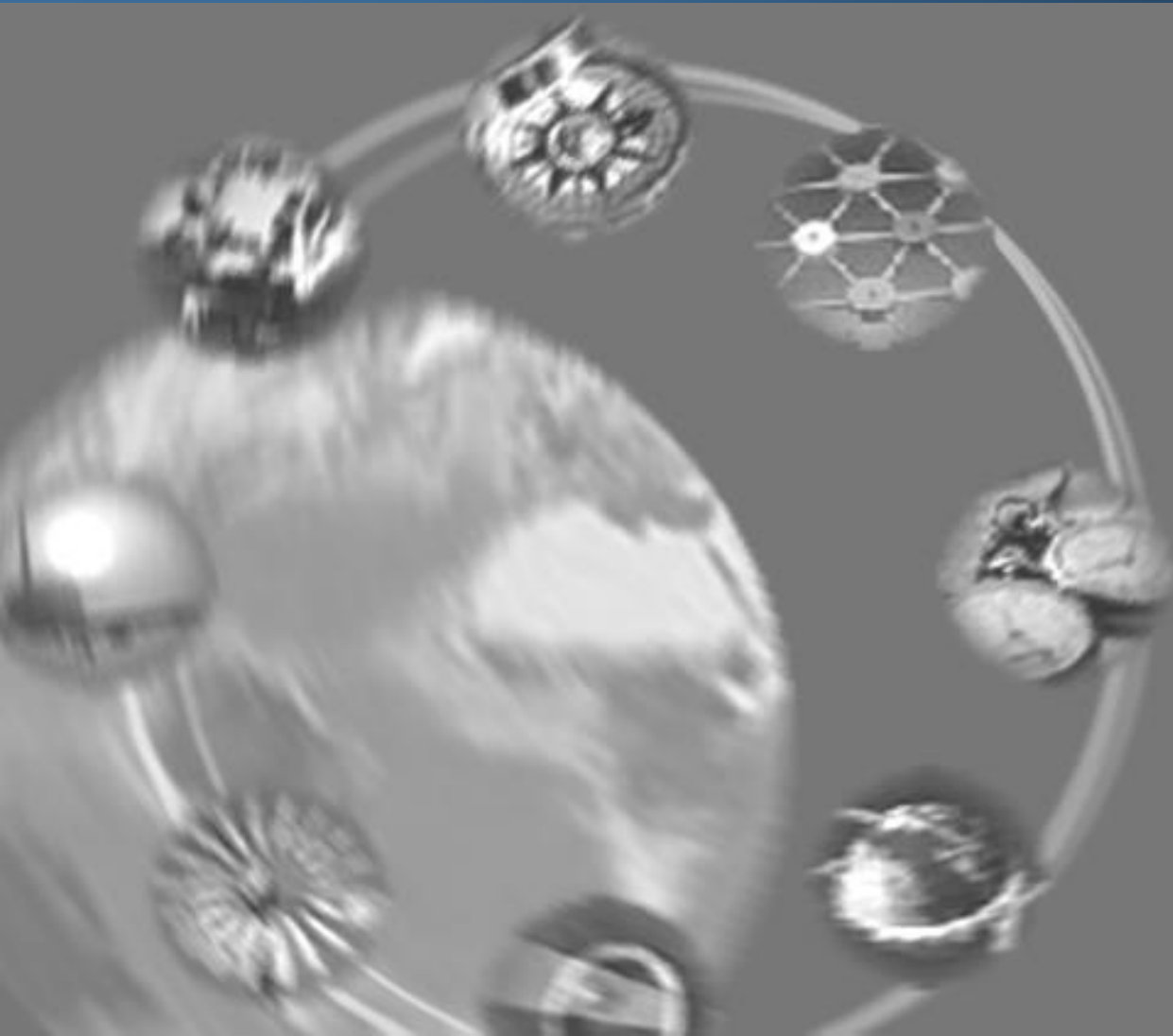


Ten Key Elements

401.649 Cost Planning for Construction Projects



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Alternative analysis in project delivery and finance



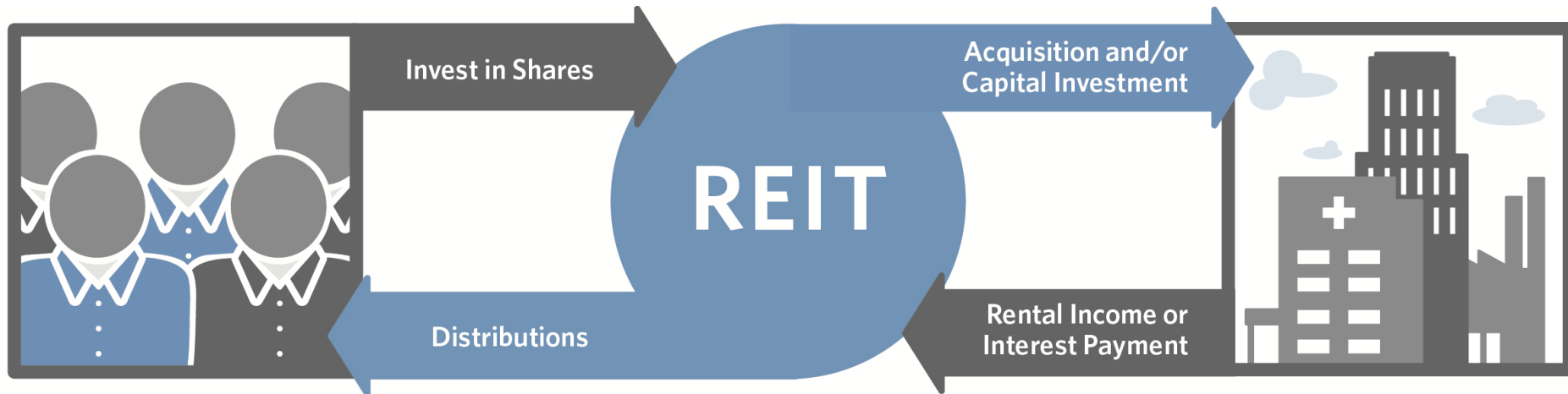
- Project delivery and project finance are variables, rather than fixed constants.

- Efforts to use any project delivery method other than DBB
 - “Public-private partnerships”
 - “Alternative delivery mechanisms”
 - “Innovative finance”

- The current public cash flow shortfall and the inexorable development of technology are leading this change in infrastructure strategy.

- What is really a continuum of project delivery alternatives ?
 - Replacing DBB in quadrant IV with another single delivery method (x)
 - More than one method is appropriate, depending on the project, and the relative abilities of government, the private sector, and the public to fund it.
 - All of public infrastructure can be “privatized” (x)
 - “Open System”

- Reject an exclusively preferred procurement approach (DBB or BOT)
- This new discipline builds on Gordon's work on alternative project delivery strategies.
- Elimination of inappropriate project delivery and finance strategies, not the identification of a “correct” one
- The tools that construction and project managers can apply in meeting society's needs for sustainable infrastructure facilities and services.



INVESTORS

**ASSETS/
SECURITIES**

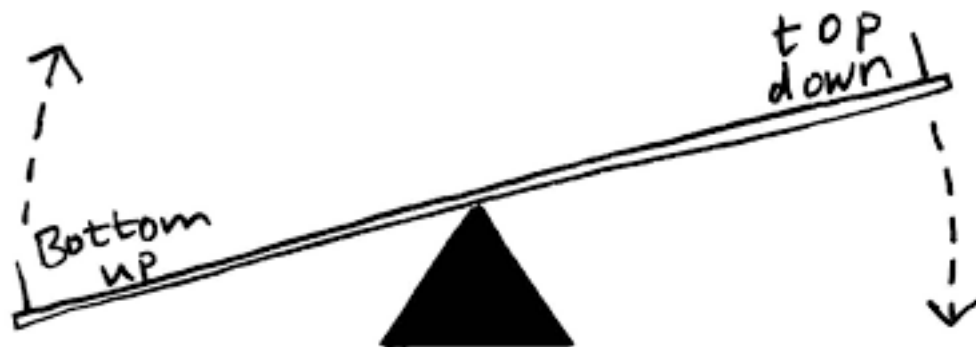
Chapter Case: The JFK Int'l Airport

The Emergence of Infrastructure Portfolio Management

- Portfolio Management is the centralized management of the processes, methods, and technologies to analyze and collectively manage current or proposed projects... The objectives are to determine the **optimal resource mix** for delivery and to **schedule activities** to best achieve an organization's operational and financial goals..(wikipedia)



- Infrastructure Portfolio
 - Use alternative project finance and delivery methods across collections of infrastructure projects
 - Strategic opportunities to affect the timing, quality, and cost of facilities performance.
 - Introduce different sources of revenue and capital, improved methods of design, construction, and operation
 - The term “portfolio” : the collection of infrastructure projects held or controlled by a government.



- Modeling the portfolio
 - Find alternative combinations of project delivery specific cash flows
 - “Bottoms up” analysis of project delivery and finance options for the portfolio
 - Attract both public support and private sector capital investment
 - Provide high quality infrastructure services at reasonable initial and long term costs
 - Must be flexible, yet simple

- New formulation (modeling the portfolio)

Capital Sources (Capital Rationing Limits for each source by year)



Adjustable Restraint

The List of Desirable Infrastructure Projects



The Variables : Alternative Means of Delivery

(Source, Amount, Timing of Capital varies with method)



Strategic Planning Goals

1. Evaluate A Range of Project Delivery/Finance Configurations Against Expected Capital Constraints
2. Evaluate the Impact of Adjustments in Capital Source, Project Delivery Methods
3. Maximize the Number of Desirable Project Delivered
4. Present Alternative Viable Configurations (Order of Delivery, Star/Finish Dates, Means of Delivery)

Chapter case:

The Dulles Greenway and the Indianapolis Wastewater Treatment Project

Next Assignment: Bidding for the Confederation Bridge

The Confederation Bridge joins the provinces of Prince Edward Island and New Brunswick, Canada and forms part of the Trans Canada Highway-making travel to and from the mainland fast and simple. A close 30 minutes from the Nova Scotia/New Brunswick border, the engineering marvel is open year-round 24 hours a day and takes a little over 10 minutes to cross.

