



SERVICE BRIEF

Upgrades, Modifications and Integration

Keep your plant running and make it better: modern controls, new functions, new equipment.

[::]MATRIX

THE CHALLENGE

A plant that has outgrown its controls

Obsolete hardware

Controllers, panels and networks past the end of their support. One failure could mean a long stop while scarce spares are found.

Little documentation

The code works, but nobody fully knows how. Drawings and I/O lists no longer match what is installed.

Short outage windows

The plant has to keep producing. Upgrades must fit into planned shutdowns, with a way back if anything goes wrong.

New equipment to integrate

New machines, instruments, drives, robots and vision systems each come with their own controls, and they all have to work together.

WHAT WE OFFER

The upgrades we deliver

UPGRADE 01

Controller migrations

Obsolete PLCs and controllers replaced by current ones: for example Siemens S7-300 and S7-400 to S7-1500, STEP 7 Classic to TIA Portal, or older Rockwell controllers to ControlLogix. Code is converted and reviewed, not just copied.

UPGRADE 02

Software and firmware upgrades

Engineering projects, firmware and SCADA brought up to supported versions, such as older TIA Portal projects to the current release, with every version archived and under version control.

UPGRADE 03

HMI and SCADA modernisation

End-of-life operator panels and SCADA replaced. Screens, alarms, trends and scripts are carried across and tested against the PLC before the old system is switched off.

UPGRADE 04

Functionality upgrades

New modes, sequences, recipes, reporting and data added to a system that already runs, without rewriting the parts that work.

UPGRADE 05

Modifications and extensions

New lines, machines and equipment added to an existing system, or a new system tied into the old. Each change is engineered, tested and made under change control.

UPGRADE 06

Integration across disciplines

Process, mechanical, instrumentation, drives, robots, vision and safety brought into one control system, with every interface agreed, documented and tested.

EXISTING AND NEW SYSTEMS

Upgrade what you have, or add something new

Upgrading an existing system

- Survey of hardware, firmware and software versions
- A restorable backup of what runs today, before any change
- Code analysed and the missing documents recovered from it
- New system tested against the old system's behaviour
- Cut-over and rollback plan built around your outages

Adding new equipment or systems

- Interfaces agreed with each supplier before design
- Signals, limits and failure positions documented
- One standard for code, screens and alarms across the plant
- Interfaces tested in simulation before equipment arrives
- Integrated testing at factory and site acceptance

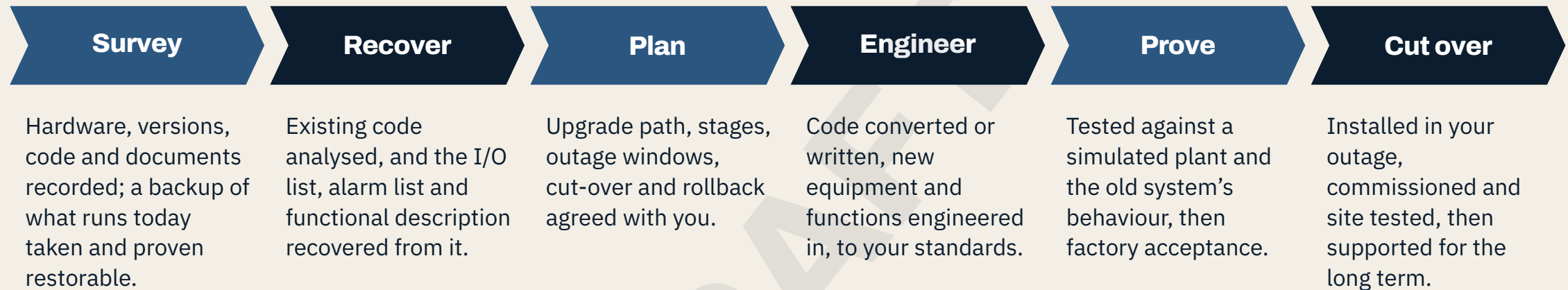
COVERAGE

Integration across the plant

Discipline	What we integrate	How it is proven
Process	Control philosophy, loops, sequences and recipes, agreed with your process engineers	Sequence tests and process trials
Mechanical	Pumps, valves, conveyors, guards and pressure systems: signals, limits and failure positions	Interface and failure-position tests
Instrumentation	Transmitters, analysers, flow, weighing and level: ranges, scaling, alarms and trips	Loop checks and calibration records
Drives and motion	Variable speed drives, servos and motion over fieldbus, with parameters archived	Drive tests and parameter record
Vision and robots	Camera inspection and robot cells: triggers, results, rejects and recipes exchanged with the PLC	Handshake and reject tests
Safety	Emergency stops, guarding, safety PLCs and relays, to your safety requirements	Safety requirements tests, independently reviewed
Networks and data	PROFINET, EtherNet/IP, Modbus and OPC UA; links to historians, MES and ERP; segmented networks	Communications tests and network records

HOW WE DELIVER

From survey to supported system



WHERE THE LINE IS

Nothing changes on your running plant without your permit to work, a restorable backup and sign-off at each stage. Converted code is a starting point that we review and test, not proof of identical behaviour. Equipment supplied by others is proven by its suppliers; we prove the interfaces.

WHAT YOU RECEIVE

An upgraded system you can support

✓ Survey and asset and version inventory

✓ Cut-over and rollback plan

✓ I/O list and cause-and-effect

✓ As-built drawings and source code

✓ Training and fault method statements

✓ Upgrade plan with stages and outages

✓ Functional design specification

✓ FAT and SAT protocols and records

✓ Backup and restore arrangement

HOW WE PROVE IT

- Nothing changes on your running plant without a restorable backup of what runs today
- Converted code reviewed line by line, and tested against the old system's behaviour
- Every change staged from offline to simulation to live, each step signed off by a named engineer
- A cut-over and rollback plan agreed before the outage starts
- Deviations logged with their fix and retest; nothing closed silently

GET IN TOUCH

Talk to us about your upgrade

enquiries@matrixsystems.co.uk

0121 240 7454

www.matrixsystems.co.uk

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