

Powered by the Microsoft Power Platform, Microsoft Dynamics 365, Microsoft Azure and Microsoft Office 365, EY DEEP provides an open platform that enhances innovation, supports better decision-making, improves efficiency and reduces time and cost.

The solution:

- Provides a common data model that delivers data integrity across multiple user interfaces, improving end-user confidence in a single source of truth
- Supports future digital solutions, such as artificial intelligence (AI), machine learning and predictive analysis
- Enables standard and custom analyses of complex processes for faster and more iterative engineering designs and scenario or contingency planning

EY Digital Energy Enablement Platform (DEEP) connects operational, production, financial and reporting data, providing business context to carbon management

EY DEEP connects operational, production, financial and reporting into a carbon data hub, feeding data back to business solutions.

EY DEEP brings disparate data together, using the power of MSFT connectors and other web services.

EY DEEP supports operational and managerial decision-making and analysis.

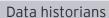
EY DEEP supports scenario assessment to help companies prepare for a transition to a clean economy.

Modern air emissions platform

Challenges

- Operational and production data are ingested to a certain extent, but are viewed from a compliance standpoint, not an operational status.
- Current systems are focused on regulatory emissions reporting and engineering calculations, have nascent AI/ML capabilities and lack modern data visualization without addressing carbon management.
- Carbon emissions may be calculated, but not with enough granularity for scenario planning or carbon management.

Operational data inputs



IoT

Gas chromatographs

Challenges

- Emissions are monitored for emissions compliance and are siloed from the rest of the operations.
- Data are captured and stored for technical emissions compliance monitoring; no business or operational context is provided.

Microsoft

Business tools

Well planning tools

Operational planning tools

Multiple SAP systems

Business planning tools

Challenges

- Business tools are currently tied to operations, but are not tied to carbon emissions tracking.
- There is no ability to incorporate carbon pricing, regulatory and market shifts, or sequestration cost into financial forecasting and planning.

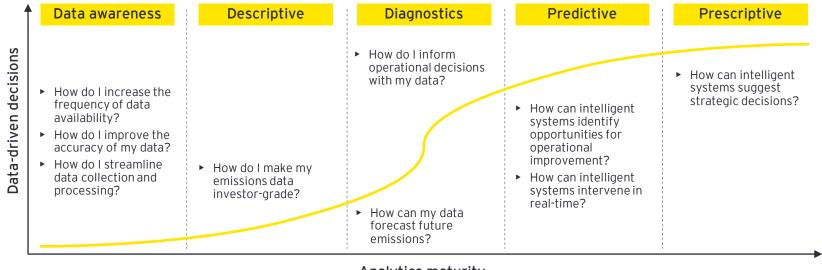
Reporting

Challenges

- Carbon emissions reporting is done quarterly at best and is reported at a very high level.
- Carbon emissions Information is displayed in only a regulatory context, with supporting systems focused on disclosure and not analysis.
- ► There is no ability to compare carbon intensity across regions or asset classes.
- There is an ability to incorporate carbon intensity or pricing in financial reporting.

The EY DEEP value proposition

What questions should I ask myself in the future?



- Implementation of a carbon data hub enables carbon data to be fed back to business solutions.
- Al agents use data from the modeling tool and data hub to look for opportunities to optimize from a carbon perspective.
- The investment in modernization and connections makes the platform scalable, evolving with the business as technology and processes become more sophisticated.

Analytics maturity

	Finance	Operations	C-suite
Current state	 Continued investment in outdated assets based on legacy processes and regulations Investments that do not account for market and regulatory shifts Reactive capital allocation siloed within business units 	 Carbon management not currently incorporated into operations 	► Lack of alignment of risk functions with decarbonization strategic objectives
Future state	 Proactive centralized capital allocation model, incorporating carbon pricing, cost of sequestration and demand shifts as variables when planning for capital allocation 	 Automated data analysis to identify and solve potential problems pertaining to carbon management and sequestration Carbon emissions and intensity as variables in operational and planning activities, and plans that are altered to optimize from a carbon emissions standpoint 	 Enterprise-wide key risk indicators aligned to decarbonization strategy Real-time dashboards with forecasting, scenario planning and initiative tracking Access to investor-grade carbon emissions data
Benefits	 Long-term value creation through rebalanced portfolio Cross-enterprise spending, aligned with strategic carbon reduction goals Ability to forecast potential financial impacts, identify investments in carbon mitigation and better understand the relationship between production, emissions and finance 	 Better insight and transparency into carbon emissions and sequestration monitoring Active role in driving increased profitability through carbon management 	► Better insight into organizational operations, with an improved ability to comprehend and communicate risks, opportunities and company initiatives to address carbon disclosure and reporting, asset planning and strategic business decisions

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As changing demand and pricing volatility transforms the oil and gas industry, companies must reshape to thrive in this new energy world. But how do you balance the immediate cost and regulatory pressures of "now" with investment in what comes "next?" EY's Global Oil & Gas team brings together the breadth of experience and talent needed to approach the entire transformation process. By considering four key pillars of change – structure and culture, customers, technology, and skills and capabilities – we can help you adapt for today and reap the opportunities of tomorrow. And together we can build a better working world.

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