

The Success Story of Tatsuta & ACI

TATSUTA and ACI started a strategic partnership to drive product innovation

Plug and Play's New Materials' batch startup ACI impressed our corporate partner TATSUTA with their unique cavitation process to develop functional materials. In an interest to diversify their existing business with new products, TATSUTA entered a joint development agreement with ACI and participated in ACI's equity with an investment.

The Innovation Partnership Success Stories is a series that focuses on key projects that emerged through our open innovation platform.

PNPTC.COM

TATSUTA



We connect the best technology startups and the world's largest corporations.

FIND OUT MORE

WE HELP YOU IN EVERY STEP OF YOUR INNOVATION JOURNEY

Partnering with the largest organizations worldwide gives us a line of sight to identify the main pain points affecting each industry. We then focus on sourcing the best startups that can provide the best solutions to these challenges.

By collaborating with startups, corporations increase operational efficiencies, lower costs, find new product lines, and become more innovative from the core.

30,000+

Carefully-curated international startups in our network

500+

Corporate Partners

30+

Offices Worldwide

Global Reach

One of our greatest ambitions is to make our ecosystem accessible wherever you are. With offices across the world, we're proud to be the world's largest innovation platform by geographic reach.



The Parties Involved

The Corporate Partner



TATSUTA Electric Wire and Cable Co., Ltd. ("TATSUTA") based in Osaka, Japan, is a manufacturer of electric wire/cable, electronic materials, and sensor & medical products. Since 1945, TATSUTA's power supply/distribution and telecommunication cables widely contributed to the building of infrastructure during Japan's high-growth period.

As a result of diligent R&D efforts, TATSUTA has brought to the market numerous electronic materials and optical components, such as fiber optic couplers and EMI shielding film which achieved significant sales worldwide with the market growth of smart phones. TATSUTA operates seven business sectors, including the broad area of Functional Materials, like conductive pastes and inks, born of their technologies in polymer compounding and metal powder surface treatment.

The Startup



ACI Materials ("ACI") is a California-based manufacturing and development company that enables the advanced products of tomorrow. They create functional materials like high-performance inks, pastes, and coatings using a revolutionary cavitation process. Cavitation is the formation, growth, and implosive collapse of vacuum/vapor bubbles in a liquid releasing tremendous localized energy and ACI holds a unique patent for their technology.

ACI's target applications are flexible hybrid electronics, wearable electronics, aerospace coatings, and thermal management. Customers count on them to deliver high performance materials that outperform old technologies and enable new applications. ACI's CEO Dana Hankey has been entrenched in high pressure cavitation technology since 2001 and he founded ACI in 2013.

The Project

TATSUTA's "2025 Long-Term Vision" is a long-term management plan for the years 2017 to 2026. They want to achieve net sales of ¥100B and operating income of ¥10B by the end of March 2026.

To achieve these goals, TATSUTA is using **product innovation** to strengthen their existing business platform and to expand into entirely new fields of business.

By reaching out to startups in Plug and Play's open innovation ecosystem, their goal was to find relevant new technologies for product development or new products. In March 2019, they requested a deal flow with Plug and Play about interesting innovations in the field of 'printed electronics', right in line with their vision to exploit new business fields.

The First Steps

In this deal flow, TATSUTA discovered the startup ACI and initiated a follow-up conversation. Technical discussions in virtual and personal meetings followed their initial interest. Both parties agreed to start sample testing of ACI's products — their stretchable inks. TATSUTA already develops non-stretchable inks and wanted to learn more about this product area. Stretchable inks are used for wearable technology that is integrated into clothing that requires a way to transmit signals between sensors, transmitters, and power. This technology could allow TATSUTA to enter a new market.

When TATSUTA explored ACI's stretchable inks as an interesting new field of business, ACI's unique cavitation technology to create such functional materials became extremely interesting to TATSUTA. Although TATSUTA compared ACI's solutions to 2-3 other startups, ACI's advanced technology distinguished them from others.

Both parties were keen to evaluate the joint business potential and, with the support of TATSUTA's management, discussed a scheme of partnership that would be the basis for a successful joint product innovation.

The Timeline

March 2019:

TATSUTA met ACI in a Plug and Play dealflow focused on 'printed electronics'.

May 2019:

Both parties followed up in several technical discussions, involving TATSUTA's Innovation Team, R&D Team, and their 'Advanced Paste Department'. TATSUTA's team from Japan visited ACI personally.

June - November 2019:

TATSUTA evaluated ACI's ink samples, assessed test data and continued technical discussions about product improvement ideas with ACI. Their Japan team visited the US every other month to stay in close contact with the startup.

The technical study was complex and more insights into the technology were needed to get to a meaningful result. Additionally, TATSUTA became interested in ACI's actual unique ink development process with cavitation. So the decision was made that a deeper relationship was needed.

November 2019 - June 2020:

ACI and TATSUTA broadened discussions about a strategic partnership with the goal to explore new fields of business for TATSUTA together; to create trust on both sides an investment in ACI's equity was decided.

July 2020:

TATSUTA purchased equity in ACI and both parties signed a Joint Development Agreement about developing new ink products together to explore new markets.

Today:

TATSUTA and ACI set up a product co-development. TATSUTA mainly conducts material tests and discusses improvements with the advisory team of ACI. Their joint business is evolving and as a next step both parties envision to involve customer feedback.

The Outcome

TATSUTA and ACI entered a strategic partnership pursuant to a Joint Development Agreement and an equity participation in ACI.

Outlook

The synergy of ACI and TATSUTA's existing technology will result in new products including functional pastes. Additionally, TATSUTA aims to strengthen the business platform by implementing new fundamental technologies and to establish new products and markets in its Electronic Materials Business through the strategic partnership and joint development activities with ACI.

By collaborating with ACI, TATSUTA drastically cut down their own **development time** of new products and they were able to take advantage of ACI's **technology expertise**. TATSUTA is looking for future technical synergies in their collaboration with ACI.

TATSUTA continues to focus on next generation technology and will invest and support promising startups for further growth.

Take Aways

Build trust with having a stake in the game

Many startups are keen to protect their IP during PoC and pilot projects and only share the necessary details about their products. This makes the evaluation of technical potentiality difficult. With an investment into a strategic partnership, trust can be build and a collaboration can be more effectively.

Achieve buy-in from executives at your HQ

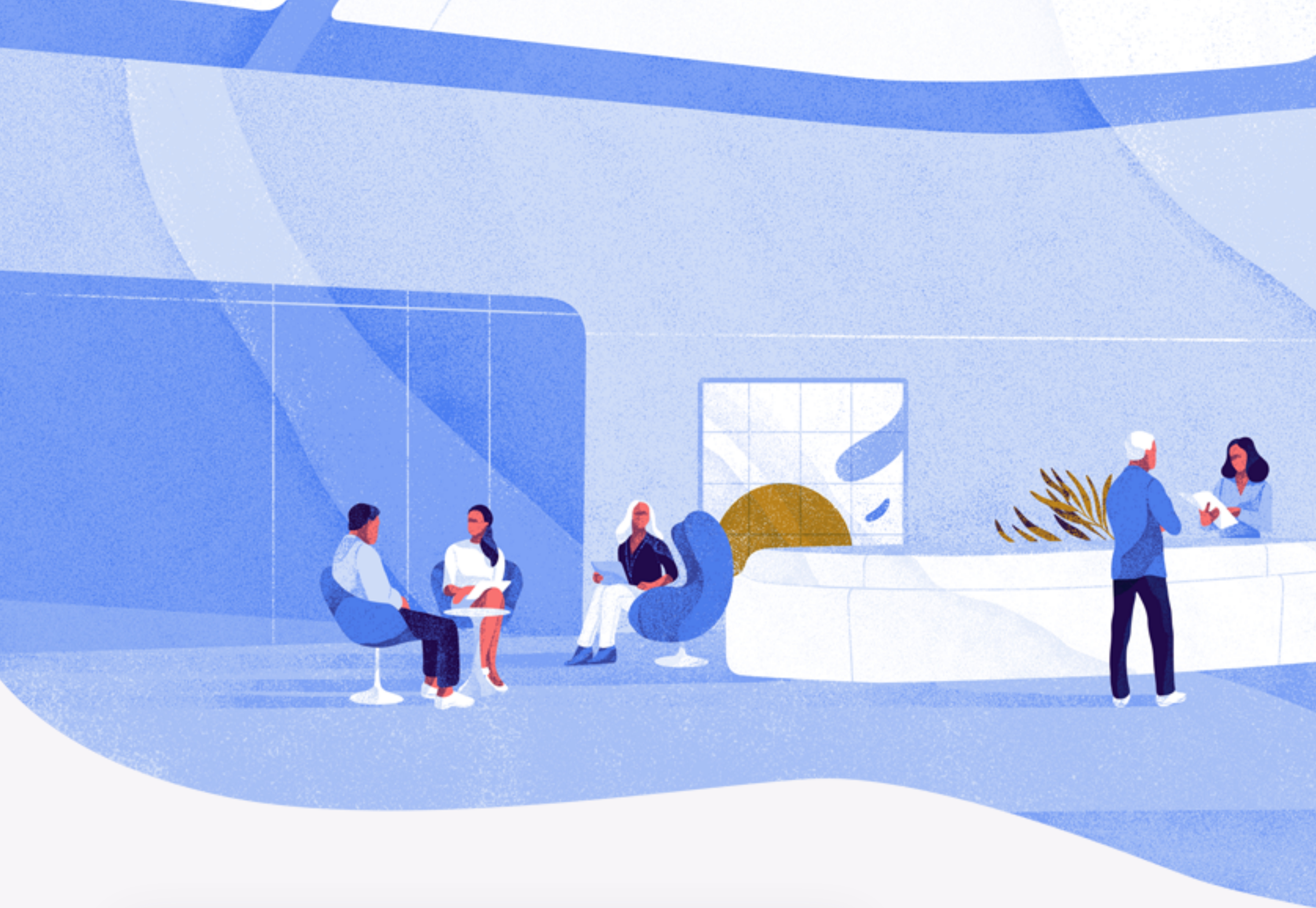
The involvement of TATSUTA's management team and the Japanese R&D teams & business units allowed all activities with the startup to run smoothly. Their management team from Japan also flew in regularly to the US, which helped facilitate the collaboration and build a strong relationship with the startup.

Have a good network of advisors

TATSUTA has made use of a broad network of outside experts, like the Plug and Play Ventures team or legal firms, in the process of setting up the investment. They have learned a lot about startup investments through that process.

How We Can Help

We are the ultimate innovation platform, bringing together the best startups and the world's largest corporations. Collaborating with startups is a great source of inspiration and innovation... but can be a challenge. Let us show you how to adopt the concept of open innovation to help your business succeed.



Plug and Play is a global corporate innovation platform which helps to connect corporate partners to startups in order to help solve their greatest challenges. We also operate as a venture fund and startup ecosystem. To date, we have helped over 3,000 early-to-growth stage startups raise over \$3.5 billion. Plug and Play is consistently ranked among the most active VCs in Silicon Valley.

For additional information, please contact iot@pnptc.com

[PNPTC.COM/IOT](https://pnptc.com/iot)