



# **2020 Sulphur Cap Challenges and Opportunities**



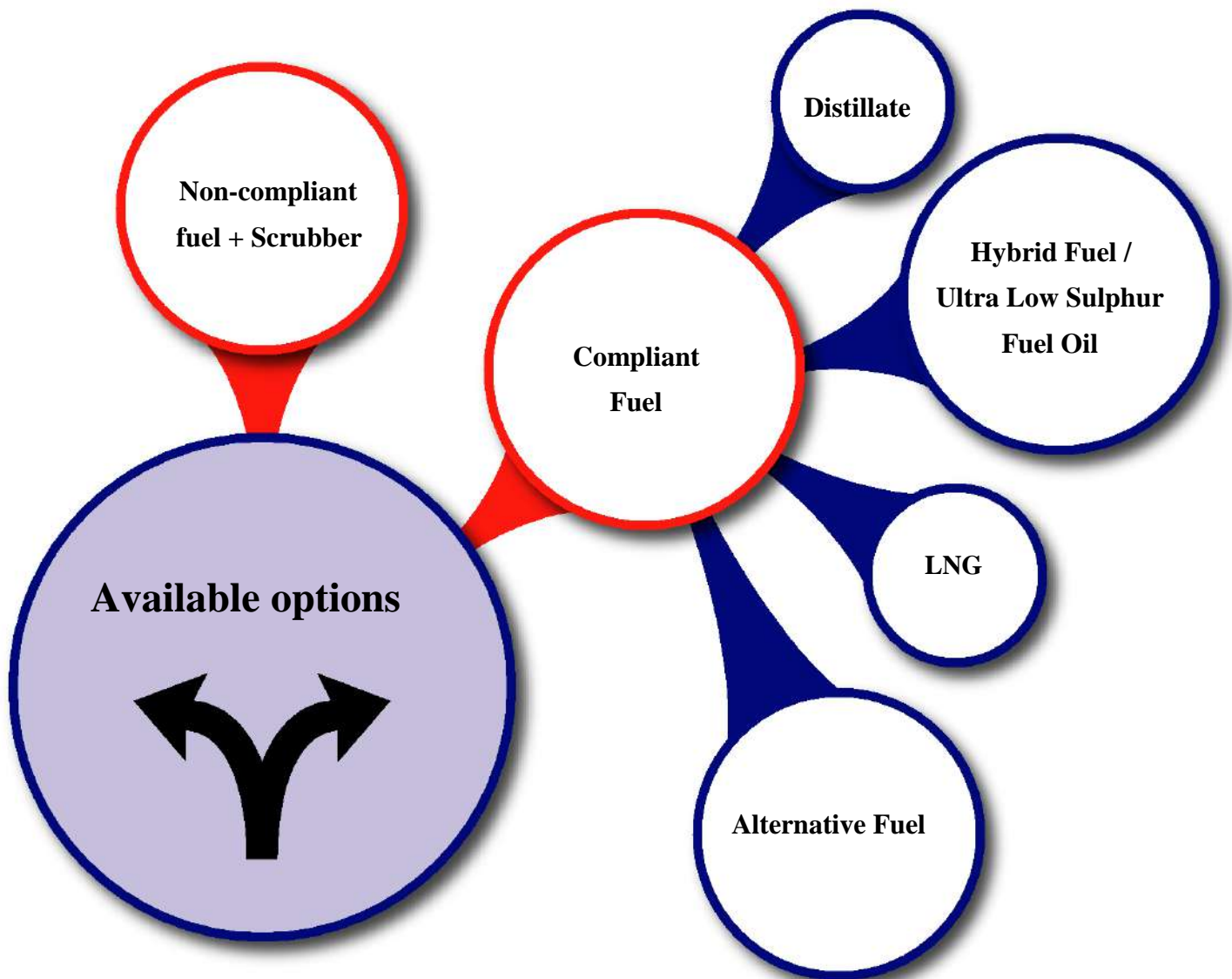
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SUSHE MARINE SERVICES PVT LTD

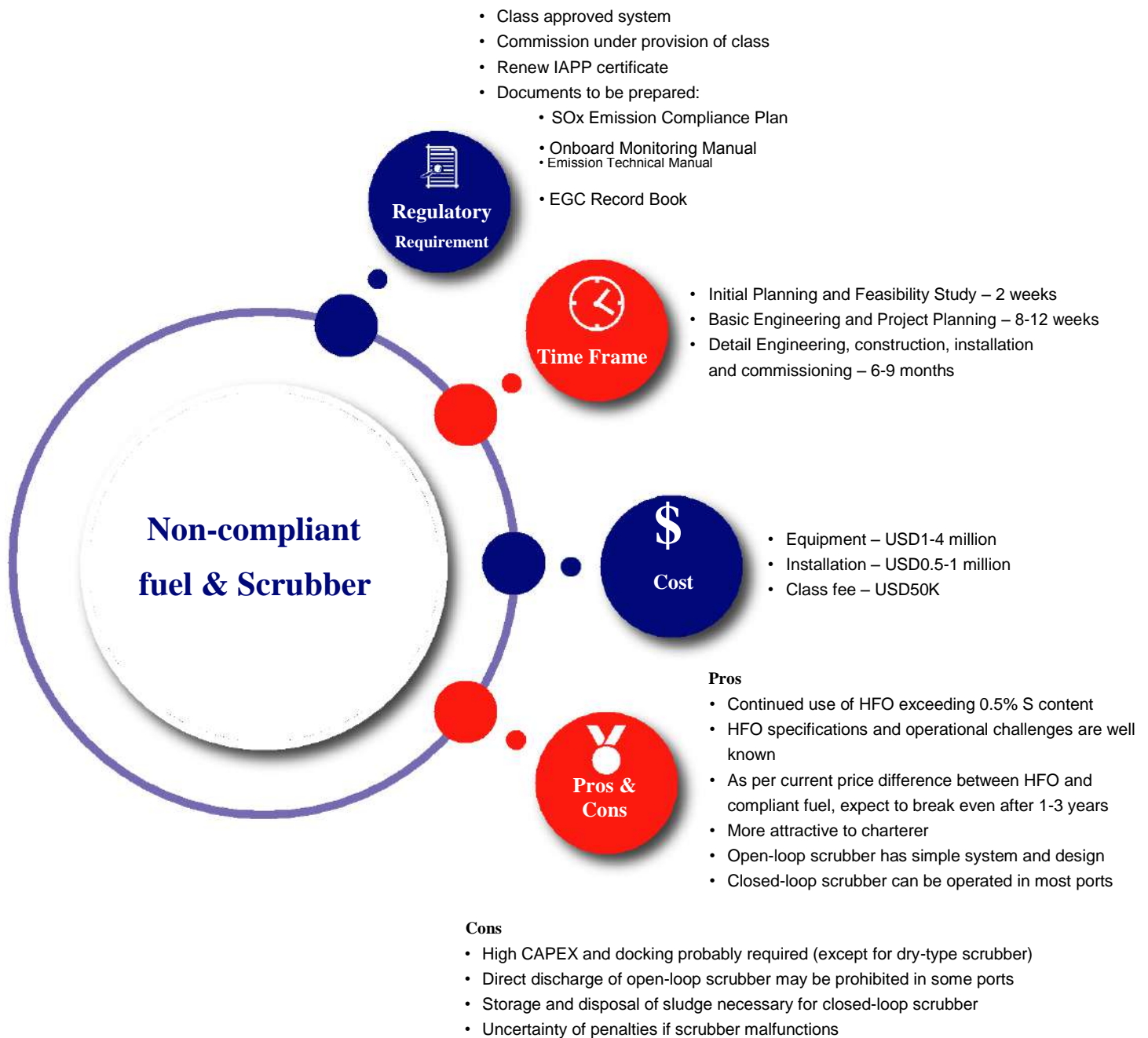
## About the Sulphur Cap & Fuel Options

Due to the latest requirements of MARPOL Annex VI coming into force on 1st January 2020, we will see a reduction in the Sulphur content of Fuel being used onboard, from 3.5% to 0.5% by mass.

Sushe Marine Services Technical team have years of experience in providing reliable and cost efficient services and in finding technical solutions to protect our owners' assets. The team has done extensive research on the various fuel options available to ship owners. This white paper presents an outline of our professional opinion on your available options.

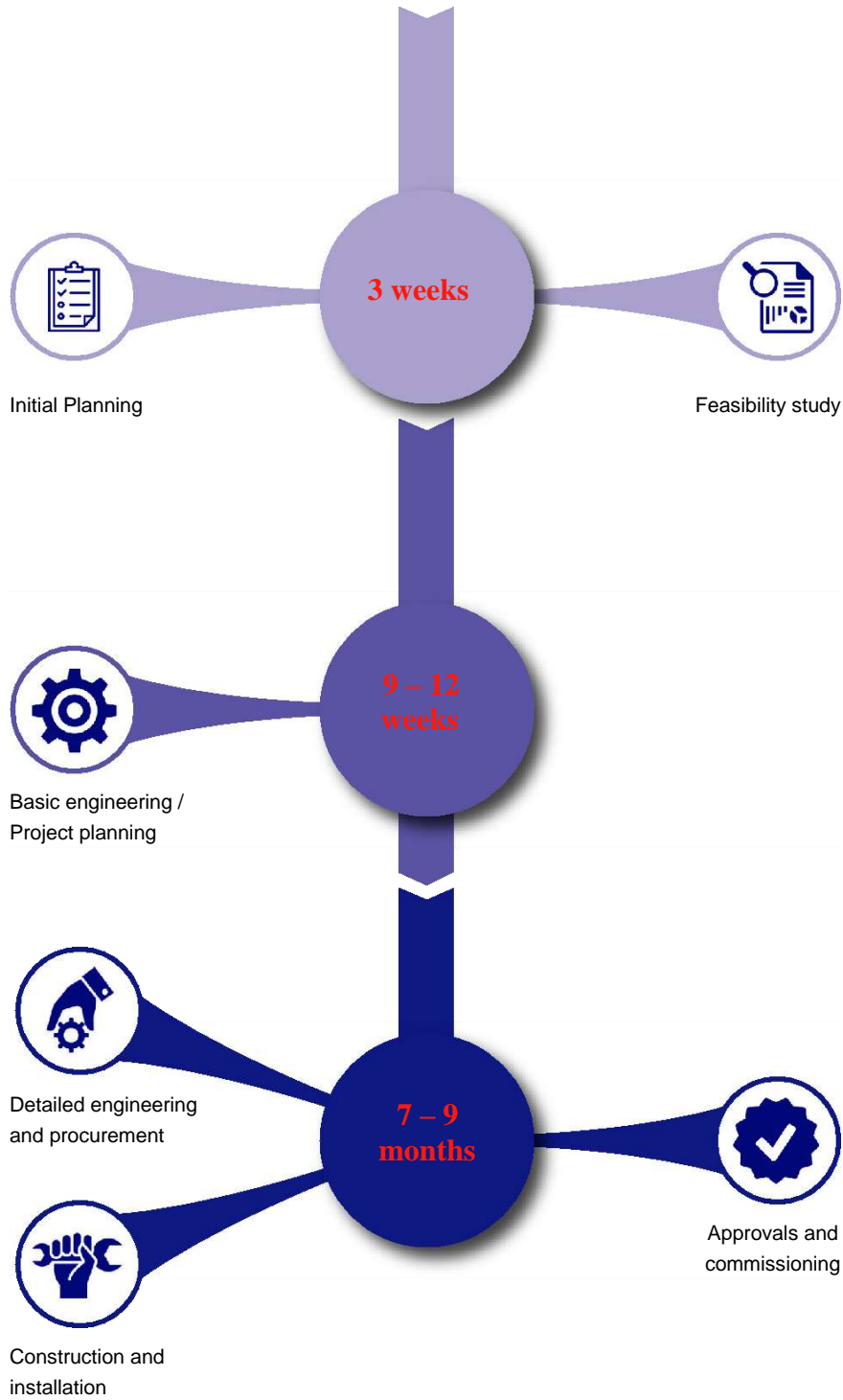


## Compliance with 2020 using Non-compliant fuel & Scrubber

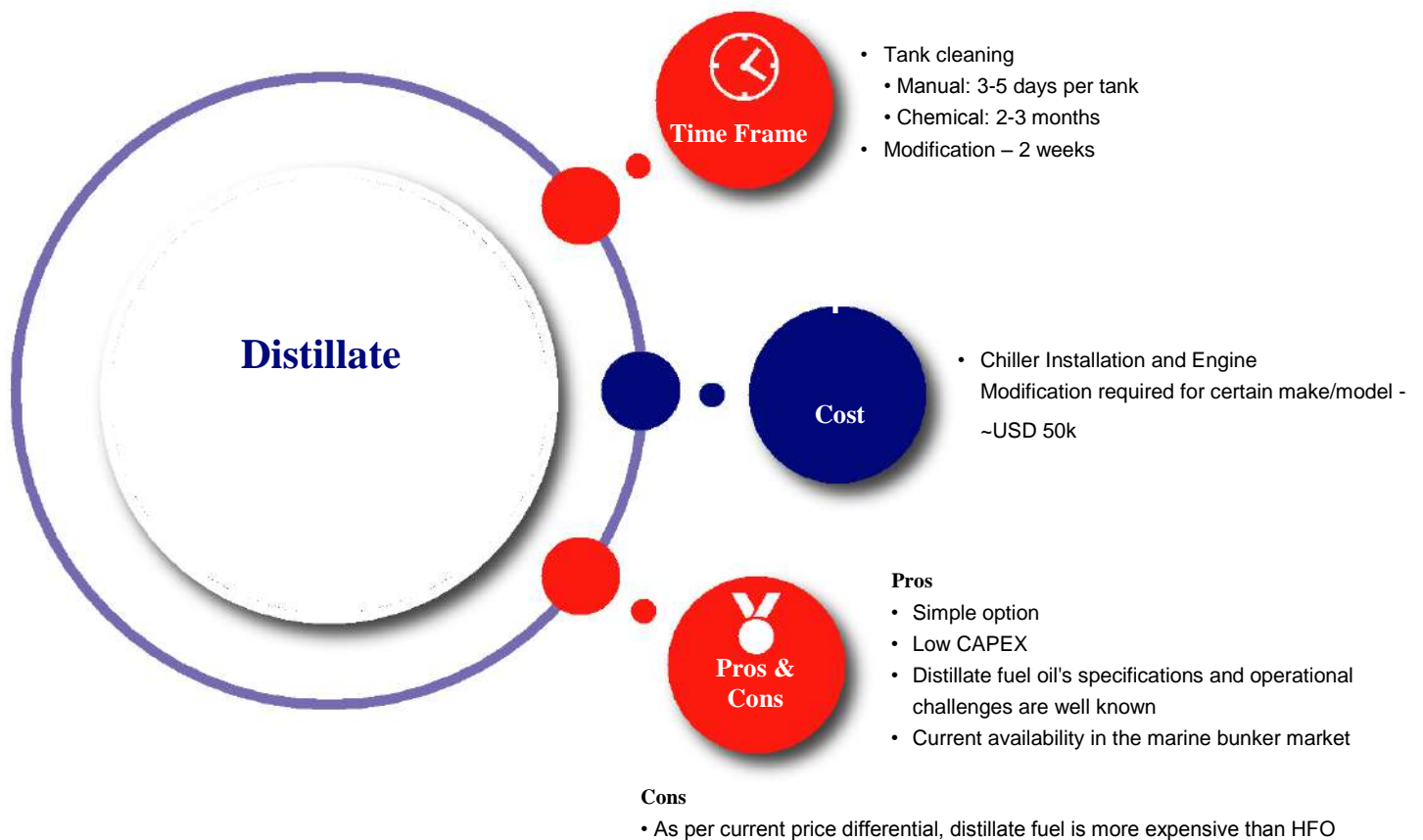


Contact the Sushe Marine Services Technical Team for further information on the above and to assist in the selection of the most suitable scrubber for your ship or fleet.

## Timeline for installation of Scrubber onboard

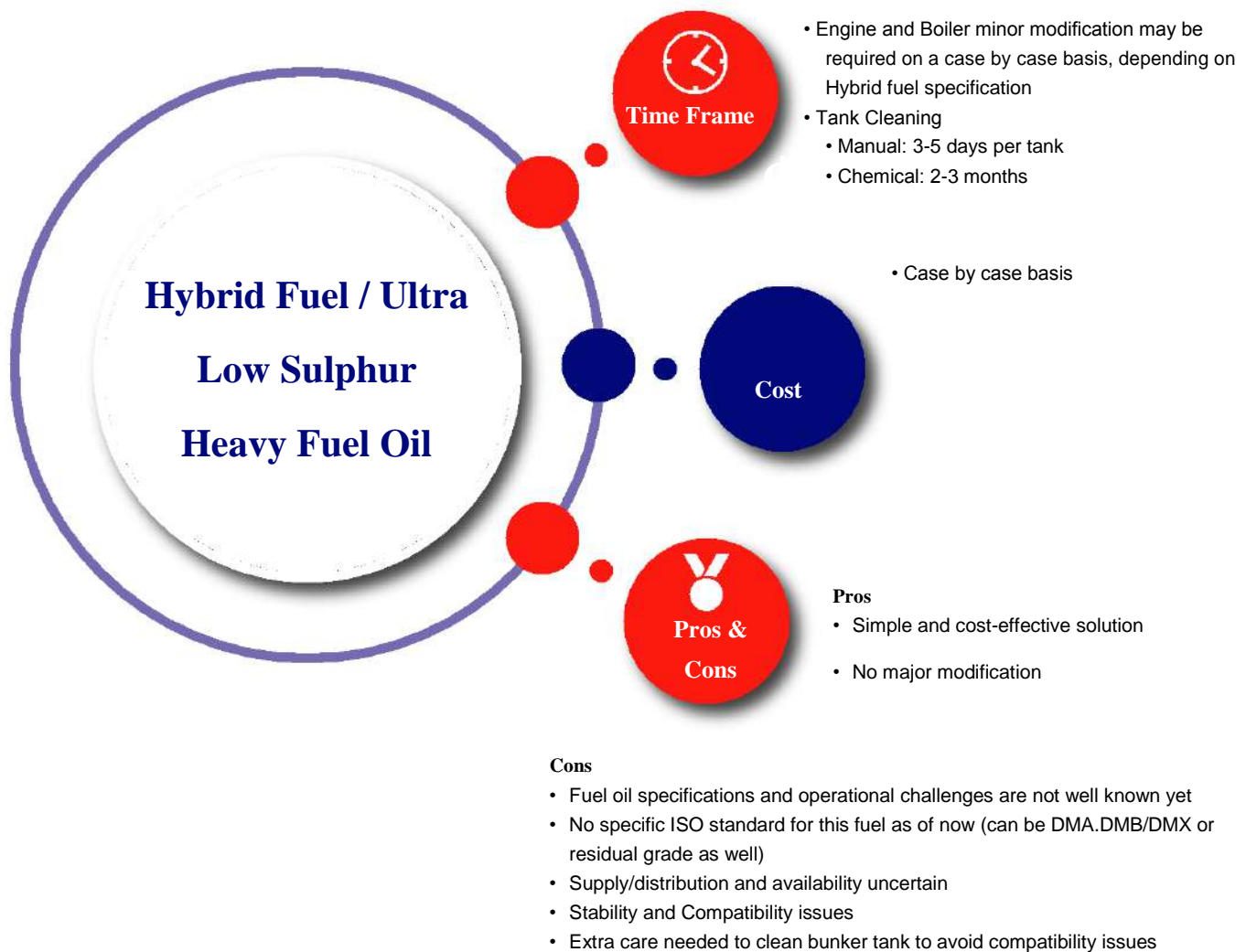


## Compliance with 2020 using Distillate



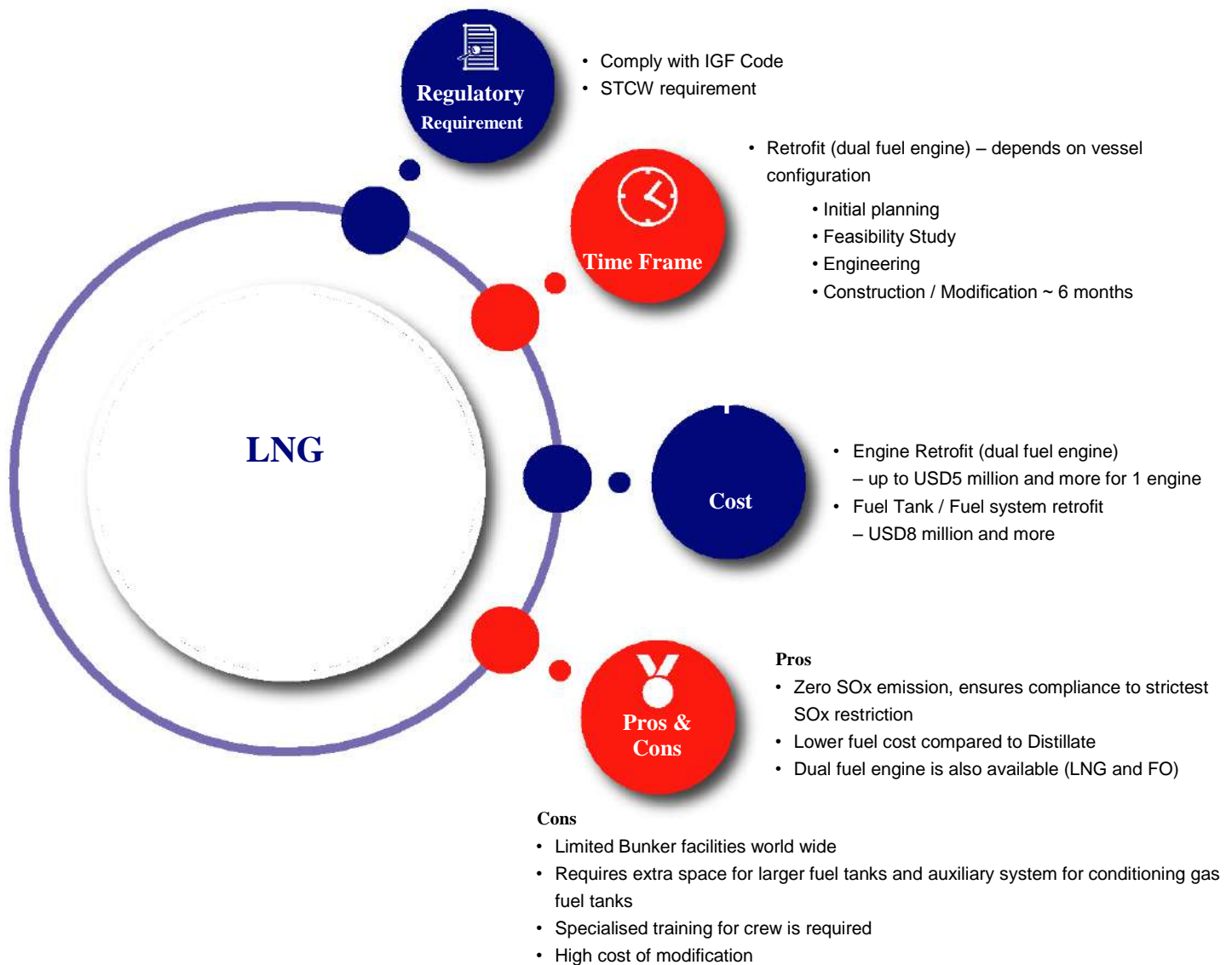
[Contact the Sushe Marine Services Technical Team](#) for further information on preparing your vessel for prolonged operation on Distillate Fuel.

## Compliance with 2020 using Hybrid Fuel / Ultra Low Sulphur Heavy Fuel Oil



Contact Sushe Marine Services Technical Team for further information on preparing your vessel for prolonged operation on Hybrid Fuel / Ultra Low Sulphur Heavy Fuel Oil.

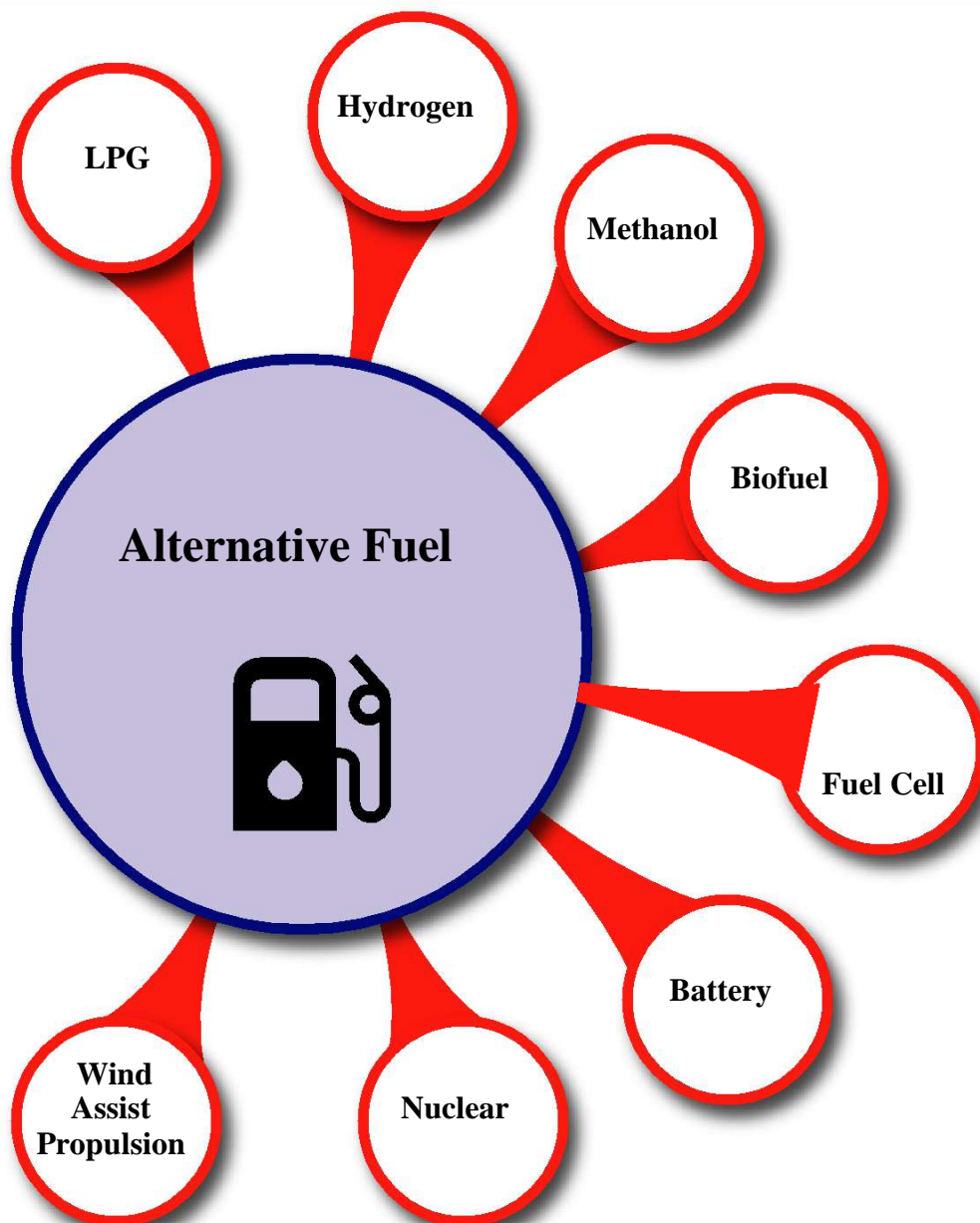
## Compliance with 2020 using LNG



[Contact the Sushe Marine Services Technical Team](#) for further information on preparing your vessel for prolonged operation on LNG.

## Compliance with 2020 using Alternative Fuel

There are plenty of other possible choices for future bunker fuel. However, due to the maturity of technologies at this stage, these can only be applied in niche sectors and for specific trading patterns. Information and knowledge of implementation of these fuel options onboard vessels is currently limited, but may prevail in the future if the Green House Gas limitation comes in.



[Contact the Sushe Marine Services Technical Team](#) for further information and the latest developments on Alternative Fuel.



### Conclusion

With the Sulphur Cap regulation coming into force in 2020, ship owners and operators find themselves in uncharted territory. The decision on how best to operate the vessel while in compliance when 2020 comes around is a purely commercial decision. Unfortunately there are many variables that need to be considered in order to make this decision. Information from various stakeholders such as bunker suppliers, equipment manufactures and financial institutions, which is often conflicting, also has to be taken into account.

There are technological pros and cons for the three main options for compliance. Each one of them can be the preferred option depending on what assumptions one makes on various elements such as HFO to ULSFO to MGO price differential, fuel type availability, equipment price and availability, etc.

Our role as ship manager is to assist you in understanding the technical and operational implications of each option available in order to comply with this regulation. It is then to use our expertise to help to implement the selected option for the vessels under management.

Please do not hesitate to [contact the Sushe Marine Services Technical Team](#) for more information and assistance in finding the best and most economical solution for your vessel / fleet of vessels.

