



Australian Government
Australian Trade Commission



International Mission

Australian Future Materials and Advanced Manufacturing Mission to India 2015

Explore opportunities to tap into the manufacturing opportunities in India driven by the 'Make in India' campaign. To make this initiative a success, Indian manufacturers will have to boost technology and product development, which opens up significant technology collaboration and manufacturing opportunities. This mission aims to help Australian companies understand and access these opportunities across manufacturing sectors like Aerospace, Automotive, Oil & Gas, Chemicals, Power and Energy.

About this mission

Austrade presents the 3rd edition of the Australian future materials and advanced manufacturing mission to India. Organised across key Indian cities in October 2015, the mission is amongst the flagship activities of the **Australian Innovation Showcase to India - 2015**. The mission will showcase Australian expertise, research capability and innovation in the areas of future materials- composites, polymers, ceramics, electronic/photonic materials, advanced materials for energy, biomaterials and surface engineering; advanced manufacturing technology – 3D printing, laser welding, ferrous and non-ferrous casting technology, precision manufacturing, nanotechnology, characterisation of materials and mechanics, to facilitate engineering, research & development projects and strategic research partnerships between Australian and Indian organisations.

The Australian future materials and advanced manufacturing mission to India 2015 is designed to: position Australia as global source of innovative technology and expertise in the manufacturing and engineering sector; assist Australian technology companies, Technology precincts, Universities, Research and engineering firms engaged in future/emerging material and advanced manufacturing technologies to locate new export opportunities and access global supply chains; create a platform for new linkages between Australian research firms and institutions with Indian manufacturing and engineering companies; and attract Indian investment into Australian material sciences R&D programs and support the commercialisation of new Australian technologies in the material sciences and advanced manufacturing segment.

Why India?

India is looking at increasing the share of manufacturing and engineering in its GDP to 25% by 2025 and creating 100 million new jobs. To aid this, the Indian Government has launched the 'Make in India' campaign, which aims to transform India into a global manufacturing and export hub. The campaign seeks to increase foreign and domestic investments in manufacturing across 25 sectors, ranging across aviation, defence, automotive, ICT, tourism, biotechnology, pharmaceuticals, chemicals and more. Indian companies are constantly in pursuit of competitive

Important information

Date: 12 – 16 Oct 2015

Location:

Mumbai, Bangalore and
Chennai

Apply by 31 August 2015

Who should participate?

- Material Science companies
- Future Manufacturing companies - Chemical, Aerospace, Automotive, Power, Energy
- Robotics & automation companies
- Technology Precincts
- Australian Universities and Research Institutions

Apply now at www.austrade.gov.au/eventName2011

manufacturing strategies and operations and they are successfully integrating into the global supply chains. Indian manufacturing companies across sectors are looking for breakthrough technology, new materials & concepts and increasing levels of product and process differentiation that provides them a distinct advantage to compete successfully in global markets.

Leading Indian manufacturing and engineering companies are increasing their R&D budgets; seeking international collaboration; acquiring, licensing or partnering with international companies to access cutting-edge technologies & expertise. This offers significant opportunities for the Australian future materials and advanced manufacturing sectors; Australian companies with niche technologies in chemicals, aerospace, automotive, oil & gas, power and energy sectors; Australian universities and research institutions for technology, research and licensing partnerships with the Indian manufacturing and engineering sector.

Australian Innovation Showcase to India 2013 & 2014

The 2013 & 2014 missions offered a successful platform for Australian organisations to showcase Australian expertise in future materials, automotive technologies and new manufacturing technologies and explore partnerships in with the Indian manufacturing sectors. Information on the Australian Innovation Showcase to India 2013 & 2014 is available [here \(link to be included\)](#)

Market opportunities and insights

With the launch of the 'Make in India' initiative, by The Government of India, India has set for itself an ambitious target of increasing the contribution of manufacturing output to 25 per cent of gross domestic product (GDP) by 2025, from 16 per cent currently and enable India to become a global manufacturing hub in the years ahead.

Achieving this objective will not be easy for Indian companies. The challenges being faced by Indian manufacturing businesses as they globalise their operations and face up to international competition, opens up plethora of opportunities for Australian companies to help Indian companies address these challenges by providing advanced materials and manufacturing technology. To improve their production frontiers and global competitiveness, domestic companies plan to invest in research and development (R&D) introducing new products and services, facilities expansion and geographical expansion. According to a Pwc report top 3 areas of investment for several Indian companies, R&D investment figures at the top.

India's manufacturing sector could touch US\$ 1 trillion by 2025, according to a Mckinsey and KPMG report. There is potential for the manufacturing sector to account for 25-30 per cent of the country's GDP and create up to 90 million domestic jobs by 2025.

The government's 'Make in India' campaign aimed at facilitating investments, encouraging innovation and building high-class manufacturing infrastructure is expected to boost manufacturing activities in key sectors including aerospace and defence, automobile, oil & gas, auto components, electronics and electricals, capital goods and railways.

Aerospace Sector: Growth and opportunities

- A McKinsey report mentions India's \$12 billion defence market, which has grown substantially in recent years, will continue the growth would continue on a strong growth trajectory through 2020.
- The new government under the Make in India programme, is believed to spend far more aggressively than its predecessors on upgrading the country's armed forces. According to KPMG India, the defence ministry expects the defence budget to grow at a compounded annual growth rate of 8% to touch \$64 billion in the financial year 2020. The increased defence budget this year, the massive modernisation drive in the Indian

defence sector and the new government's policy changes has propelled the number of opportunities in this sector for both the domestic and foreign players.

- Five years ago, there were only defence PSUs but now there are many private companies foraying into this sector. Being a specialised industry requiring high technical knowledge and standards, companies cannot acquire competency overnight. So, Private companies will be looking for joint ventures, technology transfer arrangements and tie-ups to acquire the required capability.
- All segments in the aerospace industry, including civil and military aviation and space are showing a significant level of growth because of which several international companies want to be part of the growth story. There are about 110 International Aerospace companies who have their presence in India.
- Key technologies that are highly sought after in India include high performance composites, UAV technology, stealth technology, next-generation navigation systems, high energy weapon systems, niche manufacturing capabilities in building engines, providing maintenance, repair and overhaul services.

Automotive Sector:

- In view of the changing landscape of the Australian automotive industry, Austrade commissioned KPMG to produce an Insights report titled "Opportunity Assessment of Automotive R&D Market in India". The report outlines the key opportunities for Australian industry and research organisations to work with India's growing automotive sector.
- India was the only car manufacturing country without any fuel efficiency standards for a long time. The new norms has been finalised, which will be binding for the car manufacturers in India starting 2017. The new norms are based on a corporate average fuel efficiency (CAFE) system similar to standards in Australia. These norms for emission control and fuel economy, has necessitated OEMs to collaborate in the areas of light-weighting and alternative system solutions.
- The Indian Government has recently launched a scheme namely Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME India) under National Electric Mobility Mission Plan 2020. The scheme focuses on technology development through international collaborations.

Chemicals sector: Growth and opportunities

- The Indian Chemical industry is the third largest producer in Asia in terms of volume production and twelfth in the world.
- The Chemical industry is estimated to grow at an annual rate of 15% to reach USD 290 billion by 2017.
- The Government of India has approved 100 per cent foreign direct investment (FDI) in the chemicals sector and reduced excise duty from 14 per cent to 10 per cent. Policies have been initiated to set up integrated Petroleum, Chemicals and Petrochemicals Investment Regions (PCPIR). PCPIR will be an investment region spread across 250 square kilometres for manufacturing of domestic and export-related products of petroleum, chemicals and petrochemicals.
- Petrochemicals is one of the fastest growing segments in the chemicals sector.
- The polymer chemicals sector is anticipated to grow at a higher rate due to growth in plastic demand resulting from increased usage in packaging, construction and automotive sectors.
- Opportunities are in petrochemicals, specialty chemicals, colourant chemicals and agro chemicals.

Australia – India Advanced Manufacturing & Technology Partnerships

Australia and India already have strong links in scientific research, collaboration, technology transfer, and commercialisation. Some examples of Australia – India scientific engagement include:

- **Include recent partnerships**

Why you should participate

Meet the leading Indian organisations and related research organisations

- Gain an insight into the research priorities and research programmes of the Indian manufacturing and engineering companies
- Explore technology, research and licensing partnerships with the Indian manufacturing and engineering industry
- Access the global supply chains through the Indian manufacturing and engineering industry.
- Explore opportunities to attract Indian investment into your research and commercialisation programs
- Meet potential partners at networking events and focussed roundtable discussions

Mission Program (Tentative)

Date	Details
11 October 2015	Arrive in India (Mumbai)
12 October 2015	<p>MUMBAI</p> <p>Boardroom meetings/ Site Visits with leading Indian business conglomerates</p> <p>Aditya Birla Group, Larsen & Toubro, Reliance Group, Godrej Industries, Essar Group, Vedanta and Mahindra & Mahindra among others.</p> <p><i>Stay in Mumbai / travel by road to Pune (2-3 Hrs travel time)</i></p>
13 October 2015	<p>MUMBAI / PUNE</p> <p>Group meetings / Site visits / one-one business match meetings with local companies</p> <p>Bharat Forge, Bajaj Auto, Thermax Ltd, Kirloskar Cummins, Tata Motors – Engineering Research Center, Tata Auto Comp (TACO), Force Motors, Finolex Industries and Greaves Cotton Ltd among others.</p> <p><i>Fly from Mumbai to Bangalore – Flight: Jet Airways 9W-7206 Dep 18:15 Arr 20:05</i> (or) <i>Fly from Pune to Bangalore – Flight: Go Air G8-242 Dep 18:30 Arr 19:55</i></p>
14 October 2015	<p>BANGALORE</p> <p>Group meetings / Site visits / one-one business match meetings with local companies</p> <p>General Electric Technical Center, AxisCades Aerospace Ltd, Hindustan Aeronautics Limited, Central Power Research Institute (CPRI), Titan Industries, SABIC Tech Centre, Shell Tech centre, RESIL Chemicals, ABB, among others.</p> <p><i>Fly from Bangalore to Chennai – Flight: Spice Jet SG 3308 Dep 19:35 Arr 20:45</i></p>
15 October 2015	<p>CHENNAI</p> <p>Group meetings / one-one business match meetings with local companies</p> <p>Organisations from the leading business groups like Amalgamation Group, Hinduja Group, Murugappa Group, Sanmar Group, Rane Group, TVS Group, Ucal Group,</p>

	<p>Saint-Gobain, Larsen & Toubro among others.</p> <p>Industry focused round table dinner</p> <p>Australian Consul Commercial will host a small group industry reception with a targeted 8-10 industry participants matching to the business interest of the delegation</p>
16 October 2015	<p>CHENNAI</p> <p>Site Visits and small group meetings with some of the following list of organisations</p> <p>Advanced Research Centre for Powdered Metallurgy and New Materials, IIT Research Park, The Global Automotive Research Center (GARC), Renault Nissan Technology Business Center India (RNTBCI), Mahindra Research Valley and Nissan Ashok Leyland Technologies among others.</p> <p><i>Fly to Australia</i></p>

Note: The selection of lead organisations in India for the program will be based on the individual business match interest of each delegate company.

Austrade service fee of AUD 1400 (1100 + 300)

includes:

- Pre-departure briefing
- Mission program coordination and assistance with logistics
- Preparation of mission booklet to promote participants' capabilities
- Organisation and promotion of welcome dinner, networking event and industry seminar
- Pre-mission marketing to selected potential customers
- Individual business matching and up to five 1-1 meetings in the program.

Apply before 31st August 2015

In order to provide the highest level of service to delegates, places are strictly limited. Apply online at -----
- to have our country and industry specialists review your application. If your application is successful we will send you an Event Participation Kit with all the information you need to prepare for the mission.

If you are considering this mission, Austrade recommends that you consult 'Smartraveller', the Australian Government's travel advisory service, which is available at www.smartraveller.gov.au. Travel advice is updated regularly on this site.

Please note that Austrade will only work with clients that maintain appropriate business ethics, and demonstrate a commitment to legal obligations including anti-bribery laws, both in Australia and overseas markets.

Key contacts

To discuss your participation options further, please contact:

Apply now at www.austrade.gov.au/eventName2015

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