

HYBRID CLOUD: CLOUD'S TAKE-OFF TO INNOVATION

By Khaled Talaat

The debate between investing in public or private cloud systems may be coming to an end as businesses in Middle East realize there's a much easier model to digital transformation.

In a rapidly changing market where one third of the top 20 companies face disruption from digital competitors, businesses must constantly speed up innovation, deliver exceptional customer experience, and transform their business models. Eighty percent of businesses are leveraging cloud as a key ingredient to do just that. However, the questions about data security, integrity and where the actual data is held continue to be a barrier to adoption for many businesses in the Middle East region. As organizations in the Middle East are under constant pressure to increase productivity while reducing costs, the migration of business platforms and applications to the cloud is clearly a matter of when, not if.

What was not so obvious over the last 1-



2 years is just how big of a focus the cloud would become. While businesses had a choice between public cloud services-with a lower CAPEX but less direct control-and private cloud setups in which they had more secure and customizable services albeit with higher investment up front. CIOs in the Middle East also faced a dilemma when choosing a cloud environment that not only meets existing needs but one that will future-proof IT investments as their business needs continue to evolve.

Forward-thinking businesses are already looking at how cloud adoption will enhance innovation rather than just cost benefit alone. According to MarketsandMarkets, the hybrid cloud market in the MEA region is expected to experience huge growth in the coming five years due to improved application functionality and enhanced technologies. It is expected to grow from \$2.13 billion in 2016 to \$6.69 billion by 2021, at a CAGR of 25.8 percent from 2016 to 2021.

According to IBM, 85 percent of business leaders believe that hybrid cloud is accelerating digital transformation, with hybrid cloud growing faster than the public cloud. The hybrid model allows customers to integrate rather than migrate, extending current investments to extract value.

Reduced complexity

Enterprises large and small are now exploring several different cloud models as they assess current and future needs. Learning from the early days of cloud, many have found that building a private

cloud environment is a lot more difficult than just using one. The networking layer can be complex, businesses need to have a good amount of IT-knowhow to get the foundations right, and it can be time-consuming to maintain. However, it is ultimately your cloud, and that comes with all the benefits that a public model lacks; namely greater resource availability and heightened security functions. This remains a popular model in sectors like banking where there are strict regulations on information integrity and CIOs prefer to have complete control of the infrastructure.

Nevertheless, public cloud services have been a popular choice for many organizations in the Middle East and bring their own value to the table. A public model liberates organizations from complex and costly IT systems which require a high degree of cost, capability and management to run efficiently. Public cloud services also offer the benefit of on-demand scalability and computing power without the need for further infrastructure investments. You rent what you need and that is all.

Now neither of these models is perfect for every scenario. Thankfully, they no longer have to be. Today's hybrid model-which combines the delivery of public and private cloud services-is gaining popularity in the Middle East by offering the dual benefits of both models with an added layer of security and control. It's a model that overcomes regulatory and compliance requirements that a public cloud does not provide, while still allowing organizations to keep their IT investments lean for mass-volume operations.

Seems simple enough, but the challenge in cloud's early days was that it was near impossible for businesses to easily integrate both systems. If you built a private cloud environment for certain operations, integrating it with another company's public cloud services-or even another offices private cloud-was next to impossible. That situation has changed however as both offerings have matured and new open platforms have come on line within the Middle East in particular. — Khaled Talaat is Branch Manager, IBM Kuwait.

AUTOMAKERS, SUPPLIERS TEAM UP TO SHARE COSTS OF SELF-DRIVING CARS

LAS VEGAS: Automotive suppliers and automakers are expanding alliances to develop self-driving car technology that can serve multiple automakers, as the race to put such vehicles on the road separates companies that can go it alone from those that need help sharing the financial and technical burdens. While some companies, such as Tesla Motors, General Motors and Ford Motor, are trying to develop proprietary driverless systems, a larger group of automakers appears to have decided it makes more sense to develop self-driving technology in collaboration with suppliers - as many other features such as anti-lock brakes or radar-enabled cruise control already are.

"What's going on in the industry right now is like a hyper version of musical chairs - and the music is still playing," said Gill Pratt, chief executive officer of Toyota Research Institute. "Everyone is changing partners." Several suppliers - notably Mobileye, Nvidia and Delphi Automotive - are among the more popular technology partners in the self-driving race, with multiple alliances around the globe.

"If you want to build a truly autonomous car, this is a task for more than one player," said Amnon Shashua, chief executive of Mobileye, an Israeli-based supplier of mapping and vision-based sensing systems. "The technological challenges are immense," Shashua told Reuters. "I would compare it to sending a man to the moon."

Partnerships

Mobileye supplies cameras, chips and software for driver assist systems - the building blocks for self-driving cars - to more than two dozen manufacturers around the globe. The company was an early supplier of vision systems to Tesla, but the two companies had an acrimonious and public breakup last summer after the driver of a Tesla Model S was killed while operating his vehicle using Tesla's Autopilot system.

Since the break with Tesla, Mobileye has secured two critical partnerships to develop self-driving systems: With German automaker BMW and US chipmaker Intel, and with longtime supplier Delphi.

The Delphi-Mobileye alliance involves a turn-key system that the partners plan to offer to smaller automakers that lack the resources to develop such systems on their own. It will be ready for production by 2019, said Jeff Owens,

Delphi's chief technology officer, with a projected wholesale cost of about \$8,000. The alliance with BMW and Intel is expected to draw additional vehicle manufacturers and suppliers, according to Elmar Frickenstein, BMW's senior vice president for automated driving.

"We would like to create a standard system for everybody to use by 2021," Frickenstein said. "That would share the costs and speed up the process of development and adoption."

Eventually, BMW and its partners could offer self-driving hardware and software sets or an entire driverless system on a non-exclusive basis to companies ranging from Uber to Google, Frickenstein said. A blueprint for collaboration is BMW's joint ownership with Daimler AG and Volkswagen AG's Audi of Here, the mapping company acquired in late 2015 from Nokia. Since then, both Intel and Mobileye have teamed with Here to pool and share data.

Chipmaker Nvidia also is ramping up its partnerships in self-driving technology and systems, this week announcing deals with Audi and Here, as well as German suppliers ZF and Bosch. "We're not looking to develop a proprietary system," said Dirk Hoheisel, the member of Bosch's board of management who oversees autonomous driving. "We want to work with others to develop a standard platform and open standards for self-driving systems, especially around data and mapping."

While pursuing similar partnerships with suppliers, Audi sees its role as a vehicle manufacturer evolving to that of a supplier out there who can provide the whole solution - no one who knows everything, every part of what's needed to make an autonomous car," said Alejandro Vukotich, Audi's head of development for driver assistance systems.

Some key components of self-driving systems - cybersecurity, for instance - should remain the responsibility of vehicle manufacturers, said Guillaume Devauchelle, head of innovation and scientific development at French supplier Valeo.

But carmakers also will continue to rely on suppliers to provide specific self-driving technologies, he said. "There will be a mix because it's quite a complex system (with) sensing, data fusion, artificial intelligence, connectivity, man-machine interface and so on," Devauchelle said. "Those are big blocks." — Reuters



LAS VEGAS: Faraday Future's FF91 electric car on display at the 2017 Consumer Electronic Show (CES) in Las Vegas, Nevada on Saturday. —AFP

THE CAR OF THE FUTURE: GETTING TO KNOW YOU

LATEST AUTOMOTIVE TECHNOLOGY ON DISPLAY AT CES

LAS VEGAS: The car of the future doesn't just want to drive you. It wants to know you. The automotive technology showcased at the Consumer Electronics Show over the past week was in part about self-driving vehicles, but also about personalizing the driving experience.

Artificial intelligence and facial recognition will allow vehicles to let you in (if it's your car), and adjust the seating, lighting, music or other elements of the environment for you, automatically.

"The idea is to be more than a machine, to be a partner, make you happy," said Toyota's Amanda McCoy, who explained some of the innovations of the Japanese automaker's concept-i vehicle at the Las Vegas tech show.

The manufacturers want the car to hold a conversation, help you make a shopping list and determine where and how you want to travel. In a demonstration, the Toyota vehicle started a conversation and suggested potential destinations for the driver. Its camera detected that the driver was in an upbeat mood and thus suggested "the happier route."

The concept car will also keep a driver alert to potential perils on the road, with sound and light signals. Moving to autonomous mode, it allows the seats to recline.

Swiss-based group Rinspeed



LAS VEGAS: Promotion hostesses Justina (left) and Ty (right) pose beside a Harley Davidson motorcycle equipped with Cerwin Vega soundsystem at the 2017 Consumer Electronic Show (CES) in Las Vegas on Saturday. —AFP

showed a prototype electric car called Oasis with a miniature garden inside. The vehicle with an "intelligent rolling chassis" can also operate in autonomous mode, converting its windshield into a screen for videoconferencing.

"The interior of the car in the future will be redefined entirely, to meet different needs," said Rinspeed chief executive Frank Rinderknecht.

Rinderknecht said the company has no plans to produce an entire

vehicle but use elements of the company's technology, which could be available in a few years.

Other technologies shown in Las Vegas could turn the car into a payments platform. Honda, for example, said it was working with Visa to allow motorists to pay directly from the vehicle for parking or refueling, for example. Several automakers at CES unveiled plans to move forward on autonomous driving technology. But they also showcased ways to

incorporate virtual and augmented reality, use voice systems and other technology to personalize the experience.

Digital assistant on board

One part of that experience is the "digital assistant" which is making inroads in connected homes. Ford announced it would incorporate voice-controlled Amazon's Alexa onboard while Renault-Nissan and BMW announced plans to use Microsoft Cortana.

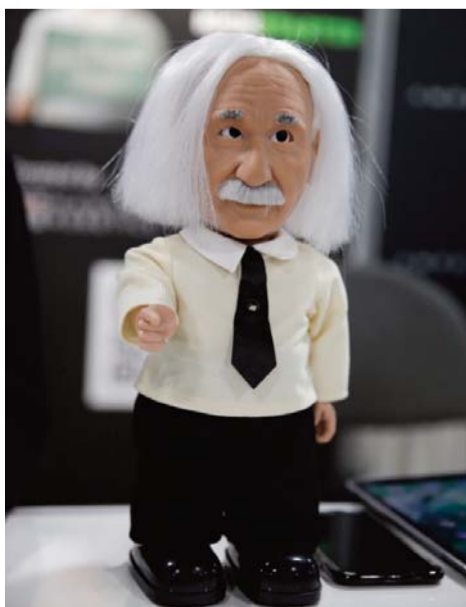
Hyundai is installing sensors in its seating which evaluate posture and in seatbelts to monitor respiration. This could allow an intelligent car to know if a driver is having a heart attack or falling asleep at the wheel. The South Korean giant is experimenting with a number of ways to deal with different scenarios: it may use blue lights or cold air to wake up a groggy driver, or change the environment to calm a stressful one. "If we can see the mood (of the driver), we can probably do something with this information and modify the environment," said Hyundai's David Mitropoulos-Rundus.

Even if a car is autonomous, Mitropoulos-Rundus said there will be times when a driver will need to assume control, and the automaker want a system to "re-engage him in emergency situation." — AFP

THE CHALLENGES OF ROBOTIC DELIVERY

LAS VEGAS: Many companies hope to use robots to deliver food to your hotel room, or packages and sundries to your home. But they still have plenty of issues to work out.

Like safety, for instance. "Now is the time for drone delivery," said Helen Greiner, the founder of CyPhy Works, a startup that's testing the use of drones with UPS to make commercial deliveries. But she noted that companies have to



LAS VEGAS: Educational robot Professor Einstein is on display at CES International in Las Vegas. —AP

CES GADGET SHOW

guard against accidents - like, say, drones dropping packages on people's heads, or falling out of the sky themselves.

The drones weigh 15 pounds, not counting the packages they carry, Greiner said at a robotics session at the CES gadget show Friday.

On the ground, businesses not only face safety concerns, but the need to educate consumers who might be shocked by having a robot show up at their front door.

Steve Cousins, CEO and founder of Savioke, is in the midst of deploying 50 robots to various hotels, which rent them for a monthly fee to deliver room service items. Preparing guests for the arrival of their mechanical assistants can be a challenge. Cousins told the story of one surprised hotel guest who slammed the door on a delivery robot - only to reopen it, camera in hand, to take a photo.

Educational robot

Professor Einstein, a miniature educational robot, looks eerily like the genius himself - complete with the crazy wiry hair. The company behind it, Hanson Robotics, says it's the first commercial robot with emotive features. It's one of dozens of robots on display at the CES tech show, which runs through Sunday in Las Vegas. One can mow your lawn; another folds your clothes.

Professor Einstein is expected to come out in March for about \$300. The robot stands more

than 14 inches tall and has soft skin. The company says it has 50 realistic expressions. It can stick his tongue out and move his eyes around to follow you. The robot interacts with an Android or Apple tablet - not a smartphone - to teach science, math and other subjects. It recognizes your voice and responds to your questions. It also can offer weather updates and recite facts about famous people.

Andy Rifkin, chief technology officer at Hanson, says the company's focus is to offer complex emotions. For those concerned about privacy, he says the robot's camera tracks your face but doesn't take photos.

Vibrating jeans

Tired of having to constantly check your cellphone for directions? French startup Spinali Design has created jeans that will vibrate on your right or left hip to let you know which direction you should head. A chip embedded into the waist is connected to an app. Just enter your destination ahead of time. Of course, a smartwatch can do that, too, but why get something that can do more? The technological capabilities of the jeans are limited to directions.

However, the company also has bikinis that will buzz when you're out in the sun too long and need to apply more sunscreen lotion. You enter information on your skin type and SPF level of your sunscreen into an app. The chip then monitors the sun rays.

Spinali says the chip should last four years even with constant use and will turn off automatically when wet to avoid damage. The jeans



LAS VEGAS: Models wear jeans from Spinali Designs at CES International on Friday in Las Vegas. The \$100 jeans will vibrate on your right or left hip to let you know which direction you should head. —AP

cost about \$100, and the bikinis about \$140.

The Echo

Amazon's smart speaker, the Echo, is getting a lot of attention at the CES tech show in Las Vegas this week. But it can't acknowledge your presence or tell one member of your household from another.

That's where Olly, billed by its makers as the first robot with personality, wants to come in. The gadget resembles a radial tire on a stand that tilts in your direction when it detects you. It can run your household via voice command,

looking up information or controlling the temperature (assuming you also have a smart thermostat). But Emotech, the company behind Olly, says it can do much more. For instance, it can supposedly adapt to the personalities of different people in your home, allowing it to pull off tricks like setting the perfect temperature when you come home from work or go to bed. And Emotech claims it can predict the type of music you like playing at night. Olly hasn't been released or priced yet, although Emotech co-founder Chelsea Chen estimates it will eventually cost in the range of \$600 to \$700. —AP