Embracing Industrial Cyber Safety
EMBRACING INDUSTRIAL CYBER SAFETY

From generation, transmission, and distribution of energy by utilities across the country, to oil and gas production in the oil fields, or refineries near our largest cities, there are thousands of industrial control systems (ICS) that must be protected from increasingly digital cyber threats. With the boom in use of Internet-connected devices, there is an uncontrolled and exponential risk to ICS attacks by external threats. IT and Operational Technology (OT) leaders need a data-driven approach to help them prioritize their ICS security measures.

At Booz Allen Hamilton, we combine industry knowledge and proven experience with the right people and technologies to reduce risk, improve safety, and increase profitability for your business. Together, we can help protect you from the risks in today’s increasingly complex operational environment.

STRENGTHEN YOUR BUSINESS BY MAKING IT SAFE AND SECURE

THE RISE OF OPERATIONAL TECHNOLOGY RISK

The evolution of the Industrial Internet and the growing concerns around security of legacy ICS presents a critical inflection point in the application use, and reliance of OT.

While industrial leaders have been using point solutions, dedicated ICS to automate and control machines for decades, advancements in sensor technology, cloud computing, connectivity, and data analytics are transforming scattered systems into integrated and scalable OT ecosystems. These ecosystems enable machines and humans to collaborate with one another in real time based on operational intelligence, providing unprecedented applications for predictive maintenance, and energy and cost efficiency.

Increasing demands for access to industrial information from the business, new forms of wired and wireless communications mean that ICS (which include SCADA, DCS, and other automation systems) are now being introduced to new vulnerabilities, increasing the cyber attack surface at the application, device, and platform levels. The growing interconnectedness across OT systems (driven by the business) also amplifies the risk of any single threat having a profound impact on business operations.

Companies must take a comprehensive and pragmatic operational technology security (OT-SEC) approach to mitigate potentially catastrophic security threats inherent with the Industrial Internet.

INTEREST IN OUR CRITICAL INFRASTRUCTURE IS INCREASING

Our reliance on energy, as well as the need for energy independence, places increasing burden on our nation’s energy infrastructure. This energy infrastructure is complex, diverse, and vast, built over the last 40–50 years in a relatively mature and static environment, which in the last few years has seen some pockets of modernization as it moves to a more dynamic digitally balanced ecosystem.

While utilities are constrained by the public utilities commissions, and oil and gas companies are challenged by low oil prices, it has been recognized that increasing investment is required to protect health, safety, environmental, and process aspects of these digital industrial assets.
UNDERSTANDING THE CONSEQUENCES OF A CYBER EVENT ON PHYSICAL INFRASTRUCTURE REQUIRES A UNIQUE MINDSET

By looking at the relationship between digital (or cyber) events and the physical world, we are able to focus the impact of these new cyber threats and directly understand how they will impact or affect your key metrics within your industrial environment.

Booz Allen’s SAF-ICS is a pragmatic OT risk assessment lifecycle we use to prioritize and mitigate risks in the industrial environment. The model is based on realistic industrial risk scenarios; industrial threat modeling and analysis; likelihood assessment; and impact to safety, production, and the environment. SAF-ICS includes four key phases, each supported by a myriad of threat intelligence sources and evidence-based algorithms to provide a more accurate, efficient, and cost-effective risk remediation and mitigation strategy.

WE BRING BEST IN CLASS SOLUTIONS DESIGNED TO MAXIMIZE INVESTMENTS

To succeed in today’s dynamic market, our customers need to adapt quickly to new challenges such as cyber threats, regulatory compliance, and new technologies. At Booz Allen, we have the industry insights, technology expertise, and on-the-ground experience to develop—and implement—smart solutions to drive your operations forward.

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WITH AN EVER-CHANGING ATTACK SURFACE AND EXTREME ADVERSARIES, HOW DO YOU ASSESS YOUR OPERATIONAL RISK?

UNDERSTANDING RISK

Booz Allen has developed cutting-edge techniques to help you identify and understand the risks in your ICS environment:

- Passive inventory creation and asset discovery techniques
- Security Analysis Framework for Industrial Control Systems (SAF-ICS)
- Strategic simulation and innovation
- Cyber threat and geopolitical intelligence
- Reverse engineering and blind analysis

Booz Allen operates at the intersection of risk and technology to deliver engineering, process, and domain-focused solutions for managing process and production cyber security challenges in a sustainable manner.

MANAGING AND RESPONDING TO THREATS AGAINST ICS

Booz Allen has the technology and talent to anticipate threats and implement programs to neutralize them:

- CyberSim™ for ICS for training and testing your ICS security staff
- Asset and vulnerability analysis of ICS equipment across a range of industries
- Industrial focused feeds and indicators of compromise
- Open source ICS threat intelligence
- ICS monitoring platform and managed services
- Industrial incident response and plant recovery management

We bring the capability to work across the entire organization from C-Suite with business and regulatory perspectives to the plant manager and the realities of the production floor to ensure business, process, and product integrity.
About Booz Allen

Booz Allen Hamilton has been at the forefront of strategy and technology for more than 100 years. Today, the firm provides management and technology consulting and engineering services to leading Fortune 500 corporations, governments, and not-for-profits across the globe. Booz Allen partners with public and private sector clients to solve their most difficult challenges through a combination of consulting, analytics, mission operations, technology, systems delivery, cybersecurity, engineering, and innovation expertise.

With international headquarters in McLean, Virginia, the firm employs more than 22,500 people globally, and had revenue of $5.27 billion for the 12 months ended March 31, 2015. To learn more, visit www.boozallen.com. (NYSE: BAH)

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