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The Riskiest Type of  
Megaproject to Exist:

*The Olympics*

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*Presenter*



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Case Study:  
*The Olympics*

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Is it worth it?  
Is it a bad deal?  
Is it too expensive?



cost of olympics



most expensive olympics



10 reasons why the olympics are bad



disadvantages of hosting the olympics

<https://fbe.unimelb.edu.au> › Newsroom

### Hosting the Olympic Games: Is it worth it?

The Olympic games have long since been a means to display an array of talents, vast cultural exchanges and application of peaceful global interactions.

<https://www.nytimes.com> › business › olympics-economics

### Hosting the Olympics Is a Bad Deal - The New York Times

24 July 2021 — Every **Olympics** since 1960 has run over budget, at an average of 172 percent in inflation-adjusted terms, according to an analysis by researchers ...

<https://www.canberratimes.com.au> › News › Latest News

### The Olympics are a hypocritical waste of time and money

Between 2012 and 2016, Australia spent \$340 million funding **Olympic** athletes. At the Rio **Olympics** in 2016, Australia won 29 medals - eight gold, 11 silver, 10 ...

<https://www.sbs.ox.ac.uk> › oxford-answers › time-scrap...

### Time to scrap the Olympics? - Saïd Business School

7 Sept 2020 — The **Olympics** are a **megaproject** like no other. For hosts, there is no option to reverse their decision, no chance to control costs by trading ...

<https://www.vox.com> › olympics-tokyo-2020-summer

### Hosting the Olympics comes at a massive cost - Vox

1 Aug 2021 — Local organizers have disputed that total — though they admitted in December 2019 that **costs** had risen to \$12.6 billion. But competing estimates ...



# *Tokyo Games*



# The Undeniable Question Is: *Why are Megaprojects so Risky?*

*9 out of 10 megaprojects fail to meet cost, schedule and benefit objectives.*



## 2016 Oxford Study:

The Olympics have the **highest average cost overrun** of any type of megaproject.

There are no Games that are exempt from cost overrun in the period that was studied (1960-2016).

There are no other types of megaprojects where this is the case.



## Call to Action:

*“...for a city and nation to decide to stage the Olympic Games is to decide to take on one of the most costly and financially most risky type of megaproject that exists, something that many cities and nations have learned to their peril”*





## 2020 Oxford Study:

The average Games cost overrun is **172%**

**53%** of Games have a cost overrun above 100%

**79%** of Games have a cost overrun above 50%



# Summer vs Winter Games

(measured by overrun, based on sports related costs)

	Montreal 1976	Barcelona 1992	Atlanta 1996	Sydney 2000	Athens 2004	Beijing 2008	London 2012	Rio 2016	Grenoble 1968	Lake Placid 1980	Sarajevo 1984	Calgary 1988	Albertville 1992	Lillehammer 1994	Nagano 1998	Salt Lake City 2002	Torino 2006	Vancouver 2010	Sochi 2014
Country	Canada	Spain	US	Australia	Greece	China	UK	Brazil	France	US	Yugoslavia	Canada	France	Norway	Japan	US	Italy	Canada	Russia
Cost Overrun %	720	266	151	90	49	2	76	352	181	324	118	65	137	277	56	24	80	13	189
Games	Summer (213% Average, 120% Median)								Winter (142% Average, 118% Median)										



## IOC Categorise for the Cost of Hosting:





## ***Cost Overrun:***

### ***Estimated Bid Cost vs Final Outturn Cost***

19 out of 30 Games from the period (1960-2016) had this data

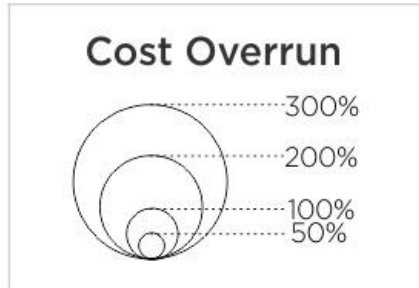
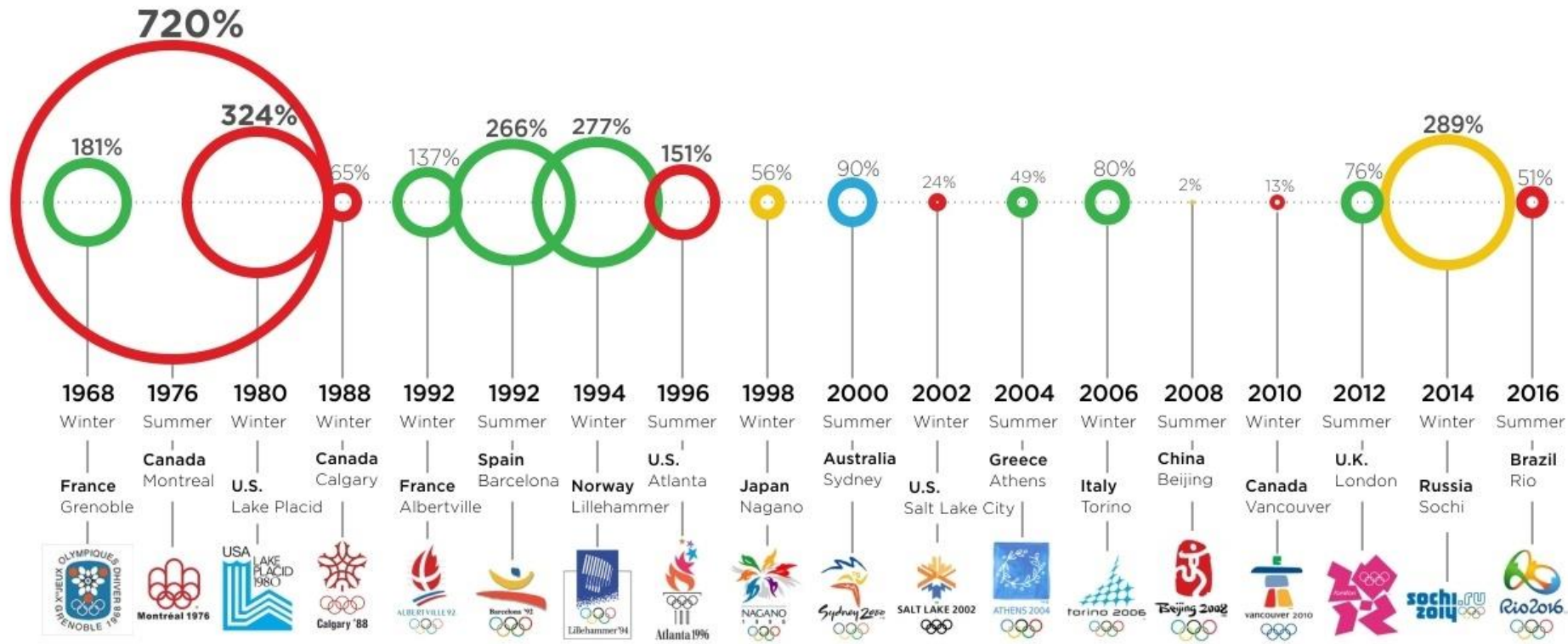




# Megaprojects Comparison *(measured by overrun)*

	Roads	Bridges, tunnels	Energy	Rail	Dams	IT	Olympics
Cost Overrun	20%	34%	36%	45%	90%	107%	172%
Frequency of cost overrun	9 of 10	9 of 10	6 of 10	9 of 10	7 of 10	5 of 10	10 of 10
Schedule Overrun	38%	23%	38%	45%	44%	37%	0%
Schedule length, years	5.5	8.0	5.3	7.8	8.2	3.3	7.0

# Costs Overruns of the Olympic Games 1968-2016

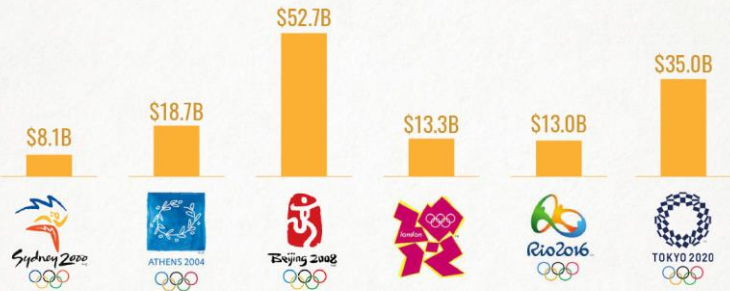


■ Australia   
 ■ Africa   
 ■ Americas   
 ■ Asia   
 ■ Europe

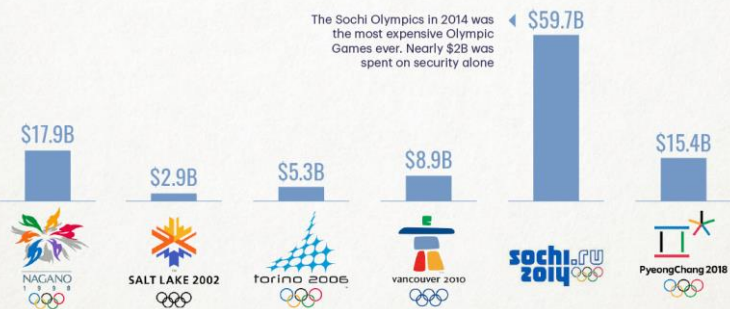


# ESTIMATED COST OF HOSTING THE OLYMPIC GAMES

In constant 2021 dollars



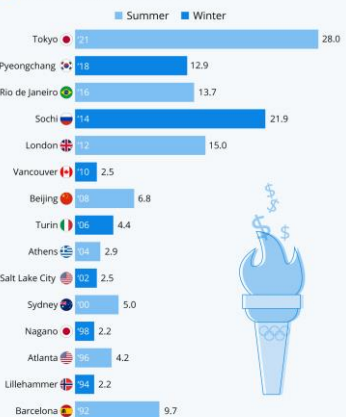
The Sochi Olympics in 2014 was the most expensive Olympic Games ever. Nearly \$28 was spent on security alone



Source: Council of Foreign Relations, Martin Müller, After Sochi 2014, costs and impacts of Russia's Olympic Games  
Note: Estimates include infrastructure and other indirect spending, as well as sports-related costs

## The Massive Costs Behind The Olympic Games

Cost of hosting the Olympic Games since 1992 (billion U.S. dollars)\*



\* In 2015 dollars with the exception of Pyeongchang (2018) and Tokyo (2021). Tokyo value is an estimate.  
Sources: Nikkei, Asahi, Forbes and Flyvbjerg et al. via Play the Game

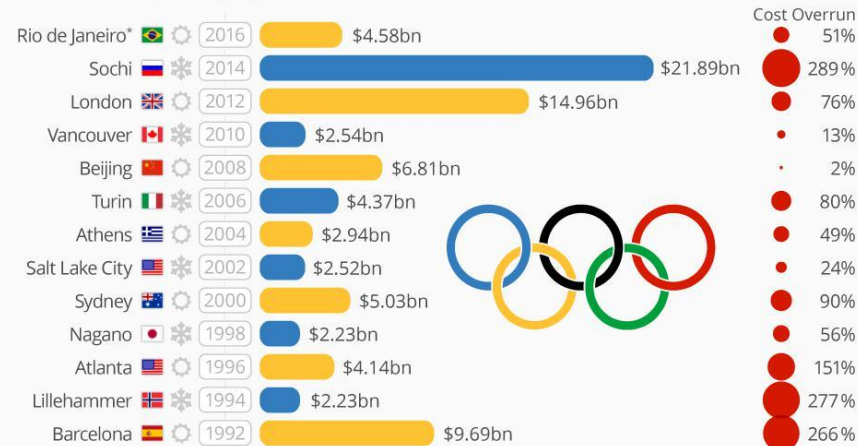


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## The Massive Costs Behind The Olympic Games

Cost of hosting the Olympic Games since 1992 (billion U.S. dollars)



\* As of January 29, 2016 - survey did not take into account infrastructure such as airports, road & rail networks, etc.



Source: The Oxford Olympics Study 2016: Cost and Cost Overrun at the Games

@StatistaCharts

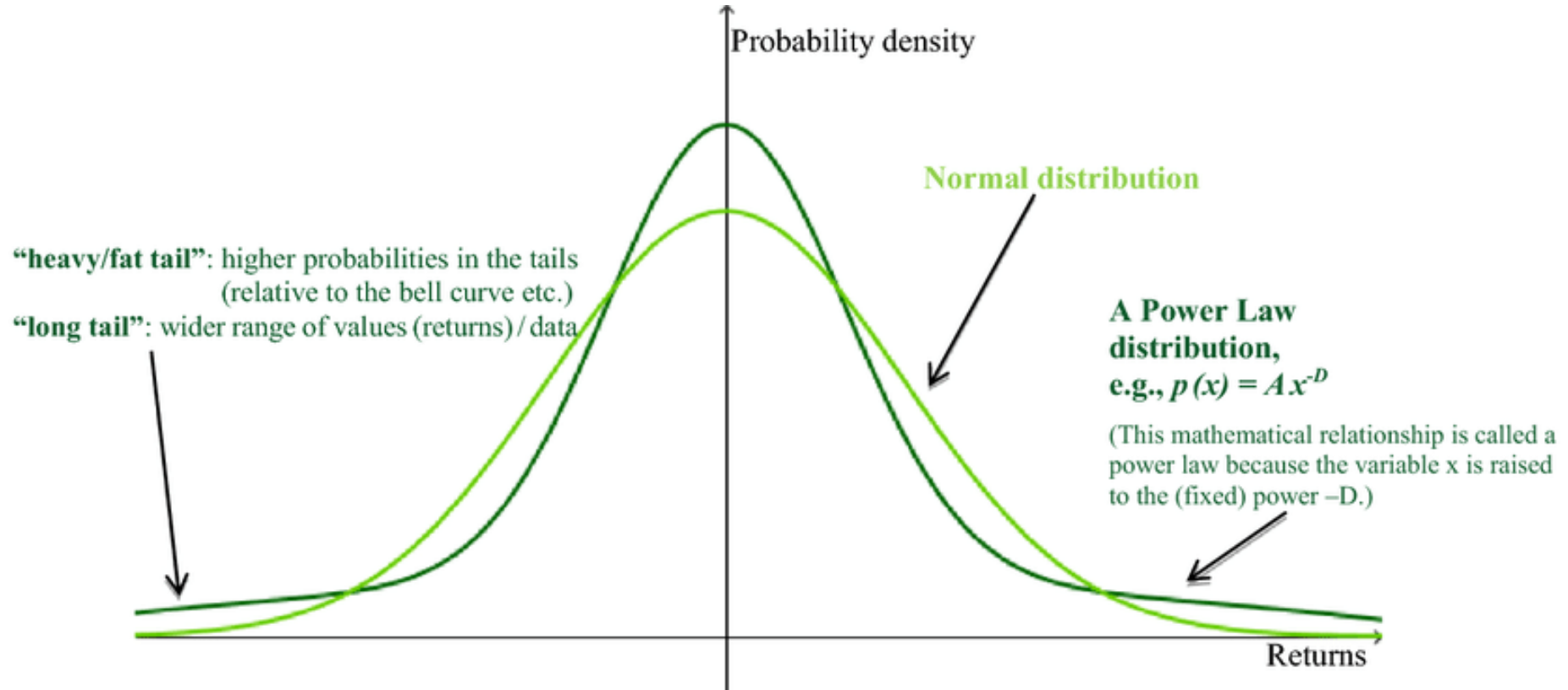
Forbes statista



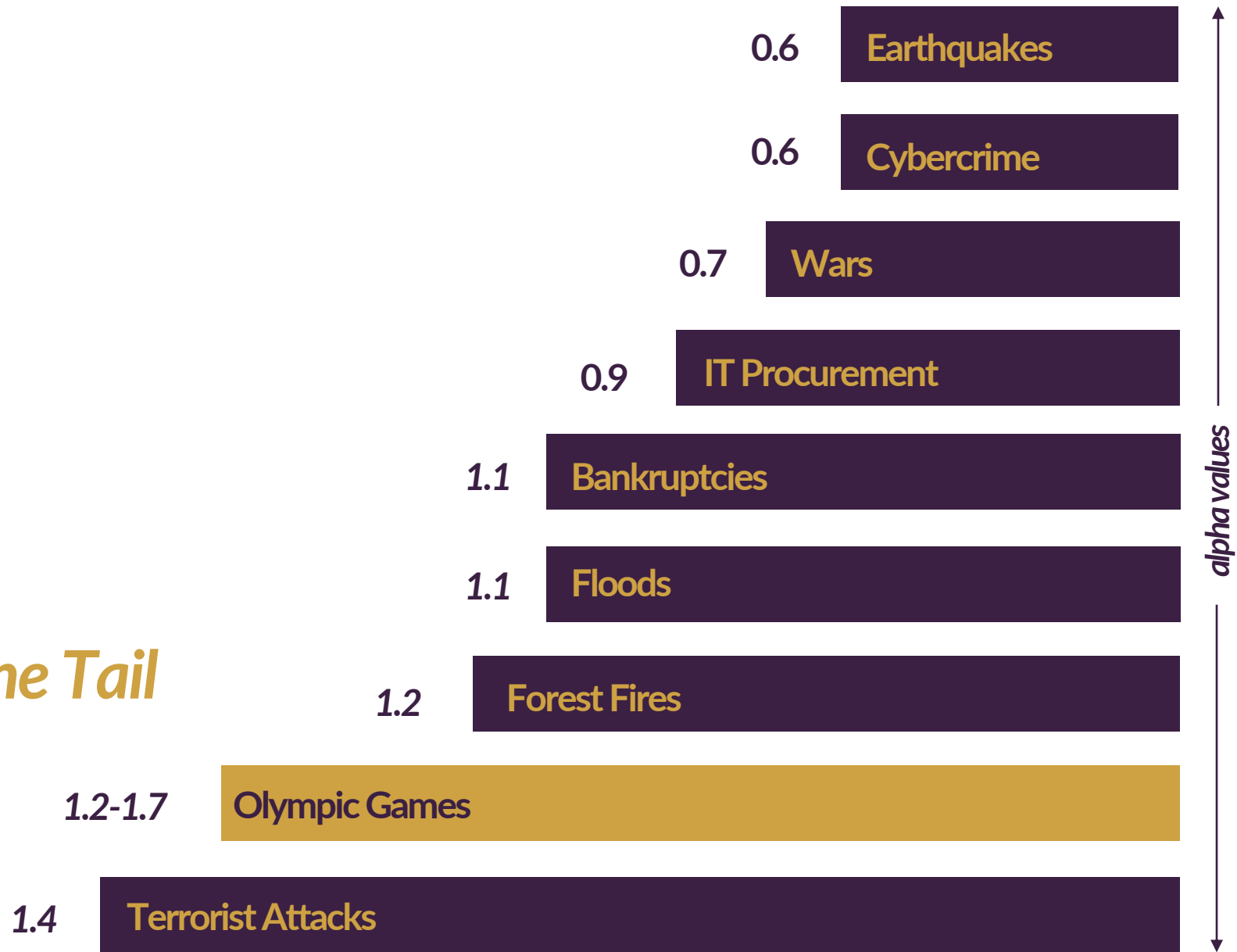


*So why is this type of megaproject so risky?*





# Extreme Events: *Power-Law Distributions* *The Law of Regression to the Tail*





# *Olympic Power-Law*



## Olympic Power-Law:

*“The generative mechanism for the Olympic power-law is identified as strong convexity prompted by six causal drivers: irreversibility, fixed deadlines, the Blank Check Syndrome, tight coupling, long planning horizons, and an Eternal Beginner Syndrome. The power-law explains why the Games are so difficult to plan and manage successfully, and why cities and nations should think twice before bidding to host.”*





# *Strong Convexity*



## *Causal Drivers of the Olympic Power-Law:*

- Irreversibility
- Fixed Deadlines
- The Blank Check Syndrome
- Tight Coupling
- Long Planning Horizons, and
- An Eternal Beginner Syndrome



# *Blank Check Syndrome*



# *Eternal Beginner Syndrome*



# *Black Swan Logic*



# Heuristics

## HEURISTIC NO. 1:

*Can we afford and accept a 20 percent risk of a three-fold increase or higher in cost in real terms on the multi-billion-dollar expenditure for the Olympics? If the answer to this question is yes, then proceed and become a host; if the answer is no, walk away.*





# Heuristics

## HEURISTIC NO. 2:

*Can we afford and accept an expected cost overrun in the range of 170-750 percent in real terms on the multi-billion-dollar expenditure for the Olympics, with substantial risk of further overrun above this range? If the answer to this question is yes, then proceed and become a host; if the answer is no, walk away, or find effective ways to "cut the tail," i.e., reduce tail risk.*



## *Factors for Games management:*

Education on Existence of Fat Tails

Larger Cost Contingencies

Cost Accountability from IOC

Solutions to Eternal Beginner Syndrome (repeat hosts, explore permanent locations, create Olympic island)

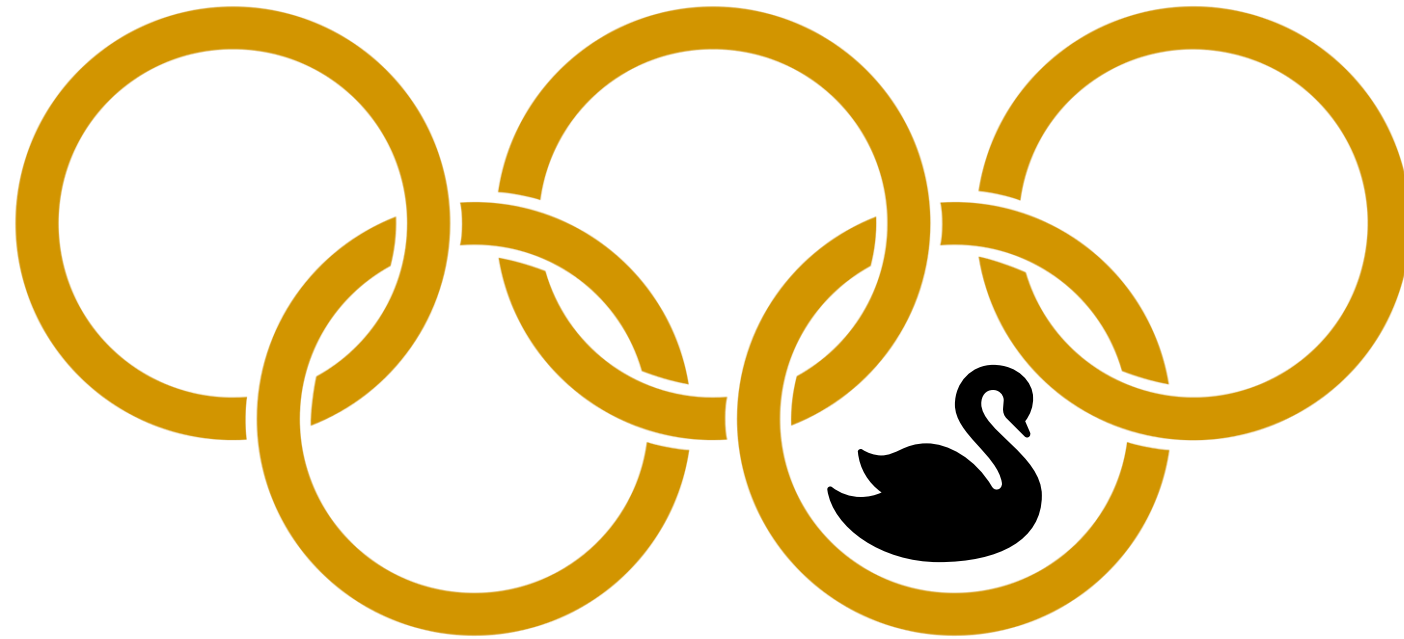
Shorten 7-Year Delivery Phase

**ABORT**

Consider Local and Global Economy and Trends

Factor in Operational, Direct and Indirect investment Costs

Capitalise on Existing Infrastructure



*Ask for tomorrow's ideas, today.*

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## *A call for a new Games model*

*"Most cities, unless you have a government that's willing to go into debt or pay the subsidy of what this costs, most cities will never say yes to the Olympics again unless they find the right model"*

-Los Angeles mayor, quoted in Ford and Drehs 2017



# *A call for a new performance criterion*

ON OUR MEGAPROJECTS





# *A call for Risk*







# Thank You

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Flyvbjerg, B., Stewart, A. & Budzier, A. 2016, "The Oxford Olympics Study 2016: Cost and Cost Overrun at the Games"

Flyvbjerg, B., Budzier, A. & Lunn, D. 2020, "Regression to the Tail: Why the Olympics Blow Up", Oxford University

