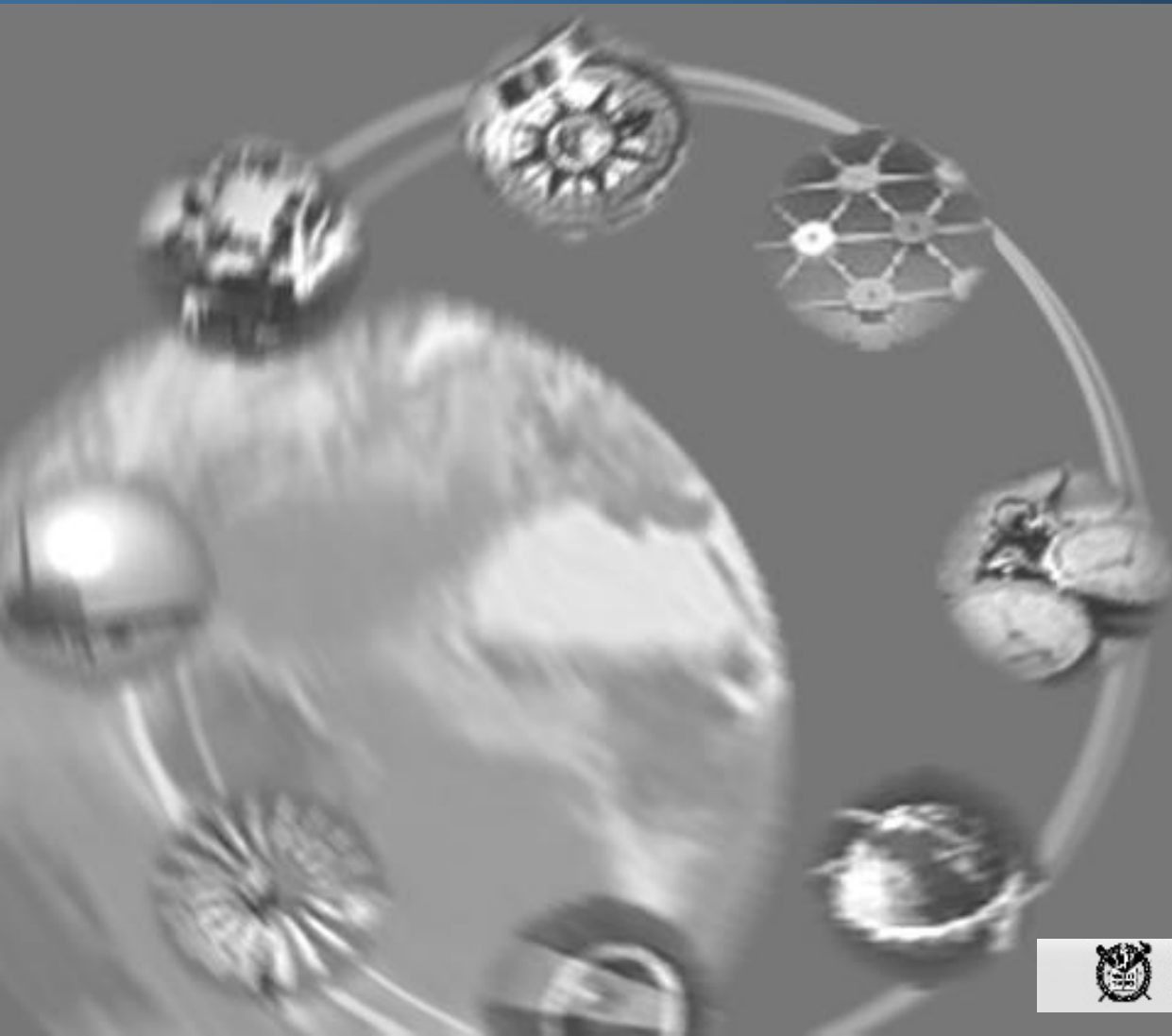


Ten Key Elements

Transparency, Open to new tech change, Sound financial analysis

401.649 Cost Planning for Construction Projects



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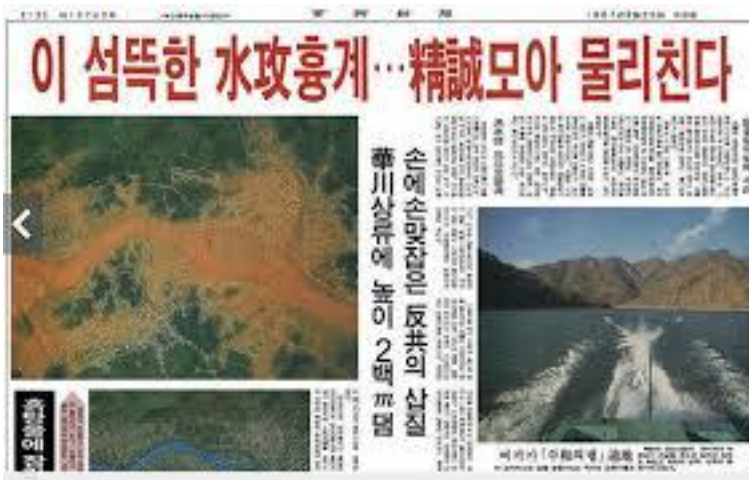


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과학기술부
국가지정연구실
National Research Lab.

Transparency



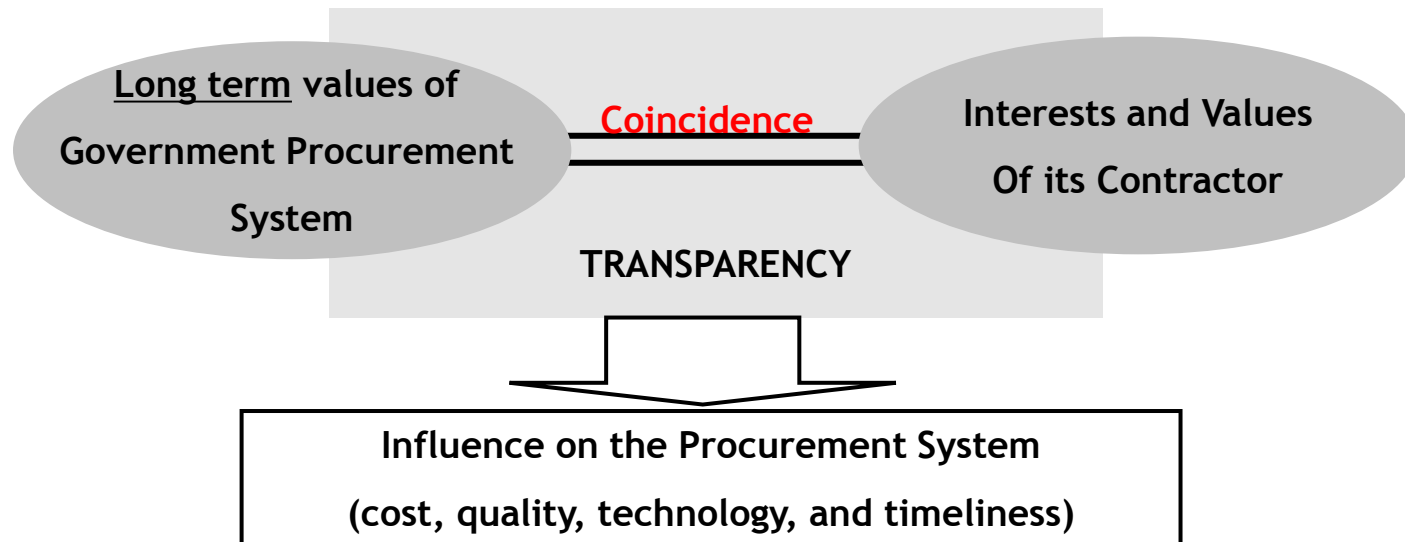


Public Procurement System



**Stable, Reliable, Predictable
Acquisition System**

- Transparency to Contractors
 - Notion that potential competitors can see and understand the acquisition process prior to making a commitment to participate, and can rely upon government.
→ **Signal Fair Treatment to Potential Competitors**
- Transparency drives much of what is good and bad about the procurement system



Case Project:
**The Wilmington, Delaware Waste Water
Treatment Plant**



Privatization

Advantage

시장논리에 의한 효율화 증대 기대

공기업에 투자 되었던 자본 회수 (세수 부족 해결)

공기업 - 일반회사로서 경쟁에 참여
①관료제적 성향; ②경쟁력약화 탈피

자본시장의 저변 확대

정부기능의 축소 - 규제완화

Disadvantage

적시적소에 투자가 될지 의문(기업의 이익과 소비자의 혜택의 일치 여부)

정부 정책대로 물가조절을 할 수 있을지 의문(요율증가에 따른 물가 상승)

공기업은 독점화 상태에 있는 데 이를 민영화하고 요금 정책까지 기업에 맡긴다면 인수한 기업이 시장에 ①독점적 체제를 구축; ②특정재벌로의 경제력집중도 심화 - 국민경제에 악영향을 주므로 방지해야 함

수익성 원리에 따라 시설의 지역적 차별이 발생

취약계층에 대한 사회적 요금체계가 무시 - 돈이 없으면 공공서비스를 제대로 이용하지 못하게 됨

민간독점 기업으로 전환 - 독점이윤으로 소수 자본 세력에게 전유

Privatization Types

- 형식적 민영화: 사실상의 지배권 유지
 - PPP: BOT, BTL etc
 - 국유화해제 (denationalization): 공기업 지분일부매각
- 실질적 민영화: 지배권 축소, 경영권 이양
 - 기능적 민영화 (functional privatization): 관리업무 완전위탁 (예, 예술의전당 위탁 운영)
 - 민간위탁(contracting out): 특정 업무 민간 위탁 (예, 쓰레기처리, 고속도로 휴게실 운영)

공기업

- 정부투자기관: 정부지분 50%이상 → 경영권 행사
 - 국책은행 (산은 중소기업은 국민은 주택은), 한전 석탄공사, 광업진흥공사, 석유개발공사, 도로공사, 주택공사, 토지개발공사
- 정부출자기관: 50% 미만, 법인체형 또는 주식회사 형 공기업
 - 인천국제공항공사, 한국방송공사 등

공기업 민영화 (상장) 고려사항/시점

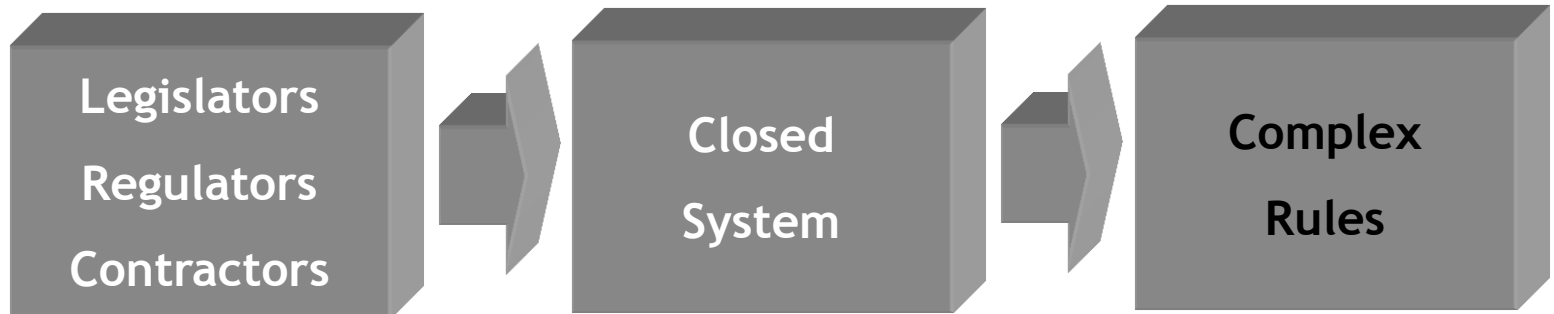
- 증시부양책 vs 매각가치 극대화
- 재정적자 보완
- 자본시장 규모: 매각 공기업 수용 능력
- 공익성 훼손의 정도: 수익성 중심의 공기업 우선
- 공기업 내/간 구조조정: 공공성/수익성 위주 부문 정리, 중복 업무 기관 정리

Open to Technological Change

- Technological change
 - A fundamental element of future infrastructure procurement strategy

- Open System vs. Closed System

- In a Closed System



- Lack of institutional memory to see the importance of evolution in technology and methods

- Comfortable to build procurement methods
- Technology and Methods are frozen

- The closed system has led to increasingly detailed efforts for reform of acquisition system
- Constrain continued innovation

- In an Open System
 - Open System: An environment in which some or all the variables cannot be controlled, predicted, or managed.



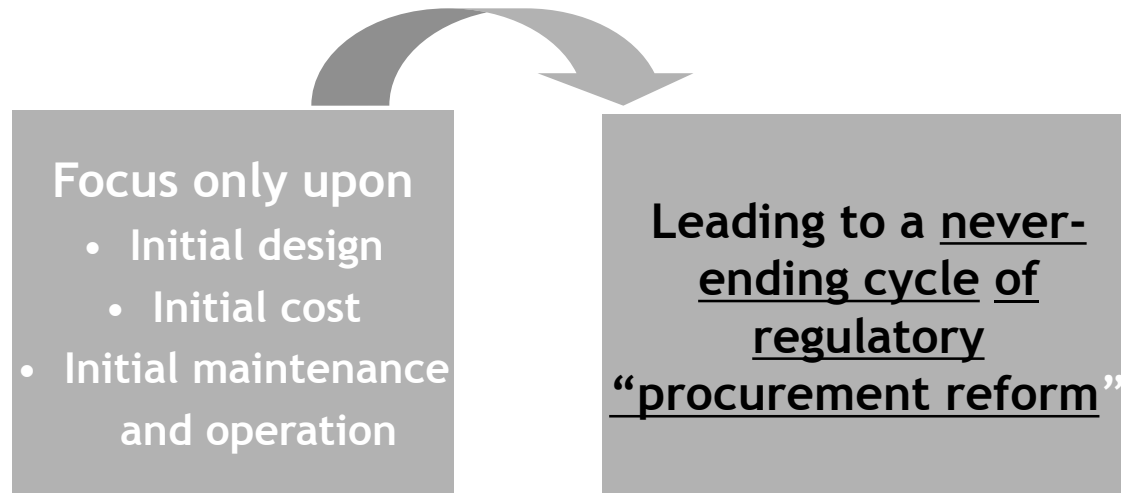
- Deft strategy today is very likely to be poor strategy tomorrow
 - Steady technological improvement is important !!
- Change: 11th key element (?)
- Change vs. Continuity

- The open system confirms that new technology and methods can move around the world,
from project to project
from industry to industry
from application to application

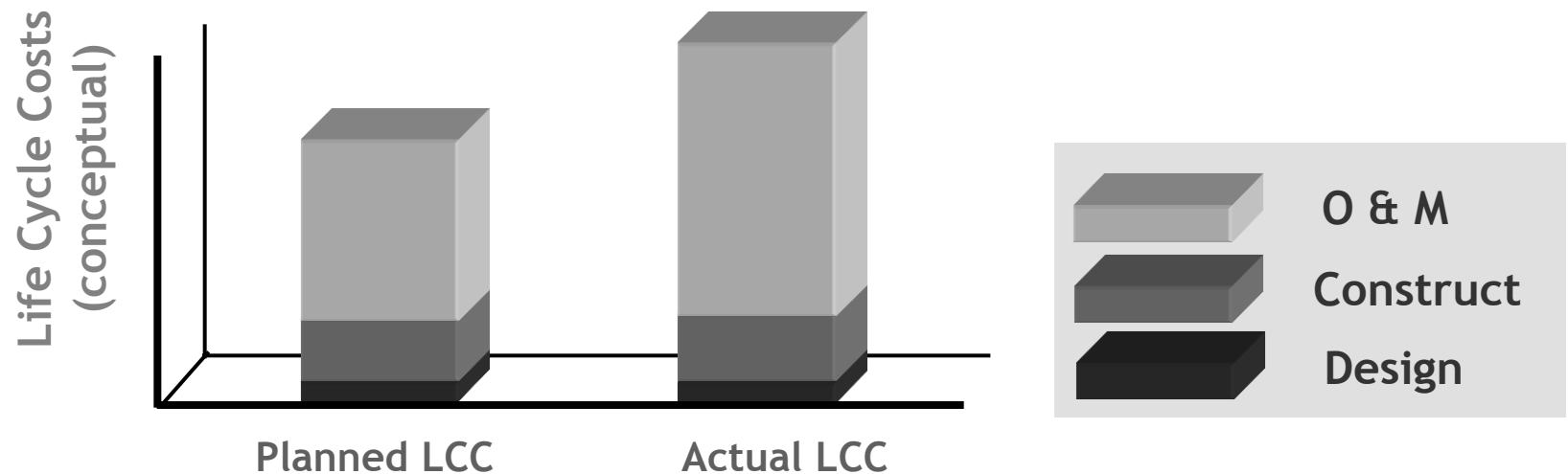
Case Project: Highway 407, Toronto

Sound Financial Analysis Over the Project Life Cycle

- Life cycle discounted cash flow analyses should form the analytical core of strategic efforts to improve portfolios of infrastructure facilities and services.
- Currently, LCC are not treated as core value in the procurement of infrastructure facilities



- Planned initial cost (design and construction):
→ 10-15% of LCC
- Actual initial cost → 5% of LCC
Because most facilities remain in service far longer than planned.
- So initial design and construction ought to be aimed at long term operations, maintenance, and finance.



- The cause of overruns
 - The avarice of bidders competing to perform the work
 - Incompetent contractors (both design and construction)
 - The contracting officers administrating these programs
 - The “environmentalists”
 - **Quadrant IV processes themselves are the cause of such overruns**

- ◆ Segmented process (independent design, construction etc.)
→ “out of control” on the cost side
- ◆ Changes in project definition are decided after initial design and construction → Discrepancy between estimates and actual costs
- ◆ Regulatory agencies insist upon the submission of complete plans and specifications prior to final regulatory consideration
- ◆ Multiple interfaces between stakeholders lead to overrun initial cost → cost overrun is covered by user fees

- Solution

- Think carefully about project definition and scope before contracts are signed
- Prepare detailed discounted cash flow analysis of capital costs, financing costs, operating expenses, and operating revenues over the life of the service agreement

Chapter Case: The Franklin Water Treatment Plant