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## **Being ready for “what’s next” is at the heart of innovation thinking - by Luiza Mills**

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In the past 50 years, the construction industry has seen more rapid-fire changes than in any period in history. From digital records and 3-D imaging systems to smart construction software and drone technology, the construction site functions a lot differently now than it did back then.

Today, it's all about speed and efficiency. Buildings go up faster, work crews pack more into a day, supplies arrive on jobsites ready for installation and projects are leaner from start to finish.

Years ago, Interstate Electrical Services embraced change as the new normal, and adopted innovation as a way to navigate change. Pat Alibrandi founded the company with innovation as one of the guiding principles. Fifty years later the company is still pushing boundaries, finding new and better ways of doing things, always in pursuit of value—for both customers and employees.

### First Experiments with ‘Lean’

One innovation that grabbed everyone’s attention (and still does) is the practice of delivering supplies to the jobsite ready for installation. Prefabrication is aiding this process, and continues to be a major cornerstone of lean design and construction.

Interstate had dabbled in prefabrication before adopting it. The company had built one-offs and pre-assembled transformers. At one point, a couple of savvy managers came up with a scheme that would allow a steady stream of materials to be delivered to a job where site conditions did not allow for storage. They called it a room box and it included all the parts needed to complete a phased installation.

This was Interstate’s first encounter with the principles of lean construction material delivery, a concept that would soon become a core to the Interstate story.

### Embedding ‘Lean’ Companywide

Fast forward a few years and Interstate was embedding lean methods companywide. If the construction landscape was constantly changing, Interstate was going to be ready. The business would now include the systematic and continual evaluation and improvement of internal processes and information streams that move a project from estimation through completion.

With Lean, work crews can pack more into a day. They get the information, tools and assemblies to complete an installation task as needed. Assembly tasks that once took up precious floor space on a crowded jobsite are now completed offsite in a controlled UL listed assembly environment.

With Lean, crews work smarter. They can meet job expectations and delivery schedules fewer individuals on site. This helps maximize the labor hours of journeyman and apprentice resources by shifting non-essential tasks offsite, in Interstate's case to our operations center.

Lean makes for a safer jobsite, too, because there is less chaos, minimized waste and more controlled materials on the job. Lean helps team performance, too. Since each worker is engaged in productive tasks for more hours of the day, there tends to be less physical wear and tear and emotional fatigue because team members can focus on the high-value work they are trained for.

#### Delivering for Customers

The customer benefits of Interstate's Lean methods are evident every day.

Recently on a new construction project, midstream, the owner asked that the data room schedule be accelerated. The building had just been enclosed, and the data room was nowhere near complete. Because of this methodology, Interstate, as the electrical engineer of record, had all the working drawings in 3D, which meant the positioning data for every electrical component was readily available. Interstate extracted the data from the model and projected it onsite using a laser device, allowing the site team to put electrical components in place before other interior structures were complete.

The customer's request to speed up the project didn't cause panic. The team simply shifted priorities, because everything that was needed to complete the task was at hand.

For another customer, Interstate's expertise in Lean was critical in outfitting a new data center during a winter installation of electrical and data cabling—a project complicated by a short, five-day schedule. Ground zero for the project was Interstate's operation center, where the Lean approach to pre-fabrication and pre-assembly gave the team a place to pre-build conduit racks in 10 foot sections, stacked three up, banded and shipped to the jobsite—a project that included more than 3,600 pieces of 4-inch conduit. The team used 3D modeling data and laser pointer to position the hangers that would hold the unit in place exactly as the model instructed.

Interstate's Lean methods saved the team from making hundreds of trips across the jobsite and up and down ladders carrying heavy pipe.

#### Keep Innovating

The lessons and benefits of innovation are clear. Because the market is always shifting, you don't want to just keep up, you want to get ahead. You need to learn how to learn. Being ready for 'what's next' is at the heart of innovation thinking. It's how we do it at Interstate Electrical Services.

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