HxGN SMART BUILD
SIMPLY SMARTER.
THE CHALLENGES OF BUILDING SMART

Building construction projects are among the most difficult undertakings to plan, coordinate, and execute. That difficulty, compounded by the continued flat line of productivity in the industry, increasing complexity of projects, and growing risk of schedule and cost overruns, makes the need to invest in technology solutions clearer than ever.

The HxGN SMART Build solution meets these challenges, leveraging decades of Hexagon’s leadership in multi-industry project planning and control. By intelligently linking model, schedule, and cost information in a simple-to-use, cloud and mobile solution, SMART Build provides real-time insight into project performance that drives predictable outcomes to keep projects on schedule and within budget.
Although the cutting-edge visionary companies in the survey claim to enjoy fully integrated, centralised project and portfolio reporting, the majority of respondents state that their organisations continue to use manual processes and multiple systems. It seems that the dream of ‘one button’ to get all project information is yet to be realised."

“Building a technology advantage: Harnessing the potential of technology to improve the performance of major projects.” Global Construction Survey 2016, KPMG China
SMART Build brings simplicity and order to tasks and processes that have historically been complex, time-consuming, and error-prone. From the field to the office, SMART Build breaks through traditional communication silos and puts actionable information at your fingertips, wherever you are.

Designed around model visualisation and easy-to-understand reporting, SMART Build supports 3D, 4D and 5D processes to increase visibility for better control of resources throughout the project life cycle. General contractors gain real-time insight into progress and are able to improve the planning and execution of work at the construction site.

SMART Build is comprised of three modules that provide innovative technology for the entire building construction project lifecycle.

“We are excited to partner with Hexagon to work together toward Skanska’s vision of a new level of construction, where we will move toward an integrated construction process.”

Pull Per-Ola Svahn
Technical Manager, Skanska Sweden
**HxGN SMART Build | Core**

The foundation of the solution, the Core module intelligently links model, schedule, and cost information to optimise construction planning and execution. This module enables the creation of packages of work, which are communicated to site teams via mobile devices with real-time progress captured by site personnel, connecting the site and office.

**HxGN SMART Build | Controls**

This module enables real-time tracking, managing, and reporting of key project metrics such as schedule, costs, progress, and change, and predicts where deviation from the plan will occur, allowing course correction in the project at the earliest possible stage. Visibility into project execution and performance through dashboards and interactive spreadsheets ensures issues are identified and can be addressed before they become a serious problem for the project. This can also be visualised in the model with the Core module.

**HxGN SMART Build | Layout**

The Layout module facilitates taking models to the field, to use in conjunction with Robotic Total Stations for construction layout and verification.

Construction digital layout points can be added directly to any model object in SMART Build to support construction layout. A unique feature is the construction layout points’ ability to inherit intelligence from the model. Layout teams will be able to reap the benefit of model intelligence such as concrete type, floor level, and rebar size for increased site productivity.

Models and layout points are exported or synchronised with Leica Robotic Total Station software for fast and accurate layout. Robotic Total Station single-point quality control or as-built points can be round-tripped back into the model environment for comparison. When deviations are identified, issues can be logged in SMART Build for fast and effective collaborative team resolution.
SMART FEATURES

Schedule Work Assignments
Intelligently links the 3D model to project schedules for assigning site activities with all supporting information to field teams and for 4D visualization of planned, in-progress and actual delivery of construction.

Project Controls
Provides a comprehensive suite of project controls capabilities including budget and cost control, progress and productivity management, forecasting, earned value management, and more that allow real-time monitoring of budgets and costs.

Field Mobile Enablement
Enables mobile access to all relevant information to support site activities and captures feedback of site progress and issues to the office in real-time.

Digital Layout, Scanning and Verification
Permits models to be taken to the field and used in conjunction with Robotic Total Stations or as-built scan data for construction layout and verification.

Reporting
Allows the model to visually represent progress and cost status of the project compared to current budget and schedule, and additionally provides a wide range of other graphical and tabular report formats.

Interested in learning more about HxGN SMART Build? Visit our website at hxgnsmartbuild.com.
SMART BENEFITS

SMART Build supports a smart digital strategy for building construction management throughout the project life cycle. Benefits include:

**Simplified Workflows**
SMART Build brings simplicity and order to tasks and processes that have traditionally been complex, time-consuming, and error-prone. By putting critical information at your fingertips wherever you are, collaboration between site and office is streamlined and simplified.

**Accelerated Schedule**
SMART Build facilitates communications and progress updates, and feeds real-time insights to all stakeholders to ensure an accelerated schedule. By making individual field workers more productive, SMART Build can help minimise delays and errors.

**Early Projections**
Thanks to its real-time progress and cost-tracking capabilities, SMART Build can accurately predict a project’s final cost through project completion.

**Better Coordination**
SMART Build optimises team efficiency and coordination by getting every project member on the same page, ensuring execution is aligned with plans and helping to reduce costly mistakes and rework.

**Reduced Risk**
SMART Build dynamically captures and reports progress and deviations from plan throughout the construction phase of the project. This constant collaborative connection between people, workflows, and real-time data minimises surprises, establishes accountability, and creates visibility for proactive decision-making.

**Field Empowerment**
SMART Build is a mobile solution that passes tasks and required documents to the field from the office, ensuring field workers have the information they need to perform on-site functions. This empowers the teams to move forward with time and budget-critical components of a project.

**Transparency**
The office and site are transparently connected so the impact on the design, scope, schedule, and budget can be seen—in context—by all.
ABOUT HEXAGON

Hexagon is a global leader in digital solutions that create Autonomous Connected Ecosystems (ACE). Our industry-specific solutions create smart digital realities that improve productivity and quality across manufacturing, infrastructure, safety and mobility applications.

Hexagon’s PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at hexagon.com and follow us @HexagonAB.