

# Optimizing Risk by Adopting New 'Convertible' Contracts

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**Snamprogetti**

**A company of Salpem**

# Presentation Outline

- **Saipem highlights**
- **Reimbursable vs. LSTK contracts for EPC projects**
- **Today's market trends**
- **'Convertible' Contracts**
- **Saipem focus on Risk Management**
- **Conclusions**

**Do you know us?**

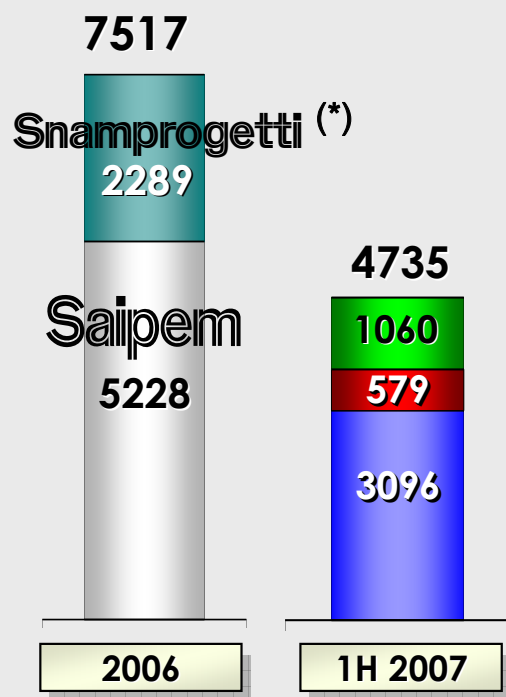
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**A few introductory highlights on Saipem**

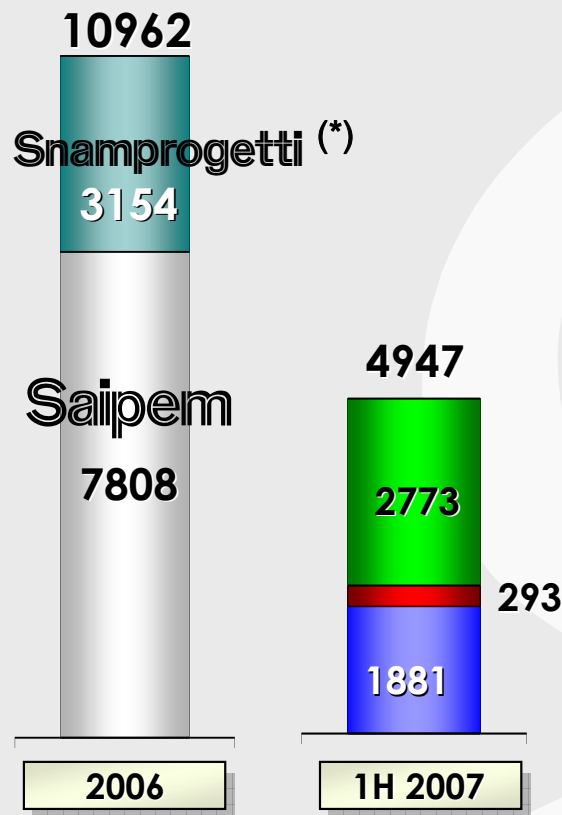
# Financials

( M € )

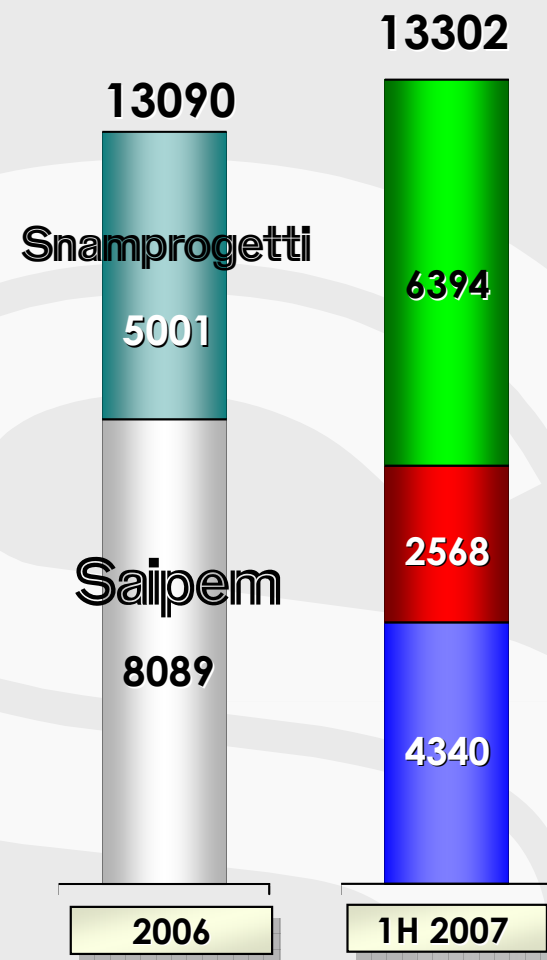
## Revenues



## New Contract Acquisitions



## Backlog



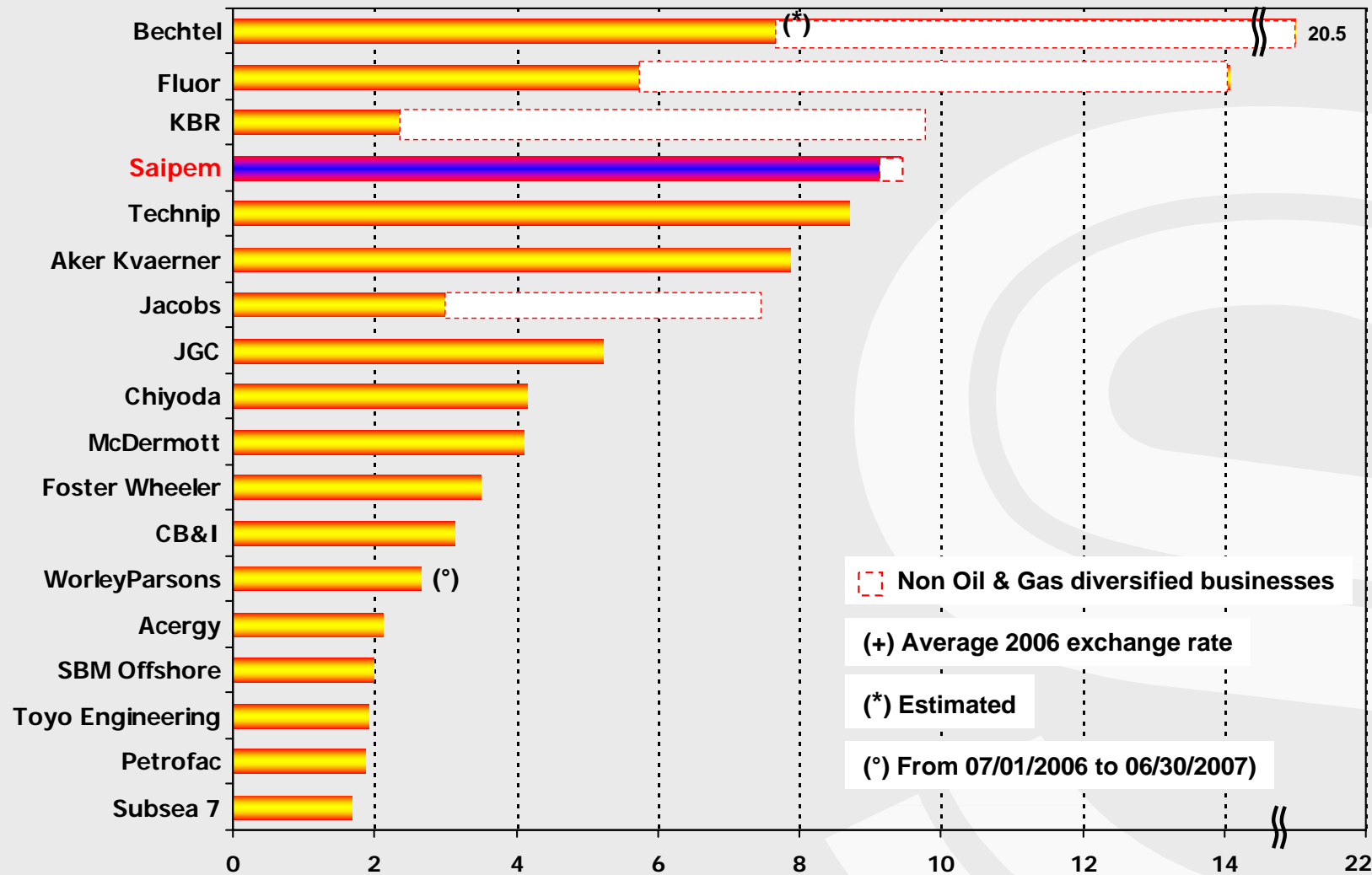
(\*) Figures include Snamprogetti from Q2

### Saipem Group Business Units

■ Offshore
 ■ Drilling
 ■ Onshore

# Major Global E&C Oil & Gas Companies

## Revenues 2006 (Billion \$<sup>(+)</sup>)

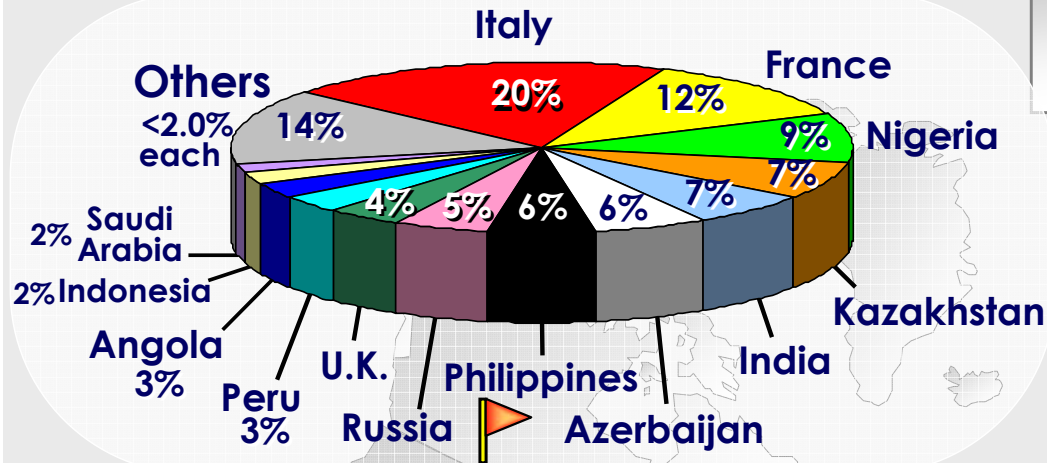




Saipem

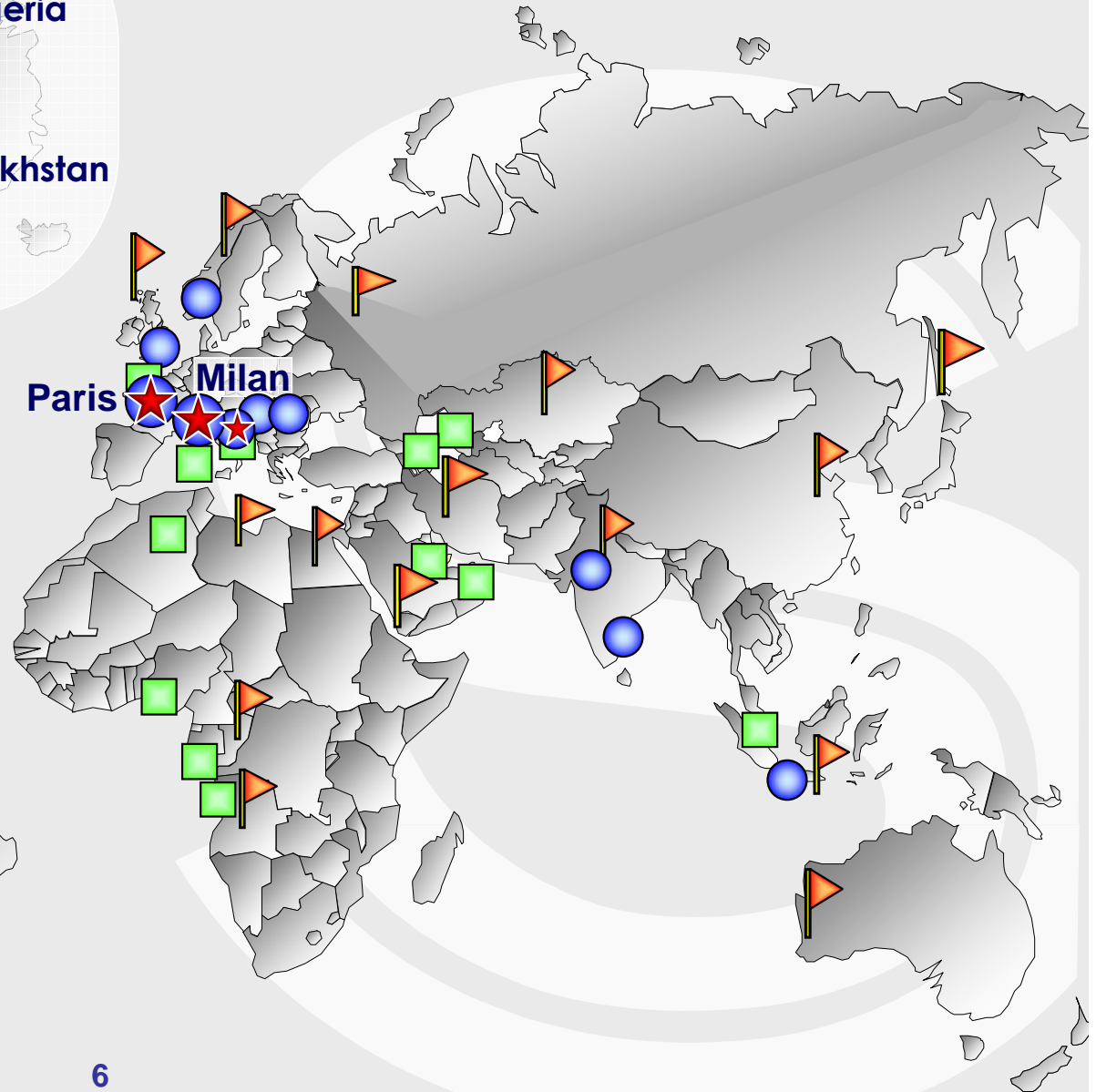
# Global Presence with a Multilocal Emphasis

## Human Resources by Nationality:



- 32,000 people
  - 107 Nationalities
- @ December 31, 2006

- ★ Operating and Engineering Hubs
- Engineering Centres
- Yards & Main Logistic Bases
- ▢ Other Main Areas and Rep. Offices



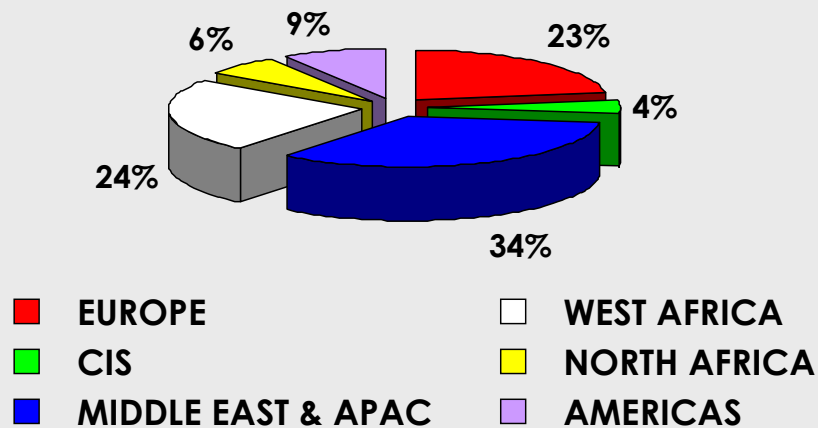


# Saipem New Group Balanced Exposure to Oil & Gas Industry

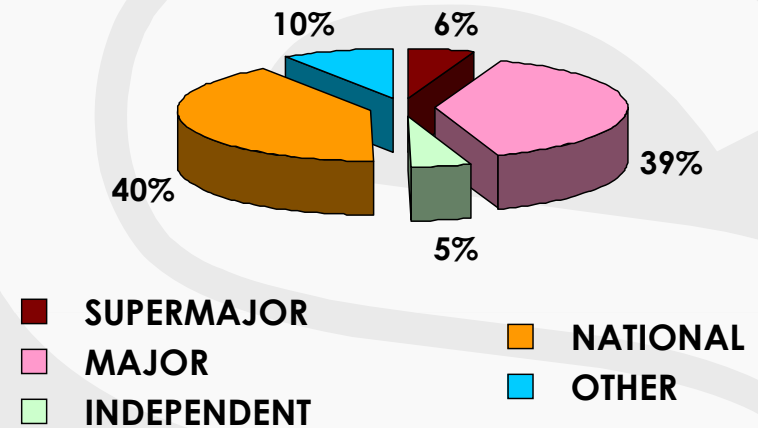
## Backlog

on 12/31/2006

### BY GEOGRAPHIC AREA



### BY CLIENT





# A Few Recent Achievements - Onshore

RasGas, Ras Laffan – Qatar  
LNG Trains 3÷5



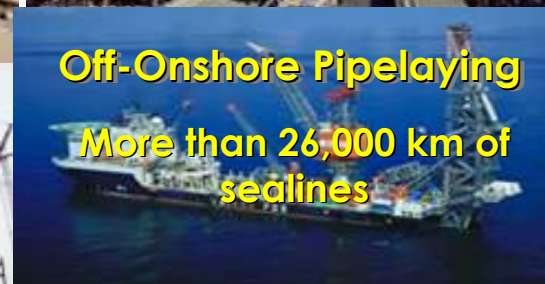
Qatif, K.S.A.  
842,000 bpsd oil production



IGCC 550 MWe  
Sarlux, Sarroch - Italy



Off-Onshore Pipelaying  
More than 26,000 km of  
sealines



CANAPORT LNG - Canada



CNRL Horizon Project,  
Fort McMurray, Alberta - Canada  
Capacity: 110,000 b/d



More than 75,000 km of  
land pipelines



Omifco, Oman  
Ammonia 2 x 1,750 t/d  
Urea 2 x 2,530 t/d



ENGRO CHEMICAL PAKISTAN Ltd.  
Daharki – Pakistan  
Ammonia 2,194 t/d  
Urea 3,835 t/d

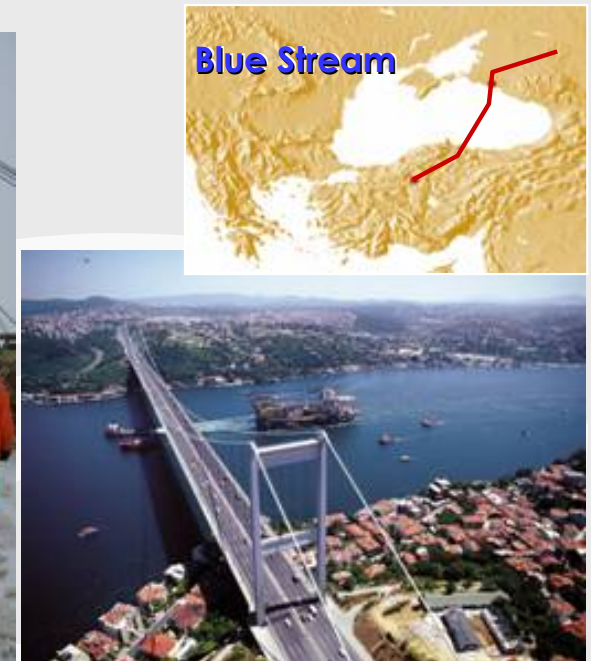


Pemex H-Oil Reactor  
Tula - Mexico  
Capacity: 50,000 bpsd





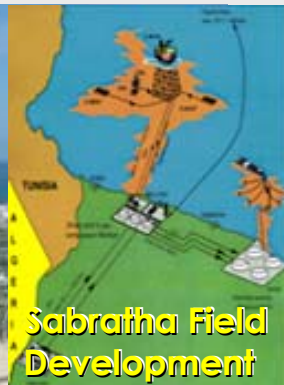
# A Few Recent Achievements - Offshore



## LIBYAN GAS PROJECT – ENI GAS BV/Green Stream BV

SABRATHA PRODUCTION PLATF., BAHR-ESSALAM PIPELINES AND  
SUBSEA FACILITIES, MELLITAH GAS TREATMENT PLANT. GREENSTREAM EXPORT LINE LIBYA TO ITALY

**MELLITAH  
GAS TREATMENT PLANT**  
Capacity: 700 MMscfd



# **‘Reimbursable’ vs. ‘LSTK’ Contracts for EPC Projects**

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# 'Reimbursable' and 'Lump Sum' Contracts

Who runs the project ?

Who is responsible for the outcome ?

## Reimbursable

Owner

*Short, can be subjective*

*Easy*

Owner

Owner

Owner

*High*

- **Project Definition**
- **Contractor selection process**
- **Overlap between main steps**
- **Design**
  - **Leadership**
  - **Location**
  - **Project Risk**
- **Owner's involvement**

## Lump Sum Turn Key

Contractor

*Rigorous and formal, but long*

*Difficult*

Contractor

Contractor

Contractor

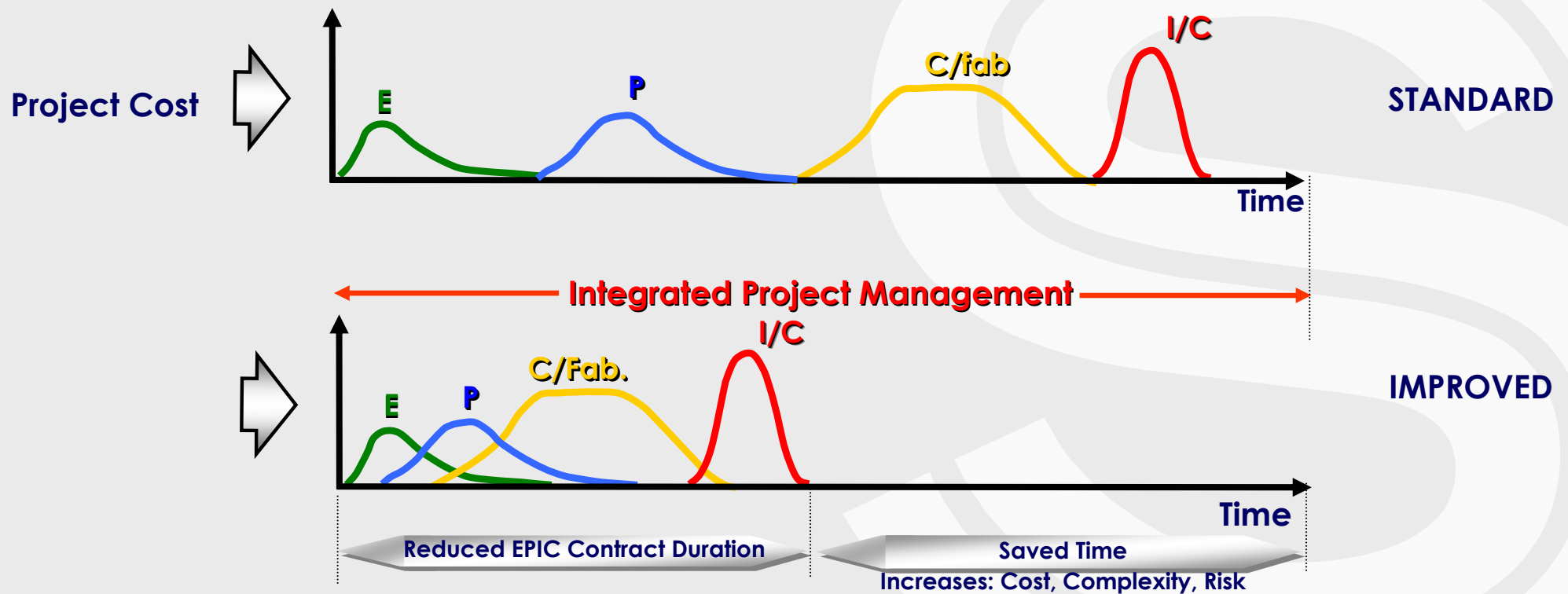
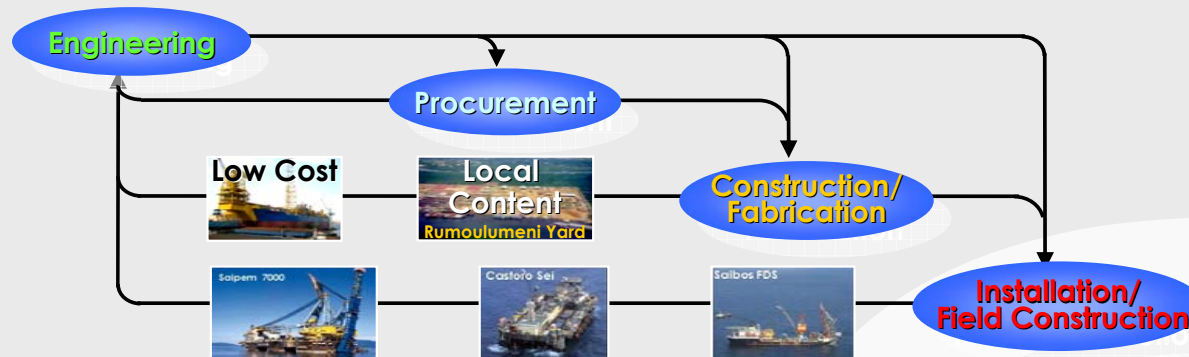
*Low*

- *Allows design development, flexibility, adaptation to evolving and unpredictable circumstances*
- *Little guarantee on final cost/schedule*

- *Guarantees defined budget and completion time*
- *Requires excellent project definition*

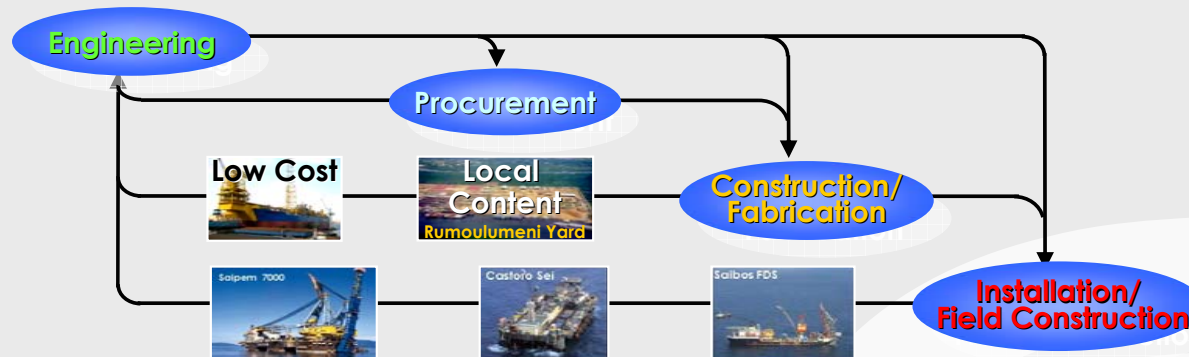
**We believe that the EPC/EPIC approach can offer superior performance in large projects execution**

## Typical EPC/EPIC Process



# We believe that the **EPC/EPIC** approach can offer **superior performance** in large projects execution

## Typical EPC/EPIC Process



### Pros:

- Most efficient process
- Parallel processes are possible  
(Indeed essential to capture program value)
- Continuous improvements  
(Project-to-project)
- Easier to maximize local content efficiently
- More sustainable than best-in-class alternatives

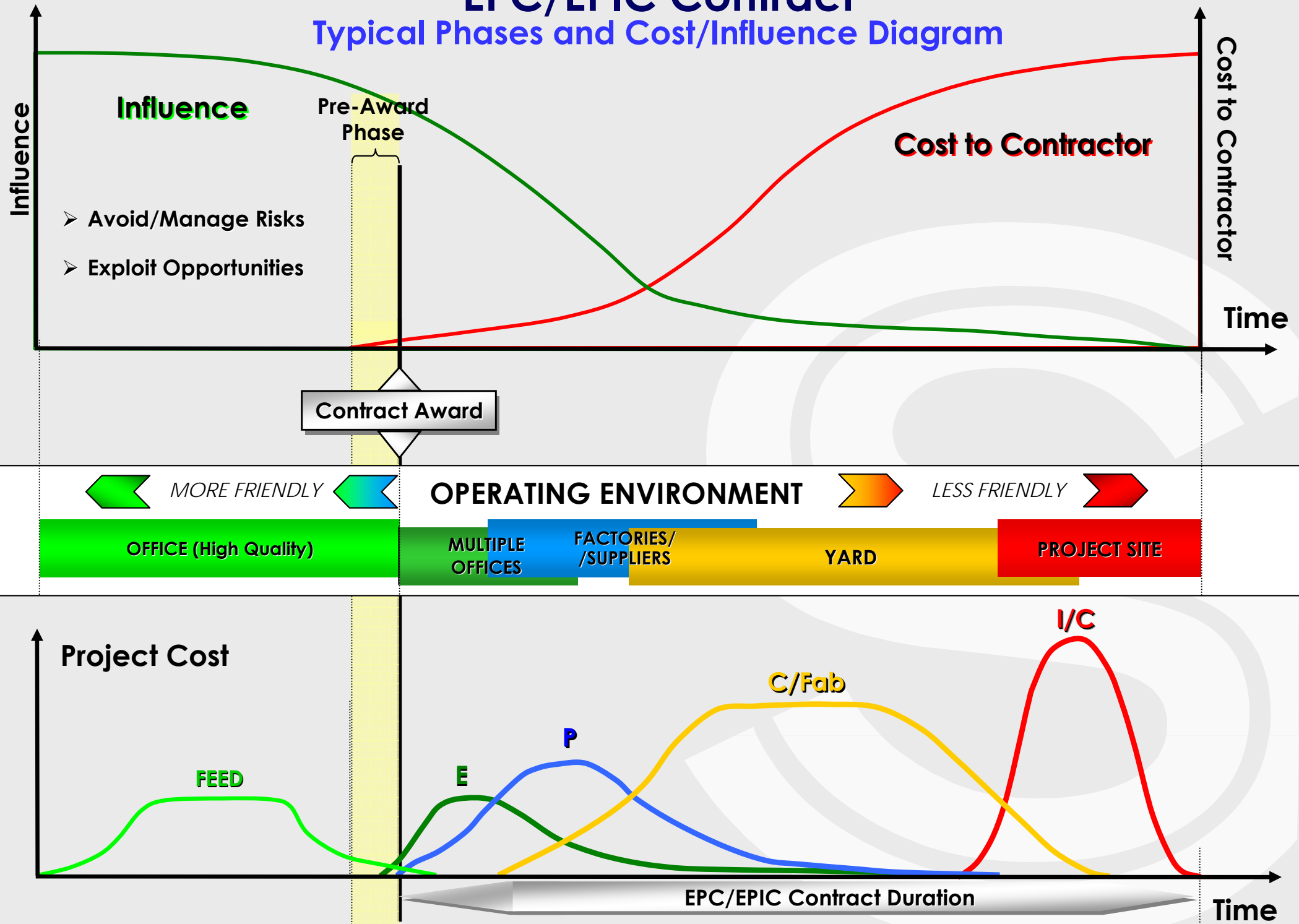
### Cons:

- Complex/ High Risk  
(Especially without appropriate Industrial Model)
- Requires firm and precise execution of each step

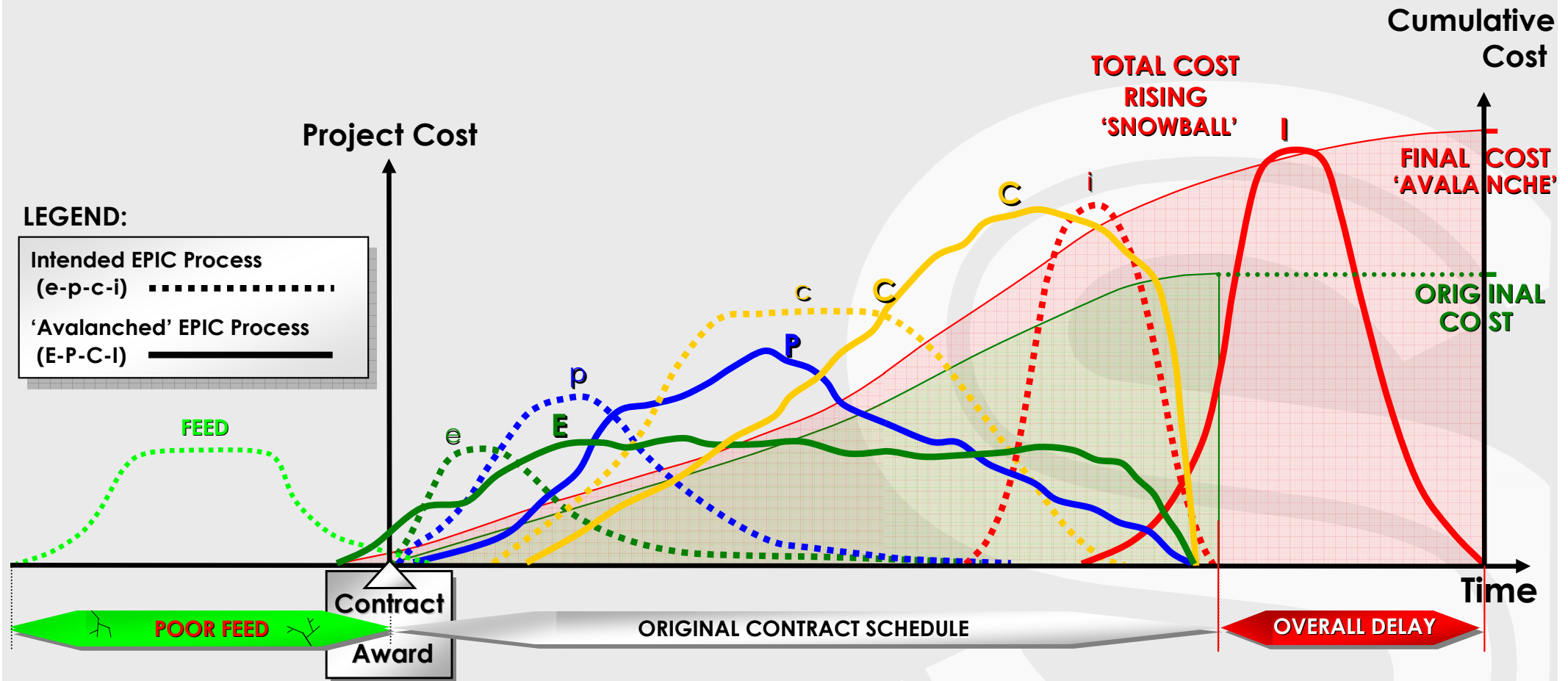


# EPC/EPIC Contract

## Typical Phases and Cost/Influence Diagram



# In EPC/EPIC Contracts we need to avoid the “Avalanche Effects” of poor or changing FEED / Technical Package



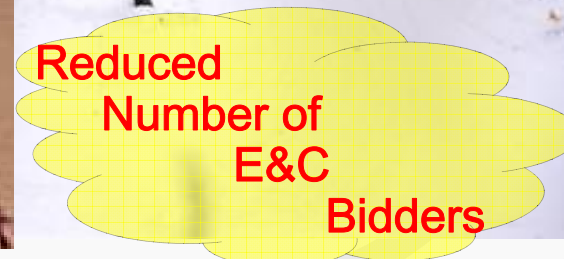
# Today's Market Trends

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# E&C Market Trends

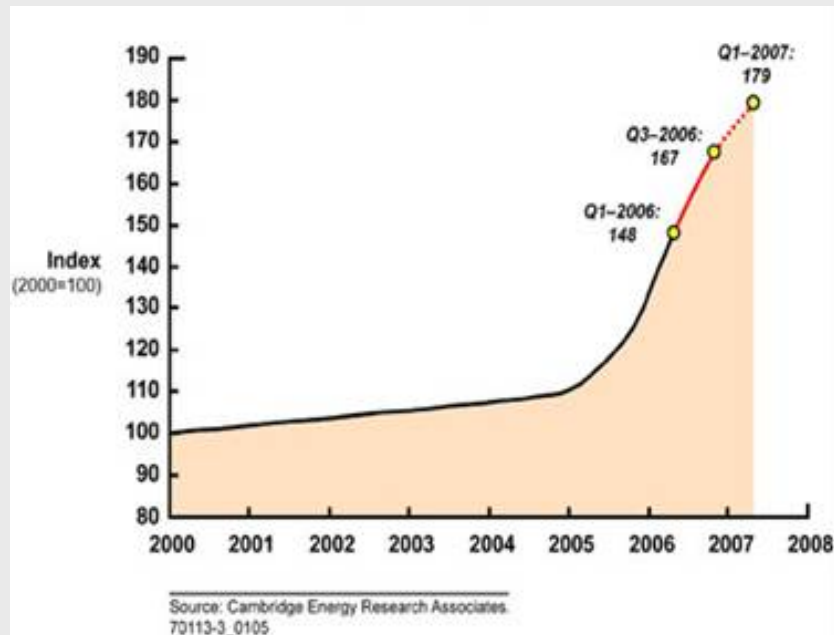


- ▶ Huge investments and projects (> 1 B\$, some 15 B\$)
- ▶ Remote and frontier areas
  - Challenging locations – climate, access, remoteness
  - Political uncertainties
  - Simultaneous need for local content
- ▶ Increasing technological complexity
- ▶ Pressure for 'Fast Track' execution
- ▶ Rapid price escalation and longer delivery times
- ▶ Shortage of production and execution resources

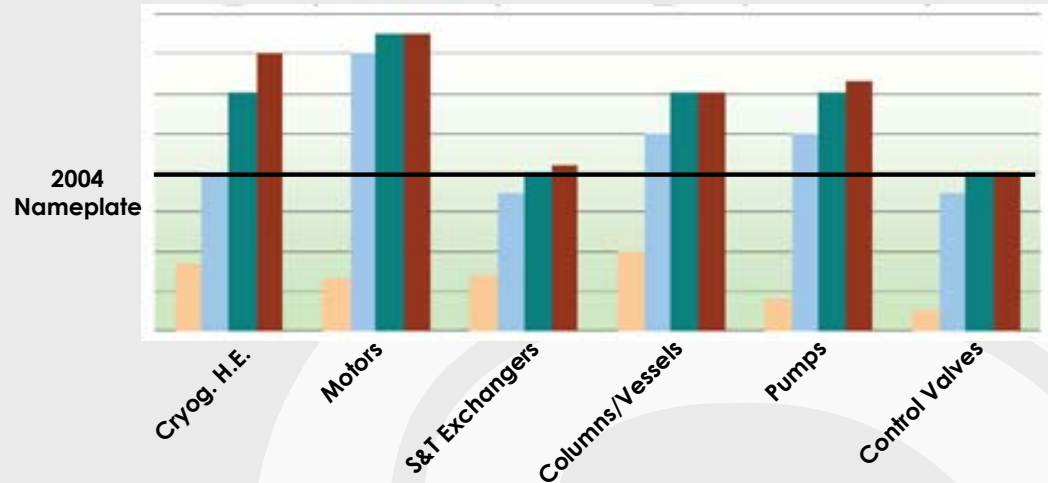


# Rapid and non-homogeneous cost rises contribute to unpredictability and higher risks

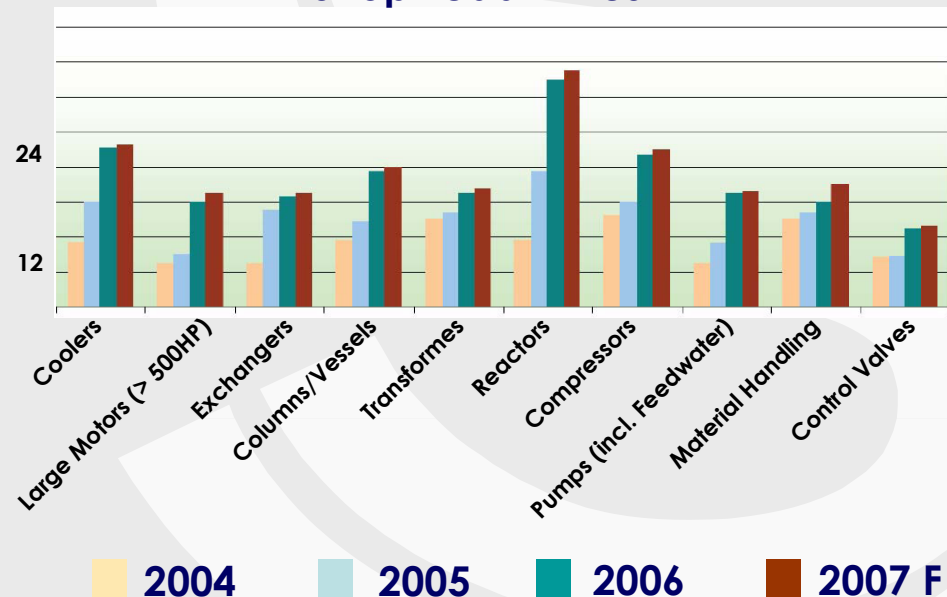
## IHS/CERA Upstream Capital Costs Index



## Pressure to Increase Manufacturing Capacity



## Shop Lead Times





# 'Convertible' Contracts

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# In response to today's markets needs, new “convertible” contracts offer a compromise contractual scheme

Reimbursable,  
Open Book



Lump Sum Turn Key

Maintain simultaneously the main advantages of the two extreme contractual forms

‘Convertible’ into  
Lump Sum Turn Key

Optimize risk balance between Owner and E&C Contractor

*Project definition,  
Execution plan*

CONTRACT  
CONVERSION

*Project  
implementation*

F E E D

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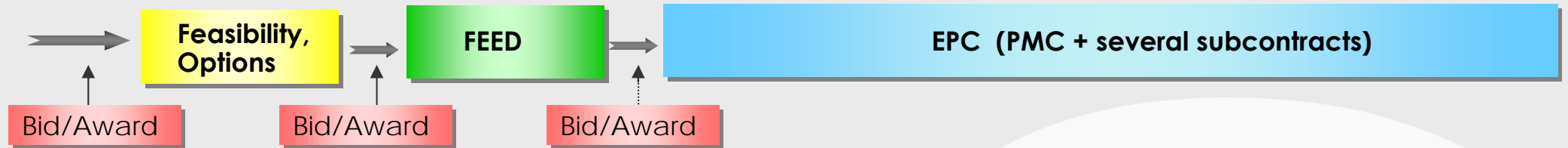
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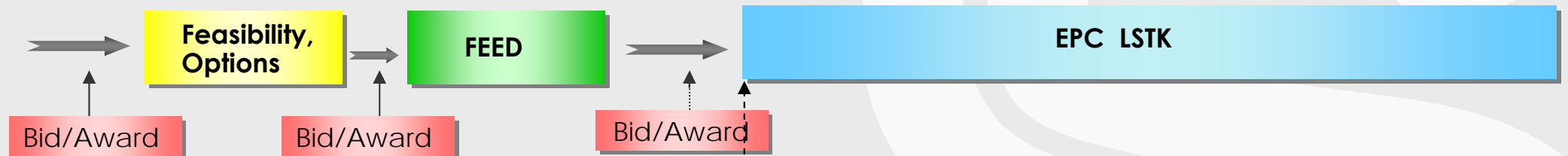
**PROJECT EXECUTION**

# Execution Approaches

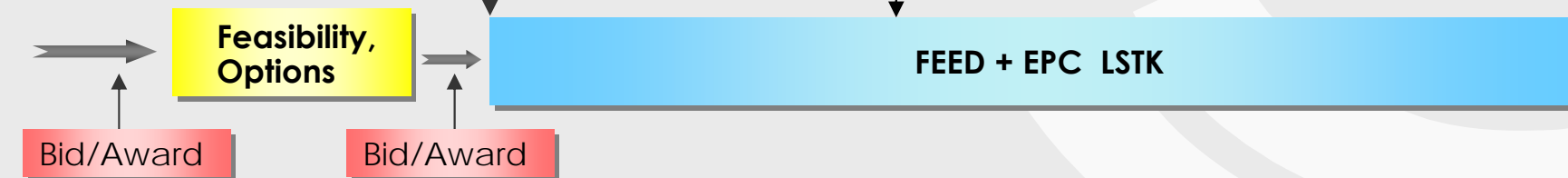
## Open Book Reimbursable



## LSTK

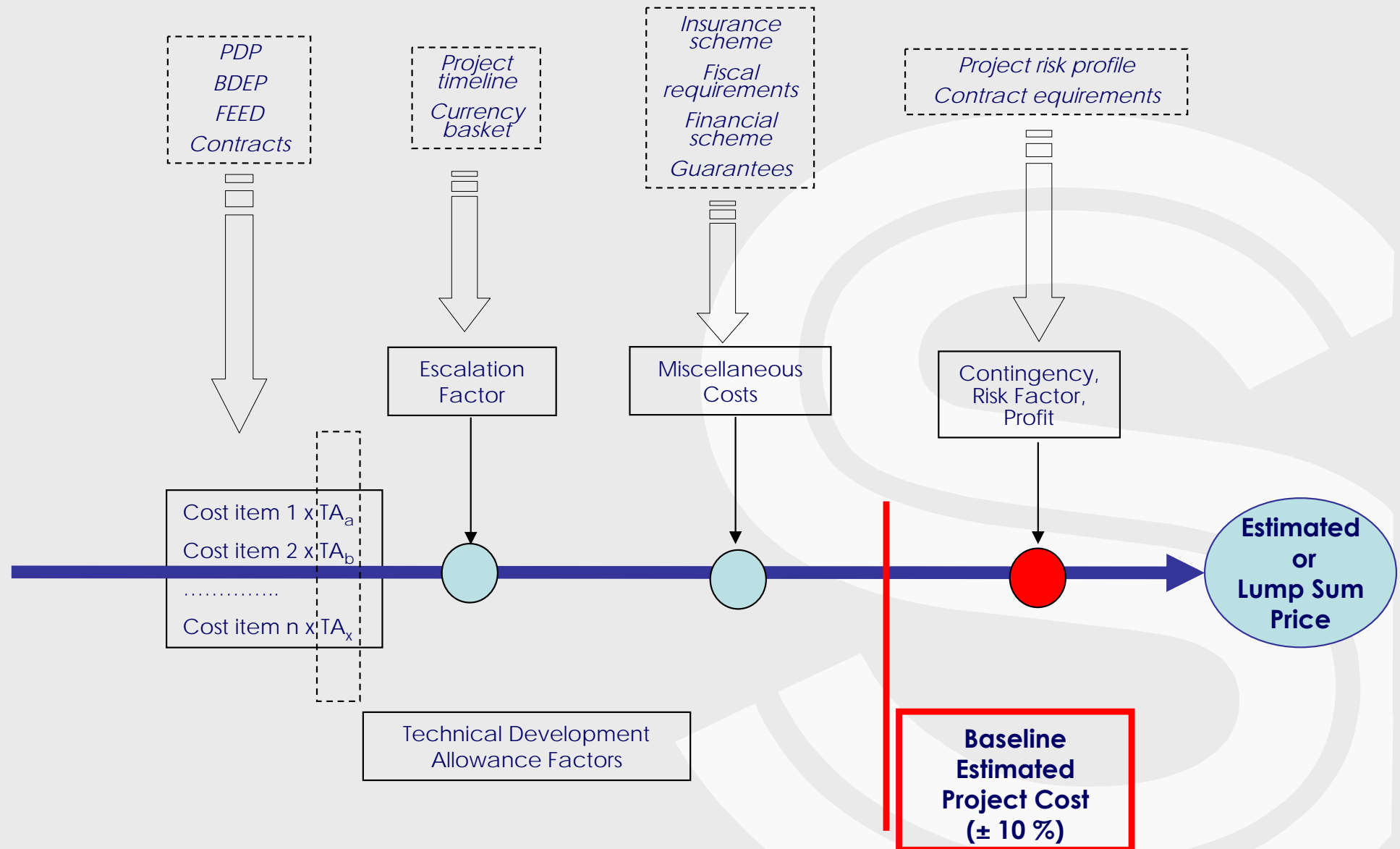


## 'Convertible' LSTK

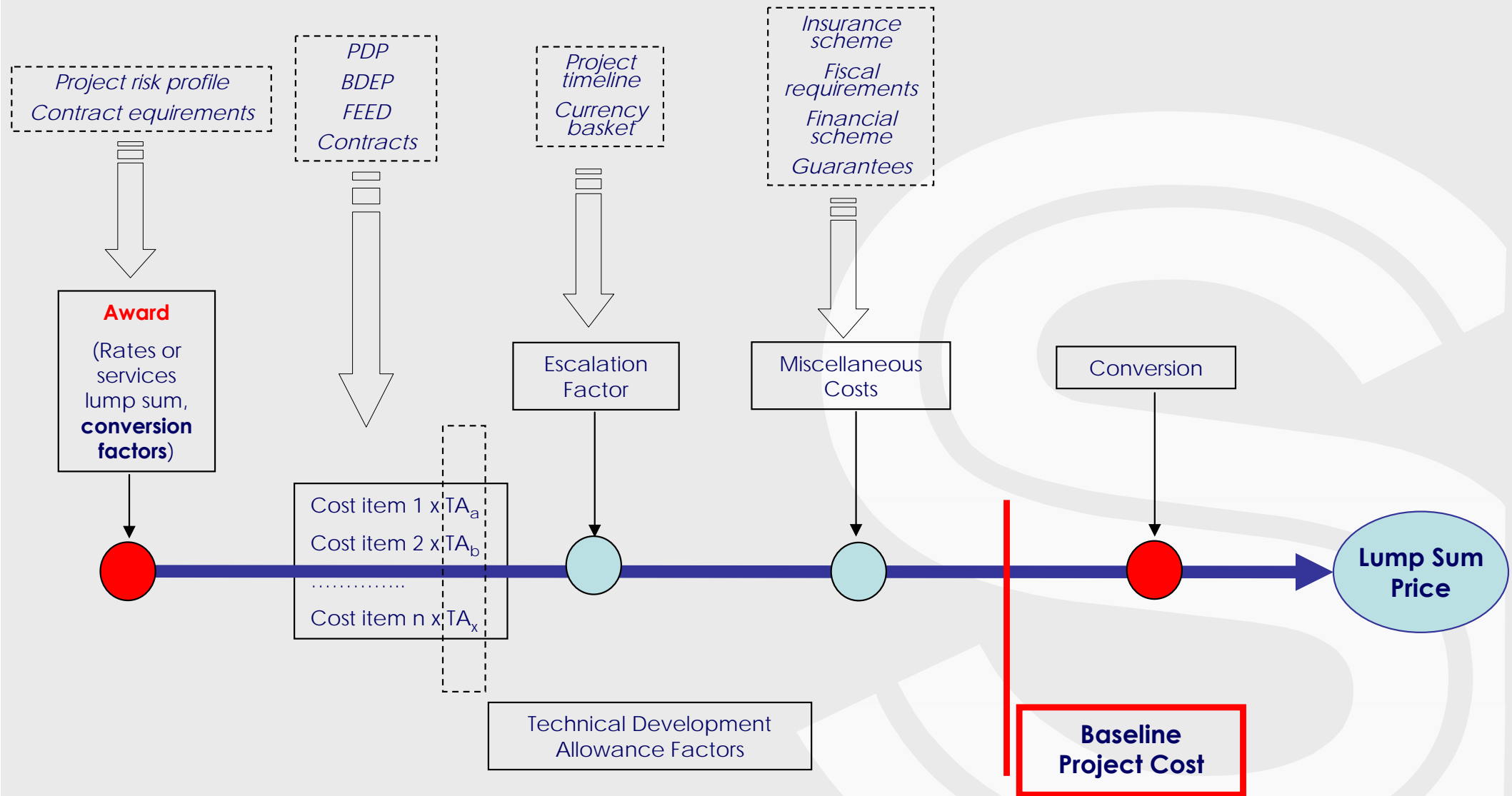


# Traditional Open Book Cost Estimates

## Occasional Conversions into Lump Sum Price



# 'Converted' Lump Sum - Contract and Final Price Development





# 'Convertible' Contracts

## The initial contract at award time

- Very simple and straight forward
  - Pre-agreed Conversion Factors
  - Methodology for Project Baseline Cost Definition
- Later, Conversion Factors applied to Project Baseline cost, or to its components
  - Account for residual contingencies, residual risks and agreed profit
- Define FEED contractual terms, Reimbursable or LS
  - Optimization needs, Value Engineering vs. project constraints and execution needs
- Decide timing and modalities of contract conversion into LSTK
  - Project definition vs. residual contingencies
  - Typically after 50 ÷ 60 % Engineering completion, some Lead Items orders, main subcontracts definitions

**High degree of mutual Owner/Contractor trust required**

# 'Convertible' Contracts - Advantages

- Significant time saving vs. traditional LSTK: almost one year  
Big NPV improvement !
  - Proven experience on two parallel projects
- Fully transparent process
  - Owner maintains full access to all project data and prices
- Balanced risk sharing between Owner and E&C Contractor
  - Reduced risk for Contractor, lower need for contingencies/risk premium
- The process fosters a cooperative mutual relationship with Owner's empowered project team

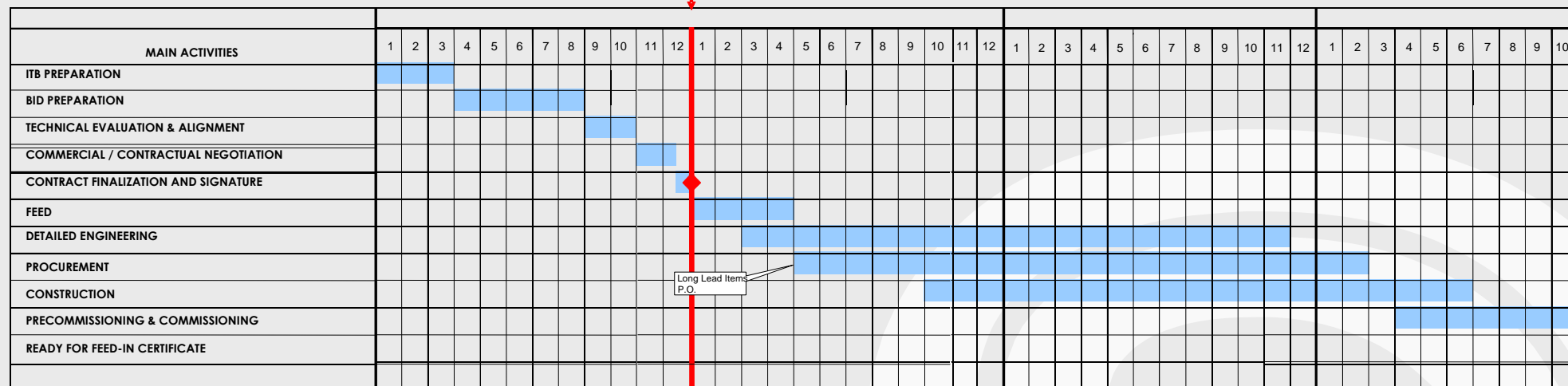
# Lump Sum vs. Convertible Contracts Overall Execution Schedules

## Example: Polymer Project (Middle East Location)

### COMPETITIVE EPC LSTK BIDDING

(License pre-selected by Owner, FEED needs to be carried out)

EPC LSTK CONTRACT AWARD

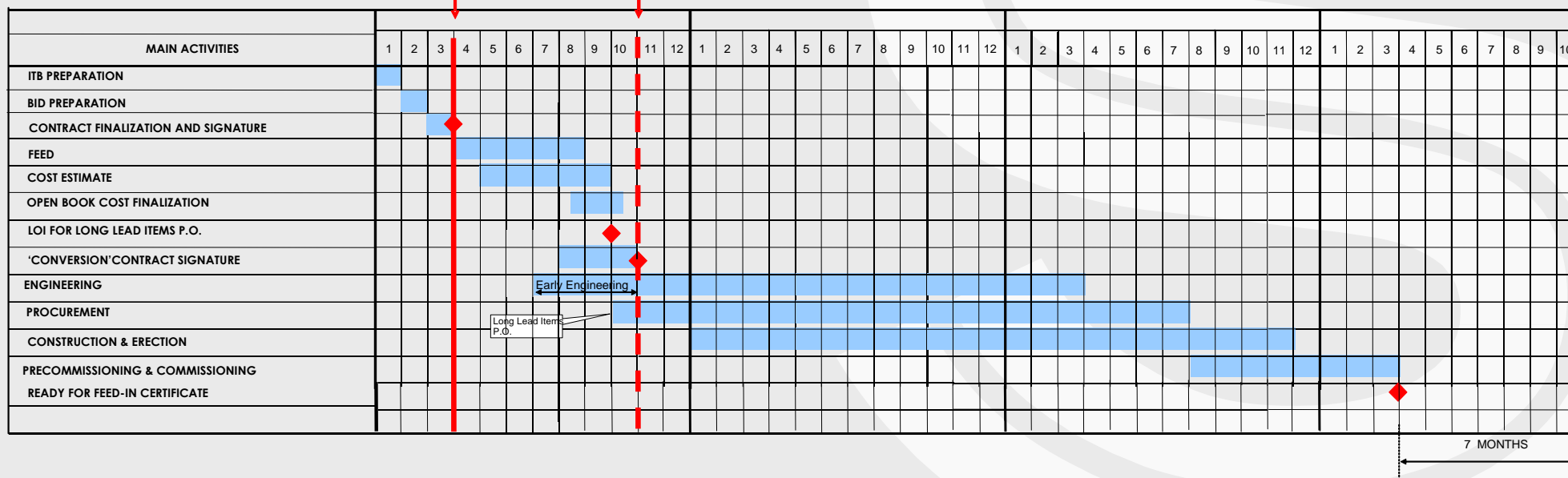


### 'CONVERTIBLE' EPC CONTRACT

(License pre-selected by Owner)

INITIAL  
CONTRACT AWARD

CONVERTED  
EPC/LSTK CONTRACT AWARD



# Do these benefits outweigh the challenges?

It will depend on ....

## ➤ Owner's key success factors

- Achieve schedule ?
- Achieve cost certainty ?
- Optimize the project ?
- Fast track execution ?
- Achieve lowest cost ?
- Value Engineering ?

Setting realistic and clearly communicated goals

## ➤ Conversion methodology actually applied

Well thought upfront contract

## ➤ High level of competence on both sides

# Our Convertible Contracts Experience

**Qurayyah Sea Water Treatment  
S. Arabia**



**Khurais Utilities Package**



**Saudi Aramco  
Khursaniya KPF**



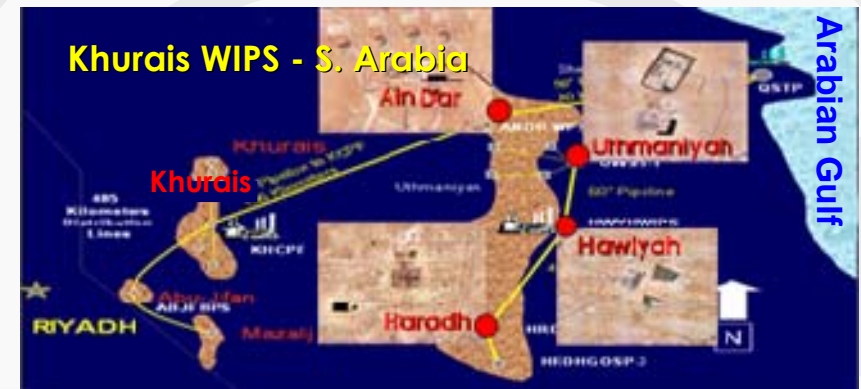
**Eni R&M,  
Deasphalting  
and  
Hydrocrackers**



**Grassroots  
Refinery  
Undisclosed**



**Khurais WIPS - S. Arabia**



- Almost 5 B\$ of such projects either completed, 'converted' or today in design phases
- An additional 3 B\$ awarded - not yet effective

... in parallel to many other projects executed on EPC LSTK basis



# Saipems's Risk Management Context

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# Focus on Risk Management

## One of Key Saipem Strategy Components

- Huge projects
- More complexity
- Frontiers
- Technological challenges

### E&C Industry “Risky Business”



- Risky contracts
- Value recognition by Clients?
- Management of suppliers and subcontractors
- Engineering management competence

*Higher Risk implies potentially Higher Reward*

*How to achieve appropriate Risk Level ?*

## ✓ Risk Management – the organizational challenge

**Decentralized Operations**

**Capillary Risk Assessment Process**

Corporate Rules, Guidelines, Lessons Learned  
Risk Management services

## ✓ In-house control of critical EPC/EPIC phases

Own as much critical local content as possible  
Outsource volume to cost effective subcontractors,  
but manage the overall EPC/EPIC process

# Conclusions

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# Conclusions

## ➤ The 'Convertible' LSTK formula is catching on

- Billions worth of contracts to Saipem/Snamprogetti, all proceeding well
- Increasingly adopted by the market at large (Owner's choice !), in parallel to LSTK and reimbursable contracts

## ➤ Critical factors of success:

- Significant time savings, better investment NPV
- Risk sharing between Owner and E&C
- Avoidance of "excessive" risk-premiums and contingencies
- Possible tailoring of specific schemes to individual Owner's needs and circumstances

*once again ....*

**The nature of this approach requires a high degree of mutual confidence between Owner and Contractor**

**Thank you!**

Thank you!