A large industrial factory complex at sunset, with numerous smokestacks and pipes illuminated by warm orange and yellow lights. The sky is a mix of orange, red, and blue. Overlaid on the scene are various digital elements, including a network of glowing blue lines and nodes in the upper left, and a semi-transparent technical drawing or blueprint on the right side.

**MAXIMIZING DIGITAL
TRANSFORMATION ROI
IN MANUFACTURING:**

MAPPING A PATH TO POWER

IF TECHNOLOGY MAKES US MORE EFFICIENT, **WHY IS DIGITAL TRANSFORMATION SO CONFUSING?**



IT'S THE PERENNIAL QUESTION:

With so many incredible, game-changing technologies like AI and simulation available, why is smart manufacturing shrouded in uncertainty?

Digital transformation goes beyond modernizing the process manufacturing landscape – it offers higher profitability, improves quality control and compliance, and increases team productivity and customer satisfaction. By intelligently wielding Industry 4.0 tools, engineering and operations leaders eradicate the inefficiencies that consume their time and profits, enabling them to focus on big-picture innovation.

Yet, for asset-intensive industries such as pharmaceuticals, petroleum, and utilities, these new tools have arrived when most organizations are in transition. Often, they are moving from document-driven environments to data-driven environments and replacing legacy equipment with newer, environmentally friendly assets. Their workforce is changing, too, with senior workers retiring and a new generation of “digital natives” coming on board who expect to find modern efficiencies in the workplace.

Juggling competing demands, these manufacturers may hope their journey to a digitally efficient future is a matter of simply buying new technologies. They might believe they need only digitize their current documents and impose existing processes on new platforms. But often, those efforts lead their teams into confusion and disappointment – efforts that become part of the [70% of digital transformation projects that fail](#).



Eventually, those manufacturing leaders realize that **true digital transformation is a multidimensional journey requiring deep analysis and overhaul of team structures, workflows, equipment, and operations.** In short, it's a journey that often requires a helping hand. To avoid common pitfalls and maximize hidden advantages, digital transformation yields the most significant rewards for process manufacturers when guided by the right expertise.

DIGITAL TRANSFORMATION IN THE MANUFACTURING MARKET IS EXPECTED TO GROW FROM

USD \$ 367.60

BILLION IN 2024 TO

USD \$ 876.10

BILLION IN 2029,

according to [Mordor Intelligence](#).



ROADBLOCKS TO THE DIGITAL REVOLUTION

TECHNOLOGY CONFUSION

Industry 4.0 is the age of artificial intelligence, the Internet of Things, digital twins, machine learning, and other smart manufacturing innovations. Theoretically, these tools should empower a busy process manufacturing team to create innovative products and accelerate output. In reality, most teams are unsure where to start or how severely the implementation could disrupt operations.

COMPLIANCE CHAOS

Many asset-intensive manufacturers rely on a mix of contractors, suppliers, internal teams, and partners – all of whom use different systems and workflows, making it challenging to document compliance with state and federal regulations.

DISORGANIZED INFORMATION

On any given day, a maintenance worker may be unable to find recent repair details, a field team may be unable to locate the correct work order, and an engineer may be unable to find the correct data after hours of searching through information collected from different channels, internal systems, and third-party sources.

DECARBONIZATION CHALLENGES

Many companies want to hit the Net Zero goals of their decarbonization programs – but transitioning out of non-sustainable assets and into new ones is often more complex than anticipated. Sustainability leaders are frequently slowed down by missing documentation and siloed data, making it challenging to meet their targets.

OUTDATED PROCESSES AND TOOLS

Ad hoc processes and legacy tools can become cumbersome over time. The intricacy of operations makes it difficult to scale cohesively, while the institutional knowledge of its long-term staff isn't documented anywhere. New workers are frustrated by outdated tools and illogical workflows, especially when they cannot complete their duties without spending hours searching for information.

SCALING SLOWDOWNS

Many manufacturers plan to add new product lines or expand into new plants, but implementing new processes, worker safety protections, and change management initiatives is only possible with standardized processes and the right collaboration tools.

DIGITAL DISASTER: WHEN TRANSFORMATION GOES WRONG

Viddaco* is a public utility responsible for providing electrical power to millions in a hot Southwest city. Millions of households and businesses depend on their power – but with their grid badly in need of modernization, Viddaco leaders have an urgent wish list of projects to complete. They know that a failure in either of their two older plants could put tens of thousands of households out of power. In a city where temperatures can reach 115 degrees or higher, just one malfunction could cause loss of life and bring years of challenges with regulators.

In addition to diversifying into different power sources, Viddaco leaders want to upgrade their technology stack and solve inefficiencies like projects running over budget, difficulties finding critical asset information, and information inaccuracy. Some veteran workers are retiring, and the facility wants to be an attractive workplace for the new generation of workers. Finally, they must hit a deadline to reduce emissions radically.

*Names changed to protect the innocent.

The leaders plan a digital transformation roadmap but run into trouble.

- Their first move is to invest in exciting new tools such as simulation and digital twins. They aim to reduce product design costs and use artificial intelligence to improve data integrity. However, their IT team doesn't know how to deploy these tools or integrate multiple systems. The projects run over budget and over deadline; employee adoption is low.
- As the company transitions from a document-driven environment to a data-driven environment, leaders realize that 500,000 documents and drawings are trapped in disconnected systems, from printouts to engineers' personal hard drives. They long to create a unified data source, but their data volume is too high and complex. Their handover processes consist of data dumps that force their team to stop all work while they verify data accuracy.
- The company acquired another facility with much-needed equipment to replace obsolete grid components. However, the plant manager realizes they are missing documentation for thousands of pieces of equipment, from spec sheets to certificates to instructions. They must now reproduce the information, which could consume thousands of engineering hours.

The company has yet to meet any of its digital transformation goals, but its operations, maintenance, engineering, and IT teams are already exhausted. Viddaco leaders conclude that they simply don't have a strong enough foundation to execute a beneficial transition. At the same time, they can't afford the cost of inaction.

ACCORDING TO [ITIC](#), 86% OF MANUFACTURING FIRMS STATE THAT AN HOUR OF DOWNTIME IN THEIR SYSTEMS OR EQUIPMENT CAN COST AT LEAST **\$300,000.**

JOURNEY INTO **SMARTER DIGITAL MANUFACTURING**

Viddaco's plant manager takes a step back to analyze how other asset-intensive manufacturers are digitizing their operations. She discovers that organizations that map out and follow a change management strategy are [6 times more likely to meet their digital transformation goals](#).

She enlists the support of Kinsmen Group, whose **Digital Asset Transformation Model (DATM)** engagement guides the company through the modernization journey and into higher efficiency and productivity.

Together, Viddaco and Kinsmen Group achieve multiple transformations.

They cleanse, control, and contextualize their data.

Even across different systems, teams, and facilities, Viddaco now has a unified data source. Their new system can extract mission-critical data, contextualize it quickly, and translate it into meaningful insights. Now, Viddaco leaders can spot processes that aren't working, find new ways to optimize plant operations, and identify cost-saving opportunities. Because they have removed information silos, visibility extends across the organization. All data and documents are now digitally connected, organized, and available to everyone at any time.

Standardized processes and audit trails make compliance easier.

New processes enforce conformity and consistency across all teams and locations, with all practices aligned with state, federal, and industry regulations. New monitoring tools help confirm data integrity, operational safety, asset maintenance, and documentation fidelity. This makes it much easier for the team to prepare information for FERC, NERC, CEII, and other regulatory bodies, ensuring that information is trackable, current, accurate, and easy to find.

By documenting institutional knowledge, it's easier to onboard new workers.

Capturing the operational know-how of the most senior staff members has helped new workers get up to speed quickly. Workplace safety and productivity are stronger – and so is talent retention, thanks to improved worker morale.

Assets are brought online faster.

Unlike the document issues with their last acquisition, Viddaco now uses AI to identify missing components before finalizing a sale, ensuring they receive a complete and clean data set for immediate use.

More intelligent data analytics, artificial intelligence, and machine learning unlock innovation.

With everyone accessing the right content at the right time, teams drastically reduce costly errors, collaborate more productively, and design more energy-efficient, sustainable assets.

They improve asset reliability and customer service.

Previously, Viddaco's maintenance teams spent hours searching for work orders or asset details. Now, with accurate data always accessible, workers maintain the grid efficiently, avoiding unscheduled downtime and emergency maintenance.

Decarbonization initiatives are on track and on time.

The sustainability team implements new asset information faster and at a lower cost, replacing legacy technologies with eco-friendly equipment. They now accurately measure the performance of new assets, helping them make more intelligent energy and consumption decisions and document their successful carbon emission reductions.

Worker safety improves.

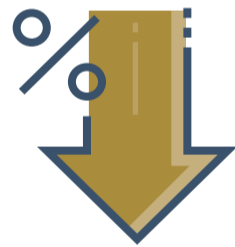
Standardized training combines institutional knowledge with current asset info, speeding up onboarding and ensuring correct safety and operational training. As a result, workplace injuries decrease.

Triumph!

This time around, the digital transformation is a success. Viddaco's grid is modernized, and its power generation is diversified. Its facilities run more efficiently, and the new technologies Kinsmen Group introduced have improved innovation and collaboration. Most importantly, the utility company can guarantee better customer reliability and safety.

DATM: THE PATH TO DIGITAL MATURITY IN MANUFACTURING

Kinsmen Group is the trusted partner to today's leading asset-intensive manufacturers, guiding them through smooth, holistic, end-to-end digital transformation. Digital Asset Transformation Model (DATM) engagements offer expert guidance from the first assessment to ongoing support, helping your team leverage Industry 4.0 technologies to improve uptime, decision-making, compliance, and plant operations.



TYPICAL COST REDUCTIONS ACHIEVED THROUGH A DATM ENGAGEMENT

30%

EMPLOYEE
PRODUCTIVITY
EFFICIENCY SAVINGS

6%

CAPITAL PROJECT
HANDOVER
IMPROVEMENT

UP TO
10%

OPERATIONAL
EFFICIENCY GAINS

DISCOVER THE **DATM** DIFFERENCE

Technology expertise, robust solutions

Our playbooks are built on decades of experience, but we tailor strategy and practice to your vision. Our team can zero in on your precise needs, helping solve your unique challenges.

Faster ROI

Too often, organizations embark on a 5 to 10-year roadmap only to find their original goals obsolete halfway through. DATM engagements move quickly and holistically, staying aligned with your organization throughout the process.

Depth of manufacturing experience

Kinsmen Group serves only asset operators in the process manufacturing space. Our teams are experts in the challenges, nuances, and solutions of information management in engineering, operations, and maintenance.

Lifetime value

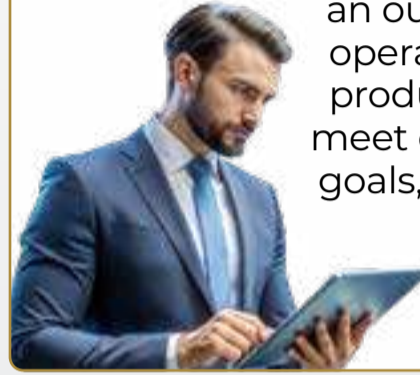
Kinsmen consultants implement best-in-class solutions focusing on your organization's lifetime value. We think ahead when transforming your digital ecosystem to carry you into a profitable future.

DATM TRANSFORMS TEAMS

Engineering: Accurate and available data helps engineering teams optimize design, modification, and production – accelerating time to market.



Operations: Mission-critical data is always available, even in an outage, helping operations teams hit production targets, meet decarbonization goals, reduce costs, and increase revenue.



Maintenance: Workers can always access up-to-date data even in the field, preventing equipment failures and minimizing downtime.



IT: DATM streamlines and upgrades the tech stack, creating a single source of data truth and implementing advanced new tools with support that lightens the load on IT.



The Kinsmen Group conducted a short information maturity assessment and uncovered the current state of our information. We had no idea where to start making improvements, but with their help, solid methodology and plan of action, we are well on our way to success..

— Engineering Manager, Chemical Manufacturer



THE DATM JOURNEY

Kinsmen consultants help you maximize digital transformation

ROI in three steps:

Strategy

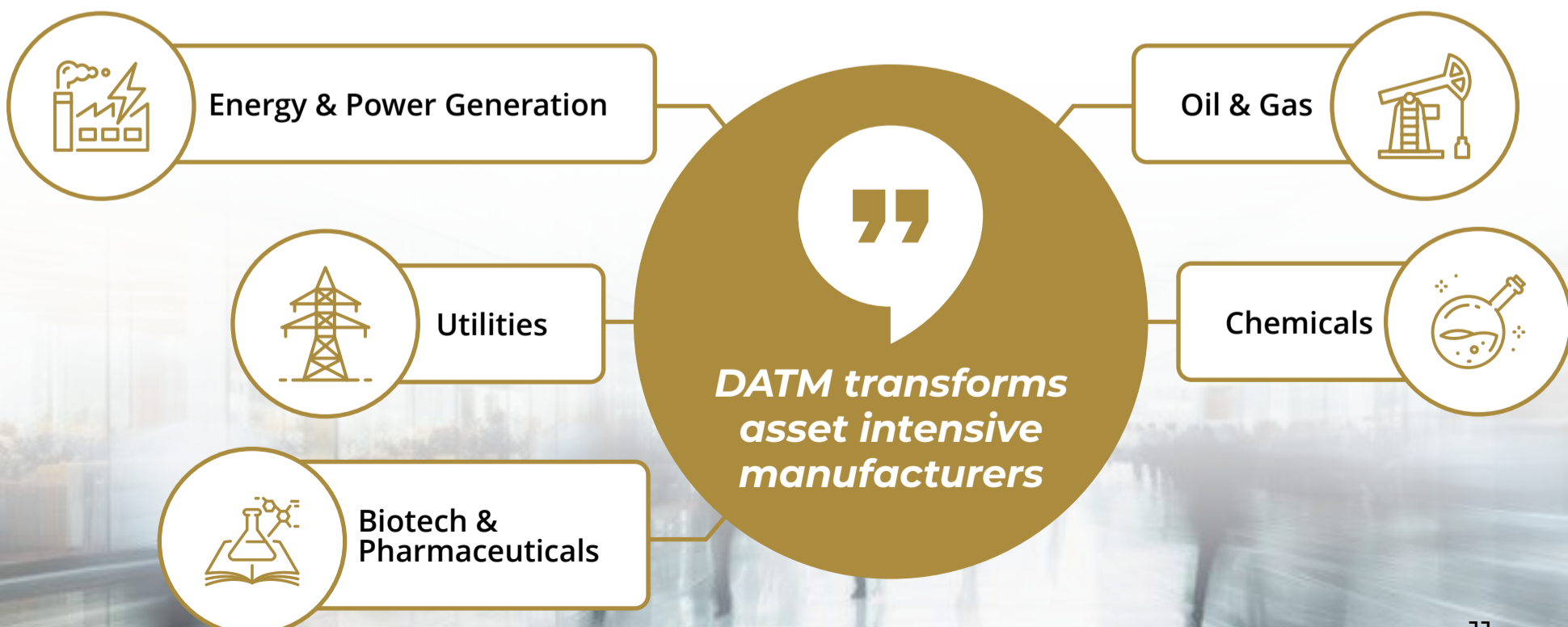
Assess business processes, organizational structure, systems, and technology infrastructure to formulate a targeted action plan that effectively tackles information chaos, resulting in newfound insights and increased ROI derived from your data.

Solution

Deploy innovative solutions to streamline data accessibility throughout the asset lifecycle, ensuring the right information is available to operate assets safely and reliably. Create a digital ecosystem based on Industry 4.0 that transforms your data into your greatest asset.

Success

Elevate your digital readiness by ensuring adoption through comprehensive training, onboarding, system support, and effective change management services. Stand by your side from the outset of your digital journey, guiding you toward success.



SMART MANUFACTURING SAVINGS



**A RECENT DATM
ENGAGEMENT IS
PROJECTED TO REALIZE
THE FOLLOWING ROI**

OPERATIONAL EFFICIENCIES:

\$7 MILLION

STAFF PRODUCTIVITY:

\$6.5 MILLION

**COST REDUCTION AND
ACCELERATED PRODUCTION:**

\$2 MILLION

LAUNCH YOUR PATH TO DIGITAL SUCCESS WITH AN 8-WEEK DATM ASSESSMENT

WHERE ARE YOUR ROADBLOCKS?

**WHAT AREAS OFFER THE HIGHEST
POTENTIAL FOR IMPROVEMENT?**

**WHICH TECHNOLOGIES CAN BEST SERVE
YOUR NEEDS?**

No matter where you are on your digital journey, our cost-effective DATM assessment will evaluate your current position and provide a comprehensive report charting your path to success.

ABOUT KINSMEN GROUP

The Kinsmen Group was created to simplify the complexities of information management through specialized solutions that transform how companies use data.

As a team of engineering, operations, and maintenance information veterans, Kinsmen Group helps organizations transform their information into high-value, contextualized insights that accelerate their success in the digital era.

From our hands-on industry experience and carefully selected technology partnerships to our vigorous project delivery methodology, our team offers a holistic, cost-effective, and user-friendly roadmap to digital transformation. Our holistic approach pairs depth of experience with an agile ability to customize solutions for your individual needs.


With locations in the U.S. and the U.K., we work with leaders in the most asset-intensive industries worldwide, helping each organization achieve digital mastery and groundbreaking innovation.

**INDUSTRY
INFLUENCE**
GLOBAL REACH

100%
CUSTOMER SUCCESS

1K+
SOLUTION IMPLEMENTATIONS

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