

Black Elephants¹

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This paper follows on from my Letter to the Editor² in response to David Pells prescient piece on Black Elephants³. As you read through this paper the following key points should be kept front and center:

- A Black Elephant is a cross between a Black Swan and the proverbial elephant in the room
- Black Elephants are high-impact events that lie beyond the realm of regular expectations but is ignored despite evidence of its existence
- Black Elephants broadly impact society, creating challenges, threats, risks and opportunities for our profession, our people and our projects
- Black Elephants also inhabit the projects we undertake and execute
- Because of the size of Black Elephants, they tend to preferentially inhabit the largest, most complex and often most visible projects we undertake
- Black Elephants around us are described
- Black Elephants in projects are described
- Black Elephants are not going away
 - They are a characteristic of complex, adaptive systems

This paper also continues the “black and white” series of Executive Insights that may be found on the National Academy of Construction web site⁴, focusing on a new animal in the zoo, Black Elephants. Black Elephants were made popular in Thomas Friedman’s 2014 New York Times editorial, “Stampeding Black Elephants”. Friedman was quoting environmentalist/investor Adam Sweidan but on closer inspection the term goes back to 2009 and is credited to Vinay Gupta, a consultant on disaster relief and risk management, who recognizes its origination in a small group meeting and cites the originator as Lloyd Davis, a social artist and master community builder.

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² Prieto, R. (2020). On the Subject of Black Elephants, Letter to the Editor, *PM World Journal*, Vol. IX, Issue VII, July. <https://pmworldlibrary.net/wp-content/uploads/2020/06/pmwj95-Jun2020-Prieto-Letter-to-Editor-on-black-elephants.pdf>

³ Pells Editorial: Black Elephants and... maybe Project Management, *PM World Journal*, Vol IX, Issue VI, June 2020. <https://pmworldlibrary.net/wp-content/uploads/2020/06/pmwj94-Jun2020-Pells-black-elephants-and-maybe-project-management-editorial3.pdf>

⁴ <https://www.naocon.org/insights/>

The short history on its origins are important since many have taken credit for its creation and as this paper will show, Black Elephants are all around us including in the world engineering and construction.

So what is a Black Elephant?

A Black Elephant is a cross between a Black Swan and the proverbial elephant in the room. You can't miss the black elephant; everyone sees it; but nobody wants to deal with it.

Said another way, a Black Elephant is a high-impact event that lies beyond the realm of regular expectations but is ignored despite evidence of its existence.

When it finally decides to trample us we falsely declare it to be a Black Swan, as if that relieves us of responsibility.

Black Elephants impact engineering and construction in two significant ways. The first are those Black Elephants which more broadly impact society, creating challenges, threats, risks and opportunities for our profession, our people and our projects. The second, are those Black Elephants which seem to inhabit the projects we undertake and execute. And, because of the size of Black Elephants, they tend to preferentially inhabit the largest, most complex and often most visible projects we undertake.

Let's look at each of these in turn.

Black Elephants Around Us

The world in which we live is home to many Black Elephants. Some we see or hear about on a regular basis, others more intermittently. But we are aware of them none the less. Like everything in life there are good and bad aspects to these elephants but only if we deal with them and the threats they present.

For engineering and construction organizations these Black Elephants represent not just threats but also opportunities.

Black Elephants Around Us	
Economic	Global poverty
	Global depression (extreme global financial crisis)

Black Elephants Around Us	
	Unsustainable/unstable level of public and private debt
	Collapse of traditional currencies
	Collapse of global trading system as China rises
Environmental	Destruction of rainforest (climate change; pandemics)
	Pandemics (COVID-19, most recent)
	Failure of global food chain (dustbowls; extinction of pollinators)
	Anthropomorphic climate change
	Ocean acidification/over fishing
	Extreme solar storm EMP
	Mass extinction event (asteroid strike; rapid sea level rise; nuclear winter)
	Biodiversity loss
	Depletion of global fresh water resources
	Widespread, extreme natural disaster in one or more major global cities (hurricane, flood, earthquake, tsunami)
Social	Social injustice (Black Lives Matter)
	Post nuclear event (terrorist attack, accident; cleanup, survivors)
	Peak education
	Unchecked cybercrime
Political	Return of tribalism (closed nationalist societies)
	Collapse of traditional political parties in existing Western democracies
	No-deal Brexit (in progress)
	Collapse of multi-lateral institutions
	Fall of the American empire
	Regional nuclear conflict (North Korea; South China Sea; South Asia)

Black Elephants Around Us	
Cultural	Fear-induced massive failures arising from a “Red Swan” ⁵
Intellectual/Technology	Interaction of algorithms (flash market crashes)
	Non-ethical AI
	Defense nuclear waste cleanup and disposal
	Rise of robots (AI self-awareness)

Black Elephants in Projects

Black Elephants exist not only in the world around us but also in our own organizations. They range from the incompetent or inadequate CEO (who everyone sees) to the telltale signs of systemic fraud (Enron, Waste Management, TYCO, WorldCom). They also include an ostrich like response to the Black Elephants charging at us that will invalidate our business model (Kodak, Blackberry, Blockbuster).

Black Elephants in engineering and construction organizations include persistent but ignored weak ethical and safety cultures and a general lack of transparency. The table that follows attempts to lay out some of the Black Elephants experienced in engineering and construction projects. While they may not appear as large as the ones in the preceding table, their trampling will be no less fatal to a project’s performance.

Black Elephants in Projects	
Project Foundations	Strategic Business Objectives (SBO) absent ⁶
	Strategic deception/ unrealistic baselines/ optimism bias

⁵ Probable event that could create a significant impact, but eventually does not happen (Y2K; Mad Cow disease fatalities); invented by Gordon Woo, Calculating Catastrophe

⁶ National Academy of Construction Executive Insight, Importance of Strategic Business Objectives (<https://www.naocon.org/wp-content/uploads/The-Importance-of-Strategic-Business-Objectives.pdf>)

Black Elephants in Projects	
	Incomplete project selection and definition ⁷
	Inadequate risk assessment and management process
Owner Organization	Lack of transparency
	Owner organization not ready/ not capable to undertake project ⁸
	Resistance to bad news
	Unwillingness to allow CEO level conversations
	Failure to make timely decisions
Project Team Behaviors	Weak ethical culture
	Weak safety culture
	Lack of alignment of project team and owner
	Mismatch between team capabilities and project complexity
	Too many precedences and couplings in schedule
Management Inadequacy	(Just) managing versus leading
	Administering versus managing
	Irregular management reviews of project
	Root causes of productivity challenges left unaddressed
Common Externalities	Significant unresolved stakeholder issues (internal; external, including political) ⁹
	Unaddressed labor strife

⁷ National Academy of Construction Executive Insight, Know What You Are Trying to Accomplish: The Primacy of the Scope Baseline (<https://www.naocon.org/wp-content/uploads/Know-What-You-Are-Trying-to-Accomplish-The-Primacy-of-the-Scope-Baseline.pdf>)

⁸ National Academy of Construction Executive Insight, Owner Readiness (<https://www.naocon.org/wp-content/uploads/Owner-Readiness.pdf>)

⁹ National Academy of Construction Executive Insights, Stakeholder Management in Large Complex Projects (<https://www.naocon.org/wp-content/uploads/Coupling-in-Large-Complex-Projects.pdf>)

Black Elephants in Projects	
	Significant supply chain and logistical challenges

Black Elephants are not Going Away

Black Elephants¹⁰ are not going away. They are a characteristic of complex, adaptive systems and our world, our companies and our projects, at least the largest of them, are complex adaptive systems.

Complex adaptive systems arise as the number of connections and the number of interactions grow, often exponentially (Executive Insight, Coupling in Large Complex Projects). These connections are not just human-to-human or task-to-task in a project setting. The set of enabling connections that give rise to complexity and Black Elephants include technology, new ideas including cultural shifts, and disruptive events at either a global or project scale. Often, the events which lead the black elephant to charge were also knowable, residing in the “fat tails” of our risk distributions. (Executive Insight, Fat Tails)

References

1. Stampeding Black Elephants; Thomas Friedman; New York Times; 11/22/14
2. Black Elephants in Our Safety Systems; Gary Wong; 4/6/20
3. Black Elephants: Ignorance, Extinction and Human Impact on the Planet; Suzanne York; 11/26/14
4. Black Elephants and Black Swans of Nuclear Safety; Niklas Moller, Per Wikman-Svahn; 2011 (Oxforddictionaries.com)
5. A White Elephant is not a Black Swan: Why you can do more about IT risk than you think (A reply to Flyvberg and Budzier); Robert Zafft; Risk governance and control: financial markets & institutions; Volume 2, Issue 3, 2012

¹⁰ Black Elephants are not to be confused with White Elephants defined as “a possession that is useless or troublesome, especially one that is expensive to maintain or difficult to dispose of.” (Oxforddictionaries.com)

About the Author



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Bob Prieto is a senior executive effective in shaping and executing business strategy and a recognized leader within the infrastructure, engineering and construction industries. Currently Bob heads his own management consulting practice, Strategic Program Management LLC. He previously served as a senior vice president of Fluor, one of the largest engineering and construction companies in the world. He focuses on the development and delivery of large, complex projects worldwide and consults with owners across all market sectors in the development of programmatic delivery strategies. He is author of nine books including “Strategic Program Management”, “The Giga Factor: Program Management in the Engineering and Construction Industry”, “Application of Life Cycle Analysis in the Capital Assets Industry”, “Capital Efficiency: Pull All the Levers” and, most recently, “Theory of Management of Large Complex Projects” published by the Construction Management Association of America (CMAA) as well as over 700 other papers and presentations.

Bob is an Independent Member of the Shareholder Committee of Mott MacDonald. He is a member of the ASCE Industry Leaders Council, National Academy of Construction, a Fellow of the Construction Management Association of America and member of several university departmental and campus advisory boards. Bob served until 2006 as a U.S. presidential appointee to the Asia Pacific Economic Cooperation (APEC) Business Advisory Council (ABAC), working with U.S. and Asia-Pacific business leaders to shape the framework for trade and economic growth. He had previously served as both as Chairman of the Engineering and Construction Governors of the World Economic Forum and co-chair of the infrastructure task force formed after September 11th by the New York City Chamber of Commerce. Previously, he served as Chairman at Parsons Brinckerhoff (PB) and a non-executive director of Cardno (ASX)

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