



Digitally connected: An agronomist in Olam Progida, Turkey signs up a hazelnut farmer to our farmer network.



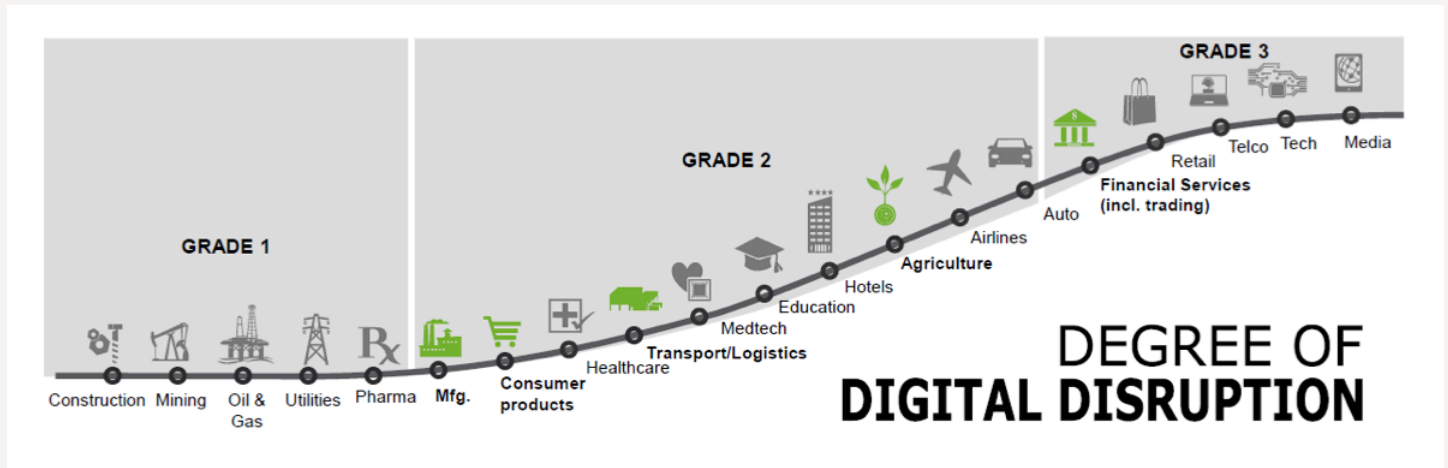
Digital Olam in the making

Digital is not a buzzword anymore; it is central to business across all sectors. Exponential growth in data, ubiquitous connectivity of people and things, and leaps in computing power are driving re-invention and innovation in business models and products. Workflow and operations are being digitalised to meet shifting customer expectations. Disruption brings new experiences. New technology is being deployed to underpin rapidly transforming digital capabilities, giving rise to new businesses.

In this issue of Olam Insights, we focus on **Digital Olam** – a function within the organisation actively shaping Olam 2.0 for the future. With ‘Digital’ being one of the four key enablers to execute our strategic pathways, our digital team has made the case for an emerging Digital Olam that will positively disrupt the way we operate and interact with our stakeholders throughout supply chains and transform the way we work.

Digitalising Olam – an insurgent for Olam 2.0

By **Suresh Sundararajan**, President, Strategic Investments, Business Development & Shared Services



There are two broad but distinct pathways when it comes to deploying a digital strategy namely Disruption and Transformation. Most of our experiences on Disruption over the past decade has been driven by start-ups also described as ‘Insurgents’ while large companies (referred as Incumbents) are often slow to disrupt but undergo a transformation journey. Disruption brings in game-changing experiences for customers, ending up creating entirely new streams of revenue. It is about solving a big problem or embedding an innovative idea, typically requiring significant capital, but often without a clear visibility on success. Investments are made on the premise that such disruption may be a game changer, perhaps the next billion-dollar business for the company.

Transformation, on the other hand, is changing the core of the organisation by adopting digital technologies that can bring down costs or achieve higher efficiencies. There is clearer visibility on returns and payback.

A global agribusiness passionate about re-imagining global agriculture and food systems, Olam is now in an industry that is ripe for disruption, mirroring or sometimes supporting similar disruption occurring in sectors such as consumer products, healthcare, transportation and logistics, education, hotels and airlines. Grade 3 industries such as automotive, financial services, insurance, media, retail and telco have gone through disruption.

Today there are several hundred start-ups in Silicon Valley attempting to disrupt various parts of the agricultural supply

chain. Globally, there are more than 10,000 start-ups looking at innovation and patents for the agriculture space. Current investment into ag-tech has grown to about US\$26.5 billion, at a CAGR of 155% over the past three years.

At Olam we are acutely aware that digital technologies are not only fundamentally transforming the way we live and work, but also significantly changing the way we connect and interact with our stakeholders – including farmers, suppliers, communities, customers and employees.

Olam has always been an insurgent in the agricultural supply chain, enjoying market leading positions through a unique model of strong origination, differentiated portfolio of businesses as well as strong competencies across the supply chain. The “Olam Way” has been to go as far up the supply chain as possible, to the farm gate disintermediating other players in the supply chain. Along the way we embed several value-added solutions for our customers as the produce goes through our supply chain from farm to fork. We are now exploring new and bold ways to retain the insurgency character as our business model evolves into the next phase Olam 2.0, thereby leading the industry’s digital disruption and transformation.

Pain points in the supply chain

Several pain points exist in today’s agricultural supply chain. The farmer base in most developing countries is highly fragmented, farmers have low literacy rates, have no or little access to technology, poor infrastructure and financing facilities. The supply chain is complex with multiple

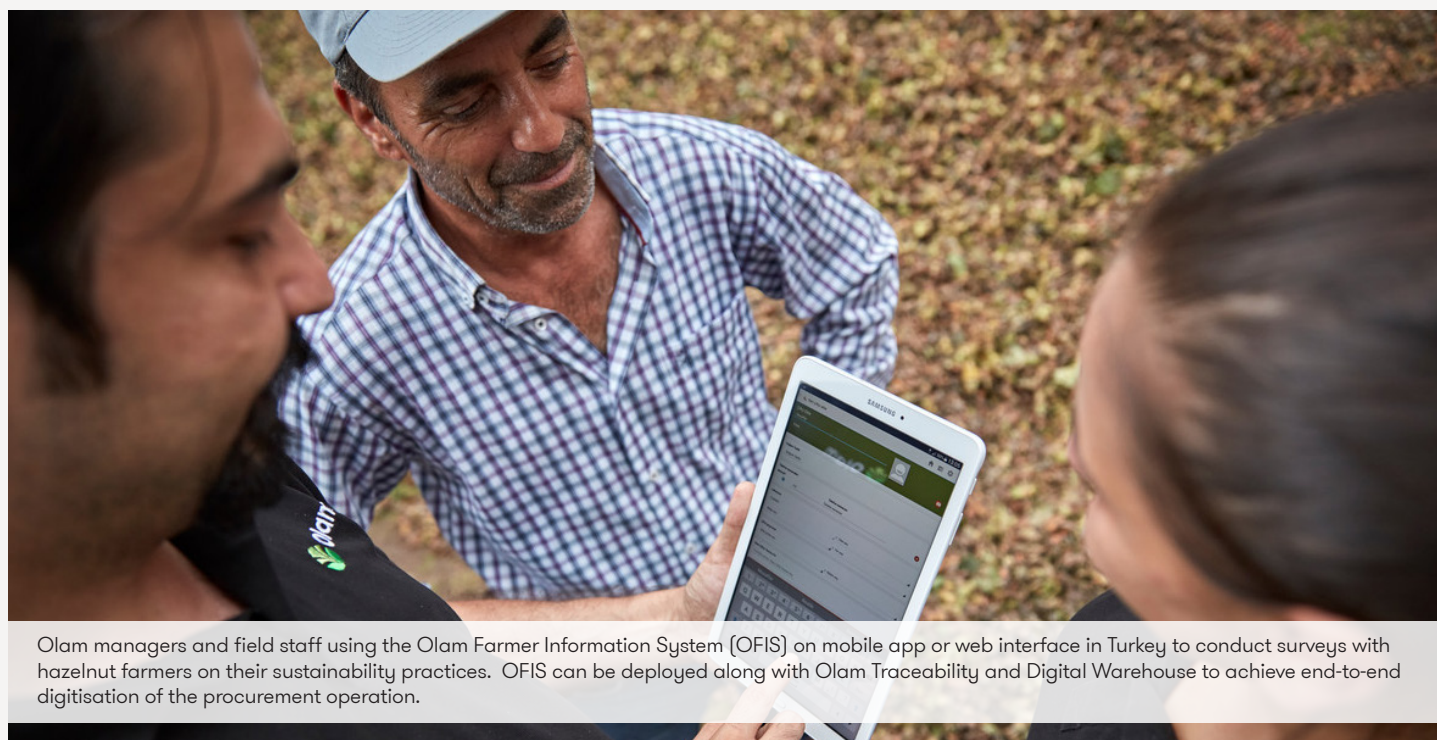
intermediaries in play and farmer being at one end of the chain.

At the other end of the supply chain, customers are increasingly seeking traceability and sustainability solutions for the products they buy – for example, the integrity of coffee or cocoa beans from start to end, and the social and environmental footprint of growing, processing and handling the beans through the supply chain, is fundamental to the customer procurement decisions, pricing and marketing to their end-consumers.

The opportunity, or threat, of disruption, tends to lie in the first and the last mile of the supply chain – at source with farmers and at the market end with customers.

“We are focusing our efforts on leveraging our latent asset, unparalleled connect with millions of farmers across the world, to disrupt the traditional farm gate buying model, at the same time digitise end-to-end supply chain.”

Suresh Sundararajan, President, Strategic Investments, Business Development & Shared Services



Olam managers and field staff using the Olam Farmer Information System (OFIS) on mobile app or web interface in Turkey to conduct surveys with hazelnut farmers on their sustainability practices. OFIS can be deployed along with Olam Traceability and Digital Warehouse to achieve end-to-end digitisation of the procurement operation.

Reflecting on this, we are focusing our efforts on leveraging our latent asset, unparalleled connect with millions of farmers across the world, to disrupt the traditional farm gate buying model, at the same time digitise end-to-end supply chain to provide to customers not just the basic product but a comprehensive suite of sustainability and traceability solutions. Infusing a 'digital first' culture is a must to survive, lead and win in the agricultural supply chain of the future.

Game-changing disruptions

As a global agribusiness supplying multiple products to over 20,000 customers with direct presence across more than 60 countries – many of these are in emerging markets – Olam has the largest network of farmers in the world at 4.8 million. This provides us with a unique opportunity to lead and disrupt the supply chain through addressing its deficiencies.

Our proximity to smallholder farmers provides an opportunity to onboard and upskill farmers through technology. It allows us to reach farmers directly, eliminating intermediaries - otherwise an impossible task without digital platforms due to the sheer number of farmers and the need to rely on aggregators and collectors as intermediaries to achieve the same outcome. The end game is a disruptive digital buying platform known as **Digital Origination**.

Digital Origination will integrate digital solutions to enable traceability, transparency of price, capture a host of data on sustainability initiatives, provide advice on yield, quality and facilitate payment – all of which will deepen our relationship with farmers as well as provide visibility and enhance control over the many moving parts of the supply chain. This will create a significant and new competitive advantage for Olam and for farmers.

Today, Olam is already helping to revolutionise practices at small farms which supply many of our products – including cocoa, coffee and edible nuts. Most of these farms are in Africa, Central America and Southeast Asia, where funding and access to information and the latest farming technology have previously been limited.

A few years back, we introduced the **Olam Farmer Information System** or **OFIS**. We expect to double the coverage of farmers under this programme to 500,000 farmers by the end of 2019.

With Digital Origination, we have added solutions that support direct transactions between Olam and farmers. In Indonesia, for example, we buy cocoa directly from farmers – approximately 40,000 farmers are now on this platform and we publish prices and transact daily. Digital Origination has also been launched in Peru and Guatemala for Coffee and

Cambodia for black pepper. In 2019, we will expand Digital Origination to 15 profit centres across 13 countries. These include Nicaragua and Colombia for Coffee, Cameroon and Brazil for Cocoa, and Ghana, Mozambique and Vietnam for cashew.

This is a game-changing business model. The benefits are mutually shared between Olam and the farmers, with Olam getting greater efficiency and a premium for quality produce, while farmers can, often for the first time, leverage technology and enjoy improved realisation from a fair and transparent procurement process. As we add more services for farmers by embedding more digital solutions, we can build a robust ecosystem shared between Olam and our farming community.

Implementing this business model involves many moving parts. For instance, the farmers need basic phones and mobile networks have to be set up in rural areas. They also need banking infrastructure, where rural banks provide bank accounts and mobile ATMs. Farmers need to be incentivised to use technology and banking services.

It also involves use of data and image analytics to solve problems in the new model of procurement. For example, we use image analytics to assess crop quality beyond moisture levels and run algorithms to calibrate and inform on the presence of foreign material.

Open marketplace

Ultimately, we aim to embed all our innovations into a **Farm Services Platform**, kind of like a Facebook for farmers. This will be an open platform inviting farmers and buyers

to participate in the market place. We will also bring in third-party service providers, who would supply farmers with agro-inputs, fertilisers, financing, insurance and logistics solutions.

Our hope is that such a platform will eventually become an open marketplace

linking rural farmers, including those outside our network, to other supply chain partners. This is a powerful idea and highly value-accretive because technology can empower and level the playing field for all supply chain participants.

About the author: SURESH SUNDARARAJAN



Suresh Sundararajan is President of Strategic Investments, Business Development & Shared Services in Olam International. He joined Olam in 1996 as finance manager in Olam Cameroon and was transferred to Singapore in 1998 to head the Corporate Affairs function and oversee the public listing of the Group. In the late 2000s, Suresh moved on to head the Global Business Services function responsible for end-to-end business process and analytics before also assuming the lead role of Strategic Investments & Business Development function in 2011. Suresh holds a Bachelor of Commerce degree from the University of Madras, India, a degree in Cost Accountancy in 1990 from The Institute of Cost and Works Accountants of India, and is a qualified Company Secretary with The Institute of Company Secretaries of India.

Journey towards digitising Olam's origination

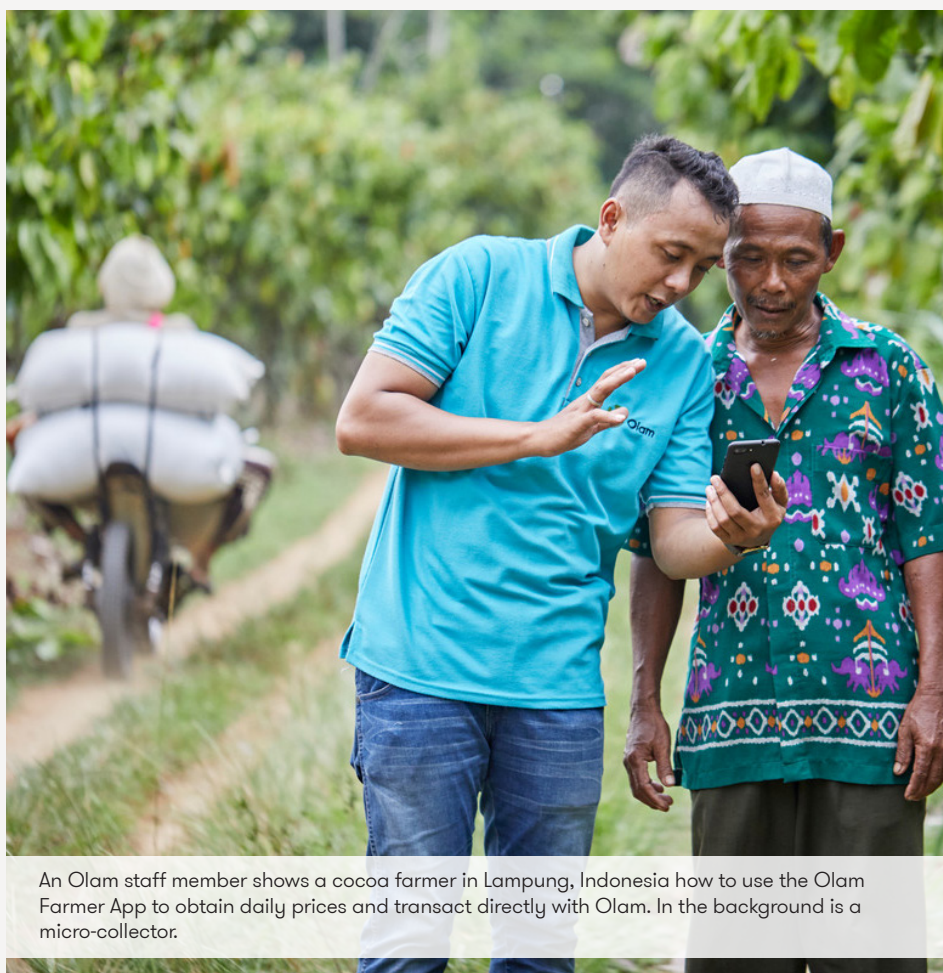
By **Pankaj Lunawat**, Vice President & Global Supply Chain Lead, Digital Olam

Origins of Digital Origination – Indonesia

Olam's ideation of disintermediation – Digital Origination – was developed based on feedback from smallholder farmers who saw pricing and lack of transparency as their major concerns, largely due to the presence of multiple intermediaries in the supply chain with most of them being speculative players.

In early 2017, we launched a pilot to establish the proof of concept for the Cocoa supply chain in Lampung, Indonesia – a buying model that bypassed the traditional medium and large sized middlemen or speculators in the supply chain. With attractive commissions, we incentivised farmer group heads in the villages to buy cocoa directly from smallholder farmers on our behalf – this group eventually became our Farmer Leads. Farmer Leads provide important services such as storage, handling of goods, weighing and quality analysis. Disintermediation led to increased price realisation for farmers as well as control, visibility, traceability and better margins for Olam.

Indonesia was chosen for the pilot as we have strong origination operations in the country across businesses. As we also run multiple traceability and sustainability projects in the country in collaboration with our customers, it was an ideal pilot location.



An Olam staff member shows a cocoa farmer in Lampung, Indonesia how to use the Olam Farmer App to obtain daily prices and transact directly with Olam. In the background is a micro-collector.

The pilot was a success as it gave Olam unparalleled access to farmers who are now armed with a mobile phone and a digital app to transact directly with Olam. From 6,000 in end-2017, we now have more than 40,000 farmers registered for Digital Origination, a platform we are building to connect thousands of farmers directly with Olam to ensure a fair and transparent supply chain.

The scale-up enabled us to capture intermediary margin, introduce new

technologies and solutions to test and improve product quality, achieve complete traceability, support sustainability initiatives and enable smart logistics – such are the benefits of a digital supply chain accruing to both farmers at source and Olam.

Within a relatively short period of time, the Digital Origination model has evolved based on farmer behaviour and taken Olam closer to the farmer's doorstep with the introduction of micro-collectors. We

have also set up third-party collection centres, each manned by a Farmer Lead.

Digital Origination has a high potential to open up the entire rural ecosystem. We intend to connect millions of marginal farmers and deliver crop inputs, financial products, insurance and other services to them via our network of Farmer Leads and collection centres.

Digital Origination: Re-imagining Olam's supply chain



Digital Origination's suite of apps connects all the participants in the supply chain and enables the end-to-end flow of information and produce. Each app interfaces directly with users and is designed for their needs.

Solutions for end-to-end integration

Even as we continue our push for **Digital Origination**, as an agribusiness operating from more than 40 origin countries across Asia, Australia, Africa and the Americas, we also have other origination models where we buy from local agents and cooperatives rather than from farmers directly. In some origins, Olam buys from immediate suppliers in a competitive market. Our digital solutions are being adapted to accommodate these origination models.

Digital Olam has developed a suite of **Olam Direct Origination Solutions** that can be used in different combinations depending on our origination model and business objectives.

In origins where we are engaging directly with farmers, such as cocoa beans in Indonesia, our sustainability team and field staff use the **Olam Farmer Information System** or **OFIS** to capture rich data from farmers on a hand-held device – information gathered includes farm size, location, crops, infrastructure and eco-support systems. We conduct surveys with farmers on their farming and sustainability

practices, track farmers' proximity to social infrastructure, such as schools, hospitals, local buying agents and water treatment plants, monitor the crops grown and their yield and analyse all this information on our database. In this way, we can manage our sustainability programmes efficiently, and above all, provide customised, tailored information and advice to the farmers to help improve their yield and performance.

In locations such as Cote d'Ivoire, where we source cocoa beans from local suppliers and cooperatives acting as aggregators of the produce from farmers, we have invested in traceability

programmes that track and trace cocoa beans from the farmers who grow the beans to our warehouses.

To digitise these existing traceability programmes, we can deploy **Olam Traceability** in combination with OFIS and SAP to achieve end-to-end digitisation of the entire procurement operation, with the suppliers and cooperatives using Olam Traceability application at their buying points.

Suppliers get a small premium if they register the farmers they buy from. They can record farmer transactions and despatch the produce to our warehouses or to a location where we will arrange pick-up by scanning, tagging and recording the crop purchases on a mobile app using QR codes or RFID (whether by cash, on loan or through mobile payment). They can also trace deliveries on the phone.

Farmers who have been identified will be issued ID cards for sale of goods to the buying agents. The cards will record

crop information – where it comes from, the fertilisers and pesticides used, etc – and the recorded transactions are automatically synced to our inventory systems.

The result is improved execution and competitiveness, better visibility of the impact of sustainability initiatives and instantaneous traceability information right from the farm, delivered to our customers, leading to supplier and customer stickiness.

Through the **Digital Warehouse** solution, warehouses are digitally enhanced with goods or lots tagged with identifiers that are readable by mobile devices. The goods' physical parameters are tracked and traced digitally in this manner. The warehouse manager will be able to control operations and make decisions on product blending and inventory management, reduce stock losses and optimise costs via a dashboard that displays real-time information on the inventory.

“The result is improved execution and competitiveness, better visibility of the impact of sustainability initiatives and instantaneous traceability information right from the farm delivered to our customers.”

Pankaj Lunawat, Vice President & Global Supply Chain Lead, Digital Olam

Olam Direct Origination Solutions



Digital Origination – A disruptive platform based on direct farmer buying model disintermediating middlemen or speculators and bringing transparency



Olam Farmer Information System (OFIS) – A rich smallholder farmer database that captures several activities at an individual farmer level and enables first mile execution of sustainability programmes



Olam Traceability – A point-of-purchase digital solution installed at the premises of suppliers and co-operatives that provides first mile traceability to farmers, helping us to expand traceability programmes with customers



Digital Warehouse – A hand-held solution that automates and tracks movement of inventory within a warehouse, providing a vital link to achieve end-to-end traceability across the supply chain

About the author: **PANKAJ LUNAWAT**



Pankaj Lunawat is Vice President & Global Supply Chain Lead for Digital Olam. A Chartered Accountant with an MBA in international business from the Indian Institute of Foreign Trade, New Delhi, Pankaj joined Olam in Nigeria in 2005 as a branch manager for Cocoa and cashew. Since then, he has held profit centre responsibilities in plantation, origination, processing and trading for the Cocoa, cashew and palm oil businesses in several geographies, including Cote d'Ivoire, Nigeria, Singapore and Indonesia. In March 2017, Pankaj had the added responsibility to lead the Olam Direct initiative and build Olam's first digital origination platform in Indonesia, which led to the formalisation of his current role as the global supply chain lead for Digital Olam in April 2018.

Engaging customers in the digital world

By **Munish Minocha**, Senior Vice President, CIO & Global Lead, Digital Customer Engagement



The DCE Customer Portal offers a wide variety of Olam products (pictured: edible nuts and spices) with short lead times and streamlined execution to improve customer experience.

Imagine a one-stop customer portal that lets customers research Olam's products, place an order, view order history, shipment documents, contract balances, product traceability data, real-time handling and shipping rates, track the delivery status and assess the social environmental footprint of purchases simply at the click of a mouse or on a mobile phone. In other words, a complete personalised B2C experience created for the B2B food industry.

This is the omni-channel experience that Olam's **Digital Customer Engagement (DCE)** initiative aims to provide to customers through an online self-service portal.

DCE is one of the key products within the solutions suite developed by Digital Olam to digitalise the customer experience and supply chain.

Big on small, medium-size customers

The business case is obvious on large customers – we protect existing sales through improved customer experience; we increase Olam's share of their wallet by up-selling and cross-selling different products;

we also improve product offerings based on data driven insights. We will digitise customers' procurement experience, in line with the wants of the new millennial generation of procurement managers in large FMCGs whose needs are met through e-commerce.

The biggest opportunity and impact of DCE is likely to be for the growing small to medium-size businesses (SMBs) across the world. This enables Olam to target new market segments that we have not been able to efficiently reach or serve before through conventional channels.

These SMBs are primarily food manufacturers, distributors, foodservice companies and restaurants chains, which buy their ingredients from importers or distributors. Most would traditionally search the internet for suppliers or rely on a network of distributors in the local vicinity for their supplies. They choose to purchase from smaller companies or distributors due to their need for smaller and frequent order size, and their inability to connect with large companies. They also prefer distributors who can supply a variety of ingredients in one order to make the buying experience simpler.

“The biggest opportunity and impact of Digital Customer Engagement is likely to be for the growing small to medium-size businesses (SMBs) across the world. This enables Olam to target new market segments that we have not been able to efficiently reach or serve before through conventional channels.”

Munish Minocha, Senior Vice President, CIO & Global Lead, Digital Customer Engagement

However, as health, wellness, clean labels and sustainability mega trends evolve, these SMBs are keen to find a reliable source who can supply good quality, clean label products that are grown and processed in a sustainable manner with clear supply chain traceability. These SMBs are often disadvantaged by their own lack of scale in negotiating favourable shipping and handling rates for the order size they want. Access to third-party financing is also challenging.

Olam is well-placed to capture this rising segment given our breadth of portfolio and global supplier network, our ability to grow crops sustainably and source raw materials directly in origins where they are grown. The DCE Customer Portal will be the direct gateway to this market, offering shared economies with the qualities and facilities these enterprises seek to grow their business. Through this digital channel we will be able to offer a wide variety of Olam products with short lead times and streamlined execution to improve customer experience.

Although this market segment accounts for a fraction of the total market size at 25-35% in the case of spices, vegetable ingredients or edible nuts, it has been growing by 5-7% each year for the past several years. This growth is a result of shifting consumer preferences to health and wellness focused products with clean label, natural ingredients, that are sustainably and or locally sourced.

Unsurprisingly, SMBs are collectively taking share from the food majors in the US and some other markets and are growing at significantly higher rates than large food companies that are experiencing flat to negative growth. We expect the SMB segment to account for a sizeable 40% of the market in less than a decade from now.



AtSource

In the long term, these market trends will be most relevant and a significant opportunity for Olam through our AtSource initiative. Today, our customers, large and small, are in search of solutions to deliver on their sustainability ambitions and carve out differentiation with their downstream consumers.

Our response to this need is to integrate AtSource into our Digital Customer Portal. AtSource is a digital dashboard that provides instant access to rich data, advanced foot-printing and granular traceability. From field to factory gate, AtSource helps customers shape real change on the ground and meet multiple social and environmental targets thereby increasing resilience in supply chains. By connecting customers directly to the source of supply at each stage of the product's journey, traceability is guaranteed.

Our objective is to enable transparency, allowing customers to assess the potential risks in their supply chains and make informed choices after studying the impacts of their actions. This is a huge factor of differentiation from competition as it helps companies to meet sustainability goals, providing a great source of value for them and in turn for Olam.

Engaging customers digitally and through AtSource to impact global supply chains and the communities and landscapes is an efficient and effective way to drive positive change as we transform our customers' experience while putting sustainability at the heart of everything we do.

I am proud to announce that our **Specialty Coffee, Edible Nuts and Spices** businesses have successfully launched their DCE Customer Portals in late 2018. Our hope is to derive 15-20% of the total volumes from the portal by 2020. We are now looking beyond the US, such as Australia for Edible Nuts and Ghana for our downstream distribution business.

About the author: MUNISH MINOCHA



Munish Minocha is Senior Vice President, CIO & Global Lead, Digital Customer Engagement. Prior to this position, he was responsible for Olam Spices' Vietnam, India businesses and supply chain operations and formerly the head of IT for the Americas and Europe regions. He first joined Olam in Indonesia (Cocoa and cashew origination) in 1997 but left the Company in 2000 to co-found and lead an ag-tech startup based in Ann Arbor, Michigan for eight years, before rejoining Olam in 2010. Munish holds a BA (Honors) in Economics from Delhi University (Hansraj College) and an MBA in International Business & Finance from Manchester Business School, UK.

Digital transformation in Olam: From technology to impact

By **Saravanan Murugan**, Vice President, Analytics & Digital Technology, Digital Olam



“Instead of focusing on investments in technology first, we build models ground-up to reflect what the businesses want.”

Saravanan Murugan, Vice President, Analytics & Digital Technology, Digital Olam

the country and other tree crops. The objectives were to automate tree counting; enhance quality; reduce pest infestation; determine maturity levels; and to identify High Conservation Value (HCV) areas for compliance and sustainability purposes.

Consequently, the Big Data Analytics team developed and designed algorithms to analyse images produced by aerial vehicles that fly over our 58,000-hectare plantation to ascertain weather conditions (e.g., humidity, temperature) and collect agronomical data. This helps in precision farming and with reduced manpower.

Drone images are captured across different estates and sent for analysis using image processing platforms that are built on Deep Learning Algorithms. The Algorithms identify mature and immature palm trees based on the crown; analyse health of trees; provide comprehensive insights on HCV; and identify other parameters across the plantation, such as newly planted, overgrown vegetation and newly cleared areas, amongst others.

Optimising US Cotton

As one of the leading exporters of cotton in the US, Olam operates a complex supply chain cycle from procurement, warehousing and shipping to quality management and allocation of cotton to contracts on demand. Creating optimal lots based on various quality parameters consisting of more than 2,500 varieties of cotton for storage and distribution across more than 350 warehouses had largely been done manually in the past, so allocating these to fulfil contracts based on agreed quality posed additional challenges.

Digitalisation and breakthrough technologies, such as big data, image based analytics, connected devices, field sensors, and IoT, are transforming the way we work at Olam. These technology trends have led to the emergence of new business models. The speed of innovation is faster than ever, the mandate to disrupt and bring change in everything we do is adding tremendous agility and speed to the business.

However, digital transformation isn't just about embracing or consuming the latest technology. In Olam, we place greater emphasis on promoting business readiness to receive a new idea. Instead of focusing on investments in technology first, we build models ground-up to reflect what the

businesses want. We bring in best business practices across our projects to improve communication, product training, business review, technical and regulatory feasibility, and consider other cross-functional needs to drive change and truly scale innovation.

Digital Olam and the business teams have worked together to implement many solutions to impact the business holistically. Here are three notable examples:

Digitising palm plantation management

Olam's palm plantations in Gabon were the subject of a pilot project by the Big Data Analytics team within Digital Olam to develop a prototype for scaling across

To solve this problem, the Big Data Analytics team conducted an extensive study based on the inventory data that was aggregated from various sources, which primarily serve as the key parameters for cotton lot creation and routing. The key findings were used to build a heuristic algorithm that identifies and filters cotton bales; selects based on mark type and bale tied to each quality; reduces bale counts to permissible weights; optimally marks cotton at the lowest cost within expected shipment date while meeting the contract's requirements; and allows traders to select, review and appropriate marks based on contractual agreements.

The result was a robust, plug and play smart algorithm that creates optimal cotton lots across the warehouses, reduces delays and minimises logistical cost and time over-runs. Most of all, it reduces man-

hours by up to 75%, thereby freeing up our people to do higher value-added tasks.

Decoding customer buying patterns

Customers across the globe have developed distinct preferences for specific taste, aroma and flavour of coffee as well as various other preferences in their coffee sensing experience. Olam's Coffee business caters to diverse customer demands with many product variants. However, this strategy can increase total cost and lead to variability in earnings. It was therefore critical to understand consumer behaviour for a better targeting strategy.

Olam's Big Data Analytics team applied association and clustering algorithms based on historical purchase and behavioral data records to arrive at prospective buying trends. They also

observed and generated social media analytics that profile the different speciality coffee flavours that consumers like, which is an indicator of future consumer preferences. One of the algorithms generated identified cross-selling opportunities by recommending alternate grades or similar products along with the main product snapshot, all based on product availability and margin profiles. We have also another algorithm that monitors customer churn and re-activates after a defined period of time customers who have dropped off by prompting customer retention strategies.

With this comprehensive understanding of customers and predictive capabilities, the Coffee business can now realise value from the shifts in buying behaviour and sentiment by making better product and marketing decisions.

About the author: SARAVANAN MURUGAN



Saravanan Murugan is Vice President of Digital Technology & Analytics in Digital Olam. Currently based in Chennai, India, Saravanan joined Olam in September 2016 with more than 20 years of experience in IT and data analytics, having worked in consulting firms, such as Tata Consultancy Services (2011-2014), Cognizant (2005-2011) and Wipro Technologies (1999-2005). He had spent extensive periods in the US, UK and other Asia Pacific countries where he managed large projects, such as developing analytics solutions and text mining algorithms, and architecting Big Data platform analytics solutions for clients in the retail, FMCG and financial services sectors. Saravanan holds an MBA (IT & Systems) from ICAI University and is a certified Data Scientist from IIT, Madras.

Sensing for disruption

By **Siddharth Satpute**, Programme Director, Digital Olam

Olam has learned a great deal from operating successfully through the volatility, uncertainty, complexity and ambiguity (VUCA) of the global agribusiness sector over the past 29 years, particularly as we operate deep within emerging markets. We have adapted our strategy and operating methods accordingly – often involving significant innovation to do so. Now, helping the organisation seize and operationalise the digital agenda is a primary business driver.

The Digital Programme Management Office was set up last year and one of its main roles is to build a construct with the external ecosystem for innovation and collaboration, and thereby help harness

the potential that digital holds to transform our business.

Engaging the ecosystem

Ecosystem sensing is essential as we need to be aware of market shifts caused by new technology or innovation in our core and adjacent business fields. We need to be plugged into the ecosystem to identify relevant stakeholders who can collaborate with us to solve problems and support development of a disruptive business opportunity.

As a Singapore based company, our first port of call is the local ecosystem. We are engaging with various government agencies, such as the Economic

Development Board, Enterprise Singapore, Agency for Science, Technology and Research to leverage their programmes and networks. We are exploring collaboration opportunities with academic institutions like the National University of Singapore and the Singapore Management University.

More recently, we have connected with Singapore based accelerators and incubators to tap into their start-up ecosystem and forge mutually beneficial partnerships. We are expanding our network and reaching out to the main innovation hubs in the US, Israel, India, etc, as we see significant intellectual and financial capital flowing into ag-tech in these locations.



A digitally enhanced warehouse in Olam Cocoa, Indonesia: Goods are tagged with identifiers readable on mobile devices.

“We must get accustomed to using agile methodologies by working in sprints and breaking away from conventional project management approaches.”

Siddharth Satpute, Programme Director,
Digital Olam

Internalising digital

Aligning employees internally to our digital programme is an important responsibility of the Programme Management Office. We must make sure every employee understands our objectives, suite of solutions, costs and benefits in adopting these solutions, ways of operating and collaboration for new ideas and opportunities.

The Programme Management Office is stepping up on digital internalisation and looking to work with designated ‘digital champions’ from each of the businesses to build and implement digital solution roadmaps. We also actively engage with key influencers in the business units, regions, countries and functions who act as evangelists for raising awareness

about our digital programme and for driving a change in culture across our Company.

We are promoting the digital culture with a bottom-up approach – by tapping on the Olam ‘re-imaginiers’, who are millennials passionate about re-imagining the future of global agriculture and will be the future leadership in the Company.

As the famous adage goes, cultural change takes a generation to materialise – perhaps 18 years for renewal and change of habits to truly take place. Unlike the information technology era, where adoption was by developing a comprehensive blue print and implementing it, in digital transformation, solution prototypes are conceived

through building and launching ‘minimum viable products’ which are then tested and enhanced rapidly through robust learning and feedback loops. Hence, as an organisation we must get accustomed to using agile methodologies by working in sprints and breaking away from conventional project management approaches.

Conventions will give way to new genres during this critical period of adjusting the way we work. Digital transformation is about ‘the art of the possible’ – what can we do now that we couldn’t do before, given the fast pace of evolution in digital technologies. This will create opportunities for new ways of doing business or even new businesses enabled by digital innovation.

About the author: SIDDHARTH SATPUTE



Siddharth Satpute is Programme Director of Digital Olam. He joined Olam in India as in 2013 as head of finance and later became regional CFO for Asia. He then joined the Digital Olam team in 2017 and co-led the development of the Digital Origination solution for Indonesia before assuming his current role in the newly created Digital Programme Management Office in March 2018 based in Singapore. Prior to joining Olam, Siddharth spent more than 15 years with Royal Philips in various finance leadership roles in India, Singapore and the Netherlands. Siddharth is a Chartered Accountant from India and holds a Bachelor of Commerce degree from the University of Pune, India. In 2016, he was recognised as being amongst the ‘100 Most Influential CFOs of India’ by CIMA U.K.

Digital Products Footprint

NORTH AMERICA

E-commerce
US – Spices, Edible Nuts, Specialty Coffee

CENTRAL AMERICA

Digital Origination Peru – Coffee Guatemala – Coffee Nicaragua – Coffee	OFIS Honduras – Coffee Mexico – Coffee Nicaragua – Coffee Guatemala – Coffee
Olam Traceability Mexico – Coffee Nicaragua – Coffee	

SOUTH AMERICA

Digital Origination Brazil – Cocoa Peru – Coffee Colombia – Coffee	Smart Farms Brazil – Pepper
OFIS Brazil – Coffee, Cocoa Ecuador – Coffee Colombia – Coffee Peru – Coffee	Olam Traceability Ecuador – Cocoa Colombia – Coffee Peru – Coffee, Super Foods (Quinoa, Chia)

EUROPE

E-commerce
UK – Cocoa

WEST AND CENTRAL AFRICA

Digital Origination Ghana – Cashew Cameroon – Cocoa	Smart Farms Gabon – Palm, Rubber Cote d’Ivoire – Cotton Egypt – Onion	Smart Factories Cote d’Ivoire – Edible Nuts Ghana – Packaged Foods Nigeria – Packaged Foods, Grains, Rice, Edible Nuts Tanzania – Coffee Mozambique – Palm Gabon – Palm
Digital Warehouse Cote d’Ivoire – Cotton	E-commerce Ghana – Grains, Rice Nigeria – Grains	
Spyder Cote d’Ivoire – Cotton		
Aqua Feed Nigeria – Animal Feed	OFIS Cote d’Ivoire – Cocoa, Rubber, Cashew, Cotton Ghana – Cocoa, Cashew Nigeria – Cocoa Cameroon – Cocoa Republic of Congo (Congo Brazzaville) – Cocoa Uganda – Coffee Burundi – Coffee Tanzania – Coffee, Cotton Democratic Republic of Congo – Coffee Rwanda – Coffee Zambia – Coffee Mozambique – Cashew, Cotton	
Olam Traceability Cote d’Ivoire – Cocoa, Cashew Nigeria – Cocoa Uganda – Coffee		

AUSTRALIA

E-comm
Australia – Almonds

ASIA

Digital Warehouse Indonesia – Coffee	Farmer Services Platform India – Community for farmers	
Digital Origination Indonesia – Cocoa, Coffee Cambodia – Pepper	OFIS Indonesia – Cocoa, Coffee Vietnam – Coffee, Cashew, Pepper Laos – Coffee Thailand – Rice Timor-Leste – Coffee PNG – Cocoa Turkey – Hazelnut	Smart Factories Singapore – Cocoa Malaysia – Dairy Indonesia – Sugar Vietnam – Cashew
Olam Traceability Vietnam – Pepper Indonesia – Coffee		

Aqua Feed – An app that enables the business to build better engagement with fish farmers by providing superior technical advice using data collected through the app

Spyder – A digital solution that enables timely and insightful training and information sharing with farmers, while tracking crop development from sowing to harvesting and managing each farmer account from input financing to crop sales

Smart Factories – Digital technologies that can transform manufacturing units into agile (excellence in customer service), reliable (consistent quality, high asset productivity) and cost competitive ‘Lean Factories’

Smart Farms – Digital solutions that help improve yields (e.g. by using drone analytics) or reduce operating costs (e.g. through an app for monitoring field staff productivity) in plantations