SMART CONSTRUCTION

What if you could actually reduce the amount of time it takes to construct a building?

Stagnation has hampered construction productivity for years – and it will continue to do so in organizations ill-equipped to meet new challenges. But for those visionary enough to seize this moment in time, disruptive technology and new construction methodologies are creating unparalleled opportunities in Smart Construction.

Take sophisticated modeling. At KONE, we use 3D and 4D Building Information Modeling (BIM) to increase predictability during construction, sequence trades and improve schedules. Prefab and modular building solutions are being introduced to improve construction time and change the way buildings are erected.

Each of these advancements is of particular interest to venture capitalists who see step-function disruption opportunities in traditional construction industries. Emerging technology offers enormous incentives to operations that are nimble, creative and collaborative.

What is Smart Construction?

In Smart Construction, BIM technology is an essential part of preconstruction planning. An incredibly insightful tool, BIM encourages constructability interrogation early in the process. BIM delivers a more predictable and better communicated solution before construction begins, and that reduces rework and eliminates waste.

BIM 4D takes productivity to the next step, sequencing site logistics (like material laydown and clear work areas) and trade work activities during construction. When those processes are carefully orchestrated, significant savings are realized, both in time and money.

On today's construction site, the benefits of BIM's instantaneous iterative analysis are immediately apparent. Models progress from the generic to the specific, providing information at every step and deepening understanding. Because there's more collaboration, there's more innovation.

Choosing a construction partner

Another key to Smart Construction? The professional project manager. On the jobsite, the cost of inexperience can send a project into a nosedive. Professional project managers keep jobs on track. They know the building industry, and they speak the same language as developers, general contractors and trades – and that translates into savings.

Professional project managers play an especially important role in construction of vertical transportation. It's one thing to manufacture an elevator or escalator; it's another thing to install it. When a contract is awarded for vertical transportation, you've done more than select a product: You've chosen a construction partner.

SMART CONSTRUCTION ESSENTIALS:

- Professional project manager
- Unique KONE solutions
- Project-specific intelligent models and coordination workflows

Contact us today to learn more about KONE and Smart Buildings

www.kone.us/about-us/contact-us/contact-form

Productivity for all seasons

In many cases, vertical transportation is itself a key component of Smart Construction. KONE offers a variety of solutions designed to increase productivity during pre-construction planning, construction and the building's full life cycle.

When vertical transportation is considered as part of the construction pre-coordination process, productivity gains are improved. KONE intelligent 3D models show clear interfaces between elevators, structural steel and concrete, and push a greater level of understanding of building interface components customized for every installation. Project-specific modeling delivers a smooth construction process and a more effective partnership.

For exceptionally high-profile projects, KONE BIM 4D simulation further enhances communication and innovation. On uniquely challenging projects with tight schedules and rigid site requirements, 4D simulation anticipates obstacles and spurs communication in a graphic way that forces proactive coordination and resolution.

Solutions designed for efficiency

Unique solutions like KONE JumpLift and KONE UltraRope™ generate savings of time and money – and create exciting new design possibilities. KONE JumpLift is a construction-time elevator that moves trade workers efficiently, trimming months off of a high-rise construction timeline. Jobsite safety is increased, efficiency is improved and construction work is accelerated.

Because KONE JumpLift uses an existing elevator shaft, it eliminates the need for an exterior hoist. Construction workers can be transported more quickly and easily, and, because there's no construction lift cutting into the exterior, work on the interior can begin more quickly.

KONE UltraRope is a revolutionary hoisting mechanism. It lasts twice as long as traditional steel cables, weighs up to 70 percent less than steel cables and is not susceptible to building sway. And, because it uses less energy to transport passengers, building lifecycle costs are reduced.

KONE UltraRope also creates unique design flexibilities. The weight of traditional steel cable creates limitations in travel distance. With a dramatically lighter product, architects are rethinking the possibilities in ultra-tall buildings.

Optimizing People Flow®

Smart Construction dovetails neatly into today's Smart Lobby – and the Smart Lobby is the essence of KONE People Flow. Improved security, a highly functional layout, guidance elements and identity optimize the flow of people, both horizontally and vertically. Elevator speed, capacity and space planning are important concerns: Vertical transportation drives efficiency and end user experience.

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About the author: As KONE's Global Building Information Modeling (BIM) Solution leader, **Kenneth Flannigan** serves as a thought leader for process and technology transformation in the architecture, engineering and construction industry. In previous positions, he's worked as a BIM consultant, collaborating with firms around the globe as they leverage technology to drive business benefit.

ABOUT KONE

At KONE, our mission is to improve the flow of urban life. As a global leader in the elevator and escalator industry, KONE provides elevators, escalators and automatic building doors, as well as solutions for maintenance and modernization to add value to buildings throughout their life cycle. Through more effective People Flow®, we make people's journeys safe, convenient and reliable, in taller, smarter buildings. In 2017, KONE had annual net sales of EUR 8.9 billion, and at the end of the year over 55,000 employees. KONE class B shares are listed on the Nasdaq Helsinki Ltd. in Finland. For more information, see www.kone.us.