Iliette Frontera – President, Medical Devices Cluster, Puerto Rico



Puerto Rico is not just a manufacturing hub—it is a center of innovation, growth, and long-term industry leadership.

09.04.2025

Tags: Puerto Rico, MedTech, Manufacturing

Backed by world-class expertise, cutting-edge technology, and an ecosystem built on collaboration, the Medical Device Cluster is redefining what it means for Puerto Rico to be a global leader in medical innovation. From scaling high-precision manufacturing to pioneering workforce development, the island is setting new industry benchmarks.

How has the Medical Device Cluster's vision evolved under your leadership, and what significant milestones have shaped its growth and impact?

The Medical Device Cluster has remained steadfast in its mission to integrate, leverage, and collaborate for the sake of enhancing, diversifying, and expanding our value offering—individually and collectively—in the global MedTech marketplace. My tenure has brought a renewed focus on collaboration as the foundation for sustainable progress.

Given the sector's rapid expansion, a resilient and well-integrated ecosystem—one that unites academia, government, industry partners, and service providers—is essential to maintaining Puerto Rico's position as a global MedTech hub. Our approach has prioritized open collaboration, not only to expand existing operations and attract new investments but also to cultivate the next generation of industry professionals. Our efforts have concentrated on three strategic pillars with a keen focus on the continue education and talent development has been a major priority.

Recognizing the urgent need for specialized skills, we collaborated with multiple companies to pinpoint critical skills and gaps in automation, software engineering, and business analytics—fields essential to high-precision, technology-driven manufacturing. In response, we designed and implemented training programs, deployed them across the industry, and are currently being integrated into Puerto Rico's top universities, allowing students to obtain industry-recognized certifications. This initiative ensures a steady pipeline of skilled professionals to continuously reinforce the island's competitiveness in advanced manufacturing.

Second, strengthening the broader MedTech ecosystem has been imperative, particularly in addressing infrastructure constraints. Through a collaborative effort with the Puerto Rico Industrial Development Company (PRIDCO), we provided critical inputs into their launched of the White Box Project – an initiative aimed at replacing outdated facilities with modern, purpose-built industrial spaces designed to accommodate business expansion and investment growth.

The third major focus has been supply chain optimization, a crucial factor in ensuring long-term industry stability. After conducting an industry-wide assessment of raw material needs, we identified key commodities such as metals and packaging and pursued a dual strategy—expanding local sourcing capabilities while simultaneously attracting international suppliers to establish a presence in Puerto Rico. This approach not only reinforces supply chain resilience but also creates new business opportunities within the local manufacturing ecosystem.

To accelerate supplier attraction efforts, we have partnered with Invest Puerto Rico (InvestPR) to spearhead a targeted initiative. By leveraging data-driven insights, we can identify the top suppliers serving the industry's core needs and launched a strategic campaign to position Puerto Rico as an ideal business destination. This initiative, which began last year, is designed to streamline supply chains, localize critical components, and strengthen Puerto Rico's role as a premier MedTech hub.

How is Puerto Rico's MedTech sector driving economic growth, and what trends are shaping its expansion and investment landscape?

Puerto Rico has established itself as a premier global hub for medical device manufacturing, home to over 30 production facilities and 12 of the world's top 20 MedTech companies, including Medtronic, Johnson & Johnson, Becton Dickinson, Stryker, Cooper Vision, Baxter, Sartorius, Boston Scientific, and others. The sector has seen continuous expansion, driven by new product strategies, market diversification, and increasing global demand, resulting in higher production volumes and

job creation. Today, the industry directly employs approximately 20,000 professionals, with a far-reaching economic impact on service providers, suppliers, and auxiliary industries. With over USD 20 billion in annual exports, MedTech remains a pillar of Puerto Rico’s industrial economy.

Investment in the sector has been robust, with leading companies expanding capacity, enhancing automation, and strengthening R&D. CooperVision has broadened its operations, adding a facility in Ponce alongside its primary facility expansion. Medtronic, operating across four sites, continues to invest in their facilities while Stryker is focusing on energy resilience and advanced R&D initiatives by expanding into a second facility. Boston Scientific has allocated over USD 30 million in recent years to facility upgrades and expansions, increasing production capabilities. These investments clearly reflect the industry’s commitment to long-term growth.

While the arrival of entirely new MedTech manufacturers has been limited, Puerto Rico has attracted bioscience firms such as CytoImmune Therapeutics, along with an increasing presence of research laboratories and innovation centers. However, industry growth is predominantly fueled by the expansion of existing companies, leveraging Puerto Rico’s well-developed infrastructure and manufacturing ecosystem rather than large-scale new construction. With PRIDCO owning significant industrial real estate, companies can scale operations within existing facilities on PRIDCO properties rather than pursue greenfield projects, ensuring cost efficiency, faster scalability, and seamless integration into Puerto Rico’s MedTech landscape.

What are the key growth opportunities for Puerto Rico’s MedTech sector, and how is the cluster positioned to capitalize on them?

Puerto Rico’s MedTech sector is uniquely positioned for growth, benefiting from a highly skilled workforce, advanced manufacturing capabilities, and an integrated ecosystem that supports the entire product life cycle. Unlike emerging MedTech markets still developing industry expertise, Puerto Rico boasts a deep talent pool with decades of experience in pharmaceuticals and medical devices, particularly in regulatory compliance, quality systems, and complex manufacturing processes. This accumulated knowledge ensures operational efficiency, adherence to global standards, and the ability to handle high-precision, technology-driven production, all of which are critical in an industry where innovation and reliability are paramount.

A key advantage is the island’s strong foundation in high-tech manufacturing, where production lines incorporate sophisticated, multi-step processes requiring advanced automation and data-driven systems. Some manufacturing operations involve dozens of distinct processes running

simultaneously—a level of complexity that demands expertise in engineering, automation and process optimization. As the industry evolves toward less invasive treatments and more advanced diagnostic technologies, Puerto Rico's established technical proficiency ensures it remains at the forefront of these advancements, attracting companies seeking cutting-edge production capabilities.

What truly sets Puerto Rico apart is its fully integrated MedTech ecosystem, which extends far beyond manufacturing. Unlike regions where companies focus solely on production and export, the island offers an environment where firms engage in on-site R&D, process development, commercialization, logistics, and distribution all within a single operational framework. This seamless integration enhances efficiency, accelerates time-to-market, and fosters continuous innovation. At Boston Scientific and other leading MedTech firms on the island, engineers work directly on the manufacturing floor, contributing to R&D, process development, and product optimization. This approach is rarely seen in other markets and is a key driver of Puerto Rico's competitive advantage.

While countries like Costa Rica, Dominican Republic or Mexico have established themselves as major MedTech manufacturing hubs, their operations lack the same depth in R&D and innovation infrastructure. Puerto Rico's ability to offer both high-tech manufacturing and a fully integrated innovation ecosystem makes it a preferred destination for companies looking to scale, optimize, and develop next-generation medical technologies. By leveraging its technical expertise, sophisticated production capabilities, and comprehensive industry infrastructure, Puerto Rico continues to attract investment and reinforce its standing as a premier MedTech hub.

How can Puerto Rico leverage its status as a US territory to strengthen its position in MedTech manufacturing amid global shifts?

A well-established MedTech ecosystem, decades of industry expertise, and a proven track record in regulatory compliance make the island an ideal destination for companies seeking stability, scalability, and global reach. Many manufacturing sites operate as centers of excellence, serving as the sole global producers of specialized medical devices. At Boston Scientific, for example, our Puerto Rico facility exclusively manufactures certain products for worldwide distribution, highlighting the island's critical role in global supply chains.

As a US territory, it offers regulatory alignment, supply chain security, and seamless access to the US market. This positions Puerto Rico as a strategic alternative to regions affected by geopolitical

tensions. While industries like aerospace and defense have long been tied to national security, healthcare manufacturing is increasingly recognized as essential, reinforcing its role in securing US medical supply chains. A strong logistics infrastructure and geographic advantage further enhance our ability to efficiently serve both domestic and global markets.

How is the MedTech sector ensuring workforce retention and long-term talent development?

Building an engaged and tenured workforce requires not only attracting new talent through university partnerships, but also retaining and continuously developing existing employees. Career paths and development programs are essentials for employees to see they can continue to growth and reach their potential.

Career development remains a strategic focus, with structured training programs that enable employees to advance from technical roles to management or engineering positions, often through company-sponsored education. Additionally, as technological advancements reshape the industry, firms are investing in specialized training in emerging fields such as AI, offering expert-led programs and hands-on learning to ensure employees remain competitive and at the forefront of innovation. By integrating professional growth opportunities, a strong workplace culture, and continuous investment in innovation, the sector is cultivating a highly skilled, engaged, and future-ready workforce.

Companies also prioritize work-life integration, providing amenities and benefits such as on-site gyms, medical services, and banking services, fostering an environment that promotes well-being .

Beyond workplace benefits, social responsibility is integral to retention as employees increasingly seek employers committed to environmental sustainability and community engagement. By actively supporting these initiatives, companies reinforce a sense of purpose and strengthen their organizational culture.

What opportunities and risks does AI present for Puerto Rico’s MedTech sector?

AI, and other digital solutions, offers a transformative opportunity for the industry, provided companies invest in upskilling their workforce to integrate it effectively. The real risk is not AI itself, but falling behind in adoption and failing to prepare employees for its impact. In manufacturing, AI

can significantly enhance efficiency and precision by automating repetitive, low-value tasks, such as repetitive inspections or those that require a level of accuracy beyond human capability. This allows or experts and engineers to focus on higher-value activities, including innovation, problem-solving, and process optimization, ultimately driving greater operational efficiency and technological advancement.

From a data analytics perspective, AI enables faster, more informed decision-making by processing vast amounts of information in real time. Rather than spending time manually mining data, engineers can concentrate on analyzing insights, identifying trends, and making strategic improvements, leading to better resource allocation and smarter business decisions. AI is also reshaping customer service and supply chain management, improving order processing, predictive analytics, and customer interactions, resulting in more personalized and efficient service delivery. The challenge lies in ensuring companies adopt AI at the right pace and equip their workforce with the skills to leverage it effectively.

How does Puerto Rico’s MedTech sector approach business continuity, and why should it not be solely defined by resilience?

The idea of resilience is often associated with recovery from disruption, but for Puerto Rico, business continuity is not about bouncing back—it is about never being knocked off course in the first place. While industries worldwide face geopolitical challenges, natural disasters, and supply chain volatility, what distinguishes Puerto Rico is its proactive, built-in approach to minimizing disruption rather than merely responding to it.

The island’s MedTech sector operates within an infrastructure designed for uninterrupted performance, incorporating reinforced concrete facilities, backup power systems, independent water supplies, diesel reserves, and satellite communications. These measures are not reactive crisis solutions but an intrinsic part of daily operations, ensuring that even in extreme circumstances, production remains stable, and supply chains remain intact.

This was evident after Hurricane Maria—the most severe natural disasters to hit Puerto Rico in a century. Despite the widespread devastation, industry operations resumed within days. This is a testament to the industry’s preparedness and ingrained risk-mitigation strategies. Similarly, during the COVID-19 pandemic, the sector adapted seamlessly, reinforcing its ability to navigate global crises without significant operational disruptions.

Rather than being defined by resilience alone, Puerto Rico's MedTech industry should be recognized as a strategically fortified global hub built on foresight, adaptability, and a culture of operational continuity. Its ability to anticipate, prepare, and function seamlessly in any scenario makes it one of the most stable and reliable manufacturing locations worldwide.

How can Puerto Rico elevate its global standing in the MedTech industry?

Despite its decades-long impact on global MedTech manufacturing, Puerto Rico's contributions remain under recognized. This is a challenge that requires stronger industry advocacy, international engagement, and a reframing of its narrative. Organizations like InvestPR, the Pharmaceutical Industry Association of Puerto Rico (PIA), the Puerto Rico Manufacturers Association (PRMA), and the Medical Devices Cluster are actively promoting the island's capabilities, but a more unified industry effort is essential to amplifying its achievements.

With over 60 years of expertise, Puerto Rico is the largest US exporter of medical devices, nearly doubling the output of Indiana which is the second-largest exporter. It also has the highest concentration of biotech operations per square mile worldwide, reinforcing its critical role in innovation and high-precision manufacturing. To enhance global recognition, Puerto Rico must shift the focus from challenges to its leadership in advanced manufacturing, supply chain resilience, and cutting-edge MedTech innovation. Strengthening international collaborations, increasing visibility in key industry platforms, and leveraging strategic media positioning will be crucial in solidifying its status as a premier global MedTech hub.

What are your key priorities for the remainder of your tenure, and how do you see collaboration evolving under the new government?

A primary focus is ensuring that critical technical capabilities are fully integrated into university curricula, with structured certification programs that provide specialized training and align new talent with industry needs. This initiative is essential to developing a skilled workforce and strengthening Puerto Rico's position as a MedTech hub. Equally important is expanding local sourcing and attracting new companies, reinforcing supply chain resilience and fostering economic growth. Strengthening the ecosystem through greater industry collaboration and investment will further enhance Puerto Rico's competitiveness.

Collaboration with the new government remains a key priority. We are actively engaging with the Governor and the Secretary of Economic Development to align industry needs with policies that support MedTech expansion. The administration's focus on economic growth and its appointment of private-sector professionals in key roles signal a strong foundation for continued public-private cooperation, ensuring sustained industry growth and long-term investment.

What makes collaboration a defining strength of Puerto Rico's MedTech sector?

Collaboration is embedded in the industry's DNA, driven by a shared understanding that collective success strengthens the entire ecosystem. Unlike markets where competition dominates every aspect of business, Puerto Rico's MedTech sector thrives on strategic cooperation in areas that benefit all industry players, such as talent development, regulatory engagement, and infrastructure improvements. A prime example is the automation curriculum initiative where several of our industry collaborators such as Medtronic, Boston Scientific, Sartorious, and others aligned to define key technical skills and develop a standardized training program. This kind of collaboration ensures that a highly skilled workforce is available across the sector.

Beyond the Medical Device Cluster, cross-industry partnerships with the PIA, the Puerto Rico Science, Technology & Research Trust, InvestPR, and the PRMA further strengthen industry influence. Representing nearly 50 percent of Puerto Rico's GDP, these organizations work together on policy advocacy, workforce initiatives, and economic development, ensuring that the sector's priorities receive the recognition and support they deserve.

How are you advancing leadership opportunities for women in the MedTech sector?

Leadership development starts with visibility and example, but meaningful progress requires structural change in career advancement and hiring practices. My commitment is not only to serve as a visible leader but to actively shape policies that open pathways for women in technical and executive roles. At Boston Scientific and within the Medical Device Cluster, we are focused on broadening opportunities for women through coaching, mentoring, and sponsorship programs—each addressing different aspects of professional growth. Mentoring provides guidance, coaching builds skills, and sponsorship ensures visibility for career advancement.

As an example, one policy we have implemented in Boston Scientific is requiring diverse candidate pools before any hiring process begins. While this does not mandate female selection, it

significantly increases opportunities for equitable hiring decisions. Beyond representation, true inclusion means ensuring that women are not just present in leadership but actively involved in shaping decisions that drive the industry forward.

Through initiatives such as Women’s Networks and broader industry-wide leadership programs, we continue to push for gender diversity at all levels. The Medical Device Cluster Board reflects this commitment by maintaining balanced representation between male and female industry leaders, reinforcing that sustained progress comes from intentional, systemic change.

What final message would you like to share with a global audience?

Puerto Rico is far more than a manufacturing hub—it is a center of innovation, technological advancement, and sustained industry growth. With a highly skilled workforce, world-class infrastructure, and the ability to support the full product life cycle, the island seamlessly integrates research and development, high tech complex manufacturing, and global distribution, making it a key player in the MedTech sector. What truly sets Puerto Rico apart is its deeply collaborative ecosystem, where industry leaders, academia, and policymakers align to drive progress, investment, and expansion. This collective approach strengthens its position as a strategic destination for companies seeking a resilient, innovation-driven environment, ensuring its continued leadership in shaping the future of global MedTech manufacturing.

See more interviews