



**COMPUTATIONAL
MODELLING**

GIS SERVICES

**SMART FUTURE CITIES
ENGINEERING DESIGN**

Instrument Calibration

- Electrical
- Pressure
- Force
- Temperature
- Dimensional

CALIBRATION SERVICE

INFORMATION TECHNOLOGY

TRAINING

Nanda Engineering Knowledge Solutions and Services Pvt Ltd
Baramunda, Bhubaneswar-751003, Odisha, India
CIN: U93090OR2017PTC026537
PAN: AAFCN5739F
GSTIN: 21AAFCN5739F1ZM

- Nanda Engineering Knowledge Solutions and Services (NEKSS) Pvt. Ltd. is a young vibrant organization founded by IIT Students in 2017. The outstanding technical qualification of our experts and a strong tie with the IITs as well as best universities serves as a guarantee for our deep understanding and providing solutions to serve public and private organisations.
- We are providing solutions in the domain of Agriculture, Water, Environment, natural resources, utilities, communications, land & infrastructure through the engineering design, computational modeling, risk analytics, IT and Geospatial services.
- Our working environment in a (so far) small team is based on trust and open communication. We believe our domain specific knowledge, combined with our team's expertise, the power of the information and recent technology holds the key to unlocking the right solution and provides the best services in the specified domain.

OUR SOLUTIONS

➤ **Our domain specific knowledge, our expertise teams develop tailor-made solutions and provide specialised services to solve your specific challenges.**

- Agriculture
- Water
- Environment
- Forestry
- Mining
- Energy
- Oil
- Gas
- Utilities
- Communications
- Infrastructure
- Measuring Instruments

OUR SERVICES

➤ **In our research and consultancy services, we support you through our domain specific knowledge, the power of the information and advanced technologies**

- Computational modeling & Risk Analytics
- Engineering Design services
- GIS services
- Information technology

VISSION:

To be the global leading engineering, management and development consultancy

MISSION:

To deliver optimum solutions and services adhering to our core values

CORE VALUES: R-I-C-E

Respect: We respect the environment and the communities in which we work. We value all people by providing everyone an equal opportunity to grow without any bias

Integrity: We deliver on our promises. We behave ethically, fairly manner in compliance with laws and promote a safety culture targeting zero harm to all

Customer Focus: We believe that, in order to succeed, we must contribute to the success of our Customers. We earn trust using domain specific knowledge and by delivering best solutions and genuine services that create long-term value

Excellence: We develop innovative, efficient solutions that create value for our customer and ensure customer delight

Registered Office:

Nanda Engineering Knowledge Solutions and Services Pvt Ltd

Address: Plot No-749/750, Near Apex Hospital, Baramunda, Bhubaneswar-751003, Odisha, India

Phone: +91-9937677620

Email: info@nekss.com

Website: www.nekss.com



Technical TEAM:

“Specific Knowledge, Best Solutions and Genuine Services Creates Specific Value”

The management has ensured that NEKSS is a preferred Agriculture, Water, Environment, utilities, Geospatial and IT outsourcing vendor for Global Customers. Our strength lies in our team of motivated, in-house IIT graduates as well as experts from IITs and experienced professional who are committed to deliver quality and speed that meet our customer's highest standards.



Mr. Banamali Panigrahi (Director)

Mr. Banamali is the founder of NEKSS and has been the key driving force in building the company brick by brick, and establishing NEKSS as one of the best solution provider in the domain of agriculture, water, environmental, GIS and IT.

He leads from the front, and ensures that the company is driven on high performance, sustainable business strategies and positive outcomes. He has been passionate about the idea of NEKSS since its inception, and continues to enjoy every bit of the journey. He has a unique experience of being an entrepreneur and also having worked with large MNCs and consulting companies that include GVK BIO, Excelra etc.

He has the vast expertise in the areas of Environmental Fate modeling, Environmental Risk Assessment, Plant Protection Product, Report Preparation, Dossier Preparation, Degradation Kinetic Assessment, Soil, Surface water modeling, groundwater modeling, GIS, Flood modeling, etc.

He completed his M.Tech in the specialisation of Land and Water Resources Engineering from Indian Institute of Technology, Kharagpur.



Mr. Pravakar Panda (Director)

Mr. Pravakar is responsible for business development, client interaction, operations management, resource planning & management and entrepreneurship in communication & IT services. He plays a significant role in the company's growth and business expansion.

He has over 10 years of experience in starting new businesses, opening new markets along with strategic planning and implementation primarily in the technology, IT industries and also in the education areas.

Prior to joining NEKSS, he worked in telecom software products at Nethawk Networks India Pvt. Ltd (NNIPL), EXFO as the principal software developer with the Telecom/Wireless technologies (3G, 4G [LTE], GSM, CDMA, WiMax, VoIP etc. He is an expert in software product integration processes and led business-critical activities at EXFO for different Analyzer products. Apart from IT or software topics, he is affluent in subjects like Power System Engineering and Electrical Machines of Electrical Engineering.

He completed his B.Tech (Electrical Engg) from College of Engineering and Technology, Bhubaneswar, Odisha.



Dr. Trushnamayee Nanda (Director)

Dr. Nanda is responsible for implementing and sustaining business strategy and strategic initiatives at NEKSS, including achievement of the operational and financial results. Dr. Nanda has the overall responsibility for developing the company's vision and strategic direction.

She heads the Agriculture, Water Resources business units at NEKSS. She is also responsible for customer interaction, supervision, and project execution & monitoring for all the projects and pilots handled by NEKSS.

She has the vast expertise in the areas of Surface water modeling, groundwater modeling, GIS, Flood modeling, Flood forecasting, Natural Hazard Risk Assessment, River Basin Management, Soil Conservation, and Watershed management etc.

She has a PhD in the domain of flood forecasting and M.Tech in the specialisation of Land and Water Resources Engineering from Indian Institute of Technology, Kharagpur.



Dr. Sanjeet Kumar

Key Areas: Water resources, disaster management and Climate change

Dr. Kumar involves in the Computational modeling and Risk Assessment business unit at NEKSS. He is also responsible for supervision and project execution of all the projects and pilots related to the domain of Water resources, disaster management and Climate change at NEKSS.

He has more than 10 years experience in academic research and 2 years teaching experience with excellent knowledge of administrative work. He has the vast expertise in the areas of Rainfall-runoff modeling, climate change impact assessment and water resource variables forecasting, GIS, watershed management etc. He has profound knowledge on hydrological modeling softwares SWAT, MIKE SHE, HEC-HMS, BASINS and RS-GIS softwares ERDAS IMAGINE, Arc view, ArcGIS, Map-window.

He has a PhD in the domain of climate change and its impact on catchment hydrology and M.Tech in the specialisation of Land and Water Resources Engineering from Indian Institute of Technology, Kharagpur. Moreover, his doctoral thesis was received Jawaharlal Nehru Award for outstanding research in agriculture and allied sciences for natural resources management.



Mr. Dibyendu Bikas Nayak

Key Areas: GIS and Remote Sensing

Mr. Dibyendu involves in the GIS business unit at NEKSS. He is also responsible for supervision and project execution of all the projects and pilots related to the domain of GIS and RS at NEKSS.

He has vast experience and expertise in Remote Sensing & GIS domain in the areas of Mining, Agriculture, Natural Resource Management (Watershed management plan, Forestry, Surface and Groundwater studies), Disaster management action plan (Landslide vulnerability assessment, Plain and coastal area flood risk assessment, Forest fire mapping, Earthquake risk assessment), data management & analysis, location based services and land information management.

He has a very good work experience in handling GPS & DGPS in various sectors like Mining plan survey, Forest Survey and urban area plan survey and explores different remote sensing & GIS software tools to accomplish the work.

He holds his master degree in Geoinformatics from Birla Institute of Technology (BIT), Mesra, Jharkhand and also has done his PG Diploma in Remote Sensing and GIS from Utkal University at Bhubaneswar, Odisha.



Dr. Sushil Mhaske

Key Areas: Utility, Natural resources and disaster management

Dr. Sushil involves in the GIS business unit at NEKSS. He is responsible for business development, client interaction, operations management in GIS, & IT services. His area of interest includes the utility of Remote Sensing and GIS in various fields such as Geology, Hydrology, Geomorphology, Soil erosion and conservation planning, Mine Reclamation, and Environmental management etc. He is also expanding his knowledge to investigate future applications of “Hyper-spectral remote sensing” for rocks and mineral detection.

He has more than 4 years experience in academic research and 3 years industrial experience with excellent knowledge of administrative work. He has sound knowledge of RS-GIS and hands-on ArcGIS, ERDAS Imagine, and ENVI software.

He completed M.Tech (Geological Remote Sensing & Geoinformatics) from the Bharathidasan University, Trichy and Ph.D. from Dept. of Mining Engineering, IIT Kharagpur, India.



Mr. Niranjana Panigrahi

Key Areas: Agriculture, crop modeling, crop insurance, Spectral analysis

Mr. Niranjana involves in the GIS business unit at NEKSS. He is also responsible for supervision and project execution of all the projects and pilots related to the domain of Agriculture, crop modeling, crop insurance and spectral analysis at NEKSS.

He has work and research experience in understanding of agricultural systems (crop and soil), developing spectral library of natural resources, multivariate data analysis and data mining, research analysis, writing documents for publication, and programming ability in Matlab.

He completed M.Tech in the specialisation of Agricultural systems and management from Indian Institute of technology, Kharagpur. He has the vast expertise in understanding of agricultural systems (crop and soil), developing spectral library of

natural resources, multivariate data analysis and data mining, research analysis, writing documents for publication, and programming ability in Matlab.



Mr. Satyanarayana Goli

Key Areas: Development of GIS and RS based software platforms and Communication

Mr. Satya involves in the IT business unit at NEKSS. He is responsible for development of GIS and remote sensing based software platforms or applications with solutions for agriculture, water resource, natural hazard assessment, urban planning, environment, utility and e – governance.

He has over 4 years of experience in Development, Testing, Analyst and Infrastructure with IT industries and also has 2 years of research and development experience with educational organizations. Prior to joining NEKSS, he worked with Alliance Prosys India Pvt Ltd as a System Administrator.

He holds a Masters in Computer Application degree from the Vinayaka Missions University at Salem, Tamil Nadu and has done his Bachelor of Science in Electronics from Acharya Nagarjuna University (ANU) at Guntur, Andhra Pradesh.



Mr. Abhijeet Rout

Key Areas: Hydrologic and hydraulic modeling,

Mr. Abhijeet involves in the Computational modeling and Risk Assessment business unit at NEKSS. He is also responsible for supervision and project execution of all the projects and pilots related to the domain of hydrologic and hydraulic modeling at NEKSS. He plays a significant role in the company's growth and business expansion.

He completed M.Tech in the specialisation of Water Resources Engineering & Management from Indian Institute of Technology, Guwahati. He has the vast expertise in the areas of Surface water modeling, groundwater modeling, Flood modeling, River Basin Management, water flow sediment dynamics.



Mrs. Rajanagu G.

Key Areas: Calibration for Pressure, Temperature, Electrical and Mechanical

Mrs. Rajanagu involves in the Instrument calibration business unit at NEKSS. She is also responsible for business development, client interaction, operations management, resource planning & management.

She has over 10 years of experience in the instrument calibration services. Currently she heads a proprietary organisation M/s. Matrix Calibration Laboratory Equipment and Services. It is NABL accredited laboratory and maintain quality standard of ISO/IEC 17025:2005 & are traceability to International / National accreditation in the field of Mechanical & Thermal parameter.

Prior to joining NEKSS, she worked in Forbes Marshall Private Limited, Nagman Instruments & Electronic (P) Ltd, Baliga Lighting Equipments Private Limited, Medical & Control Instruments House, and Universal Gauges & Instrumentation.

She is an expert in In-House/on-site Calibration for wide variety of Pressure, Temperature, Electrical and Mechanical instruments. She provides training on calibration and also assisting in getting accreditation.

She completed her B.E (Instrumentation & Control) from Dr. M.G.R. Engineering College, Madras University, Tamilnadu.



Mr. Shankar Shan Patro (Associate Consultant)

Key Areas: Expertise in ESRI technology, including project management, data analysis and modeling

Mr. Shankar involves in the GIS business unit at NEKSS. He is also responsible for supervision and project execution of all the projects and pilots related to the domain of GIS services at NEKSS.

He has over seven years of experience in Geospatial field with expertise in ESRI technology, including project management, data analysis and modeling, and workflow methodology design work, performing suitability analyses and creating automated GIS tools for a diverse client base. His professional expertise includes Generation and extraction of geo-referenced map, ground trothing, DGPS analysis, TBM formation, Monitoring and Evaluation of Extracted Maps, its attribution and legendry changes ensuring its veracity. His other assignments include GPS based survey of health centres of Orissa supported by

NRHM, Assessment of ground water potential in Khurda and Cuttack District, Generating base map, land-use/land cover map, and contour and drainage maps for Sairam & Sunayana Pvt. Ltd., Watershed projects, involving field survey & generating maps.

Mr. Shankar holds a Post Graduate Diploma in RS & GIS from Utkal University.



Mr. Dipak Bisoi (Associate Consultant)

Key Areas: Development of software platforms (Web and Mobile applications)

Mr. Dipak involves in the Information Technology business unit at NEKSS. He is also responsible for supervision and project execution of all the projects and pilots related to the domain of IT at NEKSS. He plays a significant role in the company's growth and business expansion and also responsible for business development, client interaction.

He has over 10 years of experience in IT industries and also in the education areas. Prior to joining NEKSS, he worked in telecom software products at Nethawk Networks India Pvt. Ltd (NNIPL). He completed his Master Degree in computer application (MCA).



Mr. Akhtar Hussain

Key Areas: Development of software platforms (Web applications)

Mr. Akhtar involves in the Information Technology business unit at NEKSS. He is also responsible for project execution of all the projects and pilots related to the domain of IT at NEKSS.

He has over 5 years of experience in IT industries. Prior to joining NEKSS, he worked in SSAC India Pvt. Ltd. He completed his Master Degree in computer application (MCA).

Our Core Services

1. Computational modeling & Risk Analytics

We have extensive experience in handling open source and commercial softwares/models in different media of earth surface like air, surface water, soil and groundwater. At NEKSS, we manage various projects through modeling, simulation and visualization techniques utilizing a wide array of softwares. Moreover we develop site specific/customized models to predict the future risk and assess potential losses from anthropogenic and natural hazards.

We provide end to end modeling services starting from risk identification upto simulation and final risk characterization. We offer modeling services using black box models (deterministic/probabilistic mathematical models) to conceptual/physical based distributed models based on historical data, physical processes of earth surface, and conditions of the target area.

NEKSS has a team of highly experienced modellers with multi-discipline specializations like agriculture, water, and environment. We offer support for simulation, predictive analysis including spatial & temporal analysis, preparation of detailed project report as per the client's interest.

Computational Modeling and Risk Analytics Services offered by NEKSS include:

- Surface water modeling
- Groundwater modeling
- Soil Modeling
- Air modeling
- Watershed management
- Flood modeling
- Flood management and forecasting
- Crop yield modeling
- Irrigation
- Water quality
- Environmental modeling
- Environmental Impact Assessments

2. Engineering Design services

We at NEKSS provide specialised comprehensive range of engineering design services ranging from planning through preliminary investigation to detailed design to start-up and commission all types of project. We provide reliable sustainable and cost efficient engineering solutions for all types of projects related to water, agriculture, natural resource and other environmental related issues for small industries to big Enterprises. NEKSS has a group of diversified experienced leaders and researchers to unlock the right innovative feasible scientific solutions.

Engineering Design Services offered by NEKSS include:

- Design of STPs
- Design of ETPs
- Design of CETPs
- Auto CAD/CAM design
- Geo-technical designs
- Computer aided facility management (CAFM)

- Micro-Irrigation Design
- Irrigation network/canal design
- Reservoir/Pond Design

3. GIS services

NEKSS provides a wide range of digital mapping and Geographic Information Systems (GIS) consultancy services to its clients all over the world. NEKSS help its clients to better understand and gain benefit from the geographic information. The GIS services provided by NEKSS allow for creating, updating and visualizing of geographic datasets, analysis of spatial relationships, and efficient data management. We have a team of professionals experts equipped with state-of-the-art GIS workstations, software and Photogrammetric mapping suites

We have multi domain expertise of working with coarse to very high resolution satellite imagery. The GIS services include data conversion, processing, interpretation and analysis of data from different sources. NEKSS assist various industries such as agriculture, water, forestry, utility, petroleum, gas, mining and geology, etc.

GIS Services offered by NEKSS include:

- Surveying
- Digitisation and Mapping
- Spatial Data management
- Remote Sensing
- Photogrammetry
- GIS application development
- Mobile GIS application development
- Development of custom geospatial databases
- Development of spatial information systems
- Enterprise GIS solutions
- Web GIS application development
- GIS Integration
- Cross platform migration

4. Information technology

NEKSS focuses on end to end offerings in Information technology services. NEKSS has vast experience in offering IT & software consulting. Our consultants conduct a detailed analysis of the customer business model to offer value added insights such as cost benefit analysis of using various technologies. These technology services try to remove barriers and connect resources, by ensuring optimum utilization of their infrastructure and accelerate their transformation journey.

We at NEKSS provided IT consulting services to various local, state, and central government agencies; from small industries to big enterprises. We focus on either building client specific solutions or to take over the maintenance and support of the client's existing applications.

IT Services offered by NEKSS include:

- Web Application
- Mobile application

- Application Maintenance and Support
- Quality Assurance & Software Testing
- Digital marketing
- Automation services

5. Instrument Calibration

We provide calibration of mechanical, thermal and electro-technical instruments. Measuring instruments need regular calibration of the parameters in order to ensure correct measurement values. We provide calibration and testing for various ranges of pressure gauges, temperature gauges, ammeter, voltmeter, multimeter, conductivity meter, resistance bridge, frequency indicator, weighing instruments, pH indicator, volume burette, pipette, beaker etc.

Calibration Services offered by NEKSS include:

- Temperature
- Electrical
- Pressure
- Instruments