I-DAPT HUB FOUNDATION
IIT (BHU) VARANASI

inviting startups/innovators/researchers for

I-DAPT HUB PITCH CHALLENGE

Under the aegis of
NM-ICPS
(DST, Govt. of India)

I-DAPT HUB FOUNDATION is inviting startups/innovators/researchers involved in Thrust areas -

- **Power**
- **Defense**
- **Telecommunications**
- **Road transport and Highways**
- **Health and Family welfare**

for the Grand Pitch Challenge.

Data Analytics & Predictive Technology
should be the background technology

***The detailed list of sub-areas are given on the next pages**

INR 50,000
For one winner in each thrust area.

INR 20,000
For one 1st runner up in each thrust area.

INR 10,000
For three 2nd runner ups in each thrust area.

CASH PRIZES AND CERTIFICATES FOR THE WINNERS
+
INCUBATION OPPORTUNITIES

Important Dates

- Applications for the 1st round will be accepted from **7th Feb-28th Feb, 2022**
- Result of 1st Round will be declared on **15th March, 2022**

(Scan here for registration)

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Power

- **Smart & Sustainable Power grid**

Smart and Sustainable Power Grid to facilitate efficient and reliable end-to-end intelligent two-way delivery system from source to sink through integration of renewable energy sources.

- **IoT based e-vehicle charging infrastructure**

IoT technology to enable EV charging infrastructure to make it smart, connected and efficient for usage in remote areas.

- **Digital twin of power generation, transmission, and distribution.**

Digital Twin technology to make power generation, transmission and distribution more transparent, error proof and effective.

- **Energy Harvesting and wireless power transfer**

Energy harvesting and wireless power transfer technology to self-power the systems towards further advancement in mobile electronics, internet of things and sensor networks.

- **IoT enabled Demand response management.**

IoT-enabled smart power devices in residential buildings and Industrial complex to deal with dearth of electrical energy in the prospective world due to exponential increase in energy demand of rapidly growing world population.

- **Any other innovative topic related to this domain area.**

Defense

- **Microwave imaging for object detecting radar.**

In recent times, the microwave imaging has shown great potential for security applications, such as the buried object detection, concealed weapon detection at the security checkpoint, and through-the-wall imaging.

- **Energy storage system for defense applications**

Advanced energy storage system to increase energy efficiencies by lowering fuel consumption and lessening the risk of lost live in battlefields.

- **Biosensor Devices for Soldier readiness**

Wearable biosensor devices for monitoring physiological status of soldiers, to sense chemical and biological warfare agents and add to intelligence collection capabilities and knowledge of the battlefield.

- **Supply chain management for defense readiness**

An end-to-end digital solution for integrated planning and execution in the military supply chain which allows all the various entities within the Defense ecosystem to exchange information in real-time via a shared standard.

- **Drone & Radar for Border and underwater surveillance**

Artificially intelligent real-time decision-making, acoustic sensors based drones and radars for rough terrains and underwater applications.

- **Stealth technique based advanced polymer composites**

Using advanced polymer composite materials development of a Stealth Technology to aircraft invisible to opponent's detection system.

- **Any other innovative topic related to this domain area.**

Telecommunication

- **Integrated ambient (air, water and land) monitoring and visualization using smart sensors and AI**

IoT enabled environmental toxicology monitoring for air, water and land pollution using AI techniques

- **Smart Healthcare Network**

5G-Based Smart Healthcare Network for Ultra Reliability and Low Latency Communications to handle complex remote surgeries, telemedicine, organ availability database etc.

- **Smart telecommunication for Smart City development**

Smart telecommunications for smart cities that facilitate smart living, smart economy, smart mobility, smart governance, smart economy etc.

- **New frontiers for next generation telecommunications**

Next-Gen telecommunications for future wireless applications like ultra-high data rate, an ultrawide radio coverage, an ultra-large number of connected devices, an ultra-low latency etc.

- **Role of Next generation telecommunication for city infrastructure management**

Safe and secure Low Power Wide Area (LPWAN) wireless technologies to connect and improve infrastructure, efficiency, convenience, and quality of life in modern smart cities.

- **Hybrid Technology (6G+5G+4G)**

Hybrid networks to facilitate the transition to 5G and help evolution of new further technologies.

- **Command and Control center for smart management.**

Next Generation Integrated Command and Control solutions for smart cities to effectively deal with any exigency situation.

- **Industry 4.0 (5G Hyper Connectivity)**

To implement Industry 4.0 using 5G technology and IoT to create a fully-integrated, collaborative manufacturing systems that respond in real time to meet changing demands and conditions in the factory, in the supply network, and in customer needs.

- **Any other innovative topic related to this domain area.**

Road Transport and Highways

- **Connected/Autonomous vehicle network**

Smart, connected vehicle network to make roads safer, travel more productive, entertaining, time efficient and fuel-efficient.

- **EV Infrastructure network**

An efficient EV Infrastructure network like 'on-the-go charging set ups, smart Battery charging stations etc. to boost electric vehicles on the road.

- **Highway Infrastructure Management**

Smart Highway Infrastructure Management to identify, assess and mitigate road risks and make it economically sustainable.

- **Road accident mitigation strategies using DAPT.**

Data Analytics and Predictive technology models to prevent Road accidents and minimize loss of lives.

- **Long term observation of water resources using IoT and Data Analytics for effective water management**

Development of cost effective sensors and IoT devices to monitor long term changes in quality and quantity of surface water.

- **Changing smart city scenario with respect to road transport & highways**

Intelligent transportation systems for traffic management in today's urban mobility.

- **Any other innovative topic related to this domain area.**

Health and Family welfare

- **Solution to overcome and mitigate the difficulties of immobile patients.**

Assistive devices for partially/fully paralyzed patients to help them with activities of daily living.

- **Non-invasive medical devices for mass scale trials and tests.**

Non-penetrating medical devices for Human clinical trials and mass testing with assurance of safety and effectiveness.

- **Solutions for Community health monitoring.**

Smart Digital solutions for community health monitoring to prevent rapid transmission of epidemics and pandemics.

- **Indigenization of bio-medical devices.**

To promote 'Make in India' and to promote 'Atmanirbhar Bharat', Indigenization of the bio-medical devices.

- **3-D printing technology for various medical applications.**

Application and development of 3D printing technology for medical education, surgical planning, prosthesis customization, tissue culture and biosensor manufacturing etc.

- **Smart Healthcare Network**

5G-Based Smart Healthcare Network for Ultra Reliability and Low Latency Communications to handle complex remote surgeries, telemedicine, organ availability database etc.

- **Any other innovative topic related to this domain area.**

Contact us:

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I-DAPT HUB FOUNDATION,
IIT (BHU) Varanasi

Challenge Structure

Round 1

- Submission of Google Application Form along with the Abstract.
- Primary screening will be done on the basis of Application form and Abstract.
- Results will be announced on Mar 15th, 2022.

Round 2

- Shortlisted applicants will be given 1 month time to develop their prototype and submit a detailed report alongwith demo videos.

Round 3

- Finally, shortlisted applicants from Round 2 will be given chance to Pitch their ideas to the screening committee of I-DAPT HUB Foundation, IIT (BHU)

Winners and Runner-ups of Round 3 will get Cash Prizes and Incubation opportunities.