

## APPLICATION BRIEF

Every day, your teams make important operations and business decisions about your gas infrastructure. Operations, Engineering, Risk Management, Regulatory, Finance, Executive Management – can all benefit from the power of analytics to shape decision making.

Picarro offers a comprehensive suite of analytics tools to provide visibility into your natural gas infrastructure at a degree of accuracy not previously possible.

### A universal data warehouse to fuel transformative analytics

The Picarro solution starts with a universal analytics platform that leverages the power of real-time methane data and many other data sets. It aggregates traditional data sets such as pipeline GIS assets, weather information, gas system data such as pipe type and age, and any DIMP risk model already in use. Picarro vehicles equipped with proprietary technology are then deployed to collect methane data over the infrastructure at a precision, speed and scale not previously achievable. The result is the industry's most comprehensive and current representation of your natural gas assets - deeply intuitive, actionable and optimized for your particular infrastructure.

### Developing key business process applications and analytics

Picarro's dedicated Data Analytics team taps into this unparalleled data warehouse to create fit-for-purpose business process applications and analytics tools in order to solve your unique business challenges.

Picarro is helping utilities revolutionize their compliance survey programs with a risk-based survey framework enabled by methane data and Picarro analytics. With a risk-based survey approach, you can forecast and plan your compliance surveys and optimize labor efficiency by identifying and prioritizing areas that are most likely to develop hazardous leaks. Picarro's risk ranking algorithms can also accurately predict which Picarro leak indications are most likely to be associated with hazardous leaks to help remediate these high priority leaks first. Operators can easily assess survey productivity – for example reporting on Picarro vehicle uptime, miles of main surveyed over time, and quality control – for example by verifying all areas are adequately surveyed per prescribed protocol.



**Figure 1.** Leveraging methane data to prioritize pipe replacement at the project level earthquake to do a rapid, post-disaster survey of Napa's entire gas infrastructure.

Beyond compliance, Picarro offers a suite of analytical tools for smart, digital asset management. These tools uniquely rely on real-time methane data collected from the gas infrastructure to augment DIMP models, allowing an additional metric for prioritization of pipe replacement projects that has been shown to significantly increase avoided O&M from pipe repair. Methane emission reduction initiatives also benefit from the same data, but analyzed with a different set of analytics that produce interactive emissions heatmaps, complete with spatial leak density at various scales and a list of “super emitters”, leaks that disproportionately contribute to overall emissions.

### Breakthrough insights, delivered directly into your existing software environment

Picarro enables you to view, consume and export your analytics reports in your preferred format so that you can maximize the benefits of your existing tools and build on your existing digital environment.

Picarro’s cloud-based analytics are paired with the latest interactive apps and dashboards, powered by ESRI and Elasticsearch, that provide quick, intuitive visualization and reporting on live data that let you easily share and socialize your insights. Picarro’s reports are tailored to provide actionable results and support decision making. The data is easily exported in various formats to ensure interoperability with existing GIS and ERP tools and databases such as SAP and ESRI integrate with support existing workflow environments.



Figure 2. Live, interactive views of natural gas assets with intuitive visualization dashboards

Operators want to develop a deeper more real-time understanding of their natural gas infrastructure and are constantly evaluating and selecting the tools best suited to achieve specific goals. With extensive expertise in data science, machine learning, visualization tools, and statistical risk analysis, Picarro’s data science team can customize and implement solutions to your specific business issues and process challenges.