accenture

Stories to watch at the Farnborough international airshow 2024

AUDIO TRANSCRIPT

00:07 - 00:48
Joe Anselmo
Welcome to check six with Accenture. A special edition of Aviation Week's Check six podcast sponsored by Accenture. I'm Joe Anselmo, editorial director and editor in chief of Aviation Week and Space Technology magazine. Believe it or not, the aerospace industry's biggest event of 2024 the Farnborough Airshow is nearly upon us. And so, continuing an annual tradition, it's time to hear Accenture's predictions of what to watch for at this year's airshow.

Joining us with their crystal balls are John Schmidt, the leader of Accenture's global aerospace and defense practice, and Joyce Kline, the firm's global data and AI leader for aerospace and defense. John and Joyce, welcome to the podcast.

00:49 - 00:50
John Schmidt
Thank you Joe. Good to be here.

00:51 - 00:51
Joyce Kline
Thanks, Joe.

00:52 - 01:03
Joe Anselmo
John, you're going to start us off by outlining four stories to watch at this year's Farnborough. And then we'll take some time for you and Joyce to delve into each of them. So take it away.

01:04 - 02:20
John Schmidt
All right, Joe. Well, thank you. And let me first talk about how we come up with these, these stories to watch every year. And, you know, each year we come into the show, we think about, you know, what we're seeing happening in industry.

You know, the trends that are impacting the overall industry. What we're hearing from earnings reports, our clients, the work we're doing. And we kind of take all that work and bring it together into, okay, here's what we think is going to be stories of the day when we get to the show. Sometimes we find things that are really quite interesting and maybe new that haven't been talked about before.

And I think, as you and I were discussing just shortly ago this year, there's going to be a continuation of a theme in many ways. So we have four stories, outline all four quickly, and we can kind of dive in. The first one is really around aerospace growth. You know, the growth of the companies that are working in this industry and the projections for that growth going forward, and what it says about the need to really use technology to improve supply chain operations, to really accomplish and and build on that growth.

Number two is around reinvention and what Gen AI is doing in the industry and what we expect it to be doing at scale. Number three is around manufacturing quality. I think that's any surprise to anybody listening. And then story four is really around attracting and retaining or retraining the next generation of talent. We're seeing that become a much larger theme in the discussions we're having across the industry.

02:21 - 02:24
Joe Anselmo
Okay. Should we jump into, in story one?

02:25 - 04:29
John Schmidt
Sure. First of all, there's five things that we think are really driving the industry today. the five forces, the first one is around supply chain. And we're going to dive into that moment. So I'll leave that one there. The second one is around geopolitical uncertainty and what we have going on around the world in a number of different, areas that are causing a large number of governments to rethink their defense posture and rethink whether they have the right number of platforms, types of platforms for their defense, needs.

The third one is what we call the ongoing tech revolution. I mean, the continuing exposure to new technologies and ever faster rate. And one of the most recent ones Generative AI which we're in again, talk about a little bit later. And then we have what we're calling boundaries of imagined new segments emerging like the retail operators, like commercial space coming to the fore.

You have mergers and acquisitions. The most recent announcement at Boeing acquiring Spirit. I mean, there's a whole lot of change going on in the industry causing incumbents to think about where they're playing and how they're playing and how to make sure that positioned to tackle future growth. Then the fifth one is around talent renewal. So if you take those into context, then we start looking at what's going on in the industry.

And our most recent report that we did on commercial, which we do every six months, is called the Commercial Aeropace Insight Report, available on our website indicates that A&D company revenues are going to be returning and surpassing pre 2019 levels by almost 11% this year. So the company's operating the commercial side of the business. The growth is back.

The revenues are back and there's more ahead of us. And it's fueled by a number of things. One is the need for new aircraft, which obviously we can be increasing those rates and still have a tremendous number of years of backlog and also a tremendous amount of aftermarket services that are growing as well. So the segue to this to Joyce and it there's persistent and continuing supply chain challenges.

And even while our report shows a couple percentage increase in confidence among executives said that 79% were confident that their supply chain is going to be able to deliver on time over the next six months, up from a couple points lower. It's still got a lot of room to move.

04:30 - 05:46
Joyce Kline
Yeah, and I think for me, Joe, one of the important statistics that came through that, while not surprising, sometimes it's having the percentage that kind of is the reawakening moment.

More than half. It's actually 55% of the executives surveyed said that they're still relying on time consuming, cumbersome manual processes from monitoring their supply chain. And, you know, in terms of also sharing information with their suppliers is also manual. And the other part of, you know, the manual context is the way that they're managing risk. So when you look at all these things as managing and monitoring the supply chain, exchanging data with suppliers and monitoring risks, there are technology solutions that can be deployed.

And to know that there's still this heavy reliance on manual tasks and people intensive, it's just come on, you know, we as an industry, we really need to start moving forward a little bit there. And so for me, I'm not surprised by it. But if you are to say, hey, last year to this year, I'm not seeing that much of a change.

And really, I hope going forward organizations start to double down and really look at these three areas around monitoring data exchanges and risk management and start to embrace some of the technology that exists.

05:47 - 05:57
Joe Anselmo
That's an astounding statistic. I mean, we've been writing about technological solutions for years, if not decades. And to see that the industry is still at that point is really surprising.

05:57 - 05:57
Joyce Kline
Exactly.

05:58 - 06:21
John Schmidt
Well, it is. And if you think about the other

kind of data that's coming forward and respect to Gen AI you know, 66 the two thirds of the executives we surveyed in most recent report think that, Gen AI can strengthen supply chain resilience by improving how they engage with everything from entering network supplier networks to enabling intelligent buyer assistance. In fact, I think, Joyce, you have an example that we might be able to describe even further.

06:22 - 07:22
Joyce Kline
Yeah, yeah. And so our example, to build on what John was just saying is we have a resilient supply chain solution that Accenture that really looks at, you know, what is that n-tier? How do I get access to all those multiple layers within my extended supply chain?

You take that solution, couple it with a digital twin capability, and then move upstream to the integration into manufacturing. And that whole aspect of managing and monitoring. If I add Gen AI on top of that, I'm building this conversational layer and the ability to extract data in a more user friendly manner. That should make, you know, the use of technology here and the and the 66%, you know, that want to aspire to use Gen AI, providing them with those capabilities to really, I would say, build a more robust solution than what exists today. So I'm encouraged by that. You know, you look at the 66% in comparison to the 55% and you say, okay, there's hope here. So that's the good news.

07:23 - 07:25
Joe Anselmo
We're getting into story two here, aren't we?

07:26 - 08:22
John Schmidt
Well, you know, before we jump out of this, just as a thought, you know, we are doing our digital showcase again this year at our chalet at Farnborough. And we do this every year where we can actually bring our clients in to see what this looks like and how it's really used. We're going to have five demos showing how Generative AI can be used in different facets of what we do core in aerospace defense industry, and one of those on supply chain resilience. So I'm looking forward to be able to show our clients kind of what this really means and what it really does, because it's no longer time for proof of concept or let's dilly dally, this is when we can start taking in technology which isn't as new as it seems.

Even though it broke onto the global stage in November of 2022, large language models have been around for a long time before that, and we've been working with them for years before that. But take this technology and actually use it to drive bottom line results. So we're very happy to have those digital demonstrations, available to our clients when we're at the show in a couple of weeks.

08:23 - 08:28
Joe Anselmo
AI is moving so fast. How do you even keep up and stay kept up with this? And when it's moving at that pace?

08:29 - 10:32
Joyce Kline
Well, I think one of the things that that Accenture has been investing in this year, in fact, Joe, I'm not sure if you know, but we are investing $3 billion over the next three years as it relates to generative AI. We really believe that the technology is game changing, and all of us that are involved, you know, it's, how do you keep

pace with all the changes. But one of the things that we're really trying to do as, as John highlighted, is help our clients appreciate not only this new technology, but how we can provide the value.

As John mentioned, you know, last year was all about POCs. This year is, you know, enterprise reinvention, powered by generative AI, keeping pace with the multiple large language models that are out there. But really looking at it from a business driven perspective. So it's not just, oh, here's a whiz bang technology, but rather, you know, we've looked at it across aerospace and defense and have prioritized these five priority areas of business development engineering, supply chain and operations, aftermarket and corporate functions.

And IT. And for us, it's really what are those, you know, what we call table stakes use cases. And then what are the strategic bets that our A&D clients really need to keep pace with. Because we see the value. We understand how the technology can change the way that work is being done. We understand how back to our manual process example, where it can be fundamentally changed from a productivity perspective.

I can do things a lot quicker with the use of this technology. I can break down silos that exist today. And I'll give you a real quick example in the planning space. So today, because data is segregated, you have a supply planner or a demand planner or an operations planner. But why can't generative AI pull all that information together and make it available to an end-to-end supply chain planner that can now then do the tasks necessary to appropriately plan knowing what the forecast is all the way down to what the operations team needs. So we see that we have just one example of the power of generative AI.

10:33 - 10:35
Joe Anselmo
Okay, so guys we've gotten into story two. Now John.

10:36 - 11:27
John Schmidt
Yes we have. And that was a quick segue wasn't it. Yeah. One thing to add to what Joyce is saying. Again, the research we're doing in recent in aerospace and defense is one the industries we're investing a lot of our time and energy on as a firm is over half the working tasks within Aerospace Defense Company are ripe for automation or augmentation powered by Gen AI

So there's a lot of opportunity here. And if I take it not to story for quite yet on workforce joke, but if I take it towards looking at the demographics and the need for Stem talent that we have across this industry globally, we're going to have to figure out how to get augmentation as a part of what we do with technology.

There's just simply not going to be enough Stem graduates or even qualified people on the shop floor or the assembly floor to be able to service the demand that we have in front of us on both the commercial and defense side. So it's a it's a pretty enormous opportunity for the industry.

11:28 - 12:01
Joe Anselmo
Okay. We're going to move on to story three manufacturing quality. But before we do that, a quick word from our sponsor. (With four decades of working with leading global organizations in aerospace and defense, Accenture helps companies achieve operational excellence, embrace the ongoing technology revolution and reinvent their business. To learn more, visit accenture.com/aerospace-defense). Okay we're back. John story three.

12:02 - 14:22
John Schmidt
Well manufacturing quality I don't think anybody can open a newspaper or magazine and not see a story that's related to this topic. You know, it's always been important to be able to drive manufacturing operations efficiently and effectively. I remember when I was brand new and we were working on the assembly line of one of the defense aircrafts here in the US. It was all about cycle time, quality and cost, and managing across all those three dimensions. And we recently did some research that came up with a staggering number, $41 billion annually in missed revenue growth opportunities.

And the last few years were due to challenges in engineering, supply, production and operations. $41 billion. That's a huge number of missed revenue opportunities last few years. And so a lot of focus on this area. And there's a number of things that we're seeing going on out there. And some of them had to accelerate. So we talked about automation and robotics as a solution for years.

We're seeing an increase in activity around here. You know, for some obvious reasons. One, drive efficiencies. You know, for some of the innovation that we can drive through the automation itself. But when you start combining all this stuff together, you get to some powerful, powerful tools. And one of them is something we've actually developed and working with our clients, and we call it Leon and LEON Lean eradication of nonconformity.

And it can generate some significant results. So as an example, Leon helps manage and analyze the production process to help get to root cause nonconforming assets, you know, leads to a faster time to cure in a more effective manner, and then also helps reduce the amount of overall time and analyze, solve, and documenting component of that process. So if you're familiar with all that process, nonconference is found and the corrective action has to be generated.

So using a tool and in fact so many seasonal components they can use language to go in and say here's what I'm seeing. The tool then goes and searches through all the past history. It has to be able to quickly recognize that's something that's very similar to this one or this one, allowing the operator to go select and move forward.

And we're getting in 98% first time right resolution using the tool. So it's a kind of magic between automation and in some ways Gen AI enabling this tool to work to take down the time and then in effect, start to eliminate the multiple times we correct the same nonconformity because it happens to be found in different parts of the assembly floor. So let's do down there.

14:23 - 14:23
Joe Anselmo
Joyce.

14:24 - 16:05
Joyce Kline
Yeah. The pieces that I would add on, you know, we talked about table stakes, use cases, from a Gen AI perspective. And you know, John kind of hit on root cause analysis. And you know how Leon can help, you know, adding Leon plus

generative AI really feel that we would have a very powerful means of understanding what's happening, why is it happening, and how can I resolve it so it doesn't happen again from a quality perspective.

And then generative AI also has a role just on manufacturing shop floor work instructions. How can I rewrite reinvent? How can I capture what's happening on the shop floor and improve that productivity to the points that, you know, John raised earlier in terms of the benefits of generative AI? And then the final piece that I'd add is we also have the ability and this is probably a little bit more of a strategic bet from a generative AI perspective, but it would be looking at all of the machine data around the shop floor.

And how can generative AI help better manage predictive maintenance and asset uptime? By understanding what's happening and keeping track of it, pulling the requisite information and making it available, but also providing that entire feedback loop to know that when there is an issue identified, how am I going to track it? Who's you know, where's the right worker? So we'll get into workers and and another minute.

But you know the right employees with the right training and certification so that they're deployed to actually do the actual repair and upgrade. And so you see it kind of a full circle perspective in a role that generative AI can take in terms of keeping everything together and resulting in, you know, faster repair cycles and, you know, the ability that the machine is up more than in the past.

16:06 - 16:52
John Schmidt
Yeah, maybe I'll just add in that we talked about the demos we're going to have at Farnborough this year, and one of them is literally around the future of manufacturing and using a shopfloor automation example of how we can use generative AI, along with the virtualization and shadowing to be able to assess, you know, quality control, modularization, optimization of the assets on the assembly floor themselves.

So we're really trying to show what we're doing in the industry now versus what we're talking about. And last year we did a lot around automated inspection. So we had a robot using lidar to be able to do inspection on a section of, aircraft assembly. We actually had to scrap out a section of an aircraft assembly in our chalet.

And this year we're trying to close that loop with things like the Leon tool to be able to show that how we can actually get the speed to results, and then also get to a point where we eliminate those defects, not just identify where they are.

16:53 - 17:04
Joe Anselmo
Okay. And story four I mean, workforce, we had so many skilled workers retire during Covid and man every company we talked to. It's just been rough to find and keep enough talent.

17:05 - 18:06
John Schmidt
Yeah, it's it's the challenge of the day for sure. I mean, talent has been something I feel like I've been talking about every year for the last ten or more. Now, what we're finding in the data supports that, you know, over 40% of the workforce has less than five years of tenure with their current employer.

Now that's an amazing number compared to what it used to be pre-COVID. Attrition is now at around 7% just over, which is a huge jump from just over 4% in 2017. So you know, we've got kind of dual challenge here. And so as a result, nearly all of the aerospace executives we surveyed considered retention as an important or very important to their organization.

It was actually 97%. But it's one of the top issues that we hear about, no matter what element we're talking about across the core value chain. And so, you know, I talked earlier about, you know, looking at the demographics in Stem graduates, what we need to continue to fuel our growth. The fact is that Gen AI is one of those tools, along with regular AI. I think we talk a lot about Gen AI and it is a game changing technology regular AI is also quite important in that.

18:07 - 19:13
Joyce Kline
Yeah. So to build off of, John's comments, what I would add is that, you know, one way of thinking about generative AI is not only, you know, how can it transform processes, but how does it help the employee better do their job.

So we see things like the ability of Gen AI helping to search documentation to get answers quickly. On our last podcast with Michael Bruno, we talked about, you know, the engineering assistant working alongside a junior engineer. So they don't have to tap on a senior engineer. But one of the things that really is remarkable in that capability is the speed by which that junior engineer can now become more proficient because they know where to go look, they can follow along.

So to John's point, the ability that work will be done differently going forward, powered by AI and Gen AI are part of those things that I think will fundamentally change our industry going forward. Work won't be what it was in the past. It'll be this new means of working with these assistants across the entire value chain to get work done at a different pace and manner than it has been in the past.

19:14 - 20:20
John Schmidt
Yeah, it's a great point, Joe. It's a changing nature of work. When we think end to end, that's being enabled here, and it's also going to drive a change in the types of workers that we're going to want to be bring into the industry, people who are able to adapt more quickly to change, to adapt more quickly, to new technologies.

It's going to be the skill of the future because technology and the revolution of technologies is not going to change. It's not going to slow down. And it is. I was talking to one of our clients, the chief digital officer of one of the large OEMs. I'm taking this slightly out of context, but the technology's the easy part.

Getting people to use the technology is the hard part. And and there's a lot of truth in that. And it's a complicated thing. It's not just change management helping people understand it. It's also about having people who have that kind of innate adeptness at be able to pick things up and then move on quickly and leverage it in their in their kind of current job.

So there's me a lot of success is driven ultimately upon that adoption. You know we can give you Microsoft Copilot or we can give you this tool or that tool. But if the people don't use it or don't use it to its full potential, we'll never get to the full potential of tool. As for for being able to

do things faster and better cost or a higher quality.

20:21 - 20:41
Joyce Kline
John, just to add on, I think there's also this piece of there's net new skills that are required that aren't, you know, that fundamentally didn't exist before. So I need to know people that know how to do prompt engineering. I need to know people that know how to update and upgrade LLM. So it's a very different, you know, set of requirements going forward than exists today.

20:42 - 20:54
Joe Anselmo
We are just about out of time, but I can't let you to go without putting you both on the spot. Pull out those crystal balls. Joyce. John, what are your predictions for the Farnborough Air Show this month?

20:55 - 21:46
Joyce Kline
I'll go first. All right. So, Joe, I have a two part and you probably can guess that one of them is that we're going to see and hear a lot about generative AI. At the Farnborough Air Show this year. It was talked about last time we were in Paris. But this year it's, I think, going to be front and center for us in Farnborough. Now, with that, I think you can expect me to make my next comment, which is also Gen AI related. I would like us as an industry to start to think about how generative AI can help in marketing of activities and promoting products within our industry.

And where I'm going is if you walk around the airshow and you don't see a logo, all the wording is very much the same. And I'm hoping that as we move forward, companies will start to think about the personalization aspects that exist powered by generative AI and start to leverage that capability going forward. So that's why I said I had a two part

21:47 - 21:49
Joe Anselmo
okay, John, what's yours?

21:49 - 22:13
John Schmidt
I let her go first because hers is way better than mine. I mean, typically we make predictions about the weather, but the last several the Farnborough just seems like hot, followed by more hot, and then maybe some rain. So I'm saying I'm going to predict. And I know that our lead for the air show is going to be listening to this, that we're going to have extra air conditioning capacity in our chalet just in case it's hot and even more hot afterwards. So that's my prediction, Joe.

22:14 - 22:39
Joe Anselmo
Okay, I remember the year when the power went out and, the chalets were pretty hot at Farnborough. Hopefully we'll get better weather this year. John Joyce, thanks so much for sharing your insight. That is a wrap for this edition of check six with Accenture. A special thanks to our podcast editor in Georgia, Olie Sylvester, thank you to our listeners for your time. John Joyce and I will be soon headed to the United Kingdom to attend the show, and we hope to see you there.