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## Letter from the Editor

By: Scott St. John

Innovation is a curious thing, and curiosity is the very heart of innovation. It's the ability to question what is and what could be. Or, how something could, should, or would be different. Innovation is often viewed as the stuff of science fiction, and that wouldn't be entirely wrong. In some cases, life *does* imitate art. But it's the innovators who can see the interwoven matrix of life, art, and the possibilities; and they're driven by the simple question of "what if?"



Those who dare to dream, and those who strive to make that dream a reality continually change our world—along with our view of it. There are many examples around us. I imagine the first innovations were relatively primitive. What if we could tie a rugged material on our feet to make walking through the forest less painful? What if adding a handle to this jug would make carrying or pouring it easier... or to this mug, so we could drink clean, hot water without burning our hands or spilling it? To imagine shoes or coffee mugs back then would have appeared to be futuristic, as well the stuff of science fiction.

Today's innovations are equally if not more incredible. For example, along the life-imitates-art vein, you can now buy a <u>real-life light saber</u>. And forget Zoom. Today, you can <u>hologram into</u> <u>conference rooms</u> from virtually anywhere in the world and be present, "in person," and at full size. <u>Drones and robotic dogs</u> patrol the perimeters of data centers, government installations, and corporate office buildings alike. In 2017, <u>Chinese researchers teleported a photon</u> from the Gobi Desert to a satellite 500 kilometers (300 miles) above the earth using quantum entanglement—a principle of quantum physics being used today in quantum computing and networking. What was once the subject of fantasy and hallmarks of *Star Trek, Star Wars*, and *The Terminator*, is now becoming a reality. (I haven't even mentioned generative artificial intelligence [AI], which looks a little like leather shoes in comparison.)

With this new reality comes new risks. In a recent conversation with <u>Aliro Quantum</u>, we discussed the Q-Day event horizon, by which quantum computers will be able to crack today's encryption technologies—putting data, networks, corporations, governments, and our global society at risk. It's been well covered in the news that <u>Elon Musk and others have called for a pause to generative</u> <u>AI</u>, and industry leaders like <u>Microsoft</u> have pressed for accelerated regulation to mitigate cyber, physical, and national security threats. But as great as these risks are, the opportunities are equally significant.

The innovations happening around the world and throughout industry can reshape our lives from great efficiencies and profitability through the application of generative AI, to making our world more sustainable. But again, innovation is a curious thing. It takes a transformative mindset—a particular culture and the courage to ask, "what if?" Then, innovation must be put into action through much trial and error—ultimately commercially monetized—to make it viable. (Think back to leather shoes. Now, think Nike.) These are just some of the topics that make this issue of *Pipeline* so important.

In this issue of *Pipeline*, we explore the many facets of industry innovation. EPB and Qubitekk discuss <u>practical applications for quantum networking</u> and computing, demonstrated by the first commercially available quantum network in the US. Pipeline's Dr. Mark Cummings discusses how to <u>prevent and prepare for generative AI attacks with dynamic defense</u>. Iceotope delves into <u>data center sustainability strategies</u>, going beyond limiting energy consumption. ServiceNow illustrates the value of <u>workforce automation</u>, AI, and process mining for long-term success, despite economic headwinds. Beyond Now explores the <u>telco-to-techco transition</u> and BT Group shares the <u>top trends in digital transformation innovation</u> for global enterprises. Chainstack looks at how <u>big brands are transforming with blockchain</u>, Red Hat underscores the <u>challenges of monetizing innovation</u>, SmartCIC reveals the billion-dollar opportunity for <u>5G fixed wireless</u> access, and iBwave highlights the obstacles and opportunities of <u>5G Advanced for enterprises</u>. All this plus the latest <u>enterprise and communications technology news</u>, and <u>more</u>.

We hope you enjoy this and every issue of *Pipeline*.

Scott St. John Managing Editor Pipeline

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