



**BHADALE GROUP OF COMPANIES
- IT AND REAL ESTATE**



Nov 23 2019

Systems engineering services Catalogue

Bhadale IT Developers Pvt. Ltd | Bhadale Real Estate Developers Pvt. Ltd (registration due)

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Bhadale Group of Companies

Bhadale Group of Companies consists of Bhadale IT Developers Pvt. Ltd and Bhadale Real Estate Developers Pvt Ltd.

1. **Bhadale IT Developers Pvt. Ltd** is an IT and Computer Engineering company

This company provides consultation in areas of cutting edge technologies, research outsourcing, and software consultation related to data center and related engineering practices

2. **Bhadale Real Estate Developers Pvt. Ltd** is a Real estate company

This company provides development of Infrastructure for IT Datacenter and allied sectors. It manages the engineering design, landscaping, civil architecture, presently serving internal projects.

Bhadale Group of Companies has aggressive programs in place to serve the niche market.

Bhadale IT Developers Pvt. Ltd Programs and Services

IT Division programs

- 1 Cloud Architecture
- 2 AI
- 3 Digital
- 4 Automation
- 5 R&D services
- 6 Engineering services
- 7 Mentoring Services
- 8 Data center services
- 9 Outsourcing

There are various services offered under each program, details are described below

IT Division program related services

Cloud Architecture

- Cloud Enterprise Architecture
- Cloud Business Architecture
- Cloud Information / Website data Architecture
- Cloud Solution Architecture
- Data center Virtualization and Cloud services (IaaS)
- Cloud Technical Architecture – Project specific
- Cloud ERP Solutions (SaaS, PaaS)
- Cloud Strategy and Transformation
- Cloud Systems Integration and consolidation
- Cloud Project Management
- Cloud Pre sales support
- Business Needs (RFI/RFQ/RFP assistance)

- Cloud Quality Initiatives
- Cloud Business Analysis
- Cloud Infrastructure Planning – hardware , network, storage , backup (IaaS, PaaS)
- Cloud business portfolio assessment services (workshops)

AI

- Artificial intelligence and advanced machine learning
- Intelligent applications, Intelligent things
- Conversational systems
- Mesh app and service architecture
- Adaptive security architecture

Digital

- Virtual reality and augmented reality: Brief capability, deliverables and service offering
- Digital twins
- Blockchains and distributed ledgers
- Digital technology platforms

Automation

- Robotic Process Automation
- IoT
- Manufacturing robots
- BPO call center robots
- Chatbots
- Remote workers
- Hazardous jobs robots(Mine bombs, nuclear waste, underwater, space etc)

R&D services

- PHD mentor, buddy
- BPO - Outsourced work in areas of research areas related to IT and Computer Engineering

Engineering services (Only Engg)

- Engineering services for Data centers
- Engineering services for IT Departments
- Engineering architectures, drawings, road ways, town house planning, parking, safety, outdoor maintenance, lighting etc
- All other aspects of engineering: Civil, electrical, water and sewage, safety and mechanical motors, pumps, refrigeration, cooling

Mentoring Services

- IT Mentoring
- Engineering Mentoring
- Business Mentoring
- Mentoring for special categories based on age, and disabled
- Mentoring for special professionals like Military and Govt officials under Govt Programs

Data center services (Engg + IT)

- Data center Engineering services
- Data Center IT Services
- Data center Security services
- Data Center QA services
- Datacenter Cloud services
- Datacenter compliances services
- Data center based business solutions

Outsourcing

- Insourcing
- Outsourcing
- Near sourcing
- Cloud sourcing
- BPO services
- IT specific services
- Engineering specific services
- Training specific services

Service details for Bhadale IT Developers Pvt. Ltd

Engineering Division programs – Systems engineering services

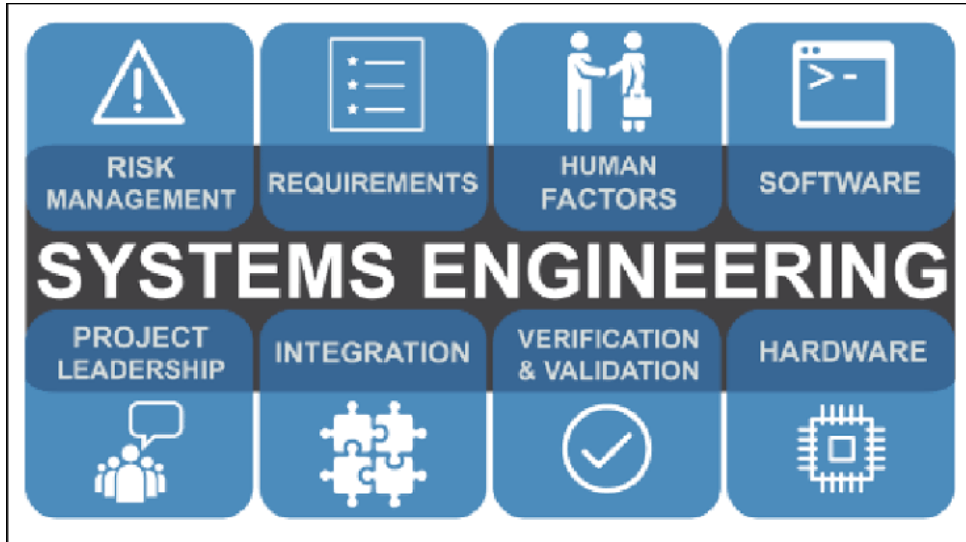


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We have a large set of offerings; few are mentioned below based on INCOSE and SEBoK

Systems Engineering

No	Name	Key component features / Use cases
1	Requirements Analysis / Design of SE elements / approach of your project	<p>Based on your business needs of SE, we transform your requirements into a SE model that enables you to have a right approach and maturity</p> <p>Our System Engineers will:</p> <ul style="list-style-type: none"> • Study and define system boundaries/scope of systems engineering, systems implementation, and project/systems management • Analyze and map your business requirements to system elements that compose the system which includes hardware, software, firmware, people, information, techniques, facilities, services, and other support elements. • Choose the best set of life cycle processes and methodologies beginning early in conceptual design and continuing throughout the life cycle of the system through its manufacture, deployment, use and disposal • Define the Core Concept Diagram /Map, using UML notations that capture the project concepts, attributes, relationships, and processes that will be a part of the MBSE , & SysML • Frame project elements into INCOSE specified taxonomy of five classes: natural systems, designed physical systems, designed abstract systems, human activity

systems and transcendental systems

- Define system groupings as Systems of Systems (SoS) and Federations of Systems (FoS) and their internal representations
- Design Engineered systems features that:
 1. are defined by their purpose, goal or mission
 2. have a life cycle (glossary) and evolution dynamics
 3. may include human operators (interacting with the systems via processes) as well as other natural components
 4. that must be considered in the design and development of the system.
 5. are part of a system-of-interest hierarchy
- Selecting proper systems approaches, and methodologies (Hard System , Soft System , & Critical Systems Thinking)
- Selecting different systems under consideration along with the main System-of-Interest

We offer engineering of your product as per INCOSE and SeBoK elements. Below are the key knowledge areas that we cover

1. Life Cycle Processes
2. Life Cycle Models
3. Concept Definition
4. System Definition
5. System Realization
6. System Deployment and Use
7. Systems Engineering Management
8. Product and Service Life Management
9. Systems Engineering Standards

Details of key offerings are as given below:

- Detail the life cycles with project specific requirements :
 - Concept , Development , Production, Utilization, Support , & Retirement
- Detail the Life cycle approaches - Iteration and Recursion, Sequential Methods, Incremental and Iterative Methods
- Detail the Life cycle stages -Organizational project enabling processes , agreement processes, technical management processes, technical processes
- One example for Life cycle stage for “technical processes” is:
 - Business or Mission Analysis Process
 - Stakeholder Needs and Requirements Definition Process
 - System Requirements Definition Process
 - Architecture Definition Process
 - Design Definition Process

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**Systems
Engineering and
Management of
your project**

- System Analysis Process
 - Implementation Process
 - Integration Process
 - Verification Process
 - Transition Process
 - Validation Process
 - Operation Process
 - Maintenance Process
 - Disposal Process
- Define, select process options like:
 - Integrated product development (IPD) that use external internal interfaces/ upper and lower level elements
 - Agile Systems Engineering
 - Object Process methodology (OPM) based processes
 - Develop processes context diagram for B2B, B2C
 - Define process I/O, activities and interfaces
 - Define the model types to be designed: Descriptive (Functional flow block diagram, IDEF0, OPM, SysML, OWL) or Analytical(DIS, HLA,Modelica, FUML)
 - Define the model transformations (QVT, OPM to SysML)
 - Define data exchange standards (Application protocols, ReqIF, XML, RDF)
 - Define domain specific standards(Software-AADL, UML, Hardware-VHDL, BPM-BPMN)
 - MBSE Model generation : Choose suitable type like Function based Systems Engineering (FBSE) or Object Oriented System Engineering method (OOSEM)
 - Reuse core diagrams from earlier phase and define the model details like physical attributes, behavioral attributes, & dynamic attributes using SysML /OMG language
 - Define the activities and modeling artifacts, interfaces , communications, & data exchange
 - We offer project specific “Technical management processes” :
 - Project Planning Process
 - Project Assessment and Control Process
 - Decision Management Process
 - Risk Management Process
 - Configuration Management Process
 - Information Management Process
 - Measurement Process
 - Quality Assurance Process

3	Tailoring of your project products / services	<p>We follow INCOSE specified processes that match to your unique needs:</p> <ul style="list-style-type: none"> • Tailoring Process definition • Tailoring for Specific Product Sector or Domain Application • Application of SE for Product Line Management • Application of SE for Services • Application of SE for Enterprises • Application of SE for Very Small and Micro Enterprises <p>Key details of above:</p> <ul style="list-style-type: none"> • Identify the tailoring balance between Risk and Process • Identify and record the circumstances that influence tailoring • Obtain input from parties affected by the tailoring decisions • Select the life cycle processes that require tailoring • Eliminate unnecessary outcomes, activities, and tasks, and add additional ones • Offer Project level and organizational level tailoring • Offer domain specific tailoring and engineering boards / organizations • Offer tailoring of Services / products in a SoS type
4	Cross-disciplines engineering	<p>We follow INCOSE specified processes that match to your unique needs, few key ones are:</p> <ul style="list-style-type: none"> • Modeling and Simulation • Model-Based SE • Functions-Based SE Method • Object-Oriented SE Method • Prototyping • Interface Management • Integrated Product and Process Development • Lean SE • Agile SE <p>Key details of above:</p> <ul style="list-style-type: none"> • Modeling for characterizing the system in simple way using SysML notations • Models being applied early in the system life cycle to synthesize and evaluate alternative mission and system concepts • Address different aspects of the system design and respond to the broad range of system requirements • Knowledge capture and system design evolution • Select model type like Physical mock-ups, Abstract, Informal, Formal • Scope and define models like, functional model, behavioral model, temporal model, structural model, mass model, layout model, and network model • Physical simulations, Computer-based simulations (discrete event, continuous time solving, or finite element), and human-in-the-loop simulations

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**Specialty
engineering /
Integration
with Enterprises**

We follow INCOSE specified processes that match to your unique needs:

- Interoperability Analysis
- Logistics Engineering
- Manufacturing and Producibility Analysis
- Mass Properties Engineering
- Reliability, Availability, and Maintainability
- Resilience Engineering
- System Safety Engineering
- System Security Engineering
- Training Needs Analysis
- Usability Analysis/Human Systems Integration
- Value Engineering

As per SEBoK:

- Define Limits of Integration Activities
- Aggregation of Implemented Elements
- Integration Techniques- Global Integration, Integration "with the Stream", Incremental Integration, Top-Down Integration, & Bottom-Up Integration
- Perform V&V actions
- Checking and Correctness of Integration using techniques like Coupling Matrix and N-squared Diagrams

Disclaimer:

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For more details, contact below:

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