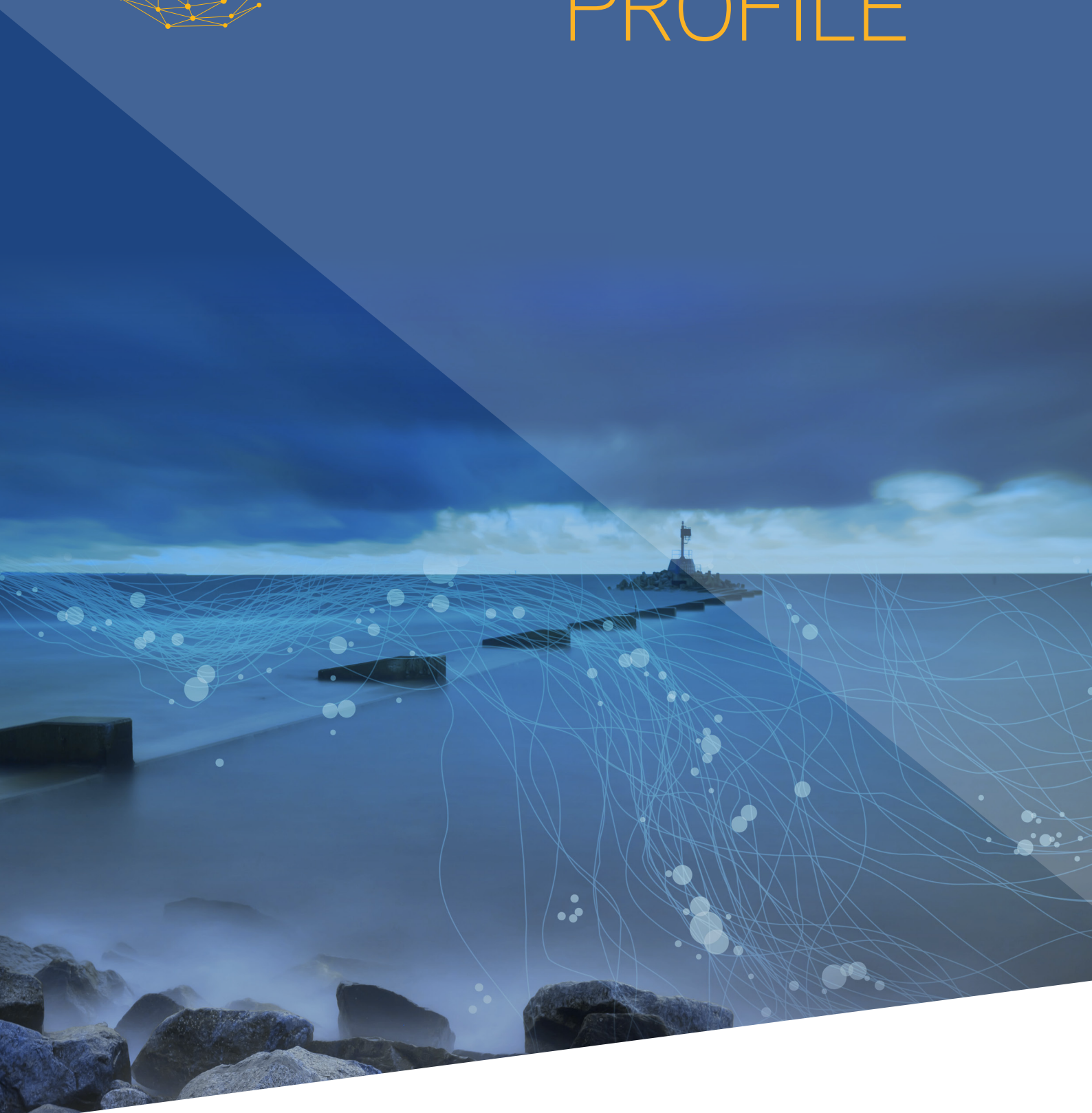




BIG DATA
LAB

COMPANY PROFILE



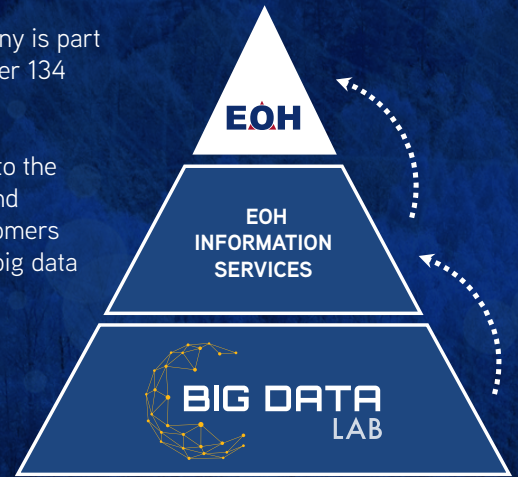
ABOUT EOH BIG DATA LAB

EOH Big Data Lab is a big data advisory and implementation partner. The company is part of the EOH Information Services division of the EOH Group which operates in over 134 locations throughout South Africa and Africa and in over 50 countries.

EOH provides the technology, knowledge, skills and organisational ability critical to the development and growth of the markets they serve through high value, end-to-end consulting, technology and outsourcing services and solutions. EOH serves customers across all major industries. EOH Information Services is the leading provider of big data analytics solutions and information services within the EOH Group.

EOH Big Data Lab is a level 1 B-BBEE company.

EOH Big Data Lab is headquartered in Stellenbosch, South Africa.



VALUE PROPOSITION

EOH Big Data Lab focuses on building company capability to respond to new business realities and contexts - where platform business models are key drivers of growth. Our robust data science and analytic abilities, coupled with deep insights into what customers truly need from their digital platforms, enable our customers to derive maximum benefit from rapidly transforming business landscapes and an ever expanding digital economy. Through our own Aqueduct platform and big data lab, we actively collaborate with our customers as they seek to master their platform strategies.

At EOH Big Data Lab, our focus is to unlock the value of big data for our customers by helping them to harness the full suite of benefits that an innovative, scaleable and elastic data management tool, like Aqueduct or other platforms, can provide. This is achieved through advanced problem-solving and analytical capability within our innovative and creative lab environment.

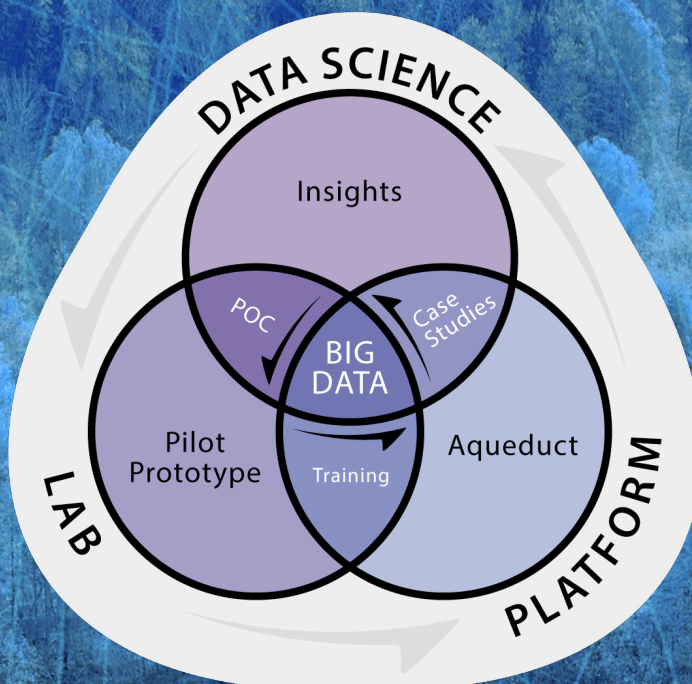
Our approach to platforms prioritises both network and distribution elements – focusing on network value for different user groups and optimal distribution range – both of which help to drive value creation and scale for our customers. The innovative and tailored solutions we offer, as well as our active learning lab environment, help our customers to realise the benefits of interconnected ecosystems of users and information that can be scaled exponentially according to business needs. Importantly, they can also be used to identify new and different paths to growth.

The EOH Big Data Lab business model is characterised by high responsiveness to load, users and events; ensuring that response times are consistently honoured and a robust level of recovery resilience is maintained, and indeed improved, when the opportunity presents itself. Our software development methodology is guided by an open-source ethos, and project delivery is underpinned by close collaboration and communication with the IT and Operations functions of our customers. Our close customer partnerships ensure cohesive, high-performing data management solutions that are able to build on existing technical infrastructure.

Our innovative and leading-edge big data lab environment provides our customers with one-stop access to leading technologies, highly-skilled problem-solvers, leading-edge open-source vendors and advanced analytics capabilities, as well as access to the broader network of EOH companies.

We aim to truly optimise the value derived from data management for our customers: firstly, by establishing the key analytical outputs of information, knowledge and insights as 'business as usual'; and secondly, by further developing key insights into wisdom and creativity. In this way, we help our customers to become true innovators in their chosen space with a unique competitive edge.

OFFERINGS



BIG DATA LAB

EOH Big Data Lab structures its services around the concept of a lab; creating an optimal environment for our customers to become familiar with the big data context, and to experience for themselves how leveraging the right combination of data and technology can create significant value for their business.

Our big data lab serves as an innovative and creative hub where customers can formulate their questions and then assess which technological solution offers the best answers. This could be Aqueduct or it could involve learning how to better optimise their existing technology.

In the lab environment, we combine the domain expertise of our customers or potential customers with our technical expertise. Highly-skilled technical experts and problem-solvers

support customers to identify the best big data management tools and solutions for the best business result.

The lab provides infrastructure to ingest and store potentially very large volumes of data, while the application of stream and batch analytics, machine learning and graph processing extracts value for our customers. Within this technically robust environment they can participate, in an agile and cost-effective manner, in the development of tailored analytic models and data products that best suit their business needs.

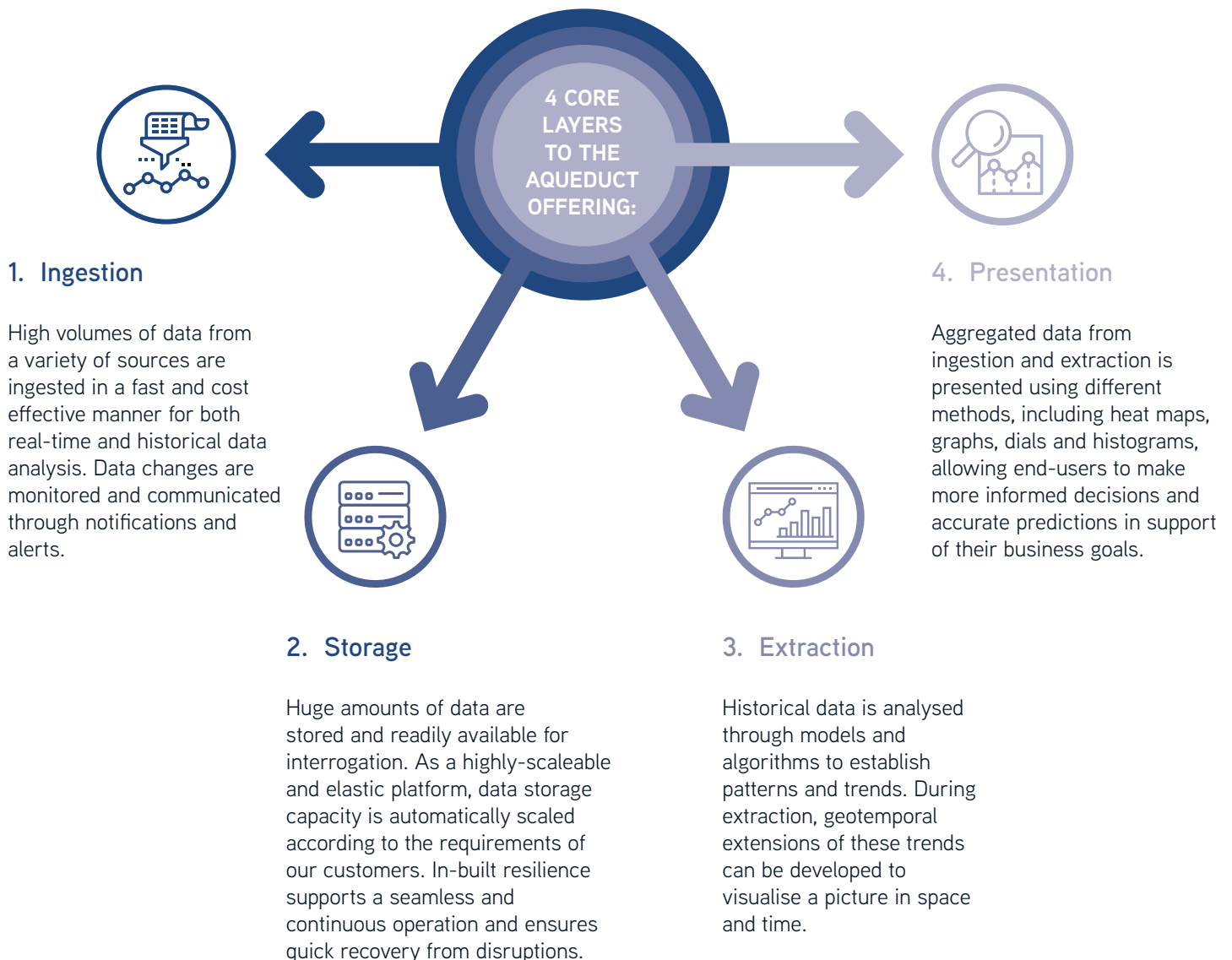
The lab also operates as an in-source facility where customers contract us to execute projects working in close collaboration with their internal teams.

PLATFORM

Aqueduct

With businesses rapidly realising the opportunities to translate insights and wisdom derived from long-term data analysis into business success and growth, the role of a scaleable, resilient and elastic data platform such as Aqueduct is indispensable.

EOH Big Data Lab created the Aqueduct platform to capture, store and analyse vast amounts of semi-structured and unstructured data in real-time and through historical analysis. The platform speedily captures and cleans large amounts of data from a variety of sources and offers secure and resilient data storage with unlimited capacity. With Aqueduct, data is always visible and available for interrogation through a well-designed user interface, enabling our customers to truly unlock the value of big data.



CUSTOMISATION

Sentinel

The Sentinel layer sits on top of Aqueduct and monitors real-time changes in data through triggers and alerts to ensure a consistently current and updated dataset. This layer conducts predictive analysis, establishing trends in both real-time and historical datasets, as well as providing leading-edge geotemporal analytics to further benefit our customers.

Since Aqueduct is a highly versatile data management tool, customers also have the option of customising their own solutions for use on top of Aqueduct, depending on their specific business needs.

CONSULTING

EOH Big Data Lab offers both strategic and architectural technology consulting, as well as data science and analytics services that include developing models for both predictive and geotemporal analytics tailored to the needs of our customers.

BLOCKCHAIN

Within our blockchain lab environment, we explore synergies between blockchain and big data technologies that could benefit our customers' business models. We achieve this level of innovation by:



providing best-in-class blockchain components and infrastructure



ensuring agile and scalable deployment



creating integration patterns and libraries to existing back-office systems



establishing the value-chain, including accounting and monetisation points

TRAINING

EOH Big Data Lab is a certified training delivery partner and is able to train the internal technology and operations teams of our customers on platform usage, data management and enterprise software, as well as offering specialised training in big data and blockchain.



CASE STUDY

SASOL – Geotemporal Analytics in Supply Chain Management

The business challenge

The integrated chemicals and energy company SASOL, headquartered in Johannesburg, wants to gain a competitive edge in the supply chain management of its South African petrol station network by using big data analytics.

Big data analytics provides valuable insights into the changing volume, velocity and variety of critical industry data. Our customer wants to optimise their scheduling, demand forecasting, delivery and inventory planning to ensure leading-edge operational performance and service quality.

The solution

EOH Big Data Lab provides a customised geotemporal analytics solution. Using 'geotemporal indexing' – a sophisticated form of analysis that relates events with other variables based on their time and place – EOH Big Data Lab is able to overlay country-wide consumption patterns with external factors such as price hikes, long weekends or strikes to provide service station owners with a precise account of when to refill their fuel tanks and by

how much. By relying on real-time data, this forecasting also ensures resilience against unpredictable events like theft or wildcat strikes. In the event of over-ordering, the system can also identify nearby petrol stations that require top-ups, as well as the appropriate route for distribution trucks to deliver – instead of going all the way back to the depots. Overall, this trend analysis based on original data and anomaly detection allows for vastly improved and more accurate prediction and forecasting.

Products and services that are used include, amongst others, our Aqueduct platform with a geotemporal extension to capture, store, analyse and visualise data.

Benefits achieved

This contextual intelligence solution dramatically improves demand and supply synchronisation, reduces inefficiencies and maximises petrol stations owners' return-on-investment. It allows our customer to calculate and predict exactly when fuel tanks of petrol stations need to be refilled, thereby reducing the risk of running dry and losing customers or of over-ordering and wasting time and money.

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