



Business Case for CLMA Utilization on Cost-Driven Projects

The objectives of a Cost Driven Project include a high priority for delivering the project results for the least cost possible and for the estimated Project Cost Budget. The project is primarily justified and funded based on cost; therefore, when making project scope and schedule decisions the project team always considers the cost impact first.

On a Cost Driven Project, the Cost Budget for the project must be achieved. The project was funded on a cost budget that provided the required rate of return for the project investment, so if the budget cost is overrun, then the entire basis for funding the project would be challenged.

To achieve the objective of a Cost Driven Project, two main requirements are paramount...

1. The budget estimate is accurate and reliable – If higher costs are possible, these need to be known early so that the risk of potential overruns can be minimized.
2. The project is executed per the budget estimate – This assumes labor wages and productivity meet the budget and that quality, rework and safety issues are managed efficiently.

The **Construction Labor Market Analyzer®** (CLMA) tools and services can help with both of these requirements for Cost Driven Projects by enabling the more realistic outcome of cost avoidance.

Getting the Budget Right

The CLMA® provides early project risk intelligence for owners to develop more reliable project Cost Budgets by providing a realistic evaluation of the current construction labor market supply/demand environment.

Empirical research (**RT-318**) completed in 2015 by the Construction Industry Institute (CII), in collaboration with the CLMA®, the **Construction Users Roundtable** and **NCCER**, investigated, documented and reported that skilled labor shortages can dramatically impact project costs as shown in the following table.

The CLMA® is designed to identify future labor issues similarly to how Google Maps or Waze identifies traffic challenges. The CLMA® cannot solve the labor problem, in the same way your phone application can't prevent an accident or guarantee you'll get to your travel destination on time and without problems. But, when an owner uses the CLMA®

CRAFT LABOR STAFFING DIFFICULTY	AVERAGE COST CHANGE	AVERAGE SCHEDULE CHANGE	OSHA RECORDABLE INCIDENT CASES (PER 200,000 HOURS)
Moderate - Severe	17.3% (8.4%, 26.2%)	22.5% (11.5%, 33.4%)	0.94 (0, 2.84)
Slight	3.2% (-0.9%, 7.3%)	12.8% (7.7%, 17.9%)	0.43 (0, 1.72)
No Difficulty	-6.2% (-10.7%, -1.8%)	6.4% (1%, 11.8%)	0.26 (0, 1.25)






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early in project planning, they can forecast the potential labor cost (wages, per diems, bonuses, excessive overtime and productivity) impact, which on average ranges from a 3% to 17% increase depending on the labor availability severity. The owner can then build these costs into their Project Cost Budget and mitigate this risk. Proving cost savings is difficult because it requires proving a negative in an environment where the budget is assumed to be the optimal spending level for the project; however, demonstrating cost avoidance is doable.

If early planning shows the forecasted project labor costs to be higher than expected, it is best to know early and avoid funding projects that may experience unexpected post-funding cost increases resulting in project failure.

Also, when facing the potential for expected higher labor costs, project teams may be able to identify creative alternate scope or execution approaches to counter-balance the potential increases and deliver better value. Again, this is best to complete early in the project before detailed engineering and construction are started.

In some cases, the CLMA® may report sufficient labor availability for the project with little or no risk of higher costs. This information is also invaluable for developing reliable Project Cost Budgets with confidence and may help avoid committing unnecessary capital by funding higher costs than required.

Project Executed per the Budget

The key to meeting the project budget is to plan and execute the project efficiently and mitigate the risks of unexpected labor shortage impacts on wages and productivity. For owners this includes using the CLMA® to identify the risks and then planning the execution to mitigate the impact.

When an owner uses the CLMA® and has early knowledge that there is a potential for a labor shortage, they can plan and execute the project so that the risks of project cost overruns are minimized, if not eliminated, by

- ✓ Selecting contractors with a proven, stable workforce and demonstrated capability to recruit and develop skilled craft workers
- ✓ Planning for appropriate prefabrication and modularization to move work to other areas which have better labor availability
- ✓ Considering alternate locations or project timing (if possible) to avoid specific shortages cause by other projects in the region
- ✓ Planning an appropriate wage, per diem and bonus compensation package with the contractor to attract and retain skilled workers without using excessive overtime and per diems.
- ✓ Working with the contractor to establish the right job conditions to ensure retention of the best workers throughout the project duration

During project planning and execution, the goal should be to minimize the total cost impact of the labor shortage. One potential goal would be to achieve better results than predicted in the CII research – E.g., delivering a project during a severe labor shortage for a 12% cost increase vs. the 17% reported by CII on past projects could represent a real 5% labor cost savings/avoidance for the project.

Conclusion

On Cost Driven Projects, the most important objective is to deliver the project results for the Project Cost Budget or less. Labor shortages result in a high risk of not achieving this objective.

Using the CLMA® early in project planning to identify the risks of a labor shortage gives an owner the information required to assure the Project Cost Budget is realistic and achievable and helps effectively plan and execute the project to mitigate labor risks. Using the CLMA® throughout the project duration enables an owner to carefully monitor labor market risk and use leading indicators to anticipate and avoid project labor cost uncertainty.

Lastly, in the process of working to get the project budget correct and plan the project, there is also the possibility that the project team is able to identify possible further cost reduction opportunities to lower total project costs while successfully delivering on the objectives.

Let us help you avoid the cost impact of labor uncertainty so you can execute successful projects.