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European Perspective on Risk Management in Alternative Project Delivery

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Introduction…

- *The European Perspective*
- *Alternative Project Delivery [APD]*
- *Managing risks on APD projects*
- *When things go wrong…*
- *Conclusions*

Who are the Europeans?

- European Perspective
- What is APD?
- Managing Risks
- When things go wrong…
- Conclusions

VINCI, BOUYGUES, HOCHTIEF, ACS, SKANSKA, ferrovial, FCC, STRABAG, EIFFAGE, acciona, Balfour Beatty, BILFINGER BERGER, carillion, OHL

Back in History…

London,1943

Back in History…

B-24 Bombers,1944

Back in History…

Hamburg, 1944

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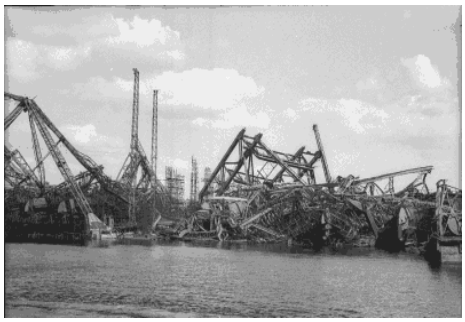
Back in History…



Port of Hamburg,1944

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Back in History…

9th Canadian Infantry Brigade, D-day 1944

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Back in History…

Normandy (Post D-day), 1944

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Back in History…

Liberation of Paris, August 29, 1944

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Back in History…

70% of the industrial capacity of Europe was destroyed between 1939 and 1945.

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The Marshall Plan

- *$13 Billion US funds provided to reconstruct Europe from 1948 to 1951 in addition to over $12 Billion provided by USA between 1945 and 1947*
- *Delivered through OECD*
- *Purpose was to support the modernization of Europe using American economic models, reduce trade barriers and install a sense of hope and self-reliance*
- *By 1951, output in all countries receiving Marshall plan assistance was at least 35% higher than in 1938*

FOR EUROPEAN RECOVERY
SUPPLIED BY THE
UNITED STATES OF AMERICA

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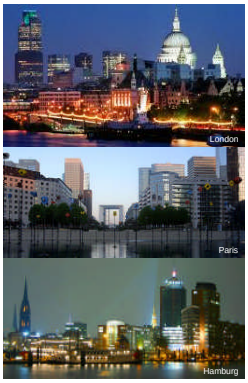
How did Europe Rebuild?

- Public-private partnerships supported the creation of large infrastructure contractors following WWII
- New management approaches were needed to manage fast-track design, procurement and construction
- Materials were scarce – contractors vertically integrated by necessity



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Why Europe Matters Today…

- Very Large Contractors (Among Canadian Contractors, only PCL would rank in the top 50 list of European contractors at #32)
- Great Depth of Experience
- Vertically Integrated Business Units
- Sophisticated Management
- Strong Balance Sheets
- Strong Government Relationships
- International Presence
- Capable Competitors

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European interest in North America…

- Large contracts
- Complex projects
- Projects where competitive advantage may be exercised:
  - Integrated Design-Build
  - Project Finance
  - O & M

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European interest in Ontario…

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Alternate Project Delivery

- A different way of procuring goods and services
- More risks and responsibilities are transferred to the construction contractor
- New players at the table: banks, financial institutions & insurers
- Various models: PPP, DBFO, DBF, DB, CM

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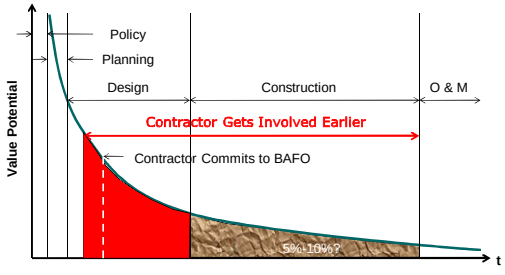
APD enhances value potential

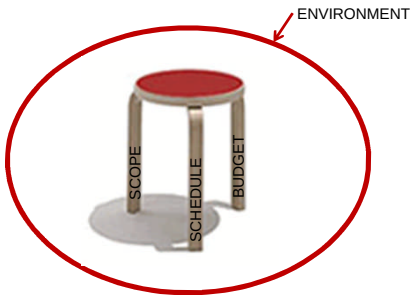


Key Success Factors for APD

- Partnering philosophy
- Collaboration
- Trust
- Problem-solving attitude
- Fairness

Le plus proche de tous. Martin Bouygues et Nicolas Sarkozy se sont connus quand le candidat à l'élection présidentielle n'était que le jeune maire de Neuilly. Depuis, Nicolas Sarkozy considère le patron du géant du BOUYGUES comme son "meilleur ami".

The Risks…



RISK ~ UNCERTAINTY

Scope Risks…

- *Nature of Bid Documents*
  - Clarity of owner expectations
  - Prescriptive or performance-based specs
  - Management & administrative processes defined
  - Mechanisms defined for scope changes and conflict resolution
  - Industry-standard documents
- *Quantity Risk*
  - Incomplete design
  - Incomplete specifications
  - Unforeseen ground conditions
  - Environmental compliance requirements
  - Stakeholder concessions
  - Errors & omissions

Schedule Risks…

- *Scope changes*
- *Design duration*
- *Site availability*
- *Utilities coordination*
- *Management of traffic*
- *Approvals & permits*
- *QA/QC requirements*
- *Labour productivity & volatility*
- *Material availability*
  - Long delivery items
- *Equipment availability*
- *Supplier and sub-contractor performance*
- *Testing & commissioning requirements*
- *Operations & maintenance Impacts*
- *Climate & weather*

Budget Risks…

- *Labour rate inflation*
- *Labour productivity*
- *Commodity price fluctuations (inflation)*
  - Steel, fuel, electricity, asphalt, etc.
- *Changes in material specs or suppliers*
- *Equipment rate inflation*
- *Approvals & permitting costs*
- *Administrative burden*
- *Insurance*
- *Taxes*
- *Interest*
- *Penalties*
- *Administrative Burden*
  - Compliance monitoring & reporting

Environmental Risks…

- *Character of the Client*
  - Attitude?
  - Trust?
  - Fairness?
  - Collaboration?
  - A Partner or an Antagonist?
  - Payment policies?
- *Character of the Client's Advisors*
- *Character of the Client's Project Manager*
- *Social and Political*
  - Political will
  - Community activism
  - Union attitudes
  - Special Interest Groups

Environmental Risks (cont'd.)

- *Legal Issues*
  - Rule of Law
  - Legislative & regulatory environment
  - Independence of the adjudication system
  - Body of jurisprudence
  - Corporate structure requirements
  - Ownership and governance restrictions
  - Experience of legal profession
  - Sanctity of contract
  - Dispute resolution mechanisms
  - 3rd Party claims
- *Jurisdictional issues*
  - Special Requirements
    - Disadvantaged Business Enterprises
    - Davis Bacon Act
    - Americans with Disabilities Act

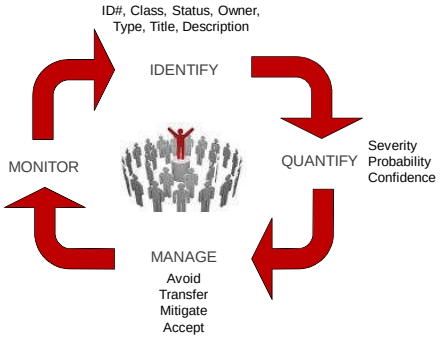
Environmental Risks (cont'd.)

- *Crime & Criminality*
  - Security payments
  - Supplier cartels
  - Bid rigging
  - Labour extortion
  - Corrupt officials
- *Jurisdictional issues*
  - Special Requirements
    - Disadvantaged Business Enterprises
    - Davis Bacon Act
    - Americans with Disabilities Act
    - OSHA/OHSA requirements

Managing Risks…

- *ISO 31000:2009*
  - the identification, assessment, and prioritization of risks (defined as the effect of uncertainty on objectives, whether positive or negative) followed by coordinated and economical application of resources to minimize, monitor and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities.
- *PMI Practice Standard for Project Risk Management*

Risk Management Cycle



Typical Risk Matrix

Typical Risk Characterization

87 risks
23 majors risks

LIKELYHOOD		Severity 1	2	3	4	5
VERY HIGH	5	1	2	2	4	1
HIGH	4	1	2	5	4	
MEDIUM	3	5	15	6	4	
LOW	2	3	7	10	5	1
VERY LOW	1	4	3	1		1

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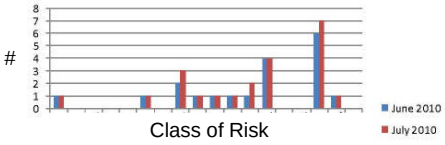
Typical Risk Classification



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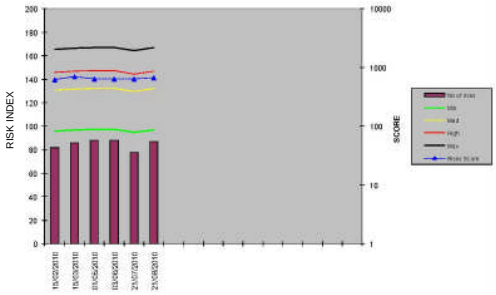
Typical Risk Tracking



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Why Bother?

- *Increased performance certainty*
- *Safer work sites*
- *Reduced insurance premiums*
- *Increased transparency*
- *Increased trust*
- *Fewer claims*
- *Fewer disputes*

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When things go wrong…

Miller Park, Milwaukee, July 14, 1999

The crane known as "Big Blue" was lifting a section of the stadium roof weighing over 450 tons. Three ironworkers died in the accident. $100 million in repair costs and $99 million in civil & punitive damages. One year delay.

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When things go wrong…

Shanghai building collapse, June 27, 2009

An unoccupied building still under construction at Lianhuanan Road in the Minhang district of Shanghai city toppled over. One worker was killed.

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When things go wrong…

Commonwealth Games Facility New Delhi, Sept. 22, 2010

The steel walkway connecting the main Jawaharlal Nehru stadium to car parks collapsed injuring 19 people.

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When things go wrong…

2011 Tōhoku earthquake and tsunami, Japan: Mar 11, 2011

Tsunami surge advances across Sendai Airport. Magnitude 9.0 earthquake and tsunami killed over 16,000 and caused widespread damage that will take years to repair at a cost of over $300 Billion.

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When things go wrong…

- *A Risk Management process ensures:*
  - Contingency plans are in place
  - Impacts on scope, schedule and budget are minimized

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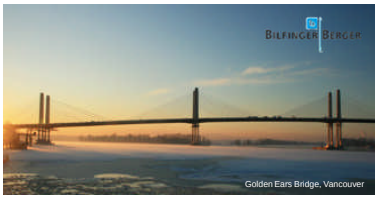
Conclusions…

- *European firms:*
  - Are large and sophisticated
  - Seek large and complex projects
  - Respond well to APD opportunities
  - Explicitly manage risk
  - Are successful



Golden Ears Bridge, Vancouver

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Questions?

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