Welcome to our new Embark podcast episode, where we talk about travel, technology, and trust. My name is Emily Weiss, and I am the Global Travel Industry Lead at Accenture and your podcast host. Today, we’re going to discuss what the latest Accenture Technology Vision means for the travel industry. We have forecasted tech trends every year for about 20 years with the Accenture Technology Vision. This year’s theme is ‘When Atoms Meet Bits’. I am delighted today to be joined by two of my colleagues, Harish Ranganath and Michael Robinson, who will share more about that theme and the associated trends.

Harish is based in Miami and has 23 years of experience working with hotels, cruise lines, airlines, and airports. As a Global Travel Technology Lead at Accenture, he helps travel executives find answers to some of the hardest questions they face every day. Michael is a Washington, D.C. based managing director and a leader in Accenture’s travel practice, where he serves as travel industry innovation, ecosystem, and generative AI lead globally. So let’s get started. If you look back over the past 5 years, we have seen an unprecedented level of disruption. In fact, according to our Accenture Business Trends Survey and Disruption Index, the overall level of disruption increased by 200% between 2017 and 2022. And the world is not getting any simpler. So what are businesses doing in response to all of this? They are reinventing, and the reinvention is powered by technology. In fact, our surveys show that 9 out of 10 leaders believe technology is essential to how they compete and whether they succeed going forward. Technology is fundamental to providing the resilience that companies are looking for as they reinvent for a more dynamic, agile approach to navigating the future.

That is why we talk about the idea of total enterprise reinvention. A new performance frontier that’s focused on navigating continual uncertainty rather than a one time transformation approach. So that leads us to this year’s theme. When atoms meet bits. Today, the digital world and the physical world operate largely separately. We live our lives split between the digital and the physical, and frankly, moving across these separate realities can be inefficient and exhausting at times. So it’s time to make a change. The next wave of business transformation will shift from creating isolated digital capabilities to creating the foundations of a new reality, a shared reality that seamlessly converges the physical lives we’ve been leading with the digital ones we’ve been rapidly expanding.

Accenture’s Technology Vision provides the necessary foundation for businesses to understand this new reality, see the value it offers, and leverage it to their advantage. So let’s now hear from Michael and Harish, who will delve into each of the four trends. Michael, starting with the first trend, generalizing AI, can you share with us your perspective on how travel companies can determine the right use cases for generative AI?

Michael Robinson
Thanks, Emily. That’s a fantastic question. Accenture believes that generative AI is here to stay. It’s not a fad. It’s not a step change that is going to go away like some other previous emerging technologies. We do think that it’s going to be differentiated. We’ve done some research overall in the marketplace and across all industries, and travel is no different. We believe that about 40% of all industry processes are going to be transformed or augmented, by generative AI. But the key is generative AI is a technology. So we think travel companies need to take a step back, look at their organization and identify where
they see a competitive advantage for generative AI. That can be on the experience side, in terms of what they're going to deliver for their customers, or it could be on the operations side or the enterprise side and see where they can drive productivity or cost efficiencies.

There are going to be opportunities to create new value pools, create new experiences and disrupt themselves, potentially participate in new parts of the ecosystem where they haven't previously participated. If you think back in the late nineties, when OTAs came to life, that was a disruptive moment in the travel industry. And we think that generative AI is another one of those moments. So the question for travel companies is: what do you do? Do you want to create a moat around your organization and experiences and create opportunities that you previously couldn’t create prior to the new capacity and new capabilities that generative AI will bring to the table?

Or do you want to essentially go outside of the box, go outside of your area of influence and try to drive new experiences, new capabilities that you've been thinking about, but were previously limited due to technology concerns. And we've actually helped a lot of our clients start thinking through that process and identifying across that value chain, where generative AI has a strategic fit, an operational fit and a technology fit.

And, given those use cases, there are some things that organizations are going to need to do to bring those to life. But the first step is to identify where you want generative AI to play a role.

Emily Weiss
Michael, I'm curious. I know you just said they can look at it sort of strategically, technically or operationally. Do you see, or do you feel that travel companies are focusing in more on one versus the other, or has it been really divided equally across those three areas?

Michael Robinson
Yeah, they're focused on the operational side. And there’s a couple of reasons for that. The first reason is the risk profile. They’re looking at the value proposition, but they’re also looking at the risk proposition. Obviously, if there's a risk to your brand, or regulatory risk or privacy risk, that's an area that you want to tread carefully as you go through the process.

So one way to think about this would be to look at the enterprise side and look at the operational fit and identify areas where you can set your foundation. Set your governance structure, set up your organizational capabilities, and look for the opportunities where Generative AI can play a role in the operational side.

And it gives you a great opportunity to do some of the things that are key: identifying the foundational models, identifying ways to create a responsible AI. Identify ways to embed new capabilities with your talent and upskill your talent. So we see a lot of clients thinking about the big picture, thinking about the strategic picture, but using those table stakes, low risk, high value productivity opportunities to drive value.

Emily Weiss
That's great. So I'm pretty certain we could spend this entire podcast talking just about generative AI. You've mentioned responsible AI. I'm just curious if there's any, 1 or 2 nuggets you want to share about that too, because I know that this is something that many of our clients and really the world at large is concerned with. Any kind of comments regarding responsible that you want to leave us with?

Michael Robinson
I think that: don't underestimate the need for this. Generative is a new technology and these models are very confident in what they say, but they're not always right. And it only takes one kind of inappropriate result or inappropriate recommendation, whether it's on the enterprise side around a policy or whether it's something that's being delivered to one of your customers, that could have a tremendous impact.

And we look at it across a bunch of different dimensions, but we would say, just think about five different things if you're thinking about responsible AI.

Transparency. Making sure that it's clear, where the answers are coming in from and how they were generated, whether it’s in real time or through a policy. Privacy. All the privacy constraints that go along with the expectations that customers have set don’t go away with this new technology. Um, they actually become even more relevant.

Explainability, giving you as an organization as well as in some cases, your customers, the opportunity to understand how a recommendation, how some summarization, how advice was generated.

Fairness. There’s a lot of different information, trillions of parameters go into this. So making sure that the information that comes back is fair and robust, making sure that you're thinking about the full spectrum of capabilities as you go down the path of responsible AI and making sure that the models that you train and the way that you train them are robust and really deliver the value that you’re expecting.
**Emily Weiss**

Wonderful. Thank you. I mean, clearly this is a very, very powerful, yet very complex topic, and I'm sure we'll be back on a future podcast elaborating further, but let's shift to our next trend, which is very closely tied anyway. So, Harish, I'm going to ask you to share a little bit about the trend, your data, my data, and our data.

I know historically, when we've talked about data relative to travel companies, we talk about the extensive volume of data within travel companies and how many of our clients are struggling with data being in silos. So can you share with us some thoughts on how travel companies can deal with increasing data volumes?

**Harish Ranganath:** Sure, Emily. Thank you for the question. Since we are talking about data and more specifically data volumes. Let me share some data nuggets. In 2022, the number of people, who flew European airlines skyrocketed by almost 425% year on year. And the people who flew North American airlines was around 225%

That's the kind of explosion we're talking about. If you again look at a few more specific instances. A twin engine aircraft, which flies, let's say, from L. A. to New York and back produces around 800 terabytes for that flight alone - data. If this number is now expanded to include around 28,000 flights on a given day and times an entire year, then the amount of data is close to 8 billion terabytes. Today's aviation industry, by the way, produces around 100 million of terabytes of data on a daily basis. If anybody had any doubts about data volumes, exploding, expanding, etc. I think these data nuggets, should answer that question.

So now, why are we talking about this? Yes, there is a data explosion. But so what? Why are we so focused on data, to your question? Because data has the power to fuel future growth for the travel industry, but its potential is still largely untapped. Why do I say that? Because there was a survey done and only 17% of the execs felt confident that they have the necessary information and insights to make informed business decisions.

So what could we do to actually get this going? To become data powered, travel companies need three things:

One, put data at the heart of business. All decisions should be data led decisions. When all the fortune 500 companies were surveyed, only 28% actually said they feel, they firmly believe, that they have a data driven organization. So that is what I mean by put data at the heart of the business culture.

Second, have the right technology infrastructure. What do I mean by that? Overall outdated technology systems, processes, again, because they are the ones impeding the integration and interoperability between data silos, which is vital, so that's needed.

And third, uh, not in any particular order, the governance and leadership accountability that will drive its use. This is what is needed to have any organization pivot towards becoming a data driven organization. And having all the decisions based on data.

If you look at investing in technology that captures data that can help travel companies as the next step, again, better understanding customers, what are their wants needs, what are the purchasing patterns create new revenue streams. Again, you can tailor and personalize experiences for customers, improve operations. One classic example is Alaska Airlines Flyaways AI implementation that helped save an average of around 2. 6 or 7 minutes per flight. So a lot can be done there.

**Emily Weiss**

Yes, absolutely. I think everything you said is very important to pay attention to, but what are you seeing across the industry in terms of action in formalizing these roles? So the chief data officer role, or really just elevating the importance of leadership.

Have you seen a change more recently? Do you think there's still a lot of work to be done?

**Harish Ranganath**

I would say it's a combination of both Emily, because yes, all the companies have definitely realized the value of actually having a data culture, and that begins by making sure that they have a CDO, but not just stop at that point, but have the entire organization under that CDO actually streamlined. What do I mean by that? As I said, most of the Fortune 500 companies actually have started increasing their spend. It's right now around 2 to 6% depending on various surveys. It's gone up. It's not just about the increase in spending, but what are they spending it towards? When we say data, data analytics, getting their data integrity right, making sure that the silos do not exist anymore. That is the thing that the whole data organization needs to look at.

It starts from the CDO. Then there are different departments in the data driven organization, which actually interact with the different business verticals, ensure that the data that is there, which used to be there in 25 different silos, can now be actually available, not just at one place. It's not about just consolidating by building another data lake but using the existing data lakes. Can we now actually have one view? That is what the data organization is
moving towards. So, are our clients doing it? Absolutely yes, but there is still a lot to be done. That’s what I meant when I said the potential is still largely untapped. But the good part is everybody’s beginning to realize and hopefully we’re going to see a lot of traction in this area.

Emily Weiss
Great. So, Harish, let me shift gears slightly, but how would you react to sort of the impact that third party windows of transparency are having on travel companies?

Harish Ranganath
Great question again, Emily. Windows of transparency. What exactly does it mean? Right? So let’s think back to around 15-20 years ago when people who wanted to decide where to eat were relying more on word of mouth, maybe a guidebook, etcetera. But then 2005, Yelp came and changed everything, right? What did it do? It created a place where customers could share reviews of business, and in doing so change the restaurant industry forever. Positive customer reviews can again help restaurants and the companies increase revenue. These companies created what we now are calling window of transparency. Clear, detailed, and expansive view into the piece of world around us. That can give us real insight into customers, their business model processes, market shifts, et cetera, right?

So, now to your question, what’s the impact of these third-party window transparency that we are talking about?

So, companies have been building robust data practices for years. Volume of data that we collected skyrocketing. We’ve already talked about that. It’s not just business looking for this level of information. It’s everyone now. So now leaning into this and becoming a more transparent business can bring in a lot of advantages. We are talking about moving from, historic reality with where the data was proprietary, to a reality where data is being quantified, and made available and most businesses are not prepared for this. This is where the window of transparency is something which is a reality. So we need to help our clients figure out, can they actually do this by themselves or wait for some other platform to come in and have their data shared? Hope that answers the question.

Emily Weiss
Absolutely. Thank you. It’s a very powerful topic and we could keep going on, but let’s shift gears here. So, Michael, trend number three is all about ID for everyone and everything. Can you share with us your thoughts on where the opportunities are for travel companies to innovate with digital identity today to improve both the traveler and the employee experience? And how travel companies will shape the digital identity world.

Michael Robinson
Yeah, I think that’s a really interesting question. And that last part I think is really powerful. The travel industry traditionally has been someone that has shaped how new technology has been utilized and that’s then cascaded across the board. I mean, digital ID is really going to be no different. All of these different experiences that drove value for businesses, but also drove value for customers, have been powerful indicators and powerful drivers of introducing emerging technologies. I mean, if you think about it, the place where you pull out a physical I.D. the most is in travel, um, outside of going to maybe a nightclub or a bar, there’s very few other places that you actually pull up your ID. But when you’re traveling, you need to show your ID when you’re checking in at immigration, checking in at the hotel, when you’re getting a visa at the immigration office, getting a rental car, all these different aspects of the travel experience. And obviously that creates friction. And it also creates potential anxiety, because you have to show that ID. It creates cues, it creates an elongated process.

So, the tremendous opportunity for kind of streamlining that process, creating a network of trust. That’s a network of trust for both the customers where they have more control over their identity and they have an understanding of kind of privacy implications of that. But if they control the information, you can not only share your identification information, but you can also now share preferences and you can share other customer centric information that can allow the travel companies to provide you better experiences. And those travel companies can then deliver better experiences, create deeper relationships, decrease risk, and also manage and maintain compliance with a lot of the regulatory requirements overall. And what we’ve seen is passengers, guests, all members of the travel ecosystem are open to this. What we’ve seen is if you give travelers convenience, if you remove anxiety, you remove risk, you give them opportunities to board early. All of these incentives, travelers are more than willing to participate in this ecosystem. And that’s anywhere from 85 to 95% of travelers that have said they would be willing to adopt these capabilities.
And in many cases, governments are going to drive this because it increases security. It drives consistency. It drives down manual processing, and there’s a really great opportunity for each part of the ecosystem to play a role and digital identity can bring to life a lot of the concepts and belief around this seamless travel experience where you’re engaged in the travel experience, not engaged in moments of anxiety. You’re engaged in moments of inspiration as you’re traveling and thinking about kind of that experience that you’re going to have that digital identity and digital ID can bring to the table.

But the real question is, how do you get there? And there’s opportunities now to start setting that foundation, just like generative AI, to bring those things to life, whether it’s biometrics or digital IDs and digital wallets, people participating in their kind of government. Uh, citizen IDs and incorporating those into the travel environment. These are all kind of these opportunities that digital ID can come in to play. And you know, to go back to the beginning, we do think that the place that’s really going to drive the adoption of digital ID will likely be the travel industry.

Emily Weiss
That’s great. But I, you know, you said something really interesting about probably governments who are going to have to drive it.

And that’s the part on this topic that always makes me sort of second guess that the topic and the solution, because although the travelers are open minded and interested and willing to share data and, you know, for the purpose of travel, in the end, it’s not actually something that travel companies can solve themselves. It’s a much broader ecosystem. Would you agree?

Michael Robinson
I would agree. And, the governments want to move in this direction, right? So, there’s a lot of advantages against the governments for introducing digital ideas. And by 2030, some governments have mandated that their citizens start moving to this digital ID. So that move is going to be generated by some of the governments, but the advantage to the travelers or the advantage to their citizens comes from the experiences that can be delivered with that digital ID. A good example would be, um, in the U. S. The T. S. A. Has now introduced biometric scanning when you’re going through lines, and they’ve actually been able to get people through lines more quickly. And then the TSA in the U. S. has been able to create a more secure environment. So there’s real opportunities for this partnership between government and private businesses to really drive not just the adoption, but real value for their customers or their citizens.

Emily Weiss
Great, wonderful. Thank you for sharing that. All right, so now we’re on to our fourth and final trend for this session, our forever frontier. So, Harish, back to you. Can you share with us some of the ways that the science technology revolution could help travel companies?

Harish Ranganath:
Sure. This is like a blue sky topic, right? There are so many things that you can talk about for days. And this is where we are learning as well, as we go along. Relationship between science and tech will play a key role. It’s an understatement. We all know that. Because as technology evolves, it will provide innovative solutions to major global issues that will affect travel.

More than 90% of the travel execs agree that this combinatorial effect of science and technology driving each other is leading to compressed innovation in the science technology space. In the coming 20 years, as we have been talking about for the last few minutes, we expect air travel to double, resulting in more complex operations, right?

To tackle these complicated issues, quantum computing is crucial. So quantum computing in particular, will be vital for achieving sustainability goals, property location, portfolio planning, et cetera. It will also be significant for planning airline network, cargo routers, sea fleets, you name it. What’s more, this technology will also help airports, airlines, hotels prepare for, let’s say, high cancellation rates, workforce shortage, even increase call volumes during natural disturbances like volcanic ash events, et cetera, that we have seen. Right. One definitely is airline network planning. Second is, real time application, analyzing weather conditions during a flight and optimizing the path. But again, I want to leave everyone with this thought that this is just the tip of the iceberg. So quantum computers will allow companies to tackle grand challenges that once defined and shaped the very core of their industry.

Again, there are certain specific examples that I would want to share here as well. So, Shell Aviation are currently navigating their industry’s most significant challenge to date, net zero by 2050. So, we work with the client to build and launch Avelia, one of the first blockchain powered digital book and claim solutions, that aims to help airlines and corporates facilitate sustainable business travel at scale. The solution allows, uh, airlines to share the environmental benefits and costs of Sustainable
Aviation Fuel. These are the things where the combination of science and technology, to your earlier question, is going to come together.

Emily Weiss: Fantastic. Harish, thank you for sharing that. Well, I think we’ve covered a lot of information and a lot of content, we covered everything from generative AI, which we know, as Michael said, is here to stay. We talked about data and putting data at the heart of the organization. We talked about digital ID and how important that is across the travel ecosystem. And then Harish just concluded by sharing some examples and exciting innovative ways of looking at the combination of science and technology.

So again, Michael and Harish, thank you so much for joining me today. I really enjoyed the conversation. And I look forward to speaking to you both again and hope everyone’s enjoyed the podcast. Thanks, and have a great rest of the day.

Michael Robinson
Thank you, Emily.

Harish Ranganath
Thank you, Emily. Thank you, Michael.