The Civil Engineer's Edge: Overcoming Site Design Challenges with OpenSite®+

Accelerate land development with AI-powered capabilities and integrated workflows

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You Know Your Site Better Than Anyone. Now, It's Time Your Tools Did Too.

Let's be honest, you've walked enough sites to know that planning is everything.

In civil engineering, waiting to fix problems later can lead to delays, rework, and unexpected costs. You've seen how quickly a grading or drainage issue can throw off an entire project schedule. That's why proper site design and planning isn't optional—it's essential.

OpenSite+ gives you the power to design with foresight. With AI-powered features and integrated workflows, you can explore thousands of optimized site designs, catch conflicts early, and make informed decisions before construction even begins.

Because the best site designs happen before the dirt moves.
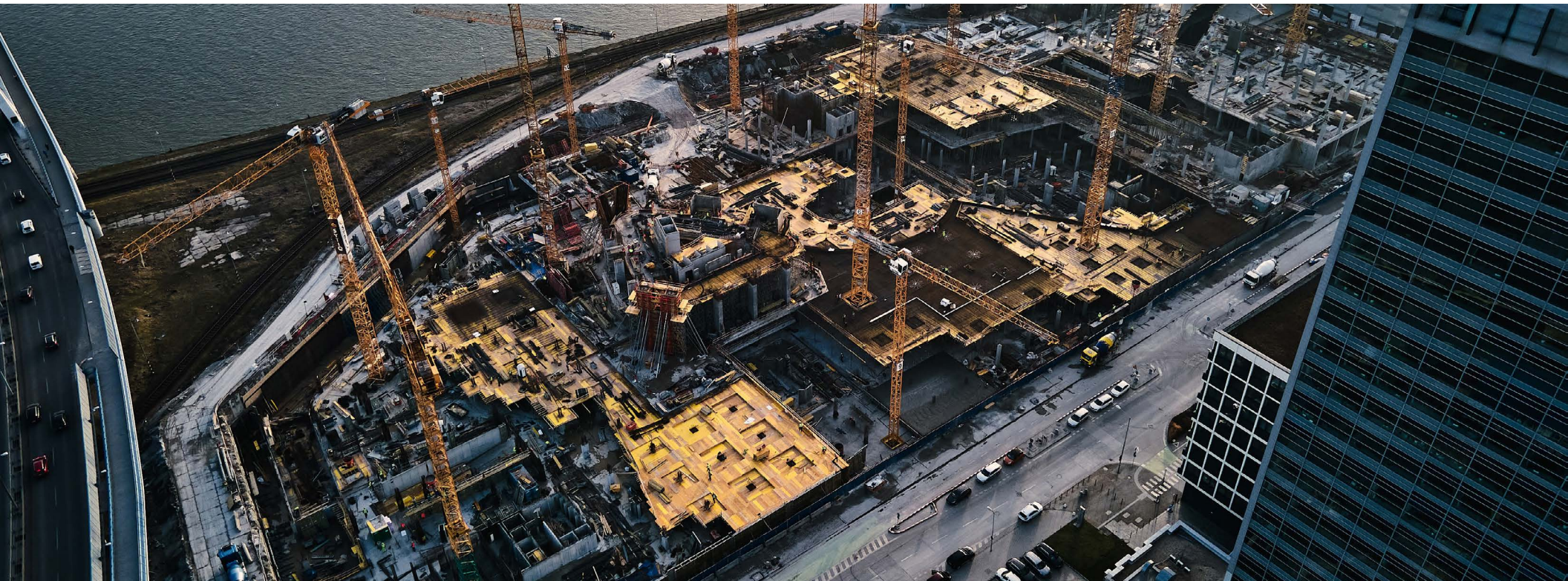
The Complex World of Site Design

**You're not just designing a site. You're solving for everything that could potentially go wrong.**

Site design and land development have always required accuracy, but today's civil engineering projects introduce new layers of complexity. With tighter project timelines, stricter budgets, and higher expectations, the environment around your work has evolved, even though the core task of shaping the project site remains the same.

If you're still relying on traditional 2D CAD workflows, you've likely felt its limitations. Manual drafting takes time, and disconnected tools make it harder to share data or adapt quickly. Rather than focusing on designing and optimizing your site, you're stuck repeating tasks that should be automated. It's not just inefficient; it's tedious and frustrating.

Then there's the workforce challenge. With fewer skilled engineers entering the engineering field and more experienced ones retiring, you're now being asked to do more with less. You're not just designing anymore. You're drafting, coordinating, troubleshooting, and often managing multiple moving parts of a project. Remote collaboration adds another layer of complexity, making it harder to keep teams aligned under tight timelines and project deadlines.

External pressures are also intensifying. Regulatory requirements are becoming more strict. Clients are expecting a higher level of detail, digital deliverables, and faster turnarounds. Broader forces at play, such as climate change, urban expansion, and aging infrastructure, are fundamentally reshaping the expectations placed on site performance. You're now expected to design for resilience, sustainability, and long-term value while staying on schedule and within budget.

If your current tools and processes feel like they're holding you back, you're not alone. Many civil engineers are becoming frustrated by inefficiencies, communication gaps, and fragmented workflows. **You're doing the best with what you have, but what if your tools could work smarter?**
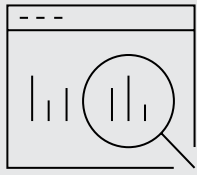
What if your design software helped you identify risks right from the start?
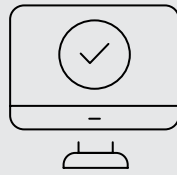
What if your software evaluated a site design thousands of times in minutes?
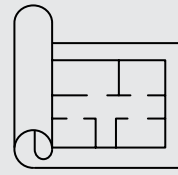
What if your site plan gave you the clarity to move forward with confidence?

That's where OpenSite+ comes in.

Introducing OpenSite+:
The Purpose-built Solution

You wouldn't build a site with the wrong equipment, so why design one with the wrong software?

OpenSite+ was created with one purpose: to provide civil engineers with a smarter, faster, and more intuitive way to design sites. It's not a generic software platform trying to fit into your design workflow. It's a solution built specifically for site engineering, powered by AI, grounded in real-world challenges, and focused on helping you deliver better results to your clients with less effort.

Rather than spending hours redrawing CAD graphics or wrestling with disconnected software, OpenSite+ helps you automate the tedious parts, grading, annotations, plan production, so you can focus on what really matters: making smart design decisions early, when they're easiest to act on and least expensive to change.

The application is more than just a time-saver. It's a shift in how site design gets done. With OpenSite+, you can explore layout options in minutes, not hours. You can model in 3D while working in a familiar 2D environment using smart site objects that dynamically interact. Most importantly, you can move from concept to final design in one connected software platform without bouncing between tools or losing time to file conversions.

For firms designing commercial, industrial, or residential sites, OpenSite+ delivers a competitive edge. It helps you respond faster, collaborate better, and meet rising expectations with confidence. When your tools are built for the job, your team doesn't just work faster. They develop better designs from the start.

"This is the first time I've seen software think like an engineer."

Kyle Rosenmeyer, Model-Based Design Leader, VHB
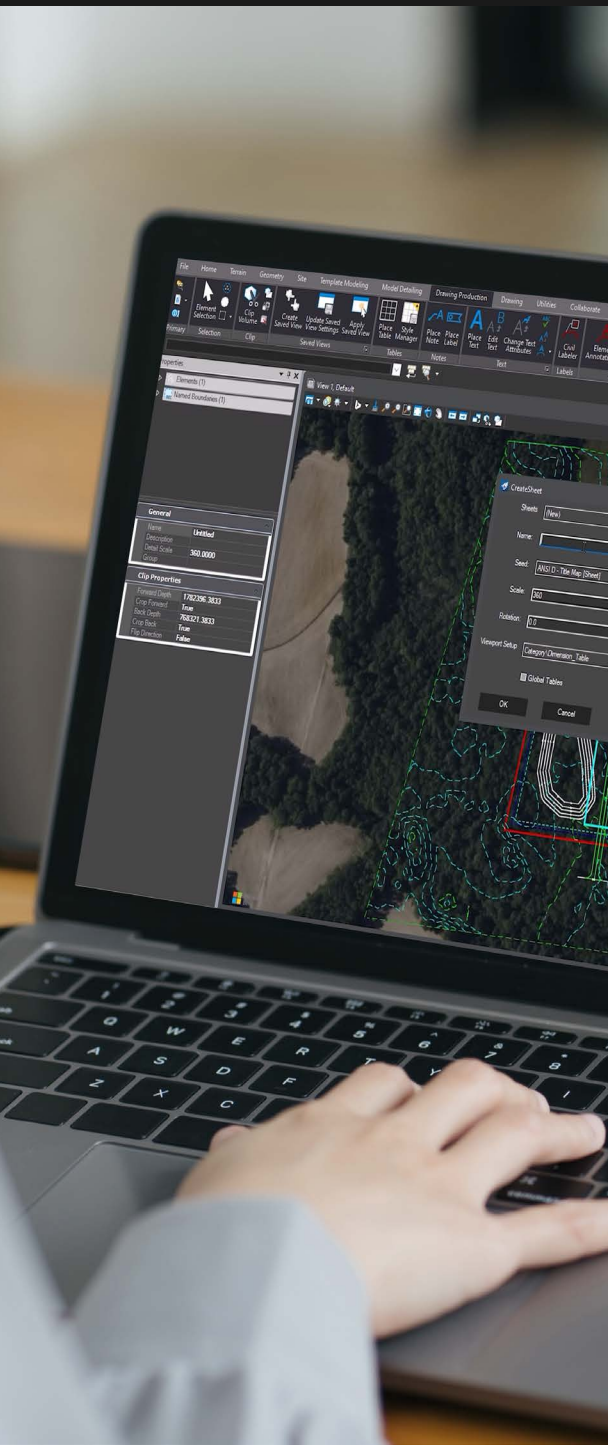
Built to Solve What Slows You Down

You've faced the obstacles: design rework, grading surprises, misaligned teams, and more. **What if those same challenges become your competitive edge?**

OpenSite+ doesn't sidestep those problems; it empowers you to prevent them before they start. Accelerate your workflow, design with intelligence, and deliver optimized site designs up to ten times faster using AI-driven capabilities. With tools purpose-built for design, every obstacle becomes a chance to excel.

Deliver construction drawings faster

Engineers spend countless hours labeling, annotating, and sheeting, tasks that can be repetitive, manual, and worse, prone to error. These bottlenecks slow down project delivery and pull focus away from higher-value design work.

OpenSite+ changes that with AI-powered drawing production. Annotations, labels, and sheets are automatically generated based on your design, dramatically reducing the time spent on these tasks. Instead of redrawing and rechecking, your team can focus on refining designs and delivering better project outcomes.

By accelerating the transition from design to documentation, OpenSite+ helps teams deliver construction drawings faster, freeing up time, improving accuracy, and keeping projects on schedule.

> **"I often get asked the question about AI and will it replace my job, his job, her job. And I think that [with] AI, I don't really see it replacing jobs. I think it changes jobs. One of the best sorts of quotes that I heard was that, again, those that embrace AI will advance much more quickly in the jobs of the future."**
>
> Joe Viscuso, Senior Vice President and Director of Strategic Growth, Pennoni

Design Smarter with Bentley AI copilot

Accessing critical design information—such as parking counts, zoning requirements, or building square footage—often requires digging through files, spreadsheets, or emails. It's time-consuming, interrupts your workflow, and increases the risk of missing key project details.

With Bentley AI copilot, you can simply ask for help finding the information you need. Whether by typing or speaking, you can use natural language to retrieve project-specific data or execute design tasks instantly. Need to check zoning compliance or update a parking layout? Just ask and copilot delivers evidence-based answers directly from your project files.

More importantly, you'll have the ability to go back into a project and retrace why it was designed in a certain way. It provides a helping hand to the overall workflow and allows for multiple users to see the reasoning behind a design.

This capability means faster, more accurate design decisions. Engineers can reduce manual effort, avoid costly oversights, and spend more time optimizing site performance while staying in flow.

Optimize earthworks efficiently with a click

Let's face it: Grading decisions can make or break your project's budget and timeline. Traditional methods rely on a few manual trial-and-error adjustments, which often miss the most cost-effective solution. The result? Unnecessary earth movement, higher costs, and increased risk.

OpenSite+ solves this with one-click earthworks optimization. The tool evaluates thousands of design iterations in minutes to find the most efficient grading solution, balancing cut and fill, minimizing haul distances, and aligning with client constraints.

The result is a site layout that's not only functional but financially optimized. Teams can reduce material waste, cut costs, and accelerate timelines, delivering smarter sites with less effort.
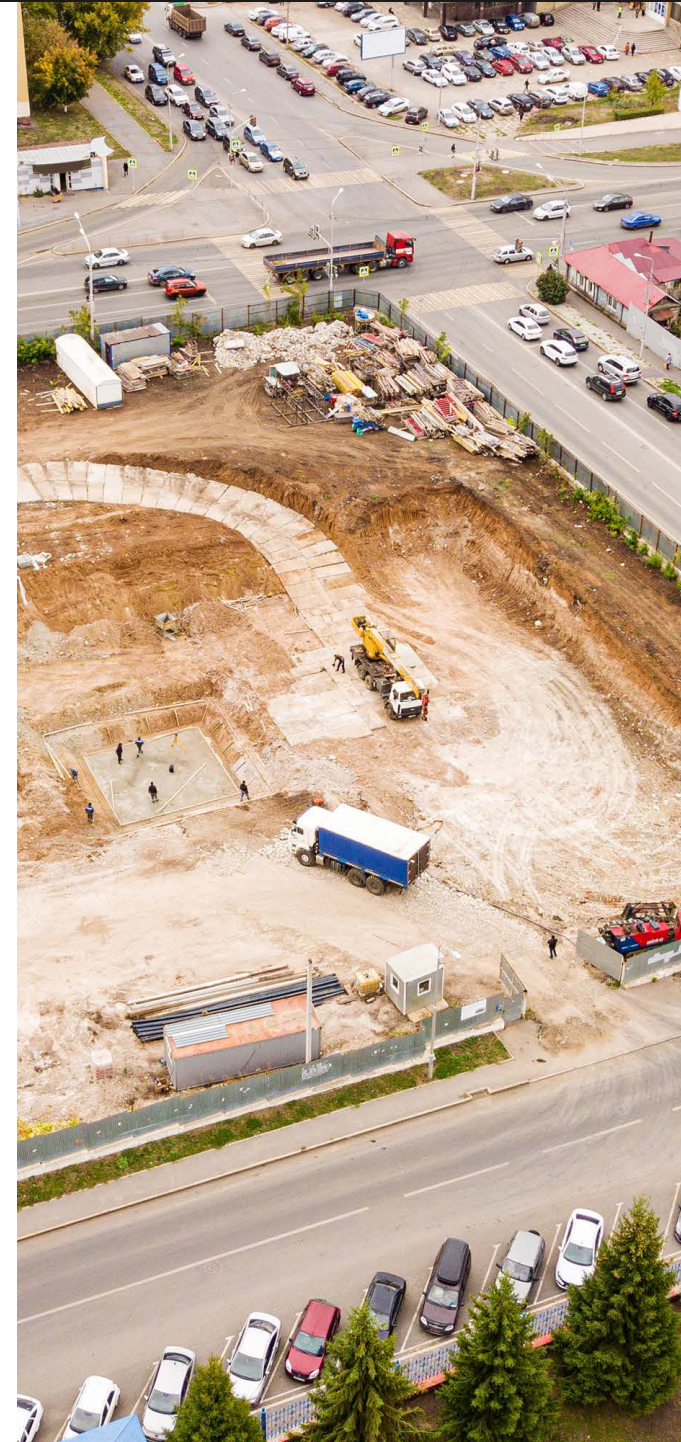
The Foundation of Smarter Site Design

AI may accelerate your workflow, but it's the engineering backbone of OpenSite+ that ensures your site designs are grounded in performance and practicality. **Because no matter how advanced your tools are, they still need to deliver on the fundamentals.**

OpenSite+ was built with these core essentials in mind. From the moment you start a project, it helps you gather the right data, model with confidence, and deliver in the formats that your agencies and clients expect. These aren't just capabilities. They're the foundation of smarter site design. More importantly, they're what make OpenSite+ a tool you can trust from conception to construction.

Start smarter with contextual data

Getting a project off the ground often means chasing down terrain files, parcel boundaries, and zoning overlays, usually from different sources and formats. That fragmented start can delay your progress before design even begins.

With OpenSite+, that friction is eliminated. Built-in data acquisition tools enable you to instantly access and integrate high-quality contextual data from multiple sources, creating a project-ready foundation in minutes.

This means your team can start designing the site with confidence, knowing the foundation is complete, accurate, and aligned with the real-world environment. As a result, you spend less time setting up and more time designing without compromising accuracy.
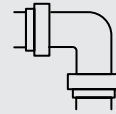
Streamline design with integrated drainage

You've probably hit that inevitable pause more than you would like. That moment when you need to stop what you're designing and switch to a different system just to work on the drainage. It disrupts your workflow, introduces risk, and slows everything down.

Stormwater design doesn't need to be a separate workflow. OpenSite+ integrates OpenFlows analysis directly into your site design process. You can model, analyze, and optimize drainage systems without ever leaving the software. This means no rework and no data loss.

Additionally, the integrated model-based design approach allows the model to update intelligently when changes are made, so your team doesn't have to manually identify and replicate those changes across different designs.

This seamless approach reduces data loss, improves accuracy, and helps you deliver compliant, constructible drainage designs, faster and with more confidence.

Deliver digitally without disruption

Digital delivery is no longer a future goal; it's a current requirement. Meeting those requirements shouldn't mean sacrificing the tools you trust or overhauling your entire workflow. OpenSite+ bridges the gap between traditional design practices and modern digital mandates, producing smarter deliverables more efficiently than before.

You can design with the familiarity of 2D drafting in a 3D model, moving seamlessly from concept through to final design on a single platform, and deliver results to the cloud with direct integration with Bentley Infrastructure Cloud™.

Whether you're delivering PDFs or digital twins, OpenSite+ keeps your projects efficient, connected, and, most importantly, ready for what's next.

# What It Means for You: Impact by Role

OpenSite+ isn't just software. It's a strategic advantage for every role involved in the process of site development. Whether you're leading the department, managing the project, or embedded in the design work, here's how OpenSite+ helps you move faster, work smarter, and deliver better outcomes overall.
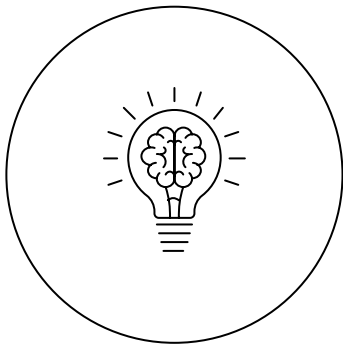
→ **Impact on site department leads**

→ **Impact on digital delivery leads**
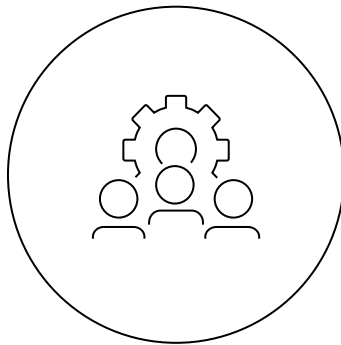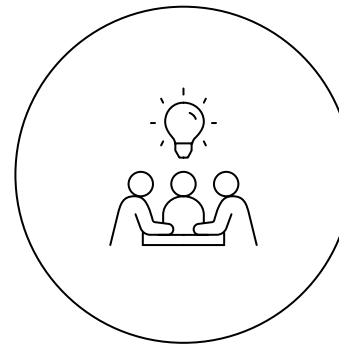
→ **Impact on project managers**

→ **Impact on engineers**
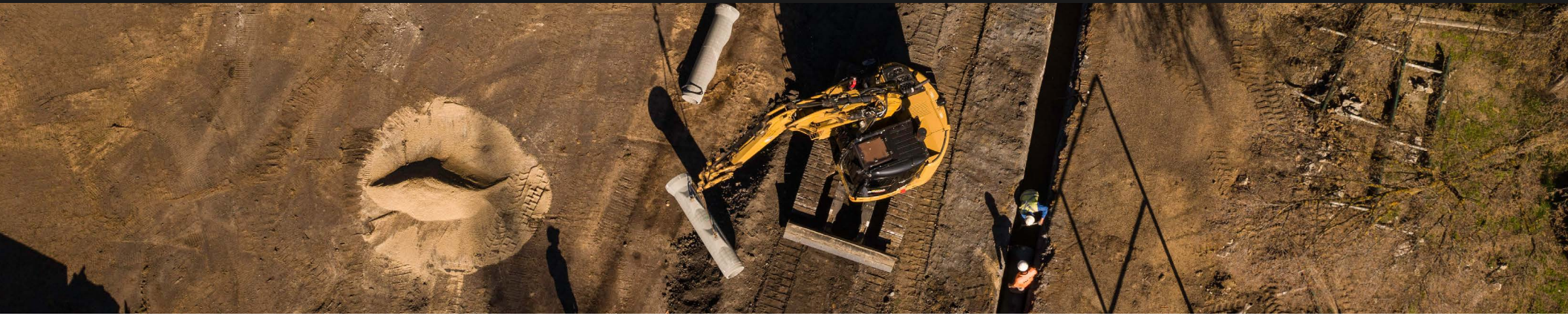
Impact on Site Department Leads

**Differentiate your firm
with smarter design**

Win over clients with faster
timelines, optimized layouts,
and digital-ready deliverables.

**Handle more projects with
the same team**

Free up your engineers to focus
on design and handle more
projects efficiently.

**Attract and retain
top talent**

Attract the next generation of
engineers with intuitive, smart
site design tools.
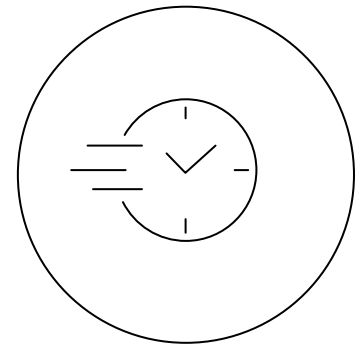
**Accelerate site openings
for your clients**

Reduce delays and help
clients break ground sooner.
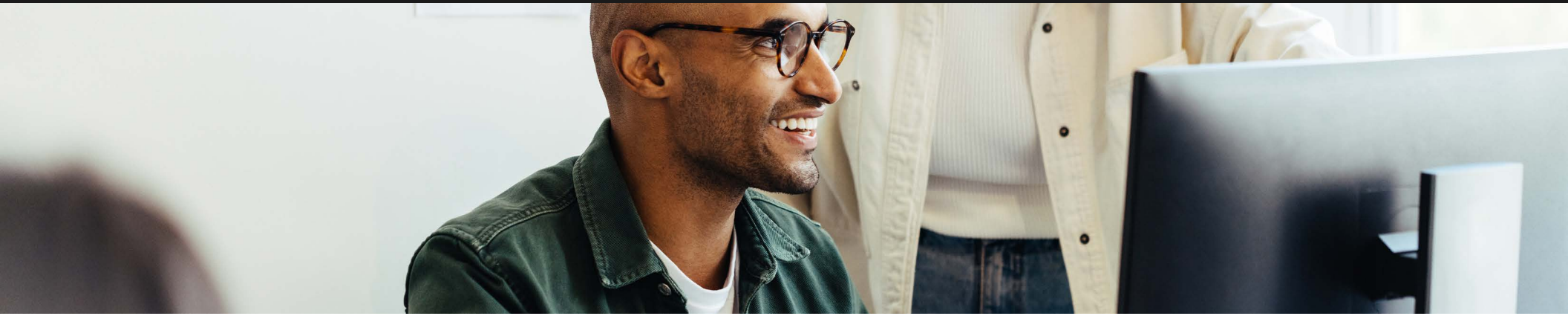
Impact on Digital Delivery Leads
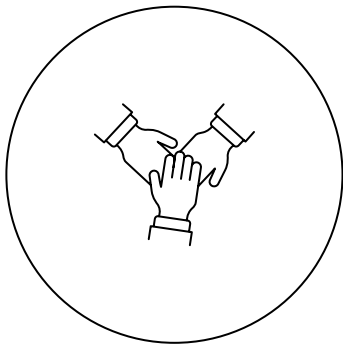
Improve collaboration

Reduce file transfers and enable smoother teamwork and integration within a single platform.
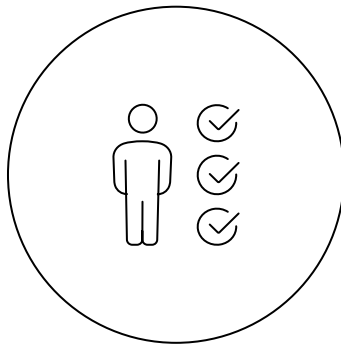
Unlock team potential

Empower your workforce to deliver projects with greater speed and accuracy.
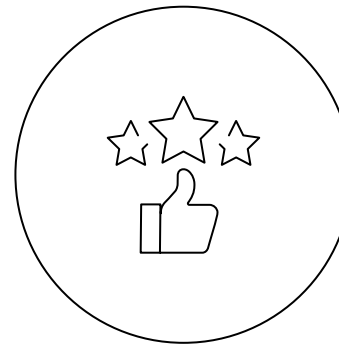
Support long-term value

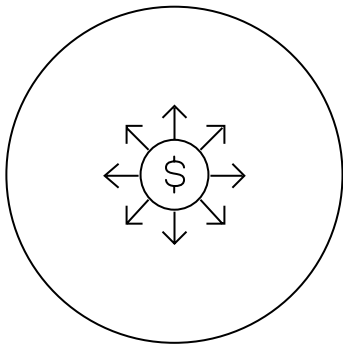Design with the full lifecycle in mind, from concept to long-term performance.
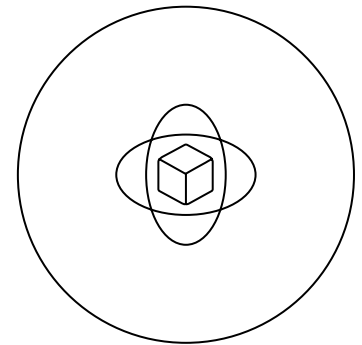
Meet evolving industry requirements
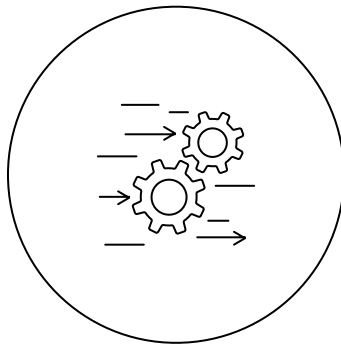
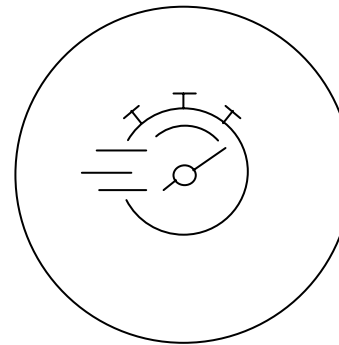Support digital delivery and model-based design.
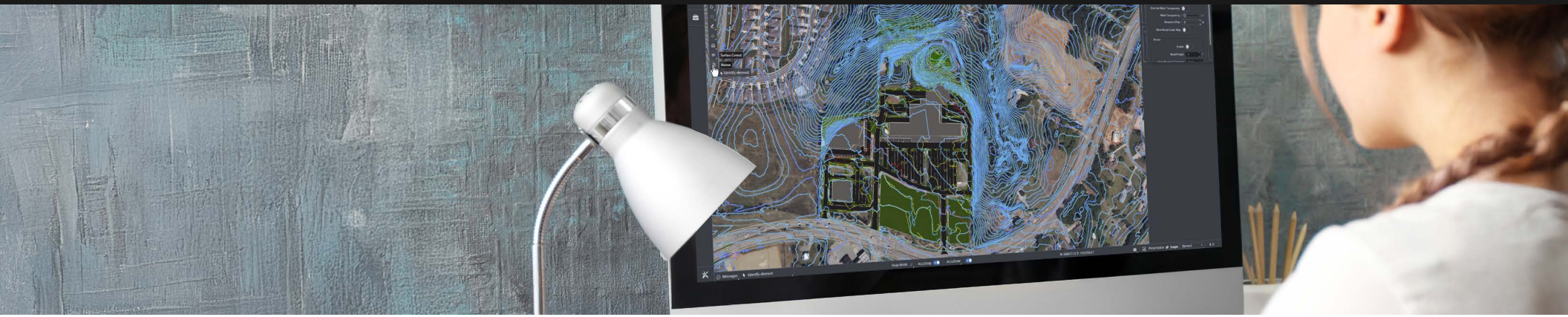
Impact on Project Managers

**Identify options and
mitigate risk early**

Provide multiple alternatives
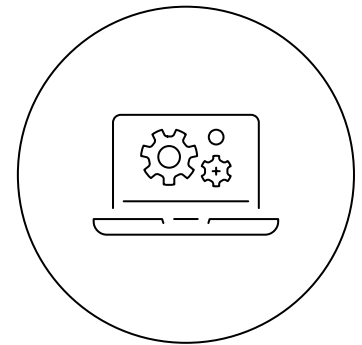with budget forecasts.

Streamline workflows

Keep your team aligned and
your data intact with a fully
integrated platform.

**Speed up design without
sacrificing quality**
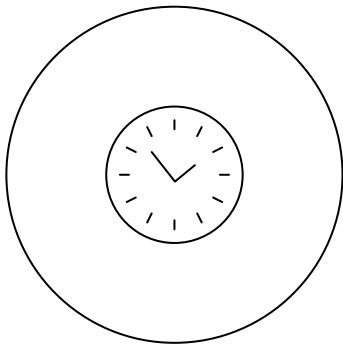
Maintain and increase
client satisfaction.

**Data-driven and
digital twin-native**

Meet industry demands while
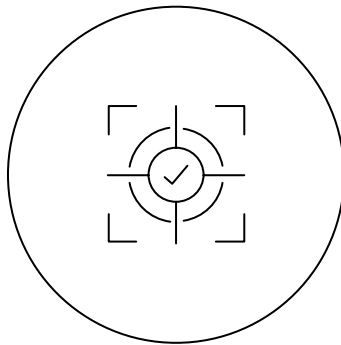setting up assets for better
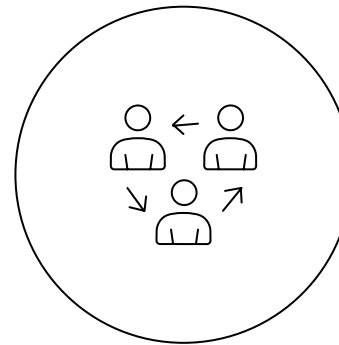operations and maintenance.

Impact on Engineers

**Save time,
cut repetitive tasks**

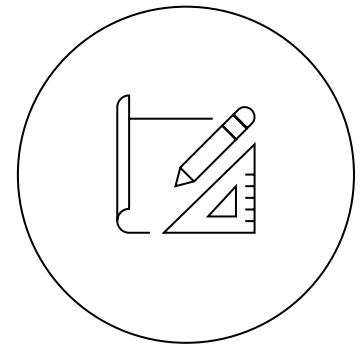Automate grading, annotations,
labeling, and sheeting.

**Improve quality
and accuracy**

Use site-specific tools
and smart objects to
improve outcomes.

**Do more with an
existing team**

Eliminate the learning curve
with an easy-to-use interface.

Prioritize engineering

Focus on core
engineering tasks rather
than time-consuming
drafting tasks.

Start Designing Smarter Today

Site engineers are constantly being asked to do more with less. You need to deliver faster, design smarter, and meet rising expectations with fewer resources. That isn't just a challenge. It's become a turning point.

OpenSite+ was built with this strategy in mind. It's not about replacing people and their expertise; it's about amplifying it. With AI-powered automation, integrated workflows, and a software that thinks like you do, OpenSite+ can help you move from concept to construction with clarity, speed, and confidence.

Whether you're leading a team, managing a project, or designing the next great site, OpenSite+ gives you an edge to do your best work.

Ready to see what smarter site design looks like in action?

Discover more