SDG 17 in India: Partnerships for the Goals

Sustainable Development Goal 17 (SDG 17) emphasizes the importance of global partnerships to achieve the United Nations' Sustainable Development Goals (SDGs). In a diverse and populous country like India, partnerships are crucial for mobilizing resources, fostering innovation, and achieving sustainable development. India's commitment to SDG 17 is evident through its collaborations with international organizations, private sectors, and local stakeholders.

Efforts by the Indian Government to Achieve SDG 17

1. International Collaborations:

- India actively participates in global initiatives such as the International Solar Alliance (ISA) and Coalition for Disaster Resilient Infrastructure (CDRI) to share knowledge and resources for sustainable development.
- Partnerships with organizations like the World Bank, United Nations
 Development Programme (UNDP), and Asian Development Bank (ADB)
 facilitate funding and technical expertise for development projects.

2. Public-Private Partnerships (PPPs):

- o PPPs drive infrastructure development, renewable energy projects, and digital transformation initiatives.
- o Programs like **National Investment and Infrastructure Fund (NIIF)** attract private sector investments for sustainable infrastructure.

3. Technology and Knowledge Sharing:

- o Platforms such as **Digital India** foster collaborations between the government and tech companies to enhance digital connectivity and e-governance.
- o Initiatives like **GIAN** (**Global Initiative for Academic Networks**) bring international experts to Indian universities to share knowledge and research.

4. Mobilizing Financial Resources:

- o India leverages innovative financing mechanisms such as **green bonds** to fund renewable energy and environmental projects.
- o The **Corporate Social Responsibility (CSR)** mandate requires companies to allocate a portion of their profits toward social and environmental initiatives.

5. Data and Capacity Building:

- o India has developed platforms like **NITI Aayog's SDG India Index** to track progress on SDGs, ensuring accountability and data-driven policymaking.
- o Skill development programs, such as **Skill India Mission**, are supported by partnerships with international organizations and industries.

6. South-South Cooperation:

- o India provides technical and financial support to developing countries through programs like the **Indian Technical and Economic Cooperation (ITEC)**.
- Sharing of expertise in renewable energy, digital transformation, and healthcare strengthens regional and global partnerships.

7. Sustainable Development in Rural Areas:

- Programs like Sansad Adarsh Gram Yojana and Mission Antyodaya foster collaboration between government agencies and community organizations to improve rural livelihoods.
- o Partnerships with NGOs enhance the reach and effectiveness of development initiatives.

SDG 17 at the University of Petroleum and Energy Studies (UPES)

UPES actively supports SDG 17 through collaborations, research, and community engagement. The university fosters partnerships across industries, academia, and government to achieve sustainable development goals and drive innovation.

1. Industry-Academia Collaboration:

- o UPES partners with leading companies in energy, technology, and law to provide students with industry-relevant skills and exposure.
- Collaborative research projects address challenges in renewable energy, sustainable infrastructure, and digital transformation.

2. International Academic Partnerships:

- The university has tie-ups with international universities and institutions for student exchange programs, joint research, and knowledge sharing.
- o Initiatives like **UPES Global Connect** enable students to gain global perspectives on sustainability challenges.

3. Community Engagement:

- UPES collaborates with local NGOs and government bodies to implement community-based projects focused on education, healthcare, and sustainable practices.
- Outreach programs in rural areas promote skill development, entrepreneurship, and environmental conservation.

4. Research and Innovation Hubs:

- o The university's research centers focus on developing sustainable solutions for energy, transportation, and urban development.
- Partnerships with government agencies and industries enhance the impact of research initiatives.

5. **Promoting Entrepreneurship**:

- The **UPES Incubation Centre** supports startups by providing funding, mentorship, and networking opportunities.
- Entrepreneurial initiatives often focus on sustainability, promoting innovative solutions for energy efficiency, waste management, and clean technologies.

6. Skill Development Programs:

- o UPES organizes workshops and certification courses in collaboration with industries to equip students with advanced technical and managerial skills.
- o Programs align with national missions like **Skill India** and **Make in India**, fostering a workforce ready for sustainable growth.

7. Raising Awareness and Building Networks:

- The university hosts conferences, seminars, and hackathons that bring together experts, policymakers, and students to discuss global challenges and sustainable solutions.
- Events like Sustainability Week foster dialogue on achieving SDGs through partnerships.

8. Digital and Green Campus Initiatives:

- Collaboration with technology providers supports the development of a smart campus, integrating renewable energy, digital learning platforms, and sustainable infrastructure.
- Partnerships with environmental organizations promote green practices on campus, such as waste management and biodiversity conservation.

Impact of UPES's Contributions to SDG 17

Through its partnerships with industries, academic institutions, and local communities, UPES exemplifies the spirit of SDG 17. The university's initiatives foster innovation, inclusivity, and sustainability, preparing students to contribute to global development goals. By aligning its efforts with India's national priorities and international commitments, UPES plays a pivotal role in advancing partnerships for sustainable development.

<u>How UPES is contributing to SDGs</u> https://blog.upes.ac.in/how-upes-is-contributing-to-sdgs/ [1]

EKTA KASHYAP · NOVEMBER 24, 2022



Sustainable Development Goals

UPES is building a network of experts for finding sustainable solutions to both local and global problems

Over the years, UPES has adopted several transformational policies such as Project UK, Waste Paper Recycling Laboratory, Project Artisan, and We Care to name a few, to achieve inclusive, prosperous and sustainable development

In 2015, 193 member states of the United Nations made a historic decision. They unanimously adopted the 2030 Agenda for Sustainable Development. The Agenda, with 17 Sustainable Development Goals (SDGs), provides an internationally agreed-upon blueprint for world peace and prosperity, for both now and the future.

In the processes of development, education institutions have always played a significant role by shaping the next generation of leaders and committing to growth. As a university, UPES is conscious

of its role in transforming the youth and igniting the spirit of sustainable development in their minds and hearts.

Recently, UPES organised a four-day 'Sustainability Fair' highlighting several solutions that can address today's most pressing problems. Hon'ble Governor of Uttarakhand, Lt. General Gurmit Singh (Retd.), visited the campus for unveiling the 'Conference Proceedings' of the fair. The Governor congratulated UPES for its contributions in stimulating the sustainable economy and encouraged the university to continue its commitment towards meeting the SDGs.

Further, UPES has adopted various initiatives that align with the SDGs to help achieve inclusive, prosperous development while preserving the stability and resilience of the planet.

SDG 1: No poverty



Project Naman is a social impact initiative to reach out to the kin of valiant martyrs from Uttarakhand. Under the project, besides financial assistance to the family of the martyrs, UPES provides complete funding of school education for one martyr's child every year; supports the dependent of the martyr in finding job opportunities, provides special training and development to the martyr's widow under Shakti – a women's empowerment initiative; and offer full higher education scholarships to the children of five martyrs from Uttarakhand every year.

Project Vikalp economically empowers rural womenfolk in the local community through manufacturing of environment-friendly 'woodless pencils', tech-assisted handicrafts, and growing medicinal and aromatic plants suitable to the climate and soil in the region.

Empowering local women to create eco-friendly products

Project Artisan empowers local communities, especially women weavers, in a remote village of Ladakh. They are imparted design skills for collective production and sales of back-strap loom carpets, while considering responsible consumption and production that uses affordable-clean energy. The project, which focuses on creating income opportunities, is a partnership between education institutes and local NGOs. It sustains their cultural heritage, without migration to cities from villages, an issue faced in the Ladakh mountains.

Project UK (India Sustainable Development and Research Collaboration) is aimed at building a network of experts to find sustainable solutions, starting with reviving, modernising, and enhancing the small watermills for rural income enhancement. This networking plan directly addresses the issues of remote community poverty in India and is aimed primarily at the hill communities in Uttarakhand.

SDG 2: Zero hunger

UPES provided 'Dry Ration Family Packs' to 1000 migrant workers families at six rural locations during the COVID-19 lockdown. Each pack contained dry ration for around 8-10 days for a family of four. The initiative helped over 4000 workers.

SDG 3: Good health and well-being









UPES started 'We Care', a 24×7 counselling support for students, faculty, staff and their families to address issues related to emotional well-being. Through another health initiative Sanjeevani, students and employees can avail all services of Practo – a patient focused, independent medical website with over 100,000 doctor profiles from across India and Singapore at no cost.

Healthcare camps, multiple awareness drives in government schools and villages, promotion of good menstrual hygiene through sensitisation and distribution of menstrual cups, annual voluntary blood donation camps, eye donation camp, and several projects including the 'Assessment of Nutritional Status' in three districts of Uttarakhand, further contribute to realising the goal of good health for all.

Free healthcare camps

SDG 4: Quality education

The University provides several scholarships to students in financial need, including those from low-income areas and underprivileged backgrounds. Uttarakhand bonafide residents are eligible for 33% concession in tuition fees; up to 100% merit scholarships; sports scholarships; freeships to underprivileged students; and Shakti scholarships for girls.

The UPES curriculum facilitates a broad-based, experiential, and multidisciplinary knowledge and learning experience. It enables students to 'Design their own Degree', giving them the opportunity to choose from a range of diverse courses.

Through EDUDHARMA – Education for Developing Humans for Righteousness and Mindful Actions – UPES has impacted the lives of over hundred families, students from underprivileged backgrounds, government teachers, locals as well as local schools in Dehradun. There are four projects under EDUDHURMA— Protsaahan, Utkarsh, Dronasthali and Utthan — which aim to elevate the lives of citizens and communities around the university's Bidholi campus.

Project Abhilasha identifies meritorious students from marginalised regions of the state and invites them for a month-long residential coaching camp on campus. The focus is on strengthening subjects such as Physics, Chemistry, Mathematics, thereby preparing them for engineering entrance examinations.

Project Vriddhi offers academic and infrastructural interventions, Project Raftaar aims at the holistic development of students, and Project Bodh promotes comprehension amongst students at the eight adopted government primary schools in the local community.

Project Samvedna provides day care and education to the children of migrant construction workers, mostly women, engaged in construction activities on UPES campuses.

SDG 5: Gender equality

UPES' program Shakti aims at developing the leadership capabilities of emerging women leaders by taking them through a carefully-designed intervention focused on adaptive skills, emotional intelligence, communication effectiveness, and multiple other competencies needed to be successful in the future. The program is spread over nine months and is based on real empowerment.

Project Payal promotes education of the 'girl child' in the local community.

Through Project Vikalp, the UPES Rural Women Technology Park empowers women of neighbouring villages surrounding the university campus. The project supports initiatives pertaining to recycled paper products; ICT-assisted art and craft design; and the identification and cultivation of medicinal and aromatic plant species. It also encourages budding entrepreneurs for the marketing of their products. UPES also conducted an awareness drive in 16 local government schools in Dehradun to make them aware about the concept of equality.

SDG 6: Clean water and sanitation

As per Central Ground Water Authorities, UPES is a 'Zero Water Discharge' campus. The University recycled 250 KL of water in the horticulture section, has a 550 KLPD (Kilo Litre Per Day) of recycling capacity, and all rainwater harvesting pits have water flow metres to ensure the feeding of rainwater to the ground, leading to 89% savings of water.

Project Swachhata focuses on contributing to 'Clean India' mission through sustained cleaning of the adjoining community areas.

SDG 7: Affordable and clean energy

UPES has installed solar power plant of capacity 100 kW. In the last five years, 8% demand of the total power consumption has been catered by the solar power plant. The solar plant is also being utilised for the training and project purposes for the students.

Research by UPES has contributed to clean energy projects by the United Nations Development Program. The university has also conducted capacity-building programs as well as social impact reviews in the field.

SDG 8: Decent work and economic growth

Through Skill India Mission, UPES provided upskilling opportunities for Dehradun District Jail inmates to enhance their livelihood options.

Project 'Craft Story Making' promotes and creates opportunities for Indian artisans impacted by the pandemic. Spreading cheer among the underprivileged, UPES in collaboration with Dehradun-based NGOs organised a fair, which displayed products made by orphaned children, marginalised women, and promising artists.

SDG 9: Industry, innovation and infrastructure

UPES conducted workshops on value-added product development with bamboo, and research projects on the development of novel and sustainable products from textile waste generated in garment industry, electric amphibious vehicle for nature parks, strategy to use waste wood for creating plastic and chemical-free toys, to name a few.

SDG 10: Reduced inequality

UPES Skill Development Program upgrades the skills of support staff including security guards and housekeeping staff on campus in building their capacities in English, Computers, and life skills.

SDG 11: Sustainable cities and communities

Project Utthan aims to transform Dhalani and Koti villages of Dehradun into model smart villages, with special focus on healthcare, education and livelihood. These will be first of many villages to reap the benefits of this program, bringing more development and prosperity to the Indian rural landscape.

UPES Waste-Paper Recycling Laboratory aims to help rural women from the indigenous community earn a fair wage by teaching them how to make high quality goods using waste-paper viz, paper, pencils, jewellery and stationery items.

Further, UPES students have developed flagship engineering projects such as Flying Cars, Electric Cycle, Waste Management, Water Security, First Aid, Fire and Safety, Women Empowerment through Cultivation of Medicinal and Aromatic Plants, Solar Driers, and Biochar Bio Briquette. Students have also designed anon-tracking solar tree, which is furnished with 3-Watt and 6-Watt LED light, multiple USB 2.0 port and basic electrical socket to charge laptop as well as mobile phone.

SDG 12: Responsible consumption and production

UPES has solar water heating plants of capacity 61500 litres. The university has made it a policy to retrofit all conventional lights on the campus. All the conventional lighting fixtures are being replaced to ensure energy savings. Unity Power Factor is maintained at UPES sites to ensure zero energy loss.



Solar power

SDG 13: Climate action

Through awareness campaigns and project-based learning, students are encouraged to develop ecofriendly products such as edible cutlery, which are nutritious as well as have significant potential to replace plastic menace.

SDG 14: Life below water

UPES has worked on a project with the Wildlife Institute of India for designing appropriate mitigation measures to reduce fishnet entanglement of dugongs.

SDG 15: Life on land

UPES was a contributing organisation in the Leopard Report 2018, which was released by the central government. The university has also established polyhouse and nurseries for the cultivation of medicinal and aromatic plants. Under this project, UPES gives training and technical backup support to rural women farmers to cultivate medicinal and aromatic plant species such as Tulsi, Chamomile Lemongrass and Stevia in nearby villages.

SDG 16: Peace, justice and strong institutions

UPES' Legal Aid Society raises awareness about societal issues and increases access to justice for all. The university also conducts various seminars, lectures, panel discussions, and skill development events to promote peaceful and inclusive societies for sustainable development.

SDG 17: Partnerships to achieve the goal

UPES has signed several MoUs with non-governmental organisations to work toward improving the nutritional status of villagers in rural Uttarakhand.

UPES also has tie-ups with 44 international universities for student exchange program, internships and research collaborations spread across the globe. 600+ NGO tie-ups are in place for Srijan, the Social Internship Projects.

It is the question of the century: Can we leave the world a better place than what we inherited? Can we meet all the SDGs by the stipulated timeline? Can we write a sustainable chapter for the planet and the future generations? Through collaboration, education, and will of people, institutions and governments, we can.

A new milestone for UPES!

https://twitter.com/UPESDehradun/status/1707693258330034568 [2]

A new milestone for UPES! We are delighted to be ranked in the 801-1000 band, 25th in India, 9th amongst all private and deemed Universities in India and 2nd amongst state universities by the Times Higher Education (THE) World University Rankings.



<u>Top 3% Universities in the World</u> https://twitter.com/UPESDehradun/status/1674041728758677507 [3]

A proud moment for #UPES as it secures a distinguished position amongst the top 3% universities in the world. * This is a testament of our unwavering commitment to academic excellence.

#UniversityOfTomorrow **Z** ★



QS World Rankings by Subject

https://twitter.com/UPESDehradun/status/1639507544761860097 [4]

We are ranked in the band 101-150 for Petroleum Engineering and in the band 501-550 for Computer Science and Information Technology Systems.

We are humbled by this wonderful debut.



<u>UPES achieves record-breaking milestones in research</u>
https://blog.upes.ac.in/upes-achieves-record-breaking-milestones-in-research/ [5]



EKTA KASHYAP · SEPTEMBER 15, 2022

Research Milestones - UPES

From reaching triple the global average in research output to faculty who are among highly cited researchers in the world, here is a glimpse of the university's magnificent accomplishments in research over the years

A lot has happened since 2003, the year in which UPES was founded as a premier learning institution to provide multi-disciplinary, trans-disciplinary, industry-aligned, holistic education. Since its inception, UPES faculty members have made landmark contributions in their respective fields; contributions that have revolutionised research, solved local and global problems, and filled gaps in knowledge.

Today, the university stands tall as a hub of exploration and research. UPES research output – from 0.7 papers to three papers per faculty is possibly the highest jump for any university in one year. It is also triple the global average of one paper per faculty per year.

Scopus (the world's largest abstract and citation database of scientific literature) indexed research output for UPES was 1100+ in 2021. Until mid-September 2022, it was around 1400+ and is likely to cross 2100 by the end of this year. The university has grown twelve times in research output in the last seven years.

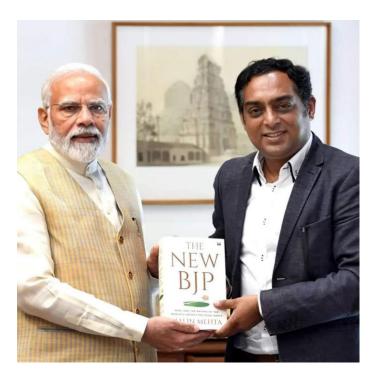
24 UPES faculty members are on the list of top 2% researchers in the world, according to Stanford list and eight of these researchers have found a place in the one of most coveted 'Highly Cited Researchers' list published by Clarivate.

Unmatched academic prowess

UPES students get the opportunity to learn from the best in the world. The university's faculty pedigree comprises two Rhodes scholars, a Fox fellow from Yale University along with Fulbright, Commonwealth, Chevening, DAAD, and Erasmus scholars. Recently, Dr. Khyati Tripathi, Assistant Professor, School of Liberal Studies, received a Harvard fellowship, an honour given to a select few in the world.

Dr. Manish Kumar, Head of Sustainability Cluster, Professor, School of Engineering, was recognised as India's number one and world's fourth-best environment expert for his published articles, as per the analysis by Expertscape.

Dr. Nalin Mehta, Dean, School of Modern Media, recently presented his book 'The New BJP' to Prime Minister Narendra Modi. The book has been making waves on Amazon's list of bestselling non-fiction books for 12 straight weeks. It has been prominently featured in multiple publications and networks including Hindustan Times, The Times of India, The Hindu, The Indian Express, The Washington Post, BBC News, CNN-News18, The New Indian Express, and NDTV. The book is receiving rave reviews nationally and internationally and has been praised as a 'seminal work'. The book has also been listed among the all-time top 10 books in the genre along with the late Pandit Jawaharlal Nehru's autobiography. The UPES School of Modern Media is India's first digital-first media school.



Narendra Modi

Dr. Nalin Mehta (R) presenting his book 'The New BJP' to Prime Minister Narendra Modi

Dr. Snigdha Misra from Cornell University and Dr. Dhruv Kumar, PhD in Cellular, Molecular and Industrial Biology from the University of Bologna, Italy, are among the esteemed faculty members at the School of Health Sciences and Technology. At the School of Design, UPES has onboarded some of the finest academic leaders such as Prof. Debkumar Chakrabarti (Ex-IIT Guwahati), Prof. Pradyumna Vyas (Ex-Director, National Institute of Design), Prof. Nina Sabnani (Ex-IIT Bombay IDC), and Prof. Amit Ray (Ex-IIT Kanpur) as distinguished professors and advisors to craft the best learning experience for students.

Several international faculty are co-teaching modules at different schools. UPES is probably the only private university in India looking to hire full time 1000 PhD scholars – 250 every year for the next four years – beginning 2022. These scholars will be provided with fellowships similar to University Grants Commission (UGC) and Council of Scientific and Industrial Research (CSIR) fellowships through university's internal resources.

How UPES nurtures a culture of research and innovation

In the quest to facilitate a creative and collaborative research ecosystem, the university provides financial support in the form of SEED funding. SEED is an in-house financial support available for consumables, mini equipment, travel grant, fees for characterisation, software purchase, and other operational expenses.

The initiative intends to support the growth of researchers by providing them flexible working capital and to leverage these limited funds to generate substantial external funding, industrial support, or creative scholarship projects.

Infrastructural Support

UPES has a dedicated research laboratory called the Central Instrumentation Centre, which houses machines such as X-ray Diffractometer, Drop Shape Analyzer, Photoluminescence

Spectrophotometer, Atomic Force Microscope, Raman Spectroscopy, Mössbauer Spectroscopy, Electrical Resistivity and Transport Properties, Magneto Optic Kerr Effect (MOKE), to name a few.

The university also provides access to several research databases such as Science Direct, SCOPUS, Web of Knowledge, IEEE, RSC, Thomson Reuters, Harvard Business Review, Emerald Insight and Taylor & Francis. Additionally, researchers are provided dedicated research space, assistance through Junior Research Fellowships (JRF), finance, legal cells, and manpower support.

At UPES, the foundation of higher learning is based on critical thinking and innovation; every milestone in research is a testament to the university's thriving research ecosystem.

KPMG Partnership

https://upes-production-cvb3e7frghdda0a4.z01.azurefd.net/drupal-data/2023-09/mba-2023.pdf [6]



Strategy & Consulting

- Co-designed and Co-delivered by KPMG experts
- Real-time live consulting projects
- Mentorship support
- Experts from KPMG to teach key Strategy and Consulting modules
- Networking opportunities with industry experts

Business Analytics

- Co-designed and Co-delivered by KPMG experts
- Real-time live consulting projects
- Mentorship support
- Experts from KPMG to teach key Strategy and Consulting modules
- Networking opportunities with industry experts
- Co-delivered by KPMG experts
- Industry-relevant capstone project
- One-on-one interaction with industry mentors
- Networking opportunities

Experiential learning: Hands-on experience in leading industry tools and technology

2 nd International Conference Workshop on Energy Innovation Initiatives for Attaining Sustainable Development Goals https://www.hcikl.gov.in/pdf/Cover_EIISDG_2019.pdf [7]



The 4th "Sustainable Energy for All" forums held in May 2018 at Lisbon, Portugal concluded that the energy systems imaginations requires a significant shift.

"...the sustainable energy systems of the future are no longer just about electrons, but about energy as a set of services that deliver prosperity, reliable health care, education and business opportunities. We understand now that the energy systems of the future are so fundamentally different from the energy systems of the past that they require a re-imagining of the institutions, business models, financing and partnerships necessary to deliver SDG7 on the timeline laid out."

The inaugural "Eradicating Poverty through Energy Innovation" (EPEI) workshop held at Arizona State University in February 2018, arrived at similar conclusions, proposing that energy thriving should be the broader goal of achieving SDG7 i.e. Clean and Affordable Energy for All. Deliberating around the concept of Social Value of Energy; innovation in socio-technical-financial arrangements as well as governance and ownership of energy access projects were explored by a global cohort of participants. The contextual factors of geography, climatic conditions, economy, institutional strengths or weaknesses and culture etc. emerged as crucial factors for achieving desired outcomes. Social justice, equitable distribution of benefits, and inclusive development emerged as strongly interlinked issues.

To continue the sharing and dissemination of the concept of social value of energy various workshops around the world have been envisioned. These workshops will explore contextual themes and challenges in creating meaningful bankable projects and programs for energy sufficiency that are financially viable, while generating social value for local communities which will lead to energy thriving. University of Petroleum and Energy Studies, located in Dehradun, Uttarakhand, a Northern state of India, under the aegis of NITI Aayog and in association with Arizona State University, USA and IPE Global, India is hosting this conference workshop. The conference workshop is supported by Cairn India and is focused to attempt to meet SDGs through energy intervention and the expected outcomes will prove to be good drivers for underdeveloped and developing countries.



Objectives and Outcomes:

Innovative energy initiatives are being planned and implemented all the time, but one can always find a disconnect between well intended plans/policies and effective implementation, scalability, sustainability and financial viability. The primary motivation of this workshop is to bridge this gap by bringing together the participants from various domains of policy, financing, implementation, research and practice around energy systems. Participants in the workshop will deliberate on five major objectives:

- 1. To assess existing projects/programs on basis of how they use energy as enabler to attain SDGs (issues of equality, justice, climate adaptation, poverty alleviation etc.).
- 2. To deliberate on potential initiative (s) that are currently in the conceptual phase or in relatively early planning phases in order to identify and incorporate social value of energy parameters in their strategic plans.
- 3. To deliberate critical factors necessary to make ensure such initiative (s) are scalable, sustainable and financially viable.
- 4. To share best practices as well as failures from around the world in energy initiatives undertaken, with focus on South and South East Asia.
- 5. To deliberate how such initiatives could support achieve India's and host state Uttarakhand' s ambitious targets towards energy innovation in a socially and financially cohesive manner

UPES & GMRAA

https://twitter.com/UPESDehradun/status/1642766854849540096 [8]

#UPES students are ready to take off on a new adventure with the partnership between UPES & GMRAA! This DGCA-approved course will help students own their tomorrow. It includes a potential job opportunity for #SchoolOfBusiness students with GMR Airports.





