



Midstream and AI: Essential, Inevitable, Still Taking Shape

By Thomas Kalb, Director
June 8, 2026

The AI boom is dynamic, politically fraught, and represents the next industrial revolution. Although this technology will continue to experience significant growing pains, it is already reshaping industry and society in ways that are currently difficult to fully comprehend and, ultimately, in overwhelmingly positive ways.

Companies that fail to learn how to create value from AI will steadily lose competitiveness and, over time, risk becoming obsolete. With this perspective in mind, I interviewed senior executives from medium-to-large midstream companies, an engineering consulting firm, and a technology company to better understand how organizations are responding to this AI-driven industrial challenge.

The responses ranged from transformative enterprise-wide adoption strategies that require employees to embrace AI applications to more limited, engineering-led deployment models focused on iterative application and operational validation.

Every respondent recognized that AI adoption will be essential to maintaining long-term competitiveness. In practical terms, however, the midstream sector remains in an early exploratory phase of AI deployment, and broadly accepted best practices have yet to emerge. Nearly every organization is evaluating opportunities to improve operational efficiency, enhance decision-making, strengthen system reliability, and improve financial performance through AI-enabled technologies.

Although tangible, large-scale success stories remain limited and many anticipated benefits remain more aspirational than proven, several respondents pointed to emerging areas of measurable value creation. Three respondents, for example, said AI tools helped reduce headcount requirements for specific functions that historically depended on manual data management and analysis. Importantly, they described this shift less as a labor-elimination exercise and more as an opportunity to redeploy personnel into higher-value areas where the company needed additional talent and expertise.

One observation from the interviews was the difference in adoption posture between traditional pipeline operators and the technology company. While pipeline operators appeared focused and deliberate in their AI assessment and deployment strategies, the technology company stood out as the leader in both adoption and strategic execution.

This difference is understandable. Technology companies compete in markets where maintaining leadership in emerging technologies is often essential to near-term survival. Pipeline companies operate long-duration infrastructure assets within highly regulated markets, where stability, reliability, and safety naturally slow the pace of change.

The midstream industry may benefit from learning more aggressively from firms that develop their operational technologies, automation platforms, and control systems. Those companies are likely to provide an early indication of where AI applications can generate meaningful operational and financial value. Midstream companies should also closely monitor their competitors for news on successful AI adoption impacting operating performance.

While the AI lifecycle remains in its early stages, it is already evident that most midstream companies largely view AI as essential to maintaining future competitiveness and are working to determine how to deploy it effectively. Some AI applications will prove transformative and highly profitable. Others will generate more hype than value. As a result, the industry is likely entering a prolonged period of experimentation and incremental deployment before the most effective use cases fully emerge.

Eventually, AI adoption in the midstream sector will mature to the point where the technology becomes operationally routine and commercially proven. Operators will know technological stability has arrived when they see the emergence of consultants promoting standardized “AI best practices” across the sector.

Thomas Kalb is Director of the Coastal Bend Midstream Program at Texas A&M Corpus Christi. CBMP is a midstream-focused educational and research program housed in the College of Engineering and Computer Science at TAMU-CC. CBMP works with TAMU-CC faculty and leadership to connect the university with midstream industry participants, including operators and service companies, professional organizations, and the U.S. Department of Transportation. Learn about CBMP at cbmp.tamucc.edu/.