporate donations. This allows small and niche technology firms to leverage cutting-edge technology to take advantage of these opportunities. Furthermore, these firms are nimbler and more flexible, enabling them to pick the most suitable solutions for similar-sized clients without incurring huge necessary overheads. This is a significant advantage for smaller firms and sole practitioners who are more agile, can experiment to try new things and can rapidly adapt to changing tax requirements.

The key is to focus on the underlying problems to be solved, instead of blindly adopting technology. Technology offers a plethora of tools, and their effectiveness depends on how well they are applied to solve specific problems. It is essential to first understand the needs and challenges of each business before identifying the most suitable solutions for each. In this sense, both big and small firms have an equal opportunity to understand their own issues and leverage technology to

improve their processes and services.

Challenges and risks of emerging tax technologies

The allure of tax technology is promising, but it also comes with a set of risks that cannot be ignored. It is paramount to understand the limitations of each technology and manage expectations. As we integrate these tools into our tax-related work, it is crucial to also implement appropriate governance and mitigate risk as much and as early as possible.

For example, AI solutions are often ‘black box’ (hard to explain how they arrive at their conclusions) and difficult to maintain at peak performance over time. LLMs are (currently) known to be bad at maths, may hallucinate information, and their knowledge quickly becomes out-of-date until their training data is updated with more recent information. In a digital age, data privacy emerges as another pressing concern. With vast amounts of sensitive information being processed, ensuring its security is not just a best practice; it’s a moral obligation.

As we dig deeper into the world of tax technology, we also face potential pitfalls and unforeseen challenges due to situations that are outside the control of tax departments. For example, tax professionals may have to rely on data sources with too much missing or incorrect data for machine learning algorithms to churn out any meaningful results. Cutting-edge AI solutions are at risk of generating out-of-date or inaccurate outputs without proper governance procedures. Overly fragmented software systems may pose incompatibility issues when attempting to create a combined end-to-end automated workflow using RPA tools.

Despite the challenges, with the right level of risk awareness and mitigation, clearer guidance from tax authorities around the world, and a commitment to continuous learning by tax professionals, these obstacles can be transformed into significant opportunities.

Tax technology’s potential benefits to HMRC

The impacts of tax technology extend far beyond the boundaries of individual firms and practices. At the core of the nation’s tax infrastructure is HMRC, which stands to gain immensely from these advancements. Despite the disjointed legacy data schemas of various tax systems, tax technology reveals the possibilities of creating a more streamlined tax collection process by minimising redundancy and emphasising efficiency.

The potential benefits of tax technology extend beyond operational enhancements. HMRC can leverage the power of predictive modelling to revolutionise its risk and compliance functions, adopting a more proactive approach to revenue forecasting, and enabling rapid identification of potential tax evasion. Furthermore, the integration of AI driven platforms promises to enhance the taxpayer experience. An intelligent content platform powered by LLMs could identify areas where taxpayers commonly struggle to understand tax rules and offer proactive guidance and interactive clarification, thereby ensuring a more informed and compliant taxpayer base.

As we continue down the tax technology path, taxpayers should expect to grasp the general level of governance and best practices from HMRC regarding the use of various technology tools in tax. Consequently, HMRC has a unique opportunity to level the playing field for taxpayers, regardless of their size.

Conclusion

This article provides a high-level review of the current status in the field of tax technology. The digital transformation of the tax profession is not a distant dream – it’s our present reality. The tools at our disposal, from RPA to AI, offer a glimpse into a future where efficiency, accuracy and innovation coexist harmoniously. The cornerstone is understanding the core business problems and identifying suitable solutions from the various tools available.

For tax professionals, the journey ahead is clear. It’s a path of continuous learning, adaptation and creation. In this ever-changing tax landscape, our ability to harness

the power of technology will not only determine our success but also shape the future of the profession.

The opinions presented in this article are solely my own and do not reflect those of any of my previous or current employers.

DITT: The Diploma in Tax Technology

The CIOT understands the significance of digital change, which is an important part of tax practice and as relevant as tax law. The solution to this challenge is education. In November 2022, the CIOT launched the Diploma in Tax Technology (DITT) qualification.

While digitalisation has many benefits, the challenges remain around how tax advisers change, keep on top of tax technology advancements, and avoid being left behind.

CIOT believes the solution to this is centred around an awareness of technology, the tools available and an understanding of how it works. The DITT is intended to educate and equip tax advisers with a solid foundation in tax technology so they can meet these challenges head on.

The overall learning outcome for this Diploma is that the holder will have sufficient knowledge to understand and participate in a tax-technology related project, including the ability to liaise with experts in tax and technology as required for the purpose of the project.

Further information, see: www.tax.org.uk/ditt

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