IMPROVE PROJECT PERFORMANCE WITH REVAY’S CUSTOMIZED PROJECT MANAGEMENT CONSULTING SERVICES
Revay is internationally recognized as an expert in providing Project Management, Dispute Resolution, and Claims Analysis services on building construction, infrastructure, and heavy civil projects including industrial, commercial and institutional building, as well as process oil and gas, sewage treatment plants, tunneling, road construction, and airport construction.

We have developed a specialised approach to meet the project management needs of our clients, which results in dramatically improved results in terms of achieving targeted outcomes. Our experienced and highly trained professionals can deliver a full suite of project management services from the inception stage of a construction project or program through to close-out. We formulate a customised approach to provide our services in fluid and commensurate response to our client’s needs.

Revay can lead or assist our clients in developing a system and strategy to avoid or mitigate risk by a front-end approach to risk that involves plan validation as well as early identification and corrective action in response to performance off-trends. Our system encourages collaboration and cooperation on the part of all parties to the contract in the service of peak project performance. To champion the best performance, Revay can provide a specially trained professional called Project Success Advocate, who has extensive experience in implementing project management systems.
Revay can provide a full suite of services during the project initiation, design and bidding and tendering phases. Our services are crafted to maximize the great potential of a front-end approach to risk, which commits to early identification of risks and implementation of effective plans to mitigate or avoid risk.

- Front-End Risk Avoidance/Mitigation
- Improve Performance during Pre-Construction Phase
INITIATION PHASE

Creating reasonable stake-holder expectations relative to project outcomes requires a clear understanding of the objectives, along with an appreciation for the challenges that must be overcome to achieve them. Revay can take the lead, or support your leaders, in facilitating the development of a Project Charter which aligns the stakeholder’s expectations with the stated purpose of the project, and clearly defines the scope and objectives as well as the role of the stakeholders in accomplishing the same. Revay brings the advantage of extensive experience in helping to successfully deliver construction projects to the task of developing a Charter which will include consideration of matters such as: project purpose; defining measurable project objectives; assumptions and constraints; risk analysis; milestone schedules; summary budget; stakeholder identification; approvals; and organizational approaches.

In our view, effective project management is an essential risk mitigation tool, and it is therefore extremely important that the Project Management Plan, which specifies how the project will be planned, executed, monitored and controlled, has the benefit of experienced practitioners. The scope, schedule and cost baselines are developed, resource requirements determined, and sub-plans developed for management of schedule, cost, quality assurance/control, communications, risk, procurement and stakeholders.

In all of these areas, Revay can provide expert judgement based not only on its project management and controls experience, but also on its experience in dispute resolution and construction claims work. This unique combination of skills also adds great value the advice we can provide on Contract Delivery Approaches, contract Front-End Specifications, as well as Bidding and Tendering Strategies.
Even the best laid plans will go awry without the leadership to ensure they are carried out. For example, meaningful schedules are available which identify risk at an early stage, someone must then act on this intelligence in order to avoid project failure. This person should be a project management and controls expert with specialized analytical skills. Equally important, this person, whom we call a Project Advocate, must have the ability to lead project teams, because they will be the dedicated champion of best performance in the service of the project. If the owner does not have such a person in-house, we can fill the role.

Front end planning is necessary but not sufficient to ensure that the owner’s cost, schedule and quality objectives are met. No matter how thoroughly pre-planned a project may be, once construction begins, continuous change is to be expected. Revay draws upon a staff of experienced people with expertise in multiple disciplines and types of construction, who are uniquely qualified to identify the tell-tale signs of problematic changes and how best to respond to the problems which inevitably arise.
IMPROVING DESIGN PERFORMANCE

Owners frequently encounter delays in design development, which may have the knock-on effect of delaying overall project completion. In addition, owners are increasingly faced with designer claims for cost over-runs and delay damages. It is rarely the case that the owner has early warning of these problems, and so potential mitigation opportunities are squandered, and the participants’ energies are later diverted to resolving the dispute rather than preparing for construction.

Revay has developed a customized approach to planning, scheduling and performance monitoring of the design work which has proven highly effective in achieving the targeted time and cost objectives as well as avoiding design claims.

It begins with assisting owners in developing their Request for Proposal (RFP) for Design Services. Since the foundation for the development of a feasible design schedule is clear definition of schedule expectations, we create a highly detailed schedule specification elaborating on Critical Path Method schedule best practices, conveying the central importance of schedule as a planning and control tool, and setting out requirements for baseline schedule development as well as the production of monthly schedule progress updates and reporting.

In order to create reliable schedules which the entire project team can buy into, it is necessary to understand the underlying production and productivity assumptions, and so the design schedule specification requires loading of design labour hours and costs at an activity level. This enables earned value analysis of the design progress which may detect off-trends at an early stage. We have created a system to monitor and control design progress which connects design progress payments to earned value.

Design progress can be delayed by informational log-jams as well as design scope change approval process. Revay has experience in creating web-based document management systems for design and construction administration. For Design, we have created an automated process to managed design information requests as well as for design changes.

» Develop Design Requests for Proposals
» Oversee Development of Design Schedules
» Monitor and Report on Design Schedule and Earned Value Performance
DEVELOPING THE PERFORMANCE MEASUREMENT BASELINE - TIME AND COST CONTROL

In Earned Value Project Management parlance, the Performance Measurement Baseline (PMB) is the cash (labour, and other resource) loaded planned schedule against which time and cost objectives will be measured. The development of this schedule into a reliable target plan is a key step in ensuring time and cost certainty for owners, as well as creating realistic expectations amongst stakeholders.

The steps in creating a PMB include: definition of the work scope (accomplished within a Work Breakdown Structure); establishment of a high level schedule which reflects the primary schedule objectives; an estimation of the resources required to support these objectives; and development of a detailed resource-loaded schedule. Revay has specialized expertise and experience to assist, or lead the team, in all of these areas of plan development.

In the early stage of the project, the scope of work is not finalized, and so there will be many iterations of the baseline plan until it can be considered a validated plan. Rolling Wave scheduling is the name given to the gradual process of bottom-up and top-down development, which culminates with fully detailed schedules produced by the performing contractors. Once detailed drawings and specifications are completed, Revay can create feasibility schedules which provide a check against current target milestones. Throughout the process of schedule development, we use Monte Carlo simulations to provide a probabilistic analysis to complement the deterministic one.

Cost, labour and other resources are loaded into the validated PMB, with a work breakdown structure that enables very powerful cost reporting for management. Contingencies are separated from distributed budgets, changes are incorporated but separately identified, and management reserves are assessed in the light of change. In the systems that Revay has set up, the PBS and progress billings are seamlessly connected so that reporting is reliable and efficient.
CONSTRUCTION MANAGEMENT AND CONTRACT ADMINISTRATION OVERSIGHT AND ADVICE

During the design stage, owners sometimes enlist the services of a Construction Manager (CM) with the expectation that the CM’s contracting knowledge, skills, and experience will help to achieve efficiencies with respect to time, budget and constructability. Once construction starts, and depending upon the selected project delivery approach, the Construction Manager may be tasked with coordinating all of the construction work. In either case, Revay can provide owners with an independent opinion on the Construction Manager’s performance.

Furthermore, we are uniquely qualified by our experience to provide advice and recommendations with respect to the appropriate contract delivery method, review of the Contract Front ends, as well as bidding and Tendering strategies. A Revay specialist with direct experience in having managed construction contracts can attend construction meetings to keep abreast of current issues of concern, and provide the owner with objective insights into risks and opportunities.
CONSTRUCTION PHASE

Our innovative and specialised approach to providing project management services during the construction phase covers all process areas including the following:

- Web-Based Communications Management
- Schedule Management including:
  - Schedule Development
  - Schedule Monitoring
  - Schedule Performance analysis
- Contractor/Project Performance Evaluation
- Dispute Resolution
- Project Close/Lessons-Learned
The idea behind On-Line Collaboration and Project Management (or OCPM) is to use a web-based platform to create communications structures and automated procedures to manage the administration of design and construction. The potential benefit of these systems is much greater efficiency and accountability. Documents are stored and controlled in a shared and centralized environment, creating a unified structure, and the history and status of all the typical work flows is real time and transparent, which encourages accountability.

OCPM can be an invaluable resource which enhances performance, however, on many projects the platform is used only as a document storage place, and the potential is not realized. The system we have developed manages all work flows including Requests-for-Information, contract changes, shop drawings, progress billings, and other submittals, and is based on our vast experience in contract administration. We have found the keys to successful implementation are: system-simplicity, ease of use, strict adherence to documented procedures, and early training and support (which we can provide).

WEB-BASED COMMUNICATIONS PLATFORM
SCHEDULE MANAGEMENT WITH A PERFORMANCE IMPERATIVE

The schedule should tell the truth about time: past, present and future. If it does, then it is the vitally important tool at the heart of an effective project management planning and control approach and which is essentially this: a feasible plan is created to which all buy-in; actual progress is measured against this plan to identify off-trends, and corrections made to bring the schedule back on course if possible; and reliable forecasts to complete are produced so that delay may be avoided or mitigated or, at the very least, known about in advance. This approach provides the means to evaluate performance and enforce accountability.

Notwithstanding the great potential of scheduling to benefit the project, many owners find that the baseline and progress schedules produced for construction are unreliable, negating their benefit as a planning and control tool. In response to this industry challenge, Revay has developed strategies and techniques to ensure that meaningful schedules are the norm on construction programs where our services are provided.
CONSTRUCTION SCHEDULES WORK PLAN

A detailed scope of work is developed to clarify the process of reviewing baseline and progress schedules, and roles and responsibilities are assigned. To ensure that contractors have a clear understanding of their schedule obligations, Revay creates a customised specification describing in detail the requirements for software, resource loading, integration with progress billings, CPM best practices, narrative composition, reporting, etcetera.

REVIEW OF CONSTRUCTION SCHEDULES

Revay’s customized multi-method schedule analysis reports combine critical and near-critical float path analysis, Earned Value metrics, progress curve and labour hour consumption curve analysis, performance intensity comparisons, as well as insights derived from Delphi work shop sessions. Our concise and prescient analysis is complemented by dashboard graphics which convey the big picture at a glance.

MONTE CARLO SIMULATIONS

Schedule activity durations are only an estimate of time, and some activities will have a much wider potential range of duration than others. Revay performs Monte Carlo Schedule risk analysis so that owners can factor probability into their time and cost forecasts.
The durations of schedule activities should be based on realistic daily production rates. And daily production rates (for activities with a labour component) should be based on realistic assumptions about productivity (how many quantity units can a worker produce in a unit of time), and effort (how many workers in a crew working how many hours per day).

Even where best practices are followed in creating and maintaining schedules, the fact remains that a schedule can only ever be a model of reality. Monitoring bridges the gap between the model, and the reality in the field. It is essential in validating a baseline schedule to understand the productivity and labour resource assumptions supporting activity durations. But equally important, once work starts, knowing whether the assumed rates of productivity and production are being achieved is a key consideration in determining the reliability of forecasts as well as determining the reasons for performance problems. A Revay productivity monitoring consultant can visit the site on a regular basis, record observed progress, and report on productivity and production.
Contractor Performance Evaluation Systems (CPES) have been found to greatly improve overall construction program delivery. Not only is performance on current projects improved, but such systems can help owners identify the best-performing contractors. A construction program can perform better immediately, and continuously improve, when there is objective performance measurement.

The CPES we have developed is designed to encourage objective scoring. The numerical scores are supported with a rationale (or qualitative aspect) which reveals the full performance story in all of its complexity. It digs deeply into the reasons for the performance score since this can provide insight into the cause and effect of delay and disruption issues, and offer lessons-learned.
CONSTRUCTION PHASE

DISPUTE RESOLUTION – CLAIM REVIEW AND PREPARATION

Revay has prepared and evaluated several thousand claims, ranging in value from $10,000 to hundreds of millions of dollars. Our firm has earned its reputation over the years as an "honest broker", making Revay a leader in dispute resolution throughout Canada and placing it among the leading consulting firms in its field. This recognition is born out of the professional competence, the specialised knowledge and the unique analytical approaches Revay has developed for appraising and representing client claims.

Our vast experience and expertise in dispute resolution services such as the following uniquely complements our project management expertise:

» Claims Assessment
» Expert Reports and Testimony
» Trial Graphics
» Assistance to Legal Counsel
» Schedule Analysis
» Lost Productivity Analysis
» Damage Quantification
» Delay Analysis

Mississauga Bus Rapid Transit Program
ALTERNATE DISPUTE RESOLUTION

Disputes over delay compensation and extension of time claims often become very contentious that they interfere with the collaboration essential to expeditious completion of the project, thereby causing further delay and cost over-runs. Revay has led negotiations which amicably resolved multi-million dollar claims on various types of contract delivery. We can take the lead and be directly involved in the negotiations, or work in the background, providing negotiating strategy and advice. Once settlement is reached, we can prepare a comprehensive and clear settlement agreement which will make future conflicts far less likely. In addition to mediation, two alternate dispute resolution methods we often use are described on the following page.
PERFORMANCE-BASED DISPUTE RESOLUTION

On in-progress projects, a problem with the way much dispute resolution in the construction industry is handled is that it attempts to resolve the dispute (i.e. agree on compensation and extension of time) without certainty about the current schedule status of the project. This usually happens because the schedule is unreliable, and the result is that even if the first claim is settled, more will follow, causing more disruption to the project.

Recognising that owners need time and cost certainty, and the best way to avoid further claims is to introduce a performance imperative along with effective project controls going forward. The first order of business is to create a schedule for the remaining work which the owner and contractor accept as credible and achievable. At the same time, the contractor’s reasonable claims for compensation will be reviewed and analyzed. All of this is completed over a 4-6 week period. This approach has proven to be very successful that projects which were at or near a standstill are transformed within a short time into beehives of activity.

As a part of this service, Revay can provide a range estimate evaluation of the reasonableness of contractor claims.

PROJECT NEUTRAL

Under this process, Revay offers unbiased advice and recommendations to the parties involved, with a view to helping them to work cooperatively towards a solution. As Project Neutral, Revay provides the parties with an impartial claims consultant who will carry out schedule analysis, evaluate delays and damages, assist with negotiations, and facilitate the conciliation process.

Project Neutral services include: assessment of respective positions; fact finding; report, and facilitation of negotiations.

As all parties to the dispute share the cost of the services provided, the cost to each is substantially lower than under a more traditional method of dispute resolution.
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