Contents

- Background
- About GITA
- The GITA Innovation Ecosystem
- Board of Directors
- Ongoing DST Programs
- Forthcoming programs in 2015
- Bilateral program structure
- Types of Projects for Financial Support
- Focus Sectors
- Current Projects
Background

- **Business Expenditure in R&D (BERD) in the Economy** is one of the key indicators of Innovation driven economy. India ranks low in BERD (0.03% of GDP) compared to even many Asian Nations.

- Govts in other countries **stimulated BERD through direct and indirect incentives**. In India, Tax incentives on limited expenditure in R&D by industry leads to low BERD.

- Direct Govt incentives through flexible funding support to industry for R&D with writing–off of failures has been missing in India.

- Industry–Institute research collaborations & their Global partnerships in technology development, refinement to suit local conditions & finally deployment for business and social development have been a missing link in India for many years.

- The Sub–Committee of PM’s Council on Trade & Industry recommended incorporation of a Govt’s Arm’s Length entity under PPP mode to professionally manage government fund for providing to industry through flexible mode of funding like grant, loan and equity with option of writing–off fund invested in failed R&D.
Establishment of GITA

Finally, on 29 November 2011, a PPP, not–for–profit (Section 8) Company named “Global Innovation & Technology Alliance” (GITA) has been incorporated jointly by the Technology Development Board (TDB) of the Department of Science & Technology (DST), Govt of India and the Confederation of Indian Industry (CII) with a mandate to implement Govt schemes/funds to attract Industry investment in R&D, Technology Development & Demonstration with Institutional partnerships & Global collaborations to deliver tangible research outcomes.
What is GITA?

- **A unique institution** for providing demand-driven Technology solutions through Institutional & Global alliances via a competitive process.

- **An one-stop-shop** for forging frontline Global technological alliances for Indian companies for achieving leadership in Global & Domestic markets.

- **An Innovative mechanism** between Govt of India and Indian industry for attracting Indian industry’s investment in technology by **Mapping** technology gaps, **Evaluating** technology offers across the globe on appropriateness from techno-economic perspective for India, **Connecting** among technology developers, providers, commercializers, **Funding** last phase of technology development that connects the market and **Demonstration** of technology solutions.
The GITA Innovation Ecosystem

Central / State Govt
1. Enabling Policy
2. Funding

Indian Industry
1. Funding
2. Market Access

Academia
1. Ideas
2. R&D support

Global Organisations
1. Technology
2. Global Markets

Output → Innovative Products & Services aimed at India / Global Markets

© Global Innovation & Technology Alliance
GITA’s USP

- **Unique Public–Private–Partnership** (PPP) between the Govt of India (GoI) and Indian Industry (CII), leveraging on the collective strengths.

- Manned by **Professionals** for effective **Fund Management**, Transparent **Evaluation** of project proposals and quick & efficient **Disbursal** process.

- **Flexible funding mechanism** (Loan / Grant / Equity) to cater to different needs through **Competitive Process**

- For the **Govt** – GITA provides outreach to Industry, Technology & Markets, not only in India but across the world.

- For **Global Organisations** – GITA is the gateway for access to the Indian market & Technology partners.

- For **Academic Institutions** – GITA is the link for funding of Industrial R&D and providing market access for their R&D output.

- For **Industry** – Access to Technology, Funding & enabling Project Management support.
# Board of Directors (as on date)

## From Industry
- Mr Vikram Kirloskar, Chairman, GITA & Vice Chairman, **Toyota Kirloskar Motors Pvt. Ltd.**
- Mr S Gopalakrishnan, Co–founder **Infosys Ltd.**
- Mr Chandrajit Banerjee, Director General – Confederation of Indian Industry (CII)
- Mr R Mukundan, Managing Director, **Tata Chemicals Ltd.**
- Mr Deep Kapuria, Chairman, **Hi–Tech Gears Ltd.**
- Mr Navroze Jamshyd Godrej, **Godrej & Boyce Mfg.Co.Ltd.**

## From Govt of India
- Dr Inder Jit Singh, Co–Chairman, GITA & Secretary, Technology Development Board (TDB)
- Dr Arabinda Mitra, Adviser & Head – International Bilateral Co–operation, **DST**
- Mr J B Mohapatra, JS & Financial Adviser, **DST**
- Dr Ajay Kumar, JS–**DeitY**
- Mr S N Tripathi, JS–SME, **MSME**
- Mr Soumen Bagchi, JS–ES&ITP, **MEA**
Govt Funds being managed by GITA

Ongoing Programs of DST
1. India–Israel Industrial R&D Fund
2. India–Canada Industrial R&D Fund
3. India–UK Industrial R&D Fund
4. India–Spain Industrial R&D Fund
5. India–Finland Industrial Fund
6. India–South Korea Industrial R&D Fund
7. ASEAN–India Science & Technology Development Fund (AISTDF)
8. India–Taiwan Scientist Exchange program
Forthcoming programs in 2015

1. DST’s India–Japan Industrial R&D Fund
2. DST’s India–Sweden Industrial R&D Fund
3. DST’s India–Norway Industrial R&D Fund
4. DST’s India–Netherlands Industrial R&D Fund
5. DST–TWAS Fellowship program for pan-African students
6. DeitY’s Bilateral Industrial R&D Fund
7. MSME’s India–Germany Industrial R&D Fund
8. DIPP’s Technology Acquisition & Development Fund (TADF)
9. MoD’s Technology Development Fund (TDF) for the Defence sector
Bilateral Program Structure

Lead Industry from India + Academic / R&D Institution

Govt of India provides financial support up to 50%

Joint Technology Development Project

Lead Industry from Partner Country + Academic / R&D Institution

Govt of Partner Country provides financial support up to 50%

Decide on “Focus areas” for Call for Proposals:
- Renewable Energy
- Water Management
- Affordable Healthcare
- Information Communication Technologies
Program implementation process

Govt of India & Govt of Partner Country sign MoU highlighting:
• Focus areas &
• Annual fund allocation

Programme implemented by:

GITA in India

Partner Country

Partnership Development Activities like information exchange, missions, workshops, reports etc. to attract potential industry applicants to the Call for Proposals.

Independent Evaluation of Proposals received

Disbursal of Funds

Jointly agree on award of Projects

Disbursal of Funds

Project monitoring / Loan repayment / Closure impact analysis
Funding under Bilateral programs

- Funding cap of **Rs 1.5 crores** for Indian companies by way of Grant & Soft Loan @ 3% rate of interest, repayable over 10 years
- Participating Indian company will need to contribute equal amount for the project
- For more details on currently open Request for Proposal’s (RFP’s) & to apply for funding support, please log–on to [http://gita.org.in/rnd.html](http://gita.org.in/rnd.html)
## Technology Readiness Levels (NASA model)

<table>
<thead>
<tr>
<th>Technology Readiness Level (TRL)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity</td>
<td>Discovery &amp; Research</td>
<td>Innovation</td>
<td>pre Commercialisation</td>
<td></td>
<td></td>
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<tr>
<td>TRL description</td>
<td>Basic principles observed &amp; reported</td>
<td>Concept or application formulated</td>
<td>Experimental proof of concept</td>
<td>Concept or process validated in laboratory</td>
<td>System or component validated in relevant environment</td>
<td>System model or demonstrator in relevant environment</td>
<td>System prototyping demonstrator in an operational environment</td>
<td>Actual system completed and qualified test &amp; demo operational environment</td>
<td>Actual system mission–proven in successful mission operation</td>
</tr>
</tbody>
</table>
Types of Projects for Financial Support

- Joint Research & Development
- Joint Deployment through Pilot Production, Testing, Market Access, etc.
- Projects should be Innovative, user–need based and market–driven, leading to New Product or Process & eventual Commercialization
- Duration of the project should not be more than 24 months from the date of receipt of fund
Focus Sectors

- Agriculture / Food Processing
- Healthcare
- Renewable Energy Technologies
- Water Purification / Waste Water Treatment
- Information & Communication Technologies (ICT)
- Bio–Technology
- Earth Sciences & Disaster Management
- Nanoscience / Nanotechnology

- Space Science & Technology
- Life Sciences
- Treatment of Municipal / Industrial / Bio–hazardous Waste
- Energy Efficiency – covering Appliances, Industrial Energy Efficiency & Green Buildings
- Green Mobility
- Clean Technologies
<table>
<thead>
<tr>
<th>No.</th>
<th>Project Funded Under</th>
<th>Project Title</th>
<th>Sector</th>
<th>Indian Project Partners</th>
<th>Foreign Project Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Canada</td>
<td>Design and Development of an Aircraft Integrated Development Environment Tool for a New Generation Regional Transport Aircraft</td>
<td>Aviation Technology</td>
<td>• National Aerospace Laboratories (NAL), Bangalore</td>
<td>• CAE Inc, Montreal, Québec</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>• CAE India, Bangalore</td>
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<tr>
<td>2</td>
<td>Canada</td>
<td>Indigenization of Broadband over Power Line Technology to Connect Adjoining Villages in India using Existing Power Lines</td>
<td>Information &amp; Communications Technology / Broadband</td>
<td>• Indian Institute of Information Technology (IIIT), Allahabad</td>
<td>• Corinex Communications, Vancouver, BC</td>
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<td></td>
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<td></td>
<td>• Maple Leaf India Private Limited, New Delhi</td>
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<tr>
<td>3</td>
<td>Canada</td>
<td>Application of Bio-Fuels for Aviation</td>
<td>Cleantech</td>
<td>• Indian Institute of Petroleum (IIP), Dehradun</td>
<td>• Pratt &amp; Whitney Canada, Longueil, Québec</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>• Indian Institute of Science (IISc), Bangalore</td>
<td>• Laval University, Québec City, Québec</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>• Indian Institute of Technology (IIT), Kanpur</td>
<td>• McGill University, Montreal, Québec</td>
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<td></td>
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<td></td>
<td></td>
<td>• Indian Oil Corporation Limited (IOCL), Faridabad</td>
<td>• Ryerson University, Toronto, Ontario</td>
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<td></td>
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<td></td>
<td>• Hindustan Petroleum Corporation Limited (HPCL), Mumbai</td>
<td>• National Research Council of Canada- the Institute for Aerospace Research, Ottawa, Ontario</td>
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<td></td>
<td></td>
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<td></td>
<td>• Infotech Enterprises Limited, Hyderabad</td>
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</tbody>
</table>
## Current GITA Projects (of DST)

<table>
<thead>
<tr>
<th>No.</th>
<th>Project Funded Under</th>
<th>Project Title</th>
<th>Sector</th>
<th>Indian Project Partners</th>
<th>Foreign Project Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Canada</td>
<td>Creating the next generation of interoperable GeoPortal (iGP) technology solutions for the Spatial Data Infrastructure market</td>
<td>Information &amp; Communications Technology</td>
<td>Infotech Geospatial Enterprises Limited, Hyderabad</td>
<td>CubeWerx Inc., Gatineau, QC</td>
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<td></td>
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<td></td>
<td></td>
<td>Jawaharlal Nehru Technological University (JNTU), Hyderabad</td>
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<tr>
<td>5</td>
<td>Canada</td>
<td>Commercialization of Biopanels Manufacturing from Rice Straw and Digestate Using Green Adhesives</td>
<td>Sustainable Environmental Technologies &amp; Alternative Energy</td>
<td>Sarda Plywood Industries Ltd, Kolkata</td>
<td>Bayview Flowers Ltd, ON, Canada</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Indian Plywood Industries Research &amp; Training Institute (IPIRTI), Bangalore</td>
<td>University of Toronto, Canada</td>
</tr>
<tr>
<td>7</td>
<td>Canada</td>
<td>Mobile Authentication &amp; Fraud Detection</td>
<td>Telecom / Banking and Finance</td>
<td>MobME Wireless Solutions Pvt. Ltd., Kacheripadi</td>
<td>Zighra, Ottawa, Canada</td>
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<td></td>
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<td></td>
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<td></td>
<td>McMaster University, Canada, Canada</td>
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<tr>
<td>8</td>
<td>Canada (Ontario)</td>
<td>Decision Support System to Enhance Safety of Railway Track Workers</td>
<td>Information &amp; Communications Technology</td>
<td>Indian Institute of Technology (IIT), Kanpur</td>
<td>McMaster University, Canada, Bombardier, Canada</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IAITO Infotech Ltd., Kanpur</td>
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<td></td>
<td></td>
<td></td>
<td>Indian Railways</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Canada (Ontario)</td>
<td>Microfibre-based Innovative Structural Auto-parts</td>
<td>Clean / Green Tech</td>
<td>Central Institute of Plastics Engineering &amp; Technology (CIPET), Chennai</td>
<td>Ford Motor Co, Canada</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Harita NTI, Chennai</td>
<td>University of Windsor</td>
</tr>
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<th>Foreign Project Partners</th>
</tr>
</thead>
</table>
| 10  | Canada (Ontario)     | Enabling Technologies for Intelligent Wireless Sensor Network for Health and Environmental Monitoring | Information & Communications Technology | • Indian Institute of Technology (IIT), Rajasthan  
• Indian Institute of Technology (IIT), Kanpur  
• Freescale Semiconductors India Pvt Ltd., Noida  
• Infosys Tech Ltd., Bangalore | • University of Waterloo, Canada  
• Research in Motion (RIM), Canada  
• ON Semiconductor, Canada  
• TR Labs, Canada |
| 11  | Canada (Ontario)     | Advanced Smart Grid RxD, Demonstration & Commercialization Utilizing Distributed Energy Storage | Clean Technology: Advanced Smart Grid | • Larsen & Toubro (L&T) Technology Services, Mumbai | • eCAMION Inc., Ontario |
| 12  | Canada (Ontario)     | Mechanism for delivering clean water by use of immobile Photocatalytic media produced by HVOF spray | Clean Water | • Associated Plasmatron Pvt. Ltd., Navi Mumbai | • Simulent Inc, Ontario |
| 13  | Canada (Ontario)     | Development of Software Defined Networking Controller and related applications | Telecom / Information & Communications Technology | • Tejas Networks Ltd, Bangalore | • Solana Networks, Ontario |
| 14  | Israel               | Hand Held Thermal Imager (HHTI) for Home Land Security | Homeland Security | • Alpha Design Technologies Private Ltd., Bangalore | • ITL Optronics Ltd., Israel |
| 15  | Israel               | Technology for detecting and screening attentiveness cognitive abilities | Affordable Healthcare- ICT Applications for Medicine / Healthcare | • Excelsoft Technologies Pvt Ltd., Mysore | • Neurotech Solutions Ltd., Ness Ziona |
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<tbody>
<tr>
<td>16</td>
<td>Israel</td>
<td>Development of Data Analyzer (DPX-Anal) System for Analyzing data feeds from Internet websites (RSS / non-RSS), Social media websites &amp; blogs for corporate / security information Reports</td>
<td>Information &amp; Communication Technologies (ICT) / Instrumentation</td>
<td>• Sunworks Consultants Pvt Ltd., Gurgaon</td>
<td>• IntuView Ltd., Herzliya</td>
</tr>
<tr>
<td>17</td>
<td>United Kingdom</td>
<td>Multi-Condition Robust Biomass Gasifier for Power Generation</td>
<td>Cleantech</td>
<td>• CHOGEN Powers Private Ltd., Secunderabad</td>
<td>• Geocapita Group Ltd, London</td>
</tr>
<tr>
<td>18</td>
<td>United Kingdom</td>
<td>Improving Process for Stable Liposomal Amphotericin B Formulation: Removing Cumbersome Pre-Processing Before Administration to Enhance Global Clinical Acceptance &amp; Commercial Success</td>
<td>Affordable Healthcare</td>
<td>• Lifecare Innovations Pvt Ltd, Gurgaon</td>
<td>• Wockhardt UK, Wrexham</td>
</tr>
<tr>
<td>19</td>
<td>United Kingdom</td>
<td>Advanced Real-time Refinery Monitoring and Optimisation</td>
<td>Cleantech</td>
<td>• Bharat Petroleum Corporation Ltd, Greater Noida</td>
<td>• Process Systems Enterprise Ltd., London</td>
</tr>
<tr>
<td>20</td>
<td>United Kingdom</td>
<td>Sustainable Dengue Prevention</td>
<td>Affordable Healthcare</td>
<td>• Gangabishan Bhikulal Investment and Trading Limited (GBIT), Mumbai</td>
<td>• Oxitec Ltd, Oxfordshire</td>
</tr>
</tbody>
</table>