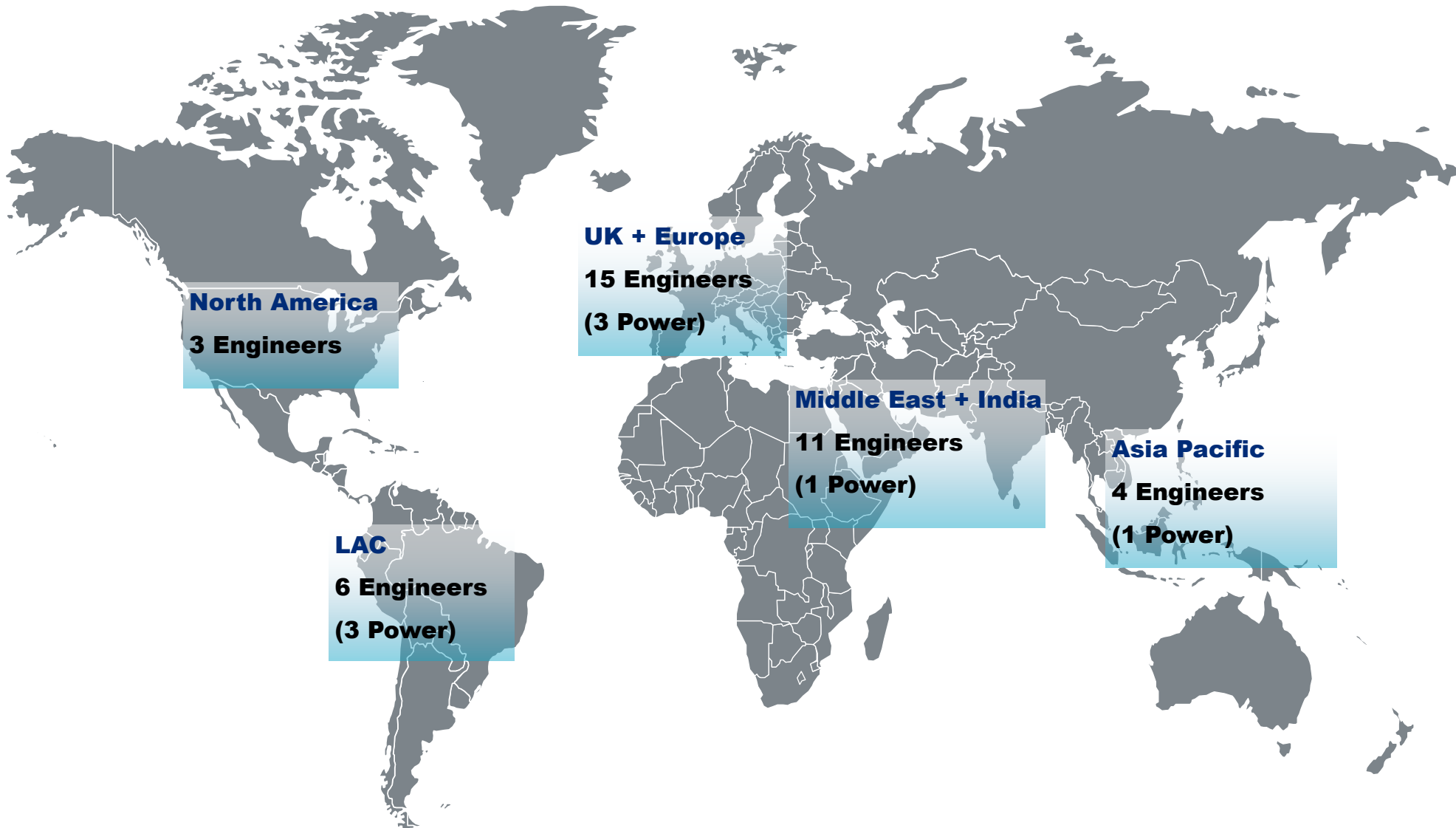


# MARSH BUSINESS INTERRUPTION (BI) CASE STUDIES REEF

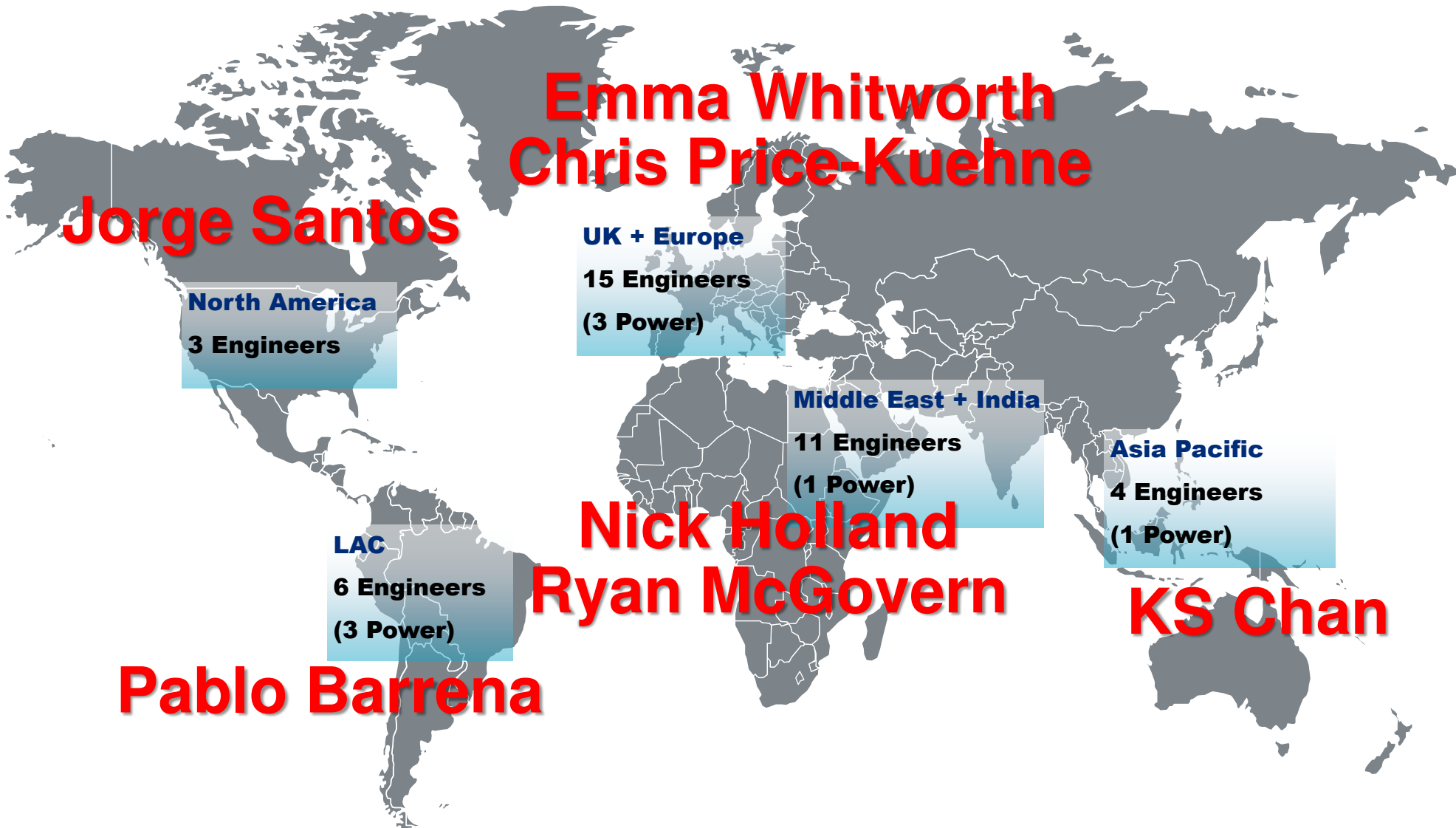
**Emma Whitworth & Jorge Santos**  
**BI Risk Engineers – Engineering Specialties**  
**Global Energy Risk Engineering**

# INTRODUCTION

# Global Power and Energy Risk Engineering



# Global Power and Energy Risk Engineering BI Engineering Specialists



# BI CASE STUDIES

EXAMPLES OF BI HURDLES THAT THE ENERGY  
INSURANCE INDUSTRY ENCOUNTERS

# Examples of BI Hurdles that the Energy Insurance Industry Encounters

**A. Declaration Errors**

**B. Evolving Risk Climate**

**C. Complex Systems**

## Example A – Declaration Errors

- National Gas Transportation Company
- Moving towards a commercial business model – including insurance purchase
- Bought Business Interruption Insurance on a revenue basis through local Insurance Advisor and looking to increase limit
- Commissioned BI Study to determine new limit
- We reviewed contracts
- Actual BI exposure (due to contractual arrangements with Government) was limited to less than 20% of Sum Insured
- Not unusual for calculated exposure to be double or half the previous declaration

*Clients Do Not Always Understand Exposures  
Contracts Impact the Exposure*

## Example B – Evolving Risk Climate

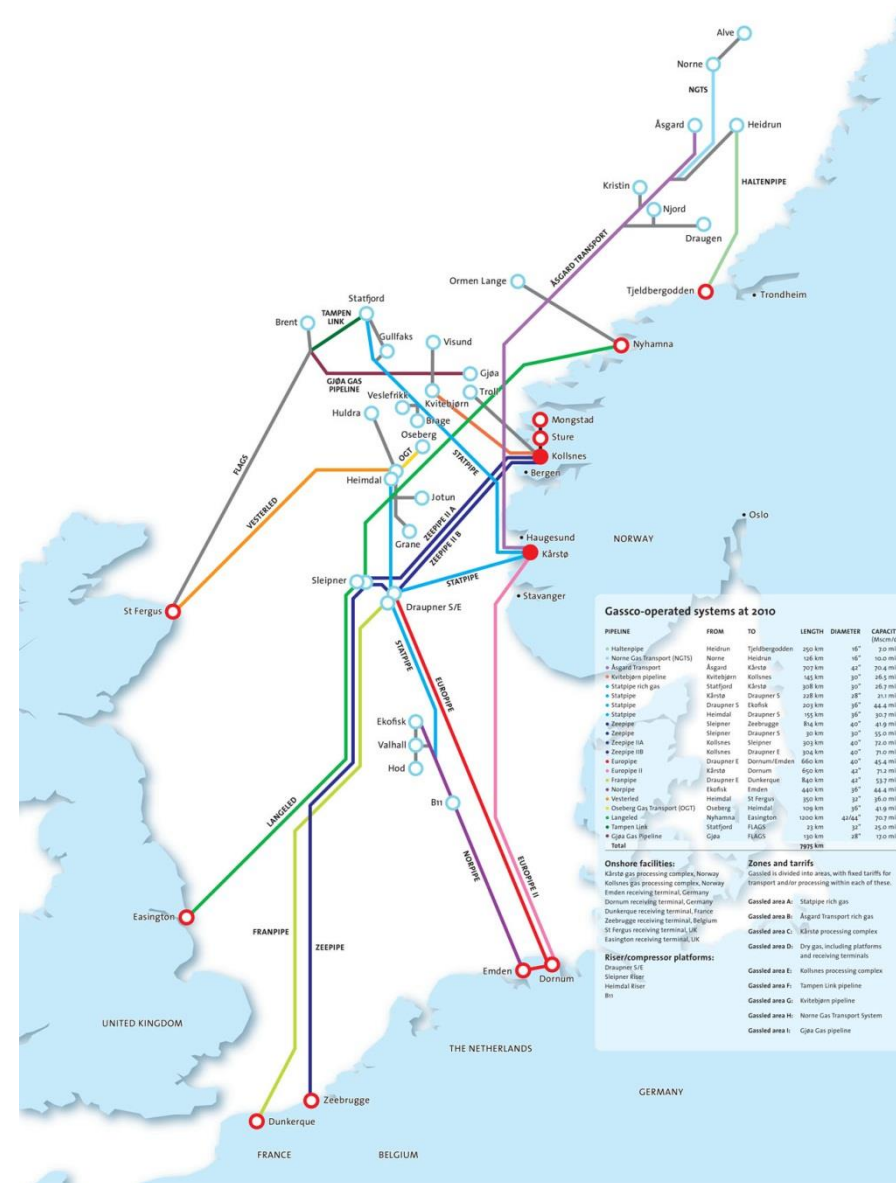
- International Energy Company – predominantly refining
- Long standing PD, MB, BI policy
- Policy limits changed to reflect company performance
- MB BI policy had both USD and time limits, based on spares available and risk appetite
- PD BI limit was adjusted annually with declaration
- MB BI limit had not changed for several years
- BI review determined that changes in sparing policy and profitability had changed the MB BI exposure

*Businesses Change  
Limits Must Reflect Changes*

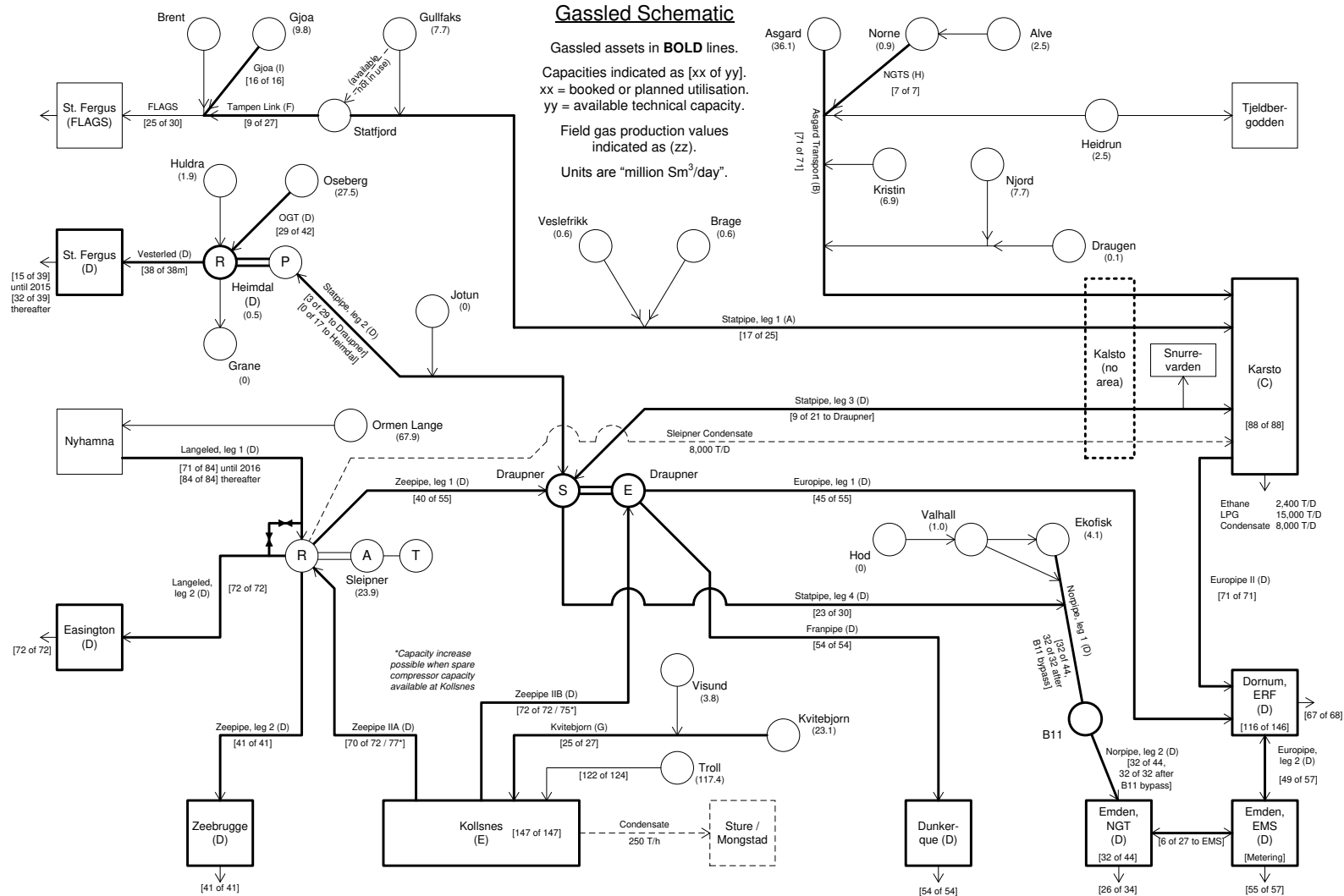


# Example C – Complex System / Underwriter Accumulation

- Dedicated BI review
- Norwegian Continental Shelf (NCS)
  - North Sea operations
- Gas distribution supplying Europe
  - 8,000 km of pipelines
  - Riser platforms
  - Gas processing facilities
  - Receiving, metering and distribution terminals
- Complex network, poorly understood
- 12 joint venture partners
- Tariff based revenue structure



# Example BI Schematic



“This is the first time we have understood the BI exposure” – Insured

## Summary - Key BI Learnings

- Declared BI Values often Different to Exposure
- Clients Do Not Always Understand Exposures
- Contracts Matter
- Changing Risk Climate
- Complex Systems Have Complex Exposures
  - Mitigation
  - Interdependencies
- Supply Chains Increasingly Challenging

# CONTACT

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# Thank you!

## Any further questions?



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