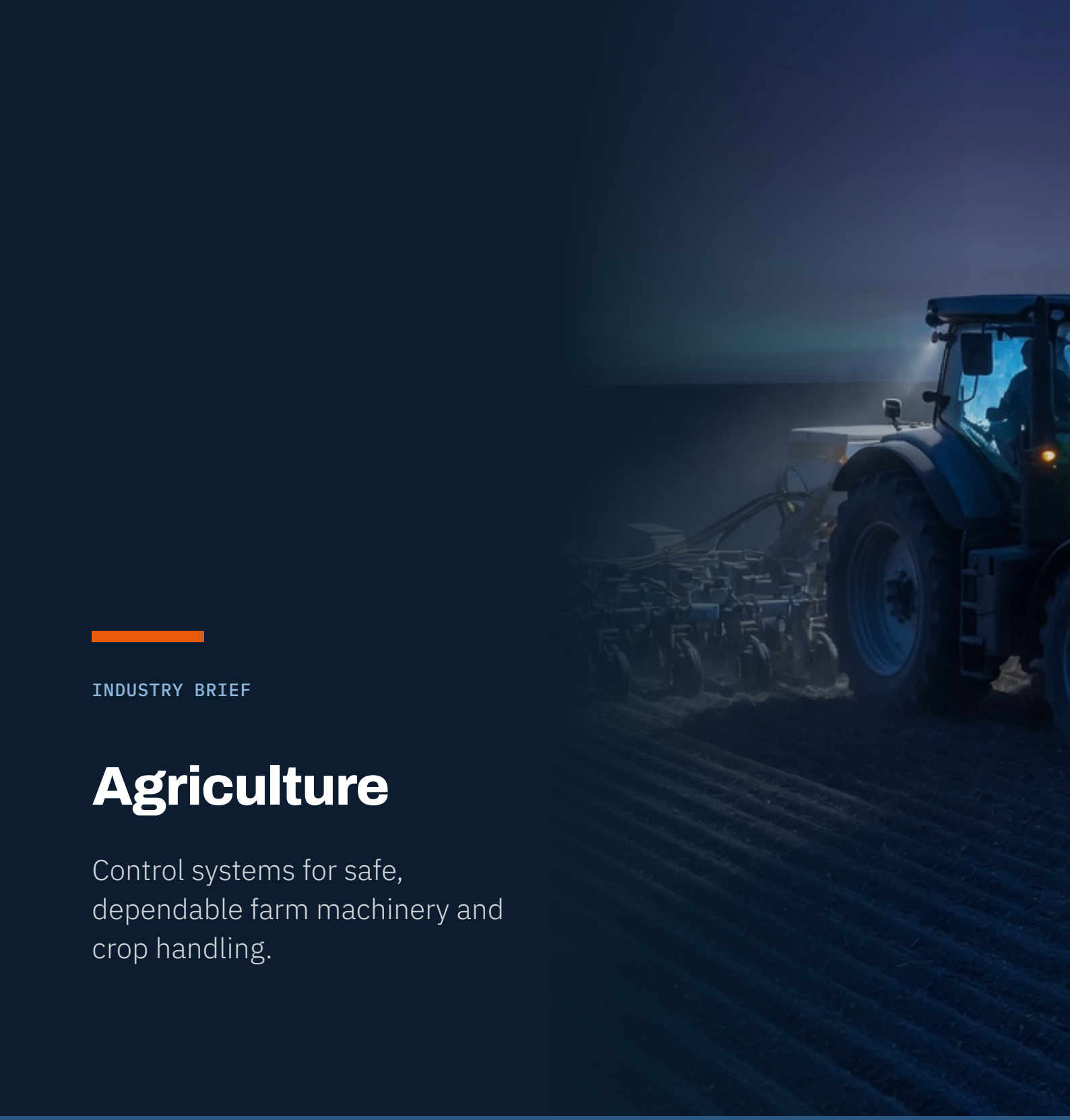




INDUSTRY BRIEF

Agriculture

Control systems for safe,
dependable farm machinery and
crop handling.



Control system engineering, integration and analytics since 1997
ISO 9001 certified • Cyber Essentials • CHAS • Constructionline • SafeContractor

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YOUR PRIORITIES

What matters most

Agriculture is increasingly automated, from the machines that prepare soil and sow seed to the plant that dries, stores and moves each harvest. Growers, machinery builders and processors need control systems that are safe around people, dependable through short seasons and simple for operators and service teams to support.

Safety around machines

Automated machines work in fields and yards, close to people. Their safety functions must be designed and proven, and the machine must meet the law before it is sold or put to use.

Ready when the season is

Planting and harvest windows are short. Machinery and crop-handling plant must work first time and keep working, with faults that are quick to find and fix.

Crop quality in store

Drying and storage must bring grain to the right moisture and temperature and hold it there for months, without wasting energy or letting the crop spoil.

Dust and explosion risk

Grain and feed dust can explode. Dryers, elevators and silos need equipment suited to their hazardous zones, and interlocks and monitoring that keep them safe.

WHAT WE WORK ON

Systems we engineer

- Automated soil preparation and planting
- Machine and implement control
- Grain drying and moisture control
- Storage, silo and ventilation control
- Intake, conveying and elevators
- Operator HMIs and machine diagnostics

PROJECT EXPERIENCE

Soil preparation and planting

Matrix delivered the control system for automated soil preparation and seed planting machinery. Every project we deliver follows the same approach: requirements and standards agreed up front, logic tested before it runs, and full documentation for the people who operate and maintain it.

What this means on your project

Machinery has to be right before the season starts. We agree safety functions and performance levels with you early, prove control logic against a simulation of the machine or plant, and test before anything reaches the field or yard. You get the documentation for your technical file and for the people who service the machine.

STANDARDS

The standards that shape your project

Customers ask us first about standards. These are the ones we meet most often in this sector, and what they mean in practice.

Standard	What it covers	How we work with it
ISO 25119	Safety-related parts of control systems on tractors and machinery for agriculture and forestry, graded by AgPL.	Machine safety functions designed and verified to the agricultural performance level each one requires.
ISO 11783 (ISOBUS)	The serial control and communications network linking tractors, implements, terminals and farm management systems.	Where a machine must work with ISOBUS tractors and terminals, we design its control around ISO 11783.
BS EN ISO 4254-1	General safety requirements for self-propelled, mounted, semi-mounted and trailed agricultural machinery.	Operator controls, interlocks and warnings designed to its requirements for the machine in question.
Supply of Machinery (Safety) Regulations 2008	The GB law on machinery safety that sits behind a declaration of conformity and UKCA or CE marking.	Control design and technical documentation that support your risk assessment and technical file.
DSEAR 2002 and ATEX	Managing the risk of explosive atmospheres, including grain and feed dust, and the equipment used in them.	Equipment selected for your hazardous-area zones, with interlocks that support your explosion protection.
BS EN ISO 13849-1	Safety-related parts of machine control systems, rated by performance level (PL).	Safety functions on processing plant designed to the performance level your risk assessment requires.

The standards listed are those most often relevant to control-system work in this sector. Which apply to your project, and how, is agreed with you at specification stage.

The evidence you receive at handover

✓ Functional design specification	✓ I/O list and cause-and-effect	✓ Alarm list and HMI interface
✓ FAT and SAT records	✓ As-built drawings and source code	✓ Method statements for common faults

ABOUT MATRIX

Standards-led, fully documented control systems that you own and can support.

Matrix International (UK) Ltd has designed, built and supported industrial control systems since 1997. We take projects from specification and electrical design, through PLC, DCS and SCADA software, to installation, commissioning and long-term support, and we build the analysis software that shows how a plant is really performing. We are ISO 9001 certified and hold Cyber Essentials, CHAS, Constructionline and SafeContractor accreditation.

Siemens TIA Portal, S7 and PCS 7 • Rockwell • ABB • Schneider • Mitsubishi • Beckhoff • Emerson DeltaV • Honeywell • GE • WinCC, Ignition, AVEVA (Wonderware), FactoryTalk, iFIX and Citect SCADA

HOW WE DELIVER

From specification to long-term support

01 Specify

Requirements, applicable standards and risks agreed with you up front, itemised into a clear plan.

02 Design

Electrical and control design, PLC/DCS and SCADA software, to your standards and ours.

03 Test

Logic proven against a simulated plant, then factory acceptance testing before anything reaches site.

04 Commission

Installation, commissioning and site acceptance testing, planned around your operation.

05 Hand over

Full documentation, method statements for common faults, and training for your team.

06 Support

Maintenance, upgrades and analysis for the life of the system, with 24/7 cover under a support agreement.

WHY MATRIX

Why customers choose us

Standards first

An ISO 9001 certified quality system, designing to the standards your sector demands, plus any you specify.

You own the system

Clear structure, open interfaces and complete documentation, so you can support it yourself or with any vendor.

Tested before site

Control code is version-controlled and tested against a simulated plant before factory and site acceptance.

Multi-vendor

Siemens, Rockwell, ABB, Schneider, Mitsubishi, Beckhoff, Emerson, Honeywell and GE platforms.

In it for the long term

For us a project is not finished until the control system is decommissioned. 24/7 support is available under a support agreement.

OUR PROMISE

Standards-led, fully documented control systems that you own and can support.

Talk to us about your project

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