



TECHNOLOGY UTILISED TO TACKLE THE CHALLENGES

OF THE CONSTRUCTION
INDUSTRY



The construction industry is fraught with multiple unique challenges that sets it far apart from conventional businesses. There is a definite start and finish, after which any corrections or amendments are too late (or carry a significant cost). The costs involved are tremendously fluid and adjustments constantly required throughout a project to remain on time and on track. That being said, anyone who deals in construction projects will be all too aware that they rarely (if ever) go precisely according to the original plan.

The construction industry is extremely competitive and, due to the relatively high fiscal value, margins are typically less than 10% (in the current climate, closer in fact to 5%). To squeeze that margin from a project, every ounce of productivity and activity must be maximised to ensure the optimal benefit is gleaned from every cost. It follows then that to make a profit on a project, a successful construction company will be required to be extremely efficient and maintain tight controls over the multiple and extensive component parts that can be widespread in terms of location and, indeed other partners or subcontractors.

Although complex today, historically (going back to the 70's and 80's) construction projects were far more fragmented. Technology was evolving and all but the most high spec computers could entertain the demands of the construction industry, the Hewlett Packard HB85 standing alone in that arena. Although it could carry some of the load, even that work horse was not able to carry all the component parts and a real disconnect was widespread across all departments as a result. The engineers had a very different view and opinion as to what was happening onsite compared to the commercial and project managers who were at the customer facing' end. Costs were not able to be monitored and controlled on a rolling day to day basis and over-runs common (thankfully in a time where margins were perhaps more generous).

Early innovations driven by RIB included systems that could be attached to the (now infamous) HB85, such as plant management, certification processes and even a road design program. Groundbreaking as this may have been at the time, it was still not enough to span the gulf stalling the expansion of the industry. The most noticeable hurdle at the time was the application of standard accounting practices, handling costs and accounts as separate autonomous ledgers. This resulted in construction companies evaluating their operational costs from out of date financial information, manually reviewing the previous months cost sheets in the finance office far from the front line.

Whereas common sense dictates there should be a division between costing and accounts, the handling of these for the construction industry is challenging indeed. Construction projects will typically span multiple years and reconciliation of an income statement at the end of a financial year is not going to work, the project is still very much alive and evolving. It isn't possible to define in this way what you have purchased, spent and what you have available to continue. Calculating budgets during the tender process and planning is all well and good but, the need to track costs and expenses in real time, adapt to variations and still remain within defined budgets is critical. After all, with margins so tight, the risk of finishing with no profit or even a loss is very real.

What is required is a single point of integrated information that is constantly up to date and absolutely correct, a source of truth. This data must be available at all areas of the project and enable every over or under spend to be evaluated and factored into the life of the project. Every action and its consequence being absorbed and recognised in terms of its input and outcome Specialist software that can carry out these crucial tasks is now real and readily available. The construction companies that have embraced these systems are finding themselves

- more competitive
- more profitable
- and more successful

The core reason for such a bold statement lies in the fact that earned value forms the basis of budgeting in the construction industry. By that we mean, it is only possible to correctly apportion a budget for the remainder of a project once the work done to date has been correctly measured and accounted for. If you are a construction professional, you will already know that the difficulty in this is exacerbated by the fact that the construction process rarely, if ever, stays on 'plan' as the factors impacting it are constantly changing from resource availability and cost, site conditions, labour variations etc, etc, etc (the list is endless)

Where technology shines is in providing relevant real time insights into this ever shifting landscape enabling the smart construction company to minimize loss causing changes whilst maximising the variations to their benefit. Even small savings and shutting off small losses, when applied over the life of a project, add up to significant cost benefits (and maintenance of margin).

In reality, the core of this success must be in the timing. It is real time actions that make the difference and the very reason working from spreadsheets is a gamble at best.

Identifying low productivity today can enable a construction company to address it immediately. Quick and decisive actions can be applied to stem any loss of time and resources. Fixing problems and mirroring success is enabled by real time reporting. Construction specific software helps take the guesswork and sheer luck out of the equation (accept of course when a lucky break can be leveraged and repeated)

The '**source of truth**' already mentioned is at the center of this ability. All sectors and departments involved in the project providing and sharing information, data and results to enable the whole project to work as one finely tuned machine. Software linking all this together that was specifically designed for the construction industry and to take into account all these nuances, is the tool required.

All too often, the power of the tools available is missed or misunderstood. Many construction companies still work from reports (by their very nature, a report is a snapshot and starts becoming out of date from the moment it is captured). That is not to say that the information is necessarily wrong, it is to highlight that the raw data, when combined and evaluated as a whole, becomes an 'insight'. These insights are what will drive a successful project forward.

If we look at payroll as an example. It is comprised of 3 component parts that are traditionally considered separately, the budget, cost and accounting parts. By analysing and cross referencing all these components, effective construction software can tell you much, much more. With regards to personnel and labour, these might include:

1. Do you have the right resources on the right job on the appropriate day?
2. Do you have an oversupply at one location whilst needing more resource at another?
3. Were the resources maximised effectively?
4. If not, how can this be corrected?

When we consider that labour cost typically make up between 40-60% of the total construction costs, this level of insight becomes invaluable if not essential.

As already pointed out, this software not only exists today, it has been evolving and leading growth in the construction world. Your commercial managers, project managers, estimators and, in fact every specialist you employ within the teams at work are taken on for their specialist skills. By allowing software to take away the time consuming manual collation and comparison of data, your specialists are freed up to use their skills and abilities where they can deliver the best results. Not using construction software is like walking rather than using modern transport to get where you are going. You will get there in the end but at what cost (in terms of time and resources expended).

The pace of development and change is rapid. That goes for software and hardware. You only have to look at the mobile phone as an example of something that only 20 years ago was seen as something of a luxury, to being an essential part of life for adults and children alike. There will continue to be earth shattering developments and capabilities of applications, devices and tools that will in turn be used to enhance all industries and work places, none more so than construction.

Staying up to date and at the front of this evolution is what will determine who thrives, who just survives and who dies.

If you are not currently using the tools available, take some time to review them and understand how they work and how they are helping your competitors grow.

Give the team at RIB a call and let them show you what technology in the construction industry has done and will continue to do to resolve the biggest challenges you are facing now and in the future.



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