



Technology to map the Nigerian Exclusive Economic Zone of the Gulf of Guinea in support of the UN Ocean Decade

2022 World Hydrography Day

Steve Keedwell

Chief Surveyor & Head Offshore Survey

Peter Halim

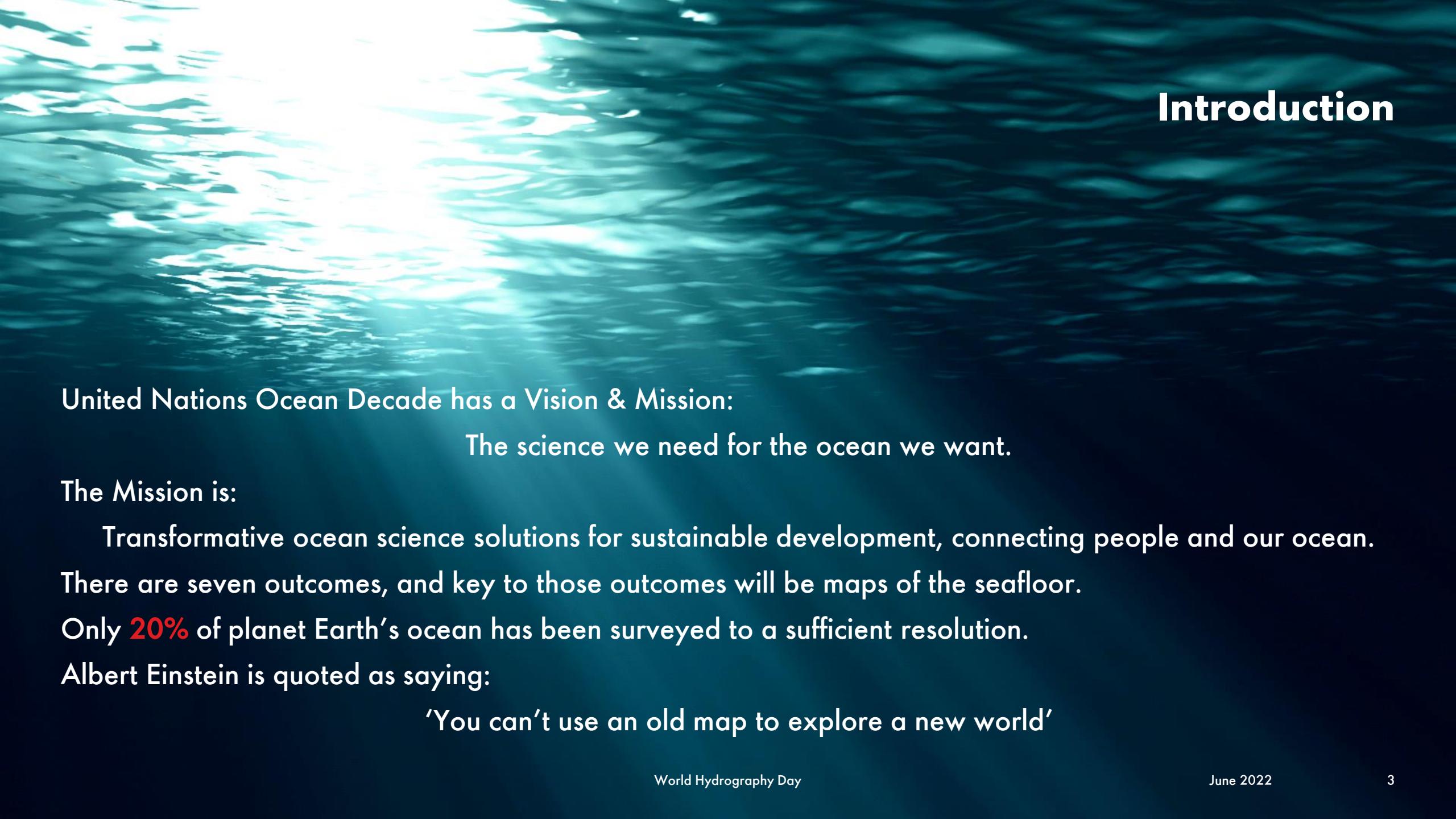
Principal Offshore Surveyor

Definitions & cautionary note

The companies in which Shell plc directly and indirectly owns investments are separate legal entities. In this presentation entitled 'Technology to map the Nigerian Exclusive Economic Zone of the Gulf of Guinea in support of the UN Ocean Decade' "Shell", "Shell Group" and "Group" are sometimes used for convenience where references are made to Shell plc and its subsidiaries in general. Likewise, the words "we", "us" and "our" are also used to refer to Shell plc and its subsidiaries in general or to those who work for them. These terms are also used where no useful purpose is served by identifying the particular entity or entities. "Subsidiaries", "Shell subsidiaries" and "Shell companies" as used in this entitled 'Technology to map the Nigerian Exclusive Economic Zone of the Gulf of Guinea in support of the UN Ocean Decade' refer to entities over which Shell plc either directly or indirectly has control. Entities and unincorporated arrangements over which Shell has joint control are generally referred to as "joint ventures" and "joint operations", respectively. Entities over which Shell has significant influence but neither control nor joint control are referred to as "associates". The term "Shell interest" is used for convenience to indicate the direct and/or indirect ownership interest held by Shell in an entity or unincorporated joint arrangement, after exclusion of all third-party interest.

This presentation entitled 'Technology to map the Nigerian Exclusive Economic Zone of the Gulf of Guinea in support of the UN Ocean Decade' contains forward-looking statements (within the meaning of the U.S. Private Securities Litigation Reform Act of 1995) concerning the financial condition, results of operations and businesses of Shell. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in these statements. Forward-looking statements include, among other things, statements concerning the potential exposure of Shell to market risks and statements expressing management's expectations, beliefs, estimates, forecasts, projections and assumptions. These forward-looking statements are identified by their use of terms and phrases such as "aim", "ambition", "anticipate", "believe", "could", "estimate", "expect", "goals", "intend", "may", "milestones", "objectives", "outlook", "plan", "probably", "project", "risks", "schedule", "seek", "should", "target", "will" and similar terms and phrases. There are a number of factors that could affect the future operations of Shell and could cause those results to differ materially from those expressed in the forward-looking statements included in this entitled 'Technology to map the Nigerian Exclusive Economic Zone of the Gulf of Guinea in support of the UN Ocean Decade', including (without limitation): (a) price fluctuations in crude oil and natural gas; (b) changes in demand for Shell's products; (c) currency fluctuations; (d) drilling and production results; (e) reserves estimates; (f) loss of market share and industry competition; (g) environmental and physical risks; (h) risks associated with the identification of suitable potential acquisition properties and targets, and successful negotiation and completion of such transactions; (i) the risk of doing business in developing countries and countries subject to international sanctions; (j) legislative, judicial, fiscal and regulatory developments including regulatory measures addressing climate change; (k) economic and financial market conditions in various countries and regions; (l) political risks, including the risks of expropriation and renegotiation of the terms of contracts with governmental entities, delays or advancements in the approval of projects and delays in the reimbursement for shared costs; (m) risks associated with the impact of pandemics, such as the COVID-19 (coronavirus) outbreak; and (n) changes in trading conditions. No assurance is provided that future dividend payments will match or exceed previous dividend payments. All forward-looking statements contained in this entitled 'Technology to map the Nigerian Exclusive Economic Zone of the Gulf of Guinea in support of the UN Ocean Decade' are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Readers should not place undue reliance on forward-looking statements. Additional risk factors that may affect future results are contained in Shell plc's Form 20-F for the year ended December 31, 2021 (available at www.shell.com/investor and www.sec.gov). These risk factors also expressly qualify all forward-looking statements contained in this presentation entitled 'Technology to map the Nigerian Exclusive Economic Zone of the Gulf of Guinea in support of the UN Ocean Decade' and should be considered by the reader. Each forward-looking statement speaks only as of the date of this entitled 'Technology to map the Nigerian Exclusive Economic Zone of the Gulf of Guinea in support of the UN Ocean Decade', 21st June 2022. Neither Shell plc nor any of its subsidiaries undertake any obligation to publicly update or revise any forward-looking statement as a result of new information, future events or other information. In light of these risks, results could differ materially from those stated, implied or inferred from the forward-looking statements contained in this presentation entitled 'Technology to map the Nigerian Exclusive Economic Zone of the Gulf of Guinea in support of the UN Ocean Decade'. The content of websites referred to in this presentation entitled 'Technology to map the Nigerian Exclusive Economic Zone of the Gulf of Guinea in support of the UN Ocean Decade' does not form part of this presentation entitled 'Technology to map the Nigerian Exclusive Economic Zone of the Gulf of Guinea in support of the UN Ocean Decade'.

We may have used certain terms, such as resources, in this presentation entitled 'Technology to map the Nigerian Exclusive Economic Zone of the Gulf of Guinea in support of the UN Ocean Decade' that the United States Securities and Exchange Commission (SEC) strictly prohibits us from including in our filings with the SEC. Investors are urged to consider closely the disclosure in our Form 20-F, File No 1-32575, available on the SEC website www.sec.gov



Introduction

United Nations Ocean Decade has a Vision & Mission:

The science we need for the ocean we want.

The Mission is:

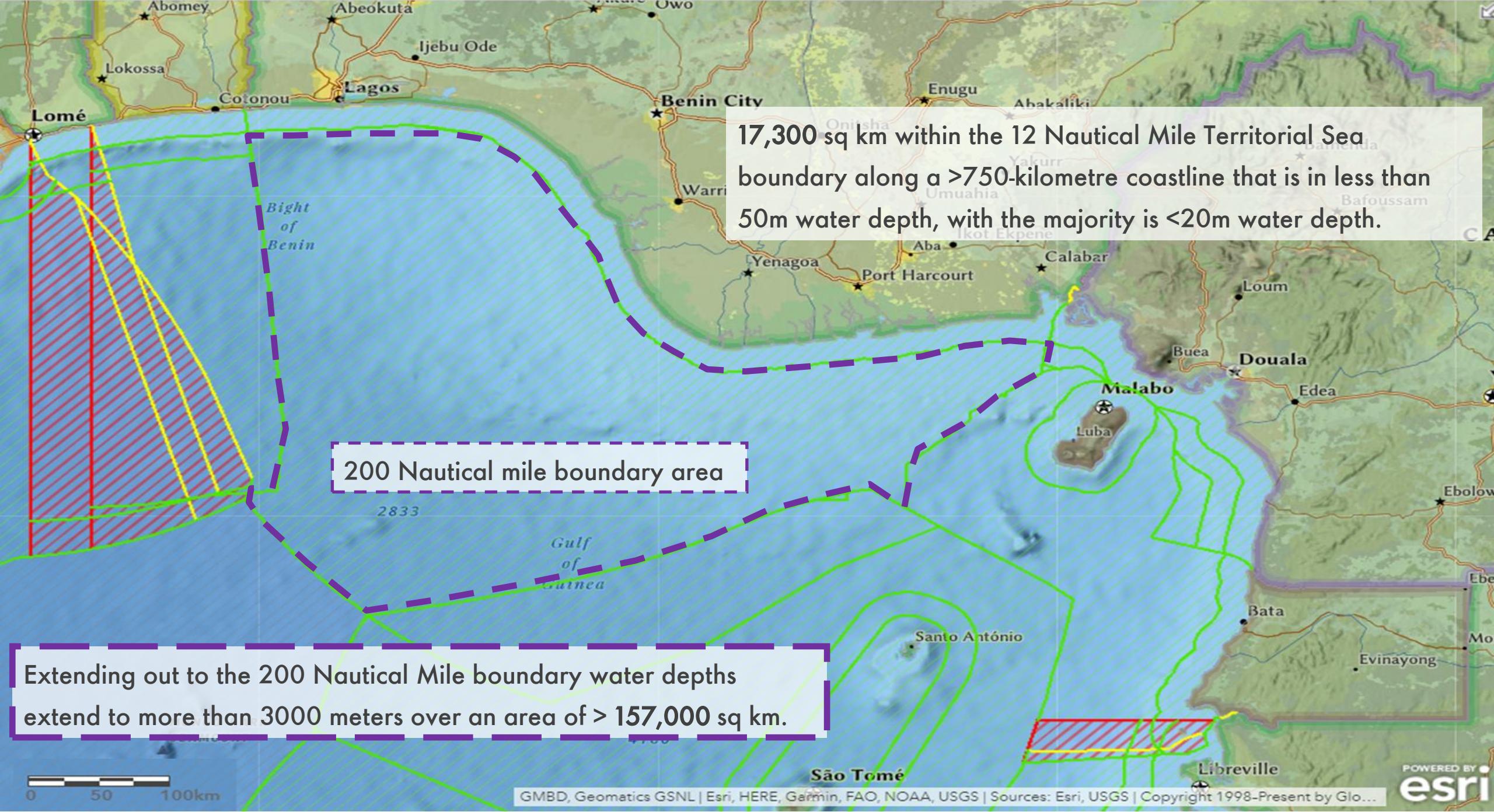
Transformative ocean science solutions for sustainable development, connecting people and our ocean.

There are seven outcomes, and key to those outcomes will be maps of the seafloor.

Only **20%** of planet Earth's ocean has been surveyed to a sufficient resolution.

Albert Einstein is quoted as saying:

'You can't use an old map to explore a new world'





Shell OCEAN DISCOVERY XPRIZE®

Getting to the Bottom of Our Ocean.

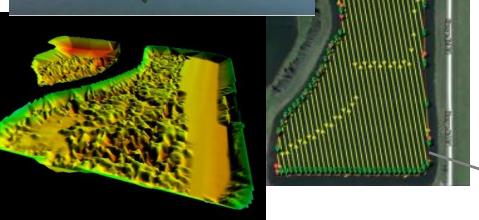
UNITED KINGDOM

1. Pipeline inspections
2. Pipeline leak detection
3. Seafloor survey (NOV) for CCS



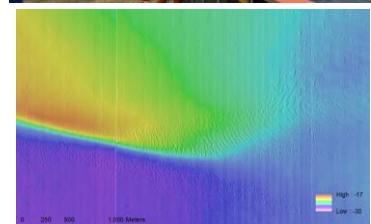
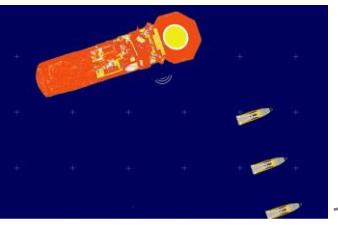
CANADA

Pond surveys



MAURITANIA

Bathymetry survey



NORWAY

2x Subsidence Sensor Data download)



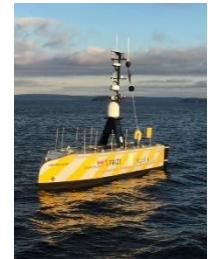
NETHERLANDS

1. Pipeline inspections
2. Pipeline route survey



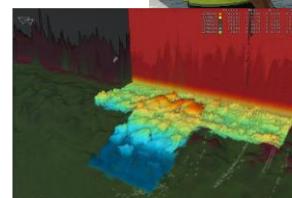
GREECE

Shell Ocean Discovery XPRIZE



GIBRALTAR

Quay wall inspection



NIGERIA

Seismic survey



Challenges & Opportunities

Water depth range

- Varied platforms
- Sensor coverage

Platforms & Sensors

- Robotics
- Resolution
- Regulation

Marine Geospatial Platform

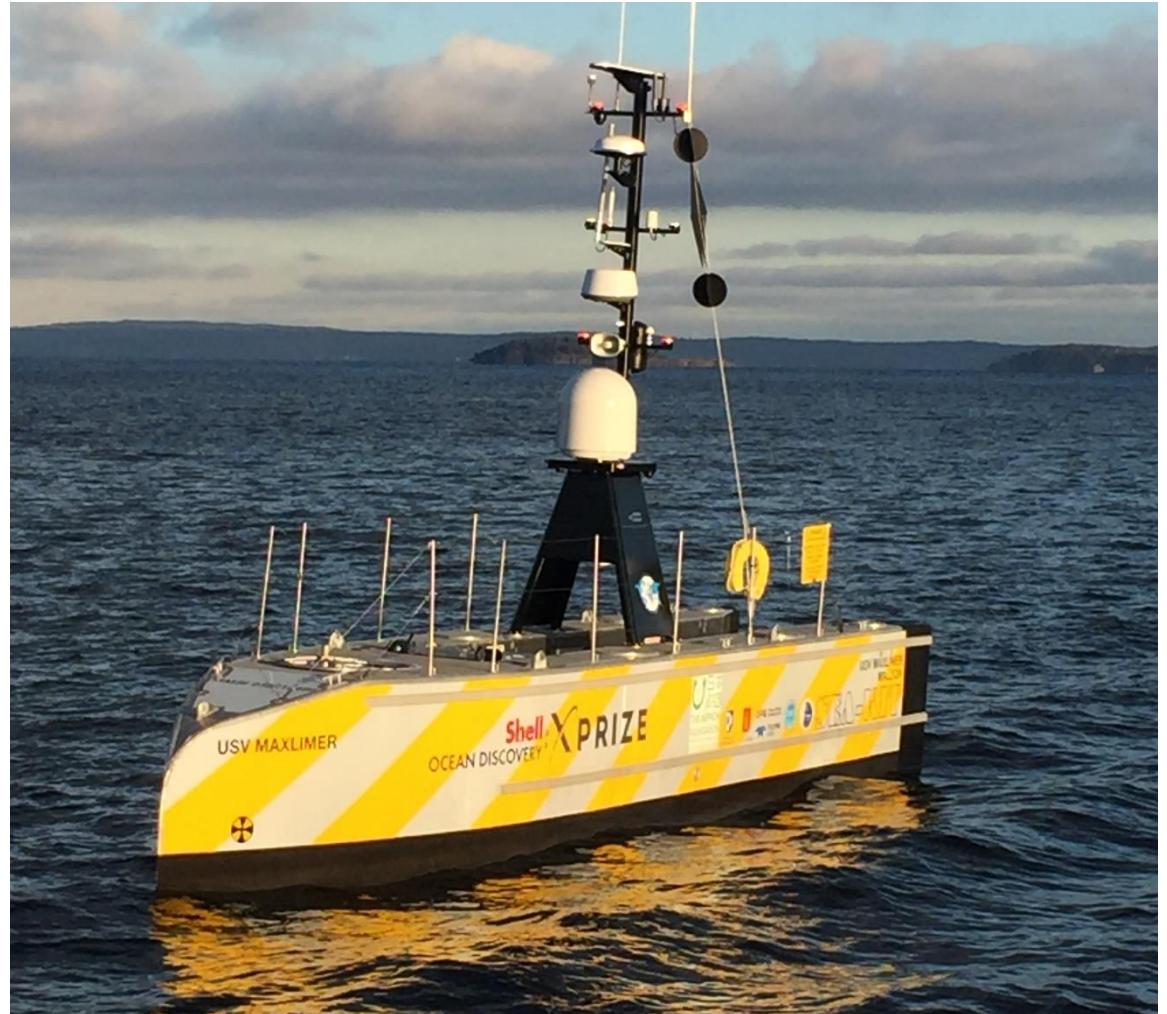
- Management
- Access and sharing of data

Benefits

- Blue economy
- UN Ocean Decade mission

Conclusion

- Hydrography is foundational in supporting the Blue Economy and the UN Ocean Decade Vision.
- Nigeria has a large offshore area that ranges from riverine, nearshore to deep water.
- A systematic program is required to consolidate existing data and fill in the missing gaps anchored by the Charting Authority to a common standard (IHO) under a marine geospatial platform.
- Technology continues to evolve, with large strides in Maritime Autonomous Surface Ships, sensors and software.
- Other options, such as Satellite Derived Bathymetry (Optical & LIDAR) should be considered.
- Deployment of technology has to be responsible and collaborative with regulators.



Questions and Answers

A large, stylized graphic consisting of the letters 'Q' and 'A' joined by an ampersand (&). The letters are filled with white space and have a thick yellow outline. They are set against a solid yellow background.

