Given the structure and accuracy of the acquired survey data used for the analysis, the conclusions made in this presentation are to be considered indicative and not final.
Conclusions flowing from data
According to the responses acquired in the survey, there is a significant interest in building further transparency and compliance within the shipping and bunkering industry.

Looking to the case of Singapore, the vast majority of respondents believe that the introduction of a Bunker Licensing Program (74.5%) and mandatory use of Mass Flow Meters (76.1%) have had a positive impact on bunkering in the port.
Have you experienced any QUANTITY and/or QUALITY dispute(s) over the last 12 months?

- **Yes**: 59.57%
- **No**: 45.74%
- **N/A**: 4.72%
- **Total**: 100%

How do you usually settle a dispute?

- **Commercially**: 53.03%
- **Legally**: 28.79%
- **Notify auth.**: 8.57%
- **N/A**: 7.19%
- **Other**: 1.43%
- **Total**: 100%

### Dispute Statistics

- **Deliveries**
  - Total: 196,589
  - Disputes: 1,925
  - Dispute percentage: 0.98%
  - Average cost: 54,009

- **Disputes**
  - Total: 86,289
  - Disputes: 1,392
  - Dispute percentage: 1.61%
  - Average cost: 27,790
What do you think will happen to bunker prices in a port that introduces a Bunker Licensing program?

- Prices will increase: 48.94%
- No impact on prices: 39.36%
- Prices will decrease: 2.66%
- Don't know: 9.04%

A Bunker License program would cut down the number of suppliers in the port.

- Strongly agree: 10.11%
- Agree: 39.89%
- Neutral: 26.06%
- Disagree: 18.62%
- Strongly disagree: 1.06%
- Don't know: 4.26%

What impact would Bunker Licensing have on disputes at a port in your opinion?

- Decrease: 62.23%
- Unaffected: 47.87%
- Increase: 7.45%
- Don't know: 11.17%

Would you prefer to bunker at port that has a Bunker Licensing program?

- Yes: 80.85%
- No: 2.66%
- Don't know: 16.49%
What do you think will happen to bunker prices in a port that introduces mandatory use of Mass Flow Meters?

- **Prices will increase:** 59.57%
- **No impact on prices:** 31.91%
- **Prices will decrease:** 2.13%
- **Don't know:** 6.38%

Using Mass Flow Meters at a port, QUANTITY issues will:

- **Decrease:** 84.04%
- **Unaffected:** 9.04%
- **Increase:** 2.13%
- **Don't know:** 4.79%

Would you prefer to bunker from a supplier that has:

- **A Mass Flow Meter installed:** 94.15%
- **No Mass Flow Meter installed:** 5.85%

When a Mass Flow Meter is installed, certified, and used properly, do you accept supplier's figures?

- **Yes:** 79.79%
- **No:** 8.51%
- **Don't know:** 11.70%
In connecting the data, there is a clear support towards building further transparency and compliance within the shipping and bunkering industry, despite the underlying expectations of increased premiums and enhanced competitive landscapes.

**#disputes**

- Quality disputes have a considerably lower frequency relative to quantity disputes, yet with a substantially higher average cost.
- Most disputes are usually settled commercially, albeit more than 1 out of 4 quality disputes are settled legally – presumably due to the higher average cost.

**#licensing**

- Respondents are torn on whether bunker licensing will lead to price increases or not.
- Expectations are that bunker licensing will reduce the number of suppliers in-port as well as the number of disputes.
- There is substantial support towards implementing bunker licensing with more than 4 out of 5 respondents preferring ports having such programs.

**#mfm**

- By introducing mass flow meters, quantity issues are expected to decrease, while bunker prices are expected to rise.
- More than 9 out of 10 respondents prefer taking bunkers from suppliers having a mass flow meter installed.
- There is a strong consensus that the supplier's figures are determinant, when a certified and properly installed mass flow meter is used.

To conclude, the overall focus appears to promote all possible levers that change industry standards for the better, building further transparency and trust. It does not seem possible to conclude that economic incentives can change the industry standards alone, i.e. the willing cost against needed investments versus claims size and frequency, does not provide an unambiguous clear financial incentive to drive industry changes for higher standards and further transparency.
Conclusions flowing from context
Industry context: Quality focus and discipline works

The substantial focus on quality, quantity, and compliant bunker licensing has improved transparency in Singapore

- Since the authorities implemented a mandatory use of flowmeters, we have experienced a significant decrease in the amount of quantity claims
- All non-compliant suppliers have relocated their operations to neighboring ports, Hong Kong or similar, where the amount of quantity claims now appears to be rising
- The local authorities in Singapore are providing subsidy schemes for suppliers wanting to install a flow meter
- The Maritime and Port Authority of Singapore (MPA) is involved in case of disputes, and sends a representative onboard the implicated vessel if issues arise
- Despite mandatory use of flowmeters, some customers may still request compensation due to commercial relations
Industry context: Change is possible

- The IMO2020 transition emanated from ideologic incentives and was considered successful because it applied to all actors within the shipping and bunkering industry.

- Up to 2020, there was significant doubt as to the success of the transition, availability of products etc., but it was brought to shame by an industry who came together.

- The key to success was regulation and governance. With these going hand in hand, there was a level playing field aiding the successful implementation.

- This constituted the largest change to the bunkering industry since the change from coal to oil, and it was made possible!
The industry calls for enhanced transparency

• There is a strong incentive to build and solidify trust and compliance in the industry

• The survey shows that market players desire enhanced transparency and control, despite the overall expectation of facing price increases

• Further regulation must be established to create and sustain transparency

• Given the extent and complexity of such industrial measures, financial incentives are difficult to establish and cannot solely justify change by themselves

• This calls for an ideologic approach to “(re)branding” the industry, rather than an economic one

Naturally, it all comes at a price.