

# Connecting enterprises to innovation, the Singapore way

**An Introduction to IPI Singapore**



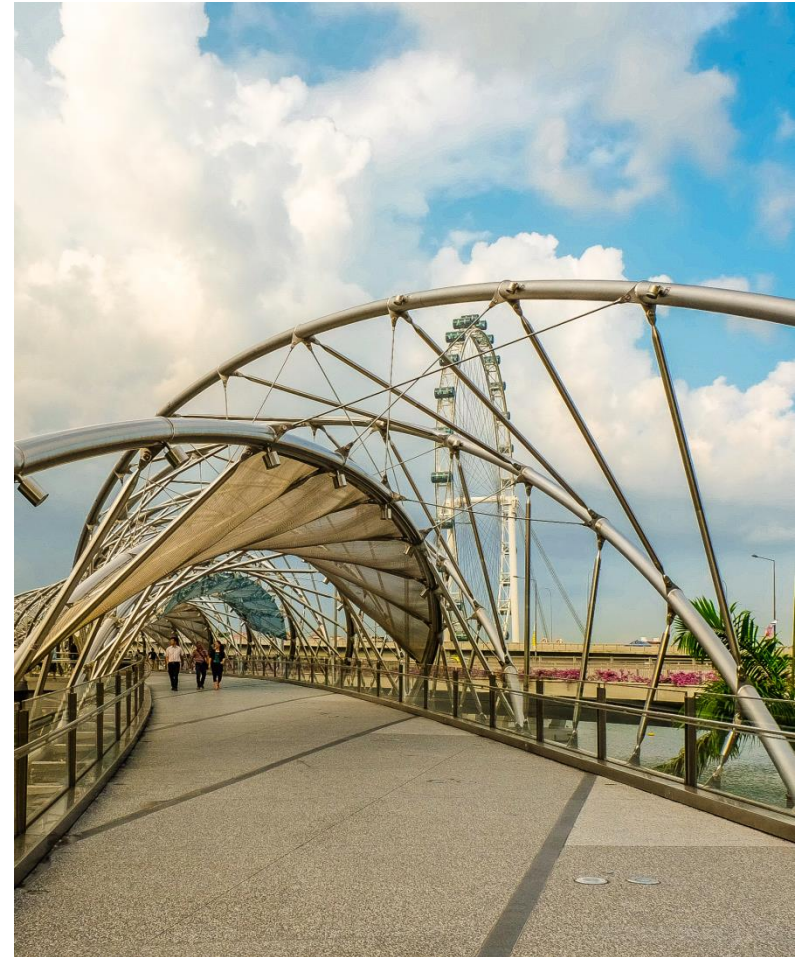
connecting  
enterprises to  
innovation

# Introduction



- Established in April 2011 by the Ministry of Trade and Industry (MTI) to enable enterprises to grow their businesses through technology and innovation.
- Focusing on industry needs, IPI works with enterprises to source for technologies **locally and overseas**, from **both public and private sectors**; and facilitate partnership to bring new products & services to the market.

- **Bridge gaps between innovation and business-readiness**
  - Identify relevant technology solutions and partners for product and service development.
  - Access to developers, translators, regulatory consultants, experts and partners.
  - Connect to funding sources, test bedding sites and clinical trials.
- **Accelerate innovation and help boost competitiveness**
  - Leverage on IPI's integrated services and marketplace platforms.
- **Connect to new partnership opportunities**
  - Link to a strong international network technology partners including the Enterprise Europe Network (EEN).
  - Highlight call for proposals from public agencies.



# Our Areas of Focus



## Infocomm & Electronics

- Internet of things & sensors
- Big data & data analytics
- Cybersecurity
- Artificial intelligence
- Network communications
- Telematics



## Manufacturing

- Additive manufacturing
- Automation / Robotics
- Functional printing
- Machine vision



## Energy & Environment

- Green building
- Renewable energy
- Solid waste management
- Industrial waste water treatment



## Personal & Healthcare

- Diagnostics
- Medical devices
- Nutrition & health
- Skin care
- Digital health



## Materials & Chemicals

- Performance materials
- Functional coatings
- Specialty chemicals
- Composite
- Nanotech



## Other Sectors

- Construction
- Food manufacturing
- Retail
- Services
- Industrial biotech

# How We Work

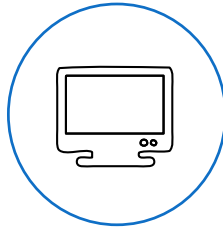


# Our Engagement Model



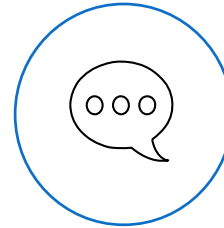
## 1-to-1 Company Engagement

- Company Visits
- Technology Services



## Online Portal

- Virtual IP marketplace



## TechInnovation

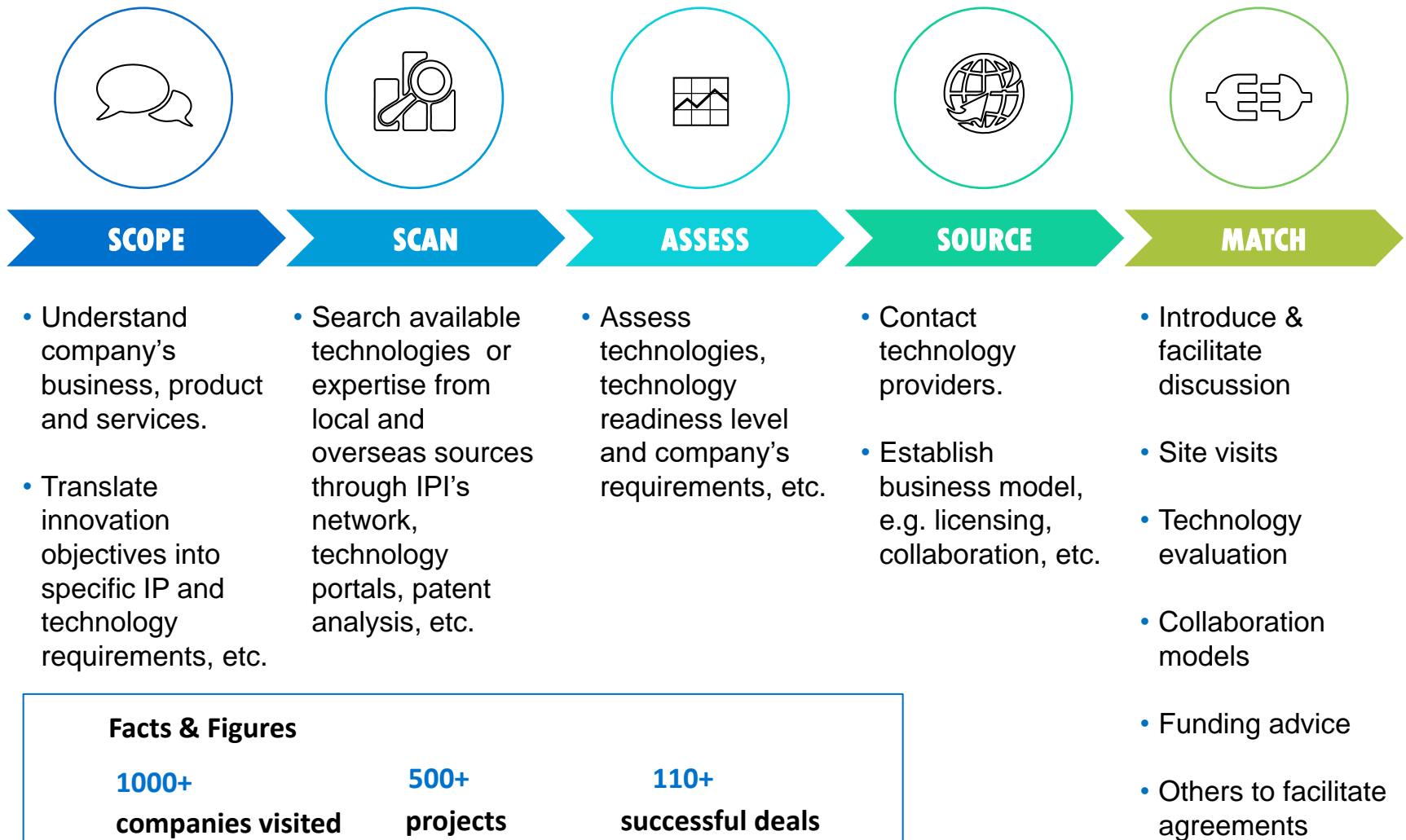
- Physical IP marketplace



## Enterprise Europe Network

- World's largest innovation & business support network

# 1-to-1 Company Engagement: Technology Services



## Facts & Figures

**1000+**

**companies visited**

**500+**

**projects**

**110+**

**successful deals**

\* Cumulative from FY2011 to FY2016



- A self-service online portal that allows industry to reach out to IPI's global network to:
  - Search for technologies of interest.
  - Search for technology needs of other companies and government agencies.
  - Post technology needs to crowdsource for solutions.

## Facts & Figures

**1,500+**  
technologies

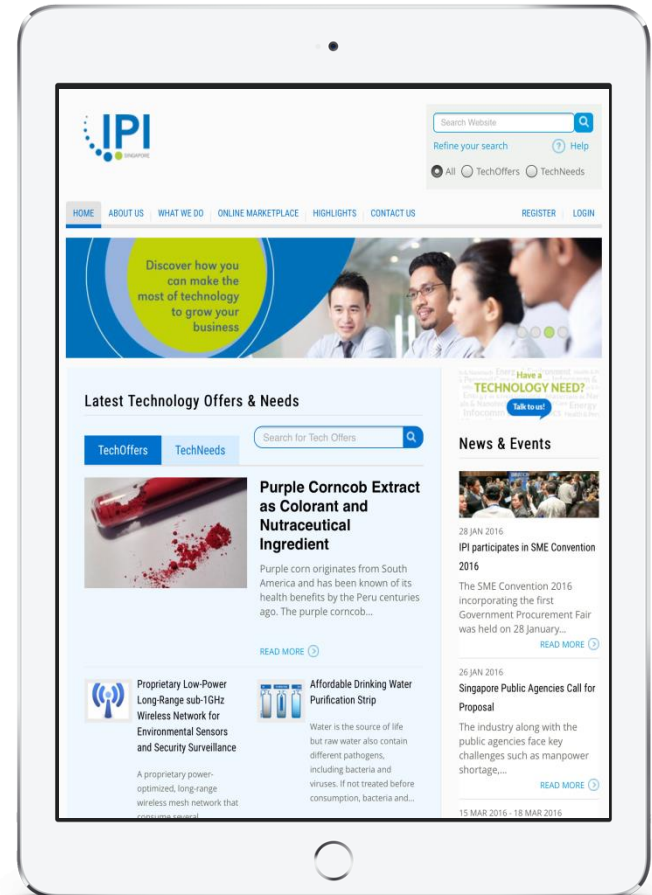
**1,000+**  
enquiries

**15,000+**  
subscribers

**115,000+**  
visitors

**170+**  
countries

\* Cumulative from FY2011 to FY 2015



Register for an account to post your tech offer/need and receive our tech alert & newsletter at

<https://www.ipi-singapore.org/user/register>

# TechInnovation (19-20 Sep 2017, Marina Bay Sands)

- IPI's flagship industry-technology matching event.
- It brings together international technology providers and seekers to network, explore commercialisation and initiate business collaboration.

## Facts & Figures

**2,700+**

**participants**

**300+**

**technologies**

**30+**

**countries**

**400+**

**meetings**

**70%**

**from industry**

[www.techinnovation.com.sg](http://www.techinnovation.com.sg)

\* Statistics from TechInnovation 2016



**TECHINNOVATION SINGAPORE**



### Crowdsourcing

An open innovation platform for corporations seeking technologies, solutions or partnerships.



### Crowdpitching

A pitching platform for technology provider exhibitors to feature technologies for commercialisation or co-development.



### Best Practices

Learn from thought leaders and be inspired by successful enterprises in their innovation journey.



### 1-to-1 Meetings

Pre-event matching of technology opportunities with enterprises' needs through 1-to-1 business meetings.



# Our Strong Network of Partners

## Local & Overseas Academic Partners

## Local & Overseas SMEs & Start-ups



## Trade Associations & Chambers

## Government Agencies

## Commercial IP Intermediaries

- EEN is the world's largest innovation & business support network set up to help SMEs to seize business opportunities in the EU and beyond.
- EEN Singapore is a consortium formed by IPI, the Singapore Manufacturing Federation (SMF) and International Enterprise Singapore (IE Singapore). It was launched on 21 April 2016.
- Through EEN Singapore, Singapore companies can:
  - Gain exclusive access to the network-partners-only database comprising of 600 organisations in more than 60 countries.
  - Search for strategic business and technology partnerships in the EU.
- Find out more on [www.een-singapore.sg/](http://www.een-singapore.sg/).



*Business Support on Your Doorstep*

[Watch the video on EEN Singapore](#)

# Success Stories

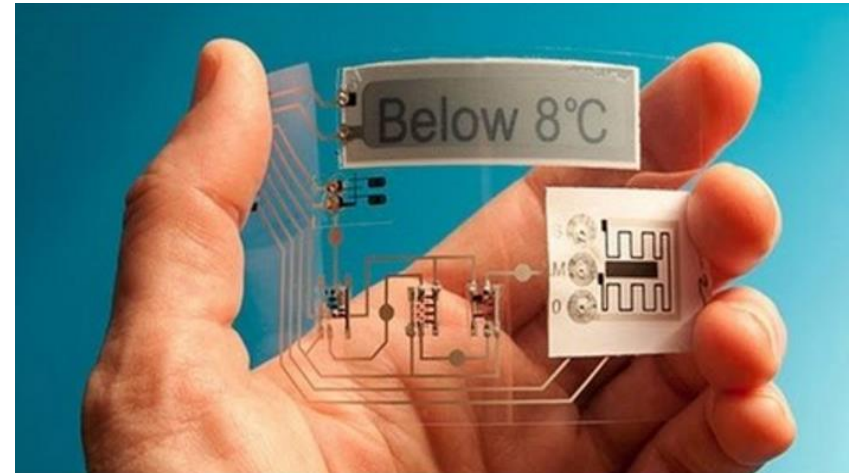
# Smart labels to ensure food safety in cold chain logistics

## Challenge:

- A local startup that invests in innovative technologies for business areas in food & beverage, healthcare, biotechnology is interested in adopting disruptive innovations and have identified **technologies for food safety and cold chain management** as one of its main area of focus.
- Cold chain management in tropical climates is critical in sustaining the quality and condition of temperature-sensitive products/items , especially in the food industry.

## Solution:

- The company approached IPI during [TechInnovation 2015](#) and through a Tech Source engagement, IPI introduced the local company to a Swedish company which provides a **low cost printable smart label capable of detecting exposures to temperature variations beyond a programmed level.**



## Outcome:

- Both companies agreed to form a joint venture to introduce solution to Singapore, Malaysia, Indonesia and Thailand.
- If the technology gains traction in the market, it will have an influence in raising the overall standards in cold chain management, especially how temperature-sensitive food items are handled, stored and presented.
- Applications in the pharma industry are also being explored.



# Overcoming “Last Mile” Logistics Challenges with Smart Real Time Traffic Prediction and Route Planning

- **Challenge:** Courex, a local third-party logistics company, was looking for opportunities to **use technology to improve its operations in the “last mile” stage**. This is the last leg in the delivery of a product from supplier to customer. It is often the least efficient link in the supply chain.
- **Solution:** Through TechInnovation 2014, Courex came across a technology offering “Real-time Traffic Prediction & Route Guidance” by Nanyang Technological University (NTU). With IPI’s facilitation, Courex commissioned NTU to build a smart algorithm to optimise its route planning. The mathematically computed programme efficiently clusters articles for delivery and proposes the best route to deliver each article in the cluster.
- **Outcome:** Courex has already benefited from improvements in productivity. For example, scheduling work that used to require two man-hours can now be autonomously completed within minutes with the new system.



**Courex Pte Ltd**

“ We are convinced by the returns of investment in technology and TechInnovation offered an excellent platform for us to discover and explore potential technologies to achieve greater operational excellence. Beyond operational cost savings, efficient route planning has also enabled us to cut down on our carbon footprint. ”

**Joe Choa, Managing Director,  
Courex Pte Ltd**



- **Challenge:** HVS Engineering is a local enterprise that provides automated maintenance solutions for heat exchanger systems in heating, ventilation and air-conditioning (HVAC) industries. To expand their business into the oil and gas industry, it was looking for an advanced material to **replace its existing HVS brush ball which was not designed to withstand the high temperature and harsh oil-based environment.**
- **Solution:** Through TechInnovation 2013, HVS Engineering was connected to the Materials Centre of Innovation (MCOI) at the Institute of Materials Research and Engineering (IMRE) which had a new elastomeric nano-composite material with high thermal stability and chemical resistance.
- **Outcome:** A research collaboration agreement was inked with the MCOI on 1 December 2013 to develop a new material for HVS' brush ball. The two-month project yielded a material that can maintain mechanical and thermal stability even at temperatures of at least 250°C in petroleum environment.



## HVS Engineering

“ We are pleased to share our technical needs with MCOI through TechInnovation. Our successful research collaboration has enabled us to integrate a new technology to develop an enhanced product. With the new HVS brush ball material, we are able to enter into a new niche market in the oil and gas sector, and further grow our customer base. ”

**Alex Chow, Managing Director,  
HVS Engineering**

- **Challenge:** Kim Eng Seng Machinery is a local SME that designs, manufactures, repairs, leases and sells ISO container transport trailers. As part of their drive towards improving productivity, the company decided to explore the use of technology to **improve their workflow and raise its productivity**.
- **Solution:** With support from IPI in analysing its capability gaps and identifying a suitable technology partner, Kim Eng Seng successfully collaborated with the Marine & Offshore Technology Centre of Innovation (COI-MOT)@Ngee Ann Polytechnic to design mechanical jigs that reduced the need for manual lifting of heavy steel chassis during the production of its trailers.
- **Outcome:** A partnership agreement was inked in April 2015, signifying both parties' commitment to share resources and work together to provide arsenic filter solutions to arsenic-affected regions.



**Kim Eng Seng Machinery**

“ We believe that innovation is the way for Kim Eng Seng to improve our productivity and increase our competitiveness. We look forward to future engagements with IPI to achieve our vision as a modern manufacturing company. ”

**Randi Ng, Managing Director,  
Kim Eng Seng Machinery**

# Arsenic-free Drinking Water for Bottom-of-the-Pyramid Segment

- **Challenge:** The GoodWater Company is a local environmental and social solutions integrator was on the **lookout for a technology partner to develop a solution for removing arsenic in groundwater.**
- **Solution:** IPI successfully matched The GoodWater Company to Asxban Technologies, a homegrown enterprise with the capability of integrating their arsenic absorbent technology into The GoodWater Company's existing product.
- **Outcome:** A partnership agreement was inked in April 2015, signifying both parties' commitment to share resources and work together to provide arsenic filter solutions to arsenic-affected regions.



**The GoodWater Company & Asxban Technologies**

*“We are delighted with IPI's help in facilitating the building of this long-term relationship with Asxban Technologies. With this partnership, GoodWater can look forward to expanding the availability of arsenic-free, potable water through simple solutions to more BoP communities.”*

**Eddie Low, Programme Director,  
The GoodWater Company**

- **Challenge:** Mase International Marketing Services is a leading distributor of cosmetics and toiletries products in Asia. It engaged IPI to **source for alternative hair dyeing methods to cater to a segment of customers looking for products with gentler formulations to reduce hair damage.**
- **Solution:** IPI assisted Mase in **identifying and assessing relevant technology partners to accelerate their in-house R&D efforts.** Through IPI's technology matching service, Mase successfully partnered the School of Chemical & Life Sciences at Nanyang Polytechnic (NYP) to embark on a research collaboration to develop a novel dye ingredient.
- **Outcome:** The collaboration is expected to create a new range of hair dye products that are gentle on the hair and retains colour for a longer period. In total, Mase has saved 18 months had they undertaken their project on their own..



## Mase International Marketing Services

“ IPI was instrumental in finding the right research partner to complement our in-house research activities. Through IPI's facilitation, we are glad to have saved substantial time and effort to look for the right research partner. The research collaboration with NYP will also accelerate our product innovation cycle. ”

**Ng Ling Ching, Director,  
Mase International Marketing Services**

# Opportunities for Tech Partnerships With Singapore

# Opportunities for tech partnerships with Singapore



Title of Profile	Country	Type
<a href="#"><u>Seeking algorithms for wheezing, cough and breathing pattern analysis for wearable asthma monitoring device</u></a>	Singapore	Tech Request
<a href="#"><u>Seeking the development of a cold plasma-based hand-held sanitisation device for home use</u></a>	Singapore	Tech. Request
<a href="#"><u>Seeking miniaturised rechargeable battery technology for earphones</u></a>	Singapore	Tech. Request
<a href="#"><u>Seeking technologies to integrate and improve hybrid solar windmill for groundwater pumping</u></a>	Singapore	Tech. Request
<a href="#"><u>Real-time localisation system for nasogastric tubes</u></a>	Singapore	Tech. Offer
<a href="#"><u>Solution for automated attendance taking using smartphone and bluetooth beacon</u></a>	Singapore	Tech. Offer
<a href="#"><u>A novel coating for drug delivery stents used to treat ureteric conditions</u></a>	Singapore	Tech. Offer
<a href="#"><u>Enterprise blockchain innovation platform</u></a>	Singapore	Tech. Offer
<a href="#"><u>Highly secure 3-factor voice and signature authentication solution</u></a>	Singapore	Tech. Offer
<a href="#"><u>Assistive Low Vision Aid for Aged-related Macular Degeneration (AMD) Patients</u></a>	Singapore	Tech. Offer
<a href="#"><u>Smart toilet system</u></a>	Singapore	Tech. Offer
<a href="#"><u>Human Generated Data Analytics - Data-Driven Health Risks and Performance Management Platform</u></a>	Singapore	Tech. Offer
<a href="#"><u>Biodegradable controlled-release technology to improve treatment methods or enable new treatment methods in...</u></a>	Singapore	Tech. Offer
<a href="#"><u>Human cardiac myocyte platform for drug discovery and drug toxicity</u></a>	Singapore	Tech. Offer
<a href="#"><u>Eco-friendly boiler water treatment without chemicals</u></a>	Singapore	Tech. Offer



# Meet our Team



**Dr. Sze Tiam Lin**  
Director



**Lim Ming Khai**  
Deputy Director



**Michael Goh**  
Cluster Head,  
Manufacturing,  
Energy & Environment



**Sim Kung Kiat**  
Cluster Head, Infocomm  
& Electronics



**Alvin How**  
Acting Cluster Head,  
Chemicals & Materials



# Thank You

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