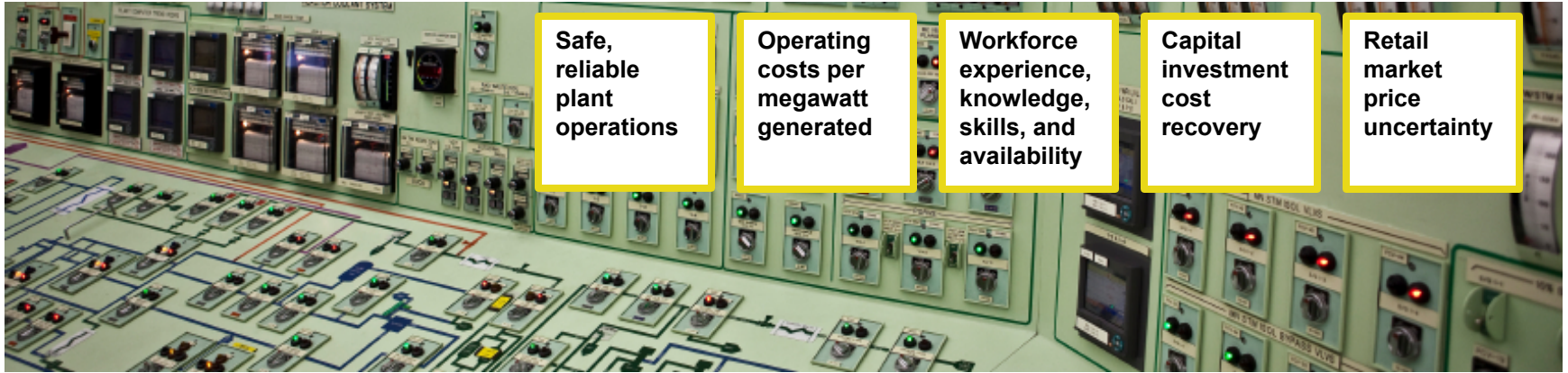


StrategyDriven

alignment, accountability, accelerated results

**Enhancing safety, reliability, and efficiency
in nuclear electric power generation**

An Evolving Industry



Complex issues challenge the safe, reliable, and efficient operation of nuclear power plants.

The safe, reliable, and efficient operation of nuclear electric generating stations is a responsibility shared by all nuclear professionals. Aging infrastructure, retiring workers, growing regulation, rising capital costs, and increasing budget pressures combine to challenge nuclear executives and managers now more than ever before.

To meet these challenges, nuclear plant owners must find cost effective ways to replace aging components and obsolete equipment, transfer knowledge and a respect for the uniqueness of nuclear power to a new generation of workers, release currently unavailable capital, and optimize operations and maintenance programs.

StrategyDriven advisors are seasoned nuclear professionals. As such, we have tailored our tools and methods to meet the unique needs of nuclear plant operations and are committed to being exceptional teammates in your pursuit of excellence.

The StrategyDriven Difference

StrategyDriven advisors possess 'stood the watch' nuclear power generation experience:

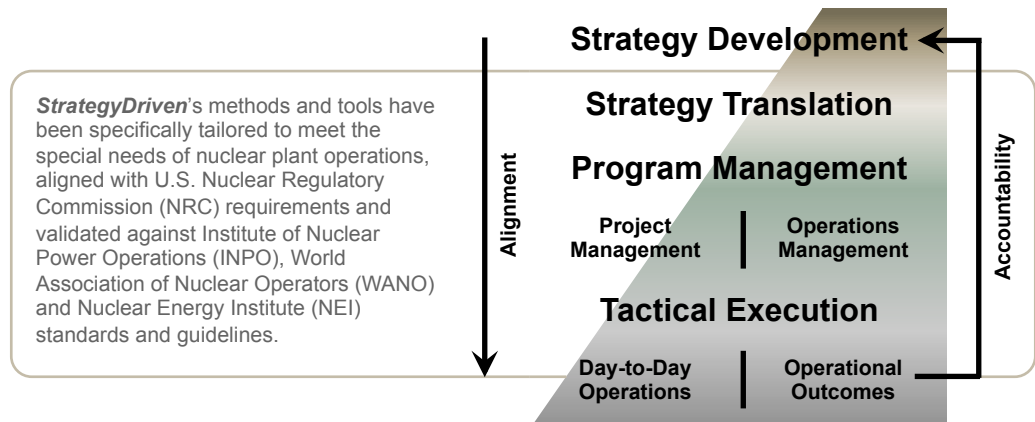
- leading day-to-day nuclear plant operations,
- supervising refueling and maintenance activities, and
- overseeing infrequently performed tests and evolutions

Our nuclear professionals have been awarded top industry licenses, certifications, and qualifications:

- U.S. Nuclear Regulatory Commission Senior Reactor Operator License
- U.S. Navy Chief Nuclear Engineer Officer Qualification
- U.S. Navy Engineering Officer of the Watch Qualification
- Institute of Nuclear Power Operations Plant Operations Evaluator Qualification
- National Academy for Nuclear Training Event Investigator Certification
- National Academy for Nuclear Training Instructor and Facilitator Certification
- Project Management Institute Project Management Professional Certification

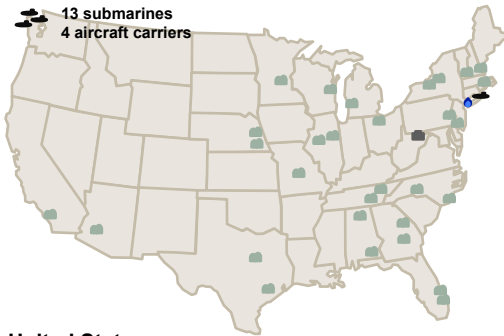
StrategyDriven uniquely combines decades of nuclear plant operating experience, deep business acumen, and industry specific methods and tools to provide solutions that enhance the safe, reliable, and efficient operation of nuclear electric generating stations.

StrategyDriven focuses on business performance improvement...



Achieving Operational Excellence

Diverse, Global Client Experience



United States

- 30 nuclear power plants from 18 utilities
- 18 U.S. nuclear powered naval vessels
- 1 coal-fired fossil power plant from 1 utility
- 1 natural gas delivery system from 1 utility

Canada

- 4 nuclear power plants from 4 utilities

Japan

- 1 nuclear power plant from 1 utility
- 1 U.S. nuclear powered naval vessel

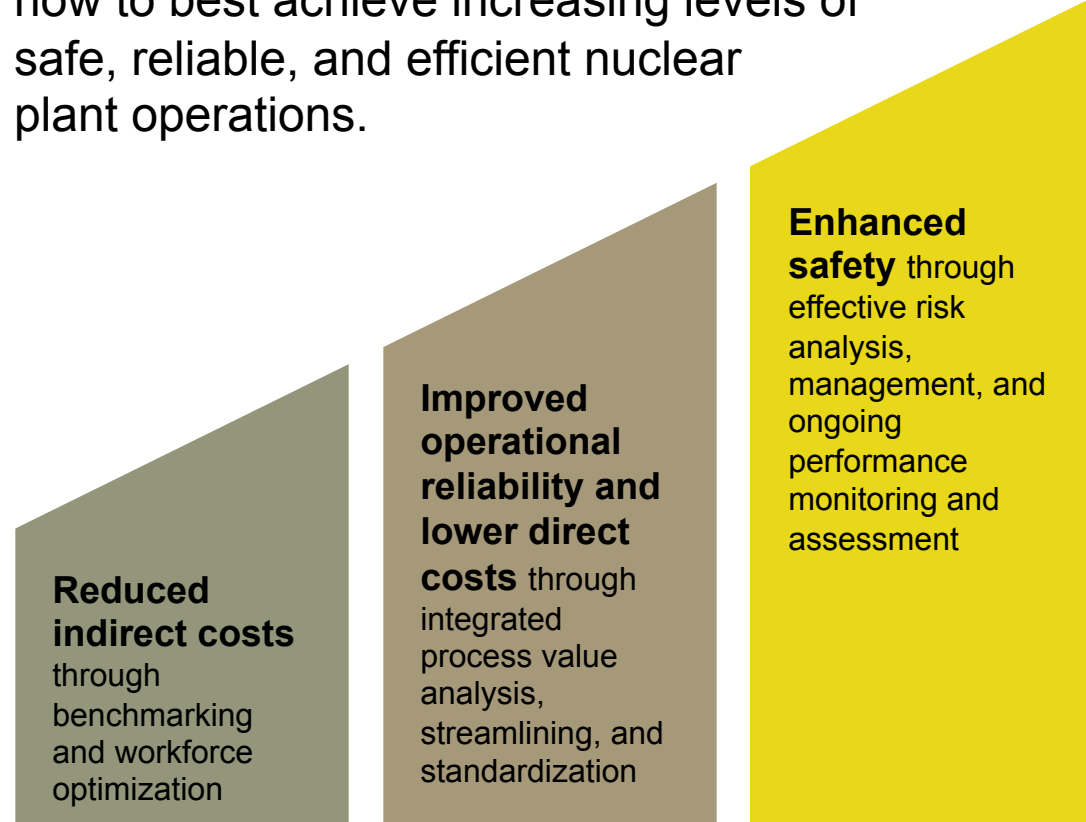
United Kingdom

- 2 natural gas-fired power plants from 1 utility

Central & South America (El Salvador, Peru, and Brazil)

- 1 hydro dam from 1 utility
- 1 diesel generator power station from 1 utility

StrategyDriven's nuclear professionals advise executives and managers at dozens of Fortune 500, government, and large regional utilities on how to best achieve increasing levels of safe, reliable, and efficient nuclear plant operations.



What We Offer

StrategyDriven can help you accelerate the achievement of improved operational safety, reliability, and efficiency through the application of our deep hands-on operational experience and leveraging our nuclear specific tools and methods in the areas of:

Enhanced safety

- Corporate Risk Analysis, Management, and Mitigation
- Internal Assessment
- Decision Making and Management

Improved operational reliability and lower direct costs

- Enterprise Performance Measurement
- Program / Project Development, Management, and Improvement
- Equipment / System Life Cycle Maintenance Management
- Online and Outage Work Management Optimization

Reduced indirect costs

- Domestic and International Benchmarking
- Succession and Workforce Planning



Corporate Risk Analysis, Management, and Mitigation

How We Serve

We help reduce corporate nuclear risk exposure through an independent assessment of your enterprise risk programs. We can help you develop a nuclear risk profile, benchmark your risks against industry peers, identify risk management program gaps, and develop and implement a multiyear oversight program to manage nuclear risks consistent with industry guidelines.



Case Study

A **StrategyDriven** advisor mapped a large Midwestern utility's corporate risks to their nuclear business unit risks and then to the processes from which those risks could be manifest. Oversight mechanisms for these programs were identified including gaps; providing a basis for a multiyear internal audit assessment schedule.

Engagement Approach

Our advisor worked with the utility's corporate managers and staff to capture the existing internal audit framework and developed a gap analysis of their risk profile; identifying risks not currently categorized or audited and opportunities for further program enhancement based on industry leading practices.

Value Delivered

Only seventy-five percent of the utility's nuclear-related high-risk programs were routinely assessed by either the utility's nuclear quality assurance or its corporate internal audit programs. Addressing the twenty-five percent gap will enable the utility to considerably reduce its safety, reliability, and efficiency risk exposure.

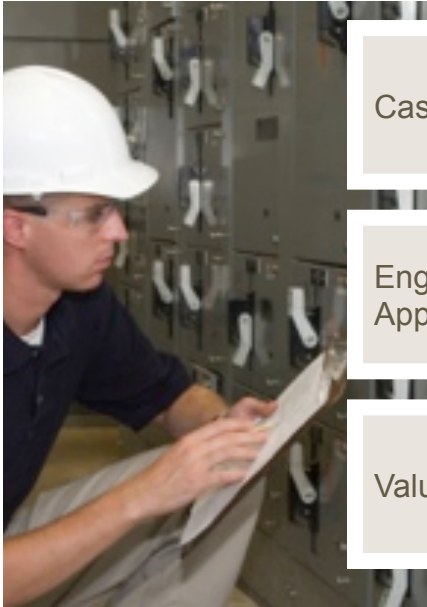
The **StrategyDriven** Difference

Decades of operational 'stood the watch' nuclear risk management and mitigation experience. Co-authored the nuclear industry's operational risk management guidelines and evaluation methods. Proprietary risk to process to oversight mapping tool.

Internal Assessment

How We Serve

We perform independent, objective, and detailed reviews of core line and support organization functions; assessing performance against U.S. NRC requirements, INPO, WANO, and NEI performance standards and guidelines, and industry leading practices. Our resulting recommendations offer a unique actionable value proposition focused on improving operational safety, reliability, and efficiency.



Case Study

A **StrategyDriven** advisor led teams of highly experience nuclear utility personnel in the ongoing evaluation of plant operations at one of a large nuclear fleet utility's generating stations. Provided objective assessment of operations standards, reactivity management programs, and licensed operator training.

Engagement Approach

Our advisor worked with senior station managers to identify personnel performance and programmatic gaps and develop near and long term improvement plans. Initial assessment and routine follow-up evaluations were conducted onsite. Periodic leadership team video conferences and weekly Operations Manager discussions helped promote high accountability and continued progress.

Value Delivered

Specific, actionable performance improvement plans were developed and routine follow-up helped drive implementation. A uniquely organized system health measurement system assessing integrated plant safety functions was created to further identify critical equipment improvement opportunities. A later industry evaluation assessed the plant as exhibiting excellent operational performance.

The **StrategyDriven** Difference

Decades of hands-on nuclear operations, maintenance, engineering, supply chain, work management, and regulatory experience.
Developed the U.S. nuclear industry's plant operations and operational focus guidelines and evaluation methods.

Decision Making and Management

How We Serve

We can assist you with the development and implementation of a high risk operational decision management program. Additionally, we can assess and recommend improvements to your existing program; evaluating it against industry leading practices and the common programmatic and execution shortfalls **StrategyDriven's** proprietary research has identified. We also support leaders while making their important decisions; asking the tough questions that prevent group think, introduce new approaches, and help foster success.



Case Study

A **StrategyDriven** professional advised a Fortune 200 nuclear utility's management team in the development of their fleet-wide high risk decision-management program; consistent with the Institute of Nuclear Power Operation's *Principles for Effective Operational Decision-Making* guidelines and incorporating industry leading practices.

Engagement Approach

Our advisor worked with senior utility managers to identify and benchmark industry leaders in each phase of the decision-making process. He then supported consolidating and harmonizing these practices into one cohesive process document. Lastly, a process execution assessment was performed at one of the utility's several nuclear plants to ensure effective implementation of the program.

Value Delivered

This client successfully developed and implemented an end-to-end industry leading practice decision-management program; promoting increased levels of operational safety and reliability. The program's development was accelerated by insights into the tested practices from numerous other utilities introduced by our **StrategyDriven** advisor.

The **StrategyDriven** Difference

Co-authored the nuclear industry's operational decision-making guidelines and evaluation methods. Extensive experience supporting numerous utilities design and implement their high-risk decision management programs.

Enterprise Performance Measurement

How We Serve

We can work with you to assess and improve your performance measurement system; yielding metrics and reports that are operationally relevant, organizationally consistent, and economically implemented. The resulting system helps improve managerial decision-making, organizational alignment, and individual accountability.



Case Study

A **StrategyDriven** professional advised a Fortune 200 nuclear utility management team in assessing their organizational performance measurement system; identifying monitoring and communication gaps and developing an improvement plan that included supporting system configuration upgrades.

Engagement Approach

Through a series of workshops and interviews, our advisor worked with senior station managers to catalog existing performance metrics and reports, recognize gaps to industry leading practices, identify additional measures needed, and develop a phased approach to upgrading the utility's measurement system. A fleet-wide metrics and reports governance program was also developed.

Value Delivered

An actionable performance monitoring system upgrade plan was created that, once implemented, will provide executives and managers with the accurate and timely information needed to support effective decision-making. This comprehensive roadmap contained a step-by-step plan for establishing a fully integrated performance monitoring system supported by data collection and processing procedures, application configuration, program governance, and management and employee training.

The **StrategyDriven** Difference

Comprehensive, **proprietary collection of U.S. NRC, INPO, WANO, and NEI performance metrics** enhanced by broadly benchmarked industry leading practice performance measures. Extensive experience implementing measurement systems.

Program / Project Development and Management

How We Serve

We can assist you in the effectiveness assessment and improvement of existing internal program and project management plans, oversight of contractor projects, and implementation of a program / project management office. For capital construction and other major projects, we can analyze program / project risk models and evaluate contracting method and management effectiveness to ensure strategic benefit realization and delivery timelines.



Case Study

A **StrategyDriven** advisor spearheaded the planning, execution, and on-time delivery of a 12-month, \$325 million large-scale, integrated nuclear maintenance and modernization project employing 1800+ personnel across multiple work specialties and organizations. Implemented robust operational risk mitigation, technical management, metrics analysis, and project management tools.

Engagement Approach

Our advisor worked with station managers at all levels to actively manage daily work schedules and resources, improve meeting and operational efficiencies, oversee contractor commitments and acceptance criteria, and ensure efficient integration of work through the use of Project Management and Lean Six Sigma analysis. Assisted in the definition, interpretation, and analysis of key performance metrics.

Value Delivered

Achieved a safe, on-time return to service of two nuclear plants and supporting equipment within original cost estimates. Provided for sustainable first-time work safety and quality improvements through standardization and documentation of streamlined outage work management processes.

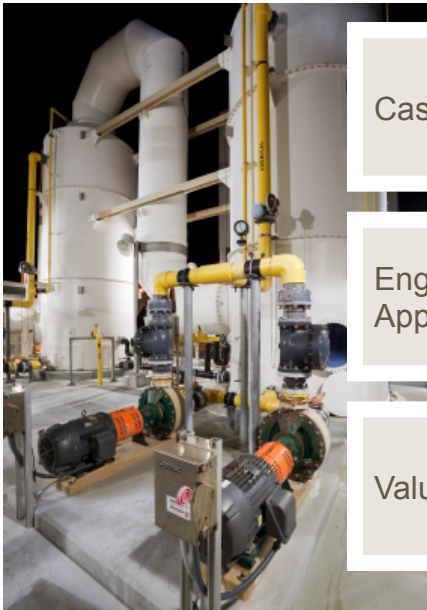
The **StrategyDriven** Difference

Decades of nuclear experience in operations and maintenance execution and planning, identification and **utilization of the most efficient and applicable plant metrics**, and analysis and enhancement of existing processes **using Lean Six Sigma practices**.

Equipment / System Life Cycle Maintenance Management

How We Serve

We can assist your organization assess the cost efficiency of your plant equipment life-cycle maintenance programs. We are particularly effective in identifying cost-saving improvements in maintenance plan scheduling, resource use and balancing, and consolidation of industrial skill sets to optimize personnel deployment and physical equipment storage/floor footprints.



Case Study

A **StrategyDriven** advisor, through the implementation of Lean Manufacturing principles and constraint analysis, identified multiple cost and schedule saving improvements to a nationwide nuclear submarine rotatable equipment pool storage system.

Engagement Approach

Our advisor worked with in-house delivery management representatives and those of other national coordinating logistical organizations to analyze delivery times, maintenance repair times, and packaging schedules using Lean Six Sigma Value Stream Analysis. The approach focused directly on the largest cost and schedule constraints and provided immediately actionable process improvements.

Value Delivered

Improvements included gains in component repair and equipment delivery times. Delivered a 10 percent overall schedule execution time reduction (overall maintenance turnaround time) and over 25 percent reduction in logistics material delivery timelines.

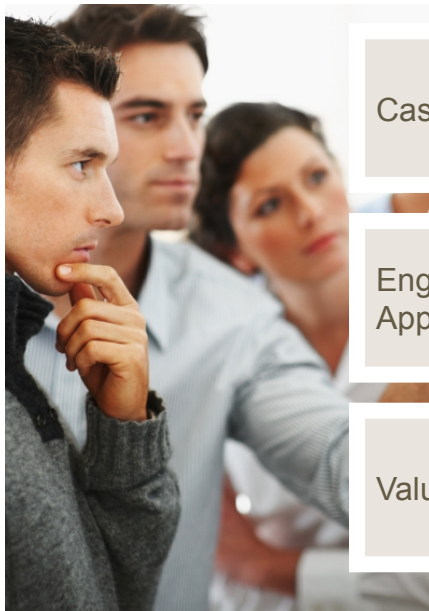
The **StrategyDriven** Difference

Executive level experience managing a **nationwide maintenance program** including **life cycle management of major industrial plant equipment** and identification and implementation of **performance metrics driving continual improvement**.

Online and Outage Work Management Optimization

How We Serve

We can work with you to assess and improve your end-to-end work management program; yielding an operationally focused process driving improved organizational alignment and supporting high equipment reliability. The resulting program will directly support increased operational and personnel safety, higher capacity, and reduced maintenance, inventory, and expediting costs.



Case Study

A **StrategyDriven** advisor qualitatively and quantitatively assessed a Fortune 200 utility's work management function performance, including the integration between the work management, operations, engineering, maintenance, and supply chain organizations, relative to industry guidelines and global leading practices.

Engagement Approach

Through direct observation, interviews, and quantitative analysis, our advisor worked with senior station managers to assess the focus and efficiency of the work management program. This assessment identified people, process, and technology gaps to industry leading practice performance for each process phase as well as a collection of performance improvement recommendations to eliminate shortfalls.

Value Delivered

Implementation of identified work management program improvements were projected to improve process efficiency and equipment reliability; enabling increased plant safety and total generation capacity, reduced total maintenance cost, and lower component inventory and associated carrying costs.

The **StrategyDriven** Difference

Decades of online and outage work management experience. Proprietary, INPO guideline compliant process framework complimented by **hundreds of execution leading practices, metrics and reports, and maturity model assessment tools.**

Domestic and International Benchmarking

How We Serve

We assist clients in the comparative analysis of their operational performance to that of domestic and international peers. Our assessment approach enhances available industry and government data with **StrategyDriven's** proprietary collection of operational data, metrics, process maps, and organizational charts and further benefits from our advisors' decades of direction performance observations at dozens of domestic and international utilities. The resulting analysis informs integrated future state performance target-setting and outcome achievement monitoring.



Case Study

A **StrategyDriven** advisor supported a United Kingdom based power generation utility in the comparative operational assessment of its natural gas fired generating stations operations, maintenance, work management, engineering, and supply chain programs against North American and European industry performance and protocols.

Engagement Approach

Our advisor worked with senior utility leaders, functional area managers, and line organization staff to compare operational program processes and results with those of leading power generation utilities and European program standards. The resulting analysis identified programmatic and performance shortfalls, specified improvement opportunities, and defined future state operational goals.

Value Delivered

Client executives and managers gained foundational insights on their generating stations' operational performance compared with that of industry peers. Additionally, they received a three-year resource-loaded performance improvement roadmap specifying the execution, program, and technology enhancements needed to achieve their benchmarking-informed future state goals.

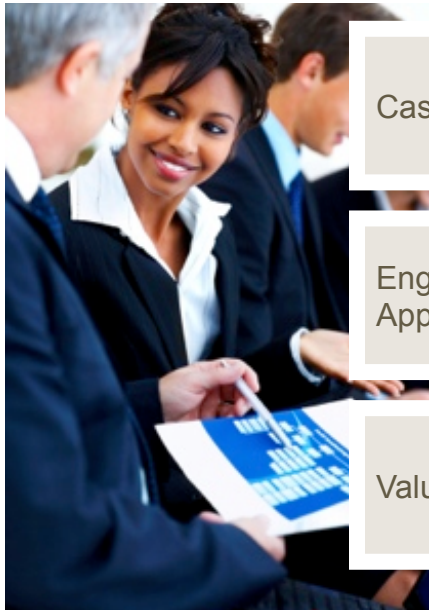
The **StrategyDriven** Difference

Robust, proprietary domestic and international utility performance information enhanced by experienced onsite analysis and evaluation at **dozens of utilities**. **Improvement opportunities** tied directly to **increased employee efficiencies** and **operational cost savings**.

Succession and Workforce Planning

How We Serve

We help clients enhance their succession and workforce planning programs through pipeline and capability projection, training and development program assessment, and improvement plan design and implementation assistance. Our evaluations identify retention, replacement, productivity, and quality risks while providing leading practice strategies for maintaining full staffing including temporarily filling vacancies with highly qualified personnel.



Case Study

A **StrategyDriven** advisor supported a Fortune 200 utility's internal audit team assess the succession and workforce planning of key nuclear plant management and employee positions.

Engagement Approach

Our advisor worked with senior plant leaders to identify management and workforce staffing and experience shortfalls, including the underlying drivers, for positions within the online work management and outage planning organizations. Senior utility manager briefings were conducted on the fundamentals of succession and workforce planning programs and potential near-term solutions to fill existing vacancies.

Value Delivered

Our client received foundational insights on how to establish a robust management succession and workforce planning program, including key program elements and execution effectiveness measurement. Recommendations to close positional and programmatic gaps were provided to temporarily alleviate the plant's near-term staffing shortfalls.

The **StrategyDriven** Difference

Responsible for a management rotational program. **Ground-up experience building a nuclear organization's workforce planning program.** Proprietary collection of succession and workforce planning program implementation and evaluation tools.

StrategyDriven's Nuclear Professionals



Nathan Ives

Principal
Advisory Services
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NathanIves@StrategyDriven.com

Nathan Ives is a StrategyDriven Advisory Services Principal with over 20 years of Energy industry and consulting experience. His experience includes 12 years of external and internal advisory work within the Energy industry specializing in strategic planning, resource management, project management, managerial decision-making, operational risk management, organizational alignment, and operator performance. Nathan has advised executives and senior managers at numerous utilities on improving generation fleet and individual plant operating performance. He authored the nuclear industry's risk management, high-risk decision management, and operations performance guidelines and evaluation methods.

Nathan also has 8 years of experience managing and supervising (military and commercial) nuclear plant operations, online and outage work management, and maintenance and held the U.S. Nuclear Regulatory Commission's Senior Reactor Operator license and U.S. Navy's Chief Nuclear Engineer Officer qualification.



Greg Gaskey

Principal
Advisory Services
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GregGaskey@StrategyDriven.com

Greg Gaskey is a StrategyDriven Advisory Services Principal with over 20 years of nuclear plant operations, maintenance, and large-scale program and project management experience. An experienced Operations Manager, he has managed critical Department of Defense programs, projects, and business lines; spanning multiple engineering maintenance disciplines including mechanical, electrical, hydraulic, and instrumentation and controls systems. He has extensive knowledge of initial system design development, lifecycle maintenance planning and optimization, existing system modification and modernization, and end-of-life disposal.

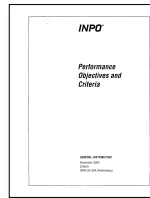
Greg has over 10 years experience in nuclear and environmental Emergency Management Operations, including environmental and terrorism incident response coordination and Emergency Operation Center (EOC) oversight for the U.S. Navy's largest regional maintenance facility. He previously served as Combat Systems Officer onboard a NIMITZ Class Aircraft Carrier and as a nuclear weapons courier and maintenance supervisor for TRIDENT Class ballistic missile submarines.

Nuclear Industry Thought Leadership

StrategyDriven's nuclear professionals have long supported the nuclear industry through co-authorship of performance improvement articles and nuclear industry standards and guidelines documents.



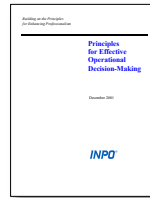
Improving safety and reducing costs in the power and utilities sector, Ernst & Young LLP, April 2012
Five steps to a more effective relationship between work management and supply chain.



INPO 03-004, Performance Objectives and Criteria
Publication documenting the standards for corporate and station performance in the operation and maintenance of nuclear electric generating plants.



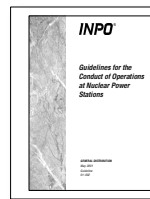
Responding to a Black Swan, Ernst & Young LLP, August 2011
Principles and protocols for responding to unexpected, catastrophic events.



Principles for Effective Operational Decision-Making, INPO 2001
Principles-based document on risk informed managerial decision-making; published in six languages and serving as the performance model at nuclear plants worldwide.



Reducing Lifecycle Expenditures, Public Utilities Fortnightly, May 2009
Total cost of ownership accounting optimizes long-term costs



INPO 01-002, Guidelines for the Conduct of Operations at Nuclear Power Stations
Document establishing the operational performance standards, based on industry leading practices, for nuclear electric generating stations.

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