Construction Economics

Introduction to this Discipline

Richard O’Carroll
What do the following Buildings have in common?
‘Hydropolis Underwater’ Resort Hotel - Dubai UAE

Estimated price - $440M

200 Guest Suites

22M underwater

US$5,500 per night

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B ‘Burj Dubai’ UAE – World’s tallest building

Estimated price -$1.5B
828M high
160Nr Levels
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C  ‘Ski Dubai’ UAE – World’s largest indoor snow park

Estimated price - $275M
32,290 Sq foot
2 foot of snow
Has own ‘black slope’
Construction Economics

Yes..... you spotted it ...
Yes..... you spotted it ... ‘DUBAI’
Yes..... you spotted it ... ‘DUBAI’

Well not quite what we wanted you to notice
Yes..... you spotted it ... ‘DUBAI’

Well not quite what we wanted you to notice

LOOK AGAIN  !!!
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$440 Million

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$1.5 Billion

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$275 Million

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They all needed ‘Budget Estimates’ to be established

(to ‘Confirm feasibility or otherwise the Client’s Objective’).

“You’re Fired!

“you’re fired !!”

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They all needed to be Measured and Evaluated (to confirm the Client’s Budget).

Comparative Cost Planning based on Analysis on previous completed Contracts

Cost per Hospital Bed
Cost per Theatre Seat
Cost per Car Park Space

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They all needed the most, **time** and **cost** efficient methods to be **procured**

(to comply with the Client’s requirements)

Fishing for the Best Price and Best Contractor

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They all needed the most, **time** and **cost** efficient methods to be **constructed**

(to ensure it is coming In on Budget)

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**Bringing in the Contract Cost on Budgetary Target**

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They all needed ‘Finance’

(to support the Objective)

Based on soundly established and balanced Cost Plans and Projected Cash Flow forecasts

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They all needed **Financial Control**

*(to satisfy the financiers)*

Based on a proper financial monitoring system as well as a pool of change control facilities to incorporate changes whilst still maintaining Budget and Programme

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They all need to be administered to a pre-agreed contract

(to bring the dream to fruition)

Via suites of Construction &/or Design Contracts

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All contracts need to be *negotiated based on a sound cost based knowledge*

(to maximise the chances of being within Budget)

From Main Contractor to Nominated/Specialist Contractors
From Pre-Award to Final Account

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All Contractors need to be paid a fair assessment of the value of Work done on an interim basis

(to ensure the continued liquidity of the Contractor and completion of the Objective).

Cash flow is the Life Blood of the Contractor

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Once complete, over time, buildings will need **maintenance, repair, renovation, rectification**.

*(To ensure the maximum life of the original Capital Investment but with the most economic means of design and construction).*
So where does it all start?
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Clients (*Entrepreneurs, Developers, Contractors*) start with an idea

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Clients idea

Wish to procure / attain idea

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Clients idea

Wishes to procure

Little or no Capital

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Clients idea

Wishes to procure

Little or no Capital

Seeks finance

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Clients idea
Wishes to procure
Little or no Capital
Seek finance

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Clients idea

Wishes to procure

Little or no Capital

Lets try that one again !!!

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Clients idea

Wishes to procure
Little or no Capital

Provide a Game Plan

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Clients idea

Wishes to procure

Little or no Capital

Provide a Game Plan

Market Analysis / review of economic indicators

Likely Cost

Likely Revenue

RoI / Profitability – Balance of payments

Cash Flow Forecast (long & short term)

Risk strategy & Stress Testing

Sound Procurement strategy

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Clients idea
Wishes to procure
Little or no Capital
Provide a Game Plan
Seek Finance

Now.....They are listening !!!

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Reasons to be a 'DOCTOR'
Reasons to be a ‘DOCTOR’

Richard O’Carroll
Reasons to be a - ‘Lawyer’
Reasons to be a ‘Lawyer’

Richard O’Carroll
Reasons to be a ‘Construction Economist’

Richard O’Carroll
Reasons to be a ‘Construction Economist’

“He reads between the lies”

“Of course I can do it for that price…..”

“Oh that extra will cost a fortune…”

“I never intended to do that work…”

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The Construction Industries Best Kept Secret

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The Construction Industries Best Kept Secret

The ‘Construction Economist’

and the

‘Quantity Surveyor’

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Essential Equipment
Construction Economics

Essential Equipment

The ‘All seeing’ & ‘Cool’ glasses

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Essential Equipment

The ‘All-seeing’ & ‘Cool’ glasses

The DIT C.E. Tee Shirt that says....

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‘Not only **Builds** Relations.....
‘but also **Costs** and **Values** them’

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What happened before Construction Economics??
BEFORE

CONSTRUCTION ECONOMISTS
This is how they Forecasted Costs before Construction Economists
These were their Negotiation Experts before Construction Economists
This is how they **Controlled Costs on Site** before

*Construction Economists*
What did Construction Economists bring to Civilisation?
What did Construction Economists bring to Civilisation?

Be careful ……

Serious Learning Section

Now

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Construction Economics

Serious Learning Section

Cost
- Labour
- Plant
- Materials
- Preliminaries
- Overheads
- Inflation

Time
Programme
- Methodology
- Resources
- Outputs
- Holidays
- Acceleration
- Weather

Quality
Standards
- Finishes
- Mech & Elec Services
- Useful Life / Maintenance

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Construction Economics

Cost
- Labour
- Plant
- Materials
- Preliminaries
- Overheads
- Inflation
Construction Economics

Time
Programme
• Methodology
• Resources
• Outputs
• Holidays
• Acceleration
• Weather

Master Programme

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Quality Standards
- Finishes
- Mech & Elec Services
- Useful Life / Maintenance

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Typical Client’s view of himself, the Design Team & Construction Team

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The Client’s view of themselves
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The Client

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The Architect

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The Engineer

Richard O’Carroll
The Health & Safety Officer

Richard O’Carroll
The Health & Safety Officer

Richard O’Carroll
The Contractor
& Site Team
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The Contractor & Site Team

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The Construction Economist

Richard O'Carroll
We navigate away from foreseeable dangers

Richard O’Carroll
We identify alternative action should conditions change

Richard O’Carroll
We determine the underline features of any venture project

Richard O’Carroll
We protect our Clients Interests
Thankyou ..... any Questions ?

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International Acclaim & Recognition of students

Council of European Construction Economists
Royal Institution of Chartered Surveyors
Union Nationale des Economists de la Construction et Coordonnateurs (UNTEC)
Society of Chartered Surveyors (SCSI)

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CEGA Award ceremony CEEC – Cyprus 2009

Thomas Stronge of DIT - Third place runner up

CEGA Award ceremony CEEC – Cyprus 2009

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Richard O’Carroll  CEEC -Educational Officer; Nick Murphy of DIT -CEGA Winner; Peter van der Pijl -President

CEGA Award ceremony CEEC – Malta 2010

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