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## Procurement 4.0

A survival guide in a digital, disruptive world

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### **PREFACE**

Procurement is without a doubt at an important turning point and might have to redefine itself in terms of its role as a business function or even regarding its reason for being. In such uncertain and fuzzy times, it can be helpful to stop for a moment and freeze the status quo.

At this special moment in time, we from h&z decided to write a book on »Procurement 4.0«, addressing the huge challenges procurement will have to face. There will not be fewer tasks, but definitely different ones in terms of what we buy and how we buy.

With this book, we dare to take a glimpse into the future while broadening the overall picture: »Digital« is only a small aspect of Procurement 4.0, even more challenges lie, for example, in the organizations we need to design for tomorrow or the people we need to choose, leveraging the supply base while creating winning value chains.

And, as one CPO put it recently: »We want Procurement 4.0, but we have Staff 2.0 and even Leadership 1.0.«

Fortunately, we didn't have to go all the way on our own. We'd like to thank the contributors from leading industrial corporations for sharing their opinions and insights in the form of interviews and use cases.

Stefan Aichbauer Managing Partner at h&z

# A LETTER FROM PROCUREMENT LEADERS BY DAVID RAE

#### Challenges ahead — an outlook by Procurement Leaders

There has been a great deal of debate over recent years about how the ongoing march of technology might undermine our way of life; with robots stealing our jobs, computers driving our cars and artificial intelligence (AI) systems surpassing human intelligence on their way to taking over the world.

While much of this debate is fueled by headline-loving journalists' and entrepreneurs' intent on creating a feeding frenzy around a particular trend or technology, the fact remains that we are living through an intense and unprecedented period of change. Not only is technology advancing at an astonishing rate, when coupled with other trends such as population growth, rapid urbanization, climate change and an intense and increasing energy dependency, we face some interesting challenges ahead.

The advances made in technology, of course, are in many cases a commercial reaction to the challenges we face as a society. Tesla CEO Elon Musk's vision and determination to disrupt both the energy and automotive sectors are a good example; but so are the advances made in the pharmaceutical and healthcare sectors on disease control and the focus on genetically-enhanced farming methods. All direct responses to current and emerging global trends.

The point here is that the commercial sector is as responsible for solving our future challenges as our governments. We are living through a period of social entrepreneurialism; where, for many, a desire to make money is matched by a desire to solve the most pressing issues we face as a society.

So, why is this important to procurement?

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The reality is that the pace of change and scale of challenge that we are faced with demand a new approach to how we do business. Call it what you will; but in simple terms it demands gaining a greater understanding of our world through advanced data analytics, being quick to react to situations as they arise and being more open to collaboration with third parties to help solve those challenges. In each of these areas, digital technologies are a key enabler and in each of these areas, CPOs must assess their own capabilities and approaches and determine how they can support and contribute to the overall strategy.

#### Knowledge is power

There are many examples of how procurement can make better use of data, both in the traditional sense through improved spend and category analysis; but also in new and emerging areas such as advanced data analytics and the Internet of Things (IoT).

Advanced data analytics can be used to provide more visibility to the business for planning and forecasting purposes, using real-time data such as commodity and labor prices to help predict individual-product production costs on an ongoing basis. In theory, this can help companies work to rolling forecasts and mean procurement can be much closer aligned with, and supporting of, sales and marketing tactics.

Meanwhile, the impact of IoT continues to be felt, with the supply chain a key playground – visibility of individual goods and components in the supply chain can be greatly improved, with a subsequent improvement in efficiency, which in many cases can lead to a significant cash benefit. At the recent Procurement Leaders World Procurement Congress, Flextronics' CPO Tom Linton provided a good example, explaining how taking five days out of his 65-day supply chain through enhanced visibility provided \$350 million in cash to the business.

#### Speed is of the essence

The same thinking can be extended to agility and the benefits that come from being able to react to market conditions and opportunities. Being

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able to easily ramp up or slow down production to take advantage of peaks and troughs in consumer demand without holding large quantities of inventory is a growing differentiator in corporate performance and, ultimately, shareholder return.

Being able to react quickly to global events – whether positive or negative – is another key differentiator, and something CPOs can look to digital technologies for to help solve. For example, digital dashboards that offer a real-time view of a supply chain and suppliers, and how wider political and economic issues are affecting them, can help drive faster, more effective decisions.

However, perhaps the largest, or, at least, most widely experienced, impact of digital technology over the past 20 years, is in the world of communication. Thanks to this technology, we are permanently connected with and have immediate visibility into the activities of billions of individuals all across the world, which brings with it fundamental opportunities.

Entire business models have naturally been built on these opportunities, but for traditional businesses, and therefore the procurement functions that serve them, the impact of this revolution is more subtle.

#### The end of not invented here

Although individuals are now accustomed to sharing and being open with the entire planet, the corporate world is slower to adapt. But adapt it has to, and one of the ways in which procurement has a major role to play comes with the breaking down of traditional corporate boundaries.

Chrysler's Extended Enterprise model and its famous Supplier Cost Reduction Effort (Score) from the 1990s are both well-known approaches to supply management that have been the subject of many articles and academic theses.

But while predominantly focused on cost control, companies today are looking to break down corporate barriers to access new technologies, new solutions and new product developments. This is different and new, and procurement has the opportunity to manage and facilitate the process with suppliers, and potentially other third parties.

Because procurement sits in the privileged position of having visibility

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of relationships with thousands of suppliers, as well as connections with the entire business, we are perfectly placed to manage the processes that enable advanced collaboration between otherwise autonomous organizations.

We can increasingly rely on technology to manage much of the procurement process, freeing up time and resources to spend on more strategic and value-adding activities. Rather than having a conversation with suppliers on price, or even total cost, procurement should be facilitating a wider discussion around opportunity and capability. Rather than viewing third-party spend as a cost that needs to be reduced, we should be looking at it as an investment that demands a return.

At Procurement Leaders, we call this new focus supplier-enabled innovation (SEI), and at its core it means handing your company the keys to the expertise, collective brainpower and R&D budgets of the supply base. Of course, it isn't one-way traffic – for true SEI to take place, suppliers must benefit significantly and fairly from the collaboration in order for the partnership to be effective. Neither is this a short-term win; companies must invest for the long term in SEI and supplier partnerships in order to see a return.

But if you were to ask me what the biggest impact is that CPOs can make to their organizations over the next 20 years, my answer would be straightforward – to provide the means by which their companies can work with leading suppliers collaboratively and benefit from their expertise, capabilities and solutions.

Digital technologies will be a key enabler for this shift – and it's a shift that will allow procurement to facilitate the collaboration required to solve some of the biggest problems our societies have yet faced.

David Rae
Content & Community Director at Procurement Leaders

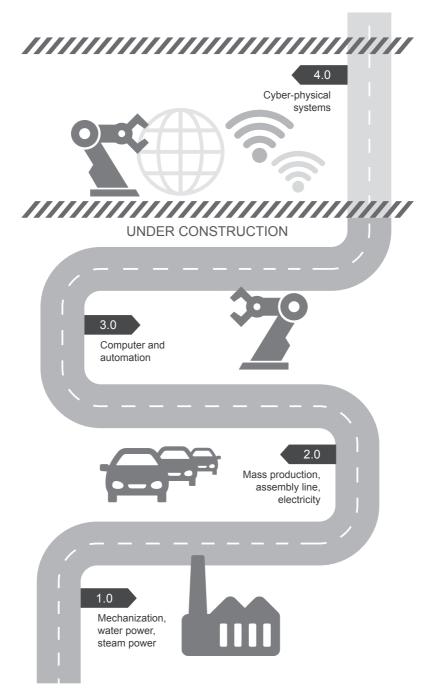
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# THE SURVIVALISTS GUIDE TO PROCUREMENT 4.0

Industry 4.0, or the fourth industrial revolution, is well underway. There is a lot of talk surrounding this latest industrial trend where digital technologies, including cyber-physical systems, the Internet of Things, cloud robotics, 3D printing, sensor technology and big data, are dominating the agenda and reshaping industry and the way we work. A search on Google for »Industry 4.0« will reveal about 116 million sources, so there is clearly a strong community building up around this topic, offering ideas, insights and support.

#### What has happened so far

It all started out with the invention of the steam engine, which was the birth of industrialization and which enabled the shift from an agricultural to an industrial economy. In the mid–19th century, the second industrial revolution was enabled by inventions like the combustion engine and assembly line, boosted also by electricity. As automation proceeded and computers offered completely new possibilities, the next industrial age was heralded. Today we are on the move into the so-called fourth industrial revolution, where more and more tasks will be executed by machines or artificial intelligence, which brings us back to the above-mentioned cyber-physical systems, i.e. connected machines.



Phases of industrial revolutions

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#### And what about Procurement 4.0?

Try a Google search again, now for Procurement 4.0 and there are comparatively few hits, just over 12 million in fact – and even fewer for the global term of »procurement digitization«. When you consider that procurement is the function that manages the 70–80% of the external value add that most companies are looking for, this imbalance seems very disproportionate. It appears that procurement's role in Industry 4.0 is being overshadowed and that the focus is on other business functions that will be affected by this new industrial revolution. What does this suggest about the future of procurement?

Procurement will not be devoured by these digital technologies. On the contrary, as the business function with the most internal and external interfaces within the value chain, those who work in procurement will be confronted with new challenges and opportunities.

Are you ready for this new Procurement 4.0 environment?

Strip everything else away and it can be seen that at the very heart of Procurement 4.0 are questions about changes in what to buy and how to buy.

#### What to buy

Digitization enables new business models and therefore new product markets and categories. Customization beats standard product lines and generally there is a shift from plain products and services to whole ecosystems. The speed of innovation and time-to-market are accelerating. All industries and business models are affected by disruptive technologies. Simply the question how fast it will happen and how big the impact will be.

The automotive industry has been deeply affected by digitization and is a high-profile example that illustrates to what extent the scope of »what to buy« has changed. After 100 years of optimizing mechanically-oriented driving performance, the automotive industry is now focusing its considerable power on connectivity, electric motors and fully autonomous, self-driving vehicles. This has changed almost everything on the supply side. Huge players like Google and Apple are now suppliers to the automotive industry. The nature of supply-critical categories has changed,