



Construction Management in the ESCWA Region: Opportunities for Technology and Know-how Transfer

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Outline

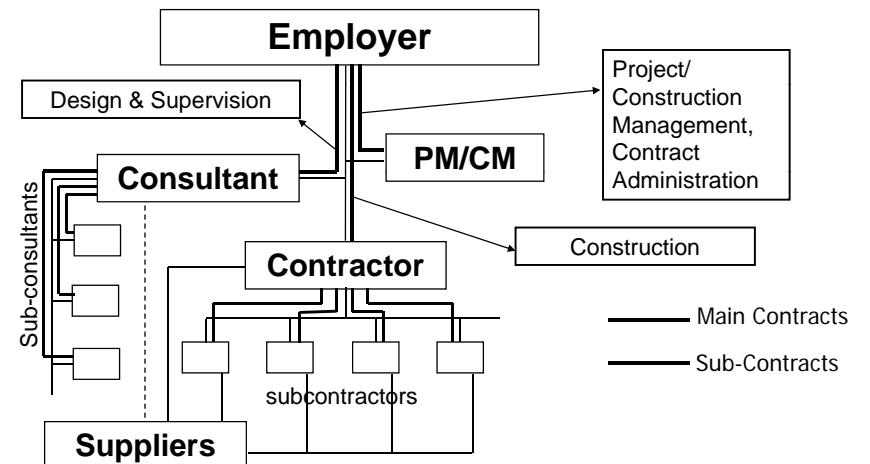
- Objectives
- The Traditional Project Organization
- Technology Transfer (TT) in Context
- Employer as Enabler
- Consultant as Enabler
- Contractor as Enabler
- Concluding Remarks

Objectives

The objectives are basically:

- to highlight the venues through which technology transfer may be promoted, and
- to shed light on the roles of the main project participants as enablers of technology transfer.

The Traditional Organization



Technology Transfer in Context

Technology transfer in the engineering and construction industry can be viewed in the context of:

- Design know-how and technology
- Construction know-how and technology
- Information management and technology for:
 - Business processes
 - Project management processes

Employer as TT Enabler

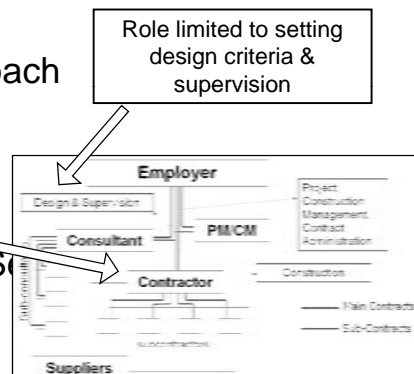
- Degree of Employer's Sophistication
- Project Delivery Approach
- Pre-qualification and Selection of Participants

Employer as TT Enabler (Cont'd)

- Degree of Employer's Sophistication
- Project Delivery Approach
 - Design-build and EPC
 - Build-Operate-Transfer

Extended role

- Pre-qualification and Selection of Participants



Employer as TT Enabler (Cont'd)

- Degree of Employer's Sophistication
- Project Delivery Approach
- Pre-qualification and Selection of Participants
 - Project-to-project technology transfer
 - Consultant-Contractor Compatibility

Consultant as TT Enabler

- Gate-keeping (being the specifications drafter)
- Green/sustainable architecture and engineering designs
- Design technology, coordination, and management (BIM and design visualization software and applications)

Contractor as TT Enabler

- Joint venturing
- Subcontracting (in two ways)
- Construction method innovation, including the adoption of technological innovations from other industries and/or partnering with technology suppliers (laser, sensing, GPS, etc.)

Contractor as TT Enabler (Cont'd)

- Business process applications (company-wide resources management and document control,)
- Project management applications (estimating, planning and scheduling, change control, claims tracking, document control, QA/QC, HSSE, lessons learned, etc...) leading to having an integrated project management information system

Concluding Remarks

- Diffusion of roles (multi-participant industry)
- Dependence on other industries
- Slower rate of TT (geographical spread, nature of competition, business development strategy,)