



Energy Technology Outlook: The Decade Ahead

Energy Workforce & Technology Council

Maynard Holt, Founder & CEO

January 24, 2024



-
- What is Veriten?
 - A Complicated Energy Equation
 - The Energy Transition Needs to Transition
 - Our Own Investing
 - Ten Year Outlook

Veriten Overview

Our Team



Maynard Holt
Founder & CEO



Jeff Tillery
Partner, COO



Todd Scruggs
Partner, Investment Opportunities



Mike Bradley
Partner, Energy Market Strategy



Arjun Murti
Partner



Tammy Duong
Chief of Staff & Marketing Director



Albert De La Portilla
Creative Director



Chanel Vanderzyde
Communications & Marketing Systems Manager



Brett Rampal
Director, Nuclear & Power Strategy



Ryan Zorn
Senior Contributor



Marc Davidson
Technical Advisor



Gun Kim
Director



Taylor Neal
Director



Nick Lance
COBT Content Manager



Lovett Shaper
Associate



Phillip Boltan
Analyst

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Co-founder and Former Chairman & CEO
of Plains All American Pipeline, L.P.



Leslie Beyer
Former CEO, Energy Workforce &
Technology Council



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Managing Director of the Natural Gas
Initiative (NGI) at Stanford University



Deborah Byers
Former Partner, E&Y



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Former CFO, Anadarko Petroleum



Jason Cansler
CEO, Birch Resources

Tapping into the World's Leading Thinkers

Thought Provoking Weekly Energy Show: Close Of Business Tuesday ("COBT")

>230

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Advisor to the Chairman
Kleiner Perkins

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Former White House Chief of Staff and
United States Secretary of the Treasury

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Rob Kaplan
Former President and CEO
Federal Reserve Bank of Dallas

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Maria Korsnick
President and Chief Executive Officer
Nuclear Energy Institute

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Katherine Blunt
Author, "California Burning"
Renewables & Utilities Reporter,
The Wall Street Journal

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Jigar Shah
Director, U.S. Department of Energy
Loan Programs Office

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NJ Ayuk
Executive Chairman, African Energy Chamber
CEO, Centurion Law Group

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Vice Chairman and Managing Director
Moelis & Company

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Jesse Jenkins, Ph.D.
Assistant Professor of Mechanical and
Aerospace Engineering and the Andlinger
Center for Energy and the Environment
Princeton University

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Harold Hamm
Executive Chairman, Continental Resources
Author, "Game Changer: Our Fifty-Year Mission
to Secure America's Energy Independence"

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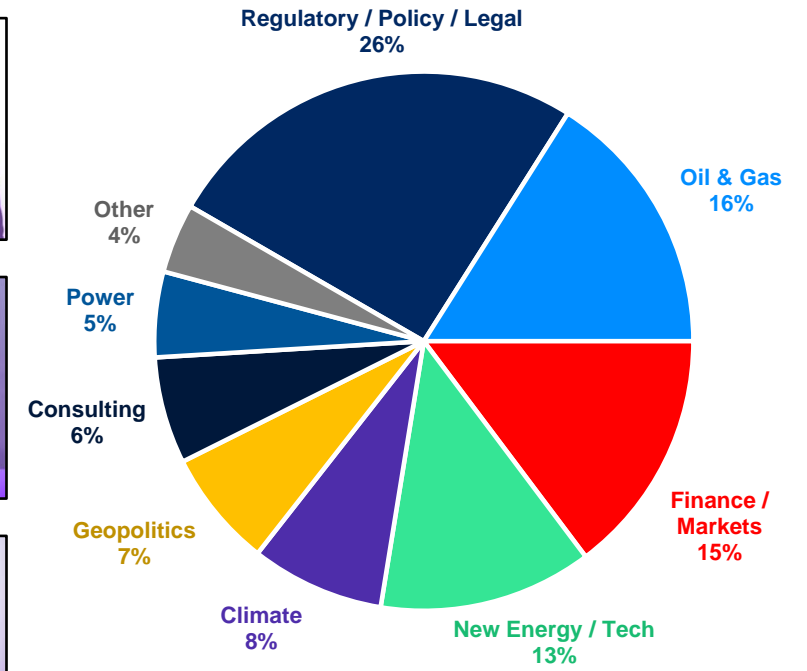
Mayor Sylvester Turner
Mayor of Houston

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General David H. Petraeus
US Army, Ret.
Partner, KKR and Chairman of the
KKR Global Institute

COBT Guest Breakdown



Our Desire is to Talk to Anyone and Everyone with an Important View to Share





Private Content, Custom Research, Investment Ideas, Strategic Advice and Future of Energy Community

Thought Partners

IOCs

**Onshore, Offshore and Diversified E&Ps
Domestic & International Service Providers**

LNG Exporters

Infrastructure & Downstream

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Electricity Providers

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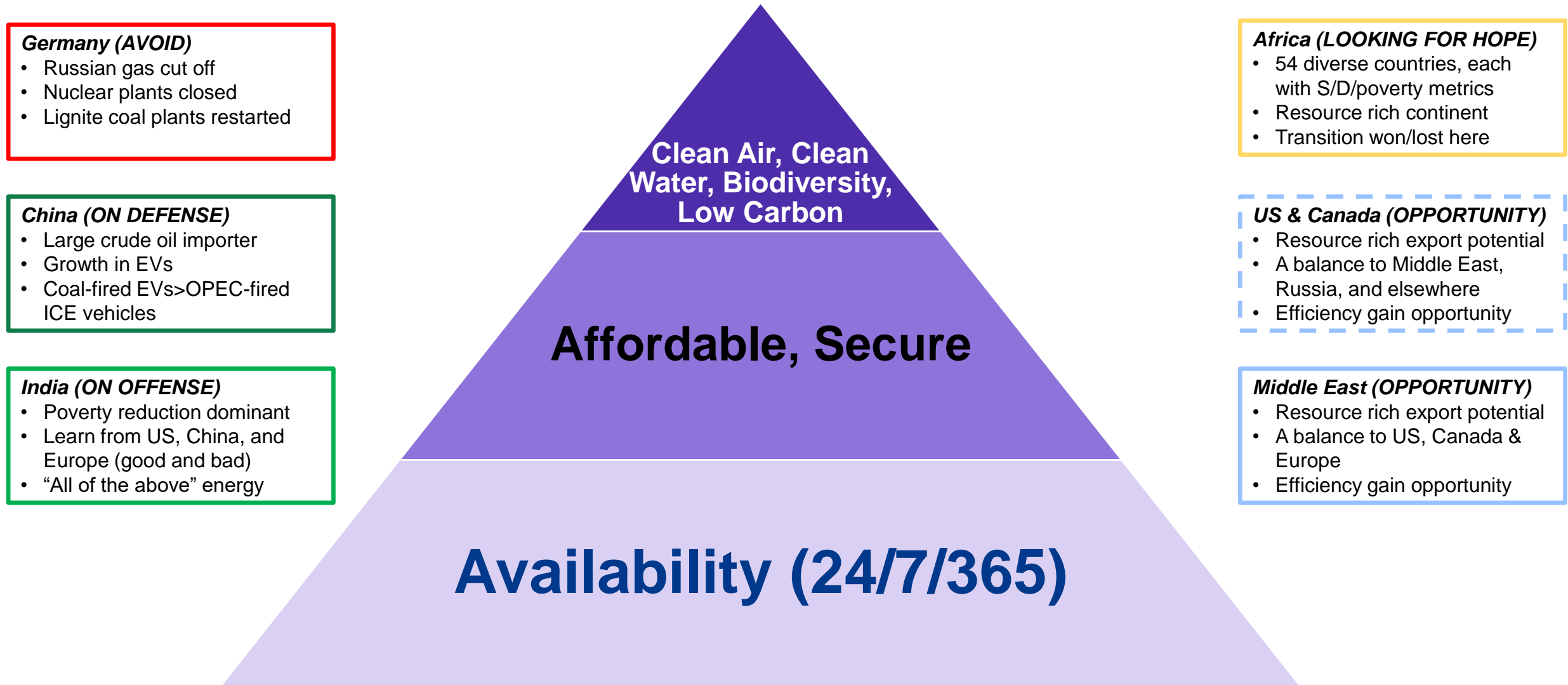
Family Offices

Current & Former Energy Executives

Entrepreneurs

Financial Institutions

The Energy Transition Needs to Transition



The Lucky 1 Billion People

(United States, Western Europe, Canada, Japan, Australia, New Zealand)

Oil Demand
(mn b/d)

41

Oil Demand
per Capita

13.3

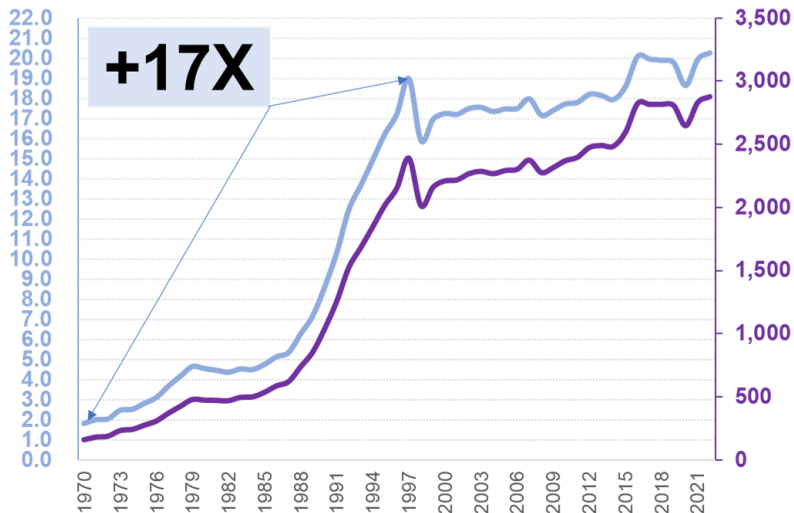
The Other 7 Billion People

59

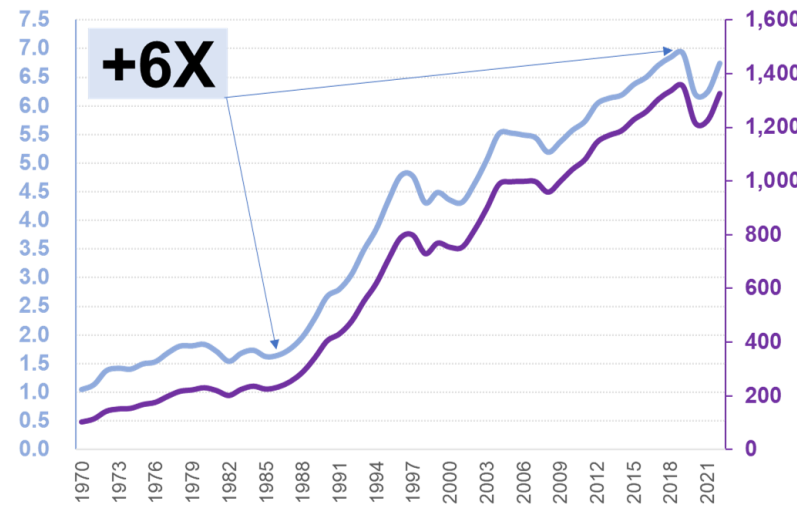
3.2

per capita (lhs), absolute, thousands b/d (rhs)

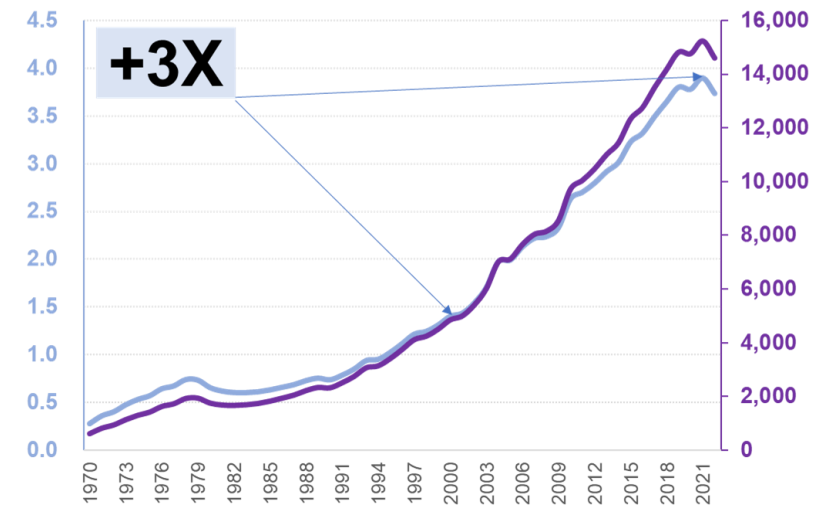
SOUTH KOREA



THAILAND



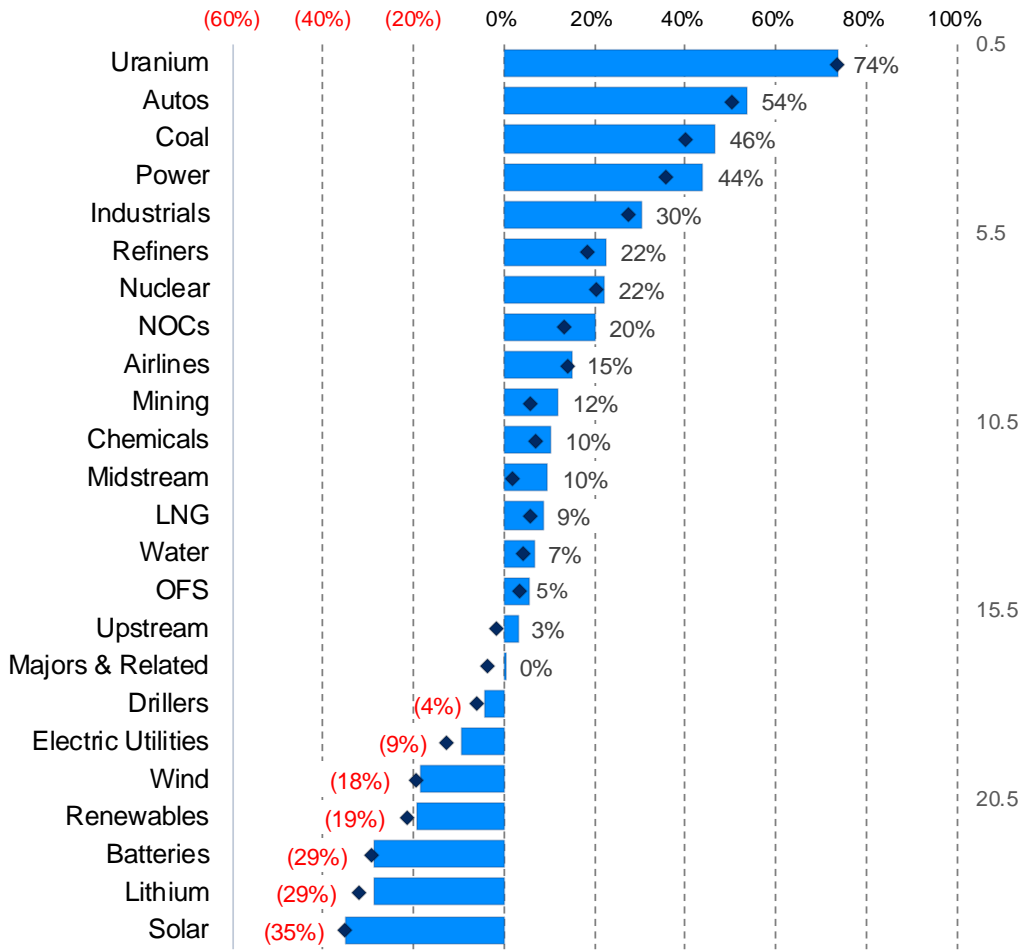
CHINA



2023 Energy Sector Returns

2023 Industry Returns (cap-weighted)

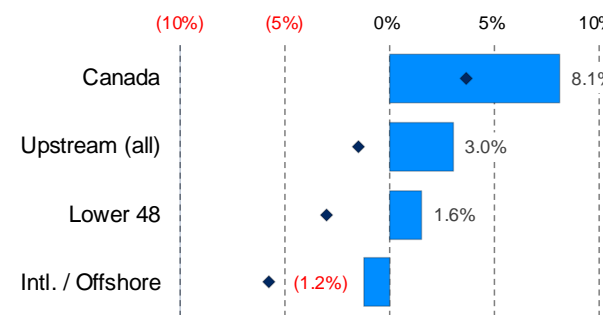
■ Total Shareholder Return ◆ Share Price Performance



Subsector Returns Detail

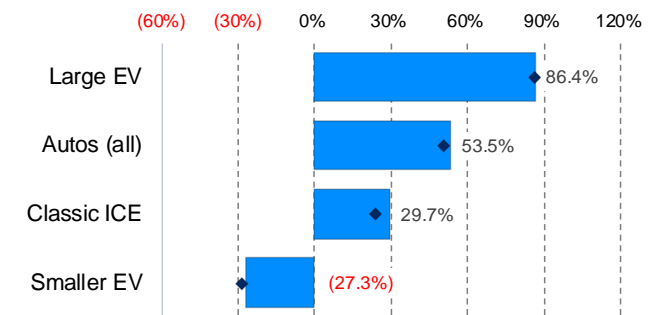
2023 Upstream Returns

■ Total Shareholder Return ◆ Share Price Performance



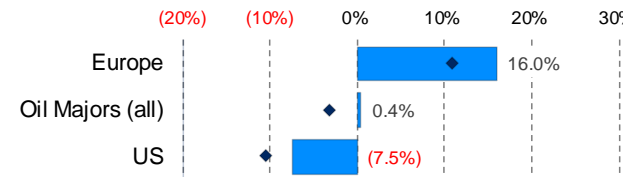
2023 Autos Returns

■ Total Shareholder Return ◆ Share Price Performance



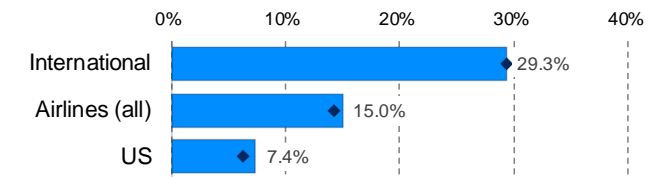
2023 Majors & Related Returns

■ Total Shareholder Return ◆ Share Price Performance



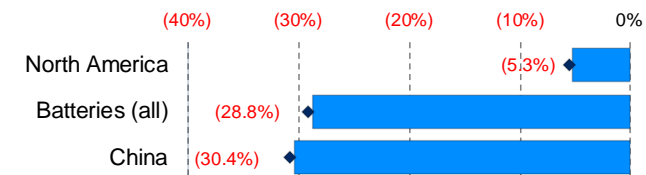
2023 Airlines Returns

■ Total Shareholder Return ◆ Share Price Performance



2023 Batteries Returns

■ Total Shareholder Return ◆ Share Price Performance



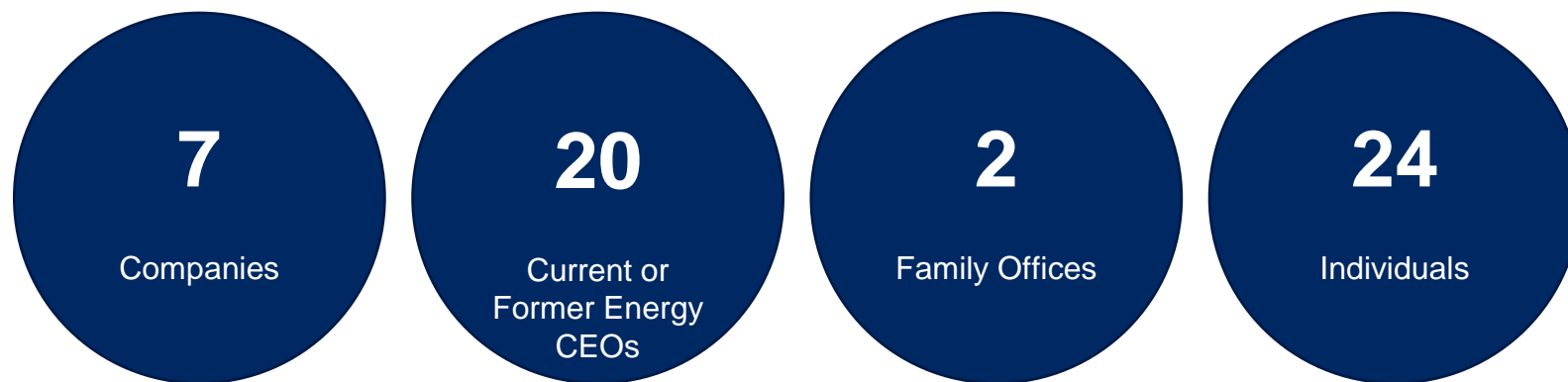
Note: Analysis includes 382 publicly listed companies: Airlines (16), Autos (18), Batteries (16), Chemicals (15), Coal (8), Drillers (7), Electric Utilities (25), Industrials (23), Lithium (14), LNG (8), Majors & Related (9), Midstream (21), Mining (9), NOCs (9), Nuclear (2), OFS (33), Power (6), Refiners (10), Renewables (23), Solar (17), Upstream (67), Uranium (6), Water (13) and Wind (7)
Source: FactSet as of 12/31/2023

NexTen Investing & Energy Technology Outlook

Veriten has established an investment vehicle (“NexTen”) to scope the greater energy landscape for attractive energy transition opportunities that are impactful, profitable, and long-term viable energy solutions over the next ten years

- With a focus on patience and commitment to high quality returns, Veriten screens for opportunities that help meet the world’s sustainable energy needs in the next ten years
- Portfolio Attributes:
 - Thematically driven
 - Diversified across investment stage
 - Well-vetted with our network
 - De-risked with an opportunity for Veriten to positively impact through the broad Veriten network

LPs Committed To Date



~\$85mm currently committed to the fund

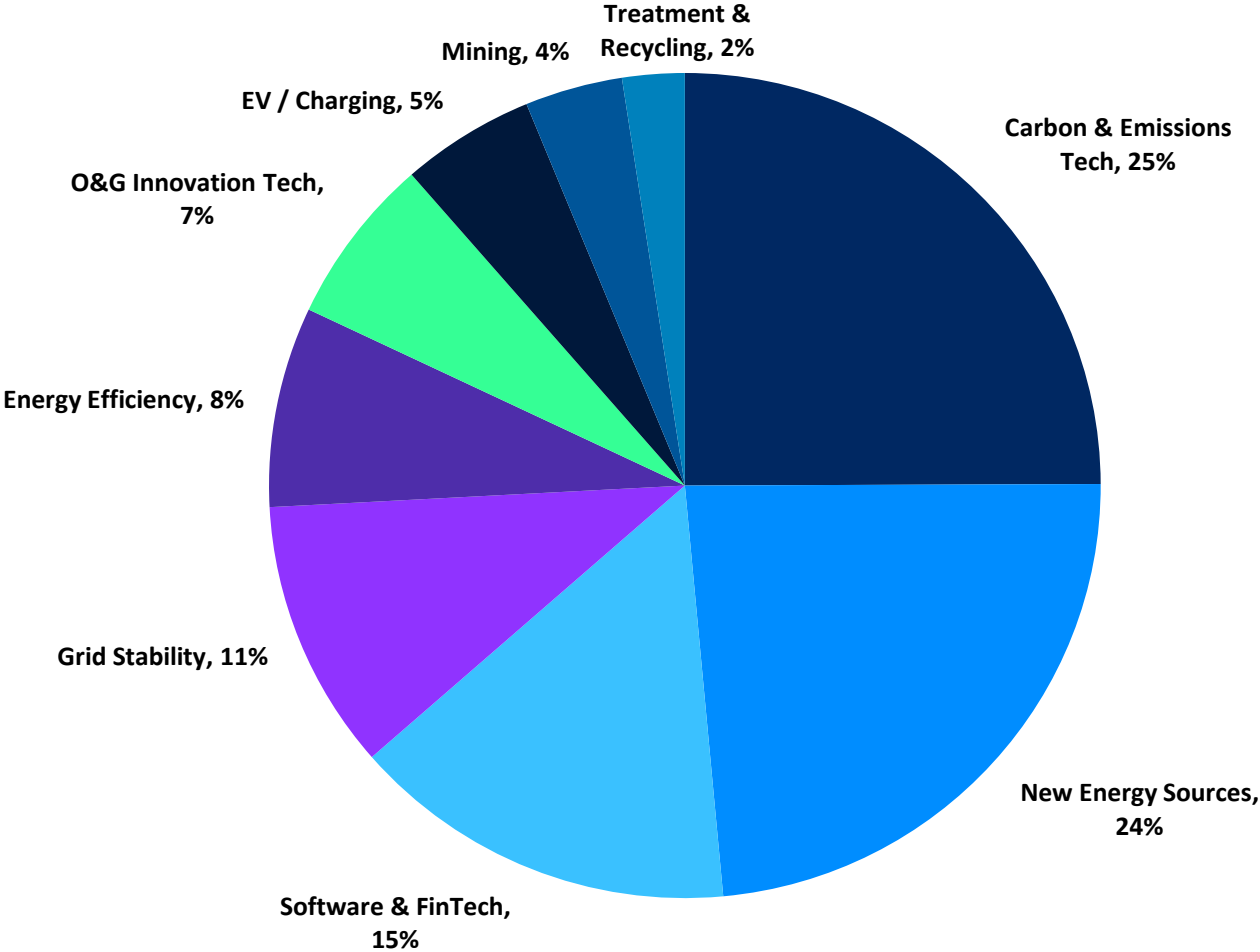
\$10mm in commitments from Veriten insiders

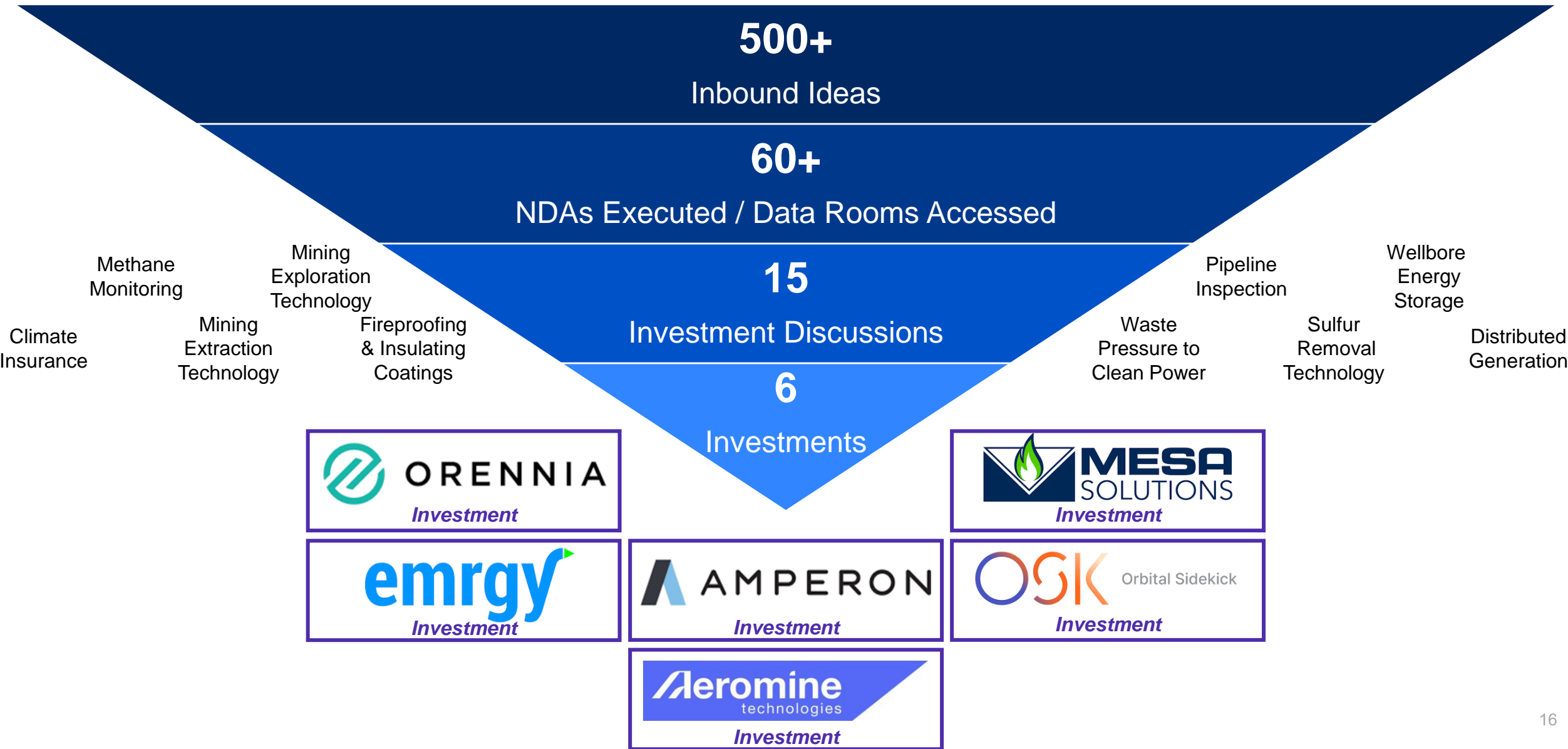
500+ opportunities vetted in past six months

NexTen Investment Pipeline

Since inception, NexTen has screened over 500 investment opportunities across a variety of sectors

Investment Pipeline Sector Breakout

















Looking Ahead: What Excites Us? What Are We (Probably) Avoiding?

Some sectors seem opportunity rich, some seem more challenging

Sectors We Like

-  Distributed, reliable power
-  Grid stability applications (including storage)
-  Software that helps energy be smarter, more efficient, or cleaner
-  Natural gas-related technologies
-  Ideas that help oil and gas be cleaner (and ideally combine with something above)
-  Mineral (or natural resources broadly) extraction, logistics, and processing
-  Engineered/Mechanical Solutions

Sectors We're Cautious About

-  Hydrogen
-  Certain types of carbon capture
-  Intermittent power resources
-  Nuclear (but only as an investment for NexTen!)
-  Renewable Natural Gas

- 1 **Hydrocarbon demand** has grown (including coal!) as developing countries place a premium on energy security and economic growth
- 2 Oil and natural gas are sold on a certified, methane-free basis. **Scope 1 oil and natural gas emissions** are on-track to be eliminated
- 3 **Reduced U.S. oil and gas growth opportunities** but increased non-North American activity / investment
- 4 **Energy always surprises in new directions** and the intensity with which the world is pursuing new alternatives almost **ensures hard to predict technological breakthroughs**
- 5 **Transition mineral extraction** gets cleaner but is a bottleneck and costs matter to consumers (EVs showing signs of market share plateau)
- 6 Power demand growth and changing mix drive **resilience and cost issues**. New solar & wind construction required to have a storage solution



Energy companies with flexibility, scale & strong leadership will thrive

- 7 **New nuclear technologies** make first deployments (including in industrial applications), setting up future meaningful increased nuclear contribution to the energy mix
- 8 **Hydrogen** (and derivatives) as a super-fuel is still many years away
- 9 Significant improvements are made in **circular economy applications** - we get much better at using waste streams to generate energy while decarbonizing
- 10 **The IRA and European subsidy programs** spawn new technologies but create unintended consequences, leading to overproduction of unnecessary assets
- 11 **Structurally higher energy costs** for consumers is a drag on developed world economic growth
- 12 **Countries and regions with good economic and energy policy choices will thrive**, namely India and the Middle East

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bp's Subsurface & Wells Digital Data Transformation Journey Leveraging OSDU

Bola Ajakaye

BP, Digital Product Management

Jan 2024



Presentation Overview

- OSDU – A non-traditional energy technology
- bp's OSDU pilot approach
- Business-driven 2023 OSDU Pilot
- Integrated Business Workflow
- Learning while progressing through the pilot
- A step forward in bp's OSDU Journey



What is OSDU?



OSDU (Open Subsurface Data Universe) is not an energy technology in the traditional sense, instead it is an industry-led technology platform specifically designed for subsurface and wells to enable:

- 1 Open Innovation & Collaboration
- 2 Data Integration & Accessibility
- 3 Advanced Analytics & Machine Learning



What is bp's OSDU approach?

“nail it” before we “scale it”

Maximally leverage OSDU data standards while flexibly adopting industry-leading best practices through the OSDU data platform

Establish close partnerships with bp business to identify priority workflows to build and applications to connect to OSDU data platform

Design & execute business workflows to enable seamless collaboration between subsurface experts



OSDU standards and innovation

Data and application workflows

Partnership with business and vendors

Business-Driven 2023 OSDU Pilot

Pilot Goal:

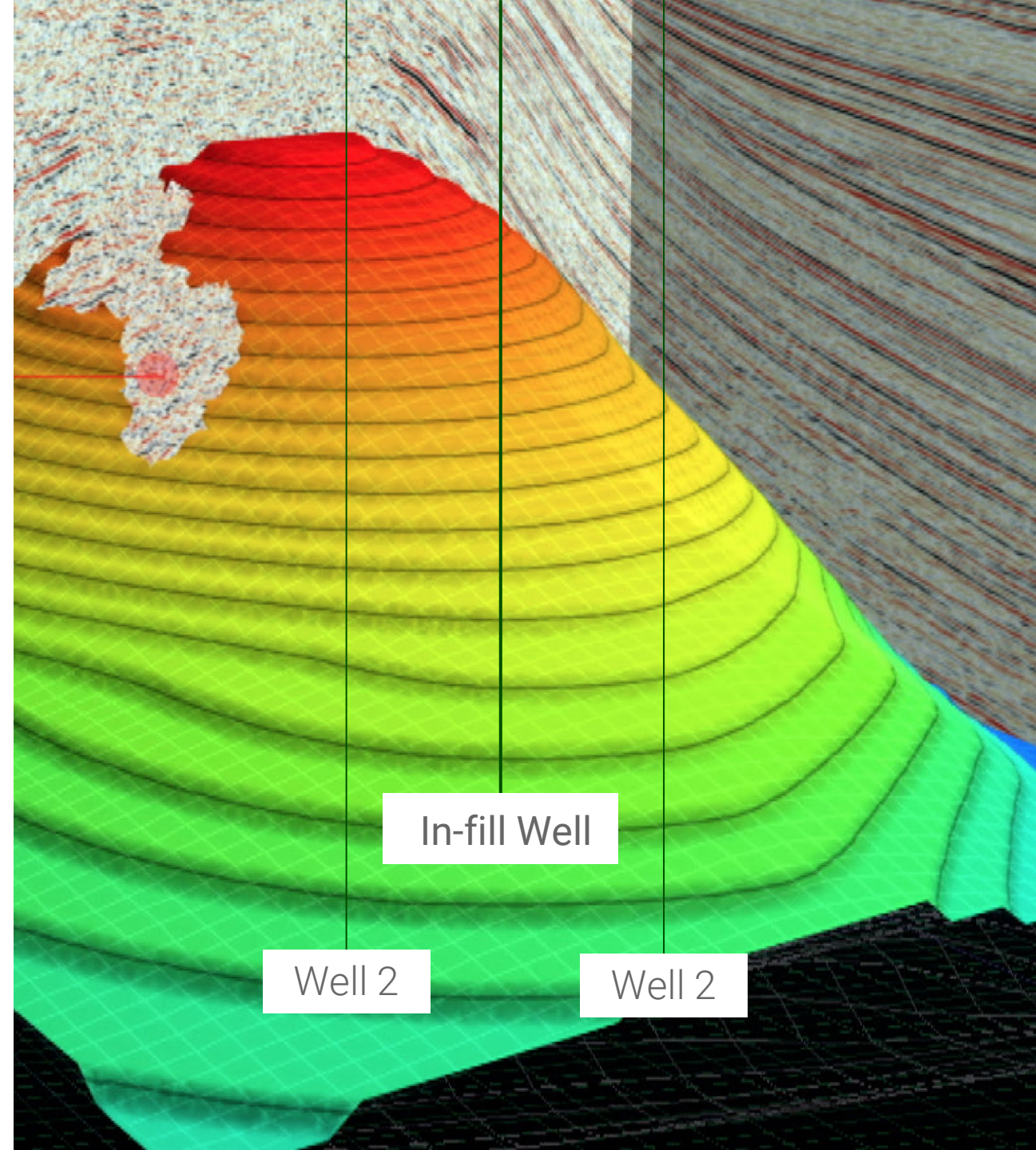
Atlantis Gulf of Mexico Pilot to assess OSDU platform as the transformational backbone of bp's wells and subsurface digital ecosystem of the future

Business Use Case:

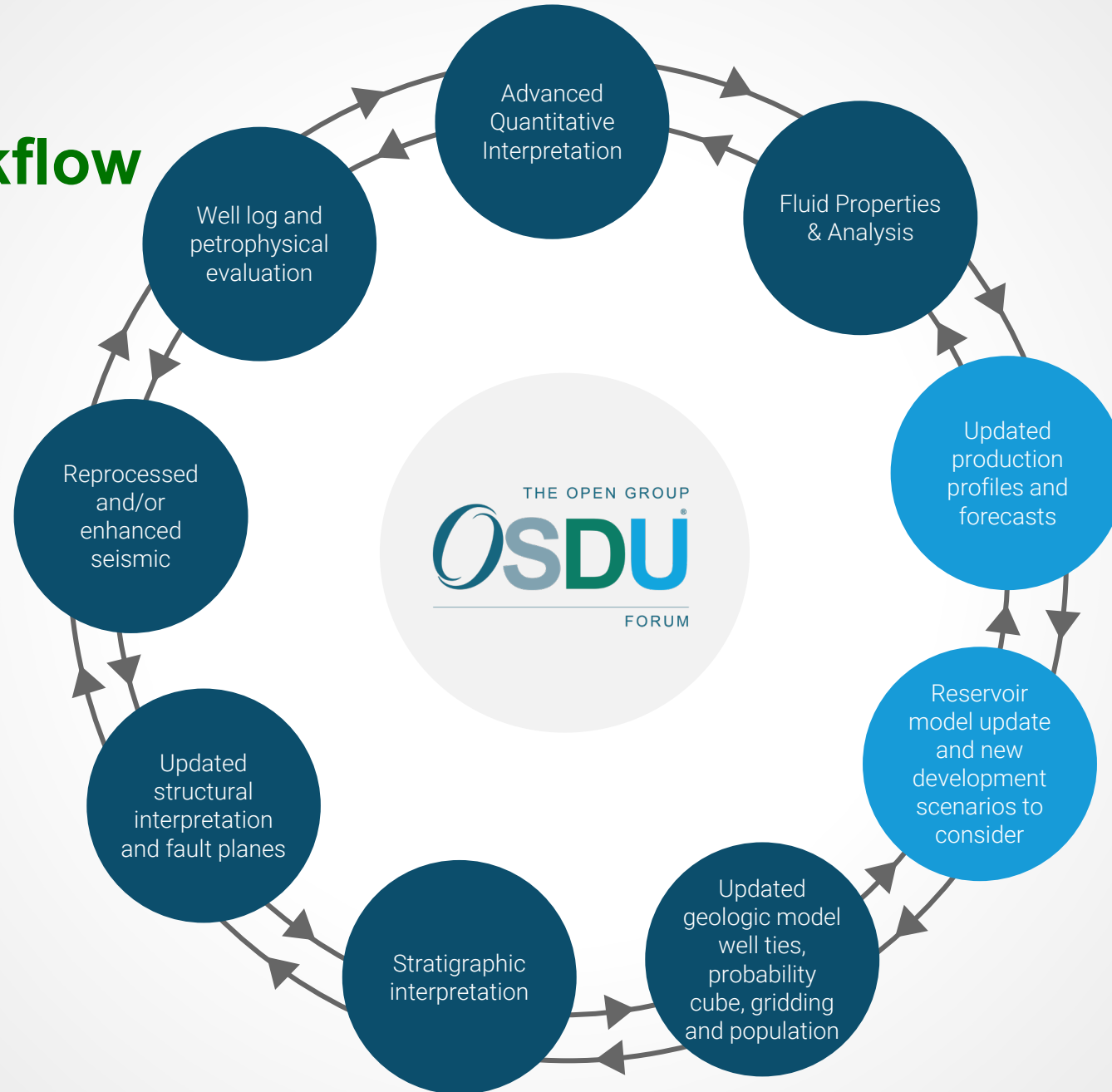
Test how OSDU platform integrates with subsurface workflows, applications, and data to support wells and subsurface evaluation planning for a future infill well at the Atlantis asset

Why this Use Case:

Atlantis is a mature asset requiring routine infill well drilling to optimize production. Demonstrate OSDU's ability to optimize decision making in a mature and complex asset environment



Integrated business workflow



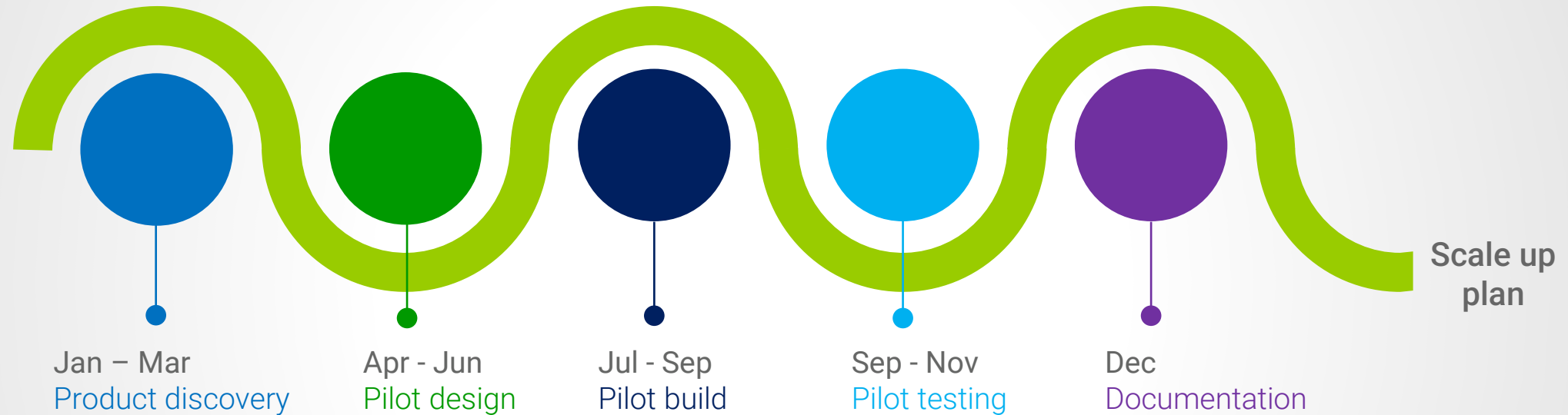
Legend

Reservoir Performance Prediction

Reservoir Characterization



Learning while progressing through the 2023 pilot



Pilot Discovery & Design:

Detailed User Interviews and Design Workshops to narrow down on two key business workflows for optimizing Seismic Streaming and Application Interoperability

Data Ingestion:

Ingested data into Microsoft ADME platform across diverse data types (reference data, well, and seismic data)

Pilot Build:

Built out integrated workflows to connect data from legacy systems to OSDU to applications from multiple vendors

Pilot Testing:

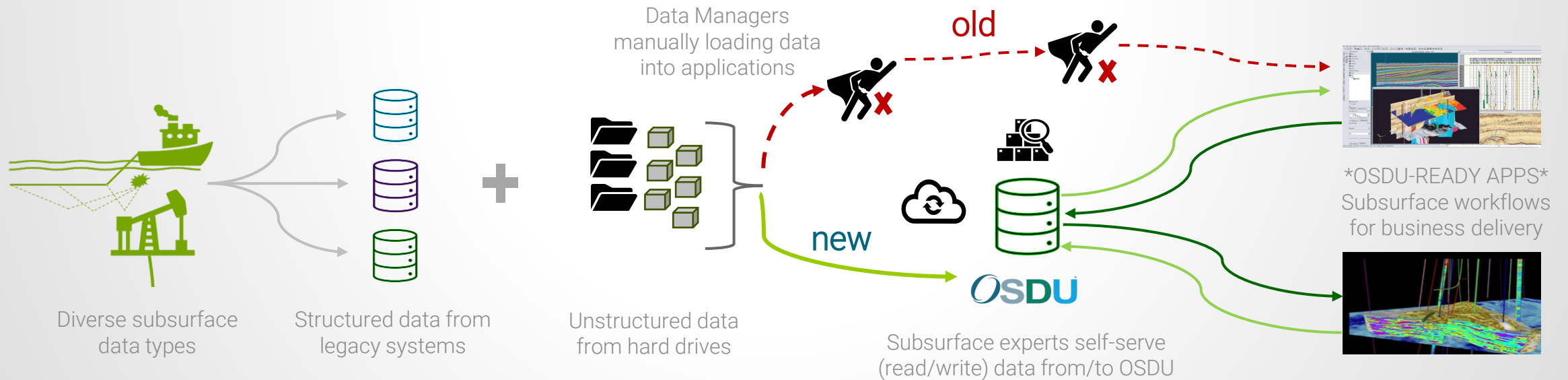
Integrated workflow testing (data and application) to test platform performance, usability, scalability, and seamless data collaboration and integration across high priority subsurface applications

Documentation:

Document Pilot results and share with stakeholders to inform scale up plans in 2024

A step forward in bp's OSDU Journey

- Harness OSDU as a unified data repository – “one source of truth”
- Break down silos across data, vendor applications, and workflows
- Shorten time to quality insights by optimizing workflows/app suite
- Reduce non-productive time and data management costs



We're investing in an OSDU ecosystem that gives us a 'bigger brain' to create innovative solutions in the energy industry today, tomorrow, and in the future.

bp



OSDU®



Any Questions?
Thank you