CEO of Global Shop Solutions
DUSTY ALEXANDER

'YOUR ERP SYSTEM IS THE HEART OF YOUR MANUFACTURING BUSINESS AND IT IS CONNECTED TO EVERYTHING'

ERP
INTEGRATES WITH
NEXT
GENERATION TECHNOLOGIES

Yagmur Sahin

EDITOR'S NOTE

Hello everyone and welcome to our second issue!

Dreaming, after all, is a form of planning! We dreamed, we worked very hard, and in the end, the positive feedback we received from you about our first issue was the biggest reward for us. While the excitement of our first issue has not yet passed, we are proud to share our second issue with you. In every new issue, we will be even more excited to share the latest news, articles, and interviews with you about the ERP industry.

In this issue, we focused on how ERP solutions support Industry 4.0 and IoT enhance ERP systems. We dived deep into the effects of Artificial Intelligence on ERP systems and how AI is shaping the future of ERP.

With the contributions of valuable names from the ERP industry, we tried to answer any questions you might have in your mind about these next-generation technologies and their integration with ERP. If you still do not have a road map on the way to digital transformation, you will be able to analyze the industry and you will know better about the steps that you must take!

Our comprehensive cover interview with *Global Shop Solutions* CEO **Dusty Alexander** provides an overview of the ERP industry. We would also like to thank him once again for his warm approach and contribution.

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FASHION RETAILER ACCESSORIZES WITH ORACLE TO BOOST INTERNATIONAL GROWTH

O bag

ORACLE®

Italian brand, **O bag** produces and distributes unique and personalized fashion accessories. In 2012, the company launched an iconic women's casual-chic, completely customizable handbag collection, enabling shoppers to mix materials in numerous combinations, according to one's own style and individual taste. With Oracle Retail, O bag is able to deliver the same level of personalization in local promotions and tailor customer experiences in 400 stores worldwide and online.

"Our main objectives are to develop our retail business further to meet the needs of a transversal and multigenerational audience, looking for a totally customized experience," explains Michele Zanella, founder, and general manager of O bag. "We started from the physical stores and then embarked on an omnichannel journey with Oracle Retail."

With Oracle Retail technology, the in-store experience goes far beyond the flawless and secure execution of transactions. Sales associates have consumer intelligence tools available to analyze consumer behavior and differentiate each interaction. Associates can access customer information in real-time, including purchase history and loyalty information, while engaging clients and strengthening their trust in the brand.

"As noted in our Topography of Retail report, 56% of

European consumers believe that personalized offers and promotions are fundamental to their shopping experience. By gaining a single view of the customer and providing that insight at the point of sale, O bag can deliver timely, relevant, and personalized offers that compel the consumer to act and remain loyal," said Mike Webster, senior vice president, and general manager, Oracle Retail.

As part of a strategic multi-year engagement with Oracle Retail, O bag globally implemented Oracle Retail Xstore Point-of-Service (POS) and Oracle Retail Customer Engagement solutions to localize offerings and personalize the customer experience in over 400 franchise and owned stores in 55 countries across Europe, U.S., Canada, Latin America, Japan, South Asia, and South Africa.

Oracle Retail Xstore Point-of-Service is a cornerstone needed to enable several omnichannel shopping experiences. When combined with Oracle Retail Customer Engagement, associates are empowered to deliver a more personalized customer experience. By laying the foundation with these solutions, O bag can streamline the move into new markets at a rapid, but sustainable pace, thanks to the integrated localization features.

O bag purchased Oracle Retail Xstore Point-of-Service solution in 2017 and Oracle Retail Customer Engagement solution in 2018.

GARTNER SAYS AI AUGMENTATION WILL CREATE $2.9 TRILLION OF BUSINESS VALUE IN 2021

Gartner

In 2021, artificial intelligence (AI) augmentation will create $2.9 trillion of business value and 6.2 billion hours of worker productivity globally, according to Gartner, Inc.

Gartner defines augmented intelligence as a human-centered partnership model of people and AI working together to enhance cognitive performance. This includes learning, decision making and new experiences.

"Augmented intelligence is all about people taking advantage of AI," said Svetlana Sicular, research vice president at Gartner. "As AI technology evolves, the combined human and AI capabilities that augmented intelligence allows will deliver the greatest benefits to enterprises."

Business Value of Augmented Intelligence

Gartner's AI business value forecast highlights decision support/augmentation as the largest type of AI by business value-add with the fewest early barriers to adoption (see Figure 1). By 2030, decision support/augmentation will surpass all other types of AI initiatives to account for 44% of the global AI-derived business value.

Augmented Intelligence Enhances Customer Experience

Customer experience is the primary source of AI-derived business value, according to the Gartner AI business value forecast. Augmented intelligence reduces mistakes while delivering customer convenience and personalization at scale, democratizing what was previously available to the select few. "The goal is to be more efficient with automation, while complementing it with a human touch and common sense to manage the risks of decision automation," said Ms. Sicular.

"The excitement about AI tools, services and algorithms misses a crucial point: The goal of AI should be to empower humans to be better, smarter and happier, not to create a 'machine world' for its own sake," said Ms. Sicular. "Augmented intelligence is a design approach to winning with AI, and it assists machines and people alike to perform at their best."

Gartner clients can read more in the report: "Leverage Augmented Intelligence to Win With AI." More information on how to define your artificial intelligence strategy can be found on the Gartner AI Insight Hub.

Additional analysis on what is driving the future of AI in the IT industry will be presented during Gartner IT Symposium/Xpo 2019, the world's most important gathering of CIOs and other senior IT executives. IT executives rely on these events to gain insight into how their organizations can use IT to overcome business challenges and improve operational efficiency. Follow news and updates from the events on Twitter using #GartnerSYM.

Business Value Forecast by AI Type

■ Decision Support/Augmentation ■ Agents ■ Decision Automation ■ Smart Products

Millions of Dollars

Source: Gartner
ID: 386366
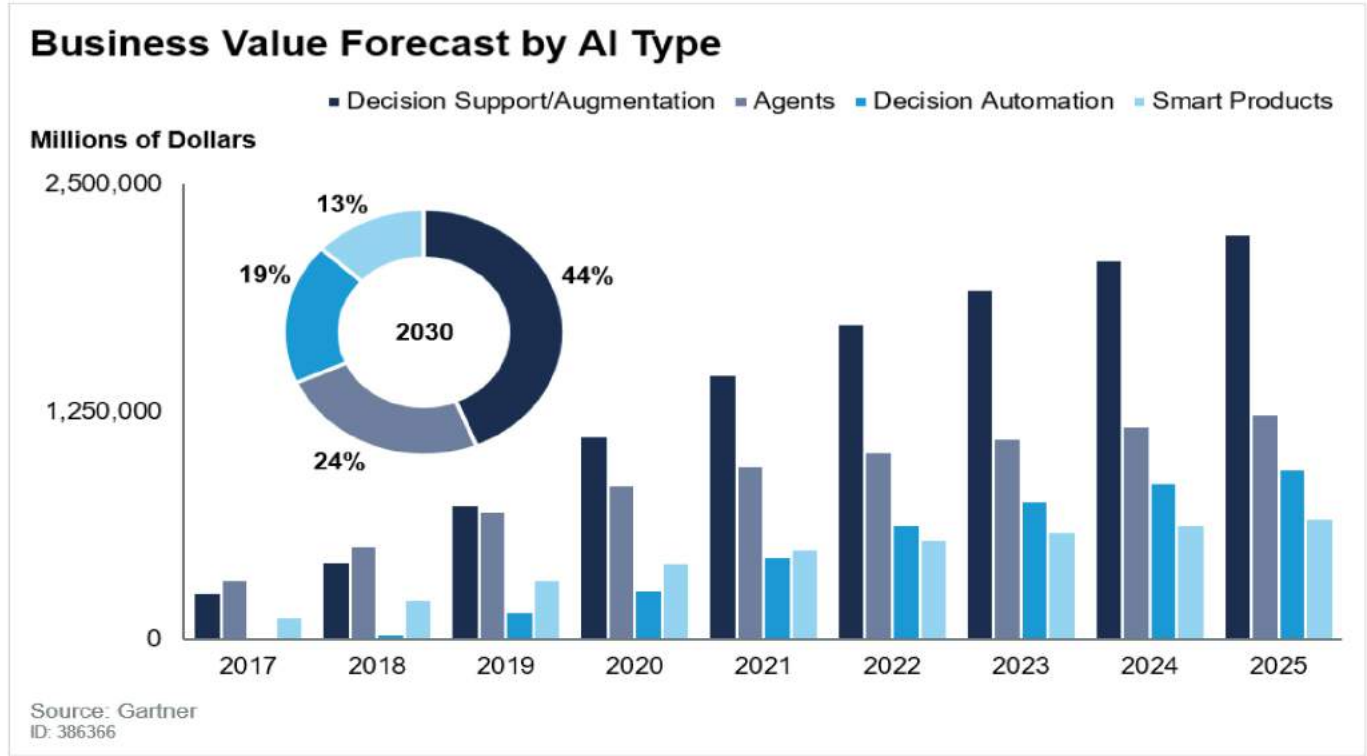
LEADING ORACLE REPORTING SOLUTION SUPPLIER ENHANCES E-BUSINESS SUITE PERFORMANCE

Enginatics
simple ERP reporting

Enginatics, makers of Blitz Report™ - the fastest reporting solution for EBS, adds performance audit service and enhanced reporting

Enginatics – leading supplier of reporting solutions for Oracle's E-Business Suite (EBS) – has announced the availability of a performance audit service and enhanced reporting for EBS performance tuning.

EBS is one of the world's leading enterprise resource planning systems and is used by many major organizations worldwide, so it is critical that it always operates at peak performance. Relevant information about systems performance can be hard to find and interpret, using Oracle's standard tools, so Enginatics has enhanced Blitz Report to make this key data readily available.

Identifying the underlying causes of performance issues can be difficult, so Enginatics built the fastest EBS reporting solution on the market, Blitz Report, and equipped it with tools to quickly highlight performance bottlenecks. Blitz Report generates reports directly into Excel.

The company also now offers an in-depth performance audit that highlights specific areas for change. Enginatics has been conducting these audits and improving EBS performance for almost twenty years. Following an audit,

customers get the Blitz Report toolkit, allowing them to continue to monitor and tune their EBS system as necessary.

Enginatics will be exhibiting at Oracle Open World in San Francisco (September 16th to 19th) on Booth 842. The company has also been shortlisted for the first time at the UK Oracle User Group Partner of the Year Awards.

Andy Haack, managing director of Enginatics said: "We are delighted to announce the availability of our enhanced performance tuning toolset, which significantly simplifies EBS performance monitoring. Our experience of conducting performance audits and improving system performance is built upon our super-fast reporting solution Blitz Report."

Aurelien Georgel, Global ERP Manager, THALES DIS, added: "Our development team uses Blitz Report as part of our weekly process to monitor SQL performance, allowing us to identify and proactively optimize and correct code before it can negatively impact our end users."

For further information plase visit;
www.enginatics.com

About Enginatics

Enginatics was formed in 2010 and has grown to become a leading global technology company specializing in reporting and performance tuning for Oracle's E-Business Suite (EBS). The team of highly experienced Oracle experts has created the world's fastest EBS reporting solution, Blitz Report™, which is in use around the world across a wide range of industry sectors.

Blitz Report™ produces operational reports directly into Excel, and there is an extensive on-line library of SQL scripts for customers to adopt and adapt, some of which are designed specifically to enable rapid performance audit and tuning.

SUGARFINA IMPROVES OPERATIONAL EFFICIENCY USING ZOHO ANALYTICS

Sugarfina improves efficiency using Zoho Analytics

ZOHO

Sugarfina is a mid-sized luxury candy boutique headquartered in California, US. They own and operate 52 retail stores across North America that produce and sell gourmet chocolates, caramels, gummies, malt balls, and licorice candies.

Sugarfina was churning out large amounts of data from their supply chain and customer channels. Stored in multiple apps and databases, analyzing this data was fast becoming a challenge for them.

They were looking for a BI solution that can import data from multiple sources and blend it, then create insightful dashboards, at the best cost possible. "Zoho Analytics is the only product with the right mix

of cost and value—with features like data visualization, integration, data blending, collaboration, user filters, drag and drop, geomaps, and much more at an affordable price", says Ben Smith, advisor and former COO of Sugarfina.

With Zoho Analytics, Sugarfina was able to visualize their production efficiency, costs, and seasonal trends, all within minutes, resulting in an increase of 50% to their operation team's efficiency.

Key Benefits for Sugarfina:

-Operation team's efficiency increased by 50%
-Reduction in manual effort spent analyzing data
-Insights made it easy for department leaders to identify and focus on areas that needed attention
-Overall reduction in costs across company

VAI HELPS DRUG MANUFACTURERS AND DISPENSERS WITH DRUG SUPPLY CHAIN SECURITY ACT COMPLIANCE

VAI provides customers with built-in verification router service solution for DSCSA compliance

VAI, a leading ERP software developer, recently announced integrations with traceability and serialization solutions such as Adents, and LSPediA's Verification Router Service to enable drug supply chain manufacturers and distributors to meet the fast-approaching Drug Supply Chain Security Act (DSCSA) serialization track and trace requirements. Through its S2K Pharma ERP Software, VAI will provide customers with a built-in verification router service solution - tracking all drugs throughout the supply chain for increased visibility. Following the DSCSA's announcement that all pharma distributors must have a process in place for verifying product identification of returned drugs, organizations are racing to comply with these new regulations. According to a recent study, only 38% of warehouses said they were confident their ERP or WMS systems will be able to handle all their serialized distribution needs. When a pharmaceutical supplier ships a product after November 2019, the receiving organization must verify they are obtaining the right barcode with the right serial number along with other supporting data. And with nearly

25% of all 2D barcodes having coding issues, wholesale drug distributors need a verification routing service that can help them track all prescription drug returns. "VAI's S2K Pharma ERP solution provides our customers with a built-in verification router service solution for DSCSA compliance," said Gina Parry, Sales Manager at VAI. "By partnering with companies such as Adents and LSPediA, our S2K Pharmaceutical solution is critical for wholesale drug distributors who have just months to prepare for the FDA's November 2019 deadline for verifying saleable returns." Meeting the DSCSA 2019 saleable returns requirement and the 2023 interoperability requirement, VAI's S2K Pharma ERP solution allows customers to perform product verification in real-time with sub-second response directly from the S2K application without additional steps or systems. The system will automatically track items as required, as well as validate licenses for the Drug Enforcement Administration (DEA) to ensure that all transactions are in accordance with the law. "Previously, employees were solely responsible for updating and validating licenses for each order manually which can lead to increased errors and fines if the licenses are not validated correctly," said Parry. "Through our solution, distributors now have the ability to create a safer environment for consumers through improved traceability."

About VAI

VAI is a leading independent mid-market ERP software developer renowned for its flexible solutions and ability to automate critical business functions for the distribution, manufacturing, retail, and service sectors. VAI's software solutions are backed by a wealth of experience and a reputation for excellence that countless companies rely on. With specific ERP solutions for Hard Goods, Food, and Pharmaceutical companies, VAI has helped some of the most recognized companies address key industry requirements and deliver bottom-line results. VAI continues to innovate with new solutions that leverage analytics, business intelligence, mobility, and cloud technology to help customers make more informed business decisions and empower their mobile workforce. VAI is headquartered in Ronkonkoma, NY, with branch offices located in Florida, Illinois, and California. For more information, visit http://www.vai.net

U.S. NAVY BOOSTS CYBERSECURITY BY MOVING ERP TO THE CLOUD

The U.S. Navy has completed its largest-ever migration of computerized business systems to a cloud computing environment, the service announced Friday. The Navy's Enterprise Resource Planning suite, which manages about half of the service's annual spending, now lives on a cloud platform rather than an in-house Oracle-based server system. It is the first time that the Pentagon has moved a large-scale business IT system to a commercial cloud service - in this case, Amazon Web Services' GovCloud.

"The magnitude of this accomplishment is incredible," said Secretary of the Navy Richard V. Spencer. "The Navy ERP tech refresh is our largest system cloud migration to date and will enhance the performance of our force. I am proud

of the team efforts to accomplish this on an accelerated schedule, cutting the projected timeline nearly in half." The Navy says that the migration will make the user experience faster and simpler for 72,000 servicemembers across six Navy commands. It also marks a step towards integrating all the Navy's financial systems into a single general ledger and achieving audit compliance, according to Thomas Harker, who serves as the Navy's equivalent of a CFO. The Navy failed a financial audit last year, as did the Army, Air Force and Marine Corps; Pentagon-wide, a lack of IT security control was a major issue, along with an inability to account for spending.

The ERP cloud migration effort took about three years and tens of thousands of man-hours, according to the Navy, and the service says that it will pay back that effort with a reduced workload for cybersecurity and database maintenance. At present, the Navy runs its finances on nine separate general ledger applications, with diferent formats and different programming languages, and keeping them all secure is a significant challenge.

"I think it's a widely accepted practice that you can move from many disparate systems that' you've got to independently always be checking and protecting and dealing with vulnerabilities, and get that into a more coherent single system, that reduces the attack surface and allows you to much more efficiently ensure that you're always keeping that infrastructure up to date," assistant secretary for R&D and acquisition James Guerts told Federal News Network.

SYSPRO ERP SOFTWARE RECOGNIZED BY SIIA AS BEST IOT OR IOT ENABLEMENT SOLUTION

SYSPRO, a global provider of industry-built enterprise resource planning (ERP) software, has been named the best IoT or IoT Enablement Solution of 2019 as part of the annual SIIA CODiE Awards. The prestigious CODiE Awards recognize the companies producing the most innovative businesses technology products across the country, and around the world.

"This award really puts SYSPRO on the map when it comes to the new technology being leveraged in our latest software release," said Geoff Garrett, SYSPRO USA CEO. "We are honored to be recognized among some of the most influential technology companies in the world."

SYSPRO's latest product release introduces a practical, user-friendly way for manufacturers and distributors to interface into the Internet of Things. Through the use of SYSPRO's RESTful APIs, customers can connect sensor data from IoT devices into SYSPRO's platform—sending key messages that initiate workflows for mission-critical transactions, including: preventative maintenance, tracing materials across the entire supply chain, collaboration between factories, improving worker safety, maintaining compliance, and even creating new revenue streams and business models.

SYSPRO recently published a customer success story addressing how its IoT enablement helped Agricultural

Sector leader, BKB Ltd., make the digital leap in a way that addresses traditional and emerging market challenges.

"SYSPRO's solution has created the foundation from which our business created insights into our customer base, payment trends, value allocation, and new selling opportunities. Now that we have the facts, we are actively assessing how we apply our strategy to further develop our digital strategy objectives to solve our business challenges," said Jaco Maas, BKB General Manager. "SYSPRO plays well with other applications, which is really important to our business."

The Software & Information Industry Association (SIIA), the principal trade association for the software and digital content industries, announced the full slate of CODiE winners during a special Award Ceremony in San Francisco on June 12.

The SIIA CODiE Awards are the industry's only peer-reviewed awards program. The first-round review of all nominees is conducted by software and business technology experts with considerable industry expertise, including members of the industry, analysts, media, bloggers, bankers, and investors. The scores from the expert judge review determine the finalists. SIIA members then vote on the finalist products, and the scores from both rounds are tabulated to select the winners. 44 awards were given this year for products and services deployed specifically for B2B software, information and media companies, including the all new Best Overall Business Technology Product, awarded to the product with the highest scores of both rounds of judging. 10 awards were given as part of the Company CODiE Awards, which

About Syspro

SYSPRO is a global, independent provider of industry-built ERP software designed to simplify business complexity for manufacturers and distributors. Focused on delivering optimized performance and complete business visibility, the SYSPRO solution is highly scalable, and can be deployed on-premise, in the cloud, or accessed via a mobile device. SYSPRO's strengths lie in a simplified approach to technology, expertise in a range of industries, and a commitment to future-proofing customer and partner success.

SAP PARTNER ITELLIGENCE AG LINKS PRODUCTION MACHINES WITH BUSINESS MANAGEMENT

itelligence NTT DATA Business Solutions

itelligence takes part in the initiative "Open Industry 4.0 Alliance"

The objective of the "Open Industry 4.0 Alliance" is to create a network that links up most of the various machines in a smart factory. The alliance is a union of companies from the engineering and industrial automation sectors and SAP. In August 2019, itelligence AG, one of the world's leading SAP consultancies, joined the group as one of the first partners at the application level.

The aim of the Open Industry 4.0 Alliance is to build a standardized, open network for operating highly automated factories and processing plants, including logistics and services. The partners in the alliance are planning a framework on the basis of existing standards.

"We're integrating production-level sensors with the world of business management systems," says Norbert Rotter, Chairman of the Executive Board of SAP partner itelligence AG. "With the help of the solution portfolio of SAP, we're modeling business processes like production control, inventory management or maintenance as well as collaboration between companies and external partners," Rotter adds. The founding members of the Open Industry 4.0 Alliance include the companies Beckhoff, Endress+Hauser, Hilscher, Ifm, Kuka, Multivac and SAP. Other partners are Balluff, Gebhardt, Pepperl+Fuchs, Schmidtsche Schack, Samson and Wika. In general, any company is welcome to join the alliance.

Creating a common language for data exchange

Any large company, or any medium-sized factory, processing facility or logistics center, will use a variety of products from a number of different manufacturers. "Proprietary standards in connectivity, data management and collaboration inhibit the scaling toward 'Industry 4.0'," says Mark Albrecht, Global Head of Innovation Technologies at itelligence. "We want to change that by creating a common language for data exchange."

Open standards all the way from production to service

The Open Industry 4.0 Alliance promises an open, standards-based and compatible range of solutions and support and intends to model the entire path extending from the product in the workshop to service. Companies using this framework can draw on a toolkit of modular, compatible and scalable components for solutions and services. These are based on the core competencies of the alliance members and provide the opportunity to make a vendor-neutral selection among suppliers in the discrete manufacturing and processing industries.

Four winning elements: The Open Industry 4.0 Alliance offers the four components Device Connectivity, Edge, Operator Cloud and Cloud Central as well as an associated range of services. The alliance is global in scope. The initiative was joined by itelligence in August of this year.

About itelligence

itelligence AG transforms IT landscapes and business processes through the combination of innovative SAP software and technology with services and products developed in-house. As an SAP Global Platinum Partner, itelligence supports SMEs and large enterprises in every phase of their digital transformation. itelligence's range of services includes IT strategy and transformation consulting, software deployment and implementation, as well as application management and managed cloud services.

RUNWAY BY SAP
RETURNS TO NEW YORK FASHION WEEK WITH NEW FEATURES DEBUTING AT THE BADGLEY MISCHKA RUNWAY SHOW

*SAP announced a new version of the Runway by SAP mobile app that will debut at the **Badgley Mischka** show at New York Fashion Week.*

Available for download in the Apple store (for iPhone and iPad), Runway by SAP enables fashion show audiences to actively participate in the show — whether watching in-person or online — by providing instant feedback on runway looks and accessing detailed info on each item within the presentations. New to the app for this season's Badgley Mischka Spring 2020 show, audiences can add to their wish list items as they debut on the runway for preorder and even buy now from this season's Fall 2019 runway collection through the app.

Runway by SAP is a live-audience feedback app using the Internet of Things, beacon technology and machine learning algorithms to automatically recognize the looks as they go down the runway and enable users to interact in real time with the collection by providing feedback. The direct user feedback offers invaluable real-time data and analytics to the designers.

"Digitally empowered consumers are rewriting the rules of fashion, and Runway by SAP provides a unique opportunity for our fashion show audience to interact with our new collection as they see it on the runway in real time," said Mark Badgley, Badgley Mischka cofounder and designer. "The live audience engagement and feedback will be paramount in our future creative and production decisions," said James Mischka, Badgley Mischka cofounder and designer.

Runway by SAP app functionality supports users live at the show or watching remotely, and includes the following:
-Real-time interaction with the new collection as it debuts on the runway, including the ability to provide feedback on each look and items within the look, using "like" and "love" commentary options;

-Ability to access detailed information on specific items in each look
-Purchase feature that enables users to add items to their wish list
-Users able to either order or preorder specific Badgley Mischka looks depending on the season
-Ability to take photos while using the app, ensuring attendees don't miss any of their favorite looks as they appear on the runway
-Ability to leverage the machine learning features of the app to identify looks, provide feedback and buy items using a runway video replay (such as YouTube or Facebook)

The Badgley Mischka Spring 2020 show is the third New York Fashion Week appearance of Runway by SAP, which debuted at the Badgley Mischka Fall 2018 show and was also used at the Christian Siriano Fall 2019 show.

BILL MCDERMOTT AT TECHCRUNCH SESSIONS: ENTERPRISE

Enterprise leaders must protect their core businesses while expanding the "perimeter," SAP CEO Bill McDermott told the audience this week at a TechCrunch technology conference in San Francisco.

During the conference session, "Keeping an Enterprise Behemoth on Course," McDermott emphasized that to stay on top, market leaders need to continue developing innovative solutions and creating new business models. "Change is unbelievably fast, but remember, the world will never move this slowly again," he said.

Underscoring the importance of bold leadership McDermott noted, "We had a $110 billion addressable market in 2010, but if you were spending time addressing 'today' problems, we would lose the opportunity of tomorrow." Today, he said, SAP's addressable market has grown to $400 billion.

Since McDermott took over as sole SAP CEO in 2014 — becoming the first American to hold this position — he has grown the company and its market capitalization, thanks in part to a number of key cloud-based acquisitions.

"If you look at our business in 2010, we had zero cloud revenue. Now we will have a $15 billion cloud business by 2023," he said. "If we hadn't made those decisions [to buy cloud companies], we wouldn't be in that position."

as transformational for SAP and the software industry." The SAP CEO spoke during a fireside chat with TechCrunch news editor Frederic Lardinois at TechCrunch Sessions: Enterprise.

"We are living in an experience economy," McDermott shared, while describing Qualtrics as "the elixir to serve our customers."

"It's a key part of our strategy to be the fastest-growing enterprise company," he said, adding that the combination of experience (X-data) and operational (O-data) data on the SAP platform can change experiences for people around the world, and make their engagement with companies "simple and beautiful."

Growing the Market and Shareholder Value

Since becoming CEO, McDermott has overseen SAP's market capitalization increase from $40 to $150 billion. He noted that while SAP's market cap has quadrupled in 10 years, "We've quintupled the customers we serve." To do that he said, "You need loyal customers, and a mindset at the company that's focused on the customer." TechCrunch Sessions: Enterprise was the result of a partnership between SAP and TechCrunch. More than 1,200 attended in person along with a large audience

Expanding Experience

Among those deals, SAP acquired Qualtrics, the experience management (XM) market leader, earlier this year. McDermott compared that deal to earlier tech industry mega deals, including Apple's 1996 acquisition of NeXT, which brought Steve Jobs back to the company he co-founded, as well as EMC's 2003 acquisition of VMWare and the subsequent purchase of EMC by Dell in 2016.

"Those were acquisitions that changed the industry," McDermott said. "Similarly, the Qualtrics deal will be just

online. SAP Chief Innovation Officer Max Wessel, managing director of SAP Silicon Valley, also presented at the event and spearheaded the collaboration.

Of the significance of the event, Wessel explained that SAP innovation is well understood by its employees and customers. "But to lead," he said, "we need to be open to how we partner across the ecosystem and push ideas forward. Given that TechCrunch is a leading outlet for technology news, it's important for us to sit side-by-side with them."

Be financially responsible and conservative	Take care of our customers every day	Keep our company culture exciting
Continue growth trajectory responsibly	Create and offer new solutions to our customers	Hire and retain bright, creative thinkers passionate about customer service
Retain family ownership without taking on debt	Maintain a diverse and healthy portfolio of industries served	Invest in our people, processes, and technology
Continue to sell directly to customers	Know who we are and where we compete and win	Constantly evaluate how we serve our employees and customers

Table 1.1

ERP INTEGRATES WITH
NEXT GENERATION
TECHNOLOGIES!

Global Shop
SOLUTIONS
ERP SOFTWARE

an Interview with **Dusty Alexander,** *CEO of Global Shop Solutions*

For several decades, ERP systems have transformed the way business is done in the manufacturing industry. With the advent of next-generation technologies, ERP solutions that integrate with the digitally connected IoT (Internet of Things) ecosystem are once again shaping the future of the manufacturing in a profound way. Specifically, Industry 4.0, big data, data analysis, business intelligence, artificial intelligence applications are determining the future of companies by making unprecedented amounts of data available to companies. Working together in a fully integrated structure, Industry 4.0 and ERP systems will forever change the face of manufacturing.

In particular, artificial intelligence will have a major impact on the ERP industry as it affects almost every sector and will enable organizations to further optimize their business processes. To organize this transformation, companies need to renew their IT strategies and roadmaps while advancing work on artificial intelligence and ERP integration. We are delighted to share with you an exclusive interview with the CEO of Global Shop Solutions, Dusty Alexander, who presents his perspective on the subject and of the ERP industry in general.

How do you define a successful career in the ERP industry?

If our customers are growing their businesses and our employees are growing, I consider that success. Generally speaking, you can have a successful career in ERP if you love to battle and love to build things. Whether you are in R&D, service, consulting, sales, or marketing, you are always battling to solve problems, overcome obstacles, and build new things for the company or the customer. Global Shop Solutions operates on *three guiding principles (Table 1.1)*, and through these principles we see success for customers and employees.

As a leader in the ERP industry, what keeps you up at night?

Two things are on my mind all day, every day.
1) Keeping customers happy. I am so proud of our great, great customers; and I am always listening to them and thinking about how we can keep them happy, make them better users of our software and help their businesses grow.

We have one of the highest implementation success rates and one of the highest customer retention rates in the industry. That is due to being laser-focused on the one product we sell and providing the best customer experience in the industry. Every customer gets my personal cell phone number, and I take every call.

2) Keeping employees happy. In the last five years, our employee count has nearly doubled, and the average tenure of an employee at Global Shop Solutions has grown to about eight years. If our employees are challenged, growing, happy, and know their job is secure, they will perform better. I am so proud of all the talent we have at the company.

Tell us more about the industry-specific solutions that Global Shop Solutions offers. How flexible can Global Shop Solutions be?

We have a diverse customer base that requires our ERP software to be flexible and customizable. In order to deliver these requirements, we do two things. First, we make one – and only one – product: ERP software. Everyone our customers work with, from sales to implementation, service, and ongoing continuous improvement, are Global Shop Solutions employees. We believe this is the best model for our customers to be successful.

Second, we build a high degree of flexibility and customization into our ERP system through our software development toolkit (SDK) called the Global Application Builder (GAB). Using this SDK, our customers or the developer community can customize our software and screens.

This includes building applications, reports, and dashboards on top of the software that meet their specific needs. Once completed, customization projects are free for all customers to download and install after they are released to our store. We currently have over 1,500 custom applications available, and our customers love them!

What are your expectations about the future of ERP? What will change in five years?

Integration – more and more and with everything – machines, phones, tooling, other software, your website, etc. Your ERP system is the heart of your manufacturing business and it is connected to everything.

Automation – robots, machines, and software do repeatable tasks while your human capital does more of what you want them to do, which is make decisions, serve customers, and think critically. *Right now the U.S. has 7.3 million open jobs, and manufacturers are having a hard time finding people to fill them. Our customers repeatedly tell us one of the biggest challenges they face is finding reliable employees. They are looking to automation to help solve that problem.*

Customization – Our software runs in over 3,000 facilities in more than 20 countries around the globe. Each facility runs their business and makes parts differently than the next. Your ERP software and employees have to be ready to understand, recommend, and be able to customize the software to meet their needs.

What demands does Industry 4.0 make on ERP systems?

Do more with less. This means making ERP systems smarter, faster, more connected, and easier. In North America, many manufacturers don't have the people to create the integrations and take advantage of Industry 4.0, so our customers continually lean on Global Shop Solutions to do that for them. It has become such a popular request that we have developed a Manufacturing Health Test (https://www.globalshopsolutions.com/manufacturing-health-test) to help manufacturers understand where they are, where they can go, and how we can help them. Additionally, Industry 4.0 is asking ERP systems to provide recommendations and answers in addition to collecting the data. As Industry 4.0 becomes more mature and cost-attractive, we expect the industry will see more lights-out manufacturing and smart manufacturing where the shop floor is supported with software, wireless connectivity, and sensors everywhere.

> "
> **YOUR ERP SYSTEM IS THE HEART OF YOUR MANUFACTURING BUSINESS AND IT IS CONNECTED TO EVERYTHING.**
> "

> ## "
> ## WE HAVE ONE OF THE HIGHEST IMPLEMENTATION SUCCESS RATES AND ONE OF THE HIGHEST CUSTOMER RETENTION RATES IN THE INDUSTRY.
> ## THAT IS DUE TO BEING LASER-FOCUSED ON THE ONE PRODUCT WE SELL AND PROVIDING THE BEST CUSTOMER EXPERIENCE IN THE INDUSTRY.
> "
>
> *Dusty Alexander, CEO of Global Shop Solutions*

How does IoT enhance ERP systems?

For Global Shop Solutions, IoT has been an absolute game-changer. When our customers adopt IoT, which they are doing in increasing numbers, it allows us to deliver a better product. Many of our customers are wireless throughout their shop floor, have connected TVs on their shop floor, connected phones and tablets, RFID sensors, and other technology. The combination of these technologies allows us to provide a product that delivers a paperless environment, real-time data, and more efficient scheduling, inventory, shipping and more so they can deliver a quality part on time every time. Lastly, we are seeing more and more customers looking to connect their website to our ERP software so they can take orders online, go through a quick approval process, and immediately start their production and scheduling processes.

How is AI shaping the future of ERP software?

ERP software generates a lot of data, and AI will help Global Shop Solutions sort, organize, and present that data to our customers better than ever so they can make better decisions. As machines and other devices become more capable, capture more data and, most importantly, become more integrated with ERP software, it allows our engine to analyze the data and make decisions and recommendations for our customers. A great example of AI shaping ERP is in scheduling, inventory, auto purchasing, and nesting integrations.

Factory of the Future (FoF) is a large-scale intelligent machine that operates with a highly integrated and organized knowledge base. The time has come to check on the readiness of ERP systems to cope with the demands of the FoF. In this context, what do you see as the major problem associated with current ERP systems? Is Global Shop Solutions ready for the factory of the future?

Global Shop Solutions is definitely ready for the FoF. Many of our customers are heading there and look to Global Shop Solutions to help them get there. Two great examples of customers leading this move to the FoF are Jacksonville, FL-based Load King (http://www.loadking.com/) and Lake Zurich, IL-based Geremarie Corporation (http://www.geremarie.com/). Two very different companies using Global Shop Solutions ERP software to achieve similar goals – become a better manufacturer each and every day.

One of the major headwinds for the FoF is the speed of everything. Your network, connectivity, servers, devices, computers, integrations and software all have to get faster, which requires investment. We have made large investments in our cloud and SaaS offering (built on Amazon web services) to provide customers a broad range of choices and the fastest product.

Dusty Alexander has been at the helm of Global Shop Solutions for over 30 years. As President & CEO, his main focus every day is loving, serving and caring for their great customers. He continues the family legacy of trust his father began at Global Shop Solutions by keeping the company 100% family owned and family run, debt free with no outside investors. He strives daily to continue to deliver the best product and service to meet customers' needs – today and in the future.

About Global Shop Solutions

We simplify your manufacturing.™ Global Shop Solutions ERP software provides the applications needed to deliver a quality part on time, every time from quote to cash and everything in between including shop management, scheduling, inventory, accounting, quality control, CRM and 25 more. Available in the cloud or on premise, our manufacturing customers benefit from real-time inventory accuracy, improved on-time delivery, lower administrative costs, increased sales and improved customer service. Headquarters in The Woodlands, Texas includes a state-of-the-art R&D facility and Global Shop Solutions training center. Through its offices in the U.S., Mexico, Indonesia, Singapore, Australia, New Zealand and the United Kingdom, the company supports thousands of manufacturing facilities in over 25 countries and nearly 30 industries.
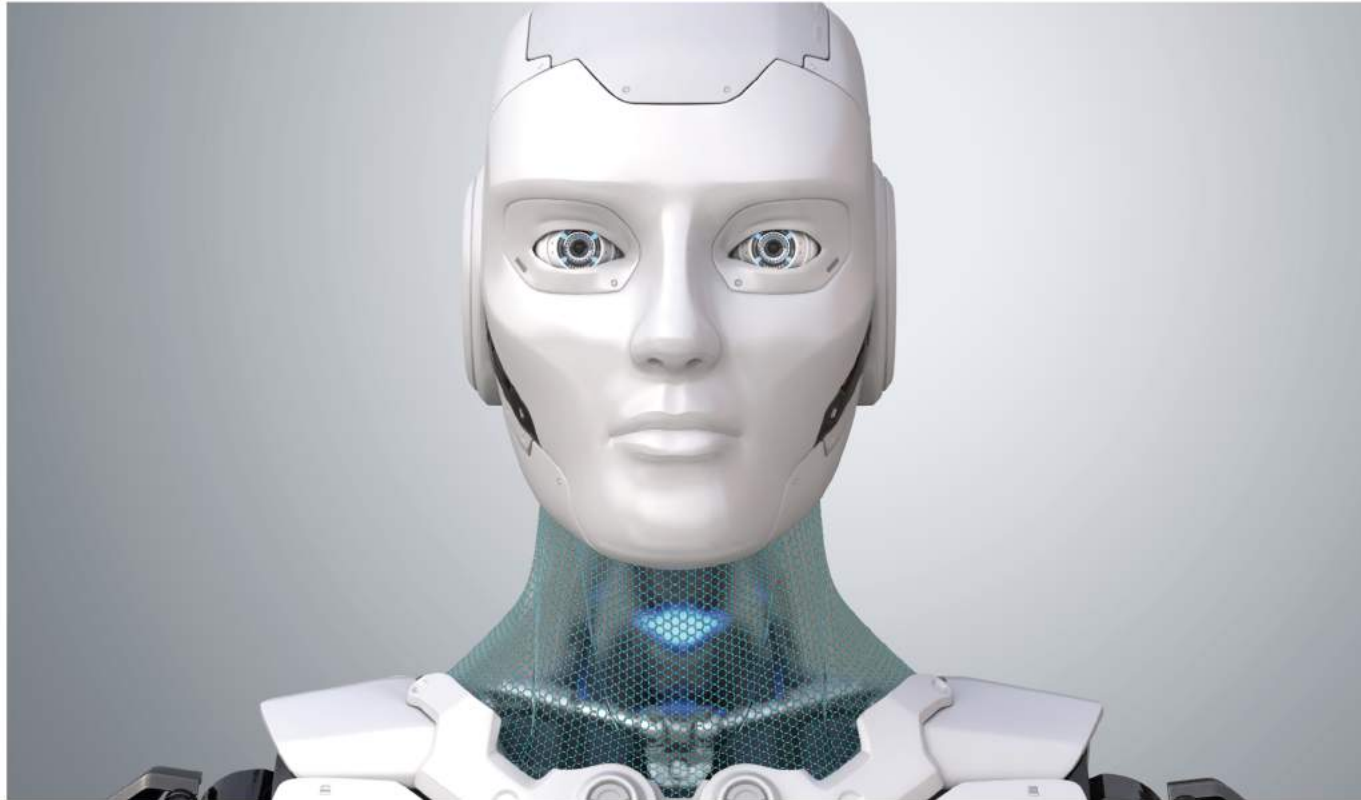
HOW AI IS SHAPING THE FUTURE OF ERP SOFTWARE

HANSAWORLD   *by* **Maricelle Boshoff, Country Manager South Africa**

Although AI (Artificial Intelligence) is still in its early stages for ERP software, the demand for the technology is rising each day.

What is next?

During the 1990s, ERP was the emerging trend and companies were looking to utilize the new functionality and opportunities this trend brought. Many customers moved from manual systems and spreadsheets to ERP software with the main aim of improving efficiency. Today, ERP is a very common term within the industry and most companies who have adopted ERP software in their organizations are asking the question 'what is next?'

AI is an emerging trend but understanding terms like Big Data and the Internet of Things (IoT) which are causing digital disruption can create a misperception in the market. Today, more than before, companies need to understand how AI fits into ERP software as well as the benefits it can provide.

AI in ERP software

To understand AI in ERP software, it is important to touch on some aspects which can lead to improved efficiency. Moving from a paper-based system to an ERP system can help

organizations streamline their business processes. Once business processes are streamlined, and the data is ready, incorporating AI can lead to truly optimized efficiency levels.

Repetitive tasks that are still required by the ERP system can now be done by AI, allowing employees to focus on value -added tasks as well as tasks that involve creative thinking.

Companies have also looked toward their ERP systems to optimize the time employees spend on analyzing data and decision making. By bringing AI into the ERP system, the ERP system can assist with analyzing financial figures, picking up discrepancies and helping with quicker month-end routines. AI can also assist by suggesting sales items for customers based on historical purchases or customer behavior, therefore, increasing revenue.

Many companies are beginning to use AI with their ERP system to assist with scheduling - a task that takes managers many hours within the service industry. For example, an ERP user might have multiple resources working on various projects and if an employee (or two) is off sick, rescheduling can be a very time-consuming task. By having AI make suggestions relating to resource scheduling, the managers can focus on other aspects of these projects with no loss of productivity.

AI for SME's

Gartner predicts that 80% of emerging technologies will have AI components by 2021. Therefore, companies of all sizes should be ready for new technology.

Although AI has had a very big drive within large organizations, the value it brings to SME's (small and medium enterprises) should not be overlooked. For larger enterprises, having an AI price suggestion can lead to increased sales and slightly higher profitability, however, for an SME, this type of information can be the difference between surviving in the market and having a competitor take over the sector.

For AI to be most effective it is essential to have the necessary data or infrastructure available and established through business processes.

Companies can often take on an AI approach without fully understanding their business processes, therefore, missing opportunities to fully utilize the advantages that AI can provide. Understanding the bottlenecks or problem areas where managers spend a lot of time is very hard when there is no ERP system providing transparency to management. Companies of all sizes should be keeping track of the market and seeing what ERP software companies are doing with AI.

HansaWorld's Standard ERP recently received an International Silver Stevie Award in the 2019 category for Artificial Intelligence/Machine Learning Solution.

Standard ERP's AI Virtual Assistant Anna is not only able to perform system operations with voice

> **ERP SOFTWARE AND AI WILL CONTINUE TO MOVE FROM STRENGTH TO STRENGTH AND LOOKING FOR AN ERP VENDOR WHO HAS A FUTURE SAFE APPROACH SHOULD BE THE MAIN PRIORITY ON ANY COMPANIES AGENDA.**

commands such as running reports, performing searches and assisting with informed decision making but is also able to answer questions asked by customers such as 'has this invoice been paid?', or, 'has my order been shipped?'. Anna is also able to provide customers with stock level updates based on orders received.

Where is the market now?

Although the early adoption of an ERP system does have significant advantages for companies looking to benefit from AI, it is not too late if you have not yet made the move. ERP software and AI will continue to move from strength to strength and looking for an ERP vendor who has a future safe approach should be the main priority on any companies agenda.

| About HansaWorld

HansaWorld is a multinational software development company specializing in accounting software, ERP and CRM solutions. Founded in 1988, HansaWorld offers a range of versatile business management software solutions in 110 countries and translated to over 25 international languages. With HansaWorld's innovative technology, servers can be hosted in the cloud or on-premises; this allows for a hybrid cloud environment as well.

HOW IOT CAN IMPROVE ERP DATA INTEGRITY IN MANUFACTURING

Anyone who has ever spent even a little time in an ERP system understands all too well the meaning of "garbage in, garbage out". ERP systems are incredibly powerful and complex and, generally speaking, very good at what they do, however, they all share one common Achilles heel: they actually believe the underlying data – both master data and transactional data - that controls them. When that data is an accurate representation of the physical world, life is good! When it is not, life in an ERP environment can be unbearable! That is why it is so important to take proactive steps to get the data right.

Part of the challenge with ERP systems is that they still rely heavily on human inputs, and let's face it, humans make mistakes. Although I think most organizations would find it to be a rather large leap to take humans completely out of the data equation, I do believe IoT has much to offer in helping make sure humans "get it right" when it comes to transactional and master data in ERP systems. What follows is a simple example of how IoT, and other Industry 4.0 concepts, can be applied to continuous, semi-continuous, and even batch manufacturing processes, to greatly improve ERP data integrity.

To see the value of this IoT use case, I will jump to the last chapter of the book, so to speak, to describe the end state, and then go back and fill in what specific steps it takes to get there. First, let's look at what happens with material movement validation. In the traditional approach, the shift

supervisor may do a quick check at the end of every shift to confirm that the reported total production on his/her shift makes sense for the machine rate and uptime for that day. This check is often an informal, back-of-the-envelope calculation without machine assist. Gross errors are generally identified and investigated in this approach, but more subtle errors often go undetected. Adding just a little bit of extra measurement and analytical capability can change the picture dramatically. With those things in place, two sets of checks can be performed automatically, multiple times during a shift, using real-time analytics and algorithms. The first check is a comparison of actual goods issues and receipts versus planned goods issues and receipts. This check helps assess how well the team is performing relative to plan, both in terms of total output and the relative ratio of ingredients. The second check is a comparison of all mass balance relationships to determine if anything has gone awry, such as, for example, a missing or errant goods movement, or a drift in measurement equipment calibration. While the actual production may differ from planned production for any number of legitimate reasons, the mass balance checks should always hold because the law of conservation of mass is universally true. Therefore, any discovered mass balance discrepancies trigger immediate corrective action response from the shift team. This not only greatly improves transactional data integrity; it also improves shift team participation and ownership.

But it's not just about transactional data. The impact of added IoT capability can be extended to master data processes as well. In the traditional master data maintenance approach, BOMs and routes are reviewed annually as part of the process for setting standard costs. Typically, an overall variance analysis might be performed on each

finished good, based on the cumulative variances for all the manufacturing orders over the past year. Depending upon the number of materials and production campaigns, this can be a rather time-consuming process. It also happens to be very much a "looking in the rear-view mirror" approach.

Contrast that to performing real-time trend analyses enabled by Big Data. Based on the real-time monitoring of material movements described above, it is now possible to automatically create and manage on-going control charts on every material, component, and asset. In essence, you can now constantly monitor BOM and route performance, raise real-time alerts, and take corrective action whenever appropriate. What once was an annual data analysis nightmare, is now performed in the background, constantly throughout the year, and available at your fingertips with the click of a button. No longer do you have to wait for "the standard-setting season" to act. Of course, there is some price to pay for all this capability, but it's not as expensive as you might think. In addition to developing an application to execute and display the digital activities previously described, the following items must be put in place:

•Measurement capability
You must be able to measure and electronically report mass flow on every material stream – including waste and by-products. For most organizations, that capability exists for the intended produced material and all ingredient streams, but it is the waste and by-product streams that typically require additional investment.

•Real-time material movements
Even if your organization is not quite ready for material movements to be autonomously generated directly from machines, you will need to have in place real-time (or near real-time) posting of material movements.

•Master Data Set-up
BOMs must contain all materials, including waste and by-product materials, in ratios based on actual demonstrated performance. The routes must contain rates that are likewise based on actual demonstrated performance.

•Algorithms
Logic must be developed to enable a comparison of the actual measured values to the expected values as indicated in the BOMs and routes. That logic is based largely on the mass balance relationships of the components.

So, while implementing this IoT use case certainly isn't free, it also is not exorbitant, and I believe most organizations will find the benefits to be well worth the price of admission. This is just one simple example of how IoT and other Industry 4.0 concepts can be applied to improve data integrity in an ERP system. The number of other possible IoT use cases in ERP is as limitless as your imagination. As you think through your overall IoT strategy, I encourage you to dream big but, implement in little bite-size pieces. As we have just seen, even a light-touch IoT application, if well thought out, can greatly improve your overall ERP operational experience, and enhance your return on investment.

About Competitive Capabilities International (CCi)

Established in 1987, CCi is a privately held, global company that enables organizations to deliver sustainable results across the supply chain through a continuous improvement solution called TRACC. With its core experience residing in manufacturing and supply chain best practices, CCi's goal is to "unlock greatness" in organizational capability through proven experience in World Class Manufacturing (WCM), Total Productive Maintenance (TPM), Six Sigma, Lean and Supply Chain Optimization.

INDUSTRY 4.0; A BRIGHT FUTURE WITH DARK FACTORIES

by Yagmur Sahin, Editor of ERPNEWS.COM

ndustrial revolutions are central to the desire for technology to make human life easier. Although we can summarize the journey from Industry 1.0 to 4.0 in a paragraph, human beings have been trying to make life easier for centuries. What did this desire create? How did it start? At what point of the industrial revolution are we now? Is your business ready for this revolution?

The last question is one of the biggest concerns of almost every business today. Without further ado, let us begin the story of the dark factories in our bright future;

Industrial Revolution from Past to Present

It all started with the invention of water and steam-powered mechanical production facilities. This first step was called Industry 1.0. Then the second industrial revolution took place in 1840 with the invention of the telegraph, and in 1880, with one of the most radical inventions of our lives, the invention of the telephone. While Industry 2.0 took place in the center of Taylorism and scientific management, Industry 3.0 came up with the first computers in 1971. After this period in which the successful mechanical engineers in the field provided the automation of the mass production processes, Industry 4.0 was finally at the point where the target has been realized since the beginning.

The Industry 4.0 revolution teaches us to live in the virtual world with autonomous machines. This process, which started with the Internet of Things in 2000 and the Internet of Services in 2010, was first introduced in 2011 at the Hannover Fair in Germany. In October 2012, Robert Bosch GmBH and Kagermann formed working groups and submitted the Fourth Industrial Revolution proposal to the German Federal Government. On April 8, 2013, again at the Hannover Fair in Germany, these working groups shared the term "Industry 4.0" with the global world as the beginning of a new industrial era.

Industry 4.0, in which the era of intelligent production began after mass production, is a term nurtured by the evolving technology dynamics of digital transformation. It is of critical importance for companies who want to achieve success in the increasingly difficult competitive environment in the global economy.

With the Internet of Things, the Internet of Services, and cyber-physical systems that form the basis of Industry 4.0, today's companies have started to use intelligent systems with artificial intelligence to monitor the production-distribution processes of factories and make diagnostics. When Artificial Intelligence ceased to be the subject of science fiction movies and came into our lives together with ERP systems, all the rules of competition have changed. The first question in the minds of companies that want to keep up with the competition is undoubtedly how the combination of artificial intelligence and ERP systems would co-operate together.

AI and ERP

AI modules in modern ERP platforms provide flexibility for processing new information, and in these modules, a human touch is always needed to work with data, understand the modeling process and deploy it into operational processes. In other words, artificial intelligence is preparing the future of humanity rather than ending it.

Artificial intelligence can play an active role in reporting, which is one of the first features that come to mind when ERP software is mentioned. By combining business intelligence systems and artificial intelligence modules, analysts can achieve much more efficient results. Particularly in large companies, the continuous flow of data from different departments can sometimes become difficult to manage. It is possible to overcome these difficulties with AI analysis. In ERP software, artificial intelligence technology can be used to develop the areas involved in the analysts' modeling process.

ERP and artificial intelligence can give companies an advantage in many other areas. When it comes to ERP, what is critical is choosing a structure that is right, flexible, and allows you to take advantage of Industry 4.0.

As individuals living in the universe that was once depicted in the science fiction movies which we used to watch 10 years ago, we can change the end of the movie as we wish. If you want the film to end with a happy ending for your company, remember that the first step is the right ERP software!

I wish you all a happy ending until the next issue!

MANUFACTURING ERP AND THE PURSUIT OF REAL-TIME INFORMATION

By **Glenn Graney**, Director Industrial and High Tech, QAD

Perhaps no expression evokes more of a disputed territorial discussion in a manufacturing environment than "Real-time" information. Process control engineers and manufacturing operations personnel have historically claimed the expression "real-time" within their domain. They openly scoff at IT professionals who refer to real-time activity that isn't measured in microseconds. If you don't know the value of some important information in less than a second then you are just reading yesterday's news.

Traditionally, Enterprise Resource Planning (ERP) in the context of manufacturing is a planning and business function that executes on daily, weekly or even monthly cycles. This hardly matches the shop floor definitions of real-time. Not even the most zealous material manager would clamor for backflushes within microseconds of inventory consumption. Finance leaders don't use sub-second clocks to close their monthly books. (Although I have met some that would if they could!)

So what does real-time mean for ERP and manufacturing operations? Real-time is a relevant descriptor when it is defined as the ability of a system to provide information and enable responses within strategic time frames. Too often real-time in our planning and operational processes are measured in the time that it takes to update and share a spreadsheet. The lags in information flow and inconsistent access to current status changes are very real detriments to optimizing both planning and responsive decision-making. Real-time for production order status is most likely measured to the minute, which would be a significant improvement for many manufacturers.

Even in automated environments, attaining real-time information is not always guaranteed. The integration between manufacturing ERP and third-party or home-grown shop floor systems like MES or machine-level operator interfaces can be challenging. The inherent purpose-built design of these distinct systems can still result in an integration that is dependent on batch loads and periodic lags of current status.

The solution to delivering real-time manufacturing ERP capability may lie in the ability of ERP software systems to extend into the operational functionality. No one should advocate for ERP software to actively control machines. However, extending core capability to the collection and coordination of relevant information is both possible and capable of providing real benefits.

So what information is necessary for real-time manufacturing ERP? Generally speaking, for most manufacturers, ERP is production order-centric. The ERP software system converts demand into manageable portions of material requirements and executable orders with defined delivery windows. Correspondingly, the information needed to deliver real-time feedback at the ERP level is associated with these production orders. ERP capability needs to evolve to provide the interface that is appropriate and available to the shop floor. Order progress is best collected directly from the person doing the actual manufacturing. This requires an interface that is both appropriate for the operators on the shop floor and provides minimal disruption to the operators' focus on the manufacturing process.

Modern manufacturing ERP solutions provide great capability in terms of comprehensive access to data and hierarchies of functions that are appropriate for planners and other business functions. The cockpit of an ERP planner looks like a spreadsheet on steroids with access to all relevant data. Conversely, the shop floor operator interface needs to be highly visual, use simple navigation and always be contextual to a limited scope of geography and responsibility. The operator of a work center should only be presented with released orders in a relevant time frame, such as a shift or even the next few hours. There may be hundreds of planned orders but an operator should only deal with a finite and limited scope.

This allows the operator to take action and efficiently record progress in real

> ## THE LAGS IN INFORMATION FLOW AND INCONSISTENT ACCESS TO CURRENT STATUS CHANGES ARE VERY REAL DETRIMENTS TO OPTIMIZING BOTH PLANNING AND RESPONSIVE DECISION-MAKING.

-time. This simplistic and visual access is far superior to the dreaded clipboard or paper travelers. These processes often result in delayed production reporting at the end of the shift via separate data-entry. The recording of production quantities by the operator not only improves the timeliness of the data but also improves the quality of the data. On-line integrity checks and the avoidance of data entry miscues are a huge upgrade over manual collection strategies. The emergence of IoT as an enhanced path to process data associated with individual production orders completes a data set with real-time details around the order, operator information, and equipment performance.

All of this may not sound like a new approach. The distinction is that adaptive ERP solutions can provide this capability by providing native operational extensions. The legacy layers of multiple systems and complex integration have been, in some ways, a barrier to real-time insights. ERP-provided awareness of shop floor activity as it happens can be used to make better-informed decisions. One very simple example is the potential for improved collaboration between planning and operations. If a planner can instantly see that a production order is near completion via real-time access, they could make decisions about the next order or the possible expediting of an unplanned order. Historically, the planner would have been blind to the current status and would have to resort to a cumbersome series of phone calls to floor supervision or worse just release orders blindly. The floor supervisor also benefits from having a clearer set of priorities.

Real-time insights into operational capability can make modern manufacturers truly rapid, agile and effective. Manufacturing ERP with native operational extensions may not be real-time at the microsecond level, but it can provide real-time, real-world results.

Glenn Graney is QAD's Marketing Manager for the Industrial and High Tech markets. He enjoys comedy and all things funny. He and his wife live in Wilmington, North Carolina where their grown children intermittently visit and their pets rarely stray.

STALLED ON LEGACY ERP SYSTEMS: THE COSTS, RISKS AND MISSED OPPORTUNITIES

rootstock® CLOUD ERP

By **Pat Garrehy**, CEO of Rootstock Software

When it comes to ERP, many manufacturers have chosen the "path of least resistance," continuing to use the same legacy systems they've had for the past 15 to 30 years. Familiarity with on-premise architecture has lulled these companies into a false sense of comfort with the status quo, but in reality, they're stuck in a business era long gone. As time passes, these companies risk missing opportunities to achieve increased growth, customer centricity, recruitment of new knowledge workers, and other competitive advantages – all of which could result in greater costs and risks in the end.

The reasons for wanting to hold onto an existing legacy system are well known and understandable. Corporate leaders feel replacement will be expensive and resource-intensive, not to mention accompanied by a significant risk of project failure. Many believe the current system, which was built and honed overtime to produce competitive advantage, still works and retiring it could jeopardize key operations. If the system has been highly customized, it may seem daunting to reconfigure a new solution from scratch. And of course, no one likes change. With a large system replacement, there's significant internal resistance to overcome, not to mention the legwork to obtain buy-in for the project. With all of these factors, it's no wonder companies try to put off the inevitable.

But as time goes on, companies must also consider the large-scale benefits they're losing out on by not making the switch to a cloud ERP sooner:

Opportunities for growth

Let's face it: companies want to be on the leading-edge. They want to achieve first-to-market or other competitive advantages. However, a slow-moving legacy ERP holds them back. Continued growth is predicated on the ability to adapt, respond, scale, and automate. So, the lack of agility in legacy systems leads to an inability to stay competitive, which can translate into reduced revenue and losing one's edge over time.

Although a legacy system may be able to perform its original core functions with ongoing maintenance, those functions may no longer serve a company's business or customer needs. For example, a legacy ERP might not be able to support increased production, which often requires a more sophisticated supply chain or rapid launch of new products.

Companies also have evolving technology needs. Currently, many manufacturers are looking to incorporate the Internet of Things (IoT) or 3D printing into their operations. Legacy ERP systems can only keep pace with new technology for so long. Beyond that, a company may be forced to adapt its business to the system's limitations, stunting its ability to grow or leverage emerging options.

Reducing IT maintenance costs

It comes as no surprise that the older and more complex a legacy system, the more it costs to operate and maintain. First of all, legacy systems require a stack of software, security, and hardware that has to be constantly managed and updated. Companies can eliminate these costs when they adopt a cloud ERP solution. Cloud systems also reduce the need for costly maintenance. These funds can then be redirected toward new initiatives and innovation. Computer Economics estimates that companies using legacy systems spend about 80% of their IT budgets on maintaining existing systems, with only 20% left for new initiatives. Computer Economics also projects that after moving to the cloud, companies utilize only 69% of IT budgets for support, with as much as 31% directed toward new initiatives – a significant improvement.

Implementing a customer-centric focus

Customer-centric manufacturing isn't just the latest buzzword. It's a real shift in strategy that puts the customer first, both in terms of products and service. Companies are striving to satisfy heightened customer expectations, provide more personalized products and offer top-notch service.

Legacy ERP systems don't effectively support the infrastructure for customer-centric manufacturing. At the core of customer-centric manufacturing is the need to aggregate, share, and act on data. However, with a legacy ERP, data is typically fragmented and disconnected between departments and business functions. One department may have customer data while operational departments have another set, and the systems don't talk to one another. Customer service representatives may not have access to all the information they need to address customer concerns. Over time, multiple sets of competing information can result in lost revenue as customers seek more responsive service elsewhere.

/ ERP divide. In essence, a legacy ERP hinders executives from obtaining a complete view of their business, while a true cloud ERP would provide the 360∞ view that enables companies to synchronize operations with market demand. Companies also gain complete visibility of customers, so they can meet their needs from order to delivery.

Adapting to other market and industry needs

As manufacturers try to adapt their production environment to the demands of modern manufacturing, they quickly realize the significant gap

> **ACCORDING TO GARTNER, COMPANIES THAT CONTINUOUSLY IMPROVE THEIR OPERATIONS VIA A CLOUD ERP WILL REALIZE 60% MORE BUSINESS VALUE SIMPLY BY ADOPTING THE LATEST BEST PRACTICES THE VENDOR OFFERS VIA THEIR FREQUENT SAAS RELEASES.**

A 360-degree view of customers and operations

Another primary example of the disconnection introduced in the section above is the fact that legacy ERP systems aren't typically connected to CRM systems. Key processes and data are kept in silos, making it difficult for companies to effectively know and respond to their customers. In addition, there's an inability to see company-wide trends and results as data and transactions are caught in the CRM

that exists between what they need and what their legacy ERP can deliver. While cloud ERP can help companies modernize and achieve digital processes, legacy systems create bottlenecks that work against these efforts to bring manufacturing into the 21st century. To support today's modern manufacturing needs, companies need speed and flexibility in their ERP – features not found in a legacy system. In addition, many employees – baby boomers and millennials alike – prefer to utilize smartphones, rather than laptops and tablets. However,

legacy systems aren't designed to accommodate a mobile workforce. Their functions and data are centralized and disconnected, making it difficult for people to communicate, access information, and make decisions. Cloud ERP, on the other hand, has mobility built-in, so users can readily access ERP capabilities via their smartphones.

According to Gartner, companies that continuously improve their operations via a cloud ERP will realize 60% more business value simply by adopting the latest best practices the vendor offers via their frequent SaaS releases.

Connecting people, data, and things

Manufacturers have significant data to manage, including data regarding marketing and sales, customers, suppliers, products, financials, engineering and inventory, production, shipping and receiving, and service. All of this information needs to be digitally shared with the right people at the right time – both inside the company and externally with suppliers, partners, and customers. According to a 2018 study by Aberdeen Group, top-performing companies are 46% more likely than other companies to be able to share data with both customers and suppliers.

Rather than facilitating this function, legacy systems inhibit it, as they are notoriously difficult to integrate. A cloud ERP platform, with its inherent connectivity, can securely share ERP data for the benefit of customer and supplier communities, as well as using data from remote IoT apps.

The longer you wait, the greater the risk

Legacy systems are becoming increasingly more difficult to maintain, especially as the hardware and software supporting them turn obsolete. Likewise, IT professionals who have maintained legacy systems are retiring or moving to the more in-demand and higher-paying positions associated with the cloud. As businesses continue to hold onto legacy systems, the greater the risk that these systems will finally fail. Waiting too long to upgrade can also make data conversion and process engineering more prone to risk. As discussed, the IT professionals – who originally built these legacy ERP systems and know-how these systems handled data and business processes – are leaving. As they go, a company's institutional knowledge goes with them. Once it's lost, it cannot easily be baked into a new system rollout. If day-to-day business processes weren't properly documented, it could increase the risk of project failure.

As we've outlined, it's crucial that companies with outdated ERPs consider a switch to a more modern, cloud solution sooner rather than later.

Attracting new knowledge workers

One of the biggest challenges facing manufacturers is the labor shortage. In a recent survey, the National Association of Manufacturers (NAM) projected a shortfall of almost eight million workers by 2030 and bringing with it, potential revenue losses as high as $600 billion.

As baby boomers retire in rapidly increasing numbers, manufacturers need to be able to attract young, digitally-proficient workers. Digital transformation is one way to make the manufacturing industry more attractive to these new knowledge workers. For example, a twenty-something won't want to spend all day on a legacy ERP system that's 15 to 30 years old. They've grown up living and working on smartphones and social media, and they expect ERP systems to operate similarly. If these technologies are not available in the manufacturing industry, young workers will seek jobs elsewhere.

> **ONE OF THE BIGGEST CHALLENGES FACING MANUFACTURES IS THE LABOR SHORTAGE. IN A RECENT SURVEY, THE NATIONAL ASSOCIATION OF MANUFACTURERS (NAM) PROJECTED A SHORTFALL OF ALMOST EIGHT MILLION WORKERS BY 2030, AND BRINGING WITH IT, POTENTIAL REVENUE LOSSES AS HIGH AS $600 BILLION.**

Pat Garrehy is founder and CEO of Rootstock Software. He has an extensive background as a software architect and engineer. With over 30 years of management and technical experience, Garrehy possesses a unique blend of analytic and business savvy.

About Rootstock

Rootstock Software is a worldwide provider of cloud ERP on the Salesforce Platform. When combined with Salesforce CRM, Rootstock Cloud ERP offers manufacturing, distribution, and supply chain organizations a single platform to grow and manage their businesses. Rootstock Cloud ERP is a flexible, modern, and digitally connected system that transforms companies to deliver a more personalized customer experience, efficiently scale operations, and out-service the competition. To learn more, please

IAS GEARS UP THE SWIFT!

an Interview with **Behiç Ferhatoğlu,**
General Manager of caniasERP

caniasERP live event will be held in Istanbul Four Seasons Bosphorus Hotel on September 26th this year. Having described the latest developments at IAS and the innovations about caniasERP, IAS General Manager Behiç Ferhatoğlu explained the details about the event and said " We will talk about what we have done since our previous launch, what innovations we have achieved both with our product and with the projects we have realized with our customers in the event. We are waiting for everyone, especially our customers and prospective customers, who are curious about what is happening in the ERP world."

What are the main points you focus on as IAS in 2019? How has the first half of the year been?

In 2019, we focused on the new version 8.02, which will be launched in September, as well as growth and new operations. The most important of these is to start our South Korean operation and to continue our preparations for our operations in Switzerland and the United States. While expanding our operations, we have continued to expand our service and sales network with our new solution partners. We have been carrying on the project about the organization structure we have been working on for two years to make it more agile. In addition to all these, we continue our IAS Constitution project, in which our processes can be standardized and documented, especially in sales, consultancy and software development, and our corporate culture to our new operations can be extended much faster. One of the important tasks we have realized is the serious arrangements we have made on our licensing model. This is a work we have been experimenting with over the last few years. At the last point, we have reached so far, we have simplified our license model considerably; we have made

it much more understandable for both our customers and prospective customers. With the growth of our customers, increasing numbers of users meant increasing licensing and maintenance costs to them. With our new licensing model, we have aimed to reduce these costs. The first half of 2019 has been shaped in line with all these efforts. 2019 is a year in which we have achieved very positive results from a commercial perspective. In the first half of 2019, IAS grew by more than 10 percent in Euro terms. Our goal is to continue to grow in the second half of 2019 similarly. We will continue to advance rapidly by the end of the year and also in 2020, both with our new version and licensing model and with our growing organization.

Can you tell us about the caniasERP Live Event?

We organize caniasERP Live events almost every year. In addition to the big cities such as Istanbul, Izmir, and Ankara, we have also carried it out in cities like Gaziantep and Bursa which have important roles in terms of industry and the sixth one will be in Istanbul this month. We will share what we have done since our previous launch, what innovations we have achieved both with our product and with the projects we have realized with our customers in the event; in summary, we will talk about innovations in the ERP World. The interest in our activities increases every year and this year we expect intensive participation. We are waiting for everyone, especially our customers and prospective customers, who are curious about what is going on in the ERP world, and those who want to join this world in the future.

What will be the agenda of the caniasERP Live Istanbul event in 2019?

One of the main topics of the caniasERP Live event, which takes place at the Four Seasons Bosphorus Hotel on the

26th of September this year, will be the new version we will introduce to the participants. In the new version, we have made significant changes in terms of the user experience; we will introduce our new web client at this launch too. Now, caniasERP can be used easily from all mobile devices. With our new version, we offer a new menu design where users can use applications through a process map that they can customize and receive

decided that we need a database that is under our control to respond to the increasing need of our customers for managing big data and to prepare the groundwork for our studies on artificial intelligence. As a result of our constant efforts, we have developed IASDB. We will share the details of this new product with the participants in the event. Our work on Industry 4.0 is on the agenda of the event too. Our goal is to enable our customers to realize

also present many of our practices on the protection of personal data law. Also, we will have a panel consisting of five of our customers attending. Here, participants will have the opportunity to listen to the experiences of our customers first-hand. At the end of the event, Ahmet Serif İzgören, whos is the author of more than 10 personal and corporate development books and the founder of İzgören Academy and has given thousands of seminars

information about their processes. Thanks to this, people who start working on caniasERP will adapt to the system much easier. Existing users will be able to manage their favorite applications much faster. Within the scope of the new user experience, there are cockpit applications developed for each group of users. We will introduce these applications to the event too. With the work of Industry 4.0, we have

their data collection needs from factory automation or any IoT sensor directly with our solution, without the need for any other suppliers and to transfer the data directly from the production site to caniasERP, analyze and manage the machines in the production site. In this context, we will share our practice with the participants. Another key issue of the caniasERP Live event is our business intelligence solution, caniasIQ. We will

in this context, will have a one-hour closing speech. At the closing, we aim to contribute to the personal development of the participants with Mr. İzgören's talk that is like a seminar.

About caniasERP

IAS developed its own unique software development platform, TROIA in 1997 and released caniasERP 6.01 in the year 2000 as one of the first few ERP solutions available online with full functionality. TROIA, open-source and platform-independent integrated development environment, and its exceptional flexibility feature are the core strengths of caniasERP, as evidenced by various third-party studies. IAS, today more than ever, is committed to providing superior quality on its solutions and services to leverage efficiencies in companies to reach operational excellence and expand its operations into further global markets. For more information, please visit : www.caniaserp.com

canias^{ERP} live

Join us at caniasERP Live 2019!

IAS to introduce the latest version of caniasERP and digital transformation during caniasERP Live 2019. The event will be held on the *26th of September at Four Seasons Bosphorus Hotel, Istanbul!*

The countdown to the traditional caniasERP Live event, which draws intense interest from the participants each year, has started!

The latest innovations and features of caniasERP, and many topics raised by the Industry 4.0, Digital Transformation, and Automation and as well as future of enterprise resource planning software will be discussed by industry experts. The IAS team will come together with its customers to discuss all developments related to digital transformation processes, the philosophy of Industry 4.0, automation and the future of enterprise resource planning software.

The past can not be changed. The future is yet in your power.
Are you ready for the future?

WE HOPE TO SEE YOU THERE!

#READYFORTHEFUTURE

AGILE ERP IMPLEMENTATION: IS IT POSSIBLE?

By *Pandora O'Hara*

ERP and agile culture have always been seen as opposing ends of Industry 4.0. But with the advent of the IoT, are ERP systems ready to adapt to industry demands for agility?

Agile culture is a set of pragmatic values employed in developing software to achieve a lean and nimble project management style. The flexibility it affords has made it popular for businesses that experience markets, technologies, and demands change very quickly. While shifting to this methodology has worked for many software projects, some are skeptical about whether or not it can be implemented within enterprise applications — especially ERP systems.

Waterfall vs. Agile

ERP systems are off-the-shelf software and therefore have a different life cycle than other software development projects. They are usually developed via the waterfall approach – a long, sequential, and linear method that has so far ensured the reliability of

ERP systems. While agile culture was made for software that needs to be built from the ground up, it can potentially catalyze the customization process in ERP systems better than the waterfall method.

This is why more and more businesses are investing in adopting an agile approach that enables customized sprints.Whereas a waterfall approach would entail waiting a full year to deploy and test software, agile allows developers to prioritize certain functionalities and roll them out in two-week sprints.

In fact, researchers from Iowa State University found that developers using the agile methodology felt that projects were more collaborative, more interactive, and easier to control. The study also highlights that transitioning to agile from the waterfall requires developers to be physically near each other. By being in a single location, developers can overcome flexibility barriers as agile requires constant collaboration and a high level of responsiveness. Other research suggests that the transition to agile greatly reduces the complexity of ERP implementation — a huge factor in deployment failures.

The IoT demands agility

The rising adoption of IoT technology — interconnected devices and sensors over a wireless network — will without doubt disrupt ERP systems. From smart cars to warehouse sensors, the IoT opens up new models for ERP data collection and management.

Currently, IoT and Industrial IoT technologies supplement ERP systems as a source of abundant data. These new streams of data enhance business intelligence by providing insights that are crucial for streamlining processes – arguably the main goal of ERP development. As the annual amount of generated data reaches new heights, which Maryville University predicts will stretch to 180 trillion gigabytes by 2025, ERP systems will have to adapt to accommodate and develop IoT use cases. The ability to extend IoT data from the factory floors to the C-suite will be crucial in further digital transformations.

As the IoT becomes more central in businesses, Tech Beacon highlights that continuous delivery and post-deployment will be the key factors in software development.
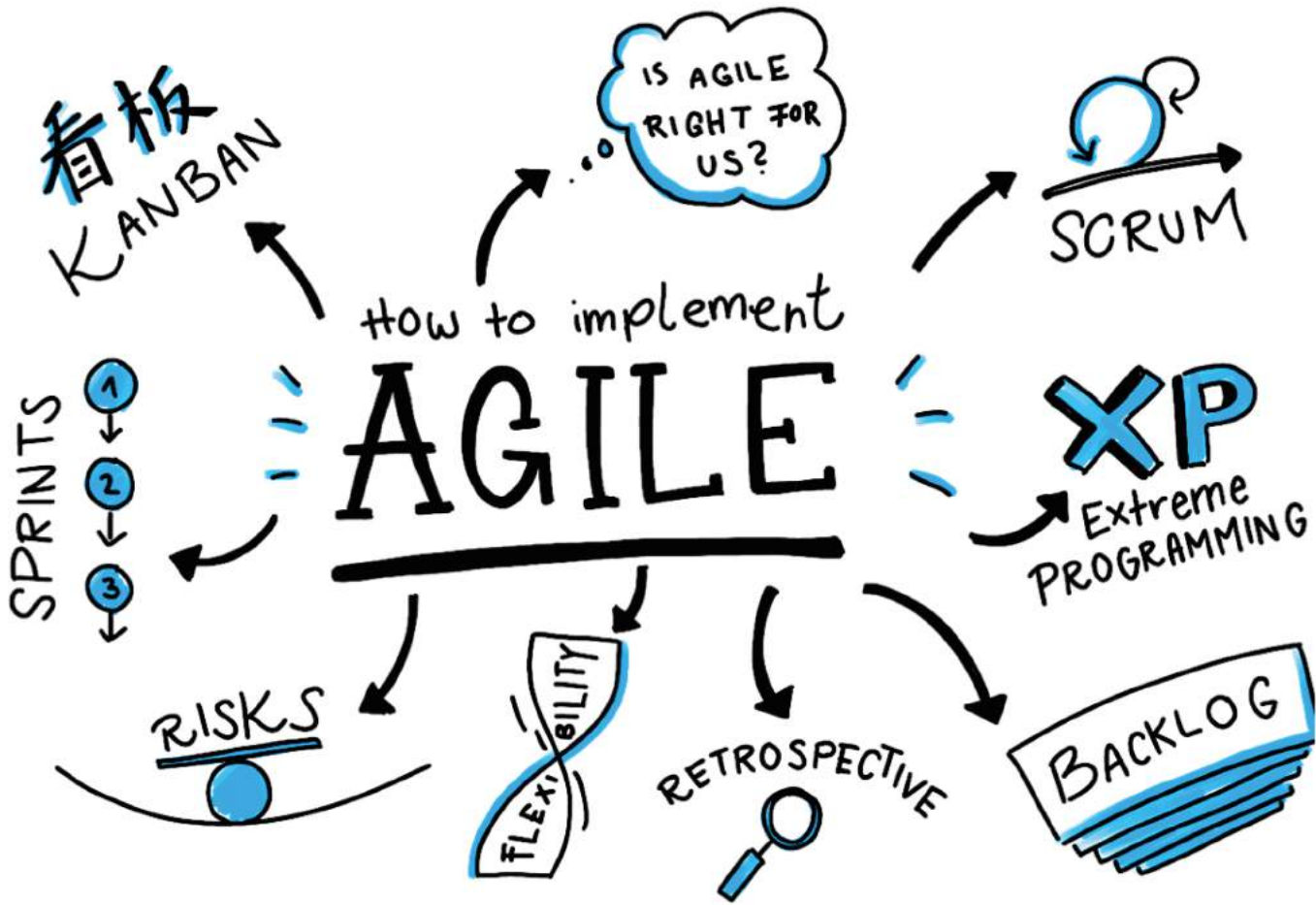
Agile methodologies, which can deliver both, will be imperative even in enterprise solutions.

Challenges to going agile

While entirely possible, there remain challenges in adopting agile as a methodology for ERP implementation. As the project scales, agile culture might not be conducive to the increasing cross-functional decisions needed. The high demand for synchronicity and performance alignment in agile environments can also become a hindrance when not addressed properly. In addition, the inherent risks in relegating documentation to functionality alone can be counterproductive at the scale of enterprise applications.

This is why businesses favor hybrid approaches like the Scaled Agile Framework (SAFe) to integrate agile methodology in ERP implementation. Instead of two-week sprints, SAFe splits deployments in "waves of functionalities" which can span longer. Hybrid approaches start out sequential like waterfall, but later employ the agile method once in the testing stage of the development process.

With these current disruptions, agile methods to ERP implementation will soon be crucial in future-proofing your business. While resistance is understandable, given that agile is relatively new in enterprise applications, the shift towards it is inevitable.

Manager and freelance writer Pandora O'Hara is obsessed with finding management solutions in the most technologically disruptive era in modern history. She spends most of her free time learning how to read and write code. When she needs to relax, she either meditates or coaxes her cat Ubuntu to give her a massage.

5 SIGNS IT'S TIME FOR SMES TO AUTOMATE

priority™

by **Andres Richter**, *CEO of Priority Software*

Automation can help businesses of all sizes to become more efficient and in turn, benefit from increased productivity and customer satisfaction. Seems quite straightforward, doesn't it? Surprisingly, according to a McKinsey survey, a mere 25% of small-sized companies are in fact, automated. The decision to go the digital route is often delayed because of the time and costly resources needed to develop and implement a new system, and only then, train employees on how to use it.

Then again, waiting too long to automate your organization can and does have consequences. Production workflow, for example, can be effected, even slowed to a halt or by holding on to manual processes. But what's effected most of all is the customer experience

that depends on timely development, production and distribution processes. When these can no longer scale up as the business grows, the customer is the hardest hit.

Here are the five bottlenecks that can let small and medium-sized businesses know that it's time to go digital.

Late deliveries

Where there's a large pile of paper orders, it's easier for an order to be misplaced or even lost. When order data is recorded manually, it can be incomplete or incorrect, resulting in products not delivered on time, or not at all. But when business processes are automated, built-in dropdown lists and validations ensure complete, consistent and reliable order data. In addition, digital 'paperless' orders are easier to share with suppliers, helping to streamline the entire fulfillment process.

Complex sales tax calculations

Tracking sales tax laws can be time consuming, particularly for businesses operating in multiple states, where each has different sales tax regulations. What's more, this problem is compounded when new products and services with new tax laws are added to a company's portfolio. Automation ensures compliance with regulations in real time, enabling companies to generate "return ready" reports and perform e-filing – saving time and reducing the risk of errors.

Duplicate invoices

Paper invoices make it more difficult to track cash flow and can result in common errors, such as sending a duplicate invoice or the incorrect invoice to a customer. One industry

study determined that invoice duplication alone can cost a typical SME more than $12,000 per month, a result of the time invested in customer communications, rectifying payments, and adjusting financial systems. In addition to streamlining invoicing processes and preventing errors, automatic invoicing can accelerate collections by sending late paying customers a series of reminders, or retainer customers, invoices at predefined intervals.

Late submittal of payroll documents

There are business out there who manually onboard new employees. Collecting and filing paper forms is tedious, and there's always the risk of not complying with regulations or not submitting payroll or tax documents on time. The American Payroll Association (APA) estimates that payroll automation, in addition

Unauthorized purchases

Automating purchase orders enables organizations to enforce approval policies and keep actual spending in line with budget. But once a company implements a full purchase requisition system, it gains full control over its expenses. For example, one CEO improved working capital immediately by shutting down the company's purchasing requisition system, actually preventing employees from making unauthorized purchases. However, automating purchase orders can be tricky, since it typically involves several cross-departmental steps – from the initial request, to receiving the product, and then confirming that all requirements were met. Due to the complexity of the purchasing process, it's often one of the last business processes to be automated. To potentially achieve the highest return on investment, businesses should first think about automating

before system bottlenecks are a threat to customer satisfaction and profitability. By implementing a system that can start small and grow as your business grows, it is possible to automate your organization at just the right time, minimize risks and put fast-track your success.

> **TO POTENTIALLY ACHIEVE THE HIGHEST RETURN ON INVESTMENT, BUSINESSES SHOULD FIRST THINK ABOUT AUTOMATING PROCESSES THAT ARE THE MOST TIME CONSUMING, AND PRESENT THE GREATEST RISK. ADVANCED BUSINESS MANAGEMENT SYSTEMS, NAMELY CLOUD ERP, CAN BE AN IDEAL SOLUTION FOR SMES.**

to ensuring timely filing, reduces processing costs by as much as 80%. But when is it time for a company to go digital? As a rule, once a company has grown to the point where they can no longer actually 'see' when employees come and go, it's time to automate their payroll. Aside from improving accuracy and compliance, automating payroll enables direct deposit, e-filing, and easier, more reliable tracking of accumulated vacation time and sick leave.

processes that are the most time consuming, and present the greatest risk. Advanced business management systems, namely cloud ERP, can be an ideal solution for SMEs. These systems are flexible and scalable, enabling new features and functionality to be added as required, while in parallel, eliminating both the expense and headache of managing hardware and software in-house. The best time to jumpstart your business automation is one step

Andres Richter leads the Priority Software team in fulfilling the company's mission to make ERP easier and more affordable for organizations of all sizes. He brings more than two decades of experience in the IT arena, having started his career as an ERP project manager and implementer. Andres' mantra on focus and determination led him to Priority from Ness Technologies, a leading IT and systems integrator, where he worked for over a decade in a variety of senior executive positions, the last of which was CFO and COO of Ness Israel. Following, he served as a business development consultant for startups and technology companies and managed a software development services company. Andres holds a B.A. in Economics and Accounting and an MBA in Finance & Global Management, both from Tel Aviv University, Israel.

HOW TO MANAGE YOUR CUSTOM MANUFACTURING SHOP BETTER WITH AN ERP

by Jesse Linklater, is the Director of Marketing for Genius ERP

Genius ERP

Managing a custom manufacturing plant isn't easy—you've got a busy shop floor to run, engineering and customer changes to keep up with, jobs to complete, and rapidly approaching deadlines that you need to meet. This is why an ERP is an essential tool for small- to mid-sized custom manufacturers. ERPs are truly the workhorse of the manufacturing industry and can help you realize your goals and grow your business.

Custom manufacturers specifically need an ERP, like Genius ERP, that has been developed and built exclusively for them: A manufacturing-specific ERP will include the features and functionalities that a custom manufacturer needs to manage inventory levels, efficiently schedule a shop floor, and complete more jobs, but will also include features to help manage the sales process, customer relationships, as well as reporting, finances and accounting.

A good manufacturing-specific ERP will help you manage every aspect of your shop, simplify your manufacturing processes, complete more jobs on time, and make your business more profitable. Whether you call what you do Make-to-Order, Configure-to-Order or Engineer-to-Order, if you're a high-mix, low-volume custom manufacturer you will benefit from an ERP. To really understand how the right ERP will help make custom manufacturing easier, we'll follow a typical job through a shop, to see how an ERP helps move a job along at every step of the process, making your shop more efficient.

CRM

Let's start with your sales team. A CRM helps your sales team stay organized, giving you straight forward pipeline management, simple communications, and the ability to effectively track leads and opportunities.

Quoting and Estimating

Next, an ERP will streamline your quoting and estimating process by quickly generating an accurate quote based on price or cost, and your Bill of Materials (BOMs). This helps custom manufacturers create more accurate quotes and estimates, which can be a big problem for manufacturers that never build the same product twice. Using accurate data and built-in integrations, an ERP takes the guesswork out of the quoting and estimating process—meaning you'll win more jobs, build better relationships with your customers, and ultimately increase your bottom-line.

Quote to Job

When your customer is ready to sign, an ERP helps you move seamlessly from quote to sales order. You will be able to easily generate a job and seamlessly launch your MRP to drive material, work-centers and labor requirements.

Engineering to Manufacturing

Now let's get your engineers involved—which as a custom manufacturing shop, is a big part of your manufacturing process. Many ERPs, even manufacturing-specific ERPs won't include engineers in the loop, leaving out a vital portion of your manufacturing process. As the only true Engineering-to-Cash ERP, Genius ERP alleviates design bottlenecks allowing you to engineer products from scratch or use historical data to design custom products and anticipate resource requirements with greater accuracy.

And with Genis Solution's proprietary CAD2BOM system you can turn CAD models into fully itemized, complex BOMs with one click, giving you everything you need to be ready for procurement and production. "We chose Genius ERP because we are a custom, make-to-order manufacturer,

and Genius allows us to design and release parts of the machines in Solidworks as they are complete to production," says Jennifer Hinds of Hinds-Bock Corporation, a custom food equipment manufacturer.

"This allows us to manufacture complex machines in less time by getting a jump start on long lead items using just in time purchasing and production scheduling."

Production Scheduling and MRP

On to scheduling, where an ERP aligns your whole company and help you manage the priorities that truly drive your organization. An ERP gives you the tools to schedule work centers, personnel, required parts and tools based on your BOM and your actual workload and capacity. Plus you can monitor and improve work center performance and availability using integrated real-time data.

Purchasing

When it's time to purchase, an ERP increases your negotiating power by aggregating purchase orders (POs) and giving you the information you need to challenge your vendors based on delivery performance, quality and cost. And because an ERP is always managing your inventory levels in the background of everything you do, you will know what stock you have on hand, and what needs to be ordered to complete a job. You will also be able to create a PO with one click—saving you time and streamlining the purchasing process.

Production

Once you are live in production an ERP will help you maximize throughput and deliver on time by managing every aspect of every job. ERPs help you balance shifting priorities with a fully integrated shop floor system connected throughout

your whole company. And real-time data lets you track job progress, identify production bottlenecks and measure system performance.

Job Costing

You'll increase your profitability by accurately measuring job costs, comparing your initial estimate to final costs so you can effectively target profit/loss centers. An ERP lets you use accurate and real-time data and metrics

> **MANY ERPS, EVEN MANUFACTURING-SPECIFIC ERPS WON'T INCLUDE ENGINEERS IN THE LOOP, LEAVING OUT A VITAL PORTION OF YOUR MANUFACTURING PROCESS. AS THE ONLY TRUE ENGINEERING-TO-CASH ERP, GENIUS ERP ALLEVIATES DESIGN BOTTLENECKS ALLOWING YOU TO ENGINEER PRODUCTS FROM SCRATCH OR USE HISTORICAL DATA TO DESIGN CUSTOM PRODUCTS AND ANTICIPATE RESOURCE REQUIREMENTS WITH GREATER ACCURACY.**

to determine real job costs, and live job costing also allows you to improve on the fly and better predict your profit so you always know where you stand.

Shipping and Invoicing

When the job is done, an ERP helps you coordinate distribution from a single system to ensure error-free shipping, generate accurate pick lists, prepare shipping memos, bills of lading and commercial invoices. In addition to helping you move a job more effectively and efficiently through a shop, an ERP will also give you the tools to better manage your entire operation.

Accounting

A good ERP system will include all of the key features of an accounting software package, giving you a full-feature, multi-company, multi-currency, complete accounting package that makes it easy to track and manage all of your accounting and financial information. Not only does an ERP give your company all of the benefits of an accounting software system, but because an ERP system is also resource management system that connects your entire operation, you will be able to better track both tangible and intangible

accounting department will be able to produce more detailed and accurate financial reports, which will help you better understand which business lines and projects are profitable.

Management Team

And of course, an ERP will keep your management team on top of everything by delivering real-time visibility across your whole company and empowering your key staff to

make better decisions with rich data. You'll be able to leverage more than 100 built-in metrics and KPIs, plus build your own reports with our custom report tool-kit—afterall, it's all about improving the performance of your team. If you are a custom manufacturer looking to make your business more efficient and more profitable, you need a manufacturing-specific ERP. The right ERP will help you increase throughput, improve efficiency, and reduce costs. Custom manufacturing is complicated, but the right ERP, built exclusively for custom manufacturers will make it easier, and help you grow your business.

Jesse is the Director of Marketing for Genius ERP, a full suite software specifically built for custom manufacturers. Jesse has over 15 years experience leading marketing and communications teams for startups and traditional businesses.

AS FINANCE ENTERS A GOLDEN AGE OF TECHNOLOGY HERE ARE 8 PREDICTIONS FOR THE FUTURE OF FINANCE

by **Lucy Thorpe,** *Head of Social Media & Content Creation, InCloud Solutions*

Chief Financial Officers (CFOs) are coming under pressure like never before to provide data-enabled decision-making support in real time. The finance function is being asked to deliver more and more, including easily accessible insights, operational efficiencies and long-term value. Digital transformation is being touted as the answer but when you don't know where to start, it can be stressful, especially with pressure from investors to do something quickly.

The good news is that digital technology is now readily available, revolutionizing finance departments, by providing the opportunity to streamline and automate time-consuming processes.

Software-as-a-service financial suites are now available for rapid deployment which can deliver value in as little as a month. But before you start shopping for software, here are 8 predictions for the future of finance you will want to cover off in your search.

Cloud becomes the norm

Cloud-based software will ensure you're constantly updated to the latest release. With cloud as the norm you'll drastically reduce the complexity and cost of technology, without sacrificing functionality.

Finance goes real time

Periodic reporting will become less important in the future. When the information is there on demand you can do so much more. You will still need to meet regular demands from outside agencies, but investors won't have to wait.

Strategic Value Increases

With many functions automated and reporting time slashed, finance can increase its role as a provider of business insights and services such as analytics and forecasting – the key objective for finance according to research by The Hackett Group.

Inovation

Faster, cheaper cloud-based systems will simplify processes – freeing up people to make new things possible.

Robot assistance

With integrations to Siri and other digital assistants, you will be able to get answers from your data quickly. Activities ranging from budget queries to report production and more will be automated.

Spreadsheets no more

Data in spreadsheets will be replaced by visually rich information that is intuitively accessible and easy-to-use.

Data will be shared

CFOs and their teams need access to company-wide data to generate forecasts in order to help senior leaders make strategic decisions e.g. data relating to sales, order fulfillment, supply chains, customer demand, and business performanceas well as industry and market statistics.

Sharing knowledge across disciplines will be much easier with digital software – bringing an end to silos.

Good data will be essential

Data will need to be clean, aligned and integrated to capture the full benefits of digital transformation. It's never an easy job but it is more important than ever.

There has never been a better time for CFOs to look at financial automation software. Management consultants Deloitte are predicting an explosion in the market – with finance application challenging the traditional role of ERP.

At In Cloud Solutions we have heeded the call and responded with a totally new product – InCloud Express Financials Deployed within a month for a fixed price this is a fast-financial software package which will start bringing you results from day one.

Lucy Thorpe is in-house writer and content creator for cloud solutions consultancy InCloud Solutions based in Reading & London in the UK- they are members of the worldwide United Vars network of SAP consultancies.

About Incloud Solutions

InCloud Solutions are an SAP Platinum Partner offering ERP software solutions, training and consultancy to SMEs and SMBs all over the world. Based in the United Kingdom InCloud Solutions are experts in the ERP solution SAP Business ByDesign, cloud-based ERP for mid-sized business. www.incloudsolutions.co.uk

NEW LUMENIA ERP MARKET REVIEW REPORT JUST PUBLISHED

lumenia

Infor, a global leader in business cloud software specialised by industry, today announced that global fashion retailer LC Waikiki has selected Infor CloudSuite PLM for Fashion, built on Infor OS and deployed via software-as-a-service (SaaS), to help enhance visibility, boost forecasting, and support rapid growth.

LC Waikiki selected Infor due to the need for agility to react and respond to market trends more effectively. The decision was based on the application's rich user experience, its ability to scale, dedicated capabilities for private brand fashion retailers, as well as the professionalism and knowledge of the team.

Because the application is deployed via Infor's SaaS, LC Waikiki can focus on growing its business and helping users drive greater speed and business value from the solution, rather than spending time supporting and maintaining it. "The $1.3 trillion fashion industry is enormously competitive and going through significant change. To support growth and efficiency, it is crucial for fashion brands to have

systems that enable them to react to the latest catwalk trends and quickly translate them into new collections and styles and to online clicks and store sales," comments Jason Berry, VP Retail & Fashion, EMEA, Infor. "LC Waikiki is capitalising on Infor's CloudSuite PLM for Fashion capabilities to enhance visibility, collaboration and drive rapid growth — to steal a march on its competitors."

"Having a dedicated end-to-end platform designed to support the specific dynamics of fashion product lifecycle management is crucial to win market share in a highly competitive industry," comments Serafettin Ozer, chief digital officer, LC Waikiki. "LC Waikiki is the market leader in 15 of the 46 countries where it operates.

The extensive capabilities and intuitive interface of Infor CloudSuite PLM for Fashion mean that we can continue our growth journey with the very best tools and absolute confidence in our performance. Product lifecycle management is a critical process for our business, and therefore our project with Infor is highly strategic."

The report is available to download for free from the Lumenia Consulting website at https://lumeniaconsulting.com

ERPHEADtoHEAD.com
9/10 October 2019, Dublin, Ireland

LUMENIA CONSULTING TO RUN SUCCESSFUL ERP HEADTOHEAD™ EVENT IN DUBLIN

Lumenia Consulting is delighted to announce the 14th running of the ERP HEADtoHEAD™ event taking place on 9/10 October 2019 in the Crowne Plaza Hotel, Dublin Airport. Over the two days, 12 leading ERP vendors will go head to head to demonstrate their ERP solutions.

The event offers a fantastic opportunity for senior finance and IT executives and members of their ERP selection teams to meet, compare and experience leading ERP solutions under one roof and to learn how to manage their selection process ensuring benefits are maximised and risk is reduced.

Solutions suitable for various organisation sizes, from large corporations to SME's, will be represented. Amongst the 12 demonstrating their ERP solutions are Microsoft, SAP, Sage, Epicor and Oracle Netsuite.

The event is the brainchild of Sean Jackson, Managing Director of Lumenia Consulting. "One of the pitfalls you can fall into when selecting a new ERP system, is to rely solely on the vendor's sales demo because each vendor will have their own interpretation of what they think you are looking for, which makes it difficult to make comparisons," says Jackson, "What you need the vendors to do, is to follow a predefined demo script so that you can compare apples

to apples. This is the core idea of the ERP HEADtoHEAD™.

On Day 1 of the event, each of the vendors take part in an 'Elevator Speech' to introduce themselves. During this session vendors present a very short summary of their company, ERP solution and USP's. Delegates can then choose to attend sessions focused on Finance, Production, Procurement, Supply Chain, HR, Projects or Sales. Each demonstration lasts 60 minutes and is based on defined high-level scripts. Attendees can also hear vendor-independent presentations from Lumenia Consulting on 'Are you ERP Ready?' and 'Characteristics of Successful ERP Projects'.

Day 2, includes the opportunity to listen to a panel discussion from companies sharing their experiences of implementing ERP. There are lots of opportunities for delegates to meet with vendors in the expo area and to network and compare experiences with other organisations also planning an ERP implementation.

Since the event's inception in 2010, it has grown each year. The events are now run in Ireland, UK and The Netherlands annually. For further information and to register check out the event website www.erpheadtohead.com

lumenia

CUSTOMER EXPERIENCE AND CRM SOFTWARE MARKET GROWING

targetintegration

an Interview with **Rohit Thakral,**
Founder & CEO of Target Integration

As the requirements of the modern business world grow, businesses place more emphasis on CRM software to protect their existing customers and create new prospects. Especially with the customer experience becoming more and more priority for businesses day by day, the demand for CRM software is increasing. According to Gartner's report last year, the worldwide customer experience and CRM software market grew by 15.6%. With this rate, CRM software expenditures have reached 48.2 billion dollars.

In the CRM market, where competition is getting harder and harder, software providers have made a difference. CRM software, which is perhaps the most important part of the wave of change created by digital transformation, has become one of the most important decisions for businesses. Sreenivas Kanumuru, CEO of Vtiger CRM, and Rohit Thakral, CEO of Target Integration, offer businesses the chance to break down barriers with their customers in this period, in which cloud technology and applications that prioritize customer experience are more preferred.

What are your thoughts on the current scenario of the CRM industry? And what kind of reforms would you like to see over the coming years? Please elaborate.

The CRM industry is poised to grow at a good clip in the coming years as businesses are increasingly adopting digital technologies for different functions. There are 2 factors that are contributing to the CRM growth -

• Customers are expecting rich experiences when interacting with businesses. Offering excellent customer experience is often a differentiator for many businesses operating in a competitive space.

• Data is scattered in different places making it hard for Sales, Marketing & Customer service teams to delight customers at every touchpoint.

CRM solutions are still operating in silos with different teams using different solutions. Unless they bring all customer data into one platform, customer facing teams will find it impossible to have a 360 degree view of a customer and have smart conversations. There is an increasing awareness of the need for a unified platform that can offer a single view of a client.

Tell us about your company and its unique services in detail.

Vtiger CRM is a single, unified product that helps companies deliver outstanding customer experiences by breaking barriers between marketing, sales, and support teams. **What attracted and motivated you to start a venture in this sector? What were the major challenges/setbacks that were faced by you during the initial days?**

Vtiger started in 2004 with the desire to make world-class software affordable to small businesses. Until then, business software was restricted to the large enterprises who could afford to have large IT teams, and pay millions of dollars in license fees to the application vendors.

Vtiger's open source CRM edition found quick adoption and in a few years became the leading open source platform with thousands of downloads every week.

As the CEO/Founder, how do you visualize the future of your company in terms of growth and technology adoption?

Vtiger is uniquely positioned to offer a Unified CRM solution for SMBs. We are excited about the upcoming launch of a brand new version of Vtiger CRM in Q3 of 2019. It offers a much easier and friendly interface designed to empower users to delight their clients.

In the course of next year, we hope to expand AI/ML based features in the product to help users have smarter conversations with clients.

Customer Relationship Management

With vast years of experience, how successful have you been in retaining your clients? What role do they (clients) play in your company's growth?

Through retention programs and product training webinars, we are helping clients realize more value from the product. While we are pleased with the results of these programs, we do feel that we can do more to help users implement CRM successfully.

Vtiger's growth has happened only because of customers. With limited marketing budget, we rely a lot on word of mouth of existing customers.

How does Vtiger stand apart from its competitors? What crucial steps have you taken to stay ahead in the competitive race?

What sets Vtiger apart from other CRMs is that it offers one, integrated platform that helps companies deliver outstanding customer experiences by breaking barriers between marketing, sales, and support teams. As a company, when you grow, the sales, marketing, and customer support teams interact with customers separately. The data that is captured through these interactions is spread across different records or systems depending on which team was actually involved with the customer. This results in customer data and interactions being scattered across applications that hinder your team's ability to collaborate, craft engaging customer experiences and grow revenue. Vtiger's single platform approach provides a solid solution to this problem as all the details across different teams are still tied to a single contact record. This facilitates a company to truly understand your customers thereby improving customer relationships.

Tell us more about your team. What qualities/traits do you look for when hiring a new employee?

Vtiger has a relatively flat organisational structure with dedicated teams for product, marketing, partnership, design, sales, support, retention, IT, legal and HR. Each team operates autonomously and in sync with the rest of the organisation, enabling Vtiger to move faster than our competition with larger and hierarchical teams.

Given the agile nature of work and lean teams, employees more often than not are expected to pick up a variety of tasks across all roles in the organisation. Vtiger looks for candidates who are proactive, independent, and with the curiosity to pick up new skills on the fly. Experience working in other startups or small organisation is a value add.

What you need to say about your implementation partner and their strategy?

Target Integration is an experienced Vtiger implementation partner and has expertise in helping businesses make more out of their Vtiger CRM. Implementation is not a one-step process. So, Target Integration serves a complete range of needs for companies that use Vtiger CRM, including implementations, support, training, customization, and ongoing support.

About Target Integration

Target Integration was incorporated in 2008 to provide CRM & ERP solutions to help the SME sector in UK & Ireland and now they provide their services in USA also. They are helping organizations to automate their business processes by removing paper and excel based information centers. They helped businesses across industries such as solar, energy, education, manufacturing, automobiles, construction, event, etc. To learn more, please visit www.targetintegration.com

Rohit Thakral *is the Founder & CEO of Target Integration. He is an electronics engineer and has studied in Pusa Polytechnic in Delhi as well as in Dublin Institute of Technology in Ireland. He is also on the steering committee of Ireland, India Business Association (IIBA) and an ambassador of Dublin Chamber of Commerce.*

WHAT'S NEXT FOR CLOUD, AI, AND BLOCKCHAIN

TEC | Your impartial software advisor

*by **PJ Jakovljevic**, Principal Analyst of TEC*

This past year was replete with the cloud, artificial intelligence (AI), big data, digital transformation, devops, low-code platforms, the Internet of Things (IoT), edge computing, blockchain, and many more aspects of the enterprise software market. 'Tis that time of the year when we reflect on what we saw this year and predict what we are going to see next year and beyond.

Cloud Use as a Matter of Course

Software delivery through the cloud has long become mainstream. We've gone from the no-cloud ("customers are not asking for that") posture of several years ago to the cloud-enabled and cloud-first scenarios that we see today, where almost all new enterprise software solutions are cloud only. However, the larger issue now is the increasingly hybrid nature of enterprise software landscapes and the need to easily tie up all those legacy on-premise software solutions with a plethora of newer cloud solutions and apps.

We predict that by 2020, more than 60% of companies will abandon owning their own data centers. By 2020, the top six infrastructure as a service (IaaS) cloud mega platforms (Amazon, Microsoft, Google, IBM, Oracle, and Alibaba) will handle more than 80% of enterprise

workloads and processes. Customers will avoid a vendor lock-in through multi-cloud management strategies (that include integration tools across public and private clouds) and cloud-native approaches to achieve portability. Think of using microservices, containers, open application programming interfaces (APIs), dynamic orchestration, and similar approaches. Salesforce's hefty acquisition price for MuleSoft speaks volumes about this trending need for easy hybrid cloud integration.

By 2020, we predict that 40% of companies will base their decisions on IoT edge-collected data before sending it to the central processing cloud repository. This use of edge computing will address issues of bandwidth, latency, and processing data for real-time decision support. Going forward, organizations' internal information technology (IT) teams will spend much more time and resources on developing vertical industry–oriented cloud software-as-a-service (SaaS) solutions, using commercially available platform-as-a-service (PaaS) offerings.

To combat the waste of paying for server capacity that often goes unused and idle, by 2020, more than 30% of enterprise IT operations' spending will likely go to actual compensation. Serverless application development, i.e., software that runs without the need for a server provision, should help in that regard. An example of a serverless app would be a function that receives a geolocation and returns the top five businesses in a requested category in that geographic area.
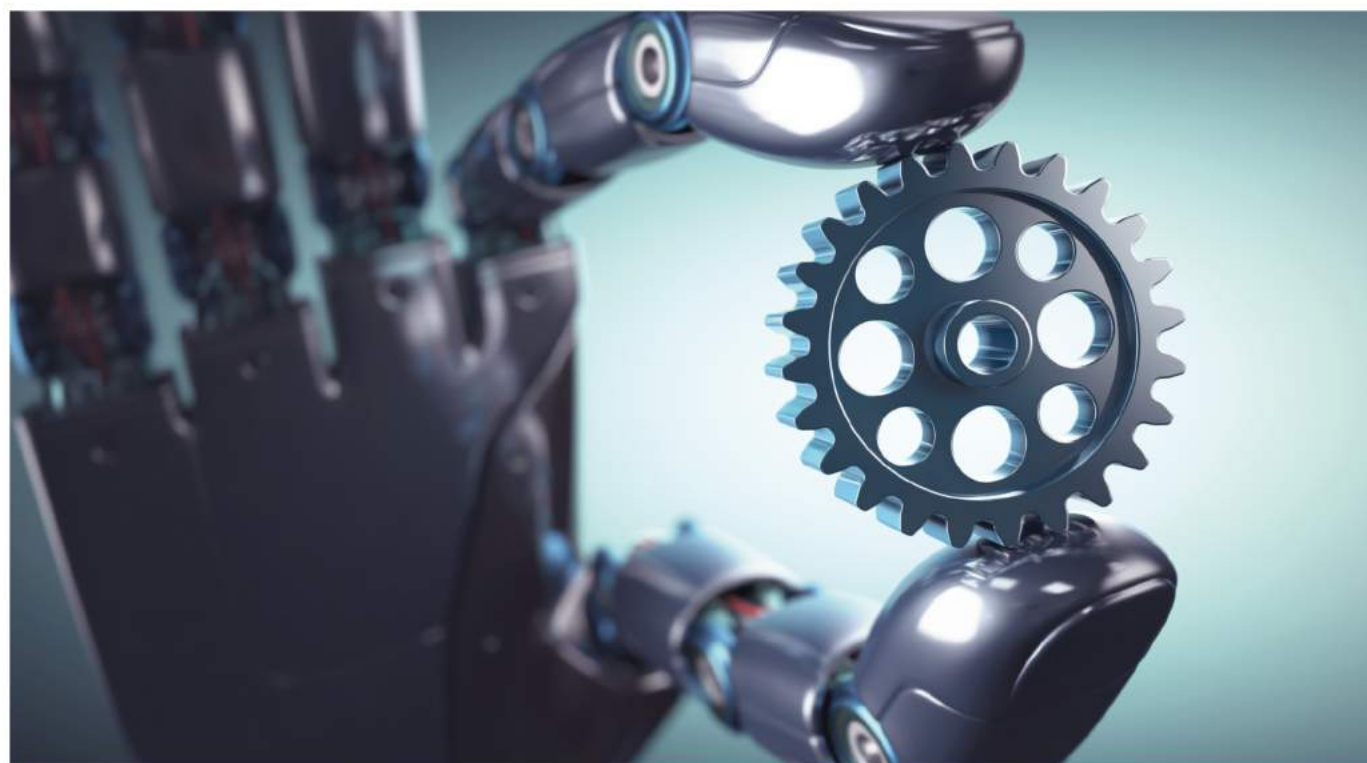
Embedded AI for Both Software Developers and Users

AI will be used in enterprise software in more pragmatic ways (easily understandable and explainable) rather than in a black-box rocket science manner (not comprehensible to the average user). Several software capabilities will reduce the time users spend on low value-adding tasks—these include intelligent applications (that is, apps that sense problems and prescribe or recommend solutions in real time), automated processes, a simple user experience (UX), and conversational interfaces.

So AI will be used to increase the ease of use for software users. By 2020, 40% of companies are expected to rely on smart robotic process automation (RPA) and low-code software platforms to achieve competitive automation and business process agility. At the same time, about 60% of new enterprise software and productivity tools will have some degree of embedded RPA, machine learning (ML), and other intelligent tools. By 2020, 20% of enterprises will use conversational interfaces for sales, service, and customer engagement. Also by then, conversational user interfaces (UIs) and RPA tools will replace one-fifth of today's solutions with character input screens.

AI will also be increasingly used to enable faster software development— that is, to facilitate integration, code reviews, testing, provisioning,

and predictive application lifecycle management (ALM). By 2020, traditional developers will use visually guided functionality, via widgets or visual frameworks, to develop apps with low-code platforms. At the same time, this new class of developers that build enterprise applications without writing code will account for 20% of all developers. To improve productivity, they will also use external open source and commercial code repositories.

Blockchain Is Getting More Real

Next year will prove there is value in blockchain for logistics and supply chain management. As materials and goods change hands, it becomes increasingly difficult to track them—and this is where blockchain technology can fit in nicely. With the continued rapid growth of the population and subsequent greater stresses on global food production processes, consumers' demands become ever more important. These demands are that the food that they are buying and consuming is as described (for example, there are no wood chips in my Parmesan cheese!), that the food is safe and ethically sourced and produced, and that individual products have moved through the supply chain in a timely manner to preserve high quality and minimize spoilage.

Another example of a valid use-case scenario would be blockchain-based protection of the authenticity and traceability of original 3D printing

computer-aided design (CAD) drawings. This digital intellectual property protection from theft and loss becomes necessary in decentralized low-cost sourcing setups. Prominent intra-industry value chains (for example, medical devices and aviation), once enabled by blockchain technology will be able to significantly reduce multichannel transaction costs—possibly by some 30%.

Thus, we believe that by 2020, about 10% of manufacturers and retailers globally will use blockchain services, enabling collaborative supply chains and allowing consumers to access their product histories. We look forward to getting together in 12 months or so to evaluate how correct (or off the mark) our predictions presented here will turn out to be.

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