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Welcome to the January edition of Business Chief USA!

This month's cover features Jason Lee, Sr. Director of International Supply Chain at Five Guys, discussing the company's unique supply chain, and the globalisation and logistics challenges it has faced.

Other leaders that feature in the magazine include Savills' Rick Drescher, Corporate Managing Director of Technical Services, and Ian Zilla, Executive Managing Director, both of whom discuss the company's Critical Facilities Services and how its IT expertise has helped to build strong foundations for customer trust. In addition, we speak with Doug Walters, Chief Sustainability Officer and Chief Resiliency Officer at The City of LA, who elaborates on some of the innovative approaches being used to create a more sustainable Los Angeles.

In our leadership feature, we speak to Juliette Rizallah, Chief Marketing Officer and cybersecurity expert at SailPoint, who goes into more detail on the impact that digital culture is having on the cybersecurity industry.

This month's City Focus takes a closer look at Atlanta, Georgia, and the businesses that are putting the city's ecosystem on the map. In addition, our Top 10 looks at American businesses from Forbes' Top 100 Digital Companies list, finding out precisely how they are disrupting the industry.

Do you have a story to share? Please do not hesitate to get in touch and you could be featured in our next issue.

Enjoy the read!

Georgia Wilson
georgia.wilson@bizclikmedia.com

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**TOP
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**Digital
disruptors in
the US**



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Lelia Wilkins

Now

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8:16AM

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Will & Mark

Yesterday

He sent a dozen roses out the...



Winnie Obrien

July 19

Sent you guys and email. Still...



Ola Webb

July 18

How was the meeting with client



Marketing Department

July 1

Coolbeans







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A RAPID

GLOBAL

EXPANSION

WRITTEN BY
RACHAEL DAVIS

PRODUCED BY
DENITRA PRICE

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Five Guys Enterprises rose from humble beginnings in Arlington, Virginia in 1986 to a globally recognised brand. Jason Lee, Sr. Director, International Supply Chain at Five Guys, discusses its globalisation and logistical challenges



Five Guys Enterprises is not your average fast food corporation. Founded in 1986 by the Murrell family and named after its five sons, the Five Guys family members still meet at the corporate office every Tuesday, and have continued to play key roles in the business. It offers a basic menu of burgers, fries, hotdogs and milkshakes with a range of toppings – keeping it simple but without making it boring: “you’d need to eat here every day for 684 years if you wanted to try all possible combinations of our toppings”, its website states. Five Guys also does not market its brand. It has achieved a cult following through word-of-mouth advertising, meaning every customer feels valued and part of a unique dining experience.

From its origin as a takeaway burger joint in Arlington, Virginia, Five Guys now has 1,600 locations in 19 countries across the world – and is still expanding. “We want to enter six to eight new countries every single year,” says Jason Lee, Sr. Director, International Supply Chain. The challenge Five Guys has set itself is that its menu is the same in every global location, and where possible, it will use the same ingredients and products.

“One unique thing about our international strategy is that Five Guys controls the supply chain,”





“THE MURRELL FAMILY JUST WANT THE WHOLE EXPERIENCE TO BE THE SAME, WHETHER YOU’RE IN LONDON, HONG KONG OR WASHINGTON DC”

—
Jason Lee
Sr. Director, International Supply Chain, Five Guys

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Lee explains. “Purchasing, logistics, distribution – we take full control of this instead of the franchisee.”

Five Guys is very strict on sourcing. In order to make the experience as authentically American – as authentically Five Guys – as possible, there are no substitutions to be made. “That’s not just on food, that’s even on disposables – napkins, bags, cups – we have a specification that every market needs to follow,” says Lee. Five Guys plays the long game in this regard. By being strict and controlling supply chain and distribution itself, the





CLICK TO WATCH: 'FIVE GUYS – PICKLES'

company ensures the highest quality while ultimately saving money, as there is less exposure to wastage, excess product, and mismanagement by third parties or franchisees.

Even peripheral products such as napkins, toilet paper, bags and cups are, where possible, shipped internationally from the United States. While it is admirable that Five Guys wants to provide the same, high-quality experience to all of its customers, no matter where it is in the world, critics would question how much financial and logistical sense it makes to ship

these products, which are largely produced in Asia, back across the Pacific to serve Five Guys' Asian market, for example.

“We spend \$8mn a year on napkins here in the US, so our buying power is tremendous,” says Lee. “When shipping a full ocean container, it costs a few dollars per case of napkins, so actually it is cheaper than going locally and trying to source for the one store we have in a country.”

For markets such as the UK, where Five Guys has more than 100 stores, it can find local suppliers that allow



it to deliver non-food items at the quality customers expect, because it has a higher volume requirement. “As we expand, not only do we want the experience to be consistent, but it actually makes financial sense to ship from the US to smaller markets,” Lee explains.

As Five Guys looks forward to extending its global expansion, one of the biggest issues it faces logistically is compliance. In order to provide that authentic, simple and standardised experience internationally, Five Guys tries to use as many of its original

American products as possible. “We try to ship everything from the United States that we can, and for Europe we have established new suppliers to service that region,” Lee explains. “Every time we ship orders, there are local regulations which we have to adhere to, and it is very tricky when it comes to food items. Having dual sources in the US and Europe provides us options.”

Five Guys takes an ‘all hands on deck’ approach to addressing compliance, and leans on its third party suppliers and compliance companies



1986
Year founded

\$2bn
Revenue in
US dollars

30,000+
Number of
employees

to help ensure it can deliver the authentic Five Guys experience while adhering to food standard laws across the world.

Finding the right partnerships, franchisees and technology solutions is essential to Five Guys' growth, particularly as it expands into new markets, with little brand recognition but considerable opportunity. Consequently, stock management and demand planning is a focus as the business expands into any new market.

Five Guys offers fresh food to its customers, meaning its stock has a

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EXECUTIVE PROFILE

Jason Lee

Jason has experience managing all aspects of supply chain for a wide variety of different industries including CPG, industrial, automotive, healthcare, and food service. Specifically at Five Guys, he has led in the establishment of materials management processes, strategic distributor networks, sourcing initiatives, and global logistics programmes. Jason has executed many successful transportation cost reduction projects through cost unbundling initiatives, negotiations, and shipment optimisation methods. His current role includes the management of teams in Europe, the Middle East, and Asia-Pacific, and will lead the growth into all future International markets for Supply Chain.



**“WE WANT TO
GO INTO SIX
TO EIGHT NEW
COUNTRIES
EVERY SINGLE
YEAR”**

Jason Lee

Sr. Director, International
Supply Chain, Five Guys

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*Photo © Ashley Camryn





short shelf life and initial sales are a 'best guess'. Accordingly, technology is integral to stock management and to ensuring the supply chain is maintained globally. To achieve this level of quality, Five Guys uses Sensitech for supply chain visibility and to moderate the shipping of its products, and FoodLogiQ to connect the store level with distributors and suppliers.

"We use Sensitech on all of our ocean containers and select trucks, and it gives us live GPS location tracking so we can see where our containers are at all times," says Lee. "It also gives us the temperature of the container at all times. This is essential for our perishable items so we can keep track of both temperature and location."

With FoodLogiQ, Five Guys can connect its store level with its distribution level, and then with its suppliers, so that "any time there is a delivery issue, whether that's quality, damage, short stock, the wrong product, the store store will fill out a report and it will automatically go to the appropriate party," notes Lee. "It is a centralised platform that all of



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the critical stakeholders have access and visibility to. The Five Guys corporate supply chain team is copied in on everything.”

Five Guys does not just use FoodLogiQ for day-to-day functioning. The technology also enables the team to run reports to establish the root cause of supply chain issues, whether that is with a particular store or a product, allowing them to take corrective action.

Concluding, Lee makes it abundantly clear that supply chain management,

“ONE THING THAT IS UNIQUE ABOUT OUR INTERNATIONAL DISTRIBUTION IS THAT FIVE GUYS CONTROLS THE SUPPLY CHAIN”

—
Jason Lee
Sr. Director, International
Supply Chain, Five Guys

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“INVESTING IN THE TEAM AND THE SYSTEMS TO SUPPORT THAT IS SO IMPORTANT TO OUR SUCCESS”

—
Jason Lee
Sr. Director, International
Supply Chain, Five Guys

including partnerships with suppliers and distributors and making use of technology, is critical to the international expansion of Five Guys Enterprises. “Once you get into a new market, it’s about managing the day-to-day stock management. What do you have on hand? What do you have coming in the pipeline? You truly cannot blink, so investing in the team and the systems to support that is so important to our success.” ■





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Driving security in a digital world

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**Business Chief speaks with
Juliette Rizkallah, Chief Marketing
Officer and cybersecurity expert of
SailPoint, to discuss how digital
culture is impacting cybersecurity**

WRITTEN BY **GEORGIA WILSON**

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70500

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Juliette Rizkallah, Chief Marketing Officer at SailPoint, started her career in application software development, transferring to cybersecurity by chance when she fell in love with the sector. “Digital culture means connectivity,” she says. “The most significant current industry trend right now is identity – the new security layer. For the B2B world this means the buyer experience has changed, potential customers like to be informed before they reach out to you. They do their research to learn and hear what others say before they make a decision.

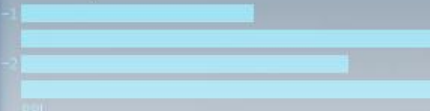
“The demand from users and buyers to be connected is driving increased availability of vast amounts of information through the web. This drive is digitally transforming organisations to use cloud platforms.” Though digital culture has unleashed vast quantities of behavioural data that can be utilised to better target potential customers, Rizkallah highlights that “while digital identities are becoming the keys to unlocking the doors to a connected world, they are also becoming so critical that they are the first IT security threat vector, which hackers are targeting more than anything else.” As a result, a new digital culture is enhancing the need for





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Dashboard



10

100%

100%

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col=ca  
sys=cb  
root=0xFF & val=0x00  
sys=0x00 & val=0xFF & root=0x00  
=Smelly= 5He Cngle 0 0xFF 00
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“The most significant current industry trend right now is that identity is the new security layer”

—
Juliette Rizkallah,
Chief Marketing Officer and cybersecurity expert, SailPoint

cybersecurity, “with everyone using their identities to access data online for both work and personal reasons, real security challenges are continuously emerging. In particular, privacy and people aren’t protecting their identities and are becoming vulnerable to hackers,” says Rizkallah..” In order to combat this threat, the industry has seen governmental regulations continuing to increase, and produce “an uptick across all sectors as they increasingly recognise the need for identity governance.”

THE IMPACT OF DIGITAL CULTURE

“We are all about digital transformation,” emphasis Rizkallah. “Digital transformation has been pushing a change in culture to how people want to work and how they want to buy. SailPoint has evolved, riding the wave of changing digital culture.”

For companies like SailPoint that manage and protect the digital identities for enterprises, it is important to promote the growing digital culture and provide protection against potential threats. SailPoint

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CLICK TO WATCH: 'SAILPOINT DELIVERS THE POWER OF IDENTITY'

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leverages artificial intelligence (AI), machine learning (ML), and Big Data within its technology to drive innovative security platforms for enterprises. “Big Data is the king of our digital culture; it is driving SailPoint’s identity data. At the same time, we leverage AI and ML for a critical process, to give the identity data context. Allowing clients to understand who has access to what and what they are doing with that access – a critical understanding in today’s fast evolving digital culture.”

“SailPoint is on the bleeding edge of

AI, ML, and Big Data. We are one of the few people solving issues that arise from a fast-evolving digital culture,” says Rizkallah, on the growing demands of automation in predictive identity. “With predictive identity, organisations can leverage peer group models to spot risk of inappropriate access. In addition, ML can be utilised to launch certification campaigns on risky user access. The launch of predictive identity allows us to deliver AI and ML-enabled use cases across our core open identity platforms.”

When it comes to connectivity Rizkallah briefly discusses the gradual redundancy of email communication, explaining that “email is not a medium people find attractive anymore”. Companies like SailPoint are becoming modern workforces that are embracing new technology tools – such as zoom and slack – to increase immediate access and provide people with 24/7 connectivity.

SAILPOINT: IN FOCUS

Founded in 2004, SailPoint has become a leading provider of identity management for enterprises in only a few short years. SailPoint helps

“email is not a medium people find attractive anymore”

—
Juliette Rizkallah,
Chief Marketing Officer and cybersecurity expert, SailPoint





customers manage the digital identities of employees efficiently and securely, in addition to contractors, business partners, and other users.

“We give our customers the critical visibility they need into who currently has access to which resources, who should have access to those resources, and how that access is being used,” comments Rizkallah.

At its core, SailPoint believes that identity needs to be predictive, accessible, and dynamic. “When our customers put identity at the center of their cybersecurity strategy, they are no longer afraid to say ‘yes’ to embracing new technologies, entering new markets, or innovating in new ways. Our customers can move forward, knowing that all their users and access to essential business applications and data are secure.” SailPoint strives to constantly redefine itself as a business to evolve, becoming pioneers and innovative when it comes to identity. ■



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WHY BUSINESSES NEED TO EMBRACE NEW TECH

ROBERT RUTHERFORD, CEO OF IT
CONSULTANCY QUOSTAR, DISCUSSES
THE BENEFITS OF A TECHNOLOGICAL
APPROACH TO RISK MANAGEMENT

WRITTEN BY **ROBERT RUTHERFORD**



The impact of technology on the business world is pervasive and constantly evolving, which has meant that companies must take action in order to stay both competitive and secure. However, with so many complex products and solutions on offer, it can be difficult for businesses to know where to begin.

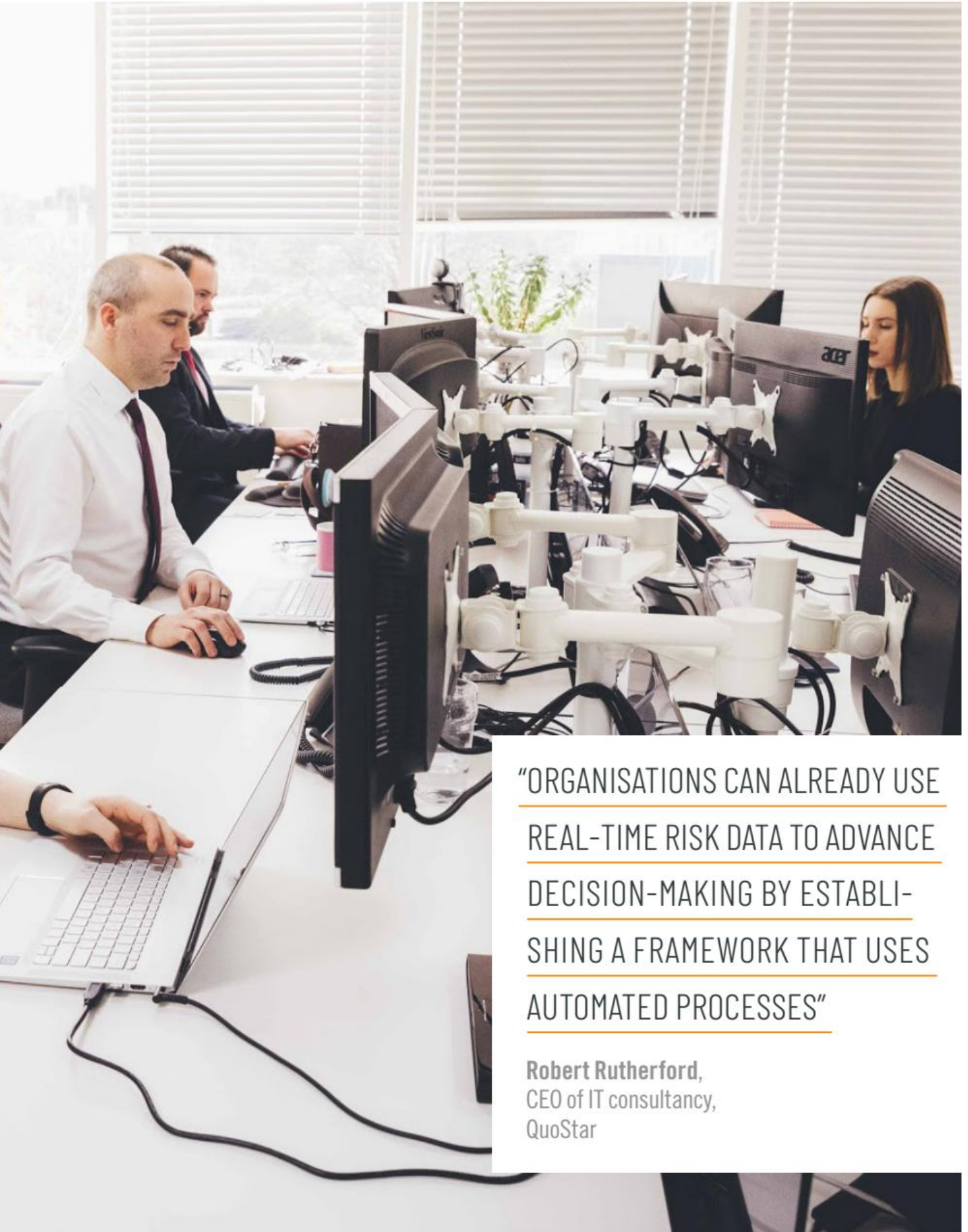
For some companies, it may be tempting to prioritise client-facing technologies that promise immediate and measurable commercial benefits, but businesses also need to think about long-term transformations in key areas, such as operational risk management (ORM).

The impact of poor risk management can be devastating for firms not only financially, but also reputationally, yet some businesses seem willing to take chances in this area. Failing to update ORM processes and systems will leave these businesses vulnerable to increasingly sophisticated cyber threats, data breaches and fraud. Investing in new technology for ORM is therefore more than just common sense – it's essential.

AUTOMATED DETECTIVES: ANTICIPATING RISKS

Identifying areas of vulnerability from vast swathes of data is definitely not a one-man job. A report by McKinsey notes that around 50%





“ORGANISATIONS CAN ALREADY USE
REAL-TIME RISK DATA TO ADVANCE
DECISION-MAKING BY ESTABLISHING A FRAMEWORK THAT USES
AUTOMATED PROCESSES”

Robert Rutherford,
CEO of IT consultancy,
QuoStar

of financial services staff are currently dedicated to risk-related work, while just 15% are focused on analytics. Although, by 2025, it anticipates these figures will be closer to 25% and 40%, respectively. The integration of AI and data analytics systems in ORM will be responsible for this reversal.

In today's world, data rules the roost, sparking a wave of advanced analytics tools that will become more valuable as more data is shared. Predictive analytics techniques, machine learning, and artificial intelligence can all help to

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“THE IMPACT OF POOR RISK MANAGEMENT CAN BE DEVASTATING FOR FIRMS”

Robert Rutherford,
CEO of IT consultancy,
QuoStar

efficiently build large and complex data sets. Working at a faster pace than any human, these solutions can be used to identify discrepancies long before they cause any serious problems.

While AI's capacity for a rational, proactive response is still in the very early stages of development, organisations can already use real-time risk data to advance decision-making by establishing a framework that uses automated processes. For example, banks can now invest in robotic process automation (RPA) bots that will continuously scan their internal environment and collect data from predetermined



Choose where your data is stored



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sources. As a result of developments like these, time-consuming and costly manual auditing methods will eventually become a thing of the past.

RISK STRATEGY IS A TEAM GAME

Breakthroughs in data analytics also mean that machines can now process data faster, more efficiently and without any bias. As such, it's important for risk managers to see this technology as a tool to be exploited and leveraged, rather than as a threat. To this end, all areas of the business need to understand its capabilities in order to build

a proactive working relationship with these solutions.

While defending against risks like cyber-attacks is vitally important, many at board and executive level are still unsure how to tackle this issue. This is alarming considering that 69% of financial services CEOs report they are concerned about cyberthreats, according to a 2016 survey by PwC.

Those responsible for risk management strategies can often find that there is a knowledge gap between them and the board-level decision makers, as executives tend to rely on external

consultants for answers. However, it's the board that will ultimately be held accountable for any failings, so effective communication between risk managers and decision-makers is essential.

Business leaders should therefore focus on creating a culture that not only prioritises risk management, but also one that encourages employees at all levels to engage with the systems they use. This top-down approach is the only way to ensure that everyone is properly prepared for the inevitable shift in ORM's technological architecture and able to mitigate and manage the operational risks of the future.

Some businesses will struggle with what can potentially be a significant change to the way they operate, so shouldn't be afraid to seek expert help on how to manage this transition. Failure to address risk would be a serious error, but mitigating risks in the wrong way can be equally as damaging.

CAUSE FOR CONCERN?

Future proofing with technology like data analytics and AI shouldn't make employees worry about job security. A company using new technology to





“DEVELOPING A ROBUST ORM
STRATEGY USING NEW
TECHNOLOGY LEADS TO MORE
PROACTIVE AND INFORMED
DECISIONS”

Robert Rutherford,
CEO of IT consultancy,
QuoStar

manage risk will see a reduction in operating and auditing costs, an optimisation of its insurance coverage, as well as an increase in staff satisfaction. By introducing tools that are capable of automating manual processes, businesses will find that employees have more time to optimise their output and reconsider their relationship to ORM.

Without a doubt, the switch from human to algorithm-based risk assessments will present new challenges, some of which may be difficult to anticipate. This is simply the nature of change. What we do know is that developing a robust ORM strategy using new technology leads to more proactive and informed decisions, giving businesses the competitive edge necessary to grow in today's marketplace. The field may be complex, however, there isn't a better time to take ORM seriously and invest in the future. ■

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ENHANCING ITS HUMAN WORKFORCE WITH ROBOTICS AND RPA

Following a visit to DHL's innovation center in Troisdorf, Germany, Business Chief takes a look at how DHL is using robotics to enhance its workforce

WRITTEN BY **GEORGIA WILSON**



Proud to
DHL

When it comes to DHL's logistics operations, Oscar de Bok, CEO of DHL Supply Chain, highlights the need for flexible solutions as supply chains become increasingly complex. De Bok says that it is imperative that a large global company such as DHL has a strategy that utilises digitalisation and collaborative robotics to enhance value and ensure its workforce is unified and connected. "The future is exciting. The future is about innovation and making sure we continuously improve," says de Bok.

DHL has recently come to the end of its 2020 strategy and is now driving towards 2025, focusing on 'delivering excellence in a digital world'. Between now and 2025, the company plans to invest US\$2.2bn into digitalisation and robotics.

ROBOTICS AND RPA INNOVATIONS AT DHL

"Digital culture is something we constantly enforce within DHL Supply Chain," says Markus Voss, CIO and COO of DHL Supply Chain. He emphasises that the company has made great efforts to ensure its employees grow alongside its innovations, fostering a culture of working collaboratively with robotics and robotic process automation (RPA) as opposed to being replaced by it. "To date,





1969
Year founded

HQ
Bonn
Germany

360,000+
Number of
employees

49



I have not seen a single site where we have introduced technology and had job losses. In fact, it is quite the contrary, workers are usually more satisfied and we attract more people,” says Voss.

CLEANING ROBOTS – NEO

“Don’t start with the most complicated,” says Markus Kückelhaus, VP of Innovation and Trend Research at DHL. “Start with something easy. Cleaning robots are not the most complex solution, but a good one that we can roll

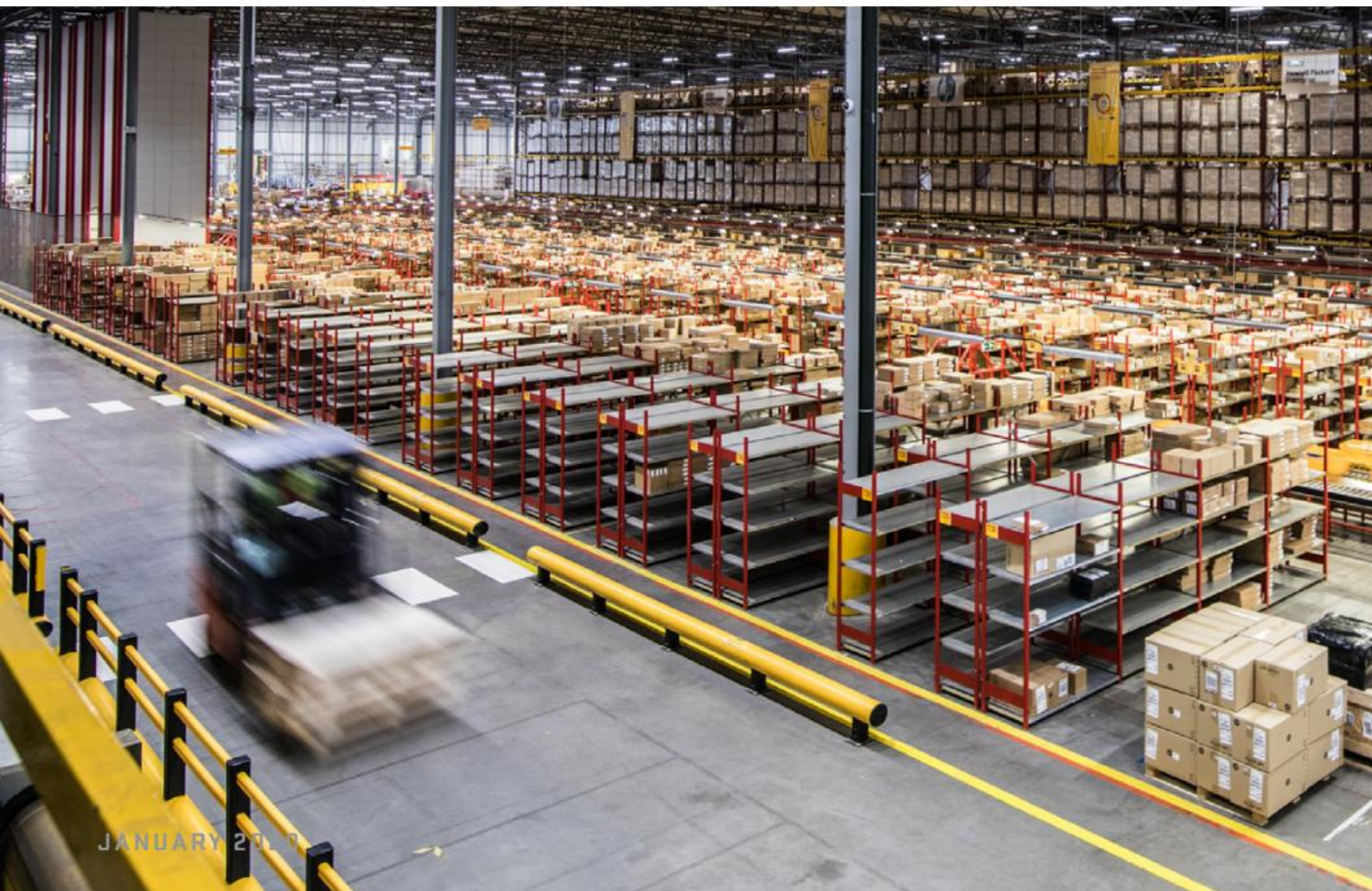
out today. Statistics show that the most used robotic solution is cleaning robots for private homes, so why don't we industrialise it?"

DHL has currently deployed its Neo cleaning robots – developed by Avidbots - to multiple standard warehouses around the world where the environment is right for them.

"Typically, in a warehouse a person is driving through to clean it overnight and it is a tedious job. We see this as something a person doesn't need to do, we can use cleaning robots instead," says Kückelhaus.

'FOLLOW ME' ROBOTS

"A simple pluck and play solution," notes Kückelhaus. This robotic solution, designed by DHL's partner Effidence, automates the simple trolley design, following an associate to help transport items across long distances. "Once full, you can simply press a button and it will automatically go to the unloading area, detecting any obstacles on its way, while another one is sent to replace it," explains Kückelhaus. However, Kückelhaus does note that the disadvantage of these robots is that they





CLICK TO WATCH: 'DHL SUPPLY CHAIN ROBOTIC PROCESS AUTOMATION RPA'



***“THE FUTURE IS EXCITING,
THE FUTURE IS ABOUT
INNOVATION AND MAKING
SURE WE CONTINUOUSLY
IMPROVE”***

Oscar de Bok
CEO, DHL Supply Chain

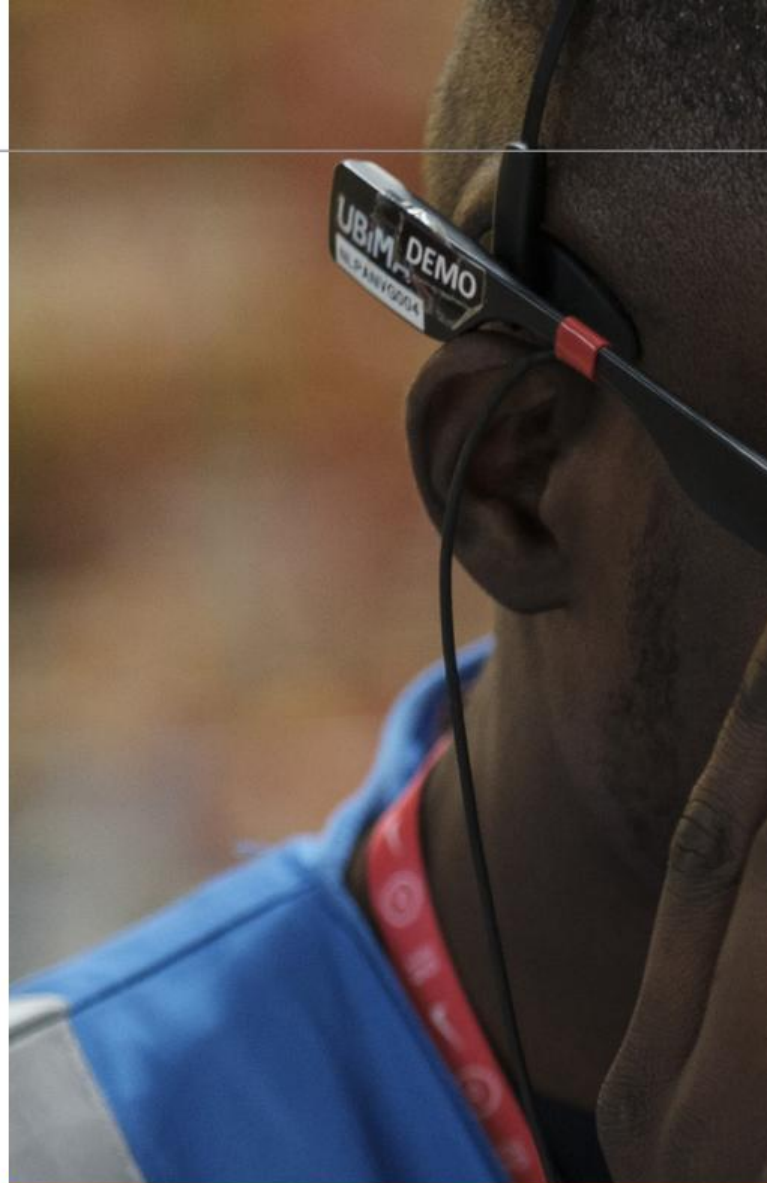
cannot integrate with a company's warehouse management system.

AISLE PICKING ROBOTS – LOCUS

Similar to the 'follow me' robot, the aisle picking robot, developed by Locus Robotics, helps associates to pick items. However, this one differs from the 'follow me' robot due to its ability to integrate with warehouse management systems. This robot moves independently around the warehouse to an aisle where items need to be picked and waits for an associate. Once the item has been picked and scanned, it takes off by itself again to cover the long distances instead of the associate. "Where we have deployed these robots we have seen an increase in efficiency of 200%," says Kückelhaus.

ROBOTIC ARMS – SAWYER

Designed as a collaborative tool to reduce strainful and repetitive tasks, Sawyer is a pluck and play robotic arm that doesn't need to be caged thanks to its pressure sensors which detect when someone comes close to it. "This is a safe robot certified to work jointly with people," says Kückelhaus. In addition, it is on wheels so it can be easily



**"WE HAVE TAKEN
A LOT OF EFFORT
TO TEACH AND
DEVELOP PEOPLE
ALONGSIDE OUR
INNOVATIONS"**

—
Markus Voss
CIO & COO, DHL Supply Chain



moved to wherever it is needed. Currently, 19 of DHL's sites in the UK are using co-packing.

THE BENEFITS AND CHALLENGES OF ROBOTICS AND RPA

While DHL sees many benefits from robotics and RPA, such as standardisation of its processes, increased productivity, increased efficiency and better use of employee talent by reducing time spent on repetitive tasks, it doesn't shy away from the fact that innovation comes with challenges too.

When it comes to robotics, particularly picking robots, Kückelhaus explains that item complexity and speed is still a negative factor for robots that can pick items. When conducting tests, the robots could only pick limited shapes and sizes, in addition to picking 73% less per hour than human associates. "Technology combined with people is the best combination," he notes.

Other challenges include change management. "We have taken a lot of effort to teach and develop people alongside our innovations," says Voss. "It's all about talking. We have many forums where there is an open, constructive and positive dialogue around

“TECHNOLOGY COMBINED WITH PEOPLE IS THE BEST COMBINATION”

Markus Kückelhaus

VP Innovation & Trend Research
DHL Supply Chain

the topic of technology. In addition, we are doing many things in terms of educating people, our certified programme drives the understanding of the necessity of innovation and the opportunities that it brings. Finally, our startup lab is a great vehicle for getting engagement from our workforce. Through the lab, employees can pitch ideas to the board to be funded and developed in a safe environment to drive it to the next phase,” he adds.

Low labour costs in developing markets is another challenge that Voss





highlights. “If you have developing markets with relatively low labour costs, then introducing highly sophisticated robotics is going to come with a long payback. We have had these challenges in Latin America and parts of Asia where high impact robotic solutions are not yet ready to be rolled out. Sometimes, we still have to deploy these solutions due to scarcity of labour being so heavy that we have to implement it regardless of a longer payback.” However, Voss does note that, with the cost of robotics reducing with every new generation, regional deployment will soon no longer be a challenge.

Finally, Voss highlights the importance of integration. “Although this is not a problem, it has to be acknowledged that just putting in a robot is not going to be the optimal fix for a particular problem,” he explains that the connection between robotics and a company’s warehouse management system needs to be fully integrated, something which he is currently putting a lot of work into to have an adaptable and standardised interface. ■





SAVING THE ENVIRONMENT ONE ROBOT DELIVERY AT A TIME

Henry Harris-Burland, VP Marketing, Starship Technologies, explores how last mile deliveries are greener than ever, and why customers should not feel guilty for ordering deliveries as opposed to driving to stores

WRITTEN BY
HENRY HARRIS-BURLAND



Last mile delivery is one of the most costly segments of the supply chain. McKinsey estimates that the final leg of a delivery comprises up to 50% of a product's total transportation cost. However, the real and lasting impact that last mile delivery can have is much closer to home, quite literally. A successful first-time final mile home delivery creates approximately 181g of CO₂ per km per item, way above the EU target set in 2017 for vans not to emit more than 175mg per km. In recent years, the only real alternatives to carbon-free bicycle deliveries have been cars, vans and motorbikes; all serial pollutants of CO₂ into the atmosphere and all the more costly too.

Consider the emissions involved in delivering take-away food, for example. Customers consistently demand short waiting times, with more than a quarter of consumers being willing to pay more for quicker delivery. This demand means that food vendors are deploying bigger fleets of delivery drivers to complete return car journeys to individual homes. They are forced to expand their fleet because it is difficult to integrate multiple deliveries into one journey, as vendors often





“Electrically-powered autonomous delivery robots are on the rise”

Henry Harris-Burland,
VP Marketing, Starship Technologies

have large catchment areas to maximise potential orders and, obviously, food gets colder the longer the journey.

In cases where deliveries can be effectively integrated, e.g. a postal service, there is a high probability that numerous deliveries won't be completed, as some recipients may be unavailable at the time of attempted delivery. In turn, this leads to more car journeys to the depot where undelivered packages are kept, multiplying the carbon emissions emitted into the atmosphere even further.

It is also important to consider the amount of unnecessary car journeys that the average consumer will take just to buy one or two items. Almost everyone has driven to the nearby shop to buy some milk instead of walking,





CLICK TO WATCH: 'STARSHIP DELIVERY ROBOTS IN MILTON KEYNES'

61

especially in adverse weather conditions. However the issue is that modern cars emit twice as much carbon in the first five minutes of a journey and more than half of UK car journeys are less than two miles.

Given that a 25km round-trip by car emits 5,188g of CO₂, or the equivalent of 16 re-delivery attempts by van, the last mile delivery industry is an unsustainable form of delivery for the future. Several high-profile commentators such as Pam Danziger of market research firm Canvas, who predicted that 2019 was to be the “year that responsible

consumerism goes mainstream”, have suggested that autonomous robot delivery is both an economical and sustainable alternative, which has the power to add convenience to customers who want their everyday items delivered without having to drive to the store, whilst decreasing their own carbon footprints.

THE SIDEWALK SOLUTION

The UK government has realised the environmental crisis that we’re facing. Its Climate Change Emergency declaration in May 2019 has prompted demands for more rigorous energy



“The UK government has realised the environmental crisis that we’re facing”

Henry Harris-Burland,
VP Marketing, Starship Technologies

targets, one of which is to achieve net-zero greenhouse gas emissions by 2050. The elimination of unnecessary fossil fuel consumption in food delivery could be a key way to achieve this target.

In this age of technological innovation and advancements in robotic capabilities, electrically-powered autonomous delivery robots are on the rise. They are already providing a carbon-free alternative for deliveries in numerous cities across the globe and helping to dramatically cut carbon emissions.

When they know they’re contributing towards the sustainable economy, customers should not feel lazy for ordering a delivery instead of driving to the shops, they should feel good

EXECUTIVE PROFILE

Henry Harris-Burland

Henry Harris-Burland leads marketing and communications at Starship Technologies and believes that autonomous delivery robots will make lives easier for millions of people across the globe. Henry has previously worked in the communications team at Rolls-Royce launching new innovative products in multiple regions. He is also renowned as a subject matter expert to UK government consultations at City Hall and Westminster, advising on autonomous driving, drones and delivery robots.





about it! Driving a two-tonne car is an incredibly inefficient method just to pick up a bag of groceries. On the contrary, incurring a small fee to have your items delivered by a small environmentally-friendly robot in as little as 15 minutes is a small price to pay so that our planet can be sustained for future generations. People should feel comfortable in the knowledge that their items will get from A to B in one piece, too. For example, Starship Technologies' robots use machine learning, sensor fusion and computer vision to navigate their way around sidewalks all over the world. They are fitted with radars, cameras and ultrasonic sensors to ensure that items are kept safe until they are unlocked by the customer, which is managed through an app interface.

Over the next few years, we'll see just how effective

delivery robots have been in the fight against climate change. Countries across the globe are eager to meet ambitious targets when it comes to curbing CO2 emissions, and going into the 2020s we can expect more and more industries take the initiative and adopt autonomous delivery to help in this effort.

As the world of delivery continues to become more innovative and flexible, it will save thousands and even millions of CO2 tonnes in the years to come. The 2020s will be an exciting decade as we see more and more consumers utilise environmen-

tally-friendly solutions like autonomous robots – the future could not be greener! ■



STARSHIP



City Focus ✈️

Welcome to Atlanta, a city of rebirth, renewal and growth. This month, Business Chief is exploring the home of Coca-Cola, UPS and the startup hub that's putting the city's ecosystem on the map

WRITTEN BY **HARRY MENEAR**

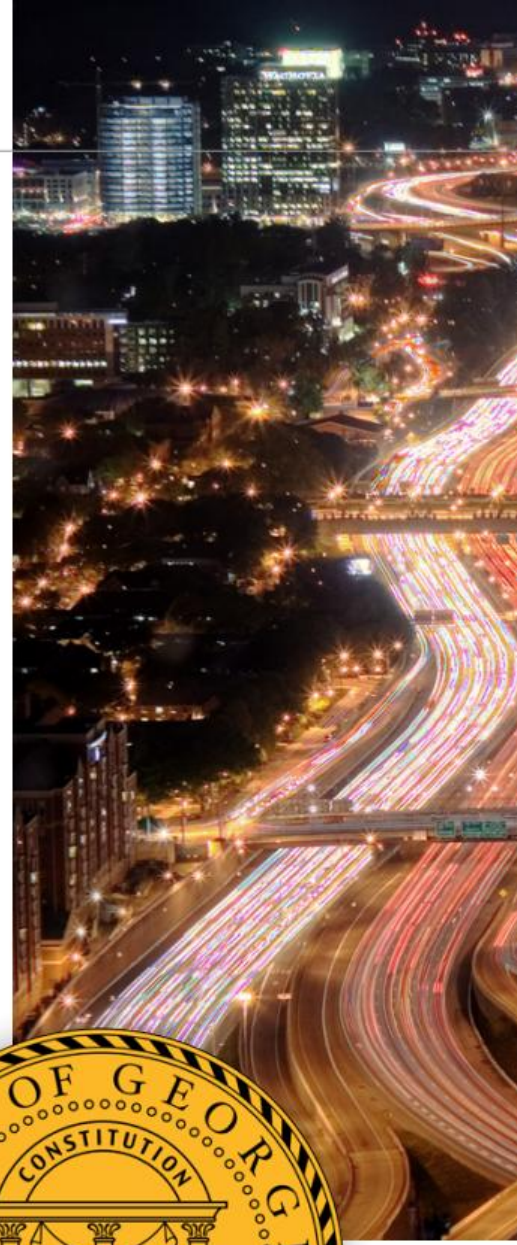


Atlanta, Georgia, the capital and economic heart of its state, is a city steeped in the history of the American South. Its sprawling metropolitan area is home to almost 6mn people and its Hartsfield-Jackson International Airport has been the biggest and busiest in the world since the start of the century. Every year, more than 107mn passengers arrive at or depart from its terminals.

REBIRTH, RESURGENCE AND MODERNISATION

Originally Creek and Cherokee Native American territory, Atlanta was first established at the end of the 1830s, as the terminus of a government-built railroad leading to the Midwest. A wooden stake marking the end of the rail was driven into the ground and, over the next decade, homes and storefronts grew around it until, by the 1850s, the town had become the primary rail hub for the entire American South.

The great seal of Atlanta depicts a phoenix rising from the ashes, tribute to the city's tumultuous past. During the American Civil War, Union troops leveled Atlanta, burning thousands of buildings to the ground. The city's story is one of rebirth, resurgence (the city's motto) and modernisation. Post-Antebellum Atlanta was recreated as the gateway to the modern South. Today, Atlanta is home to some of the country's most elite universities (including Georgia Tech) as well as more than 150,000 businesses, of which many belong to the Fortune 500 and 1,000.





486,290

Population of
Atlanta, Georgia

1847

Year founded

Nearest Airport

15km

Hartsfield-Jackson
Atlanta International

67



ATLANTA'S GIANTS

Atlanta is home to leading logistics company United Parcel Service (UPS), as well as Home Depot and Delta Airlines (which accounts for around 70% of the flights leaving the Hartsfield-Jackson International Airport). Alongside hundreds more, they are responsible for Atlanta's GDP exceeding \$385bn. However, there is one company perhaps more synonymous with the city than any other.

Founded in 1892 in response to Georgia's newfound participation



© Delta Airlines

A collage of various Coca-Cola signs and logos. In the foreground, a large, illuminated red sign features a glass bottle of Coca-Cola. Behind it, several other signs are visible, including one with the word 'Coca-Cola' in a stylized font, another with 'FOUNTAIN SERVICE', and another with 'DRINK Coca-Cola'. A large red play button icon is overlaid in the center of the collage.

CLICK TO WATCH: 'EXPLORE INSIDE THE WORLD OF COCA-COLA, ATLANTA'



in prohibition by pharmacist John Pemberton, the Coca-Cola Company has been at the heart and soul of the city for more than a century. During the great depression, when the city government was nearing bankruptcy, the Coca-Cola company helped to bail out the city's deficit. Today, the company employs more than 7,000 people in the city, where it also has its iconic museum, home to the vault where the secret formula is allegedly kept.

There is more to Atlanta, however, than global conglomerates and

gargantuan logistics operations. Its startup scene is young, vibrant, and working to change the way the city, the state and the nation does business.

THE ATLANTA TECH VILLAGE

When David Cummings, founder of B2B marketing automation company Pardot, came to Atlanta in 2002, the city had next to no startup scene. A decade later, following the sale of Pardot, Cummings took it upon himself to change the face of the city's entrepreneurial community.

In 2012, alongside David Lightburn, Cummings created the [Atlanta Tech Village \(ATV\)](#), the fourth-largest tech space in the US which, within its first year, was host to more than 180 startups.

Today, the ATV works to continue creating and supporting a community of innovation, with the goal of generating more than 10,000 jobs in a bid to bring Atlanta's scene from the 26th best in the world to the top five.

"When I first moved to Atlanta in 2002, I had a really hard time finding other tech entrepreneurs to connect with," said Cummings in an interview with Atlanta Magazine last year.

"A lot of entrepreneurship is driven by serendipitous interaction with people who are good with one thing helping other people that are good at something else."

The methodology seems to be working. In September, the ATV announced that its startups had collectively raised more than \$839mn since 2012, and are on track to hit \$1b in 2020. "We need more big-time success stories," said Cummings. "That's the next phase for Atlanta."





[CLICK TO WATCH: 'ATLANTA TECH VILLAGE COMMUNITY CENTER'](#)

71



“There is more to Atlanta than global conglomerates and gargantuan logistics operations”

“We need more big-time success stories. That’s the next phase for Atlanta”

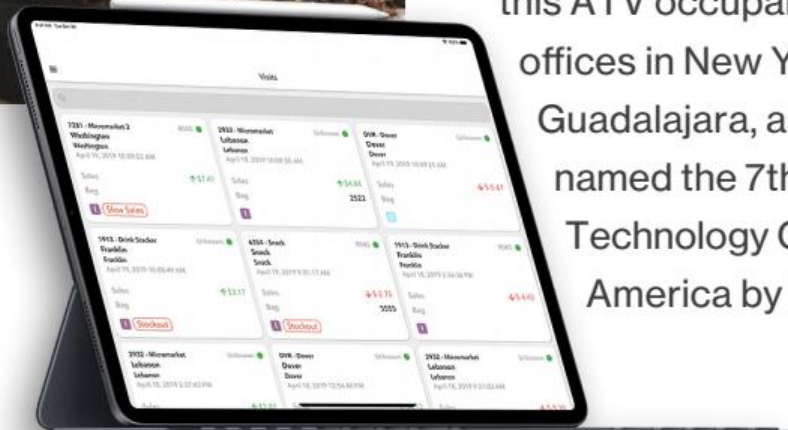
David Cummings,
CEO, Co-Founder, Atlanta Tech Village

72



© Farm'd

© Gimme Vending



THE NEXT PHASE

Let’s meet some of the companies that currently call ATV home, and are fighting to carve out a place for themselves in the ever-evolving history of the city.

FARM'D

Is the world’s first B2B farm-to-table marketplace aimed at empowering local farmers and giving local chefs access to the finest ingredients.

GIMME VENDING

Working with leading national brands and local Atlanta firms alike, Gimme Vending delivers a full-service product suite for convenience services and vending machines.

SALESLOFT

Sales engagement platform SalesLoft helps organisations to improve customer experience. Founded in 2011, this ATV occupant also now has offices in New York, London and Guadalajara, as well as being named the 7th Fastest-Growing Technology Company in North America by Deloitte.



GRANTScribe

GrantScribe is a free service that matches businesses, nonprofits and startups to relevant funding opportunities using a grading system and AI.

There are hundreds of other startups working at the ATV, on everything from fintech and application design to cybersecurity and crypto, as well as thousands outside its walls, all striving to make themselves and the city they call home a true American success story. ■

73



CLICK TO WATCH: 'SALESLOFT SUMMER CELEBRATION'





TOP 10 ▶

Digital disruptors in the US

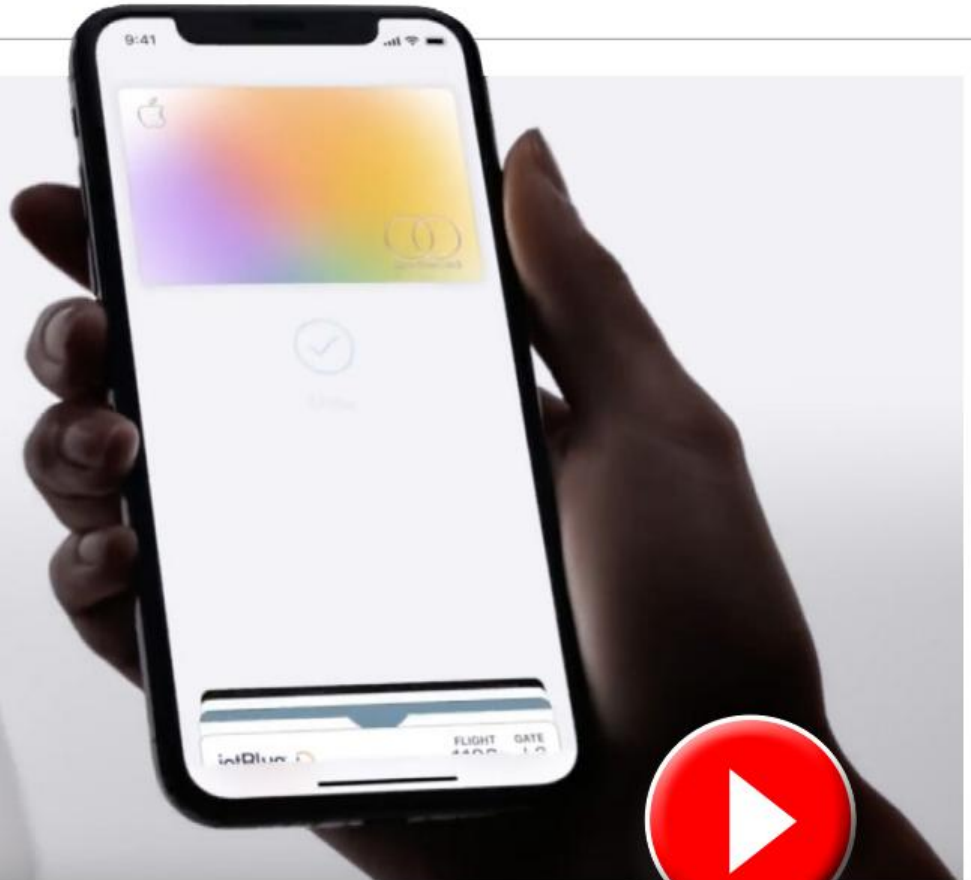
Business Chief USA takes a closer look at 10 of Forbes' top 100 digital companies from the US and how they are digitally disrupting the technology industry

WRITTEN BY **GEORGIA WILSON**

CEO
TIM COOK

\$261.7bn
REVENUE IN
US DOLLARS

132,000
NUMBER OF
EMPLOYEES



10 Apple

CUPERTINO, CALIFORNIA

WWW

Apple – founded in 1976 by Steve Jobs, Ronald Wayne and Stephen Wozniak – is an American multinational technology company that designs, develops and sells electronics, software and online services.

REIMAGINING THE CLASSIC CREDIT CARD

Representing ‘simplicity, transparency and privacy’, the [Apple Card](#) launched in August 2019. The card has been designed to encourage healthy finance and sits within the iPhone’s digital wallet. Its key disruptive feature is its increased security; when first activated, a unique number is generated and locked within the Secure Element, and it can be regenerated manually. The device number and a unique one-time security code is required with every purchase. Even its physical version has no long card number, no expiry date, no signature and no CVV.



CEO

ENRIQUE LORES

\$58.7bn

REVENUE IN
US DOLLARS

55,000

NUMBER OF
EMPLOYEES



09

HP

PALO ALTO, CALIFORNIA

WWW

77

The Hewlett-Packard Company (HP) was founded in 1939 by David Packard, Bill Hewlett and Mohamed M. Atalla. HP provides computing and access devices, imaging and printing products as well as technology solutions and services.

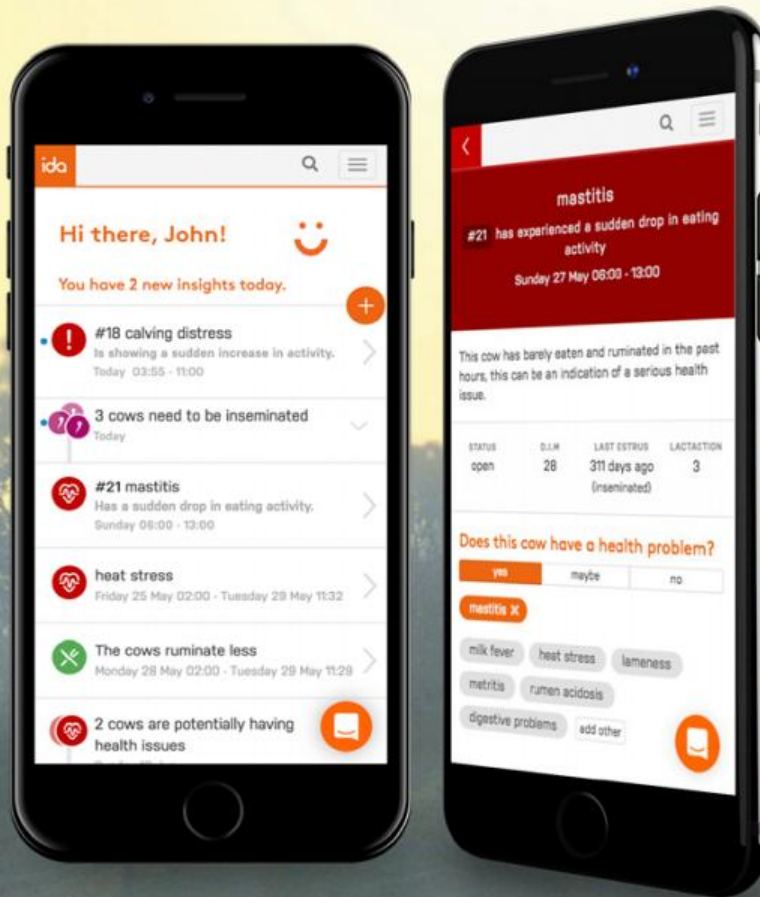
A NEW ERA OF 3D PRODUCTION TECHNOLOGY

Partnering with Adobe in November 2019, HP developed an end-to-end product – [Project Captis](#) – that scans physical materials into digital 3D copies via photometry. The software equips users with increased workflow efficiency to reduce time and cost, in addition to 3D visuals that provided photorealism and colour accuracy. Through its collaboration with Adobe, HP aims to drive technological innovation within 3D design and production.



Hi, I'm Ida!

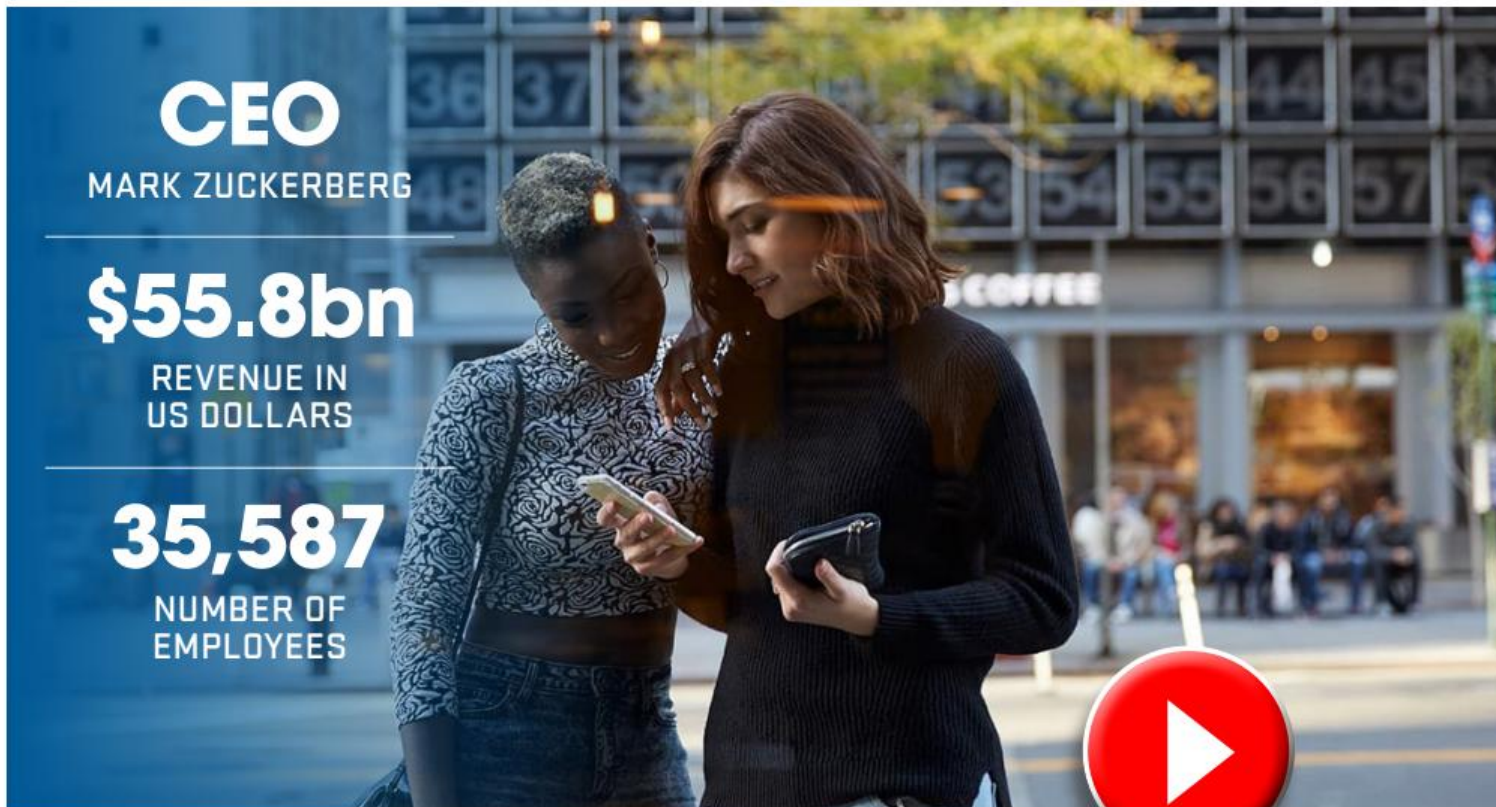
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CEO

MARK ZUCKERBERG

\$55.8bn

REVENUE IN
US DOLLARS

35,587

NUMBER OF
EMPLOYEES

08

Facebook

MENLO PARK, CALIFORNIA

WWW

79

Facebook, founded in 2004 by Mark Zuckerberg, is an online social media and social networking service.

DIVING INTO THE CRYPTO MARKET

Announced in June 2019, Facebook is in the development stages of its own cryptocurrency, [Libra Coin](#). The currency – backed by real assets - utilises blockchain technology to connect people who do not have access to traditional banking methods. Users will be able to make cross border payments via Facebook-owned apps such as Messenger and Whatsapp, with potential acceptors of the currency being Uber and Visa. The new currency is expected to launch in 2020.

CEO

MICHAEL DELL

\$90.4bnREVENUE IN
US DOLLARS**138,000**NUMBER OF
EMPLOYEES**07****Dell**

ROUND ROCK, TEXAS

WWW

Dell – founded in 1984 by Michael Dell – is a multinational computer technology company that develops, sells, repairs and supports computers as well as related technology. Its ICT infrastructure services include hardware, software, cloud services and virtual reality (VR).

PIONEERING HEALTHCARE BREAKTHROUGHS

In October 2019, Dell's high performance computing (HPC) system, a [GPU-accelerated supercomputer](#), was developed for the University of Queensland. The technology carries out data visualisation and machine learning (ML) tasks in the hopes that it will enable a non-invasive, disease-modifying strategy to develop treatments to stop or impede degeneration for those with Alzheimer's Disease.



CEO

JEFF BEZOS

\$232.9bn

REVENUE IN
US DOLLARS

647,500

NUMBER OF
EMPLOYEES



06

Amazon

SEATTLE, WASHINGTON

WWW

81

Amazon is a multinational technology company - founded in 1994 by Jeff Bezos - that provides products and web services to consumers, sellers, enterprises and content creators.

DRIVING INNOVATIVE TECHNOLOGY EDUCATION IN THE US

During the second half of 2019, Amazon delivered and funded computer science and robotics courses for thousands of students in the United States. Amazon aspires to support the next generation of innovators by inspiring and educating children and young adults. Alongside its installation of courses in schools, Amazon has been providing tours of local robotics fulfillment centers to give students the opportunity to learn more about robotics and to emphasise the importance of computer science education.

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**CEO**RANDALL L.
STEPHENSON**\$170.8bn**REVENUE IN
US DOLLARS**268,000**NUMBER OF
EMPLOYEES

05 AT&T

DALLAS, TEXAS

WWW

83

AT&T is an American multinational conglomerate holding company and a subsidiary of Bell Telephone Company, founded in 1877 by Alexander Graham Bell. AT&T started its journey as Southwestern Bell Telephone Company (SBC) taking on the AT&T name in 2005 following SBC's acquisition of the company.

SPEARHEADING THE ADOPTION OF 5G TECHNOLOGY

AT&T has been working to integrate 5G with [Microsoft Cloud](#) to drive innovative next generation solutions. Other 5G innovations from AT&T include the launch of an industry-first [400-gigabit network connection](#) that supports video, augmented reality and other 5G needs. In addition, AT&T is striving to transform experiential learning via the implementation of [5G and edge computing technology](#) for university campus connectivity.

CEO

GINNI ROMETTY

\$78.7bnREVENUE IN
US DOLLARS**350,600**NUMBER OF
EMPLOYEES

04 IBM

ARMONK, NEW YORK

WWW

The International Business Machines (IBM) Corporation is a multinational information technology company, founded in 1911 by Charles Ranlett Flint.

DRIVING INDUSTRY INNOVATION

IBM has been operating in multiple industries to drive disruptive technologies. Some of these technologies include: [autonomous ships](#) that leverage artificial intelligence (AI), cloud and edge technologies. IBM has also established the world's first [public cloud](#) for financial services and joined TSUBASA to take banking to the next level with [shared banking systems](#). In addition to its own innovations, IBM has been partnering with the California State Government to create [technology apprenticeships](#), supporting future innovators.



CEO

BOB SWAN

\$70.8bn

REVENUE IN
US DOLLARS

107,400

NUMBER OF
EMPLOYEES



03

Intel

SANTA CLARA, CALIFORNIA

WWW

Founded in 1968 by Gordon Moore and Robert Noyce, Intel is a multinational technology corporation.

AUTONOMOUS VEHICLES AND SMART BUILDINGS

Autonomous vehicles: striving for a safer future, Intel sees the development of technology that has the capacity to deliver autonomous vehicles as an imperative. Currently, Intel is harnessing advanced driver assistance systems (ADAS) and assisted driving solutions to reduce severe crashes as its first steps towards an autonomous future.

Smart buildings: September 2019 saw Intel unveil its development center that uses AI to make efficient decisions.

02

Verizon
New York, NY

WWW

Founded in 1983, Verizon is an American telecommunications company that offers wireless products and services.

HARNESSING 5G FOR PUBLIC SAFETY

In the last few months, Verizon has been disrupting public safety with 5G technology.

Powering public safety: With 5G Verizon, is striving to enhance communications for [first responders](#) not only between each other but with ER doctors awaiting patients.

Disaster victims and first responders: Verizon aims to provide connectivity for all during times of crisis by utilising 5G for its low latency and increased capacity. In addition, by harnessing 5G alongside drone technology, Verizon has developed and is constantly improving solutions to [locate disaster victims](#).

CEO

HANS VESTBERG

\$130.9bn

REVENUE IN
US DOLLARS

144,500

NUMBER OF
EMPLOYEES



door open, try pin
1 World Way
Los Angeles, CA 90045
United States

Door was open.
Please check.

CLICK TO WATCH: 'HOW VERIZON 5G CAN HELP LOCATE DISASTER VICTIMS'



CLICK TO WATCH: 'MICROSOFT AND NUANCE PARTNER TO DELIVER AMBIENT CLINICAL INTELLIGENCE'

88

CEO

SATYA NADELLA

\$118.2bn

REVENUE IN
US DOLLARS

131,000

NUMBER OF
EMPLOYEES



01 Microsoft

REDMOND, WASHINGTON

WWW

Founded by Bill Gates and Paul Allen in 1975, Microsoft is a multinational technology company that develops, manufactures, licenses, supports and sells computer software.

DRIVING DISRUPTIVE DIGITAL TRANSFORMATION WITHIN MULTIPLE INDUSTRIES

Healthcare: When it comes to healthcare, Microsoft has been partnering with Novartis to leverage data and AI for medicine discovery, development and commercialisation. In addition, Microsoft has partnered with Nuance to harness AI for administrative tasks and giving doctors more time to focus on patients.

Mission critical networking and communication: By combining Microsoft's cloud, AI and machine learning expertise with Nokia's mission critical networking and communications services, the two aim to digitally disrupt industries by accelerating Industry 4.0 and digital transformations.

Insurance: In November 2019, Microsoft partnered with Allianz to disrupt the insurance industry by streamlining its processes with Azure. In addition, Microsoft partnered with Syncier to develop customisable insurance platform solutions and services.

Energy: Microsoft has recently joined forces with Baker Hughes and C3.ai to disrupt the energy sector by accelerating digital transformation, to drive safer, cleaner and more efficient operations.

A vibrant blue background featuring two macarons, one pink and one yellow, surrounded by scattered crumbs of various colors. The title text is overlaid on this scene.

Embracing change in the supply chain space

WRITTEN BY
SEAN GALEA-PACE

PRODUCED BY
JUSTIN BRAND



Gian Carlo Leocata, Supply Chain Director at Sensient Food Colors Latin America, discusses the importance of a firm change management strategy in the supply chain industry

Versatility is key. Operating with an agile approach provides companies with the opportunity to switch up operations in a bid to drive efficiency. As a leading global manufacturer and supplier of natural and synthetic colour solutions for a range of different markets, within Sensient Colors, Sensient Colors Latin America certainly understands the value in what it means to be versatile.

A unit of Sensient Technologies Corporation, Sensient Colors revolves around the following segments: Food and Beverage Colors , Industrial Colors , Pharmaceutical excipients, Digital Inks and Cosmetic Colors. Gian Carlo Leocata, Supply Chain Director at Sensient Food Colors Latin America, affirms his company's diverse selection of solutions sets the organisation apart. "We pride ourselves on being number one because we cover a vast array of market segments," explains Leocata. "We stand alone – none of our competitors cater to as many segments as we do. We also don't compromise on quality because if anything happens that means we have to reduce the quality of a sale, then we will happily lose that transaction. I would





“We stand alone – none of our competitors cater to as many industries as us”

—
Gian Carlo Leocata,
Supply Chain Director,
Sensient Food Colors Latin America

describe Sensient as a company that is everywhere but no one knows about it. Our colours are present in almost every other product that you find in the beauty store or supermarket. We’re everywhere.”

Sensient Colors Latin America operates in 20 different countries all over Latin America, with the exception of Brazil which has its own business unit. This brings the challenge of diversifying its services to tailor to the needs of each specific country.

However, it is something that Leocata

believes his firm manages effectively. “Each country has its own regulations and standards,” he says. “Everything we ship must meet customer specifications, cost and country regulations. Juggling these three components isn’t always a simple task because there’s a lot of regulatory movement that has to happen.” Leocata believes in the value of being “emotionally intelligent” to the demands of each individual country. “If you want to be successful in a global world, you have to know how to handle different cultures. I’m fortunate enough that I’ve worked and lived in





CLICK TO WATCH: 'SENSIENT'S UNIQUE MICROFINE™ TECHNOLOGY'

four different countries. It has enabled me to understand of the subtleties of managing culturally different people.”

With change management sometimes considered a challenging hurdle to overcome, Leocata has transformed the way Sensient Colors Latin America conducts business by introducing new systems. “Process, process, process. It was a relentless push for processes because we had an ERP system that was grossly underutilised. Ever since I joined, I pushed for all our processes to become standardised as we set about undergoing change management.” As

part of that strategy, Leocata believes establishing a clear goal ensures every employee is aligned to a common objective. “It’s important to have an ambition and stick to it,” he affirms. “In order to achieve the level of success we envision, it’s vital that every employee embraces change and wants to be a part of it. Fortunately for us, the majority of them do.”

Leocata stresses the importance of mitigating risks and thinking strategically in order to get the best out of his company’s procurement approach. “It’s crucial to have a plan in place

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“If you want to be successful in a global world, you have to know how to handle different cultures”

Gian Carlo Leocata,
Supply Chain Director,
Sensient Food Colors Latin America

because there’s so many factors to consider. For example, I might have three suppliers all in the same geographic space,” he explains. “What does it mean to our business when Syria and Turkey are under trade embargo? In terms of our vendor base, how are they located geopolitically and what is their status? How big of a company are they? Because these days, everyone is trying to push for longer payment terms and if I try for 120 days,

EXECUTIVE PROFILE

Gian Carlo Leocata

Gian joined Sensient in 2012 and has held various supply chain roles in the US and Canada. In 2015 he managed the implementation of a global supply chain management software at the color headquarter in St Louis, MO, and continues to oversee the global rollout process across the company. Since 2018 he is responsible for orchestrating Sensient Colors Latin America’s overall supply chain operations, including purchasing, customer service, demand and production planning, inventory management and logistics, as well as to coordinate activities aimed at improving productivity and efficiency of operations and a faster response



A photograph of three glass bottles with metal wire closures, each containing a different colored beverage. The bottles are arranged on a white tray filled with crushed ice. The bottle in the foreground is filled with a vibrant red liquid, the middle one with an orange liquid, and the one in the background with a yellow liquid. The background is softly blurred, showing a white surface and a glass. The overall scene is bright and clean, emphasizing the colors of the beverages.

**“It’s up to us
to adapt and
be versatile”**

Gian Carlo Leocata,
Supply Chain Director,
Sensient Food Colors Latin America



am I taking my vendor out of business? It's a massive balancing act." With customer-centricity considered the key to most companies' success, Leocata sees similarities between his business and the transactional customer relationship of a supermarket. "When you buy food, you go to the cashier and pay and the chances are you'll visit the same supermarket every time. It's not necessarily because it's the closest, but because you've established a relationship," he explains. "It's the exact same thing in the B2B space. You need to throw yourself into the organisation you're conducting business with and make them not want to go anywhere else."

Sensient Colors Latin America has established two strategic relationships in a bid to drive operations. Having formed partnerships with CFS and PIM Mexico, Leocata believes in the true value of a mutually beneficial collaboration. "Both partnerships are very different, however, strategic in their own way. CFS is a global producer and supports us in every market. If we have a need in Europe, they have a plant that can help us. It's the same in Asia and Latin America. They, like us, have that

global footprint and are able to work with us all over the globe regardless of where we are,” he explains. “We also have a very local partnership with PIM Mexico. During the chemical crisis last year in China, they were instrumental. They worked with us and have the people on the ground in China and India to help us through the sourcing process, validation and approval of new vendors. After such a crisis, you have to reshape and remodel a very complex, intricate supply chain. PIM Mexico was the partner we needed to help us through that.”

Leocata believes that partnerships with companies such as CFS and PIM



Mexico require cooperation and common values to sustain. “In order to have a reliable, secure supply chain, you have to maintain good partnerships with organisations you can trust and work with,” affirms Leocata. “Take PIM for example, we started with one product and now our portfolio with them has grown significantly. We’ve started to use some of their other products

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that we traditionally wouldn't buy but because they proved their worth, we've switched a lot of our procurement through them too."

Looking to the future, Leocata believes the industry is set to become more reliant on new technology and recognises the importance of being lean and agile in order to succeed in the space. "In the next five years, I believe the so-called 'Amazon effect'

will start to reach us," he summarises. "B2B commerce is becoming more and more centered around service from an app or a chat box because of the way technology is developing. It's up to us to adapt and be versatile." ■





THE CITY OF LA: BUILDING A SUSTAINABLE FUTURE THROUGH UNITY

WRITTEN BY
OLLIE MULKERRINS
PRODUCED BY
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JANUARY 2020



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Doug Walters, Chief Sustainability Officer and Chief Resiliency Officer, discusses the innovative approach to creating a more sustainable Los Angeles ahead of the 2028 Olympic games

Doug Walters is currently engaged in a project under the direction of Eric Garcetti, the Mayor of Los Angeles, focused on addressing the escalating challenges of climate change. LA's geographical location brings a host of varying landscapes within the vicinity of the city. This, combined with the increasing challenges of climate change and our impact on the environment, presents several unique obstacles to the infrastructure and maintenance of the city, as Walters explains. "We've seen rising temperatures; pollutants that we inhale are increasing concerns about public health rates and our ability to breathe freely; we've seen wildfires in our hillsides and, when it does rain, we often see flooding in our streets. It's a challenge for any advancing society, particularly as people start to develop and build further into the outlying area of the city," he says.

The diverse range of challenges faced by Walters has led him towards a holistic approach, where contributing factors from urban and natural environments have to be considered and siloed solutions must be set aside for a more focused





Japanese gardens at Donald C. Tillman
Water Reclamation Plant 105



1781

City founded

\$1.2bn

Annual budget
in US dollars

3,500

Number of
employees

“We have a host of low impact, best management practices to get homeowners or businesses to capture that first inch of rain and treat it”

—
Doug Walters,
Chief Sustainability Officer & Chief
Resiliency Officer

approach. Often, this means looking at transforming behaviors alongside the technologies to support the change. “There are many instances where there are environmental emergencies and economic opportunities that call us to tackle climate change and start looking at different ways we can change our behavior to limit our carbon emissions,” Walters explains. “Whether that be in our urban environments or in the suburbs or elsewhere, we’re working to reduce the negative impacts that certain communities have faced from





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decisions made decades ago that result in some bearing the brunt of a lot of industrial waste or dirty air, for example. We're moving a lot of those new technologies into those communities to manage waste.”

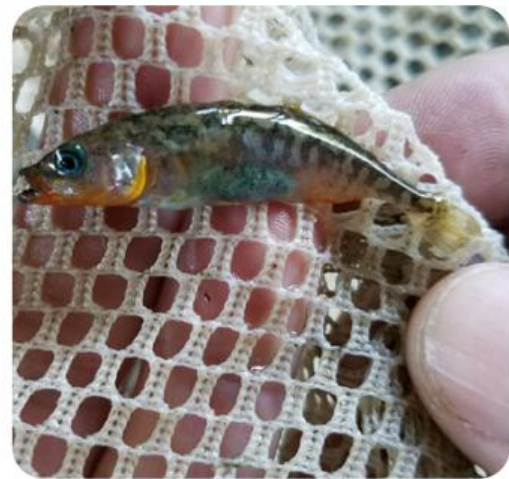
Walters has been working closely with Mayor Garcetti's Chief Sustainability Officer (CSO), Lauren Faber-O'Conner, along with 27 other CSOs across the city's departments to outline over 200 goals that, if achieved, will meet Los Angeles' aspirations. Those led by LA Sanitation and Environment include initiatives for 100% recycled water,

Watershed experts building ecologically-based adaptation and resilience into our communities.

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Stillwater Sciences





solar installations, alleviating health concerns around homeless encampments by creating rapid response teams to collect abandoned waste, and abating the rat population. Discussing the progress the department has made towards its own sustainability goals, he says that “our Mayor put forth a sustainability plan back in 2015, which is committing all of us in the city – and certainly the municipal departments – towards a more low-carbon, green energy future. In April, he updated

the plan because many of the goals that were on track to be achieved, about 90%, had already been met.”

Alongside technology, Walters is keen to reiterate that education is a key factor in tackling climate change: “There’s a lot more awareness in the population as a whole,” he says. “We’ve been educating children on environmental issues for several decades and, as they have matured, they have fostered a more socially responsible population.”

EXECUTIVE PROFILE

Douglas Walters

In his dual role as LA Sanitation & Environment’s Chief Sustainability Officer and Chief Resiliency Officer, Doug Walters, P.E., BCEE, has been a leader on many fronts since his graduation as a Civil Engineer at UCLA. He’s been instrumental in numerous breakthroughs in ceasing ocean discharge of biosolids, designing composting facilities, transforming landfills, improving water quality, integrating water assets and planning, recruiting talented engineers, strategic planning, and touting environmental justice and equality causes. In June, he rode his bicycle 545 miles from San Francisco to LA to raise money and awareness in support of people living longer and stronger with HIV and AIDS.



**“We are closer to nature,
we’ve planted more trees
and made leaps towards
a sustainable future
for our citizens and for
the environment”**

Doug Walters,
Chief Sustainability Officer & Chief
Resiliency Officer



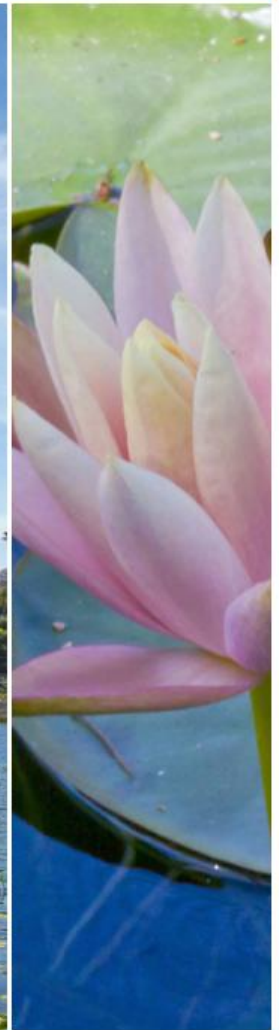
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SUSTAINABLE LA

Black & Veatch has been proud to partner with Los Angeles for more than **35 years** on over **\$1 billion** in constructed environmental projects, including numerous **award-winning** facilities that have **promoted** the city's water quality, reclamation and resilience.

ECHO PARK LAKE

An award-winning rehabilitation effort redefined this LA icon as a stormwater treatment facility. Today the lake protects nearly 800 acres of Los Angeles River watershed while sparkling as the jewel of revitalized Echo Park, which has been a central part the city's history for more than 150 years.



HYPERION WATER RECLAMATION PLANT

LA's oldest and largest wastewater treatment facility was completely reengineered and rebuilt without once going out of operation, including innovative solutions to control odor, reuse water, save energy, and restore Santa Monica Bay, earning recognition as a public works masterpiece.





This cultural shift has forced industries to take note of the necessary changes, and municipal bodies now meet less resistance from commercial and technological sectors. “It allows those who are more ambitious, which is certainly a growing number in the city including our Mayor, to really scale up a lot of these goals and bring in industries that have new ideas or new technologies so that we can be more aggressive in our timelines and approach,” Walters elaborates.

LA has experienced drought and

flooding regularly over the past decade, making water management an increasingly pressing issue. The city’s stormwater programme is set to tackle both of these problems through the redirecting and repurposing of stormwater. “The programme started in the early 90s and it recently had a huge boost,” Walters explains. “When it does rain in LA, for maybe 30 days of the year, we get a lot. We tend to get floods, and the sad part is that so much of that water runs straight off our streets and directly into the ocean and

river. It is, effectively, wasted. By rethinking our approach and broadening our appeal to other sectors, we can reuse water to preserve and enhance the city's biodiversity, something that most urban dwellers don't often think about."

The new initiative is looking to engage the community in environmental conservation through educational programmes and focused funding. Through such engagement, citizens are able to actively contribute to the wellbeing of the city and themselves.

"We have a host of low-impact, best management practices to get homeowners or businesses to capture that first inch of rain and treat it," says Walters. "We can then provide guidance on what the treatment practices and equipment may be."

Technology is playing a vital role in managing and meeting the demands the city has on its limited water resources. With regards to this, Walters is working with teams to develop these technological innovations and increase the supply of key resources. He explains: "We're reducing our dependence on water from a snow pack up in the northern part of the state. We're







Innovation through partnerships to focus on the future.

The National Association of Clean Water Agencies (NACWA) is celebrating the 50th Anniversary of its founding this year. Los Angeles Sanitation & Environment (LASAN) was one of a handful of clean water agencies that had the vision and foresight to create NACWA and ensure improved water quality and environmental protections to everyone across the United States - so thank you LASAN!

As NACWA reflects on five decades of clean water progress, we celebrate the accomplishments of our now nearly 500 public and private organization members. But none should be more celebrated than the accomplishments of LA Sanitation & Environment.

LASAN is a recent recipient of the coveted *Water Resources Utility of the Future Today* award and is looked to as an innovator by its peer utilities for its pioneering work on many projects, including but by no means limited to the following:

- **The Residential Food Waste Diversion Pilot Program**, which converts consumer food waste into renewable energy and reduces the amount of trash sent to landfills and gas emissions; and
- **The Water Recycling Program**, which protects environmental resources and provides a local, reliable water supply.

Congratulations LASAN on behalf of your fellow public clean water agencies across the country. Keep blazing the trail!



The National Association of Clean Water Agencies
1130 Connecticut Ave. NW, Suite 1050
Washington, DC 20036

Learn more at nacwa.org



looking at different membrane technologies, membrane bioreactors, reverse osmosis and other advanced treatments so we can process and manage our wastewater more effectively while reducing costs to the city.”

Walters supports low-tech, green solutions that will not only reduce the city’s net carbon emissions but also improve its aesthetic and living

standards. “We can never forget trees. They are such a powerful asset to have. They absorb pollutants through root systems, convert carbon from our atmosphere and shield us from the heat and airborne pollutants. We’ve been planting trees in impacted neighborhoods, and this has become a big part of our strategy to cool the environment down,” said Walters.



“We’ve been rolling up our sleeves, looking at ways to make this the most sustainable games ever. We have a commitment to making them the ‘zero-waste’ games”

—
Doug Walters,
Chief Sustainability Officer & Chief
Resiliency Officer

In 2028, from 21 July to 6 August, LA will play host to the Olympic Games. Walters and his team have been working towards making the games a zero-carbon event, as well as to raise awareness of the city’s sustainability goals. Speaking on the ambitions in place, Walters says, “We’ve been rolling up our sleeves, looking at ways to make this the most sustainable games ever. We have a commitment to making them the ‘zero-waste’ games. The Olympic planners are directly working with all of our big sponsors. They



LA 2028






have a huge role; they commit a lot of money to make the games successful, but we want to make them aware that we don't expect to see lots of plastics making their way into our environment."

LA is meeting the challenge of becoming a leader in sustainability and intelligent resource management while using its reputation to change opinions and raise awareness around the solutions a government can enact to better its citizens' lives. "We want people to think of LA as more than a jungle of entertainment, glitz and glamour,"

says Walters. "We are proud of that image, but there is more to it. Now, we are closer to nature, we've planted more trees and made leaps towards a sustainable future for our citizens and for the environment." ■





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IT NOW.**

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