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The Future of Business in Pittsburgh

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Near Earth Autonomy Enables Autonomous Flight with Partners in US & Beyond

Near Earth Autonomy, a Carnegie Mellon University spin-off company that bridges the gap between aerospace and robotics by enabling autonomous take-off, flight, and landing for aircraft ranging from small drones up to full-size helicopters, has announced a collaboration with the Kaman Corporation on the KARGO UAV. The KARGO UAV is planned to provide cost-effective cargo hauling and offers a rugged design for easy transport and deployment, according to a release. Near Earth will provide obstacle avoidance and other technologies such as precision landing, sense and avoid, and navigation in a GPS-denied environment. Near Earth is already working with Kaman on the U.S. Marines Corps K-MAX TITAN unmanned helicopter.

VoloDrone is equipped with Near Earth Autonomy technology.

In May, Near Earth Autonomy announced a separate partnership with the German company Volocopter on the VoloDrone, an electric vertical take-off and landing heavy-lift drone. At the time VoloDrone Chief Engineer Christophe Hommet said “We are very excited to work together with the leading player in the aerial autonomy industry. Near Earth Autonomy has years of experience, shown real results, and is going to help our VoloDrone stay ahead of the curve with autonomous capabilities.”

In addition to partnering with companies around the world on autonomous flight, Near Earth Autonomy enables the autonomous inspection and analysis of construction sites, power plants, tunnels, bridges, warehouses, and more.

Near Earth CEO and co-founder Sanjiv Singh received his PhD in Robotics at Carnegie Mellon University in 1995 and is still on the faculty at CMU’s Robotics Institute. You can find more information on their website, https://www.nearearth.aero/.

From ‘Steel City’ to Innovation City

Today Pittsburgh is best known as an innovation powerhouse, pioneering the robotics, artificial intelligence, and healthcare of the future. Despite this, Pittsburgh is still referred to as “the Steel City”. The steel industry defined Pittsburgh’s reputation for well over a century, but for much of the 1800s Pittsburgh was actually an iron city. The Scottish immigrant Andrew Carnegie was a major player in Pittsburgh’s iron industry before his foray into steel, but it was steel that would solidify both Carnegie’s place in history as perhaps the richest person in the world and Pittsburgh’s role as one of the most important industrial cities in the world.

The Pittsburgh steel industry would come crashing down, however. By the 1980s, the steel industry was on the rise in other countries, particularly Japan, and various factors meant that Pittsburgh mills struggled to compete. In 1984, Nippon Kokan bought 50% of Pittsburgh-based National Steel Corp., and the Wheeling-Pittsburgh Steel Corp. announced a joint venture with Nisshin Steel Co. The time of Pittsburgh’s steel domination was at an end.

The Carnegie Steel Plant in Homestead, Pennsylvania, circa 1905.

Throughout the 1990s and early 2000s, after steel collapsed, the economy of Pittsburgh diversified, and the city became known for “eds and meds”. Universities and medical facilities drove innovation, and also employment. This laid the groundwork for institutions such as the University of Pittsburgh and Carnegie Mellon University to enable Pittsburgh to redefine itself once again, shifting from “Steel City” to “The Robotics Capital of the World”.

Many of the companies in Pittsburgh’s “Robotics Row,” an area of the city with a high concentration of robotics and technology companies, are constantly reminded of the city’s past. The National Robotics Engineering Center operates out of a century-old industrial building, and the Advanced Robotics for Manufacturing Institute in Hazelwood is located within the steel superstructure that was once LTV Coke Works. The remnants of the region’s past are becoming the scaffolding on which Pittsburgh grows and improves.

Manufacturing is still present in the Pittsburgh area, as is the energy industry that long ago provided the iron and steel industries the coal they needed to operate, but they are no longer what people think of when they imagine Pittsburgh. From iron to steel and from eds and meds to robotics and technology, Pittsburgh has repeatedly redefined itself. It’s also worth noting that after he amassed his fortune, Andrew Carnegie became a noted philanthropist. One of the initiatives funded by Carnegie were the Carnegie Technical Schools, which sought to provide education and training to the families of working-class Pittsburghers. Eventually, in 1967, what was once the Carnegie Technical Schools became Carnegie Mellon University. Today, more than 150 years later, Carnegie is still building the future in Pittsburgh.

Pittsburgh Business News and Updates

- U.S.-EU Trade and Technology Council “blown away” by Pittsburgh technology innovation ecosystem (https://www.wpxi.com/news/business/i-think-we-open-their-eyes-us-commerce-secretary-remarks-conclusion-inaugural-us-eu-trade/X43ATRN3ZFDBTCY4RE7OSEBBHE/)

- New Study Finds Breakout Opportunity for Pittsburgh to Become Major Player Globally in Autonomy Sector (https://ridc.org/news/autonomy-study/)

- Self-Driving Tech Company Aurora Names Pittsburgh As Official Corporate Headquarters (https://www.wesa.fm/health-science-tech/2021-09-09/self-driving-tech-company-aurora-names-pittsburgh-as-official-corporate-headquarters)

- Pittsburgh Supercomputer Powers Machine Learning Analysis of Rare Japanese Stamps (https://www.hpcwire.com/2021/09/27/pittsburgh-supercomputer-powers-machine-learning-analysis-of-rare-east-asian-stamps/)

- Yoshi Tsutsugo finding baseball success with Pittsburgh Pirates (https://www.mlbtraderumors.com/2021/09/pirates-rumors-yoshi-tsutsugo-breakout.html)

About Ryan
Ryan O’Shea is a JETRO Investment Advisor focused on connecting Japanese companies to opportunities in Pittsburgh, Pennsylvania. He is the host of Future Grind, a podcast that explores the ethics and impact of emerging science and technology. In 2017, Ryan co-founded an artificial intelligence startup that was named a Top 10 team in the IBM Watson AI XPRIZE. Ryan has represented NASA and CalTech’s Jet Propulsion Laboratory as a Solar System Ambassador and serves both as a World Economic Forum Global Shaper and an ambassador for Pittsburgh AI. He is a graduate of the University of Pittsburgh & serves on the boards of multiple non-profit organizations. He can be reached at Ryan@futuregrind.org.