ASCOTT LLC

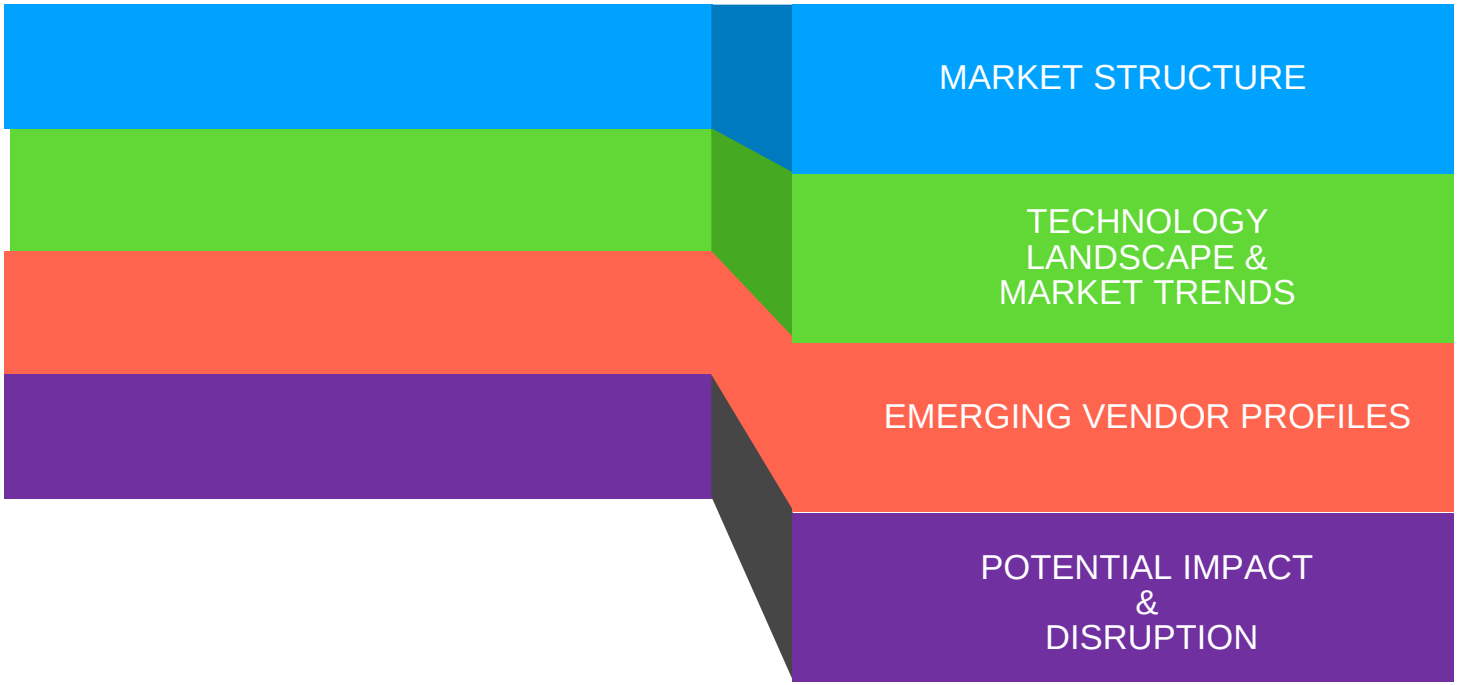
Arundo

Digital Wells & Field Optimization

ASCOTT LLC

ASCOTT LLC

FastTrack Insights



Technology and Innovation - Key Enablers

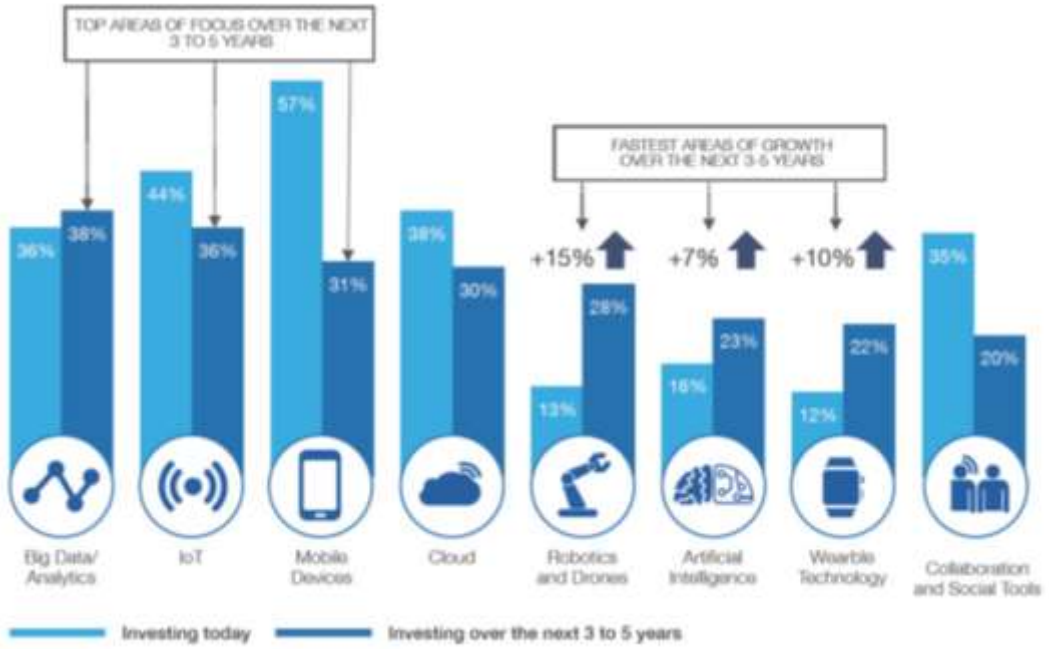
Throughout history, technology advancements in the upstream oil and gas business have opened up new frontiers (e.g., Seismic 3D), enabled safer operations, enhanced oil and gas recovery from existing fields and increased energy efficiency. In the downstream business (e.g., refining and marketing), technology has increased and upgraded the capacity of the oil barrel and has met the increasing demands of environmental legislation.

Rapid advancements in technology will continue to engineer further growth in oil and gas. Super computers and complex data processing will enable new discoveries. Smart devices will enable improved operational management and better risk management. Advanced materials will offer safer operations in difficult terrain. Manufacturing technologies will improve the applications of new materials and collaborative technologies will enable new ways of managing complex global projects.

Source: The Changing Dynamics of Oil & Gas Industry. Retrieved from https://mce.eu/oil-gas/

Oil & Gas Market towards Digitalization

Oil prices have swung sharply in recent months, fluctuating between $40/bbl to a high of almost $90/bbl. The unexpected price volatility is causing stress on the capex and opex of the oil and gas value chain. Compounding the challenges, the negative perception of fossil fuels, rising trade tensions and geopolitical upheaval are adversely affecting near-term demand and business costs. As a result, more companies are looking toward a “digital transformation” to drive effective capacity, not only through capex, but also opex investments by optimizing operations and improving asset availability as these are more scalable and have a shorter lead time, enabling companies to swiftly respond to market changes[1].



Source: Accenture (2016)., The 2016 Upstream Oil and Gas Digital Trends Survey
https://www.oilandgasmiddleeast.com/article-17944-digitalisation-a-new-era-for-oil-and-gas

Signs of Digital Change for Oil & Gas

The oil and gas industry has a digital maturity rating of just under 5 out of 10. Despite efforts to revolutionize, this measure is a damning indictment of a sector that is lagging behind. However, there are some further signs of change.

Firstly, as technology becomes more affordable, and appetite for investment increases in the lee of price crashes in 2008 and 2015, digital solutions are becoming the most preferred options for companies looking for a competitive edge. Reducing costs and providing ever-greater access to data is the name of the game.

Real-time data is also helping to streamline business procedures and increase agility. Justifying increased spending in choppy waters (or at any time, to be honest) is always tricky, but tech solutions that help the business work smarter rather than harder are proving popular. Effective use of digital solutions can increase productivity, efficiency, and agility by making precise business decisions more reliably – and the number of collaborations between oil and gas and technology companies is rising.

In addition to this collaboration within the sector, there are cross-sector relationships in this space, too. The world of the solution provider is changing, and smaller specialists are now taking the place of larger generalists. These smaller solution providers are able to tailor packages to directly suit the needs of oil and gas companies, and provide powerful analytics, data, or performance-driving information – and make changes to their key competencies. With these partnerships, oil and gas companies can enter their age of digital maturity and become fully integrated and interconnected.

Finally, Big Data is a key factor in lowering costs across all aspects of the company – especially in the face of rising production costs and the difficulty with optimization of sprawling company departments. Switching to a digital model has saved oil and gas companies an average of $50 million on reducing downtime alone – with cost reductions in most areas in the double figures.

Oil and Gas IQ (2018). What does digital transformation in oil and gas look like? 2019, Retrieved from https://www.oilandgasiq.com/oil-gas/news/what-is-digital-transformation

This page is intentionally left blank

ASCOTT LLC

Emerging Vendor Profile

Emerging Vendor Profile

Founded in 2015, Arundo's proprietary software for asset-intensive industries enables "edge"-state streaming and analytics, rapid cloud deployment of machine learning models, and enterprise-scale models management.

Arundo provides industry context with asset hierarchies that help take advantage of trapped or previously unutilized data. It is revolutionizing operational performance by delivering solutions that are shaping the digital journey, unleashing the business value of data, and enabling human and machine collaboration at scale.

With primary offices in Oslo, Houston, and Silicon Valley, Arundo Analytics provides cloud-based and edge-enabled software for the deployment and management of enterprise-scale industrial analytics applications. Arundo's software connects industrial data to advanced models and model insights to business decisions. This enables industrial companies to increase revenue, reduce costs and mitigate risks.

In 2016, Arundo graduated from Stanford University's StartX accelerator and subsequently received investment from the Stanford-StartX Fund. In 2017, Arundo was named to the MIT STEX25 by the Massachusetts Institute of Technology Startup Exchange (MIT STEX). MIT STEX25 recognizes select companies from a pool of more than 1,000 MIT-connected startups as being particularly well-suited for industry collaboration based on technical and commercial success[7].

ARUNDO

Arundo Analytics

Arundo Analytics provides cloud-based and edge-enabled software for the deployment and management.

Palo Alto, California, United States

Categories	Artificial Intelligence, Big Data, Energy, Internet of Things, Machine Learning
Headquarters Regions	San Francisco Bay Area, Silicon Valley, West Coast
Founded Date	Aug 3, 2015
Founders	Marcus Furuholmen, Stuart Morstead, Tor Jakob Ramsøy
Operating Status	Active
Funding Status	Early Stage Venture
Last Funding Type	Series A
Number of Employees	51-100
Estimated Revenue Range	$1M to $10M
Legal Name	Arundo Analytics, Inc.

Arundo. Retrieved from www.crunchbase.com

Arundo graduated from Stanford University's StartX accelerator and subsequently received investment from the Stanford-StartX Fund.

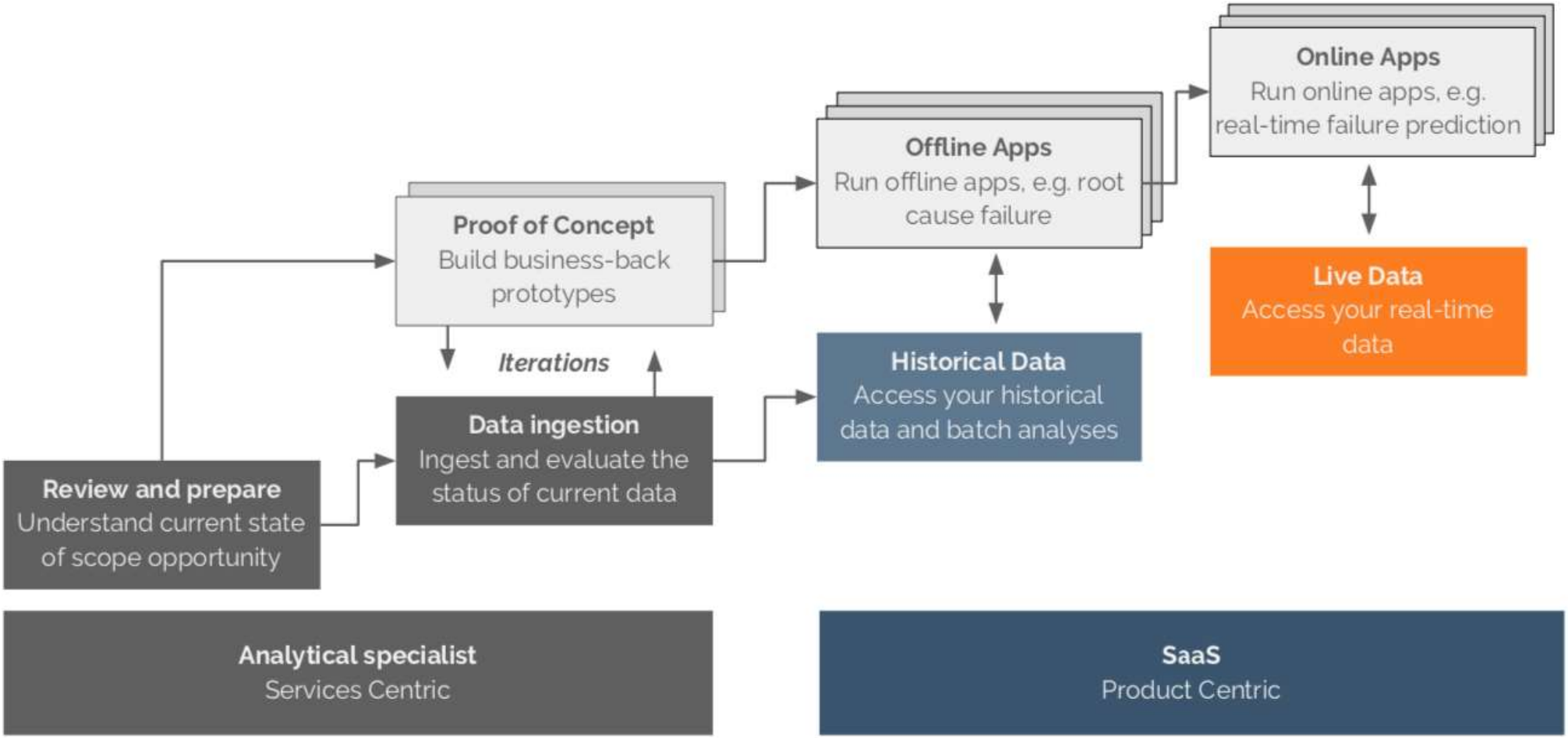
ASCOTT LLC

- Bringing "Silicon Valley" into oil & gas, marine and utilities
  - Leveraging MSFT Azure backbone
  - First customers running "microservice" analytics models on base platform
  - Closed second financing round bringing new strategic investors
  - Funding and support from Stanford through StartX accelerator
- Built industrial grade cloud architecture (deployable in private cloud)
- Growing team in all locations, strong support from investors to accelerate

ASCOTT LLC

Emerging Vendor Profile – What ARUNDO does?

ARUNDO



Sintef (2017). Machine Learning with Industrial Data. Retrieved from https://www.sintef.no/contentassets/4817fcaabf034bcfacadd625ac89498c/tibbetts_geilotalk.pdf

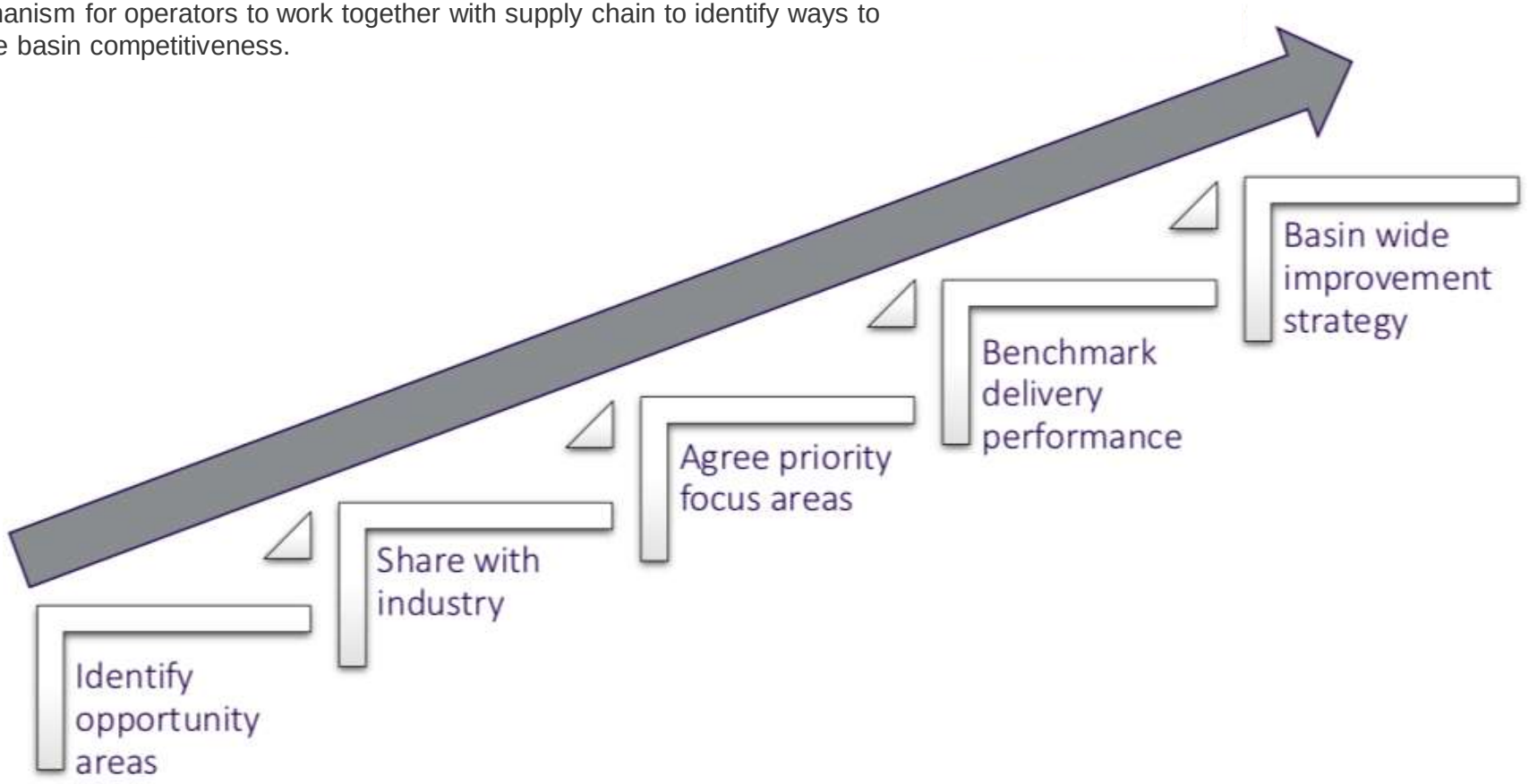
This page is intentionally left blank

ASCOTT LLC

POTENTIAL IMPACT & DISRUPTION

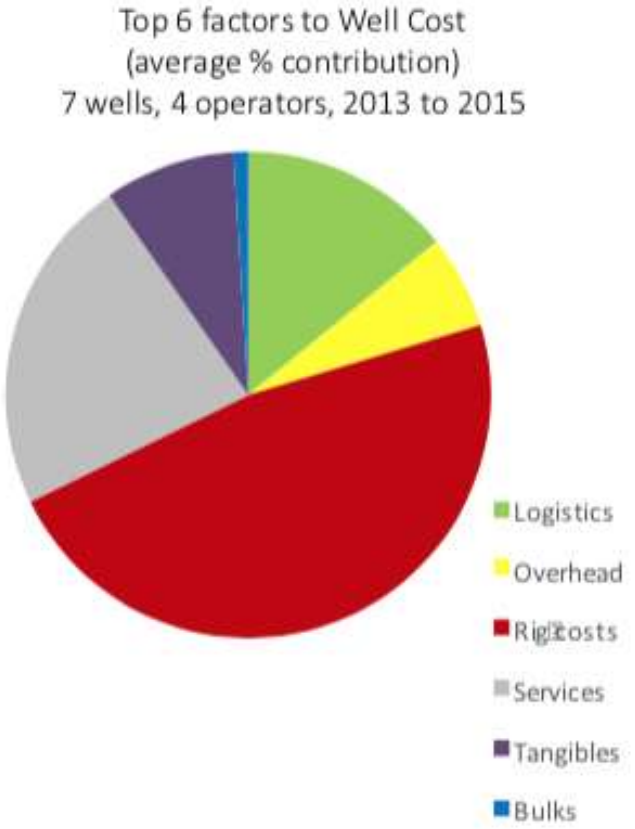
Competitive Well Delivery Staircase

A mechanism for operators to work together with supply chain to identify ways to enhance basin competitiveness.



Source: The Mining Institute of Scotland

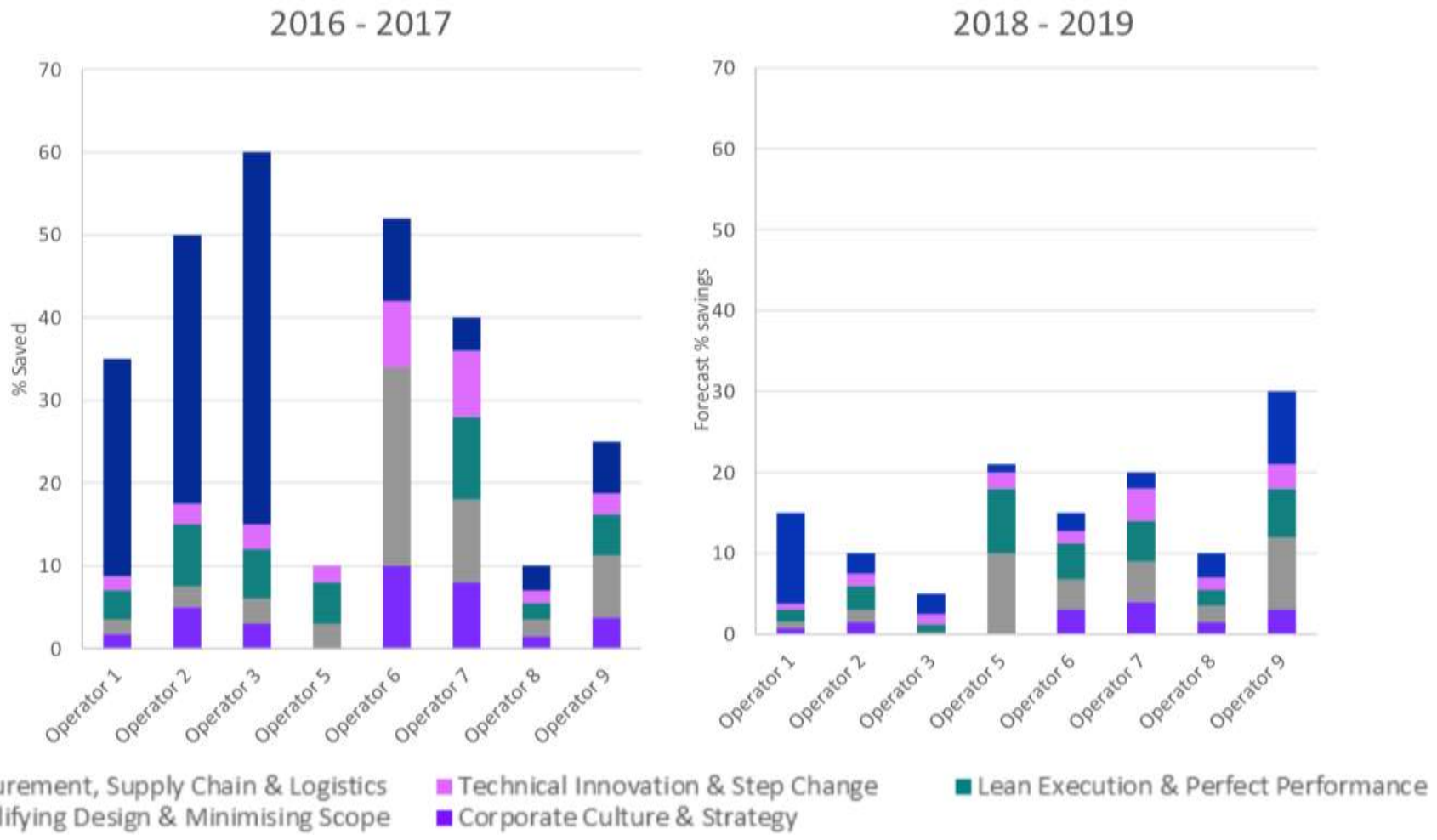
- Significant cost reductions can be achieved through
  - Working better together
  - Sharing knowledge and experience
  - Improved efficiency
  - Use rigs less
  - Broader technology uptake
  - Reducing unplanned overspend



Source: The Mining Institute of Scotland

ASCOTT LLC

Staircase Results – Cost Savings



Source: The Mining Institute of Scotland

This page is intentionally left blank

ASCOTT LLC

ASCOTT MARKETING MANAGEMENT L.L.C.
registered address is at Business Bay Area,
Burlington Tower, Plot No. 39, Property
No. 1301-28, Makani No. 25157 86586, Dubai, UAE

info@ascottmanagement.com
www.ascottmanagement.com