Services

1. As-Built Engineering

Objective:

Transform existing brownfield facilities into accurate 3D digital models to enable growth, maintenance, and operational efficiency.

Key Features:

- **3D Digitalization:**
    - **Converts complex facility layouts into precise 3D models.**
    - **Captures every structural and operational detail, ensuring an exact replica of the facility.**
- **Documentation:**
    - **Generates detailed documentation to support modifications, upgrades, and maintenance.**
    - **Ensures compliance with industry standards and government regulations.**
- **Role in Project Management:**
    - **Enhances project execution by supporting engineering and documentation teams.**
    - **Simplifies collaboration across disciplines.**

Benefits:

- **Streamlines project execution by providing a single source of truth for facility data.**
- **Reduces costs associated with errors or rework during modifications or expansions.**
- **Improves asset management and regulatory compliance.**

---

2. Dimension Control

Objective:

Ensure optimal positioning and alignment of equipment and components to maximize operational efficiency.

Key Features:

- **Critical Alignment:**
    - **Ensures that machinery and equipment align precisely to prevent malfunctions.**
- **Deviation Corrections:**
    - **Identifies and corrects structural deformations, deviations, or misalignments.**
- **Seamless Assembly:**
    - **Facilitates smooth assembly of complex structures during installation or maintenance.**
- **Tailored Solutions:**
    - **Includes Dimension Profile Mapping (DPM) for the power sector to boost operational efficiency.**

Benefits:

- **Reduces downtime during maintenance or shutdowns.**
- **Enhances reliability and safety of machinery and equipment.**
- **Increases operational accuracy, leading to long-term cost savings.**

---

3. Owner's Engineering

Objective:

Provide comprehensive project oversight to ensure smooth execution from planning to commissioning.

Key Features:

- **Project Oversight:**
    - **Feasibility studies and detailed engineering reports.**
    - **Preparation of tenders and evaluation of bids.**
- **Site Supervision:**
    - **Third-party inspections to ensure quality and compliance with standards.**
    - **Expert engineers deputed at project sites for on-ground support.**

- **Multidisciplinary Approach:**
    - **Covers Civil, Mechanical, Electrical, and Health, Safety, and Environment (HSE) disciplines.**
- **End-to-End Solutions:**
    - **Includes bid management and Operations & Maintenance (O&M) management.**

Benefits:

- **Minimizes project risks by identifying potential issues early.**
- **Ensures adherence to timelines, budgets, and safety standards.**
- **Provides technical expertise and oversight to optimize project outcomes.**

---

4. Re-Engineering & Supply

Objective:

Recreate and manufacture critical machinery components to extend the lifespan of equipment.

Key Features:

- **Advanced 3D Laser Scanning:**
    - **Captures the dimensions and geometry of existing components.**
    - **Allows precise redesign of obsolete or high-cost parts.**
- **Customized Manufacturing:**
    - **Develops and supplies spares tailored to unique project needs.**
- **Lifecycle Extension:**
    - **Improves the efficiency and lifespan of critical components.**

Benefits:

- **Reduces reliance on expensive OEM (Original Equipment Manufacturer) spares.**
- **Addresses challenges with obsolete components.**
- **Improves cost efficiency without compromising on quality.**

---

5. Digital Twins

Objective:

Leverage virtual replicas of physical assets to optimize operations and maintenance.

Key Features:

- **Real-Time Monitoring:**
    - **Provides real-time data and insights into equipment performance.**
- **Predictive Analysis:**
    - **Detects potential failures or inefficiencies before they occur.**
- **Process Optimization:**
    - **Enables simulation and testing of operational changes without disrupting real processes.**

Benefits:

- **Minimizes downtime through proactive issue resolution.**
- **Enhances operational efficiency by identifying optimization opportunities.**
- **Reduces maintenance costs by enabling predictive and condition-based maintenance.**