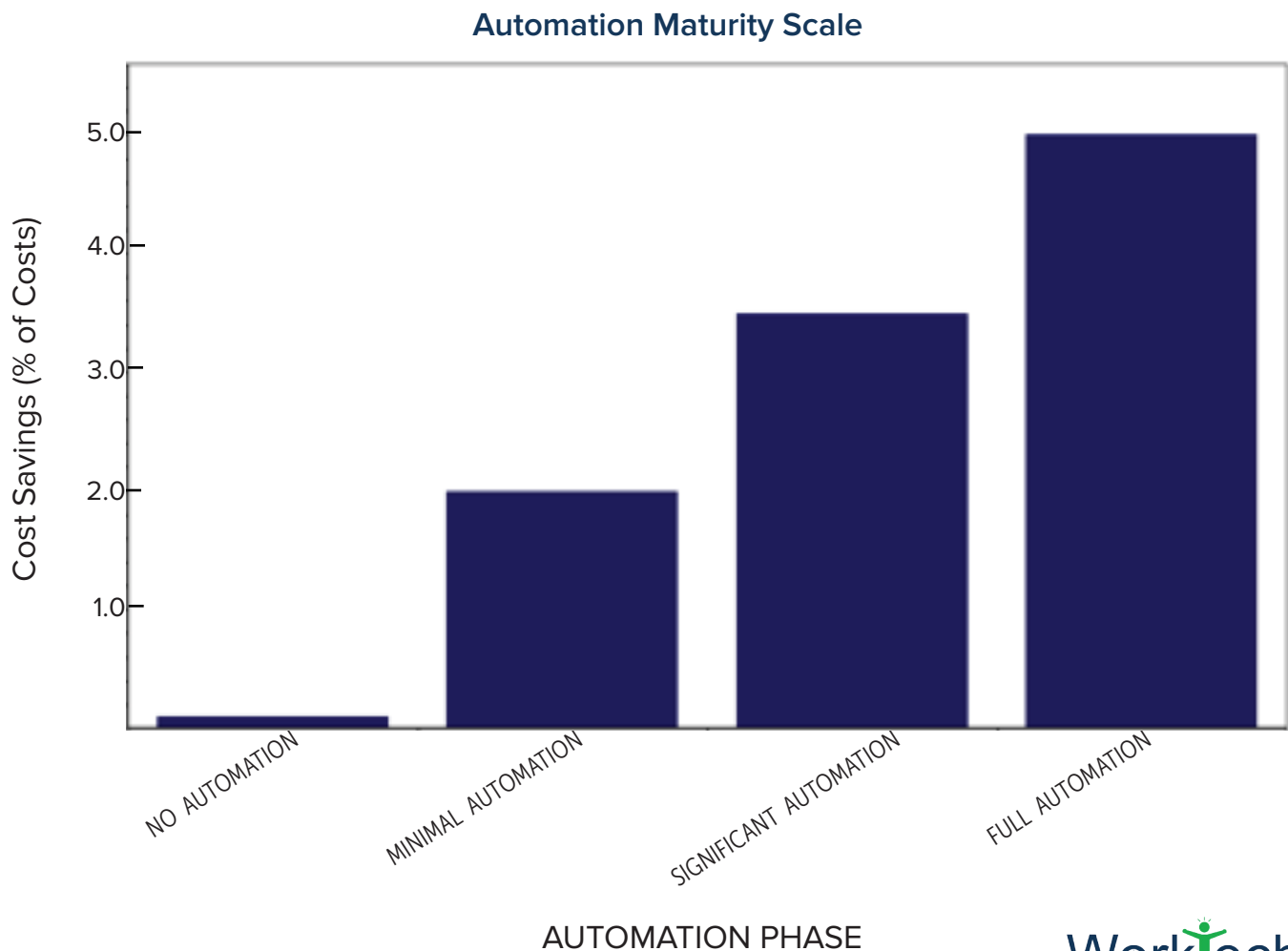


20 Ways to Save Money Implementing Contractor Cost Tracking Software

Introduction:

Companies can save a considerable amount of time and money by implementing Contractor Cost Tracking Software when utilizing a contingent workforce for a considerable part of their operations. Many of these cost savings are “hard” costs leading to a direct reduction of the amount of money an organization spends each month on its contractors. Other savings are “softer” and pertain more to improving the way that an organization operates, increasing efficiency, and reducing waste.

Both hard costs and soft costs are important for companies as they follow the automation maturity scale. Typically speaking, companies need to first eliminate waste across their organizations. This involves rooting out false charges and inflated bills by contractors. At the top of the scale, companies can identify issues in real time, and make adjustments to staffing in real time so that employees and contractors are working on the most mission-critical elements. As companies progress across the Automation Maturity Scale, they save an increasing percentage of their overall costs.



Analysis Assumptions

The remainder of this document explores the key areas where companies see the greatest increase in productivity and the greatest cost savings through automation. This is not necessarily an exhaustive list, as each company is unique in its needs and current practice. In addition, companies can benefit from implementing some elements of automation while leaving other elements unchanged. Companies should not ignore the importance that a company's culture and past practices have on the success of implementing these sorts of changes.

To calculate an estimated return on investment for the purposes of this study, there were several assumptions that had to be made. This analysis is based on a facility that spends \$50,000,000 annually for:

- **Operations & Maintenance (O&M)** – costs for upkeep, preventive maintenance, and repairs
- **Capital Projects** – additions or remodeling of the plant operation for such items of adding new production lines or environmental protection
- **Turnarounds / Outages / Shutdowns** – periods where the plant production lines are closed for heavy maintenance and upgrades. (These are most critical, usually, because revenue generation is effected during those periods. Large numbers of temporary labor is brought in during these periods. Also, planning for such events lasting from 10 to 150 days is often years in advance of the actual event)

This paper categorizes savings in three categories:



Clerical Savings

The amount saved by agents or clerks for the time they save in undertaking the task. Clerks assumed to be billed at \$20/hr, but procurement and planners may be billed at \$40 and up.



Savings from Accuracy

The savings realized because incorrect or overbilling is now caught and eliminated without regard to changing work procedures



Savings from Process improvements

With automation, better and more timely data permits changes in procedures that will promote better management.

Overall Savings Gained by Implementing Contractor Cost Tracking

Note that an implementation of Contractor Cost Tracking will be unlikely to achieve all areas of savings at the outset, but it is equally true that most sites will exceed these estimated savings by a large factor in some cases. The point is that savings on these scales cannot be overlooked by anyone endeavoring to improve business practice.

| | | Clerical Savings | Annual Savings from Accuracy | Savings from Process Improvements | Total |
|----|---|------------------|------------------------------|-----------------------------------|------------------|
| 1 | Savings from Rate Entry | 10,000 | 125,000 | - | 135,000 |
| 2 | Savings from Rates Pre-Review & Approval | - | 100,000 | - | 100,000 |
| 3 | Simplified Time Entry with No Rates | 20,000 | 150,000 | 20,000 | 190,000 |
| 4 | Ability to Negotiate Better Rates | - | 125,000 | - | 125,000 |
| 5 | Ability to vet union rate agreements | 72,000 | 50,000 | - | 122,000 |
| 6 | Simplify Retroactive Rate Adjustments | 4,000 | - | - | 4,000 |
| 7 | Contractor savings on billing | 120,000 | - | - | 120,000 |
| 8 | Real time knowledge and validation of actual work | - | 175,000 | - | 175,000 |
| 9 | Transparency and immediate info for better foreman-level management | - | - | 50,000 | 50,000 |
| 10 | Better feedback at foreman level | - | - | 50,000 | 50,000 |
| 11 | Better history information on workers at site | - | - | 10,000 | 10,000 |
| 12 | Regulatory compliance | - | - | 10,000 | 10,000 |
| 13 | External Auditing Simplified | 48,250 | - | - | 48,250 |
| 14 | Significant Reduction in clerical time to provide reports | 84,000 | - | 50,000 | 134,000 |
| 15 | Better, easier reconciliation with EIS System | 42,000 | 120,000 | 50,000 | 212,000 |
| 16 | Data usage to analyze and improve wrench time | 48,000 | - | 50,000 | 98,000 |
| 17 | Turnaround shift by shift planning | - | - | 125,000 | 125,000 |
| 18 | Dispatching tool for daily/hourly work assignments | 25,000 | - | 100,000 | 125,000 |
| 19 | Maximum flexibility to retain current timekeeping practices where effective | 42,000 | - | - | 42,000 |
| 20 | Elimination of Other Systems | 62,000 | - | 50,000 | 112,000 |
| | Total | 577,250 | 845,000 | 565,000 | 1,987,250 |

1. Savings from Rates Entry

One of the areas where companies lose money is in the improper management of resource rates. In an automated system, rates for resources are pre-entered into the system and are vetted with a rigorous work flow. There can often be more than 50,000 data points that need to be validated for different types of transactions, and in larger organizations, these data points can vary from contract to contract. By creating and maintaining these rates in an automated contractor cost management system, companies can save a minimum of 500 hours per year in clerical time. In addition, because the rates schedule is maintained in one database by the company, there is no risk that the contractor enters the wrong rate for labor, equipment, or materials. Through the elimination of error, companies can save a quarter of one percent of all project costs through the reduction of mis-entered rates and expenses.

| Description | Savings |
|-----------------------------------|------------------|
| Clerical Savings | \$10,000 |
| Annual Savings from Accuracy | \$125,000 |
| Savings from Process Improvements | N/A |
| Total Annual Savings | \$135,000 |

2. Savings from Rates Pre-review and Approval

With an automated system, rates are entered or uploaded by the company to ensure that there is a link between the contract and the rates that a contractor can charge. These rates can all be assigned an effective date so that regardless of when the charges are entered, the proper rates are applied. Without the use of an automated system the contractor could either intentionally or unintentionally enter the wrong rates when submitting charges and invoices. Automation makes it easy to review hundreds of craft rates from each large contractor and compare them to other contractors. Companies can also see and compartmentalize proposed rates easily and in minutes versus hours. Companies can expect to save upwards of two tenths of one percent of all project costs by the deploying an automated Contract Cost Tracking system as it applies to the savings from Rates Pre-Review and Approval.

| Description | Savings |
|-----------------------------------|------------------|
| Clerical Savings | N/A |
| Annual Savings from Accuracy | \$100,000 |
| Savings from Process Improvements | N/A |
| Total Annual Savings | \$100,000 |

3. Simplified time entry with no rates

Through the use of an automated system, the contractor does not need to provide rates for transactions that are submitted; only the quantity of the resource charged. A resource can be labor, material, rentals, or other special charges. For labor, the contractor can temporarily charge a worker to another craft for which the worker is qualified. This may lead to the worker being able to be charged at a different rate. By taking away the calculation of reimbursable costs from the contractor, and by only having to confirm the quantity of labor, material, equipment, companies can cut their errors by up

to 90% (three tenths of one percent of total project costs). Companies also need to spend less time reviewing transactions, as they know that the rates that are in the system are accurate because they have been pre-validated. This can save up to 500 hours per year.

| Description | Savings |
|--|-----------|
| Clerical Savings | \$20,000 |
| Annual Savings from Accuracy | \$150,000 |
| Savings from Process Improvements | \$20,000 |
| Total Annual Savings | \$190,000 |

4. Ability to negotiate better rates

With all rate schedules in one place, and with skill set mapping as part of an automated solution, it becomes feasible for contractors to be able to negotiate the best rates as contracts come up for renewal. It also simplifies the comparison process by the buyers. Once a Company has narrowed the contractors down to a few and it is a question of pricing, the company can make sure that the contractors have not jacked up the rates on some items or crafts. By providing companies with a single source for comparing the different rates that contractors charge for the same crafts and materials, companies have the data to be able to more effectively negotiate rate decreases with their suppliers (contractors). In many cases, companies can save upward of a quarter of one percent of total project costs through this advantage.

| Description | Savings |
|--|-----------|
| Clerical Savings | N/A |
| Annual Savings from Accuracy | \$125,000 |
| Savings from Process Improvements | N/A |
| Total Annual Savings | \$125,000 |

5. Ability to vet union rates agreements

Incorporating rates management within the Contractor Cost Management tool gives Companies the means by which they can automatically calculate charge rates based on union agreements and ensuring that owner and contractor agree. Admittedly, this benefit applies to a smaller portion of companies that would benefit from automated Contractor Cost Management solutions. This is a second order benefit, usually kicking in after the initial deployment of an automated solution. Without deploying an automated solution for these types of calculations, companies need to rely on several people to make the calculations several times each month and have to go over them several times with people in several departments. Despite all of this manual effort, oftentimes the final rates are not correct. An automated system can easily save more than 100 man hours each month of clerical and supervisory time, and save companies one tenth of one percent of annual spend each year.

| Description | Savings |
|--|-----------|
| Clerical Savings | \$72,000 |
| Annual Savings from Accuracy | \$50,000 |
| Savings from Process Improvements | N/A |
| Total Annual Savings | \$122,000 |

6. Simplify retroactive rate adjustments

There are times when a new rate gets negotiated between a contractor and company, and nobody remembers to tell the cost accounting department. As such, the contractor's invoice does not match what the company expects. To fix this, companies need to perform retroactive rate adjustments to correct the rates for work that was performed in the past. The ability to automatically make retroactive rate adjustments, and apply changes in contractor compensation and project cost allocation, is a significant time and cost savings tool. Without automating the process, companies need to go line by line and make manual adjustments to project charges. They need to update both the invoices and the project costs. With an automated system, the company only needs to enter a new rate, give the rate an effective date (even if it's in the past) and the system will automatically calculate all charges and properly update all integrated systems such as the invoicing system and the asset management/project tracking system. Companies can save close to 200 hours of clerical time per year using this feature of an automated Contractor Cost Management system.

| Description | Savings |
|--|---------|
| Clerical Savings | \$4,000 |
| Annual Savings from Accuracy | N/A |
| Savings from Process Improvements | N/A |
| Total Annual Savings | \$4,000 |

7. Contractor savings on billing

An automated contractor cost management system can integrate with the company's accounts payable systems, which allows all contractor charges to be invoice-less. With an automated system, the contractor reports the work, equipment, and materials used right in the contractor cost management system, and the owner reviews and approves using the same system. Oftentimes the approvals occur on multiple levels – for confirmation that work was done, and for confirmation by the budget holder that the work was authorized. Payment to the contractors can be in days. Companies do not need to pile through stacks of paper backup for invoices, scan documents, and manually reconcile the invoice charges with the numbers entered in the billing system. This can save hundreds of hours each month of manager/supervisor time, and can greatly improve the accuracy of the payments that get sent to contractors.

| Description | Savings |
|--|-----------|
| Clerical Savings | \$120,000 |
| Annual Savings from Accuracy | N/A |
| Savings from Process Improvements | N/A |
| Total Annual Savings | \$120,000 |

8. Real time knowledge and validation of actual work

An automated Contractor Cost Management system can, where appropriate, validate the presence and location of each worker on a job using GPS device or Gate Control system. The software can also verify equipment usage to ensure that the charges that are being reported to the company are accurate. One of the key benefits is to prevent a worker from being able to charge time when he is not on job. Another is the system's ability to verify the length of time workers are in plant to validate against given charges, which is an extremely valuable audit feature. For example, if the worker entered the gate control system at 8:00am and left at 12:00pm, then the worker cannot charge more than four hours of labor worked on site. This prevents the contractor from overcharging for the worker's time and equipment usage. This feature alone can save companies more than a third of one percent of all project charges annually.

| Description | Savings |
|--|-----------|
| Clerical Savings | N/A |
| Annual Savings from Accuracy | \$175,000 |
| Savings from Process Improvements | N/A |
| Total Annual Savings | \$175,000 |

9. Transparency and immediate info for better foreman- level management

When companies deploy an automated contractor cost management system, contractors can record field costs and resource usage virtually in real time. All items are captured in a single database for all contractors and company staff, and reported costs are available to all, regardless of where they are in the approval queue. Both the company and contractor see the same data, and it is collected to the atomic level of work order / operation / contractor / resource / time of work / work description. This process removes any ambiguity that exists in a more manual process, and removes guesswork from the equation. With information that is maintained in real time, both companies and their contractors have the information they need to work better. This helps Companies to redeploy resources in real time, as they can see what projects are being worked on. This also leads to greater efficiency and lower overtime costs, resulting in an improvement of one-tenth of one percent of annual project costs.

| Description | Savings |
|--|----------|
| Clerical Savings | N/A |
| Annual Savings from Accuracy | N/A |
| Savings from Process Improvements | \$50,000 |
| Total Annual Savings | \$50,000 |

10. Better feedback at foreman level

Deploying an automated contractor cost management system gives more authority and control to supervisors in the field. This is because the system gives foremen the ability to capture commentary and progress on work being performed using smart phones, tablets, or other mobile devices. This commentary is integrated with the database and gives managers and supervisors the ability to analyze work in progress in real time. These comments and notes can also update the company's enterprise asset management system with important information. It can also be used to analyze and make process improvements. By doing so, companies can expect to be able to save a little more than a tenth of one percent on annual contract spend.

| Description | Savings |
|--|----------|
| Clerical Savings | N/A |
| Annual Savings from Accuracy | N/A |
| Savings from Process Improvements | \$50,000 |
| Total Annual Savings | \$50,000 |

11. A Detailed History of Workers at Site

All workers who work on a company site or outlying offices are accounted for in an automated contractor cost management system. Thus, if an individual worker moves from one contractor to another, or moves to a different work site, the contractor cost management system records this, and any issues with that worker can be flagged and used for consideration in allowing the person to charge time. If a company has requested that a particular worker not be assigned to its work sites due to performance or safety violations, there is a way for the company to track whether that employee simply stops working for one contractor and starts working for another. The savings are found in the reduced risk of safety violations, where an accident can lead to significant damage, worker injury, or death. As such, the savings are in what does not happen as opposed to what does happen.

| Description | Savings |
|--|----------|
| Clerical Savings | N/A |
| Annual Savings from Accuracy | N/A |
| Savings from Process Improvements | \$10,000 |
| Total Annual Savings | \$10,000 |

12. Regulatory compliance

Using an automated contractor cost management system means that approvals of work performed by workers can easily take place at a level appropriate to the task. This helps ensure higher level managers will be compliant with all relevant regulations such as Sarbanes-Oxley and industry-specific fatigue management regulations (e.g., 10 CFR 26, RP 755, and 49 CFR 192). In addition, there is a complete audit trail to show that managers were relying on proper, auditable information when they took action on particular items. With work reported currently, and approvals / rejects occurring within hours, a manager has sufficient backup information and reduces his risk of committing violations

almost completely. The company can avoid fines that could potentially arise out of violations, so the automated system, in addition to providing some of the more concrete cost savings, can also serve as a bit of an “insurance policy” against potential regulatory compliance.

| Description | Savings |
|--|----------|
| Clerical Savings | N/A |
| Annual Savings from Accuracy | N/A |
| Savings from Process Improvements | \$10,000 |
| Total Annual Savings | \$10,000 |

13. External Auditing simplified

One of the key benefits of implementing an automated contractor cost management system is the fact that the audit process to validate correct charges is greatly simplified. The confirmation by an auditor that a rate is being applied fairly means that all applied rates for a contractor are being applied fairly. Auditors spend a lot of time and money doing trivial but costly audit work. And internal accountants spend even more time answering the auditors concerns. With an automated contractor cost management system, most of this work totally disappears.

| Description | Savings |
|--|----------|
| Clerical Savings | \$48,250 |
| Annual Savings from Accuracy | N/A |
| Savings from Process Improvements | N/A |
| Total Annual Savings | \$48,250 |

14. Significant Reduction in clerical time to provide reports

Having all of the relevant data as it pertains to labor, equipment, and materials charges for projects across multiple contractors makes it much easier to generate detailed and actionable reports. An automated contractor cost management system can deliver a single feed of information for all contractor costs. Some of the systems that an automated contractor cost management system feeds include:

- Payments
- Job allocation
- Primavera scheduler actuals
- Earned Value system
- Planning
- Cost accounting
- Turnaround reports
- Safety reports
- Safety Events reporting

Data capture occurs on a very granular level of detail so that it can be summarized, and parsed. Automated contractor cost management software captures it all, giving all these reports and systems the exact same set of information for unequalled precision. Companies can save hundreds of labor

hours each month compiling cost reports, and the increased accuracy of data can lead to a savings of upwards of one tenth of a percent of total project costs. Contractors, foremen, planners all have access any level of detail with a few mouse clicks. Detail is never lost.

| Description | Savings |
|--|-----------|
| Clerical Savings | \$84,000 |
| Annual Savings from Accuracy | N/A |
| Savings from Process Improvements | \$50,000 |
| Total Annual Savings | \$134,000 |

15. Better, easier reconciliation with EIS system

An automated contractor cost management system that processes and calculates all labor, equipment, and materials charge rules in real time prevents charges to ERP systems like SAP, Maximo, and Oracle (or others) where there is insufficient funding. The system can notify budget holders of conflict between what the contractor has put in to charge vs. what the ERP system will allow and correct before going over to the ERP system. In addition, the system can check other ERP-type errors such as expiry of master services agreement or work order status. Work is often done without proper authorization, and a great deal of time is lost chasing down the approvals, costing both time and a lot of accounting effort to get it done.

| Description | Savings |
|--|-----------|
| Clerical Savings | \$42,000 |
| Annual Savings from Accuracy | \$120,000 |
| Savings from Process Improvements | \$50,000 |
| Total Annual Savings | \$212,000 |

16. Data usage to analyze and improve wrench time

An automated contractor management system allows companies to capture details of work in order to spot limited wrench time or a mismatch between budgeted and actual hours. With data this granular, detailed data mining and analytics can be employed. Improving wrench time is perhaps the single most important KPI for increased productivity. An automated system can reduce the amount of clerical time required to gather and generate reports, and can help increase productivity on projects by upwards of one tenth of one percent. This feature could well exceed this estimate by an order of magnitude.

| Description | Savings |
|--|----------|
| Clerical Savings | \$48,000 |
| Annual Savings from Accuracy | N/A |
| Savings from Process Improvements | \$50,000 |
| Total Annual Savings | \$98,000 |

17. Turnaround shift by shift planning

An automated contractor cost management system gives companies the ability to use data from previous shifts to plan activities for the next shift. This is one of the key benefits of collecting and processing contractor labor costs in real time. Projects that could potentially slip because they were not completed when planned can have resources added to subsequent shifts, helping to ensure that the overall project does not slide. In addition, if company managers know that work on a project was not completed as expected, the manager can deploy scheduled resources on the next shift instead of relying on using overtime to finish the tasks. The savings can be upwards of a quarter of a percent of total project costs.

| Description | Savings |
|--|-----------|
| Clerical Savings | N/A |
| Annual Savings from Accuracy | N/A |
| Savings from Process Improvements | \$125,000 |
| Total Annual Savings | \$125,000 |

18. Dispatching tool for daily/hourly work assignments.

An automated contractor cost tracking system can be used to generate job assignments that can be distributed to workers in the field. Foremen can assign work to their crews/and/or individuals for next day or for the next shift. They typically do this the night before, or prior to arrival of the worker. The worker can get the assignment on smart phone or other mobile device en route to the job. When a crew is selected, the automated contractor management system can generate a record for each person on the crew based on their work pattern. These can be converted to time entries. This leads to less clerical work for companies, as there is less back and forth between workers, contractors, and companies. It helps workers spend less time generating their time sheets – something they do while still “on the clock” – because a bulk of the work is automated. Companies can save upwards of a fifth of a percent of total project costs with this improved efficiency.

| Description | Savings |
|--|-----------|
| Clerical Savings | \$25,000 |
| Annual Savings from Accuracy | N/A |
| Savings from Process Improvements | \$100,000 |
| Total Annual Savings | \$125,000 |

19. Maximum flexibility to retain current timekeeping practice where effective.

Automated contractor cost management systems have the ability to be configured to account for special conditions for each site, each manager, each contractor. This means that most procedures can be automated without disruption of the current work flow, and require little training. It allows companies to minimize changes due to conversion. An effective contractor cost management system does not require the company to change its business practices in order to use the system; instead, the contractor cost management system should conform to the business needs of the organization itself. This can lead to a reduction in clerical effort, which has an ongoing benefit to the organization.

| Description | Savings |
|--|----------|
| Clerical Savings | \$42,000 |
| Annual Savings from Accuracy | N/A |
| Savings from Process Improvements | N/A |
| Total Annual Savings | \$42,000 |

20. Elimination of other systems

An automated contractor cost management system gives many companies the ability to sunset a number of legacy systems and simplify IT systems management. By having all of the data in one place, a contractor cost management system often allows companies to standardize multiple business processes on a single system. This is especially important for IT departments that need to support numerous homegrown systems that are similar, but have been developed to support the specific business requirements of different work groups or business units across the enterprise. By deploying a single system, companies can reduce IT costs in addition to improving operational efficiency across the enterprise.

| Description | Savings |
|--|-----------|
| Clerical Savings | \$62,000 |
| Annual Savings from Accuracy | N/A |
| Savings from Process Improvements | \$50,000 |
| Total Annual Savings | \$112,000 |

Conclusion:

Companies can achieve significant cost savings in their projects by deploying an automated contractor cost management system. Summarizing the individual points of cost savings leads to the following conclusion:

| | | Clerical Savings | Annual Savings from Accuracy | Savings from Process Improvements | Total |
|----|---|------------------|------------------------------|-----------------------------------|------------------|
| 1 | Savings from Rate Entry | 10,000 | 125,000 | - | 135,000 |
| 2 | Savings from Rates Pre-Review & Approval | - | 100,000 | - | 100,000 |
| 3 | Simplified Time Entry with No Rates | 20,000 | 150,000 | 20,000 | 190,000 |
| 4 | Ability to Negotiate Better Rates | - | 125,000 | - | 125,000 |
| 5 | Ability to vet union rate agreements | 72,000 | 50,000 | - | 122,000 |
| 6 | Simplify Retroactive Rate Adjustments | 4,000 | - | - | 4,000 |
| 7 | Contractor savings on billing | 120,000 | - | - | 120,000 |
| 8 | Real time knowledge and validation of actual work | - | 175,000 | - | 175,000 |
| 9 | Transparency and immediate info for better foreman-level management | - | - | 50,000 | 50,000 |
| 10 | Better feedback at foreman level | - | - | 50,000 | 50,000 |
| 11 | Better history information on workers at site | - | - | 10,000 | 10,000 |
| 12 | Regulatory compliance | - | - | 10,000 | 10,000 |
| 13 | External Auditing Simplified | 48,250 | - | - | 48,250 |
| 14 | Significant Reduction in clerical time to provide reports | 84,000 | - | 50,000 | 134,000 |
| 15 | Better, easier reconciliation with EIS System | 42,000 | 120,000 | 50,000 | 212,000 |
| 16 | Data usage to analyze and improve wrench time | 48,000 | - | 50,000 | 98,000 |
| 17 | Turnaround shift by shift planning | - | - | 125,000 | 125,000 |
| 18 | Dispatching tool for daily/hourly work assignments | 25,000 | - | 100,000 | 125,000 |
| 19 | Maximum flexibility to retain current timekeeping practices where effective | 42,000 | - | - | 42,000 |
| 20 | Elimination of Other Systems | 62,000 | - | 50,000 | 112,000 |
| | Total | 577,250 | 845,000 | 565,000 | 1,987,250 |

On a \$50,000,000 project, this is slightly more than a 4% cost savings.

For more information, please contact:

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