

CASE STUDY: System Control Separation Programme

UK Gas Distribution Industry

Overview

An industry wide collaborative programme to supersede a Transitional Industry Agreement and replace the ageing control system that Operates the Gas Distribution across all Distribution Networks in UK, ensuring circa 19 Million Customers get gas supplies reliably.

Highlights

Requirements & Design

- Business processes (53) & Requirements (1,350) were defined for UK Gas Distribution Industry in a record time of 11 weeks
- Active Participation of over 50 users across the industry in workshops
- EEMUA 191 and 201 Adherence

Data Management

- Over 8600 SCADA Mimics & 5700 & logic tested programmes across the industry
- Over 16 million tests run to ensure data quality

Solution Assurance

- Over 48,000 Schematics & 62,000 data points tested
- Over 11,000 tests executed across multiple test phases

ENZEN AS UK GAS DISTRIBUTION INDUSTRY SYSTEM INTEGRATOR

UK gas industry saw a structural change, when the gas distribution got separated from the gas transmission in 2005. The incumbent player sold its 8 distribution zones (out of 13 zones) to the three new distribution network companies. Following the separation, there was a strong need to separate out the assets, control systems, and commercial arrangements from one central operation to four different Organisations. A number of Critical Business Initiatives, Commercial Arrangements and Critical Systems Changes were initiated to be implemented across the UK Gas Distribution Networks.

Separation of the Mission Critical Gas Control Systems went through a series of failures and missed many deadlines. Enzen was appointed by the 4 UK Gas Distribution Networks to deliver this Industry Wide Collaborative Programme on time. Enzen led all four UK gas distribution network businesses in Governing, Managing, designing, building, testing and commissioning a new Distribution Network Control System to control the physical flow of gas to circa 19 million residential and business customers across the UK.

Enzen did a root cause analysis of programme failures and suggested a comprehensive strategy to implement the programme. The backbone of the strategy – to Change the Governance of the Programme at CXO Level, underpinned by strong, firm and goal oriented collaboration. Enzen agreed an 18 month plan with the 4 Organisations for achieving separation of the control room operations and control systems. Precise Go Live Dates were agreed for summer of 2011, respecting operational constraints of all 4 organisations.

Enzen effectively led and co-ordinated a 600 people Strong Industry Project Team to deliver the Programme, on time, to quality and plan. This was done through a combination of

- Technical Innovation
- Specialist Skills in Control Systems
- Industry wide Governance
- Collaboration
- Rigorous Programme Management.

All Distribution Networks went Live in Summer 2011, exactly as per the baseline plan, and separation achieved.

Key Benefits

- Robust control systems implemented across all distribution networks
- Fixed price programme executed in 18 months on turnkey basis.
- No deviation in costs
- No deviation in timelines
- All Programme Objectives met.
- Gas Distribution Industry Separation for Systems Operations achieved by all Networks.

Challenges of Separation and our approach

Industry Separation Programmes are complex in nature in the Utilities Industry, almost always involving a great degree of change – People, Organisational, Locational, and associated Systems and processes. These are often underpinned by the dynamics of a regulatory deadline, a number of commercial arrangements to negotiate and shaping the nature of future interactions between the organisations that make up the industry. Specialized areas of change such as the System Operations function - which operate the core of the utility, brings an additional layer of complexity, demanding a specialist approach.

Our Notable challenges included:

- Establishing cross industry collaboration, governance and commercial arrangements
- Agreeing a specification and plan to suit all the entire Gas Distribution Industry
- Managing a diverse and extensive team of circa 600 people working in partnership
- Delivering a highly complex system in a tight timetable
- Converting and assuring enormous amounts of data
- Testing the system extensively recognising the safety sensitive nature of the system
- Building and maintaining a team spirit at all levels, across all Networks with one goal
- Managing many varied stakeholders, including the HSE, who were obviously interested in such a safety sensitive system for the UK Gas Industry

Enzen,

- Integrated the people, processes, governance and provided the leadership to believe in the objective and achieve it
- Defined and baselined a plan signed off by the industry with CXO level commitment
- Embedded our customers and suppliers in every aspect of the delivery
- Defined the Target Operating Model, Processes and Requirements for the Industry
- Successfully built & tested the mission critical SCADA system and Business applications within 12 months including industry wide integration across organisations
- Drove the Industry to ensure commercial agreements are in place for all implementations
- Established strong financial control & reporting and management
- Brought in transparency across the industry and sense of total ownership across the teams
- Recognised early on that this change required Control Systems Specialists, Systems Operations Business Specialists, Human Factors Specialists and deployed the best talent into the programme.

