

CSI Global accelerates Data Center deployment - going from 30 to 300 points laid out per hour

Highlights

Critical Accuracy for Prefabricated Components

SitePrint ensured precise placement of anchor plates and racks, eliminating costly rework.

High Productivity in Demanding Projects

Thousands of layout points completed in a fraction of the time compared to manual methods.

Trusted by Data Center Owners

SitePrint was requested by the project owner, helping CSI position itself as a reliable, high-tech contractor.

Project Scope

Type of project

Construction of a large data center.

Owner requirement

Layout had to be executed with HP SitePrint to ensure both speed and accuracy.

Scope of layout

Thousands of anchor plates for server racks (between 5,000 – 7,000 points).

Critical requirement

Absolute precision, since racks and prefabricated components needed to fit exactly in place.

CSI Global is an engineering and construction firm headquartered in Uruguay, with over 45 years of experience in the market. The company operates in more than 40 countries, with offices across Latin America (Chile, Argentina, Paraguay), and three offices in the United States. CSI works across different sectors including energy, road infrastructure, and building construction. A key differentiator is its strong focus on technology: CSI consistently invests in advanced tools and solutions to remain at the forefront of the industry, something highly valued by their clients.

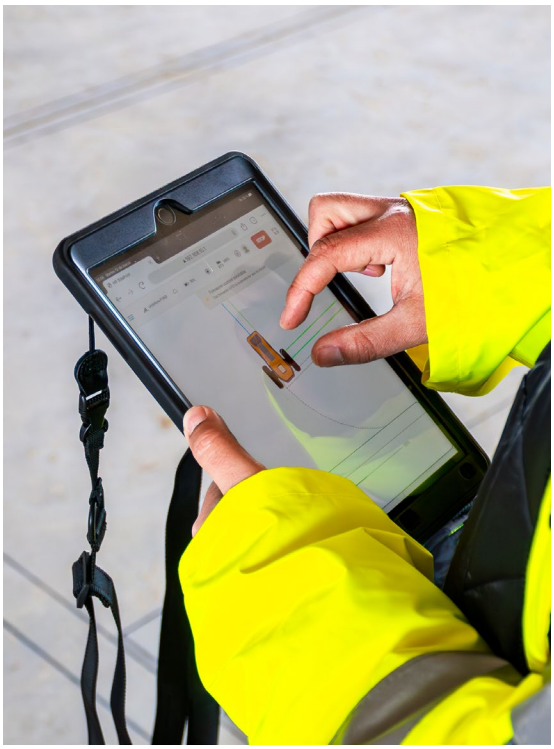


The Challenge

Until recently, CSI did not have an in-house surveying and layout discipline. Layout work was outsourced, typically executed using total stations and manual methods. While effective, this approach was slow, labor-intensive, and error-prone—especially in large-scale projects with thousands of repetitive points to mark. Even after establishing an internal surveying discipline two years ago, the team still faced the limitations of manual methods:

- High risk of errors when laying out critical components.
- Long execution times, sometimes requiring two surveyors and many working hours.
- Difficulty maintaining accuracy in demanding environments.

In the case of data center construction, layout accuracy is critical. Prefabricated elements such as racks, anchor plates, and other components must fit precisely into their designated positions. Any misalignment can generate costly rework and project delays. Manual layout methods made it difficult to guarantee this level of precision, especially under the pressure of large-scale projects with tight schedules.



The Solution

The decision to adopt HP SitePrint was directly linked to a large data center project, where the owner specifically requested the use of SitePrint to ensure the layout could be completed quickly and without errors. The scope required the precise layout of thousands of anchor plates for server racks—far beyond what was practical with manual methods.

By incorporating SitePrint into their fleet, CSI not only met the project's strict requirements but also positioned itself as a reliable, technology-driven contractor. Having SitePrint demonstrates innovation and precision to clients, providing CSI with a competitive edge that can help them secure future deals.

> **"Laying out 5,000 points manually would have taken us forever. With SitePrint, we saved hundreds of hours."**
>
> Mauro Arzuaga, Surveying Manager

The Results with HP SitePrint



CSI deployed HP SitePrint on the data center project to execute highly demanding layout tasks, and the impact was both immediate and substantial. The technology delivered the precision required to ensure that every point was marked accurately, allowing prefabricated racks and components to align perfectly during installation. This level of accuracy not only enhanced construction quality but also met a critical client requirement, reinforcing CSI's credibility and reliability with a high-profile owner.

Beyond precision, SitePrint brought significant operational advantages. The printed marks demonstrated excellent durability, remaining visible and intact even under heavy site traffic for several months until construction activities began. Productivity gains were also remarkable — thousands of points were laid out in a fraction of the time previously required by manual methods. What once took weeks of labor-intensive work with total stations was now completed in just a few days, saving hundreds of hours and minimizing project disruption.

Equally important was the system's simplicity and ease of use. SitePrint's intuitive operation allowed surveyors to focus on higher-value, technical tasks while the robot handled repetitive marking work autonomously. This new workflow not only optimized labor efficiency but also positioned CSI as a forward-thinking company ready to integrate cutting-edge digital tools into complex construction environments. By adopting HP SitePrint, CSI successfully delivered on a challenging data center project while strengthening its reputation as an innovative and trusted partner for future large-scale developments.

By adopting HP SitePrint, CSI successfully addressed one of the most critical challenges in data center construction: ensuring speed and absolute accuracy in layout. The solution not only accelerated delivery but also met client expectations and demonstrated CSI's commitment to innovation. Having SitePrint in their fleet positions CSI as a trusted, high-tech contractor—helping them both win projects and deliver them with confidence.

> **"We repeated checks with control points across the site, and SitePrint always printed exactly where it needed to. The precision really surprised us."**
>
> Mauro Arzuaga, Surveying Manager

The Results with HP SitePrint

The introduction of HP SitePrint delivered a clear and measurable impact on CSI's data center project. A layout scope that would have required around 30 working days using manual total station methods was completed in just 3 days with HP SitePrint – a 10× productivity improvement. This dramatic acceleration freed up valuable time on site, reduced labor requirements, and allowed the team to maintain tight construction schedules without compromising quality.

Despite the increase in speed, SitePrint consistently achieved millimeter-level accuracy. Repeated control checks confirmed that every anchor plate and prefabricated rack position was printed exactly where it needed to be, ensuring perfect alignment for prefabrication and eliminating costly rework.

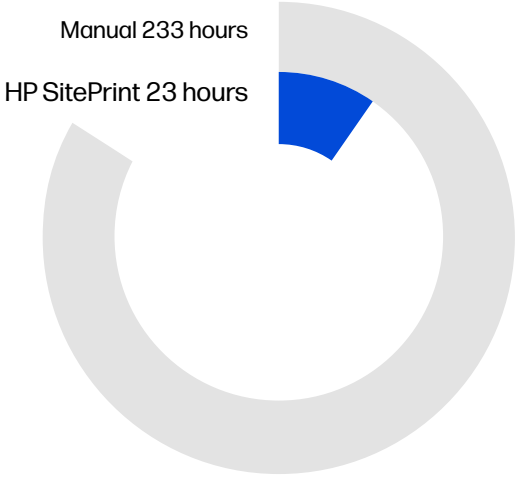
By automating repetitive layout tasks, SitePrint allowed surveyors to focus on higher-value work while delivering faster, more precise results. The combination of speed, precision, and reliability not only enabled CSI to exceed client expectations on a high-profile project but also reinforced its reputation as a technology-driven contractor capable of executing complex, accuracy-critical construction projects with confidence.







		Manual	HP SitePrint
Job Data	Data Hall Size (m²)	9.000 m²	
	Bolt Locations Marked	7.000	
	Crew Size	1	1
Time	Total Time (hours)	233 hours	23 hours
	Productivity (points/hour)	30	300



Want to learn more about how HP SitePrint can help your company achieve faster layout processes? Contact us to learn more.

Contact Us

Learn more at www.hp.com/siteprint

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