# TSG | Professional Services Utility Industry



# Professional Services Team Skillset

We have an onshore network of seasoned and highly skilled engineers at our disposal. The team is top 5% talent in their respective areas as compared to the rest of the available engineers on the market. For this reason, we can produce software quickly, at a predictable high-quality level, and with minimal ongoing technical debt.

Because the engineers can each individually cover architecture and implementation, they are able to get up to speed quickly and provide a solution that fits into the customer's architecture, is functionally complete, tested, and works at scale.

The team has expertise in many domains, languages, and development methodologies. The list below provides an overview of the team skillset, but should not be viewed as exhaustive:

# **DISCIPLINES**

- Team Management
- Requirements Definition
- System/Product Design
- Enterprise-level Architecture Definition and Technical Oversight
- Code-level Standards and Design Patterns
- Cybersecurity Design, Implementation, Review
- Internal- and Customer-facing Documentation

#### **PLATFORMS**

- Microsoft Windows
- Linux
- Oracle Database
- SQL Server Database
- Android/IOS
- Kubernetes/Docker
- Microsoft Azure
- Amazon Web Services

### **LANGUAGES**

- Microsoft .Net
- JavaScript/TypeScript
- lava
- Python

# **METHODOLOGIES**

- DevOps, Agile, Iterative
- Secure Development Lifecycle
- Macro- and Micro-services

# **INFRASTRUCTURE AND AUTOMATION**

- On-Premise and Cloud-based Software
- DevOps and Deployment Automation
- Source Code Management (SCM) Implementation, Maintenance, Migration
- Git, Perforce, Subversion, TFS
- Continuous Integration and Continuous Delivery (CI/CD) Automation
- Test-driven Development
- Metrics Monitoring (ELK/Prometheus/Grafana)

#### APPLICATION DOMAINS

- Enterprise-level IoT Device
   Management and Data Collection
- Analytics and Big Data
- Embedded Firmware (RTOS and Linux-based)
- IPv4/IPv6/Mesh Networks
- Machine Learning/Al
- Digital Twins

### **OTHER SKILLS**

- RFP Consultation and Review
- System Simulation and Load Testing
- Solution Issue Identification and Resolution
- Interprocess Communication (REST/SOAP/GraphQL)
- Blockchain
- Database Design and Performance Tuning

#### **DEVELOPMENT AND IMPLEMENTATION**

- Principals on the team that architected a largescale industry leading Smart Grid system.
   Developed suite of software applications and systems for AMI implementation.
- Led development of Utility Analytics product.
   Significant knowledge of Utility back office systems and integration needs for Smart Grid/AMI solutions. Involved in implementation and deployment of AMI at large facilities.
- Experience in Mesh/FAN networks for utilities.
   Working knowledge of Itron OpenWay RF-Mesh,
   Itron ACT, Cisco Mesh, SSN Mesh, and OpenWay Cellular.
- Deep knowledge of C&I metering and MV-90 data collection system.
- Significant understanding of utility grade meters.
   Significant experience in the development of embedded firmware on metering platform.
- Significant knowledge of Meter Data
   Management (MDM). Expertise with Itron
   Enterprise Edition (IEE). General, operational
   and deployment level knowledge. Have been
   involved with 10+ implementations of IEE
   system at utilities.
- Developed applications for back office integration with Smart Grid systems. Extended capabilities of component systems to meet AMI requirements.
- Tool design and development for Smart Grid/AMI testing by large scale utilities implementing AMI systems.

## SYSTEM ARCHITECTURE AND DESIGN

- Involved in solution architecture for several large utilities for AMI operations and implementation.
- Solution Architect for Grid Modernization at large Utility with Distributed Energy Resource integration focus.
- Involved in RFP process and review for Grid Modernization systems, including ADMS, OMS, SCADA, Device Management, DERMS, Short and Long-Term Forecasting.
- Deep knowledge of security for AMI and Grid Modernization. Experience with product secure coding implementation, vulnerability analysis, and penetration testing.
- Experience in architecting and developing edge processing applications on mains-powered metering systems.
- Extensive experience in large-scale device management for Smart Grid.

