

HELM  
TALKS

LECTURE FIVE

# CAPEX

PRESENTED BY

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# AGENDA

**DIFFERENT KINDS OF CAPEX**

**WITHIN-PERIOD CAPEX AND BUSINESS PLANS**

**MULTI-PERIOD CAPEX**

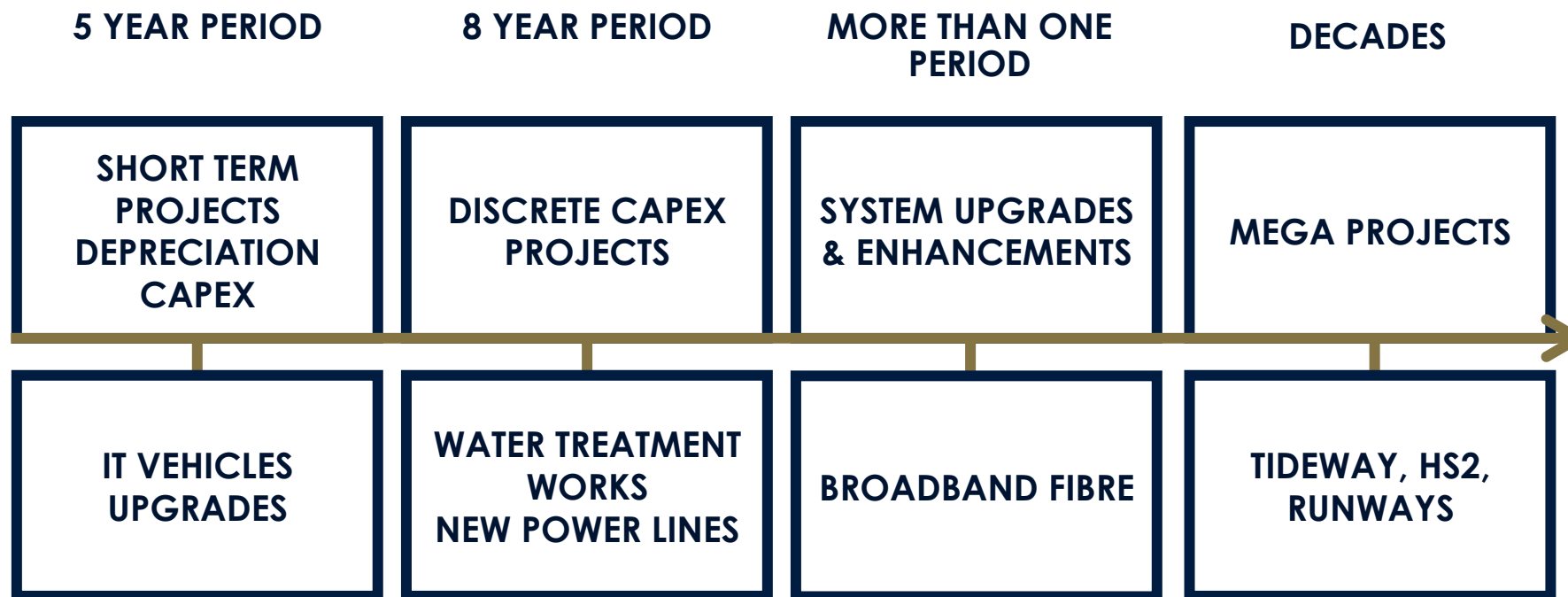
**LARGE INFRASTRUCTURE PROJECTS**

**MARKET TESTING AND EFFICIENCY TESTS**

**GAME PLAYING AND EXCESSIVE CAPITALISATION**

**DETERMINING THE SOCIALLY OPTIMUM CAPEX**

# DIFFERENT KINDS OF CAPEX



# WITHIN-PERIOD CAPEX & BUSINESS PLANS



# MULTI-PERIOD CAPEX



# LARGE INFRASTRUCTURE PROJECTS

- Longer time horizon
- Greater time-inconsistency problems
- Greater risk of cost overruns
- Large impact on balance sheets
- Novel treatments and bespoke solutions

**SPVs**

**THIRD PARTIES**

**CONSORTIA**

# HS1, HS2 AND CROSSRAIL vs. CHANNEL TUNNEL

## Channel Tunnel

- Pure private sector play
- High cost of capital
- Smaller tunnel, faster returns
- Debt crises

## HS1, HS2 and Crossrail

- State responsibilities
- Public sector projects and public cost of capital
- Refinancing and project completion for HS1

# LARGE PROJECT FINANCE

## Option 1:

- The state
- HS1, HS2, Crossrail

## Option 2:

- SPV and Tideway (+utility charging and transfer to RAB)
- Guarantees

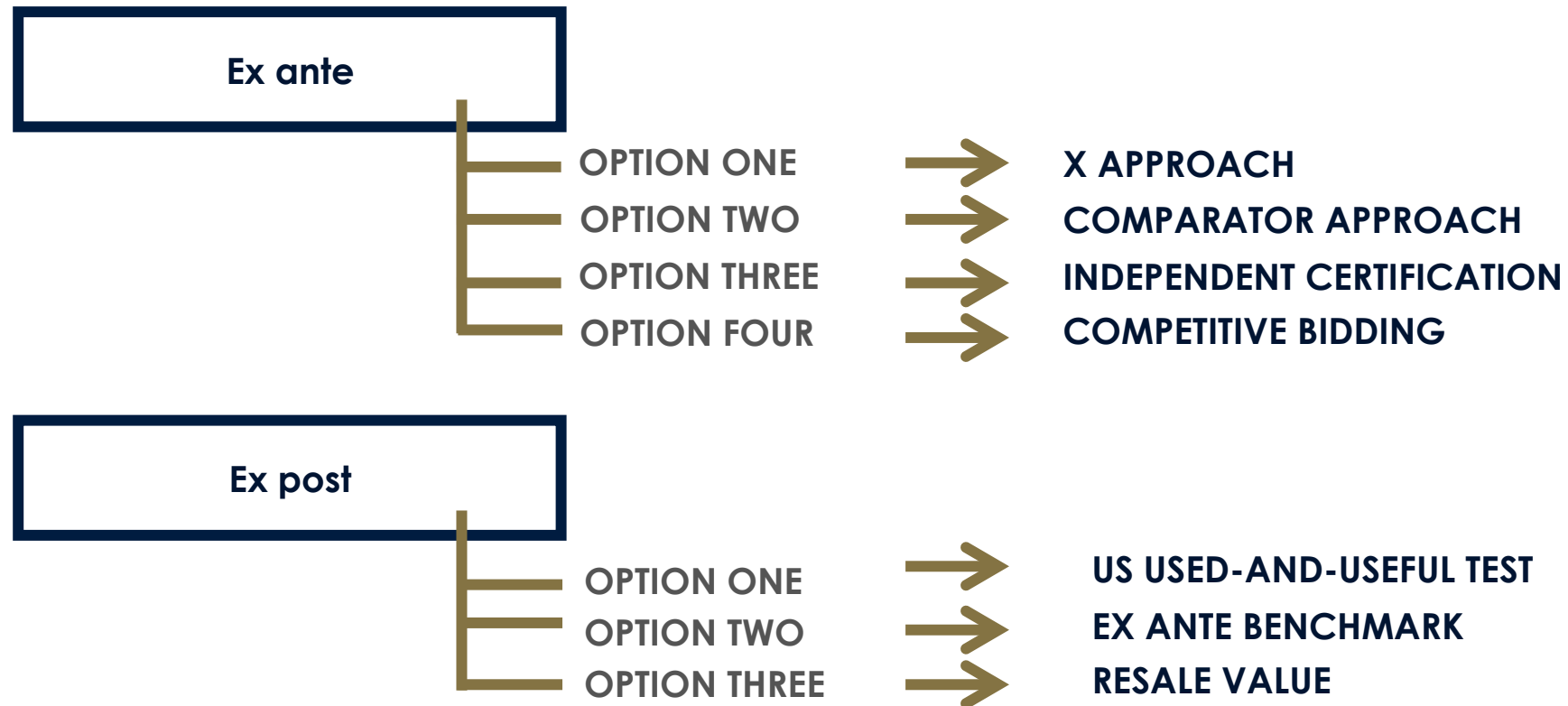
## Option 3:

- Guaranteed long term contract
- Hinkley



# MARKET TESTING & EFFICIENCY TESTS

- No obvious answers to question: “is it efficient?”



# COMPETITIVE TENDERING

- Easier for repeat projects and smaller scale construction
- Harder for bespoke and larger projects
- Disaggregation of contracts for larger projects
- Tendering costs to encourage bidding
- Incomplete specification require continuous renegotiation
- Key risk for system operators

# GAME PLAYING AND EXCESSIVE CAPITALISATION

## Periodic review strategies:

- If cost of capital < allowed return – overstate CAPEX
- *ex ante* overstate CAPEX and then under deliver and claim as “efficiency”
- Focus on exogenous reasons for extra spending
- Capitalise what should be OPEX

## Regulatory responses:

- Apply crude “efficiency” adjustments e.g. “cut CAPEX business plan by 10%”
- Move to outputs regulation
- Reduce allowed returns
- Use claw-backs and *ex post* adjustments
- Limit interim determinations
- Define what counts as OPEX

# DETERMINE THE SOCIALLY OPTIMUM CAPEX

## Start with high level outputs

- Security and resilience margins (energy)
  - Water framework directive (water)
  - Universal broadband (comms)
  - Punctuality (trains)
  - Delivery times (postal services)
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- **Set in national infrastructure plan**
  - **Set in national planning statements**
  - **Obligate system operators and regulators**

# SUMMARY LECTURE FIVE

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- CAPEX IS INHERENTLY DIFFICULT
- ONE-SIZE MODELS DO NOT WORK
- PRAGMATISM ESSENTIAL
- GAME PLAYING ENDEMIC
- SOLUTIONS INCLUDE AUCTIONS, COMPETITIVE TENDERING AND RATE OF RETURN REGULATION

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LECTURE RECORDINGS AVAILABLE AT

**DIETERHELM.CO.UK**

THANK YOU

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