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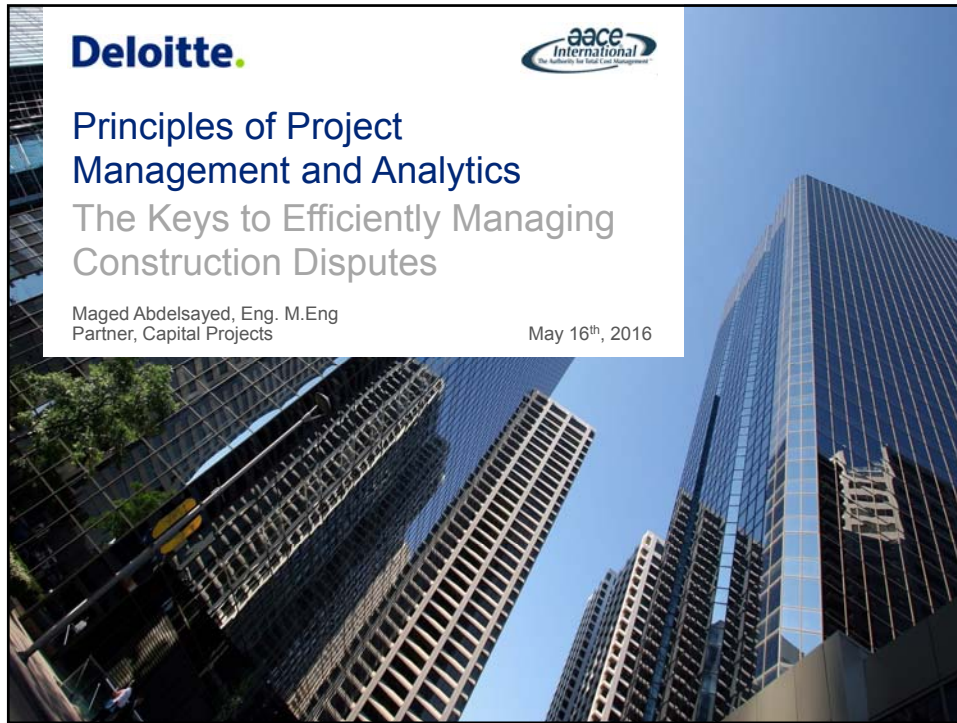
AACE International
The Authority for the Construction Contract

Principles of Project Management and Analytics

The Keys to Efficiently Managing Construction Disputes

Maged Abdelsayed, Eng. M.Eng
Partner, Capital Projects

May 16th, 2016



AACE Meeting Driving in Construction Zones

- Always be ready when comes across evidence of construction (e.g. orange cones)
- Stay alert for signs and follow them
- Stay alert for bypass lanes, detours and new traffic patterns (exercise care with uneven surfaces, mud)
- Watch for workers and small construction vehicles that may not be protected by barriers
- Follow construction zone flaggers who direct traffic
- Use extra caution, avoid passing
- Keep attitude positive
- Keep frustration level under control



Be careful out There!
Drive safely and watch for potholes!!!



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International
The Authority for Total Cost Management

Principles of Project Management and Analytics

The Keys to Efficiently Managing Construction Disputes

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4. Application of Analytics to the Process

Introduction

Introduction



Average time to resolve a construction dispute – 8 to 15 months



Average value of a construction claim – increased from US\$ 56 million in 2010 to US\$ 112 million in 2011



The number of documents to review in preparing a construction claim can be significant



There are many parties involved



The data to review in preparing a construction claim can be very complex



The process therefore requires a proper strategy and plan



Applying the appropriate tools can help make the process more efficient

Stratégie pour la réclamation

Stratégie

Le départ...

- Vous avez un contrat pour exécuter une étendue des travaux définie, selon des conditions établies, pour un prix fixe, à un coût estimé, et le tout selon un échéancier établi.
- Maintenant vous faites face à des dépassements de coûts et/ou des retards importants.
- Que s'est-il passé?
- Je fais quoi?

Stratégie

Le dilemme...

- Plus une réclamation sera présentée rapidement, plus vous diminuerez vos coûts pour l'entreprise et vous augmenterez vos chances d'un règlement négocié
- Une réclamation incomplète et mal préparée va en prolonger le traitement, diminuer les chances d'un règlement négocié et forcer toutes les parties à encourir des frais supplémentaires

Stratégie

Un autre dilemme!

En réponse à la demande de compensation de l'entrepreneur, le client répond:

J'accepte le fait qu'il y avait beaucoup de changements. J'accepte également que vous ayez encouru des coûts additionnels et des retards. Toutefois, je ne suis pas convaincu que les coûts additionnels et les retards sont une conséquence directe de l'impact des changements!

Les questions stratégiques à adresser

- Validité de la réclamation (bien fondé)
- Forces et faiblesses
- Base contractuelle
- Montant cherché
- Réclamation versus perte
- Informations disponible et structurée?
- Coûts impliqués
- Disponibilité des fonds
- Opinion indépendante rapide (légale et technique) – conflit d'intérêts

Les questions stratégiques à adresser

- Timing
- Impact sur le projet si non terminé
- Confidentialité
- Prescription et hypothèque légale?
- Niveau de détail
- Je suis le seul à réclamer? Autres entrepreneurs
- Les sous-traitants?

Les questions stratégiques à adresser

- Chances
- Relation avec client
- Disponibilité des ressources
- Les avocats et les experts
- Plan
- Équipe
- Jusqu'ou?
- But ultime?

Applying the Principles of Project Management

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Dispute Management Plan

As on a construction project:

- Feasibility study
- Requirements analysis
- Scope definition
- Risk analysis
- Establishment of WBS/Activities
- Budgeting
- Planning and Scheduling
- Value Engineering
- Cost / Schedule Monitoring and Control

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Feasibility Study

- Legal/contractual basis for the claim
- Strengths and weaknesses of the case
- Actual financial loss incurred
- Anticipated cost of the dispute resolution process
- Anticipated time for the dispute resolution process
- Availability of funds to finance the dispute resolution process
- Availability of other required resources (project personnel, legal and technical expertise, etc.)
- Impact of the claim on the project
- Impact of the claim on the corporate entity advancing the claim
- Corporate willingness to engage in litigation

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Requirements Analysis

- Definition of objectives
- Can be simple, ex: to maximize the net revenue from the claim
- Can be defined by constraints, ex: to settle before end of financial year
- Can be non-financial issue, ex: reputation

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Étendue des travaux

Définition de l'étendue des travaux pour le montage de la réclamation. Par exemple:

- Aspect légal
- Identification des causes de la demande
- Établissement du bien fondé
- Historique des événements majeurs
- Analyse des retards
- Analyse de la productivité de la main-d'œuvre
- Quantification des dommages

Risk Analysis

- The loss of project personnel with knowledge of the execution of the project (through re-assignment, change in employment or even death)
- The willingness and/or ability of project personnel to testify in court or arbitration
- The lack of evidence (the project management systems in place may not have captured all relevant information over the course of the project)
- The loss of evidence (disappearance of hard copy documents, loss of computer files, etc.)
- The lack of adequate funds to pursue the claim on a continuous basis

Risk Analysis

- Failure to recognize early in the process the weaknesses in the claimants case and/or the existence of counterclaims that may be made against the claimant
- Inconsistent and/or inadequate management of the claim resolution process
- Turnover among key players in the claim resolution team (claimant's personnel, counsel, consultants, experts)
- The expertise and level of performance of the key service providers (counsel, consultants and experts)
- Poorly defined mandates for independent experts
- Experts brought in too early or too late
- Too many experts (or not enough experts)

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Risk Analysis

- Inherent conflicts of interest:
 - the owner's representative fully employed in the resolution of the dispute who fails to take advantage of early opportunities for settlement for fear of losing his or her position,
 - counsel or experts who, in the interest of maximizing fees, "add fuel to the fire" rather than fostering resolution)
- Inadequate definition and communication of the owner's objectives, resources and constraints
- Delays in the legal process (The claims resolution process is notoriously slow. Legal systems appear to be designed to give every opportunity to a party to put forward its case. For the most part, they do not appear to be designed to ensure timely and cost effective resolution of a dispute).
- The ability of the judge or arbitrator(s) to understand and analyze large amounts of technical information

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Establishment of WBS/Activities

A WBS for a typical dispute resolution process may include:

- Compile and process relevant documents
- Capture relevant information
- Prepare claim and statement of claim
- Financial audits
- Discovery and depositions
- Undertakings and responses to undertakings
- Review of documents provided by opposing party
- Review of defenses and counterclaims
- Amendments to statement of claim

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Establishment of WBS/Activities

- Prepare defense against counterclaim
- Interview witnesses
- Review documents
- Identify / define requirements for expert reports and/or evidence
- Select experts
- Prepare expert reports
- Review expert reports
- Prepare rebuttal to opposing parties expert reports
- Develop trial plan
- Prepare witnesses for trial

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Establishment of WBS/Activities

- Negotiation
- Mediation
- Trial
- Review decision
- Appeal

Estimation / Budget

Définition des équipes

- Équipes internes
 - *Management*
- Équipe légale
- Consultants externes

- Perte d'opportunité sur autres projets?
- Perte d'opportunité avec même client?

Estimation / Budget

Contrôle du budget

- Niveau de détail requis
- Demander des budgets
- Mesurer et contrôler
- Accepter le fait que dû à la nature des réclamations, il est impossible de déterminer avec précision le budget requis
 - *Solution: Procéder par étape*

Estimation / Budget – Ressources

- Les témoins de fait
 - Versions de faits
 - Notes personnelles
 - Dossiers électroniques
- Ressources décisionnelles
- Doubles équipes:
 - Réclamation
 - Négociation

Estimation / Budget – Équipe interne

Capter l'historique du projet avant le départ des personnes clés et pendant que leur mémoire est encore vif

- Surintendant
- Estimateur
- Comptable
- Gérant de projet
- Directeur de projet

Estimation / Budget – Équipe externe

Avocat spécialisé dans le domaine de la construction

- Procédure
- Négociation
- Analyse de risque et d'options

Consultants externes:

- Monter la réclamation
- Défendre et analyser la réclamation
- Expertise indépendante
- Sujets techniques

Planification et échéancier

- Avis (selon le contrat)
- Temps pour négociation au niveau de chantier
- Délai contractuel pour résolution de litige
- Prescription
- Date ultime pour hypothèque légale
- Date ultime pour contrôler les coûts

Note: Les coûts sont accumulés en fonction de l'échéancier

Échéancier en cas de litige

- Date d'action
- Production des documents
- Précisions
- Interrogatoire
- Engagements
- Dépôt des rapports d'experts
- Réponses aux expertises
- Dossier prêt pour audience
- Date d'audience
- Durée du procès
- Exemples...

Quoi faire pour contrôler l'échéancier?

- Engagement que vos ressources restent disponibles
- Informations fournies à temps
- Information bien structurée et organisée
- Garder le « momentum »
- Garder le focus sur le but ultime
- Livrables et conclusions par étape – feedback continue
- Travail en équipe et communication
- Niveau de détail requis (Q&D?)

Value Engineering

- Is it more cost effective to use in-house personnel to organize documents or should this be outsourced?
- Is it really necessary to have three different experts provide reports on various issues?
- What is gained by reviewing all email exchanges between the project personnel and the design team? Can this be limited to reviewing only emails exchanged by selected key personnel?
- Is it necessary and cost effective to pursue every disputed change order?

Value Engineering

- What is gained by submitting a counter expertise to every expert report submitted? Can the response or rebuttal to some reports be adequately made through cross examination of the expert?
- How much discovery is absolutely necessary? Are there subjects and/or witnesses that can be set aside in the discovery process without significantly compromising the claimant's case?
- Is it necessary for experts to review the depositions of all witnesses? What will the added value be?

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Cost / Scheduling Monitoring and Control

- Pearson's Law states:
 - *"That which is measured improves. That which is measured and reported improves exponentially."*
- The practice of periodically reporting costs against a pre-determined budget is well established in capital project construction but not commonplace in litigation. Similarly, the practice of establishing a master schedule and periodically updating this schedule is also uncommon in litigation.
- The ultimate goal of the monitoring and control system is to ensure that the claimant has at any point in time, a realistic appreciation of not only the claim value but also of the anticipated time and cost of achieving resolution of the claim. This information is critical to intelligent decision making regarding settlement of the dispute and to the financial viability of the entire process.

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Proportionality

- The force within the legal community that will foster the implementation of the principles of project management to the dispute resolution process is that of proportionality.
- A recent report published in Ontario, Canada by Justice Coulter A. Osborne, Q.C. states the following regarding this issue:

*“Proportionality, in the context of civil litigation, simply reflects that **the time and expense devoted to a proceeding ought to be proportionate to what is at stake**. It should be expressly referenced in the Rules of Civil Procedure as an overarching, guiding principle when the court makes any order.”*

Quality

Qualité: « *Do it right the first time* »

- Contexte d'une réclamation
- Contexte d'un procès

Sécurité:

- Confidentialité
- Backup

Application of Analytics to the Process

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Statistiques

- Plus de 90% de l'information de n'importe quelle compagnie est entreposée sous forme de documents.
- 80% des documents électroniques sont entreposés sur le c:/ de l'ordinateur de l'employé.
- Les employés passent 60% de leur temps à manipuler des documents.

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Statistiques – encore?

- 85% - des fichiers ne sont jamais récupérés.
- 50% - Duplicatas.
- 60% - Information archivée qui devrait être détruite.
- 20% - Temps perdu par les employés pour classer et rechercher de l'information inutile.
- L'équivalent de 5 semaines par année est perdu en recherche d'informations.

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Caractéristiques d'un projet typique d'une valeur de 20 millions \$

Nombre d'intervenants (compagnies)	420
Nombre d'intervenants (individus)	850
Nombre de différents types de documents	50
Quantité de documents (nombre de pages)	56,000

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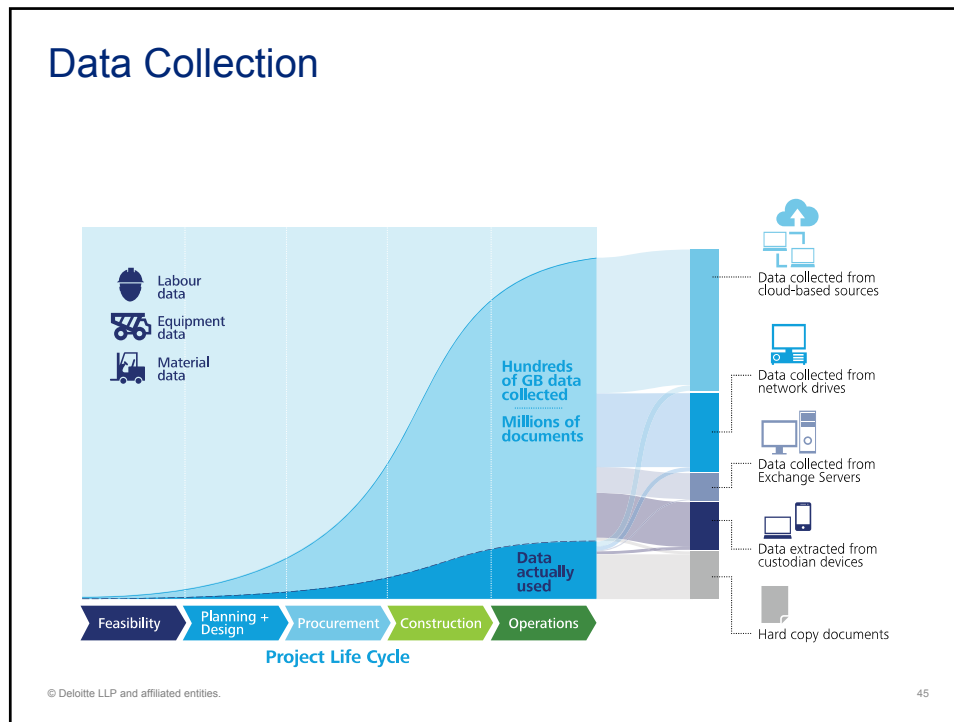


Comparaison des différents formats de préservation des documents

Arbres (8 pouces dia, 50 pieds, 20 ans)	28
Filière (4 tiroirs)	28
Boîtes 'Bankers boxes'	112
Nombre de pages	280,000
Mbyte	14,000
CD Rom	28
DVD	1

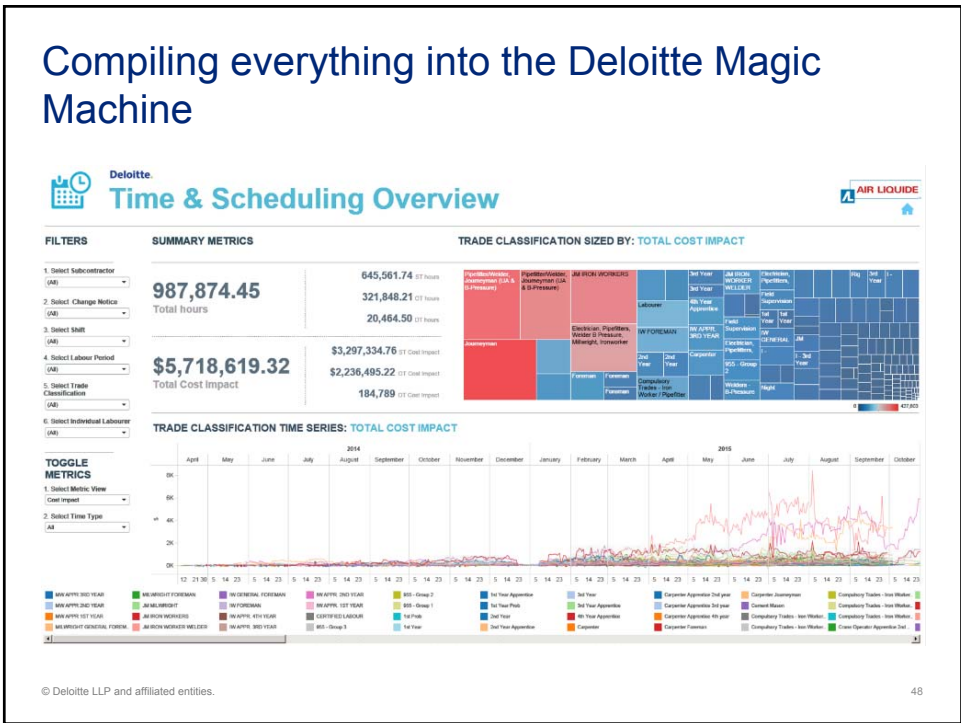
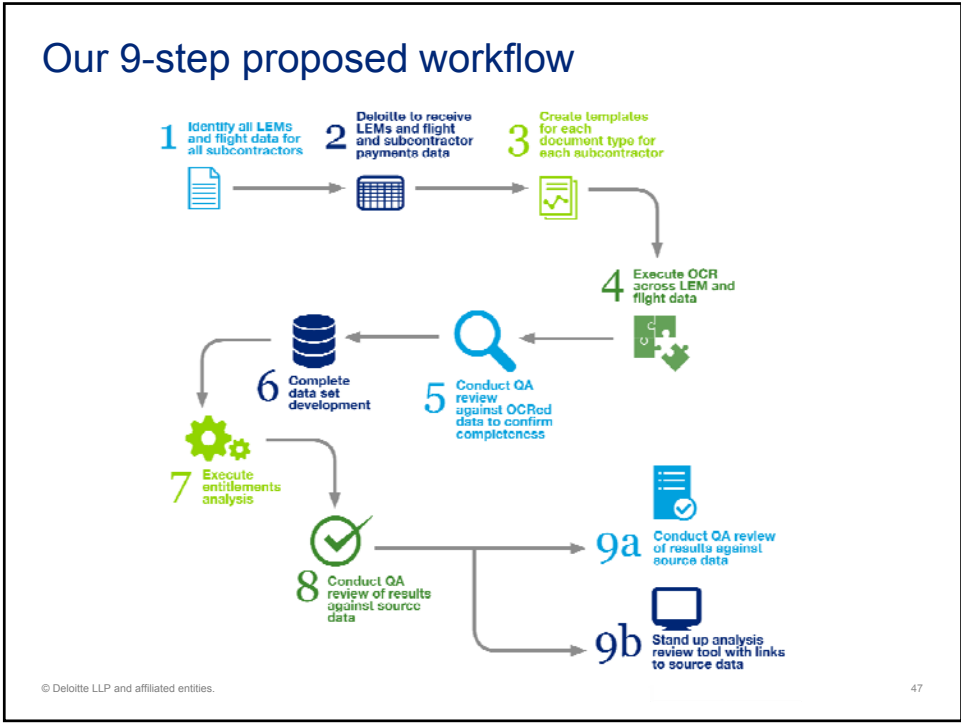


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Deloitte assisted with developing change notices for labour rates and flight costs

- Scope of analysis:
 - 16 subcontractors via 20 purchase orders
 - Between February 2013 (when on-site construction began) and November 2015 (when contract ended)
 - Initial estimates of over 1.5 million direct labour manhours, and 30,000 charter and commercial flights
 - Very large volume of supporting documents (Excel, PDF)
- Deliverables: Change notices



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