





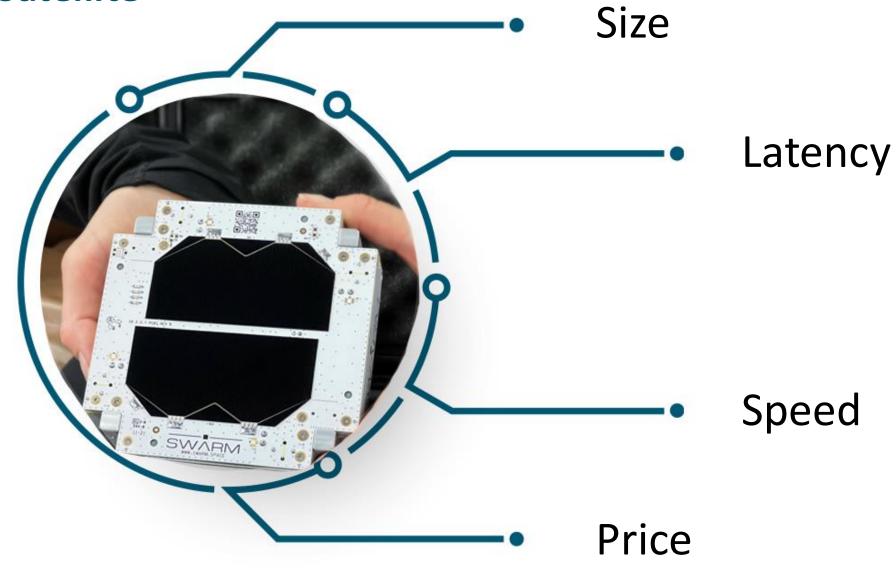








### **Swarm Satellite**





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## Satellite industry impacting shipping

- > 7000 satellites in space (not all comms satellites, and thousands are redundant already posing safety issues)
- Characterised by restructuring, heavy financing, mergers,
- > 39,700 vessels with VSAT
- > 47,000 vessels with L-band
- > 80,000 with minimal connectivity (low speed/no voice services)



# Increased connectivity

- ➤ Linking 5G networks with satellite connectivity
- > Edge computing to reduce data transfer

## **New opportunity**

- Ship to port (just in time)
- Port collaborative decision making
- > Charterer demands



### Digital services are connecting new partners

- Create collaboration with data sharing.
- > Systems such as TM Synergia brings together processes and resources to create flexibility.
- Fleet and vessel monitoring and performance now a readily accessible tool (but be wary of market options).
- Security remains top priority
  - Security creates trust. Trust is everything.
  - Security creates better collaboration (the word of 2022 in maritime).
  - > Trust and collaboration creates opportunity.



