# "How risk awareness is mitigating millions of claims and costs when building mega yachts"

Project Controls EXPO London, UK

Safran

Primaned DELIVERING PROJECT INSIGHT

# The world of Mega Yachts

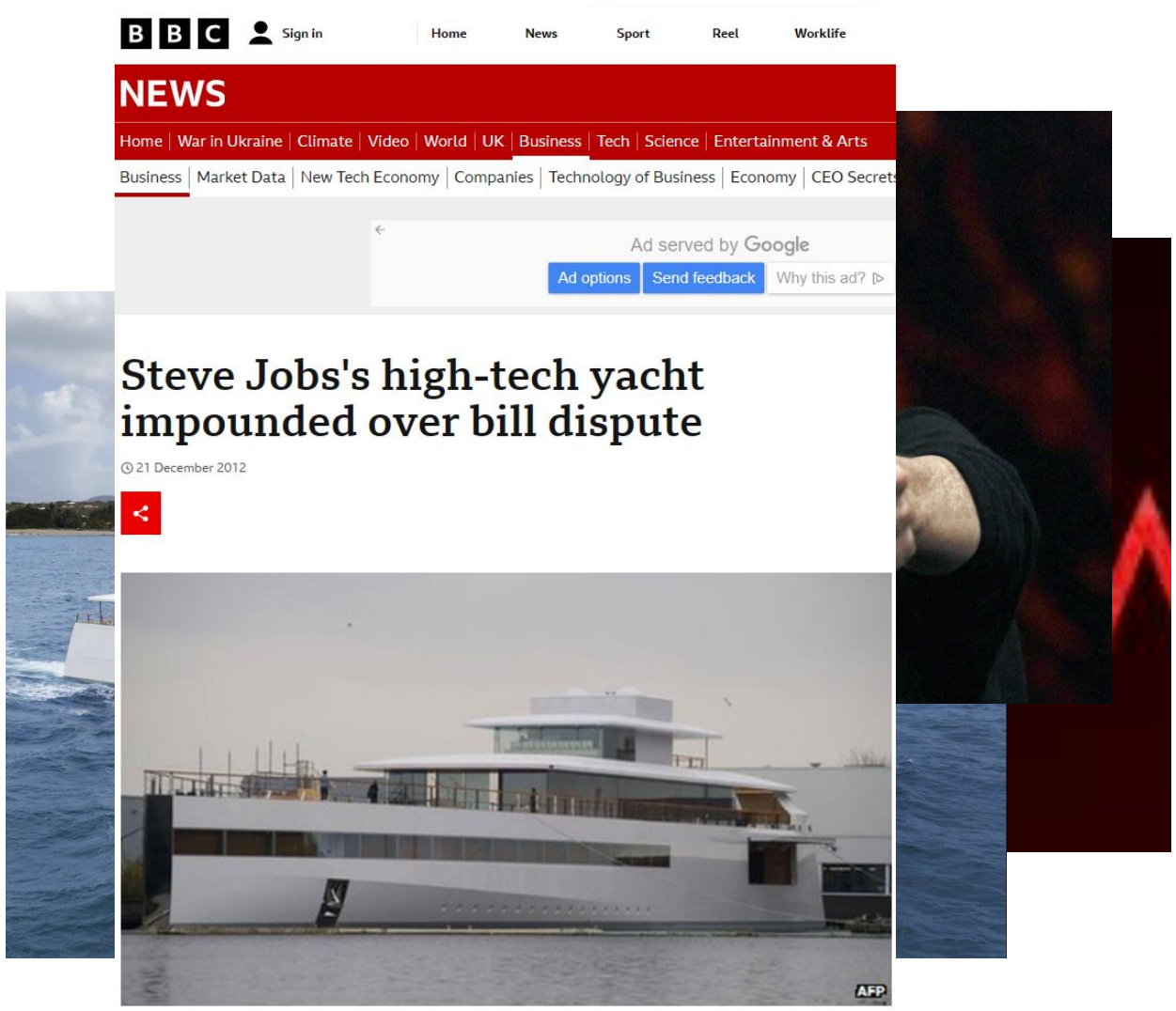
Anyone here that owns a Mega yacht?

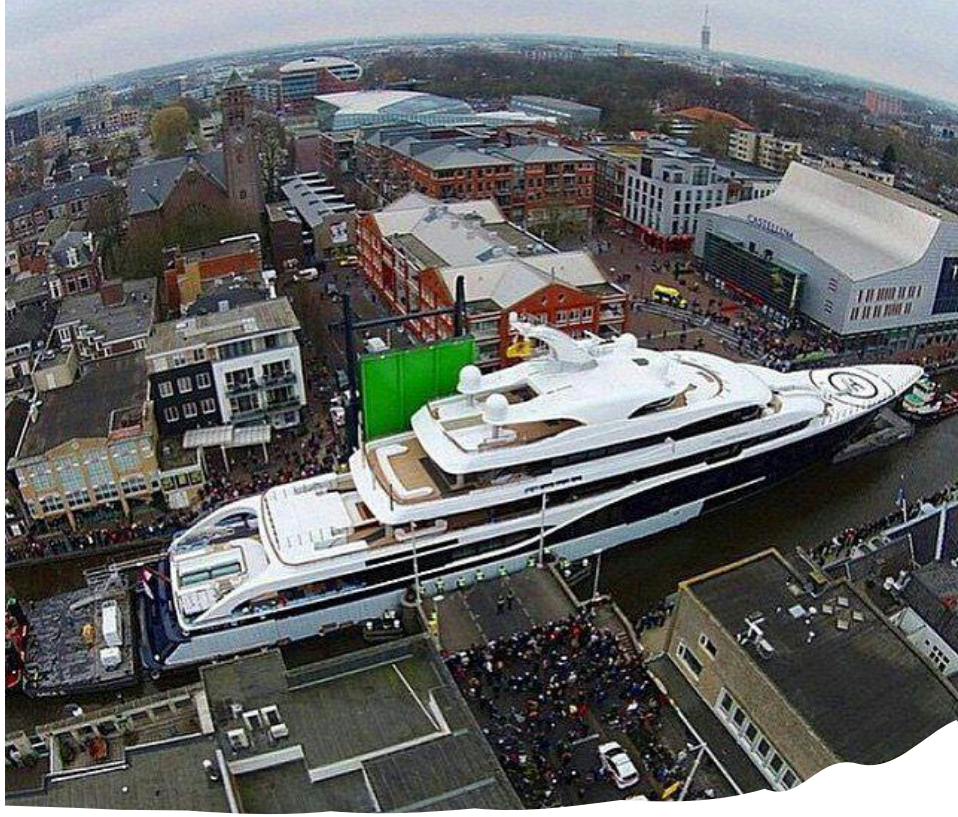

Project Controls EXPO London, UK

# The Dutch Yacht Builders

- Started in many cases in the 19th century as shipbuilders
- After WWII the world changed, to luxury yachts.
- Build for the super rich from mostly North-America and Middle-East (Feadship)

# What’s the biggest Risk when building a yacht?



# Just build the yacht, don’t care about Risk

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# Who is still managing Risk in Excel?

Fukushima Daiichi Summary Table - Units 1-6 (20 March 2011, 21:00 UTC):

LEGEND: No Immediate Concern | Concern | Severe Condition

| Unit | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Power (MWe/th) | 460/1380 | 784/2381 | 784/2381 | 784/2381 | 784/2381 | 1100/3293 |
| Type of Reactor | BWR-3 | BWR-4 | BWR-4 | BWR-4 | BWR-4 | BWR-5 |
| Status at Time of Event | In service - auto shutdown following earthquake | | | Shut down for outage before earthquake | | |
| Core and Fuel | Damaged | | | No fuel rods | Cold shutdown | |
| Containment Integrity | No damage reported | Damage suspected | No information | Outage configuration | No damage expected | |
| Off-site Power | Substation connected | Power center (in Unit) connected | Not available | | Not available | |
| Diesel Generators | Not available | | | | Two emergency diesel generators powering Units 5 and 6 | |
| Building | Severe damage | Slight damage | Severe damage | | No damage reported | |
| Water Level in Reactor Pressure Vessel | About half of fuel assembly (stable) | | | Outage configuration | Above fuel | |
| Pressure of Reactor Pressure Vessel | Stabilised | Unreliable data | Elevated | Outage configuration | Stabilised | Stabilised |
| Containment Pressure Drywell | Stable | Stable | Elevated | Outage configuration | No information | |
| Water Injection to Reactor Pressure Vessel | Sea water | Sea water | Sea water | Outage configuration | Freshwater injection in progress | |
| Water Injection to Containment Vessel | Not available | | | Not necessary | | |
| Spent Fuel Pool Temperature | No information | Spraying from outside | Spraying from outside | Spraying from outside | Cooling restored | |

*Dampier Archipelago Risk Assessment Matrix*

| Risk Level | |
|---|---|
| Low | Threat is: highly unlikely to result in a considerable impact on heritage values or; already adequately controlled by existing measures. |
| Medium | Threat: is likely to result in an impact on heritage values but degree of impact is uncertain or; requires review under existing legislation. |
| High | Threat is likely to result in a considerable impact on heritage values and: can be controlled within the existing legislation but may require new or altered policy (or); requires new systems or programs to completely control. |
| Severe | Threat is considerable and: will result in a tangible, irreversible, substantial impact on the heritage values (or); requires direct or immediate control measures (or); requires significantly altered policy (or); may require new or altered legislation to control. |

*Table 1: Risk Control Ratings – assessment of effectiveness*

| Ranking | Guidance |
|---|---|
| Weak | Control of risk low or non-existent |
| Incomplete | Actions have already been established to address/control weaknesses, but not fully implemented OR exposures not controllable but actively monitored |
| Adequate | Some improvements to controls desirable |
| Strong | Controls are believed to be operating and highly effective |
| Over-Regulated | Excessive layers of control are regulating the threat, room for efficiency improvements |

| | Control Rating → Over-Regulated | Strong | Adequate | Incomplete | Weak |
|---|---|---|---|---|---|
| Industrial development | | | Industrial development **Final Risk = High** | | |
| Emissions | | Emissions **Final Risk = Low** | | | |
| Blasting and vibration | | | Blasting and vibrations **Final Risk = Medium** | | |
| Recreation, tourism and vandalism | | | | Recreation, tourism and vandalism **Final Risk = High** | |
| Lack and/or loss of knowledge, management and engagement | | | | | Lack of knowledge management and engagement **Final Risk = Severe** |

| Likelihood ↑ | Probability: | | | Impact Rating → Insignificant | Minor | Moderate | Major | Critical |
|---|---|---|---|---|---|---|---|---|
| | Is: expected to occur in most circumstances; known to be occurring | 5 | Almost certain | Low | Medium | High | Severe | Severe |
| | Will probably occur: in most circumstances; at sensitive sites | 4 | Likely | Low | Medium | Medium | High | Severe |
| | Could occur: at some time; at sensitive sites | 3 | Possible | Low | Low | Medium | High | Severe |
| | Not expected to occur | 2 | Unlikely | Low | Low | Low | Medium | High |
| | May occur in exceptional circumstances only | 1 | Rare | Low | Low | Low | Medium | High |
| | Further research is needed to determine the likelihood of impact | U | Uncertain | Low | Medium | High | Severe | Severe |

# Building a mega yacht is a risky job

Especially, when your philosophy is this:

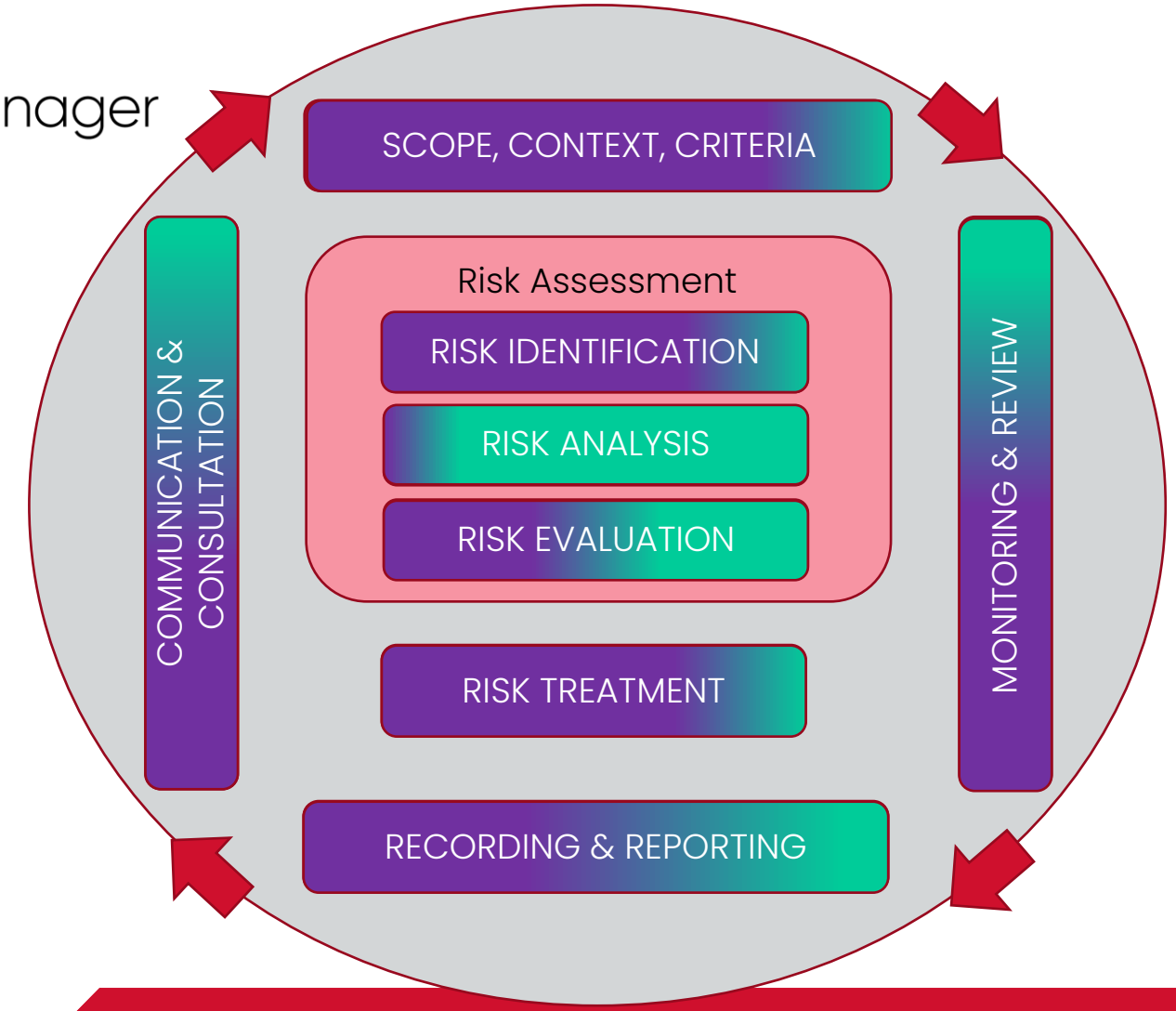
**WE SET THE STANDARD**
**BY ALWAYS REJECTING THE STANDARD.**

Impossible is a beautiful word. It forces us to go beyond what we know. To create, to innovate, to keep pushing until the unachievable is achieved. It demands the very best from us…

# Safran and the Risk Management Process

## Safran Risk Manager

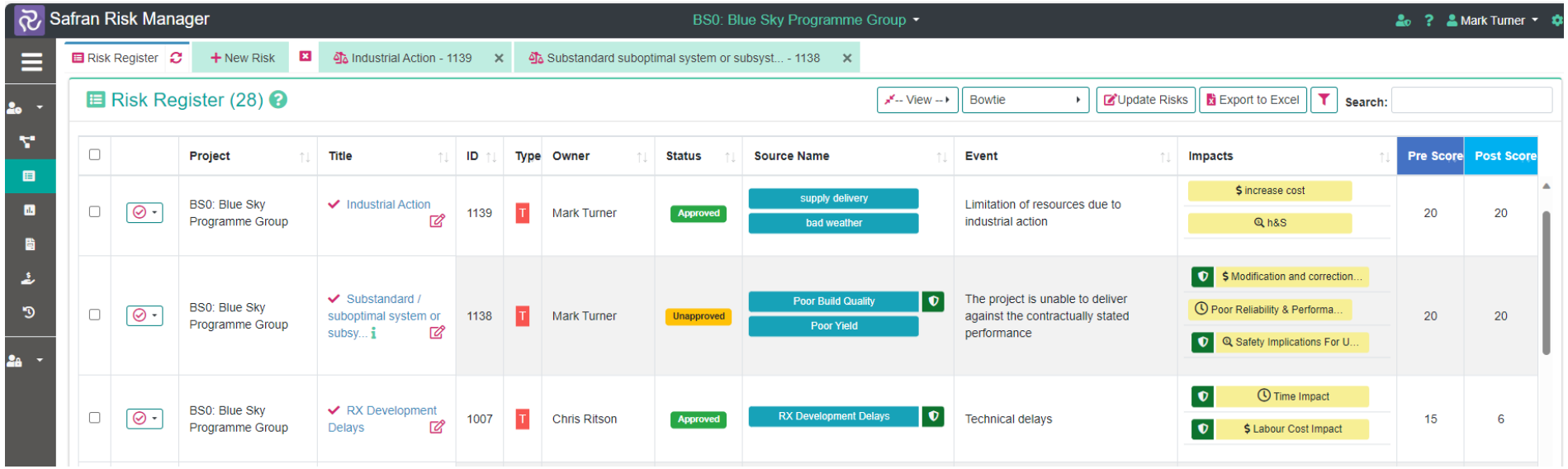
- Every risk owner
- Every project leader
- Every day




## Safran Risk

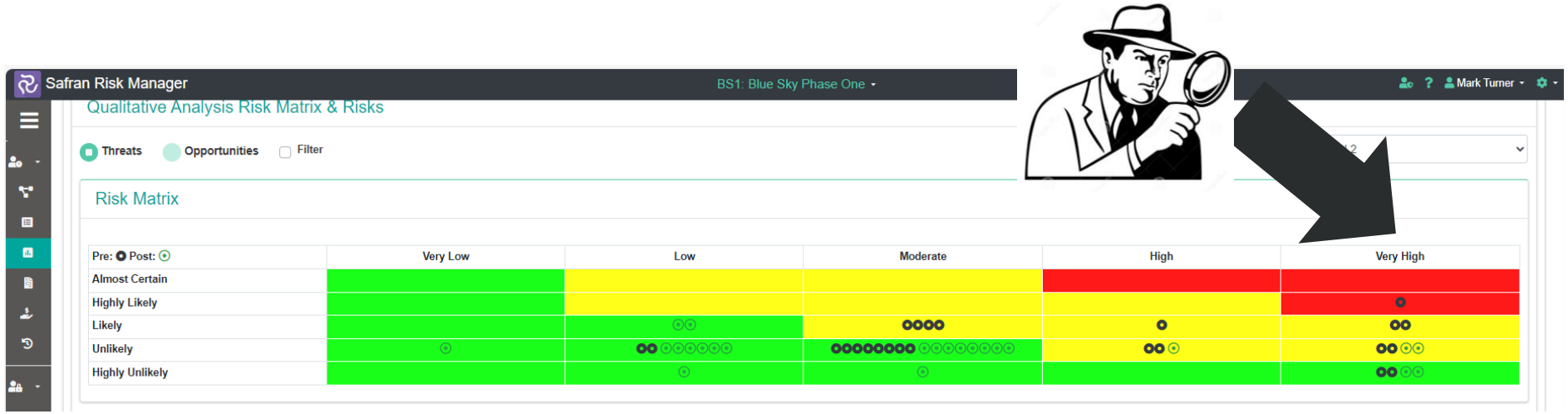
- Risk professionals
- Advanced cost and schedule modelling capability
- Each reporting period

# A Smarter Risk Register: Safran Risk Manager



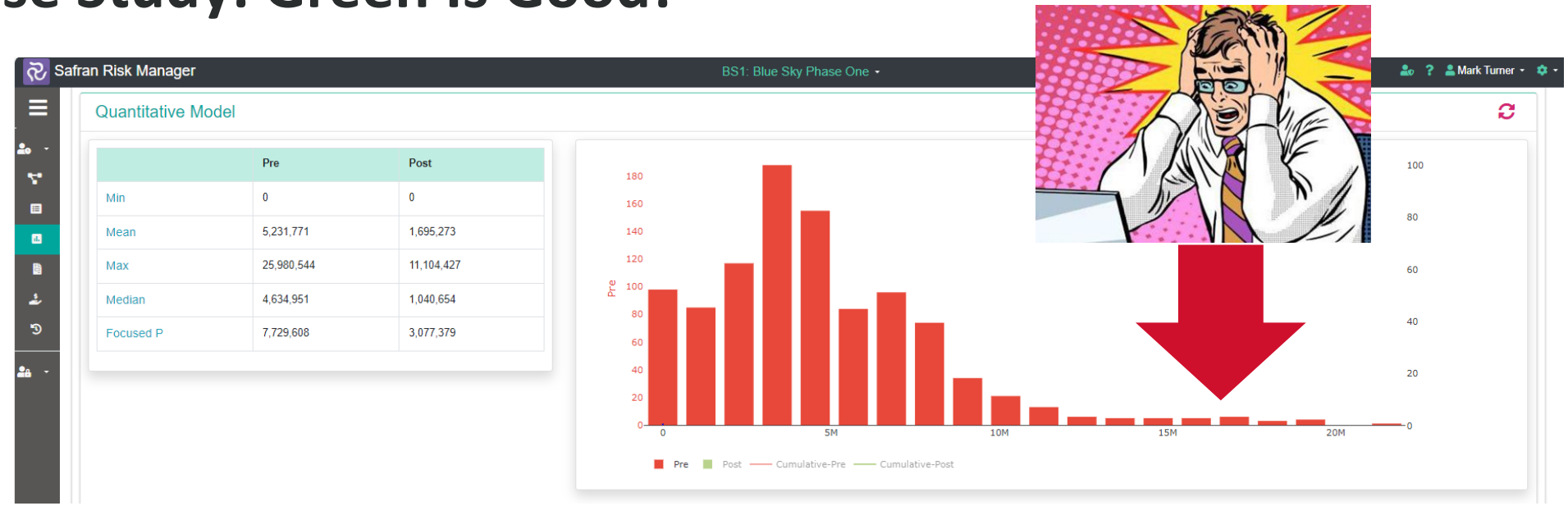

- Displays risk data as a Bowtie within the risk register
- Can show multiple-project data in the same register for easy cross-project and portfolio review

# Case Study: Green Is Good!




- Mega yacht company had only used a qualitative matrix
- Management focus had always been on the ‘Red’ risks
- ‘Green’ risks were ‘Good’ so didn’t cause a concern!

# Case Study: Green Is Good!






- However, when seen quantitatively the ‘Low Likelihood, High Impact’ green risk on the register had the potential to sink the project!
- Focus shifted to all the ‘High Impact’ risks – identifying millions of Euros of exposure which had remained unmitigated.

# THANK YOU

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