



Promoting Performance Through Partnerships





Industry Sectors

Promoting Performance Through Partnerships

Elite operates across a wide range of industry sectors both in the UK and internationally

Oil & Gas - The Elite team have a vast amount of experience and specialist expertise in the integration of process packages and modules. As well as the ability to design interface engineering and supply the composite parts, Elite adds value when bringing the various elements together into an integrated system, be it for a floating production topsides or an onshore field development / process plant. By working closely with our partners, Elite have the ability and proven capability to design and integrate systems anywhere in the world.

Work has been extensive on a diversity of projects and consultancy contracts demanding different key objectives from Aberdeen in Scotland to Baku in Azerbaijan.

Food & Beverage - Food & Beverage manufacturers face increasing demands to improve production and quality while still containing costs. As a result, the need for innovative food processing solutions continues to grow.

Elite has been at the forefront of delivering advanced automation systems since its inception. Our team of engineers is known for its ability to produce top quality solutions using best-in-class equipment.

Elite has worked extensively with a diversity of food and beverage producers, from smaller niche market players to major brand leaders.

The company's experience in the pharmaceuticals sector is not unrelated, and brings with it, for example, familiarity with Food and Drugs Authority validation and S88.01 requirements.

Petrochemicals - Elite's involvement has grown with the industry, particularly with BP and Ineos at Grangemouth, the UK's largest processing site for North Sea oil resources and with the Azerbaijan International Oil Company in Baku.

Safety issues are a prime concern, and Elite has a close working familiarity with the requirements of IEC61508 and related safety standards and requirements.

Manufacturing - Scotland's manufacturing sector has faced harsh challenges in recent times, and Elite has worked closely with a diverse range of manufacturing clients to increase their competitiveness and maximise their potential.

This has been achieved through the provision of sophisticated control and monitoring systems along with various technical and support services, including call out support and training. Elite's rigorous systems pre-testing, wide cross-sector experience, and leading-edge expertise have made strong contributions to the sector.

Power and Utilities - Elite entered the power and utilities sector in a consulting role, undertaking plant feasibility studies at major generation sites both nuclear and coal fired. The company moved into project work with ScottishPower and won one of the first major outsourcing contracts awarded by ScottishPower to provide full time engineering support.

Elite's experience is now UK wide, with clients' interests ranging from nuclear energy to wind power generation. Work for ScottishPower and UKAEA has included specification and report generation, feasibility studies, standards definition and full turnkey integration projects.

Pharmaceuticals - Elite specialise in creating applications that automate pharmaceutical processes. Elite are familiar with the requirements of the pharmaceutical industry, operate under appropriate methodologies to support process validation, and have experience creating applications that are 21CFR Part 11 compliant. We have developed software with regard to Part 11 remediation and have implemented innovative and cost effective strategies for achieving compliance.

Electronics - Elite's involvement with the electronic industry dates back to 1992 through its expertise in safety systems relating to toxic gas handling. From initial work for National Semiconductor, Elite has expanded and diversified its work in this sector, both in the UK and overseas. The industry uses some highly toxic materials, and safety is a paramount priority. Elite's experience and expertise includes both specialised tool control (and yield-promoting enhancements) and facilities management.



Summary Of Capabilities

From Initial Design Through To Lifetime Operation

Elite's philosophy is to spend more up-front time during the design and development phase. In our experience this leads to less time during installation and commissioning.

Consultancy - Elite has been working with various clients, including BP and Scottish Power, with general consultancy requirements for some time. With time and client requests, this area of the business has grown and services now include Site Audits, Site Support and User Requirements Specifications.

Safety Consultancy - With current standards and legislation regarding safety constantly changing and being updated, Elite is able to provide Safety Consultancy, with services including SIL Determination, Safety Audits, Assessments and Safety Training.

System Design - Elite take specifications produced by our consultancy department or any other third party and engineer a superior solution using our ISO9001:2008 TickIT accredited design procedures. Full control is implemented by these quality procedures which are regularly inspected by B.S.I. and our proprietary documentation and control software Asset Guardian.

The end results of this approach are Process Control and Automation Systems which exceed client expectations, with full support available for the lifetime of the system.

PLC / SCADA and DCS Integration - All software produced by Elite is produced to the highest standards using our ever developing software tools and design methods. Software we develop is easy to understand, easy to maintain and well documented providing an easy route to modify and enhance during the systems lifetime.

With the introduction of new software tools (IEC61131-3) our design procedures are regularly modified to provide the best quality and most cost effective solution for our partners.

Elite work in close partnerships and have arrangements with major manufacturers such as Rockwell Automation, Siemens etc which ensure we use only the original most up-to date software tools.

Simulation & Testing - At Elite we have for many years used simulation to test our software. Using software simulation systems allow us to quickly and more thoroughly test the software we produce in-house. This approach minimises expensive time spent on site and allows us to use valuable engineering resources more effectively in a much more controlled environment.

Installation - At Elite, we have dedicated Installation Managers. These Managers, plan, supervise and control all aspects of your new or upgraded system. We have partner companies who supply manpower on a regular basis to Elite to carry out installations. This arrangement allows us to

have competent qualified people of the correct disciplines carrying out tasks when required but offers the continuity of on site contact for overall site management.

Commissioning - All of our systems, having been designed, produced and tested to the highest possible standards, require minimum commissioning. Your experiences with other integrators make it easy for us to impress in this area. The experienced commissioning engineers will attend your site with the knowledge that all hardware and software components of the system have been rigorously tested before being released for commissioning. With this knowledge, the engineers can proceed with confidence in the system. Also the engineers have direct access to system and product specialists both within Elite and our partners if the need arises.

Support - We offer customised support solutions ranging from ad-hoc call outs to fully managed 24/7 support contracts. Support is offered on systems supplied by Elite Control Systems or by other third party vendors. Because we are one of the only companies to offer these kind of support solutions but also design and implement full turnkey automation and process control systems, our support engineers have access to manufacturer trained design engineers 24 hours a day, 7 days a week. Also due to our partnerships with the worlds leading automation and process control manufacturers, a further level of support is available.

Legacy Upgrades - In a world of limited budgets, increasing demand and perpetual uptime it is a daunting concept to contemplate the upgrade of your control system. Elite have in-depth experience and a proven track record for undertaking legacy upgrades. Elite will work with you, ensuring minimum disruption during the change over. Elites upgrade methods allow for:

- Minimal disruption
- A new system which mirrors the old but uses the full functionality of the new technology
- If required, system enhancement or modification
- Thin Slice approach of phased delivery
- Roll back contingency

Consultancy

Getting The Foundations Right - First Time.....Every Time

Elite's philosophy is to spend more up-front time during the design and development phase. In our experience this leads to less time during installation and commissioning.

General Consultancy

The main services that Elite offers in the area of general control systems consultancy are:

Management Information Systems – advice on suitable systems and production of a report; installation and configuration of management information systems; maintenance and analysis of data.

Site Audits – determination of installed control systems on a site and production of a report detailing the currently installed systems, their strengths and weaknesses and recommendations for maintenance and upgrades.

Site Support – ongoing support on site to give supervisory support for the operation, maintenance and upgrade of control systems. This may also involve working with engineers on site to produce new systems or system upgrades.

User Requirements Specification – for new systems or upgrades to existing systems, user requirements would be captured and a User Requirements Specification produced.

Standards - provide a service to help customers utilise and benefit from standardising their control systems production and maintenance. This may involve providing seminars on the relevant standards and producing guidance notes and specifications on the implementation of standards. In the area of automation consultancy the main relevant standard is IEC61131-3.

The most important aspect of general consultancy is to build a good relationship with the customer. This shall be achieved by providing a top quality service and ensuring the right consultant is used for the job.

Clients - Elite has carried out various site audits for customers such as ScottishPower and BP Oil. We have provided site support continuously for many years for large companies such as ScottishPower, BP, Glenmorangie, Kvaerner and Viper Subsea.

Elite has produced both high and low level Specifications for customers such as BP, Glenmo-

range, Nynas and A.G Barr, and have extensive experience of producing requirements specifications through normal project work.



System Integration

From Conception

Elite is proud to have dedicated and specialised Capabilities, ‘over and above our Industry specific solutions’.

System Design - Elite has, since its creation, based all of its operations on quality. Since very early days, Elite has achieved the highest of software quality recognition by becoming ISO9001:2008 TickIT accredited. The commitment to quality was again rewarded when Elite became one of the first companies in the UK to achieve ISO9001 TickIT accreditation.

Our methods are based around the ethos that everything we produce, at any step in the design process has to be firstly validated and accepted by both Elite internally and our client externally. Secondly the completed deliverables in the design lifecycle require to be verified against the initial design by testing again by both Elite and our Client. This approach allows us to minimise any potential problems before they move onto the next step in the process.

Simulation & Testing - Elite were one of the first integrators to employ advanced simulation techniques to improve the quality and reliability of software. Using these techniques, we can simulate and fully test a system from a small standalone PLC through to a complexed multi-vendor system running over a network. One major advantage to this testing method is that we can create dangerous scenarios that would not be desirable on live plant.

By testing all our systems using this method, we have complete confidence in the delivered, installed system, this is supported by customer testimonials that we get it right first time.

“Elite designed and commissioned the ETP (Effluent Treatment Plant) system as well as the L2 plant PCS7 control system. Of all the control system integrators who provided quotations for the contract, Elite was the best. In terms of technical expertise, Elite’s engineers are fully trained... and have excellent test facilities to allow offline testing prior to installation on site. The main concern for Kemfinc was that the upgrade be carried out with no noticeable plant downtime. The project was carried out professionally, within time, within budget, and – most importantly – with no disruption or downtime to critical plant.”

Archie Maine
PCS Engineer, Kemfinc

Documentation - Again, based on our Quality Approved approach, during the lifecycle of a project, we produce numerous documents from specifications through to test procedure. Each document provides its own purpose in the lifecycle, some define the process and others verify that the defined process has been implemented correctly. All documents which we produce are archived by Elite and are supplied to the end user to help complete their audit trail.

“We operate a sophisticated Distributed Central Control System, and Elite became involved as part of a turnkey contractor when we decided to develop the Free-lance system. They were involved right from the functional design stage, through to providing a working system.

We’ve had a lot of links with Elite right from the early stages when they were involved in staff training, and helped us set up a SCADA system in the packaging plant.

They produce documentation and work to a high standard. We had no qualms about using them, they were the natural choice”

John Mckenzie
Assistant Engineer Electrical and Process, Lafarge Cement

Database Integration - In recent years, Process Control & Automation Systems have been progressing to use relational databases in a much larger scale. These databases when used with proprietary SCADA’s now give systems the ability to store and process huge amounts of data and produce comprehensive online reports.

Gone are the days when you had to wait for data being compiled by hand before you could make minor adjustments to your process. With the systems that Elite produce, the system can carry out adjustments automatically, in real time, allowing for better quality products, faster and more often.

Our systems can now carry out downtime analysis and highlight areas of your process which need urgent attention, allowing predictive downtime analysis, you can now see something going wrong with your plant before it stops your production and allows you to schedule your down time, not react to it.

Support

...Through To Long Term Support

Wouldn't it be nice if you could call a number, and instead of a recording, get a voice of a fully-trained engineer that can assist 24/7, 365 days a year on emergencies?

Background - In order for most manufacturers to be able to compete on a global level, they need to find ways to cut product cost. This requires cutting production costs, sometimes to the point of eliminating valuable personnel. Along with a decrease in personnel, manufacturers are not scheduling as many shutdowns to perform maintenance on equipment. Running this lean often causes emergency automation problems.

Maintenance and engineering are now dealing with less resources and more emergency automation problems. It is often very difficult to keep a maintenance staff fully trained on both the new and old automation systems in their facility. It is quite challenging to justify hiring a full time maintenance employee to fix emergency automation problems. Emergency problems may occur yearly, monthly, weekly or even daily, depending upon the particular situation at a facility, but when they do happen every downtime minute counts. Having a fully trained employee on staff that waits for an emergency call is not efficient.

Another problem most manufactures run into is being able to support 2-3 shifts of production with qualified personnel. Manufacturers decide between putting internal maintenance staff on-call from one shift and hiring enough employees to work all shifts. If a manufacturer relies on placing employee's on-call, they run into the internal expense of coordinating on-call personnel. An important factor to consider is the cost of losing internal employees due to the burden of always being on call. Manufacturers that employ enough trained personnel to cover each shift retain the cost of salaries and training expenses.

You'll find your ideal support partner with Elite Control Systems Limited, because we are the most adaptable support solutions company in the UK - our experience covers so many different types of sites and organisations that we are bound to be able to build a solution to meet your needs.

We can offer ad-hoc, total or incremental solutions to suit your budget and stage of development. But if you don't see exactly what you want please contact us for a no-obligation discussion with one of our team. We can help you pick your way confidently through the jungle of choices, ensuring a cost-effective solution that will achieve your aims.

Customise Your Solution - Our support solutions are built on a clear understanding of your business, existing systems and future requirements. Working in partnership with you, our support team will listen to your business requirements and expectations to design pertinent business-led solutions. Using our vast experience drawn from a multitude of projects and solutions, we are confident of our ability to offer you the right solution to meet your requirements.

How Can We Offer This Level Of Support? - We offer customised support solutions ranging from ad-hoc call outs to fully managed 24/7 support contracts. Support is offered on systems supplied by Elite Control Systems and by other third party vendors. Because we are one of the only companies to offer these kind of support solutions and also design and implement full turnkey automation and process control systems, our support engineers have access to manufacturer trained design engineers 24 hours a day, 7 days a week. Due to our partnerships with the worlds leading automation and process control equipment manufacturers, a further level of support is available.

All Elite support engineers are highly trained and are RGIT accredited allowing off-shore operations.

Account Management - Your Sales Account Manager will maintain regular contact, ensuring that you are comfortable with the contract direction and that the service continues to meet your requirements and expectations.

Whats Next? - Elite Control Systems Limited has developed long-term relationships with numerous customers, working with them to develop, improve and expand their production, process control and monitoring systems, enabling them to enjoy increased efficiency and maximised returns from their investment. Our close relationship with major technology developers means we can always use the latest techniques to derive significant business value.



Safety

Safety By Design

Are you wondering how to meet your functional safety commitments in line with IEC 61508 and HSE guidelines?

Risk Assessment - Risk assessment lies at the heart of all machinery and process safety, whether the aim is compliance with IEC/EN 61508 (Functional safety of electrical/electronic/programmable electronic safety related systems), IEC/EN 61511 (the process industry sector standard under IEC/EN 61506), IEC 62061 (the sector standard for machinery), EN 954-1 (Safety of machinery, Safety related parts of control systems, General principles for design), or ISO 13849-1 (Safety of machinery, Safety related parts of control systems, General principles for design - the standard that will soon replace EN 954-1).

In order to meet the specific requirements, Elite's consultants select the most appropriate risk assessment method and undertake the assessment in accordance with EN 1050 (Safety of machinery, Principles for risk assessment).

Often a risk assessment is performed as part of a new-build project or upgrade. Alternatively, Elite's consultants can assess risks relating to existing machinery and processes where manufacturers and plant operators do not have the expertise or resource available. In such cases, should the risk assessment identify any unacceptable risks, the consultants can provide advice and assistance to implement risk reduction measures, then reassess the risks afterwards.

SIL Determination - IEC 61508 and the principles of functional safety are being increasingly recognised by machine specifiers, end-users and plant operators. Nevertheless, it is a highly complex matter to determine the SIL (Safety Integrity Level) of the overall safety-related control system or the sub-systems from which it is composed. Elite's knowledgeable and experienced consultants can carry out SIL determinations either as part of a wider project or as an independent third-party acting for clients who want to be certain of applying the correct SIL. This is important because a calculated SIL that is too low can lead to an unacceptable risk; and a SIL that is calculated to be too high can result in dramatic increases in costs.

Hazard and Operability Study (HazOp) - Independent hazard and operability studies (HazOps) are commonly used within the process industries to investigate how a plant's operation may deviate from the intended design. One of the most important factors behind a successful HazOp is the experience of the team undertaking the study, in terms of both depth and diversity. Elite Safety Consultancy certainly offers this, with highly experienced individuals who have worked in fields as diverse as oil and gas, chemicals, pharmaceuticals, food and beverage, paper processing, defence, nuclear, manufacturing and packaging.

Safety Audits and Assessments - Depth and breadth of experience are invaluable for safety audits and assessments. Elite's consultants can carry these out on existing plant and machinery or on designs for new equipment or upgrades. In some cases this is best performed by close examination of the plant and/or as a desk-based exercise, but Elite also has facilities for building software models of existing or proposed plant and running a copy of the control software to accurately simulate the operation of the process. Such an exercise allows 'what if' scenarios to be examined in detail via software, with no disruption of production or risk to plant, personnel or the environment.

Safety Software Validation - Elite Control Systems was the first automation systems integration company of its size to obtain accreditation under the coveted BS EN ISO 9001:2000 TickIT certification scheme for design, development, production, support and installation of control and monitoring systems. This forms the basis for the safety software validation consultancy service, which is available to customers who have written their own software or who wish to validate software from another supplier prior to it being run on the plant. Furthermore, the software validation team can also independently validate software written by Elite Control Systems' software engineers. In either case, Elite's software modelling and simulation suite can be utilised as part of the safety software validation service.

Safety Competency Assessment - All of the consultants and engineers at Elite Safety Consultancy have successfully undergone an independent third party audit of their competence. In addition, Elite Safety Consultancy has had its competence audited at an organisational level. Formalised competency management of this nature is essential to meet the requirements of IEC 61508, 'Functional safety of electrical/electronic/programmable electronic safety related systems', and the European harmonised equivalent, EN 61508.

Moreover, Elite Safety Consultancy has been audited and demonstrated to be competent to work with clients to formulate, develop, implement and manage their own competency management schemes. Because IEC 61508 takes a lifecycle approach to functional safety, those operating and maintaining safety-related electrical/electronic/programmable electronic control systems must be competent to do so - which is why the question of competency needs to be addressed by plant operators today.

About Elite

The People Behind The Solutions

Elite provides system and software design, system integration and full support of the highest engineering standards to clients.

Elite Control Systems, founded in 1992, has proved itself one of the most innovative companies in the system integration business. A substantial company with overseas operations and a wealth of expertise and experience, Elite remains true to its ideals: meticulous planning, an innovative attitude to business, the highest standards of service, and quality engineering — this is the Elite approach.

These ideals underlie its 'Promoting Performance Through Partnership' approach. Working in close partnership with clients, Elite's engineering staff fully appreciate the need for rapid, demonstrable returns on clients' investments.

Elite has achieved accreditation to the ISO9001:2008 TickIT certification for design, management and maintenance of application software.

Elite's design teams bring a wealth of experience in process control, automation and information systems. They place particular emphasis on Programmable Logic Controllers (PLC's), Distributed Control Systems (DCS), Supervisory Control & Data Acquisition Systems (SCADA) software.

Elite was a pioneer in the use of automated simulation and testing to conduct continuous pre-testing of its work, ensuring that each "building block" and the system as a whole meets agreed functional specifications before it goes on site. This ensures that processing interruptions are kept to an absolute minimum.

Did You Know?

Elite were the first company in the United Kingdom to achieve ISO9001:TickIT through the B.S.I. small business scheme.

Elite use sophisticated computer simulation testing on every system before the system is allowed to proceed to installation and commissioning.

Elite Control Systems Limited

Elite House
Starlaw Business Park
Livingston
West Lothian
Scotland
EH54 8SF
United Kingdom
Phone: +44(0)1506 597900
Fax: +44(0)1506 597919
E-Mail: sales@elitecontrols.co.uk
www.elitecontrols.com

Elite Companies:

www.elitecontrols.com
www.elitesystemsinternational.com
www.elitesafety.co.uk
www.elitesupport.co.uk
www.eliteconsultancy.co.uk

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Partners

Promoting Performance Through Partnerships

Elite is proud to have built long term relationships with a select range of leading manufacturers who appreciate Elite's quality standards, experience and service commitment.

ABB

Primary Automation Partner

- Turnkey Projects
- System Support and Modification
- Obsolescence upgrades e.g. Freelance
- Integration of System 800xA
- Integration of Freelance 800F & AC700F
- Integration of Compact Products 800
- Drives Integration



Asset Guardian Solutions Limited

Primary Configuration Management and Document Control Partner

- Configuration Management Consultancy
- New System Installation
- System Support and Modification
- Version upgrades
- Training



Lighthouse Systems

Primary MES Partner

- Turnkey Projects
- System Support and Modification
- Shopfloor-Online Integration
- Training



Pilz

Primary Safety Partner

- Turnkey Projects
- System Support and Modification
- Conducting SIL Determination
- Conducting Hazops
- Conducting Risk Assessments
- Integration of PSS and MultiSystems
- Integration of SafetyBus Systems
- Training



Rockwell Automation

Primary Automation Partner

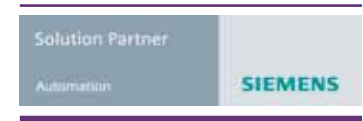
- Turnkey Projects
- System Support and Modification
- Obsolescence upgrades e.g. PLC5/SLC500 - ControlLogix/CompactLogix
- FactoryTalk View SCADA and PanelView HMI's
- ControlNet and DeviceNet Systems
- Drives Integration
- Safety Systems
- Training



Siemens

Primary Automation Partner

- Turnkey Projects
- System Support and Modification
- DCS PCS7 & APACS Support and Integration
- Obsolescence upgrades e.g. S5 - S7, FactoryLink - WinCC
- WinCC SCADA and HMI's
- Profibus DP, PA and Profinet Systems
- Drives Integration
- Safety Systems
- Training



Weidmüller

Primary Connectivity Partner

- Integration of Ethernet Switches
- Integration of Power Supplies
- Integration of Profibus, FieldBus Networks
- Integration of Wireless Networks
- Network Site Audits
- Training



Wonderware

Primary Automation Partner

- Turnkey Projects
- System Support and Modification
- Version upgrades e.g. InTouch and Historian
- System Platform Integration
- Training



Partners

Promoting Performance Through Partnerships

GE

Automation Partner
Turnkey Projects
System Support and Modification
Obsolescence upgrades e.g. Fix32 - iFix
Legacy Upgrades to RX3i and RX7i
Integration of Cimplicity
Integration of MOST8000 Systems
Training



Mitsubishi Electric

Automation Partner
Turnkey Projects
System Support and Modification
Obsolescence upgrades e.g. A Series to Q Series PLC's
Integration of Q Series PLC's



Schneider Electric

Automation Partner
Turnkey Projects
System Support and Modification
Legacy upgrades
Integration of Quantum, Premium, Momentum and TSXmicro PLC's
Drives Integration
Safety Systems
Training



Elite Companies :



www.elitecontrols.com



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