

# How the use of technology can drive inclusive, sustainable trade

**Michael Walker**, Head of Working Capital Finance, Asia Pacific at Finastra and **Claire Thompson**, Executive Vice-President, Global Trade at Mastercard, share their thoughts on how open, transparent and adaptable technology can address the growing need for sustainable products.



Sustainability can be defined as meeting the needs of the present, without compromising the ability of future generations to meet their own needs. So when we talk about sustainable trade, it encompasses a broad range of elements, from reducing impacts on the environment, to ensuring that individuals and economies have the wherewithal to trade both now and in years to come.

There is a clear drive towards sustainable trade, fuelled by changing consumer expectations, governments and industry regulators. Authorities in Asia in particular have taken steps to encourage sustainability, with China aiming to source 20% of its energy from low-carbon sources by 2030 and reduce emissions per unit of GDP by 2030.

The Hong Kong Monetary Authority announced measures to support green finance development in May 2019, including the promotion of a common assessment framework for banks and the founding of a Centre for Green Finance. Meanwhile, the Monetary Authority of Singapore is now including banks' sustainability practices in its supervisory assessments.

We are already seeing cases of banks

and corporates that have recognised the very real links between building a sustainability strategy for moral reasons and business success, especially now that institutional and retail investor action is having a much bigger impact.

One example is the initiative taken by HSBC and Walmart, which means eligible suppliers have access to better discounting rates when selling trade receivables held against Walmart as they improve their sustainability rating.

## Barriers to overcome

While no one could disagree with the concept of sustainable business, since doing good by the planet and fellow citizens can only be a beneficial thing in itself, there are some barriers that must still be overcome in this relatively new trade paradigm.

One of the main challenges for banks, and the customers that they lend to, is that there is not yet an equivalent Environmental, Social and Corporate Governance (ESG) ratings model as there is for general business performance.

Credit rating services companies such as Moody's or S&P may broadly concur on their assessments. But different third-party rating agencies will often disagree

not just on what sustainable trade means, but also where the line should be drawn between sustainable and non-sustainable business activities.

For example, a bank might say it will not finance fossil fuel extraction companies, but will still lend to companies that provide ships to transport coal. The costs of reporting and analysing data to check that corporates are not overstating their sustainability credentials to secure more beneficial borrowing terms, often referred to as greenwashing, need to be added to banks' already substantial IT budgets.

However, these costs should be balanced against the additional profitability that can be secured through trading in a sustainable way. Research shows that today's customers are willing to pay more for products that are sourced and transported sustainably, for example.

Governments around the world also recognise the benefits of sustainable trade for their populations, particularly when talented people are underserved by traditional trade finance arrangements. Of course the problem here is that people living in countries that rely on high emission industries such as coal mining risk pushing those people into poverty by taking away their jobs.

The emerging solutions to this problem include support for initiatives to generate new 'green' jobs and a series of innovative business models that exchange finance for data.

### How will technology unlock potential?

Technology can play an important role in solving all of the challenges outlined above, especially when it is open, transparent and adaptable. In the case of monitoring companies' trading transactions, banks can use powerful artificial intelligence and machine learning to automatically build reports for managing anomalies by exception.

Taking this to the next step, they can blend internal data with third-party sources of information, including press reports and sentiment data from social media. Technology with open application programming interfaces (APIs) mean these sources can easily be plugged into a bank's central IT platform.

Open technology can also support inclusive trade financing, as banks can use decision models that factor in multiple criteria beyond historical profit and loss data to check whether or not to lend funds to a small enterprise.

For example, the owner of a small, remote coffee farm using relatively expensive sustainable growing methods could find it difficult to secure funding. But an enterprising local bank would look beyond past financial performance when assessing the farmer's suitability for finance, and consider all aspects of the business, including previous crop yields. Combining this information with some of its own future-looking data, such as weather patterns, would show that the business had both potential and viability.

Looking at this another way, the bank could work with the coffee farmer to provide finance in return for installing internet of things (IoT) sensors to gather soil quality and other geographic data to inform decisions about other trade finance deals.

This approach supports the introduction of new business models, where banks gather real-time data at source from sensors, rather than relying on potentially flawed evidence submitted by companies applying for trade finance.

Project Trado is an example of where this has been approached. The result of a collaboration between banks, retailers and education institutions, Trado is a data-for-benefits swap between a buyer and a supplier in a supply chain. Data contains 'first mile' social or ecological factors, and in exchange for providing it, the buyer applies lower rates to be applied to the working capital financing offered to the supplier.

A third way to benefit small entrepreneurs is to use distributed ledgers, or blockchains, that preserve information relating to international trades from field to fork. This helps to preserve trust in a product and guarantee its provenance, aiding the battle against greenwashing and fake, sometimes harmful, products being traded.



**Mastercard's Provenance blockchain solution makes visible the entire supply chain verifying measures on carbon emissions, use of fertilisers and other parameters in grow and distribution practices.**



The use of distributed ledgers extends into big business as well as well as entrepreneurial ventures. Banks can track progress through a supply chain in real time, rather than three steps down the line. This solid audit trail means banks and corporates can make sure diamonds are not conflict diamonds, or that alcohol is not counterfeit, or that tuna has been fished from sustainable areas of the sea.

Distributed ledger technologies and blockchain provide a mechanism to trace and verify sustainable trade practices. In primary food production for example, Mastercard's Provenance blockchain solution makes visible the entire supply chain verifying measures on carbon emissions, use of fertilisers and other parameters in grow and distribution practices.

Again, AI and machine learning as well as robotic process automation (RPA) and quantum technologies can be used

to automate the otherwise onerous and time-consuming processes involved in checking sanctions and money laundering data. It helps banks and corporates prevent reputational risk, while also meeting expectations from customers for sustainable trade.

As well as improving the efficiency of processes, technology can reduce the costs of carrying them out, too. Public cloud models based on Microsoft Azure are highly scalable and able to support large data sets, which can be accessed and added to via open APIs on an ongoing basis. New sets of data add layers of additional context that supports more nuanced but much faster decision-making than would ever be possible using traditional reports.

And the paper that can be saved from not printing out those hefty reports should not be underestimated or overlooked. One outcome from the Covid-19 pandemic was the understanding that paper documents in trade finance, including letters of credit and the signed documentation that support them, are no longer necessary. Digital equivalents are more efficient and spare the world's dwindling forests.

Open technology that can be easily adapted to changing market conditions also played an important role in helping organisations manage their way through the pandemic. Overnight, banks and corporates needed to switch their staff from working in offices, branches and contact centres to working from home. Those who had already made the switch to open, cloud-based technology coped much better with the shock of change than those who were still operating traditional IT systems.

Another lesson learned from the crisis was the need for resilience in the future. When a whole country shuts down, companies need to find new supply chains and trade routes quickly and effectively, creating huge opportunities for countries that can respond to new requirements. Having inflexible, hard-wired systems in place does not allow such changes to be made at speed.

The escalating demand for sustainable products will only accelerate into the future, as pressure builds from consumers and stakeholders to bring an end to practices that harm the planet. Open technology puts banks and corporates in the best possible position to satisfy that growing need.