

# IMPROVING JOBSITE PRODUCTIVITY WITH PREFAB



## CONTRACTOR CHALLENGE



Typical construction projects are **53%** behind schedule and **68%** over budget.



Contractors are looking for ways to improve jobsite efficiency and productivity to remain competitive and relevant.

***63%** of Graybar contractors said cost competitiveness and pricing are one of their top concerns.*



Many contractors know that prefab can drive efficiency, but many are struggling to make it effective.

*Only **14%** of contractors rate their prefab efforts as effective (FMI).*



Contractors who have figured it out are winning.

*Contractors who use prefab on more than **50%** of their projects are more effective compared to those who do less prefab (FMI).*

## WHY CHOOSE PREFAB?



Implemented properly, these technologies could help improve construction productivity by 15%.

*Reinventing Construction, 2017*

Implementing prefab assemblies or even a shop is a one way to manage labor fluctuation or jobsite shortages.

**75%**

of contractors will need more people in 2018.

**71%**

will have problems filling the jobs they know of.



Products can be preassembled prior to jobsite delivery and be packaged room-to-room or floor-by-floor so labor can focus on a quicker installation.



By assembling the products offsite, there is less product onsite and less waste to manage.



Prefab is ideal for commercial buildings with a lot of room-to-room repetition like hotels, schools or MDUs.



Paired with BIM, electrical workers see a 67% increase in productivity.

**8X**

Studies show there may be an 8X increase in prefab driven by the efficiencies BIM and other construction technologies can bring. *Reinventing Construction, 2017*

## WHEN IT COMES TO PREFAB, THERE ARE THREE KINDS OF CONTRACTORS:

**1.**

**Beginners** who have not tried prefab or do not use it with any confidence.

**2.**

**Contractors who have a prefab shop** and want to increase their efficiency.

**3.**

**Advanced prefabricators** who are winning and want to do more.

# BEGINNERS

There are electrical contractors who have never tried prefab, or have tried it and stopped. The simple fact is that it's safer, easier and more efficient to build assemblies offsite or in a prefab shop. If you're willing to give prefab another shot, take a look at these tactics.



## TACTICS TO TRY PREFAB

**1.** Find a project that allows you to start small with a few items that can be prefabricated or purchased from a manufacturer as completed assembly instead of buying multiple parts.

**2.** Consider standardizing specific materials like boxes, mud rings or cable whips. Repetitive use improves results.

**3.** Keep tracking as simple as possible. Shift the appropriate number of hours from field labor to a new “prefab” category. It will also provide a very easy way to determine if there were labor savings on the project. It’s ok to estimate if you don’t track cost codes regularly.

**4.** Track prefab hours at the same level of detail that field hours are tracked. Many cost codes used in the field to track hours should be easily converted.

**5.** Graybar stocks a variety of components and assemblies from quality manufacturers like Thomas and Betts and Crouse Hinds. Why prefab when you can save time by implementing these quality components into your jobs?

**Ask your Graybar representative about prefab solutions from your favorite brands.**

# CONTRACTOR WITH A PREFAB SHOP

Good to hear! You have a prefab shop, but you know you can do more. We get it because 86% of contractors are struggling to make prefab effective.

If you want to accelerate your prefab efforts. . .



## CONSIDER THESE TACTICS

- 1.** Package your prefab assemblies into bins by area or room. Consider a color or numbering scheme that clearly identifies the floor or room where the box should be delivered.
- 2.** Separate material handling from electrician's installation. Better planning should allow one crew to focus on material handling and waste and the other on installation.
- 3.** Significantly reduce the packaging and trash on the jobsite. The costs incurred to pay an electrician to unbox and dispose of trash is usually much higher than estimated.
- 4.** Find projects that allow for pre-planning or increase the amount of time provided to the lead foreman to plan prefab for the project.
- 5.** Explore longer-term purchasing agreements with vendors on components to build common assemblies
- 6.** Track waste reduction. Increasing prefab will reduce material waste to less than two percent. Many contractors report having filled a dumpster to now filling only a five-gallon bucket.
- 7.** Need additional skilled and trusted workers on your job sites? Consider moving workers out of your shop and purchase basic assemblies from quality manufacturers.

## Unfortunately, since you've become an OEM manufacturer you have new struggles and challenges:

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**Competition:** You're competing against seasoned factories and six sigma lean cells.

**Supply:** Producing the right amount of product on schedule to meet the daily job requirements.

**Logistics:** Storing and delivering product to the jobsite is a full-time job. You need elasticity in your supply chain – just as any manufacturer would.

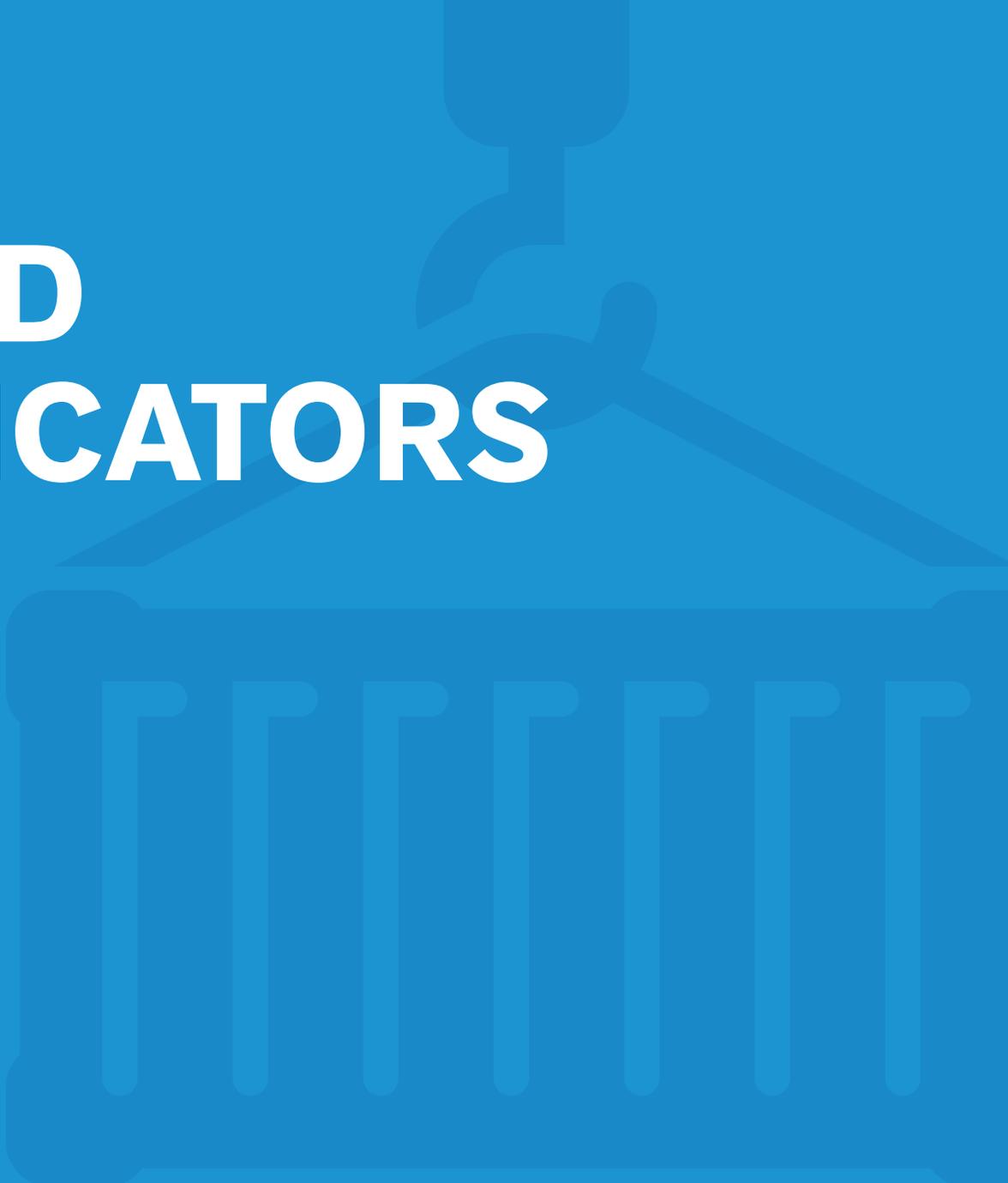
## Graybar helps OEMs improve efficiency every day:

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- Graybar has pre-negotiated parts, contracts and reliable inventory you can plan on.
- Electronic processes that help business run smoothly.
- Manage inventory effectively and make reordering easy with Graybar SmartStock®.
- Leverage Graybar deliveries by including your prefab materials with the parts we're delivering into one shipment.

**Have a Graybar Continuous Improvement Leader perform a Supply Chain Waste Walk in your facility to see how we can work more efficiently together.**

# ADVANCED PREFABRICATORS



Contractors who use prefab on more than 50% of their projects are more effective compared to those who do less prefab (FMI).

For contractors who are leveraging prefab, but looking for ways to take their shop to the next level or completely outsource their prefab . . .

## CONSIDER THESE TACTICS

- 1.** Increase precision in drawings and models to explore more prefabrication options. Although this will require additional investment in modelers, it will open up opportunities to explore modularization across trades.
- 2.** Seek or create opportunities to modularize components.
- 3.** Prefabricate to remove activities from the critical path that allows for faster project completion times.
- 4.** Manage productivity at the task level to ensure the company is making data driven decisions regarding prefabrication and productivity.
- 5.** Significantly increase the level of planning before the jobs start including coordination with other trades and the general contractor.
- 6.** Additional tactics:
  - Stay out of the storage business
  - Only have materials on the job for the next week
  - Reduce the number of touches
  - Visit with the design engineers to identify prefabrication opportunities
  - Pick what you DON'T want to do in the field
  - Eliminate trash and packaging
  - Remove benders from the field
  - Coordinate multi-trade racks

## Getting started with engineered prefab

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If you're ready to jump to the next level and have an ideal project, consider using engineered prefab solutions from Thomas and Betts and Eaton's Crouse-Hinds series.

### What you need to know about engineered prefab

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- Ideal for large, repeatable jobs like hotels, schools or MDUs.
- Requires significant preplanning, factory engineered drawings and no last minute changes.
- Jobs that require 1,000 assemblies or more to improve efficiency and productivity.
- Materials come pre-packaged and labeled for quick, easy installation and can provide a 30-40% savings over traditional installation.

**On your next large, repeatable job, connect with Graybar to learn more about how engineered prefab can deliver a 30-40% savings.**