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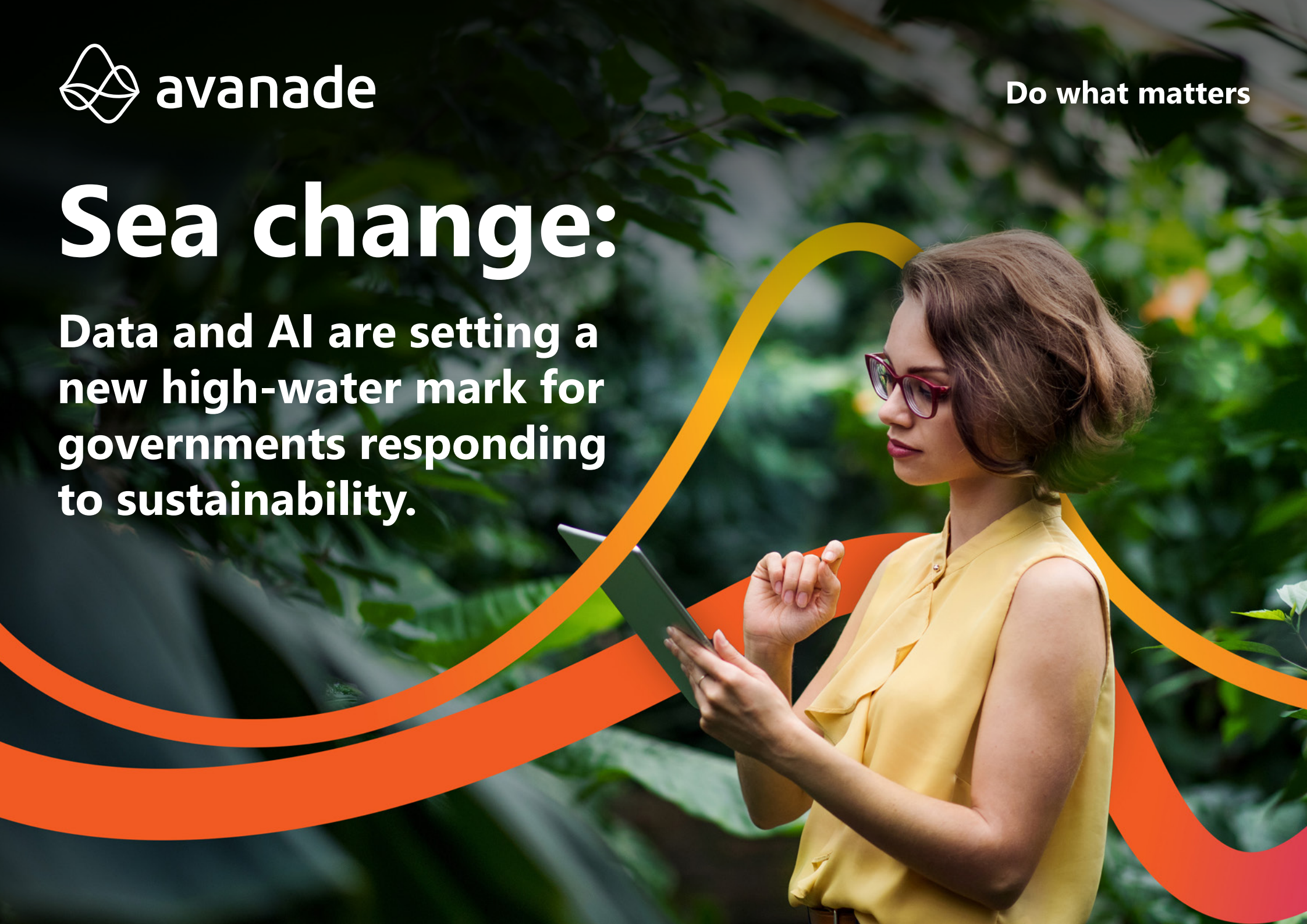
Do what matters

Sea change:

Data and AI are setting a new high-water mark for governments responding to sustainability.



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Sea change

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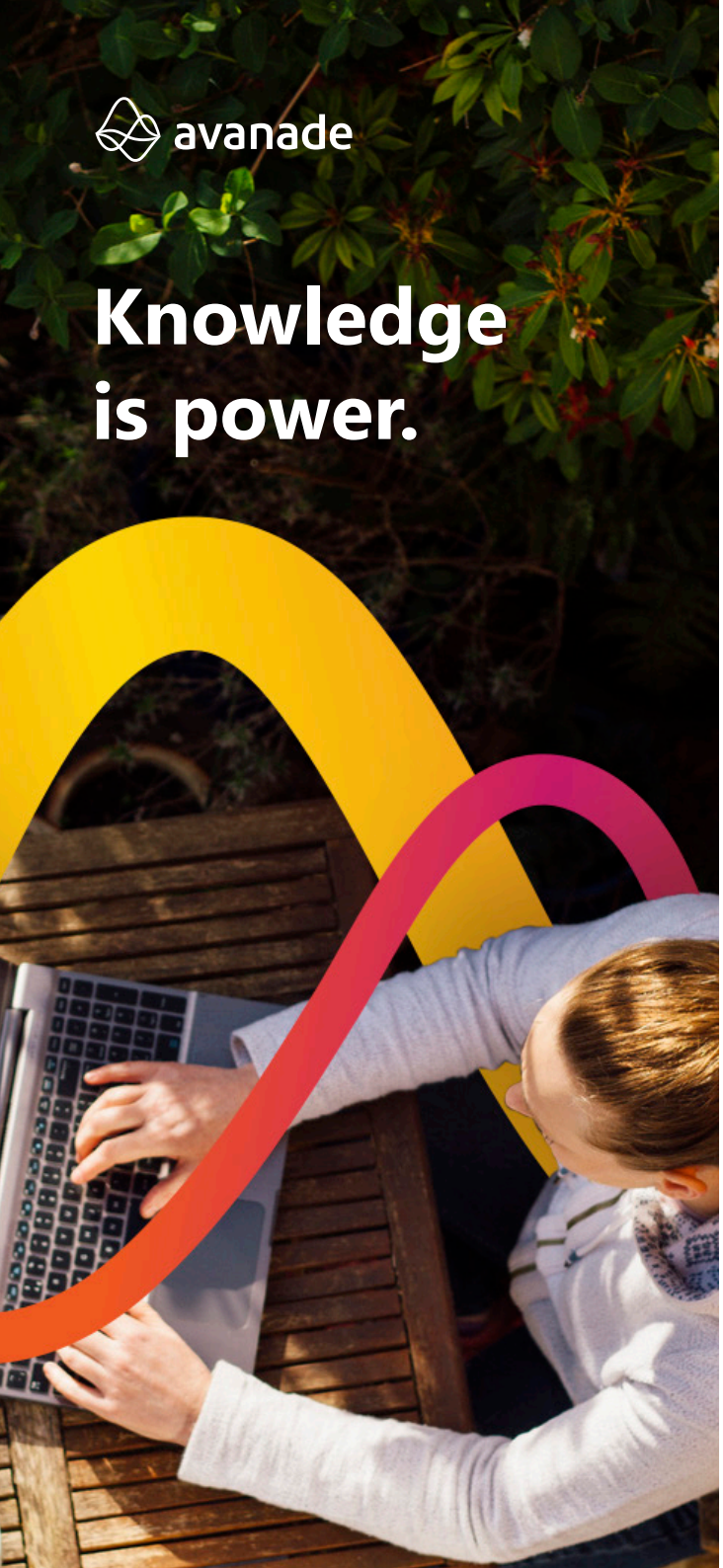
In 1897, a high-water mark for Venice was established at one of the entrances of the Grand Canal. In the next 20 years, high tides exceeded that mark only six times. In the past 20 years, tides have crossed the high-water threshold more than 150 times.

Venice's solution to the tides encroaching on the city took 50 years to bring to life, but now there is an option to raise a sea wall – called MOSE – to seal off the Venice Lagoon from rising tides. The wall has been raised nearly 50 times in its two years of operation – far beyond an initial estimate of about five instances per year. Frequent use of MOSE is creating another environmental issue, as it threatens the health of the water inside the lagoon and throughout Venice by not allowing it to refresh with the tides. Venetian officials must find the balance point between a city under water and a city in a fetid swamp.

Such is the plight of government agencies at all levels when climate change demands attention, from immediate remediation to long-term planning. Addressing one issue often may lead to unintended consequences that make matters worse. In the meantime, citizens are clamoring to have their homes, livelihoods and communities protected and fully operational.

While sustainability was deprioritized by many due to the pandemic, it's rushing back in like a high tide in Venice. When it comes to doing what matters, keeping citizens safe and communities livable is at the top of the list.

Governments and public agencies know that they need to be prepared to predict, prevent and react to climate events, while also pursuing their own sustainability objectives.



The good news in all this is that the digital core, build with cloud, IoT, and AI, gives us the power to collect, store and analyze data that can inform decisions and model outcomes. And, as citizens throughout the world expect more from both the public and private sectors, more tools are coming online to help plan, execute and measure sustainability efforts. We have the opportunity – and the ability – to make a genuine human impact on the future of the planet.

Returning to Venice, keeping the lagoon water healthy could flow directly from data and insights. Today we're surrounded by data and an advanced ability to generate insights and models as an outcome. For example, sensors could collect real-time information about water at key spots in the canals and lagoon, which could then be used in a model to find the thresholds for refreshing the water to keep it healthy. Mapping the needs for water exchange against tides, weather, and even tourist density could help the city build a plan to keep the water fresh while minimizing disruption.

The Venice example relies on data that the agency itself sets out to collect. Tapping into data that is collected organically has tremendous potential as well. For instance, Avanade partnered with the City of Tacoma and Washington Maritime Blue, a nonprofit alliance of maritime stakeholders, to help realize the State of Washington's "blue economy" strategy. Recognizing the necessity and value of efficient ports, these organizations looked at how a private, enterprise-scale 5G network could be used to collect and make sense of the data from the many stakeholders that access the port every day. This exploration will help the state of Washington do what matters in numerous ways, from digitization of transportation and real-time awareness of the port area to just-in-time arrival of vessels and lower carbon emissions due to shorter waiting times for port calls[1].

Even individual interactions with citizens have the potential to inform an agency's effectiveness. For example, if a citizen sends a photo of a broken park bench in need of repair, AI could identify trees in the photo's background and look for signs of distress or disease.

Collecting and making sense of the countless data points that surround us every day can give government agencies of all sizes information that can help them save money, channel resources effectively and plan and prioritize transformational work. The data is there. The technology is there – with cloud computing, the Internet of Things, machine learning, and now generative AI – all incorporated into a robust digital core that can run all aspects of an organization. Public agencies that find ways to make use of that data will be better prepared to respond to, and plan for, climate events while also making a genuine human impact by creating safer, more effective communities.

1. Washington Maritime Blue 5G Case Study | Avanade

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Just as we know that government and public service agencies are at vastly different places in their journeys to cloud, we know that moving to the cloud is the inexorable path to long-term value and the ability to provide services that meet your organization's and your citizens' needs. Our Azure cloud services enable organizations to reduce technical debt, lower IT costs and emissions, which makes sense from an operations perspective.

When you add in the gained agility in working with your legacy apps and the ability to bring new services to market quickly – plus the extra power to collect, store, analyze and report on data – the question of moving to cloud becomes not "if" but "when." And from a sustainability perspective, the sooner the better.

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Knowledge requires power.

Of course, **while knowledge is power,** all that data collection, storage, analysis and modeling also requires significant processing power.

Data centers currently generate between 3% and 4% of global CO2 emission, which is double that of air travel. They could be responsible for about 8% of global electricity consumption by 2030 and 14% of CO2 emissions by 2040[2].

While very few cloud migrations are motivated by sustainability goals, the ancillary benefits are too good to ignore. And they can be a significant part of an agency's own story about its embracing more sustainable operations. Organizations looking for a more efficient and sustainable approach are moving from on-premises data centers to green cloud platforms, which can reduce carbon emissions by more than 84% and energy usage by 65%. Cloud migrations can save money, too, an estimated 30% to 40% total cost of ownership savings[3].

Where and how you run your data platform matters, and so does what you run on it. Avanade – along with Accenture and Microsoft – is on the steering committee of the Green Software Foundation, a non-profit that is working to "Change the culture of building software across the tech industry, so sustainability becomes a core priority to software teams, just as important as performance, security, cost and accessibility."[4] According to modeling by Avanade and its partners, just one division of an enterprise using green software principles could create a emissions reduction comparable to removing 26,000 fossil-fueled cars from the roads for a year.

2. Telco Sector Can Be Game-Changer on Sustainability, Shrinking Its Own, Other Industries' Carbon Footprints (bcg.com)

3. The Green Behind the Cloud | Accenture

4. Manifesto | GSF (greensoftware.foundation)

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Find **partners** in sustainability.

Avanade recently identified five trends that will shape the next decade, one of which is resource-aware ecosystems. The idea is built on the reality that we, as a planet, share a finite amount of resources. Ensuring that life is literally sustainable for as long as possible requires us to individually and collectively be aware of how we are allocating and using those resources. This requires partnership at all levels, and government and public services agencies are key players in the ecosystem. They're responsible for preparing for and responding to climate events; for establishing regulations that can promote sustainability, like building codes, water rights, or emissions standards. And for operating effectively an ecosystem with other agencies, suppliers and citizens.

With so many different factors – environmental, societal, technological – it's hard for one organization to be able to take a holistic approach. Rather than trying to know and do everything on your own, you'll be better able to do what matters if you are part of a network of partners that complement each other.

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The ideal partnership in sustainability looks remarkably like the best partners in any endeavor:

Partners who think big.

We are in the midst of a seismic shift toward an AI-first world. Generative AI has the potential to transform radically how we approach complex issues like sustainability, so find a partner who can envision new ways of doing things – transparently and ethically.

Partners whose values align with yours.

One way many government entities are promoting sustainability is by requiring the organizations they work with to demonstrate commitments and actions of their own. There is a strong precedent for this in the private sector. Walmart has a goal to reduce greenhouse gas emissions from its supply chain by 1 billion metric tons by 2030. Suppliers around the world are adjusting everything from their shipping routes to packaging to be part of the solution. Government agencies can have that same ripple effect by setting standards for their suppliers.

At Avanade, we are proud of our ESG focus and the work we're doing with Accenture and on our own to operate as a responsible business. (See sidebar, Pg: 9)

Partners who ask why (and why not).

Sustainability is just one of many objectives and priorities a public organization must consider. Understanding the purpose of policies and procedures and how they tie into an organization's mission and objectives keeps everyone on track. And sometimes it's easier for someone outside your organization to ask those questions.

Partners who share your commitment to outcomes.

The fact that organizations worry about being accused of "greenwashing," or putting on a façade of caring about sustainability without backing it up, demonstrates both the importance and complexity of genuine sustainability efforts. This is where good measurement tools, like Microsoft Sustainability Manager, come into play. The solution can be used both to set targets, build a sustainability strategy as well as measure and report progress. Holding yourself and your partners accountable will weed out those who are not fully committed and help address any critics who don't believe your commitment is sincere.

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What's in your **resource-aware ecosystem?**

As you look at what your agency could and should be doing around sustainability, a good place to start is by taking stock of your how you are managing resources across your supply chain – water, waste, raw materials, emissions, etc.

If you are already in the cloud, you have the processing power to take advantage of the wealth of data and the benefit of doing more with technology while consuming less energy. If you are part of a supply chain with partners who are making strides toward sustainability, you can learn from and lean on them to strengthen your own efforts. If your citizenry is enthusiastic about sustainability, you can use that energy to advance your own agenda and persuade others to join in. And, if you are ready to embrace (or at least experiment with) generative AI, you have a powerful new tool that can help you envision and test new ideas that help you progress your sustainability goals.

Between climate events and public sentiment, sustainability is no longer a topic that can be ignored. The ideas, the tools, the expertise, and the network exist (and are at your disposal) to make a genuine human impact and effect real change. How will your organization use them?

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Appendix

Sidebar A:

Making climate action easy

An independent public organization set up a climate resiliency mission and needed a digital platform to help provide appropriate solutions to inform climate actions and investments.

Avanade helped the organization shape a value proposition and financial case for a Climate Intelligence Platform (CIP) based on Microsoft Cloud Services. The CIP provides standardized access to the best available climate datasets, models and analytics with specialized tools that support digital product management best practices.

With the CIP, the agency's goals are to drive climate action as demand flows from both the public and private sectors, create a primary source for trusted climate dataset and models, and create a platform that can adapt to regulatory pressures and increase demand for accessible, cloud-based climate data products and services that provide industry-specific insights around climate risk management.

Sidebar B:

About Avanade

Avanade is the leading provider of innovative digital and cloud services, business solutions and design-led experiences on the Microsoft ecosystem. Every day, our professionals bring bold, fresh thinking combined with technology, business and industry expertise to help make a genuine human impact on our clients, their customers and their employees. We are the power behind the Accenture Microsoft Business Group, helping companies to engage customers, empower employees, optimize operations and transform products, leveraging the Microsoft platform. Avanade has 60,000 professionals in 26 countries, bringing clients our best thinking through a collaborative culture that honors diversity and reflects the communities in which we operate. Majority owned by Accenture, Avanade was founded in 2000 by Accenture LLP and Microsoft Corporation. Learn more at www.avanade.com.

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Do what matters