

A close-up photograph of a construction worker. The worker is wearing a blue denim long-sleeved shirt and a safety vest with a red mesh and yellow reflective stripes. They are holding a blue hard hat with their right hand. The background shows a construction site with scaffolding and a clear blue sky.

**PAYING**

**FOR**

**TENURE**

**A call to action for improving  
construction cost outcomes**

## Latest data reveals construction productivity continues to decline

We have written numerous articles and delivered countless presentations documenting and rationalizing the poor construction performance observed on today's projects. And, as we tally the results of the "first wave" of major US Gulf Coast onshore investments<sup>1</sup>, the picture has only gotten worse.

Piping productivity is the key metric driving construction cost and schedule outcomes and, as *Figure 1* shows, the average productivity observed is now 3-6x worse than what was observed in the 1980s. The impact, and the obvious case for change, is a cost increase of \$500+ million and 6+ months in schedule duration.

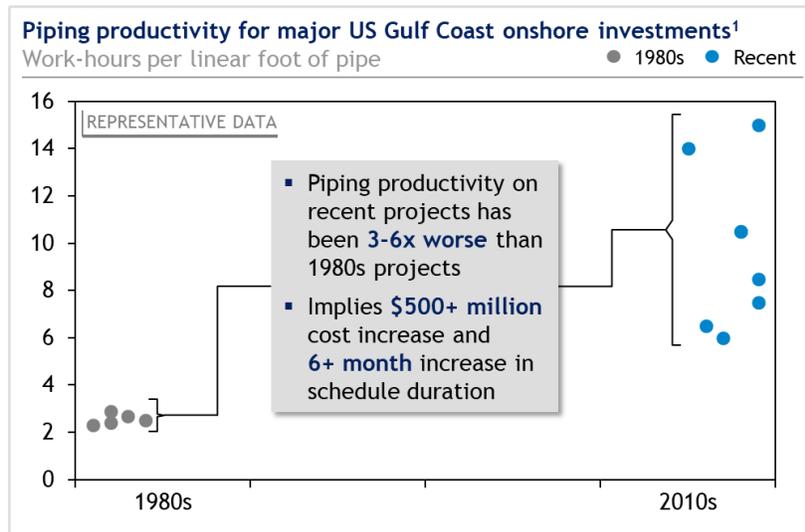


Figure 1: 1980s Piping Productivity vs. Today

## A lack of tenured resources is the primary root cause of poor performance

Our study of poor piping productivity reveals several root causes, including:

- Lack of tenured front-line leaders and craftspeople
- Attempting to choreograph execution via a detailed schedule as opposed to agile action planning
- Contractor business models that are based on recovery of hours and mark-ups as opposed to project delivery
- Site construction teams not organized to drive accountability for required installation rates
- Poor materials management

While we believe all the root causes need to be worked, the most pressing issue to be addressed is the lack of tenured front-line leaders and craftspeople. We define tenure very specifically, with a focus on the time a leader or craftsman has spent with the particular contractor in the recent past, as shown in *Figure 2*.

Definition of tenure	
General Foremen	▪ 4,000 hours with current contractor in last 3 years
Foremen	▪ 4,000 hours with current contractor in last 3 years
Craft Professionals	▪ 3,000 hours with current contractor in last 3 years

Figure 2: Definition of Tenure

<sup>1</sup> Larger diameter, higher pressure and temperature projects (e.g., ethane crackers, LNG facilities)

From our experience, successful projects have a “core” or “tribe” of at least 25% tenured resources. Unfortunately, we estimate that less than 10% of the overall US Gulf Coast craft workforce would meet our requirements. Of course, the percentage varies by contractor type. Large EPC firms, who rely heavily on “hiring at the gate,” have an even lower percentage of tenured craftspeople (less than 5%), while some traditional construction contractors, who retain and develop their workforce, have greater than 10%. Most of the results shown in *Figure 1* were observed on projects constructed by large EPC firms.

## Paying for tenure is the first step to improve construction outcomes

To drive a step-change in the number of tenured resources on the US Gulf Coast, and thus improve construction performance, we propose that owners begin to pay a premium to contractors that provide proof of tenured resources. A simple pay-for-tenure concept could include paying an extra \$5 an hour for general foremen, \$3 an hour for foremen, and \$1-2 an hour for crafts that meet the requirements outlined in *Figure 2*, with the intention that these funds would be primarily used by the contractor for retention and training.

The proposed concept would reward the traditional construction contractors who typically retain a larger portion of their core resources, and allow them to further develop their workforce. This will be critical, given that recent contract announcements for the “next wave” of US Gulf Coast projects indicate awards primarily to this group as opposed to large EPCs. Select large EPCs will likely view this concept as the owner’s commitment to projects on the US Gulf Coast and force them to decide whether they really want to be in the construction business. Then if the concept is implemented on all sizes of projects (and we think that it should), smaller contractors can use the funds to grow their capability to execute larger projects.

## While the pay-for-tenure concept does require upfront commitment from owners, we believe the benefit will be at least 10 to 1

We also understand that there will be some concern as to whether contractors will apply the extra funds appropriately. It is our view that the overall contractor marketplace will resolve this issue, as peer pressure will encourage behaviors that positively contribute to improved performance and outcomes.

The next wave of major projects provides an immense opportunity to try some new measures for improved performance. The question is – are owners (and contractors) ready to invest in tenured craftspeople and front-line leadership?

### *About the Authors*

**Justin Dahl** has engaged with and advised 10+ major projects on the US Gulf Coast. He currently serves as the Vice Chairman for the Engineering and Construction Contracting (ECC) Association.

**Keith Dodson** has 40+ years of international engineering and construction experience, including many years in executive roles. He has served as Chairman of the Board of Advisors of the Construction Industry Institute (CII), and is an elected member of the prestigious National Academy of Construction.

**Randy Walker** has 35+ years of industry experience, having held several executive positions for major EPC firms after beginning his career in the craft trades.