



DACE Contact bijeenkomst 16 maart 2006

**Cost Engineering: Core competency
of an Owner's organization?**

Albert van der Werf

Agenda

- Background information on DuPont
- Cost Engineering
- Importance of engineering for DuPont
- Cost engineering roles / organization at DuPont and contractors
- Core competency?
- Summary

DuPont de Nemours

Established over 200 years ago
(Engineering department established over 100 years ago)
Headquartered in Wilmington, Delaware

One of the three largest chemicals companies worldwide
5 business platforms

Active in over 70 countries
Main production facilities in Europe:

- Wuppertal/Hamm(Uentrop)
- Dordrecht/Mechelen/Luxemburg
- Derry (Maydown) (N-Ireland)
- Asturias (Spain)

Cost Engineering

- **Estimating**
 - early estimates “in house”
 - validation of contractor estimates
- **Planning & scheduling**
 - integrated
 - critical path
 - resource loaded
- **Change management**
 - frequently Lump Sum approach
- **Progress measurement**
 - physical progress
- **Cost control**
 - monthly for each project > 250 M\$

Relation business – engineering

Engineering is a core competency for DuPont:

Growth is important for DuPont, one of the ways to achieve this is the development of new products

New products require new (or changes to existing) plants

The function “engineering” is essential to retain the knowledge to construct plants that transform science results to marketable products

Importance of cost engineering

- To be able to bring many new products fast to market
 - > both project timing and -duration are important
 - ever more attention to planning & scheduling
- Emphasis on “shareholder value”
 - > emphasis on capital productivity of new assets
 - competitive estimates
 - aggressive cost control

Cost engineering roles for DuPont and contractors

Split in project-development:

- Pre project studies (FEL): center of gravity at Dupont
- Project implementation: center of gravity at engineering contractor

For various regions alliance engineering contractors

- US Gulf Coast
- Rest of US
- Asia Pacific
- Europe: AK, RHDE, Fluor and D+Z

Multi year contracts with performance metrics

For construction a number of preferred suppliers

Organization of cost engineering

Projects > 5 MM\$:

FEL done centrally by DuPont Engineering Center (Wilmington)
Dedicated cost engineers

Project implementation: alliance contractor or preferred engineering services contractor

Projects < 5 MM\$: FEL done by local DuPont site engineering
Cost engineering is a part time role of project team members
Guidance and review from a few full time specialists
Exhaustive use of best practices and industry standard tools

Project implementation: alliance contractor (site or regional office)

Core competency?

What is really “core”? At the end of the day it's a matter of \$\$

1. Maintaining this competency “in house”:

- Capability to do proprietary estimates
- Considerable benefits on project cost and schedule -> IPA
- Cost: Maintaining resources, systems & tools $\approx 0.5 - 1$ MM \$ /a

2. Outsourcing this competency:

- Loss of confidentiality, independence
- Loss of checks & balances
- Flexible, less permanent cost

-> in case of a project portfolio of 100 \$MM/a maintaining this competency is a good investment

Summary

Engineering incl. cost engineering capability is considered core at DuPont

This is not necessarily valid for other owner companies, depending on e.g. the \$ value of the project portfolio

When considering cost engineering core or non-core be cautious: downsizing /outsourcing is fast & easy, (re) developing is hard & time consuming