



NAC Executive Insights

Accelerating Project Delivery — Introduction

Key Points

This insight will share practices on methods that support the accelerating project delivery process and that are effective in improving these four key project metrics:

- Reducing overall project delivery time
- Making efficient use of resources
- Lowering overall cost
- Achieving successful project outcomes

Introduction

The purpose of this Insight is to explain and illustrate a few of the ways that are being used to accelerate project delivery across various industry market segments. The eight methods (shown below) will each be illustrated with a specific project example where the technique has been applied. An explanation of the project challenges that led to the application of the approach or method will be explained. Sufficient detail is included to provide a key learning and lesson learned/best practice so that future managers can apply these points to their project circumstances and requirements where applicable.

The examples will include large scale and medium project examples from public and private owners based on experiences of Academy members. The concepts are captured in short-form, abbreviated explanations and referenced to other, more in-depth references from sources such as Construction Industry Institute (CII) work products and CII published works describing the projects. The intent is to capture each in sufficient detail to be used as a discussion starter for the early in-career professional or graduate student in civil engineering, construction engineering or project management.

The Insight will show examples of the following eight methods that successfully support accelerating project delivery:

1. Innovative Project Delivery
2. Front-End Planning and Procurement for Accelerated Delivery
3. Integrated Design Process Reviews
4. Fast-Track Construction Techniques
5. Modularization

6. Start-Up/Commissioning-Driven Design and Construction
7. Managing Uncertainty
8. Use of Method Improvement Shutdowns
9. Partnering and Trust
10. Lean Process to Accelerate Process Delivery

About the Author

Jim Rowings was elected to the National Academy of Construction in 2016. He is vice president, Kiewit University, Kiewit Corporation. He holds bachelor's, master's, and PhD degrees in civil engineering from Purdue University. Upon earning his bachelor's degree, he began his career working abroad for Aramco as a construction engineer on large projects. After earning his master's and PhD, he joined academia, beginning at the University of Kansas and later joining the faculty at Iowa State University.