FOR OWNERS: MANAGING VENDOR ACCRUALS AND VENDOR INVOICE MATCHING ON LARGE CONSTRUCTION PROJECTS

The Situation

The "Owner" on major construction projects, has a very different set of challenges and priorities than contractors or EPCs. While contractors are busily figuring out ways to get the work done as cheaply as possible – and invoicing the client for as much as possible – the Owner is busily controlling project finances, monitoring vendor performance, and making sure the project is commissioned on time and on budget. In the big picture, Owners of course have a much more holistic view of the project in its entirety; and ultimately are managing the cost & timing expectations of *their* stakeholders & investors. What that translates to on a day-to-day basis for the Owner, is close management of their vendors. Put into simplistic terms, it's the vendors who are *doing* the work, and the Owner who is *paying* for it. The challenge to the owner however; is that close management of vendors is not a trivial thing to do. There can be dozens if not hundreds of vendors on the job throughout a project's lifecycle, and keeping on top of their costs, activities, productivity – and validating the invoices they send – all requires the owner to collect, organize and analyze a lot of information on a daily basis. Which is not a trivial thing to do.

1 The Problem

The Construction Industry is one of the last industries to adopt and embrace technology as end-to-end solutions for management of major projects. It's shocking how many paper timecards, home-grown spreadsheets, phone calls, emails and handshake agreements that are still used on multi-million dollar – or multi-billion dollar – projects. I know there are a lot of people that hold on to these methods as the *real way* projects should be run; however the world has undergone massive changes in the past 10 years, and the construction industry needs to catch up. To be clear, I wouldn't suggest that technology is in any way a replacement for boots-on-the-ground at the jobsite – computers can't replace human eyes, ears and spidey-sense. Nevertheless, technology can take on much of the administrative, clerical and information-gathering work that can dramatically increase the visibility into what's happening on a project. Without it, you're left with a colossal pile of paper & spreadsheets that provide little more than an ocean of darkness. Tragically, it's because of these 'old-school' methods that the owner not only needs to deploy an expensive army of project admin staff to tackle all the manual effort required to monitor their vendors; they also need a very good legal team to manage all the claims. On top of that, they also need a good pitch-man to meet with their investors to ask for more money on a regular basis, as the cost & schedule overruns stack up. When I refer to the "Construction" industry, I'm including any large construction project in any industry such as: infrastructure, energy, mining, etc.

While there are many challenging parts to this whole equation of vendor management; in this paper, I'm going to focus on a specific, but critical, segment of it. My aim is to discuss how technology, and a slight shift in process, can be used to eliminate some of the more high-risk and costly parts of managing construction projects. To the point,

I'm going to address the issues that owners face around Vendor Cost Tracking and Vendor Invoice Matching. These two areas form the root-cause of some of the greatest challenges that major projects face. The good news is that they're deeply connected to each other, so my intent is to tackle them as essentially *one* problem that can be addressed with a single technology solution.

To better articulate the problem, here's a quick explanation of each part. I'll go into more detail on each of these further down in this article.

1. **Vendor Cost Tracking**. Most owners don't record vendor costs on the project at the time the cost was incurred. They instead wait until they receive the invoice from the vendor before recognizing project cost. This delay in cost visibility on the project can introduce numerous issues with accurate project reporting. It also causes problems with approving the actual invoice when it arrives – see more on this below in the Invoice Matching part.
2. **Vendor Invoice Matching**. This is an extension of the problem introduced in #1 above. When the vendor submits an invoice – whether it's a progress/milestone invoice or an invoice for the supply of goods – it becomes an enormous and error prone challenge to match-up the invoice with the work completed or materials delivered.

A third area that's related to this, is Vendor Performance Monitoring. Not all vendors are created equally, and for an owner to stay on top of project progress, they need to have good metrics on the productivity of their vendors. In order to evaluate vendor productivity & performance, certain metrics need to be gathered on a daily basis from the jobsite. Since this is a subject that requires more in-depth discussion on its own, I'll tackle this in more detail in a separate article.

1.1 THE DETAILS OF THE PROBLEM

In this section, I'll dive a bit deeper into the two problem areas.

1.1.1 VENDOR COST TRACKING

Probably the single greatest project controls challenge for any owner; is to know, on a day-to-day basis, the current incurred cost on their project. Accurate visibility into vendor incurred cost is likely the most risky, time-consuming and costly aspect of managing projects. To be a bit more specific about what I mean by "incurred": incurred is the cost that should be recorded at the time the work was done (or supply delivered, in the case of materials or equipment). Where most companies are deficient, is that they don't record project cost until they receive the vendor invoice. By not recording at time of Incurred, this causes a few problems:

1. You have no control over *when* your vendors choose to send you their invoices. This can cause an uncertain and indefinite delay on project cost visibility
2. You don't have any evidence to validate the invoice against. Invoice Matching is near impossible,
3. You don't have any visibility into Vendor Accruals (liabilities). When you don't know what you owe, you can't possibly plan your finances appropriately

The reason that tracking incurred cost isn't typically done – or not done very well – is because it's not easy to do. On construction projects, capturing incurred usually requires inputting all vendor costs directly at the jobsite each day. As we all know, the jobsite can have a lot of variables, moving parts and uncertainty – which adds to the layers of complexity. The good news here is that vendor tracking usually happens anyway in some form – vendors will submit

LEM sheets at the end of every day in the field. But what's lacking, is that it's most often captured on paper or in a spreadsheet. This information is then routed back to the office in an email with scanned attachments, where they're saved to a shared drive somewhere. The other thing that's lacking in capturing vendor LEM data from the jobsite, is that the field personnel on the owner side don't often have visibility into the vendor's contract rates. As a result, the LEM data that's submitted is often approved by the owner based only on *Quantities*, not cost. In other words, approval for the day's work for each vendor is based on the total hours or units completed; so generally cost is not known at the time it was incurred.

As we'll discover further down in this article, one of the advantages of deploying a "system" to track the daily LEM information from the jobsite, is that the system knows the contract rates, who gets LOA, which vendors are charging T&M and which are charging unit price, etc. All the field personnel have to do is enter the quantities. The costs, activities, cost codes, and a lot more data are captured & calculated automatically by the system, and that information is immediately visible back in the office.

1.1.2 VENDOR INVOICE MATCHING

Lacking the details to make a call as to whether a vendor invoice is accurate or not has got to be one of the most frustrating and powerless situations for anyone on the owner's team.

To articulate the challenge, consider this quick example. A vendor submits an invoice to their client, which is the owner. It's a progress payment for work completed in the first two weeks of last month. For simple math, let's say the invoice is for $50,000. The invoice goes first to the Accounts Payable department. After some preliminary checking, the AP clerk routes the invoice to the project manager for approval before paying it. The project manager receives the invoice and proceeds to dig through paper timecards and spreadsheets to see if the invoice numbers add up to what actually happened. This is just one of many vendors he has working at the site, and the invoice is for work done almost six weeks ago. His memory's a bit fuzzy and the records of the work are sitting on a drive somewhere or maybe in some emails. He churns through a bunch of notes and messages and in the back of his mind he's pretty tempted to just rubber-stamp the invoice because he's got another 8 more invoices that just arrived in his inbox. He gets interrupted by phone calls and has to get back to being a project manager for a while, so the invoices get put aside. Over the course of the next two weeks he picks away at the invoices and eventually approves all but one of them – even though he's not 100% certain on any of them.

The many problems with this scenario are perhaps quite obvious, but let me touch on a couple things that stand out. First of all, the project manager should have approved the vendor's time & activities six weeks ago when the work was done. Second, the effort of invoice matching should be a straightforward clerical job of looking-up the originating incurred cost transactions to ensure they match with what's on the invoice. It should rarely have to go beyond the accounts payable department, so there's seldom a need to involve the project manager. In order for these two things to happen however, incurred cost needs to be captured as complete cost transactions when they occurred (from the jobsite, for instance). We'll cover more on this in the Solution section below.

2 The Solution

People talk about the "Intelligent Jobsite" as a goal for organizations to achieve for gathering and exchanging quality information so that people at the jobsite and in the office can work efficiently as an integrated team, and make informed decisions. In order to endow your teams with intelligence on both sides, three things need to occur:

1. A dedicated software solution designed for this purpose needs to be deployed. As we'll discover below, software can provide the platform for gathering and reporting data. This can dramatically simplify and streamline vendor management, cost tracking and invoicing.
2. With the help of this new system, a new mapping of the processes involved in how projects are planned and executed will need to occur. It's likely that your current processes are not well mapped-out and have an unnecessary number of steps, resources and are very costly. Streamlining processes that align to a new system will have a dramatic effect on efficiency, productivity and project success.
3. A slight shift in thinking. We all know that getting field personnel to do something new – like learn a new system – will be met with some resistance. The organization as a whole needs to embrace a new way of thinking about the problem; and the solution needs to bring value to everyone – including field staff.

2.1 DEPLOY THE TECHNOLOGY

Paper, spreadsheets, emails and shared drives just don't work – you need a dedicated system that can provide the platform to integrate your field and office and the various teams required to plan & execute your projects.

2.1.1 SOME ADVANTAGES OF A SOFTWARE SOLUTION OVER PAPER & SPREADSHEETS

The first advantage of a purpose-built solution, is that it brings together the many data elements that are required to fully capture daily information from the jobsite. It can leverage a big relational database in the background that links together: vendors, rates, contracts, LEM resources, permissions, cost codes, work breakdown structure, change orders, documents, purchase orders, costs, location, and a lot more. A simple spreadsheet can't manage all those connections.

The second advantage is that a solution has a tremendous amount of logic built-in that understands how information is routed, approved, costed, etc.

The third advantage is that the information captured is live and in real-time. As soon as field personnel submit their daily LEMs, all the project costs are updated for the teams back in the office to report on. No duplicate entry, no errors, no lost information. Everything is secure, contained and streamlined.

A fourth advantage, is that incurred cost transactions are easily used to match vendor invoices against. Accounts payable personnel can attest vendor invoices by using the invoice matching tools provided. Once the invoices are attested, the associated vendor accruals are negated.

2.1.2 COLLABORATIVE SYSTEM

The software solution should be a centralized, collaborative platform that brings together people, data and critical tools into the same system. You want to be able to take your projects from inception of program and project planning; all the way to close-out. You want your project managers, project controls and procurement personnel to be connected to real-time cost data that's collected directly from the jobsite. Data that is fed instantly to project management & controls back in the office to have deep visibility into all project costs, activities and vendor performance.

2.1.3 LEM TRACKING

The solution should provide a comprehensive LEM tracking system for owners to capture daily field costs, activities, documents and progress direct from the Jobsite. It needs to be easy to use, and built for construction managers and

field personnel: the interface should be easy, quick and intuitive. You want to reduce the barriers of adoption by both office and field staff.

The system should have detailed knowledge of the associated vendor contracts & purchase orders to track against. This should include the complete Rate Sheet data for labor, equipment, materials, expenses and unit price rates.

2.1.4 FIELD RECEIVING

The solution should also provide the ability to receive goods from the field. It should have purchase order knowledge so that committed costs for materials or equipment can be matched against the actual received goods. As full or partial receipts are made, the system should apply those as incurred costs and generate the appropriate accruals in anticipation of an invoice.

Field Receiving can also be used to capture vendor incurred costs as an alternative to full LEM tracking. See the next section on Baby Steps.

2.1.5 BABY STEPS

It may not be feasible for an organization to jump right into full LEM tracking for all vendors from the jobsite. This is a significant step that may need to be tackled in measured phases. While the advantage of tracking detailed LEM data is clear, using a Field Receiving solution for summarized LEM cost information on a daily basis is a great first step towards:

1. Getting daily incurred costs on the project in real-time
2. Simplifying and streamlining Invoice Matching

2.2 RE-MAP PROCESSES

As part of the overall solution, it's critical that you undertake a design initiative to map the processes involved in planning & executing & reporting projects. By doing an end-to-end blueprinting exercise that takes advantage of what the new technology system can offer, you can reduce, streamline and eliminate unnecessary, redundant and costly process elements. This doesn't have to be a long and painful activity – it can often be completed in just a couple of weeks.

2.3 A SLIGHT SHIFT IN THINKING

To successfully achieve the goals of streamlining vendor cost tracking and invoice matching, there needs to be buy-in from all players on the project team. This includes office personnel and field personnel. To get everyone engaged, there first of all needs to be a clear message and clear goals set out by the leadership team. It needs to be understood that the changes will bring about significant benefits to the company and the success of their projects. The additional mechanism for engagement is Self-Interest. The benefits of this solution are also felt by the individual staff members. Their motive can go beyond helping the company, but can be rooted in helping themselves. Much of the menial work will be taken out of their jobs so that they can improve their quality of work and get better results, reporting, etc.