

# Subsurface Strategic Connectivity

Global High-ROI Tunnel Analysis:  
Top 10 Ranked Projects for  
The Boring Company's 'Tunnel  
Vision' Competition



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**Submitted by Ray Uzwyshyn Ph.D. MBA MLIS**  
Contact: ruzwyshyn@gmail.com | 512-521-6893  
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# Executive Summary: The Search for the Ultimate 1-Mile Loop

## The Core Thesis:

An exhaustive global analysis identifies 10 strategic bottlenecks where the Prufrock TBM can deliver disproportionate ROI. These projects solve problems where surface alternatives (bridges, ferries) are physically impossible or cost-prohibitive.

## Strategic Insights:

- **The Ferry Killer:** 50% of top recommendations replace inefficient short-distance ferries.
- **The Accelerator:** Projects with single-entity land ownership (Airports, Universities) bypass Right-of-Way delays.
- **Constraint Filter:** All projects strictly adhere to 1-mile length and 12ft diameter specifications.

## Leaderboard: Top 10 ROI Opportunities

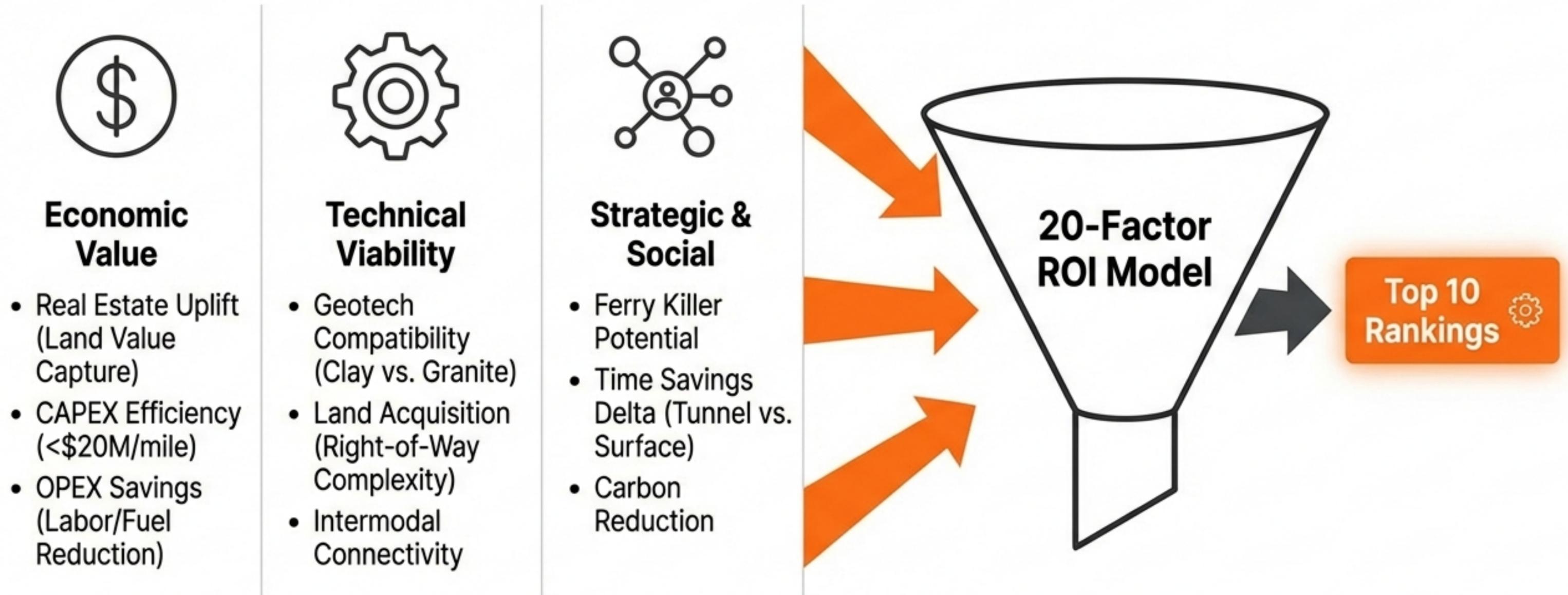
01. **Manila NAIA Inter-Terminal Loop** | ROI: 98 | The Unicom Opportunity 
02. **Governors Island Access (NYC)** | ROI: 94 | Real Estate Value Unlock 
03. **Rotherhithe Crossing (London)** | ROI: 91 | The Commuter Fix 
04. **Fisher Island Secure Link (Miami)** | ROI: 89 
05. **Amsterdam IJ River Crossing** | ROI: 85 

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06. Vancouver Granville Link | ROI: 82 
07. SF Treasure Island Connector | ROI: 79 
08. Boston Harbor Crossing | ROI: 75 
09. Stockholm Central Link | ROI: 71 
10. Istanbul Bosphorus Shortcut | ROI: 68 

# Ranking Rigor: The 20-Factor ROI Framework

Objective scoring across three strategic pillars to identify maximum value capture.

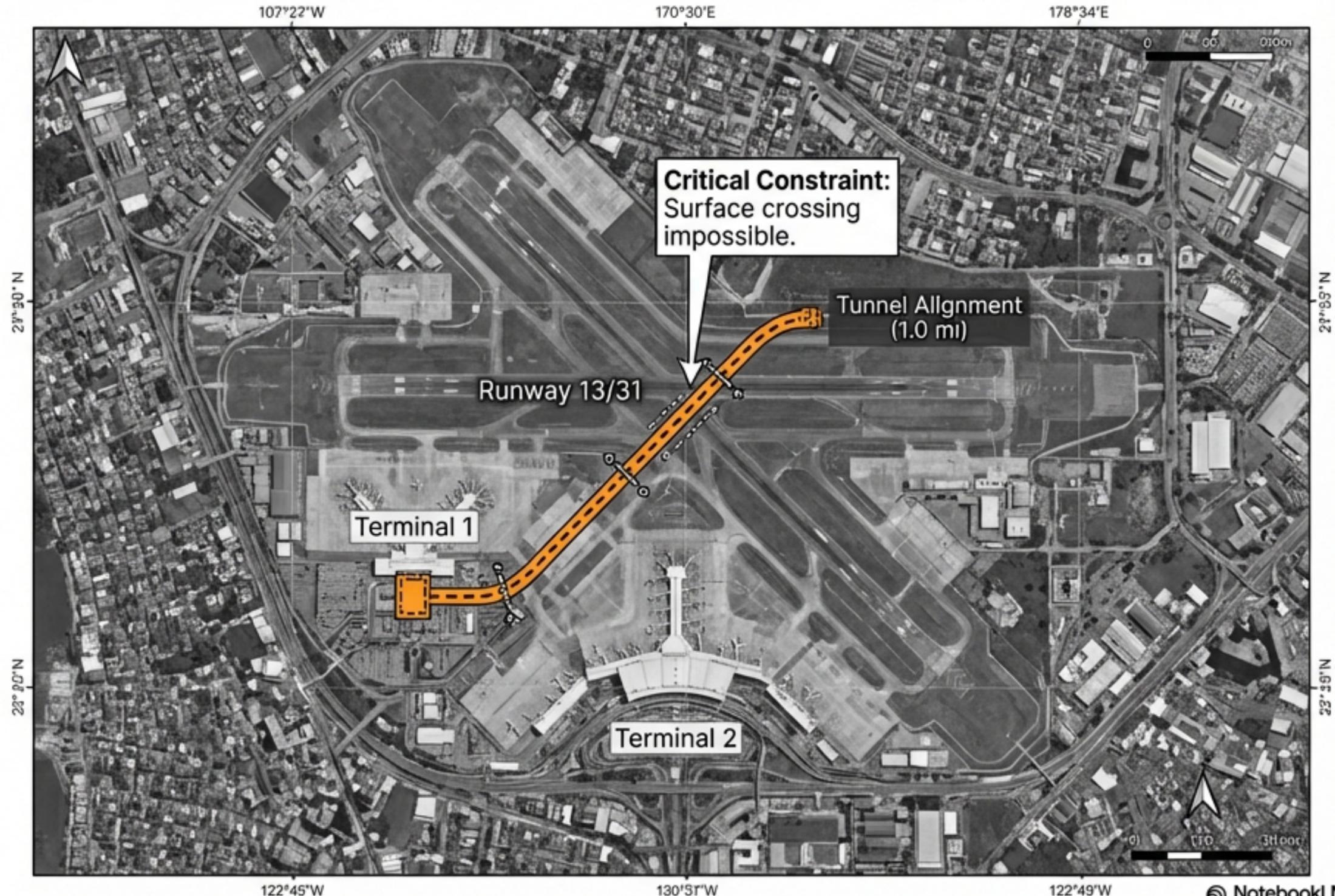


**Constraint Filter:** 1.0 Mile Length | 12ft Diameter | Continuous Mining Viability

# Rank 1: Manila NAIA Inter-Terminal Loop (Philippines)

ROI 98/100

- **The Problem:** Manila International Airport (50M pax/year). Terminals 1 and 2 separated by active runways. Surface transfers take 30–60 minutes via congested city streets.
- **The Solution:** 1-mile secure airside loop connecting T1 and T2 basements.
- **Why It Wins:**
  - **Throughput:** 3,000+ pax/hour.
  - **Speed:** Transfer reduced to 3 minutes.
  - **Land Ownership:** 100% Airport Authority (MIAA). No Eminent Domain.
  - **Geotech:** Soft volcanic tuff/clay (Ideal for Prufrock).



# Rank 2: Governors Island Access (New York, USA)

ROI 94/100

**The Value Unlock:** Transforming a park into a neighborhood.

**The Problem:** 172-acre island only 800 yards from Manhattan. Accessible only by ferry. “Ferry Curfew” stifles development.

**The Solution:** 0.6-mile tunnel from Battery Maritime Building to Soissons Landing.

**Key Drivers:**

- **Real Estate Uplift:** Potential >\$500M value increase by enabling 24/7 access.
- **Resilience:** Emergency vehicle access and utility corridor.
- **Weather Proof:** 100% reliability vs. fog/ice delays.

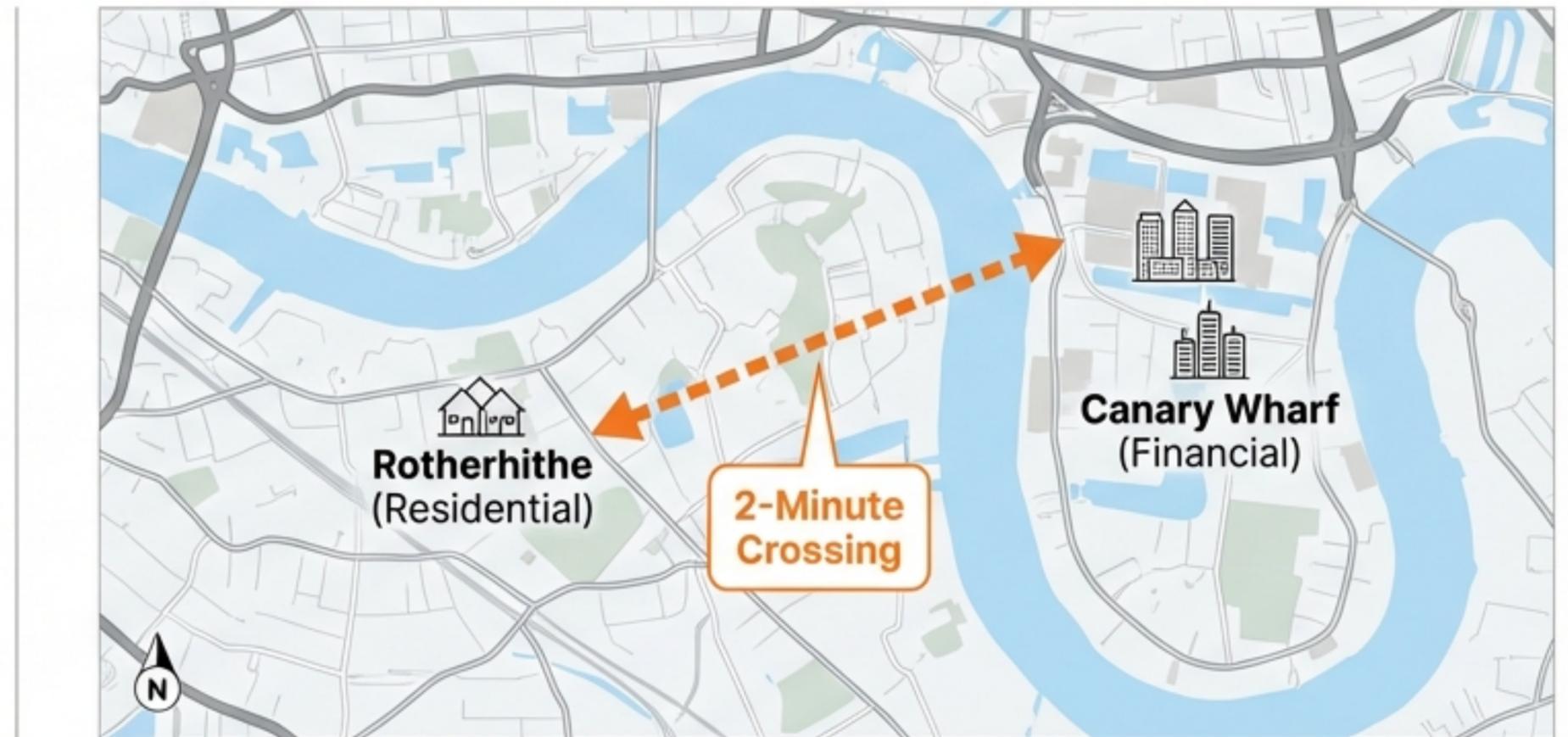
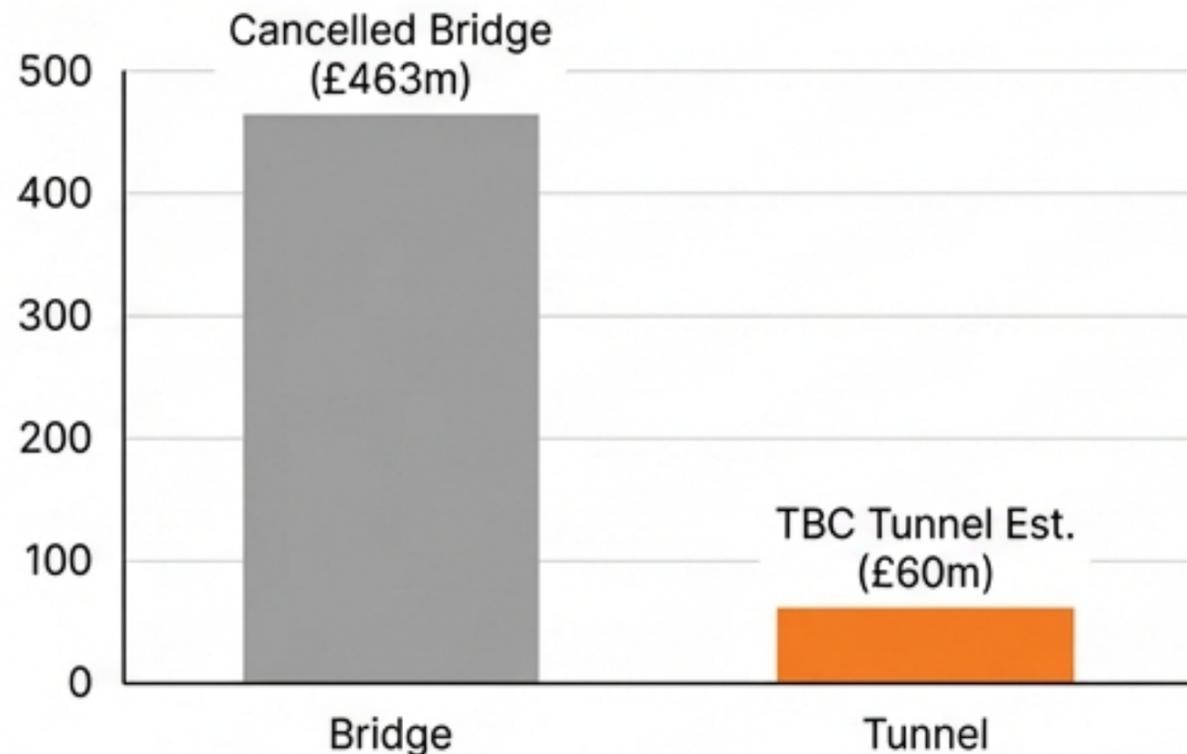


# Rank 3: Rotherhithe to Canary Wharf (London, UK)

ROI 91/100

- **The Commuter Fix:** Replacing a failed bridge project.
- **Context:** A cancelled £463m bridge leaves a gap between residential Southwark and financial Canary Wharf. 30-minute detour required.
- **Solution:** Cost-effective 1-mile micro-transit/cycle tunnel.
- **Drivers:**
  - **CAPEX Delta:** TBC Tunnel (£60m) vs. Cancelled Bridge (£463m).
  - **Geotech:** London Clay (Historically perfect for tunneling).

### CAPEX Comparison (£M)



# The Sovereign Links: Securing High-Value Assets

Single-entity owners with capital and urgent security/efficiency needs

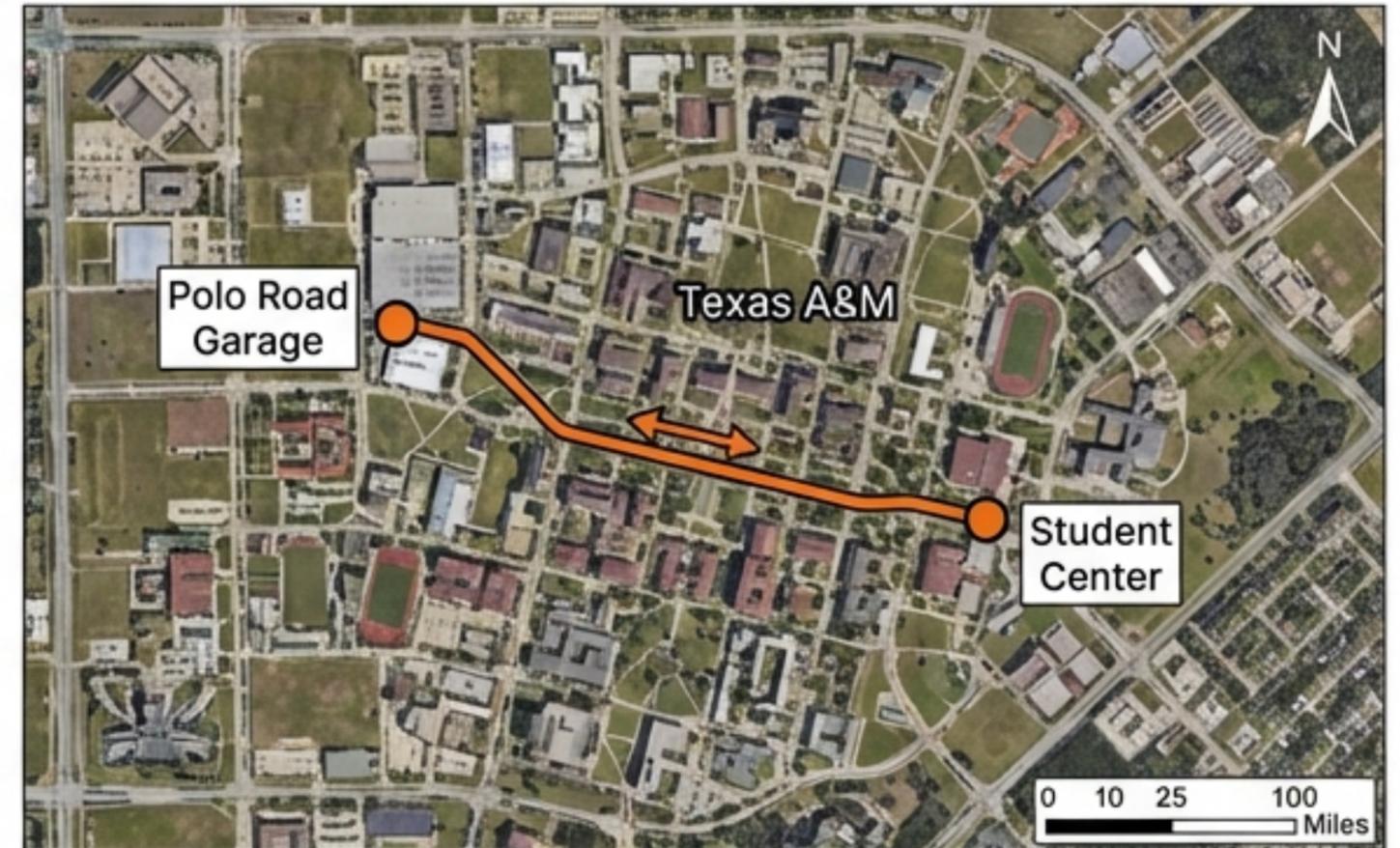
## ROI 89 Rank 4: Fisher Island, Miami (ROI 89)

- **Driver: Existential Risk.** Mainland ferry terminal land sold to developers. HOA needs permanent, private access.
- **Funding:** 100% Self-Funded (Wealthiest Zip Code in US).



## ROI 72 Rank 10: Texas A&M 'Aggie Loop' (ROI 72)

- **Driver: Campus Efficiency.** 71,000 students. Surface congestion paralyzed.
- **Land: 100% University Owned.** Lowest friction to build ("Handshake to Hole-through").



# The 'Ferry Killers': Urban Repair & Cohesion

Subsurface bridges where surface structures are blocked by shipping or aesthetics.

## Rank 5: Amsterdam IJ Crossing (ROI 85)

- **Context:** 70k daily cyclists. Bridge blocked by shipping lobby.
- **Solution:** Tunnel satisfies maritime traffic (surface) and cyclists (subsurface).



## Rank 9: Granville Island, Vancouver (ROI 74)

- **Context:** Tourist peninsula clogged by cars.
- **Solution:** Pedestrian/Transit tunnel enables a "Car-Free" district.

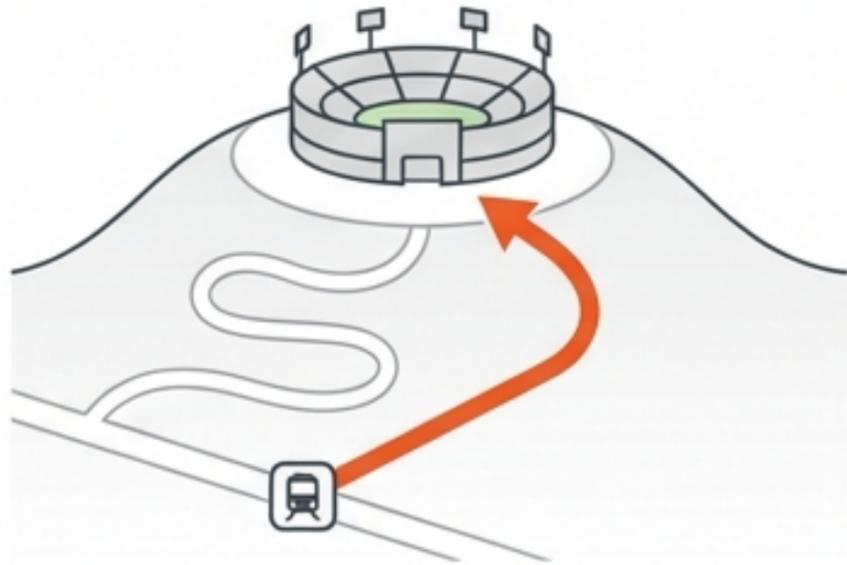


# Solving the 'Last Mile' & Urban Scars

Connecting transit nodes to final destinations and burying aging infrastructure.

**ROI 82**

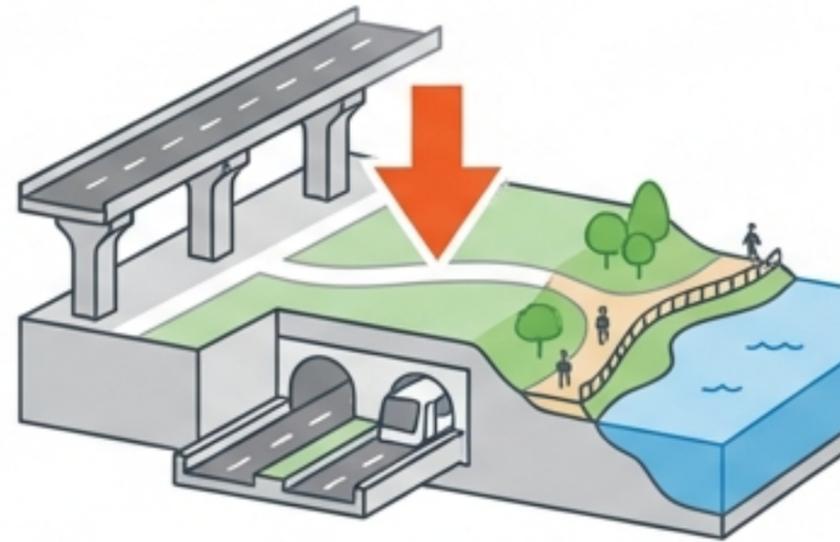
**Rank 6: Dodger Stadium (LA)**



Bypassing hilltop gridlock. 25-min uphill walk becomes 3-min ride. High visibility for Olympics 2028.

**ROI 79**

**Rank 7: Hammersmith Flyunder (London)**



Burying an aging viaduct to reclaim land and knit the city back to the river. Reclaimed land value funds construction.

**ROI 76**

**Rank 8: Navy Pier (Chicago)**



Connecting Red Line to the pier. Extends tourism into winter months by providing weather protection.

# Comparative Matrix: The Top 10 at a Glance

Rank	Project Name	Length (mi)	Primary Driver	Land Ownership Complexity	Geotech Risk	ROI Score
1	Manila NAIA	1.0	Throughput/Hub	Low (Airport Auth)	Low	98
2	Governors Island	0.6	Real Estate Uplift	Low (Non-Profit)	Med	94
3	Rotherhithe	0.4	Commuter Efficiency	Med	Low	91
4	Fisher Island	0.6	Security	High (Private)	Med	89
5	Amsterdam IJ	0.8	Ferry Relief	Low	High	85
6	Dodger Stadium	1.2	Event Traffic	Med	Low	82
7	Hammersmith	1.2	Urban Repair	Med	Low	79
8	Navy Pier	1.5	Seasonality	Med	Low	76
9	Granville Island	0.5	Car-Free Zone	Med	Med	74
10	Texas A&M	1.0	Campus Efficiency	Low (University)	Low	72

Highlighted rows indicate 'Fastest to Deploy' based on Land Ownership.

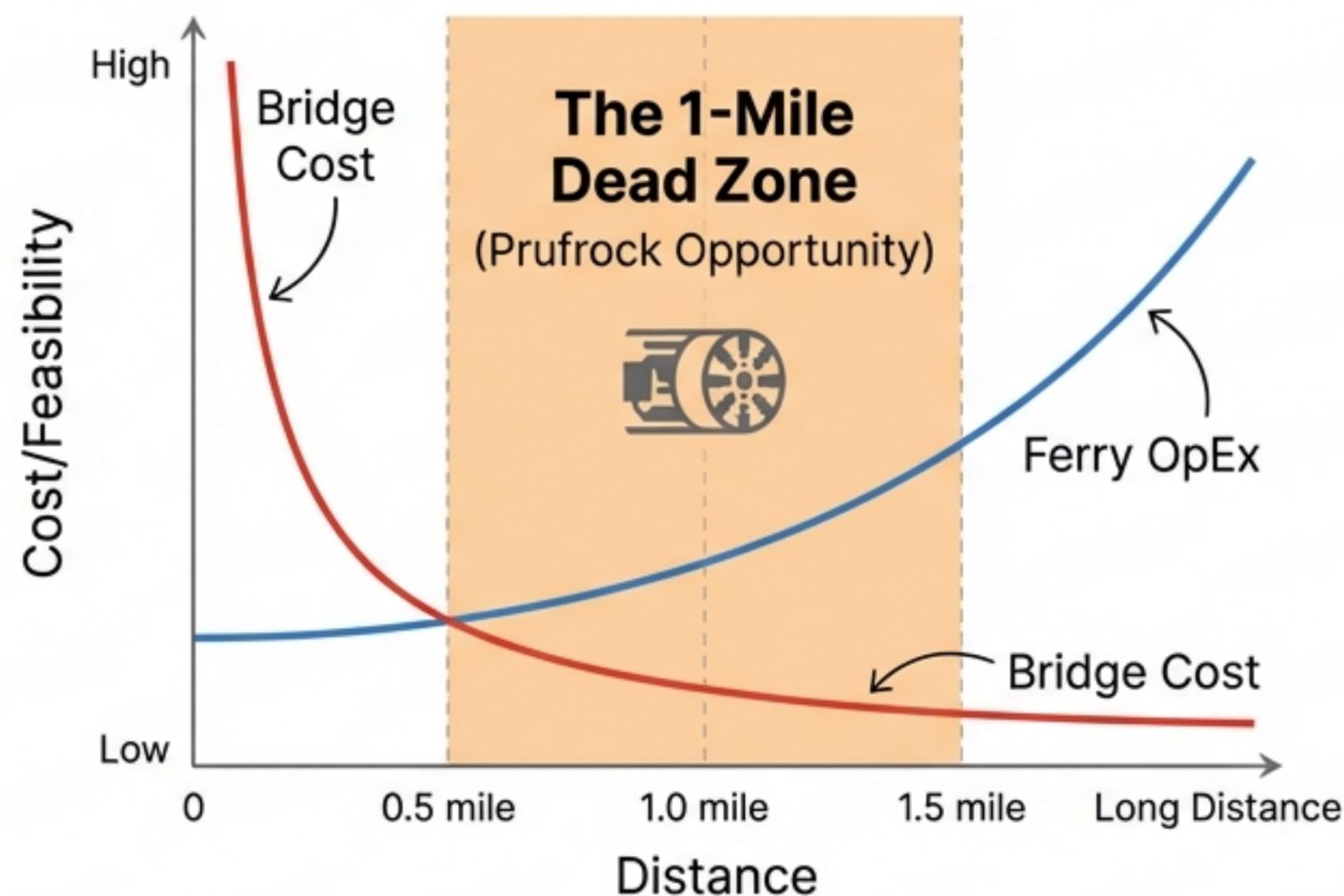
# Market Thesis: The 'Ferry Killer' Opportunity

50% of top recommendations (Ranks 2, 3, 4, 5, 9) replace short-distance ferries.

## NARRATIVE

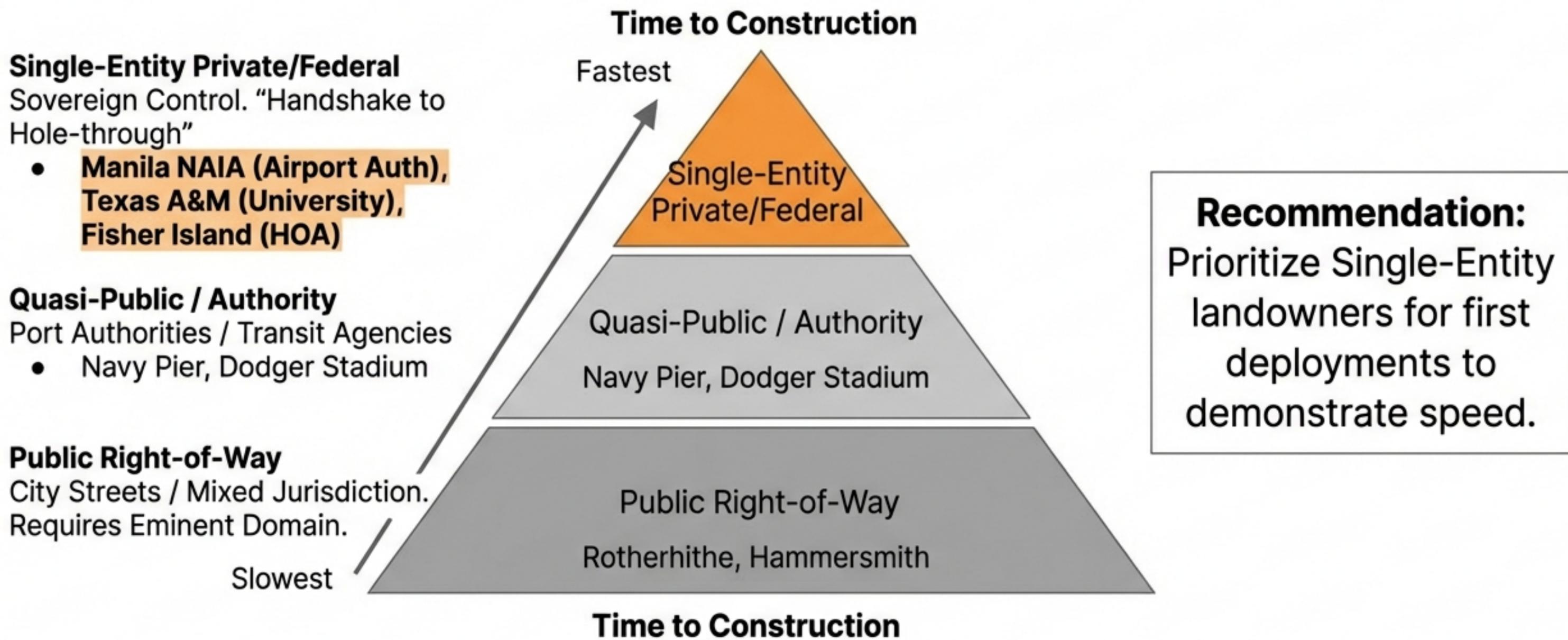
- **The Dead Zone:** 1-mile gaps are too short for high-clearance bridges (due to cost of ramps) but too long for causeways.
- **The Ferry Flaw:** High OPEX (Labor/Fuel), weather dependent, capacity constrained.
- **The TBC Advantage:** High CAPEX / Low OPEX model is superior for fixed links. Prufrock acts as an "Invisible Bridge" that does not obstruct shipping.

## THE INFRASTRUCTURE GAP



# The Path to Speed: Land Ownership as Accelerator

The biggest delay in infrastructure is not digging; it is permitting.



# Summary of Recommendations

## IMMEDIATE ACTION

### The Proof of Concept

Engage **Manila NAIA (Rank 1)**. Highest throughput, motivated private operator, zero land acquisition friction. Proves the high-capacity model.

## STRATEGIC ACTION

### The Value Capture

Pursue **Governors Island (Rank 2)**. Demonstrates the 'Real Estate Uplift' model. Creates hundreds of millions in land value out of thin air.

## NICHE ACTION

### The Speed Run

Target **Fisher Island (Rank 4)**. Fully private, self-funded. Zero red tape. The fastest path to a completed tunnel.

*"The 1-mile tunnel is not just a transit loop; it is a mechanism for urban repair, security, and real estate valuation."*