

NUCLEUS
RESEARCH

ROI: 332%

Payback: 4.8 Months

PRONTOFORMS

FLOATING GAS FACILITY

ANALYST

Isaac Gould

THE BOTTOM LINE

This floating liquid natural gas facility (FLNG), achieved a 332% average annual ROI and payback period of 4.8 months from its ProntoForms deployment. Prior to ProntoForms, the FLNG managed its forms through a legacy solution and paper forms, which lacked configurability, connectivity, and visibility. This prevented metric tracking and root-cause analysis, slowed inspections, threatened operational shutdowns due to human error, and required extensive labor for manual data entry. Since deploying ProntoForms, the facility digitized and democratized its form processes. The facility reduced technician travel expenses, eliminated reliance on third-party services to manage data gathered from brownfield projects, saved 3,000 work hours per year, and empowered non-technical users with reporting and analytics capabilities on multiple devices and across business processes.

THE COMPANY

The Floating Liquefied Natural Gas (FLNG) facility operates a natural gas production and storage operation and is owned by a global energy and petrochemical company.

THE CHALLENGE

The FLNG previously utilized a legacy solution and paper-based forms to manage its thousands of safety inspections per year. However, it contended with a lack of visibility on the progress of projects, could not consolidate its forms for a centralized view, and lacked analytics and metric tracking functionality. With a manual and labor-intensive form submission process, the FLNG risked human error which could lead to work stoppages to resolve issues in accordance with internal safety policies and industry regulations. As a result, safety inspections were a large time sink.

The FLNG had to consolidate and manually enter data from paper to digital after an inspection, which lengthened and complicated the form submission process. Employees had to rely on memory or redo certain parts of the inspection. To ensure the inspection process was run correctly, the facility required a safety engineer to helicopter to the facility to oversee and collect data. Given how expensive it is to send employees out to the facility, this was not a profitable use of time and expenses.

TYPES OF BENEFITS



THE STRATEGY

The FLNG needed a modern form management platform that could support form creation and management, as well as support data management and consolidation. It additionally required a system that it could have ownership over, eliminating vendor and third-party consultant reliance to improve agility and reduce costs. The facility also prioritized ease of use to empower non-technical users. The company considered expanding its investment with its legacy system, but decided to select ProntoForms for the following reasons:

- **Ease of use.** The FLNG prioritized a form management solution accessible to non-technical users. It wanted to democratize the system to individual business units and departments so that they could build relevant forms as needed without relying on

the head office and IT. With this approach, the FLNG could avoid professional service fees and grant individual teams the agility to address their own form needs.

- **Data management and analytics.** The facility wanted to perform analytics on its forms, which covered use cases from safety inspections to day-to-day operations. In order to collect this operational data, it needed a solution that offered a centralized repository for form data and an intuitive submission process to eliminate data entry.

Cost : Benefit Ratio | 1 : 1.8

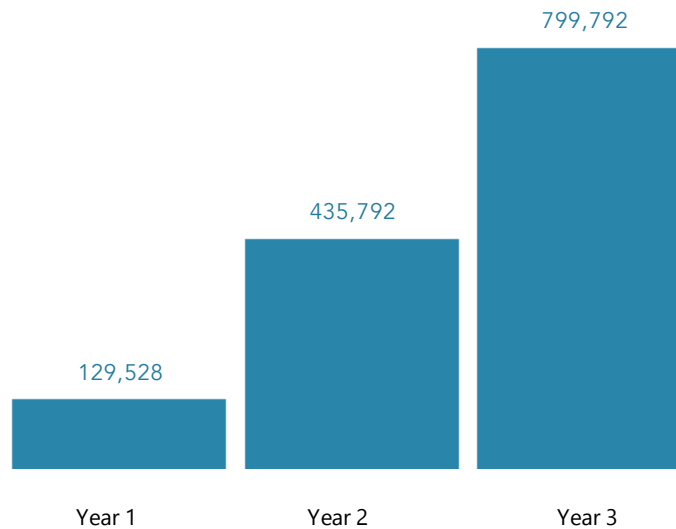
KEY BENEFIT AREAS

The FLNG began developing its forms in January 2021 and, as a testament to the ease of use of ProntoForms, produced and deployed its first safety inspections forms in under two months. The initial project was spearheaded by just one internal Digitalization Specialist without a technical coding background. Key benefit areas seen as a result of the ProntoForms deployment include reduced operational costs, increased productivity, and improved organizational visibility.

- **Reduced operational costs.** The FLNG eliminated various travel expenses as it no longer needed to send technicians to gather data for safety inspections. Instead, the technicians already at the facility can perform the inspections, inputting information on tablets that gets directly uploaded to a repository for off-site engineers to evaluate. Additionally, the FLNG no longer needed to rely on third-party services to manage data gathered from brown field projects. Instead, it gathered its own data since it now has the employee bandwidth and ability to feed information into a larger database.
- **Increased employee productivity.** By digitizing its forms with ProntoForms, the FLNG eliminated all paper forms for its safety and compliance processes, from release valve inspections to PPE inspections. Users report quicker form procedures as navigating forms on a tablet is easier since they are guided step by step and can easily navigate to the appropriate sections. Technicians have also eliminated the need to reenter paper notes into the system and can attach media files on the go, saving valuable time and reducing human error and rework. With the crew performing thousands of inspections, each with multiple form submissions, the FLNG now saves around 3000 work hours per year; this time saved allows crew to focus on production rather than awaiting the completion of inspections.
- **Improved organizational visibility.** With ProntoForms, managers now have a real-time view of an individual's progress with form submissions as well as a bird's eye view of all completed and outstanding work. Submitted form information can be accessed in a centralized database, allowing the FLNG to perform analytics on its collected data.

With a Power BI overlay and search engine functionality, users can generate insights on the performance of past inspections to identify trends and refine their processes. Additionally, since everyone on board the facility has either a tablet or smartphone, users now have the ability to take photos or videos if something has gone wrong and submit an observation to the ProntoForms system. In the past, users would have to remember the event and notify relevant parties. Now, the FLNG can keep a constant system of record to crowd source safety outside of typical inspection procedures.

CUMULATIVE NET BENEFIT



KEY COST AREAS

Since ProntoForms does not require integration into a customer's technology stack, the FLNG did not incur implementation costs for professional services or system integrators. Instead, the costs to set up the ProntoForms instance is included as part of the subscription. The largest cost area associated with the ProntoForms deployment involved the administrative costs of maintaining the system and time spent developing forms. Additional cost areas include annual subscription costs as well as personnel time spent executing the implementation.

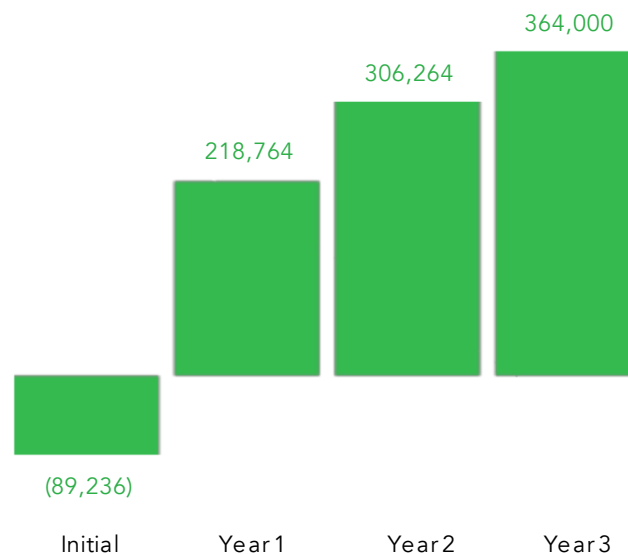
LESSONS LEARNED

This FLNG is a test run of ProntoForms and the parent energy and petrochemical company expects that it can replicate its success across its 60 other vessels. Since the platform is flexible and accessible by non-technical personnel, each vessel operation can develop forms

and configure the system to best fit their inspection processes. The FLNG has since deployed forms across its various departments: External Inspections, Instrumentation and Electrical, Production, Equipment, Laboratory, and Health, Safety, and Environmental (HSE). In addition to the quantifiable savings in increased productivity, reduced travel, and eliminated third-party services, the FLNG reports that it has streamlined safety procedures and has greater confidence in reports, granting peace of mind in potentially hazardous work environments.

Now, the FLNG is building out its analytic processes from collected ProntoForms data. For example, the facility aggregated the time it took to install and manage the upkeep and inspections of its relief boats. Using this information, the FLNG can estimate how many relief boats it can install and support with its current capacity. As the facility shifts its focus from form generation and data capture to generating insights, users expect a greater return on its ProntoForms investment in the following year.

NET CASH FLOWS




CALCULATING THE ROI

Nucleus Research analyzed the costs of software, hardware, personnel, professional services, and user training over a three-year period to quantify the FLNG's total investment in ProntoForms technology.

Direct benefits quantified include reduced spend on travel and third-party consulting services.

Indirect benefits quantified include the time savings for HSE specialists as well as the organization's internal inspectors and safety engineers. The indirect benefit is multiplied by



a correction factor to account for the inefficient transfer of time between time saved and additional time spent working.

Benefits not quantified include improved increased operational visibility, avoided work stoppages, and analytic insights that led to process improvements.

FINANCIAL ANALYSIS

Floating Gas Facility

Annual ROI: 332%

Payback period: 0.4 years

BENEFITS	Pre-start	Year 1	Year 2	Year 3
Direct	0	500,000	500,000	500,000
Indirect	0	60,000	147,500	147,500
Total per period	0	560,000	647,500	647,500

COSTS - CAPITALIZED ASSETS	Pre-start	Year 1	Year 2	Year 3
Software	0	0	0	0
Hardware	0	0	0	0
Project consulting and personnel	0	0	0	0
Total per period	0	0	0	0

COSTS - DEPRECIATION	Pre-start	Year 1	Year 2	Year 3
Software	0	0	0	0
Hardware	0	0	0	0
Project consulting and personnel	0	0	0	0
Total per period	0	0	0	0

COSTS - EXPENSED	Pre-start	Year 1	Year 2	Year 3
Software	57,736	57,736	57,736	0
Hardware	0	0	0	0
Consulting	0	0	0	0
Personnel	31,500	283,500	283,500	283,500
Training	0	0	0	0
Other	0	0	0	0
Total per period	89,236	341,236	341,236	283,500

FINANCIAL ANALYSIS	Results	Year 1	Year 2	Year 3
All government taxes	45%			
Cost of capital	7.0%			
Net cash flow before taxes	(89,236)	218,764	306,264	364,000
Net cash flow after taxes	(49,080)	120,320	168,445	200,200
Annual ROI - direct and indirect benefits				332%
Annual ROI - direct benefits only				199%
Net Present Value (NPV)				373,918
Payback period				0.4 years
Average Annual Cost of Ownership				351,736
3-Year IRR				268%

All calculations are based on Nucleus Research's independent analysis of the expected costs and benefits associated with the solution.