

Building a greenfield smart factory

WHAT IS A GREENFIELD FACTORY?

A greenfield factory is a new manufacturing facility built upon minimal or no existing infrastructure in order to increase production capacity and/or better serve a new market.

WHAT IS A SMART FACTORY?

A smart factory is a flexible system that can self-optimize, self-adapt, and autonomously run entire production processes. It represents a continuous journey toward building and maintaining a flexible learning system.



GREENFIELD SMART FACTORY = THE BEST OF BOTH

A greenfield smart factory is an unhindered opportunity to capitalize on smart factory technologies and techniques that can be difficult to implement in brownfield augmentation projects.

Greenfield Factories in the US

Data collected in October 2022



Deloitte’s 10 greenfield objectives

Optimize your greenfield smart factory investment using these 10 objectives:



01 Road map

Start your journey with a clear view of your smart factory objectives and how they relate. Begin with your vision and work backward into your master plan.



02 Enterprise

Prior to selecting location, coordinate with your supply chain and local community. Cross-pollinate your best capabilities between the new factory and your broader factory network. Balance the unique needs and capabilities of your new factory with enterprise systems and resources.



03 Incentives

Minimize costs and maximize benefits with existing and emerging government incentives at the greenfield stage. A wide variety of incentives for smart factories enables companies to access locations and labor pools at a subsidized cost.

Benefit: 20% - 30% reduced maintenance time



Benefit: 80% reduced property taxes



04 Sustainability

Target sustainability, climate, and equity (SCE) goals during the greenfield strategy and facility-design phases to maximize opportunities. Decisions in these phases are especially critical to achieve and continuously improve your ESG, HSE, and DEI performance.



05 Partners

Align your new smart factory ecosystem and alliance partners with your long-term enterprise goals. Leveraging the power of a network broader than your own enterprise is essential when building a greenfield smart factory.

Benefit: 50% reduced carbon footprint



Benefit: 35% supplier reduction



06 Talent

Craft your talent strategy and building design to ensure talent is well suited and well equipped and enjoys working at your new facility. Balance your enterprise’s existing talent pools, processes, and systems to seek new hires.



07 Connectivity

Plan your IT infrastructure early on to unlock the greatest benefits from connectivity and build a flexible digital foundation. Balance your new smart factory’s digital infrastructure goals with your unique business objectives.

Benefit: 25% lower workforce training costs



Benefit: 9% OEE Improvement



08 Performance

Design your new facility to maximize visibility and unlock decision-making and performance optimization capabilities. Use advanced remote sensing and visualization technologies to empower your workforce and balance your aspirations with natural operational pressures.



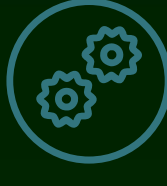
09 Simulation

Maximize the power of simulation through digital twins, optimizing a wide array of smart factory decisions from initial design through startup. Balance the use of digital twins with the use of specialized technology, and align the physical infrastructure with simulation goals.

Benefit: \$20M CapEx Avoidance



Benefit: 10% increased process efficiency



10 Automation

Early in your new factory strategy and design, identify physical and digital automation opportunities, incorporating IoT-enabled factory automation techniques and technologies. Balance your automation goals with other enterprise objectives .



Benefit: 10% - 25% reduction in direct labor costs

Deloitte smart manufacturing leaders can bring your greenfield smart factory vision to life. Contact us to help plan your road map and maximize long-term ROI.

THE SMART FACTORY by Deloitte

Learn more at www.thesmartfactory.io

Reshoring or localization on your mind?

Read our [Deloitte Insights](#) article to see how smart factory capabilities can provide opportunities for value creation.