



**Techno Essence Solutions**

## Proposal for Collaboration with AARDO Members Presentation for Liaison Committee on Agriculture – Environment – Renewable Energy – Infrastructure



**23rd April 2025  
New Delhi**



**TECHNO ESSENCE SOLUTIONS PRIVATE LIMITED  
GREEN TECHNOLOGY COMPANY**

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**Techno Essence Solutions**

**50+**  
**PEOPLE**

Core team equipped with skills in technical competences, project management, problem solving and continuous innovation process.

**500+**  
**YEARS**

Collective Business & Operation Experience in Global Level

**20+**  
**SERVICES**

Technology Services Offerings across the business spectrum in Identified Sectors

**02+**  
**PLATFORMS**

Enterprise Platforms like Crop Planet & Enviro IMX

## ABOUT US

**Techno Essence Solutions Private Limited (TES)** is a young emerging green technology company incorporated in 2022 as a startup (DIPP-118408) initiative of Government of India.

The company pioneer in offering services by combining Domain, SME and Technological strength backed by strong capabilities & proven expertise

- Developmental Consultancy,
- Geospatial Technological Solutions,
- IT Consulting & Development and
- Digital Platforms for Sustainable Developments

TES is a New Delhi headquartered based technology services company with focus on **Environment, Agriculture, Climate, Renewable Energy and Infrastructure** Sector. We offer a multidisciplinary services and follow the entire life cycle of the project development, consulting & implementation, while adding maximum value to the customer need.

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## LEADERSHIP TEAM



**Bijay Kumar Panda Ph.D**  
Founder & CEO

Dr Panda holds Doctorate degrees in Environmental Science & Engineering with specialized application degree in Remote Sensing & Geospatial Technology. He has overall professional experience of more than 25+ years in the field of IT, ITeS and Geospatial domain level including Project Structuring, Consulting, Financing, Business Development, Program Management, Formulating strategies for successful implementation of projects. He has expertise in CXO level Policy Reforms & Enterprise Solutions including Strategic Planning cum execution of large Private & Govt Organizations, Institutions in both national & international level.



**Kamna Swami**  
Co-Founder & CSO

Ms Kamna Swami, is an Urban Social Planner with more that 20+ years of professional experience of working in Urban Planning , Business Development, Climate Change and Project Advisory in Public Private Partnership (PPP) Model. She has extensively worked with Government Organisations at Centre, State and City Level and contributed to flagship programs. She has worked with various bilateral and multi lateral funding agencies over more than a decade. Her experience of working at grassroot level with NGOs and communities in participatory model helps to bring sustainable solutions.



**Susanta Kumar Panda**  
Director



**Dr. Deba Priya Dutta**  
Technical Advisor



**Dr. Sumit Choudhary**  
Technology Specialist



**Druv Manchanda**  
HR & Legal



**Amit Sharma, CA**  
Financial Advisor

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## QUALITY & SDGs FRAMEWORK



The company is **CMMI & ISO Quality Certified Entity** as part of its journey. The company is committed to achieving quality targets and customer satisfaction.

*“Our philosophy is to provide quality, cost-effective, timely delivery of services backed by defined processes and stringent controls to consistently enhance customer expectations with innovative & results-oriented approaches.”*

We contribute to the **Sustainable Development Goals (SDGs)** by ensuring our business drivers contribute towards a more sustainable and equitable world by providing solutions to our focused sectors.

We aspire to be **GLOCAL (Global to Local linkages)** company with the focus on environmental and social equity and empowerments.

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## Key Clients & Partners Ecosystem

**WE COLLOBRATE AND WORK IN PARTNERSHIP BY BUILDING NETWORK WITH GOVERNMENT , INSTITUTIONS, NGOS & PRIVATE SECTOR**

**WE HAVE MULTI DISCIPLINARY POOL OF EXPERTS ACROSS FOCUS SECTORS. DEVELOPED PARTNERSHIP WITH KEY KNOWLEDGE INSTITUTIONS AND EMAPANELED WITH GOVERNMENT AGENCIES.**



**THE WORLD BANK**



**IFAD**  
INTERNATIONAL  
FUND FOR  
AGRICULTURAL  
DEVELOPMENT



**Food and Agriculture  
Organization of the  
United Nations**



**giz** Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ) GmbH



**रक्षा मंत्रालय  
MINISTRY OF  
DEFENCE**  
सत्यमेव जयते



**मंत्रालय पर्यावरण, वन और जलवायु परिवर्तन**  
Ministry of Environment, Forest and Climate Change



**NABCONS**



**FOCUS  
MIZORAM**



**उत्तराखण्ड सरकार**  
Uttarakhand Government



**भारतीय प्रौद्योगिकी संस्थान**  
Indian Institute of Technology



**पेट्रोलियम एवं प्राकृतिक गैस मंत्रालय  
MINISTRY OF  
PETROLEUM AND  
NATURAL GAS**  
सत्यमेव जयते



**SOCRAN FOCUS**  
NAGALAND



**AFC INDIA LIMITED**  
(Formerly Agricultural Finance Corporation Limited)



**ORSA**



**UPCL**  
Uttar Pradesh Development Systems Corporation Ltd.



**भारतीय सर्वेक्षण विभाग  
Survey of India**  
विज्ञान और प्रौद्योगिकी विभाग  
Department of Science & Technology

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## CONSULTING & ADVISORY SERVICES

**END TO END DIVERSIFIED SERVICES FROM INCEPTION TO PROJECT DELIVERY FOR GOVERNMENT, FUNDING AGENCIES AND PRIVATE SECTOR**

**OUR PARTNER ECOSYSTEM AND MULTI DISCIPLINARY POOL OF EXPERTS ENABLES TO PROVIDE SUSTAINABLE COMMUNITY CENTRIC SOLUTIONS CONTRIBUTING TO GLOBAL GOALS/SDGS**



2024-07-04 14:29  
Changmai, Mizoram, India  
Lat: 23.449222 Long: 93.253462





Gondal, Uttar Pradesh, India  
Latitude: 26.000000, Longitude: 80.000000  
Elevation: 117 m (384 ft)  
Map: Courtesy of GIZ India



Legend:  
- Wetlands  
- Wetland Coverage  
- Wetland Conservation  
- Wetland Management  
Scale: 1:100,000  
Map: Courtesy of GIZ India

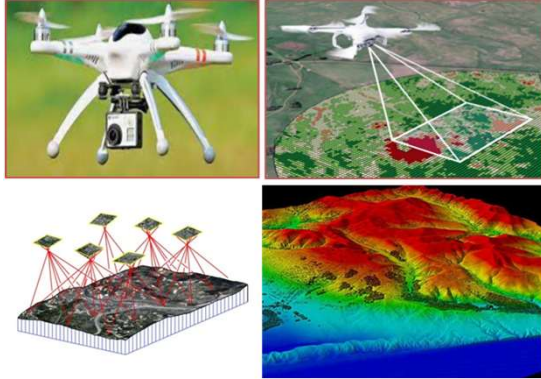
### Our Experience

- ✓ Conducted Endline Evaluation Assessment of Climate Resilient Agriculture Practices Project Financed by **FAO/ IFAD with Government of Mizoram & Nagaland**.
- ✓ Undertaken **DPR preparation of clusters of Wetlands** focusing on livelihoods and conservation in Uttar Pradesh for **GIZ India**.
- ✓ **Evaluation Studies** for Indradhanush Gas Grid Limited (IGGL)- Part of Northeast Gas Grid (NEGG) for **Ministry of Petroleum Govt of India**.

### Key Offerings

- ✓ **Policy, Advisory & Advocacy**- Action Plans, SOPs, Manuals, Conservation Management
- ✓ **Project Life Cycle Management**
  - ✓ Project Planning & Implementation- Feasibility **Studies, DPRs, Master Plans** etc
  - ✓ **Evaluation and Monitoring**- Baseline, Endline, Impact Assessments
- ✓ **Sustainable Business Solutions** - **Climate Resilient** Agriculture Practices, Sustainable **Value Chain** Development for improving livelihoods.
- ✓ **Training, Capacity Building** and Knowledge Dissemination

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### Our Experience

- ✓ Conducted more than **5000 Sq. Km UAV / Drone Mapping** of rural habitation under SVAMITVA Mission Mode Project, Govt of India
- ✓ Enabling Rural Smart Villages concept by combining resilient agriculture practices, livelihood, market access and value chain concept using tech approach
- ✓ Development of Spatial Land database using UAV/ Drone/ DGPS/ETS based mapping for **Defence Estate Office**, Govt of India.

## UAV / DRONE TECHNOLOGY

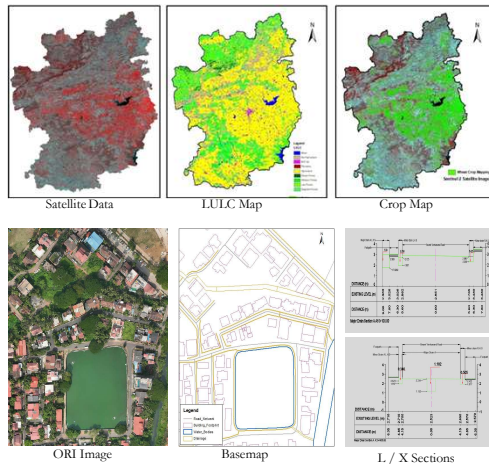
### REAL TIME AND FILED LEVEL SOLUTIONS FOR SUSTAINABILITY IN VARIOUS SECTORS OF INTEREST

WE OFFER LARGE SCALE DATA ACQUISITION, MANAGEMENT AND PROCESSING

#### Our Strength in UAV / Drone Landscape

- ✓ LIDAR based Aerial Data Survey & Acquisition In 2D & 3D Mode
- ✓ Time Series Mapping, Monitoring and Analysis
- ✓ Processing & Mapping of high Precision **ORI / DTM and Contour** lines Generation
- ✓ Installation & Integration of **IoT Gadgets** for data collection & analysis
- ✓ Enabling UAV based data feeding to AI/ML Framework for Governance & Implementation
- ✓ Training, Capacity Building and Institutionalization of the practices

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### OUR Experience

- ✓ Mapping of Crop type, crop acreage & yield including monitoring of crop health indices as part PM KISSAN Yojna, Govt of India
- ✓ Development of Spatial Land database using UAV/ Drone/ DGPS/ETS based mapping for **Smart Cities**, Govt of India.

## REMOTE SENSING TECHNOLOGY


### MACRO AND MESO SCALE SPATIAL DATA GENERATION, MANAGEMENT AND PROCESSING USING MULTI-SPECTRAL, HYPER-SPECTRAL, THERMAL AND MICROWAVE SATELLITES FOR SUSTAINABLE DEVELOPMENT AND PLANNING

#### Our Offerings & Strength


- ✓ Change detection & time series analysis in temporal scale using High-definition satellite imagery and aerial photographs Viz Crop Acreage, Land use & land cover, Urban Sprawl etc
- ✓ Data Modeling and Information Generation using detailed indices, models and spatial grid-based analysis with actionable insights
- ✓ Automated data and information extraction from multi satellite resources
- ✓ Organizational workflow process efficiency improvement through geospatial data and information
- ✓ Locational Intelligence for development & planning

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**Crop Planet**

Crop Planet ~ Enterprise SaaS based Platforms backed by Artificial Intelligence (AI), Machine Learning (ML) and Data Analytics Framework



**EnviroIMX**

Enviro IMX™ ~ Revolutionizing environmental information management through advanced geospatial technology for planning & sustainable decision

**Our Experience**

- ✓ Enterprise Level Decision Support System (DSS) for **Uttarakhand State Forest Department funded by GIZ.**

## DIGITAL PLATFORM DEVELOPMENT

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### INTEGRATED CUSTOMIZABLE DIGITAL PLATFORMS FOR AGRICULTURE AND ENVIRONMENT SECTORS

DEVELOPMENT OF SCALABLE CLOUD BASED ENTERPRISE FRAMEWORK BACKED BY CUSTOM WEB GIS PORTAL AND MOBILE APPLICATION LEVERAGED WITH AI / ML TECHNOLOGY

**What it Offers~**

- ✓ Income Enabler for the Farming Community
- ✓ Prescribing Climate Resilient Agricultural Practices
- ✓ Linking Welfare Schemes to the stakeholders
- ✓ Quantifying Sustainability at Local Levels
- ✓ Systemic Data Analysis for Risk reduction & mitigation
- ✓ Offers Integrated market linkages & value chain
- ✓ Sustainable Rural Development Strategies

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## HOW TES COULD BE USEFUL TO AARDO MEMBER COUNTRIES

### PROPOSED BUSINESS AREAS & COLABORATIONS

A blend of **Subject Matter Expertise (SME), Technology, Analytics, and Developmental Insight to Member Countries** for:

- Sustainable agriculture & Climate Smart Agri-Tech
- Environmental Conservation & Management
- Renewable energy for Rural Electrification
- Climate resilience & Disaster Risk Management

- Green Credits & Climate Financing
- Urban-Rural Infrastructure Planning
- Natural Resource Management
- Monitoring & Evaluation (M&E) of Development Projects


### PROPOSED MODE OF BUSINESS OPERATIONS


- Consulting & Advisory Projects
- Technology & SaaS Frameworks
- Project Management & Implementation
- Training & Capacity Building

### SUPPORT FROM PARTNER COUNTRIES

- Enable us to be part of the Government Schemes & Intervention Areas to understand
- Need to share primary areas of collaboration
- Enable us to build network among Institutional, Private Partner
- Make us local contributor to participate in the business opportunities


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# Thank you

## CONTACT US

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