SERVICE FEATURE

Better Organizational Decisions With Data Visualizations

The variety of data and the speed at which it is being created is constantly increasing. A successful business intelligence strategy takes that data and transforms it into actionable insights, enabling your organization to plan for today and the future.

Staying ahead of the competition and remaining relevant in your market requires decision-makers to move quickly. Organizations can no longer rely on weekly reports. Traditional methods of reporting, like spreadsheets and static graphs, are not viable solutions in the rapidly changing environment of business.

Instead, your organization's data must be readily accessible and easily digestible. A business intelligence (BI) strategy should be part of your data management plan. Implementing a BI solution puts the power of accurate, up-to-the-moment data in the hands of stakeholders, enabling you to quickly identify trends and diagnose problems. And in the long run, this saves time and money.

Many organizations lack a cohesive data strategy, resulting in poor quality data and disparate, siloed data sources. A BI strategy gives your organization a single source of truth and gives you the means to begin making more effective use of your business data.

Developing an approach

A successful BI strategy requires in-depth knowledge of industry and business requirements, coupled with the leading technology solutions. Arming yourself with this information — and an understanding of where your organization is on its data journey — allows you to move forward.

BI strategy road map

Becoming a data-driven organization is not an overnight process. Having a well-defined road map that captures the vision and needs of your organization is critical. BI strategy should articulate business needs and determine technical requirements while considering current and desired future state workflows to create an actionable road map that will guide your organization through the process.

Data management and governance

Reliable insights start with high-quality data. Maintaining data quality requires a well-rounded data management process that includes standards and metrics for tracking metadata

quality and monitoring user roles and access. Regular quality assurance checks are also necessary for cleaning and transforming data.

Reporting and data visualization

Automated reporting and self-service ad hoc analysis gets data into the hands of stakeholders quickly and efficiently. Predefined key performance indicators and metrics paired with robust statistical analysis help to sort the data and provide you with the insights you need on a regular basis. To enhance the value of the analysis performed, these findings need to be presented in a manner that tells the story behind the data. Tailor-made dashboards offer a cockpit view to end users, giving them a customized look at the data that is important to them.
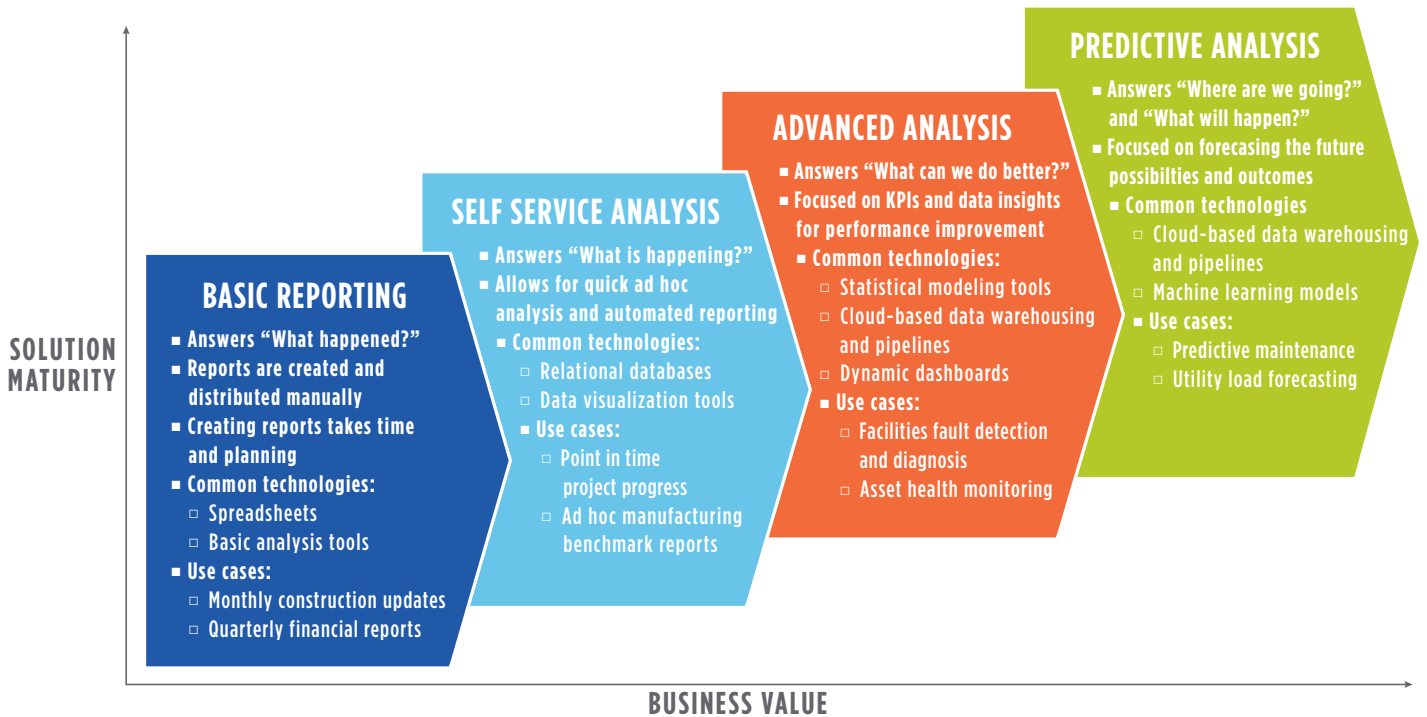
Data science and machine learning

Data science and machine learning allow for exploratory data analysis, helping you solve complex problems and maximize the value of the data being collected. Data scientists will work with you to implement and tune machine learning models to your data or create custom algorithms based on your needs. Implementation possibilities range from simple cluster analysis to predictive asset maintenance or utility load forecasting.

Cloud services

Leveraging cloud technology streamlines your BI strategy by gathering, analyzing and presenting data through a unified platform. Cloud storage options, such as data warehousing and data lakes, break down silos and provide enterprisewide access to key information. Combined with increased computing resources, analysis becomes more efficient and insights are found faster. From building a full cloud-based BI solution to migrating your data to the cloud, an experienced partner can provide you with the level of domain knowledge required.

Data security

When it comes to digital transformation, maintaining the security of your data is of the utmost importance. Having a well-defined security model that includes routine updates and testing creates confidence among stakeholder of all levels in the resiliency of that system. Security measures can be tailored to fit your organization's specific needs, from protecting data against outside attacks to implementing low-level security for maintaining confidentiality of information within your organization.

SOLUTION MATURITY

BASIC REPORTING
- Answers "What happened?"
- Reports are created and distributed manually
- Creating reports takes time and planning
- Common technologies:
  - Spreadsheets
  - Basic analysis tools
- Use cases:
  - Monthly construction updates
  - Quarterly financial reports

SELF SERVICE ANALYSIS
- Answers "What is happening?"
- Allows for quick ad hoc analysis and automated reporting
- Common technologies:
  - Relational databases
  - Data visualization tools
- Use cases:
  - Point in time project progress
  - Ad hoc manufacturing benchmark reports

ADVANCED ANALYSIS
- Answers "What can we do better?"
- Focused on KPIs and data insights for performance improvement
- Common technologies:
  - Statistical modeling tools
  - Cloud-based data warehousing and pipelines
  - Dynamic dashboards
- Use cases:
  - Facilities fault detection and diagnosis
  - Asset health monitoring

PREDICTIVE ANALYSIS
- Answers "Where are we going?" and "What will happen?"
- Focused on forecasing the future possibilties and outcomes
- Common technologies
  - Cloud-based data warehousing and pipelines
  - Machine learning models
- Use cases:
  - Predictive maintenance
  - Utility load forecasting

BUSINESS VALUE

Benefits of cloud computing

- Scalability — Cloud infrastructure scales up and down on demand to support changing workloads.

- Accessibility — Applications and data hosted in the cloud are available from nearly any device with internet access.

- Reduced operating costs — You only pay for the resources you need, when you need them, and there is no need for dedicated staff to manage applications.

Gaining effective guidance

An experienced partner will understand your core business systems and processes, then pair that understanding with big data management, data science and advisory consulting strategies. This will yield clarity and balance in the data journey. Regardless of where your organization is in developing a business intelligence strategy, it's important to engage with a team that can accelerate ideation, planning, and technology selection and deployment to transform your data into actionable insights to give you a competitive advantage.

About 1898 & Co.

1898 & Co. is a global business, technology and security consultancy serving critical infrastructure industries. We partner with clients to plan, secure and optimize their business. As part of Burns & McDonnell and our 120 years of industry experience, we understand the complexity of your asset-intensive business model, the trends impacting your industry, and the need to ground big ideas in operational realities. For more information, visit 1898andCo.com.