# CriticalDefeat

**Real-time bypass monitoring and risk assessment to reduce the likelihood and severity of accidents**

**BLUE MARVEL**

## CriticalDefeat
### Industry 4.0 Compliant & Cloud Based
*Centralized Safety, Instrument & Control Bypass Monitoring*

**Challenge**: Bypasses represent increased risk to your operation, as layers of protection afforded by the plant automation are removed when they are in use. Bypassing instruments, process control logic, and safety instrumented functions are used by operating teams, in various scenarios, including during plant start-ups. Corporate safety and risk teams require access to bypass information as part of managing risk management initiatives.

**Solution**: CriticalDefeat is a cloud native application with powerful visualization and analytic tools. It provides corporate safety and risk leaders with an aggregated view of all device, logic, and safety bypasses across industrial operations. CriticalDefeat tracks instrument, control, and safety bypasses, supporting safe operating processes.

## Solution
### Understand & Manage Your Bypass Risk
*Digital Advantage*

**Real-Time Monitoring:** Visualize instrument, control logic, and safety bypasses in real-time.

**Multi-Site Benchmarking:** Look at aggregated data across a fleet of operations or drill into a single site.

**Automated Alerts:** Get automated alerts so you can monitor all safety bypasses.

**Mitigate Risk and Safety Events:** Understand how many bypasses are active, for how long, by who, and when they are removed.

**Fast Easy Reporting:** Setup custom views and generate reports with just a few clicks

# The BlueMarvel Advantage
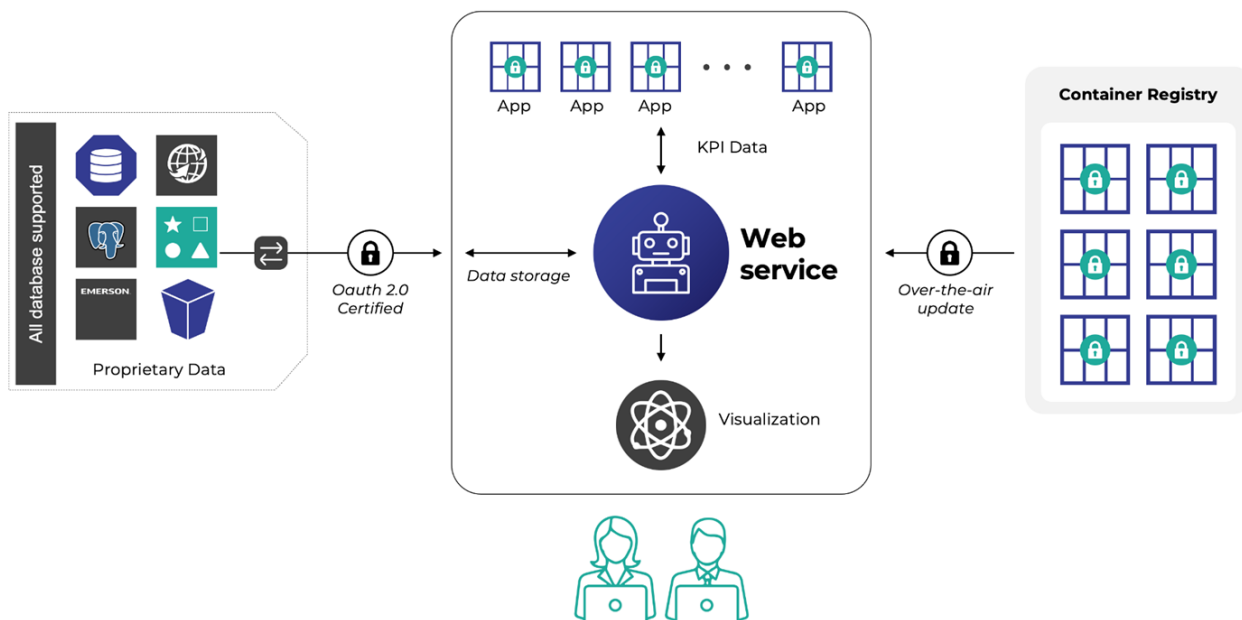## Industrial Expertise Meets Digital Transformation

**The Difference:** Our solution has been developed with industrial safety and automation system experts. All BlueMarvel applications are built using the latest information technology. Unlike common legacy Operations Technology (OT) applications, designed to run at a single industrial site, our solution was conceived for enterprise use cases and is capable of benchmarking across your entire operation. Our solutions offer custom-programmability alongside a suite of existing analytic functions allowing you to implement rules, KPI's and algorithms that fit unique corporate requirements.

We can support deployments no matter where you are on your digitization journey. Our solution runs natively in the cloud and has been designed using Docker Containers for easy deployment and set up. We can also manage SAS deployments leveraging the BlueMarvel cloud and data infrastructure, or we can work within our customer's cloud environment.

# BlueMarvel Application Architecture
## CriticalDefeat Microservices

- Control hub facilitates KPI calculations, software updates, and data movement between different applications.

- Microservices infrastructure to maximize application uptime and allow for maintenance on separate services.

- Leverages your existing cybersecurity protocols to minimize data leakage risks.

- Application is stateless, guaranteeing your data integrity and provides flexibility on future usage of calculated KPIs.
- Customer managed authorization & authentication so you can control who has access to which data.

- Optional over-the-air updates whenever new versions of the software are available.

> Traditionally, event data like active bypasses never left the bounds of the industrial operation. Today it can be made available on an enterprise scale and used to support corporate rIsk, safety, and training use cases.
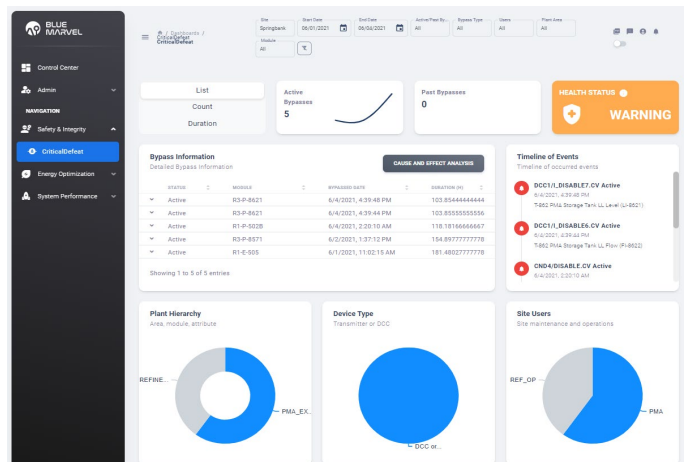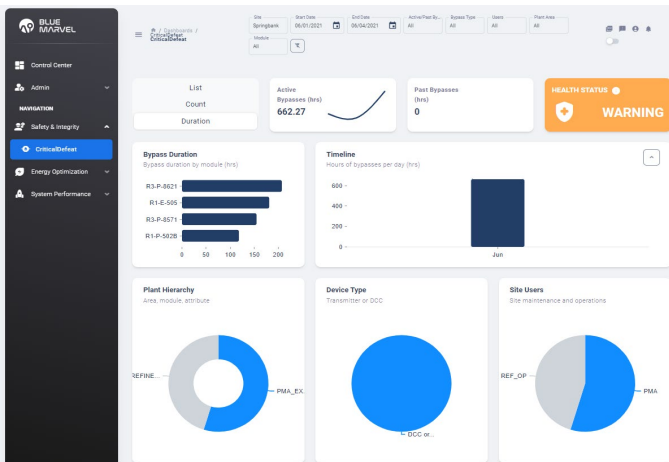
## CriticalDefeat Benefits
### Mitigate Industrial Risk & Safety Related Events

✓ Identify & quantify unacceptable levels of operational risk associated with industrial bypasses.

✓ Analyze and quantify potential impact of bypass related risk & safety events.

✓ Support corporate risk, safety & training, needs assessment, and budgeting.

✓ Benchmark measures across operating fleets in support of broad operational risk and safety awareness & decision making.

✓ Identify required changes to existing standard operating procedures or additional training needs assessment.

## CriticalDefeat Dashboard
### Showcasing Real-Time Bypass Information



## BLUEMARVEL
**www.bluemarvel.ai**