

Project Controls Expo 2018 Melbourne

**Are Your Megaproject
Schedules and Costs Under
or Out of Control?**

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Agenda

- ▶ What we studied and why
- ▶ The surprising results
- ▶ What's causing the problem?
- ▶ Critical enablers that need focus now
- ▶ Where to from here?

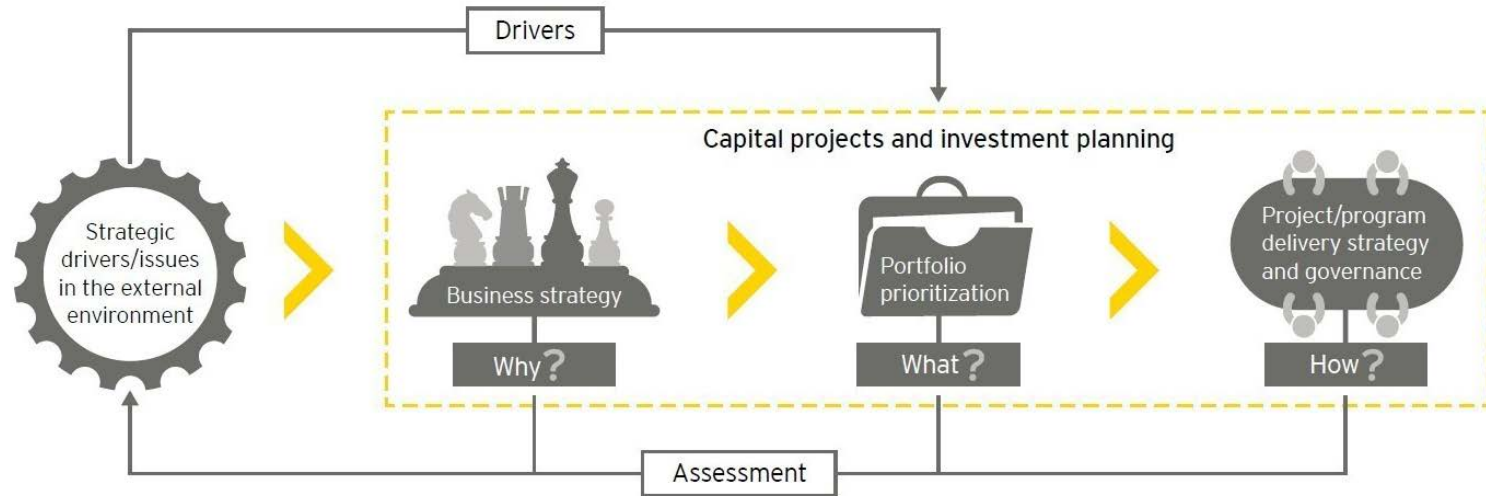
What we studied and why

The surprising results



What we studied and why

In this environment of reduced capital spend, we wanted to understand if projects were being delivered effectively in order to ensure success for mining and metals organisations



Funding, planning and delivering capital projects is part of core business and a key element of effective business strategy that must continue throughout the economic cycle

What we studied and why

Mining and Metals Megaprojects

- **108** global Mining and Metals megaprojects*
- Each individual project investment exceeded US\$1 bn
- **US\$ 367 bn** total investment

Oil and Gas Megaprojects

- **365** global Oil and Gas megaprojects*
- Each individual project investment exceeded US\$1 bn
- **US\$ 22.4t** total investment

* 'megaprojects', are highly complex, large-scale projects comprising multiple significant work packages that are typically in the hundreds of millions to multibillion dollar investment value range.

The surprising results

Mining and Metals Megaprojects

- **69%** were over budget
- **62%** average budget overrun from initial estimate
- **50%** were reporting schedule delays

Oil and Gas Megaprojects

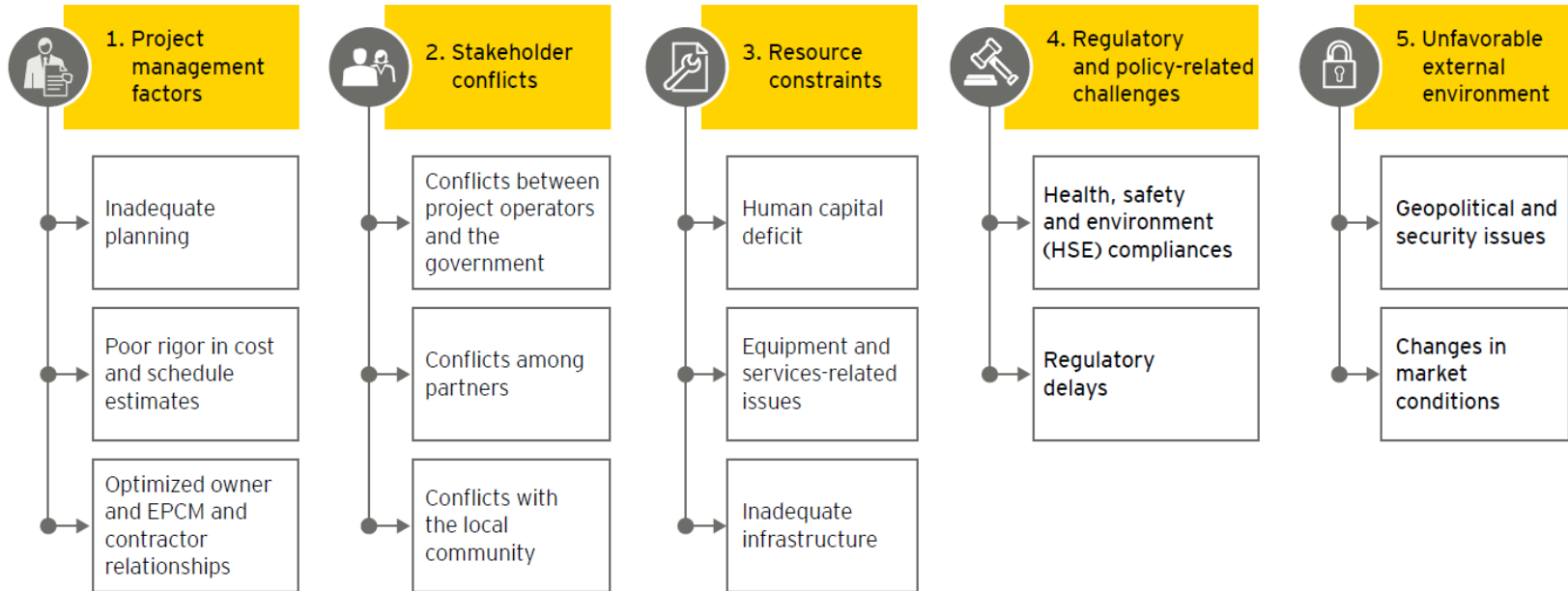
- **64%** were over budget
- **59%** average budget overrun from initial estimate
- **73%** were reporting schedule delays

What's causing the problem?



What's causing the problem?

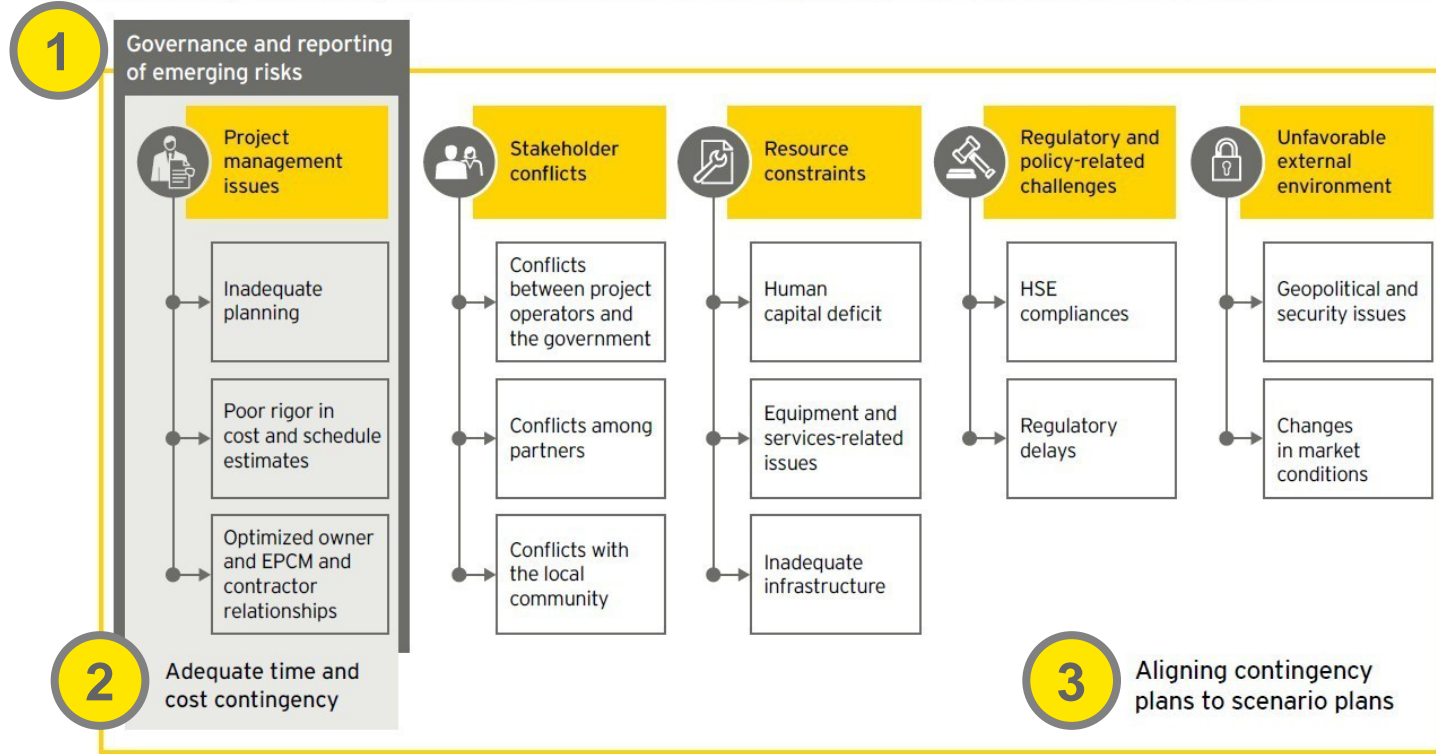
The many causal factors can be grouped into 5 broad categories



Critical enablers



Critical enablers that need focus now



Governance and reporting of emerging risks

Having the right information in a usable format to make timely and informed decisions is essential and to address 'outer horizon' risks before they occur

Lag Indicators

Reactive approach to risk management

- ▶ Reports on past events
- ▶ Provides past performance information
- ▶ Useful to understand how the project has performed against targets and identify areas requiring improvement

Lead Indicators

Proactive approach to risk management

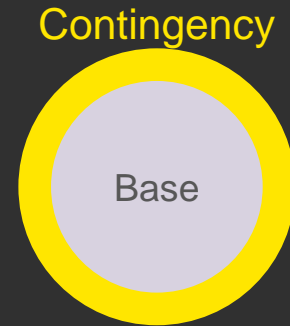
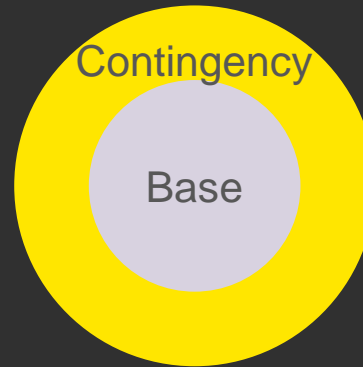
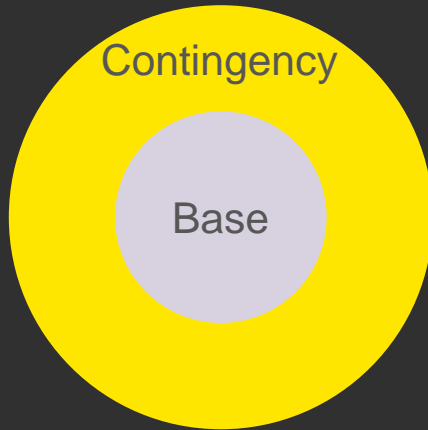
- ▶ Enables action to address the risk before it occurs
- ▶ Provides insight into what may occur
- ▶ Used as a predictor of an outcome or performance

Adequate time and cost contingency

Every program and project has a degree of risk and uncertainty

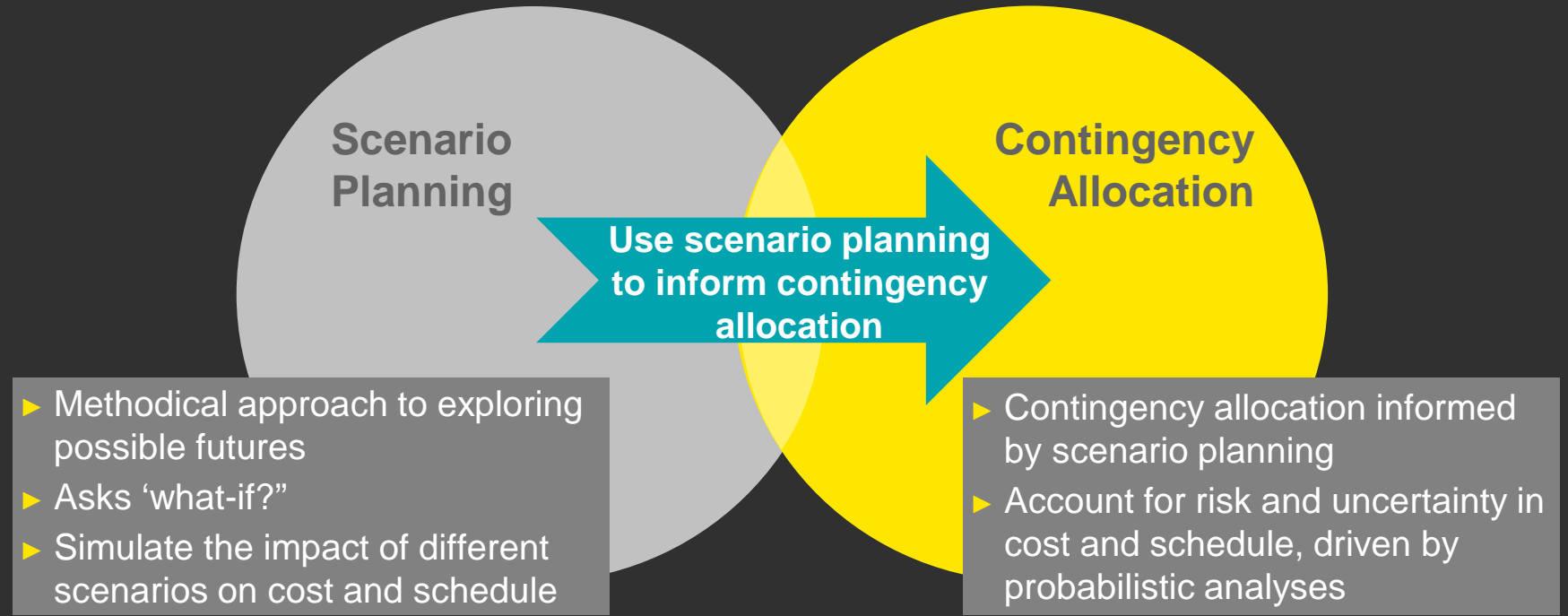
Allocation of suitable contingency up front based on a robust process of risk and uncertainty identification and quantification.

Revalidate contingency through delivery



Aligning contingency plans to scenario plans

A connection between the complementary disciplines of contingency allocation and scenario planning is often absent in capital project planning



Where to from here?



Where to from here?

Ask yourself, am I.....

- ▶ Ensuring I am aware of future and emerging risks while they can still be efficiently mitigated?
- ▶ Optimising EPCM and contractors' relationships and global "buying power" to deliver strategic outcomes and mitigate risks?
- ▶ Allocating enough cost and time contingency to account for the real risks that could impact my organisation's projects?
- ▶ Being proactive to plan for future scenarios and set contingency so that projects can be managed with confidence?

Thank you...

Questions?



If I have any questions, please reach out to:

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With a volatile outlook for mining and metals, the global mining and metals sector is focused on margin and productivity improvements, while poised for value-based growth opportunities as they arise. The sector also faces the increased challenges of maintaining its social license to operate, balancing its talent requirements, effectively managing its capital projects and engaging with government around revenue expectations.

EY's Global Mining & Metals Network is where people and ideas come together to help mining and metals companies meet the issues of today and anticipate those of tomorrow by developing solutions to meet these challenges. It brings together a worldwide team of professionals to help you succeed — a team with deep technical experience in providing assurance, tax, transactions and advisory services to the mining and metals sector. Ultimately it enables us to help you meet your goals and compete more effectively.

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