



Open source technology has provided the foundation for the majority of commercially available technologies for a over a decade. It allows for collaborative development with the sole aim of creating the best solution for the end user.

Due to the increased value provided through the use of open source when compared to proprietary technologies; it is increasingly being used in the field of Industrial Control Systems (ICS). The benefits lie in its ability to increase security, affordability, transparency, perpetuity, interoperability and flexibility.

Through the adoption of a detailed and well-planned strategy, the benefits significantly outweigh the unfounded concerns which have historically been associated with open technologies. Intrinsic to the successful implementation of open source ICS is the creation of a tailored strategy which focusses primarily upon the security, safety and reliability of the system throughout its life cycle.

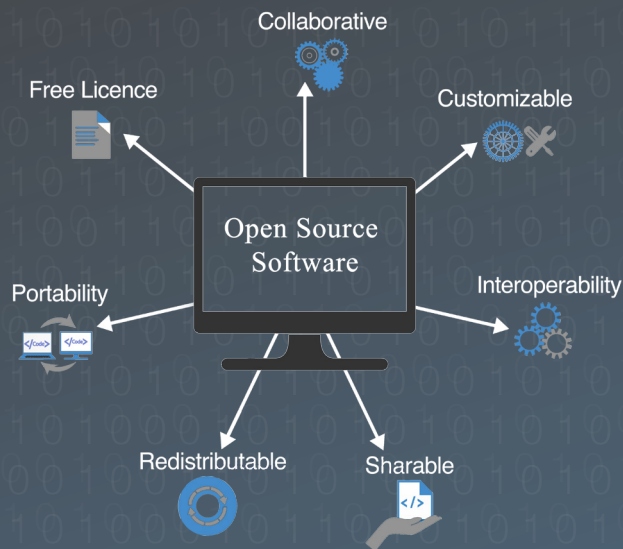
## OPEN SOURCE Industrial Control Systems

### Why Open Source in ICS

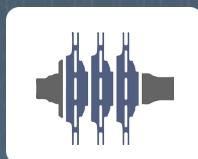
- Software and technology used in traditional ICS has been proprietary and provided by OEMs, leading to vendor lock-in and the creation of monopolies. The transition to open source software significantly reduces the cost at all stages of asset life.
- Open source allows technical software to be purpose-built ensuring that users' needs are fully met, rather than finding a 'best-fit' solution.
- Security in open source can easily be managed throughout the entire software stack, allowing instantaneous impact assessment and patch management when vulnerabilities are discovered.
- Open source provides a wider community to benefit, helping to bridge the ever-increasing skills gap within the industry.
- Open source enables access to, and collaboration with the best minds in the world, rather than being limited to those employed by an individual organisation.

### Our Approach

- Our expertise lies in understanding the challenges faced both by the industry, and how that impacts individual clients.
- Through the use of our in-house developers and security analysts, we provide support to our clients in using open source technology safely, reliably and securely, to provide an alternative to the current closed supply chain which aligns with industry-wide strategies.
- We are able to offer vulnerability assessments and mitigation to ensure conformity with the latest cyber security methodologies and standards.
- We have wrapped a technical services business model around our open-source approach in design, Implementation, testing, assurance, security, maintenance and training.



### Case Studies



#### Open Source SCADA

We have deployed an open-source SCADA platform into a CNI asset as part of an innovation project. The outcome is a significant cost saving.



#### Open Source Security

Open source security components are widely used in IT security. We are adopting the latest security countermeasures into the ICS domain.



#### Patch Management

By having access to the open source software, our engineers and cyber analysts are able to make risk-based decisions around when best to patch ICS systems.



#### OS Quality / Support

In order to successfully deploy OS technology we have adopted a similar process to that used in our process safety and system solutions.