REINVENTING THE ENERGY DATA PLATFORM

VIDEO TRANSCRIPT

SPEAKER: From around the globe, it's TheCUBE with digital coverage of AWS re:Invent Executive Summit 2020, sponsored by Accenture and AWS.

REBECCA KNIGHT: Welcome everyone to TheCUBE's virtual coverage of the Accenture Executive Summit, part of AWS re:Invent 2020. I'm your host, Rebecca Knight.

We are talking today about Reinventing the Energy Data Platform. We have two guests joining us. First, we have Johan Krebbers. He is the GM digital Emerging Technologies and VP of IT Innovation at Shell. Thank you so much for coming on the show, Johan.

JOHAN KREBBERS: You're welcome.

REBECCA KNIGHT: And next, we have Liz Dennett. She is the Lead Solution Architect for OSDU on AWS. Thank you so much, Liz.

LIZ DENNETT: Happy to be here.

REBECCA KNIGHT: So I want to start our conversation by talking about OSDU. Like so many great innovations, it started with a problem. Johan, what was the problem you were trying to solve at Shell?

JOHAN KREBBERS: Yeah, we have to go back a couple of years. We started the December 2017, we had a meeting with the guys with exploration in Shell and the main problem they had, of course, they had lots and lots of data, but weren't able to find the right data they need to work from or the data was scattered and is scattered from all over the place. And so, the real problem we tried to solve is how that a person working in exploration could find their proper data, not just the data, also the data they really needed. That was the problem we talked about December 2017. We said, okay, the way we see moving forward is to start putting that data into a single data platform. And that at the time that we called it SDU, the Subsurface Data

Universe, and that what the Shell name was.

So in January 2018, we start a project with Amazon to start creating and configuring the building that SDU environment, the Subsurface Data Universe. It was a single data platform to put all the exploration and wells data to that single environment. That was the intent.

And then we said, already in March of that same year, we said, well, from a Shell point of view, we will be far better off if we could make this an industry solution and not just a Shell solution. Of course, Shell could be – if we can make an industry solution where people set the topic applications for it and also, it's far better than for Shell to say we're have a Shell special solution because we don't make money out of how we store the data. We can make money out of if we have external data, we can exploit the data. So storing the data, we should do as efficiently as possibly as you can.

In March, we reached out to about 8 or 9 oil and gas operators, like the Equinors, like the Totals, like the Chevrons of this world that say, hey, we in Shell are doing this, do you want to join this effort? And to our surprise, they all said, yes. And then in September 2018, we had our kickoff meeting with the OPEC Group, where we said, okay, if you want to work together with lots of other companies, we also need to look at how we organize that or is it just that we're working with lots of large companies, you need to have some legal framework around, some framework around it. So that's why we went to the OPEC Group and said, okay, let's form the OSDU forum as we called it at the time.

So in September 2018, we went to the Galleria in Houston with a kickoff meeting for OSDU for about 10 members at the time. So that's just over two years ago, we started an exercise formally called OSDU and kicked it off.

So that's really then where we're coming from and how we got there also.

REBECCA KNIGHT: The origins story. So what, digging a little deeper there, what were some of the things you were trying to achieve with the OSDU?

JOHAN KREBBERS: Well, a couple of things we tried to achieve with the OSDU. The first is really separating data from applications to what is the biggest problem we have in the subsurface space that the data and applications are all interlinked or tied together? And if you have then a new company come along and I say, I have this new application and needs access to the data, then that's not possible because the data often interlinked with the application.

So the first thing we did is really breaking the link between the application and the data. That was the first thing we did. Secondly, put all the data to a single data platform, take the silos out because what was happening in the subsurface space, I mean they got all the data in what we call silos, in small little islands out of there.

So we tried to do is, first, break the link to create and then put the data in a single data platform. And the third part put a standard layer on top of it as some API level, talking to create a platform so we could create an ecosystem out of companies to start developing sub-applications on top of their data platform. Because in my level of data platform, but you all successfully have a rich ecosystem and people started developing applications on top of that. And then you can exploit the data like small companies, large companies, universities, you name it, but you have to create an ecosystem out of there.

So the three things was first, break the link between application and data. Just break it. And put data at the center and also make sure that data is data structure will not be managed by one company or it will only be managed the data structures by the OSDU forum. And secondly, then put a data, a single data platform. Thirdly then, have the API layer on top and then create an ecosystem really out for people to say please start developing applications. But now they had access to the data, of course, the data no longer linked to somebody's application. It was all free and available for an API layer. That was all September 2018 more or less.

REBECCA KNIGHT: Liz, I want to bring you in here a little bit. Can you talk a little bit about some of the imperatives from the AWS standpoint in terms of what you were trying to achieve with this?

LIZ DENNETT: Yeah, absolutely. And this whole thing, as Johan said, started with the challenge that was really brought out at Shell. The challenges that geoscientists, spend up to 70% of their time looking for data. I'm a geologist. I have spent more than 70% of my time trying to find data in these silos. And from there, instead of just figuring out how we could address that one problem, we work together to really understand the root cause of these challenges. And working backwards from that use case, OSDU and OSDU on AWS has really enabled customers to create solutions that span not just this in particular problem, but can really scale to be inclusive of the entire energy value chain and deliver value from these use cases, to the energy industry and beyond.

REBECCA KNIGHT: Thank you. Johan, so talk a little bit about Accenture's Cloud First approach and how it has helped Shell work faster and better with speed?

JOHAN KREBBERS: Well, of course, Accenture Cloud First approach really works here with an Amazon environment, AWS environment. So really look at Accenture and Amazon together helping Shell in this space. The combination of the two is what we're really looking at and where our success, of course, can bring recent knowledge to the environment, operational support knowledge to an environment and, of course, Amazon would be there to this environment that underpinning their services, etc.

So we all expect of the combination a lot of good when we start rolling out and put in production to all two or three of (inaudible). Our aim is when the Release 3 comes to the market in Q1 next year of our view and when we starting rolling out in production inside Shell. So this is the first OU leads which is ready for prime time production across an enterprise. We have Release 1 just before Christmas last year, Release 2 in May of this year, Release 3 is the first release we want to use for full scale production of deployment inside Shell and also, how to operate this around the world. And there is what Amazon – sorry, there what Accenture can play a role in ongoing in deployment in

building up, but also support environment.

REBECCA KNIGHT: So one of the other things that we talk a lot about here on TheCUBE is sustainability and this is a big imperative at so many organizations around the world, in particular, energy companies. How does this move to OSDU help organizations become – how is this a greener solution for companies?

JOHAN KREBBERS: Well, first, we make – it's a greener solution where you start making much more efficient use of your resources which is a really important one. The second thing we're doing is also, we start with our view in very much in the oil and gas space with the exploration development space. We will grow our view within our strategy, we grow our view, now also, to an alternative energy source or which you all start supporting next year things like solar farms, wind farms, the geothermal environment, hydrogen. So it becomes an open energy data platform, not just for the oil and gas industry, but for any type of industry, any type of energy industry. So our focus is to create, bring the data of all those various energy data sources together into a single data platform. They're going to use AI in all of the technology on top of that to exploit the data to be together in a single data platform.

REBECCA KNIGHT: Liz, I want to ask you about security because security is such a big concern when it comes to data. How secure is the data on OSDU?

LIZ DENNETT: Actually, can I talk – can I do a follow-up on the sustainability talking point real quick?

REBECCA KNIGHT: Oh, absolutely, by all means.

LIZ DENNETT: I mean I want to interject though, security is absolutely our top priority. I don't mean to move away from that. But with sustainability, in addition to the benefits of the OSDU data platform, when a company moves from on prem to the cloud, they're also able to leverage the benefits at scale.

Now AWS is committed to running our business in the most environmentally friendly way possible. And our scale allows us to achieve higher resource utilization and energy efficiency then a typical on prem data center.

Now a recent study by 451 Research found that AWS's infrastructure is 3.6 times more energy efficient than the median of surveyed enterprise data centers. Two-thirds of that advantage is due to higher server utilization and a more energy efficient server population. But when you factor in the carbon intensity of consumed electricity and renewable energy purchases, 451 found that AWS performs the same task with an 88% lower carbon footprint. Now, that's just another way that AWS and OSDU were working to support our customers is they seek to better understand their workflows and make their legacy businesses less carbon intensive.

REBECCA KNIGHT: That's incredible. Those statistics are incredible. Do you want to talk a little bit now about security?

LIZ DENNETT: Absolutely. And security will always be AWS's top priority. In fact, AWS has been architected to be the most flexible and secure at cloud computing environment available today. Our core infrastructure is built to satisfy the security requirements for the military, global banks and other high sensitivity organizations. And, in fact, AWS uses the same secure hardware and software to build and operate each of our regions, so that customers benefit from the only commercial cloud that's had its service offerings and associated supply chain vetted and deemed secure enough for top secret workloads. That's backed by a deep set of cloud security tools with more than 200 security compliance and governmental service and key features, as well as an ecosystem of partners, like Accenture, that can really help our customers to make sure that their environments for their data meet and/or exceed their security requirements.

REBECCA KNIGHT: Johan, I want you to talk a little bit about how OSDU can be used today? Does it only handle subsurface data?

JOHAN KREBBERS: Today, it handles subsurface and wells data. We're going to add to that production throughout the middle of next year. That means that the whole (inaudible) business goes from exploration, all the way to production. You'll be able to get into a single data platform. So production will be added around Q3 of next year. And then a principle, we have a typical to all the data in a single environment and we're going to extend to them to all the data sources or energy sources like solar farms, wind farms, hydrogen, hydro, etc., so we're going to add a whole list of other energy source to them and bring all the data together into a single data

platform.

So we move from an oil and gas data platform to energy data platform. That's really what our objective is because the whole industry, if you look at our companies, all move in that same direction according to – of course, are very strong in oil and gas, but also increasingly going to all the energy sources like solar, like wind, like hydrogen, etc. So we move exactly with the same method that the whole OSDU can really support it whole energy perspective of energy sources, of course.

REBECCA KNIGHT: And, Liz and Johan, I want you to close us out here by just giving us a look into your crystal balls and talking about the 5- and 10-year plan for OSDU? We'll start with you, Liz. What do you see is the future holding for this platform?

LIZ DENNETT: Honestly, the incredibly cool thing about working at AWS is you never know where the innovation and the journey is going to take you. I personally am looking forward to work with our customers wherever their OSDU journeys take them, whether it's enabling new energy solutions or continuing to expand to support use cases throughout the energy value chain and beyond. But really looking forward to continuing to partner as we innovate to slay tomorrow's challenges.

REBECCA KNIGHT: Johan?

JOHAN KREBBERS: Yeah, first, nobody can look this far ahead anymore nowadays, especially 10 years. I mean who knows what happens in 10 years. But if you look what our whole objective is, that really in the next 5 years, all of you will become the key backbone for energy companies, for store your data, do artificial intelligence and optimize the whole energy supply chain in this world (inaudible).

REBECCA: Johan Krebbers, Liz Dennett, thank you so much for coming on TheCUBE virtual.

JOHAN KREBBERS: Thank you.

LIZ DENNETT: Thank you.

REBECCA KNIGHT: I'm Rebecca Knight. Stayed tuned for more of our coverage of the Accenture Executive Summit.