



Digital Twin

Company Overview

“The price of light is less than the cost of darkness” - Arthur C Nielson



Our Vision

Enhancing industry through systems modernisation and symbiotic client relationships.



Our Mission

Unlock the value of data through digital transformation.

Digital Twin's Company Profile

Sherlock Holmes once said, “It is a capital mistake to theorise before one has data”. Our Mission Statement to “unlock the value of data” provides the basis for meaningful analytics – we can now theorise because the data is available.

Real world problem solving can only be effective if real world data is captured - This requires hardware that matches the measured variable to a data set. The hardware sits at the edge of the real world and is generally referred to as an “Edge Device”.

To ensure rapid universal adoption, open standards have been published which are at the core of Digital Twin's product development. Using the building blocks of “open standards” our products and services bring together legacy and edge data into a common cloud-based data set that represents an organisational process.

Digital Twin specializes in three core market segments namely Industrials & Mining, PropCo and Critical Infrastructure and can help businesses of all sizes to make the most of digital technologies.



Industrials & Mining

Cutting-edge solutions tailored for the industrial and mining segment to enhance operational efficiency, optimize processes, and drive innovation.



PropCo

Efficient asset management, improved property performance, and enhanced tenant experiences, maximizing Propco owners' investment.



Critical Infrastructure

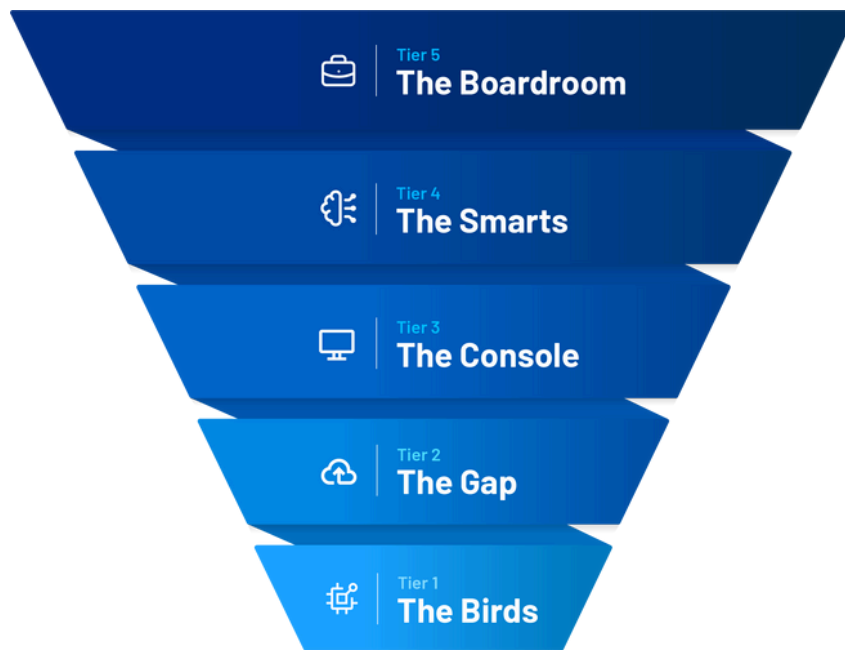
Optimized operations, asset tracking and monitoring, and enhanced security to safeguard vital systems and services.



Digital Twin's Tiered Business Model

Digital Twin's business model is modular or tiered, providing a range of tailored solutions at every level. Our comprehensive five-tiered model allows for customers and organisations to enter or engage at any point on the data value chain.

This flexibility ensures that each client is able to select specific tiers and levels of support that aligns with their unique needs, objectives, and end-user requirements.



Tier 1: The Birds

Do you need to collect new datasets or access legacy data from your existing field or systems infrastructure?

Use one of our standard birds to collect and home that data for you, or right-fit and right-price a bespoke solution with our proudly South African design, manufacture, QC and assembly capability.



Tier 2: The Gap

What's needed and suitable to bridge the connectivity divide? WiFi, Bluetooth, LPWan, cellular or a combination? We've conducted thorough research, established key relationships, and have a comprehensive offering of connectivity options for both our devices and yours.

Pretty confusing and fragmented space this, we can help. Oh, and don't forget the security aspect. Once this data backhauling GAP is closed, you now have access to the data.

What's next?

Ingest it into your existing systems via open and standard techniques such as a MQTT broker or, continue talking to us here at Digital Twin about Tier 3.



Tier 3: The Console

Combined with Tier 1 and Tier 2, the Tier 3 Management Console pulls it all together offering a rich data visualisation experience and device management capability.

Key features include CoTA (Configuration over The Air), FoTA (Firmware over The Air), device management, trending, alarming, and workflow management set you up for a great starting point.

Our management console ingests data from our birds or any other system using compliant industry standard open protocols or APIs, Webhooks, etc. If your needs extend beyond this, let's explore our higher-tier solution offerings together.



Tier 4: The Smarts

Where data transforms into insight. Whether it's managing utilities in a property, optimizing a complex supply chain, or streamlining operations on a factory floor, our Subject Matter Experts (SMEs) work closely with clients like you to identify and interpret data patterns, anomalies, and triggers.

This data layered and enriched with context translates to actionable insight. With the aid of modeling and optimisation tools, the insight further matures to foresight as we progress along the digital transformation maturity curve.



Tier 5: The Boardroom

Without demonstrated return on investment (ROI) and clear benefits to a business, data and insights become mere noise.

Direct linkage of the insight and foresight to tangible and measurable impact on the Profit & Loss (P&L), along with risk mitigation, safety improvements and other value propositions, are core to achieving the desired outcomes.

Applications

Wherever data is required in the cloud – whether this be industrial process, building management systems, cold chain monitoring, vehicle and asset tracking, biometric verification for banking, electronic contracts or security, machine condition reporting, cell tower management of inverters, generators and security alarming, alarm management of fire panels...and the list goes on – Digital Twin can assist in harvesting the data.

The Litmus test – “Does my organisation want to take advantage of the benefits of IoT and the capabilities of a common data platform for my processes?” – If there is a YES in the answer then Digital Twin can assist.

Data Costs and Footprint

Harvesting data is a costly exercise when the asset is not connected to a wireless network and even more costly when gathered on cellular networks across borders.

Digital Twin has solved this by employing several Tier2 connectivity options, one of which enables global connectivity in over 200 countries. Data costs have reduced, enabling monitoring and control of low-cost assets globally.



Edge Devices, Legacy Data, and Security

Edge devices provide a bridge between the real world and the cloud – as an example – to monitor temperature in a fridge or beverage cooler and trigger a high temperature alarm, an edge device is required. The same applies to a generator or chiller that is not connected to a building management system.

Legacy data exists where there is a system in place to measure/monitor/control – this implies the system data resides in a database or data table in situ. To provide access at cloud level requires application of standard methods such as Message Queuing Telemetry Transport (MQTT).

Data security is an integral part of cloud-based data. Data encryption (hardware and software), certification, user access rights and other techniques and standards are applied to ensure data security. Digital Twin adheres to international standards to ensure data integrity based on the organisational requirements.

Route to Market

Digital Twin is a “business to business” business. We provide consulting services, technical skills, hardware and SaaS to planning and designing an organisation's digital migration strategy. These products and services are provided in collaboration with the client and their implementation partners. Our offering includes:

- Tier 1 - The Birds: Hardware development.
- Tier 2 - The Gap: Connectivity options.
- Tier 3 - The Console: Management Console and Dashboarding.
- Tier 4 - The Smarts: Advanced services such as integration into SAP.
- Tier 5 - The boardroom: Consultancy services providing valuable insights.

With our solutions, clients are able to engage with our tiered model in a variety of different ways, making it easy to combine different solutions which are personalised to specific clients as seen in the engagement model below.

	Client A	Client B	Client C	Client D	Client E	Client F	Client G	Client H	Client I	Client J
Tier 5 The Boardroom					✓	✓	✓	✓		✓
Tier 4 The Smarts				✓	✓			✓	✓	✓
Tier 3 The Console			✓	✓	✓			✓	✓	
Tier 2 The Gap		✓	✓	✓	✓					
Tier 1 The Birds	✓	✓	✓	✓	✓					✓



Credentials

Management Team

Digital Twin's management team has accumulated over 60 years' experience in various supporting fields that have led to the fourth industrial revolution and IoT.

Richard Creighton brings a deep interest in Industry 4 and digital transformation - experience includes regional director of a Global 100 technology company. Anton Torlutter is a seasoned business executive with experience across manufacturing, mining, construction, oil and gas, and retail. Ivan Potter has passion for Automation and Control with a keen eye for identifying new opportunities. Ivan's track record in developing businesses with strong engineering capabilities spans three decades.

Consulting, R&D, Manufacturing, and Client Service Capabilities

Digital Twin has several unique differentiation points within its operating model. Our R&D team comprises hardware design engineers, embedded firmware engineers and full stack software engineers.

Our manufacturing team is a fully tooled and highly agile team of experts in their discipline, enabling rapid turnaround of field solutions. Our client services team is the bridge between our R&D and manufacturing capabilities and the market.

We have a core team of consultants, specialists in their respective segments, for example oil & gas, TowerCo/TelCo, MMM, PropTech etc that bring it all together at the boardroom level.

Contact Details

Visit our website at www.digitaltwin.digital for more information. Email us at info@digitaltwin.digital for any application specific information, give us a call at +27 (11) 958 2529, or visit us at one of our offices.

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Parting Thought

The importance of an organisation's digital migration strategy to embrace the values of 4IR are wrapped in a quote from Pierre Nanterme, CEO of Accenture - "Digital is the main reason just over half of the companies on the Fortune 500 have disappeared since the year 2000."

**Contact Us**

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