AI in Portfolios

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AI has been front and centre of investors minds for a number of quarters, with markets now seeing the positive and negative effects of the technological advancement. Less exposed to large tech hyperscalers, portfolios are instead aligned to a diversified range of companies who are successfully benefiting from the adoption of AI as they advance their sustainable mandates. This document aims to highlight some of these advancements and how AI is achieving more sustainable outcomes for portfolio companies.

Opportunities

Sustainable Development

As AI continues to develop, it is expected to have a major impact on the workforce, both in terms of job displacement and creating new jobs that might not exist today. The need for workers to navigate new skills to utilise AI tools is a challenge, particularly in countries where access to digital infrastructure and education is limited. Having said that, the technology does have the ability to unlock greater sustainable development. The portfolios have exposure to a number of sustainable development banks who are already using AI technologies in their operations through different stages of project cycles.

The African Development Bank predicts an additional $1 trillion in GDP on the continent by 2035 with AI enhancing productivity. The study by Bazara Tech believes this is possible due to Africa's growing digital capacity, favourable demographics, and ongoing sectoral reforms, making it one of the most promising regions for AI-driven growth globally. They have released a strategic roadmap in order to unlock this potential, with the African Development Bank ready to "release investment to support these actions". The report identifies five high-impact sectors that are projected to capture 58% of the overall $1 trillion gain by 2035[1]:

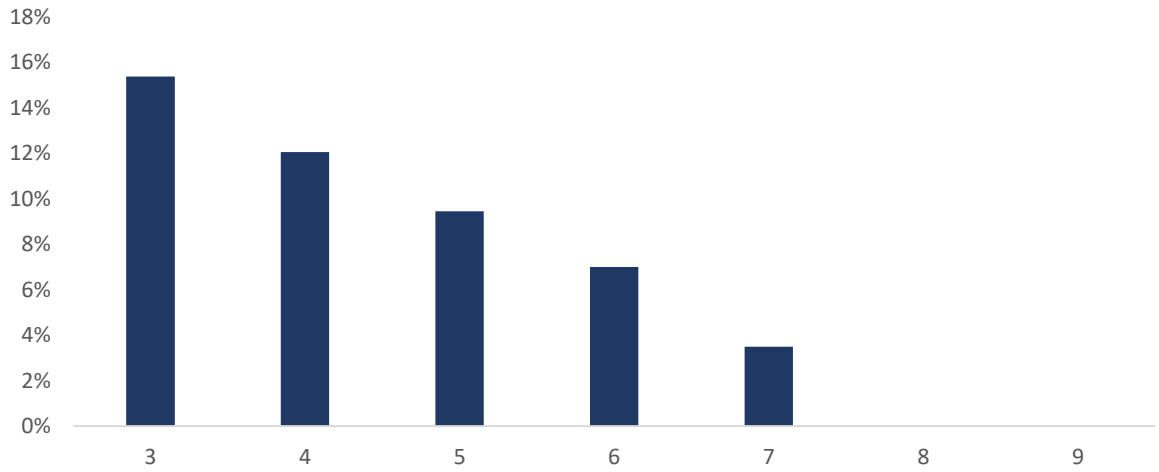
Sector	Estimated Uplift
Agriculture & Food Systems	$200 billion
Wholesale & Retail	$140 billion
Manufacturing & Industry 4.0	$90 billion
Finance & Inclusion	$80 billion
Health & Life Sciences	$70 billion

[1] *AFDB | Africa's AI Productivity Gain*

Portfolios' sustainable development bank bond exposure is highlighted below:

Ethical MPS

Brighter World MPS



Clean Energy / Energy Management

Iberdrola has been using AI for over 10 years in order to make predictions to optimise processes and detect patterns applicable to its daily operations. Iberdrola apply AI to predict the level of wind or solar production for each hour of the day and in each plate and wind turbine of Iberdrola's plants around the world, allowing for optimised output and maintenance times. With regard to electricity grids, Iberdrola puts AI applications at the service of its customers through an algorithm capable of providing an accurate estimate of the time they won't have electricity in the event of an incident. This technology also allows its teams to plan which grids or transformation centres will need partial replacements the following year, thanks to the use of 100 variables that predict possible issues based on over six years of historical data.

Vestas Wind Systems also applies AI to its operations to enhance energy capture and operational performance. It's digital platform Scipher uses advanced analytics and machine learning for real-time asset monitoring of its global network of thousands of wind turbines. Scipher also allows Vestas to forecast renewable power up to 14 days ahead, enhancing operational productivity through grid

balancing and scheduling, an area particularly important given the electricity grid is a bottleneck that is harming renewable power distribution.

Another portfolio holding, **Itron** is also using AI in its solutions to help utilities enhance efficiency. Itron has a number of partnerships with the AI 'hyperscalers'. Firstly, Itron has integrated Microsoft's gen AI Copilot technology into its Intelligent Edge Operating System (IEOS), which will enable utilities to use natural language queries to request information previously only available to their data scientists. This process transforms complex data interactions into simple intuitive processes, boosting utility companies' operational efficiency and decision-making capabilities. Furthermore, Itron have partnered with Nvidia to accelerate the adoption of AI-powered solutions at the electricity grid edge. The collaboration uniquely combines Itron's leading Grid Edge Intelligence portfolio with NVIDIA's AI-powered solutions, integrating real-time data to transform how utilities meet the demands of a rapidly changing industry. Together, Itron and NVIDIA are transforming vast amounts of data into intelligent, real-time information for utilities, supporting grid optimization, energy demand forecasting and data processing.

Energy Efficiency

Efficiency is one of the cheapest climate solutions, and a number of companies within the portfolio are focussed on providing industrial process optimisation which can lead to energy and emissions reductions. This includes names such as ABB and Siemens.

ABB's AI enabled solutions include energy optimisation, which drives higher levels of energy efficiency including the harnessing of renewable power sources. This has an obvious link to datacentre build outs where ABB's revenue is around 7%, although this is expected to grow given one in four data centres run on ABB technology. They connect physical infrastructure to systems which monitor energy use and

enable detection of energy waste. This is used on large scale grids but also microgrids to optimise electricity use. Beyond this, their AI enabled products are revolutionising logistics, industrial analytics to improve productivity and efficiency, as well as robotics. ABB have recently started reporting on the avoided emissions of their products, using an absolute value with 2022 as the baseline, they have so far avoided 204,390 KT CO2 emissions.

In a similar way, **Siemens** also have exposure to datacentre build outs, with their AI powered products enhancing efficiency and reducing cooling costs by up to 30%. This type of technology is leveraged on buildings (such as offices) to modernise outdated systems to optimise energy efficiency and make them more affordable sustainable. They have a range of products that target industrial AI and automation, with AI models running side by side with machines to predict maintenance, quality inspection and improved production reliability. From an engineering perspective, their tools help improving design and simulation to improve speed and accuracy of design, and improve testing and manufacturing processes.

Hitachi (Brighter World Only) target AI-driven industrial process optimisation to transform energy-intensive operations, using real-time data analytics to pinpoint inefficiencies, reduce energy consumption and therefore slash emissions. Their intelligent systems are able to continuously monitor equipment, production flows and energy usage, automatically making adjustments to maintain output while cutting waste. This extends to their low-carbon energy solutions, where predictive AI optimises load management and maintenance for maximum efficiency and minimal downtime. Amidst the rising demand for energy, partially as a result of AI, Hitachi have also been expanding their energy business with a focus on power grid development and new technologies such as Small Modular Reactors.

Healthcare

Portfolios have exposure to a range of companies enhancing AI for diagnostics, drug discovery, administrative automation and personalised patience care. Siemens healthcare arm, **Siemens Healthineers**, offer AI solutions for complex diagnostics, helping to improve client outcomes by accelerating and simplifying clinical tasks. Siemens offer a number of medical imaging devices, and this includes AI-powered reading of images to help manage pressures from increased workloads and staff shortages.

The biotech company **Argenx** who engineer life-changing immunology solutions are using AI in their operations. They have partnered with Sequantrix to utilize its AI-driven "DiseaseDecoder" technology for advanced drug development, whilst they use AI technology from AVAYL to pilot AI solutions for managing medical information and improving clinical trial operations.

Boston scientific are using AI to transition their portfolio of products from reactive to predictive proactive healthcare in areas such as cardiovascular diagnostics and patient monitoring. Their “BeatLogic” technology analyses ECG data to detect diseases sooner and predict cardiac events before they happen.

Water Management

Ecolab and Xylem are two portfolio holdings that are harnessing AI through their operations. **Ecolab** have developed an intelligence platform, called ECOLAB3D, which uses AI-powered predictive analytics and real-time data to support customers in optimising water usage (e.g. forecasting water quality and chemical dosing optimisation). This inherently helps businesses improve their water-usage efficiency, and therefore minimise water waste.

Xylem incorporates AI solutions to model and optimise wastewater treatment processes, such as aeration and chemical dosing. For example, their machine learning model Treatment System Optmisation (TSO) can reduce aeration energy usage by circa 30%. Efficient water distribution is a key component of Xylem's operations, and the company harnesses machine learning algorithms to optimize pumping systems. Using AI to analyse historical data, these algorithms can predict demand fluctuations, enabling Xylem to adjust pumping rates dynamically. This predictive approach enhances energy efficiency, reduces operational costs, and contributes to the overall sustainability of water supply systems.

Agriculture

AI is revolutionising the agricultural sector, effectively allowing farmers to do more with less by improving productivity, enhance efficiency, reduce costs whilst increasing crop yields. This is possible through increased real time data sets and machine learning.

This includes weather predictions for specific fields which can enhance analytics on when to irrigate. This includes crop and soil monitoring to evaluate nutrition and moisture and also identify any disease or pests early. This can lead to better application of fertiliser which can reduce the overall use and environmental harm or related emissions.

Portfolio holding **Lindsay** focusses on irrigation, and their technology allows farmers to have greater insight into the above information which improves sustainability of operations. Their FieldNet technology is an integrated remote irrigation management and scheduling technology which is helping farmers improve irrigation decisions. Further enhancing their offering, they have announced a partnership with Ceres imaging to provide high resolution imagery analytics to enhance the FieldNet platform to provide better insights into crop health.

Biodiversity

The rise of wind farms poses a fatal risk to birds, particularly raptors and migrating species, as they can collide with the wind-turbine blades, often due to tunnel vision during hunting or navigating. As farms and turbines grow in size and the distances between them increase, effective bird monitoring becomes more and more important, but relies on technology capable of capturing high-quality data and images over extensive ranges.

Spoor, an AI start-up and **Ørsted** (held in fixed income), uses AI-driven monitoring to assess the impact wind farms have on local bird populations. Spoor has already demonstrated that its software performs successfully at relatively long distances and under challenging environmental conditions, but the new trial at Ørsted's Borssele 1&2 (offshore wind farm in the Netherlands) will push the current operational boundaries. A unique advantage of Spoor's system, compared to alternatives like high-specification cameras combined with radars and human observers, is its AI technology's ability to accurately identify and track individual birds. By using off-the-shelf camera hardware, Spoor reduces system costs and complexity, unlike radar systems, which can be prohibitively expensive. High-resolution video data also enables retrospective verification of bird activity, species, and collisions near rotors, which radar cannot provide. Spoor's software outputs include data such as average bird numbers over time, flight height distribution, and species identification, verified by trained human ornithologists.

By further collaborating with Spoor, Ørsted will gain valuable insights into how different bird species behave around offshore wind farms. With a better understanding of avoidance behaviour and collision risk, more effective mitigation measures can be developed, protecting diversity throughout the clean energy transition. [2]

Source: Spoor AI Website

[2] *Spoor | Ørsted and Spoor partner on bird monitoring campaign at Borssele offshore wind farm*

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