

RELX PLC

# RELX teach-in on Risk Business Services

6<sup>th</sup> October 2021



Transcript

## Disclaimer

This transcript is derived from a recording of the event. Every possible effort has been made to transcribe accurately. However, neither RELX nor BRR Media Limited shall be liable for any inaccuracies, errors, or omissions.

Mark Kelsey: So good afternoon and welcome. I'm Mark Kelsey. I'm the CEO of the Risk Division. I've had a career in RELX now for over 30 years, and I've been the CEO of Risk for almost 10 years. So today, we're going to help you understand how Risk fits into RELX, our financial performance, what we do for our customers and our growth strategy. And we're going to focus on business services, which is the biggest, and currently the fastest growing part of the Risk Division. And one, we've also made some important acquisitions over the last few years. So, I'm going to cover the introduction. Rick Trainor, CEO of Business Services segment is then going to take us through business services. And we'll finish with Kim Sutherland, VP of market planning in fraud identity and will take us through how our customers are using our solutions, and I'll come back and do the Q&A.

Mark Kelsey: So, this gives the breakdown for the RELX Divisions in the first half of '21. And you can see the Risk Division in green. Risk is now a very significant part of RELX. Broadly speaking, we're currently over a third of the revenues and about 45% of the profits. Our trailing 12 month revenue to June was £2.4 billion. That's about \$3.3 billion in US. And on the pie charts by format, you can see that it's virtually all electronic at 99%. We're almost the most advanced across the RELX Divisions on the journey towards sophisticated analytics and high value decision tools. And by geography, you can see that 79% of our revenues are currently from North America. The market opportunity in the US is very large, but the problems we are solving are global. The international opportunity here is enormous. And later on, you'll hear more about this from Rick. And by type, you can see that it's 61% transactions and 39% subscriptions.

Mark Kelsey: Of the transactional revenues, over 90% are embedded solutions on long term contracts, but with some form of volumetric billing, and very few one-time transactions. So let me spend a couple of minutes talking about what is it we do and what kind of customer problems we solve. We operate in some very large global markets with critical problems to solve and with strong growth rates for many years to come. And our waterfront is getting bigger every day. The digital and eCommerce transformation that's accelerated during COVID is further driving growth. And what we do across our different segments is broadly similar. We help our customers assess, predict and manage risk. And let me start with insurance because I think you're a bit more familiar with that model. Insurance is our second largest segment representing nearly 40% of the divisional total. And at the core of the business, it's helping the insurance industry and assessing the risk of a person who's shopping for insurance, which allows carriers to price that risk appropriately. We do this by combining our huge data sets with analytics and technology.

Mark Kelsey: We work with all the US insurance carriers and with a clear market leader. The insurance business continues to innovate, constantly adding new contributed data sets and expanding into new verticals and use cases. We're also broadening our data sets in the connected car segment and then notify telematics and vehicle information related services to both insurance these carriers and auto manufacturers. So the market opportunity insurance continues to grow strongly. Business services is our focus today. It's our largest segment and nearly 45% of divisional revenue. And here again, it's based around assessing consumer and business risk. We help our customers, they may be banks, financial institutions or anyone involved in eCommerce, assess the risk of doing a particular transaction with a particular individual at a particular time, whether that risk is fraud, compliance or credit and business risk. Again, we do that by combining huge data sets with analytics and technology.

Mark Kelsey: With a clear market leader in both physical and digital identity, and their combined strength is allowing us to solve complex foreign identity, financial crime and credit and business problems. In government, which is around 5% of our revenue, we do something very similar, but our customers are us state, local and federal government. And finally, data services, which represents just over 10% of divisional revenue is a bit different. We provide data analytics solutions in specialist markets, such as petrochemicals, aviation, and agriculture. So, let's now move to our financial performance. Since our last investor event in 2018, we've continued on a strong and consistent trajectory with the fastest growing part of RELX with average underlying revenue growth rate of 8% for several years. An underlying profit growth going at least in line with our revenue growth. And you can see the strength and resilience of our business during COVID.

Mark Kelsey: In 2020, our underlying revenue growth was 3%. And underlying profit growth was 4%. and already in the first half of this year, revenue growth recovered to 10% with offering profit growth up 12%. In the six or seven years before COVID, the three main businesses had average revenue and profit growth rates, roughly in line with the divisional averages. Since the low point of the pandemic, business services with its strong digital identity assets, has picked back up very quickly and is currently growing a bit faster than the divisional average. And our objective is to keep this segment growing faster. The insurance segment operates on longer cycles, both slowing down and picking back up more gradually, with growth rates in driving patterns and switching, not yet back to the previous trajectory, but it's a quality business with great innovation on new products. And new business sales have already recovered and are growing strongly. Data services being subscription based, had a delayed decline and a delayed pickup, but it's seen growth in line with usual levels since the middle of this year.

Mark Kelsey: We're not only a high growth business, but also a high margin and profit generating business. And a key factor in this is our scale and ability to reuse

our unique data assets in each of our key segments and across the different problems we solve in those segments. This is also true of our strong technology and linking capability. With no real incremental product costs from volume growth, we continue to scale and aren't subject to the same inflation impacts seen across some sectors of the economy. We're also highly cash generative and we are tipping close to 100% of profit to cash. The business is not capital intensive because of our lightweight, modular and flexible technology platforms, with capital expenditure averaging only around 4% of sales. The key driver of growth in this business is not capital therefore, but rather the ability to leave a jar asset and capabilities to drive innovation. Whereas the incremental profit on sales is very high. In order to generate that sustainable growth, we continue to reinvest to create more value for our customers through product development.

Mark Kelsey:

In this chart, you can see how that organic product investment translates into revenue growth. What you can see here in orange is the key drive of our growth. That's new products. It's innovation. Just to be clear here, we define this as new products launched in the last five years, and this is the typical adoption period to roll it out across the customer base. You can see even in COVID last year, the growth contribution remains strong at 4% from new products once the market contracted by -1%. This year in the first half, we're back to a historic high of 5% growth contribution from new products. We've also done some key target acquisitions to strengthen our core capabilities and accelerate our revenue growth, and Rick will talk more about that later. In summary, as you've seen from these financial charts, we delivered a consistently strong performance, and we believe we can continue to deliver a similar level of financial performance for a decade or more.

Mark Kelsey:

Let me now tell you a bit more about how we deliver these products and services, and why we believe we can sustain our market leading position. As a business, we have four key capabilities that allows us to continuously add more value to our customers. And it starts with deep customer understanding. That deep customer understanding enables us to establish

what it is our customers trying to achieve, how that is evolving and how we help them solve their problems. And this combined with our core skill innovation is a key driver of our success. Data is one of our key foundation stones. And we have an incredible position here and there are four key types of data. First, we have by far the largest public records data in the US that we've been collecting for over 30 years. And we're starting on a journey to replicate this internationally.

Mark Kelsey:

Second, are our vast contributory databases we run on behalf of our customers. And one of our core skills is that business is running contributory databases. In particular, our digital contributory databases from threat metrics and email age are giving us real competitive advantage, both in their own right and also when combined with physical assets. These are unique data assets to us, and they put us in an incredibly privileged position in terms of the value we can create for customers, and Rick will highlight this key point. Our third, another important source is we license a huge range of data from third parties and fourth, and finally are the truly propriety data sources, primarily in data services that we've built and generated ourselves. In the US alone, we have a 10,000 data feeds coming into our servers with hundreds of millions of records added daily.

Mark Kelsey:

Our third capability is analytics and linking. Linking is fundamental to the value we bring to customers, which allows us to connect these vast amounts of disparate data points to create one unique view of an individual or a business with world class accuracy. We layer this with sophisticated analytics that allows us [inaudible 00:11:46] customers with scoring models, attributes, and diagnostic tools that critically enables them to make decisions. And then finally, technology. The foundation stone here is our big data platform. This brings incredible scale and speed that we also use a whole host of open source technologies. We employ over 3000 technologies in the division. It's a third of our staff and key to our success. And you'll hear more about how we bring these capabilities together through the rest of this presentation. And here on this slide, you can see how our tech stack comes

together from data inputs to actionable outputs that enables a customer to make a decision.

Mark Kelsey: And those will be risk scores, attributes, models, visualisation tools, whatever format the customer needs. And these outputs, these solutions help our customers improve their risk assessment in a measurable and quantifiable way, providing them with a visible uplift in their performance. And here's our strategy for doing that. It's all about how we drive organic growth and there are four key themes. First, it's about continuous product innovation in our core segments. We're looking to go deeper and deeper into our customer workflows with additional decision points. Second priority, it's about innovation in our close adjacent markets, driven again by launching new products. Third priority is about expanding into new geographies in the segments that made up the old US based Risk solution side of the business. We had world class competencies, but we weren't applying them internationally.

Mark Kelsey: At the end of 2012, we had less than a million dollars of international revenue. Since then, we've made great progress and you'll see this later in Rick's slides, but it remains an area of massive potential value creation. And finally, we have relentless focus on customer satisfaction and employee engagement. And we have world class scores in both. And this is critical as there's an absolute correlation between customer satisfaction, employee engagement and financial success. And finally, we're incredibly proud of our unique contributions. Last year, we detected and stopped over 590 million cyber fraud attacks on our customers, saving them billions of dollars. 80% of consumers get cheaper insurance because of our partnership with the industry. We help increase financial inclusion. We pioneer the use of alternative data, allowing millions of disadvantaged consumers to get access to credit in the US. And by using digital data, we're now expanding this effort globally. We help reduce crime and fraud, and that might be protecting individuals from fraud identity theft through our partnership with law enforcement and police to combat crime and terrorism.

Mark Kelsey: And through our partnership with the ADAM Program we've located and found more than 800 missing children in the US. And we have great positive feedback from our customers and employees. Our customer net promoter scores are above best in class across our segments. And we have incredibly engaged staff. More than 50% of our staff participates in RELX supported volunteering activity. So, to conclude, we help our customers solve absolutely critical and increasingly complex problems. Our products often account for less than 1% of our customers' total cost base but have a significant and positive impact on the economics of the remaining 99%.

Mark Kelsey: We operate in attractive markets that are large, global and structurally growing. We have leading positions in both physical and digital assets, and this combination gives us real competitive advantage. And the combination of strong, structural growth in our co-markets, tremendous opportunities in adjacent markets and our continued international expansion gives us great confidence that we can continue to deliver annual growth in revenue and profit in the high single digits for another decade or more. And with that, I'd like to turn it over to Rick Trainor, CEO of Business Services.

Rick Trainor: Thank you for attending today's session and welcome. I'm Rick Trainor and I'm the CEO of Business Services. I joined the RELX organisation in 2004 through the acquisition of [inaudible 00:16:28]. Initially, I focused on content acquisition and leading the public records business. Since mid 2009, I've been leading Business Services. I'll walk through what we do and how we deliver value to our customers, as well as what drives our financial performance. Later, my colleague Kim Sutherland will show you some of our core use cases in Fraud And Identity. Business Services is now the largest and fastest growing segment within the Risk Portfolio representing nearly 45% of the division's revenue. Business Services' 12 months trailing revenue to June of this year was £1.1 billion or about \$1.4 billion US. Since our last presented to you in 2018, we've become increasingly global. We have continued to aggressively expand our solution set and geographic reach, and today almost 25% of our revenue is generated outside of the USA.



Rick Trainor: And this now includes a portion of the revenue that comes from acuity, which was transferred into Business Services' portfolio last year. Finally, as you can see the business is 55% transaction and 45% subscription. And as mark said, our transactional revenues are over 90% from embedded solutions on long term contracts and have some form of volumetric billing with very, very few one-time transactions. So what it is that we do. Our solutions help our customers assess risk associated with the consumer, business or transaction, whether that risk is fraud, compliance or credit risk. This allows our customers to make higher confidence decisions, which increases trust and lowers friction by allowing good transactions to go ahead quickly.

Rick Trainor: We also help our customers reduce costs by detecting and preventing fraudulent or illegal transactions. Overall, the services we provide to our customers represent a very small part of their cost base and have significant positive impacts on the economics of their overall business. Our services address a number of broad use cases, fraud and identity solutions, accounting for a bit more than a third of the revenue are the biggest piece of our business. What we do here is we help our customers determine if an identity exists and if it can be trusted, and this includes both physical identity and the device being used.

Rick Trainor: We also have a proprietary ability using our behavioural biometrics tools to understand whether an identity is behaving consistently with past interactions. Financial crime and compliance solutions, accounting for a little under a third of our revenue, are our second largest part of our business. Here, we leverage our identity intelligence and our deep expertise in person and payment screening to help customers comply with global regulations, such as know your customer, any money laundering, terrorist financing, and any bribery and corruption. Our credit, business, and other risk solutions also accounting for a little under a third of our revenue provide a range of specialised risk services, including alternative credit solutions, which was discussed in depth at our corporate responsibility seminar held back in May.

Rick Trainor: All of our solutions are underpinned by a combination of sophisticated software and analytics, combined with highly differentiated data assets, which I'll talk about in just a moment. Our solutions are used by customers across industries, such as financial services, FinTech, payments, mortgage, e-com, media, telecommunications, and crypto, to name just a few. We also provide solutions that other parts of the risk division take to market in the insurance, government, and healthcare sectors.

Rick Trainor: Most of our products are machine to machine, that is automated solution used by our customers as part of their risk assessment processes. We serve tens of thousands of customers through both direct and indirect channels. And increasingly through integration platform providers. We have a long-standing relationships with our customers, with low single digit attrition rates and no single customer accounting for more than a couple percentage points of our revenue. Our customer base includes customers of every size, from the largest global financial institutions, the world's leading digital businesses, and more than 75% of the Fortune 500. And along with a sizeable number of mid and small size customers.

Rick Trainor: Our products are used across our customers workflows as they manage their relationship with their customers. Most customers use multiple products across key decision points. For example, a large bank in the US would use a number of our products to help with fraud and identity management, financial crime, and credit risk workflows. On this chart, you can see how business services has evolved and has grown into a \$1.4 billion business. Our track record of strong growth spans over two decades, as we expanded from physical into digital identity and new use cases. We've expanded primarily through organic innovation and new product launches, supplemented by some targeted and highly complementary acquisitions. So let me tell you a bit more or about some of our key recent acquisitions.

Rick Trainor: First of all, we have a very disciplined approach to acquisitions. We buy market leading assets that are a natural fit with our business. And over the

last four years, we have deployed nearly 2 billion on acquisitions and the fourth significant ones are listed on this page. The key to our success is that we fully integrate the required capabilities into our core business. And this allows us to accelerate growth by creating significant incremental value for our customers. Effectively, our approach allows us to quickly unlock the value of the combined assets. Threat Metrics is the number one provider of digital identity insights. And we had a strong partnership with them before the acquisition. So, we were very familiar with their device intelligence and global network of shared digital intelligence. Here, we saw all the opportunity to connect digital insights to our rich physical data assets, to provide next generation identity verification and fraud assessment solutions.

Rick Trainor:

Similarly, Email Age was another one of our partners, and we leveraged their industry leading email based global fraud intelligence and performance data. Again, we saw an opportunity in integrating their data into our digital and physical asset portfolio. ID Analytics had a deep contributory data asset on fraud outcomes and contributory credit application information, which when combined with our solutions provided orthogonal insights on fraud and credit scoring. This was another natural fit with our fraud and credit risk solutions. Our latest acquisition, True Narrative provides a sophisticated platform to orchestrate customer onboarding workflows, helping companies comply with financial crime compliance regulation through integrating third party data assets, conducting transaction monitoring, and rating risk. We believe True Narrative will open up new vectors of growth, similar to way Threat Metrics and Email Age have transformed our competitive position with fraud prevention.

Rick Trainor:

Another key part of the acquisition is talent, and we are proud that many leaders within our business today joined us through these and other acquisitions, myself included. As you can see our solutions help customers solve critical problems. And these problems are only getting bigger and more complex. This slide sets out the context around just how big these problems are, which we estimate are somewhere in the order between five

and \$10 trillion globally. These are all significant and complex challenges, and we have the tools to solve them. Bad actors continue to find ways to the fraud system. And we continue invest in new data and platforms along with capabilities to help our customers stay one step ahead of them.

Rick Trainor: The key to how we do all this is our data assets. You can broadly think about our data in four categories, physical identity, digital identity, behaviour intelligence, and contributory intelligence. Here on this slide, you can see the share scale of these assets. We have market leading positions in both physical and digital data assets, and it is their combined strength that makes this so powerful as they come together to create a unified view of identity. We link our physical and digital assets to provide a comprehensive view of a person, who they are, what email addresses and devices such as mobile tablets and computers they're connected to. We also use our behaviour intelligence to see what behaviour is typical for a person as they interact with their device.

Rick Trainor: For example, we can tell if a device is being held at a different angle or typing in an unusual way, which may indicate fraud is taking place. And then we have our contributory databases. Let me give you a bit more detail on that, because this is a competitive advantage that is incredibly, incredibly hard to replicate. For our contributory solutions, every customer to be a customer of these solutions has to contribute all their transactions to the solution. The more transactions we process, the stronger we get. The stronger we get, the more transactions we process.

Rick Trainor: It's an absolutely fantastic virtuous circle and it's well past the point of critical mass. In fact, this was a key reason we acquired Threat Metrics in 2018. It had already reached critical mass and now it continues to get stronger and stronger each and every day. So, each time a consumer transacts or applies for a new account, the input data is captured, along with the outcome of that transaction. This information is then linked, and pseudo anonymised in accordance with our data privacy practices and regulations. And as

additional data points are received and associated with that identity, we continuously build out a more complete view of who that person is, what digital footprint they have, what behaviour is typical from them, and whether they or the devices or emails associated with them can be trusted.

Rick Trainor: The scale and growth of the digital transactions in our infrastructure is immense. We now manage over 55 billion transactions each and every year and see well over 200 million transactions every day. All of this provides us with unparalleled intelligence on an identity and helps us more accurately identify unusual and potential fraudulent behaviour. That also means when there isn't fraud, a transaction can be quickly processed with minimal friction, where you're now able to recognise over 99% of all email transactions, all in just a fraction of a second.

Rick Trainor: I would also like to note that we are highly trusted custodians of this data. And we operate in highly regulated markets and have a deep expertise in the management of data. And we've done this for many years and consider this a core skillset and we take the security and use of our data extremely seriously. We combine these data assets with other key capabilities that Mark spoke about. Many of our employees come from the industries we serve and we work very closely with our customers and have deep, deep industry knowledge. All of which helps us understand what kind of problems our customers are trying to solve. We link our data to an individual with a high degree of accuracy with over 99.9% precision. And then we build insights, be it scores, attributes, or reports from this linked information, leveraging data science, patented algorithms, machine learning, and artificial intelligence. We do this using technology that is purpose built for the use case in question, whether it's for highly resilient and accurate financial crime screening engines, handling billions of transactions, or whether it is to determine whether a machine, or human is interacting with a particular site.

Rick Trainor: Our solutions are built specifically for those purposes and provide us with significant differentiation and scalability. The majority of the problems we are

solving are global and international expansion has been one of our key drivers of growth. Before 2013, we generated virtually 100% of our revenue in the US. We have since been expanding across the globe. And as I mentioned, we now generate 25% of our revenue outside of the US. We now have local operations in the US, UK, and Brazil, and a consistent go to market approach, serving customers in over 180 countries.

Rick Trainor: Excluding an internally transferred international revenue stream, we have gone from almost no international revenue 10 years ago to now close to 200 million. We've done this through a combination of priorities. Some of our products like our financial crime compliance and our digital identity are naturally able to support global customer needs. We sell these broadly across all geographies, some geographies like the UK and Brazil have been identified as attractive countries for deep local presence. In these markets, we utilise local partnerships and Beachhead Acquisitions to build localised platforms, along with physical identity assets to develop a scale position in fraud and identity. Expect to see more of this in the future, as we are seeing strong double digit growth internationally and believe we have only just scratched the surface here.

Rick Trainor: Finally, not only do we have a suite of highly valuable solutions, we also have a mandate that truly matters. And this is something we are incredibly proud of. We combine comprehensive data sets with advanced technology and analytics to help our clients evaluate, assess, and predict risk. And in doing so, our solution to help our clients protect against many of the world's most pressing societal problems. So to wrap up, we operate in some very large, global, and fast growing market segments. We help our customers solve absolutely critical and increasingly complex problems protecting their business and their customers from fraud, identity theft, financial crime, credit risk, and all other types of risk. We have a leading position in physical and digital data assets. This puts us in a unique position to build a robust and unified view of an identity.

Rick Trainor: Our identity network is only getting stronger. The more transactions we process, the more data points we have, and that helps us assess risk faster, more accurately, and more importantly, comprehensively. We have a strong record of organic growth extending into new use cases and segments of the market and driving international expansion. Finally, we use targeted acquisitions where we are the natural owner to accelerate that growth. And I hope you agree with me that this is really a fantastic business. Thank you. And I'll now turn it over to Kim Sutherland who will take us through how our customers use our fraud and identity solutions. Kim is vice president of market planning, fraud, and identity. Kim has been with us for 15 years and has been recognised as one of the top 100 world leaders in identity and has served as the past plenary chair of an identity ecosystem starting group, a White House Initiative during President Obama's administration. Now Kim, over to you.

Kim Sutherland: Thank you, Rick. My name is Kim Sutherland and I lead our market strategy for our fraud and identity business. I've been with the Risk for over 15 years. And during that time, I've been focused on building our commercial market strategy for our fraud and identity solutions. Our fraud identity solutions help our customers assess risk during each interaction with a consumer. Every time you log into your bank account or buy something online or make a payment, the business that you're interacting with wants to make sure you are who you say you are it and that this isn't an attempt by a bad actor attempting to mimic you. This is where our solutions come in. Among other things, we help protect against someone else opening new accounts in your name, someone logging into your account using credentials that they've purchased on the dark web, someone completing a purchase using your payment information. These challenges are only getting more and more complex.

Kim Sutherland: The trends that are driving this increasing complexity are twofold. First, there is change in consumer behaviour that only accelerated during COVID. Second, technology and the sophistication of attacks is evolving as you can

see on the right hand side. So, let's walk through an example of a consumer logging into their account. They can be doing this to make a payment, to transfer funds, to change their address or phone number, or to reset their password.

Kim Sutherland: Behind the scenes, our solutions are providing layered approach to accessing fraud risk. And in a fraction of a second, we can assess if the device being used is suspicious, if the identity exists, if the device is associated with the person whose account is being accessed, if the person currently using the device is behaving consistently with other behaviours we've seen on that device or devices associated with this account. At each stage of the process, we provide our customers with a risk score or outcome.

Kim Sutherland: Based on their risk tolerance, they define thresholds that will determine whether the transaction will be processed or will be routed for further authentication and the highest risk case will require manual review. This enables a fast frictionless experience for the vast majority of consumers in transactions that are low risk but provides a strong protection for our customers and consumers when there are signs of fraud.

Kim Sutherland: Our ability to provide confident assessments of risk is based on the foundational data and analytic capabilities that Mark and Rick have discussed. These data assets are all unique, but separately, none of these data assets alone could give us a full picture of risk. Our key differentiator is our ability to link these assets back to an individual with confidence and accuracy, and to see the whole picture, a unifying view of an identity across all of these different data elements. This helps us identify unusual and potentially fraudulent behaviour and enables our customers to confidently assess whether they should trust the person and device with whom they're transacting.



Kim Sutherland: We provide this critical intelligence through a single unified point of access. Our customers can easily assess and layer as many of our risk assessment solutions as they deem appropriate for their business. We make it easy for our customers to gain the insights and scores they need to grow with the confidence of knowing who they're transacting with.

Kim Sutherland: So, let me share the sheer scale and impact that we have. We protect over 2 billion active online accounts and have been able to stop 120 million fraudulent account applications in the last year. We currently see an average of 200 million plus transactions a day across 169 countries. And these numbers are growing every day. In the last year alone, we've protected over \$360 billion in e-commerce and media payments and have stopped \$23 billion in fraudulent payments. In the same timeframe, we've been able to protect our customers from being negatively impacted by 590 million fraud attacks, 2.4 billion bot attacks, and 260 million mobile attacks.

Kim Sutherland: So, let me give you an example. A logistics business launched a self-service platform that enabled their customers to log in and monitor shipments and change shipping payment details. This was a capability that was launched broadly across multiple geographies but were concerned with the exposure to fraud. An additional challenge was that the business only captured minimal data inputs from the consumer, like name and email address. And they did not want to request unnecessary information. In this case, we utilised our digital identity solutions, Threat Metrics and Email Age, and our business verification solutions. So, every time a new customer logs into this self-service portal, their device, email address, and business information is risk assessed.

Kim Sutherland: The results for this business were astounding. We were able to reduce fraud cases and fraud losses by over 90%. Our customer went from experiencing thousands of successful fraud attacks a month to single digit number of cases a month. This business was able to grow according to their plans, improve their customer's experience, and limit risk. This is now a multi-

million dollar, multi-year contract for risk. And in the two years since launch we've increased our revenue ninefold with addition of these fraud solutions and through increased transaction volumes.

Kim Sutherland: The next example is a US credit card issuer. They were focused on expanding their applicant pool for new credit cards in order to book more new accounts in an increasingly competitive market for credit card issuers. The customer made changes to their fraud policy strategy and had seen a sudden reduction in identity fraud, but they suspected fraud attacks were actually going unnoticed from criminals using stolen or manipulated data inputs, like name, address, social security number and birthday, to open new accounts.

Kim Sutherland: So, we leveraged our fraud intelligence predictive fraud score, marrying ID analytics and risk data assets to assess the customer's applications. This score is driven by unique physical identity insights based on nearly 2 billion US consumer credit and service applications, and nearly 9 million confirmed identity fraud attempts.

Kim Sutherland: We enabled the credit card issuer to achieve significant improvements in fraud mitigation in support of their growth strategy, including a 41% improvement in fraud detection overall, and a 78% improvement in fraud detection for their digital applicants. And in less than one year we provided additional insights to support the approval of over 10 million applicants. This also created significant operational savings by reducing the need to manually authenticate their low risk consumers, and better isolate high risk applicants for more manual authentication processes.

Kim Sutherland: Final example. A leading US financial institution was growing but were concerned with the risk of fraud and the associated financial loss, as consumers were opening new accounts and using these accounts. In particular, they knew consumers were using multiple devices to access their accounts, but had limited ability to recognise the devices, assess the risk

associated with those devices, and understand that the devices linked back to the appropriate consumer. In the instances where the business couldn't recognise the device, the consumer was required to undertake more involved, often manual forms of identity verification, or high friction forms of authentication.

Kim Sutherland: So, we deployed our threat metrics digital identity intelligence and contributory network with a multi-year contract, and were able to provide a meaningful lift. We were able to recognise over 80% more devices than the business was able to do alone. For our customer this meant they could more accurately risk assess millions of interactions with new and existing customers, reducing their potential fraud losses while also minimising friction for the end consumer. This was a great proof point for the value of our solutions. And we were able to expand our relationship with this customer by layering additional fraud products into their workflow.

Kim Sutherland: Thank you. And I will now turn it back to Mark.

Mark Kelsey: Thank you, Kim. So, to conclude, we help our customers solve absolutely critical and increasingly complex problems. We operate in attractive markets that are large, global, and structurally growing. We have leading positions in both physical and digital assets, and this combination gives us real competitive advantage. And the combination of strong structural growth in our core markets, opportunity in adjacent markets, and continued international expansion, gives us real confidence in our long term growth prospects.

Mark Kelsey: So that's the end of our presentation now. What I'm going to do is open it up for Q&A.

Operator : Thank you. If you would like to ask a question, please signal by pressing star one on your telephone keypad. Please make sure that your mute function is turned off to allow your signal to reach our equipment. And again, that is star

one to ask a question. So we will now take our first question from Sami Kassab at Exane. Please go ahead.

Sami Kassab: Thank you. And good afternoon, everyone. I have the traditional three questions, please, Mark.

Sami Kassab: First one, are there differences in the growth and margin profiles of the three sub-segments of the business services division that you've just presented?

Sami Kassab: Secondly, can you comment on your market positioning relative to other players such as TransUnion or Experian, and other particular segments where each player has its particular strengths? Can you help us put RELX in the context of the competitive landscape please?

Sami Kassab: And lastly, you have referred to the positive network effects derived from your contributory data sets. The more data you see the better you are, and so on. Can you share with us how average false positives or average false negatives have evolved over time? Just to illustrate those positive networks effects that you have referred earlier on? I would assume the numbers are going down and the product gets better, but any colour on that would be much appreciated. Thank you, Mark.

Mark Kelsey: Okay. So I'm going to take the first one, then I'm going to pass the second one on market position, and contributory databases, the third one, to Rick.

Mark Kelsey: So, we talk about the first one, the kind of key growth sectors. As I said in my speech, if you look back six or seven years, the three key sectors have been remarkably similar in their average growth over that period of time. Remarkably similar.

Mark Kelsey: Now, if you look at what's happened since COVID, I talked a little about it, tried to give it a flavour, that obviously the world changed a bit in March, and what we saw is that business services picked up very, very quickly with its digital assets, and it's actually performing above the divisional average.

Mark Kelsey: Insurance is working on much longer cycles. It goes down slower, it comes back up slower. And we've had really good new business closes, but the driving behaviour isn't quite back to kind of the traditional level, but it's not far off now. It's getting in the high 90% sort of thing.

Mark Kelsey: And then data services, again, historically are the same averages, but that's a subscription business and it's very, very different. And it actually held up remarkably well in the first half, declined in a second half. The first half was actually slow, and now as of mid year this year, data service is now back to its kind of medium term, long term averages, division average, and forming very nicely.

Mark Kelsey: So that's my question. So, I'll pass over to Rick to do the market position.

Rick Trainor: Yeah. So, on the market position, competitive positions, the markets we play in are very competitive. We have large competitors, small competitors, midsize competitors. We're a global business with different dynamics on the global scale versus what we do in the various countries. Suffice it to say, as we look at our business from a fraud and identity perspective, physical and digital, we believe we're number one in those markets. That's on a global basis.

Rick Trainor: Similarly in the financial crime and compliance space, that's another area where when we look across our portfolio country by country and on a global basis, we're number one. Alternative credit area, very highly specialised area, in the US in particular, we believe we're number one in that space as well. And then you have a long tail of other solutions and products that have varying degrees of kind of market penetration, but we believe we're very well positioned with the assets that we have, and have made great progress in expanding that penetration.

Rick Trainor: Next, I think the next question was around network effect and on false negatives and false positives. I don't have specific number details on that, but as you can imagine, and as you alluded to, the more transactions we

see, the better our network gets, the more insights we can provide. So those numbers are coming down. And as you heard from Kim, the sort of the lift that we're providing, the amount of fraud that we're reducing, the numbers are extraordinary. So, our solutions and products get better and better each and every day as we get more of those insights, add more customers, get more insights, and continue that cycle on the digital side, as well as on the physical side as we continue to add more underlying license data or proprietary built data. Next question?

Operator : Thank you. So, we will now take our next question from Matthew Walker at Credit Suisse. Please go ahead.

Matthew Walker: Thanks a lot. I've got two questions, please. The first one is, what are the key partnerships that you have at the moment? You mentioned you had a partnership with ThreatMetrix, for example. What are the key partnerships? Maybe the top two or three partnerships that you have at the moment, and what function do they serve?

Matthew Walker: And then the second question is on, you mentioned the low CapEx of sales. Would you consider the acquisitions that you are making to be also a form of CapEx? And how do you balance the two things, organic CapEx and acquisitions? The acquisitions have been getting bigger and bigger, so what sort of size, in terms of acquisitions, roughly on average for the next sort of five years, should we expect? What sort of M&A spending should we expect?

Mark Kelsey: I'll take the second one and let Rick do the first one around partnerships. Top two or three. Rick, you go first.

Rick Trainor: Yeah, sure. Certainly. Partnerships are something ... I mean, we tend to white label our partnerships, so we're not actively out there selling somebody else's solution. It really becomes embedded within our product portfolio. So actually, naming them is not something that I'm comfortable doing.

Rick Trainor: But what we do with partnerships is, our initial focus is, build organic products, continue to develop our solutions, and where we see a capability that somebody else offers, we embed it into our solution, in generally a white label perspective so that look and feel is LexisNexis. And then over time we get to understand who those partners are and understand that market a little better, understand the capability of where they fit. And then look, as our strategy evolves, is that something that we believe is a better asset to put under our roof? Because when you have a partnership, you can only get so close to the IP. And then when you bring it under your roof, you can then get close that IP and really integrate products sort of at an atomic level and really unlock value.

Rick Trainor: So, I hope that answers part of the question. Mark?

Mark Kelsey: Thank you. And I'll pick up the CapEx question. When we look at our business, we're not a capital intensive business. Our technology platforms are very agile and very flexible. We're launching a lot of products, we've got fantastic opportunities, but the vast majority of that spend is on the P&L, it's the core skill innovation that we've got. And looking at CapEx going forward, we think still going to be low, mid, single digit sort of thing. We're not seeing a big rise in CapEx at all, actually. We're very, very efficient.

Mark Kelsey: And when we think about acquisitions, our real focus actually is on organic growth and looking at our opportunities, and we're in some fantastic sectors. Now, we will look at acquisitions when they're there to support our growth, and if they can drive our growth and bring a new competence. They either bring a data or a technology or a core competence. And ThreatMetrix was a fantastic example because it brought all three. And that was a slightly bigger one. And obviously email age kind of really reinforced that well, and IDA came along.

Mark Kelsey: And I think the way I describe acquisitions for us is, it's kind of lumpy really. We're going along at the same speed in the road, but when we come across

a business where it really drives up strategic value, we'll make acquisitions. We made slightly more in 18, slightly more in 20. 17 and 19 were lower years.

Mark Kelsey: I wouldn't read anything into those for what's coming next, because our real focus is on maximising the value we can do organically. We have fantastic opportunities. We will look to make acquisitions here and there, but we're not constrained by size, small, medium or large, it's just, do they fit us? Are we their natural home? And if they are, then we'll make those acquisitions. And we're absolutely delighted to have got them. But no change in strategy in looking at size of acquisitions or anything like that.

Mark Kelsey: Thank you. Next question please. Thank you, Matthew.

Matthew Walker: Yeah. Thank you.

Operator : Thank you. We will now take our next question. But as a reminder, if you would like to queue for a question you may do so by think star one. Our next question is from Matti Littunen from Bernstein. Please go ahead.

Matti Littunen: Thank you very much for the presentation. Two questions, please.

Matti Littunen: One on pricing. So, where you monetise API calls, and you mentioned you have often a volumetric component into your billing, could you give us a bit more detail in terms of how the pricing is typically done in your contract? So, for example, do you typically negotiate some kind of fixed value per transaction, or is that linked to customer lifetime value on a more dynamic basis? How does that work?

Matti Littunen: And then the other one on the global identity sort of graph you have, you said your number one in global digital identity and you talked about the competition. Could you specify a little bit specifically in this area? So global digital identity. Are your sort of most capable competitors, the way you see it, do they tend to be these sort of larger companies in consumer scoring,



these legacy players, or do they tend to be smaller, more specialised companies?

Mark Kelsey: Thank you for those questions. And Rick is going to take both of those two.

Rick Trainor: Okay. All right. So, in terms of pricing, as you can imagine, we have hundreds and hundreds of different products, local US, local UK, Brazil, and then we have global products. So, our pricing mechanisms kind of vary across the board. And fundamentally what we're trying to do is, low percentage of sort of the cost of the solution to our customers, provide a solution that represents a very low percentage of their kind of overall cost base.

Rick Trainor: So, it's probably best for me to kind of break it down into three buckets in terms of how we price and just give you the themes. First is our digital identity products. And our digital identity, there are dimensions within it. So new account opening, logins, and payments, are kind of the use cases within the digital space. And then we look at it by industry. Financial services, media, gaming, are a couple different types of industries that we then sort of layer another dimension in. So, it's kind of use, industry, and then when we look at kind of the pricing of each, they differ.

Rick Trainor: And the way we price it to customers in the digital space, they tend to buy ... We package it up as a bucket of transactions on an annual basis, and sometimes more than annual. So, they're able to have a bucket of transactions which they then burn down against, or consume against, based upon the use case. And when they consume the totality of those they renew, either at the annual basis, or most often, earlier than the annual basis. And at that renewal we reevaluate what the next sort of bucket of transactions they will need for the next period that they want, as well as look at what we've introduced into the solution in terms of value add and whatnot, because it's not necessarily that the transaction unit pricing remains the

same. We increase value to some of these solutions on a regular basis, and we need to look at that and price accordingly.

Rick Trainor: On the financial crime space, it tends to be subscription based pricing. So, a customer can license a software package for account screening based upon the size of the institution, based upon the number of payments they may be using over the course of the year. It's basically a subscription, committed amount based upon overall size of the institution.

Rick Trainor: And then our physical identity solutions, they tend to be licensed transactionally. It could be just straight list price on a unit by unit basis. It could be monthly minimums, annual minimums, so [inaudible], per seat pricing.

Rick Trainor: Effectively we have pricing models by solution set, for use case, for industry, that meet the need, and we're able to pivot and effectively kind of deploy a model that makes sense that for that sector, the marketplace, or with that broader philosophy of trying to be low single digit percentages of what their kind of total overall cost base is in the marketplace.

Rick Trainor: Now, the second question was around global digital identity and who generally do we see in the marketplace, Clearly there are the larger players that I think you were alluding to. And oftentimes we're seeing smaller players, boutique players that are focused in a geography or a certain industry within a geography. So really, it's a fairly dynamic space, and it really depends, just generally by market and use case.

Rick Trainor: In our solutions, we have our front metric solution, which is a highly sophisticated, very robust solution targeting the most complex digital identity problems out there. And we have other solutions such as Email age that can fit more in the mid tier, mid market, as well as in the upper tier as well. So, we have solutions to fit either one of the market needs. But they have competition like any, it's a highly competitive markets. And we say the big players, and mid to small size players as well.

Mark Kelsey: And if I just add to what Rick said-

Matti Littunen: Very helpful. Thank you very much.

Mark Kelsey: I'll just add a little bit to that. Very often when our sales teams are talking to a customer, that digital space, we're talking to customers who don't actually use someone, they're often do it themselves in half the market's un-penetrated, and they're trying to do it themselves, and it's challenging. So it's a very often our sales teams go in, we're not in a head to head pitch. We're actually trying to convince them to use an external company. Which is normally quite compelling, but thank you, Rick. Thank you.

Mark Kelsey: Next question, please.

Operator: Thank you. We'll then take our next question from Tom Singlehurst at Citi. Please go ahead.

Tom Singlehurst: Yeah, thank you. Thanks for taking the question. Tom, here from Citi. It's been a great session, so I really appreciate it. First question, during COVID I would have thought there would have been quite a few people stuck at home, fiddling around on devices, buying stuff, yet at an aggregate level, the division. So, a fairly marked slowdown still grew, which was obviously great. Can you just talk about the moving parts? Did things like ID fraud and ID fraud detection, did that grow a lot and then other bits just fell more? Or did the whole piece uniformly stepped down? And if so, why?

Tom Singlehurst: That was the first question. The second question was, a few weeks back, I think it was in July, there was a report about you getting a contract from the labor department in the US. Obviously, I don't suppose you will give us the full gory details of that, but I'm just interested again, whether that is new scope of work, whether that's an area of activities where there was no nothing going on before, no revenue being generated and, because there is more sort of social security payments. So, it's just now more focused on the fraud detection.

Tom Singlehurst: And then very finally on the topic of e-privacy and data protection, you obviously got lots of data, lots of databases, and I appreciate that it's in part the linkages between the data basis, but what consents do you have from individuals for the data that you hold? And to what extent is there any existential risk around, if you're asked to get consent? You not being able to provide the same level of quality of service. Thank you.

Mark Kelsey: Okay. So, I'm going to ask Rick to take the first one, and the third one, and then I'll come and do the second one.

Rick Trainor: Okay. So, the first question, if I heard you correctly, was around 2020 expectation that growth would have been faster, because of some of the segments that would have been from people purchasing at home. I just want to make sure I heard that question right. And so, what are the differences there, what's the difference in [inaudible]. I think that's correct. If I'm not, please let me know if that's not the question.

Rick Trainor: Yes, to your point, we did see a strong volume from our fraud and identity solutions in [inaudible]. Now, if everyone would say back in March and April, and beginning the part of May, there was things where in the US, so a bit of a tighter slowdown as just to kind of the mark through reacting to, there's work from home and just kind of the state things. But after that, things quickly got back to on a traditional kind of riding levels, and then we saw in our fraud and identity space, strong growth across the board, transactions did quite well.

Rick Trainor: And we do have other parts of the business that didn't see that strength. We have a collection side of the business that was a bit more challenged. And some of our other core underlying transactions, we saw some moderation in them. Probably the new business last year was a bit of a, we had a strong year of new business, but slightly less than we expected. So, I think it's a combination of all those issues as it... Now on the new business side with sales people not being able to get out in front of the customers as they

would normally, now we were able to be successful in communicating with them telephonically and move a business forward, but it wasn't as it would have been naturally in '19, or what we're seeing here in 2021. So, it was really a combination of things that caused some of the slow down last year, but generally on an F&I side really strong growth as to what you alluded to. People opening new accounts and whatnot, really in our acquisitions and really [inaudible] I would say. Did I answer your question there? Just want to make sure I covered all the parts of it.

Mark Kelsey: The third question?

Rick Trainor: Yeah. So, on the privacy and data side, as you know, we operate in highly regulated markets. We view privacy, and our treatment of how we view data and what we do with data privacy, as a key competitive strength. And as we go about acquiring data, we have a very, very disciplined approach. Our legal teams review all of our sourcing agreements, make sure that the suppliers can provide the data to us, have legitimate purposes for that data, comply with all the regulations, whether it's EPPBA, GLBA, GDPR, in Brazil, LGPD, and all the various privacy regulations. So, our upstream vendors comply with that. And we actually, I've seen when those laws came into effect, and we'd have to turn off from some vendors because they didn't have the right sourcing before the law's implementation. So, we go through that.

Rick Trainor: Any new product we use and build, we have legal compliance look at the product to make sure it complies with all the regulation and our own internal privacy, our rules. The data that is supporting that product, from ideation all the way through the weeks, now meets with all those rules. So, we're very rigorous around how we use data, and make sure that the data that is being used is permissible for the application. And we regularly review our data suppliers in that regard, as well as on a internal, train our staff around regulation. So it's not a one and done issue on training our staff, we're annually training staff on all the various laws, and what they need to be

aware of when using data or thinking about data, putting data into particular products, and fundamentally it comes out of legitimate interest when we're sourcing data, particularly in Europe and your non-US jurisdictions. Do we have a legitimate interest for that data as a consumer provided consent, somewhere in the value and the ecosystem such that we can use that data in our solutions.

Rick Trainor: We believe there is no existential threat to our using and sourcing of data, because of the processes and procedures we have in place. It is something that is a focus of ours, to make sure that data is [inaudible]. And we make sure that we have adequate supplies, we have redundancy and suppliers, we have longer-term agreements. And we just kind of make sure that that's an area of key focus. That's an area that... I grew up in the business through the contact acquisition side, so it's an area of business that's near and dear to my heart, and an area that we really focus on, because that's what makes the business tick. Mark, and I think there was a-

Mark Kelsey: I'll pick up the middle question. On the particular contract you're talking about, I'm not going to talk about an individual contract, and that's right to do. But what I would say, is we provide a range of products to help prevent financial fraud and human trafficking, and smuggling, and money laundering, and child exploitation. And in general, my view is we provide these in the commercial market. I think it's inappropriate to provide these to a newly elected kind of government. So our view on that is it's democratic elected, it was a new government, it's the right thing to do, but it's done. And they're a customer of ours. But no more comment other than that. Thank you.

Tom Singlehurst: Thank you very much.

Operator: Thank you. We will now take our next question. And it comes from Bernd Klanten at Barclays. Please go ahead.

Bert Clanton: Yes. Hi. Thank you. So, two questions here, the first one is, so since you moved the Acuity business into business services, have you seen any

notable revenue synergies? Or are they expected in the future? And then secondly, on technological innovations, are there any technological innovations out there in the market at the moment that you're particularly excited about, and that may help you in your effort to help and support providing even more sophisticated products to your customers?

Mark Kelsey: Okay. So, I'm going to take the first question on Acuity, I'll let Rick do the second one. And it was about a year and a half ago now the Acuity move together in Rick's organisation. They've both been operating in our businesses for quite a while. They work very closely together, their heartlands are different, but they have a small overlapping product, but actually the real driver in bringing them together is to benefit from the go-to sales expertise. Acuity had its own Salesforce and Business Services had its own Salesforce, both selling their own products.

Mark Kelsey: The key reason we bring them together is so that both sides can do a cross-sell. And actually, we're really pleased now, particularly on the international side, Acuity's international salesforce was probably bigger than the Business Services one. So now we've got both teams cross selling, our go to market strength is really up a gear. And when you've got so much potential for an entity, that was the biggest driver. And we're really pleased that it's working through. The businesses have always been close, but we haven't had that sale linked together. So that's why we did it, and actually very, very pleased at where it's going. And then Rick, over to you.

Rick Trainor: On the tech and innovation side, I'll take a part of it, and then Kim, I'll ask you to kind of weigh in as well. Now, one of the areas that we're really excited about, we launched last year our behaviour biometrics. So, it was a human or machine capability within our threat metrics solution. Now we're seeing somewhere around 12 billion or so annualised, sort of attributes being derived from that. So being able to determine, making sure that it is a human, and it is the human consistent with the prior interaction with that device. And we're now moving into can we authenticate that, that is actually

Mark Kelsey interacting with that device. So that's one of our kind of newer innovations, technology innovations that are coming down past. We're real close, and we're excited about it. Kim, where else would we see?

Kim: No, I completely agree with you, Rick. I think that behavioural biometric authentication is going to take us to just another level when it comes to being able to passively authenticate an individual, and add more value into that process. I also think that the ability to do integrated workflows is going to be an area we continue to work with our customers on. So being able to have a easy to deploy approach for mid-sized customers, and the ability to combine the solutions, to give added lift to detect fraud.

Mark Kelsey: Thank you, Kim. Next question, please.

Operator: Thank you. So, our next question comes from Adam Berlin at UBS. Go ahead, your line is open.

Adam Berlin: Hi. Good evening, everyone. Three quick questions, please. Firstly, can you talk about, and this is particularly for Mark that the adjacencies and new geographies you are most excited about, and why? And where'd you see the biggest opportunity in the next three or four years?

Adam Berlin: Second question is, can you explain how you're able to keep capital intensity just to 4%, which just seems a lot lower than other companies in the area? Is that because you're using M&A to buy in certain capabilities rather than using CapEx, or was it just you're expensing things that other companies would capitalise? And thirdly, can you talk about who your key data suppliers are, and are there any risks to those relationships? Are they happy to keep sending you that data, even when you seem to be gaining market share? Thanks very much.

Mark Kelsey: Okay. I'm going to pass number one and number three to Rick, and I'm going to pick up the capital one. And on capital, they talked earlier, we've got incredibly efficient technology and agile platforms that enable us to spin



out products very well. And we do put the vast majority of our launches, and we've put a lot of product launches. You remember that chart in orange and green, we're getting five percentage points growth from products launched in the last five years. So, we're launching a lot of products, but the vast majority of that spend is on the P&L. But that's the way it's historically been, that's the way it is, and that's the way we're very comfortable operating. It is a lower level, but that's not a constraint to our growth at all, quite the opposite, because during the last period, if you look at all those years of growth, the capital stayed very, very consistent. So it's the fact that we put it all on the P&L, it's ingrained in the businesses. It's part of the DNA to constantly innovate and make our core products better, and find new products to launch. So that's the reason why our CapEx is relatively low compared to some competitors.

Mark Kelsey: Rick, over to you for the kind of [crosstalk].

Rick Trainor: Clearly an international piece of our business is, among other areas, an area that I'm incredibly proud of, having grown to 200 million year in relatively short order. And the two components like the, we have those local businesses in the US, UK, Brazil, and then the global products piece, the rest of the world, and kind of the rest of the geographies. The rest of the world piece, international pieces, we do business in roughly 180 different countries, that represents roughly 60% of our international business. So, it's a big chunk. We're really driving what we have with threat metrics, funding our fraud and identity solutions and our financial crime solutions into those markets. We believe there's incredible amount of opportunity to continue to drive those solutions on a global basis, because we're not constrained by country boundaries or local data requirements. It's more of these globally applicable products that we can push everywhere. So, we're really going to continue to focus hard.

Rick Trainor: And what happens is we build up local knowledge in a particular geography, and we start building, scale and a geography. And that's where we then look

to say, "Hey, what is the next geography that we want to go to? Do we have a scale group of customers that are actually pulling us there because they love what we're doing on the digital side, they want more physical? Do we have local presence with team? The merger with Acuity has more than doubled our staff internationally, and it's really given us greater presence around the world. So where can we leverage that? And where are the suppliers? And do we have suppliers in the countries that we're thinking about going to next?" So, we're really trying to leverage that global team to take us into these other geographies. Now, we don't have the map to tell you which country's next, but it would be one where customers are pulling us, we have local presence with our teams, and the supplier network that kind of meet with our formula to be successful in building out the next local geography.

Rick Trainor:

Now, in the UK and Brazil, I had mentioned those are fairly young businesses for us, and we believe there's plenty of room to scale those businesses as we build the local data assets, export capability from the US. Export in terms of just kind of DIPing in the concepts and let them be localised, and those then get integrated with our global assets in those local markets. So we have a formula that works, we're really excited about the formula and what can be replicated in other countries, right now as we move forward.

Rick Trainor:

I think the last question was on data suppliers, and I think the resilience of data suppliers due to the competitive nature of the markets. As I previously mentioned, we look to source content on long-term agreements. We look to have resiliency and the suppliers of like content, so we're not getting sources from just one source, we have multiple sources. Oftentimes our suppliers can be our competitors. They also can be our customers. They can also be integration partners. So we work in this very complicated ecosystem, and manage those relationships very carefully so that when we win, they win, and the system is able to move forward and advance the market in total. So it's a complicated area, an area of the business that we focus on quite

keenly, and manage it appropriately. So we have this win-win system around all the geographies, everything.

Mark Kelsey: Next question.

Operator: That is all the questions that we have for today. I'd like to hand the conference back over to you.

Mark Kelsey: Okay. Well, thank you for coming. Really good questions. Really appreciate it. Enjoyed your being here and travel safely. See you again soon. Thank you.