6th International Conference on Entrepreneurship, Innovation and Leadership
(ICEIL – 2024)
9th - 11th October 2024

SESSION WRITEUP

TRACK-3:
Engineering & Technology, Natural Resources & Environmental Sciences, and Agricultural Sciences, Defence Technology & Studies

Session No	3.1
Panel Discussion Session Topic	Drone Industry and Entrepreneurship Opportunities for Young Professionals
Day & Date	Wednesday, 9th October 2024
Time	12 noon – 1:30 pm
Venue	E-2 Seminar Hall
Organizing Institute	Amity Institute of Aerospace Engineering

Session Overview:

The drone industry has experienced exponential growth in recent years, revolutionizing various sectors such as agriculture, logistics, and surveillance. As this technology continues to advance, it presents a wealth of opportunities for aerospace engineers.

This panel discussion will explore the latest advancements in drone technology, including autonomous flight, long-range capabilities, and advanced payload integration. It will explore the diverse applications of drones, from agriculture and environmental monitoring to search and rescue operations and urban delivery services. The discussion will provide insights into the necessary skills and qualifications for success in these areas, emphasizing the importance of expertise in areas such as aerodynamics, avionics, and control systems.

Additionally, it will address the challenges and opportunities facing the drone industry, including regulatory frameworks, safety standards, and infrastructure development. By understanding these factors, aerospace engineers can better navigate the landscape and contribute to the growth of this exciting field.

Session Objectives

1. Explore the diverse applications of drones and how they're reshaping industries from agriculture to urban delivery system.
2. Discover exciting career paths in the drone industry, from designing innovative drones to piloting them on tough missions.
3. Learn about the current regulations governing drones and how they impact the Drone industry.
4. To make students aware of the skills required to be an entrepreneur in this field.

Key Questions to be Explored

1. What have been the key milestones in the evolution of the drone industry in India, and how have they shaped its current landscape?
2. How has the regulatory framework in India evolved to accommodate the increasing use of drones, and what challenges and opportunities does it present for entrepreneurs in the drone industry?
3. What are the critical technological advancements and innovations driving the drone industry's growth, and how can start-ups stay at the forefront of these developments?
4. What funding and investment opportunities are available for drone start-ups in India, and what strategies can entrepreneurs employ to secure financing and scale their businesses?
5. What are the international collaborations and partnerships that can benefit Indian drone start-ups, and how can they access global markets and expertise?
6. What are the skill sets and talents required for individuals to excel in the drone industry, and how can educational institutions and training programs better prepare the workforce for this field?

Session No	3.2
Panel Discussion Session Topic	Startup Ecosystem for Space Applications towards Atmanirbhar Bharat
Day & Date	Wednesday, 9th October 2024
Time	2:00 pm - 3:30 pm
Venue	E-2 Seminar Hall
Organizing Institute	Amity Institute of Space Sciences & Technology

Session Overview:

Startup Ecosystem for Space Applications towards Atmanirbhar Bharat catalyst for accelerating the exchange of knowledge, information and technology of space-related domains amongst all stakeholders of the entire Indian Space ecosystem including the government and its agencies, to make India self-reliant, technologically advanced and a leading player in the Global Space arena.
It is responsible to promote, enabling authorize and supervising various space activities of the NGEs that include, among others, the building of launch vehicles & satellites and providing

space-based services; sharing of space infrastructure and premises under the control of DOS/ISRO; and establishment of new space infrastructure and facilities.

The space industry has seen a recent increase in private sector participation, with commercial ventures taking on more critical roles. Some of the factors that have contributed to this increase include, i.e. favorable policy changes. India's Space Policy 2023 recognizes the private sector as a key stakeholder in the space economy.

Also, the government has allocated funds for space research and technology and signed a Memorandum of Understanding with Microsoft to provide support to space tech companies.

Session Objectives:

1. To understand the Space domain problems and its solution: The problem space deals with identifying what business challenges are trying to solve and why they matter.
2. Startup venture domains: This domain involves developing systems and vehicles to move payloads, resources, and spacecraft through space. SpaceX, RocketLab, and Blue Origin are some of the leaders in this field.
3. Funds of Startup: Venture capital funds, are expected to help startups get early-stage funding and boost participation in the sector
4. Collaboration with ISRO and several other organizations on space-related projects.

Key Questions to be Explored:

1. How strong will the commoditization of the space industry be?
2. Can commoditization and pushing technology boundaries go hand in hand?
3. Will transparency see a transformation in the space industry?
4. Will suppliers emerging out of new geographies start getting a bigger share of the business?
5. Is there a case for platform economy/marketplaces in the space industry supply chain?

Session No	3.3
Panel Discussion Session Topic	Emerging Technologies and Opportunities in Future Mobility
Day & Date	Wednesday, 9th October 2024
Time	3:45 pm - 5:15 pm
Venue	F-1 Seminar Hall
Organizing Institute	Amity Institute of Space Sciences & Technology

Session Overview:

The transport sector is in the midst of a technological revolution responding to changing consumer preferences. This track will identify the key upcoming technologies that will define the future of mobility and discuss how they can help businesses and individuals seize the

opportunities. The tracks cover major trends such as electric vehicles, autonomous driving, smart cities, and Mobility as a Service (MaaS) platforms that will reshape the way people and goods move across the globe. Experts from various industries will shed light on emerging technologies that are disrupting traditional mobility paradigms, creating new business models and monetization opportunities in different verticals. It is well known that autonomous cars could have a significant impact on public transport, logistics, and personal mobility by making them safer, reducing traffic congestion and improving transportation system efficiency. The panellists will discuss various regulatory challenges that arise due to deployment of autonomous vehicles at scale such as data security and ethical considerations; also, how mobility converging with digital platforms creates new opportunities like MaaS platforms - which will be detailed during our special track dedicated to "Emerging Technologies and Opportunities in Future Mobility" where the industry experts deliberate on just what's coming up next for this dynamic industry.

This session also delves into the critical innovations reshaping global logistics and transportation. With the rapid expansion of international trade and heightened demands for efficiency, sustainability, and transparency, advanced technologies are unlocking new avenues for streamlining cross-border transactions, ensuring real-time tracking, and addressing the unique challenges of handling sensitive shipments like perishable goods and pharmaceuticals.

Session Objectives

1. **Identify key emerging technologies:** latest advancements in electric vehicles (EVs), autonomous vehicles (AVs), connected vehicles (CVs), and MaaS platforms.
2. **Discuss the impact of these technologies:** Analyze the possible benefits and challenges with a focus on sustainability, efficiency, safety, and accessibility.
3. **Explore business opportunities:** potential business models and investment opportunities surfacing because of the new technologies.
4. **Address societal and regulatory challenges:** discuss the implications on societies and regulatory frames that would have to accompany such technologies.

Key Questions to be Explored:

1. What are the major technological advancements driving the future of mobility?
2. How will electric vehicles transform the transportation panorama?
3. What are the challenges and opportunities associated with autonomous vehicles and ethical issues?
4. How will connected vehicles enhance safety and efficiency?
5. What are the entrepreneurship opportunities in future mobility?
6. How can governments and policymakers guide the transition to a sustainable and equitable mobility future?

Session No	3.4
Panel Discussion Session Topic	Harvesting Innovation: Exploring Tech Solutions for Sustainable Agriculture
Day & Date	Thursday, 10th October 2024
Time	10:00 am – 11:30 am
Venue	E-2 Seminar Hall

Organizing Institute	Amity Institute of Organic Agriculture and Amity Institute of Horticulture Studies & Research

Session Overview:

By 2047, India aims to achieve Viksit Bharat, a vision of a developed and sustainable nation. A crucial step towards this goal is harnessing technology to transform agriculture, ensuring food security, and promoting sustainable practices.

In the quest for sustainable agriculture, technological innovation has emerged as a pivotal force in transforming traditional farming practices. In India, the vision of a "Viksit Bharat" (Developed India) is increasingly intertwined with advancements in agricultural technology. From precision farming to smart irrigation systems, technology offers a range of solutions designed to enhance productivity while minimizing environmental impact.

Drones and satellite imaging provide farmers with detailed insights into crop health and soil conditions, enabling more informed decision-making. IoT sensors and automated systems facilitate real-time monitoring and management of irrigation, reducing water wastage and ensuring optimal crop growth. Additionally, advancements in genetic engineering and biotechnology are leading to the development of drought-resistant and pest-resistant crops, which can thrive in challenging conditions. These technologies not only promise to increase yields but also to support the broader goals of sustainability by reducing resource consumption and lowering carbon footprints.

As India strives to build a more developed and self-sufficient agricultural sector, embracing these innovative technologies will be crucial in achieving the dual objectives of food security and environmental stewardship.

By integrating these tech solutions, India can move closer to its vision of Viksit Bharat, where agriculture is both productive and sustainable, ensuring a prosperous future for its farmers and the nation as a whole.

Session Objectives:

1. **Highlighting Sector Significance**: To understand the vita of the agriculture and horticulture sectors within the broader context of Entrepreneurship, Innovation, and Leadership.
2. **Exploring Cutting-Edge Tools:** To explore and discuss the latest next-generation tech solution tools and strategies that can drive innovation and entrepreneurship in agriculture and horticulture.
3. **Expert Insights:** To gather valuable insights from distinguished industry experts, enabling a deeper understanding of the challenges and opportunities in these sectors.
4. **Inspiring Action:** To inspire and encourage participants to actively engage in fostering innovation and entrepreneurship within the agriculture and horticulture fields, contributing to sustainable growth and development.
5. **Agritech Startups:** To Promote Entrepreneurship in leveraging technology solutions in agriculture field

Key Questions to be Explored:

1. Opinions on how the NextGen tools can be easily implemented to small and marginal farmers.
2. As majority of farmers are small scale, how to make the technology cost-effective, ways and measures.
3. How can cutting-edge technology and digital solutions be leveraged to enhance agricultural productivity and sustainability?
4. What are the most promising innovations in crop management and precision agriculture, and how can they be integrated into traditional farming practices?
5. What role does sustainable and organic agriculture play in addressing global food security challenges, and how can entrepreneurship be encouraged in this sector?
6. How can entrepreneurs and innovators access funding and support for agriculture and horticulture startups and thus contribute to the tech start-ups in Agriculture?
7. What strategies are effective in bridging the gap between urban consumers and rural agricultural producers, promoting sustainable agriculture and entrepreneurship?
8. What are the key challenges and opportunities for agricultural and horticultural entrepreneurship in the context of emerging trends like vertical farming, Agri-tech, and farm-to-table concepts?

Session No	3.5
Panel Discussion Session Topic	Green Entrepreneurship for the Sustainability of Natural Resources towards Combating Climate Change
Day & Date	Thursday, 10th October 2024
Time	12:00 noon – 1:30 pm
Venue	E-2 Seminar Hall
Organizing Institute	Amity School of Natural Resources & Sustainable Development

Session Overview:

Environmental degradation is undoubtedly the greatest fear for academics, policymakers, the government, and civil society globally in this new millennium. Global acceptance of the recently created Sustainable Development Goals (SDGs) is a result of a greater understanding and awareness of the ecological crisis that have resulted from the global industrial transformation and technological advancement. The world is now facing major issues of climate change, serious environmental pollution and scarcity of natural resources. Combatting climate change is of critical importance to maintaining well-being and standards of living across the world in a sustainable manner. Therefore, in order to fulfil increased responsibility on the economic, environmental, and social front, a sustainable change in consumption and production patterns is absolutely necessary. Owing to the increasing number of eco-conscious consumers, several people and businesses are capitalizing on the present economy by creating novel products and redesigning existing ones from an environmentally conscious standpoint. As a result, the idea of "green entrepreneurship" is gaining importance in Indian markets gradually.

Green Entrepreneurship is key to developing and propagating innovative green solutions needed to combat climate change. Green entrepreneurship can help develop and propagate new technologies, create new markets and drive change in the business sector. Stimulating green entrepreneurship is therefore an important lever that governments can use to drive the transition to a more sustainable economy. Green Entrepreneurship can be developed in the production of organic output, environmental tourism, environmental construction, plantations, alternate source of energy including bio- energy, recycling practices, and waste management.

Green entrepreneurs play a pivotal role in fostering sustainability and combating with adverse impact of climate Change. They are innovators who extricate the customary "environment harming" production methods and bring in pioneering environmentally superior products or processes, thus triggering a shift in the traditional consumption pattern. By integrating nature-based solution into their business models, they not only drive green innovation but also influence societal attitudes towards eco-friendly practices. Their work shifts consumer preferences towards greener products and services, which can lead to both job creation and environmental benefits. These entrepreneurs actively incorporate sustainability principles into their decision-making processes, constantly monitoring their impact. By creating innovative approaches, advocating sustainable practices, and generating positive environmental effects, entrepreneurs are essential to "addressing climate change."

Green entrepreneurs with small businesses hold significant latent potential to adapt and contribute to climate change mitigation. They have the potential to develop green climate technologies that can help in the GHGs decline and climate change adaptation. Entrepreneurs can be a significant driving force behind efforts to lower GHG emissions through their capacity to develop and propagate innovative green solutions. Entrepreneurs have an important role in bringing new ideas to the market and driving change in economies. This is particularly true for green entrepreneurship, where new start-ups have the potential to disrupt established practices. Entrepreneurs can be a significant driving force behind efforts to lower GHG emissions through their capacity to develop and propagate innovative green solutions. Green entrepreneurship is therefore an emerging field of interest in a world confronted with the need to achieve economic growth while making frugal use of natural resources and minimising pollution.

There are a number of key factors that influence and drive green entrepreneurship. At a basic level, green entrepreneurship stems from the need for societies to address environmental challenges. As environmental pressures become more acute and societies increasingly seek to adopt a more sustainable way of living, the demand for green products and solutions increases. Global markets for climate-friendly businesses and technologies are growing. The contribution of the environmental economy to EU GDP increased from 1.6 % in 2000 to 2.3 % in 2018 (Eurostat, 2022). During the same period, employment in the EU environmental economy increased from 3.1 million full-time equivalents to 4.4 million full-time equivalents. Green entrepreneurship is a key contributor to such job creation results. In most cases, these new jobs in the clean economy have different skill profiles. Indian government policies, market situation and environmental consciousness of the consumers have resulted in adoption of green initiatives like Miyawaki plantation, adoption of clean renewable energy, bio-energy and biomass energy, biogas, organic farming, waste management, eco- tourism .

Session Objectives:

1. To understand the concept, need and scope of green entrepreneurship.

2. To understand the priority areas for establishing start-up in green entrepreneurship.
3. To understand the policies, initiatives of Government for green entrepreneurship ecosystem.
4. To understand the level of competency, skill & infrastructure and financial support to Green Entrepreneur.

Key Questions to be explored:

1. What are the problems and challenges faced in green entrepreneurship?
2. What are the key drivers of green entrepreneurship?
3. How the present situation of Climate Change can be considered as an opportunity for green entrepreneurship business?
4. What are the policy issues and initiatives by the Government for establishing start-ups in green entrepreneurship?
5. What kind of correlation exists among green entrepreneurship, innovation, and leadership?
6. What is the competencies and skills needed for young green entrepreneurs?
7. What are various priority areas for taking up green entrepreneurship?

Session No	3.6
Panel Discussion Session Topic	Promoting Startup Ecosystem in Defence for Atmanirbhar Bharat
Day & Date	Thursday, 10th October 2024
Time	2:00 pm – 3:30 pm
Venue	E-2 Seminar Hall
Organizing Institute	Amity Institute of Defence Technology

Session Overview:

India's pursuit of Atmanirbhar Bharat *is especially vital in the defense sector, where self-reliance can enhance national security and reduce dependency on foreign technologies. Startups play a crucial role in this transformation by bringing innovation, agility, and cutting-edge technologies to the forefront.*

The government's *Innovations for Defence Excellence* (iDEX) program, launched in 2018, is a key initiative supporting startups in the defense space. It encourages startups to collaborate with defense organizations to develop home-grown solutions through funding, mentorship, and infrastructure support. This has opened new avenues for startups specializing in areas like Artificial Intelligence, Drones, Cybersecurity, and Robotics. iDEX is supporting many startups and throwing Defence challenges open to students/ faculty.

Policies such as the Defence Procurement Procedure (DPP), *which prioritizes local production, and the establishment of* Defence Industrial Corridors *in Uttar Pradesh and Tamil* Nadu have further boosted the startup ecosystem. These corridors provide startups with a platform to collaborate with larger defense manufacturers, enhancing innovation and local production capabilities.

By nurturing a startup ecosystem, India not only moves towards defense self-reliance but also drives economic growth. The promotion of indigenous defense startups can lead to job creation, technology exports, and global recognition as a defense innovation hub.

In conclusion, fostering a vibrant defense startup ecosystem is a crucial step toward realizing India's Atmanirbhar Bharat vision, ensuring both national security and economic development.

Session Objectives:

1. **Understanding Policy Framework**: Explain the government initiatives that support startups in the defense sector and promote self-reliance.
2. **Fostering Innovation and Collaboration**: Highlight the role of startups in driving innovation in areas like AI, Robotics, and Cybersecurity, and how collaboration with established defense organizations can enhance India's defense capabilities.
3. **Showcasing Success Stories**: Present successful examples of Indian defense startups that have contributed to the nation's security and self-reliance, inspiring new entrants and demonstrating the impact of innovation.**Creating Industry Linkages**: Encourage networking and partnerships between startups, defense manufacturers, and government bodies to strengthen the ecosystem and create a collaborative approach to defense technology development.

Key Questions to be Explored:

1. What are the major challenges faced by defence startups in India, including funding, regulatory hurdles, and market access, and how can these be mitigated?
2. How can startups address the specific technological needs of the defence sector while meeting the stringent regulatory and security requirements?
3. How can collaboration between startups, established defence manufacturers, and research institutions drive innovation and improve India's defense self-reliance?
4. What role can Defence Industrial Corridors play in creating a robust ecosystem for startups, and what resources are available to support new ventures in these regions?
5. How can Indian defence startups scale their solutions for global markets, and what are the opportunities for export and international collaboration in defence technology?
6. How can Amity students and faculty benefit from iDEX programs and DRDO?

Session No	3.7
Panel Discussion Session Topic	Privatisation in Defence Manufacturing; Challenges, Prospects, and Strategy
Day & Date	Thursday, 10th October 2024
Time	3:45 pm – 5:15 pm
Venue	E-2 Seminar Hall
Organizing Institute	Amity Institute of Defence & Strategic Studies

Session Overview:

The entrepreneurship development on the defence manufacturing sector has been a subject of intense debate in many countries, including India because of the strategic nature of this sector. While proponents argue that it can boost efficiency, innovation, and self-reliance, critics raise concerns about national security, quality control, and the potential for corruption.

Proponents of privatisation believe that private companies are more efficient than government-owned enterprises. They argue that private companies operate under market pressures to reduce costs and improve quality, leading to greater efficiency. Additionally, they contend that the private sector is more innovative than the public sector, driven by profit motives and with access to greater capital. Privatisation can also help countries to develop their own defence industries, reducing their dependence on foreign suppliers.
However, critics of privatisation express concerns about national security. Defence manufacturing involves sensitive technologies and information that must be protected from foreign influence. Privatisation can increase the risk of technology leakage or compromise national security. Another concern is quality control. Ensuring the quality of defence equipment is critical for national security. Private companies may be tempted to cut corners to reduce costs, which could compromise quality. Furthermore, the defence sector is particularly vulnerable to corruption. Privatisation can increase the opportunities for corruption, as there are more actors involved in the procurement process.

Despite these challenges, there is a growing consensus that a mixed approach, combining public and private sector involvement, may be the best way to achieve the goals of efficiency, innovation, and self-reliance in defence manufacturing. By carefully balancing the roles of the public and private sectors, governments can harness the strengths of both while mitigating the risks. This aligns with the Aatmanirbhar Bharat initiative of the Indian government.

The Innovations for Defence Excellence (IDEX) initiative is a groundbreaking endeavor launched by the Indian government to foster innovation and technology development in the defence and aerospace sectors. The primary objective of IDEX is to promote self-reliance in defence and security, reduce dependence on foreign imports, and encourage indigenous research and development.

Through IDEX, the government aims to create an ecosystem that supports startups, MSMEs, individual innovators, research institutions, and academia. By providing financial assistance, mentorship, and access to defense laboratories, IDEX empowers these entities to develop innovative solutions for the Indian armed forces.

Key components of the IDEX initiative include:

- **Defence India Startup Challenge (DISC):** This platform provides a competitive environment for startups to showcase their innovative ideas and solutions. Winners receive funding and support to develop prototypes or commercialize their products.
- **Innovate 4 Defence (i4D):** This program offers internships and mentorship opportunities to students and researchers, enabling them to gain practical experience in the defense industry.
- **Defence Innovation Organisation (DIO):** The DIO acts as the executive arm of IDEX, providing strategic guidance, managing funds, and facilitating collaborations between stakeholders.

IDEX has the potential to revolutionize the Indian defense industry by nurturing a culture of innovation and entrepreneurship. By harnessing the creativity and ingenuity of Indian innovators, the initiative can contribute significantly to the country's defense capabilities and economic growth.

Session Objectives:

1. **Atmanirbhar Bharat:** Discussing the importance of privatisation of Defence manufacturing and its role in Aatmanorbhar Bharat
2. **Assess the Potential Benefits:** To evaluate the potential advantages of privatisation, such as increased efficiency, innovation, and self-reliance in the Indian defence manufacturing sector.
3. **Identify Challenges and Risks:** To identify and discuss the potential challenges and risks associated with privatisation, including national security concerns, quality control issues, and the potential for corruption.
4. **Explore Optimal Models:** To explore various models of privatisation, such as joint ventures, public-private partnerships, and outright sale of assets, and assess their suitability for the Indian context.
5. **Develop Policy Recommendations:** To develop policy recommendations based on the discussion, addressing the identified challenges and maximizing the potential benefits of privatisation while safeguarding national security and ensuring quality standards.

Key Questions to be Explored:

1. **National Security:** How can India ensure that the privatisation of defence manufacturing does not compromise national security, particularly in terms of technology leakage and dependence on foreign suppliers?
2. **Quality Control:** What measures can be implemented to guarantee the quality of defence equipment produced by private companies, given the critical nature of these products?
3. **Corruption and Transparency:** How can the government prevent corruption and ensure transparency in the procurement process for defence equipment from private companies?
4. **Innovation and Technology:** How can privatisation stimulate innovation and technology development in the Indian defence manufacturing sector, and what incentives can be provided to encourage research and development?
5. **Public-Private Partnerships:** What are the potential benefits and challenges of public-private partnerships in defence manufacturing, and what are the best practices for structuring such partnerships?
6. **Skill Development and Human Capital:** How can India ensure that the workforce has the necessary skills and expertise to support the growth of a privatised defence manufacturing sector?
7. **Role of IDEX:** Discussing the role that IDEX shall play in encouraging entrepreneurship and start-up culture the sector of Defence manufacturing.