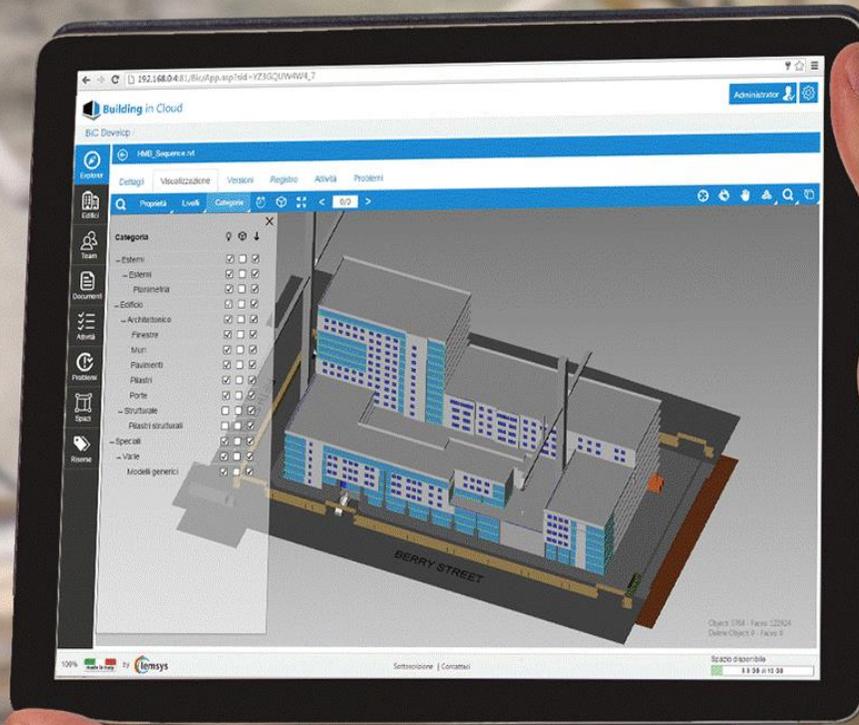




How to Leverage  
JOB ORDER CONTRACTING &  
LEAN Construction Methods

6 Reasons to Use OpenJOC™  
and the OpenCOST™ Approach



Delivering better facilities through [LEAN Construction](#) requires improved Owner<sup>1</sup> leadership and competency, the collaboration of all stakeholders, financial transparency, and longer term and mutually beneficial relationships. Improving the financial and operational performance of facilities is key to increasing overall productivity and can measurably impact the bottom line. However, to achieve better results owners must become more involved.

Traditional construction delivery methods such as design-bid-build, lowest-bidder and newer methods (design-build) are not up to the task. Ultimately, these methods fail to integrate the unique variables of each construction project.

#### [Lean Construction Basics](#)

LEAN construction delivery provides a process framework to improve outcomes. When LEAN is properly implemented more than 90% of projects (renovation, repair and new construction) can be delivered on time, on budget, and to the satisfaction of all parties.

Many business sectors have successfully applied LEAN processes, most notably is the auto manufacturing industry. The LEAN process propelled the productivity and quality advantages that Henry Ford achieved and the Japanese automakers later advanced. Software development, electronics and

<sup>1</sup> Owner – Real property owner, facilities management, and oversight groups.

## CONSTRUCTION COST DATA 2017 & Beyond

OpenCOST™ Construction Cost Methodology



THE OPENCOST™ APPROACH INCORPORATES  
SIGNIFICANT IMPROVEMENTS INTO THE  
COLLECTION, VALIDATION, USE, & MAINTENANCE  
OF DETAILED LINE ITEM UNIT PRICE  
CONSTRUCTION COST DATA.

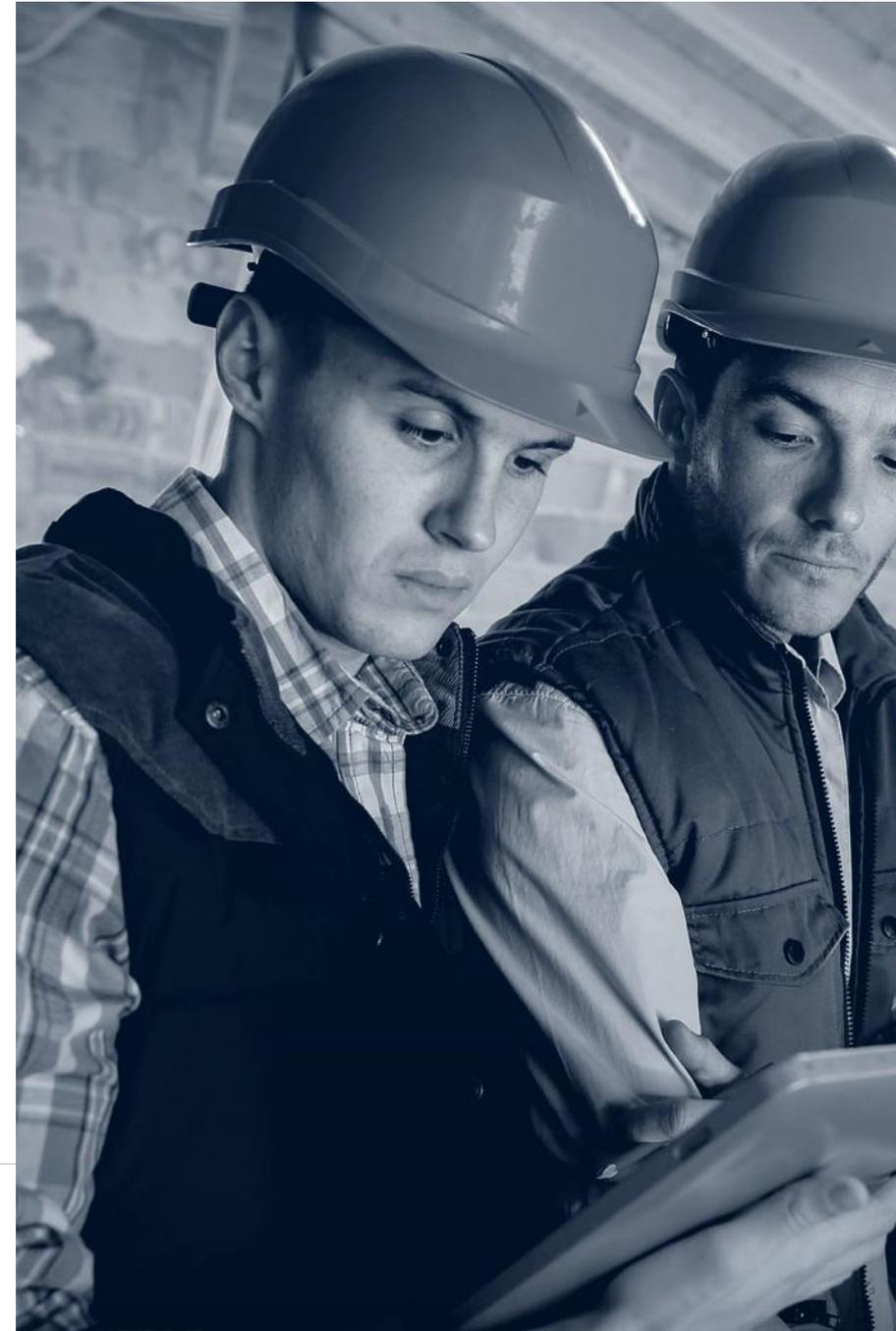
process industries also have attained major improvements.

### The LEAN Core

The LEAN construction method requires all participants which includes all external providers and internal actors such as, finance, real property, design, engineering, operations and maintenance, personnel, purchasing/procurement, and building users to collaborate. Focus is upon the needs of the customer with early and ongoing communication which facilitates better education for the processes. Owners typically have promoted and led successful LEAN implementations in construction according to authors James Womack and Daniel Jones in their book “Lean Thinking: Banish Waste and Create Wealth in Your Corporation”.

Features of the LEAN approach include:

- Early and ongoing involvement of participants and stakeholders
- Best value selection
- Collaboration
- Mutual respect and trust
- Common data environment
- Financial transparency
- Shared risk/rewards
- Performance-based reward system
- Long-term relationships
- Enhanced leverage of localized knowledge
- Global oversight/leadership
- Competent leadership without excessive management and control
- Continuous improvement / ongoing training



# LEAN Construction Process Embedded in Cloud Technology Solution Saves Money & Monitors Compliance

Though not itself the primary driver, technology is important to consistent LEAN construction delivery. Too often organizations view technology as the solution rather than a tool. Technology should support established organizational objectives and change-management activities.

Cloud-based technology that supports a common data environment (CDE), data architectures (CSI MasterFormat, etc.), and [locally researched cost data](#) are good starting points.

LEAN contracting puts the value on relationships over the formal terms of a contract. The relationship approach maximizes collaboration among the many stakeholders throughout the life cycle of a construction project. Integrated Project Delivery (IPD) and [Job Order Contracting](#) (JOC), which are construction delivery methods as well as procurement methods, are the most common forms of LEAN construction. IPD is reserved for major new construction projects whereas JOC is deployed for renovation, repair, facility maintenance and minor new construction projects.

## Phases of JOC Task Order

To help illuminate the lean construction method, here are the specific phases of the JOC task order life cycle:

- PHASE 1** Owner establishes a current construction need, determines preliminary budget and confirms funding availability.
- PHASE 2** Owner team (technical/facilities management, JOC program/project manager, contracting/purchasing or building user) conducts a pre-proposal meeting and drafts a JOC task order signed by the JOC contract administrator.
- PHASE 3** Owner team and JOC contractor make a joint site visit and confirm work scope, site conditions and any unusual requirements.
- PHASE 4** Owner creates an independent, detailed, line-item cost estimate.
- PHASE 5** Contractor creates estimate. (Both owner and contractor use the contract-required unit price book.)
- PHASE 6** Contractor submits a task order proposal/estimate. Owner compares it to independent owner estimate.
- PHASE 7** Owner and contractor negotiate a review of any variances or conflicts with the JOC program. There are three possible outcomes: 1) Owner issues a notice to proceed (NTP) to contractor; 2) Owner issues specific changes or requests additional information; or 3) Owner cancels task order.
- PHASE 8** A project kickoff meeting takes place and the worksite is handed off to the contractor.
- PHASE 9** Owner conducts weekly site visits and reviews progress reports submitted by the contractor.
- PHASE 10** Project closes out with a final package of warranty and maintenance information as specified in the JOC operations/execution manual.



### The cloud's benefit

Everything at your fingertips at any time wherever you are.



### Multi devices

Building in Cloud is available on any of the following devices: PC, Tablet or Smartphone



### Life cycle

Designed to allow maximum collaboration during the entire building life-cycle



### Project Management

Building in Cloud supports all building management phases allowing the designer, the builder and the owner to stay up to date and share the same information



### Unit Price Book & Estimating

Verifiable, fully researched and localized detailed unit price cost data, by Facility Managers for Facility Managers™.



### Document Management

Building in Cloud lets you share documents while keeping track and recording all revisions made.

JOC, Task Order Contracting (TOC), and Simplified Acquisition of Base Engineer Requirements (SABER), , also known as IPD-Lite, are project delivery methods utilized by organizations to get numerous commonly encountered construction projects done quickly and easily through multi-year contracts for a wide variety of renovation, repair and minor construction projects.

JOC is most commonly used to clear deferred maintenance backlog, perform rapid-response recurring project needs, and construct minor renovation projects.

These, and other forms of best-value collaborative methods, provide frameworks for lean construction implementation and a path to better outcomes. Owners that are capable of leading lean construction environments are better positioned to collaborate.

**Few organizations are managing productivity and quality for facility renovation, repair, sustainability, and new construction project to the degree they could be.**

# Hurdles to Leveraging LEAN Construction & Cloud Solutions

Less than 5% of organizations leverage LEAN construction delivery best management practices. Here are some reasons why...

- Many still think the old method of using spreadsheets is good enough.
- Some are collecting information electronically but using a handful of old applications that only work in silos.
- Many simply do not understand the ripple the core aspects of LEAN produce i.e., collaboration, win-win outcomes, continuous improvement, and common data.
- Few understand the criticality of everyone using common terms, definitions, and data architectures. (CSI MasterFormat, Unifomat, and Ominclass).
- Many fear sharing information especially those involving financial transparency.
- Lack of understand of the Cloud in terms of security, access, and privileges.





# Cloud-based LEAN Construction & JOC Solution

**1. Instant access to data.** The latest construction cost estimates, drawings, issues, or reports are available without any bottlenecks. Overall project delivery times reduced including critical path activities such as:

- Requests for Proposals
- Joint Site Visits
- Contractor Detailed Estimate Creations
- Estimate Reviews & Negotiations
- Issuance of Notices to Proceed
- Job Site Mobilization & Demobilization
- Quality Control & Daily Inspections
- Substantial Completion & Punch Lists
- Warranties & Close out packages

**2. Standardize processes and reports across the enterprise and among service providers.** Owners, contractors, and oversight groups are all using the same common data environment and technology.

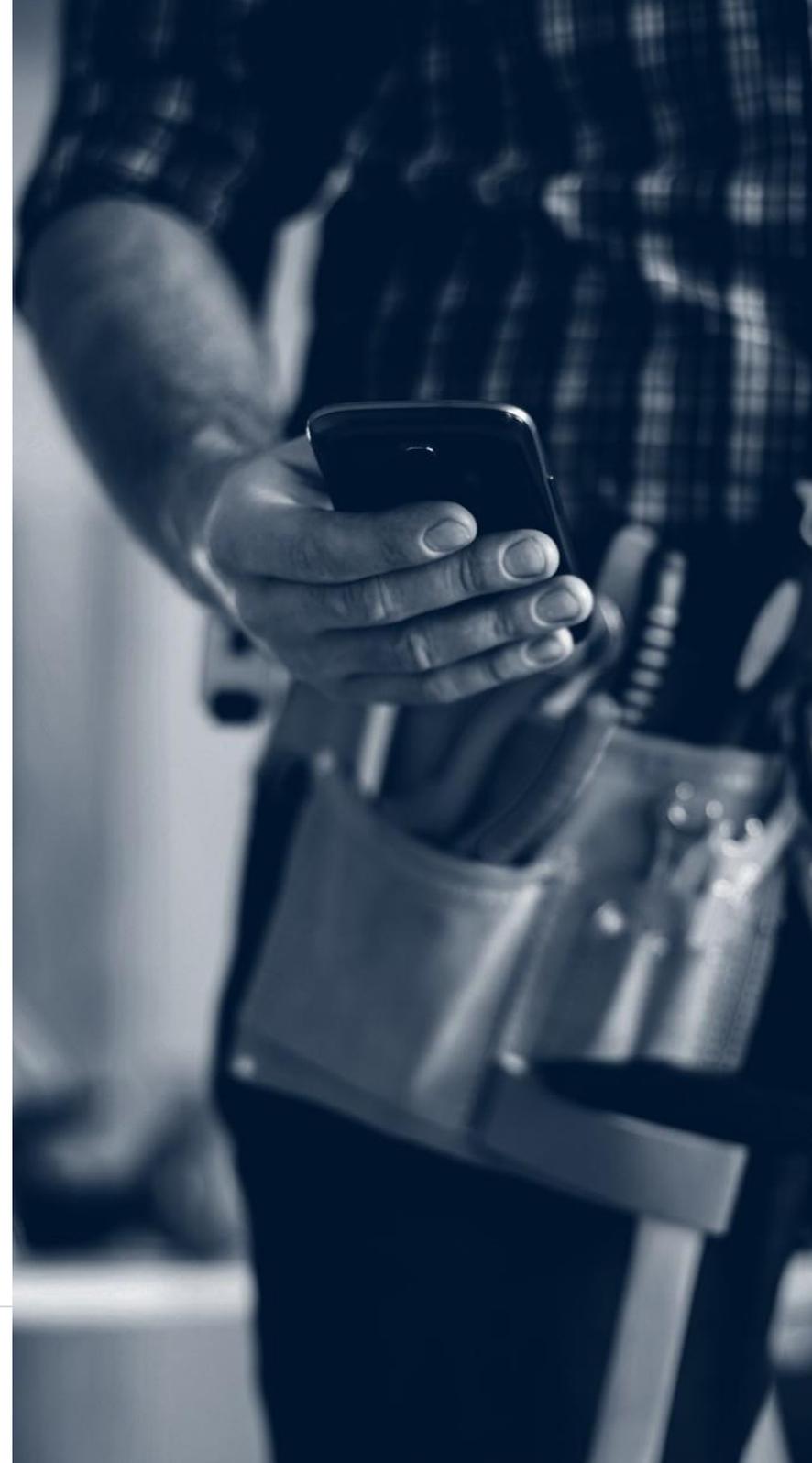
- Appropriate views and privileges assure everyone is speaking the same language.
- Data is no longer being located in silos in individual apps

### **3. Locally researched detailed unit price cost data assures full financial transparency.**

Not all construction cost data is created equal. While “national average” cost books and associated “localization factors” have their role in conceptual estimating, there is little room for error in estimates for actual renovation, repair, or construction projects. Having access into current and actionable cost data across projects, rather than just a single project, means owners and contractors can better...

- Prioritize projects and resources.
- Monitor performance.
- Schedule projects in stages for more efficient, quality-controlled construction.
- Valid subcontractor & contractor proposals.
- Meet compliance regulations for financial transparency.

**4. Leverage key performance indicators to pinpoint issues and leverage successes.** Having access and insight to detailed line item costs, project timelines, and spend



rates across single and multiple locations, project types, and contractors can...

- See which suppliers have had problems with either delivery or quality requirements.
- Perform trend analysis to see which suppliers are top performers.
- Avoid small mistakes turning into massive costs.



#### 5. Archive and distribute required historical or current data, documents, or images to project stakeholders.

All participants can access virtually any format of data and take a more proactive approach.

- Information and reports are available to anyone with access to the cloud and appropriate credentials.
- The reports can be run enterprise-wide to give stakeholders greater visibility and insight rather than project-by-project.
- All forms of documents, Adobe PDF, Microsoft Word/Excel, etc., and drawings, DWG, JPG, TIFF, PNG, RVT, etc., can be viewed. (...)

**6. User tasks and incident reporting.** Appropriate forms can be accessed via computer, smart phone, and tablet to post tasks and incidents. Internal system notifications eliminate problems associated with email.

- Appropriate workflows and sign offs can be incorporated.
- Documents the incident reports with photos that can be immediately posted and time stamped.
- Automatically updates any changes to forms enterprise wide.



#### Additional White Papers / References:

[ASSET LIFE-CYCLE MODEL – Total Cost of Ownership Management](#) – A framework for facilities life-cycle management.

[Building Information Modelling BIM in the Construction Industry – Technical Report TR-1405](#)

[BIM, LEAN Construction, and a Common Data Environment \(CDE\)](#) – A strategic tool for sharing information and managing a team within a BIM / LEAN Construction Delivery environment.

[BIM, PROJECT DELIVERY METHODS, WASTE, & LACK OF LEADERSHIP](#) – Traditional design-bid- build (DBB) contracting techniques, and even more recent attempts to improve DBB such as design-build (DB), CM@R, etc. should not be considered LEAN efficient construction delivery methods.

[COAA – Owners Perspective – BIM for FIM, BIFM](#) – BIM for FM and a “Building Information Management Framework” – BIMF includes a laser sharp focus on integrated functional planning and cost metrics. The framework’s value for stakeholders includes: a) transformational change effected by a capital planning philosophy that emphasizes integration of professional practice; b) delivery models that emphasize lean construction practices; and, c) transparent standardized construction and facility operations data and taxonomies that contain cost by providing access to building information whether stored or linked to a building model.

[How to Select a JOC Unit Price Book – White Paper – Download – Select a JOC UPB](#) – A JOC Unit Price Book, UPB is very important to the quality, integrity, productivity, and transparency of any Job Order Contract.

JOB ORDER CONTRACTING – Overview & Best Management Practices – [Job Order Contracting White Paper 2016801](#) – Job Order Contracting (JOC) is a competitively bid, firm-fixed price, Indefinite Delivery Indefinite Quantity (IDIQ) LEAN construction delivery method.