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Dell Technologies Launches Financing Solutions Arm in Singapore

Dell Technologies is launching its financing arm Dell Financial Services (DFS) in Singapore, as part of an expansion strategy to provide financing alternatives to regional and global Dell Technologies' customers with a Singapore presence. This allows access to payment solutions from Dell Technologies in Singapore, similar to those that are available in the United States, Canada, Mexico, and Europe. With DFS in Singapore, organizations can accelerate their digital transformation goals with better cash flow management and capital preservation.

"Today, we're seeing more customers showing a preference for financing when making technology purchasing decisions," said Lena Yam, Vice President, Dell Financial Services, Asia Pacific, Japan & China (APJC).

"With financing from DFS, customers can combine innovative financial offerings with holistic technology advice to develop a long-term infrastructure strategy. The DFS team has invested in tools to help support customers through the entire financing process, from approval to account management. This combined with a dedicated support function ensures an exceptional customer experience."

One-stop-shop for simple and flexible financing DFS offers financing options that include Technology Rotation and Ownership, Software Installments, PC-as-a-Service (PCaaS), and Dell Technologies APEX Custom Solutions. These customizable payment solutions are integrated into Dell Technologies' portfolio of solutions – from hardware and software to services. This not Internal Use – Confidential only translates to greater payment flexibility according to customer needs and utilization but also guarantees optimization of IT infrastructure to improve operational efficiency.

With financed transactions, customers can better handle budget constraints, improve project economics to make them self-funding, and manage planned technology refresh cycles with suitably scheduled leases.

"Dell Financial Services is a natural extension of our strategy to become the leading provider of essential technology solutions," said Andy Sim, Vice President, and Managing Director, Dell Technologies Singapore. "As a regional headquarters, Singapore already caters to many of Dell Technologies' global customers. We are responding to our customers' needs for a broadened capability and portfolio to enable their business transformation journey through competitive financing options. Dell Financial Services has the dedicated people, processes, and tools to power this added value. Most importantly, the financing options offered by DFS are both direct and through our channel partners."

Customized financial strategies for different IT needs

Dell Financial Services offers a payment solutions portfolio that allows customers to pay overtime and pay as they use. These financing options provide customers with predictable payment programs to quickly acquire hardware, software, and lifecycle services.

"Dell Financial Services provides predictable payment structures for IT Infrastructure solutions," said SS Lim, managing partner, PTC Systems. "The innovative solutions remove the burden of large capital expenditures for our customers, allowing partners like us to grow and secure our businesses."

Customers can also choose to pay for technology based on actual consumption with Dell Technologies APEX Custom Solutions. With Dell Technologies APEX Flex On Demand, customers can scale their usage up and down to match their workloads, while Dell Technologies APEX Data Center Utility allows them to establish a pay-per-use environment across their entire IT infrastructure. Both solutions, part of Dell Technologies APEX Custom Solutions, allow organizations to grow at their own pace and pay for technology according to their needs.

Globally, DFS has over US\$12 billion assets under management and provides support for Dell Technologies' customers and partners in more than 50 countries. DFS, in its 24 years of experience, has built relationships with a wide breadth of end-user customers -from the smallest businesses to public entities to the largest enterprise organizations. The business has created over 3,000 global channel partnership agreements and has over 1,600 dedicated team members around the world.

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REIMAGINING DATA AND ANALYTICS SUCCESS

Active role of leadership coupled with our ability to democratize the data while breaking the silos are crucial for data and analytics success. This cover story re-imagines the approach towards data and analytics while sharing best practices and the latest approaches to learn - and win

Amit Singh

Data intelligence and analytics have become more prevalent than ever before across the industries. From

maximizing efficiency at a workplace to providing greater personalization to customers, applications of data intelligence are



“For data and analytics (D&A) leaders, what’s most important is change driven by leadership. In fact, any kind of innovation and change must be lived by the leadership in order to deliver success.”

DR MARIUS BRAND,
Director and Head, Digital Innovation, APAC,
DB Schenker



“With the challenges in utilizing the right data, there is a need to derive a new data operating model. As the data is growing exponentially, the data governance and policies are getting changed, which are making it compulsory to introduce new roles and responsibilities that forms the new data operating model.”

V SRINIVASA RAO (VSR), ,
Chairman & MD, BT&BT

endless. Companies across industries derive value and generate revenues by leveraging these technologies. Availability of quality data, reduction

in computation costs, and demand for predictive business models are driving the adoption of data intelligence and analytics.

As data is the new oil

for almost all successful organizations and these businesses are getting more fluent with new technologies, it's becoming

more obvious to find ways to get the right insight from this data. With the advent of different kinds of IoT devices and



“It's very easy to collect data due to availability of various touch points and digital footprints. This data is crucial in building trust among the consumers when they transact with the businesses digitally. So data has now become crucial in preventing crises and losses.”

VISHAL NARULA,
Managing Director, Alvarez & Marsal



“The data silos are creating a situation where we churn the same data to get poor results. This can be addressed with organizational strategy and framework to nurture data.”

KHUSHRU M MISTRY,
CIO & SVP, Eureka Forbes

consideration of influences from social media, today's businesses are focusing not only on internal operational data but also these external data to bring meaningful insights to drive key decisions.

India analytics market stands apart

Indeed, India is one

of the fastest-growing countries adopting artificial intelligence, big data analytics, and IoT. According to reports, the Indian analytics industry is estimated to reach approximately US\$16 billion by 2025. A recent study reveals that between the years 2021 to 2026, the industry will grow at a CAGR of 35.1 percent.

In fact, the maturing of the analytics market in terms of experienced

hiring and salaries offered, the significance of gender diversity in the Indian



“ Methodologies of data lifecycle are changing with the concepts like warm, cool, and hot data; and bringing any data from pool A to pool B happens with a snap of the finger. However, data need to be retrieved within seconds; hence, storing data in a manner and place through which it can be retrieved easily is important. ”

SHARAD KUMAR AGARWAL,
CDIO, JK Tyre & Industries



“ Big data can be used to improve customer experience significantly. Every company talks about customer-centricity. There's another parameter – the ease of use of the solution, which is used for excellent customer experience. The accumulated data taken with customer demographics can help a bank find out customer preferences and the applications they are comfortable using. ”

BHUVANESH SHUKLA,
CTO and CISQ, AGD Bank

analytics function, and the \$836.3 million investment in Indian AI and analytics start-ups in 2020, are self-

explanatory in terms of the development and global standing of the Indian Analytics market.

Moreover, According to Gartner, 75 percent of businesses will move from

testing to conceptualizing AI by 2024, resulting in a 5X growth in streaming



“ In today’s circumstances, data has become the key to run our current and future business. In fact, organizations need to become data-driven, which first requires a data-driven strategy. The important thing is to point out what do we do about the enormous amount of data generated daily. And the need is to address the data challenges in the hybrid and multi cloud environment. ”

MEHERIAR PATEL,
Group CIO, Jeena & Company



“ With the compelling benefits, it’s a matter of time when traditional organizations will totally embrace cloud, which will give rise to the true multi-cloud scenario. It basically needs a mindset change. ”

ASHOK CHORIAN,
CIO, Page Industries

data and analytics infrastructures. AI will certainly help to interpret all of the data and make predictions about a customer’s future lifetime value based on all we know – whether or not we understand the connection ourselves.

Industry spending

From an industry standpoint, banking has the largest share of analytics spending in 2021, with an expected CAGR of 13.7 percent till 2025, according to IDC. The banking industry has gained in-depth cognizance in numerous



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facets of operations - from data being an asset for the unpredictable environment, customer satisfaction,

enhancing productivity and performance. The banking industry is now making decisions much faster than



“If you read the data wrong, you can go into a wrong direction. Hence, data decision and strategy must be driven by top central decision-making layer. In addition, security of the data is crucial. The third aspect is the skill set of the resources in terms of how ready are you to utilize this data.”

ANIL MENON,
Head, IT, LuLu Group India



“Data silos result in getting insights based on limited set of data. For better results, analytics must work on consolidated data. This requires fundamental changes to data architecture backed by strong data management and governance framework. Most importantly, data and cloud migration decisions need to be taken centrally.”

VIDHYA VEERARAGHAVAN,
VP & Head, Analytics (Financial Market Operations),
Standard Chartered Bank

the traditional ways by leveraging analytics in the Indian market.

Telecommunication is the second leading industry

in adopting big data and analytics solutions to understand customers, business, and overall operations. The banking

and telecom industries are expected to contribute to more than 30 percent

of the BDA (Big Data and Analytics) spend in 2021.

Further, spending by



“ Unless we raise questions on standard stereotypes, innovation couldn't come into picture. While data is essential to bring about the innovation, we see typically two types of organizations: Organizations that allow access to data to only privileged few, which ultimately stops collaboration and innovation. ”

ANUP KUMAR,

Chief Architect, Data and AI, IBM Asia Pacific



“ Hospitals have large number of sources which generate enormous amount of data daily, including vaccinations, clinical data (inpatients and outpatients) and software applications like HIMS, supply chain and so on. The challenge is that every organization and even departments have created its own dashboard to consume data, which doesn't talk to each other. ”

NEERAJ LAL,

Group Senior Vice President, Medicovert Hospital

public sector organizations has also grown as data played a significant role in decision-making to control the spread of the pandemic. Enterprises

across the industry have realized the potential of intelligence technologies (such as big data analytics, AI/ML) and are focused on building new decision

environments based on data-driven insights.

Learn, Unlearn, Relearn: The Key to Data & Analytics Success

Experts note that leadership is crucial for data analytics strategy. "In today's ever-changing world, it's critical to take the time to pause and think about what is important. For data and analytics (D&A) leaders, what's most important is change driven by leadership. In fact, any kind of innovation and change must be lived by the leadership in order to deliver success," says Dr Marius Brand, Director and Head, Digital Innovation, APAC, DB Schenker.

He further highlights three ground rules for data and analytics success:

- Data analytics team must orbit around the organizations. It should not be too close or too far from the organization in order to have a perfect visibility and observations on the gaps and changes.
- Data analytics team must be placed in cross-functional areas in order to have an

organizational impact.

- Data analytics team must have a combination of evangelists who know and speak about the solution in and out, and implementers, which are ground problem-solvers and executors. Further people must be sourced from inside the organization as well as from outside the organization to bring news innovations and ideas to the system.

Building an Effective Data and Analytics Operating Model

As per market estimates, organizations are leveraging just 10-15 percent of the structured or unstructured data. "With the challenges in utilizing the right data, there is a need to derive a new data operating model. As the data is growing exponentially, the data governance and policies are getting changed, which are making it compulsory to introduce new roles and responsibilities that forms the new data operating model," says V Srinivasa Rao (VSR), Consulting Editor, Techplus Media and Chairman & MD, BT&BT.

Highlighting the importance of efficient data utilization, Vishal Narula, Managing Director, Alvarez & Marsal, states

that enterprises are using data to prevent losses and get deeper insights. "It's very easy to collect data due to availability of



“As the decision-making has become more data-driven, departments require easy access to relevant data for quick decisions. Hence, the need is there for a solution that makes data available across the enterprise.”

VISHAL NAGPAL,
Head, Data Science and Analytics, Zee5

various touch points and digital footprints. These digital footprints help

organizations understand their overall risk profile. This data is also highly

crucial in building trust among the consumers when they transact with the businesses digitally. So data has now become crucial in preventing crises and losses."

He adds that it is really important for us to know what can we get out of the data whenever we want and how do we do it. "Data governance enables us to get the results in formats which are visual enough for us to be able to perceive the problem and its solution."

Elaborating on lifecycle of data management, Khushru M Mistry, CIO & SVP, Eureka Forbes, notes that with the rampant utilization of social media data volume and silos have gone up tremendously. "The silos are creating a situation where we churn the same data to get poor results. This can be addressed with organizational strategy and framework to nurture data."

Adding to this, Sharad Kumar Agarwal, CDIO, JK Tyre & Industries, underlines that methodologies of data lifecycle are changing with the concepts like warm, cool, and hot data; and

bringing any data from pool A to pool B happens with a snap of the finger. However, data need to be retrieved within seconds; hence, storing data in a manner and place through which it can be retrieved easily is important."

Summarizing the data fabric approach with an example, Siddhesh Naik, Country Leader, Data, AI & Automation, Technology Sales, IBM India/South Asia, reveals that utilizing data fabric approach IBM built a damage assessment model with AI capabilities for a general insurance company. "The model is able to identify the car model and the damaged part as it appears in the spares catalogue. The solution started with digitizing the data in the form of millions of images in order to recognize and identify the extent of damage and cost, and further process the claim amount in fraction of minutes. Based on this model, the company went ahead to announce a scheme where claims lesser than certain amount were settled without involving assessor or surveyor. This model basically put to use the data that was available with them for quite



“Most of the organizations are able to harvest only 20 percent of the data. Lot of unstructured and operations data remain hidden or siloed. We have seen the data fabric approach emerging over the last 15-18 months. Data fabric is like virtual connective tissue between all the data end-points.”

SIDDHESH NAIK,
Country Leader, Data, AI & Automation,
Technology Sales, IBM India/South Asia

some time. This definitely brought customer delight to the next level.”

Exploring Big Data

Models in Financial Institutions

While capturing what financial organizations are doing in their big data business modelling



“Gone are the days when you could say that my data is residing in the data warehouse with ready for consumption data. Data fabric enables us to utilize the distributed and vast dataset, which is evolving and changing, on a real-time basis with its autonomous updates and meta-data management.”

AMIT VARMA,

Executive Director, Country Technology Head, DBS Bank

journey, Bhuvanesh Shukla, CTO and CISO, AGD Bank, underscores that when it comes to data acquisition, core banking systems capture numerical data which adds up with structured data that includes customer demographics to form over 150 TB of big data. “This indeed calls for huge processing capability. Big banks like DBS, SBI, ICICI are in a position to do some level of big data analytics. If you talk about the smaller banks, they are not in a position to spend huge amount on data processing.”

He further adds, “Big data can be used to improve customer experience significantly. Every company talks about customer-centricity. There’s another parameter – the ease of use of the solution, which is used for excellent customer experience. The accumulated data taken with customer demographics can help a bank find out customer preferences and the applications they are comfortable using. We are on this path to improve customer experience and build their loyalty.”

Role of Intelligent Data in Multi-Cloud & Hybrid World

Seeking to explore insights into how organizations are traversing the journey to building comprehensive, cloud-native, AI-powered or end-to-end data management platforms in order to meet the new normal of Cloud-First and Multi-Cloud, Meheriar Patel, Group CIO, Jeena & Company, stressed on the role of intelligent data in multi-cloud & hybrid world. “In today’s circumstances, data has become the key to run our current and future business. In fact, organizations need to become data-driven, which first requires a data-driven strategy. The important thing is to point out what do we do about the enormous amount of data generated daily. And the need is to address the data challenges in the hybrid and multi cloud environment,” he states.

It is a matter of time when we expect the cloud ecosystem to mature as the applications become cloud-ready and stakeholders accept cloud as the appropriate medium to keep data and compute, mentions Ashok Cherian,



“With the increasing bandwidth and data volume, we are going to see much more real-time engagement with data. That’s where data fabric approach comes into picture. In addition, data fabric will be much relevant when it comes to open source and interoperability of the platforms. I see towards at it as a crucial element for the data strategy.”

ASHISH PANDEY,

Digital & Tech Head India Sub Continent, CIO, CDTO,
GSK Consumer Healthcare India

CIO, Page Industries. “With the compelling benefits, it’s a matter of time when traditional organizations will totally embrace cloud, which will give rise to the true multi-cloud scenario. It basically needs a mindset change.”

While cloud has found incredible acceptance, data is proving to be the oil as well as the pain, adds Anil Menon, Head, IT, LuLu Group India. “If you read the data wrong, you can go into a wrong direction. Hence, data decision and strategy must be driven by top central decision-making layer. In addition, security of the data is crucial. The third aspect is the skill set of the resources in terms of how ready are you to utilize this data.”

Vidhya Veeraraghavan, VP & Head, Analytics (Financial Market Operations), Standard Chartered Bank, further highlights that business challenges have been there as data had been siloed across various functions and departments, whether on-premise or on cloud. “Data silos result in getting insights based on limited set of data. For better results, analytics must work on consolidated

data. This requires fundamental changes to data architecture backed by strong data management and governance framework. Most importantly, data and cloud migration decisions need to be taken centrally.”

Accelerating innovation by Eliminating Data Silos

Sharing his views on building a data fabric and accelerating innovation by eliminating data silos, Anup Kumar, Chief Architect, Data and AI, IBM Asia Pacific, highlights that innovation comes from asking questions. “Unless we raise questions on standard stereotypes, innovation couldn’t come into picture. While data is essential to bring about the innovation, we see typically two types of organizations: Organizations that allow access to data to only privileged few, which ultimately stops collaboration and innovation. Further, in case of many of the organizations 80 percent of data is not usable in its current form. Users find majority of the data unfit for use due to low data quality. In other cases

data is scattered around multiple silos and people aren't sure if they are using the right data."

He further elaborates on building a data fabric

with a recent example of the ING Bank. "ING Bank was able to break the data silos by creating data catalogues (irrespective of their location). In addition,

they tried a combination of data integration and data virtualization to cut down the delay in assessing the data. Further, they leveraged automation across their processes including auto-cataloguing (as soon as the new data source is created, it is catalogued automatically). If enterprises need to innovate, they need to be sensitive about their data but not be over-protective. The idea is to create a data fabric, which removes all the complexities and abstracts the data to make it available seamlessly. A combination of tools and technologies makes the data fabric."

revolves around connected airlines. There are four components of connected airlines: customer, enterprise, aircraft, and the airport. These components are interlinked for seamless flow of data and to enable business processes. And, the data flows across the in-house datacenter, public cloud and the cloud infrastructure of the service providers. This infrastructure converges to provide a meaningful and structured data. The challenge arises due to the diversity of the platforms, different locations and the way data is generated, processed and consumed."

Highlighting unique challenges of healthcare segment, Neeraj Lal, Group Senior Vice President, Medicovert Hospital, says, "Hospitals have large number of sources which generate enormous amount of data daily, including vaccinations, clinical data (inpatients and outpatients) and software applications like HIMS, supply chain and so on. The challenge is that every organization and even departments have created its own dashboard to consume data, which doesn't talk to each other."

When we look



“Data fabric is going to be the need of the hour as data is disparate coming from different sources. Data fabric is essential in things like financial decision-making and customer purchasing or selling trends.”

ANANTH SUBRAMANIAN,
Executive Vice President and Head IT, Kotak Mutual Fund

The Data Fabric Approach to Data Access and Analytics

By 2023, organizations using data fabrics to dynamically connect, optimize and automate data management processes will reduce time to integrated data delivery by 30 percent. Discussing the data challenges and the approach to unify enterprise data for insights and innovation, Sourav Sinha, Chief Information Officer, IndiGo Airlines, elaborates, "Our IT strategy

from data consumers perspective, there are two major entities: internal data consumers and external data consumers, states Vishal Nagpal, Head, Data

Science and Analytics, Zee5. "In the internal data consumers, we are moving towards a condition where data analysis or data science team is not

the only custodian of the information. Data is more democratized among the marketing, sales, finance departments which have direct access to the data. As the decision-making has become more data-driven, departments require easy access to relevant data for quick decisions. Hence, the need is there for a solution that makes data available across the enterprise."

Suggesting possible solutions, Siddhesh Naik, Country Leader, Data, AI & Automation, Technology Sales, IBM India/South Asia, says that data engineering is about the lifecycle of your data from collection, organizing, policies, data analysis to data utilization. "The challenge we face is due to diverse data sources like structures, environment. With public and multi-cloud environments, the complexity has become very high. And the reality is that most of the organizations are able to harvest only 20 percent of the data. Lot of unstructured and operations data remain hidden or siloed. We have seen the data fabric approach emerging over the last 15-18 months. Data fabric is like virtual connective tissue between all the data end-points. Data fabric is all

about creating a network of instantly available information to power the business. It is agnostic to the deployment platform and facilitates the use of data as enterprise asset."

"Gone are the days when you could say that my data is residing in the data warehouse with ready for consumption data. Data fabric enables us to utilize the distributed and vast dataset, which is evolving and changing, on a real-time basis with its autonomous updates and meta-data management," shares Amit Varma, Executive Director, Country Technology Head, DBS Bank.

Ashish Pandey, Digital & Tech Head India Sub Continent, CIO, CDTO, GSK Consumer Healthcare India, adds, "With the increasing bandwidth and data volume, we are going to see much more real-time engagement with data. That's where data fabric approach comes into picture. In addition, data fabric will be much relevant when it comes to open source and interoperability of the platforms. I see towards it as a crucial element for the data strategy."



“Data fabric offers a clear benefit in standardizing data management practices in a multi-cloud environment. Further it offers instantaneous insights based on data.”

DIPU KV,
President and Head, Operations and Customer Service,
Bajaj Allianz General Insurance

Data fabric is going to be the need of the

hour as data is disparate coming from different



“As per our internal survey, 60-70 percent of the time of employees work goes into routine task; however, in many cases they need to take critical decisions on the spot due to safety and time aspects. That’s where an architectural framework which facilitates the data availability with AI/ML optimization.”

SOURAV SINHA,
Chief Information Officer, IndiGo Airlines

sources. Data fabric is essential in things like financial decision-making and customer purchasing or selling trends, supports Ananth Subramanian, Executive Vice President and Head IT, Kotak Mutual Fund.

Further, Data fabric offers a clear benefit in standardizing data management practices in a multi-cloud environment. Further it offers instantaneous insights based on data, highlights Dipu KV, President and Head, Operations and Customer Service, Bajaj Allianz General Insurance.

Sourav Sinha, Chief Information Officer, IndiGo Airlines adds, “70-80 percent of our workforce works on the field and are distributed. As per our internal survey, 60-70 percent of the time of their work goes into routine task; however, in many cases they need to take critical decisions on the spot due to safety and time aspects. These people require insights on the options and facts to make their decision based on real-time data and discovery data. That’s where an architectural

framework which facilitates the data availability with AI/ML optimization.”

Road ahead

As we all understand, the current Covid-19 crisis has further accelerated the demand for intelligent technologies to enable new ways of working. In fact, in the current circumstances, enterprises are heading not towards a ‘new normal’ but rather a ‘no normal’ — an environment of uncertainty and ambiguity that requires continuous flexibility, innovation, and investment or reinvestment in data and analytics strategy. Hence, data and analytics are now vital to business strategy, adding significant value to digital transformation initiatives.

We accept that the uncertainty ushered in by 2020 will stay with us for multiple years to come. But with disruption comes enormous opportunity to not just restart what we used to do, but forge new paths. Data and analytics leaders that thrive will design and execute on a strategy that accelerates change, builds resilience and optimizes business impact.

EXPLORING BIG DATA MODELS IN FINANCIAL INSTITUTIONS

With digitisation making banking a whole lot easier, Bhuvanesh Shukla, CTO and CISO, AGD Bank, Myanmar, discusses with Kalpana Singhal how this change has transformed customer experience as well as ushered in new challenges



BHUVANESH SHUKLA,
CTO and CISO, AGD Bank, Myanmar

■ How do you see the future of banking in the current involvement of circumstances and technologies?

Banking has been evolving significantly. For instance, 2-3 decades ago there were stock computers available in banking and now you have

centralised core banking servers that help manage transactions centrally. There are software processes which assist people in carrying out operations efficiently. This has resulted in the accumulation of data in one place, which is paving the path for business intelligence or analytics. Consider, for example, what

happened when the BJP government announced demonetisation. Everyone was forced to move to digital transactions. The advantage with India was that the IT infrastructure backbone was already prepared to take on the load of digital transactions.

Meanwhile, UPI and the

National Payment Operation of India have ushered in mechanisms to manage everything efficiently. The invention of ATM has revolutionised the money deposit and withdrawal concept and similarly the financial technology (fintech) app also has revolutionised payments. This evolution

has come in handy during the ongoing pandemic because now there is a lot of flexibility within the banking system. The technological processes will become more complicated and banks will have to see whether their business processes have to be redefined with new capabilities or have to be made more flexible, efficient, extensible and secure.

■ How do you see the fintech landscape evolving in the last couple of years? Do you see it as a threat or a collaboration partner for banks?

Financial technology started bringing in the habit of digitalisation in the payment space, which was found to be useful and flexible. Going hand in hand, the mobile device and payment capability have together triggered the digitalisation of transactions. Now, fintech has become extremely important and it's more widely used so that it will become the lifestyle norm for every person around the world. In Myanmar, people are purchasing gold using fintech. This has yet to become popular in India. Crowd-funding, for example, has become possible with fintech. Also, this technology will provide people in rural and remote regions access to banking channels.

■ While digital banking is used by almost half the population and financial institutions have enough data

at hand to make operations more efficient, customer-centric and profitable, how are the banks equipping themselves to keep up with the competition?

When it comes to data acquisition, core banking systems capture numerical data. The size of the numerical data is about 2-3 TB. If one makes a data warehouse out of this database size and if you add structured data that includes customer demographics, you would have to deal with 150 TB of big data. This would indeed call for huge processing capability. Big banks like DBS, SBI, ICICI, etc. are in a position to do some level of big data analytics. If

serve the needs of both the bank and the customers.

■ Leading banks are making use of big data from boosting cyber security to cultivating customer loyalty through innovative and personalised transactions that provide highly individualised experiences. How are you relying on big data technology to provide customer experience and marketing initiatives?

Big data can be used to improve customer experience significantly. Every company talks about customer-centricity. There's

“ Now, fintech has become extremely important and it's more widely used so that it will become the lifestyle norm for every person around the world. In Myanmar, people are purchasing gold using fintech. This has yet to become popular in India. ”

you talk about the smaller banks, they are not in a position to spend costs on data processing. The big data processing per year is USD 1 million. It is also important to note whether all this data will be useful. Up to 90% of the banks are using Power BI Pro from Microsoft as it's extremely convenient. It addresses 60% of the needs. Ultimately, the data should

another parameter – the ease of use of the solution, which is used for excellent customer experience. The accumulated data taken with customer demographics can help a bank find out customer preferences and the applications they are comfortable using. We are on this path to improve customer experience and build their loyalty.

■ What have been your recent initiatives to further smoothen the process and customer interactions? What will be your top technology focus areas in the next couple of years?

Myanmar has got one big challenge of infrastructure. Under the economy, if the infrastructure is weak, financial inclusion becomes difficult. For instance, electricity is not available for 16 hours and so fintech is the solution. Myanmar is a country which is not technologically developed; however, we have very strong digital initiatives whereby we ensure that in the absence of any national ID an account can be opened digitally with just a mobile device. A customer sans complete KYC details can still use a fintech solution and make payments like school fees, electricity bills or even purchase gold.

The biggest challenge is that a majority of people do not know English and converting Myanmar language requires more digital space. Another level of challenge is security. Hackers are omnipresent and frauds have been on the rise. We would like to implement cyber security at an optimal cost. Meanwhile, we are beefing up security in our own way by having layered checks for authentication. For example, if the transaction amount is big, we ask for fingerprint authentication so that if the mobile phone has been robbed, it cannot be used by any other person to do a transaction. That is how we are trying to balance both cost and facility.

USING TECHNOLOGY FOR A FORWARD THRUST



In this fireside chat, Vikas Gupta, CIO and Head-IT of H-Energy Group of Companies, discusses with Kalpana Singhal how the company has moved into top gear through the adoption of new systems and processes

VIKAS GUPTA,
CIO and Head-IT of H-Energy Group of Companies

■ **After having worked with many large conglomerates over 25+ years, how has been your journey of moving from**

consultant to CIO?

Consulting is very close to my heart. I worked in that area for 15 years of my initial career till I could mature to the CIO level. Consulting is more of problem-solving. It

provided me the opportunity to move across various industries in a short span. Consulting gives you so much to learn and so much to work through. It offers diverse and interesting challenges.

Moreover, it gives you the chance to look at problems from different angles and leads to out-of-the-box thinking. This led me to think that it would also be equally interesting to look at the

origins of the problem as a CIO. I wanted to know if we as an industry are lagging behind in implementation or is it because technology is moving at a slower pace.

■ The last 24 months have dramatically changed the outlook of enterprises towards technology and technology leaders. How has this added focus and responsibility made life challenging for technology leaders like you?

Technology was always expanding. And it was available at both the retail and corporate levels, as for example, Amazon. The pandemic, however, has changed the scenario because we now not only look at our own domain but also at cross-domain expertise in adopting technology to serve our customers. The locus of innovation has moved from the realms of IT to where the customer is now so that the customer is the focal point. The lookout of people has also changed because earlier we used to chase business in adopting technology and now business chases us in delivering a technique. The work-from-home culture has made technology more adaptable.

■ How are you leveraging new-age technologies like automation, AI, IoT and data analytics to enhance the

productivity and efficiency of the workforce?

The technology that we adopted for surveillance has turned into a robotic system which actually works on AI and ML algorithms and enables users in different ways irrespective of the geographical location. For example, a person can see a fashion show online even if he is thousands of miles away. Or an engineer can watch the execution of a pipeline lane without visiting the site. All this provides more time and scope for better evaluation of how we can do certain things or engage in tweaking resource augmentation, identifying

“ We enhanced our website and a few other CRM tools. In short, the development process was not stalled and we utilised the lockdown periods to the maximum. All of these are going to drive the technological side of our development. ”

dependencies and removing obstacles.

Further, new-age technologies help us track through the system huge assets, as for example, JCBs deployed at a big construction site. It is now possible to know exactly how many assets should be put to work and the idle ones can be spotted immediately. You can therefore use AI to move these assets to sites where they could be more useful,

thus plugging the waste of time, money and manpower. Such systems also give you an advantage in understanding the productivity of employees. These remote surveillance tools help us in monitoring the situation in a way that is favourable for the company.

■ What will be your top technology focus areas and priorities over the next 2-3 years?

The pandemic has imparted a clear lesson – that this not going to end anytime soon. When it started, we didn't even know if there would be a vaccine for it. We had no clear idea

The next thing that we looked at was the HSE tool to understand stress management standards. We integrated all this with SAP. We also started using a robotics-based AIML tool not only for surveillance but also for execution and monitoring of the site work. We enhanced our website and a few other CRM tools. In short, the development process was not stalled and we utilised the lockdown periods to the maximum. All of these are going to drive the technological side of our development. And with time all this will help us move forward so that ultimately the applications will benefit our customers.

■ What are the key challenges for digital transformation in a manufacturing environment and what would your advice be to counter these challenges?

The major challenge is the mindset. We have to adapt to the new situation following the pandemic. And once the mindset has changed, the other big challenge is to adopt new technologies and ways of working. We are fortunate in being driven from the top but not many organisations may have that kind of an advantage. I mean, things have to go down from the mouth to the throat and then to the other parts of the body. The other big factor is appetite. There has to be a proper plan to the whole thing and the various parts of the big plan have to be properly synchronized.

BUSINESS AT A SPACESHIP SPEED

The pandemic and the ever-increasing dependence on technology have changed the way the retail sector now works. In an interview with Kalpana Singhal, Lulu Group International's CIO Piyush Chowhan shares details about how this is taking place



PIYUSH CHOWHAN,
CIO, Lulu Group International's

■ The past 24 months have dramatically changed the outlook of enterprises towards technology and technology leaders. How has

added focus and responsibility making life challenging for technology leaders like you?

The biggest change is the pace of change.

Obviously technology transformation is all about change: you bring in new technology, new processes and new ways of working. These transformations were happening with a timeframe of 3-5 years for

an organisation to adopt an omnichannel strategy and become a more omnichannel retailer. The pandemic has condensed this timeline in a superfast way. It is called hyper-scale agile. This is a big shift because organisations

have done much more in just 18 months than what was planned for 3-5 years. It has become a 'digital first' transformation journey. The second important thing is the upskilling of the enterprise. Changing people is the most difficult thing. Therefore, technology leaders need to drive this change. This has ushered in a need for technology tools that can help them work across geographies and different concepts.

■ So how are you managing this change in your organisation?

The earlier concept of change management was around how to have a lot of training programmes and their involvement. All this has changed. One of the important aspects around change management is about doing things, small, measurable and doing it fast. Earlier, the change programmes were very bulky in nature. What you need to do is now to create small, closely monitored agile teams so that they are able to work closely with the consumer or whichever process that you are trying to change. Thus they can work in a group to deliver an output at a much faster pace. And this transformation from a large set-up into multiple small agile teams is one of the ways of implementing the changes much faster.

■ Retail has undergone a dramatic transformation during the pandemic with online and virtual video retail platforms

becoming the norm. How are you reinventing yourself for this big shift?

If there was a choice, I would reinvent the whole thing, but obviously when you are running a very large enterprise with 57,000 people, 215 stores and operations across multiple countries, reinventing the whole thing may not be the possibility. It's like a spaceship moving at a rapid pace in which you are trying to make changes while being in a state of motion. All you need to do is carve out ideas which are focused on customer-centricity such as customer acquisition, intimacy and marketing.

“ If there was a choice, I would reinvent the whole thing, but obviously when you are running a very large enterprise with 57,000 people, 215 stores and operations across multiple countries, reinventing the whole thing may not be the possibility. ”

We cater to about half a million customers every day in our physical stores. And the idea is to transform that into a pure omnichannel. For online business there has to be a different concept and business model. We would like digitally enabled interactions with the consumers so that their experience becomes much more seamless. Cashless transactions in stores can be one such change.

■ So how are you leveraging new-age technologies like automation, AI or IOT to enhance the productivity and efficiency of the workforce?

People are kind of struggling. And if you put technology in front of the business use case, I think most of the time technology fails. Technology does not mean installing video cameras all around. You need to identify which technologies are best suited for your organisation because there are multiple ways of doing it. The agile way of working means to start small

and learn from it. You can't remove people and install bots. That is non-intelligent automation and you cannot value to your organisation. So look at your automation journey with an intelligent mindset.

■ What are the three big shifts you anticipate will happen in retail technology over the next two

years? And how have you geared for this?

One of the key aspects revolves around consumer behaviour which keeps changing all the time. For example, the pandemic has pushed people into the direction of e-commerce. Thus it has led to supersonic retailing. The advancement in video technologies and the merging of IOT with a physical environment will create a very new dynamic in terms of consumer experience. There will be contactless stores and true omnichannels. IOT and other technologies will bring in lot of innovation in both the physical and online spaces.

■ What would you tell CIOs in the retail space as a takeaway?

Statistics show that there are about 74% digital transformation programmes which are not posting value. And one of the biggest reasons why things are failing is that we choose technology first and find a use case. Never do that. Understand what the use case needs and then fit the technology to it.

■ What will be your top technology focus areas and priorities over the next 2-3 years?

Among other things, digitisation and creating a data-driven decision-making enterprise is what our key focus is. And once we have achieved a large part of that, we will be able to build a lot of intelligence solutions on top of it.

India Printer Market Struggles with Low Stock Availability, Logistics Constraints in 3Q21

India's printer market registered shipment of 0.84 million units in 3Q21 (Jul-Sep) growing by 20.3 percent quarter-over-quarter (QoQ) however declining by 7.5 percent from year-over-year (YoY) perspective, according to the latest data released by IDC Worldwide Quarterly Hardcopy Peripherals Tracker. The printer market includes Inkjet printers, Laser A3/A4 printers and Copiers, Serial Dot Matrix Printers, and Line Printers.

The inkjet printers' segment declined YoY by 11.9 percent due to the low stock availability of ink cartridge printers. From a QoQ perspective, the segment however grew by 21.8 percent, primarily by HP's delayed 2Q21 shipment spilling over into 3Q21. Additionally, with schools and colleges being forced to continue the virtual classes, demand from parents and students remained strong in 3Q21.

The laser printers' segment (including copiers) recorded a marginal YoY decline of 1.8 percent. The laser copier segment, however, observed a YoY growth of 15.1 percent. With the markets opening further, the demand from the government picked up following an increase in the number of

new projects and execution of those that were previously on hold. The corporate sector, too, observed a surge in demand for laser copiers as they began resuming operations from offices in a phased manner.

"In the Inkjet printer segment, while the shipment of single-function printers declined, that of the multi-function printers grew at 25.2 percent YoY. This growth came primarily at the back of ink tank printers and more specifically from the \$200 – \$300 category of printers. Because of its price point and added functionalities, there is a growing preference for multi-function Ink tank printers over Laser A4 printers in offices where these printers are typically deployed in the cabins of senior-level management. Most of the demand was met by HP and it could have been higher had it not been for the stock crunch that Epson and Canon faced in 3Q21," said Bani Johri, Market Analyst, IPDS, IDC India.

HP Inc. (excluding Samsung) maintained its leadership in the overall HCP market with a share of 46.9 percent and a YoY growth in shipment of 2.3 percent. The growth was led by the Inkjet printer segment, wherein HP grew by 9.1 percent



BANI JOHRI, Market Analyst, IPDS, IDC India

YoY, increasing its market share from the last few quarters to 46.3 percent, thus replacing Epson to become occupy the 1st position in the inkjet printer segment. The growth came at the back of its ink tank portfolio which grew by 53.5 percent YoY coupled with the launch of new models in 3Q21. In the Laser A4 printer-based segment HP declined by 6.6 percent YoY as it struggled with product availability.

Epson occupied the 2nd position in the overall HCP market with a market share of 20.7 percent while registering a YoY decline of 9.4 percent because of the challenges it faced at the production end. In the inkjet printer segment, it occupied the 2nd position in the market with a share of 32.0 percent. Epson was particularly impacted in the ink tank multi-function printer category.

Canon recorded a YoY decline of 25.4 percent and occupied 3rd position in the overall India HCP market, capturing a unit market share of 20.1 percent. In the inkjet

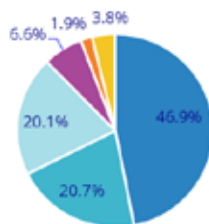
printer segment, Canon observed a YoY decline of 43.2 percent as it struggled with the stock availability of certain Ink cartridge models. In the laser segment (including laser copiers) Canon maintained its 2nd position with a market share of 24.8 percent while growing YoY by 12.0 percent. In the laser copier segment, Canon grew by 37.7 percent YoY and continued to lead the copier segment with a 35.1 percent market share.

IDC India Printer Market Outlook:

"Chip shortages and increase in logistics costs will continue to impact the supply of printers and is also likely to cause an upward revision in prices as well. As schools/colleges open, we can expect demand for ink tank printers to start stabilizing in the coming quarters. Laser copier demand is expected to remain strong in Q4, as enterprises continue to bring employees back to offices," said Nishant Bansal, Senior Research Manager, IPDS, IDC India.



India Top 5 HCP Companies, 2021Q3 Unit Market Share



■ HP Inc ■ Epson ■ Canon ■ Brother ■ Kyocera Document Solutions ■ Others

Source: IDC 2021

Veeam Reports Double-Digit Growth for 15th Consecutive Quarter; Registers 28% Growth in Q3'2021



Veeam Software has announced another quarter of double-digit growth with an annual recurring revenue (ARR) increase of 28 percent year-over-year (YoY) for Q3'21. With the fastest revenue growth YoY (25.3 percent) in the most recent IDC Semi-Annual Software Tracker for Data Replication & Protection 1H'21, Veeam's momentum is being fueled by more than 20 new

product releases and major feature updates this year, and is preparing for two more in Q4: Veeam Backup for Office 365 and Veeam Disaster Recovery Orchestrator v6.

"As businesses struggle to thwart evolving cybersecurity threats and deal with unprecedented global and economic challenges, modern data protection continues to be the golden ticket keeping enterprises secure and driving sustainable business continuity," said William H. Largent, CEO and Chairman, Veeam. "With the market average YoY growth at just +2.9 percent for data replication and protection, our 15th consecutive quarter of double-digit growth is proof that Veeam's solutions continue



WILLIAM H. Largent, CEO and Chairman, Veeam

Q3 2021 Highlights

More than 300,000 users have downloaded Veeam Backup & Replication v11 since its launch in Q1. Released as the most advanced data protection solution for cloud, virtual, physical, Software as a Service (SaaS) and Kubernetes workloads, V11 now enables organizations to accelerate cloud adoption by ensuring data is reliably secured, protected and managed from a single console.

Veeam cloud-native data protection reported more than 350 percent growth YoY in Q3'21. New releases of Veeam Backup for AWS v4, Veeam Backup for Microsoft Azure v3, and Veeam Backup for Google Cloud Platform v2 are now integrated directly into Veeam Backup & Replication v11a.

Veeam Backup for Microsoft Office 365 reported 73 percent growth YoY in Q3'21. The #1 backup and recovery solution for Office 365 enables users to securely backup to any location, including on premises, in a hyperscale cloud, or with a service provider.

Veeam's single platform is resonating with enterprise customers resulting in +268 percent bookings growth YoY in transactions of more than \$1 million.

Veeam Universal License (VUL), the industry's first portable license that offers a simple, flexible "per workload" subscription for protecting all workloads across on-premises and hybrid/multi-cloud environments, accounted for nearly 3/4 of net new core transactions in Q3, with Veeam's subscription product offerings reporting 64 percent growth YoY.

Primary storage product line integrations with Veeam have now increased to 86 with even greater integration support for HPE Alletra 6000, HPE Alletra 9000, HPE XP8, Dell EMC PowerMax and Hitachi Virtual Storage Platform (VSP), furthering the scope of storage integrations and hardware-agnostic options.

In the most recent IDC Semi-Annual Software Tracker for Data Replication & Protection 1H'21, Veeam had the fastest revenue growth YoY (25.3 percent) among the top five vendors, all other vendors combined, and in overall market average. Veeam's growth is more than double the nearest competitor, is firmly cemented as the #2 vendor worldwide, and stands tall as #1 provider in both EMEA and LATAM in overall revenue growth and market share.

to meet and exceed customer expectations, helping businesses across the globe meet operational objectives, while protecting against growing ransomware at "Globally, we achieved double-digit growth for the 15th consecutive quarter and in APJ, Veeam reported an annual recurring revenue (ARR) increase of 30 percent year-over-year (YoY). The APJ region is proud to have announced the expansion of its partnership with Ingram Micro – following the launch of Veeam on Ingram Micro's cloud marketplace in ANZ, we're also now available in Singapore, Malaysia and Hong Kong. This quarter we added some great referenceable customers to the region, including: Parul University in India, Qingdao Huanghai Pharmaceutical in China, Diamond Group in Indonesia, Midosuji Tax Office in Japan, TRC Thailand, Lembaga Lebuhraya Malaysia and Essilor Group in Singapore," said Shiva Pillay, Senior Vice President, APJ, Veeam.

AI, ML and Blockchain-Driven Digital Disruption Set to Transform Indian Real Estate Sector



Artificial intelligence has emerged as one of the biggest disruptors and game changers in the real estate landscape today, enabling a strategic, and empowered buying and selling experience. With the potential to carry out massive technological reforms across the sector AI is driving change with a technology-led immersive experience made possible just at the click of a button.

These views were expressed by eminent leaders from the industry at 'Leveraging AI in the Real Estate Landscape,' a webinar organized by Techarc, a leading technology analytics, research and consultancy firm in association with Compass, the overseas development centre of Urban Compass Inc., a US-headquartered technology platform leading change with new age technologies such as AI & ML in the real estate industry.

The panel called for leveraging the power of AI and its potential to transform the real estate landscape especially in India with appropriate

investments

Incorporating data and AI based algorithms is enabling leading real estate platforms like Compass, in decision making process and at the same time is also assisting them in managing the substantial

volumes of historic data that has been generated within the industry over the years and monitor bespoke KPIs in order to expedite procedures and extract useful data.

Rushi Bhatt, Sr. Director and Head, AI, Compass IDC said, "At Compass, we strive to provide a platform that can automate certain processes and make the end-to-end process as digital & frictionless as possible with the real estate agents at the centre of all of this. As far as leveraging AI is concerned in India's scenario, there are two kinds of applications that we need to start building, one is consumer-facing that involves digital marketing, virtual walkthroughs, lead generation etc and the other is gaining insights such as which houses are most likely to sell by the end of the year etc. AI adoption across the Indian Real Estate landscape has still got a long way to go but the growth is definitely possible with appropriate investments."



RUSHI BHATT, Sr. Director and Head, AI, Compass IDC

AI has made significant inroads within the Indian real estate landscape & is expected to further stretch its reach in the coming years. As per recent reports 93.8 percent believe such technologies like cloud & AI will be used for analytics-based recommendations and 67.1 percent of respondents have suggested that AI & ML will be frequently used in Indian real estate in the coming 12-36 months.

Prashant Solomon, MD, Chintels India & Hon. Treasurer, CREDAI NCR said, "Covid was a great opportunity for the real estate industry because it forced us to change how we work & think. One of the immediate effects that we observed was a large move towards online transactions & searches, increased use of VR & AR to conduct virtual tours of properties and using technologies like drones & AI. Thanks to AI & the algorithms that are being introduced, people are able to find houses based on their liking & their requirements. Real Estate is not limited to just providing a house but providing a complete ecosystem & the only way you can achieve that is by adopting technologies like AI"

Pranav Kaushik, Partner, Digital Transformation, Grand Thornton dGTI, India said, "The sector is embarking on continuous digital initiatives but there's still a lag in some of the areas where tech has not permeated. A change in the management aspect & re-skilling of the workforce in organizations will ensure a sustained digital transformation in the real estate sector. Technologies like AI, ML & Blockchain will help connect the whole ecosystem including the regulators, agents, and the companies to freely and securely exchange information."

Channel Point



Data & AI and Innovations in 2022

Most enterprises failed to scale their AI deployments this year. Will 2022 be the year when this actually happens?

Companies had high hopes in 2021 that artificial intelligence (AI) would enable them to make better and faster predictions to gain competitive advantage. However, Accenture research reported that despite their best efforts, nearly 80 percent of enterprises last year failed to scale AI deployments across the organization. However, we see AI evolving quickly to begin delivering on its promise in 2022. We predict a new wave of technological advancements that will help companies overcome the common challenges for operationalizing AI.

Here are the innovations we expect to see in the year ahead.

In 2022, we expect some relief for data scientists as more and more machine learning tasks become automated. Many labor-intensive tasks (such as preparing data, engineering features, and training models) that involve repetitive, tedious, and time-consuming functions will begin to be automated in the coming year. Automating the process results will not only provide relief to data scientists by letting them focus on what they do best -- perfecting algorithms -- but will also enable IT teams to put higher performing AI/ML models into production, faster.

In 2021, most companies were still in the experimentation or proof-of-concept phase of AI. In the coming year, we are going to see a shift towards AI-first approaches. AI applications will be at the forefront of enterprise (and even government) strategies. As AI/ML models become the norm, companies will experience a steeper curve of improvements, expanding AI to become part of every department and impacting every business process.

Deloitte's State of AI report found that about 80 percent of business and IT executives believe AI will be critical to their company's success over the next two years. In addition, about three-quarters of the respondents believe all businesses will use AI in the next three years. We expect to see the wider adoption of AI technologies in several industries but primarily in healthcare, retail, manufacturing, and finance.

In 2022, the use of AI will not only be more prevalent, it will also be more strategic. AI will continue to be used to achieve productivity gains. In addition, in the coming year AI will also be used to rethink and redesign products, services, business models, and overall strategy. AI won't be something tacked onto the existing infrastructure but instead will be an integral part of a company's technology stack, providing insights for customers, partners, and employees in real time.

With the new online economy, companies will race to use AI insights to become more competitive by being truly data driven in 2022. The increase in research and development driven by the giant companies will result in more innovation and enablers bringing AI within reach for smaller companies as well.

This year's challenges of integrating, cleaning, and processing data will continue, but at the same time there will be a flood of more generic open-source solutions that can replace manual tasks, freeing up data scientists for more strategic tasks. As the increasingly online economy demands more data for companies to be more efficient and provide a better customer experience, there will be more enabling technologies available to ease the transition to an AI economy.

K. Singhal

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