



Co-innovation opportunities for German and Singapore companies

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26 July 2023

ABOUT ENTERPRISE SINGAPORE

Enterprise Singapore

We're part of a larger family that looks at growing Singapore's economy



Grow inward investment and overall development of the enterprise ecosystem in Singapore



Help local enterprises build capabilities and capture new opportunities across sectors and markets, to be globally competitive

Merging two economic agencies



BUILDING INDUSTRIES

Develop industrial infrastructure to grow new industries and transform existing enterprises



Foster world-class scientific research and nurture scientific talent to develop a vibrant knowledge based Singapore



We grow stronger Singapore enterprises



MISSION

Grow stronger Singapore enterprises by building capabilities and accessing global opportunities, thereby creating good jobs for Singaporeans.



VISION

A vibrant economy with globally competitive Singapore enterprises.



Drive enterprise transformation and growth



Strengthen Singapore as a global node for innovation and startups



Develop Singapore as a top global trading hub



Build trust in Singapore products and services

Enterprise Singapore's global network

36 offices worldwide



Updated as of Nov 2022

About Singapore

Singapore snapshot 2021

Total population 5.64 million

Resident population 4.07 million

(Singapore citizens and permanent residents)

Total land area 733.2 sq km

Total merchandise trade S\$1.16 trillion / US\$859.3 billion

GDP S\$533.4 billion / US\$395.1 billion

(at current market prices)

S\$97,798 / US\$72,442 (per capita)

Top trading partners China, Malaysia, United States

Singapore's Trade in Goods with Germany (2022)

Export	USD 8.38bn (+17% y-o-y)
Import	USD 10.31bn (-0.6% y-o-y)
Total Trade	USD 18.70bn (+6.6% y-o-y)

Top Singapore imports from Germany: Nuclear reactors boilers machinery, electrical machinery, vehicles and vehicle parts, pharmaceutical products

Top Singapore exports to Germany: Electrical machinery, nuclear reactors boilers machinery, optical instruments, organic chemicals, vehicles and vehicle parts

Examples of outstanding sectors in Singapore



BANKING & FINANCE

Among the world's top 5 global financial centres, home to > 1,200 local and foreign financial institutions

(Source: Global Financial Centres Index, 2019)



DIGITAL

Asia's top-ranked country in digital transformation, and 1st in digital infrastructure.

(Source: Asian Digital Transformation Index 2018)



ADVANCED MANUFACTURING

4th largest exporter of high-tech goods globally, in terms of value-add.

(Source: World Bank Data)



HUB SERVICES

46% of Asia RHQs are based in Singapore, across a diverse range of industries.

(Source: Singapore Business Review, as quoted in KPMG, "Budget 2018/2019 Report")



SUPPLY CHAIN & CONNECTIVITY

2nd busiest container sea port and 12th busiest air cargo hub in the world.

(Source: Lloyd's List 2017 – Top 100 Container Ports 2017; Airports Council International - World Airport Traffic Report 2018)



AEROSPACE

#1 aerospace city of the future globally.

(Source: fDi's Aerospace Cities of the Future 2018/19)



ELECTRONICS

Accounts for 25% of global semiconductor equipment output in 2017.

(Source: SEMI Global Industry Association)



ENERGY & CHEMICALS

Top 5 largest refinery export hub globally.

(Source: BP Statistical Review of World Energy 2019)



MARINE & OFFSHORE

Top maritime capital of the world.

(Source: Leading Maritime Capitals of the World Report, 2019)

Singapore is a Global-Asia Node for Technology, Innovation and Enterprise



Best business environment

Economist Intelligence Unit, 2021



World's 2nd most digitally competitive country

IMD World Digital Competitiveness Ranking, 2020



Ranked top 20 startup ecosystem globally

Global Startup Report, 2021 by Startup Genome



2nd easiest place to do business in the world

The World Bank, 2020



Most innovative country in Asia Pacific

Bloomberg Innovation Index, 2021



Startups

Supported by conducive business environment



Stable Policy & Regulatory Environment

- Provides a stable environment for your business to operate and grow in
- Startup SG and Startup SG Network serve as dedicated ecosystems that bring stakeholders together



Supportive Government Policies

- Government takes the lead in digital transformation and innovation with programmes such as the Smart Nation Initiative



Numerous Financing Opportunities

- Home to numerous venture capital firms and financial institutions
- Venture capital investments totaled more than \$14.7 billion in 2021[^]



Launchpad Into ASEAN and Asia

- Southeast Asia is projected to be the world's 4th largest economy by 2030
- China and India are among the world's most populous countries with huge demand for goods and services

Source:

DealStreet Asia, Crunchbase, Pitchbook, Preqin and admin data from Enterprise Singapore

Startups

Diverse pool of ecosystem partners driving innovation...

>200 incubators/accelerators



>600 venture capital investors



> 30 IHLs and research institutions



Startups

... and growing startup activities



Increased entrepreneurial activity
in tech sectors

3,400 → **3,800**

Tech startups (2012)

Tech startups (2021)



Increased venture funding activity
& amounts

80 deals → **692** deals

S\$186.9 million (2012)

S\$14.7 billion (2021)



Home to 22 unicorns



Partners with extensive regional reach



Global Innovation Alliance partners include:



Startups

Our approach to create a vibrant and self-sustaining global startup hub

1

Deepen
global
connections



2

Catalyse
more
platforms for
co-innovation



3

Strengthen
human
capital



4

Catalyse
financing
opportunities



5

Create
network of
infrastructure
to support
startups





Co-Innovation and Partnership Opportunities

Co-Innovation Opportunities with Singapore

German companies are welcomed to collaborate with Singapore enterprises on joint R&D and innovative projects through the following platforms:

Collaboration with
MNC/Corporates

Multilateral

Information Technology for European Advancement (ITEA) 4

The ITEA4 Call is an initiative part of the Eureka Clusters Programme, which **supports companies to collaborate on software innovation projects** in domains such as **smart mobility, healthcare, smart cities and energy, manufacturing, engineering and safety & security.**

<https://itea4.org/>



eureka
innovation beyond borders

ITEA 4



eurostars™

Eureka Eurostars

SME-focused

Multilateral

Eurostars is the largest **international funding programme supporting cross-border R&D collaborations** between innovative SMEs from 37 countries, **including Singapore and Germany**, to create innovative products, processes or services for commercialisation.

<https://www.eurekanetwork.org/countries/germany/eurostars/>

SME-focused

Bilateral

Germany-Singapore SME Funding Programme

Jointly administered by Enterprise Singapore and Federal Ministry for Economic Affairs and Climate Action (BMWK), the Germany-Singapore SME Funding Programme (GSFP) **supports R&D collaborations between Singapore and German companies** for the **development of ready-to-market solutions** that have strong market potential for Germany, Singapore or the international market.

<https://www.enterprisesg.gov.sg/grow-your-business/innovate-with-us/market-access-and-networks/global-innovation-alliance/cip/germany-singapore-sme-funding-programme>



Enterprise
Singapore

Germany-Singapore SME Funding Programme

A partnership between EnterpriseSG and BMWK to support collaborations between Singapore and German companies

Enterprise
Singapore

 Federal Ministry
for Economic Affairs
and Climate Action



What is the Germany-Singapore SME Funding Programme?

The Germany-Singapore SME Funding Programme (GSFP) encourage the development of ready-to-market solutions for products, technology-based services or processes that have strong market potential for Germany, Singapore or the international market.

Programme information

Guidelines for project proposals:

- i. Open to projects from all sectors.
- ii. Projects should result in new ready-to-market solutions, products, technology-based services, or processes.

Benefits of participating

- ✓ Joint funding support from Singapore and Germany.
- ✓ Co-development and test-bedding of innovative products and applications with strong market potential.
- ✓ Expansion into new sectors and scale up into international markets.

Who can apply?

The project consortium must **involve at least one Singapore SME and one German SME**, independent from each other.

Application period

Call for proposals: 20 April 2023 – 20 September 2023

Website

For more information, please visit:

<https://www.zim.de/ZIM/Redaktion/DE/Meldungen/2023%20Internationale%20Ausschreibungen/2023-04-20-5-ausschreibung-deutschland-singapur.html>

<https://www.enterprisesg.gov.sg/grow-your-business/innovate-with-us/market-access-and-networks/global-innovation-alliance/cip/germany-singapore-sme-funding-programme>

Information Technology for European Advancement (ITEA) 4

ITEA4 is an Eureka Clusters call focusing on software innovation projects

What is ITEA4?

The ITEA4 Call is an initiative part of the Eureka Clusters Programme, which supports companies to collaborate on software innovation projects in domains such as **smart mobility, healthcare, smart cities and energy, manufacturing, engineering and safety & security.**

Programme information

Guidelines for project proposals:

- i. ITEA4 is open to software innovation projects in various domains.
- ii. Projects should focus on R&D / innovation, with intent to develop innovative products, processes, and services.

Benefits of participating

- ✓ Opportunity to work with over 200 MNCs and corporates, and access partners across Europe such as government agencies, research institutes, SMEs and universities.
- ✓ Gain access to the innovative value chain of corporates such as Bosch, Philips, and Volvo etc.
- ✓ Tap on expert guidance for your project.

Who can apply?

The project consortium must involve at least two independent companies from the 35 participating countries, including **Singapore and Germany.**

Application period

Applications are typically opened in second half of year.

Website

For more information, please visit:
<https://itea4.org/>

Eureka Eurostars

Supporting cross-border R&D collaborations between companies from 37 countries, including Singapore and Germany

What is Eureka Eurostars?

Eurostars is the largest international funding programme which supports innovative SMEs wishing to collaborate on R&D projects to create innovative products, processes or services for commercialisation.

Programme information

Guidelines for project proposals:

- i. Eurostars is open to projects from all sectors.
- ii. Projects should focus on R&D and innovation, with the intent to develop innovative products, processes, and services.

Benefits of participating

- ✓ Gain access to public funding.
- ✓ Join an ever-growing international network of SMEs, universities and research centres, and expert support.
- ✓ Collaborate on innovative and market-driven R&D projects with like-minded international partners.
- ✓ Acquire feedback on technical and commercial viability from multiple expert evaluation.

Who can apply?

Innovative SMEs and project partners (large companies, universities, research institutions and other types of organisations) from the 37 participating countries, including **Singapore and Germany**.

Application period

Two call for proposals each year:

- Call 1: January – March
- Call 2: July – September

Website

For more information, please visit:

<https://www.eurekanetwork.org/countries/germany/eurostars/>

Demand-led Open Innovation Initiatives with Singapore

Hosted on the Open Innovation Network under <https://www.openinnovationnetwork.gov.sg/innovation-challenges>



NIC Kickstarted & Announced by DPM
[May-Jun 2020]



Trade & Connectivity 2020
- Enterprise Track & NIC [Jul 2020]



Energy OI Challenge [Sep 2020]



Healthcare OI – Enterprise & NIC
[Oct 2020]



Environmental Service IoT NIC
[Oct 2020]



E-Commerce Supply Chain
Challenge NIC 2020 [Oct
2020]



OIN 2.0 Launched
[Dec 2020]



Built Environment
Accelerate To Market Programme
BEAMP Cycle 3 [Dec 2020]



Sustainability OI Challenge 2020 –
Enterprise Track & NIC [Dec 2020]



Southeast Asia OI 2020
[Dec 2020]

Example: Sustainability Open Innovation Challenge (SOIC) 2021



“
 Our aim in terms of decarbonization and sustainability at large, is to become net carbon neutral by 2050. It's quite a large task, and that's why we joined the Sustainability Open Innovation Challenge. To get connected to world-class talent across all different business areas. This initiative really expanded our open innovation portfolio.
 ”

Petromil Petkov,
 Head of Innovation Hub Singapore
 Volkswagen

16 Challenge Owners



RESOURCE EFFICIENCY



ZERO WASTE



SUSTAINABLE BUILT ENVIRONMENT



GREEN TRANSPORT



1260+
 participants



627
 submitted proposals



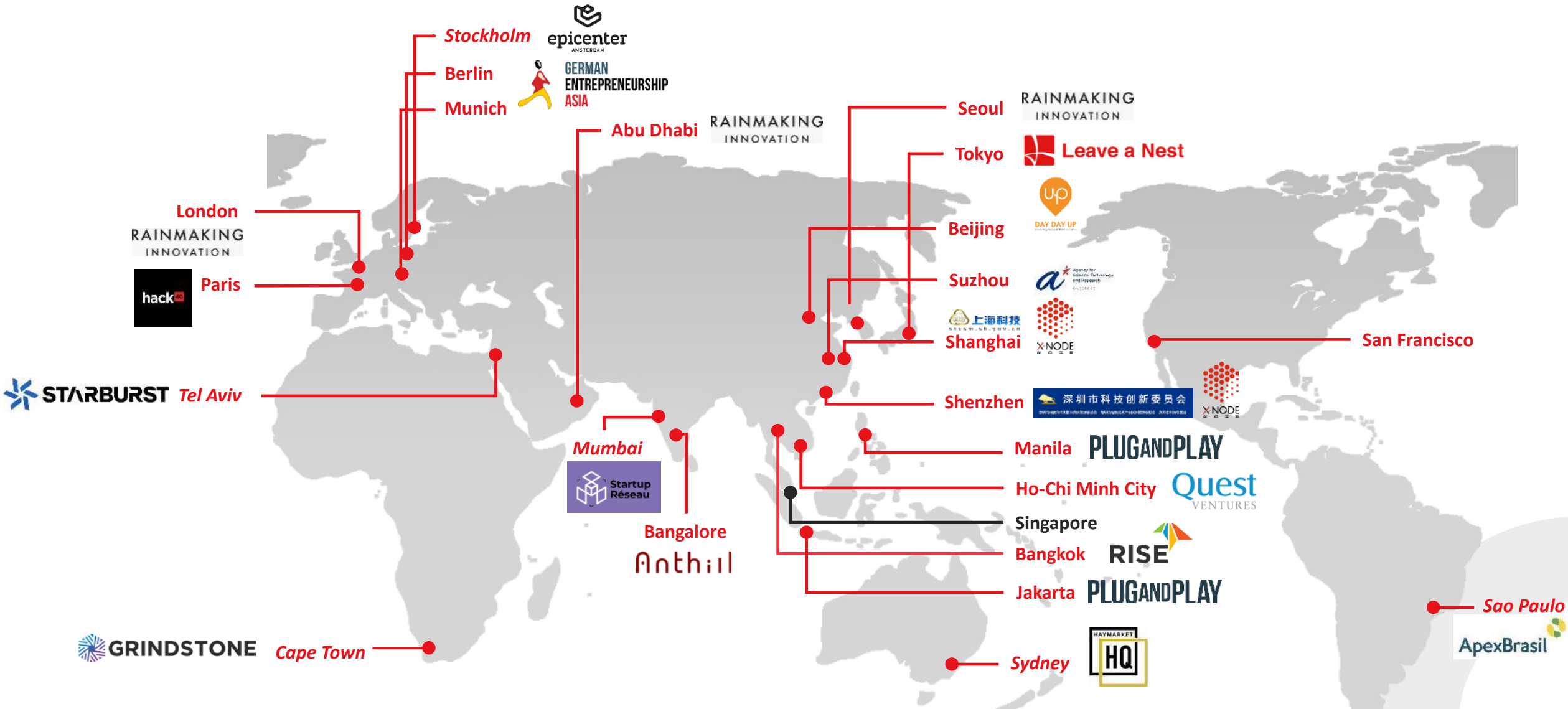
90+
 participating countries



15
 awarded startups

GLOBAL INNOVATION ALLIANCE - for Startups

Strengthening Singapore's connections to major innovation hubs around the world



GIA Acceleration Programmes in **17** cities, with **6** pilot cities

Southeast Asia Manufacturing Alliance – for Manufacturers

SEA Manufacturing Alliance as a Gateway

The **Southeast Asia Manufacturing Alliance** is a partnership between Singapore Government agencies - Economic Development Board (EDB), Enterprise Singapore (ESG), and private sector Strategic Partners to enable pairing of Singapore's global business hub connectivity and innovation ecosystem with the manufacturing strengths of Indonesia, Malaysia, and Vietnam, and help companies expand production bases in SEA

Manufacturers must both:

-  Expand business operations in Singapore or partner a Singapore-based company
-  Invest in industrial activities in the assets of Strategic Partners in SEA

01 EDB: Nurturing innovation and driving future solutions

Grants of up to S\$1.5m for eligible R&D and innovation activities undertaken in SG*

**Subject to relevant terms and conditions.*



02 ESG: Forging strategic partnerships across supply chains

- ▶ Partners companies on a one-to-one basis to provide customised services for supplier sourcing
- ▶ Access to dedicated supplier matching resources for manufacturing or i4.0 related solutions

03 Strategic Partners: Streamlining setup and optimising operations

Strategic Partners including **CapitaLand** (Malaysia), **Gallant Venture** (Indonesia), and **Sembcorp Development** (Indonesia, Vietnam) will offer different benefit packages that may include:

- ▶ Differentiated prices on areas like lease and logistics
- ▶ Complimentary business services





Examples of Partnership with Singapore Companies

German Corporates are setting up R&D and innovation centres in Singapore to plug into Asia's innovation ecosystem...



EcoLabs-Continental Urban Mobility Accelerator Programme

- ❑ Set up in 2020 by **Continental Automotive Singapore** and **EcoLabs Centre of Innovation for Energy** at the Nanyang Technological University in Singapore
- ❑ Aims to build pipeline of products and services co-created by Continental and Singapore startups/SMEs
- ❑ Focus areas: Autonomous, Telematics, Electric, Intelligent Traffic, Aerial



Henkel Global Supply Chain Hub in Singapore

- ❑ 1 of 2 Global Supply Chain hubs by **Henkel**
- ❑ Working with suppliers and partners to implement a circular economy strategy by using less raw materials, more recycled materials and experimenting with plastic resin alternatives
- ❑ Partnering global non-profit organization **Alliance to End Plastic Waste**, which has innovation hubs in Singapore, Paris and Silicon Valley

Partnerships to jointly co-develop innovative solutions to address regional needs & launch globally



- **Infineon** collaborated with **Xnergy**, a Singapore startup that specialises in **wireless charging technologies**, to co-develop Xnergy's wireless fast charging solution for autonomous devices such as mobile robots and vehicles which can eliminate battery-model incompatibility issues.
- Xnergy's solution was first testbedded in Infineon's Singapore factory, then deployed to Infineon's **customers in the SEA region** such as Panasonic and Balyo.



Armstrong, a Singapore precision engineering firm with manufacturing operations in China and 6 Southeast Asian countries, which has a strategic partnership with German Mittelstand company **Philippine** to jointly manufacture and supply to automotive OEMs in Asia.

Platforms & Events



Germany Singapore Business Forum Connect: Flagship business platform with illustrious 29 years history



- Flagship platform connecting German and Singapore businesses co-led by **Asia-Pacific Committee of German Business (APA)** and **Enterprise Singapore**
- **Germany Singapore Business Forum** : Launched in 1994 following visit of then Chancellor Helmut Kohl to Singapore
- Founding Co-Chairs: Chairman EDB/Philip Yeo; Managing Partner TRUMPF/Berthold Leibinger
- Current Co-Chairs: Chairman EnterpriseSG/**Peter Ong**; Former Chairman TÜV SÜD & Chairman Ostasiatischer Verin e.V. (OAV) /**Prof. Dr. Axel Stepken**
- Rebranded as **GSBF Connect** in 2020 to enable faster and more digital connections amid COVID-19 pandemic
- GSBF Connect: series of thematic events held throughout the year delivering high-level perspectives, industry insights and 1-to-1 matching between German and Singapore businesses; organised in conjunction with major events; e.g. Singapore Week of Innovation and Technology (SWITCH), Hannover Messe etc.

Join us at SWITCH!



Focus Sectors

SWITCH 2023 &
SLINGSHOT Competition Domains

Manufacturing, Trade and Connectivity	Health and Biomedical	Environment, Energy and Green Technology	Consumer Media, Goods and Services	Transformative Digital Technologies
<ul style="list-style-type: none">• Advanced Manufacturing• IoT & Sensors• Mobility, Transportation & Logistics• Robotics & Automation	<ul style="list-style-type: none">• Biotech• DigiHealth• Medtech	<ul style="list-style-type: none">• AgriTech• Clean Energy• Renewable & Alternative Energy• Waste Management & Treatment Solutions• Water & Environment	<ul style="list-style-type: none">• AI & Machine Learning• Augmented Reality & Virtual Reality• Big Data• Blockchain• Cybersecurity• 5G	<ul style="list-style-type: none">• AdTech, Content & Marketing• Education Tech• FinTech (Insurtech, P2P Lending)• Food Tech• Retail Tech (Experiential Retailing)• Product Personalisation Technologies

Organised by Enterprise Singapore and supported by the National Research Foundation Singapore of the Prime Minister's Office, SWITCH (Singapore Week of Innovation & TeCHnology) is Asia's leading deep tech festival that connects the Global-Asia innovation ecosystem through premier thought leadership, vibrant networking, showcase events, and a start-up pitching competition.

Connecting startups, investors, corporates, research institutes, trade & tech government agencies and innovators – more info under <https://www.switchsg.org/>

**Enterprise
Singapore**

Growing **Enterprises** ^{SG}

THANK YOU

www.enterprisesg.gov.sg

