

# Construction Issues in PPP Contracts

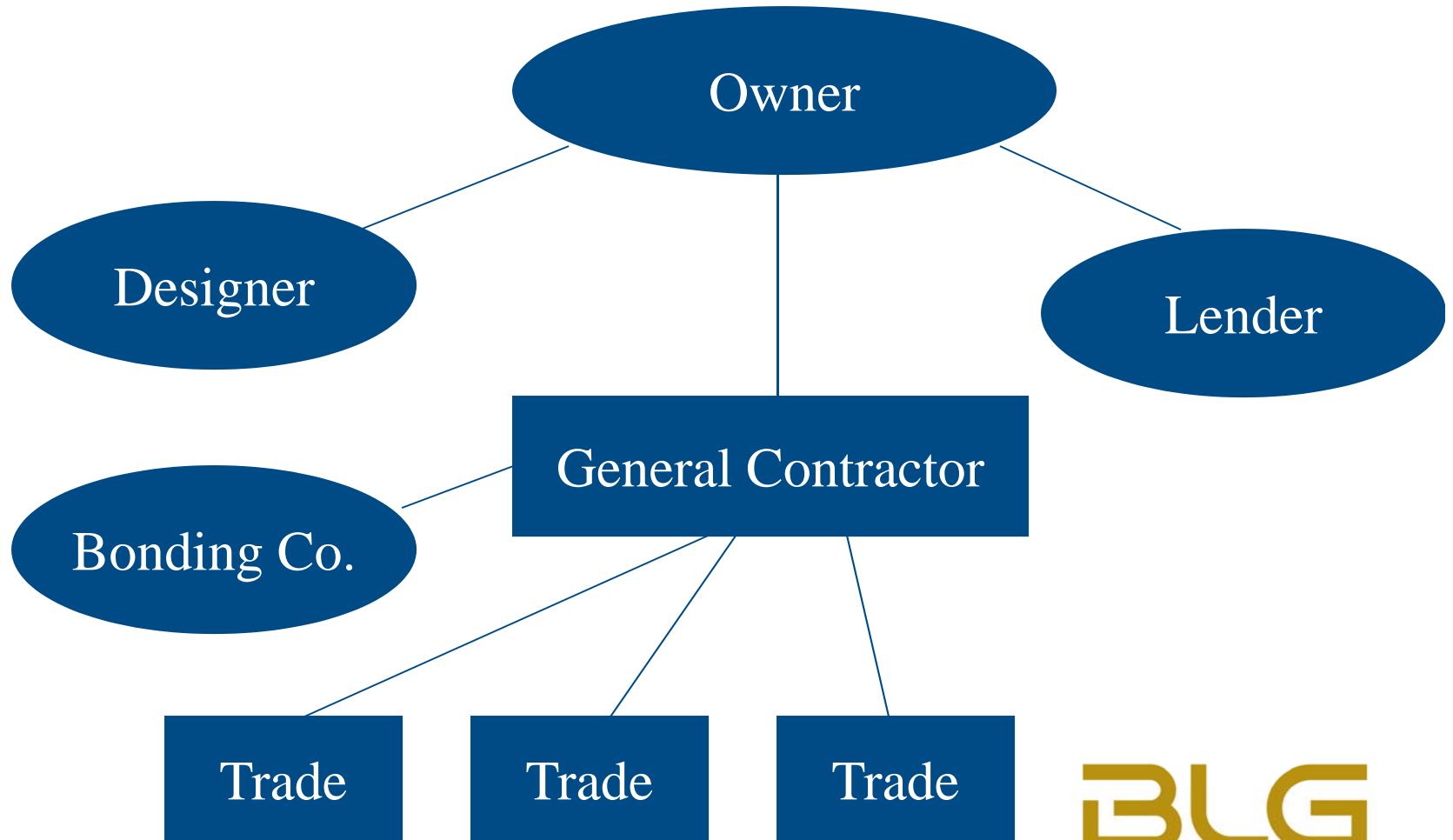
**Doug R. Sanders**  
**October 22, 2010**



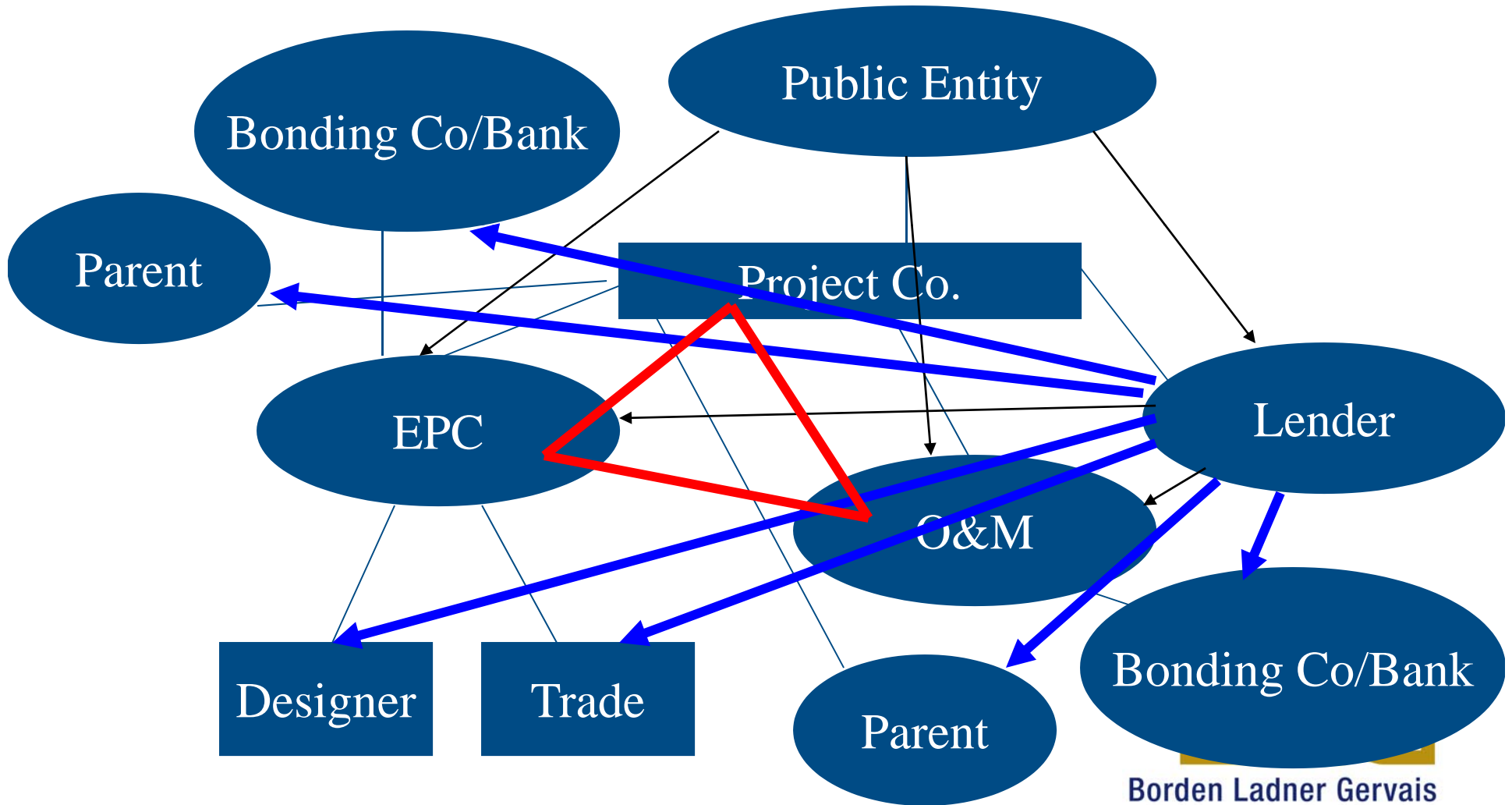
# Introduction

- **Issues between**
  - Owner/Developer/Design Builder
  - Developer/Design Builder
  - Lenders/Design Builder
  - Design Builder/Operator

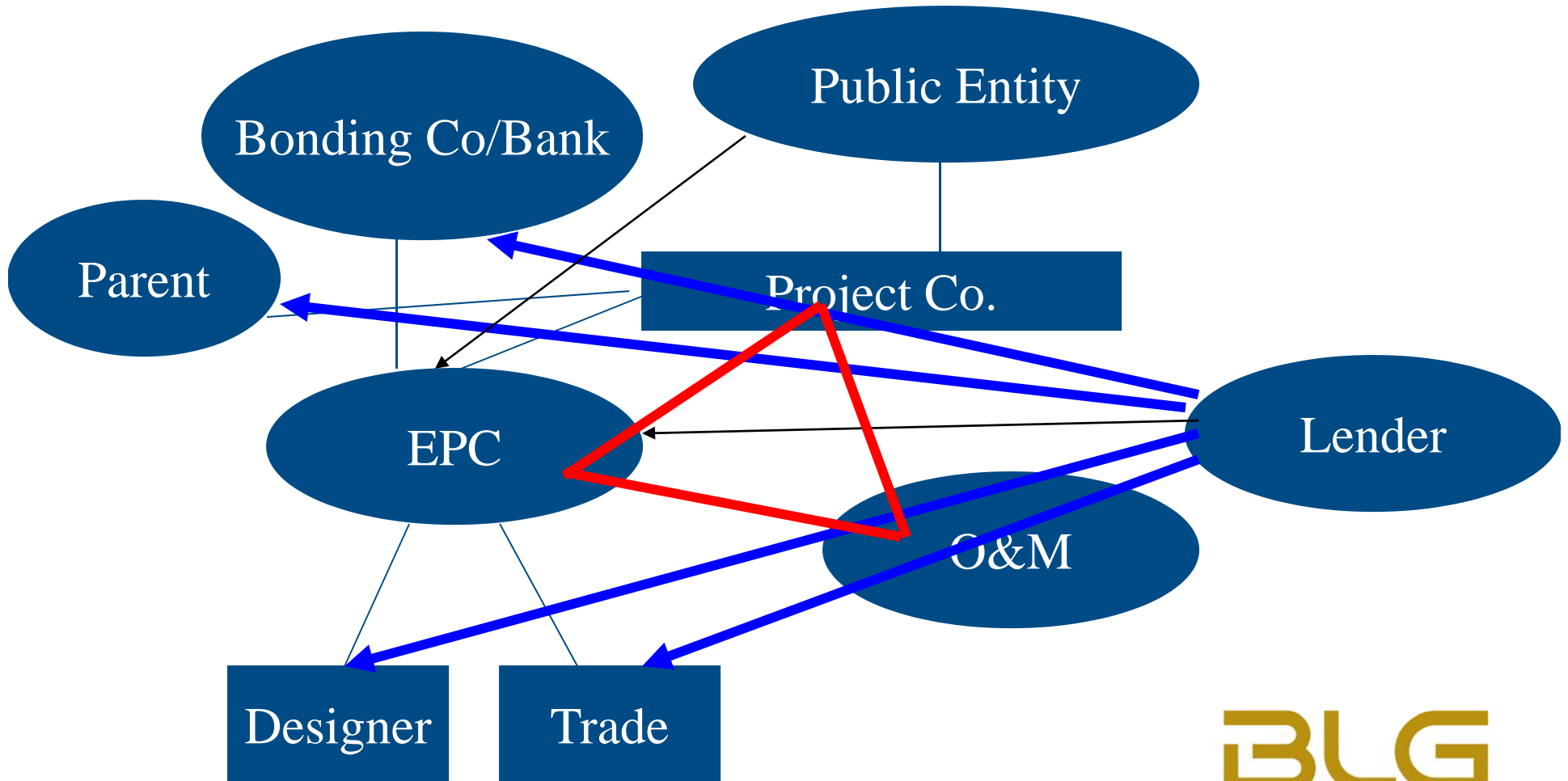
# “Traditional” Construction Contract



# PPP Contractual Relationships



# PPP Construction Relationships



- INTER PARTY  
ISSUES

# Issues with Project Owner

- **Political/procedural**
- **Budget**
- **Stipend**
- **Payments**
- **Schedule (RFP/construction)**
- **Data risk**
- **Step-in rights**

# Issues with Project Owner

- Risk allocation (discussed later)
- Payment
- Changes
- Design review
- Construction review
- Relief events (discussed below)
- Termination
- Equivalent Project Relief
- Builders Lien Holdbacks
- Insurance
- Security?



# Issues with Concessionaire

- Risk allocation (discussed later)
- Payment
- Changes
- Design review
- Construction review
- Relief events (discussed below)
- Termination
- Equivalent Project Relief
- Builders Lien Holdbacks

# Issues with Concessionaire (cont)

- **Builders Lien Holdbacks**
- **Insurance**
- **Retained risk**
- **Liability caps**
- **Liquidated damages/bonuses**
- **Warranty**
- **Right to terminate for force majeure**
- **Interest costs during relief event**
- **Liability period**

# Issues with Lender

- **Time for suspension/termination**
- **Improper security calls**
- **Priority**
- **Step in rights/obligations**
- **Financial statements**
- **Level of information**

# Issues with Operator

- **Design review**
- **Construction review**
- **Liability Caps**
- **Warranty**

# Issues with Operator

- **Design review**
- **Construction review**
- **Liability Caps**

- RISK  
ALLOCATION

# The “Fixed Price” Myth

Labour  
Materials and Other Costs  
Contingencies  
Risks Allocated to Contractor  
Profit and Overhead



“Stipulated Sum”

Changes Due to Alterations  
Changes Due to Design Errors  
Risks Allocated to Owners



“Extras”

# Cost Certainty v. Fair Risk Allocation



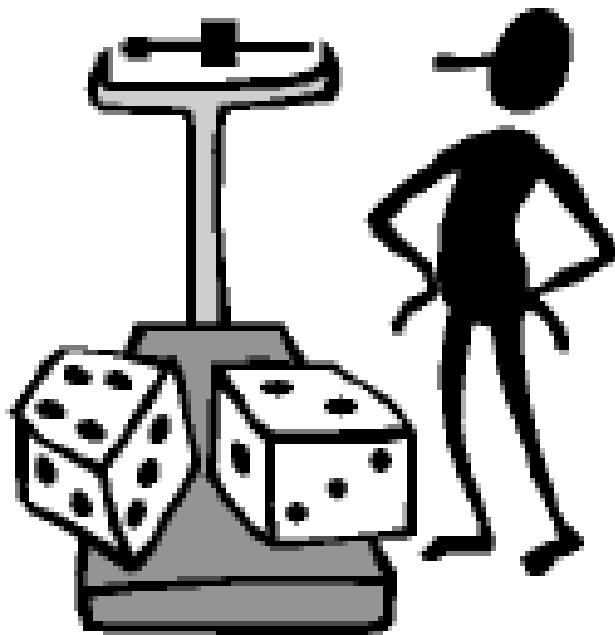
- **Cost certainty**

- **Fair risk**
- **allocation**



# Transfer of Risk/Obligation

- **Goal:** Optimize levels of risk and obligation for each party



# Managing Risk

- **First Principles**

- Formal identification, quantification and allocation of risk is essential to a successful PPP
- Goal should be to optimize (not maximize) levels of risk and obligation for each party – e.g., the allocation of a given risk to the party best able to manage it
- Allocation of risk should be transparent

# Managing Risk

- A prime cause of project stress is often project exposure to counterparty risk, rather than inherent project risk

# Managing Risk – Process Risk

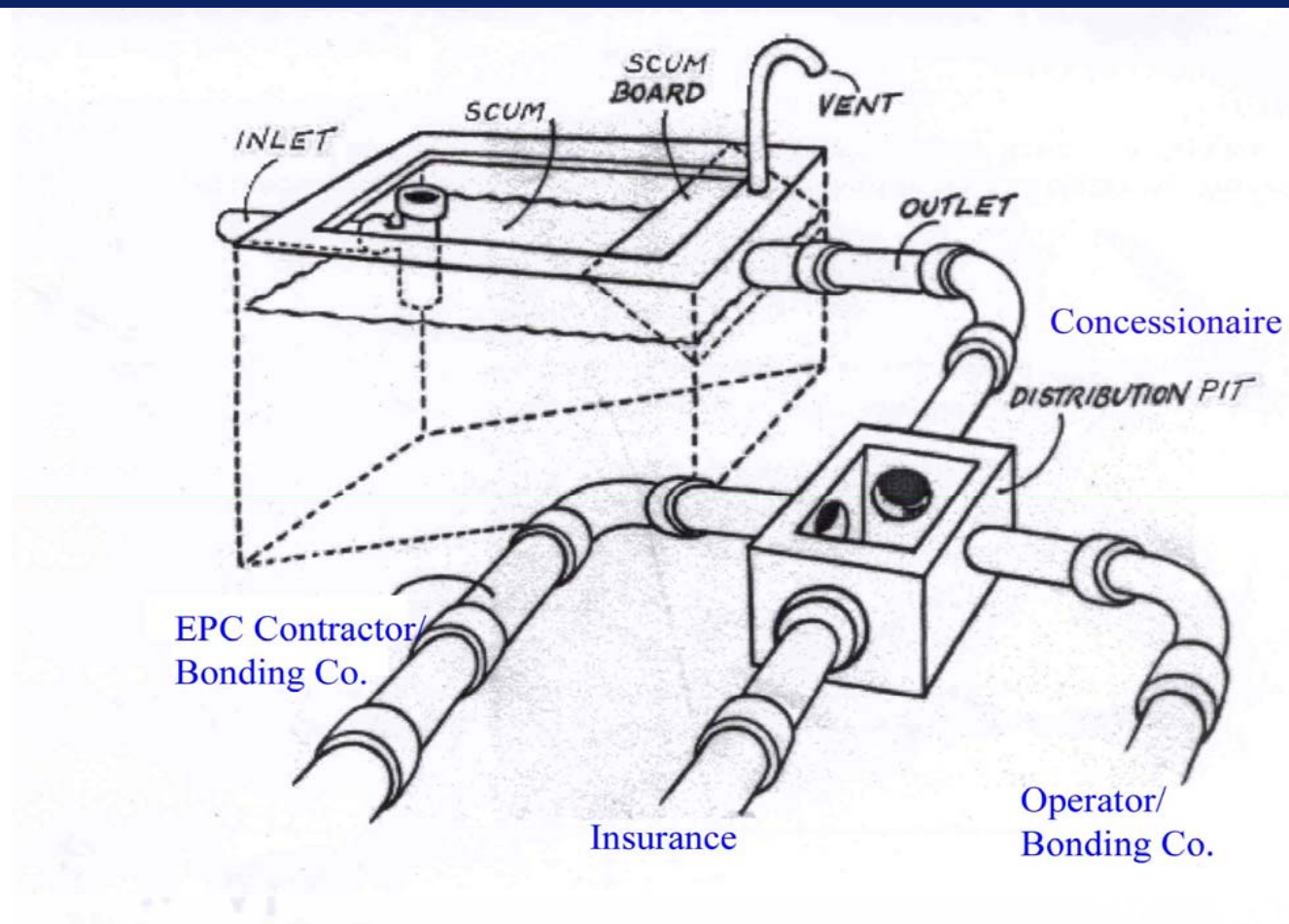
- Significant bidding cost for both owner and bidders
- Risk of owners changing process mid-stream (e.g., Whistler)
- Trying to keep costs down in bidding process difficult and may lead to bad bid
- Fairness; transparency

**“It is easy to be tender to one who is fair;  
Harder yet to be fair to one who tenders”**

# Managing Risk – Risk Allocation Considerations

- **Each party should be assigned risks that:**
  - has the greatest impact on it
  - it can efficiently mitigate and manage
  - it can more easily or cost-effectively transfer to a third party (e.g., an insurer)

# Managing Risk – Risk Allocation Considerations



# Managing Risk – Risk Allocation Considerations

- Any risk can be allocated, for a price?
- Cost of allocating unforeseeable / unquantifiable risks could be excessive
- Consider sharing risks

# Risk Allocation Considerations

Level of Concern	Probability of Occurrence	Impact (time/\$\$)
Low	Low High	Low Low/Mod/High
Low-Mod	Mod Low	Low Mod
Low-Mod	Low Mod	Mod Low/Mod
High	Low/Mod	High
Unacceptable	Unquantifiable	Unquantifiable



# Managing Risk – Transfer of Risk / Obligation

- Change in Law
- Cost overruns
- Defects/warranty
- Dispute risks
- Environmental
- EPC contractor default
- Force majeure
- Supplier default
- Input demand
- Offtaker default
- Operational
- Permits
- Concessionaire default

# Managing Risk – Transfer of Risk / Obligation

- Project revenue
- Public entity default
- Schedule
- Set-off
- Site acquisition
- Site - geotechnical
- Site - environmental
- Site - fossils
- Step-in rights
- Third party default
- Variations

# Managing Risk – Transfer of Risk / Obligation

- **Risks typically retained by Public Sector:**
  - Approvals
  - Majority, if not all, demand risks
  - Changes in interest rate between selection of preferred proponent and financial close
  - Procurement risks (e.g., lack of bidders and delays in procurement process)
  - First nations

# Managing Risk – Transfer of Risk / Obligation

- **Risks typically transferred from Public Sector to Concessionaire:**
  - Design
  - Construction
  - Permitting
  - Lifecycle
  - Industrial relations

# Managing Risk – Transfer of Risk / Obligation

## Special considerations in transfer of risk from Concessionaire to EPC and O&M Contractors:

- Concessionaire will want to ensure that there are no stranded risks
- Consider contracting approach to transfer risks (generic sub-contract; “drop-down” or “back to back”)
- “Equivalent Project Relief”
- O&M specific issues – liquidated damages, long-stop date, security for performance

# Change in Law

- e.g. stricter legislative requirements; tax laws
- should flow with nature of change
- public entity should retain some risk



# Cost Overruns

- place risk on EPC and O&M contractors
- “fixed price” contracts / optimal model for owner / sponsor



# Concessionaire Default

- use equity funds first, personal guarantees from sponsors
- step in rights
- breach when operational - termination sum
- bond requirement – flowed down to EPC and O&M?





# Design / Warranty / Latent Defects



- EPC and O&M contractors → cause identification?
- availability of insurance
- cap on liability → gap risk



# Dispute Risks

- obligation to mitigate
- well-written contracts that are pro-actively administered (e.g., good governance)
- dispute process definition
- neutral referees

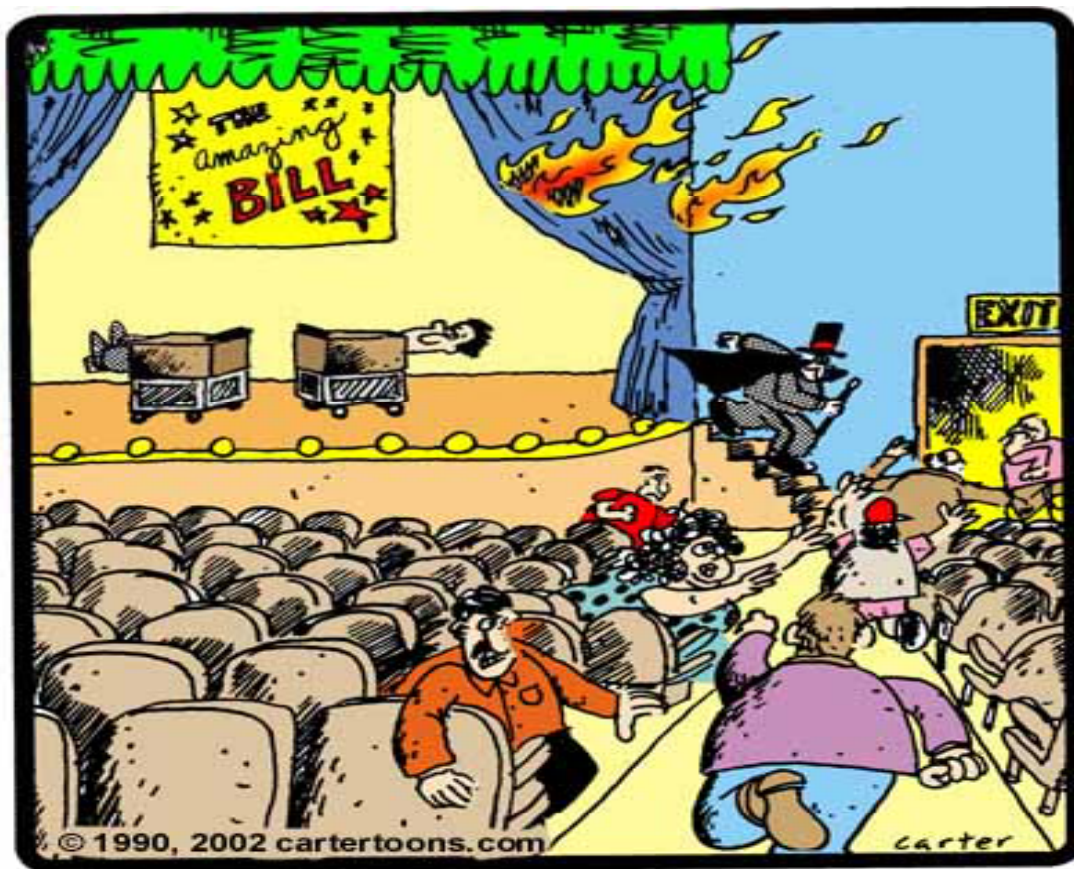


# Environmental

- related to change of law and site conditions
- generally shared by EPC contractor and public entity



# EPC Contractor Default

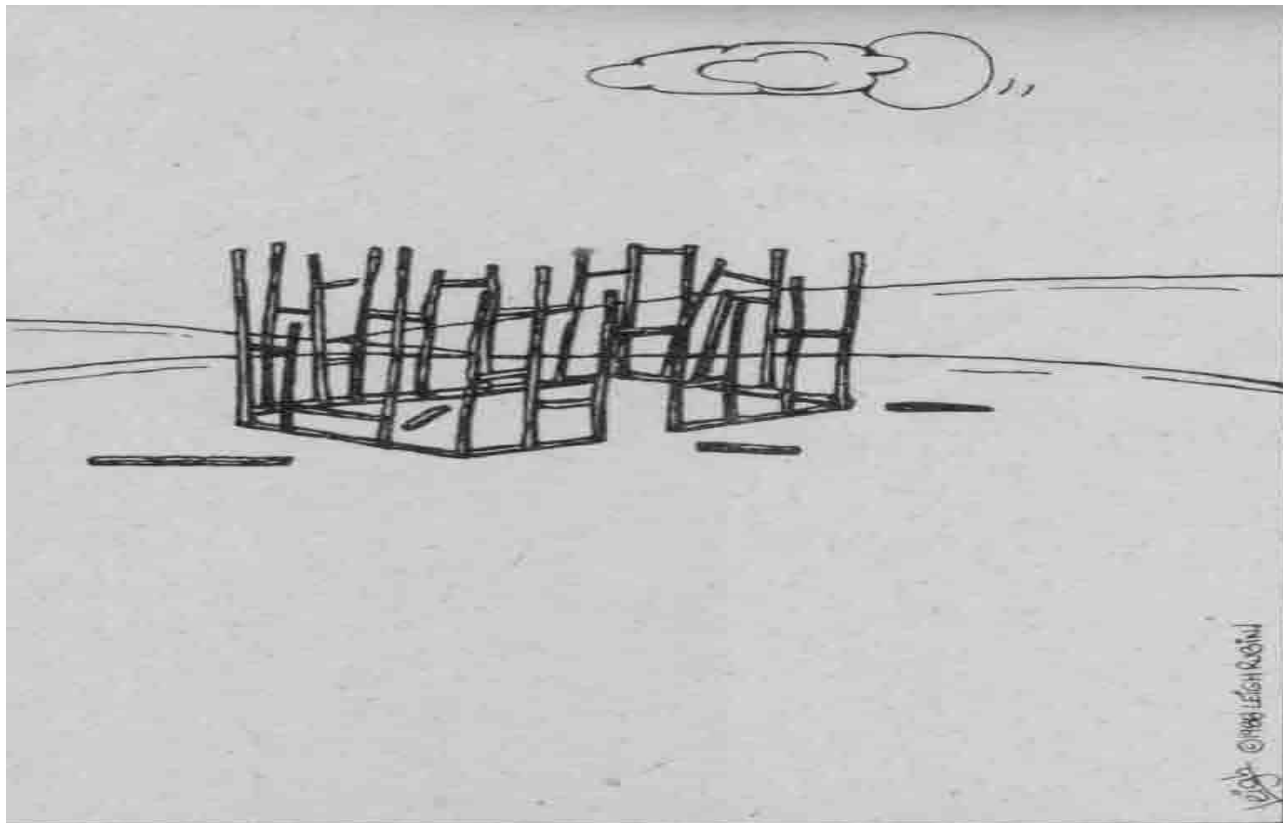


# EPC Contractor Default

- EPC contractor and bonding company
- bond will only cover 60-75 % of debt, so lenders will require a competent and credit worthy EPC contractor



# Force Majeure



Fire, ignited by a bolt of lightning completely gutted the atheist's meeting hall. Unfortunately for them their insurance policy did not cover acts of God.

© 1993 Leigh Rubin

# Force Majeure

- spread: public entity, lender, insurer, EPC, O&M
- uninsurable: damage from nuclear explosion



# Input supplier default

- O&M contractor
- third parties e.g. fuel suppliers





# Input demand below contract minimums

- all parties suffer if expected demand not met
- O&M contracts with input suppliers could allow for reduced input quantities
- supply certainty v. supply flexibility



# Offtaker / End-user default

- is the product or service disposable on the free market?
- “take or pay”
- consequential costs for products or services not accepted?



# Operational difficulties

- EPC (design issue) and O&M (performance)
- remuneration linked to performance
- escalator provisions
- new technology?



# Permits

- government support agreement
- lender may require permits before debt is extended – not possible for ongoing operational permits.



# Project Revenue

- all parties (except the EPC) potentially suffer when project revenue is lower than expected
- lender especially vulnerable



# Public entity default

- deep pockets
- termination payments in concession agreement to protect lender and concessionaire



# Schedule

- EPC contractor, third parties
- fixed completion dates, liquidated damages
- possible time extensions for force majeure events



# Set-off

- lenders want debt service guaranteed
- pay set-off immediately, or pro-rate over time





# Site acquisition

- public entity – expropriation powers



# Site conditions - geotechnical

- site history research and testing useful, but not conclusive
- capped contingency - risk sharing between EPC contractor and public entity



# Site conditions - environmental

- hidden pollution or hazardous waste
- public entity / premium by EPC contractor / gap risk
- lenders may require expenditure of equity funds first
- aggressive environmental legislation



# Site conditions – fossils

- public entity / premium by EPC contractor / gap risk



# Step-in rights

- lender will prefer long lead time – 6 months
- contractors prefer short lead times



# Third party default

- third party performance critical to project success (e.g. utilities relocation, supporting infrastructure development)
- place risk (incentive) on third parties
- allocation of any retained residual risk (“gap risk”)



# Variations / changes

- cost of specification changes to be covered by public entity
- require concessionaire and lender approval for changes to specifications or scope of project



# Strategies for flowing down risk

- Models for Concessionaire duty delegation
  - mirror provisions
  - short form



- SECURITY

# Financing Considerations – Lender Security

- **Typical security includes:**

- Project Company - First ranking secured creditor over all assets and undertakings – lender default?
- EPC and O&M Contractors – Step-in rights, liquid security, performance bonds and parent guarantees
- Insurance – first loss payee position

# Performance Security

- **Letters of Credit**
- **Performance Bonds**
- **Holdbacks**
- **Parent Guarantees**

# Letters of Credit

- **Amounts**
- **Who can call**
- **Call conditions**
- **Improper calls**
- **Credit ratings**
- **Transfers**

# Bonds

- Amount
- Bricks and mortar?
- Process
- Financial check

# Holdbacks

- **Inexpensive**
- **Liquid**
- **Payment conditions**

# Parent Guarantees

- Amount
- Conditions
- Joint and several

- SCHEDULING



## A. Introduction

- **Causes of delay:**

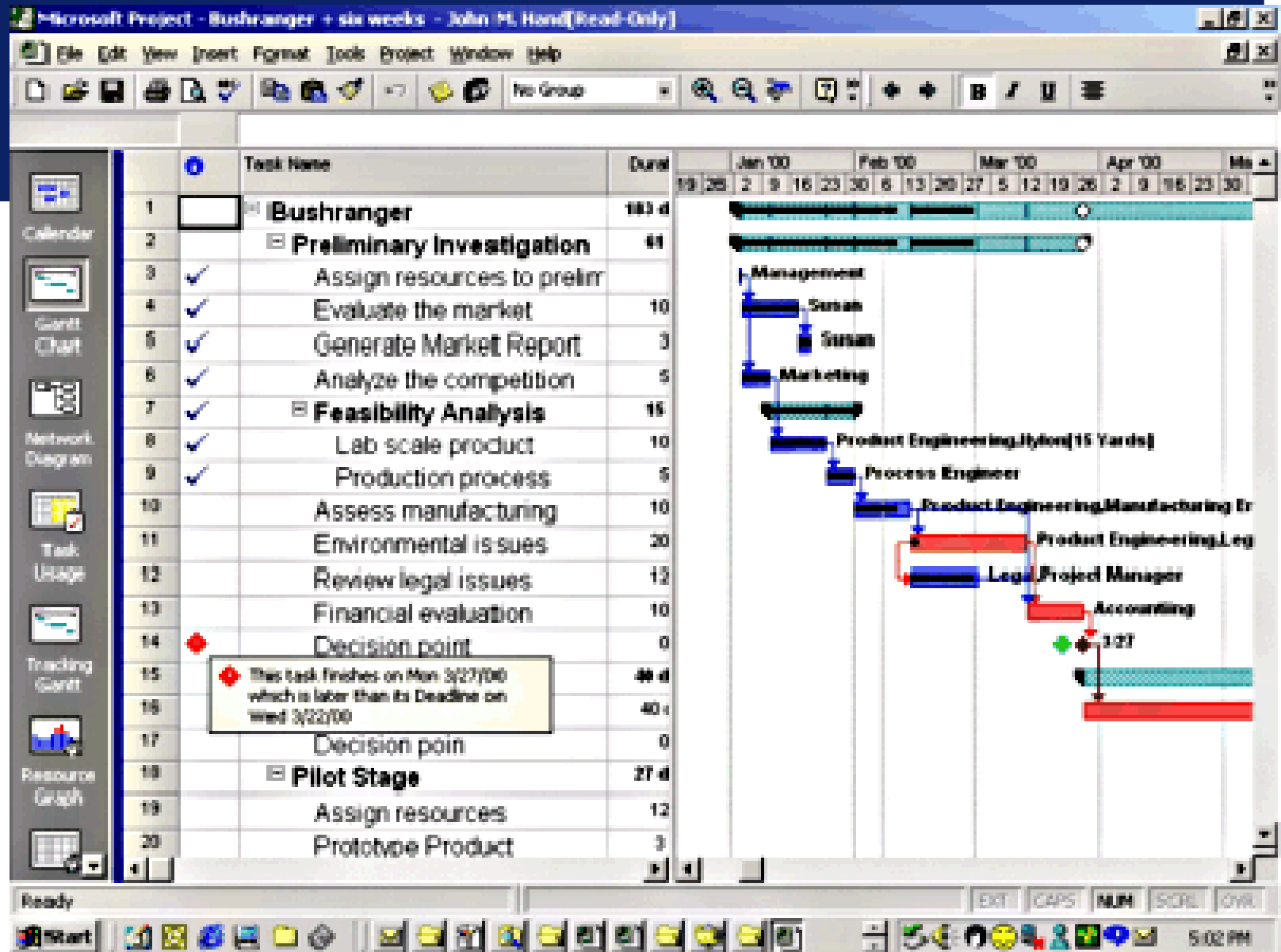
- Owner
- Owner's consultant
- Contractor
- Subcontractor
- Third party
- Natural event

## B. Scheduling Principles/Risk Allocation

### 1. Scheduling Principles

- **Schedule is a tool to plan construction activities; part of work method**
- **Art rather than science**
- **Bar charts**
- **Network Diagrams, including CPM**





## **B. Scheduling Principles/Risk Allocation**

### **2. Allocation of Risks**

- **Generally done by contract**
- **Uses “variables”**

## C. Definitions

### 1. Excusable and Non-Excusable

- **Defined by contract, but generally:**
  - Excusable = extension of time
  - Non-Excusable = no time extension
- **\$\$? Depends on contract**

## **C. Definitions**

### **2. Critical and Non-Critical**

- **Critical path = shortest time to build project**
- **Delays to events on the critical path will result in delays to project and likely increase in cost**

## **C. Definitions**

### **3. Concurrent Delays**

- **Delays often caused by more than one factor**
- **Concurrent delays are those caused by multiple parties**
- **Generally used to try and reduce compensation payable**
- **Must the delays be contemporaneous?**
- **Must the delays be on the critical path?**

## **C. Definitions**

### **4. Compensable/Non-Compensable**

- **Compensable = \$\$**
- **Non-compensable = No \$\$**



## **C. Definitions**

### **5. Delays/Disruption/Acceleration**

- **Delay = event that extends duration of project**
- **Disruption = detrimental impact on project**
- **Acceleration = added labour/equipment to finish project earlier**

## **C. Definitions**

### **6. Mitigation**

- **Obligation to mitigate means party must attempt to limit effect**
- **Questions:**
  - Does mitigation have to be commercially reasonable?
  - Who pays for mitigation?

# Scheduling – Definition of Terms

## DELAY

An event that causes an extended time to complete an activity

- > compensable
- > excusable
- > contractor-caused

## CRITICAL PATH METHOD

A management technique for losing your shirt under perfect control

# Scheduling – History

## HISTORICALLY

Simple, easy to follow bar charts prepared by seasoned project managers

Simple, easy to follow computerized schedules prepared by junior project managers with significant direction from seasoned project managers

# Scheduling – Current Situation

TODAY

Complex, impossible to understand schedules with millions of logic-interlinked activities that are never followed and are really just setups for construction claims by reserving all float to the contractor and have no bearing on reality

# Scheduling – Current Situation

## TODAY

Well-intentioned construction lawyers drafting ever more complex requirements for contractor to create useless gigabits of gobbledygook that are approved (without real thought) by owners who are then stuck with them, and who then require contractors to follow the meaningless schedule in precise detail

Contractors reverting to seasoned construction manager's bar charts or simple computer schedules for how it is really built

# Scheduling – The Solution

## SOLUTION

1. Require contractors to agree to meaningful milestones with ties to performance incentives (bonuses/liquidated damages) and rights to require acceleration
2. Require production and updating of written narrative describing intended construction process (usually 4 or 5 pages)

# Scheduling – The Solution

3. Make sure owners remember that they have obligations too (e.g. site access, proper plans, following review timelines)
4. Provide appropriate risk allocation for scheduling issues
  - compensation/extension for owner-caused
  - extension for events outside reasonable control
  - no extension for contractor-caused



# Scheduling – The Solution

## SOLUTION

5. Permit contractors to re-sequence to properly manage project
6. Have look-ahead schedules (week, month) and open communication

- LABOUR

- CONCLUSION

# Conclusion

- **Some Lessons Learned**

- Communication between owner and private sector partner needs to be open, detailed, engaging and frequent – lack of communication between partners is a major cause of PPP failure
- The private consortium requires a cohesive group of leaders, to enable decisions to be made quickly and effectively
- Recognize and address challenges of working in a public / private environment

# Conclusion

- **Some Lessons Learned**

- Public entity and sponsor must recognize mutual dependence, and work co-operatively
- Given ongoing / potential public scrutiny, discussions and major decisions should be documented. Pro-active disclosure can serve to reduce the chance of future controversy.

# Conclusion

- **Industry Observations**

- Realistic time schedule is required to contain bidding costs
- Lack of flexibility in PPP contracts has been a problem
- Lack of project management expertise in public sector is a problem
- Who you ally yourself with is as important as the project you are bidding on

# Conclusion

- **Industry Observations**
  - PPP projects have brought depth and maturity to the construction industry – requires companies to work in an integrated way across divisions, and to mitigate and manage project risk in a disciplined manner. Companies are learning to say no to procuring parties when something is not possible.
  - PPP sponsors are able to develop expertise as multi-service providers, thereby distinguishing themselves from the competition.