



# CONSTRUCTION ECONOMICS

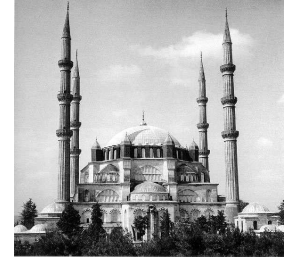
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## THE CONSTRUCTION INDUSTRY

### Lecture 03

# Introduction

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- The characteristics of the construction industry, which separate it from all other industries:
  1. The physical nature of the product
  2. The fact that the product is normally manufactured on the client's premises, I.e. the construction site
  3. The fact that many of its projects are one-off designs, with no prototype model available
  4. The arrangement of the industry, where design is normally separate from construction
  5. The organisation of the construction process
  6. The methods used for price determination



# The Importance of the construction industry

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- Scale of the construction industry
  - In Malaysia, construction industry accounts for about 14.9% of GDP (in 1994), which worth about RM28.3 billion.
  - But, 2004, the domestic construction industry is expected to register growth of 0.5% only.
- Employment
  - Direct employment
  - Indirect employment
- Investment (economic regulator)
  - Create spin-off activities in more than 30 other industries



# Structure of the industry

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- Clients
  - Government/statutory bodies (JKR, JPN, Education Ministry, Defense Ministry, UDA, etc)
  - Private sector (developers, listed corporations, etc)
- Regulatory bodies
  - Regulate developers, contractors, consultants, etc.
- Financiers



# Construction Output

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- BUILDING
  - Residential
    - Landed (terrace, semi-d, bungalow)
    - Multilevel (apartment, condominium, etc)
  - Non-residential
    - Shopping complex
    - Office buildings
    - Hotels and leisure
    - Educational
    - Healthcare



# Construction Output

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- ENGINEERING
  - Roads and bridges
  - Drainage system
  - Airports
  - Harbour/wharfes
  - Sewerage
  - Dams/irrigation
  - Power generation



# Construction process

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- INCEPTION
- FEASIBILITY STUDIES
- DECISION TO BUILD
- LAND MATTERS
- DESIGN BRIEF
- DESIGN CONCEPT
- DESIGN DETAIL
- SUBMISSION TO AUTHORITIES FOR APPROVAL
- TENDER
- CONSTRUCTION AND COMPLETION
- OCCUPATION AND MAINTENANCE



# Materials/components in buildings

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- STRUCTURE

- Concrete
- Reinforcement/steel
- Timber formwork

- WALL FINISHES

- Tiles
- Gypsum board
- Timber paneling
- Wallpaper
- Shanghai Plaster
- Bonn tile
- Soundproof paneling

- FLOOR FINISHES

- Tiles
- Vinyl flooring
- Carpet
- Timber strip
- Rubberized sheeting
- Stone finish (granite, etc)

- CEILING SYSTEM/FINISHES

- ROOF SYSTEM/FINISHES



# Professional in the industry

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- VALUERS
- LAND SURVEYORS
- TOWN PLANNERS
- ARCHITECTS
- CIVIL ENGINEERS
- STRUCTURAL ENGINEERS
- MECHANICAL AND ELECTRICAL ENGINEERS
- QUANTITY SURVEYORS
- PROJECT MANAGERS
- CONSTRUCTION MANAGERS
- LAWYERS
- FACILITIES MANAGERS



# CIDB-Led Overseas Construction Projects

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- The rapid economic development in many developing countries particularly in the Asian, African and Gulf regions, have spearheaded the growth of promising and exciting opportunities for the Malaysian Construction Industry.
- A number of opportunities have been translated to successful infrastructure projects involving:
  - Roads
  - Rail
  - Seaports
  - Airports
- Therefore, the Malaysian Construction Industry players offered skills and technological expertise to the overseas clients.

## CIDB-Led Overseas Construction Projects In Bosnia Herzegovina Completed Projects in Bosnia Herzegovina

NAME OF COMPANY	DESCRIPTION OF PROJECT	COST RM (M)
CIDB - Led Consortium MBI Ventures Sdn. Bhd.	Design & Construction of Road R460 between Hillsterac to Cerik to Brcko, Bosnia & Herzegovina	7.40
	Design & Construction of External Cladding to Blocks C & F of the Clinical Centre, University Sarajevo, Bosnia & Herzegovina	1.90
	Design & Construction of the Malaysia Mosque' in Breka, Sarajevo.	1.70
CIDB - Led Consortium BMIG d.o.o. MBI Ventures Sdn. Bhd. Unioninvest Holdings	Investment in the reconstruction of 7-storey commercial building at Emerika Blume, Sarajevo.	8.60
	TOTAL	19.60



## Projects Under Implementation in Bosnia Herzegovina

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NAME OF COMPANY	DESCRIPTION OF PROJECT	COST RM (M)
CIDB - Led Consortium	Riverina-Sastavci Mixed Development Project in Illidza, Bosnia & Herzegovina	<b>1,121</b>