

The Promise Of Technology And Human Ingenuity

An Interview with Teresa Tung, Global Lead of Data Capability, Accenture

EDITORS' NOTE Teresa Tung is the Global Lead of Data Capability at Accenture. Her current interests include edge computing, data mesh, digital twins, and robotics. She brings strategic expertise in helping clients bring in first of its kind new technology capabilities to create a differentiated digital foundation for their businesses. Tung regularly speaks at technology industry conferences like Strata and IoT Solutions World Congress on topics including AI, digital twins, DataOps and ModelOps, and innovation.



Teresa Tung

Tung leads her team in bringing together the best-of-breed next-generation cloud architecture solutions from industry, start-ups and academia to build Cloud First's capability and assets by working on pioneering pilot projects. She is Accenture's most prolific inventor with over 225 patents and applications, and received Accenture's Invention of the Year award in FY19. Tung has had several leadership roles in her career with Accenture. Previously, she led Accenture Labs research and development activities for cloud, big data, the Internet of Things and APIs, creating a wide range of key assets that are still in use across Accenture and with clients today. Tung holds a PhD in Electrical Engineering and Computer Science from the University of California at Berkeley.

COMPANY BRIEF Accenture (accenture.com) is a leading global professional services company that helps the world's leading businesses, governments, and other organizations build their digital core, optimize their operations, accelerate revenue growth, and enhance citizen services – creating tangible value at speed and scale. It is a talent- and innovation-led company with approximately 742,000 people serving clients in more than 120 countries. Technology is at the core of change today, and Accenture is one of the world's leaders in helping drive that change with strong ecosystem relationships. The company combines its strength in technology and leadership in cloud, data, and AI with vast industry experience, functional expertise, and global delivery capability. Accenture is uniquely able to deliver tangible outcomes because of its broad range of services, solutions and assets across Strategy & Consulting, Technology, Operations, Industry X, and Song. These capabilities, together with its culture of shared success and commitment to creating 360-degree value, enables it to help clients reinvent and build trusted, lasting relationships.

What have been the keys to Accenture's industry leadership?

The true power of Accenture is our people, who possess a broad range of expertise – like our 53,000 skilled data and AI practitioners and more than 200,000 people with cloud skills – and our deep experience across industries. I'm consistently impressed with the quality of talent we can bring to any project across industry, function, technology, and region. Our talent in terms of depth, breadth, and scale – which span creative, systems

integration, marketing, and manufacturing, to managed services across the enterprise – makes us unique. Beyond being tremendous in each area, we're special in how we come together as one Accenture team to create innovative, repeatable industry solutions to help our clients solve their greatest challenges.

Maintaining this level of expertise takes work, and we've industrialized that: we're continually investing – in research and development, in the learning and professional development of our people, in emerging technology companies, in co-development with our partners, and in new capabilities via strategic acquisitions – so that we can anticipate and harness ongoing waves of technology innovation to help our clients reinvent their businesses.

How do you describe Accenture's culture and values?

Accenture is a purpose-driven company, committed to delivering on the promise of

technology and human ingenuity. We have a culture of shared success, which is about success for our clients, our people, our shareholders, our partners and our communities. It's all underpinned by our core values and Code of Business Ethics, which safeguards the trust our clients and partners place in us – it's our job to do the right thing. This includes our focus and commitment to ensuring that innovative technologies like generative AI are designed and deployed responsibly.

Our team of leaders invest in our employees' growth and challenge them to reach new heights. My mentors at Accenture helped me dream bigger and strategize on how to make it happen, and I help my team do the same, for themselves and for our clients.

For me personally, my 18 years at Accenture is one of the longest relationships in my life – even older than my three children. I've gotten to work on first-of-its-kind projects for cloud, big data, edge, and digital twins. Accenture has helped me shape and personalize a career path to take on bigger leadership roles, to lead at the cutting edge of technology, and to balance needs in my personal life.

Will you provide an overview of your role and areas of focus?

As the global lead of data capability at Accenture, my role revolves around building the vision, assets, and talent needed to help our clients become data-driven businesses. As every business becomes an AI business, data is the competitive advantage that fuels differentiation.

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Today, I'm working with clients to rethink what data readiness means in the age of generative AI. Most enterprise data foundations have been built for technical users; they mainly focus on structured data packaged for reporting and answering pre-determined questions. Generative AI changes the game – with an ability to allow non-technical users to work with data directly, with the capability to dynamically contextualize and connect data across organizational silos, and with the flexibility to extract insights from unstructured data like documents, voice, and video. Data is no longer a technology project, but an asset to be treated like a product with measurable value to the business.

Will you highlight Accenture's work with industry, start-ups, and academia to build cloud, data, and AI capabilities?

Accenture forges strategic partnerships with leading technology companies, start-ups and academic institutions, not only to gain advanced insights, but to shape a future enabled by technology. We have a unique vantage point from working with thousands of clients ranging from global industry leaders to start-ups. We're hyper-attuned to their needs and opportunities and can maximize this perspective to guide the application of emerging technology to help our clients go further and faster.

For example, we're working with Stardog, a start-up that enables enterprise knowledge graphs (the same technology that underpins internet search) to connect digital twins with operational data and expert knowledge to create an automated AI-powered warehouse. And we're working with a generative AI platform start-up, Writer.AI, to personalize communications for tone, insight, and channel from a trusted corporate knowledge base.

We're also working with world-class universities to augment our capabilities. In 2022, we became an inaugural member of the Corporate Affiliate Program at Stanford Institute for Human-Centered AI to help guide and build the future of AI. Through the program, we are supporting a number of faculty research programs around AI safety and trust. In addition, Accenture has created a Foundation Model Scholar Program to provide certifications related to large-language model skills.

As a proud alumnus, I'm also excited about our work with UC Berkeley's Sky Lab to augment our foundation model architect capabilities and provide certifications on foundation model fine-tuning and engineering. This collaboration will help us stay on top of the next generation of cloud and data architectures.

How is Accenture helping its clients bring in first of its kind new technological capabilities to create a differentiated digital foundation?

Recent Accenture research finds that organizations that have an advanced digital core – the critical technology capability that uses cloud for agility, data and AI for differentiation, applications and platforms to accelerate growth, and has security baked in by design – can drive continuous reinvention.

We identified three tenets to achieve reinvention-readiness. The first step is to build

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cutting-edge digital core maturity that matches industry needs. Second, companies need to shift more resources toward innovation. And third, it's important to balance technical debt liabilities with future investments. When companies follow all three tenets, they can grow revenues by approximately 60 percent and profits by nearly 40 percent.

I lead a team focused on helping our clients build out data as part of a strong digital core, specific to their industries. This includes updating the data foundation including knowledge graphs, vector databases, and more use of unstructured and synthetic data needed to implement generative AI across the enterprise – as well as using generative AI to more rapidly migrate, modernize, and work with data.

I'm looking at new technologies like specialized infrastructure that will enable data processing in new ways. For example, we're seeing GPUs enable foundation models, and there are also ultra-low power processors that are perfect for use cases like voice activation to open the trunk of my car, even if it's been parked at the airport for over a month. Right-sized infrastructure allows us to process data whether at generative AI scale, or when embedded into everyday things and places.

As another example, there's confidential compute and privacy preserving technology that enables new programmatic protections for data sharing that protect both the data and the algorithm through encryption. This is essential for data sharing, especially when using a managed foundation model with sensitive data.

Do you feel that there are strong opportunities for women in leadership roles in the industry?

Absolutely. This is an exciting and important time for women to leverage their unique skills and perspectives. As technology rapidly evolves, women can bring a fresh outlook and can anticipate new opportunities that will drive the industry forward.

As a female leader, it is my job to help foster an environment of trust and change as technology levels the playing field. For example,

I am the lead sponsor of our internal Women in Quantum initiative, which is focused on growing our capabilities and prioritizing training and opportunities for females around this disruptive technology. Whether it's quantum computing, generative AI, edge computing or robotics, emerging technologies are new to everyone and offer a great way to be purposeful in maximizing diversity and perspectives.

You have more than 225 patents and applications, and received an Invention of the Year award in 2019. Are you able to take moments to reflect on your accomplishments and celebrate the wins?

Accenture provides tremendous support for inventors – anyone can submit an idea for consideration for a patent to tap into the creativity and unique perspectives of our approximately 742,000 employees. I have been doing just that throughout my career. I am proud to be Accenture's most prolific inventor with over 225 patents and applications in my name. My patents span various technology domains, including artificial intelligence, edge computing, digital twins, and data architectures.

In 2019, one of my patents was honored with the coveted Invention of the Year award at Accenture. This annual competition celebrates the most technically innovative and business-impactful patents across Accenture globally.

I am grateful to have the opportunity to be creative in whatever work I am doing, to have an idea, and to have Accenture's support in getting my inventions documented and protected.

What advice do you offer to young people beginning their careers?

My advice to young individuals just starting out is to fully embrace every opportunity. Lean into what makes you special and identify how you can bring a unique perspective – remember that much of this technology is new for everyone, so we're all starting at the same time – and use your voice. It's important to have a clear vision of your goals and aspirations, but also to remain flexible and adaptable as the industry continues to evolve. ●