

- 1 HOW COVID-19 CHANGED GLOBAL TRADE FOREVER
- 2 HOW TRADE RELATIONSHIPS & TARIFFS ARE AFFECTING TRADE WORLDWIDE
- THE IMPACT OF DIGITALISATION ON TRADE
- DE-GLOBALISATION A NEW WAY TO TRADE BUT WILL IT STICK?





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In some sectors digital transformations that would normally have taken years have been completed in just a few months.

Andreas Tesch

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Audience Q&A

What are the big things coming down the track that we need to get on board with now?

The future is already here. It's just not evenly distributed. It's going to be a continuation of some of the things that we've seen start to disrupt how we work lately. Automation, machine learning and artificial intelligence are clearly going to be dominant for all sorts of industries. Quantum computing, and new forms of massive data processing in real time are going to be huge. We're going to be able to simulate fast and cheap versions of the world we're in, we're going to be able to track every aspect of a supply chain using sensors and connected networks at every step. We're all going to have to start carbon accounting.

David Rowan

The impact of digitalisation on trade

In the series of webinars, From crisis to opportunity: what's the future of trade? we have been exploring some of the key issues affecting trade in 2021. As the Fourth Industrial Revolution gains pace, and Covid-19 leads to an increasing number of businesses, organisations and even individuals adopting digital tools, we wanted to look more closely at the impact of digitalisation on trade.

Perhaps appropriately, we used digital tools to host a webinar and broadcast it around the world, and invited a panel to provide insight and thoughts for further discussion. Our panellists featured the Founding Editor of WIRED's UK edition and investor in technology startups, David Rowan, the Founder and Managing Director of Trusted Shops, Jean-Marc Noël, the Executive Director International Credit at Ingram Micro, Frédéric Wittemans, and the Director of Strategy & Corporate Development Atradius, Dirk Hagener.

Our panellists' views do not necessarily reflect the views of Atradius. Any observations or reflections shared during the webinar and captured in this white paper should not be taken as Atradius insight or advice. This webinar was introduced by Chief Market Officer Atradius, Andreas Tesch and moderated by journalist, Daisy McAndrew.

Key themes

Trends in digitalisation and trade

Digitalisation has accelerated during the pandemic, affecting many areas of business life. What are the main trends?

Digitalisation and ecommerce

Online shopping experienced a huge surge during the lockdowns. What are the main implications for retailers?

Customer satisfaction and trust

What role does trust play in digital transactions, how is this impacting brand reputations and how can businesses negotiate this safely?

Why buy when you can rent the latest model?

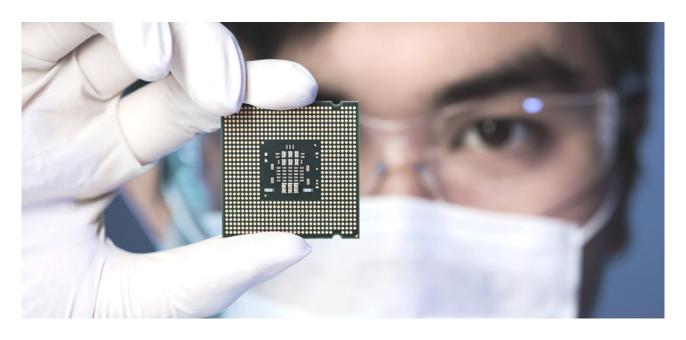
How are technological advances impacting distribution and supply chains? What is the role of developments such as Everything as a Service?

Human interaction: is it over?

How can businesses find and employ new talent, and interact with colleagues and with customers? Will a hybrid model be the new normal?

Technology and data

How can businesses use technology such as AI to assess credit quality? How is Atradius adjusting its value proposition to cater for trends in digitalisation?



Main trends in digitalisation

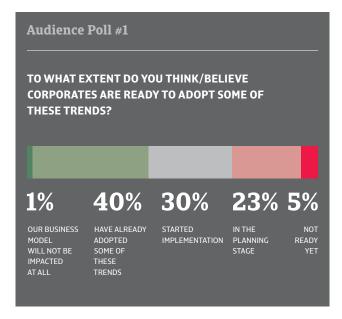
Acceleration of digital adoption

"Covid-19 means that the inevitable suddenly becomes immediate." The digital commentator and tech start-up investor, David Rowan, is unequivocal in his assertion. The strongest trend currently hitting digital markets is not about the latest invention or the hottest IPO. It is that digital transformations, that should have taken several years, were suddenly completed in a few short months.

He is not a lone voice identifying this phenomenon. His fellow webinar panellists echoed this view with observations from their own experiences. "As far as trade and ecommerce is concerned, you can see that in 2020, you leapt forward five years," said Jean-Marc Noël, CEO of Trusted Shops. Frédéric Wittemans, Executive Director International Credit at Ingram Micro, said: "The pandemic has really accelerated stuff. So we are really seeing a massive growth in cloud solutions. There's huge demand in cloud platforms."

Trend watchers have also noted the pandemic-driven acceleration of digitalisation. Internet and new technologies analyst Mary Meeker has published an *Internet Trends Report* every year since 1995. Last year she broke with that tradition and, perhaps in recognition of the enormity of what she was witnessing, published a different report with colleagues at her technology investment firm, Bond, titled *Our New World*. Looking at digital transformation, Bond's assessment concurs with our panel: "Many of these offline-to-online trends have been in place for a while – Covid-19 just accelerated them." The World Economic Forum's *Chief*





Economists Outlook 2021 notes: "the pandemic has also sped up the automation of more tasks." The OECD's Digital Economic Outlook records the weight given to digital issues by governments: "By mid-2020, 34 OECD countries had put in place a national digital strategy co-ordinated at the highest levels of government, and they are devoting more attention to emerging digital technologies such as AI, blockchain and 5G infrastructure."

IoT, Robotic Process Automation and machine learning

Additional trends in digitalisation include the increasing automation of tasks previously done by people, particularly in the field of data analysis. This includes machine learning and artificial intelligence. In the world of trade, the Internet of Things, IoT is predicted to have a big impact with sensors and connected networks enabling us to track every aspect of the supply chain. As David notes, we have already had "an impetus in the last year to make sure it works. If you are trying to track the delivery of protective medical



equipment from China to the west. If you are trying to understand how to get computer chips to your car factory when there are problems in getting them into the supply chain. Obviously, we need real time clarity about where parts are, how long it's going to take to get them."

Such trends are already evident in the freight-forwarding start-ups building software systems that automate processes such as bills of lading and technology such as Robotic Process Automation, which is software designed to automate repetitive back-office digital tasks normally performed by people. David also predicts that machine learning and data analytics are going to be important for future climate emissions monitoring. He said: "Every company is now under pressure from regulators, shareholders and customers to be carbon neutral, and accountable. And suddenly, I'm seeing digitisation platforms springing up from everywhere, there's a whole bunch of them in places like Berlin, to try and help measure and hold organisations accountable to where they are generating CO₂."

Audience Q&A



Are there international institutions aligning with governments on digital issues instead of organisations setting their own standards?

Regulators tend to come in too late and too heavily. They're too slow, often, to monitor what's happening. So how do we protect people from being scammed by corrupt companies that abuse online trust in your personal or company brand? How do we ensure that the regulators act quickly, but also the companies that host these negative reviews, the Trustpilot type companies, the Google and Facebook type companies? When you have big monopoly companies, they don't like being accountable. And that is a problem in a democracy.

David Rowan

Digitalisation and ecommerce?

Ecommerce is nothing new, with the first online sales taking place in the 1990s. What is new, however, is the speed in which ecommerce is being adopted by consumers. During the Covid-19 crisis, many governments enacted lockdowns or stay-at-home orders requiring the temporary closure of non-essential shops. Retailers with an established strong online presence and access to a delivery network saw a surge in sales, as large numbers of people turned to online shopping. Retail giants Amazon and Alibaba reported astonishing growth. Amazon reported year-on-year ecommerce revenue growth of 47% for the second quarter of 2020.4 Alibaba reported a 37% spike in sales in the final quarter of 2020, compared to the same period in 2019.5 Smaller retailers and independents also saw their online sales surge. A September 2020 survey by Shopify of 10,000 consumers across 11 countries found that 84% had shopped online since the start of the pandemic. As Jean-Marc Noël acknowledged of Trusted Shops: "there has been a massive acceleration. We are seeing more than 1 million purchase transactions through our system every day."

can trust. And we do that with a combination of a trust mark, which is certification orientation for the consumer, but also customer reviews, which are providing what we call the social proof, but also a great deal of information to improve as a company."

In addition to the importance of digital trust, Jean-Marc identified software and the way people work as two key trends impacting ecommerce. He said: "Software is hitting the world, breaking up the value chain and is really disrupting retail trade. Everybody wants to go direct, everybody wants data." This can be seen with brands that used to sell their goods to stores that are now selling directly to consumers through their own websites, effectively working in competition with their resellers. It can also be seen in the explosion of social media with platforms such as Instagram, Facebook, TikTok and YouTube providing brands the opportunity to engage directly with consumers, including advertising and even direct sales (as with Instagram Shop).

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The share of ecommerce - when you look at the addressable retail sales - was something like 7%. Now in 2020, it is 16%. In the UK, it's as far as 26%.

Jean-Marc Noël

The other side of the story is bleaker. Commenting on the situation in the UK, the Chief Executive of the British Retail Consortium said: "The forced closure of thousands of shops during the first quarter of 2021 has exacerbated already difficult conditions for the retail industry. We estimate there are around 5,000 fewer stores since the start of the pandemic, meaning 1 in 7 shops now lie empty."

Retailers who have been slow to adopt a digital presence have undoubtedly struggled. However, the pandemic has only exacerbated wider structural issues impacting the health of retailers. The answer for many retailers lies online, but the solution is far more complex than creating a website. As Jean-Marc Noël noted in the webinar, the replacement of in-person interactions with digital interface leads to an increased need for trust. He said: "When I started Trusted Shops back in 2000, we had a vision for a digital world we



 $^{^{4}\} http://www.spglobal.com/marketintelligence/en/news-insights/blog/amazon-ecommerce-sales-soar-amid-covid 19$

 $^{^{\}circ}\ http://cdn.shopify.com/static/future-of-commerce/Shopify\%20Future\%20of\%20Commerce\%202021.pdf$

 $^{^{7}\} http://brc.org.uk/news/corporate-affairs/empty-shop-fronts-continue-to-soar$



Customer satisfaction and trust

One of the greatest challenges businesses face when engaging in trade via digital platforms is the issue of trust. For Jean-Marc Noël, a good place to start is to try and understand what trust is and why it is important. He described it as a "lubricant" to help smooth interactions in social and economic lives. He said: "Imagine a world, when you have no trust. That would be probably impossible, that would probably also prevent innovation." He asked the audience to think about their own approach to online trust and pointed out that many of us read online reviews before buying something or making business decisions. He said: "You go on the internet and you are currently ready to trust a stranger more than a brand spending millions for advertising." He described this step – from brand-controlled communications to user reviews – as a move from centralised to decentralised trust.

Institutional trust is failing

Jean-Marc added: "Today 90% of people will search for reviews to make a decision. Maybe you want to change job? You will check that company and what the employees are saying." He described this as a kind of perfect storm where institutional trust is failing and cautioned the audience to stay up to date with digital developments that have the power to damage brand reputations. As an example of what is currently possible he encouraged the audience to look at a website called thispersondoesnotexist.com. This uses an artificial intelligence algorithm called generative adversarial network

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If you have a transparent system, where you're clear about how the data is collected, stored, and used, you have a lot more trust than you do in the old world where there were faceless organisations that seemed to take liberties with your data.

David Rowan

(GAN) to create hyper-realistic images of fake people. They look like real photographs, except they're pictures created by AI. Philip Wang says he developed the site to show "how much people are in the dark about AI and its potential.".

Power has swung from the brand to the consumer

In addition to his cautionary note, Jean-Marc acknowledged that trust is a two-way relationship and that although the power has swung from the brand to the consumer, there is a great deal businesses can do to build customer loyalty. He said businesses need to understand in real time, "what my customers are thinking about my company, and how do I connect experience data with operational data to make something meaningful?" He noted that businesses that do not actively engage with their customers online risk developing a "passive profile", a profile that he says is almost always negative. The reason for this is that consumers are more likely to complain when standards have not been met, than they are to praise when standards have been.

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^{*} http://www.inverse.com/article/53414-this-person-does-not-exist-creator-interview

Why buy when you can rent the latest model?

Everything as a Service

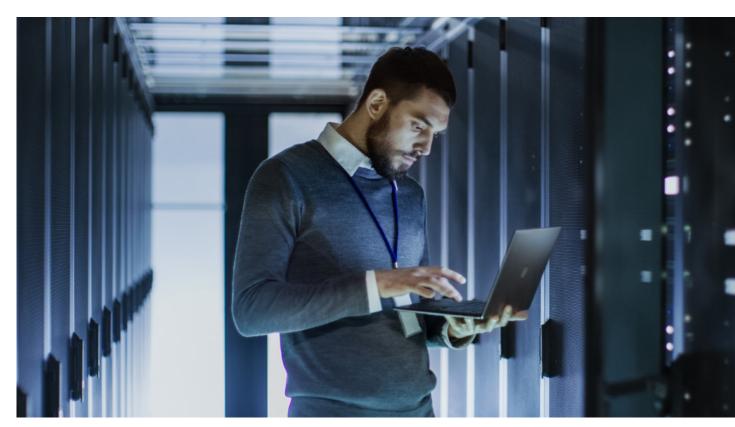
A significant technological development currently impacting businesses and consumers throughout the world is the growth of the cloud and the development of the cloud based 'as a Service' market. As Frédéric Wittemans acknowledged in the webinar: "We are really seeing a massive growth in cloud solutions. There's huge demand for cloud platforms. So we are really seeing what I would call a dematerialisation of the way business is happening, or you can call it Everything as a Service. So you go from Hardware as a Service, Software as a Service and this obviously has a big impact on the way the supply chains are being organised."

The global Everything as a Service market, also called Anything-as-a-Service (XaaS) is gaining momentum, with 2020 growth estimates at about 38.22%. In essence XaaS and the associated services, Infrastructure as a Service (IaaS), Software as a Service (SaaS) and Platform as a Service are cloud based rental models. Many of us are using these every day already in the form of entertainment streaming services such as Netflix and Spotify. By renting computing power from the massive data centres, businesses adopting the SaaS model no longer have to house servers

on site and in addition to storing data in the cloud can lease the latest versions of software instead of buying licensing agreements outright. Exploiting the monitoring power of the IoT many manufacturers are also able to leverage the XaaS model. For example, "Rolls-Royce" has been renting jet engines to airlines and then using data from networks of IoT sensors to provide proactive maintenance to help their customers cut costs and boost operational efficiency."

Challenges around XaaS and IoT

For many businesses, the XaaS model has been instrumental in supporting the increased need to work from home that we have seen since the outset of the pandemic. There are downsides to this explosion in the need for powerful computing, however. As Frédéric noted, there is now a worldwide shortage of the semiconductors required for much of this technology. He added: "One of the big challenges with IoT is the data centre sitting behind it. You need to find the right partners and the right security to have access to those data in the right capacity at the same time. And, this will have to be answered in terms of rights, the rights of security solutions around any kind of electronic device." He cautioned that these markets are changing rapidly, "but there is also a lot of hype".



⁹ http://www.ingrammicrocloud.com/se/en/solutions-i-need-xaas

 $^{^{10} \} http://forbes.com/sites/insights-intelai/2018/09/21/the-big-promise-of-everything-as-a-service-ongoing-revenue-smarter-services/?sh=80e3b337d7d0$

Audience Q&A



How do we avoid too much investment or the wrong type of investment in technology?

There are specialists in the world who can help you with that. And Ingram Micro is one of those companies actually channelling the IoT solutions. We have our specialists internally and also development labs in California, helping us in understanding, which are the right trends and where you should be. So as a company, we are trying to find which are the right solutions for our customers and for our industry, and how we can help them.

Frédéric Wittemans

We are seeing a dematerialisation of the way business is happening: everything is called a service today. Hardware as a service, software as a service and this has a big impact on the way the supply chains are being organised.

Our pre-event questions

We asked 3 questions in advance.

We wanted to take a quick snapshot of how businesses around the world are adopting new technology and what they feel about digital transformation, so we asked our webinar attendees the following three questions.

SINCE THE OUTSET OF THE PANDEMIC, TO WHAT DEGREE HAS YOUR COMPANY ADOPTED DIGITALISATION TO CHANGE YOUR SALES AND DISTRIBUTION MODELS?

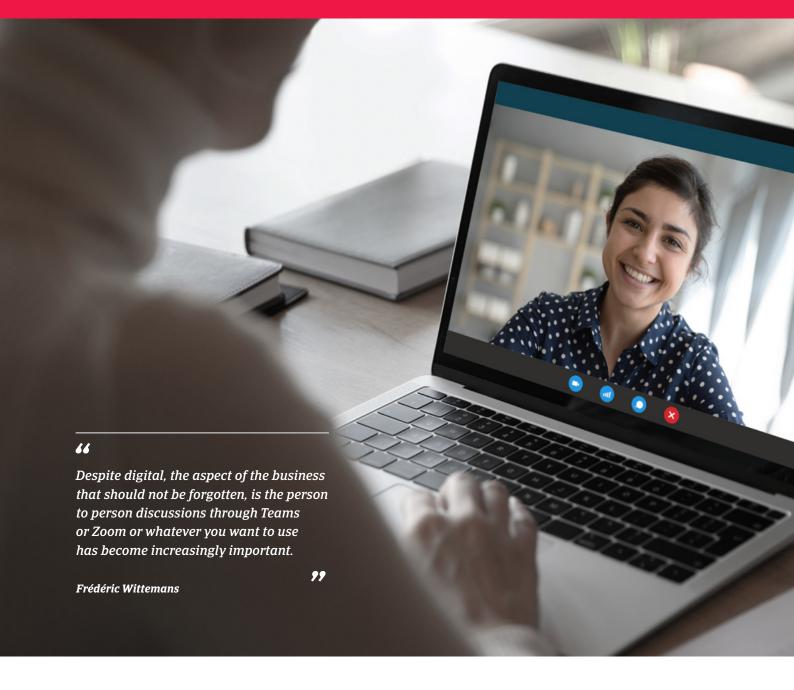
| 41% | 48% | 9% | 2% |
|-------|-------|-------------|-----|
| A LOT | A BIT | NOT MUCH | ΝΟΤ |

DO YOU LARGELY SEE DIGITAL TRANSFORMATION AS AN OPPORTUNITY OR A THREAT FOR YOUR BUSINESS?

| 82% | 11% | 7% |
|-------------|-------------|--------|
| OPPORTUNITY | NOT SURE | THREAT |

IS YOUR BUSINESS CURRENTLY USING ANY OF THESE INNOVATIONS?

| 50% |
|---|
| MACHINE LEARNING / ARTIFICIAL INTELLIGENCE |
| |
| 50% |
| CLOUD COMPUTING / SAAS |
| 38% |
| |
| ROBOTICS / AUTOMATION / MACHINE WORKFORCE |
| 27% |
| INTERNET OF THINGS |
| |
| 23% |
| OTHER PLEASE INSERT: BIG DATA / VIDEO CONFERENCING-MEETINGS / API'S |
| 12% |
| 12/6 |
| BLOCKCHAIN |
| 4% |
| 3D PRINTING |
| |
| 0% |
| CRYPTOCURRENCIES |

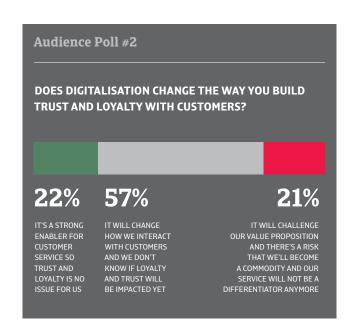


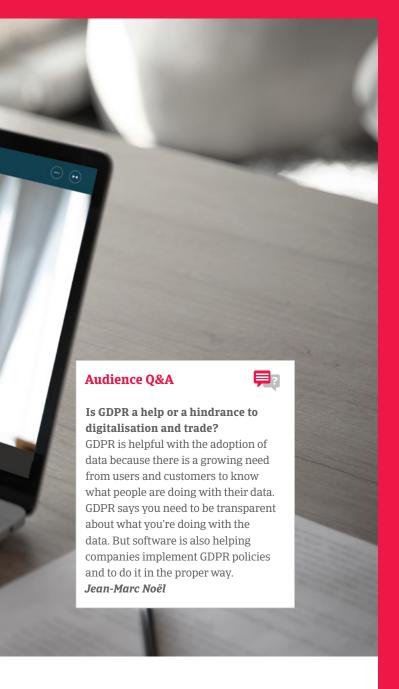
Human interaction: is it over?

One thing that has happened over the past year is, although we might be more connected digitally, we've never been less connected to other humans in the real world. Many of us have had to work from home and businesses are just beginning to work out whether they will adopt post-pandemic hybrid models of office working and home working. We asked the panel how businesses have coped with the absence of human interaction and how that will impact things like training or recruitment moving forward.

Customer contact is important

Frédéric Wittemans noted that the restrictions on human contact did not just affect colleague-to-colleague relationships, but also disrupted normal patterns of customer contact. He said: "It is important as a business to understand who you're working with. When we couldn't go out visiting customers, we had to find other ways. I can say definitely for my credit teams that we never had as much contact with our customers as we ever did before.





Yes, it might be digital, but the person-to-person discussions through Teams or Zoom or whatever you want to use has become increasingly important."

Frédéric also explained that even if sales were low it was important to keep relationships going and to work out how best to support customers in challenging situations. He said: "it was a very important time for us to stay in touch with our customers to understand how we could help them in developing their ecommerce solutions, or how we could help them in delivering products for them."

Frédéric added that communication and data is important because "the customers of our customers might have been in trouble. So we need to understand that. So big data usage has become suddenly so much more important internally and externally, to guide our internal but also our external colleagues, through the change that we're seeing today."

How is Atradius adjusting to trends in digitalisation?

Atradius is not far from its 100th birthday. But perhaps unlike human nonagenarians who tend to be late adopters of technology, the company's approach to technology has maintained pace with progress. As Dirk Hagener explained: "We have invested in this technology, we use web crawling and text mining. Managing admin is absolutely the focus at the moment, for efficiency and also how we work together with companies and with our partners."

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The data which we have in a moment available can be better used, can be smarter used, but I still believe that the expertise of people, the relationship of people in such a business is still key.

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Dirk Hagener

However Dirk was also clear in pointing out that these cutting edge tools are just that, tools. They are useful for giving Atradius underwriters information at their fingertips and help them to work in smarter, more efficient ways. However, when it comes to value creation and decisionmaking the underwriters are irreplaceable. "People are absolutely key for building trust in our proposition", he said. Looking to the future and noting areas where technology could support further efficiencies, Dirk said that it would be "very valuable to have invoice information in our systems, the system of a collector, the system of an information company." Live details on the status of an invoice, secured and shared in a distributed ledger between the supplier, their customer, the credit insurer, broker and any other relevant party could bring greater transparency and efficiency to every part of trade credit, payments and debt collection process.

Looking at the wider receivables management market Dirk said: "We don't see a big new landscaping of new players. It is still relatively clear that the main companies are driving the change in this area. But what also is clear is that we need to keep the pace with the development of platforms and ecosystems". He concluded: "We're trying to transform ourselves and work with them, instead of waiting or risking being completely overtaken."

Technology and data

One of the most important tools when conducting any sort of effective credit management is data. Information that shows a business, sector, or market is experiencing difficulties that could result in payment defaults is invaluable when it comes to assessing risk and taking decisions on whether to offer credit and, if credit is to be granted, on what terms.

Much of the explosion of digitalisation in recent years has resulted in the creation of a massive amount of new data. From IoT connected machines, to millions of online reviews, to blog posts, reports, the online publication of financial statements and annual reports. However, digital innovation has also resulted in tools to help collect, collate, process and analyse this data. From text mining and web crawling to Big Data and machine learning, a risk analyst can now access a volume of data that would have taken weeks to compile just a few years ago. Today the analyst can gather it before he or she has even brewed their morning coffee.

Dirk Hagener, Atradius Director of Strategy and Corporate Development, referred to this in the webinar. He said: "Data is now a kind of commodity and is much more available. A lot of tools are out there." However a bigger volume of data does not equate with 'better'. In addition to questions over the quality of this large volume of data,

Audience Q&A



Shouldn't we first think about optimising our processes before heading to an evolved digitalisation?

I would say that, yes, from my side, because I think there is still a lot of homework to do. But to create value in that I think we need to bring in the expertise we have and not only digitalisation. Digitalisation will help us very much in the efficiency side at this stage. And then to create value, we need to have our people working on it, creating propositions that are attractive in the receivables management market.

Dirk Hagener

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It is very much the question how data can be transformed from one system to the other, especially the receivables management is quite complex.

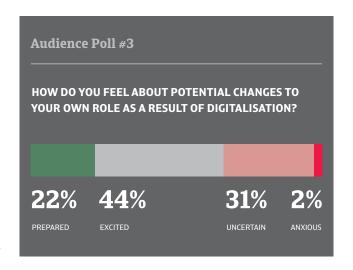
Dirk Hagener

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Dirk asked us to also consider how data is moved from one system to another and how vulnerable that is to being tampered with. The security provided by technology such as blockchain and distributed ledger are undoubtedly important in this arena.

Touching on an earlier discussion during the webinar, Dirk returned to the question of trust. He asked: "how much we can trust, for example, social media? We have technologies, like web crawling or machine learning and text mining, which helps us there but it is a question of how much weight we can give to this information." Ultimately, these are questions that can only be answered by the risk analyst or underwriter. As Dirk put it: "I believe that social capital, the expertise of people and the relationships between people in business, are still key."



Glossary

AI - Artificial Intelligence

Al uses algorithms to take information from sensors, digital data, or other inputs including real time data to complete analysis or decision-based actions. Al is currently used in medical diagnosis, search engines, voice recognition and autonomous vehicles.

Big Data

Large volumes of information, including complex data sets, that can include both structured and unstructured material of variable quality, that may be gathered at great speeds.

Blockchain

A decentralised list of records (called blocks) that have digital timestamps and are chained together in chronological order. This linking means that if one piece of information is changed at a later date – or tampered with – it impacts on and can be seen by all of the other links (users) in the chain.

Cloud platforms

Uses a network of remote servers hosted on the internet to store, manage, and process data, rather than a local server or a personal computer. The servers are usually located in dedicated data centres and enable 'as a service' or XaaS models.

Distributed ledger

Databases that are shared and synchronised across a network of people, usually across different locations.

IoT - Internet of Things

Smart devices that are connected to the internet and can be connected to each other. From fridges, to phones and even sensors on production lines, the IoT encompasses billions of devices.

Machine learning

Machine learning is a type of AI where algorithms are used to help a computer build up a cumulative data set in order to identify patterns and make decisions with minimal human intervention.

RPA - Robotic Process Automation

Software technology to automate computer-based actions. For example an RPA system might identify emails containing invoices, extract the data and process this in a bookkeeping system.

Text mining

The process of deriving high-quality information from text. This may involve accessing insights, patterns and trends in even large volumes of unstructured data.

Web crawling

Sometimes called a spider or spiderbot, this search engine program systematically browses the World Wide Web and indexes content.

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This paper captures the views of the webcast's virtual panel and is not necessarily a reflection of the views of Atradius. Visit the Atradius YouTube channel to access a summary version of the webinar.

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Founding editor of WIRED's UK edition
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Jean-Marc Noël Founder and Managing Director of Trusted Shops



Frédéric Wittemans Executive Director International Credit at Ingram Micro



Dirk Hagener Director Strategy & Corporate Development Atradius





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