

**PART OF
A BETTER
FUTURE**



BLUE OCEAN SEISMIC SERVICES (BOSS)

What, Why, How and When

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WHAT

Blue Ocean Seismic Services (BOSS)

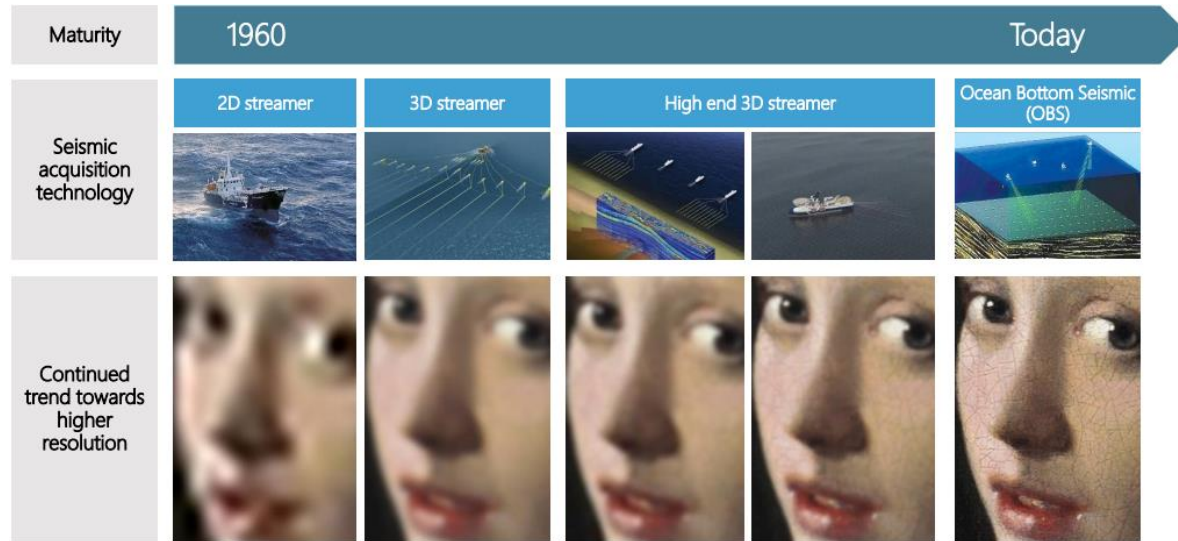
BOSS is a start-up company fully funded by 3 investors



BOSS Vision: Provide revolutionary, long endurance, self repositioning Ocean Bottom Seismic (OBS) nodes for low cost, low carbon seismic acquisition.

WHY Market Disruption

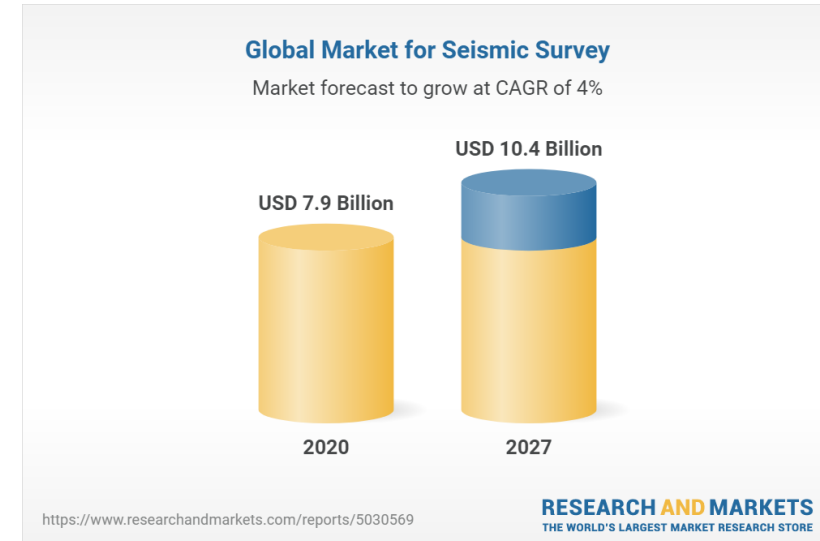
Seismic acquisition technology evolution



The seismic market has evolved towards more advanced technologies - OBS is the next leap

Streamer seismic acquisition delivers data of limited quality in difficult geological settings. Technology has plateaued. Old model clearly not working: CGG and SLB exited the market in 2019, Polarcus out of business in 2021

Seismic acquisition market size



The global seismic acquisition market is estimated at US\$7.9 Billion in 2020 and projected to reach a revised size of US\$10.4 Billion by 2027.

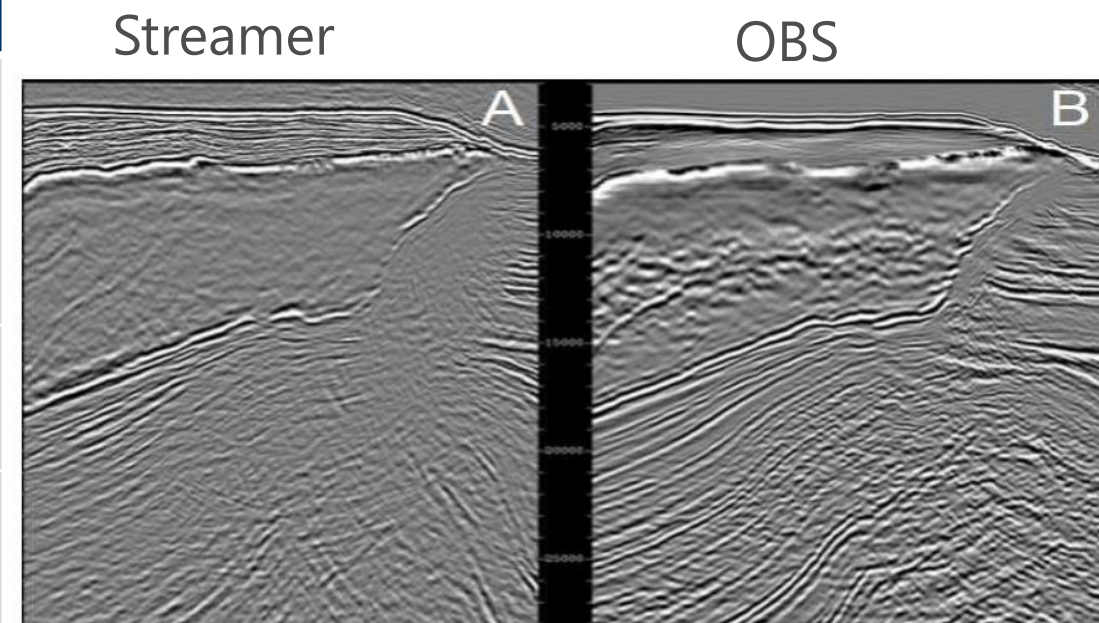
Ocean bottom acquisition delivers superior data quality, but it is slow and very expensive (7-10x). OBS share is about 20% of total market.

Market is ripe for disruption: BOSS technology will make OBS seismic about 70% cheaper and it will be cost competitive with high end 3D

WHY

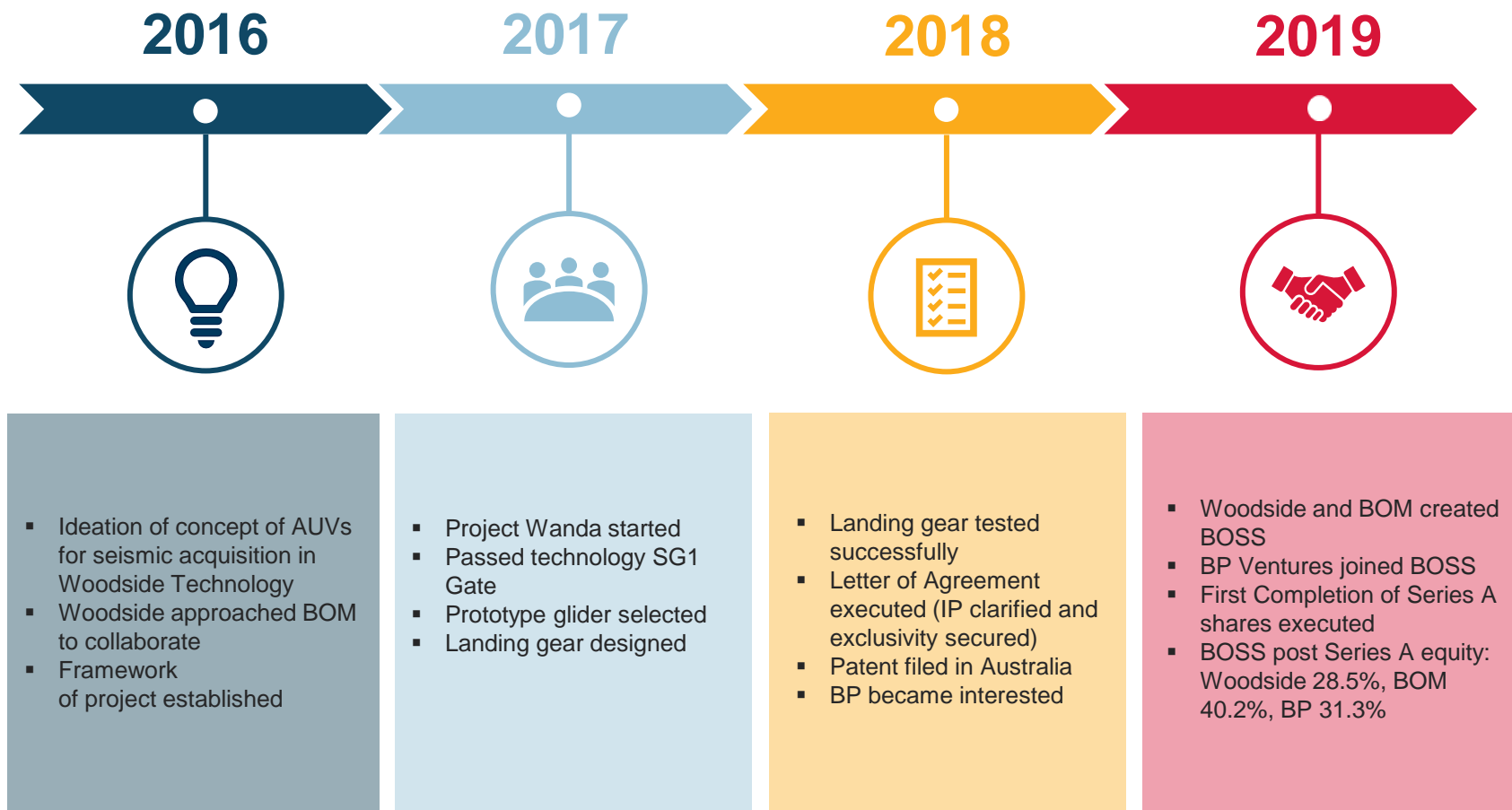
Early Access to Technology

Opportunities	Description
Leverage novel processing techniques	<ul style="list-style-type: none"> OBS data are an ideal companion for novel processing techniques (e.g. full waveform inversion, FWI) <ul style="list-style-type: none"> BP unlocked additional US\$1.2bn resources in US GoM, by combining OBS data and FWI *
Further understand existing Woodside portfolio	<ul style="list-style-type: none"> Seismic data from Sangomar, Browse and Sunrise suffer from noise and distortions due to complex overburden
Reduced reservoir monitoring burden	<ul style="list-style-type: none"> BOSS system will reduce 4D costs surveys, allowing for more frequent repeated surveys (Carbon Capture and Storage opportunity – close to installations)
Unlock regional opportunities	<ul style="list-style-type: none"> BOSS system aims to provide more reliable information in complex geological settings: <ul style="list-style-type: none"> Sub-salt regions (GoM, West Africa, Brazil, Mediterranean); Shallow gas regions (Malaysia, Indonesia)



Atlantis field, US GOM, from Shen et al., 2017

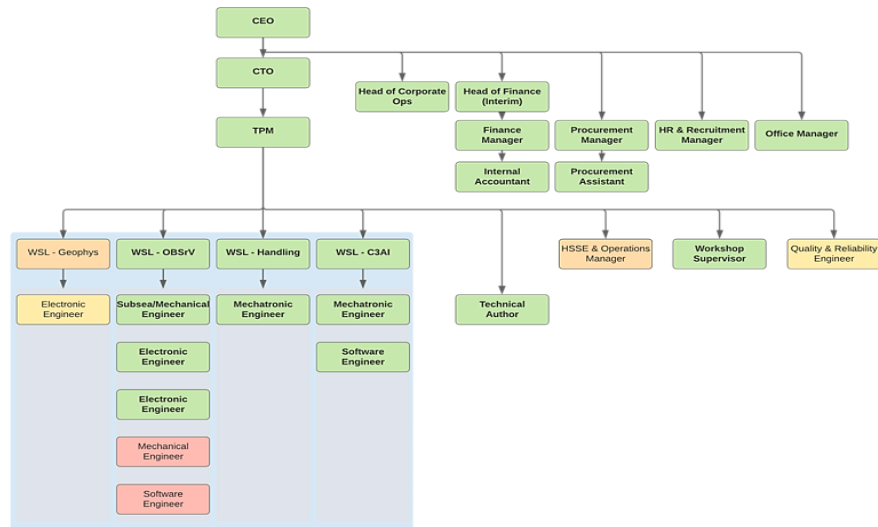
HOW BOSS Timeline





2020-2021 PROGRESS

Recruiting



- Successful recruitment effort during challenging time (COVID)
- The BOSS team has grown from **6** to **35** (5 in Perth)
- Majority of key technical/engineering roles have been filled
- Majority of support roles have been filled
- BOSS has built a strong engineering team with varied backgrounds and expertise

Facilities



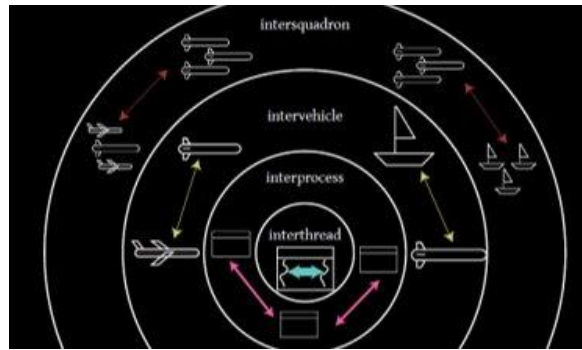
- Farnborough, UK – Office & Engineering Facility
- Perth, Australia – Satellite Office
- NOC, Southampton, UK – Satellite & Engagement Office
- Farnborough engineering fit out includes lab and workshop areas
- Physical and cyber security systems implemented

Vehicle



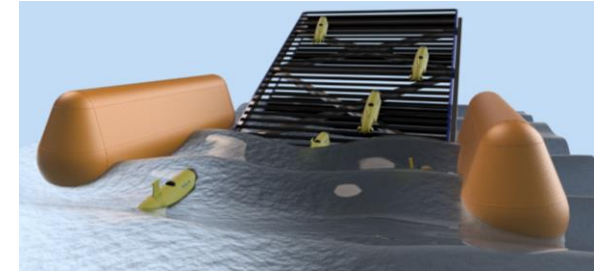
Focus: develop units which are hydrodynamic in flight but stable at the sea bottom.

Communication and System integration



Focus: Integrate communication between master vessel and units. Extend autonomy (and intelligence) of the units once in the water.

Deployment/Retrieval



Focus: design an efficient retrieval system which does not damage the units.