



Engineering company automates over 5000 reports to deliver visibility and cost savings across 47 construction sites



Industry: Manufacturing & Retail
Location: Brazil
Partner: P4Pro

GNG, a construction engineering company that specializes in building foundations were looking to automate their primary processes to increase traceability across the organization, standardize processes and create a more efficient way of working. One of the primary processes was the Daily Job Report or work reports. Most notes were made on paper or in spreadsheets, which led to a lack of visibility, which in turn resulted in difficulties in communication and billing errors.

Working with implementation partner P4Pro, GNG modeled and documented processes to create a standardized way of working with improved visibility and traceability. 47 construction sites have now been digitized and automated, with over 5000 daily job reports now automated. By orchestrating information with Bizagi and integrating with Power BI, GNG now has clear performance indicators from dashboards, helping them to make better business decisions with clear data and real-time updates. Additionally, automated production calculations and billing have helped to save time and money across the construction sites.

"Bizagi gave GNG more control of all data, real-time updates, fast resolution of issues, preventive actions and Business Intelligence Dashboards through Power BI Integration. All the benefits were rapidly implemented due to the easy way to enable collaboration, create forms, documents, integrations and reports."

George Rocha,
Executive Director, GNG

5000+ daily job reports automated	47 construction sites registered	3 months delivery of first process
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Objectives

- Automate administrative and primary processes
- Standardize processes made on paper or in spreadsheets
- Improve traceability of processes
- Integrate management tools and enhance their ERP
- Prevent billing errors from lack of visibility
- Improve equipment work hours control to reduce maintenance costs
- Improve visibility for HR regarding performance of employees to adjust pay accordingly

Achievements

- 5000 daily job reports automated
- 47 construction sites digitized and automated
- Reduction of errors as all validations implemented in forms and scripts
- Performance indicators and dashboards integrated with Power BI for Business Intelligence
- Automated status updates emailed to managers and clients, reducing communication failures
- Automated production calculations and billing
- Equipment maintenance checklists control for preventative actions
- Automated calculations for monthly payroll

Overview

GNG is a construction engineering company that specializes in drilling for building foundations. They design, manage and execute complex projects including under water and off-shore foundations, working with highly specialized machinery, which has earned them a prominent position in Brazil.

They wanted to automate primary processes, including daily job reporting and Human Resources processes such as payroll management. The aim of the automation project was to improve the way internal information was transferred between systems and departments. This would bring reliability, security, and speed to their operations.

Challenge

By automating some of its administrative and primary processes, GNG hoped to improve internal information transfers and enable traceability, which in turn would help with cost-saving.

One of the primary processes was the daily job report process. There was no daily control of production data, equipment maintenance or work reports. This was costing GNG money as advanced payments were not recognised in the system, e.g. if an employee's contract was terminated and they had a salary advance, they would still be paid even though they were no longer working for GNG.

They could also not track equipment usage hours. Their specialist machinery should be sent for maintenance according to hours of use. These maintenance appointments were often missed as vehicle use was not properly tracked, which led to unnecessary damage, and ultimately cost GNG more money to repair the machines, rather than just maintain them. Additionally, some vehicles were leased and paid for by time and mileage. But as these were also not tracked, it often led to fines for overuse.

Most of these problems occurred because there were no standardized processes. Notes were made on paper, and information was moved around the company on spreadsheets, which often got lost or was not sent to the correct people.

Solution

GNG worked with implementation partner P4Pro to develop processes to provide the visibility that would transform their operations. Using Bizagi, they mapped out and standardized processes, writing forms and scripts to allow automatic updates to SQL databases, with certain tasks validated in the system. This reduced errors and improved best practice by providing a standardized way of working.

They created a central system using Bizagi, which acted as a single point of reference. All information on specific sites and projects, including employee hours and vehicle and machinery use was uploaded centrally.

HR were provided with performance indicators and daily monitoring, which meant that they didn't have to wait until the end of the month to calculate payroll. Information for performance indicators is collected and orchestrated using Bizagi and fed into Power BI, where the information is displayed using Power BI dashboards. This has given GNG significantly more business insight than before when they relied on information written on paper.

Results

The first versions of the payroll registration and daily job report processes were rolled out in just three months. People, production, and maintenance information is now automatically reported on a daily basis, with information displayed on dashboards for users to easily understand. Informative status emails are now automatically sent to managers and clients, so everyone knows the current status of projects across the construction sites.

There have now been over 5000 daily job reports automated (5,033 in July 2021), with the Bizagi solution used at 47 construction sites, with 95 registered employees and 43 registered clients.

One noticeable improvement is the automation of the production calculation process. Rather than contract managers manually searching for information to create a bill for clients, they are able to log into Bizagi, select the necessary points from the list, and Bizagi automatically generates a bill, and sends it to the client.

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There is now a maintenance checklist as part of the daily job report, so GNG can take preventative actions to keep machinery and vehicles running effectively.

Additionally, HR now have traceability, transparency and real-time updates to calculate payroll, which not only saves them time so they can focus on more strategic activities, but also avoids any errors in payment, saving GNG money.

Ultimately, the project has helped workers across construction sites and in the central office to have more transparency and business insight thanks to Bizagi's orchestration of information, with automated processes enabling real-time updates and allowing workers to be more productive and helping GNG save money through efficiency.