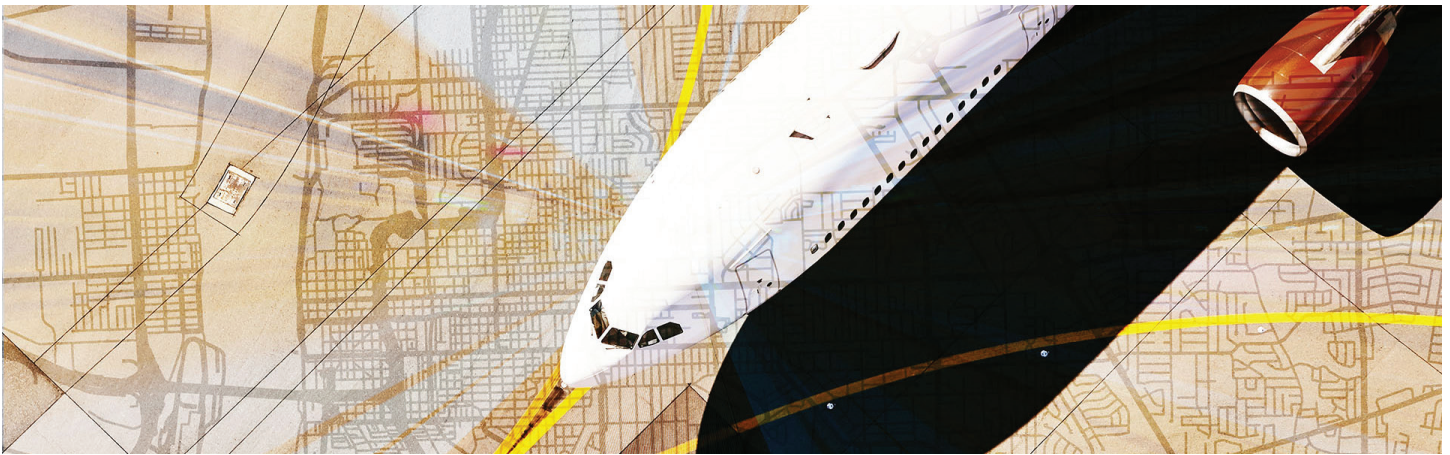


CASE STUDY

Business Intelligence Project Delivers Road Map for Data-Driven Insights at Port of Portland

A business intelligence road map developed for the Port of Portland is helping guide the port authority's transformation into a data-driven organization that will enable future budget, financial and operational planning decision-making.



Challenge

The Port of Portland, Oregon, is a complex organization with authority over operations of three airports — including Portland International Airport (PDX) — as well as four marine terminals and five business parks. Established in the late 1800s, the authority today is a major driver of the Greater Portland regional economy.

Like many similar organizations, however, the port has been hampered by an inconsistent data warehousing strategy, inefficient reporting and ineffective use of the data to make decisions.

Project Stats

Client

Port of Portland

Location

Portland, Oregon

55

SERVICE ENGINEERS

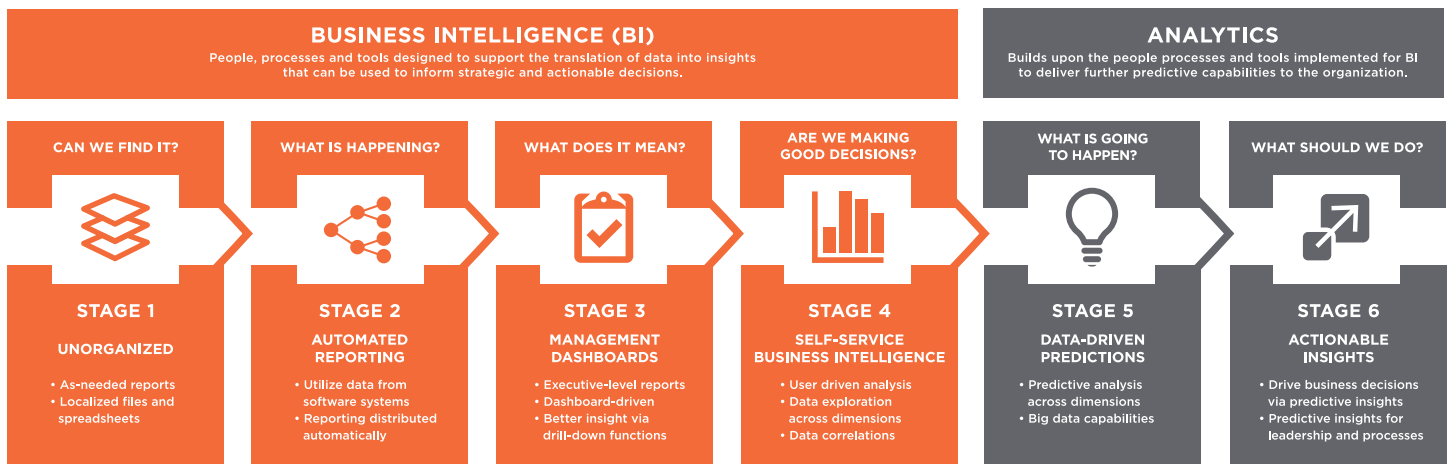


Figure 1: The process of reaching actionable insights follows this progression.

The port is a complex organization with a large portfolio of operating assets. As such, sources of financial data are especially important. Existing reservoirs of general financial data show revenue streams from concessionaires, airlines and others operating at PDX, for example, but the data has not been presented in a cohesive format necessary for optimal transparency and quick management decisions.

This has created difficulty answering typical operations and financial questions like:

- What is being spent and who is requesting resources?
- How much rent can be expected in the coming months from concessions?
- What are the trends for gate leasing by airlines?
- How will COVID-19 continue affecting our operations and what can we expect based on current case load trends?
- How many planes are landing or departing?
- Are the flights on time?
- How many people are embarking?

Based on the answers to those questions, operations and maintenance personnel can be appropriately scheduled throughout the airport.

The airport facilities team has other questions that might include the current and future demands for maintenance and the current state of critical equipment, such as that used for deicing aircraft. Deicing already leads to logistical challenges for airports, so keeping those units in service is critical to on-time operations.

Answering these and many other questions often requires a laborious process involving dozens of staff professionals spending days or even weeks manually sorting through

various sources of data, usually maintained on spreadsheets in different corners of the organization. Due to the distributed nature of the current efforts, when results could be ascertained they were not necessarily consistent across business units.

Solution

The Port of Portland needed a technology road map to enable staff to automate essential data gathering. A business intelligence program transforms data into insights to support strategic and/or actionable decisions. This road map comprises the people, processes and technology — including an estimated budget — to provide the organization with the ability to consistently answer questions for decision-makers based on available data.

The Port of Portland engaged 1898 & Co., part of Burns & McDonnell, to formulate a three-year business intelligence road map that will enable greater ease of access and better use of data. The project aimed to harvest existing enterprise data and then use it over time to make intelligent business decisions much faster. The road map identifies the skills and qualifications of people needed, the processes to be defined and the architecture and configuration of technology tools that need to be deployed.

The project began in 2021 with extensive interview sessions with a number of key people throughout the organization. The goal was to understand existing organization capabilities, maturity, technology, organization demands and existing data sources, as well as what was needed to gain more efficient access and issues that posed obstacles to efficient processes. These sessions were essential to learning about desired outcomes as well as any biases that may be creating barriers. The input was distilled to gain a deeper understanding of the specific constraints inside the organization.

The project avoided a common fallacy of defaulting to a certain technology platform or system that could be purchased to solve data accessibility issues. These simplistic solutions rarely solve the issues that are at the heart of organizational data inefficiency. They tend to leave customers with underutilized software deployed without the knowledge and resources necessary to truly harness the capability of these solutions and drive real organizational value.

Instead, the project team focused on learning the characteristics and business dynamics of the port's various operating entities. Once that insight was gained, the team proceeded to identify and recommend processes that could be executed in a time frame that was digestible for the organization.

Results

The Port of Portland is moving forward with a plan to create a business intelligence center of excellence, which will be tasked with driving the plan forward. A key goal will be to deliver needed technology and processes to enable new insights for executive-level decisions based on the most accurate facts and data.

The road map delivered in early 2022 outlines how to utilize people, process and tools to improve organizational maturity. One key recommendation involved deploying these data solutions within the cloud, due to its inherent flexibility to

purchase only the capacity that is needed as various elements of the road map are achieved. As the program grows, cloud capacity can be expanded, providing additional capabilities in a just-in-time fashion. This step would eliminate the need to purchase excessive amounts of information technology capacity for data storage and computing requirements.

The road map calls for a significant investment in people, processes and technology by the port. This investment is expected to achieve these benefits:

- Technology and process enablement.
- Consistent reporting and interpretation of data.
- Faster decision-making, based on factual information.
- Reduced labor hours spent analyzing existing data after the data is ingested and curated for end users.
- Operations and maintenance planning efficiencies.

About 1898 & Co.



1898 & Co. is a business, technology and cybersecurity consulting firm serving the industries that keep our world in motion. As part of Burns & McDonnell, our consultants

leverage global experience in critical infrastructure assets to innovate practical solutions grounded in your operational realities. For more information, visit 1898andCo.com.