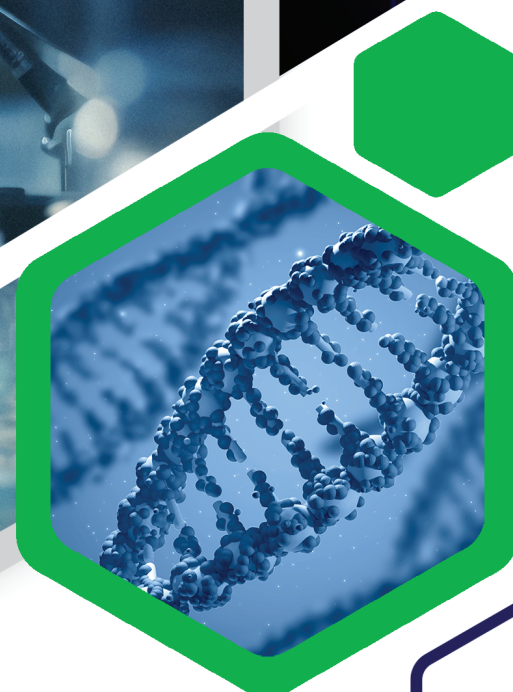




FICCI BHARAT R&D Summit 2024

Industry- Academia Collaboration

3-4 October 2024



GLIMPSES



CONTENTS

About FICCI Bharat R&D Summit 2024	04
Technology Exhibition Overview	06
FICCI Compendium of Research Work/ Technologies for Commercialisation	08
Key Speakers	09
Summit's Recommendations	10
Sessions	11
Inaugural Session	11
Session 1: S&T Clusters - Opportunities for Industry-Academia Collaboration	13
Session 2: Global R&D Opportunities for Academia & Industries	14
Session 3: From (Academia) Research to (Industry) Commercialisation	16
Session 4: Case Studies on Industry-Academia Collaboration in Research	18
Session 5: Industry Expectations from Academia	20
Session 6: Strengthening R&D National Infrastructure – The Road Ahead	21
Session 7: National Quantum Mission - Role of Academia and Opportunities for Industry	22
Session 8: Showcase of Select Research Work	23
Session 9: Global Best Practices for R&D Funding	24

About FICCI Bharat R&D Summit 2024



Introduction

The Federation of Indian Chambers of Commerce & Industry (FICCI) hosted the FICCI Bharat R&D Summit 2024 on October 3-4 in New Delhi. The theme of the summit “Industry-Academia Collaboration,” emphasized the need for stronger, long-term partnerships between industry and academia to accelerate technological innovation and facilitate seamless technology commercialization.

While the global R&D landscape is undergoing a rapid transformation with the shortening of gradual Innovation cycles, India too has witnessed significant strides in this context in recent years. India’s impressive rise in The Global Innovation Index (GII) from being 81st in 2015 to securing the 39th rank in 2024 is a testament to the nation’s commitment to fostering a vibrant innovation ecosystem. This growth isn’t merely symbolic – it fuels India’s economic engine and has secured the top position among the 38 lower-middle-income group economies and stands tall as the number one innovation performer among the 10 economies in Central and Southern Asia.

With a growing number of research institutions, a burgeoning startup ecosystem, and a plethora of government initiatives that are actively promoting innovation, India is well on its way to becoming a global innovation hub. However, there remains a gap between the theoretical prowess of our academia and the practical needs of the industry. This is where industry-academia collaboration comes to the forefront.

The FICCI Bharat R&D Summit was a landmark initiative in this direction. The two-day summit featured over 30 eminent speakers and welcomed participation from more than 600 delegates. Discussions among industry leaders, technocrats, academicians, policymakers, and researchers highlighted the importance of fostering a culture of collaboration and knowledge exchange.

The summit sessions were designed around key topics shaping the future of R&D in India. Discussions focused on strategies for effective research commercialization, addressing funding challenges that hinder innovation, navigating the complexities of bringing new technologies to market, the role of S&T clusters in nurturing successful startups through industry-academia collaboration, and aligning academic research with industry expectations.

Summit Overview



600+
Delegates
in
two days



30+
Eminent
Speakers



10
Panel
Discussions



13+
PAN- India Leading
Academic
Institutions as
Exhibitors



55+
Research Work/
Technologies
displayed

Technology Exhibition Overview

According to the India Science & Technology and Innovation Portal, India is home to over 7200 S&T organisations including over 800 Higher Education S&T Institutions. India has also secured the 4th position in the World Intellectual Property Organization (WIPO) Science and Technology (S&T) Cluster Ranking 2024. Major cities like Mumbai, Delhi, Bengaluru, and Chennai are listed among the world's top 100 S&T clusters, which are hubs for research, development, and technological advancements. This shows that India, the world's largest and the most vibrant democracy, is uniquely positioned to play a pivotal role in facilitating innovation and technology transfer between the West and the East.

Countries with strong industry-academia collaborations enjoy a competitive advantage through the development of a robust innovation ecosystem. Educational institutions provide critical concepts and skill development, while industry networks bring market exposure and essential traits like teamwork, problem-solving, and effective communication to develop market-ready innovations.

In line with this idea, On the sidelines of the FICCI Bharat R&D Summit, a technology exhibition was organised wherein over 13 leading academic institutions of the country showcased more than 55 innovations happening at their Campus. These cutting-edge advancements span across wide range of critical domains, including Clean Energy, Environment & Climate Change, Electronics & White Goods Manufacturing, Drones, Defence & Homeland Security, Hydrocarbons, Sustainable Urban Development, E-Mobility, and others.

The exhibition provided a platform for researchers to showcase their groundbreaking work and for industry partners to identify potential solutions to their technological challenges. The live demonstrations at the Summit and the evaluation by the Evaluation Jury further strengthened this bridge by providing valuable feedback and facilitated stakeholder engagement.

The Evaluation Jury was constituted with representation from premier corporate institutions namely, Sun Pharmaceuticals; Reliance Retail; ITC; IBM; Philips Machine Tools; Himalaya Wellness Company and Forus Health. The Jury Members evaluated all the technologies and the 3 technologies which hailed from, Indian Institute of Technology, Guwahati (Winner); Pandit Deendayal Energy University (1st Runner Up); SRM Institute of Science and Technology (2nd Runner Up) were felicitated at the Summit.

AWARDEES OF THE TECHNOLOGY EXPOSITION



IIT Guwahati being felicitated as the Winner of Technology Evaluation Contest at the FICCI Bharat R&D Summit 2024



Pandit Deendayal Energy University being felicitated as the 1st Runner Up of Technology Evaluation Contest at the FICCI Bharat R&D Summit 2024



SRM Institute of Science and Technology being felicitated as the 2nd Runner Up of Technology Evaluation Contest at the FICCI Bharat R&D Summit 2024

FICCI Compendium of Research Work/ Technologies for Commercialisation

The information pertaining to respective innovations showcased at the summit by academic institutions was comprehensively collated and released as 'FICCI Compendium of Research Works for Commercialisation' during the Inaugural Session at this Summit, having over 55 research works. This compendium encompassed some salient parameters such as Product Maturity Level, Product Discriminators and Current Commercial Applications of the Product among others. This knowledge-piece is a valuable resource for industry leaders, investors, and researchers alike.



Dignitaries' releasing 'FICCI Compendium of Research Work/ Technologies for Commercialisation' at the Inaugural Session of FICCI Bharat R&D Summit 2024



FICCI Bharat R&D Summit 2024

Industry - Academia Collaboration



3 - 4 October, 2024



FICCI, New Delhi

KEY SPEAKERS



Dr Akhilesh Gupta
SERB &
Senior Advisor
DST, Govt of India



Mr Praveen Roy
Scientist 'G', Advisor & Head,
Technology Translation, and
Innovation (TTI) Division
DST, Govt. of India



Dr Pratishtha Pandey
Scientist 'G', Advisor & Head, R&D
Infrastructure Division
Department of Science &
Technology, Government of India



Dr Vishal Choudhary
Scientist- F
Office of the PSA to the
Government of India



Prof Prateek Sharma
Vice Chancellor
Delhi Technological
University (DTU)



Dr J B V Reddy
Mission Director,
National Quantum Mission (NQM)
Department of Science &
Technology, Government of India



Ms Anandi Iyer
Co-Chair, FICCI Innovation
Committee & Director
Fraunhofer India Office



Prof Sudhir Kumar Barai
Co-Chair, FICCI Innovation
Committee and Director
BITS Pilani



Mr Ranjeet Goswami
Member, FICCI Innovation
Committee and Global Head –
Corporate Affairs
TCS



Mr Shishir Priyadarshi
President – Global Relations
Adani Group



Dr Amit Chakraborty
Head – R&D, Reliance
Consumer Brand – FMCG Business
Reliance Retail



Dr U V Babu
Director-R&D
Himalaya Wellness Company



Mr Nikhil Kumar
President
MapmyIndia



Mr Sankalp Sinha
GM & Business
Development Executive
IBM India Pvt Ltd



Mr Ryan Warren
Dy. Director
UK Research and Innovation
(UKRI)



Dr Amiya Bhaumik
Founder President
Lincoln Innovation College
Malaysia



Mr Narender Gaur
VP Operations, IHFC
(Technology Innovation
Hub of IIT Delhi)



Ms Shipra Misra
MD & CEO
Delhi Research Implementation
and
Innovation (DRIIV)



Dr Priya Nagaraj
CEO
Pune Knowledge Cluster
(PKC)



Mr Mrutyunjay Suar
Chairman
Bhubaneswar City Knowledge
Innovation Cluster



Mr Soumanil Mukherjee
Strategic Alliances Division
Office of the PSA to
Government of India



Dr Sushmitha Sundar
Head - Lifesciences
Research and Innovation
Circle of Hyderabad (RICH)



Cmde Amit Rastogi (Retd)
Chairman & Managing Director,
National Research Development
Corporation (NRDC)



Mr Tapas Chatterjee
Managing Director
SSP Pvt Ltd



Dr Sundar Manoharan
Director General
Pandit Deendayal Energy
University (PDEU)



Mr Subhajit Sarkar
Chief Business Officer
Technology Incubation
Hub, IIT Bombay



Mr Omprakash Subbarao
Chief Executive
CORE Labs – FSID, IISc,
Bangalore



Ms Sukanya Dikshit
Head - Incubation
Shriram Scientific &
Industrial Research



Mr Amandeep Singh Oberoi
Associate Head -
Mechanical Engineering
Department, Thapar Institute



Prof. Kamal Bijlani
Dean,
School of Artificial Intelligence
Amrita Vishwa Vidyapeetham

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Recommendations from the Bharat R&D Summit

From the Academia

- **Industry Immersion for Academia:** Establishing structured industry immersion programs for faculty and researchers is crucial to ensuring they remain aligned with evolving industrial practices and emerging technologies.
- **Structured Internship Programs:** Internships should be institutionalized in a well-structured manner to provide students with hands-on experience, bridging the gap between theoretical knowledge and its real-world applications in industry.
- **Nationwide Technology Exchange:** Technology exchange initiatives should be expanded beyond regional constraints to a national scale, fostering a more integrated and robust innovation ecosystem.
- **Development of In-House AI Solutions:** Instead of relying on external AI models like ChatGPT, organizations should focus on developing customized in-house AI solutions, such as "MyGPT," tailored to their specific needs for greater efficiency and adaptability.

From the Industry

- **Enhancing Research Quality and Global Standards:** While India ranks third globally in research publications, it stands ninth in research quality. To bridge this gap, it is imperative to establish technology and product development standards that align with global benchmarks, addressing a key challenge in the country's innovation landscape.
- **Strengthening Impact Assessments:** Effective evaluation mechanisms, such as client audits, should be implemented to assess the depth of industry-academia partnerships and ensure stakeholder satisfaction, thereby enhancing the impact of innovation.
- **Regulatory Simplification for Innovation Acceleration:** Streamlining regulatory frameworks is essential to fostering technological breakthroughs and expediting the commercialization of research.
- **Trilateral Funding for Commercialization:** Given the abundance of challenges and consumers in sectors such as FMCG, research commercialization should be supported through a tripartite funding model involving industry, academia, and government to drive innovation and market adoption.
- **Early-Stage Scalability and Feasibility Analysis:** A comprehensive evaluation of a technology's scalability and commercial viability at the initial stages is crucial for its successful commercialization.

- **Waste to Wealth for Sustainable Development:** The Waste to Wealth approach should be a foundational principle for future innovations, ensuring sustainability-driven technological advancements.
- **Data-Driven Innovation and Continuous Reskilling:** The R&D ecosystem must emphasize continuous reskilling to keep pace with evolving technologies. Moreover, innovation should be data-driven, integrating data analytics into every aspect of research and development for more informed decision-making and impactful outcomes.

From the Government

- India faces a weak translational research ecosystem, with high dependency on imported technology, and its TRL levels are much lower compared to other countries. To address this gap, there is a need for extensive study of S&T institutions/universities to understand the factors hindering innovation.

Inaugural Session



Speakers:

- **Dr. Akhilesh Gupta**, Former Secretary - SERB & Senior Advisor, Department of Science & Technology, Govt. of India
- **Dr. Krishna P. Kanth**, Scientist E, Technology Translation, and Innovation (TTI) Division, Department of Science & Technology, Govt. of India

- **Ms. Anandi Iyer**, Co-Chair, FICCI Innovation Committee and Director, Fraunhofer India Office
- **Prof Sudhir Kumar Barai**, Co-Chair, FICCI Innovation Committee and Director, BITS Pilani
- **Mr. Ranjeet Goswami**, Member, FICCI Innovation Committee and Global Head-Corporate Affairs, TCS
- **Ms. Jyoti Vij**, Director General, FICCI

Key Takeaways:

- **Industry-Academia Collaboration for Innovation:** Strengthening industry-academia partnerships is essential for building a robust research ecosystem that fuels innovation and economic growth. India has the potential to become a global innovation leader, supported by government initiatives and strategic commercialization models. Showcasing successful research models and strengthening IP ownership will further drive this transformation.
- **Enhancing Research Quality and Commercialization:** Despite ranking third globally in research publications, India ranks ninth in quality, with only 2% of technologies reaching industry consultation. Bridging this gap requires structured internships, industry-supported programs, and Technology Enabling Centres (TECs) to align research with market needs and facilitate commercialization.
- **Standardization and Global Collaboration:** Establishing national research standards and integrating public-private research efforts into a unified framework is crucial. Global PPP models, such as Germany's Fraunhofer Model, demonstrate how applied, interdisciplinary research can drive industry partnerships and sustainable revenue generation.
- **Addressing R&D Funding Gaps:** Private sector investment in Indian R&D stands at only 37%, compared to 70% in developed nations. Increasing industry participation, strengthening translational research, and reducing reliance on imported technology are critical. A strategic approach—grounded in ethical practices, global benchmarks, and academia-industry synergy—will be key to realizing India's 'Viksit Bharat' vision.

Session 1

S&T Clusters - Opportunities for Industry-Academia Collaboration



Speakers:

- Mr. Mrutyunjay Suar, Chairman, Bhubaneswar City Knowledge Innovation Centre
- Ms. Shilpa Mishra, MD & CEO, Delhi Research Implementation and Innovation (DRIIV)
- Dr. Priya Nagaraj, CEO, The Pune Knowledge Cluster (PKC)
- Dr. Sushmitha Sundar, Head - Lifesciences, Research and Innovation Circle of Hyderabad
- Moderator: Mr Vishal Choudhary, Scientist 'F', Office of PSA to the Government of India

Key Takeaways:

- **Driving Collaboration and Startup Growth:** Innovation clusters play a crucial role in uniting research institutions, academia, industry, and startups. The hub-and-spoke model fosters knowledge exchange and post-incubation startup support through targeted capacity-building initiatives. Key focus areas include waste-to-value innovations, STEM education, future economies, blue and green economies, minerals, polymers, and affordable healthcare.

- **Advancing Sustainability and Emerging Technologies:** Clusters drive progress in water security, clean energy transition, environmental sustainability, and decarbonization, with a strong focus on MSME support and industrial technology commercialization. They facilitate joint industry-academia projects, funding access, and techno-commercial feasibility studies while leveraging AI and emerging technologies in healthcare, medical devices, and diagnostics under the Make in India initiative.
- **Bridging Industry Gaps and Strengthening Partnerships:** Addressing challenges like the lack of Agri-data in food processing and inefficiencies in MSME clusters remain a priority. Collaborative efforts with government and corporate stakeholders have enabled successful technology deployment, pilot programs, and global partnerships. Innovation clusters serve as catalysts for sustainable industrial growth, bridging critical gaps between industry and academia.

Session 2

Global R&D Opportunities for Academia & Industries



*Mr. Sumeet Gupta, Deputy Secretary General, FICCI felicitating
Dr. Amiya Bhaumik, President, Lincoln University College, Malaysia*

Speaker:

- Dr. Amiya Bhaumik, Founder President, Lincoln University College, Malaysia

Key Takeaways:

- **Malaysia as a Research & Innovation Hub:** Malaysia has positioned itself as a global center for research, innovation, and education, offering extensive academic and industry collaboration opportunities. With 33 PhD programs among 164 offerings, universities provide scholarships and postdoctoral funding, backed by strong government support for science and technology.
- **Strategic Location & Economic Advantage:** As a Commonwealth University member with strong regional connectivity—including 30 daily flights to India—Malaysia attracts international businesses with its lower operational costs compared to Singapore. A 97.1% literacy rate and a diverse population, including 12% Indian descendants, further enhance its appeal.
- **Global Market Access & Education Leadership:** Companies leverage Malaysia's access to Middle Eastern and African markets, while universities receive government and international funding for patents and commercialization. Ranked the 4th most preferred foreign education destination by UNESCO, Malaysia enrolls 250,000 students annually, with institutions like Lincoln University collaborating globally, including with IIT Patna.
- **Government Support for R&D & Entrepreneurial Vision:** Malaysia's Ministry of Science and Technology actively fosters R&D and innovation. The session underscored the importance of a strong vision for startups, drawing inspiration from timeless wisdom, including the Bhagavad Gita and Swami Vivekananda's legacy, emphasizing knowledge as a unifying force for progress.

Session 3

From (Academia) Research to (Industry) Commercialisation



Speakers:

- Dr. Amandeep Singh Oberoi, Associate Head - Mechanical Engineering Department, Thapar Institute
- Mr. Subhajit Sarkar, Chief Business Officer, Technology Incubation Hub, IIT Bombay
- Mr. Shishir Priyadarshi, President - Global Relations, Adani Group
- Dr. Amit Chakrabortty, Head - R&D, Reliance Consumer Brand - FMCG Business, Reliance Retail
- Moderator: Cmde. Amit Rastogi, Chairman & Managing Director, National Research Development Corporation (NRDC)

Key Takeaways:

- The session on "From (Academia) Research to (Industry) Commercialisation" highlighted the critical need for a seamless collaboration between industry and academia. A structured pull-and-push mechanism can bridge this gap, ensuring research is market-driven and industry-supported. Institutions have already taken significant steps, such as integrating real-time industry collaborations, launching dedicated entrepreneurship

courses, and facilitating long-term internships where faculty and industry mentors jointly define project goals.

- Joint funding initiatives are driving innovative projects, and industry handholding is essential to nurture academic research. Startups and student-led initiatives are being extensively funded, particularly in emerging fields like IoT, AI, and Agri-tech. A structured approach to evaluating, onboarding, and funding startups ensures their alignment with market needs.
- Globally, efficient R&D processes, substantial funding, and national interest-driven research set benchmarks for India. Climate change, energy transition, and regulatory simplifications are vital areas requiring technological breakthroughs. The commercialization of research should be supported through trilateral funding by industry, academia, and the government.
- Understanding consumer needs remains crucial, particularly in FMCG, where market validation plays a key role. Converting research into commercially viable products requires a structured translation from science to technology, with a preference for Indian technologies. Engaging stakeholders early and ensuring startups effectively reach out to the right market will drive innovation and sustainable growth.

Session 4

Case Studies on Industry-Academia Collaboration in Research



*Mr. Omprakash Subbarao; Dr Sundar Manoharan; Mr. Narendra Gaur;
Dr. Anil Kumar Sahu; Mr. Soumanil Mukherjee (Left to Right)*

Speakers:

- Dr Sundar Manoharan, Director General, Pandit Deendayal Energy University (PDEU)
- Dr. Anil Kumar Sahu, Dean- R&D, Delhi Technological University
- Mr. Omprakash Subbarao, Chief Executive of CORE Labs- FSID, IISc, Bangalore
- Mr. Soumanil Mukherjee, Strategic Alliances Division, Office of the PSA to Government of India
- Moderator: Mr. Narendra Gaur, VP Operations, IHFC (Technology Innovation Hub of IIT Delhi)

Key Takeaways:

- The session on Industry-Academia Collaboration in Research highlighted various initiatives and advancements in research and technology. Discussions covered the significance of solar energy projects, smart grid technology for rooftop solar solutions, and the need for grid storage to support renewable energy sustainability.

- A semiconductor packaging skill training centre with a 70-crore investment was emphasized for advancing skill development, with government support aiding technology readiness levels 7 to 9. Research collaborations have led to breakthroughs in UAV development for urban navigation, fixed-wing swarm systems for defence, broadband over power lines, and AI applications in healthcare and mobile technology.
- Strategic alliances have driven interdisciplinary research across electrical, chemical, and mechanical sciences, supporting vaccine and drug discovery, nanotechnology applications, and sustainable cooling solutions. Industry partnerships have resulted in innovative solutions, such as using nanotechnology to eliminate bad odour and leveraging carbon dioxide-based cooling systems.
- The session also highlighted efforts in deep science research, defence technology, drone innovations, and autonomous AI applications, alongside the establishment of co-innovation centres and incubation hubs. Crowdfunding models and industry-driven ownership platforms were discussed as means to foster research and development, with a strong emphasis on rural innovation and mental health initiatives. The importance of academia investing a minimum of 25-30 lakhs to bring products to market was underscored, encouraging a shift toward entrepreneurship over traditional employment.

Session 5

Industry Expectations from Academia



Dr UV Babu, Director - R&D, Himalaya Wellness Company

Speakers:

- Dr UV Babu, Director - R&D, Himalaya Wellness Company

Key Takeaways:

- Industry-academia collaboration thrives on trust, transparency, and well-defined principles of engagement, including defining, setting, and delivering expectations. Successful partnerships require clear problem definition, identification of critical stages, budgeting, leveraging existing technologies, ensuring competitive advantage, and focusing on scalability and commercial feasibility.
- Industry is increasingly reaching out to academia, fostering collaborations with universities and top medical institutes. However, academia should not be expected to function entirely by industry rules. To bridge this gap, faculty exchange programs should be implemented, where faculty gain industry experience, and industry experts contribute to academia. Knowledge sharing, particularly through initiatives like the PM Research Fellowship, is crucial for developing human capability.
- Effective communication of science is essential for consumer understanding, and ensuring the authenticity of herbs is vital for quality control. Intellectual property rights must be clearly discussed and resolved to facilitate technology commercialization. While many R&D efforts in academia do not translate into market-ready products,

strategic collaborations can enhance commercial viability. Industry participation in academia through the establishment of specialized courses, such as the full-time BTech pharmaceutical degree, strengthens the talent pipeline.

- Exploring existing technologies and onboarding partners can further drive innovation. Contributions to DNA barcoding and research in regions like Himachal Pradesh exemplify the impact of such collaborations. Strengthening engagement between industry and academia is key to advancing research, developing talent, and fostering impactful innovations.

Session 6

Strengthening R&D National Infrastructure – The Road Ahead



Dr. Pratishtha Pandey, Scientist 'G,' Advisor & Head, R&D Infrastructure Division, Department of Science & Technology, Government of India

Speakers:

- **Dr. Pratishtha Pandey**, Scientist 'G,' Advisor & Head, R&D Infrastructure Division, Department of Science & Technology, Government of India

Key Takeaways:

- India has made significant strides in strengthening its R&D infrastructure, with increased women participation and higher gross expenditure on research and development, currently at 0.67% of GDP. The country holds the second-largest pool of STEM graduates and ranks third globally in terms of PhDs in science and engineering, startups, and unicorn hubs.

- The Department of Science & Technology (DST) has been instrumental in advancing R&D by supporting over 600 colleges and providing grants for various projects through initiatives such as SAIF, FIST, PURSE, SATHI, and SUPREME. Last year, DST accepted 121 proposals, with most of the funding directed toward engineering sciences. Researchers from 15 central universities and over 45 state universities have benefited from DST's support.
- The SATHI initiative, introduced in 2009, has established six centres, with contributions from organizations like TATA Steel for the newly opened SATHI Centre at IIT Hyderabad. Under the FIST program (2000-2022), 703 proposals were submitted, with 213 securing funding, and 12 departments receiving support. Physics accounts for 14% of the quantum fund allocation. Additionally, the STUTI initiative has successfully trained 8,573 researchers. India's continued efforts in fostering innovation and research are pivotal in strengthening its position as a global R&D powerhouse.

Session 7

National Quantum Mission - Role of Academia and Opportunities for Industry



Mr. Sumeet Gupta, Deputy Secretary General, FICCI felicitating Dr. J B V Reddy, Mission Director, National Quantum Mission (NQM), Department of Science & Technology, Government of India with a Green Certificate

Speaker:

- **Dr. J B V Reddy**, Mission Director, National Quantum Mission (NQM), Department of Science & Technology, Government of India

Key takeaways:

- The National Quantum Mission (NQM), one of the nine most important missions of the Department of Science & Technology (DST), focuses on advancing India's capabilities in quantum technologies. The Indian Institute of Science (IISc) has been identified as the central hub for quantum computing, driving innovation in this field.
- T-Hubs will play a pivotal role in transitioning technologies from research labs to the market, facilitating the commercialization of quantum innovations. Collaboration between T-Hubs and industry will be essential for the development of joint technologies, supported by a revenue-sharing model that ensures mutual growth.
- Key technology domains targeted by the mission include quantum computing, quantum communication, quantum sensing and metrology, and quantum materials and devices. These areas are poised to shape the future of India's technological landscape, offering significant opportunities for academic and industrial collaboration. Through these efforts, the National Quantum Mission aims to position India at the forefront of global quantum research and development.

Session 8

Showcase of Select Research Work



Mr. Tapas Chatterjee; Prof. Kamal Bijlani; Ms. Sukanya Dixit;
Ms. S. Vijayalakshmi (Left to Right)

Speakers:

- Prof. Kamal Bijlani, Dean, School of Artificial Intelligence, Amrita Vishwa Vidyapeetham
- Ms. Sukanya Dixit, Head - Incubation, Shriram Scientific & Industrial Research
- Mr. Tapas Chatterjee, Managing Director, SSP Pvt Ltd

Key Takeaways:

- The session highlighted significant advancements in research and development across various fields. The focus was on building in-house AI systems, such as MyGPT, to enhance efficiency and privacy, with thematic research centres covering cybersecurity, AI in healthcare, and more. Collaboration with Stanford University is underway to create robust data collection mechanisms for AI, with a particular focus on integrating AI into rural healthcare clinics.
- The role of telemedicine in improving healthcare delivery was also emphasized, alongside the use of AI-powered tools like derma chatbots to reduce consultation time and improve efficiency. Moreover, the session discussed the transition of unstructured data into structured formats and the adoption of Llama over ChatGPT for its reduced errors, cost-efficiency, and data privacy features.
- The research showcased innovations in high-performance materials, clean energy, and sustainable technologies. Notable projects include the lab-scale demonstration of hydrogen storage prototypes, sustainable zinc recovery from industrial effluents, and advancements in hydrogel beads for water treatment.
- Additionally, the concept of "Waste to Wealth" was explored, with technologies for converting sludge from sewage treatment into valuable products, recovering potable water, and extracting valuable materials like potassium sulfate and salicylic acid. The focus was on research collaboration, industry-academia partnerships, and fostering innovation through technology incubation, with several patents granted for breakthrough solutions in the field.

Session 9

Global Best Practices for R&D Funding



Speakers:

- **Mr. Ryan Warren**, Dy. Director, UK Research and Innovation (UKRI)
- **Ms. Anandi Iyer**, Director, Fraunhofer Office India
- **Moderator: Mr. Sankalp Sinha**, GM & Business Development Executive, IBM India Pvt Ltd

Key Takeaways:

- This session highlighted key best practices for R&D funding, emphasizing the importance of aligning research strategies with market and ecosystem needs to secure funding. Sustainable, impactful innovations and data-led approaches were underscored, with a strong focus on automation, AI integration, and technology-driven solutions.
- Continuous re-skilling was deemed essential to keep pace with evolving technologies. A documented R&D guideline is critical for organizations to seek innovation funding effectively. The automotive sector was noted for investing heavily in R&D, while a co-creation model for R&D was seen as beneficial for companies. Funding sources such as venture capital, grants, and strategic partnerships were highlighted as vital to advancing research.
- In the UK, the Haldane principle ensures that the research community, rather than the government, determines funding priorities. Fraunhofer's model, which combines industrial and academic research, illustrates the importance of addressing industry needs and ensuring ROI in research funding.
- India faces challenges like low IP generation, inadequate remuneration for researchers, and limited investments in R&D, which hinder its potential as a global product development hub. The session also pointed to the importance of partnerships and global collaboration in overcoming these barriers and driving technological success. The need for India to aim for tech leadership and global innovation was strongly emphasized.



Attendees during the FICCI Bharat R&D Summit 2024



FICCI Bharat R&D Summit 2024

Industry - Academia Collaboration

3-4 October, 2024 | FICCI, New Delhi

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