Digital transformations: a summary of the highlights of the seminar's fourth season

by

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Overview

The fourth season of the 'Digital Transformations' seminar was the opportunity to review a number of case studies from long-established institutions which had been 'turned upside-down' and subsequently revitalised by the digital revolution. These included shops, the French post office, railway stations, correspondence courses, and the French police force. This fourth season, which was full of twists and turns, continued to inform its audience and make new discoveries. In his talk, Christophe Deshayes briefly discusses what he considers to be 'misinformation', and questions the legitimacy of certain myths regarding the digital economy. He takes a step back from the mainstream narrative before analysing more favoured and weighty topics such as data, artificial intelligence and digital innovation. He ends his talk with an update on subjects discussed in previous years, including platforms, and cross-breeding ('hybridisation') between the physical and digital world (the concept of 'phygital').

Report by Pascal Lefebvre • Translation by Rachel Marlin

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This year, ten speakers presented remarkable case studies. Eight of them discussed situations experienced in large companies, and the other two involved work carried out by a consultant and a researcher.

During the year, we learnt about problems experienced by three companies of the platform economy. Firstly, at Uber the situation was complicated as a result of a decision passed down by the Court of Cassation ruling that the majority of its so-called 'independent' drivers using the Uber platform had in fact 'employee' status. This directly challenged Uber's economic model. Secondly, WeWork, the platform which, until recently, had been highly praised, was saved from bankruptcy proceedings in the nick of time, and its future remains very uncertain. Finally, Expedia is now being engulfed by the current crisis. Last year, I mentioned we were at 'an end of the beginning, not to be confused with a beginning of the end'. In other words, I inferred that we were at the end of an era where it seemed that these platforms could do whatever they wanted, with little regard for anything else, both as far as taxation and any other form of regulations are concerned. It seems that their 'insolent' or carefree growth is now meeting with a sizeable obstruction, in the shape of hefty regulations.

Artificial intelligence, or how to control it

The first subject we discussed, despite our initial reluctance, was artificial intelligence (AI). It is a very popular subject but one which is fraught with ambiguity. To overcome our initial resistance, we drew on concrete experiences, and devised a specific angle of attack which we devised from the feedback of three HR (human resources) case studies.

A paper, supposedly written by a researcher, which appeared on the website 'The Conversation' and was entitled 'My HR manager is an AI, and it's much better like that !' perturbed us because its conciliatory remarks were the opposite of what our three HR feedback case studies revealed.

L'Oréal and enhanced diversity

Eva Azoulay is in charge of recruitment at L'Oréal. She talked to us about her experience with AI. L'Oréal is a rather unusual company because it receives one million CVs every year. It clearly has no problem attracting candidates. It has offices throughout the world, and 170 recruiters handle this huge volume of application forms and CVs. Because L'Oréal has no intention of increasing the number of employees to cope with this workload, it is faced with an important decision concerning productivity and reactivity. The first, tempting shortcut might have been to reduce the diversity of candidate profiles by delimiting the selection criteria. However, this is the exact opposite of L'Oréal's ideals. L'Oréal considers that diversity is an extremely important value for a company which is present on the global stage. To facilitate its recruitment process, L'Oréal resorted to the use of two types of tools, more or less related to AI, each of which had a very specific purpose.

The first AI tool which L'Oréal uses for certain forms of recruitment is a chatbot. The use of an automated device, available 24 hours a day, does not so much pose a technical problem as a problem related to integrating a tireless 'employee' into a team and an organisation. It was decided to limit its functional scope to very well defined, basic elements, thereby avoiding any risk of error, and this is an advantage for the applicant. In practical terms, the sole purpose of the chatbot is to check the eligibility of a job application for a specific job offer. It can do this at any time of the day or night, and therefore works much more quickly than a human recruitment specialist. As a result, the candidate is informed very quickly about whether his application has been received and if it is suitable or not. This system works satisfactorily, and is a real advantage for the candidate.

L'Oréal's second AI tool is very ambitious and aims to diversify recruitment, especially with regard to academic experience judged compatible with the company's corporate culture. Each candidate is asked five open-ended

questions, and the AI solution is able to determine from the answers given and by comparison with the answers given by a reference group of L'Oréal employees deemed to represent the 'spirit' of L'Oréal, whether the candidate is potentially compatible with the company's culture and values. It is very clear that the aim is not to allow the machine to decide, but to draw the recruiter's attention to a candidate whose atypical profile might otherwise have worked against him and been rejected by the recruiter.

These two very different approaches force recruiters to 'express' and discuss the recruitment rules as well as the biases, which may be of their own making or are incurred as a result of AI. In L'Oréal's opinion, some countries are more suited than others to benefit from this technology. These are the countries which have the largest number of applicants and have teams who are willing to use these techniques. Forcing this system on recruiters, without being very precise about the recruitment rules and their changes, may give rise to resistance from recruiters (which is counter-productive) or result in a simplistic use of the system which would lead to serious mistakes. L'Oréal is the most well-known brand in France and among the most recognised throughout the world. It values its reputation above all else. The feedback loops which are in place in order to monitor potential risks, and are common in other fields, are extremely rapid and efficient.

*The French police force (*Gendarmerie*) and enhanced HR governance*

French policemen (*gendarmes*) use Google, order articles from Amazon, and have the same expectations of efficiency, speed and transparency as the rest of the population. These characteristics are the same qualities which they demand from their profession. General William Vaquette is in charge of the transformation of human resources for the French police force. He talked to us about two new AI tools which have been implemented by the HR department.

The first is a chatbot. As is the case in L'Oréal, it is not difficult to integrate it from a technical point of view, but its organisational integration is a problem. The chatbot is used for a very specific purpose. It provides 'no nonsense', simple answers to questions about status and career mobility in the police force. Users find this system satisfactory, and it has few notable, adverse side-effects. The chatbot could undoubtedly achieve a great deal more, but its limited field of use satisfies HR's clear desire to restrict it to precise functions, and thereby to provide a high level of service.

The second tool used by the *gendarmerie* is an HR form of the GPS navigation software application Waze, called 'Waze RH'. It was based on APIs (application programming interfaces) which can be found on the Internet. Every three years, *gendarmes* are transferred to new postings, but they can express a choice regarding where they would like to work, and the French *gendarmerie* tries to satisfy this choice as best it can. Having made a shortlist ordering their preferences, *gendarmes* have to decide how best to choose the postings which they consider to be a priority. Until recently the criteria which determined whether their requests were suitable for the proposed posting were quite obscure. As well as the usual, additional information regarding their children's' education and their spouses' employment, the new AI tool provides a 'popularity index' which gives information about potential 'traffic jams' for a given posting, and therefore the probability of obtaining one's desired posting. The 'enhanced governance' tool put in place by the HR department aims to satisfy efficiently the *gendarmes*' pressing request for transparency and speed. Having taken into account each *gendarme*'s career path, professional and personal wishes, and colleagues' choices, the tool suggests optimal destinations for the future posting. The *gendarmerie*'s HR information system is a remarkable treasure trove of information because, since the *gendarmes* and their families are housed in barracks, it not only has information about the professional life of each of the officers, but also additional information about their personal and family life. For obvious reasons of confidentiality, the HR information system has to be completely secure. With the addition of a few APIs, it was relatively easy to transform a rich, consistent and safe tool into a HR Waze, merely by adding a few APIs. This helps demonstrate that when one has a reliable information system, an institution, such as the French *gendarmerie* which has existed for eight centuries, can react as dynamically and rapidly as a start-up. Unfortunately, examples of these sorts of situations are very rare.

AI in the banking sector

In 1978, economists said that the banking sector would be the new steel industry, in other words it was doomed to disappear. However, since this time, the number of bank employees has not stopped growing. Today, we hear the same thing, but if we look more closely at the sector, like Pierre Blanc, a consultant specialised in the impact of AI on employment, this does not appear to be the case. Blanc also recognised that the problems related to chatbots were organisational and not technical. Every bank manager wants to have his own chatbot, but also wants to avoid the organisational problems associated with it, and, as a result, this very fashionable object often merely serves as a gadget.

As far as jobs are concerned, Blanc suggests that there is a tendency towards finely-tuned and direct human-robot collaboration in close proximity, which the industry refers to as 'cobotisation'. Fears that man will be replaced by machines therefore appear to be very exaggerated. According to Blanc, it will become necessary to gravitate towards a new role of H-MR manager, a Human-Machines Resources manager, in order to take into account this hybridisation and these new ways of working.

These three approaches are a combination of wide-reaching ambitions (diversity, 'enlightened' information, and a harmonious relationship between man and machine) and the need for great humility to put them into action. It is essential to show caution (to voluntarily restrict the scope and remain constantly vigilant about potentially damaging side-effects), pay attention to work carried out by employees (simple, straight-forward use of systems and short feedback loops), and maintain challenges (of preserving one's reputation and ensuring security) in order to achieve success. Continued work to externalise rules and biases is also key. Externalisation is an essential activity in work involving AI and is very time-consuming. It should be reserved for situations where large volumes are handled and entrusted to conscientious and willing employees. In such cases, AI can serve as a useful pretext for these people to help them ask the sorts of questions which they are not used to asking in group settings.

Data which is reliable and secure, and provides a wealth of information is a prerequisite for any AI project. In fact, AI only benefits companies or organisations which are already well advanced in this field. AI solutions should not be implemented under any circumstances in order to make up for lost time.

The data revolution

In order to learn more about data, we reviewed case studies from SNCF Gares et connexions (the French railway system subsidiary which operates the railway stations), Airbus, and the French post office.

Data to build tomorrow's railway stations

Few studies have been conducted about railway stations. They are meeting places and places which people pass though before travelling on to other destinations. They are areas where customers' can use their wait-time wisely. 'Traffic jams' in stations can be avoided by organising the flow and circulation of passengers. When devising projects to digitise railway stations, the primary concern must be to obtain data about what is happening in the station and how space in the station is used. Signals intelligence, a technique historically used by soldiers, consists of using signals emitted by mobile telephones of people present in a specific area in order to determine how many people are present and what their movements are at a given time. This is clearly anonymous. Stations generally tend to be located in town centres where space is necessarily limited. This sort of data is absolutely essential, because if one intends to manage increasing flows of travellers, one has to devise a new station layout, and this often necessitates major building work and appropriate, optimal management.

It is necessary to improve the management of these flows, and this can be achieved by setting up influential signage based on 'nudges'. This is a concept used in behavioural economics whereby people's behaviour and the choices they can make are influenced by indirect suggestions. For example, if one wants a flight of stairs to operate in one direction only, it is more efficient to put up a 'dead end' sign rather than a 'no entry' sign, because in France, people

can interpret a 'no entry' sign as an invitation to enter. If the station manager is provided with precise information, he can take advantage of signals intelligence as well as other signs which sometimes have no technological basis.

Finally, if one knows how long people have to wait for a train in a station, one can anticipate the ways in which they might keep themselves busy, and, for example, determine their probability of going into one shop rather than another, as well as the amount of time they may spend in this shop. If one has such precise information, one can launch tenders for occupancy of commercial premises in the railway station, and this will enable contractors to set higher prices for the best-placed premises. This optimal commercialisation of retail space is an important source of revenue for SNCF's *Gares & Connexions*, its company which manages railway stations.

Data is at the heart of the operating system of tomorrow's railway stations, because data from multiple sources is inter-linked in order to create a consistent entity which has high added value. We can see that consistency in information makes it possible to keep Google, Apple, Facebook and Amazon at arm's length. These companies generally take pride in bringing consistency where they think it seems to be lacking.

Skywise: a BtoB platform

Inconsistent information leads to what economists refer to as 'friction costs'. In the aerospace industry, these costs are estimated to be more than 40 billion Euros. Airbus has set itself the goal of reducing these costs significantly. Marc Fontaine, director of Airbus' digital transformation programme, talked to us about the Skywise platform which today includes 90 airline companies and manages a total of 8,000 aeroplanes – all carriers combined – and 15 suppliers.

Unlike large digital platforms like GAFAM, Airbus' industrial platform makes the airline companies and suppliers participate more, by supplying data to the platform, and sharing the productivity gains. The productivity gains of current Airbus projects are all in double figures, and contribute effectively to creating the well-known reciprocal 'network effect'. Today, Skywise is at the 'digital footprint' stage, in other words one where all the points of contact which an aeroplane makes in its flight history (its landing, arrival at a terminal, etc.) are tracked digitally. From 2023 onwards, Skywise should have 'digital twins' making it possible to simulate a situation or a problem. This represents a further step in understanding the profession, and resolving unnecessary friction. Once again, this system seems sufficiently effective to be able to keep big tech firms' systems at a distance and prevent them from being tempted to interfere in this industrial sector.

The French post office: knowing one's clients

Like many other companies, the French post office group's digital transformation depends on better knowledge of its clients. The group has five very different and independent business units and is in fact an industrial BtoB organisation which works mainly for large contractor clients. Therefore, it was not a natural decision for the group to obtain and share information about end-clients. It was necessary to create a strategic mission which spanned the group's five business areas and reported regularly to the president. In the very beginning, the group's information systems were not designed to communicate information between each unit, and the organisation was very reluctant to encourage interaction between the business areas. Therefore, it was necessary to take stock of the situation intelligently in order to find projects and occasional allies to constitute a large data base, bringing together reliable and consistent client information for the entire group. Once again, digital transformation can only take place if an information system is based on reliable data. This is a prerequisite which may be difficult to satisfy, but no shortcuts should be taken to avoid this step.

Data school

According to the European Commissioner Thierry Breton, 'The battle for industrial #data starts now, and the main battlefield will be Europe.' From these three case studies, one can see that certain industrialists already recognised the threat, and were able to anticipate it without waiting for either European or national political decisions or changes in major companies in the software package industry. This in itself is good news. Apart from strategic questions, there are also organisational questions which require in-depth consideration. Questions

equally exist regarding the design of information system infrastructures, as demonstrated by the Airbus case. Airbus had to change its policy in which it favoured the use of subcontractors to operate its information system. Rather than relying on external contractors for 80 % of the work (and 20 % in-house), it is now moving towards a balance whereby subcontracting accounts for 60% of the work and 40% remains in-house. One may indeed wonder how it is possible to be in control of operations where 80 % or more is subcontracted.

These experiences raise many HR questions and challenge certain myths, such as the myth about the lack of data scientists. In general, data used is relatively basic, and training an engineer who has a certain amount of experience in the aerospace industry to become a competent data scientist only takes a few weeks.

These case studies also bring to light the possibilities and limitations of approaches which are either hidden from management or not fully supported by management. It is often said that in order to launch a major project, one must have the approval of general management, and this goes without saying. However, very often, after a few months, support wanes and becomes difficult to rally, and the project may lose momentum. The three case studies, which had very different degrees of management support, demonstrate that even if this support is desirable or even strongly recommended, one must not solicit management support too much. What is important is to get to know the field in all its shapes and forms to the extent that one can work with it, and to one's advantage. The secret of success lies in the art of combining these two approaches.

Finally, in view of the importance of data, one may question whether it would not be reasonable to only allow managers who have been trained in a 'Data School' (similar to the French state's *École de guerre* ('War school') which trains high ranking military officers) to reach the higher, senior echelons of decision-making in companies.

Innovation and business

Finally, presentations made to us by Skill and You, Media6 and Orange highlighted certain links between innovation and business.

Re-birth of training correspondence courses

Skill and You is a group which brings together 120,000 students who are registered in training correspondence courses. Most of them are enrolled in vocational training certificate (CAP) or technical training certificate (BEP) programmes run by about twenty institutions, some of which have been in existence for a long time, such as the 'L'école chez soi' which is one hundred years old. By its very nature, this sector should have taken advantage of everything the Internet had to offer a long time ago, but, paradoxically, like mail order companies, it experienced a number of difficulties. When Éric Petco became president, he implemented a strategy which first of all pinpointed the needs which had to be met. By analysing information from job markets, he identified the employment positions which were in demand and the level of education required. These two factors were prerequisites before he was able to launch a specific training programme, because it was necessary to guarantee tangible job opportunities for students at the end of their training. Internet searches on employment websites, such as Indeed, highlight important discrepancies which can exist between job offer and demand. Éric Petco suggested a simple idea, contrary to any pre-existing business model, namely to reimburse students who had not obtained their degree but who had followed the entire course. Putting this idea into practice resulted in an in-depth remodelling of the group's correspondence courses and aimed to sustain students' motivation. In this case, understanding and monitoring the data was an essential way to support students' commitment. The bet paid off: 71% of students expressed a high level of satisfaction, which is significant in this sector. The satisfaction level is still rising.

From sales point to client experience

Media6 is a company which creates and fits retail outlets throughout the world in order to increase point-of-purchase traffic for the most well-known brands. Today, shops need to attract customers. One way of doing this is to make sales points 'theatrical'; another is to personalise the purchasing experience. To achieve

this, it is necessary to combine physical and digital aspects ('hybridisation'). Even though the number of interactive display stands continues to increase, sales representatives have not been replaced. The challenge for sales staff is to focus all their attention on the client in order to discourage him from 'zapping' between various sales offers, which is increasingly frequent. Two solutions exist. One solution is to use a robot, located at the back of the shop. The sales assistant sends the robot a request for an article and the robot collects the article which is delivered to the sales person who remains on the shop floor with the client. This appears to be a popular with chemists. Alternatively, the second solution, which is increasing popular in luxury stores, involves using 'stock runners', employees whose job is to locate the product the client requests.

There is a trend on social media called 'Instagrammability'. This is when a client takes a photograph of himself in a boutique or shop, having a 'unique' experience. He then shares this selfie on social media, and, generally speaking, on Instagram. Effectively, the boutique then becomes a 'theatre'.

Orange's innovations in Africa

Our third case study involves the activity of Orange Mobile in Africa. It demonstrates that by using a simple innovation, it was possible to successfully develop the use of mobile telephones in a market which is not solvent. Orange and two other mobile telephone operators in other areas of the African continent completely transformed the use of mobile phones, and as a result Africa became the first economy in the world to function almost entirely without cash. This breakthrough began with a basic mobile phone, costing 10 Euros, which worked like a regular telephone and was able to send money in the same way as one would send a text message. The mobile phone could also serve as a 'virtual' safe-deposit box which is essential in areas which are not very safe. In less than fifteen years, the number of Orange's clients in Africa has increased tenfold (120 million clients in 21 countries in Africa) and the average amount spent by a client has doubled. Orange's rate of growth is now similar to that of tech giants. Orange intelligently decentralised part of its innovation to research centres locally in Africa in order to adapt itself to the needs of the majority of the population. On the basis of these simple innovations, a process of 'reverse innovation' was established, whereby the experience gained from the innovation in Africa encourages innovation in more advanced European countries. As a result of this successful experience, it was possible to launch Orange Bank which is now a fully-fledged bank.

All institutions, even the most traditional ones ranging from shops, train stations, correspondence courses, and even the post office and the police force, have been forced to re-invent themselves. It is now very difficult to distinguish between start-ups and large organisations (which were always judged to be slow to implement digital technology) because the disruption model is far from the only model of innovation, and the prerequisites, especially with regards to the acquisition and exploitation of client data, require lengthy preliminary work.

We are seeing the rebirth, like a phoenix rising from the ashes, of some major groups. Other companies, however, are stagnating, overcome with difficulties. It is time to redress the rhetoric, and to bear in mind that in France, in particular, many extremely powerful and famous groups are changing their ways. Innovation is too important to be left just to start-ups and other unicorns (privately held start-ups valued at over $1 billion), or indeed those who are first in line. The preconceptions of start-ups or intrapreneurship in large companies should no longer continue to hide other fields of innovation.

Phoenixes also need to be helped, but not financially. They need the spotlight to be focussed on them in order to attract staff, clients and investors. If Orange AMEA (Africa, Middle East and Asia) were an autonomous American entity, it is likely that its value would be greater than that of the entire Orange group. Large firms' uberisation did not take place and will not take place. Shedding light on these phoenixes is a sizeable economic, cultural, educational, legal and political challenge for our country. In France, we are lucky enough to have a few unicorns, and others are likely to emerge in the next five years. We are also lucky to have phoenixes: few countries can say the same. It would be very regrettable to only use a part of our assets in this war on innovation.

Discussion

Will crises make companies re-invent themselves?

A speaker: *Will the current health crisis and the possibility of future crises, especially environmental ones, emphasise the need for large companies to re-invent themselves and devise new solutions in a post-crisis world?*

Christophe Deshayes: In previous sessions in this seminar, we noticed that some large companies had already realised that they should breathe new life into their companies and rethink their strategy, and that they should do so without delay. If one re-invents oneself, it cannot be done by copying others. One must have a genuinely introspective approach. I worry that the current crisis will not prompt companies which have not already started to review their strategy to do so with sufficient urgency. I just hope that the more mature companies will not 'throw the baby out with the bath water' when they are forced to make quick and painful decisions. Just as emergency medicine exists so should emergency management, in order to resuscitate the economy. I fear that when we emerge from crises in general, we will not be well equipped to implement such introspective approaches. As usual, companies which have already started to do this will be at a great advantage.

Speaker: *How can we make people understand that, especially people who think that if IT is not their core business, it should be entrusted to subcontractors? They ought to understand that the urbanisation of their information system with relevant information should be the key.*

C. D.: I think that the current Covid-19 crisis will speed up a certain number of things, including rethinking unsuitable relocation strategies. But let there be no mistake: this can only be accelerated because the movement has already begun. Had the crisis started ten years ago, I think that we would not have reached the same conclusions. When one is in a situation where one has to convince people who refuse to be convinced, things are very complicated.

Speaker: *Because of this crisis, more and more people have been working from home. However, this has highlighted the fact that employees are not very competent with IT. Is this an obstacle to the digitalisation of companies?*

C. D.: I do not think that this problem is as important as people say it is. Scandinavian countries were certainly much more used to working from home in a very organised and full-time way than we were in France. When there is a need for something, practices and habits change quickly. The École de Paris du management is a good example of this.

Phoenixes *vs* unicorns

Speaker: *Phoenixes and unicorns or, more precisely, 'transformants' and 'natives', have very different predispositions to digital technology. Let us take an example from Tesla, a modern, electric car manufacturing company. When I talked to an engineer at Tesla about the vehicle recharging infrastructure, he told me that when he started working for the company, he discovered that the data architecture was fully integrated. When the question of the location of the chargers arose, all the data was readily available, easy to access and structured. All that remained to be added was basic information about where people stopped their cars to recharge their batteries, information about their normal behaviour, and so on. Major European car manufacturers do not have this sort of architecture, and therefore they are seriously disadvantaged compared to 'digital natives' (those brought up in the digital world), like Tesla.*

C. D.: Firstly, the French *gendarmerie*, which has an extremely powerful and secure HR information system, merely needed a simple API (which it found on the Internet) in order to develop its Waze HR. When the data is present and well organised, everything works very quickly. We do not all need to be digital natives, like Tesla. We simply need to have done the necessary work in a serious manner and for a long time in order to tackle the digital transition, just as well as any digital native or any other company. If, however, the data has not been

organised, the digital transition will involve hard work, take a long time, and be expensive. It would be a mistake – and this is a common misconception – to think that it is possible to take shortcuts, as this inevitably leads to disaster.

Secondly, as far as Orange's experience in Africa is concerned, it shows that the success of one aspect of digital transformation does not just depend on the control and monitoring of data. Three companies, which work in very similar ways, contributed to a remarkable form of economic development. They invented an economic model based on local distribution networks, with simple and resilient technical infrastructures, and handled very small amounts of money in a decentralised way which allowed them to have relevant data.

Data co-operation

Speaker: *How should one deal with people who have a very detailed knowledge of the company from the inside and a clear vision of the problems to be tackled, but do not have the necessary IT knowledge? And how should one deal with other people who are the opposite?*

C. D.: It all comes back to the age-old question for which we have still not found an answer, namely whether a company can be managed by people who are not skilled in the profession, or, if they are skilled, whether a company can be managed by people who do not share information. What is different today is that it is the data which produces the information. I think that the analogy with the French state's *École de guerre* ('War school') is relevant here. We are moving more towards a form of 'data co-operation' and less towards conflict between specialists, and this highlights challenges which are understandable. An example of this is Airbus' technology. When the relevant data provides information about the time an aircraft lands or when the aircraft's doors are opened for disembarkation, one does not need to be a digital expert to use this information efficiently and combine it with other similar information in order to understand how the situation may work more efficiently.

Speaker: *Is the real problem then the need to distinguish between data which is relevant and data which is not?*

C. D.: If one does not distinguish data correctly, it is unlikely the situation can improve! On the face of it, since we do not know for what purpose data may be used, Airbus relied on the concept of the 'data lake'[1], in order to make data neutral and useable in its own specific context. This is obviously simpler for a digitally native company which often has just one activity than for a large, diversified group, but it highlights in any case the need for careful consideration about the pertinent questions which need to be asked.

Speaker: *What should be the correct stance politicians take with regard to these digital questions and in order to preserve our businesses?*

C. D.: Politicians never have enough time, and so they cannot look into technical and operational questions which are time-consuming. In addition, once they are convinced that a measure, such as protecting Europe from the plundering of industrial data, is legitimate, then the major software companies set up a lobby which ultimately may risk side-tracking the project from what was initially intended. Unfortunately, all public policy has adverse effects which are difficult to anticipate. Therefore, one should not ask politicians for things which they are unable to give if one wants to ensure that good, initial intentions do not backfire.

1. A data lake is a storage method for big data from multiple sources which is kept in its natural format, or is transformed very little. Users can access this decontextualized data and create their own information searches. (Editor's note)

Presentation of the speaker

Christophe Deshayes: graduate of INSEEC. At Atos, he was a branch manager and project director, and worked in senior management (as an advisor to the CEO). Since 1996, he has been in charge of several consultancies which monitor technological development. He is president of Digital Matters, and is also a speaker, well-known for his conferences on different managerial aspects of corporate digital transformation. He is a resident scholar at the *École de Paris du management* and chairs its Digital Transformations seminars. He is the author of numerous articles and books including *La transformation numérique et les patrons – Les dirigeants à la manœuvre* (pub. Presses des mines, Les Docs de La Fabrique series, April 2019).

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