



Digital Technologies' Implications for SMPs

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Introduction

Mainstream business media is increasingly focused on the implications of advances in technology on the workplace and professions. Closer to home, studies, including ones by Accenture and Deloitte, predict robotics will eliminate or automate up to 40% of basic accounting work by 2020.

The impact of technological advances are nothing new for accountancy. Even double entry bookkeeping was, in its day, an advance in technology—one that profoundly impacted accounting. In our lifetimes alone the impact of technologies have drastically impacted our work and our lives—personal computers, spreadsheets and software, the internet, and smart devices, to name only a few. But today's emerging technologies, including data analytics, blockchain, artificial intelligence, and machine learning—what we'll collectively call digital technologies—have the potential to be the real game changer for the profession. We are in the throes of the [Fourth Industrial Revolution](#), which looks set to quickly have a profound impact on the accountancy profession.

This article examines research into how emerging technologies' and the automation they herald might

impact the professional services sector. It goes on to consider the potential implications for small- and medium-sized accountancy practices (SMPs), and how the accountancy profession and SMPs might best respond.

The Future of the Professions

The research of Richard and Daniel Susskind, popular in the accounting conference circuit and published in [The Future of the Professions](#), includes a rather alarmist prediction for the professions. Their message to the accountancy profession reads like a health warning (see [ICAS](#), [Voice of America](#), and the [Harvard Business Review](#) for examples). Within decades the traditional professions, accountancy included, will be dismantled, leaving most, but not all, professionals to be replaced by people with less expertise, new types of experts, and high-performing systems.

Most mainstream professionals believe they will emerge largely unscathed. While conceding that routine work can be taken on by machines, they maintain that human experts will always be **needed** for the tricky projects and tasks that call for judgment, creativity, and empathy.

But the Susskind's research shows when professional work is broken down into component parts, many

tasks are routine and process-based—and do not in fact call for judgment, creativity, or empathy. Human professionals, they argue, are already being outperformed by a combination of brute processing power, big data, and remarkable algorithms. These systems do not replicate human reasoning and thinking. The Susskinds conclude: “The professions need to change. Technology may force them to.” The upshot for the accountancy profession is that many of the tasks traditionally associated with the profession are or soon will be automated and that the profession’s future rests on redefining its core offerings and inventing useful new tasks.

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The Age of Analytics

Perhaps the most comprehensive evidence, analysis, and insights into how automation stands to affect work, including that of accountants, can be found in McKinsey Global Institute/McKinsey Analytics’ study, [The Age of Analytics: Competing In A Data-Driven World](#). It also presents some pointers as to how the profession and SMPs might respond—specifically in [its comprehensive data set on where machines can, and can’t, replace humans](#).

McKinsey analyzed the impact of automation across 54 countries covering 78% of the global labor market to assess the percentage of time spent on activities

with the technical potential for automation by adapting currently demonstrated technology. Taking a closer look at McKinsey’s [supporting data](#) for the professional, scientific, and technical services sector (“professional services”), a sector that includes accountancy and tax advice, you can see that, globally, the professional sector employs 38.1 million and 39% of work has the potential to be automated (Europe 14.5 million and 37%). There is significant variation in potential for automation from country to country: Italy (39%) and France (44%) have a higher potential for automation than Germany (34%) and the UK (35%).

It’s worth noting that [IFAC estimates](#) that the number of professional accountants who are members of IFAC member organizations number 2.8 million—some 7.3% of the professional sector total.

Europe’s professional, scientific and technical services sector employs 14.5 million and 37% of work has the potential to be automated.

Technical Feasibility of Automation

We detailed McKinsey’s findings and automation’s technical feasibility in a previous article on the Global Knowledge Gateway, [“Where Machines Could Replace Accountants—and Where They Can’t \(Yet\).”](#) In short, [McKinsey identifies](#) seven top-level groupings of activities—*managing others, applying expertise, stakeholder interactions, unpredictable physical work,*

data collection, processing data, and predictable physical work. Since all constituent activities have a different automation potential, McKinsey arrives at an overall estimate of automation potential for the sector by examining the time workers spend on each of them during the workweek.

McKinsey concluded that managing others (9% of time spent on this activity can be automated by adapting currently demonstrated technology) and applying expertise (to decision making, planning, and creative tasks, 18%) are the least susceptible to automation. Stakeholder interactions and unpredictable physical work are less susceptible, and data collection (64%), processing data (69%) and predictable physical work (78%) are highly susceptible.

Based on data on time spent in US occupations, those working in the professional sector spend most of their time on *applying expertise, stakeholder interactions, data collection, and processing data.* This represents mixed news for the accountancy profession: while *applying expertise* and *stakeholder interactions* are less susceptible, *data collection* and *processing data* are highly susceptible. This suggests that large chunks of time spent by professional accountants, and SMPs, on data collection and processing risk being automated.

We are keen to hear what proportion of time you think accountants spend on each of the seven activities: [please click here to respond to our question.](#)

Those working in the professional sector spend most of their time on *applying expertise* (18% of time can be automated by adapting currently demonstrated technology), *stakeholder interactions* (20%), *data collection* (64%) and *processing data* (69%).

Accountancy Sector's Susceptibility to Automation

While automation requires technical feasibility, it is not a complete predictor by itself. McKinsey identified five factors that impact automation becoming a reality.

- Technical feasibility - as noted above, some activities performed by professional accountants and SMPs are less susceptible, while others are highly susceptible, to automation.
- Cost of developing and deploying the hardware and software for automation - it would seem the costs, such as that of data analytics and cloud computing, have fallen sharply in the past few years. This points to an increased risk of automation.
- Cost of labor and related supply-and-demand dynamics - many jurisdictions are reporting a talent war with qualified staff in short supply. This seems to have triggered significant increases in the salaries of professional accountants. These rising labor costs point to an increased risk of automation.

- Benefits beyond labor substitution - it's easy to see that automation might lead to higher levels of output, better quality, and fewer errors especially in data collection and processing. For example, in an audit, technology enables the testing, quickly and accurately, of entire data populations rather than just samples. These benefits of automation point towards an increased risk of automation.
- Regulatory and social-acceptance issues - it seems likely that employers or clients will be accepting of a robot or machine replacing some of the functions of an accountant, but perhaps less accepting where the situation demands the exercise of professional judgment or skepticism, such as an ethical dilemma. Regulators might also prefer to see human intervention than reliance on a machine.

We are keen to hear whether you think these factors make automation of the accountant's work more or less likely: [please click here to respond to our question.](#)

SMP Implications

The above analysis suggests that a significant proportion of the core work of a typical accountant and the main SMP fee revenue sources have automation potential. However, various other factors may work in concert or against to realize this potential. We are already seeing some realization of this potential. For example, software and subscription services can now automatically collect and organize data on everything from payroll and inventory to

audits and contract language, and even perform analysis on tedious tasks like bank reconciliation. If this trend continues to accelerate and deepen, then it's vital that the profession accelerates its move into tasks and activities less susceptible to automation.

In sum, automation presents both threats and opportunities to SMPs. Leveraging the opportunities will likely demand significantly redefining their role, moving from compliance services and tasks based on data collection and processing to knowledge work based on data analysis and advising on the data's implications and recommended actions. The challenge for the entire profession is to reinvent core tasks and service offerings.

The top candidate is advisory. Advisory involves managing others, applying expertise, and stakeholder interactions, activities that are much less susceptible to automation than data collection and processing. The crucial ingredients to advisory, that for the time being moment seem impervious to automation, are establishing trust and providing personalized expertise.

Here in Europe many accountants seem to recognize the challenge and the need for change. According to Accountancy Europe's survey, [The Technology Barometer](#), 42% of respondents see technology as a serious challenge that will require significant changes. One third believe technology is an opportunity to reinvent the profession and 56% see it as an opportunity to improve accountancy services.

Offerings by accountancy practices are already starting to change as focus shifts towards advisory. Many larger accountancy firms draw a significant percentage of their revenue from this type of work. This trend away from audit in favor of advisory is gathering pace among medium-sized international accountancy networks and SMPs (see [MGI Worldwide](#) and [IFAC's 2015 Global SMP Survey](#)). Some predict that instead of compliance services monopolizing accountant's time, business advisory services utilizing emerging digital technologies to add value [will comprise the vast majority of revenue of SMPs in the foreseeable future](#). Ultimately diversification, and the resulting increased employment of non-accountants, means accounting firms are less *firms of* professional accountants and more *firms led by* professional accountants.

The Future

The future of the profession, and that of SMPs, looks set to present both challenges and opportunities. Realization of the opportunities is contingent on SMPs focusing on the value they can offer to their clients. That demands SMPs carefully consider diversification and making the transition to advisory—a transition for

which technology will be a crucial tool. SMPs will need support from professional accountancy organizations to help make that transition. The accountancy profession's leadership—IFAC, regional organizations like [EFAA](#), and professional accountancy organizations—shoulder the responsibility for leading this change. It's then for SMPs to make the change. EFAA has made a significant start. It has established a Digital Working Group, chaired by [Martin de Bie](#), tasked with providing thought leadership and guidance to EFAA members on how best to support SMPs as they seek to leverage digital technologies. This initiative started on 8 June with EFAA's international conference 'Developing the Digital Professional', the first of its kind directed at SMPs and SMEs: presentations, video interviews and highlights are hosted [here](#).

ABOUT EFAA

The European Federation of Accountants and Auditors for SMEs (“EFAA”) represents accountants and auditors providing professional services primarily to small and medium-sized entities (“SMEs”) both within the European Union and Europe as a whole. Constituents are mainly small practitioners (“SMPs”), including a significant number of sole practitioners. EFAA’s members, therefore, are SMEs themselves, and provide a range of professional services (e.g. audit, accounting, bookkeeping, tax and business advice) to SMEs.

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