EBOOK

Accelerating your journey with Octave: Design

Facing the challenges of industrial facility design

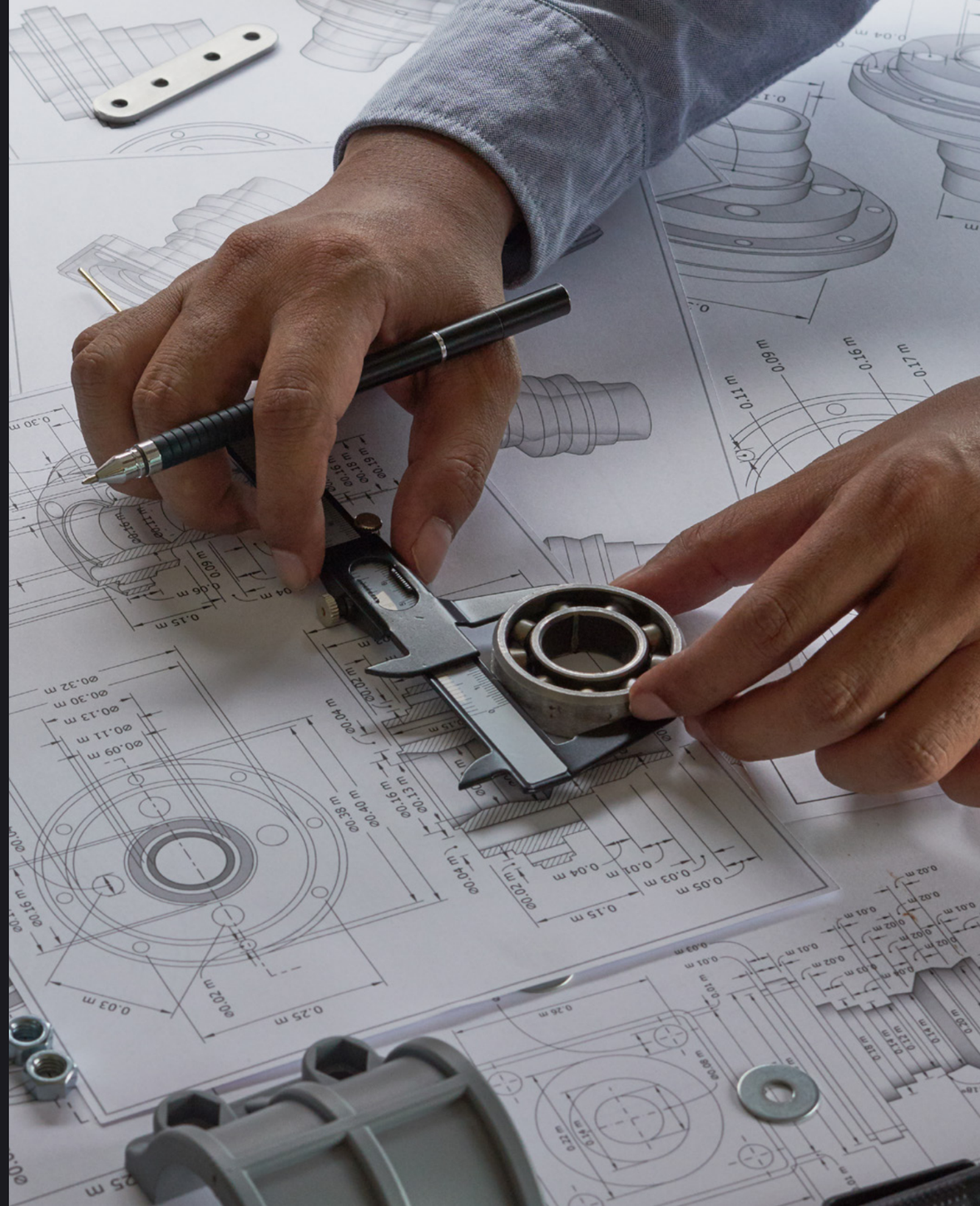
Meeting schedule is always paramount for any Industrial facility design project but this must be done while delivering benefits that address the key challenges in the asset lifecycle—improving margins, reducing labor costs, increasing quality and utilization rates, while also providing out-of-the-box integrations that improve downstream team visibility and collaboration.

Asset-intensive facilities are some of the most complex projects to design, build and operate, but are often mired in the past with manual, paper-based processes that contribute to inaccuracy, inefficiency, poor quality and ultimately smaller margins.

From conceptualization to completion, the plant design journey is filled with challenges and obstacles to overcome such asproject costs, safety concerns, environmental regulations, increased efficiency and much more.

Digitalization is the key, but if digital tools are lacking or poorly integrated, bad design practices may continue to contribute to challenges with asset efficiency, performance and safety. Business leaders need better tools to develop facility layouts that optimize workflow and enable data-driven decision making, while also allowing organizations to monitor and track assets more effectively to ensure they continue to meet design goals.

As financial and competitive pressures continue to mount, smarter, data-driven design becomes more vital for delivering on project and portfolio strategies and goals. Design must enable the use of virtual 3D models of industrial facilities that improve design review and collaboration, bolster the quality and efficiency of asset execution, operation, maintenance and improve sustainability through access to real-time data on energy consumption that can be compared to design data.



Driving intelligent and sustainable design projects

Octave has a long history of supporting and improving the design and engineering of asset-intensive projects within industrial facilities sub-ecosystems and provides solutions that offer actionable insights to enable better decision making and intelligence not only in the design phase, but across the whole lifecycle.

With Octave, you can transform older, paper-based and other manual or siloed processes that take full advantage of artificial intelligence, rule checkers, data and design reuse while providing visual feedback and collaboration in simple to use interfaces for data consumers.

From reality capture capabilities that bring physical and geospatial environments into a digital format that ensures design accuracy, to visualization through intelligent 3D tools that enable silo-free plant design and engineering, collaboration and reduced time to market, asset owner operators and engineering, procurement and construction (EPC) firms both benefit from the digitalization of these processes.

Capturing new and existing design knowledge to be used on future projects represents a key competitive edge. Octave's design solutions preserve the integrity of design data and enable reuse for future projects based on existing designs.

Octave also integrates planning data from diverse sources to help streamline design and engineering for more intelligent and consistent plans and models. Leveraging this 3D design data from project planning to execution, and for ongoing operation and maintenance of assets improves asset performance, quality and safety throughout the lifecycle.

Leveraging the full potential of your design data

With flexible solutions that work seamlessly across the entire industrial asset lifecycle, Octave's ability to deliver digital your way unlocks increasing value in the processes you need to modernize the most, so you can achieve the priority outcomes and project schedule delivery your business needs to succeed.

Standardize work processes for greater efficiency and consistency

- Standardize work processes to improve the quality of project deliverables and achieve growth in workforce performance while minimizing your overhead around software footprint and management.
- Achieve preferred contractor status, schedule, workforce utilization while providing out-of-the-box integrations that improve downstream team visibility with production of consistent project-to-project deliverables without all the administrative hassle.

Maximize the impact of your technology investments and digital initiatives

- Address the inherent complexity and risks involved in industrial projects by minimizing the use of manual, often paper-based work processes that contribute to inaccuracy, inefficiency, poor quality, missed schedules and ultimately smaller margins.
- Leverage the intelligence of modern design solutions to digitally transform the asset lifecycle where it matters most or to improve the entire lifecycle of asset-intensive projects.

Improve downstream transparency and collaboration

- Leverage data-driven design to uncover new opportunities for improving efficiencies and enabling better collaboration that helps improve project delivery and overall quality.
- Eliminate siloes during project handovers with easily accessible real-time data on safety, regulatory compliance, uptime and budget for timely decision making while improving quality and reducing engineering design time.

Gain actionable insights that enable better decision making across the asset lifecycle

- Generate new insights about the design to enable faster, more accurate decisions and actions that lead to improvements in safety, quality, efficiency and productivity.
- Add value throughout the entire project lifecycle with insights into project performance that can be extended and leveraged by downstream teams to better facilitate improved quality, reduction of rework and meet schedule deadlines.
- Reduce the prevalence of reactive projects changes by gaining more data-driven insights about 'why' changes have occurred and the impact those changes have on materials and schedules.

"Octave empowers you to construct and operate more profitable, safe and sustainable industrial facilities."

Bringing it all together: Your Smart Digital Reality

Maximizing the value of these new digital capabilities is your Smart Digital Reality, where Octave delivers a unified, role-based view of the physical and digital realities across your industrial facilities.

This integrated view delivers improved real-time visibility into asset performance, safety, security and quality, to enable better-informed decisions that increase productivity, operational integrity, profitability and sustainability of your industrial facility projects.

It is fueled by the digital backbone, our engine for interoperability, intelligence and innovation that connects data across the entire industrial asset lifecycle, enabling you to achieve more with digital twins, third-party software and legacy systems.

Your Smart Digital Reality (powered by Octave) will enable many areas that all contribute to on-time schedule delivery with the highest quality:

- Improved collaboration
- Accelerated innovation
- Smarter decision-making
- Increased productivity
- Predictive insights into potential disruptions
- Improved operational integrity
- Increased sustainability of your industrial facilities
- Heightened security against external or internal threats
- Greater resilience and more asset uptime
- Safer facilities and fewer accidents

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property, and assets– for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency, and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.