

What's coopetition? German lessons for Singapore's start-up scene

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What's coopetition? German lessons for Singapore's start-up scene

A university study trip offers insights into creating research and innovation hubs, and leveraging AI.

Thomas Menkhoff and Kevin Cheong

In the greater Stuttgart area, the heart of Germany's engineering prowess, there is a concept driving the region's industrial sector: "coopetition".

This is a strategic blend of cooperation and competition for its global home-grown brands including Mercedes-Benz, Porsche and Bosch.

When many firms in related sectors concentrate in one area, this provides an opportunity to share knowledge to grow together to have a stronger edge against global rivals.

In Stuttgart's case, this has resulted in car manufacturers and automotive technology providers collaborating by pooling research and development (R&D) infrastructure, sharing best practices and participating in joint test-beds for innovation, even if they are competitors.

The goal is not to undercut each other, but to lift the entire ecosystem through collective progress. This has created a dense network linking government agencies, universities, start-ups and established firms.

Institutions like the University of Stuttgart and the Fraunhofer Institutes play a pivotal role, offering public research platforms that industry partners can readily access.

Besides Stuttgart, Berlin and Munich were also stops for undergraduates and faculty members from Singapore Management University during a study trip. The visit offered valuable lessons from the coopetition model, especially in terms of scaling up start-ups and strengthening the entrepreneurship ecosystem.

Start-ups, in these cities, are driving projects around smart mobility, robotics, artificial intelligence (AI) and machine learning and lightweight construction, among others.

One example is Cylib, a German sustainable end-to-end battery recycling start-up backed by Porsche Ventures, World Fund, Bosch Ventures and other consortium partners. It is scaling up its recycling capacity at



By reducing duplication, spreading risk and sharing knowledge, companies innovate faster while maintaining resilience in times of disruption. This has proven invaluable for Germany (left) amid geopolitical uncertainty, labour shortages and rising energy costs, according to the writers.
PHOTO: AFP

industrial levels aimed at decarbonising the battery value chain.

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As Singapore rolls out its own economic strategy to confront those global challenges – with entrepreneurship as one of five key thrusts in the recently announced review to drive growth and stay competitive – there are useful lessons to be drawn from the German cities.

THE SINGAPORE SCENE

Despite having vibrant start-up zones and dedicated industrial hubs like LaunchPad at one-north and Seletar Aerospace Park, the local start-up ecosystem is facing headwinds.

According to StartupBlink's 2025 ranking, Singapore has the world's fourth-best start-up ecosystem, yet tech funding has dropped by more than 56 per

cent since 2023.

Some of the interconnected issues include increasing cost of capital due to higher interest rates, diversified focus of investors who are looking at other markets, and uncertainty due to geopolitical tensions focus.

Competition has become increasingly zero-sum, with many promising ventures struggling to scale or survive. Singapore's small market and limited domestic demand add to the challenge.

With only so many grants, venture funds and B2B customers – often government agencies or government-linked companies – start-ups view one another as rivals for survival rather than collaborators.

Coopetition remains superficial, limited to pitch days, demo showcases or short-term accelerators.

The Government has long supported the growth of Singapore's start-up ecosystem through tech ventures, incubators and accelerators. Yet, more needs to be done to orchestrate a network of partners that co-create value and push innovation beyond what any single company can achieve.

Unlike Germany's innovation platforms or Silicon Valley's disruptive culture, Singapore still lacks deep, domain-specific collaboration where start-ups, corporates and researchers stay in the loop over years.

While large companies have intensified their R&D efforts and are searching for ideas outside their corporate structures, much of the innovation that emerges remains incremental, rather than something radically new.

Industry-university collaborations such as The Singapore-MIT Alliance for Research and Technology are a step forward. But truly transformative (breakthrough) innovation requires a culture of long-term risk-taking, adaptive regulation and collaborative ecosystems that lead to the development of completely new business models or technologies beyond process optimisations and customer experience improvements.

Fintech start-ups, for example, often enter grey regulatory areas like blockchain (DeFI) or cryptocurrency, resulting in time-to-market delays and high compliance costs due to

regulatory complexity.

Institutions such as SGInnovate, A*Star, EnterpriseSG and the National Research Foundation are trusted intermediaries. Yet for bold, early-stage deep tech ventures with high-risk returns, navigating some of these platforms can be daunting due to the inherent mismatch between their bureaucratic nature and the high-risk, high-reward profile of deep-tech start-ups.

Structured processes, slow timelines and risk aversion can create a bottleneck for start-ups that require flexibility, speed and long-term interdisciplinary collaboration to succeed in industries like financial technology, biotech, cleantech or advanced manufacturing.

Instead of outright competition, Singapore could build cross-sector innovation ecosystems and coopetition models that bring together industries for shared R&D, joint accelerators and real-world testbeds at the district or precinct level.

A good example is AI Singapore, which brings together SMEs, start-ups, agencies, research institutions and corporates to

tackle national challenges in areas such as healthcare, insurance and waste management.

Fostering AI adoption across industries, while learning from Germany's strategy to create and capture value, could further strengthen Singapore's role as a trusted hub for responsible AI innovation.

MUNICH: AI AND DEEP-TECH FRONTIERS

At Munich Re, one of the world's leading reinsurance companies, AI is transforming underwriting in an era of climate change and severe natural disasters, powered by location risk intelligence and advanced geospatial analytics.

Its AI-driven underwriting platform, Predictor, helps life and health insurers process applications and claims end-to-end without manual intervention.

The MunichRe visit revealed how AI could serve as a strategic enabler for local and regional insurance firms, fostering smarter, faster and more resilient operations while maintaining the

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Hub for collaborative innovation

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essential role of human judgment in complex underwriting.

At the TUM Venture Lab Aerospace, an initiative of the Technical University of Munich and start-up hub UnternehmerTUM, students were introduced to an AI-powered autonomous drone for search-and-rescue operations.

UnternehmerTUM exemplifies Germany's coopetition edge by connecting universities, start-ups, corporates such as BMW, investors and government bodies to foster innovation and rapid commercialisation.

Its integrated programmes – from incubation to funding through Unternehmertum Venture Capital Partners – consistently enable start-up growth, even in tough venture capital climates.

Flagship initiatives like Circular Republic showcase how cross-sector collaborative efforts can co-create sustainable, scalable solutions for global challenges such as resource depletion, wasteful production, unsustainable logistics and non-repairable design.

MunichRe and TUM are renowned for their strong focus on collaborative innovation, academic-industry partnerships, cognitive computing and responsible and explainable AI as well as collaborative risk modelling.

Singapore could adapt the innovative synergy that exists between both organisations to further leverage AI for insurance innovation by developing a shared platform for AI-based tools and models in collaboration with the Monetary Authority of Singapore.

BERLIN: FROM THE GROUND UP

The Berlin visit highlighted the value of community-driven innovation, where citizens, start-ups, academia and agencies collaborate closely from the outset to co-create solutions.

One initiative aims to transform the space beneath a subway viaduct into a bike link. This highlights how inclusive development fosters ownership among residents, enhancing social cohesion and increasing support for public initiatives.

Berlin's newly evolving Urban Tech Republic is a pioneering R&D hub located on the site of the former Tegel Airport. Spanning 202ha, it brings together start-ups, corporations and academic institutions to co-develop sustainable urban solutions in clean energy, mobility, water, recycling, materials and information technology.

Resident firms at the hub such as Alganize, which develops microalgae-based soil enhancers, and CannaBau Berlin, a producer of sustainable hempcrete building blocks made from the woody core of the hemp plant, demonstrate how sustainability is embedded into product design from the outset.

To truly evolve into a citizen-centered, inclusive innovation ecosystem, Singapore could benefit from integrating more bottom-up input into its smart city and entrepreneurship initiatives.

By expanding neighbourhood innovation labs and adopting participatory planning and budgeting, Singapore can nurture citizens to co-create solutions to urban challenges like climate resilience, social isolation, ageing and underused spaces.

The time is ripe for Singapore to make the leap from a technologically advanced Smart Nation to a globally recognised, collaborative innovation hub that thrives on the creative energy of its start-ups, corporations, people and public leaders – all working together to solve the challenges of tomorrow.

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