VIQTOR DAVIS®

DATA CRAFTSMANSHIP

GUIDED DIAGNOSTICS

WHY NOW?

The use of data beyond traditional operational insight and business decision making has increased and is a well observed trend across industries. Forecasting and prediction through statistics and machine learning is not reserved to retail. All elements of human decision making are benefiting from data and insight augmentation, including expert human diagnosing. Healthcare organisations are looking to data and AI to support clinicians in improving patient outcomes. Organisational leaders are looking to AI to keep the supply chain moving through predictive maintenance of machines. Automotive manufactures and service providers are combining AI and IoT, connected vehicles, for proactive diagnosis of common vehicle issues. Leaders in all these industries and others recognise that educated, experienced, knowledgeable human decision makers diagnosing and prescribing action is not enough.

HUMAN VARIABILITY

Every individual is the sum of their experience. Opinions are formed, knowledge is gained and motivations differ. When presented with a set of symptoms each individual will form a different opinion of the possible diagnosis or how to prioritise those possibilities. With the variation of opinion and experience comes a variation of the quality, performance and accuracy of a diagnosis, subsequent action and long-term outcome.

EFFICIENCY

Reducing cost, maximising reward and making the best use of time and energy is a constant consideration for organisational leaders. Human decision makers diagnosing a problem without data-driven support take longer to reach a diagnosis and recommend an action in the immediate term and risk additional time and cost in the event of the wrong or suboptimal diagnosis being made.
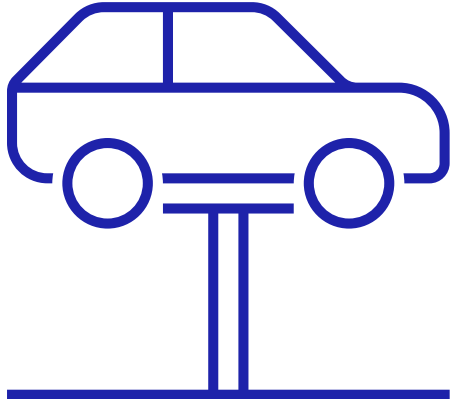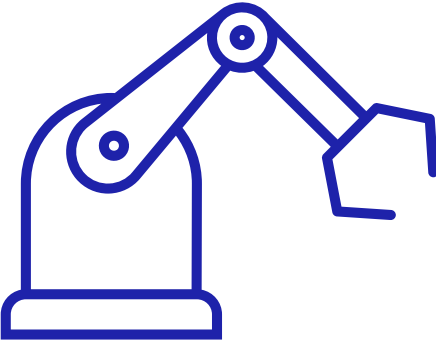
OUTCOME RELIABILITY

Whether patient outcomes, organisational outcomes or customer outcomes, the correct diagnosis needs to ensure the outcome is as reliable as possible. Reliable in the sense that a new diagnosis isn't required, but also reliable in that the same conclusion is reached regardless of the person making the diagnosis, and most importantly reliability of the best possible positive outcome being met from the earliest diagnosis.
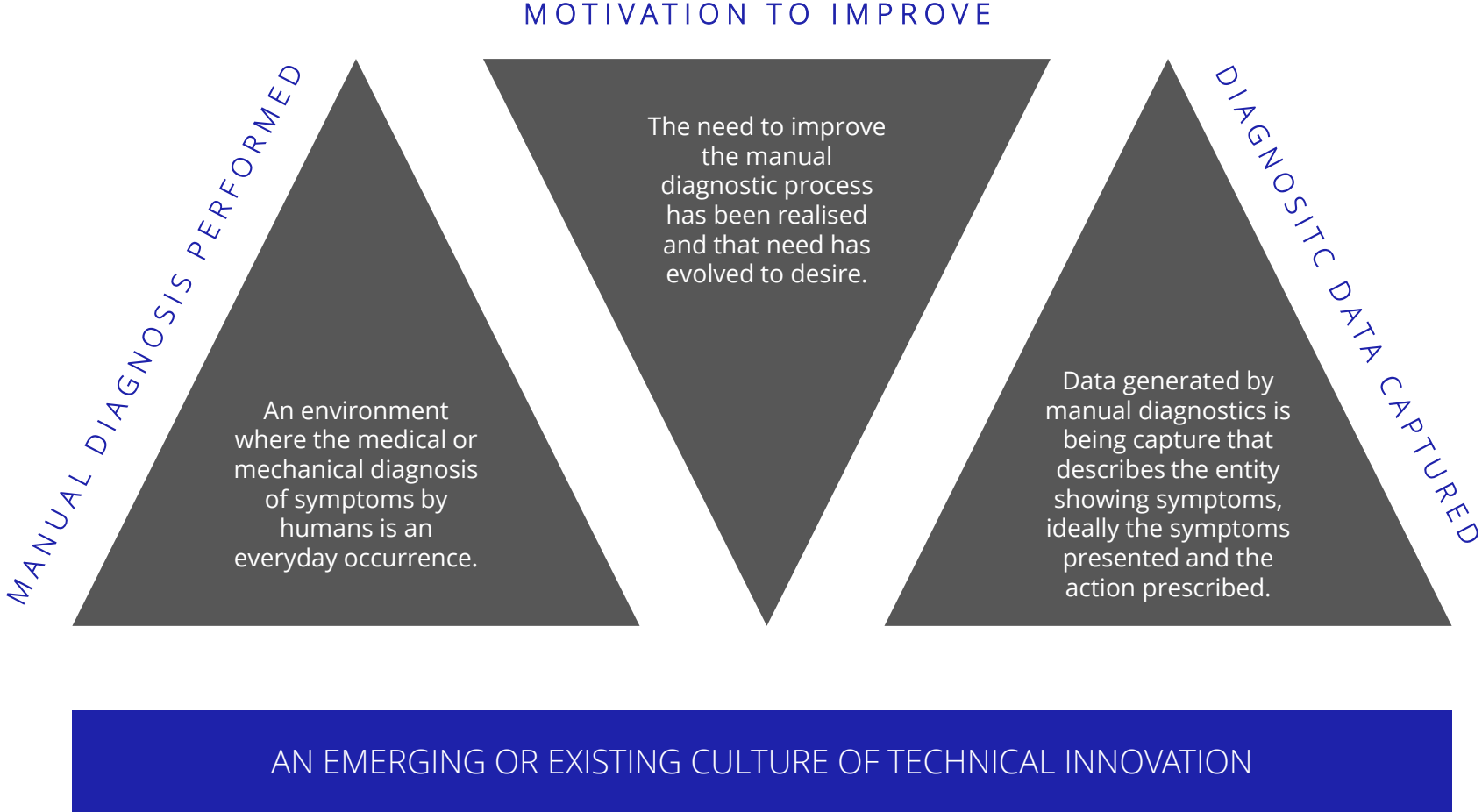
GUIDED DIAGNOSTIC SCENARIOS

PREDICTIVE MAINTENANCE

PROACTIVE MEDICINE

VEHICLE SERVICING

THE TYPICAL PROBLEM SPACE

MOTIVATION TO IMPROVE

MANUAL DIAGNOSIS PERFORMED

DIAGNOSITC DATA CAPTURED

The need to improve the manual diagnostic process has been realised and that need has evolved to desire.

An environment where the medical or mechanical diagnosis of symptoms by humans is an everyday occurrence.

Data generated by manual diagnostics is being capture that describes the entity showing symptoms, ideally the symptoms presented and the action prescribed.

AN EMERGING OR EXISTING CULTURE OF TECHNICAL INNOVATION
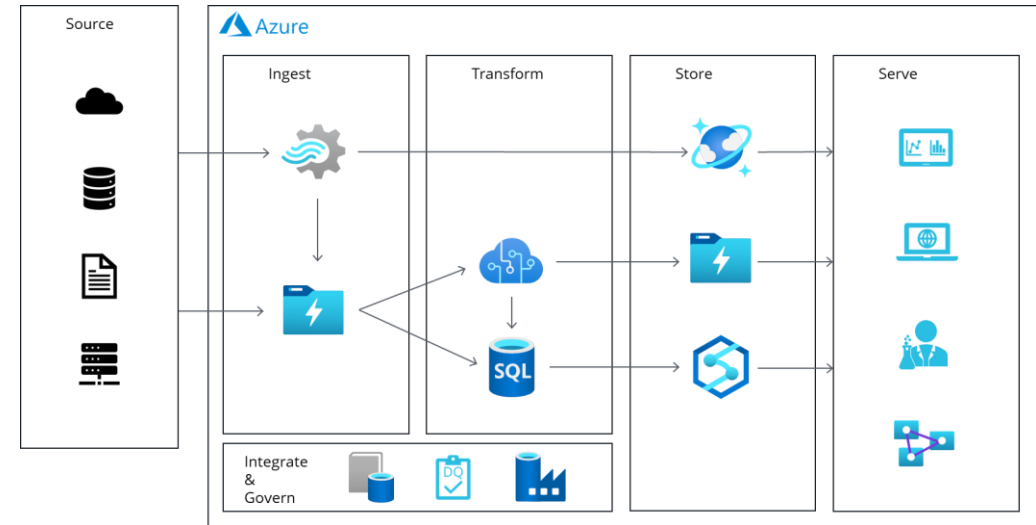
VIQTOR DAVIS GUIDED DIAGNOSTICS

WHAT IS IT?

The Guided Diagnostic solution from VIQTOR DAVIS is a proven concept, a blueprint and reusable assets for a Microsoft Azure-based platform that predicts and ranks the likely diagnosis for a given entity ontology and set of symptoms. The scored predictions can be used to inform and augment a human decision maker's action or trigger a fully automated prescribed action to be taken. The entity being described and presenting symptoms may be a human or a machine, in both cases data that describes each case is likely already captured, the solution leverages this data to predict a likely diagnoses.

HOW DOES IT WORK?

- Data captured by existing manual diagnostics processes is ingested into the Azure platform.

- Leveraging the best of Azure technologies, the data is shaped and fed into statistical and Machine Learning algorithms that produce an optimised predictive model which is retrained regularly.

- The predicted diagnostic data is exposed as output by an API that takes new cases as input.

- The API is integrated into a decision support system or automated resolution process.

THE USE OF ACCELERATORS

VIQTOR DAVIS develop reusable assets that feed into every bespoke implementation to accelerate speed to insight.
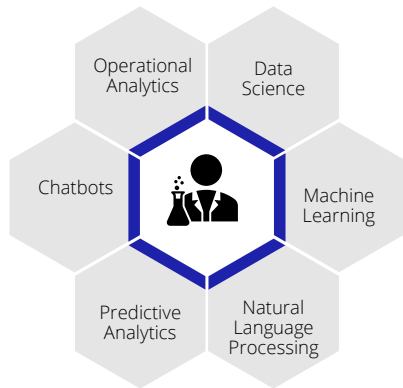
- Proven reference architectures for analytical cloud data platforms.

- Refined templated Azure implementation from which end-to-end environments can be provisioned on demand.

- Domain-specific knowledge articles that propagate the collective experience and wisdom of VIQTOR DAVIS' global teams of Data Scientists.

DATA SCIENCE SERVICES TEAM
ONGOING PLATFORM SUPPORT AND INNOVATION

Our highly skilled team maintain and grow the investments you have made or are planning to make in Data Science and Analytics to ensure continued delivery of business value.

+ EXPERTISE

Operational Analytics · Data Science · Chatbots · Machine Learning · Predictive Analytics · Natural Language Processing

Accomplished Data Scientists with a rich variation of technical backgrounds

Refined Practical Methodologies that draw from the best practices of all Data Management domains

Implement **industrial grade solutions** leveraging expertise of the latest **cloud technologies** and techniques

+ FOCUS

Model Management

ML Ops

Continuous Innovation

Our Continual Service Improvement program ensures our services are meeting your expectations and delivering business value

+ KEY VALUE PROPOSITIONS

THE WISDOM OF CROWDS
The Data Science services team works alongside 300+ data professionals and technologists spanning the Data Management spectrum, our practical methodology is designed to pull in these expertise is as appropriate.

WE WORK *WITH* YOU
The team work with our clients, embedding into your preferred way of working, to support you on your journey to Data Science maturity.

+ BENEFITS

Gain access to the largest pool of Data Science talent in Europe.

Accumulation of knowledge, because we are a dedicated team to you we will accumulate knowledge about and for you

Right team and the right time, the flexibility to change the shape of the team as your requirements demand, an Architect one day, an ML specialist the next

Flexibility to increase and decrease support as appropriate.

**VIQTOR
DAVIS** ®

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THANK YOU
FOR YOUR ATTENTION

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