

Barefoot Innovation Podcast with Jessica Rusu, Executive Director of the Data Technology and Innovation Division, and Nathalie Lowe, Private Secretary & Chief of Staff for Data Technology Innovation of the FCA

***Note that transcripts may sometimes contain errors and that transcript timing notations do not match the posted podcast**

Jo Ann Barefoot: I have been looking forward to today's episode for months really, because we are back talking with the Financial Conduct Authority in the UK and the people who are leading the innovation work there. And I know the audience is extremely eager to hear the latest on what you're doing. My guests are Jessica Rusu, and also Nathalie Lowe. And I'm going to ask you in a moment, both to introduce yourselves, but I just want to say we're we're all in London, but as it happened, we needed to do this virtually. But I have been really excited to see the heights to which you've been taking your innovation work at the FCA. You've been an inspiration really to people all over the world for a long time, and I think you're showing us the future, so welcome both of you to the show.

Jessica Rusu: Wow, thank you. Thank you, Jo Ann. That was really, really kind of you to say. And the last time you were here in London visiting us, it was right in the middle, I think, of our data and digital live event at the end of March. So that was a really exciting time for us.

Jo Ann Barefoot: Actually, I want to ask you to talk a little bit about that after we get some of the interview questions. So exciting.

Jessica Rusu: Yeah, that's really exciting. So first I guess we'll get the introductions out of the way. I am Jessica Rusu. I am the executive director of the Data Technology and Innovation Division at the FCA, which is a new division. So I'm the first executive director or exco member that is championing both the role of data and technology and innovation at the FCA. So it's really exciting to have this role and this opportunity. I've been in role for about two years now, and I come from primarily a commercial background, quite varied experience across industry, analytics and various data roles. And I'm joined today by Nathalie Lowe. Nathalie, you want to introduce yourself?

Nathalie Lowe: Yeah. Hi. So I'm Nathalie Lowe and I'm private secretary in chief of staff for data technology innovation here at the FCA. And essentially my role is to help Jessica progress her objectives and turn the FCA into a data and technology-led organization.

Jo Ann Barefoot: That's fantastic to have both of you. So let's start by laying round work and tell us about the division or the unit. Tell us about the mission, how it's structured, how many people you have, how you've organized yourselves to take on this tremendous challenge. Jessica, do you-

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Jessica Rusu: Yeah, so when I was recruited into the FCA, this was in the spring of 2021. So at that time we were just emerging from the pandemic. The country had been through a difficult period of turmoil, and Nikhil Rathi, the chief executive of the FCA, was really looking to reinvigorate the FCA and transform it around the principles of being a data-driven regulator. So he had conceived the idea of this role chief data information and intelligence officer, because he wanted to set out a vision for the FCA to be really intelligence-led and proactive in using data to its advantage. So I think that that was the concept.

And then when I arrived at the FCA, there were already innovation teams, and as you know, the RegTech and the Sandbox work was already globally recognized as something produced by the FCA, and there were also data science units, but there was a separate division around technology. So what I did is set about to centralize and bring all of the teams together so that there would be a really close relationship between data, technology, innovation and all of the systems integration work that sits in between so that we could really see through the digital transformation agenda.

So we centralized all of that. I think we've grown the organization now from about 350 to about 450, and I think we have ambitions to maybe grow a little bit further if possible, and budget allows. And we've really seen a huge, huge push from our business customers in terms of the demand for our data services, everything from enterprise architects to user experience design to innovation services, data recording and data strategy, so that it's all across the piece, the kind of roles and growth that we've seen.

Jo Ann Barefoot: Fantastic. You used the term business customers. Is that how you frame the work that you do for your colleagues at the FCA?

Jessica Rusu: Yeah, that's a really good point. So we have many stakeholders. So when we think about customers, we start with our external customers, which are actually the firms that we regulate. So we think about the burden that we put on firms through the regulatory data collections, and we've already invested quite heavily in improving the systems there when we did the migration from Gabriel to RegData, and now we're working together with the Bank of England on the transforming data collections program, which is all geared around simplifying the user experience. Then we're also supporting work around gateway, the authorization, of the front door of the organization. So in many ways, our frontline customers are the firms that we regulate in the broader stakeholders.

And then internally we partner very closely with authorization, supervision and enforcement divisions, and they are all trying to leverage data and technology to

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become more efficient so that they can respond to changes in the regulatory regime, the growing number of consumer scams and harms, and just really try to leverage data and technology more efficiently. So those are my internal set of business customers as well.

Jo Ann Barefoot: So I really want to drill down in how you're going about being a data-driven regulator, but before we turn to that, and Nathalie, I don't know if you'd like to start on this, talk further about the role of innovation in the industry that you're regulating. What are the big tech trends that are reshaping the marketplace and how does that affect the vibrance and healthiness and even competition in the marketplace?

Nathalie Lowe: So I'd say for our organization, the rest of the industry, it's probably similar to every industry at the moment, the thing that everyone's talking about, artificial intelligence. So in innovation, we are talking a lot about that, trying to demonstrate our thought leadership in that area. So internally, we're having a lot of conversations about where we are going, the impacts on the rest of the industry, the impacts internally on us. So that's definitely what we're thinking at the moment. We do try to look much further ahead. So if the artificial intelligence is the thing everyone's talking about now, it's current, but we are looking further at things such as like quantum. We've got very advanced emerging technology area within our teams. We're always trying to look at the long horizon because there's always new things coming out. So at the moment, definitely what everyone else is looking at artificial intelligence, but we're trying to go beyond that.

Jo Ann Barefoot: And Jessica, do you want to add anything on that? These are such massive topics, AI and generative AI and quantum and so on.

Jessica Rusu: Yeah, I think it's important to address the topic of relevancy because if you're not very close to the work of the regulator, you might wonder why does a regulator even care about technology or what's the connection there? And so when you come back to the core principles of what the regulator is supposed to do, to protect consumers from harm, to keep markets safe, to regulate firms and entities, and make sure that the firms that are doing business in the UK are abiding by certain consumer duties and standards, when you think about the reason for that, then you look at the emerging technologies, then you understand the systemic risks and the prudential risks and the consumer harms that are emerging because of the technologies.

So if you think about, I don't know, you think about quantum and you say, "Okay, that's a really niche area in computer science. Why does the regulator need to

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care or understand what's happening with quantum computing?" It's because of the cybersecurity implications and the consumer harms that could happen if the quantum computing is adopted at a pace that is faster than we can regulate it. So we need to understand these technologies and the impacts they'll have on the firms. And the same thing goes for artificial intelligence. The FCA wants to understand that the firms are deploying technology in a way that is safe, that is ethical, that protects consumers, and that they also understand the unintended harms that could happen from these technologies.

So that is why it's really important when we talk about horizon scanning and looking at innovation, it's important to understand what's happening around the bleeding edge so that instead of being reactive, we can be proactive in our regulatory approach. And then taking it a step further than that, we're often asked, "What are you doing as the regulator to encourage competition, to encourage growth, to make sure that UK PLC is successful?" And that's another reason why we should understand what's happening around the edges in FinTech, or in AI, or emerging technologies, whether it's blockchain or other applications. If we understand those things, we are better positioned to regulate them and to make sure that we don't take a closed-minded view to a firm that wants to do something innovative in the UK market. So that's another reason, apart from the risk-based reason, there's a growth and competitive-based reason why we want to understand these things.

Jo Ann Barefoot: The FCA is unusual in the world in having an actual competition mandate. I think there are a few other regulators that have that, but not very many. And I think it has frankly been helpful to you in pushing out a little bit more proactively into what constitutes a competitive, vibrant marketplace that will benefit the consumer, the competition. So what are the building blocks of this? I think it would be good to talk briefly at least about the latest, with your well-known innovations, your Sandbox and your TechSprint program and so on. And then I really want to look at what you're doing today with your own supervisory technology, your SupTech and internal data leveraging, but give us the latest exciting things that you're doing in the well-known innovation realm.

Nathalie Lowe: So I think the GFIN Greenwashing TechSprint that's actually actively active now, which I know that you are also closely linked to is something that's... Is three months. TechSprint, the first one, the Digital Sandbox. So that's active now. We've got a lot of things coming through the Sandbox at the moment, and our TechSprint program I think has doubled in size since last year. So there's a lot going on in that space.

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- Jessica Rusu: Yeah, I think the Greenwashing TechSprint is a really great example to call out because to the point about international collaboration and growth, many different countries and regulators are facing the same challenges. So greenwashing is one of those things that doesn't have borders. It's beneficial for us to collaborate as regulators in learning from whether it's the application of social media data or other advanced analytics techniques and synthetic data to identify where these harms are happening, to identify a global solution. Every regulator will go about its business in its own different way, but the role of collaboration is really important because sometimes we think about competition from the perspective of winners and losers. My market share gains are someone else's market share losses, but actually I believe we can increase the size of the pie really and just unlock a lot of global growth by making it easier for firms to operate cross-jurisdiction. So I think this Greenwashing TechSprint is a good example of that. I think another recent example of something that was... Yeah, go ahead.
- Jo Ann Barefoot: Before you leave the Greenwashing TechSprint, remind listeners or for those who don't know what GFIN is, and then just share a little bit about how you're going about the Greenwashing sprint, because I think it's exceptionally interesting.
- Nathalie Lowe: GFIN stands for the Global Financial Innovation Network. I think we've got around 80 regulators within the network currently. We are currently the chair. I'm not sure what the rest of the question was.
- Jessica Rusu: And then how we were going about it. So I believe we're hosting it on the Digital Sandbox.
- Nathalie Lowe: Yes
- Jessica Rusu: Right. One of the first on the Digital Sandbox. And we're also leveraging, I think both social media data as well as some synthetic data techniques.
- Jo Ann Barefoot: And it's on how to detect fake claims of climate virtue?
- Jessica Rusu: Yes. So if you use machine learning and image recognition, computer vision techniques, you can look at pictures and say this kind of marketing, for example, it features a tree or river or maybe a windmill. And then you can use the computer to identify through the machine learning techniques where certain investment firms are marketing things as green, and then you can check the underlying data to understand whether or not they actually are green. So it's

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combining different sources of data and different techniques to identify that greenwashing.

Jo Ann Barefoot: And then you'll be trying to come out with techniques then that can be adopted by the regulators in the GFIN network and also across?

Jessica Rusu: Exactly. And just sharing those learnings across all the regulators that are participating.

Nathalie Lowe: I think one of the things that, hopefully I don't sound like I'm speaking out of turn and saying this, but in terms of the things that we're doing around TechSprint, like GFIN, greenwashing, all the work that we're doing, because we have that competition agenda, and I think the way that financial services is almost like a leading industry in terms of adopting technology, based on the volume of customers that we have and the size of the market, a lot of the stuff that we are doing, which is on the cutting edge of financial services, can be replicated by other industries. So we are not just only innovating and showing what can be achieved within financial services and regulation in this space. I think that what we are doing is actually showing other industries what can be done.

Jo Ann Barefoot: I love that point, and I couldn't agree more. Some of the changes that we had in the original movement to internet adoption and digitization we're starting far from financial services and then came into the financial sector. But today, a lot of the, as you say, the most cutting edge tech changes really aren't grounded in financial services, blockchains and web three thinking and DeFi and so on. And I do think that people like you are leading the way. And when do you think you'll have some outcomes do you know from the greenwashing [inaudible]?

Jessica Rusu: I think it was... Was it wrapping at the end of this month or next month?

Nathalie Lowe: I think it's next month. It's three months.

Jessica Rusu: Three months it was, yeah.

Nathalie Lowe: And then by the time I think that we'll analyze the data and whatnot, then you're looking at early autumn for results to be shared.

Jessica Rusu: Yes.

Jo Ann Barefoot: Great. And Jessica, you were going to give another example. I think in addition to the greenwashing.

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Jessica Rusu: Yeah, I was going to say that another recent example of an interesting TechSprint was on the Register actually. So the Register is the list of authorized firms and products. And often when we're talking to consumers, we will share warnings and we'll say, "Before you do business with a certain firm or you buy a certain product, you should always check the Register and make sure that this is an authorized entity." But that is a little bit complicated from a UX or a user experience perspective. Most consumers don't have time or don't know or aren't interested in going to check that information. S.

O something that I was thinking about even two years ago when I first joined the FCA was how do we expose these APIs more broadly so that other third-party providers, whether it's lending aggregators or similar types such as ClearScore, we need to be where consumers are, we need to be where they are looking for financial products and services. And then we need to be able to expose that information to the consumer so that they can make an educated decision. And so I think the TechSprint was focused on identifying new ways to collaborate on that information.

Jo Ann Barefoot: What's the status of that one?

Jessica Rusu: Oh, I think it's just wrapped up last week, was it just concluded? The registered TechSprint was just wrapped up last week, and there were some really interesting... So the way the TechSprint works is at the end of the event each team presents a working proof of concept model, and then the proof of concept models get voted on. And then the teams take that forward in terms of whether it's an external solution or a firm that wants to go away and build a RegTech solution around that, or whether there's further collaboration to happen internally with the authorizations team. So there's always next steps that happen after the conclusion of the TechSprint event itself.

Nathalie Lowe: We do follow up where these things have gone as well. Some of the things that the team are capturing is around, for example, like venture capitalist investment in some of the solutions that have been delivered, awards won by companies that have taken part. So there's a lot of stuff that goes on after the TechSprint. And it's not just an event that just ends, there's a lot of stuff going on out there. Actual real tangible solutions getting out there to market. It's the beginning of the-

Jessica Rusu: It's the beginning. It's the beginning of the end as opposed to the end of the end.

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Jo Ann Barefoot: That's fantastic. Most of the audience may know that you all invented the TechSprint form as well... Or at least for regulators, the regulatory TechSprint as well as the regulatory Sandbox.

So I want to be sure we have enough time to maybe talk about what you are also doing in terms of supervisory techs, SupTech and being a really data driven regulator. My understanding from our last meeting is that you have created a shared data platform with the Bank of England, which has the prudential regulator, but together you're creating a single view of the firm. Talk about this, what is the status of it? What's the journey that has brought you to where you are and where do you plan to take this? And how big a transformation is this? We talk to regulators as I know you do, and most of them are at a very, very early stage of thinking about how to use data in the way that you are doing today. So what's your perspective on it?

Jessica Rusu: Yeah, so I think it's actually a really significant and large digital transformation program that we're going through. And I'm speaking from my public sector experience. I've worked in other sectors and other firms like the auto industry, the banking industry, the big tech industry. So I understand what it means to go through a massive transformation. And that includes investment in people, in processes and technologies. And it can also be very difficult in terms of changing structures, organizational structures, changing ways of working.

So the transformation that the FCA has been going through has certainly been a significant transformation and an ambitious one for all the reasons I laid out earlier about the size of the problem. So we're regulating over 60,000 firms from a conduct perspective, and as you called out from a competition perspective. We also provide the data collections for the Bank of England, for the PRA. So the reg data system that we provide does the prudential and the conduct data collections. So we have really a large operational process that we are running at the FCA.

And so I think in terms of, you said, "What is happening from a SupTech perspective?" So what does that mean? So if you think about the life cycle of the process from the front door, a firm is asking for authorization. So things that we are looking at at the front door, we are leveraging data to identify things like phoenixing, for example. This is when a firm that used to be doing something has now shut down their firm or they got in trouble and then they reemerge as something else. So we're using data and intelligence to identify things like this at the front door.

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We're also connecting single view of firm, single view of entity and individuals so that we can connect to the dots between the information that we hold within the FCA across individuals and firms and entities so that whether it's a frontline authorization team or a supervision team or an enforcement team, we have the same set of information connecting them.

Then we've also been investing in some of our internal system, upgrading systems, migrating them to the cloud, making sure we're getting on the latest versions, reducing technical debt, beefing up our cybersecurity. So there's a lot of investments that we're making internally. One of the big visions that we have is around the digital unified intelligence environment, and this is the connective tissue that learns from the decisions and actions of the supervision team, for example, and then takes that decision back into the environment and then recommends better triaging of casework at the front. So if we understand how decisions have been taken over time, then we can learn from that and better triage the work and drive efficiencies through the system.

So we're really trying to apply good data management and good decision--making and intelligence across the entire life cycle of what the FCA does add.

Nathalie Lowe:

Yeah, so that's one aspect of it in terms of developing tools, processes and all of that good stuff. But a lot of what we're doing as well is changing the culture around data and technology in the organization. So there's a lot of cultural stuff going on as well. The whole change that is going on this is a sea change in terms of from the top down and bottom up to how we deal with data, how we think about data, even though our division is DTI, essentially the thread runs through the whole organization. Everyone is involved in it. And obviously it's exciting and I love it personally anyway, but I think that everyone has really bought into these changes as well, and we are constantly coming up with new ideas. We're developing a lot of stuff and there's a lot of goodwill and support for the stuff that's been done.

I've been in the organization for quite some time, and the change has been quite remarkable in terms of how we see and use data and the ways that people think it can be used and how it can transform. We're a competitive team as well, so everyone's come up with new ideas and I'm not sure if it's because we are on the former Olympic site and everyone's very energetic and wants to come up with new things, but yeah, so it's like we're bringing all these new tools and systems, but in terms of the behaviors and all that change as well is also linked with that.

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Jessica Rusu: Yeah, the culture point is a really good one, which is why we bring in external speakers and industry experts and academia. There's a reason for that collaboration. We had an event a couple of weeks ago called DiFoR: A Data Innovation for the Future of Regulation where we had 93 global regulators come here to the office in Stratford to talk specifically about data and innovation and how it's evolving the way we regulate. And I was absolutely amazed at how many people physically got on the airplane to come and visit us because it was not a hybrid event at all. It was an in-person event only.

Jo Ann Barefoot: So I think you're putting your finger on one of the most significant challenges that people face, because part of what needs to happen in financial regulation is a set of technology changes, but I think most of us agree that even more challenging are the cultural changes and the human changes. Getting the right talent attracted, getting the right of the people that you have and so on. You've touched on it already, but talk more about what... If you were giving advice to a regulatory body that hasn't accomplished that yet, that is bumping up against cultural resistance, what would you urge them to do?

Jessica Rusu: I think the most important thing in changing the culture is about listening and it's about trying to understand the other person or the other side or whatever the other is. And I think for me, in coming into this role, coming from industry and as a data practitioner, I have learned a lot by listening to my peers and my colleagues across the FCA. There's a lot of lawyers, a lot of policy writers, and they think in a different way. And so through discussing with them about how we craft policy and how we take that policy through to action, let's say it's an enforcement action or a supervisory action, I think we've come to a common understanding that there is a need for a set of data to be there, a set of evidence to be there at the point at which you're making a supervisory decision or an authorization decision or an enforcement decision. And without that information or without that set of statistics or data to make those decisions, then you have a weaker understanding of the policy that you're setting.

So the conversation that I think we've been having internally about the culture of the FCA is to begin with the end in mind and to begin with the end in mind when you're writing policy or you're setting out the strategy of the FCA. If we begin by thinking about the outcome that we want to see, then we have a clear understanding of where we need to start. And that's why I think you've seen the FCA talking about the outcomes-based regulation that we're seeing now that we're in the implementation phase of the new consumer duty. The big deal about the consumer duty is that it's an outcomes-based, or it's a principles-based set of regulations, which is around making sure firms are making the right ethical decisions and treating customers fairly. So I think that's

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the cultural shift that we've been trying to drive, just listening to each other, trying to understand each set of challenges and then trying to bring that into alignment.

Nathalie Lowe: I'd also add as well, bringing people on the journey. Data and tech sometimes can sound a bit scary and terminology that's used. And also people feel like they've been done too. They tend to resist change. IF Jessica had turned up one day and just said, "I am going to bring this tool in and I'm going to bring in this long-worded data thing in and do it to you," then I think there would've probably been a lot of resistance. But I think it's about using language that is universal, simple, people understand, but also make it clear that we're on this journey together. We are all working together for a better outcome. It's not just about us giving you a tool, it's about that tool making it easier for you to do your job so you can go home at five o'clock as opposed to seven o'clock in the evening. It's about what are you going to get? And also that we are doing all this together. It's not us just doing it to you, it's just that collective language and just-

Jessica Rusu: Yeah, a really good example of that I got an email in my inbox this morning from a director in supervision talking about the benefits of one of the upgrades that we made to our core case management system because it was now exposing enforcement data to supervisors within the secure channels of the tool without them having to pick up the phone and physically contact the enforcement team for the information and how that was driving efficiencies both for the folks in her supervision team as well as for the colleagues in the enforcement team that didn't have to be on the receiving end of those phone calls. That's just one example of something that's landed in my inbox today, but it's those real personal examples where a tool with a funny name, with a funny acronym, and nobody cares about exactly how it works, the outcome of it made it easier for me to do my job or I have better information. It is what gets people excited about.

Jo Ann Barefoot: Yeah, I want to go back to the point you made about the fact that you have converted to the cloud. Correct me if I'm wrong, you're fully-

Jessica Rusu: That's right. Yeah.

Jo Ann Barefoot: Right?

Jessica Rusu: Fully on the cloud, with all its charts.

Jo Ann Barefoot: So talk about both how essential that is to being a true data-driven regulator. Do you have to be in the cloud? I have a theory that you kind of do, but I'd like to

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hear your thought on it. And then secondly, how hard is that? What are the main challenges that you faced in taking that journey?

Jessica Rusu: So certainly this was a massive part of the digital transformation journey. So we exited the data center. Was it in 2019? 2020?

Nathalie Lowe: Yeah, It was around that time. I think it was just before COVID, yeah.

Jessica Rusu: Yeah. Going back to just before the pandemic, the FCA, and this was prior to my arrival at the FCA, had made a decision to take its first steps on the digital transformation journey by investing in the cloud. And the philosophy around the cloud is that you have more opportunities to integrate with software providers and solution providers and lower cost in scale, as well as lower cost of data storage and the ability to integrate across your system. So there's a lot of really compelling reasons to do that. It doesn't make it easy. It's not a magic bean. It does take a lot of effort to create the systems and to do the migration away from the data center to stand down legacy applications and to stand up new ones.

And so to do that really requires a core competency in engineering and core technology skills. So we have a CIO, a director of technology, and he has a large team of engineering function supported by third-party technology providers as well, that we have outsourced and insourced models. We also have an engineering team in leads. So we have a new leads digital hub. So we are expanding some of our skillsets in the north as well as in Edinburgh. So there's a lot of internal skills and competencies that need to be created in order to effectively take advantage of being on the cloud and understanding and implementing that environment.

Jo Ann Barefoot: Have you found it easy or difficult to attract these technology experts into a regulatory environment?

Jessica Rusu: I would say yes and no. Certainly through the pandemic. I think as the whole country was emerging from that time, there was everyone at the same time seemed to be hiring technology and data skillsets. So that made it a little bit more difficult. But we also have a tremendous amount of interest in the FCA because of the access to data that we have and the role that we play. People do reach out to me from all over the world that are really interested in coming to work for the FCA and to be a part of the mission of the FCA.

I've been fortunate in hiring a really talented SLT. We have a two directors, one director is the CIO and leads the technology division. The other director leads the data and innovation division. And then across that we have 10 heads of

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department. All of them, very experienced leaders from all parts of all different industries and backgrounds. So we have a really diverse and talented SLT, and they have brought a tremendous amount of energy and fun and different ideas and backgrounds to the way we're changing the FCA. I think that's been a fun part. Building the team has been one of the highlights.

Nathalie Lowe: So we've got a very mixed team, lots of... And different backgrounds. I think as well, a lot of the innovation work that we are doing, we're very proactive for getting out there and talking about what we do and all that kind of thought leadership generates more attention and more energy. It's almost like a positive [inaudible] because then more people want to join. My LinkedIn is nuts. Constantly people asking if they can be part of it, collaborate in some way or work here or whatever. Because I know we've got a lot of data here and they can see that we're out there talking, speaking, having fun. I think that a lot of people maybe historically would've probably thought regulation was about a bunch of guys sitting in suits talking a long time over deep papers. We do do bit some of that, but in our division we do get to have a lot of fun and show a lot of leadership. So yeah, we do have a lot of cool people here.

Jessica Rusu: We have a great team. Great team.

Jo Ann Barefoot: So to that point, I did come and see you during your... Tell me what you call it, is Data-

Jessica Rusu: Data and Digital Live Week. Yeah, so we had this concept of a day the week. So one week every year we would bring in economist to come and tell us what's happening in the economy, anybody from the technology sector to tell us about the latest trends. And so this year, as Nathalie rightly said, because we're so competitive with ourselves, we wanted to one up ourselves from the previous year. So we decided-

Nathalie Lowe: We tend up, I think.

Jessica Rusu: We decided to have 10 days of data and digital live. So two weeks worth or 10 days of events to celebrate the FCAs 10th anniversary. And then across those two weeks, we had events on everything from crypto and analytics and economics and policy and regulation. And we had all of these great external speakers coming to the FCA to bring that outside in perspective.

Nathalie Lowe: It was a lot of fun. A lot of fun.

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Jessica Rusu: Yes, it was about driving culture and getting everybody across the FCA involved in thinking about those things that are happening in crypto. How does that apply to me or how should I be thinking about that in my role? So we hosted the event, but it was for the benefit of the entirety of the FCA.

Nathalie Lowe: There's a lot of real world stuff in there. It was a lot like Jessica says about bringing it home, people seeing the relevancy to their own day jobs, helping build that education and cementing the culture a bit more in a really engaging way. So yeah, the team was out the park.

Jessica Rusu: We talked about what was happening in certain criminal chat rooms, on the dark web things happening in the dark web and-

Nathalie Lowe: Predicting Formula One races.

Jessica Rusu: Yeah. So there were a lot of breadth and depth of speakers that went really deeper, really broad. And that just helps us drive the culture and the energy.

Jo Ann Barefoot: I actually had a chance to peek on that Formula One's statistical.

Jessica Rusu: That's right.

Jo Ann Barefoot: Your auditorium was filled, everyone was engaged, everyone was asking questions. It was exciting to see really, truly.

Nathalie Lowe: No [inaudible] building.

Jessica Rusu: Yes.

Jo Ann Barefoot: I've been to a lot of regulatory training events, so to speak, and I'm a former bank regulator myself as you know, and it was just really amazing to see again, the excitement and the creativity and the energy.

I know we're going to run short on time. A couple last questions. One is I'd like to try to bring this type of work down to earth a little bit and maybe put ourselves in the shoes of someone at the FCA who has responsibility for overseeing a bank or particular firms, pardon me, like waking up in the morning and accessing this single view of the firm. What does she or he see in trying to pull that data up and get an integrated view of the parts of the industry you're overseeing and the parts... And maybe how that fits into trends that you're seeing in the system overall? What's it like to work with a tool like that as opposed to traditional information?

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Jessica Rusu: So what it does is it helps centralize information. That's the beauty of MI or management information. And a lot of firms are doing this. They try to make the... You said day in the life of, they try to make whoever is doing that particular role, their day job a little bit easier by centralizing those key pieces of information, those key risk indicators in one place. And to also make it consistent and ensure consistency of decision-making across individuals.

So the way the supervision team structure themselves is they divide up into portfolios. So they have different portfolios of information that they look at. So the single view or the single dashboard that you look at, the key metrics you see will be different depending on your role or depending on which portfolio you're looking after. And so you'll have access to both your regulatory system, your case management system where you do your workflows and can input information and action things on and send it to others for further on action. But you also have a dashboard of management information available to you that gives you, it could be key risk indicators, KRIs, it can be historical information, anything that you would need to see basically to make an informed decision on that portfolio.

Jo Ann Barefoot: I know that you've [inaudible] been able to amass this data and I'm sure dealt with all the many challenges on making sure you have high quality data and data is secure and other challenges at every step. And then in addition, you are using a variety of new types of analytical techniques to learn from it, in terms of AI methods, machine learning, natural language processing. Where are you in that process and what is most exciting?

Jessica Rusu: Yeah, so maybe one example for NLP would be just looking at, let's say it was social media type data or open source type data. Maybe you're investigating a certain kind of behavior for a firm and instead of having to comb through maybe chats or a lot of text-based information, you can use NLP to automatically categorize and sort that information and help you quickly identify whatever hypothesis you're testing. If you think that maybe a particular firm is doing something, you can check the prevalence or the co-occurrence of those comments within a text space without all of the manual effort. So we are bringing those kind of channels and tools together for the supervisors within their dashboard and their toolkit,

Nathalie Lowe: Which makes their lives a lot easier. So we get really positive feedback. Because when I worked on a proof of concept and a little while back on policy paper development, so when we go out there, we're doing... We go do corporate inputs, that kind of stuff. We get lots and lots of feedback, but using these tools and being able to scan through and get sent and then quickly helps you then progress to the more value work quicker. The stuff that's actually a bit more of

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interest. So that's the kind of thing that we're getting from the supervisors. It does reduce admin, that kind of stuff is out the way. Now we can move on to the more higher value type tasks.

Jo Ann Barefoot: I will mention that we did a podcast with your CEO, Nikhil Rathi in Singapore late last year. And we'll be sure to link to that in the show notes as well.

The last question is, I know from experience from many other regulators and industry people too, when they hear about what you all are doing, it seems very ambitious, difficult, very probably investment-intensive. Again, for regulators that are earlier on this journey, what advice do you have for them? What's the most important for them to keep in mind and do?

Jessica Rusu: I think I've seen a lot of global regulators do really fascinating things with really small teams. For example, the Bank of Bahrain is doing fantastic things with social media and data analytics. I don't think you necessarily need to have a really large team or really deep pockets to make a difference. I think as with any firm or any objective, you start by prioritizing what is the most important thing for me and how can I either leverage a tool or social media or data analytics to make a difference. And collaboration. You can get a lot done with collaboration. You don't always have to do everything or solve everything on your own. And I think a lot of regulators are doing that together through GFIN and the DRCF and just working together.

Nathalie Lowe: There's a lot of... Since I joined quite a while ago, and the number of forums to be able to collaborate has really, really expanded. A lot of people are a lot more open than talking to each other because we're all facing a lot of the same challenges and threats and risks and all that kind of stuff. And technology and data, there's always new trends. There's always new things happening out there. In order to us to keep pace or stay ahead, you have to work together. Our organization's only a few thousand strong, but you're dealing with things that are much bigger than that. So you do need to collaborate far and wide. And there a lot of people are happy to do that, which is great.

Jo Ann Barefoot: Absolutely. Is there anything we haven't talked about that you'd like to add?

Nathalie Lowe: Don't know, maybe some turning the camera the other way really, in terms of what are your thoughts on how we are going in terms of our innovation journey? You talk to a lot of regulators, you talk to a lot of people.

Jo Ann Barefoot: Yeah. I mean I'll-

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Nathalie Lowe: [inaudible] achieving.

Jo Ann Barefoot: I'll say again, I really do think that you're at the forefront. There are many other regulators doing really exciting things. There's no question. And I think every regulator is... I keep using the word journey. I think every financial regulator has embarked on a journey of using technology in new ways, understanding the marketplace technology in new ways, and thinking through what does that mean? And as you say, Jessica, prioritizing.

But very few of them are fully in the cloud. Very few. Very few have gotten to the point of having a single view of the firm that is data rich and that is giving them the ability to really run analytics. And when you can do that, it's transformational, it produces better outcomes. You do gain efficiencies. I know it takes investment to get there, but once you're there, you're able to do so much more.

I think many regulatory bodies have people who hear that the technology is going to replace their human expertise. And I think the actual lived experience that I observed is quite to the contrary. The technology taking away the data entry type work and the manual labor to find information and search for it. And then enabling the deep-

Jessica Rusu: The high quality conversations to happen. Absolutely.

Jo Ann Barefoot: Exactly. You've got people, and every regulator has human brains where people have seen what can go wrong. They really understand risk, but they don't have at their fingertips good information that is quickly highlighting for them, what should I be looking at? What might be a red flag? How does this situation compare to what else is going on in the marketplace? And is it an outlier for good or bad? I think when supervisors and enforcement experts get the opportunity to work with this information, they appreciate it. And so does the industry. I know it's hard for the industry to make the conversion, to be able to provide information in digital forum. I know many regulators struggle with that. In the United States, we have a very large number of very small banks and credit unions. We have almost 10,000 such entities. And most of them are facing pretty daunting efforts to digitize what they're doing.

But that journey is underway too. And once they are there and have the ability to use RegTech tools to find their own risk before you find them, if you know what I mean, and manage them early and prevent themselves from going down a road that's going to go back [inaudible] later, it's so much more... It's better for the customer, it's better for the system, it's better for the individual institution.

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It's better for society. Again, I think you have been leading the way and I just so admire it. I so appreciate you.

Jessica Rusu: Thank you so much, Jo Ann. This has been great to show talk to you and we really appreciate you giving us the opportunity to share our story.

Jo Ann Barefoot: Absolutely. If people want to come and find out more about what you're doing, tell us where they should look.

Jessica Rusu: They should look at our... We have an FCA inbox, right?

Nathalie Lowe: Yes, we do. But I think the easiest probably way is probably to just go on our website, which is fca.org.uk.

Jo Ann Barefoot: Wonderful. Jessica Rusu and Nathalie Lowe, thank you both so much for being with me today. I cannot thank you enough.

Jessica Rusu: Thank you.

Nathalie Lowe: Thank you.