



Japan International Transport Institute



Ritsumeikan Asia Pacific University



Global Infrastructure Challenges and Opportunities

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Tremendous Challenges



Global Infrastructure, Environmental and Financial Crisis



Infrastructure Sectors



Energy



Water



Transportation



Communications

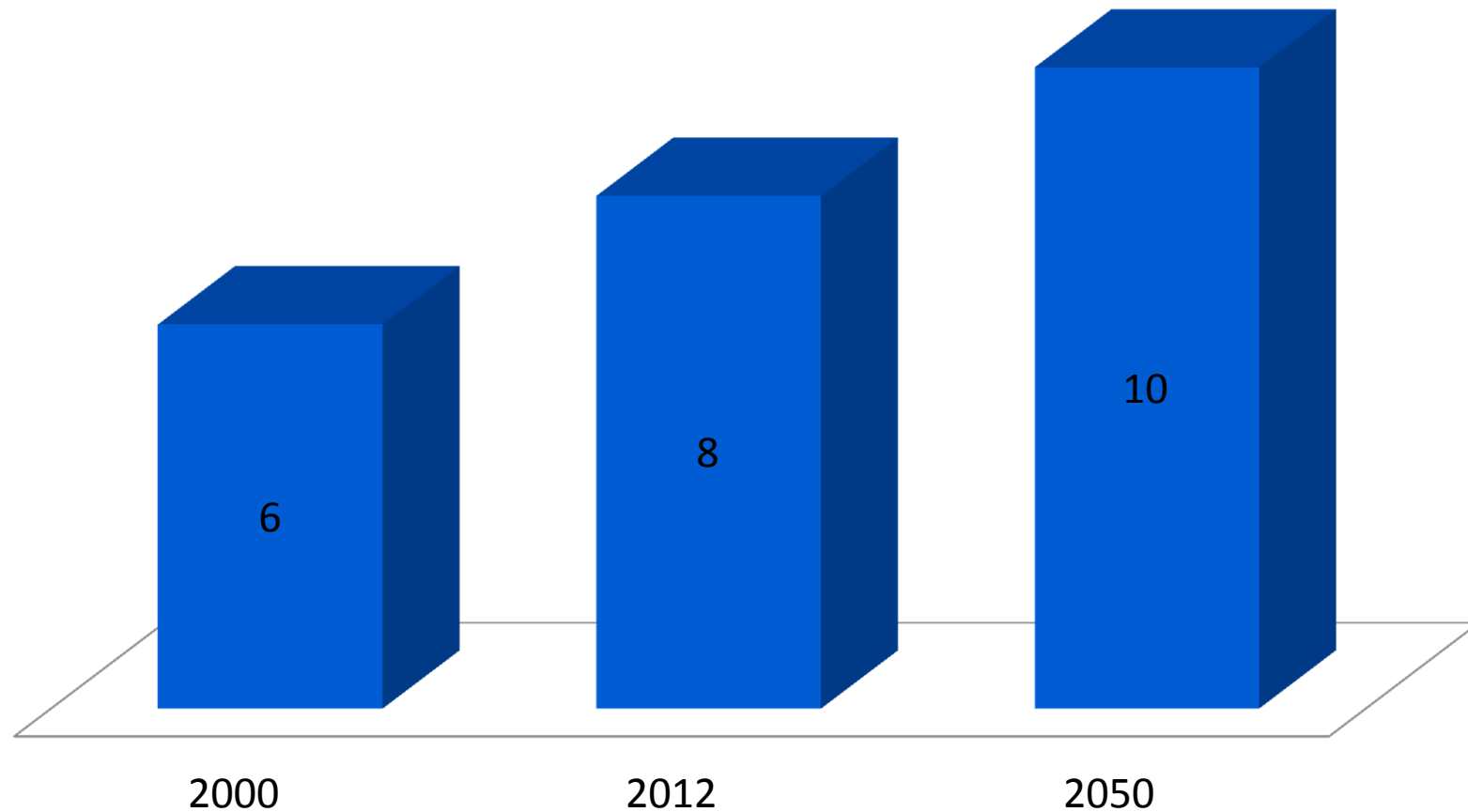


Public Facilities



World Population Explosion

Billions





Urbanization



Source: Treehugger.com



Environmental Concerns

Climate Change



The number of Category 4 and 5 Hurricanes has doubled in last 30 years (Intergovernmental Panel on Climate Change)



Arctic Ocean ice free by 2050 (Arctic Climate Impact Assessment, 2004)



More frequent and intense heat waves



Droughts and wildfires more often



More than a million species extinct by 2050 (Time Magazine, March 26, 2006)



Global sea levels will rise by more than 20 feet (Washington Post, January 29, 2006)

Source: An Inconvenient Truth (Al Gore)



Natural Disasters



Hurricanes



Earthquakes



Droughts

Pollution



Air

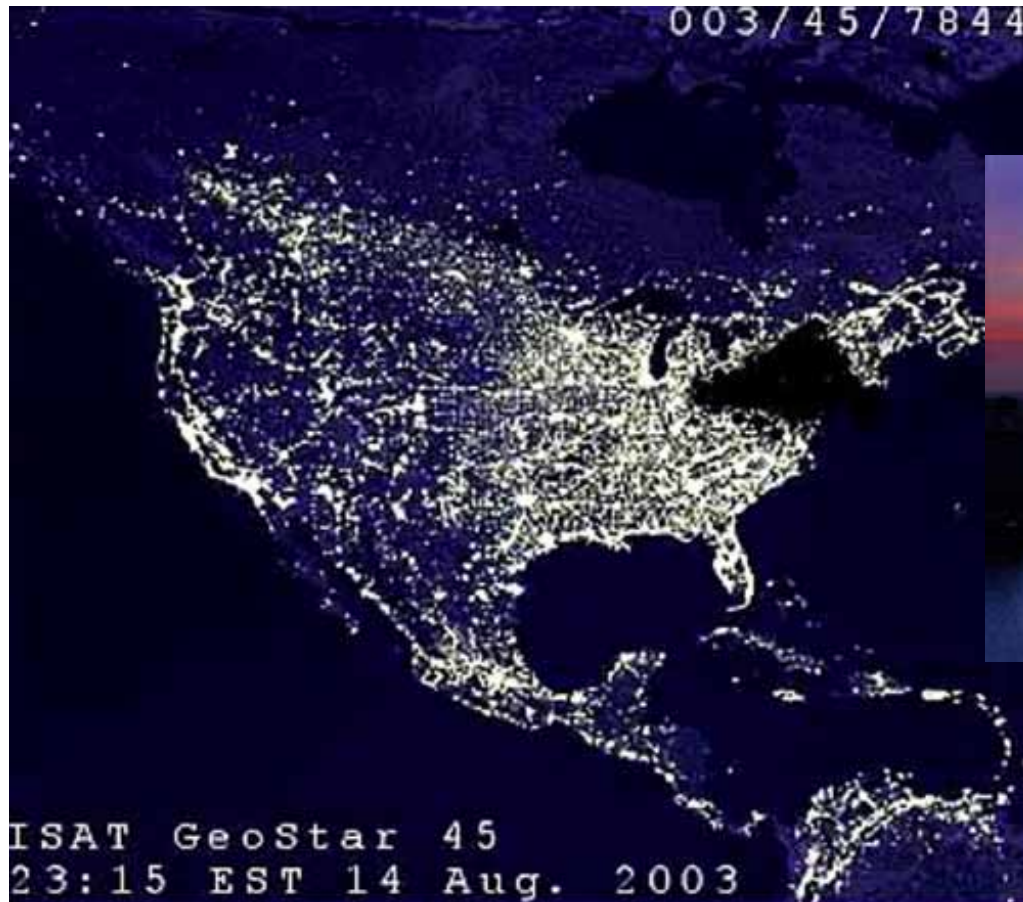


Water



Energy Shortages

2003 Northeastern US Blackout





Water Shortage

Percent of Salt Water 97%

Total Amount of Fresh Water 9 Million Trillion Gallons

Percent in Ice, Glaciers, Snow 69.6%

Percent beneath the Ground 30.1%

Percent in Lakes and Rivers 0.3%



Source: National Geographic



Safety

I-35 Minneapolis





Urban Sprawl and Congestion





ASCE 2009 U.S. Report Card

American Society of Civil Engineers



Aviation	D
Bridges	C
Dams	D
Drinking Water	D-
Energy	D+
Hazardous Waste	D
Inland Waterways	D-
Levees	D-
Public Parks and Recreation	C-
Rail	C-
Roads	D-
Schools	D
Solid Waste	C+
Transit	D
Wastewater	D-

AMERICA'S
INFRASTRUCTURE G.P.A. **D**

ESTIMATED 5 YEAR
INVESTMENT NEED **\$2.2**
TRILLION

NOTES Each category was evaluated
on the basis of capacity,
condition, funding, future need,
operation and maintenance,
public safety and resilience

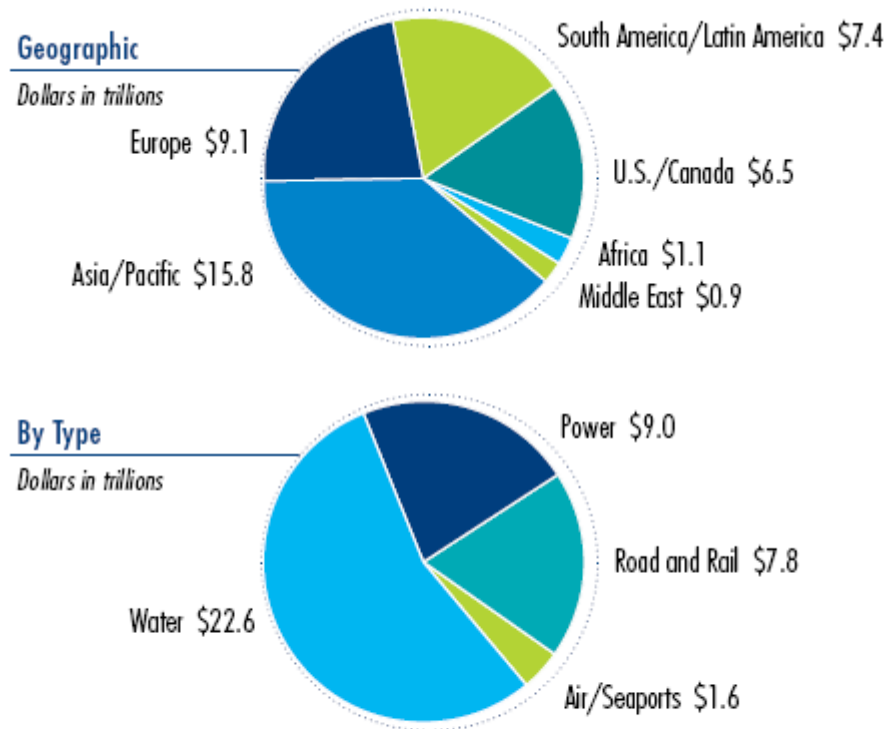
A = Exceptional
B = Good
C = Mediocre
D = Poor
F = Failing



Global Infrastructure Spending



Total Projected Cumulative 2005-2030



Source: Booz Allen Hamilton, Global Infrastructure Partners, World Energy Outlook, Organization for Economic Co-operation and Development (OECD), Boeing, Drewry Shipping Consultants, U.S. Department of Transportation



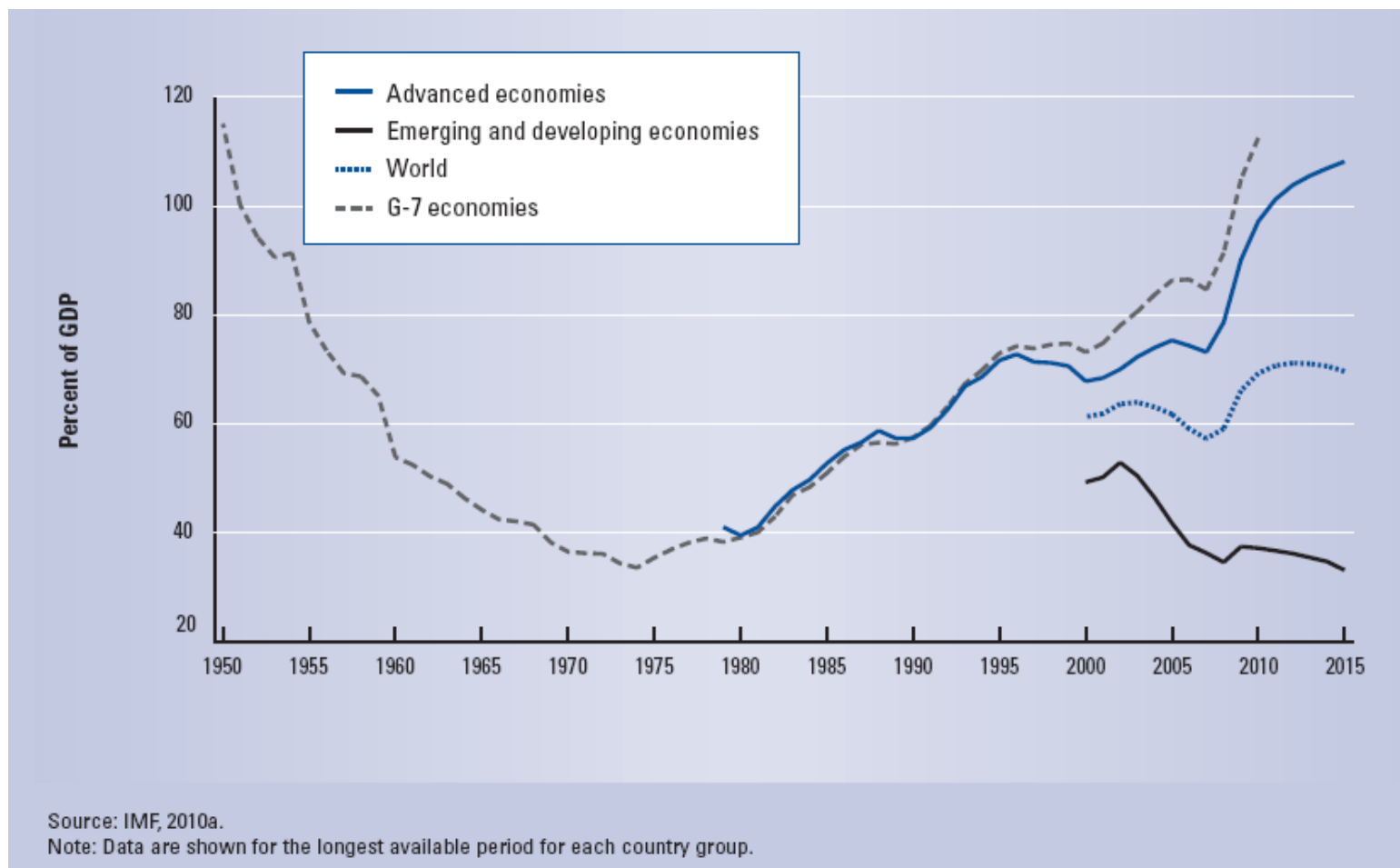
Financial Downturn



- Global Recession
- National Defaults
- Tremendous Deficit Positions at all Governmental Levels
- High Levels of Unemployment
- Reduced Consumer Spending
- Reduced Tax Revenues
- Limited Infrastructure Funding



Public Debt





Quality of Life



- Survival
- Safety
- Security
- Work
- Comfort
- Convenience
- Enjoyment



Global Competitiveness

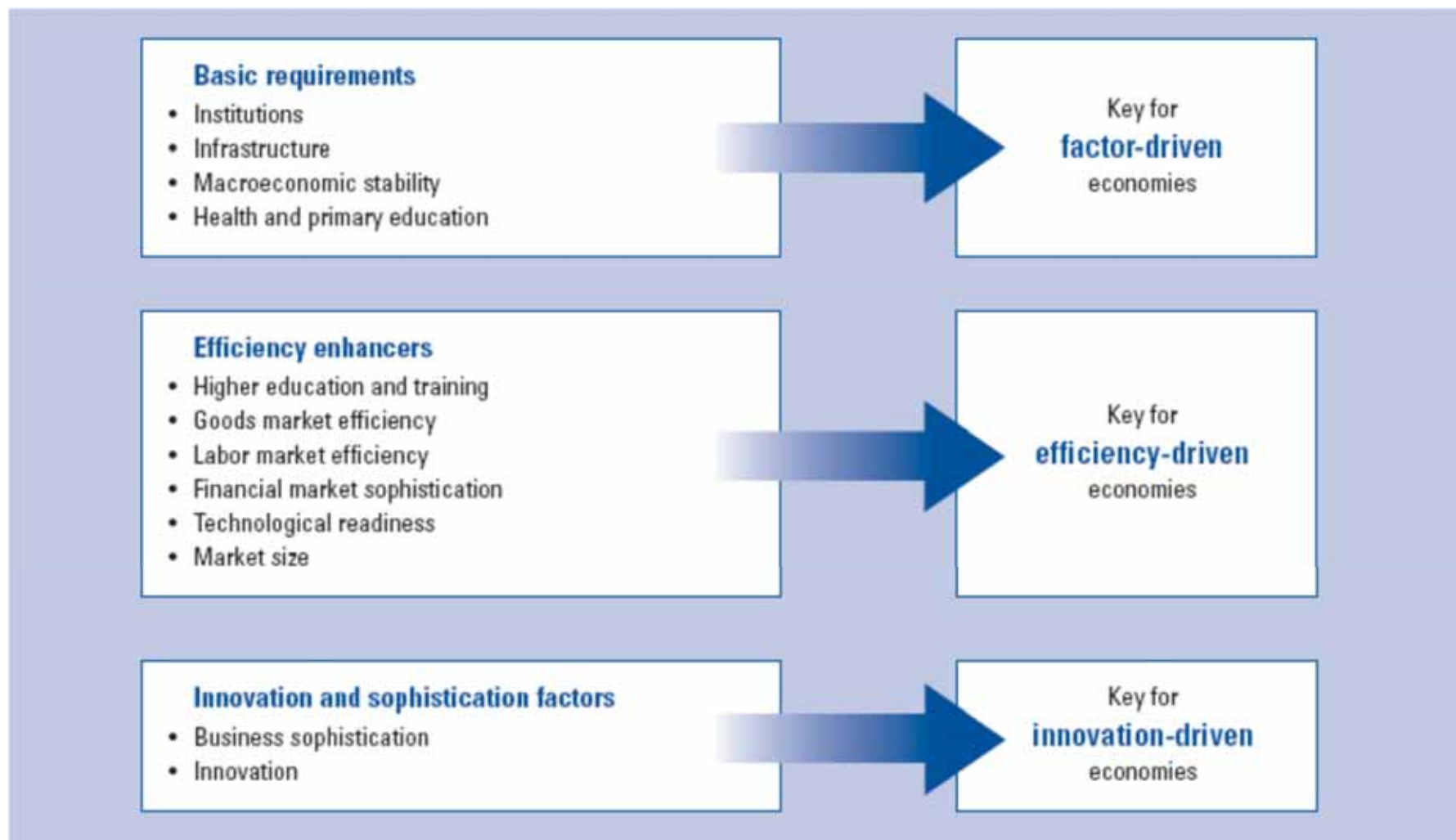


- Infrastructure has a Direct Impact on Global Competitiveness
 - Productivity
 - Market efficiency
 - Goods to market
- World Economic Forum
 - Global Competitiveness Report



12 Pillars of Competitiveness

World Economic Forum Global Competitiveness Report 2010-2011



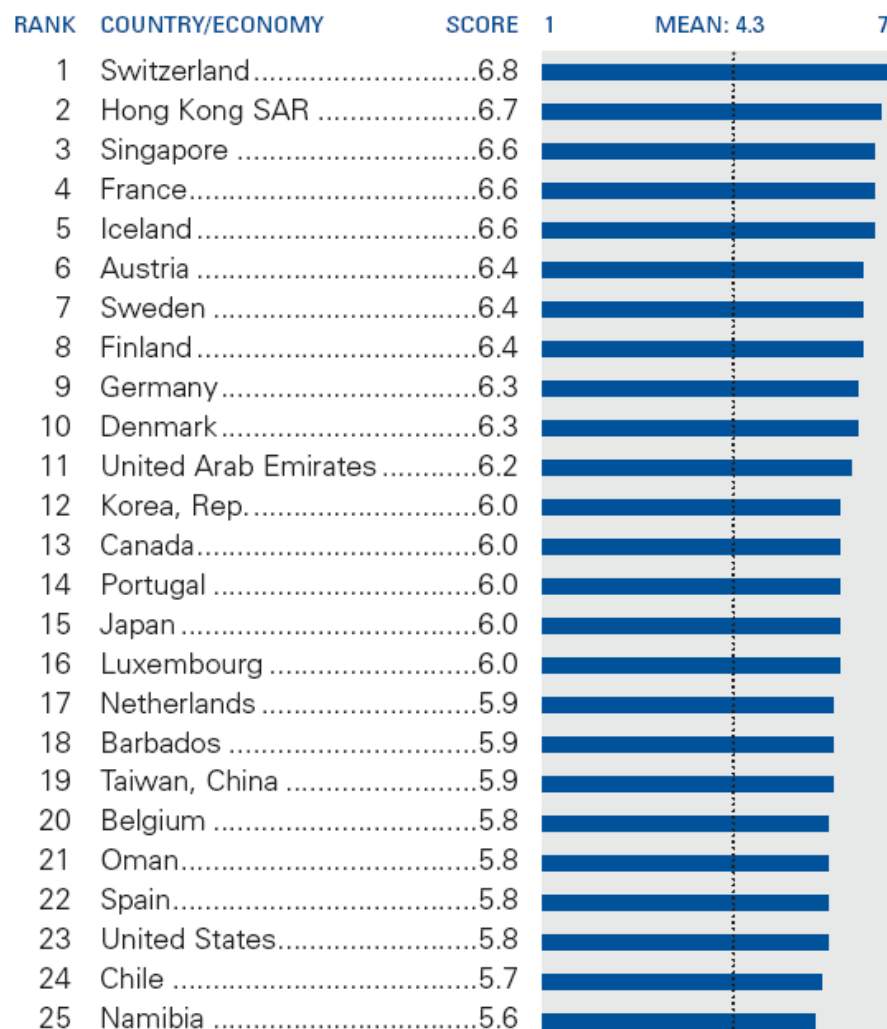


Overall Quality of Infrastructure



World Economic Forum Global Competitiveness Report
2010-2011

2009-2010





Top 20 GC Index Rankings

World Economic Forum Global Competitiveness Report 2010-2011



Country/Economy	GCI 2010–2011		GCI 2010– 2011 rank among 2009 countries	GCI 2009–2010 rank *
	Rank	Score		
Switzerland	1	5.63	1	1
Sweden	2	5.56	2	4
Singapore	3	5.48	3	3
United States	4	5.43	4	2
Germany	5	5.39	5	7
Japan	6	5.37	6	8
Finland	7	5.37	7	6
Netherlands	8	5.33	8	10
Denmark	9	5.32	9	5
Canada	10	5.30	10	9
Hong Kong SAR	11	5.30	11	11
United Kingdom	12	5.25	12	13
Taiwan, China	13	5.21	13	12
Norway	14	5.14	14	14
France	15	5.13	15	16
Australia	16	5.11	16	15
Qatar	17	5.10	17	22
Austria	18	5.09	18	17
Belgium	19	5.07	19	18
Luxembourg	20	5.05	20	21



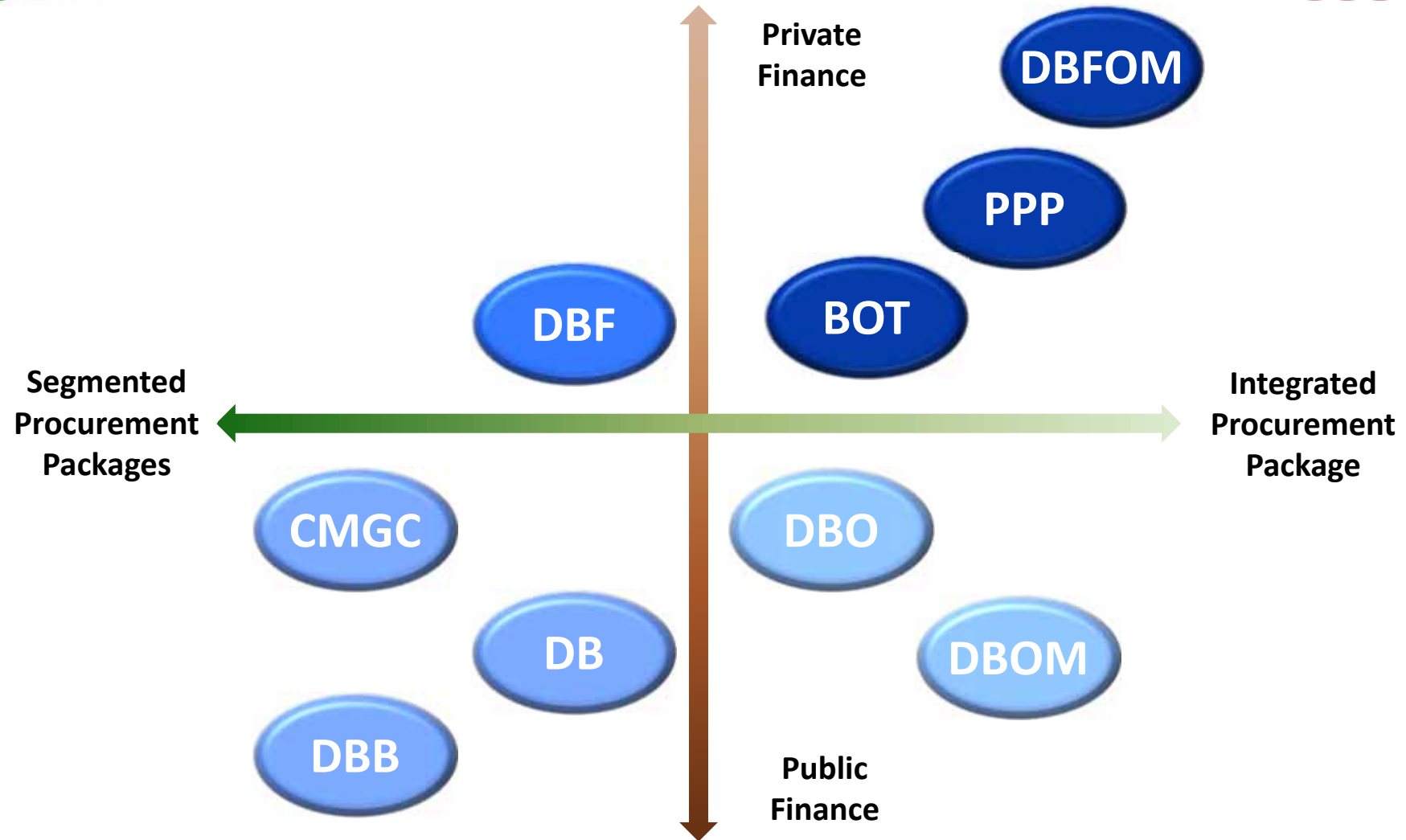
Public Private Partnerships



- Lack of Traditional Sources of Funding
 - Anti-Tax Sentiment , User Fees
- Attractive to Private Investors
 - Higher potential returns but greater risks
- Improved Project Delivery
 - Integrated Approach
- Better Risk Allocation
 - Between public and private sector
- Value for Money



Project Delivery Approaches





Presidio Parkway PPP

San Francisco, CA



Source: SFCTA/Arup/PB



Delivery Options Comparisons

Presidio Parkway Project



Project Objectives	DBB	DBF	DBFOM
Best value for money over the life of the project	●	●	●
Optimal risk transfer	●	●	●
Greatest cost and schedule certainty at and after financial close	●	●	●
Best use of public funds	●	●	●
Achieves an optimal level of operations and maintenance service	●	●	●

Ranking

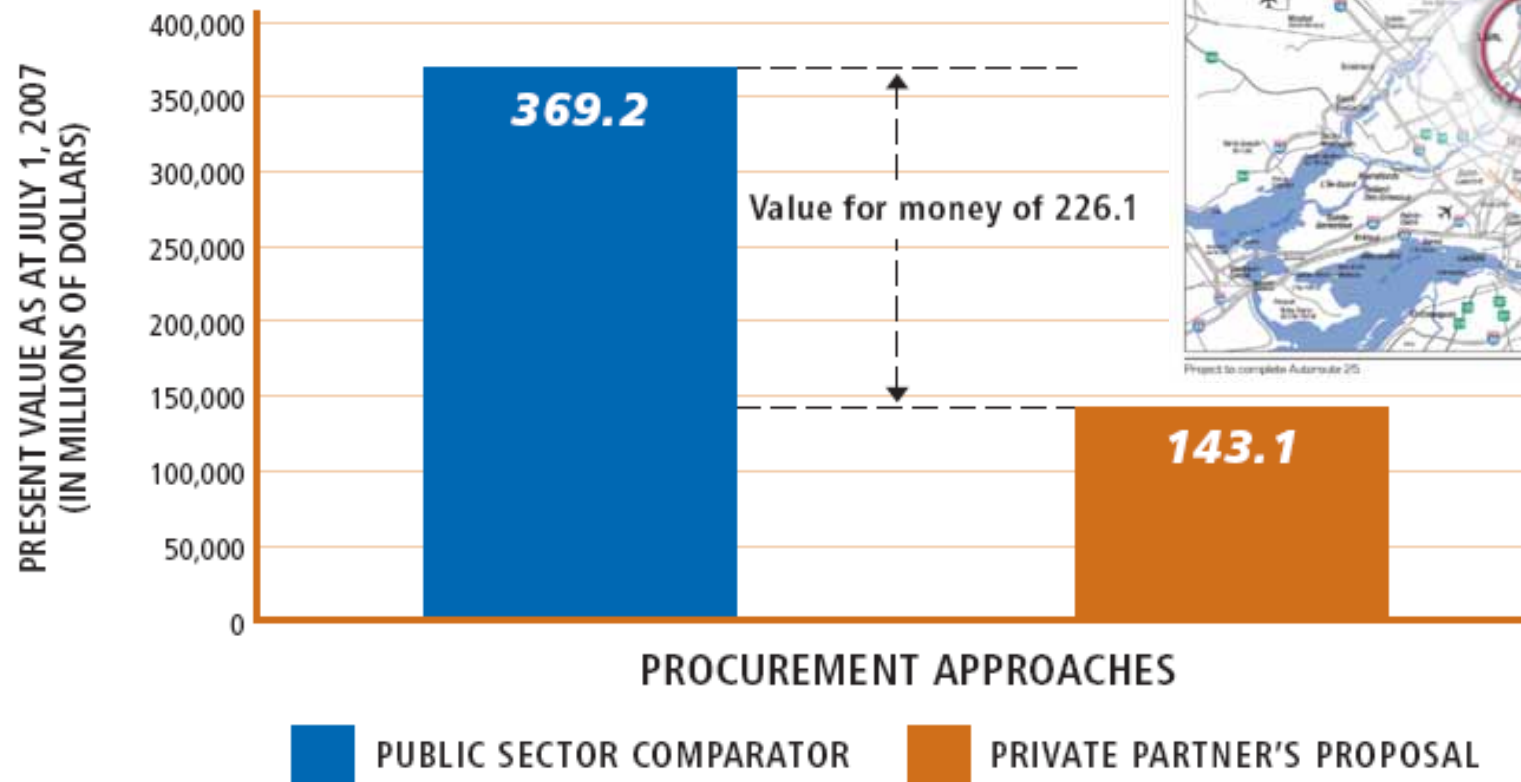
●	●	●
Lower	Medium	Higher

Source: SFCTA/Arup/PB



Autoroute 25

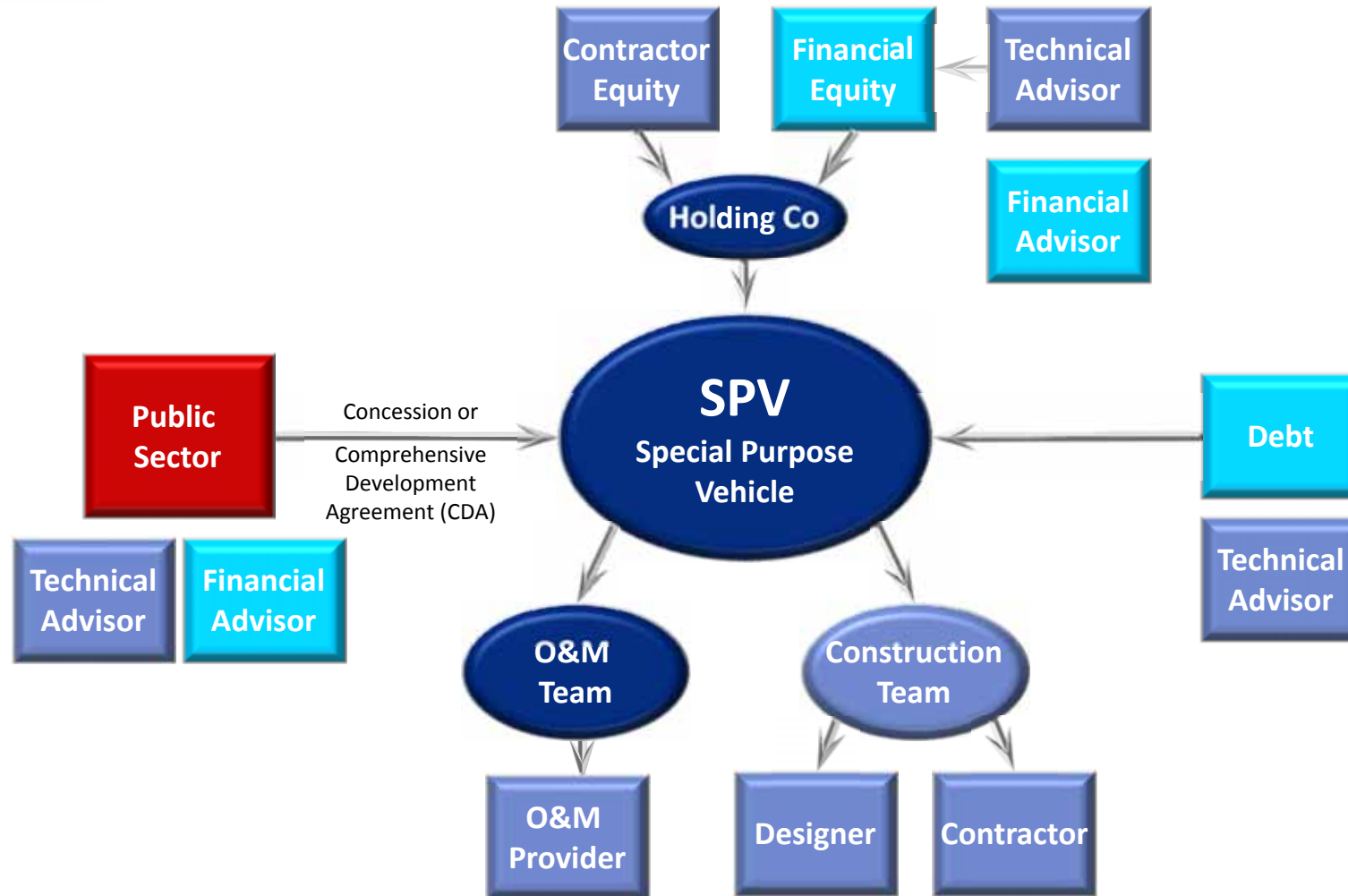
Montreal, Canada



Source: A25 Value for Money Report, Transports Quebec/Price Waterhouse Coopers, Nov. 2007



Special Purpose Vehicle





UK Public Finance Initiative

Approximately 1000 Projects for over \$100 Billion



The growth of PFI projects (excludes the London Underground PPPs)



Source: HMT signed PFI projects database (http://www.hm-treasury.gov.uk/ppp_pfi_stats.htm)



Business Opportunities



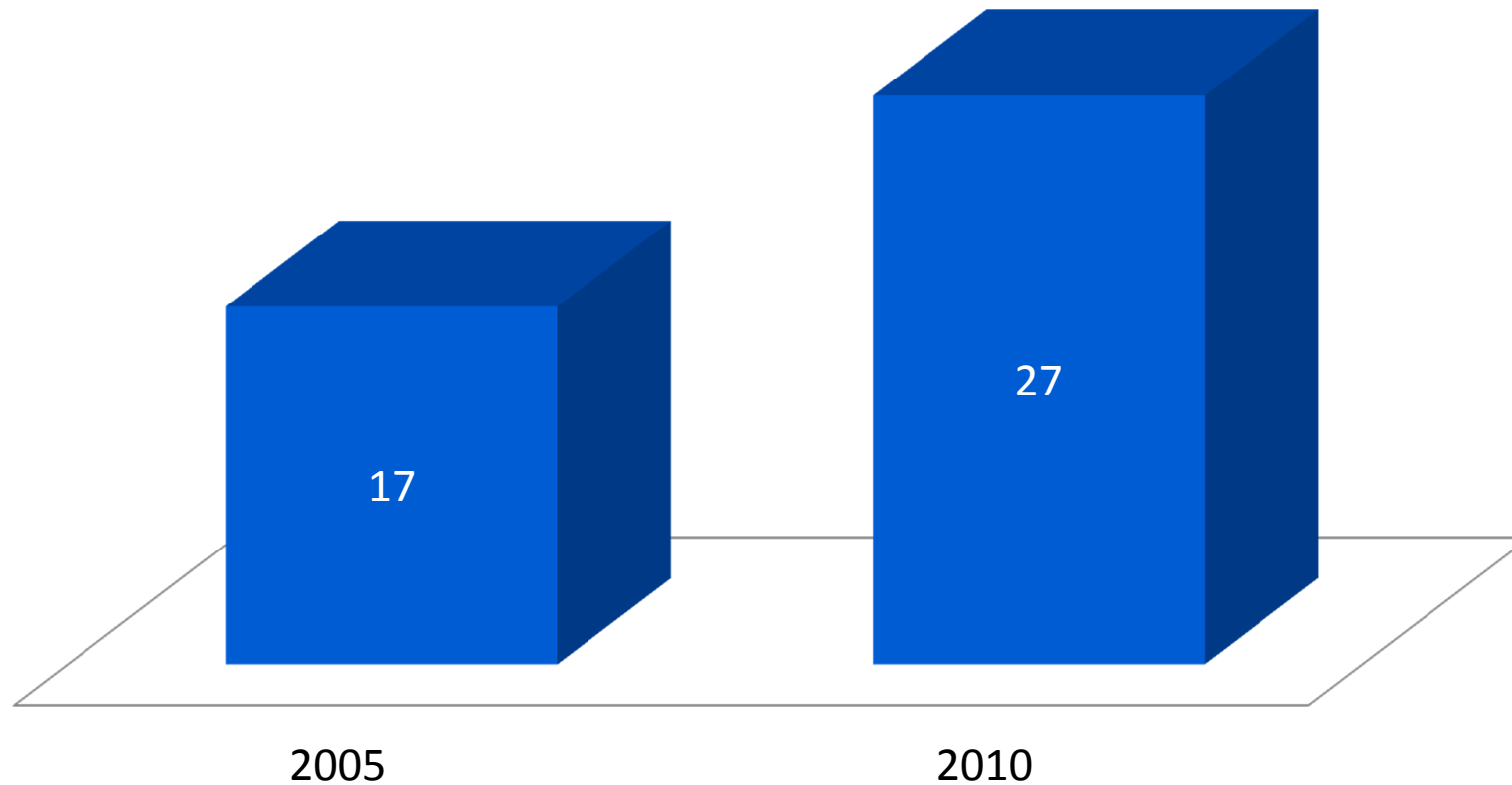
- The Full-Service Mega-Developer
 - Finance/Design/Build/Operate/Maintain
- A Case Study - Parsons Brinckerhoff



Global Contractors

Engineering News Record

No. of Companies with Revenues Greater than \$10 Billion





Global Contractor Rankings

Engineering News Record



Rank	Company	2005 Rev (\$B)	Company	2010 Rev (\$B)
1	Vinci	24.3	China RR Constr	54.0
2	Bouygues	20.1	China RR Group	52.9
3	Hochtief	15.0	Vinci	45.2
4	Grupo ACS	14.9	Bouygues	34.3
5	Bechtel	14.4	China Comm Grp	33.5
6	Skanska	14.1	China State Corp	33.2
7	Taisei	13.8	Hochtief	26.1
8	Kajima	13.2	China Metal	25.5
9	Shimizu	12.6	Bechtel	22.6
10	Obayashi	12.6	Grupo ACS	22.5



International Contractor Rankings

Engineering News Record



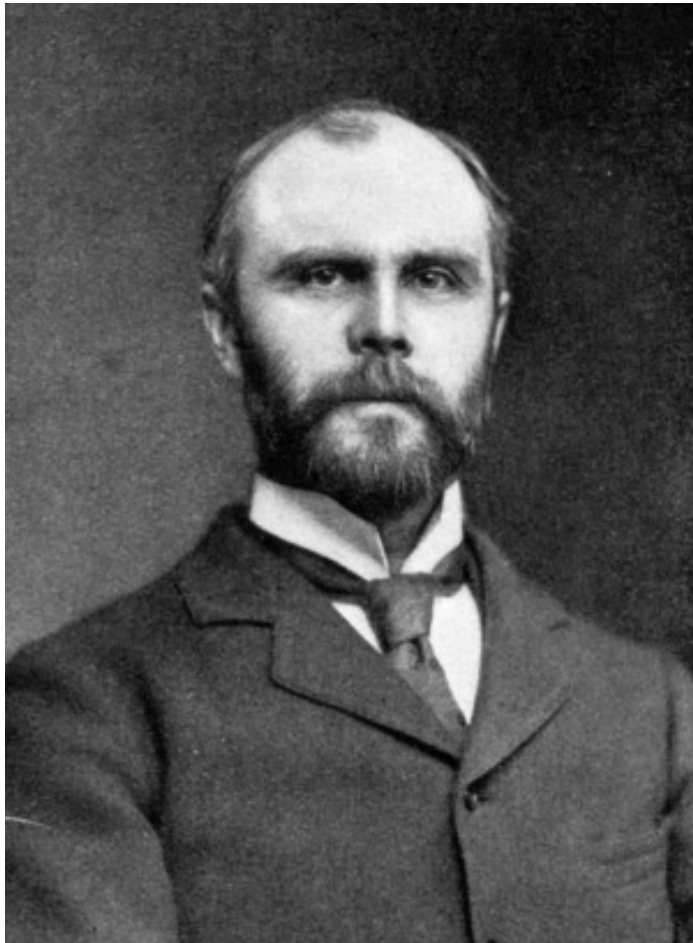
Rank	Company	2005 Rev (\$B)	Company	2010 Rev (\$B)
1	Hochtief	12.6	Hochtief	23.8
2	Skanska	11.4	Vinci	17.2
3	KBR	19.8	Strabag	15.9
4	Vinci	9.2	Bechtel	14.8
5	Bechtel	8.1	Bouygues	13.5
6	Bouygues	7.4	Skanska	12.9
7	Technip	6.4	Saipem	10.9
8	Fimag Finanz	6.0	Bilfinger Berger	9.9
9	Royal Bam	5.0	Fluor	9.6
10	Bilfinger Berger	4.9	Technip	8.9





William Barclay Parsons

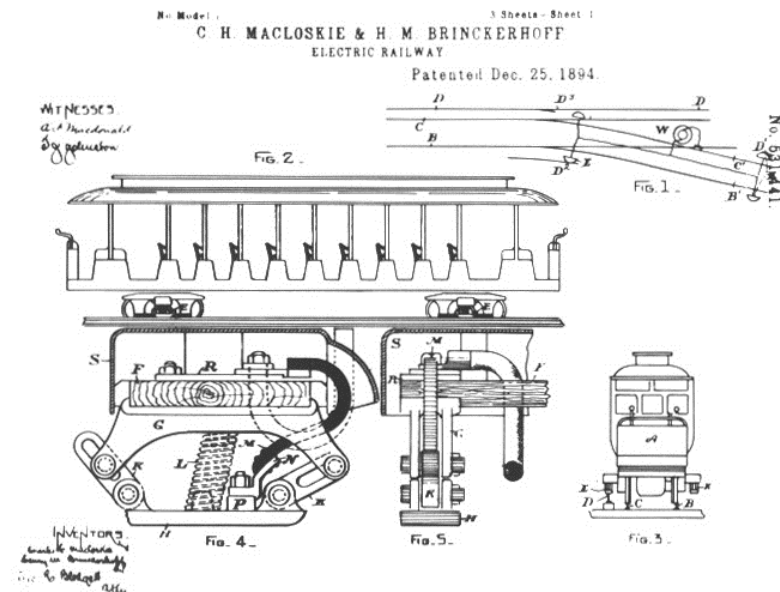
Founded Firm in 1885



“Of all human activities, engineering is the one that enters most into our lives.”

Henry Brinckerhoff

- Traction Power Engineer
- Co-Inventor of Third Rail



Drawing from patent for the Electric Railway, Dec. 25, 1894



Opportunity

New York City – Circa 1900



Source: New York Transit Museum



Technology and Innovation

Parsons was Chief Engineer of First NY Subway (IRT)



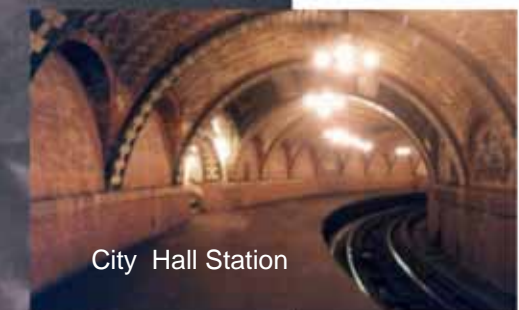
Ground Breaking



Electric Third Rail



Cut-and-Cover Construction



City Hall Station

Source: New York Transit Museum/Scientific American/Peter Dougherty



Global Transit Expansion





CA High Speed Rail



Source: California HSR Authority



Boston Central Artery/Tunnel

\$14.6 Billion Rebuild of Boston's Highway System



Zakim Bridge



I-93 Central Artery



Ted Williams Tunnel

Source: Mass DOT/Bechtel/PB



Boston Central Artery/Tunnel

Before and After



Source: Mass DOT/Bechtel/PB



Dulles Toll Road PPP

Virginia





San Diego Expressway PPP

California





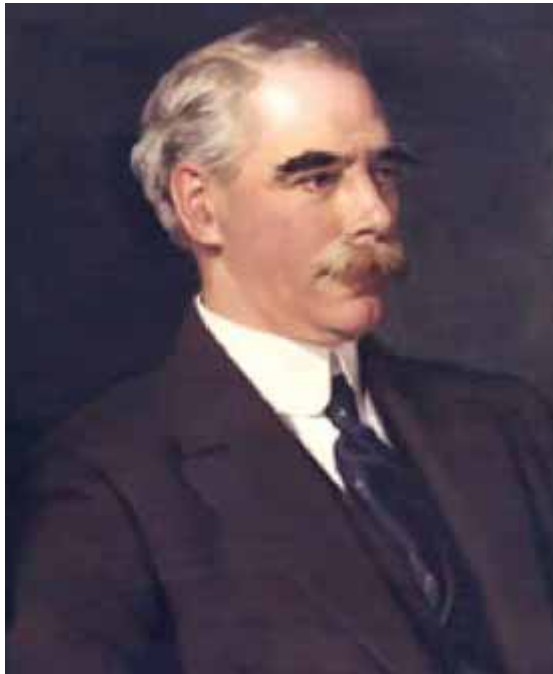
Professional Services Firm

13,000 Employees, \$2 Billion Revenue (2009)





Balfour Beatty



George Balfour



Andrew Beatty

Founded in 1909 as “engineers, contractors, operating managers for tramways, railway properties and for promoting of new enterprises.”



Balfour Beatty/PB Merger

New Civil Engineer (September 17, 2009)

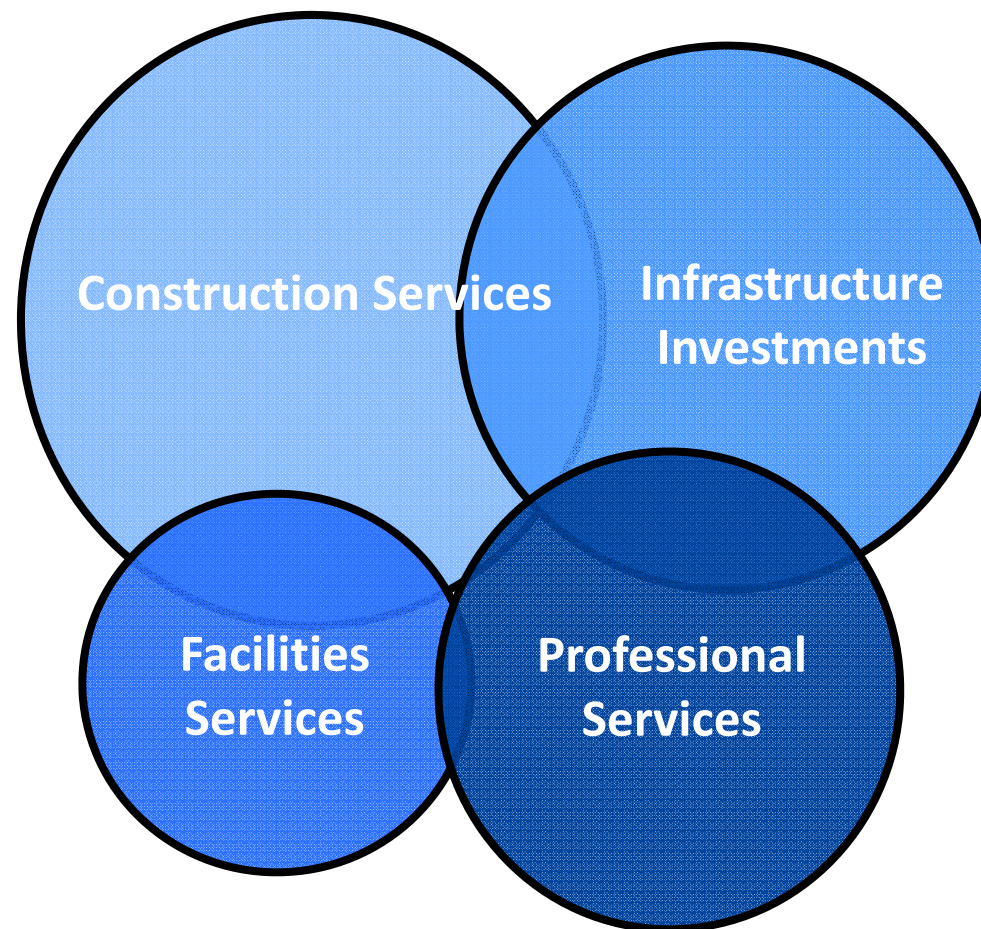


“Adding Parsons Brinckerhoff’s successful and well-established international professional services business to Balfour Beatty’s very significant construction, existing professional services and investment businesses will create a group with significantly enhanced capabilities to address the needs of key infrastructure customers internationally.”



Full Service Capabilities

Finance/Design/Build/Operate/Maintain





Balfour Beatty



Professional Services

- Parsons Brinckerhoff
- Heery International

25%

Construction Services

- BB Construction
- BB Rail
- BB Infrastructure

30%

Support Services

- BB Workplace
- BB Communities

15%

Infrastructure Investments

- BB Capital, UK
- BB Capital Group
- BB Capital, Canada

30%

2010 Total Revenue*: US\$16.9 Billion **Employees: 50,000+**

A conversion rate of £1 = 1.6 US\$ has been used throughout to derive US dollar values

*Includes share of JVs and associates



Balfour Beatty

Selected Investment Projects



Exeter Airport, UK



US Hunter Army Airfield Housing



Barking Power Station, UK



Business Strategies

- Grow or Die
- Global but Local
- Green and Sustainable
- Strategic Teaming
- Finance Capabilities
- Full Service
- Manage Risk
- Do the Right Thing!



President Obama



“Innovation, Education
and Infrastructure.”



Yes We Can!

Japan Wins World Cup Womens's Soccer Championship





Thank You!