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Virtual Financial Controller

How digital technologies affect the everyday life of a financial controller

It has happened before, and it will happen again. Automation is not a new phenomenon. Industrial automation has expanded the use of machines to carry out manufacturing processes, and they often perform with greater speed, reliability and accuracy than their human counterparts. And as each industrial revolution takes hold, certain jobs disappear. In the past, typesetters would assemble the letters, kern the font and adjust the line spacing by hand. Today, digital technologies handle these tasks, rendering the traditional job profile of a typesetter obsolete by the turn of last century.

In today's technology-driven world, advances in automation and cognitive technologies, including Machine Learning, Robotic Process Automation (RPA), as well as Natural Language Processing and Generation (NLP/NLG) are already playing a role in the finance space. Robotics and cognitive automation process information, gathering bits of data from multiple sources and assembling them, for example, into an invoice. The rationale behind the automation mirrors the evolution of the typesetter: humans are relieved of tedious and repetitive work, while still guaranteeing a uniformly high-quality end product.

And from there, automation kept getting more complex and the functionality of embedded Artificial Intelligence (AI) has emerged. Which raises the inevitable question: will financial controllers become the typesetters of the 21st century?

The CFO Program

Cognitive technologies generate new insights and identify hidden patterns that financial controllers are likely to miss

The more digitalization advances and the degree of automation increases, the greater the potential to automate financial Controlling processes, especially highly repetitive tasks. Collecting, preparing, and validating data as well as processing information and drafting reports for operational and executive management are among the highly repetitive tasks that could potentially be automated through Robotic Process Automation. Cognitive computing and Artificial Intelligence go beyond task automation, evaluating and responding to data in ways that normally require human intelligence and handling large-scale and semi-structured data sets. This will lead to a complete reconfiguration of financial Controlling tasks such as reporting and analytics, internal control and risk management, planning, as well as closing and consolidation.

Fig. 1 –Controlling activities and digital technology

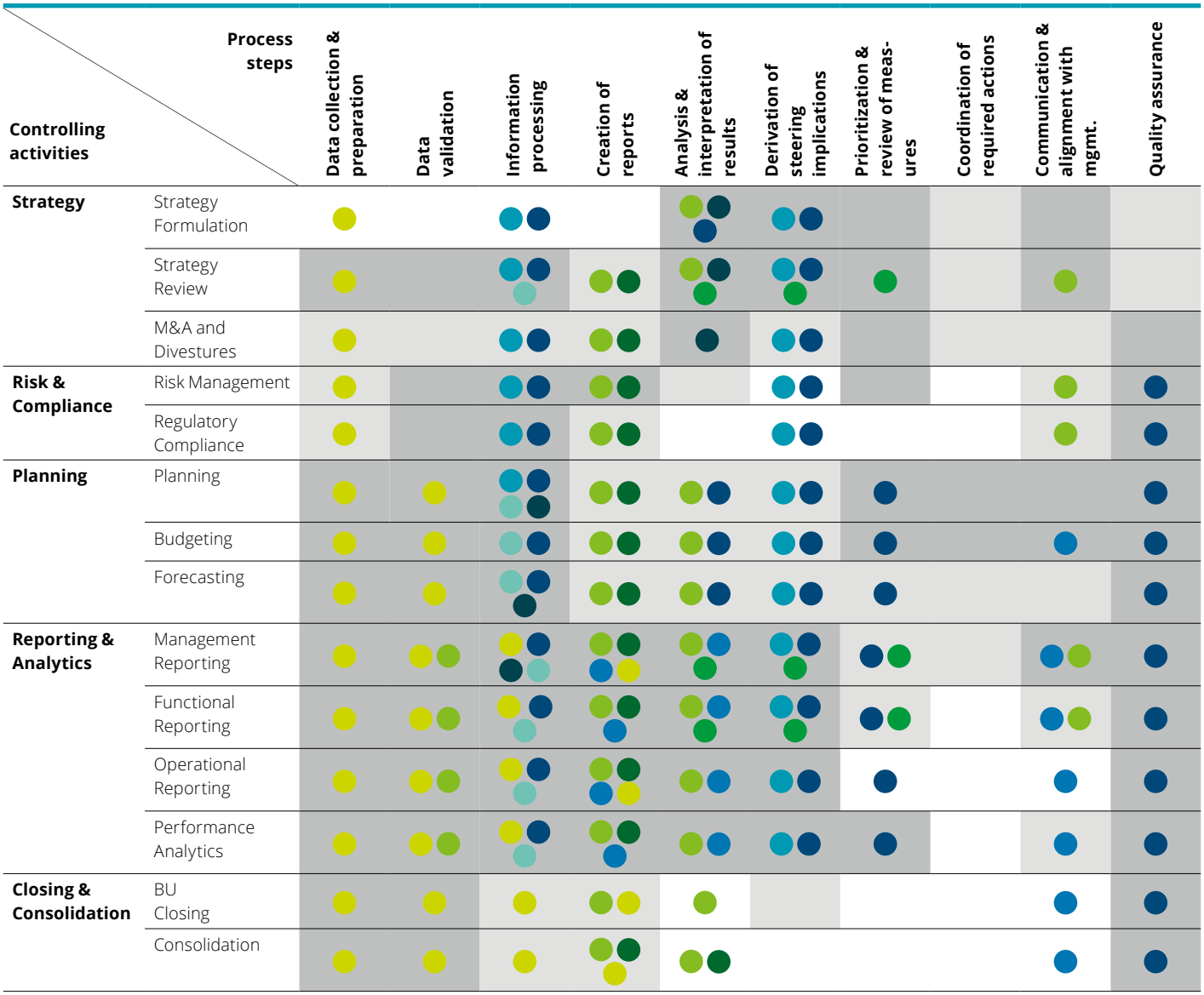

Figure 1 illustrates an overview of Controlling activities and the use of digital technologies. We are seeing several new technologies ranging from RPA and NLP/NLG to Deep Learning used throughout the financial Controlling space. RPA, for example, automates simple, repetitive processes and is especially useful not only for data collection, closing and consolidation, but also for preparation and validation tasks in reporting, analytics and planning.

In general, cognitive technologies excel at analyzing literally millions of data sets, including those that reside in both structured data from internal and external sources as well as unstructured data like photographs, diagnostic images or PDF files. Achieving a level of computational power humans simply cannot match, these technologies can take over a wide range of repetitive, high-volume tasks – to streamline, accelerate and automate complex analytical processes.

Cognitive insights help finance departments make better decisions and forecasts thanks to machine learning algorithms. They offer greater accuracy and can be used in text, voice, face and image recognition in addition to analytics capabilities.

Fig. 2 – Overview of major digital technologies

Cognitive technology is a generic term for several technology applications that are helping financial controllers meet the emerging challenges. Business leaders are demanding more timely, accurate information so that they can make faster, more effective decisions in this increasingly data-driven world. Cognitive technologies have the power to explore large, high-density data sets, deliver the relevant information in a clear format thanks to data visualization tools, and facilitate efficient, cross-functional communication and decision-making.

Cognitive technologies give finance departments the tools they need to make sense of an increasingly complex world by combining internal financial information and operational data with external information. They can optimize the budgeting and forecasting process, improve process efficiency and quality, and model future scenarios with predictive analytics.

Cognitive Agents can also communicate with the financial controllers and their business partners, understand what they are trying to achieve and give corresponding advice. For example, Cognitive Agents could assist in requesting sales figures or enquiring about the status of outstanding payments with minimum or no human involvement.

Finance departments in general, and financial controllers in particular, are under pressure to keep pace with growing demands for value-added insights. As a result, we can expect an increase in the use of cognitive technologies to replace, automate, support, and facilitate the key tasks of the financial controller.

Digital technologies affect the everyday life of a financial controller

Although cognitive technologies will be widely deployed in all areas of Controlling, it is unlikely that organizations will be steered solely by machines. Cognitive technology-based solutions aim to perform specific, well-defined tasks and automate certain processes. Perhaps more importantly, intelligent automation solutions may be able to augment human performance by automating certain parts of a process and freeing individuals to focus on more "human" aspects of the job that require contextual knowledge, problem-solving abilities, social skills and emotional intelligence. With the "right" utilization of cognitive technologies, financial controllers have the potential to achieve a much better harmony between human and machine. The so-called human-machine symbiosis could therefore create a completely new job profile.

With rule-based work largely automated, the focus shifts to business-facing analysis and exception-based investigations, with more time available to spend on proactive support. For financial controllers, this might mean automating some tasks that they were doing before, but it also may enable them to accommodate new roles that were impossible in practice before AI, e.g., to analyze big data in order to reveal patterns, generate forecasts, and make more effective decisions. Tools like predictive planning, self-service reporting, and cognitive agents give financial controllers greater capacity to provide advice on more strategic interventions. Employees will spend less time preparing data for analysis and more time asking, "What does this tell me about the business?" and "How can the business close gaps between actual performance and expectations?" With regard to management reporting or planning. AI can be used to mine data, look for trends and patterns, and leave the interpretation and communication of results to human counterparts with common sense and contextual understanding. While human managers may have already identified some of the trends that AI spots, other connections would likely remain buried beneath layers of seemingly random data.

Business partnering will shift upstream from budgeting and reporting to include scenario analysis, predictive planning and forecasting, as well as better visualization. Teams of business partners will come together to focus on the most complex commercial decisions, moving around the business as needed. Information required to make decisions will appear just in time, fully integrated into the overall management processes. Routine forecasts will be handled by algorithms that are evaluated on an ongoing basis. As a result, finance departments will increase their standing and improve their position within the organization.

Fig. 3 – Changing Controller's job profile

The range of tasks of a controller significantly changes

In times where the vast amount of manual transactions is taken over by machines, the human will focus on the business partner and consultant role

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- Decision support for CFOs and management using data insights to weigh in on strategic challenges
- Business management tasks, such as recommending a course of action using predictive analytics based on internal and external market data
- Guiding of the business function through visualization of results, e.g., advising on the use of standard reporting and explorative analysis
- Management of end-to-end business processes, for example adapting standardized processes to changing business needs
- Focus on data stewardship to ensure data integrity and compliance

You will see less...

- Push of generic insights to business managers that hasn't already been aligned with the organizational strategy and business needs
- Use of Excel to manually capture and transform large amounts of purely internal data
- Static, visually unappealing and retrospective reporting at month end
- Focus on siloed, in-house processes without considering the entire data value chain
- Reliance on "business as usual" and use of data solely for financial control's own purposes

Advances in AI will require new ways of thinking about jobs, enterprise culture, technology, and, most importantly, people. In the future, the relationship between financial Controlling teams and technology has the potential to achieve greater harmony between man and machine. In order to apply for and meet the requirements of this new job profile, some upskilling will be required.

Typesetters have been replaced by media designers – what is in for financial controllers? Much like the typesetter-media designer evolution that relied on a variety of applications and tools to create media products that went beyond simple text processing, financial controllers can advance by leveraging the use of digital technologies. Basic financial Controlling tasks and process steps remain, but will be reconfigured. Cognitive technologies will require new ways of thinking, the broadening and deepening of technical skills such as statistical knowledge, AI-based application expertise, data visualization and interpretation skills as well as data modelling and programming abilities. At the same time, cross-functional collaboration with several business units will play a critical role and raise the profile of communication, adaptation and exploration skills for financial controllers.

But how to start? – Embracing cognitive technology requires transformational change

Finance departments need to examine the opportunities of AI to address today's business challenges, prioritize the opportunities, and align the next steps. Right now, we speak of these tools as technologies. However, to understand how they reconfigure major financial Controlling tasks and how teams can and should interact with them, we need to recognize these technologies as components of work.

Finance needs to understand the holistic objectives and business levers for success (e.g., focus on efficiency gains vs. enabling deeper insights). It is important to clearly define the mandate, goals and aspirations as it will be impossible to achieve effective implementation without the right leadership interventions and buy-in. Having a clear mandate at hand, finance departments need to articulate how they will add value to the business. What is their role if it is not a transaction processor? Joint workshops and lab sessions will foster a common understanding of the future and shape new initiatives. Decision-makers need to identify processes and tasks with the highest automation potential and explore new technologies with a pilot program. Finance departments must develop actual use cases and define the anticipated benefits associated with their adoption. This is also essential to boost recognition internally.

Enterprises setting up a pilot initiative would be wise to consider the broader target picture and create a high-level business case with a clear roadmap for designing and delivering AI across the organization through an adequate operation model. However, none of these actions will matter if the finance department does not develop and update its strategy for recruiting and training talent. The focus must be on acquiring and developing the right skills. Financial controllers will face the challenge of orchestrating human-machine interactions and pushing the knowledge further into the organization by being a digital role model.

Preparing for a digital future is no easy task. It means developing digital capabilities and aligning the enterprise's activities, people, culture, and structure toward a shared set of organizational goals. By fully realizing and embracing the benefits of disruptive technologies, financial controllers can accelerate their evolution as insight-driven business partners – shaping and driving the strategic direction of the enterprise.

In summary, we expect the job profile of a financial controller to change tremendously over the next five years. While they may ultimately be producing the same end products, financial controllers have the opportunity to harness sophisticated analytical tools and methods and achieve a transformation just as radical as that of the typesetter.

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