Achieving Predictability in a World of Black Swans

Keith Dodson & Richard Westney
HUNTING BLACK SWANS
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HUNTING BLACK SWANS
THE BLACK SWAN

The Impact of the Highly Improbable

Nassim Nicholas Taleb
Avoiding the Turkey Trap

Thanksgiving!!!

Apologies to Bertram Russell
Black Swans in the World of Capital Projects
The Industry Today

- Poor project performance is not acceptable when capital markets are looking for predictability & strong returns
- >50% of execs are dissatisfied with project performance (eg 40% of projects overrun) – more-so than ever
- … cannot afford to miscalculate capital project risks – yet do not have a good grasp of how to manage (them)

Source: Capital Project Execution in the Oil & Gas Industry – Booz Allen Hamilton
Capital Project Estimating Techniques
IHS-CERA Project Capital Cost Index

Source: Cambridge Energy Research Associates
Caging Black Swans

**Core Concepts**

- Strategic vs. Tactical Risks
- Risk Exposure
- Risk-Conditioned Investment Value™
- CAPEX VaR™
Tactical Risks $\rightarrow$ Estimate (incl. Contingency) $\rightarrow$ Risk Exposure $\rightarrow$ Risk-Conditioned Investment Value$^{sm}$
A Process for Resolving Risks

- Risk Framing
  - Risk Exposure
  - Risk Management
    - Risk Balance Sheet
    - Mitigation Actions

- Strategic Planning
  - Risk-Driven Strategic Project Plan

- Risk Assessment
  - Probabilistic Analysis
  - Risk – Conditioned Investment Value

- Risk Brokering
  - Risk Collar
  - Risk – Resolved Contracts

- Financial Close

- Risk Validation
CAPEX VaR™

A calculation of project risk exposure at the portfolio level
A Closing Thought ...

One of the best lessons children learn through video games is that standing still will get them killed quicker than anything else.

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