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Win Together: Huawei's Ecosystem Partners Grow from 500 to 28,000

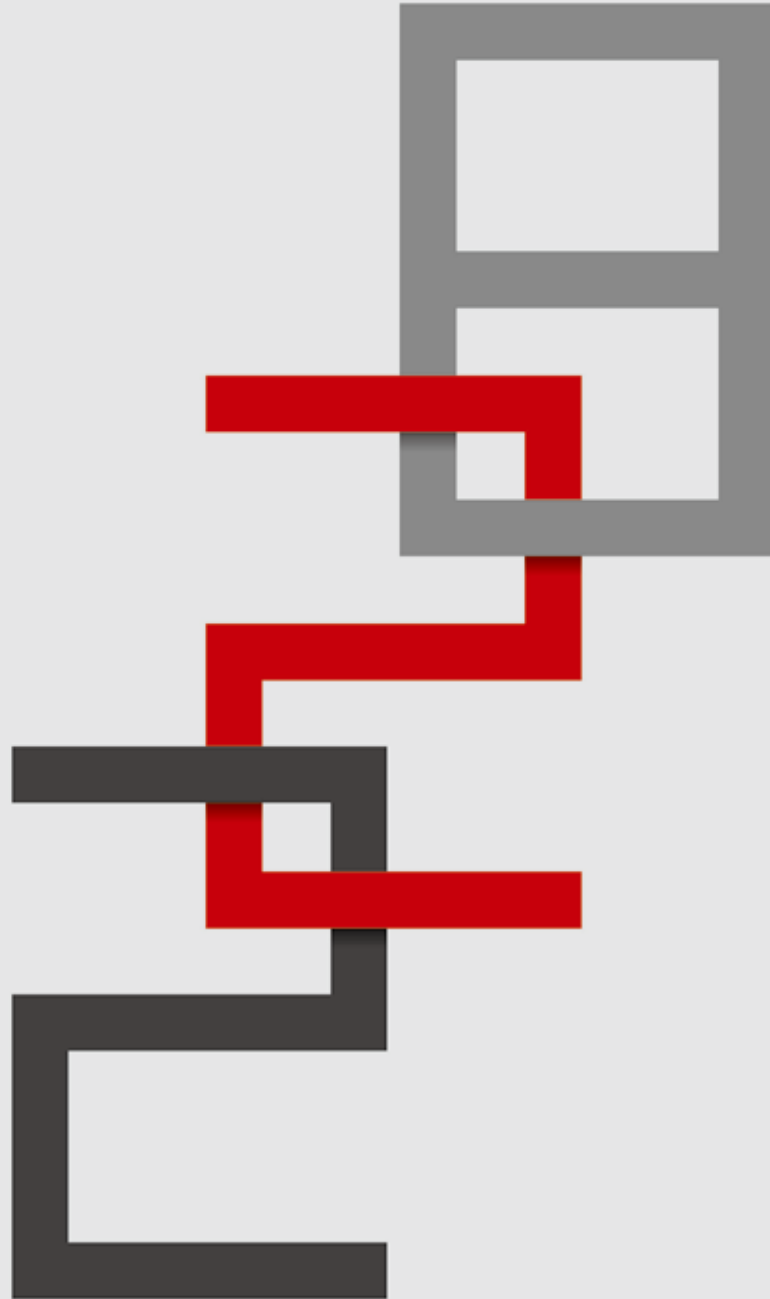


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The Channel Company: Helping Solution Providers Close the Digital Transformation Vision Gap

Building Efficient and Secure Digital Supply Chains

Huawei and Jet Infosystems Take on Tough IT Industry Challenges



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Collaborating with Partners to Build an Ecosystem for the Intelligent Era

By Ma Yue, Vice President, Enterprise Business Group, Huawei Technologies Co., Ltd.



New technologies, such as 5G, cloud computing, Artificial Intelligence (AI), and blockchain, are developing rapidly and being put into widespread commercial use. This trend is certain to have a profound economic impact, with revenue generated from digitalization set to account for 60 percent of global Gross Domestic Product (GDP) in 2022, according to global market intelligence firm IDC.

Indeed, the digitalization of industry is already well underway and enterprises across sectors are improving products, operations, and relationships by applying digital technologies to drive business growth. Yet requirements for digital transformation vary from enterprise to enterprise, so it would be impossible for a single Information and Communications Technology (ICT) company to solve every enterprise problem independently.

Huawei realizes that digital transformation relies on collaboration. This was particularly apparent when Huawei Founder and CEO Mr. Ren Zhengfei held a panel discussion with US investor and economist George Gilder and architect Nicholas Negroponte on June 17, 2019. At the end of the discussion, Mr. Ren closed by asserting that the world relies on open collaboration for shared success. Indeed, Huawei's own enterprise business mirrors the global picture: collaboration is fundamental for its development.

Chen Jin, Director of the Research Center for Technological Innovation at Tsinghua University, also believes in the importance of collaboration, suggesting that in the digital age ICT companies need an open, prosperous, and innovative ecosystem to facilitate industry-wide innovation. Chen believes that companies should implement a collaborative, ecosystem-based innovation strategy if they are to emerge as global technological leaders through digital transformation.

Professor Chen's views align with Huawei's partner strategy, which focuses on building a flexible,

collaborative, and mutually beneficial ecosystem that can combine the strengths of Huawei and its partners.

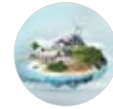
Partners Make Major Contribution to Rapid Business Growth

In 2019, Huawei's overall business remained steady, and the company stood strong in the face of adversity: annual sales revenue will likely exceed CNY850 billion (US\$123 billion), representing a year-on-year growth of 18 percent. The company's Enterprise Business Group (EBG) accounts for a significant proportion of that growth. Indeed, since Huawei EBG was established in 2011, its sales have increased 10-fold. Meanwhile, the percentage of sales revenue contributed by partners has soared over the years, with more than 86 percent of EBG's total sales revenue in 2019 projected to have been contributed by partners.

As Huawei's EBG has grown, it has gained the trust of more and more customers and partners in key industries, including government and public utilities, finance, transportation, and energy. To date, 228 of *Fortune Global 500* companies, 58 of *Fortune Global 100* companies, and more than 700 city governments worldwide have chosen Huawei as their digital transformation partner.

Huawei Collaborates with Seven Types of Partners to Build a Prosperous Ecosystem

EBG adheres to Huawei's overall 'being integrated'



Continuing its own digitalization journey, Huawei aims to team up with even more partners, in order to grow together, jointly build a prosperous ecosystem, and successfully tackle the digital transformation challenges of customers. Through this collaboration model, Huawei will help many more enterprises succeed in the intelligent era. >>

strategy, adopting fair, just, transparent, and simple principles to guide channel partner cooperation. It teams up with partners to build a healthy ecosystem that advocates openness, cooperation, and shared success.

In 2019, Huawei worked with more than 28,000 partners worldwide, including over 22,000 sales partners, 1,200 solution partners, 4,200 service partners, 1,000 talent alliance partners, and 80 investment and financing partners.

Huawei has added a new type of partner for its 2020 enterprise business ecosystem: industry partners, which includes both hardware and software component partners. Industry partners will focus on the development of components for Huawei's Kunpeng Computing Platform and other digital platforms, enabling components to provide commercial services.

Huawei will further expand its network of ecosystem partners, providing them with more enablement training, business consulting and network design, industry application development, joint solution incubation, project implementation, post-sales service, investment and financing, operation, talent cultivation, and standards formulation support. In these ways, Huawei and its partners will grow together.

Huawei and its Partners Build a Foundation for Digital China and the Core of the Digital World

With the arrival of the intelligent era, Huawei proposes a new concept combining ubiquitous connectivity, a digital platform, and pervasive intelligence to create a foundation for digital China and serve as the core of the digital world.

Huawei's efforts to build this core require cooperation with partners. In turn, Huawei's global ecosystem partners, supported by Huawei's

digital platforms, can achieve transformation through collaboration, to make their mark in the digital era.

This issue of *ICT Insights* includes many successful transformation and development stories from a selection of our outstanding international partners.

- **Synnex International**, for example, overcame considerable difficulties to achieve transformation, expanding its Huawei business to the international market and becoming a global distributor for Huawei's EBG.

- **Jet Infosystems**, Huawei's partner in Russia, moved to the forefront of its domestic market after the digitalization of its IT system. As a service supplier, it now has confidence in its ability to provide large-scale IT solutions for some of Russia's top 10 enterprises.

- **Altron**, Huawei's partner in South Africa, has provided high-quality ICT solutions for local governments and customers in vertical industries such as transportation and industrial engineering through nearly 10 years of cooperation with Huawei. Indeed, the company has made a significant contribution to the construction of a fully-connected South Africa.

- **Compwire**, a partner in Brazil, transitioned from being one of Huawei's competitors to becoming Huawei's Best IT Partner of the Year, achieving rapid growth in the digitalization business.

Continuing its own digitalization journey, Huawei aims to team up with even more partners, in order to grow together, jointly build a prosperous ecosystem, and successfully tackle the digital transformation challenges of customers. Through this collaboration model, Huawei will help many more enterprises succeed in the intelligent era. ▲



Fred Saayman
Executive, Huawei Business Unit
Pinnacle Micro Pty. Ltd.



Our cooperation with Huawei started as far back as the end of 2015. In 2016, our business growth really started to kick off. From 2016 to 2017, we achieved growth of close to 76 percent, and we had a brilliant year in 2018. In line with Huawei's business growth, we achieved 276 percent from 2017-2018.



Our company has been involved in the market for more than 25 years. We have experience doing business with almost every IT equipment and solution provider around the world. However, Huawei stood out from the rest by demonstrating its enthusiasm, determination, ambition, and energy to help its customers and partners.



Andrey Samoylov
Chief Customer Officer
Jet Infosystems



Ahmed Alazmah
SVP
Gulf Applications



When Gulf Applications' founder attended one of Huawei's exhibitions, he immediately realized that Huawei was the next big thing in the ICT industry. Huawei provides a full line of products and solutions, and can definitely serve the Kingdom's markets. I have been in the distribution business for almost 10 years, and Huawei is the first vendor I have seen that focuses on understanding its local market's needs and delivers on its promises.



Kıvanç Yılmaz
Presales Director
Destek Technologies



The products we sell are delivered to many governmental entities as well as companies in the private sector. We haven't experienced many service issues during our partnership with Huawei. Huawei's products are durable and reliable. Our partnership with Huawei has seen us return a very good profit; we expect to continue partnering with Huawei.





Shun Ando
General Manager
ITOCHU Techno-Solutions Corporation

We started working with Huawei because Huawei is the leading supplier of 5G. We recognized that 4G networks were for consumers, and 5G networks were more appropriate for enterprise businesses. We hope to expand our market share in Japan as well as Asia by working with Huawei, who have experience and strength in networks as well as cloud and devices.



Massimo Rossi
CEO
Italware Srl

We have met with many market leaders and IT producers. What we have found with Huawei is that their passion to perform their duties, and their desire to find and deliver the best possible products and solutions are second-to-none. In 30 years, I have never found another ICT company that has such a clear company strategy.

Why choose Huawei as a partner? Actually, I have two reasons. The first reason is that Huawei is the only company that can provide end-to-end solutions to its customers. And number two, Huawei is the world leader in ICT research and development, enabling us to provide smarter and more interactive solutions to our customers.

Dr. Claude Wells
CEO
Saudi Media Systems



When I talk to a client and they ask what company would provide them with the best possible support, I always answer Huawei.

Ali Al-Fozan
CEO
Gulf Group Company



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**We look forward to
hearing from you.**



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The Channel Company: Helping Solution Providers Close the Digital Transformation Vision Gap

By *Jeff Hine, Director of Content Development, The Channel Company*

‘Digital transformation’ has become one of the cloud era’s most prevalent terms, indicating a renewed focus on the digital enablement of business processes. This has profoundly impacted the roles of CTOs and CIOs, who must now embrace both technological and business leadership. As a knock-on effect, solution providers must also take up their role as an active agent of change.

However, a gap has emerged between the hype and the reality. Solution providers report that while customers are keen to overhaul business processes to take advantage of new technology — and plenty have begun this important work — there appears to be a ‘vision gap’ for many customers: they simply don’t know where to start.

This gap presents an opportunity for providers to deliver additional value for clients.

Solution Providers Are Making Progress

In the IPED Channelytics Annual North American Partner Census for both 2018 and 2019, we asked solution providers to tell us where the level of demand was for digital transformation solutions and what they saw as the path to success. Even though only 21 percent of solution providers said they had delivered at least one digital transformation project (a five percent year-on-year increase from 2018 to 2019), the topic dominated conversations at the C-level for all customers looking toward future investments.

What we find most remarkable about the research is the clear evidence that conversations and evaluations are not translating into solutions. Twenty-eight percent of providers reported that either they

hadn’t yet seen active demand from customers or those customers weren’t yet asking for guidance. Meanwhile, a further 29 percent reported that they were only in the customer conversation phase.

As a result, almost half of all solution providers saw little activity in both 2018 and 2019; at best, they were simply having conversations. We see this as a vision gap that represents a marketing opportunity for providers.

Linking Business and Technology Is Critical

Digital transformation sits at the crossroads of technology and business, and the ability to connect them relies on understanding the business functions that drive revenue and cost as well as the possible technology solutions that can be used as support. The connection between the two may often be elusive, but collaboration between a (technology) provider and a (business) end-customer is precisely what the former are in the business of providing.

This means that providers must invest in developing the necessary industry and business operational skill sets to lead the conversation, to help customers develop solutions that can have real business impact.

While customers are keen to overhaul business processes to take advantage of new technology — and plenty have begun this important work — there appears to be a ‘vision gap’ for many customers: they simply don’t know to where to start. This gap presents an opportunity for providers to deliver additional value for clients.

To help end-user customers close the vision gap and begin to implement meaningful digital transformation projects, solution providers must consider investment in three key areas.

- **Industry expertise:** Through training or recruitment, providers need to invest in the business and operational skills necessary to help customers re-equip their business process with digital technology. This means developing practitioner-levels skills often only found in industry verticals such as finance, healthcare, manufacturing, and retail. Hiring directly from within an industry is one possible answer; in the healthcare field in particular, we see solution providers bringing in staff who have worked in hospitals or research institutions to assist in customer-facing efforts.

- **Application development:** Digital transformation requires customization, which often means development. Solution

providers should seek to either build such development skills in-house or partner with others who can bring these skills to bear for clients. While it is not necessary to have a deep coding bench to cover all possible customer requirements, obtaining, or partnering with, those who have the skills necessary for building an industry solution is critical.

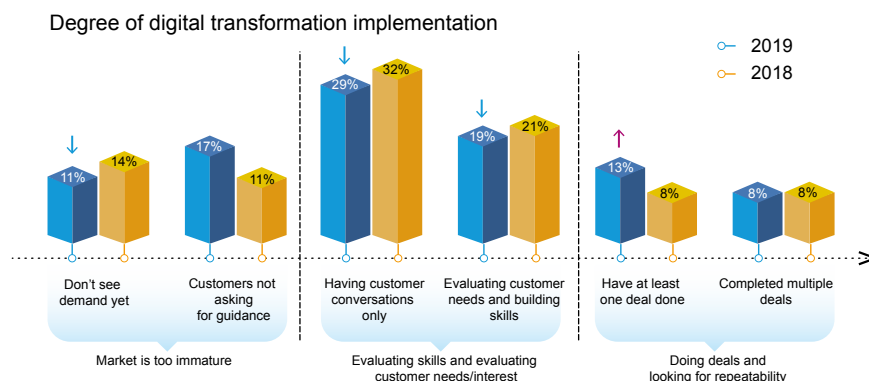
- **Consulting services:** It is also critical that solution providers engage early on, to win customers and help them successfully develop digital transformation projects. This means having a credible consulting capability that can deliver services based around needs analysis, financial modeling, and process re-engineering, to help the customer build a roadmap, vision, and justification for complex projects. To bridge the vision gap, helping the customer answer questions such as “Why?” and “What’s the impact?” is often a precursor

to understanding what technology may be appropriate for them.

Vendors Can Provide Support and Guidance

The vendor community has a critical role to play in supporting its solution provider community. Building the capabilities to help end-users envision and then execute digital transformation is an intensive process. To achieve this goal, vendors can provide enablement tools such as reference architectures for industry solutions, training in marketing, and sales tactics to target and appeal to the new business-led buyer and IP sharing — to arm their partner community with the methodologies and tools to deliver solutions. These investments are substantial, but for vendors who often build these capabilities already, it’s a matter of treating solution providers as an extension of their field team and sharing the knowledge.

Digital transformation is complex, and solution providers thrive in complexity. With the right investment and focus, solution providers will become central to helping end-users close the vision gap, ultimately accelerating the transformation of business processes through technology. A combination of industry skills, development capabilities, and consulting services will allow solution providers to lead the conversation. ▲





Collaborative Ecosystem-based Innovation Enables Digital Transformation

By *Chen Jin, Director of the Research Center for Technological Innovation at Tsinghua University, Professor of Tsinghua School of Economics and Management (SEM), and Chief Editor of Tsinghua Business Review; and Yu Fei, Postdoc at Tsinghua SEM*

Over the past two years, two research reports on the strategic development plans of the US and the EU have revealed the significance of digital transformation in building a country's competitiveness.

The first report, *Accelerate: Turbocharging the Manufacturing Renaissance in an Era of Energy Abundance*, was published by the US's Council on Competitiveness in October 2018. The report clearly states that the US needs to develop an innovation-led economy powered by a secure, sustainable, affordable energy portfolio and a robust, agile, advanced manufacturing sector.

The report also makes clear that big data is a prerequisite for the development of the digital economy. This means that the US should protect and take full advantage of big data resources, further enabling a knowledge-based economy.

Promoting European Growth, Productivity, and Competitiveness by Taking Advantage of the Next Digital Technology Wave — the second report — was published in March 2019 by the Information Technology and Innovation Foundation (ITIF). It highlights that digital transformation should not be limited to the manufacturing

industry. Instead, all physical systems, including those used in agriculture, buildings, infrastructure, logistics, and transportation, can and should reap the benefits that digital transformation offers.

Both reports affirm that digital transformation remains the very foundation from which countries have to build their global competitiveness.

Three Phases of Digital Transformation

Digital transformation is achieved through three phases: first

How can industry-leading companies established before the era of the digital economy maintain their competitiveness by undergoing digital transformation? A suitable strategy consists of three core concepts: ecosystem-based innovation, ecosystem-based collaboration, and collaborative innovation.

digitization, then digitalization, and finally digital business transformation.

• Phase I: Digitization

Digitization is the process of converting information from analog to digital form. From analog televisions to digital televisions, film cameras to digital cameras, physical typewriters to word processing software — all are real world examples of digitization that have occurred over the last few decades.

Put simply, digitization uses the binary system to convert information into zeros and ones to assist reading, writing, storage, and data transfer.

• Phase II: Digitalization

Digitalization is the transformation of processes. Digitalization

involves using digital technologies to change business models and provide new revenue and value-producing opportunities.

For example, by using systems such as Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), and Supply Chain Management (SCM), companies are able to digitize their workflow processes — effectively optimizing the efficiency of operations.

Digitalization helps companies increase workplace collaboration, boost resource efficiency, and capitalize on the value of information.

• Phase III: Digital Business Transformation

Digital business transformation involves using digital technologies and supporting capabilities to create a robust new digital business model. Unlike information- and process-oriented digitization, this

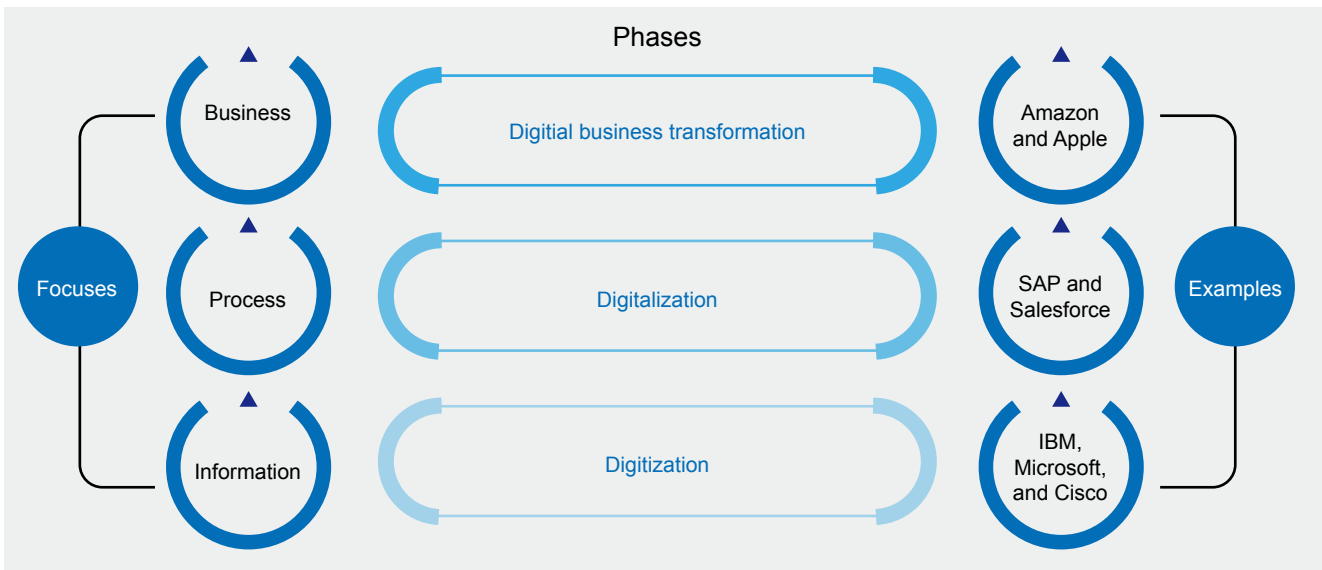


Figure 1: 'Focuses' and 'examples' in digital transformation's three phases



Digital business transformation has to be focused on a company's core business. The overarching idea is to develop a new business model, one based on the results of digitization and digitalization. >>

phase is centered on the complete transformation of businesses — enabling companies to develop new business models and competitive strengths in a modern, digital business environment.

Take a bicycle-manufacturing company as an example. In the digitization phase, the company introduces electronic financial tools to change traditional manual accounting into computer-assisted accounting.

In the digitalization phase, the company introduces an ERP system, establishing an enterprise process management IT system and integrating key financial activities, such as accounting, compliance control, financial reporting, staff management, and cost analysis. During this phase, the manufacturing company's main business scope and model does not change.

Later, after realizing that the digital economy can offer new business opportunities, the company starts to develop their bicycle sharing capabilities. They transform their business model from bicycle selling to time-based bicycle renting by applying digital technologies. Only when this process is completed will the company's core business scope and model achieve digital transformation.

Digital Transformation Success Stories

Amazon and Apple are two companies that have successfully achieved digital transformation.

Amazon started as a bookstore and later became an eCommerce platform. Then it developed Amazon Web Services (AWS).

Since its launch in 2006, AWS — which provides application programming interfaces and on-demand cloud computing platforms — has become a major component of Amazon's business. In 2018, AWS's sales revenue reached US\$25.66 billion, accounting for 11 percent of Amazon's total corporate revenue. Meanwhile, the gross profit of AWS reached

US\$7.296 billion, representing 44 percent of the company's entire total gross profit. Indeed, the clear success of Amazon's digital transformation pattern has led to many eCommerce companies trying to replicate it.

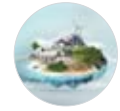
Apple is another example. The company was surpassed by Microsoft and its ecosystem partners — Dell and HP — in the 1990s. It couldn't compete in terms of market share, and almost went out of business. Then, in 1996, after he returned to Apple, Steve Jobs began transforming the company's business model. Today, Apple has revolutionized the all-in-one PC business model, switching it from one that focused on hardware manufacturing and Operating System (OS) software, to a new business model that integrates hardware, OS software, and digital content ecosystems. The company also built iTunes and the App Store, two platforms on which ecosystem partners can upload their digital content.

According to Apple's 2018 annual report, the revenue of its digital content services reached US\$37.2 billion, accounting for 14 percent of total corporate revenue. Meanwhile, Apple's digital content service was the only division that experienced successive growth from 2014 to 2018.

From these examples, it is clear: digital business transformation has to be focused on a company's core business. The overarching idea is to develop a new business model, one based on the results of digitization and digitalization.

Digital-native enterprises are the main competitors of enterprises that have yet to or are in the process of undertaking digital business transformation. These digital natives established themselves after the digital economy had already developed and have, as a natural result, already designed their business models according to the patterns and rhythms of the digital economy.

Unlike large- and medium-sized traditional



Traditional large-scale enterprises should assign a CTO to oversee technological R&D and establish an open, innovative ecosystem. CTOs help companies use digital technologies to transform into technologically innovative global industry leaders.



enterprises striving to adapt to the digital economy, the digital natives — names such as SenseTime and YITU — do not require digital transformation: they were born digital, proactively identify business opportunities, and grow rapidly because of their digitally-native capacity.

A Way for Traditional Enterprises to Achieve Digital Transformation

How can industry-leading companies established before the era of the digital economy maintain their competitiveness by undergoing digital transformation? We believe that the ecosystem-based collaborative innovation strategy is an effective way for traditional enterprises to achieve digital transformation. The strategy consists of three core concepts: ecosystem-based innovation, ecosystem-based collaboration, and collaborative innovation.

• **Ecosystem-based Innovation**

An ecosystem-based innovation model requires an open, innovative ecosystem, in place of a closed, centralized innovation structure. The failures of Bell Labs and Xerox PARC demonstrate that companies that adopt closed innovation systems are likely to miss out on the opportunities the new technological revolution brings.

Bell Labs’ transistor technology contributed to the establishment of first-generation information-based companies such as Intel. Meanwhile, the Graphical User Interface (GUI) system developed by Xerox PARC helped second-generation information-based companies such as Apple and Microsoft grow their businesses. Both research institutes created industry-leading technologies that facilitated the growth of other companies, but they failed to promote the successful development of their own companies.

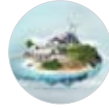
Conversely, Apple, Microsoft, and Amazon — the US stock market’s top three companies — continue to grow in their respective ecosystems.

All have successfully attracted ecosystem partners by developing platforms such as iTunes and the App Store, Windows OS and Microsoft Azure, and Amazon eCommerce and AWS. Such platforms provide opportunities for partners to create innovative projects, which in turn contribute to the platform’s own development. This leads to the formation of innovative ecosystems that are energized by collaboration with, and competition between, innovation-driven partners.

Such examples suggest that traditional large-scale enterprises should assign a Chief Technology Officer (CTO) to oversee technological Research and Development (R&D) and establish an open, innovative ecosystem. CTOs help companies use digital technologies to transform into technologically innovative global industry leaders.



Figure 2: Ecosystem-based collaborative innovation strategy



A traditional company needs a CTO, CDO, and CIO, to implement a corporate ecosystem-based collaborative innovation strategy that includes collaborative innovation, ecosystem-based collaboration, and ecosystem-based innovation. >>

- **Ecosystem-based Collaboration**

Ecosystem-based collaboration requires proactive ecosystem management, using big data technologies and data-based ecosystem operations.

An ecosystem's slow, natural growth presents considerable uncertainty, and may not satisfy company requirements. Technological competition has recently expanded from R&D to sales. Companies with poor sales results need to accelerate their development to catch up with competitors. Organizations that do fall behind can, however, surpass their competitors with stimulation of the ecosystem and cross-organizational collaborative innovation, as shown in the success of the Apollo and China high-speed railway R&D programs.

The digital economy, Internet of Things (IoT), and big data technologies have greatly reduced costs and increased the efficiency of large-scale ecosystem collaboration. To ensure continued success, enterprises should appoint a Chief Data Officer (CDO) to integrate partner capabilities in domains such as R&D, supply chain, sales, talent development, and financing and investment, using big data technologies. The CDO should manage the entire ecosystem's data-based operations to ensure sufficient support from the collaborative ecosystem as well as the company's rapid digital transformation.

- **Collaborative Innovation**

Collaborative innovation is the core engine that drives technological and business model innovation in the digital economy.

While digitalization involves using digital technologies to automate business operations and transform an existing business model, digital business transformation focuses on using innovative digital technologies to create a new business model. Digitalization is a digital upgrade

of existing resources, while digital business transformation is an exploration of a new economy using both technological and business model innovation.

Collaboration is difficult for sales departments and R&D departments, which have different business models. Indeed, few companies have realized collaborative innovations in both technology and business models.

In fact, sales departments are usually more effective at innovating business models based on customers' needs, while the technological innovation of R&D departments is usually superior. A traditional company needs to appoint a Chief Innovation Officer (CIO) to help both departments maximize their potential. By driving collaborative innovation, integrating new technologies and business models, companies can successfully achieve digital transformation.

A traditional company needs a CTO, CDO, and CIO, to implement a corporate ecosystem-based collaborative innovation strategy that includes collaborative innovation, ecosystem-based collaboration, and ecosystem-based innovation. Following the implementation of such a strategy, companies will enjoy ongoing development and success, powered by technological innovation and business model innovation.

The digital economy is advancing by adopting new technologies. To capitalize on this, companies must undergo their own digital transformation journey. This is certainly not easy, and many companies fade away during the process. To ensure that they don't suffer a similar fate, traditional companies have to fully understand the potential benefits of digital transformation, and develop a clear strategy, to seize the opportunities it provides. In doing so, they will thrive and prosper in the digital economy. ▲

POWERED BY 5G & AI

Huawei **OceanStor Dorado** Transforms Enterprise Storage

Ever fast, ever solid, AI-powered all flash storage



Win Together: Huawei's Ecosystem Partners Grow from 500 to 28,000

By Frank Shen Surong, Vice President of Partners & Alliances, Enterprise Business Group, Huawei Technologies Co., Ltd.

Despite mounting challenges in 2019, Huawei managed to navigate the year's difficulties by remaining committed to creating value for customers and working closely with partners. Indeed, its annual sales revenue is estimated to top CNY850 billion (US\$124 billion) for the year, representing roughly 18 percent growth year-on-year.

For the Enterprise Business Group (EBG), 86 percent of revenue was generated from cooperation with partners. By the end of 2019, Huawei had established over 28,000 partnerships worldwide, with an annual growth rate above 10 percent for the eighth consecutive year. In 2020, together with partners, we will continue to build a prosperous ecosystem for the intelligent era.

One Goal: Win Together

To survive, a company must be able to compete in the market. To thrive, however, cooperation is also needed, which is perfectly encapsulated by the old adage: if you want to go fast, go alone; but if you want to go far, go together.

Technologies and business models will never stop evolving, and enterprises need to adapt to the ever-changing environment through digital transformation. The requirements for digital

transformation, however, are unique for every enterprise, which makes it impossible for any single Information and Communications Technology (ICT) company to handle the challenge wholly independently. Instead, ICT companies need to cooperate with each other for long-term development.

Huawei's core values are customer-centricity and dedication, as we aspire to create the most value for our customers. Huawei wouldn't be able to survive if we only pursued success for ourselves when cooperating with partners to provide joint products, solutions, and services.

Huawei's goal isn't to maximize profits, rather it's to maintain profits at a reasonable level, because Huawei's long-term success is dependent on the success of its partners and customers. For this reason, our goal goes beyond winning alone: We aim to win together, with our partners and customers.



Two Driving Forces: 'Platform + Ecosystem' Strategy with Seven Types of Partner

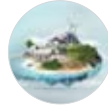
Huawei is committed to achieving mutually beneficial outcomes with partners in an integrated ecosystem. Our ICT, global marketing, as well as our training and service platforms, are all open to our partners. Our competitive advantage comes from our ability to jointly develop innovative solutions and Go-To-Market (GTM) strategies with our partners to launch products and solutions ahead of the competition. Meanwhile, we are also focused on promoting the development of industry standards, reducing the costs of digital transformation, and expanding the industry market with partners to achieve sustainable growth.

• Platform Strategy

Digital transformation affects industries large and small. Industry pioneers will combine their wealth of experience and data with ICT to reshape their production and service processes, and become platform-based enterprises that serve the entire industry.

Huawei is in a unique position to help enterprises with digital transformation. Using our technical expertise in fields such as cloud computing, big data, Internet of Things (IoT), and Artificial Intelligence (AI), Huawei offers innovative, differentiated, and leading ICT hardware and software infrastructure. The resulting platform is open, scalable, flexible, and secure, and further boosted by seamless cloud-pipe-device synergy.

As enterprises undergo transformation and become platform-based, they need to focus on their strengths and innovating their business, without being burdened by the complexities of



By the end of 2019, Huawei had more than 22,000 Sales Partners, 1,200 Solution Partners, 4,200 Service Partners, 1,000 Talent Alliance Partners, and 80 Investment & Operation and Financing partners.

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ICT software and hardware systems. To help enterprises realize this transformation, Huawei has developed the Horizon Digital Platform, applying the extensive experience Huawei has accumulated in digital transformation and through cooperation with industry-leading enterprises.

• Ecosystem Strategy

As described in the 2020 partner ecosystem overview, Huawei's partner ecosystem consists of seven types of partner: Sales Partners, Solution Partners, Service Partners, Investment & Operation and Financing Partners, Talent Alliance Partners, Social Partners, and Industry Partners (the latter being a relatively new addition).

By the end of 2019, Huawei had more than 22,000 Sales Partners, 1,200 Solution Partners, 4,200 Service Partners, 1,000 Talent Alliance Partners, and 80 Investment & Operation and Financing partners. The achievements of EBG are made possible only by the hard work and dedication from ecosystem partners across industries and domains.

• **Sales Partners**, also known as channel partners, include Distributors, Global Partners (GPs), Value-Added Partners (VAPs), Gold Partners, Silver Partners, and Authorized Partners. They work with Huawei on routes-to-market and sell Huawei products, solutions, and services to end-customers. Huawei is actively expanding its scale of cooperation with these partners, while improving their sales capabilities and developing core channels for Named Accounts (NAs).

• **Solution Partners** include Independent Software Vendors (ISVs), Independent Hardware Vendor (IHVs), Consulting Vendors, and System Integrators (SIs). They develop or deploy joint

In the intelligent era, the key to creating a mutually beneficial ecosystem is to enable every participant to play to their own strengths to make the whole greater than the sum of its parts... Huawei's goal is to become the best digital transformation ecosystem partner for enterprises everywhere. — Frank Shen Surong, Vice President of Partners & Alliances, Enterprise Business Group, Huawei Technologies Co., Ltd.



solutions with Huawei or Huawei's ecosystem partners. Solution Partners play a critical role in the internationalization of the Horizon Digital Platform, especially in the Intelligent Campus, Intelligent City, and Smart Transportation domains.

- Upon receiving certification, **Service Partners** become Certified Service Partners (CSPs). Granted by EBG, certification verifies a channel partner's capabilities. It measures a partner's service qualifications and serves as a basis for incentive policies and management. To help service partners, we will focus on improving their capabilities, encouraging independent delivery, and increasing their service sales proportion.

- **Investment & Operation and Financing Partners** are further classified as either Investment & Operation Partners, or as Financing Partners. They provide investment, operation, financing, and leasing services to Huawei's customers or partners, helping them meet financing requirements. Huawei

will focus on ensuring that the funding requirements of distributors, VAPs, Gold and Silver Partners, and customers are met, aligning with Huawei's strategy of building an open, cooperative, and mutually beneficial ecosystem. Strengthening the overall operations capabilities of Investment & Operations and Financing Partners will enrich Huawei's ecosystem as well as stimulate the digital economy as a whole.

- **Talent Alliance Partners** provide exchanges of talent, training, capability improvement, and other services for Huawei's industry chain. At this stage, most Talent Alliance partners are Huawei Authorized Learning Partners (HALPs) and Huawei ICT Academies. Working with Talent Alliance partners, we aim to train one million ICT professionals in order to meet the talent supply requirements of digital transformation.

- **Social Partners** include standards organizations, industry associations, and industry research institutes. They



The ‘being integrated’ strategy enables Huawei to avoid competition with partners and maintains focus, instead, on empowering them. By adopting this strategy, we hope that partners can assume more responsibilities for customer-facing services such as sales and delivery.
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help improve Huawei’s brand awareness and influence across industries, directly or indirectly. For the development of Social Partners, we will continue to establish partnerships with standards organizations and industry associations, expanding Huawei’s global network.

- **Industry Partners** include hardware and software component partners, and they use modules such as Kunpeng and digital platforms to help build the commercial service capabilities of Huawei components. To enhance the development of Industry Partners, Huawei plans to coordinate resources to develop computing ecosystems for Kunpeng and Ascend in priority regions.

While remaining customer-centric, Huawei is dedicated to building sustainable ecosystems that bring mutual benefits to partners. By making the most of our partners’ strengths, we will continue to expand the industry market and form a community with common interests that works, grows, and transforms together.

Three Rules for the Enterprise Business

Huawei has three rules that are particularly important for all employees: support the attainment of the mid- and long-term business goals of the enterprise business, enhance the development of ecosystem partners, and build a sustainable ecosystem.

- **Adhere to the ‘Being Integrated’ Strategy**

The ‘being integrated’ strategy is Huawei’s corporate-level strategy for enterprise customers. It is a business model that has proven suitable for Huawei, and serves as a form of self-restraint for the company. The strategy must be observed by all employees serving enterprise customers, not just by EBG staff.

This ‘being integrated’ strategy enables Huawei to avoid competition with partners and maintains

focus, instead, on empowering them. By adopting this strategy, we hope that partners can assume more responsibilities for customer-facing services such as sales and delivery.

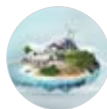
In such an arrangement, partners are expected to play an important role in the business, helping with customer relationship management, business consulting and network design, industry application and joint solution development, solution integration, engineering implementation, post-sales services, investment and financing, operations, talent development, and standards development.

By empowering partners, Huawei helps them to fully exploit their competitive advantages in industry knowledge, customer coverage, system integration, the customization of industry applications, and the localization of services.

- **Share Success**

In the past, Huawei has achieved success in direct sales, but we require our employees to change their mindset to focus on creating shared success with partners. In any cooperation, employees should take the partner’s perspective into consideration, extending the relationship beyond the simple sharing of profit and loss. The only way for Huawei to succeed is for partners to succeed as well, necessitating a mutually beneficial relationship.

To turn this into reality, Huawei’s partner policies are taken very seriously, to protect Huawei’s brand image and reputation, and ensure the sustainable growth of the company. In particular, we prohibit arbitrary deduction of incentives for partners, and we require employees to not make promises lightly. Indeed, every promise must be fulfilled, and partners should receive all the incentives they deserve. There are strict disciplinary actions for individuals failing to keep promises or for poor behavior.



Huawei released its future-oriented channel architecture and channel policies in 2012, and they have been frequently updated based on the business development of our partners and their feedback.
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- **Maintaining a Fair, Just, Transparent, and Simple Approach**

Huawei adheres to principles of fairness, justice, transparency, and simplicity in every collaborative partnership. We have teamed up with partners in order to establish a just market order that plays by fair market rules, to create a healthy, harmonious, open, and mutually beneficial partner ecosystem.

Huawei continuously seeks to optimize its IT systems, including management systems, the ‘e + partner system’ — which is used for procedures such as partner registration — and online transaction platforms. By simplifying management and increasing a partner’s authorization to access Huawei’s materials, Huawei improves the operational efficiency and service security of the ecosystem, making transactions with partners more convenient.

Four Measures: PSEE (Profitability, Simplicity, Enablement, Ecosystem)

Huawei released its future-oriented channel architecture and channel policies in 2012, and they have been frequently updated based on the business development of our partners and their feedback. To ensure the stability of the overall framework, in 2020 Huawei will further optimize its ecosystem partner policies related to business outside of China, based on four measures:

- **Profitability**

In 2019, we removed the sales rebate threshold, which means partners are now rewarded for every dollar they earn. As a result, there was an 80 percent year-on-year growth in the number of partners who received incentives, with the total incentive amount distributed nearly doubling over the same period. In 2020, Huawei will maintain the stability of the channel partner incentive framework and expand the scope of qualifying products for standalone software rebates. Partners will also receive service content support in

accordance with their star level. With a higher star level, partners are entitled to more authorization and more benefits. Diversified special incentives such as capability rebates and Business Incentive Programs (BIPs) will be introduced to motivate partners to pursue more ambitious goals.

- **Simplicity**

Huawei has been continuously simplifying policy and process execution. Over the years, partner certification requirements, rebate capability appraisal, and the Market Development Fund (MDF) and Joint Market Fund (JMF) have all been simplified. Our partner policies are now easier to remember, understand, and implement — facilitating better cooperation with partners.

In addition, Huawei will build a partner policy center based on the ‘e + Partner’ platform, to provide partners with more transparent and timely policy information, clearly communicating certification policy requirements, the various incentives available, and program solutions. In 2020, we will release a list of products that partners may get rebates on, to improve policy transparency and make incentives easier to predict. We will allow partners to independently apply for and accept MDFs to accelerate the execution of marketing activities and make Huawei’s entire business process visible to partners.

- **Enablement**

Huawei will raise the capability requirements for both pre-sales and post-sales for core partners. But Huawei will also increase capability rebates and provide free training and exam vouchers that match the partner type — motivating partners to invest in improving their capabilities. In 2020, Huawei will launch Huawei Certified Pre-sales Professional (HCPP) certification for IP and storage products, to help partners gain in-depth knowledge about relevant products and acquire the practical skills needed to provide independent customer guidance, deliver scenario-based solution design, and

| Partner type | HCPA | HCNA |
|---------------------|------|------|
| Distributor | • | • |
| Value-added partner | • | • |
| Gold | • | • |
| Silver | • | |

Incentive voucher (training & exam)

conduct Proof of Concept (PoC) tests. We have also extended the availability of MDF and JMF to support global partners, solution partners, and carrier partners in their business development. We want our partners to reap the benefits of upgrading their capabilities to deal with the challenges of digital transformation.

• Ecosystem

Huawei has established the Huawei ICT Academy Development Incentive Fund (ADIF) for 2020, to drive the development of the Huawei ICT Academy, support its training and operations, and motivate trainees to obtain Huawei certifications. Meanwhile, ADIF will increase awareness for the Huawei ICT Academy brand, strengthen cooperation with educational communities, and develop technical talent for Huawei, with talent and the Academy brand becoming a point of strength for the company. In the future, Huawei will also attract more ecosystem partners through a series of favorable policies, ranging from the Joint Solution Development and Marketing Fund and the Global Partner Incentive Fund (GPIF), to improving satisfaction levels for service delivery and making the MDF available to more partners.

In the era of ecosystem collaboration, it is more important to manage cooperation than to manage competition. With this in mind, Huawei will continue to increase investment in building a diversified ecosystem.

Five Advantages: Brand, Rapid Growth, Continuous Innovation, an Extensive Product Range, and Security Compliance

Although Huawei has been in the enterprise business for less than 10 years, and still has much to learn from industry leaders and other vendors, Huawei has several distinct advantages.

| Evaluation item | Requirement | Capability rebate |
|-------------------------|---|-------------------|
| Pre-sales certification | At least twice the required number of HCPA certificates | • |
| CSP certification | X-star CSP or higher (refer to the regional channel manager for detailed information) | • |

Capability rebate

• **Fortune Global 500 and Interbrand's Top 100**

Best Global Brands: Huawei's Brand Value Benefits Partners

As a leading global ICT solutions provider, Huawei has been growing quickly and steadily by offering cutting-edge technologies and exceptional services. Huawei was listed in the *Fortune Global 500* index for the first time in 2010, and it has risen in the ranking year after year, becoming the world's 61st largest company in 2019. In 2015, Huawei also became one of *Interbrand's Top 100 Best Brands*, ranking 74th in 2019. Throughout this period, there have been no major ups and down and no impetuous attempts to 'leap forward;' instead, Huawei has maintained smooth and steady growth.

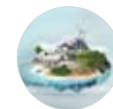
• **Continuous and Rapid Growth, Driving Strong**

Growth for Partners

Over the past five years, year-on-year, Huawei's revenue has maintained a Compound Annual Growth Rate (CAGR) above 20 percent. Despite facing some adversity in 2019, Huawei's annual revenue is still expected to exceed CNY850 billion (US\$123 billion). Huawei's robust growth means that the business growth of its partners is also assured. By the end of 2019, enterprises in more than 700 cities around the world, including 228 *Fortune Global 500* companies, had selected Huawei as their partner in digital transformation.

• **Long Term Investment in Technical Innovation and Product Innovation Helps Partners Build Leading ICT Solutions**

Huawei continues to focus on its strategy of investing in the R&D of telecom networks, cloud data centers, and smart devices. To remain at the forefront of the industry, we will focus on innovations for cutting-edge technologies that are driven by actual customer needs. Huawei has more than 96,000 R&D engineers worldwide, accounting for



In the intelligent era, EBG's targets are to integrate ubiquitous connectivity, a digital platform, and pervasive intelligence, to build the foundation of digital China and be positioned at the core of a digital world. >>

approximately 50 percent of the total workforce. In 2019, investment in R&D is expected to reach CNY120 billion (US\$17 billion), of which roughly 15 percent was invested in cutting-edge technology research. In addition, Huawei has joined more than 400 standards organizations, industry alliances, and open source communities, holding more than 400 key positions. A total of nearly 60,000 proposals have been submitted by Huawei, with over 5,000 standard proposals submitted in 2019 alone. Over 87,000 patents have been granted to Huawei, and over 90 percent of those are invention patents.

- **An Extensive Product Range Enables Partners to Create End-to-End One-Stop Solutions and Services for Customers**

Huawei's products and solutions cover fields such as mobile network, broadband, IP, optical network, network energy, telecom value-added services, and terminals. Huawei EBG integrates multiple new ICT technologies, including cloud computing, AI, IoT, big data, converged communications, video, and Geographic Information System (GIS), and uses the 'platform + ecosystem' strategy to provide high-quality solutions for both government and enterprise customers, supporting digital transformation. In 2020, we will carry out co-marketing activities with partners for our star products, including next generation AirEngine Wi-Fi 6, OceanStor Dorado flash storage, and the Uninterruptible Power Supply (UPS) + SmartLi power solution (a lithium battery-based energy storage system solution) and increase resource input for partners to achieve results that benefit both parties.

- **Security and Compliance Have Been Top Priorities for Over 10 Years, Ensuring the Healthy Development of the Partner Ecosystem**

Huawei prioritizes network security over its

commercial interests. Additionally, Huawei adheres to strict business ethics, all international conventions, and the laws and regulations of each country it operates in.

Huawei's management team has always adhered to the core philosophy of "compliance with international laws and regulations" and regards it as the cornerstone for Huawei's global operational compliance. The article titled "Huawei Compliance System Safeguards Partner Ecosystem Development" (pp. 88-91) describes in detail Huawei's initiatives and achievements in terms of network security and a compliance framework over the past 10 years. The article covers the building of the compliance management system as well as trade compliance, security and trustworthiness, anti-corruption and anti-commercial bribery policies, intellectual property rights, and trade secrets protection. These initiatives and achievements are all vital for the healthy development of the partner ecosystem.

In the intelligent era, EBG's targets are to integrate ubiquitous connectivity, a digital platform, and pervasive intelligence, to build the foundation of digital China and be positioned at the core of a digital world. In the era of intelligence, the key to a mutually beneficial ecosystem is to enable everyone to use their own strengths to create a whole that is greater than the sum of its parts.

Huawei will continue to evolve its ecosystem policies to expand the partner ecosystem, help partners achieve their goals, and provide better support for partners. We will dedicate our efforts to the development, cultivation, support, incentives, and compliance of our partners. Ultimately, we will streamline partner management to build an open, cooperative, and mutually beneficial ecosystem, and strive to become the preferred supplier for digital transformation. ▲

Star Product Campaigning: Maximizing Partners' Business Growth

By Qiu Heng, President of Global Marketing, Enterprise Business Group, Huawei Technologies Co., Ltd.

2019 was an extraordinary year for Huawei. The sanctions imposed by the US pushed Huawei to its limits. Yet under extreme pressure, we are even more dedicated to building world-leading products and solutions, and we continue to work with global partners to serve global customers. In the enterprise market, we launched a series of star product campaigns, such as those for the AirEngine Wi-Fi 6 and OceanStor Dorado products. We focused on the most competitive products and worked with partners to carry out online and offline precision marketing, quickly boosting global sales.

According to a report by Dell'Oro Group, Huawei ranked number one in the global WLAN market (excluding North America) in 2019 Q3. Concerning Huawei's Wi-Fi 6 pipeline sales, 420,000 Access Points (APs) were sold by 2019 Q4. According to Gartner's report on global storage market share in 2019 Q3, Huawei boasted the highest revenue growth rate of 42.3 percent in the primary storage market, with the revenue growth of all-flash products exceeding 100 percent.

Every bit of our growth is a sign of customers' recognition of Huawei's value and a result of close collaboration between Huawei and our partners. With trust from our customers and support from partners, we feel fearless going forward, despite grave external challenges continuing in 2020. We shall focus more on star product campaigning with more mature and precise operations. We also hope to work with more global partners to carry out joint marketing. Together, we will leverage star product campaigning to boost market space, promote sales, maximize the business growth of our partners, and achieve greater business success.

New Marketing Tactics: Creative 2B Marketing Based on Marketing 3.0

There are two types of marketing: 2B and 2C marketing. 2C marketing can stimulate a huge amount of impulsive consumption, while enterprise procurement (2B marketing) is more rational, featuring long decision-making cycles and high trial-and-error costs. In addition, 2B marketing faces challenges, such as few marketing channels, difficulty in precision targeting, and high customer acquisition costs.

After more than a year of exploration and practice, we have

worked with many overseas partners to successfully launch a number of star product campaigns outside China, overcoming various 2B marketing obstacles. We have developed a set of effective and replicable marketing 3.0 tactics that encompass four phases:

- **Phase 1 — Awareness:** Quickly build a 0-to-1 perception among target audiences with marketing through all marketing channels, as well as testimonials from authoritative KOLs and customers. This phase is characterized by vigorous marketing through all channels at the same pace.
- **Phase 2 — Interest:** Emphasize the unique strengths of our products and encourage customers to test our products in order to stimulate their interest.
- **Phase 3 — Desire:** Publicize the success cases and customer benefits of our products in specific industries, and compare our products with those of our competitors in order to stimulate customers' desire to purchase. This phase requires accuracy, and precision marketing needs to be performed based on the profile, journey, and location of customers.
- **Phase 4 — Action:** Drive customer actions through promotions and face-to-face marketing. This phase features stability and effective conversion of business value.

In addition to different phases, various marketing channels also play different roles. Here are some examples:

- “Reading customers' minds” in digital marketing: It is very important to understand what customers think. In the past, we read customers' minds based on experience. However, now, in compliance with the General Data Protection Regulation (GDPR), we can read customers' minds by analyzing their online behavior. For example,



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— Qiu Heng, President of Global Marketing, Enterprise Business Group, Huawei Technologies Co., Ltd.

if a target audience searches for keywords such as “Wi-Fi” or “Network” online, the audience may be in the awareness phase. If an audience searches for a brand or product/solution name, or watches related product videos online, it may be in the interest phase. By identifying and analyzing these behaviors, we can determine corresponding marketing strategies for certain audiences.

- Airport ads are mainly used to build awareness among potential customers by letting them know about a certain new product. However, airport ads are not enough to drive customers to make a purchase.

- An important objective of offline precision marketing activities, is to guide PoC tests. In 2019, we held an IP Club activity in Japan, which yielded four PoC opportunities. We also held three IP Club events in South Africa, leading to 12 PoC opportunities.

Furthermore, different types of products require different online and offline investment proportions. For example, Wi-Fi 6 marketing is similar to 2C marketing and requires 50-50 division of online and offline marketing investment. Products like data center switches require more offline investment, so the ratio of online investment to offline investment can be set at 1:19.

Four World-Leading Products: AirEngine Wi-Fi 6, OceanStor Dorado, UPS + SmartLi, and OptiXtrans DC908

Star product campaigning must be focused on powerful, top-class products. We believe only top-class and industry-leading products that will really impress customers should be campaigned as star products. In 2020, we will use the new-generation products of AirEngine Wi-Fi 6, OceanStor Dorado, UPS + SmartLi, and OptiXtrans DC908 and work with our partners to achieve shared success.

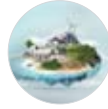
- **AirEngine Wi-Fi 6**

With a profound understanding of 5G technologies, Huawei leads the development of Wi-Fi 6. According to certification from leading testing institution Tolly, Huawei’s AirEngine Wi-Fi 6 AP has the highest single-radio rate — 3.8 Gbit/s — in the industry, 1 Gbit/s faster than the second-ranking AP. The new-generation AirEngine Wi-Fi 6 AP, released this year, is the industry’s first Wi-Fi 6 AP that supports 16 x 16 Multi-User MIMO (MU-MIMO), delivering a rate of up to 10.75 Gbit/s, setting a new record for the industry. The powerful throughput performance enables AirEngine Wi-Fi 6 to provide ultra-fast wireless access and seamless roaming in enterprise office, production, and public service scenarios. We believe that AirEngine Wi-Fi 6 will change the

productivity of enterprises and improve their competitive advantages.

- **OceanStor Dorado**

The next-generation OceanStor Dorado uses the end-to-end Non-Volatile Memory express (NVMe) architecture and is embedded with five Huawei-developed chips for transmission, computing, storage, management, and intelligence, achieving an ultra-low latency of 0.1 ms. According to the SPC-1 test model, OceanStor Dorado supports 20 million Input/output Operations Per Second (IOPS), the highest in the industry. Based on the industry's unique SmartMatrix architecture, OceanStor Dorado can still work even if seven of its eight controllers fail, ensuring zero service interruption. OceanStor Dorado is the best choice for scenarios with databases, VMware



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virtualization, and large-scale Virtual Desktop Infrastructure (VDI) deployment.

- **UPS + SmartLi**

In the digital era, all enterprise data centers need Uninterruptible Power Supply (UPS) and batteries to protect services. Huawei's UPS adopts a unique modular design, supports hot swap of all key components, and occupies 30+ percent less space compared to the industry average. The maintenance and capacity expansion of the UPS takes only five minutes. According to the third-party TUV test, the online working efficiency of Huawei UPS is 97 percent, the highest in the world. In terms of the global modular UPS market share, Huawei has ranked number one in the industry for four consecutive years. Huawei's new-generation lithium battery, SmartLi, has a battery life

4 Industry-Leading Products for Enterprise Markets



AirEngine Wi-Fi 6



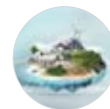
OceanStor Dorado



DCI



UPS + SmartLi



Huawei is ready to work closely with more global partners to carry out joint marketing. Together, we will utilize star product campaigning to boost market space, promote sales, maximize the business growth of our partners, and achieve greater business success.

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two-to-three times longer than that of traditional lead-acid batteries. SmartLi is 70 percent lighter and occupies 70 percent less space, realizing a minimal TCO throughout the lifecycle. In the past, the biggest challenge for enterprises in building equipment rooms was the bearing capacity of the rooms, with batteries placing the highest demand on the bearing capacity. With Huawei's UPS and lithium batteries, any office rooms can be turned into equipment rooms. SmartLi uses the unique active current equalization technology and supports mixed use of old and new batteries, maximizing battery utilization and prolonging battery life. SmartLi also ensures stable system running when a single module is damaged.

• OptiXtrans DC908

Huawei has been a leader in the optical communications field for 12 years. Huawei's OptiXtrans DC908 is customized for enterprise data center scenarios, and is the most intelligent data center interconnection product with the highest capacity density in the industry. OptiXtrans DC908 supports automatic configuration and predictive maintenance, and no special technical capabilities are required to install this product.

Maximizing Partners' Business Growth Through Joint Marketing

With effective marketing tactics and powerful star products, we also need to work closely with global partners. In 2019, we provided comprehensive support for channel partners based on promotional activities, driving their business growth. For example, in Russia, the OceanStor Dorado Flash Only Campaign directly promoted the sales of 70 sets of Dorado V3 3000, worth US\$3.5 million.

As the New Year begins, we have already developed plans, milestones, and key actions for star product campaigns. Support materials such as

advertisements, videos, cloud demos, and white papers are also being released. We hope that our partners can select appropriate star products, develop the objectives and cooperation plans for joint marketing with Huawei, and align our ideas and pace to achieve effective marketing collaboration this year. Considering the volatility of the market and the complexity of joint 2B marketing, we will conduct benchmarking with channel partners' marketing personnel through webinars every quarter to ensure information consistency between Huawei and partners.

Next, I want to offer our partners some key suggestions on marketing:

- In terms of marketing activities, we hope that our partners be more proactive in hosting and participating in Huawei's IP Club and IT Day events. We will invite more customers to take part in Huawei's key marketing activities such as MWC and HC. Partners are also encouraged to be more proactive in attending Huawei's training sessions.

- The official website is an important platform for joint marketing. In 2019, 105 of our global partners released star product advertisements on their official websites. In 2020, we expect more partners to place advertisements on AirEngine Wi-Fi 6, OceanStor Dorado, UPS + SmartLi, and OptiXtrans DC908 on their official websites, with Huawei's logo attached.

- EDM is also an important means of online marketing. In 2020, we will develop more EDMs for star products. We hope that partners can make the most of these resources and push them to customers.

Huawei is ready to work closely with more global partners to carry out joint marketing. Together, we will use star product campaigning to boost market space, promote sales, maximize the business growth of our partners, and achieve greater business success. ▲



Building Digital, Proactive Supply Chains with Continuous, Efficient, and Secure Characteristics

By Xiong Lening, President, Supply Chain Management Department, Huawei Technologies Co., Ltd.

In 2019, Huawei faced mounting external challenges that tested its supply chain management. Despite this pressure, however, it maintained business continuity. Huawei's Enterprise Business Supply Chain Group went even further, developing corporate supply chain policies, and deploying strategies such as production-sales coordination and digital, intelligent operations. Indeed, Huawei's partners have grown more and more confident in the company's ability to build digital, proactive supply chains and provide both its partners and customers with B2C experience in B2B business.

Complex Supply Environments Provide Great Challenges

In a world of political and economic instability, every industry requires supply chain continuity, security, and reliability. In particular, continuity is essential throughout the entire supply chain, from raw material procurement production to logistics. Yet it is becoming more challenging to establish supply chains with efficient, end-to-end processes that guarantee material availability,

manufacturing productivity, and product delivery.

Meanwhile, those supply chains are becoming progressively more complex, with growing uncertainties and a huge gap between supply and demand. As raw material supply chain lead times increase and companies form regional clusters, it becomes increasingly difficult for enterprises to quickly deliver goods around the world. As a leader in the 5G era, it is Huawei's duty to facilitate the Information

Huawei deploys eCommerce automatic logistics models within each node on its global supply chain network, to build digital, proactive supply chains that are continuous, efficient, and secure. Huawei cooperates with partners to improve the overall supply value chain's digital competencies, and facilitate information sharing across the enterprise supply ecosystem, optimizing collaboration.

and Communications Technology (ICT) industry's supply chain growth by helping suppliers improve their production, onsite management, planning, and end-to-end supply chain management capabilities.

Business Continuity Management Systems and Diversified Policy Development

Huawei's supply chain has consistently provided customer services in compliance with local laws and regulations. To date, Huawei has signed contracts for more than 50 5G projects worldwide. Meanwhile, shipment volumes of flagship products — in wireless networking, optical transmission, data communications, and IT domains — have grown rapidly. This has been achieved using Huawei's long-term Business Continuity Management (BCM) system and diversified supply policies.

In terms of product supply, Huawei ensures continuity by adopting diversified technical plans, multi-region supply strategies, and multi-level planning inventory management systems. Huawei has also established multiple supply centers and designed global supply networks that integrate regional warehouses (also known as hubs) and logistics routings, to ensure service continuity for customers.

Meanwhile, Huawei has set up an end-to-end BCM process by aligning the BCM system with suppliers and customers, while also ensuring the company understands process

implementation responsibilities. This has greatly improved supply chain resilience and continuity.

Building Digital and Proactive Supply Chains While Ensuring Supply Continuity

Huawei's foundation is built on supply continuity. Huawei's supply chain strategy aims to build digital, proactive supply chains while delivering supply continuity. The B2C experience for B2B partners and customers is improved by adopting simple transaction and settlement processes, allowing them to receive stable lead times and quick product delivery.

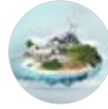
Huawei's digital, proactive supply chain strategy includes the following:

- **Production, Sales, and R&D Integration**

Huawei adopts a component/modular-based product design model to streamline the integration design process for customers, partners, and suppliers alike, allowing customers to flexibly assemble standardized product modules based on their exact requirements. Huawei has replaced the traditional one-size-fits-all operating model with different product/industry-specific operating models to create distinct supply chain advantages.

- **Supply Value Chain Collaboration**

Collaboration with customers and partners to improve supply value chain services is key for Huawei. Before contracts are signed, parties need to discuss configuration alignment,



Huawei's supply chain strategy aims to build digital, proactive supply chains while delivering supply continuity. The B2C experience for B2B partners and customers is improved by adopting simple transaction and settlement processes. >>

planning, and capability and resource visualization. This ensures contract confidence while reducing supply uncertainty. Huawei aligns its data, processes, and systems with partners, enabling simplified information sharing and end-to-end visualization.

• **Simplified Supply Chain Experience**

Huawei delivers a simplified supply chain experience by integrating production, sales, and R&D, implementing supply value chain collaboration, and building automatic, simplified supply chain models with self-restoring, self-optimizing, and self-adapting capabilities. This helps prevent supply network decoupling and supports self-adaptive planning, proactive order management, and efficient logistics.

• **Agile supply chain networks:** By using modular network capability designs, node capability backups, and risk contingency plans, Huawei provides networks that can cope with external uncertainties, and can be quickly set up and withdrawn.

• **Self-adaptive planning:** Huawei establishes a two-layer plan implementation mechanism to enable

dynamic collaboration and fast resource adjustment. Artificial Intelligence (AI) technologies, and algorithms are used in requirement identification and also assist with decision-making. Resources can be arranged and allocated during the self-adaptive planning stage.

• **Proactive order management:** Huawei develops transaction rules and provides Service Level Agreements (SLAs) in advance, based on transaction processing; builds differentiated order fulfillment channels following order generation; and arranges fulfillment activities based on different scenarios and automatically schedules production, adhering to an SLA's supply commitments, successfully establishing a no-touch order fulfillment model.

• **Efficient logistics:** Based on the transportation of physical goods, Huawei enables automatic operations using information integration, automatic equipment, and big data technologies. As a result, operations are streamlined among supply nodes, enabling an end-to-end goods transportation process

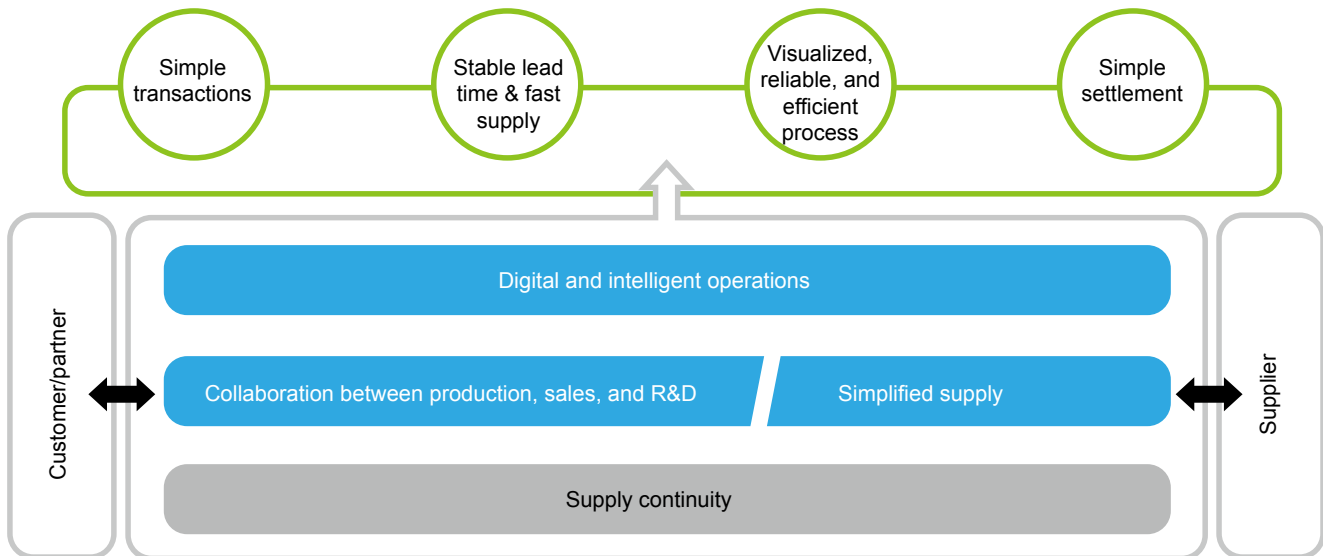
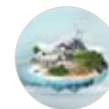


Figure 1: Huawei's supply chain strategy



By using forecast-based planning management and ATP capability visualization, Huawei guides partners on order placement cycles and order amounts. To date, the average lead time is 4.7 days, and the SLA fulfillment rate within seven days is 93 percent. >>

that is secure, reliable, continuous, and efficient.

- **Digital, Intelligent Supply Chain Operations**

Huawei builds Intelligent Operation Centers (IOCs) that are scenario-based, hierarchical, and flexibly configured, in order to form a digital twin with the physical world. Instructions can be transferred to physical operation sites by applications, algorithms, and models that operate in the digital world in real time.

Huawei Enterprise Supply Chain Success Stories

Huawei adheres to its enterprise business supply chain strategy, achieving success in diverse scenarios by adapting the strategy to address different factors, including products, customers, and business models.

- **Channel Distribution Management**

Huawei — in collaboration with partners — has established an interlocked supply-demand mechanism that includes a clear set of rules. It determines the supply amount to deliver to partners after determining their requirements at the beginning of each quarter. By using forecast-based planning management and Available-To-Promise (ATP) capability visualization, Huawei guides partners on order placement cycles and order amounts. To date, the average lead time is 4.7 days, and the SLA fulfillment rate within seven days is 93 percent.

- **Run Rate Order Management**

Huawei establishes fast fulfillment capabilities for its regional distribution centers (GLP), in low-end and mid-range enterprise IP (data communications) products.

GLP's entire stock is assembled as a set, using Product Configuration Instance (PCI) design and planned maximum/minimum inventory models. The traditional make-to-order model has

been transformed to a supply-from-stock model using automatic production scheduling, with a commitment to fulfilling orders. Furthermore, through 'clean order' management, Huawei helped improve GLP's preparation capabilities, enabling orders to be immediately shipped following assembly.

GLP's one-day finish production rate and three-day delivery rate has seen significant improvements, covering 65.5 percent of shipped low-end and mid-range IP products in China.

- **Key Projects**

Huawei collaborates with Key Named Accounts (KNAs) and industry customers in project supply solution planning, and ensures prompt supply by preparing resources before project delivery. The supply satisfaction rate of customers has increased to over 90 percent, with several strategic and core KNAs receiving goods within just one week.

- **Peak Seasons**

Huawei collaborates with partners during the second and fourth quarters to develop production-sales coordination mechanisms for upcoming peak seasons. Huawei encourages partners to place orders and make payments based on production, enabling seamless logistics and helping to ease production pressure during peak seasons. Huawei's delivery has flourished in peak seasons, with an order fulfillment rate that reaches 98 percent.

Huawei deploys eCommerce automatic logistics models within each node on its global supply chain network, in an effort to build digital, proactive supply chains that are continuous, efficient, and secure. Huawei cooperates with partners to improve the supply value chain's digital competencies and facilitates information sharing across the entire enterprise supply ecosystem, optimizing collaboration with partners — and helping to establish a 'digital Huawei.' ▲



Digital Ecosystems Enable Supply Information Sharing and Alignment Among Partners

By Sun Deqiang, Vice President, Supply Chain Management Department, Huawei Technologies Co., Ltd.

Huawei Enterprise Business Group (EBG) has experienced rapid business growth in recent years. To maintain its growth, Huawei EBG — in collaboration with partners — increased its efforts to build a digital channel ecosystem for the future. With that goal in mind, it released a policy in 2018 that encouraged distributors to organize the collection of goods themselves, rather than rely on inefficient delivery services. Huawei hoped that this move would improve the logistics capabilities of distributors and deliver a better warehouse service experience.

By 2019, distributors had adopted this ‘self-pickup’ mode in more than 80 percent of orders. However, another challenge emerged as logistics service volume surged: Tier-2 resellers and customers requested better logistics service quality. To achieve this, distributors began looking into how to improve their warehouse management efficiency.

Supply Efficiency and Perception Improvement Become Priorities

Alongside its supply and value chain distributors, Huawei also faced

challenges such as improving supply efficiency and perception while maintaining business growth.

In fact, these challenges caused problems for Huawei’s customers, who expressed their dissatisfaction with logistics systems that couldn’t be visually displayed. Comments included:

- “We can see on the eChannel platform that goods have been picked up by the distributor, but we do not know the current location of the goods or the expected delivery time.”
- “We are always informed of delivery delays or when to expect

In 2019, Huawei collaborated with global distributors to build a digital ecosystem. The ecosystem has enabled the sharing and alignment of end-to-end supply information, made partner transaction processes visible online, enhanced operations efficiency, and improved overall Tier-2 reseller and customer satisfaction.

delivery at the last minute.”

- “We have to make many calls to know the logistics status of urgent orders. The information is always transferred through various owners who are difficult to contact.”

- “Huawei’s real-time logistics information was viewable before the ‘distributor self-pickup’ mode was adopted. Why can’t we view the logistics information of the whole process now?”

Huawei’s customers and Tier-2 resellers had grown accustomed to Huawei’s observable supply information display, providing real-time information about goods production, outbound status, and shipment. Naturally, they were unsatisfied that distributor logistics information wasn’t similarly displayed.

However, Huawei’s customers and Tier-2 resellers said that they were satisfied with Huawei’s own customer-centric supply value chain. The company’s supply managers had visited key distributors on multiple occasions, and they clearly understood that simple packing list information transfer was essential to support distributors’ logistics and warehouse management. They also understood that it had become harder for traditional information processing methods to satisfy modern business requirements. The distributors that continued to use traditional methods focused on improving labor management and efficiency, and they also identified several business challenges:

- “We have two dedicated employees for packing list download and upload, and three part-time employees for lead time update. However, manual order processing can easily result in work overload at peak seasons.”

- “If our systems are interconnected, more suitable vehicles can be dispatched according to packing list volume. Mis-shipment can

be avoided, as the systems will check the codes of inbound and outbound packages. Meanwhile, we can reduce the workload of two employees in manual order processing. This will save labor costs by more than US\$100,000.”

- “There are seven steps throughout an inbound management process, including packing list download, data format conversion, and data upload.”

- “Component substitutes cannot be shipped inbound until the information has been manually confirmed with various related personnel. The complicated checking process wastes time and labor; it also extends the end-to-end delivery cycle.”

In 2019, to address these business development challenges, Huawei and its distributors began supply information sharing and alignment based on digital collaboration. Huawei developed an interconnection model for the channel supply collaboration system, which was used to streamline business processes, and establish unified data standards. It finally resulted in visible collaboration mechanisms that interconnected Huawei’s supply chain with the packing list and logistics systems of partners.

Digital Collaboration Enables Supply Information Sharing and Alignment

In May 2019, during the China Partner Supply Forum’s executive exchange, Huawei shared and aligned its digital collaboration strategy with distributors. Following the exchange, distributors increased their investment in digital system collaboration and interconnection, to carry out joint digital supply information interconnection with Huawei.



Huawei continued to optimize user experiences following the success of the IT system interconnection, by making solutions more comprehensive and improving Time To Market deliverables. >>

Huawei and distributors held at least two meetings every week to analyze distributors' business processes and requirements, discuss feasible system interconnection solutions, and align business and IT solutions. All parties agreed for Huawei to transfer distributors' key packing list information and distributor transfer logistics information, with data interconnection to be completed in 2019.

To establish logistics information interconnection security control, signature requests were used to protect back-end services and data transmission during Application Programming Interface (API) opening. Meanwhile, Huawei Customer Network Cooperation (CNC) served as the packing list information bridge, interconnecting partner systems with Huawei's internal systems. By sharing and aligning information according to industry standards and regulations, Huawei enabled the

“order placement by distributors and goods delivery to Tier-2 resellers/end customers” process while ensuring end-to-end logistics information visibility. The online transaction experience and supply efficiency for partners improved significantly.

Huawei continued to optimize user experiences following the success of the IT system interconnection, by making solutions more comprehensive and improving Time To Market (TTM) deliverables.

Huawei continued modifying the interconnection solution, supplementing key information to be aligned based on complicated packing list information and close collaboration of both parties' business and IT systems, in order to improve the completeness and timeliness of data.

By analyzing interconnected information, systems can identify one-off delivery and multiple delivery scenarios. The logistics information of

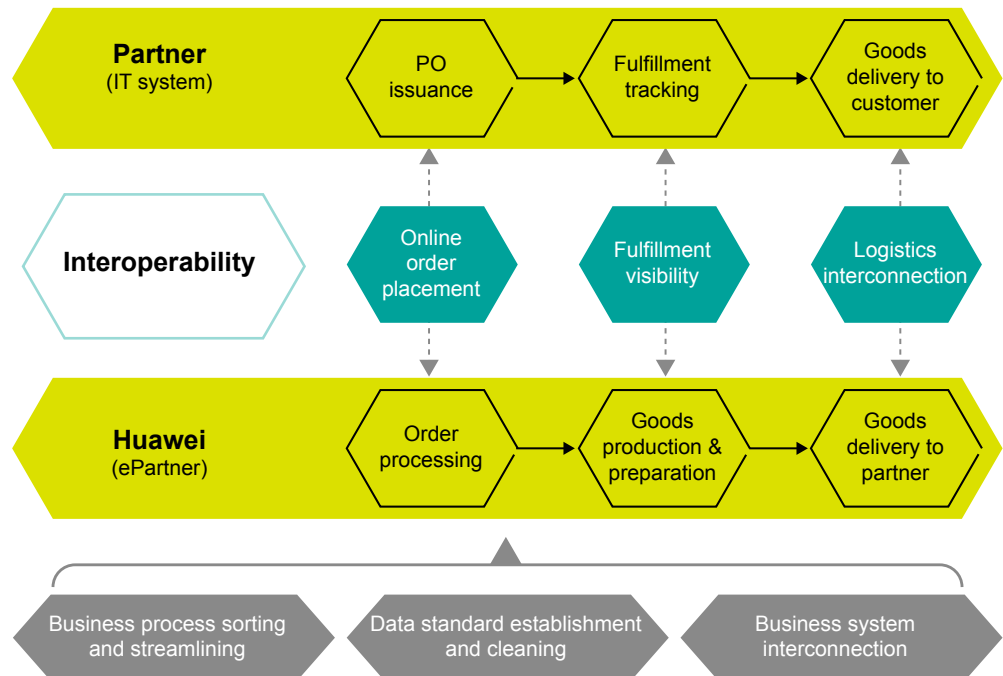
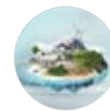


Figure 1: Supply information sharing and alignment based on digital collaboration



System interconnection and information visibility have improved monthly distributor delivery efficiency by an average of five percent, while the visibility and completeness of logistics node information has improved by over 20 percent on average.
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each individual journey during multiple deliveries is visible and searchable by using channel orders. This helps improve delivery service quality for end customers. Meanwhile, Huawei established an analysis platform for logistics information of distributors, to help improve delivery information flow and the implementation capabilities (physical goods delivery) of distributors.

Since August 2019, six distributors — VSTECS, Digital China, Kinghighway, Founder Century, Synnex, and CNBM — have collaborated with Huawei to implement system interconnection and information visibility, making logistics information visible to more than 6,000 Tier-2 resellers. Information sharing and alignment enable real-time goods tracking and in-transit status updates, helping Tier-2 resellers and customers better prepare for goods reception and inbound planning, while also improving logistics experiences and efficiency.

By deploying big data analytics, the logistics service quality of distributors can be supervised and evaluated on visualized dashboards, and analysis capabilities help Huawei collaborate with partners to improve end-customer service quality, with clearer targets, and optimized logistics capabilities.

System interconnection and information visibility have improved monthly distributor delivery efficiency by an average of five percent, and the visibility and completeness of logistics node information has improved by over 20 percent on average.

The Construction of Digital Ecosystems Has Been Recognized by Customers and Partners

By adopting system interconnection, partners can share real-time information, such as Huawei's

supply status and logistics. The end-to-end, visible transaction and fulfillment status improves partners' transaction experience. Moreover, Huawei's efforts in digital ecosystem construction have been recognized by customers and partners alike.

• Customer Perception of Logistics Visibility

Customer A: "I'm very glad that we can view the real-time logistics status of some distributors on Huawei's platform, which enables us to arrange personnel in advance for the reception of goods. In addition, we can more accurately make and adjust subsequent plans for installation and testing. We hope that Huawei can release a mobile version in the future so that we can view the information anytime and anywhere."

Customer B: "We have been querying the goods preparation information recently. Now, we can see the logistics information after the 'distributor self-pickup' node. This function is of great value to us. For example, when some orders are transferred to Shanghai, we can know the goods arrival information earlier than the distributor sales personnel. We don't need to wait for the delayed logistics query results. We hope that all distributors can provide such information."

• Partner Perception of Packing List Information Alignment

Channel Partner A: "The system has been basically interconnected. Huawei's packing list information can be transparently transferred in real-time and directly sent to our system. This reduces manual operations and improves efficiency. We hope that some minor issues can be further improved."

Channel Partner B: "After the packing list information was interconnected, our operation efficiency greatly improved. We hope that we can further integrate more information, including order and invoice information, to improve overall operations efficiency."▲



Compwire: A New Player on the Stage of Digital Transformation

By Marcos Choinski, CEO of Compwire

Founded in 1996, Compwire's main business covers data centers, storage, networks, virtualization, and big data, with an annual sales volume exceeding US\$30 million. Compwire sells products across Brazil, and has gained extensive experience through many years of cooperation with enterprise and government customers. Compwire's strong ICT solution integration, sales, and delivery capabilities have earned it considerable influence in the industry.

Realizing Transformation in Increasingly Competitive Traditional Industries

From 2015 to 2016, Brazil suffered from political instability and a sluggish economy. Rapidly growing vendors, such as Huawei and HDS, brought fierce competition to the traditional storage market. Compwire's business had declined, because it mainly relied on government customers. Aware of the dilemma, the company recognized that it urgently needed to transform itself.

As more and more industries began undergoing digital transformation, the Brazilian government decided to follow suit, promoting digital and paperless offices. The government also established the Public Safety Department, a new federal department that would build digital cities and Safe Cities to address the security challenges caused by political instability.

In light of these developments, Compwire's sales volume was declining in the traditional market, while the emerging digital city and Safe City market offered major opportunities for growth. Compwire decided to find new partners, and Huawei was the natural choice for many reasons:

- Huawei had high-quality storage products, and in recent years, its sales growth rate had ranked first in the storage market in Brazil. Huawei also offered portfolios of Internet Protocol (IP), Information Technology (IT), VC, and wireless products. Through working with Huawei, Compwire could expand its business to cover more products.
- Huawei offered comprehensive Safe City solutions, and had deployed the first CloudIVS project in Brazil. Huawei's advantages in the Safe City market perfectly matched Compwire's transformation requirements.
- Huawei's products and solutions covered a wide range, including the Internet of Things (IoT), Artificial Intelligence (AI), big data, and inverters. Compwire could leverage the cooperation to partner with enterprises and governments on their digital transformation journeys.
- Huawei had adhered to a strategy of providing products for integration in Brazil, which meant that it sold its Huawei products through local partners. From a long-term perspective, this strategy guaranteed that Compwire would benefit from the cooperation.

Compwire will continue to work with Huawei, leveraging Huawei's product portfolios and ICT solution integration capabilities. Compwire will strive to become an important partner of enterprise and government customers on their digital transformation journeys.

From Point to Plane: Realizing Extensive Cooperation

- **Getting to know each other through competition:** From 2017 to 2018, Huawei Enterprise Business grew quickly in Brazil, especially in the storage market, where Compwire operated. As Compwire and Huawei became competitors in various projects in government and finance, the two companies got to know each other well. As the old Chinese saying goes, “no discord, no concord.”

- **High-level contact and partnership establishment:** To expand its business in Brazil, Huawei was looking to find partners with strong capabilities. From December 2017 to February 2018, senior executives from Huawei's Brazil Rep Office visited Compwire, introducing Huawei's business perspective, the channel strategy of providing products for integration, and Huawei's strong desire to cooperate with local, professional IT channel partners. Senior executives in Compwire expressed their interest in cooperation.

- **Collaborative expansion for major breakthroughs:** The partnership is growing stronger. Senior executive from Huawei's Brazil Rep Office is aiming to participate in biddings, creating a steady Business Plan (BP), guaranteeing the success. Compwire understood Huawei's partner-oriented strategy, and started to invest in the cooperation, becoming one of Huawei's Certified Service Partners (CSPs).

- **Harvesting the fruits of strategic cooperation:** In October 2018, senior executives from Compwire attended *HUAWEI CONNECT 2018*. After extensive discussions with Huawei Enterprise Business Group executives, the two companies decided to cooperate on storage, networks, and Safe City solutions. They started collaborating more closely, sharing valuable customers, expanding their business, and making breakthroughs in domains such as storage, servers, and private cloud platforms. With the Huawei Dorado all-flash storage's outstanding performance and low latency, Compwire gained important customers as such as the State Labor Court and the State Secretariat of Finance.

A New Vision: Working with Huawei to Become an Important Partner of Enterprise and Government Customers in Digital Transformation

In early 2019, Compwire joined Huawei's global Partner Advisory Board (PAB). We attended roundtable meetings in China and visited Huawei's HQ in Shenzhen, as well as R&D centers. The Business Plans (BPs) jointly compiled by Huawei and Compwire have been

used to win Named Accounts (NAs) in the government, banking, oil and gas, power, and other sectors. In May, Compwire introduced its cooperation with Huawei at *Huawei's Brazil Channel Eco-Partner Conference*, and was named Huawei's 'Best IT Partner of the Year.'

We spoke at the conference, stressing the importance of embracing change and collaboration: “We are undergoing deep changes in the technology world, what people call digital transformation, with technologies such as big data, analytics, AI, cloud, and the IoT, among other new and emerging technologies. In this scenario of technology integration, my role and the roles of our executives, is to promote a profound change inside our company. For this strategic moment, we looked for a partner that could provide us a wide portfolio. And all the paths led us to Huawei. Besides a broad product portfolio, we saw at Huawei the opportunity of aggregating a large service portfolio and consulting service from Compwire. In this scenario of digital transformation, many new opportunities have arisen such as the IoT, AI, and smart cities, which have already become a reality for our business. Huawei is not only huge in terms of space, but also immense in terms of developing new technologies. And this is of utmost importance to us.”

Compwire looks forward to continuing to working with Huawei, leveraging Huawei's product portfolios and ICT solution integration capabilities. Compwire will focus on the data center, big data analytics, the IoT, and Safe City domains, striving to become an important partner of enterprise and government customers on their digital transformation journeys. Huawei has decided to certify Compwire as a solution partner. Following the establishment of the OpenLab in Brazil in June 2019, Huawei and Compwire will collaboratively test and develop solutions in Brazil. ▲

Partner Testimonials

“In this scenario of digital transformation, many new opportunities have arisen such as IoT, Artificial Intelligence (AI), and Smart Cities, which have already become a reality for our business. Huawei is huge in terms of space and immense in terms of developing new technologies. And this is of utmost importance to us.”

— Marcos Choinski, CEO of Compwire



How Huawei Helped EVI Become a Leading Smart City Solution Integrator

By *Joselito Dungca, President of EVI Distribution Philippines Inc.*

EVI is the Philippines's leading integrated Information and Communications Technology (ICT), Smart City and Pro Audio and Video (AV) systems solutions provider. Founded in 2002, it has about 200 employees, and its annual revenue is US\$10 million. In 2018, EVI began working with Huawei and started using its Safe City and Smart City solutions. EVI has since rapidly expanded its business and transformed from an AV systems integrator into a Safe City solution integrator; it has also won multiple command center projects and supported the digital transformations of the Philippines's government and industries.

Saturated AV Market Needed Business Transformation

In recent years, competition in the Filipino AV market became increasingly fierce. Undifferentiated products led to price competition among integrators. Profit margins dropped rapidly, and the market was almost saturated. EVI urgently needed a business transformation to maintain its revenue growth.

The government was deploying Safe City and Smart City solutions in the Philippines, and trying to make all cities in the country into

safe cities. The project required security systems, such as CCTV, to realize security surveillance and traffic management.

EVI wanted to participate in the project but was unsure how to undertake its own business transformation into an ICT integrator. It needed to continue providing quality solutions and services for existing customers; to be an ICT integrator, it also required good knowledge of networks and IT devices, and many professional personnel. EVI did not have these resources and could not attain them all within a short

Working with Huawei, EVI has since rapidly expanded its business and transformed from an AV systems integrator into a Smart City solution integrator; it has also supported the digital transformations of the Philippines's government and industries.

time period. Meanwhile, many of its competitors had accumulated extensive experience over the past 20 years.

In these circumstances, EVI could not successfully transform by itself, so it reached out to Huawei, which had entered the Filipino market about four years earlier and achieved rapid revenue growth. After several rounds of communication, EVI realized that Huawei could expedite its business transformation. Many of EVI's customers had security requirements that Huawei could help with, and Huawei's Safe City solution could effectively leverage EVI's technologies and personnel in the AV industry. Working with EVI, Huawei could also enhance its advantages in the Safe City domain by using EVI's local resources, such as video walls and video backhaul.

Transforming into a Safe City Solution Integrator

The transformation was much harder than expected, and Huawei and EVI experienced several setbacks in quick succession as they tried to cooperate.

At the beginning of 2018, EVI organized a team to promote Huawei's eLTE solutions. Because the Filipino market was still transforming from analog to digital, the application for the LTE spectrum was difficult, and the promotion did not achieve the expected outcome. In mid-2018, Huawei and EVI worked together to try to win a contract for a major IPT project with a governmental customer in the Philippines (Customer P). Because of a lack of mutual understanding between the two enterprises, they did not achieve their desired results. Toward the end of 2018, Huawei and EVI promoted Huawei's Safe City solution to Customer P, and Huawei and EVI bid for one of the organization's projects. Customer P could not reach an internal agreement and rejected the bid.

The struggles during these cooperation attempts affected both sides' confidence. Huawei and EVI analyzed the situation. Despite the difficulties in their cooperation, EVI recognized that Huawei had several major strengths, such as a large sales volume, a vast company scale, a mature ecosystem, and rapid development capabilities that were better than other ICT vendors. As well as these advantages, EVI also believed in Huawei's outstanding new ICT.

Teams from both companies redesigned the communication methods and agreed to jointly focus on attracting Customer P again. Because of the quality of EVI's solution and Huawei's end-to-end ICT products, they finally won Customer P's command center project.

Soon after this successful cooperation, EVI and Huawei won Customer L's command center project. A month later, Huawei and EVI cooperated again and won another command center project from Customer P — a project they had previously bid for unsuccessfully. Meanwhile, EVI made breakthroughs with Huawei's core customers because of its video conferencing products.

Integrating New ICT and AV Technology to Build Safe Cities and Smart Cities

Huawei's Safe City solution helped EVI achieve rapid business expansion, gain customers and double its revenue. Huawei has also strengthened EVI's solution capabilities, launched competitive Safe City solutions, set a benchmark for the market, and empowered EVI's business transformation and continuous revenue growth.

EVI regards Safe City and Smart City as major business strategies for the future. Integrating Huawei's ICT technology with our AV technology, EVI will become the leading Safe City and Smart City solution provider in the local market, and help in building the Philippines into a better nation. ▲

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Partner Card

EVI Distribution Inc. is the leading distributor and systems integrator for professional audio, audiovisual, broadcast, and auxiliary systems with over a decade of experience in the Philippines. EVI is committed to providing complete design, supply, and installation services that integrate current and emerging technologies to deliver the perfect experience for its clients. Combining the very best audio/video manufacturers, broadcast and security systems brands with its pool of experts, EVI creates a completely customized and innovative solution for its customers.



How VIRTUS Became a Data Center Industry Pioneer

By Christian Atmadjaja, Director of PT. Virtus Technology Indonesia

Based out of Indonesia, VIRTUS is an IT infrastructure solution provider. Its product range includes data center storage for enterprises, business continuity and disaster recovery solutions, data center computing products and networking devices, cloud and virtualization technologies, and end user computing products. VIRTUS's vision is to become the partner of choice for businesses and develop meaningful relationships with them.

Partnering with Huawei: Relationship Begins

Over the past six years, VIRTUS has developed one of its strongest and most successful business relationships to date. In 2013, VIRTUS began working with Huawei, because it saw Huawei as a reliable and experienced company that provided end-to-end IT solutions and had collaborated effectively with different vendors from around the world. Huawei and VIRTUS were united by their desire to ensure customers, business partners, and end-users receive the highest levels of service, responsiveness and dependability.

The cooperation initially involved VIRTUS's sales, presales, and engineering personnel regularly meeting with and collaborating with Huawei's account managers and solution managers. Through discussions, trainings, and best practice-sharing, VIRTUS understood Huawei's products and solutions, and used this understanding to ensure its customers around Indonesia received high-quality services.

VIRTUS continues to invest in Huawei's business goals while extending Huawei's coverage in the Indonesian market. VIRTUS has helped Huawei recruit technical partners that focus on IT storage,

servers, and networks, and has provided presales support, hardware training, and project engagement for them. VIRTUS and Huawei continue to build an increasingly large and sophisticated ecosystem with their partners in the financial services, digital transformation, and energy industries.

Making a Breakthrough with a Milestone Achievement

A significant breakthrough in the partnership came in 2015, when Customer A moved into a new building in Jakarta. The building was 60 meters high, and had an area of 3,180 square meters.

The move also required a new modular data center installed on-site. The 198-square-meter-modular data center was to be built on the building's fourth floor. The project's one-stop solution capabilities, staged deployment, and ease of management were especially important, because these features could not be provided by vendors based in Indonesia.

Following multiple rounds of negotiations and constant solution modification, VIRTUS won the project. VIRTUS chose to collaborate

Supplier and distributor Virtus Technology Indonesia (VIRTUS) has earned an outstanding reputation in the Indonesian ICT market because of its expertise with multiple vendors and consistent, on-time product distribution and services to enterprises.

with Huawei, because Huawei was the only vendor based in Indonesia that could provide an End-to-End (E2E) solution and had access to the products needed to ensure successful migration, including the IDS2000 modular data center and NetEco intelligent management platform.

Huawei has also made continuous innovations in intent-driven networks as well as intelligent and lossless networks. Since its launch in 2012, Huawei's Cloud Fabric Data Center Network Solution has been deployed in 7,800+ enterprise data centers in over 120 countries.

After harnessing Huawei's extensive R&D capabilities and comprehensive technical expertise, VIRTUS provided Customer A with a next-generation modular data center that fulfilled their strict design requirements, cementing VIRTUS's position as an E2E modular data center solution and service provider.

This project transformed VIRTUS from a company with limited project experience into an industry-leader for data center solutions. This was a milestone achievement for both VIRTUS and Huawei.

Working Closely Together, Expanding Portfolio

VIRTUS's success establishing a customer's modular data center paid dividends, as it was awarded a network implementation project for the Indonesian heavy equipment solution provider Customer T, the authorized dealer for CAT equipment in Indonesia, in 2018. The project required reliable, reputable network solution suppliers, and the companies involved had to have demonstrated experience working on large projects.

The project began with VIRTUS and Customer T's service integrator discussing each party's responsibilities. After choosing Huawei to supply the network products, they decided on the best implementation methods for rural Indonesia.

Rural Indonesia is challenging for network implementation because it lacks infrastructure and established network resources. While VIRTUS was responsible for managing the network products' deployment in rural areas, as well as the implementation and cabling processes — both were made more challenging because of the poor road quality and tropical climate.

Because Customer T had strict requirements, including

collaborating with multiple vendors, Huawei created a service site to provide post-sales services, resolve any product issues, and ensure the project's success. The service site became key when distributing resources and providing support in rural areas.

VIRTUS and Huawei remained committed to providing outstanding services to rural Indonesia, while transforming into value-adding-distributors, and maintaining Customer T's high standards. With joint efforts, the project became another success story.

This was one of many successes in the partnership. Indeed, the results speak for themselves: Since 2017, Huawei has contributed to more than 20 percent of VIRTUS's revenue — the second-highest proportion among all of its product vendors.

Attaining Mutual Benefits Through Innovative Solutions

Working alongside Huawei, VIRTUS has delivered multiple projects requiring comprehensive IT infrastructure, and provided services and innovative ICT solutions that cater to global vertical industry and enterprise customers across the government, public utilities, finance, transportation, energy, and SMEs.

The progress that Huawei made is very significant. Compared to some of VIRTUS's previous vendors, Huawei has the best commitment to partners in the channel model, the well engagement, and clear channel policies. VIRTUS believes that the future of IT business belongs to those who have a complete, E2E solution.

Based on the success that the two parties have shared with the partnership so far, VIRTUS is keen to keep working with Huawei, helping to play an even greater role in the Indonesian market by providing E2E solutions. ▲

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Partner Testimonials

“I hope Huawei keeps developing its channel ecosystem. In terms of the number of people in Indonesia who cover the market, local partners will help Huawei to get significantly higher market shares. And, of course, VIRTUS will continue to play an important role in the ecosystem.”

— Christian Atmadjaja, Director of PT. Virtus Technology Indonesia



Cloud Exchange: Boosting Development in Africa Through ICT

By Glad Dibetso, Chief Executive Officer, Cloud Exchange West Africa Limited

As Africa expands its Information and Communications Technology (ICT) infrastructure to become a major player in the global market, digital transformation has unlimited potential to drive development in the region, boost economic growth and improve the quality of peoples' lives.

Indeed, the process of digital transformation is well under way, and there has been drastic technological development over the last two decades. For instance, in 2005, Internet use within Africa stood at just 2.1 percent. Fast-forward to 2018, and that figure has risen to 24.4 percent.

But merely getting people online is not enough. If Africa is to truly compete on a global scale, ICT penetration across the entire continent is essential. The African Union has recognized as much and made it a priority. Indeed, ICT development is key pillar of Agenda 2063, the Union's blueprint for making Africa a global powerhouse, and it is seen as a route to increasing GDP, competing internationally, and improving the lives of citizens. The aim of Agenda 2063 is to ensure that ICT penetration and its contribution to real GDP in absolute

terms will be double the level of 2013 by 2063. In short, deploying advanced ICT to drive digital transformation throughout Africa is of critical importance.

Supporting ICT Penetration with Cloud Solutions

In this environment, there is a golden opportunity for a powerful cloud provider to emerge, and with support from Huawei, this is the role that Cloud Exchange West Africa Limited wants to play. And, based in Nigeria — the continent's largest economy and a center for technological investment — we believe that we are ideally positioned.

Formerly known as Dimension Data Nigeria Limited, dedicated to implementing advanced ICT throughout West Africa, we have become the region's leading cloud service provider. We are devoted

As West Africa's leading cloud provider, Cloud Exchange believe they have a duty to support Agenda 2063 and help achieve its transformational outcomes. And they are grateful that Huawei is partnering with them on this mission.

to supporting clients across public, private, and hybrid cloud environments, and also provide managed and data center services, as well as systems integration.

One of our most significant projects to date has been the construction of the first Uptime Design and Construction Certified Tier-4 data center in the West Africa region. This data center is equipped with colocation services (all-in-one servers available for rent) and interconnects (infrastructure that connects data centers) and serves as the foundation of our Infrastructure as a Service (IaaS) platform. This platform allows us to serve clients across West Africa, and we have plans for further expansion. We decided to partner with Huawei on the data center project, proudly becoming a Huawei Value-Added Partner (VAP).

Benefitting from Huawei's Constant Innovation

Choosing to partner with Huawei was an easy decision. Huawei is constantly innovating, and it is at the forefront of solutions that drive digital transformation. From intelligent video surveillance, to storage and wireless products, Huawei offers it all. But it's not just the solutions available that set Huawei apart from other Original Equipment Manufacturers (OEMs); it's the ongoing support the company provides, before, during, and after solutions are deployed.

Since the partnership began, Huawei has demonstrated its commitment to serving West Africa, with a fully staffed office that employs over 700 Nigerian staff. This close proximity to customers allows extremely efficient support and service delivery. By investing in the skills and capabilities of Nigerian employees, and by establishing offices throughout the country, Huawei has built a good market reputation, while enterprises are confident in Huawei's technology on their path to digital transformation.

Thanks to Huawei's training materials, Cloud Exchange is the partner with the highest number of Huawei-certified professionals in Africa. When an enterprise decides to undergo digital transformation — a process that is becoming increasingly critical — having such a solid team behind them is imperative.

From pre-sales and sales enablement training, to professional and specialist certifications, Huawei provides a comprehensive variety of training opportunities. At Cloud Exchange, we have taken full

advantage of these opportunities to gain insight into the available technologies and simplify our clients' digital transformation journeys.

Another advantage of partnering with Huawei is that it encourages mutual partnerships by offering affordability, as evidenced by a recent all-flash promotion. This initiative enables businesses to reap the benefits of Solid State Drives (SSDs) at the same cost and capacity as optical Hard Disk Drives (HDDs). In doing so, enterprises are assured a 10-fold improvement in performance, up to five times higher reliability, and 70 percent lower energy consumption, while maintaining the same storage capacity at no extra cost.

As well as our Tier-4 data center, we are also focused on helping companies make the shift to cloud computing, using Application Programming Interfaces (APIs) and other hybrid tools, to connect existing infrastructure to cloud infrastructure — ensuring the continuous integration, development, and availability of infrastructure throughout the cloud migration journey. This helps in reducing service disruption for enterprises and these services are delivered through our dedicated DevSecOps engineering and consultancy team.

Building Tier 4 data centers and supporting cloud migration is important to us because, as West Africa's leading cloud provider, we believe we have a duty to support Agenda 2063 and help achieve its transformational outcomes. And we are grateful that Huawei is partnering with us on this mission. ▲



Partner Card



Cloud Exchange West Africa Limited, formerly known as Dimension Data Nigeria Limited (DDNG), is an end-to-end IT company that provides world-class solutions. Following strategic investment from Synergy Capital in 2017, the company became known as Cloud Exchange West Africa. The company has expanded its offerings by building the first Uptime certified Tier-4 data center in West Africa. It is now working toward the goal of being Nigeria's best IT solution provider.



Synnex: Seeking Synergy to Support Continued Success

By Max Zhou You, Global Distribution Business Department, Huawei Technologies Co., Ltd.

Founded in 1988, Synnex International is the largest distributor of communications devices, consumer electronics, and semiconductor products in the Asia Pacific region, as well as the second-largest distributor of these products in the world. In 2018, Synnex generated nearly CNY270 billion (US\$39 billion) in revenue, with its products distributed to 38 countries (including China) in the Asia Pacific and Middle East regions, as well as North Africa and North America. The company currently has offices in 200 major cities around the world.

Service Transformation Is Inevitable

Synnex's collaboration with Huawei officially began in 2008, when the company signed a contract with Huawei's security product line. Immediately, Synnex began to invest heavily in building its team, talent recruitment, and lower-level channel partner cultivation, as well as marketing activities. Success soon followed, leading to additional Huawei product lines — including IT, datacom, and Unified Communications and Collaboration (UC&C) video conferencing — being authorized through Synnex, over the period 2009 to 2011.

By this point — 2011 — Synnex had become China's largest distributor of products and logistics services; in the same year, Huawei formally established its Enterprise Business Group (EBG), to fully enter the enterprise market. Synnex began collaboration with Huawei EBG soon after, becoming one of its leading channel partners.

The partnership, however, soon faced challenges. For example, the speed of Huawei EBG's initial business growth put pressure on Synnex's distribution network, leading customers to doubt its distribution capabilities. Meanwhile, it soon became clear

Synnex International has remained in China's leading distributor of products and logistics services for almost 10 years. Now the company began to look to expand its business abroad, becoming Huawei Enterprise Business Group's lead distributor in the process.

that Synnex's channel-based business modes, which included independent product resale but not multi-product integration or extra service provision, were further restricting its distribution efficiency and negatively impacting the partnership's growth.

Since Huawei EBG had not long entered the enterprise market, there were clear gaps between it and major market competitors in terms of brand awareness, market share, and tangible success stories. It quickly became clear that Huawei needed to work with value-added distributors that could contribute to product resales as well as solution design, multi-product integration, and after-sales services. Synnex lacked these capabilities. As a result, in 2014 and after several years of success, Synnex lost its place as the number one distributor in China.

Undeterred, Synnex was determined to overcome this setback and, following a period of reflection, took effective measures to address the challenges it faced, including:

- **Unaligned business frameworks:** Synnex and Huawei's business frameworks were not aligned. Project owners were not clearly specified, and workplace productivity was low.

To address this issue, Synnex restructured its Huawei support team, aligned it with Huawei's business framework, and specified its project owners. This meant that each department had dedicated support teams, and workplace productivity improved significantly.

- **Unbalanced personnel distribution:** Although Synnex's full-time workforce had sufficient numbers, there was an uneven distribution of personnel. Synnex had invested too much in sales and operations, and there were too few pre-sales engineers.

To fix this, Synnex adjusted its organizational structure, shifting its capability model from sales to pre-sales, and increasing the ratio of pre-sales engineers to sales personnel from 1:2 to 2:1.

- **Decision-making:** Synnex previously used group decision-making mechanisms, which required the company's headquarters to actively involve themselves in key project decisions. This reduced business efficiency as extended periods of time were needed in the decision-making process.

Synnex China solved this problem by applying for backup resources to be specifically reserved for Huawei EBG's business to ensure prompt support at crucial moments.

After implementing the changes, the cooperation between the two companies improved, allowing them to achieve impressive business results in various aspects.

- **Sales performance:** Huawei EBG's sales performance saw significant growth between 2016 and 2018. In 2018, Huawei EBG's growth rate exceeded 80 percent, and its total revenue exceeded CNY6 billion (US\$862 million). Huawei became the third-largest distributor in China, and its sales results are expected to exceed CNY10 billion (US\$1.4 billion) in the near future.

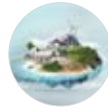
- **Professional team:** Synnex's business team now has over 480 employees, among which nearly 100 employees are deployed in various cities in China. This team has become the model for EBG development around the country.

- **Brand improvement:** In 2018, Synnex supported 354 marketing activities in 30 cities around the world.

- **Project support:** Synnex invested CNY21.21 million (US\$3 billion) in project demonstrations, supporting Proof of Concept (PoC) tests in 204 projects.

Partner Card

Synnex Technology International Corporation (SYNNEX) was established in 1988. By adopting a unique operational model, it has become the largest distributor of information, communication, consumer product, and semiconductor products in the Asia Pacific region, and the second-largest in the world. In 2018, SYNNEX's consolidated sales totaled US\$13 billion, and its accumulated joint venture operation sales exceeded US\$41 billion. SYNNEX provides integrated services to supply chains of high-tech industries, and its business territory covers China, Indonesia, Thailand, Vietnam, India, Australia, the US, Canada, the Middle East, and Africa. SYNNEX has operations in 300 cities in 38 countries and regions around the world.



Synnex and Huawei have experienced significant business success in China. Such success has given both companies the confidence to expand into more and more overseas markets. >>

Developing Services outside China: Personnel, Capability, and Channels

Synnex and Huawei have had significant success in China. Such success — both individually and collaboratively — has given both companies the confidence to expand into more and more overseas markets. In 2013, the cooperation between Synnex and Huawei went international, first expanding into China, before extending to Australia, Thailand, and Vietnam (Expansion into Indonesia is slated for the very near future). And in 2017, Synnex signed a global cooperation agreement with Huawei, obtaining Huawei EBG Global Distributor (GD) certification and becoming its highest-level partner.

Truth be told, over the last five years, overseas business hasn't been easy, just as both companies have experienced difficulties in the Chinese market. Yet both Synnex and Huawei agree that the lessons learned dealing with difficulties in the latter can only assist future overseas expansion.

Difficulties Synnex has most frequently faced

in the overseas markets include:

- **Staffing:** In overseas markets, headcount is relatively small, compared to teams in China, hovering around the 100 mark. As a result, an average of just two Synnex employees in each country branch are available to provide support for Huawei's business.

Compounding this concern, workplace efficiency is often an issue. Workplace culture varies from country to country and local customs must be adhered to and respected, to ensure that any international employees sent from Huawei can enjoy their workplace environments at Synnex.

Furthermore, as businesses are set up overseas, Synnex requires additional financial support from Huawei EBG to cover the initial setup costs. To address this challenge, Huawei EBG regularly applies for supplementary funds to support the expansion of business teams in countries outside China. Recruited personnel are managed by Synnex, but their salaries are paid by Huawei. This helps remove any doubts surrounding Synnex's investment and ensures workplaces have sufficient resources.

- **Employee capabilities:** Business success is made easier when employees feel comfortable in their roles. Meanwhile, improving an individual's abilities remains a priority.

Huawei addressed the low pre-sales and post-sales efficiency and limited capabilities of overseas personnel by organizing training sessions for distributors, while their partners remained responsible for training talent in their respective countries.

Synnex also invited Huawei's product managers to act as mentors for their engineers. Synnex engineers' capability fulfillment rate rapidly improved by employing unified



In 2019, Synnex signed a global cooperation agreement with Huawei



In 2019, Synnex and Huawei signed a global strategic cooperation agreement in innovative fields such as Artificial Intelligence, e-sports, smart devices, and supply automation. >>

enablement at the company's headquarters, national level training, and one-to-one coaching by Huawei mentors.

The two parties also developed reward programs, such as a points system for certified personnel, where employees can exchange points for gifts of varying value.

- **Lower-level channel development:** Synnex is the second-largest distributor of products and logistics services in the world, and its lower-level channel resources for Tier-2 partners are abundant. However, Huawei had limited brand influence outside China, and experienced difficulty transferring its Chinese market success into overseas markets.

As Huawei EBG had not fully-developed its business, mainstream Tier-2 partners were hesitant to cooperate. This meant that Huawei needed to partner with second-ranking Tier-2 partners. Huawei worked with Synnex to determine a list of target Tier-2 partners and develop a joint development plan. In addition, the two parties held a channel partner recruitment conference and invited target Tier-2 partners to participate in the conference to discuss key business information. Both parties secured cooperation from various target Tier-2 partners.

These efforts yielded great results: In 2018, Synnex's performance outside China improved significantly compared with 2016 to 2017, and its overall growth rate exceeded 100 percent.

High-level Interactions Build New Foundations for Future Cooperation

Following significant business growth in 2018 — registering 80 percent growth in China and over 100 percent growth overseas — the first group meeting between Synnex and Huawei was held in Kunming, China, on April 11, 2019.

The meeting was held by the Vice President of Synnex, Huawei EBG Distributor Business Department, and Huawei China Enterprise Distributor Business Department. They gathered to discuss future cooperation between Synnex and Huawei. Following a series of discussions, the three parties were very hopeful about their future cooperation.

The Group President of Synnex Group, Evans Tu, came away from the meeting optimistic about the cooperation between Synnex and Huawei and praised Huawei's corporate culture. Mr. Tu expressed his willingness to visit Huawei in the future — a significant point, since Mr. Tu hadn't visited any other vendor over the last 10 years.

Subsequently, in September 2019, Mr. Tu and Synnex's international management team were invited to visit Huawei's headquarters with Huawei's rotating CEO Ken Hu attending the reception. The two parties held high-level talks, discussed future cooperation, and agreed to begin cooperating with partners in innovative fields such as Artificial Intelligence (AI), e-sports, smart devices, and supply automation. After the meeting, the two parties signed a global strategic cooperation agreement, demonstrating that the cooperation between Synnex and Huawei had reached an unprecedented level. ▲

Partner Testimonials

"During the cooperation with Huawei, I felt that Huawei had a solid operation mechanism and is the best Chinese company I have ever worked with. In the future, Synnex will continue to cooperate with Huawei and will focus on its relationship with Huawei."

— Evans Tu, CEO of Synnex International



Managed Wi-Fi Revamps STC's B2B Services

By Talal Albakr, Vice President-Digital Solutions at STC Solutions

As government and enterprise customers carry out digital transformation, more businesses are rapidly migrating from fixed-access/LAN offices to wireless/Wi-Fi offices. After migrating to a wireless office, B2B customers are more likely to purchase managed Wi-Fi network services than continue to run and maintain their own network model. They can then focus more on their own services, control corporate IT spending, and implement a light-asset operation.

In view of this, Saudi Telecom Company (STC) launched a new managed Wi-Fi network service, expanding its conventional leased line services for government and enterprises and extending the pipe from enterprises' Customer Premises Equipment (CPE) to the customer's LAN Network. Initial estimates reveal that this service will lift enterprise business revenues by over five percent.

Cloud Management and Local Platforms Enable Campus Wi-Fi

Like most operators, STC was reluctant to sell its enterprise customers onto a Cloud Service Provider (CSP). Instead, it opted to provide more services, including delivery, maintenance, and industry

value-added services, to meet enterprises' needs, with the aim of gradually building up its own B2B service ecosystem and increasing its enterprise application business revenue while improving customer loyalty. STC carried out extensive research to select a suitable operating model for campus Wi-Fi services.

Our enterprise business team analyzed how to best approach the three stages involved in offering managed Wi-Fi network services: network planning, deployment, and Operations and Maintenance (O&M).

Conventionally, network planning requires site surveys to gain a clear understanding of how many Access Points (APs) and switches are required, how to install cabling, and other such information.

Using Huawei's CloudCampus solution, STC is well prepared to provide high-quality managed Wi-Fi networks for more enterprise customers. Initial estimates reveal that this service will lift STC's enterprise business revenues by over five percent.

Service deployment requires hardware installation and software commissioning engineers to work on-site at the same time. Hardware needs to be installed and then commissioning engineers must complete network commissioning before the service can be launched. Subsequent O&M is even more troublesome. The local network management center must solve all issues. Each O&M personnel can only deal with a very limited network scope, and a common fault at the customer site may require two to three days to resolve on-site. A major problem with the conventional process is high cost and low efficiency, which is also the main reason most carriers don't provide managed Wi-Fi services.

Therefore, the key to enabling managed Wi-Fi management services is centralized multi-tenant management in the cloud through a series of cloud tools that increase efficiency. First, cloud network planning is essential. Enterprise customers just need to upload a map to the platform, and the O&M center can complete planning for future project installation. The ZTP model of deployment and acceptance is also important. Only hardware installation engineers are required at the project site to complete service provisioning and project acceptance. Supported by a series of cloud tools, subsequent O&M is the most important task. In fact, 80 percent of network problems are solved in the remote network management center.

An open cloud platform can help enterprises with data operations, which are a value-added service for enterprise customers through add-on sales. This is where the value and advantage of managed services lie, helping STC retain enterprise customers. To make this work, local deployment of the cloud platform is the key. That's why STC decided to build its own

cloud platform to provide high-quality, manageable Wi-Fi services for enterprise customers.

Huawei CloudCampus

STC carried out performance testing and competitions over 10 months, trialing various industry-leading cloud platforms, evaluating their functions, usability, and how well they matched STC's requirements. STC ultimately selected Huawei's CloudCampus solution. Two years ago, STC deployed the solution in its data centers and officially launched its managed Wi-Fi network services.

STC discovered that the O&M mobile app and the wide range of products offered by the CloudCampus solution are advantageous in terms of campus Wi-Fi network managed services.

With the mobile app, enterprise customers and STC's O&M center engineers can carry out network O&M anytime, anywhere. Self-service O&M by enterprise customers helps to filter out at least 30 percent of the O&M workload, significantly reducing pressure on the O&M center. Meanwhile, the cloud management platform enables real-time visibility on customer network

Customer Testimonials

"Drawing inspiration from Saudi Arabia's Saudi Vision 2030, Saudi Telecom Company (STC) started shifting its strategic focus toward government and enterprise services in 2016 — a move that's proved advantageous both as a response to increasing competition and also to STC's long-term interests. STC currently has more than 50,000 government and enterprise customers, a lucrative market and huge customer base that's helping us with our digital transformation journey."

— Talal Albakr, Vice President-Digital Solutions at STC Solutions

Huawei CloudCampus solution helps STC's managed Wi-Fi network service:

5+%

Raising enterprise business revenues

30+%

Helps improve O&M workloads

4

months

Complete network deployment of 250+ clinics

5

minutes

Complete network planning and pre-configuration

30+%

Reducing costs of end-to-end network delivery

performance and application performance. The platform uses Artificial Intelligence (AI) to accurately predict network performance trends and automatically repair common faults, such as spectrum interference and Wi-Fi experience deterioration, directly targeting the root causes of faults for each user and service, guaranteeing a high-quality Wi-Fi experience. Crucially, since enabling the service, STC has been able to keep its O&M team the same size as it was two years ago, despite adding a raft of government and enterprise customer network management tasks.

STC also requires a series of products for different Wi-Fi coverage scenarios as well as indoor office scenarios, including high-traffic outdoor scenarios and high-density coverage scenarios such as classrooms, stadiums, hospitals, and student dorms. The ability to cover a range of scenarios has helped STC win more government and enterprise customer projects.

An example of one of these is the Saudi Arabia Ministry of Health (MOH) project. The MOH encompasses 15 sub-departments, including healthcare and drug supervision, healthcare institutions nationwide, more than 2,000 primary health care clinics, and over 250 large hospitals. The MOH sought an operator that could manage its nationwide hospital and clinic networks using a unified platform and also provide network-hosting services.

To ensure the security of medical information in the country, the MOH demanded the cloud storage of healthcare and network management data could not cross borders.

Harnessing the CloudCampus platform deployed in STC's data centers, STC successfully completed network deployment and acceptance of more than 250 clinics in the first phase of the MOH project in only four months, without having

to increase the number of O&M personnel.

In one Riyadh clinic, O&M center engineers were able to complete network planning and pre-configuration work on the cloud platform in five minutes, based on the indoor blueprints of the clinic and detailed project designs provided by the MOH. After configuration was completed, installation engineers brought APs and LAN switches to the clinic. They completed all their work in three hours, including cabling based on the blueprints, installing and powering on equipment, and scanning device MAC addresses and serial numbers using a cloud management app. All told, STC was able to cut the cost of end-to-end network delivery by at least 30 percent.

Thanks to the smooth delivery of the first phase of the project and the cost-saving benefits of the platform, STC succeeded in winning managed Wi-Fi network services projects for over 800 clinics and hospitals in the second phase, which accounted for more than 50 percent of the overall project. To date, these projects have been successfully delivered and commercially deployed.

Managed Wi-Fi Network Services + Leased Lines Drive New Growth

Boosted by the CloudCampus solution and STC's large government and enterprise customer base, STC has successfully sold managed Wi-Fi services and leased lines into a competitive offering. More importantly, our own cloud management platform lays the physical foundation for offering more value-added services and add-on sales to fully cultivate value from enterprise customers. Today, STC is well prepared to provide high-quality managed Wi-Fi networks for more enterprise customers. ▲

(Source: Win-Win)

POWERED BY 5G & AI

Huawei **AirEngine Wi-Fi 6** Transforms Enterprise Network

Extremely fast, high density, lossless roaming for campus





Huawei and Jet Infosystems Take on Tough IT Industry Challenges

By *The Press Center of Jet Infosystems*

Like many great relationships, the partnership between Jet Infosystems — a leading Russian ICT company — and Huawei was forged through adversity. In fact, the bond between us formed incredibly quickly, as soon as we began working together in 2012, on a complex project to create a resilient infrastructure for the Russian National Payment Card System (NSPK).

The market reacted skeptically, because many industry insiders didn't believe we could complete the project within six months. Adding to this uncertainty, Huawei was a new and completely unknown vendor to the Russian market. Yet, despite doubting industry voices, one of our core principles — to always tackle the most difficult cases — proved to be visionary.

Taking on Tough Challenges

We knew it was a huge challenge to create a nationwide, disaster-

resilient IT infrastructure for the country's first national card payment system from scratch, but we immediately started taking the necessary steps. We chose Huawei as our supplier. For the two data centers required, we tested solutions and ran simulations for the design, delivery, installation, and commissioning of the IT infrastructure that were needed — all using products that were completely unknown to the Russian market.

Difficulties that would have, perhaps, deterred others helped to create a bond between Jet Infosystems and Huawei, motivated us

Looking to the future, we have ambitious joint projects with customers from some of the top 10 Russian companies and are planning the implementation of large-scale solutions in the IT market. As we take on these challenges and many more, we are determined to forge ahead with Huawei.

both to fight for the project — against the odds. This was perhaps best illustrated by Huawei breaking from traditional market practices and using their own funds and specialists to assist us.

Huawei allocated the processors required directly from its reserves. In truth, this was instrumental to the project's success — standard delivery times from another vendor would have made it impossible to implement the project within the customer's specified deadline. Similarly, when critical network configuration problems arose, Huawei seconded approximately 20 of its own employees to help directly with the urgent development of a new patch.

It was this kind of focus and dedication that allowed us to deliver the project on time. And, on its completion, we realized that when working together with Huawei, we could massively broaden the scope of what we could achieve. Crucially, they had been with us every step of the way. This is why we have deepened our relationship every year since.

An Ever-Evolving Partnership

In the seven years since that first project, our collaboration has evolved into a close working relationship, and we have become strategic partners in the Russian market, consistently providing outstanding results. Indeed, Jet has attained the highest level of partner status and is officially a Huawei Value Added Partner (VAP). Furthermore, Jet was the first company in Russia to receive the highest level of IT (storage and cloud) and IP (Internal Protocol network) equipment service status from Huawei, becoming a 5-star Certified Service Partner (CSP 5-stars).

During our years of cooperation, Huawei has helped us replace

several generations of equipment. Together, we have completed hundreds of buildings, modernizations, IT replacements, and network infrastructure support projects for customers from the financial, industrial, and transportation sectors, among others. Jet is proud to have won several prestigious awards for 'professionalism and expertise' from Huawei, and has been further honored as the Best Medium and Small Business Sales Partner. Meanwhile, several of our experts have received the highest level of technical certification — named as Huawei Certified Specialists (HCSs) — in the storage systems and network solutions fields.

Customer Testimonials



"We realized that together with Huawei we can do anything. Moreover, they are together with us. That is why we are exponentially intensifying our interaction every year, carrying the key message as a banner: Huawei is not just a producer, but also a highly efficient and well-developed company that grows at a rapid-fire pace. Our close cooperation is a chance for companies across the country to see the opportunities that Huawei offers.

Any project using Huawei equipment not only receives financial benefits and convenience from working with the most powerful IT-complexes, but also long-term investment in the Russian IT market, and an intellectual contribution to the digitalization of the country's economy."

— Vladimir Eliseev, CEO of Jet Infosystems

Modernizing IT Infrastructure at Jet and Beyond

In 2018, we embarked on a major project: the modernization of our own IT infrastructure. Implementing it, we proved that seamless workflow transition into new technological solutions is possible. The project involved a series of large-scale internal IT projects, the creation of an additional data center, the transfer of all systems to a private cloud, migration to new campuses and Wi-Fi networks, and the implementation of a unified communications system.

The project was very challenging, and Huawei, once again, proved that it builds processes better than its competitors can. Huawei's Research and Development department works extremely efficiently, and any issues that do arise — regardless of difficulty, geographical distance, or time difference — are commonly processed within two days. That is one of the reasons why the Russian market has sat up and taken notice — and as a result, we've opened a special zone in Huawei's Russian office to demonstrate success cases that we have jointly implemented.

"Now, having the project implemented in our own company as a success story, we have refined the technological infrastructure, with everything specialized and segmented, so that we can quickly 'mirror' the solution for any customer with the necessary adjustments, thus reducing the time of any implementations," said Sergey Andronov, Director of the Jet Infosystems Network Solutions Center.

There are several large client projects in our portfolio that use Huawei's software and hardware solutions. There are projects involving the construction, modernization, and adaptation

Huawei and Jet Infosystems take on the toughest challenges together in Russia:

< 6
months

Creating IT infrastructure for Russian's first national card payment system

> 10,000

Transitioning employees of Russia's third-largest bank over to VDI

< 2
days

Processing any modernization issues occurring in Jet Infosystems' own IT infrastructure

of branched networks according to the needs of specific organizations. There are other projects focusing on the creation of, and IT support for, complex and distributed infrastructure solutions across the country, for example: transitioning more than 10,000 employees of the third-largest bank in Russia over to Virtual Desktop Infrastructure (VDI); or migrating airport express railway operator Aeroexpress to the SAP HANA database management system.

We value Huawei's ability to respond promptly and efficiently to all customer needs, as well as the near-instant availability of new products for early testing and promotion — proof of the absolute trust between Jet and Huawei. This was the case with the OceanStor Dorado 3000 all-flash storage system, as well as the new version of the second-generation TaiShan Arm server, both of which were adopted early by some customers, even before sales had officially begun.

But perhaps one of Huawei's biggest strengths is that it keeps current with the times and doesn't burden clients with old technologies. And it quickly eliminates software backlogs, so it competes on an open basis. The Russian market appreciates such fair play, and Huawei's market share is, as a result, continuing to grow. As well as having a massive market share in network products and storage systems, Huawei is among the top five vendors in Russia's server and storage IT markets; it has also recently joined the growing all-flash array market.

Looking to the future, we have ambitious joint projects with customers from some of the top 10 Russian companies and are planning the implementation of large-scale solutions in the IT market. As we take on these challenges and many more, we are determined to forge ahead with Huawei. ▲



Altron Nexus and Huawei: Building a Better Connected South Africa

By *Ehimare Aire, CTO of Altron Nexus*

At Altron, we want to help build a better connected South Africa. To achieve this, we need to establish solid partnerships that will endure across multiple projects. That's why we have spent most of the last decade working with Huawei, building multiple broadband networks and solutions for provinces and cities nationwide.

We chose Huawei as a strategic partner because our companies align in terms of our focus on innovation and the comprehensive Information and Communications Technology (ICT) solutions we offer. Our cohesiveness became apparent from the very first project we worked on together, the rollout of a Global System for Mobile Communications-Railway (GSM-R) network, serving South Africa's passenger railway.

For years, South Africa's train-to-ground communications system lagged behind those used in many other countries worldwide. Its existing system had been operating for approximately 20 years

and could no longer provide secure data communications for the railway dispatch system, other voice services, or new signal systems. Essentially, the communications system was holding the railway network back and limiting its transportation capacity, safety, and efficiency.

In 2011, the Passenger Rail Association of South Africa (PRASA) looked to upgrade all of its railway communications systems. Its aim was to build the most advanced passenger railway system in Africa. With a generous budget of US\$15 billion, PRASA sought to create a network on par with that found throughout much of Europe, the GSM-R.

“Altron want to help build a better connected South Africa. To achieve this, we need to establish solid partnerships that will endure across multiple projects. That’s why we have spent most of the last decade working with Huawei.”

Enter Altron Nexus

Our company, Altron Nexus, is one of South Africa’s leading ICT integrators. We are a division of Altron TMT, a South African-based ICT solutions company that offers a suite of world-class solutions, ranging from enterprise network services to Smart Industry platforms and Safe City ecosystems. We provide solutions across multiple networks and technologies, covering narrowband, broadband, fixed, and wireless, and we are the largest supplier of critical communications in sub-Saharan Africa. We feel that this is why we won the contract to design and build PRASA’s ambitious new network.

Spanning Thousands of Kilometers

Facing the massive undertaking of providing a network that spans over 2,200 km and more than 150 stations, we wanted to find a world-class vendor to help supply the GSM-R network. Based on its track record of providing high quality and cost-effective transportation transmission, we identified Huawei as a leader in the global ICT industry and a cutting-edge technology provider. This is why we chose Huawei as our partner for the project.

To date, 800 km of track has been connected with Huawei GSM-R, providing mission critical rail operation voice and data functions that enable train drivers, controllers, signaling engineers, and crew members to perform day-to-day operations more reliably and efficiently. The new network also provides communication services to automatic train protection systems, enabling semi-automatic train driving, which further improves the rail network’s safety and reliability.

Expanding Our Partnership

Following the successful collaboration on the PRASA project, in 2014, we won the bid to build and maintain Gauteng’s Provincial Government broadband network. The project’s goal was to connect all of Gauteng’s local government offices, schools, hospitals, and libraries onto the provincial government owned broadband network, maximizing cost savings through the use of technology.

Given the complexity of the project and the customer’s lack of experience in building and managing networks, it was clear

Partner Card



Altron Nexus provides turnkey network solutions that include end-to-end Plan, Build, Operate (PBO), and funding disciplines. Our National Network Operations Centre (NNOC) uses leading technology, tools, and processes to proactively monitor and manage networks and systems, network infrastructure and ancillary equipment to ensure service uptime. The NNOC operates 24/7/365 to provide full-tier network and services support to our customers. We offer Service Level Agreements (SLAs) that meet the most stringent uptime requirements (up to 99.999 percent).

We supplement network operations by providing managed services across all technologies with a skilled nationwide field service team. Our ITIL-based service management processes ensure that our customers receive high quality services in alignment with ISO 9001 standards. We are ICASA ECNS and ECS licensed.

We are accredited partners to Huawei in South Africa and the Southern African region.

Gauteng needed a service provider that could deliver all the necessary technologies as a complete ‘turnkey’ solution. They needed a solution that could be easily implemented into the government’s existing infrastructure, to protect existing investments. The solution was also required to incorporate design and Build-Operate-Transfer (BOT) capabilities. Based on these requirements, we decided to work with Huawei once again.

We deployed a transport layer network using Huawei enterprise equipment, including Net Engine routers, CloudEngine Core Switches, and the e-Sight management platform, which carries multiple broadband services, including voice, data, and video traffic. Numerous applications and services run on this network, which is currently provided to more than 1,600 sites throughout Gauteng.

As well as these projects, we have also collaborated with Huawei on the City of Ekurhuleni’s public Wi-Fi, deploying a corporate and a public Wi-Fi network covering municipal offices and public facilities within the Ekurhuleni Metro system. The Huawei solution enabled wireless broadband connectivity to provide free public Wi-Fi. Government offices, municipal clinics and libraries were the first locations in which Wi-Fi was deployed, followed by the addition of commercial and residential areas.

To support Ekurhuleni’s 27 departments and public utilities, including access to remote branch offices, Altron Nexus also deployed a Huawei videoconferencing solution. In the past, when city staff had to travel through heavy traffic to attend inter- and intra-departmental meetings their journeys would often be longer than the conferences themselves.

Altron Nexus uses Huawei’s solution to support:

800
km

track of PRASA project connected with Huawei GSM-R

1,600+

sites of Gauteng project that run on Huawei enterprise equipment

27

departments of Ekurhuleni deployed on Huawei videoconferencing

With the new video conferencing solution deployed in all relevant buildings, government departments and public utilities are assured efficient, time and cost saving communications. The solution also integrates into office and business systems to better support the civil services at work in the city.

“Through cooperation with Huawei, Ekurhuleni has deployed city-wide wired and wireless networks, powerful cloud data centers, and government applications,” said Tumelo Kganane, Chief Information Officer of the City of Ekurhuleni. “These are the cornerstones of a Smart City.”

Another major, ongoing project in our partnership is the provincial broadband network for Limpopo province, one of South Africa’s largest provinces, which we are jointly rolling out with Huawei. The goal is to enable connectivity across the entire province by integrating Internet Protocol (IP), and cloud solutions.

The rollout of the Limpopo network will provide the province with open-access, shared, secure, and affordable next generation broadband transmission carrier network. More specifically, we want to connect approximately 6,000 government sites and 1.6 million households by 2030.

From the PRASA project to the current Limpopo project, and multiple others that are ongoing, our partnership has gone from strength to strength, underlined by the fact that we have been Huawei’s leading Value Added Partner (VAP) in South Africa each year since the inception of our relationship. Based on the success of the partnership founded on communication, collaboration, and trust, we intend to continue working with Huawei for many years to come. ▲

AnyLinQ Adds Value in the Dutch Market with Data-Driven Solutions

By *Sebastiaan Smit, Commercial Director of Solutions, AnyLinQ Group*

At AnyLinQ, our mission is quite simple: We are driven by our desire to develop knowledge then successfully apply it for our customers. We are a Netherlands-based company that began as a consultancy firm but then started to take care of our customers' data, becoming a data management specialist.

We use our knowledge and understanding of data-based solutions to make sure that customers have their data available, and that they can manage and use it properly. In short, we are a passionate and loyal partner, helping enterprises thrive in the ever-developing, data-driven world.

Quality and Simplicity

We are a growing company, with revenue steadily increasing and our total headcount now approaching 300 — mainly technical experts and consultants. To support our growth and serve the Dutch market with end-to-end solutions, we have five strategic partners — of which Huawei is the largest.

We are among Huawei's longest-standing Value Added Partners (VAP) and Certified Service Partners (CSP) in Europe. Our well-established working relationship is characterized by the high quality equipment Huawei provides and the ease and simplicity of working together. These characteristics are perhaps best exemplified by the Medical Center Leeuwarden project.

Supporting Change at a Leading Netherlands Hospital

The Medical Center Leeuwarden (MCL) is the largest non-university hospital in the Netherlands. In fact, it is one of the nation's top clinical centers. In 2017, MCL was about to undergo a huge change: replacing its entire Local Area Network (LAN) and Wireless Local Area Network (WLAN). Our involvement in the project began after another hospital recommended AnyLinQ to MCL, as a network specialist.

Quite simply, after a proposal period that lasted several months, AnyLinQ won the MCL bid. We spoke with Huawei, who were able to offer first-rate equipment with multiple layers of redundancy, simple architecture, open standards, a good performance-to-price ratio, high availability of Wi-Fi channels, and the possibility of using

smart sensors. Based on these strengths, we decided Huawei would be the ideal vendor to collaborate with. This meant that MCL ended its long-term relationship with its previous network vendor.

After an installation and implementation period and a degree of trial and error, we completed the project. In most projects that involve replacing an entire network — particularly a hospital's — there are unforeseen circumstances that you have to evaluate and resolve. In these instances, MCL said that it had never before received the level of the support from a partner that Huawei provided, let alone from a vendor.

For example, we were able to carry out the total network migration without a single disruption to this critical network, which human lives depend on. Another huge benefit of partnering with Huawei is that we managed to achieve a lead time more than 40 percent shorter than that of a previous comparable migration.

If a difficulty arose, Huawei offered outstanding support. For example, MCL suffered compatibility problems between its telematics antennas and the telematics transmitters Philips provided. AnyLinQ specialists, Philips employees, and Huawei R&D engineers had a very proactive attitude to solving the problem, meaning we were able to do so using only additional software. So in the process, we didn't incur any added hardware costs: To put that into perspective, we know of other hospitals in the Netherlands that have had to buy new hardware costing 100,000 Euros (US\$112,000) to solve similar problems.

To this day, MCL remains impressed with Huawei's commitment to supporting the necessary changes required, to cope with any problems that arise.

Since we successfully replaced its network and gained MCL's trust, we have been able to expand our portfolio with them. For instance, MCL is now using Huawei's rack servers, E9000 blade servers, and OceanStor 6800 hyper metro configuration.

As data proliferates, and as the requirements of our customers necessarily become greater, we appreciate our partnership with Huawei even more. We are grateful that together we can foster existing customers, win new customers, and — most of all — innovate.

Helping Haarlemmermeer Manage its Data

In 2015, we secured another major project: providing the network for the Municipality of Haarlemmermeer — one of the largest municipalities in the Netherlands and home to the country's main international airport, Schiphol. AnyLinQ and Huawei's joint bid won, because it offered the best quality for the most reasonable price.

This was a major project for us. We had to replace more than 1,000 Access Points (APs), several hundred switches, and two cores. But we successfully implemented a campus network, and in the years since we have continued to innovate together with the municipality. In 2017, for example, Haarlemmermeer had a choice to make: Migrate to the cloud because its server and storage hardware was outdated, or build a new on-premises network environment. After some deliberation, the municipality decided to follow the latter course but also use the cloud for archiving. This is where we were able to help.

Based on Huawei's X6800 shared chassis server technology, we implemented a Virtual Storage Area Network (VSAN) environment in a twin data center configuration. For backing-up the most important data, we provided an on premise twin data center solution based on Huawei's OceanStor 5300, with the help of Hyper Metro Software. We also replaced the data center network with a full 100 GB Huawei DC core.

AnyLinQ and Huawei support MCL to replace its entire network:

40%

Reduced migration services

100,000
Euros

Reduced hardware costs

We have since reached the stage where we are now replacing the network, which we first implemented for the municipality in 2015.

As we all know, in recent years the demands placed on networks have changed greatly, and technology has had to evolve to keep pace. Using Skype for business by default, for example, has significantly altered the performance requirements for Wi-Fi channels.

At the time of writing, we are planning and preparing for the rollout of Huawei's new Wi-Fi 6 portfolio for the Municipality of Haarlemmermeer. We have also created a redundant campus core across two locations and upgraded access stacks from 1 GB to 10 GB, with both core and access equipment provided by Huawei. Techniques such as Virtual eXtensible Local Area Network (VXLAN) — a network virtualization technology that is designed to address scalability problems related to cloud computing — will be used by default, and the municipality is using Huawei's eSight software suite to operate and maintain Haarlemmermeer's increasingly advanced ICT infrastructure.

As data proliferates, and as the requirements of our customers necessarily become greater, we appreciate our partnership with Huawei even more. Above all, we are grateful that together we can support and expand our existing customer base, win new customers, and — most of all — innovate. When data disrupts, we help connect. ▲

ASL Collaborates with Huawei to Facilitate Industrial Digital Transformation

By Marketing and Communications Department, Automated Systems Holdings Limited

Automated Systems Holdings Limited (ASL) has been established for over 40 years in Hong Kong, China, and has been listed on the Main Board of the Hong Kong Stock Exchange for more than two decades. ASL mainly provides industry solutions, intelligent cybersecurity services, and one-stop IT integrated managed services. ASL has been cooperating with Huawei since 2011. The partnership started off with two parties implementing projects for the education sector. The nine-year partnership has been going strong since then; their current strategic projects span multiple industries, with sales revenue increasing year on year.

Cooperation Successfully Expands the Hong Kong Market

Huawei is determined to increase its market penetration rate and provide both innovative ICT technologies and comprehensive

resources. Meanwhile, with the capabilities in technology, integration, and services, ASL offers services ranging from pre-sales to post-sales, through utilizing its seven R&D centers, 1,000+ high-quality professionals, and over 40 years of industry experience.



With a focus on the Hong Kong market, ASL facilitates the implementation of the *Belt and Road Initiative* in the Guangdong-Hong Kong-Macao Greater Bay Area (Greater Bay Area), and regional digital transformation, through its expertise in technology, integration, and service.

Together with Huawei, ASL provides customers with innovative, industry-specific, one-stop ICT solutions, and thus achieve synergy and win-win outcomes.

- **Enabling Medical and Healthcare Organizations to Provide Next-Generation Non-invasive Services**

Medical institutions have been increasing their demands for modern medical technologies, which raises the requirements for next-generation information systems. However, most of the ICT systems purchased usually fall short of the customers' expectations. As data grows, the gap between ICT product performance and service requirements widens. In addition, medical institutions often could not comprehensively deploy ICT systems, due to the limitations brought by technological capabilities, like the difficulties faced when carrying out Proof of Concept (PoC).

ASL and Huawei have gained trust from customers among the Hong Kong medical sector. For example, one of the Hong Kong medical institutions wanted to develop a highly accurate, low-risk and non-invasive prenatal DNA test, which has demanding server and storage requirements. By leveraging its strong systems integration capabilities and Huawei's advanced storage technologies, ASL provided this customer with a one-stop High Performance Computing (HPC) solution. In order to enable the customer to conduct some tests that are closer to actual applicable scenarios through the R&D center, Huawei assigned onsite engineers to provide prompt and professional suggestions based on their extensive experience. Huawei's R&D center in Hangzhou also provided immense support for the project, which has greatly increased customer confidence in the implementation of the new

system. After many stringent pre-sales technical performance tests, Huawei's technologies have been proven to have a significant advantage over other competitors in terms of speed during massive storage operations. The medical institution therefore chose ASL and Huawei as its suppliers. Finally, the Huawei HPC solution helped the customer overcome the technical limitations that they had faced for several years. After one year of operation, the system has proven that Huawei's HPC solution not only met the customer's expectation in terms of service quality, but also helped the customer continuously develop its business and improve their prenatal service quality.

- **Facilitating Digital Transformation in Educational Institutions**

Hong Kong's higher educational institutions are taking the lead across Asia. These schools require digital transformation driven by the latest ICT to improve educational quality and address the increasing pressure stemmed from the large amounts of teaching contents. However, a university campus is usually large in area, creating obstacles for the technological implementations. This is made more challenging by the widespread use of mobile devices, such as cellphones and laptops, in university students' lives and learning activities. Many universities have to first solve technical problems such as slow network speed and poor signal reception, under which teaching optimization is impossible. A university with long-standing history in Hong Kong faced similar problems, after which ASL and Huawei upgraded the entire campus network to provide a highly scalable, 100 GB high-speed backbone network. Over 1,000 access points were installed. The next-generation wireless network technology now covers the whole campus,

enabling the university to provide a convenient and fast online platform that greatly improves students' digital experience accelerating the campus' digital transformation.

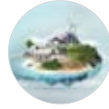
• Outstanding Strengths Recognized by Huawei

ASL is not only one of Huawei's highest-level partners, but also one of the few highest-level service providers recognized by Huawei. Since cooperation, Huawei has presented various awards to ASL, including The Outstanding Contribution Partner award, The Best Service award, and The Best Seller award. Moreover, the ASL technical support team participated in the fourth *Huawei Southern-East Asia Partner Skills Competition*, which was held in Thailand. Because of their excellent storage solution design and implementation capabilities, the team won first place, demonstrating their outstanding delivery and professional service capabilities in the Asia-Pacific region.

Integrating New Technologies to Explore More Possibilities in the Future

More and more enterprises are undergoing digital transformation. Acting as a bridge between customers and vendors, ASL will work more closely with Huawei to jointly seize the business opportunities arising from the *Belt and Road Initiative* and the development of the Greater Bay Area. Meanwhile, ASL and Huawei will also develop industrial and sectoral markets, such as government and public affairs, finance, transportation, medical and healthcare, and education. Both parties will develop annual goals and promotion plans to enhance their market advantages in different industries.

As well as expanding the scope of cooperation, promoting the successful implementation of Huawei's star products and new technologies is also an important strategy for ASL to expand the market.



ASL and Huawei will develop industrial and sectoral markets, such as government, finance, transportation, medical and healthcare, and education. Both parties will develop annual goals and promotion plans to enhance their market advantages in different industries. >>

Similar successful cases are increasing in numbers, for example: The successful design and application of Wi-Fi 6 used in educational and government organizations, the successful deployment of Huawei's All-Flash Storage solution in the financial industry, and the support to operators for their implementation of Huawei's FusionCloud cloud computing solution.

"Huawei has recently released a powerful chip. They are adapting their business development strategy to the cloud and AI era. In terms of ecosystem strategy, they also launched more novel incentive policies for partners. We are impressed by Huawei's strategies," said ASL CEO Leon Wang. "As an industry application provider, ASL's cooperation scope with Huawei has expanded from hardware products to cloud computing and AI products. We have to think about how to interconnect Huawei's leading ICT technologies and products with our customers' application scenarios to form a closed ecosystem. This might be the biggest growth and momentum for our future partnership with Huawei. We hope to create more industry applications by utilizing Huawei's advanced products and technologies, resulting in bringing higher business value to customers." ▲

Customer Testimonials



"As an industry application provider, we have to think about how to interconnect Huawei's leading ICT technologies and products with our customer's application scenarios to form a closed ecosystem. This might be the biggest growth and momentum for our future partnership with Huawei. We hope to create more industry applications by utilizing Huawei's advanced products and technologies, resulting in bringing higher business value to customers."

— Leon Wang, CEO of ASL

ACSL's Global Partner Alliance Powers Connectivity Worldwide

By Wendi Hendrickx, CEO of ACSL

Allied Computing Services Limited (ACSL) is a global service management company that provides end-to-end solutions uniquely tailored to customers' needs. To accomplish that mission, we maintain a network of in-country partners with local experience in delivering vendors' brand services and operational services.

Our network is also the basis for our greatest strength: connectivity. We know that communication and access to data are key factors that facilitate the continued growth of resellers, distributors, vendors, and customers in all parts of the world.

This is why we partner with Huawei.

Huawei Partnership Drives New Momentum for ACSL

We began collaborating with Huawei in early 2019. We were tasked with deploying an international project for one of our customers — a major automobile manufacturer. The customer initially entrusted us with a Multinational Corporation (MNC) project with international scope that began in South Korea.

We set out to fulfill the initial scope of the project, which the customer shared with our sales team in December 2018. The project was a success, so we then developed an international fulfillment program for Huawei MNC customer projects.

By using the ACSL global access portal as a central procurement platform, and initiating contact between Huawei and ACSL, one of our partner alliance members was able to support a large product

and service deployment to the HQ of a customer in the Asia Pacific region that had sites in South Korea, Singapore, and Indonesia.

While the customer team considered the hardware for procurement, our partner used the ACSL portal so the equipment would arrive without any concerns and could be easily installed at the customer site. This was made possible by Huawei and ACSL working together to align and quickly onboard a Huawei-preferred supplier for the partner's target region.

The ACSL Global Access Platform is versatile, allowing our online support team for users to coordinate with Huawei and ensure a full alignment of the local procurement channel, by expanding the range of partners. This was critical because of the specific skill set and vendor accreditations needed to successfully deploy the full-service solution that the customer required for its infrastructure.

Using the portal's order management processes and tools, the lead reseller in this project was able to supervise implementation without dedicating vast resources for the international implementation. This part of the project relied on the capabilities of ACSL, Huawei, and local fulfillment channel partners in each country to adapt

“Our network is the basis for our greatest strength: connectivity. We know that communication and access to data are key factors that facilitate the continued growth of resellers, distributors, vendors, and customers in all parts of the world. This is why we partner with Huawei.”

to processes so that all necessary information could be captured through the central procurement tool.

With this initial setup stage completed using the local team’s knowledge and hardware, service deployment was rolled out without the challenges you would normally see in international deployment.

Partnership Develops with International Deployments

When the initial project was completed, we worked with Huawei to pilot and deploy three additional international deployment projects — for customers in the banking, automotive, and telecom industries. In total, these projects involved collaboration across eight countries, and involved lead account managing teams working with Huawei’s regional offices to secure the customer business, while support teams for Huawei projects collaborated with regional partners (specifically engaged on a project basis) to jointly deliver end-results.

As with the project that launched our cooperation with Huawei, the next series of projects involved both a hardware component — which was deployed in customer sites spread across Latin America, the Asia

Pacific region, and Eastern Europe — as well as a service component, to be supported by accredited Huawei partners in each country.

Lead account teams from headquarter countries coordinated with and obtained information from local channel teams, facilitating on-site delivery and installation, and providing a clear view of delivery progress for the team supporting the customer.

Though the relationship between ACSL and Huawei is still in its initial stages, our teams have been working closely together to develop the process knowledge necessary to create a successful vendor-led program, focused on international customer requirements.

As our teams have moved forward with collaboration, we have worked with Huawei to evaluate the full range of benefits the Global Access portal can provide to existing Huawei resellers, determine the optimal accreditation level necessary across various regions worldwide where enterprise solutions are expected to be deployed, and begin a project to optimize coverage in terms of the solutions we can provide and the territories they can be deployed in.

We also signed a global cooperation agreement with Huawei on September 18, 2019, at HUAWEI CONNECT, jointly committing to use our strengths in terms of competencies and capabilities to satisfy the project requirements of international partners and customers.

For example, Huawei’s business covers a broad range of territory, and it has a large customer base with many local partners. However, Huawei lacks a satisfactory MNC business procurement process and platform. By combining our expertise in facilitating a global procurement platform with Huawei’s global Information and Communications Technology (ICT) solutions, we aim to provide a truly seamless international enterprise MNC procurement process.

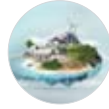
The global cooperation agreement is a major step in our commitment to develop a smart and efficient solution to provide



Partner Card



ACSL (Allied Computing Services Ltd.) headquartered in Antwerp, Belgium, is a growing company that provides an international B2B trading platform called Global Access (GA), able to manage all aspects of a global online procurement. We offer a sophisticated E-procurement solution that allows customers to control content, specification standards and global pricing for all major OEM products in managed hardware and services catalogs, covering over 170 countries.



Partners across the world will be able to engage in international projects and benefit from the experience and expertise of Huawei, ACSL, and the entire partner alliance network.

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consistent support on multinational ICT rollouts. Our goal is to work together and address the challenges that our customers and partners encounter in the global deployment of ICT equipment and services.

Huawei Enterprise Business Group Vice President Ma Yue met with our CEO, Wendi Hendrickx. They agreed that our teams will work together to shape the fulfillment partner network, to meet the expectations for performance standards of multinational corporation customers and international partners.

The Huawei MNC headquarters and ACSL vendor desk teams are now developing an action plan. The plan will improve support coverage capabilities beyond the existing scope possible through our partner alliance network and Huawei's enterprise solution channels.

The current stage of the plan focuses on establishing the best fulfillment partner and supply channel matches in all territories that Huawei supports. We want to ensure that, as our relationship develops, we can meet the full range of requirements — regardless of whether the project entails hardware procurement, service deployment, or both.

Moving Toward a More Streamlined Solution

Our goal for the immediate future is to identify the best matches in terms of channel fulfillment partners across all regions in which Huawei's enterprise solutions can be deployed. We will then incorporate them into our partner network. By consolidating the channel experience accumulated from across ACSL's and Huawei's channel teams, we will collaborate with Huawei's distributors, Value-Added Partners (VAPs), and fulfillment partners across the world.

Together, we will ensure coverage of all the solutions a customer may require and that can be feasibly deployed worldwide as a corporate standard.

With our international partners, we look forward to a successful 2020, implementing new MNC opportunities. Any major steps toward making this possible will be taken, as always, with our partners.

Working toward that aim, Huawei has been instrumental in organizing introductions and helping us to establish new relationships with key fulfillment companies in the Huawei ecosystem. Initially focusing on sales and solution partners, we are looking at eventually expanding our range of collaborations to include all levels of Huawei partner roles.

Alongside mapping the Huawei-ACSL partner network and developing its reach, our teams are working on fulfillment processes. In collaboration with Huawei Regional Channel and the Huawei enterprise MNC HQ teams, the ACSL Intel Desk team is working to align with highly accredited Huawei reseller partners across all regions.

Moving forward — toward a more streamlined solution — Huawei and ACSL aim to offer a straightforward project implementation and deployment path. Through new Key Performance Indicators (KPIs), and reporting tools that best reflect the needs of our partners and the expanding market, we intend to maintain industry-leading international procurement through Global Access. This is a goal that we will continue pursuing, expand on, and bring to our relationship program with Huawei and its reseller partners for ICT solutions, based on our continued experience with all ACSL vendors and fulfillment partners.

Partners across the world will be able to engage in international projects and benefit from the experience and expertise of Huawei, ACSL, and the entire partner alliance network. With support from Huawei and ACSL's channel teams, they will be able to manage project deployments for their customers across multiple fulfillment partners and time zones, all connected through a single platform. ▲



Mannai Builds Cities of the Future with an Eye on Qatar's National Vision

By Ramchandra Pawar, Practice Leader, Business Critical Systems, Mannai InfoTech, Mannai Trading Company WLL

Established in 1950 in Qatar, Mannai Corporation has been responsible for the successful execution of many national-level ICT projects over the last three decades and has been the country's largest systems integrator for many years.

Mannai is a top-level partner for many major ICT vendors, and its customers span across a wide range of industries, from government; Banking, and Financial Services, to Insurance (BFSI); healthcare; telecom; energy; transportation; and education sectors. In 2018, Mannai's annual ICT business revenue was US\$600 million, a year-on-year growth of 31 percent.

Meeting the Needs of a Rapidly Developing Country

Qatar is one of the fastest-growing economies in the world. In 2019, Qatar ranked first in the Arab world and seventh out of 128 countries in the Global Finance Safety Index (which ranks nations in terms of investment safety).

Over the past decade, Qatar's overall development has led to several major international event hosting opportunities. For example, Qatar made history in 2010, becoming the first Middle Eastern country to win the bid for hosting rights of the *FIFA World Cup*, when it was nominated as host for the 2022 tournament. Four years later, the country was elected host of the prestigious *2019 World Athletics Championships*.

These developments have resulted in an increased demand for Qatar to construct world-class infrastructure — particularly Intelligent Cities — and provide related services. Recognizing the growing demand for smart solutions domestically, Qatar is actively engaged in building the cities of the future. In line with its National Vision 2030, which aims to “transform Qatar into an advanced society capable of achieving sustainable development,” the country has embarked on a journey to develop Intelligent Cities and enhance the nation's security.

In mid-2017, Mannai's leadership decided to partner with Huawei, believing that the Chinese vendor could be a major contributor toward achieving Qatar's National Vision 2030 of Intelligent City development projects.

After the partnership was agreed, Mannai's management team visited Huawei's HQ in Shenzhen, as well as its R&D centers, boosting their confidence in their decision to partner with Huawei. The team was impressed with Huawei's varied solutions, which include End-to-End (E2E) ICT products, AI, data center facilities, backbone transmission networks, and Intelligent City and security infrastructure. Crucially, Huawei could provide a ‘one-stop solution,’ which would help Mannai expand its share of the fiercely competitive market in Qatar.

Getting Ahead of the Competition with a New Approach

In mid-2017, Mannai and Huawei started collaborating on projects. The early stages were harder than expected, because of the strong competition and established vendors in the market.

Together, Mannai and Huawei bid on several Requests For Proposals (RFPs), but they lost the bids because competitor vendors

Focusing on the *Qatar 2022 World Cup* and *Qatar Vision 2030*, Mannai will work with Huawei to serve the nation with the latest and best technological solutions. Together, Mannai and Huawei's vision is to win enterprise customers, excel in joint offerings and services to customers while helping them realize their business goals with Huawei's solutions.

already had a greater market presence; it proved difficult to persuade customers to switch vendor and negotiations over pricing were unexpectedly tough.

To find a solution, Mannai and Huawei held a business plan meeting at the beginning of 2018. The teams analyzed the missed opportunities and identified areas that required development.

Both teams worked together to design a fresh approach: a model that prioritized creating a Proof of Concept (PoC) and helping Mannai's technical engineers gain higher levels of certification.

Several Huawei servers, storage products, and network switches were delivered to customers for demonstration purposes, providing comprehensive support for customers to test their applications and run their live business environment on PoC demonstration machines. This strategy received a great deal of positive feedback from customers.

Indeed, this new approach improved customer confidence in Huawei products and, in just one year — with a high success rate for PoCs and growing collaboration between the teams — Mannai and Huawei beat stiff competition to win a huge project worth millions of dollars: the expansion of a major pipeline using Huawei's solutions.

The teams also made significant progress in technical training and certifications and, by the end of 2018, both parties were empowered with improved technical skill sets. Indeed, Mannai trainees were recognized as 'excellent students' by Huawei headquarters during the pre-sales technical training.

The efforts made in 2017 and 2018 began to pay dividends in 2019. In addition to revenue directly generated from the sales of Huawei solutions, Mannai professional services and third-party services related to Huawei solutions also increased, bringing in close to 40 percent of total revenue. With the cooperation proving successful, Mannai and Huawei then won a huge, national-level backbone Telecommunications Wide Area Network (WAN) project.

Working Through Hardships to Reach the Top

In 2019, the two parties upgraded their partnership, with Mannai

becoming a Huawei Value-Added Partner (VAP). Within two years, Mannai has become one of Huawei's fastest-growing partners, winning multiple major projects. Focusing on Huawei's star products, Mannai became the first company in Qatar to deploy Huawei Wi-Fi 6; Huawei Dorado All Flash storage devices have also become key elements of the partnership's success.

In turn, Huawei is the only vendor that Mannai has worked with that has grown so rapidly in such a short period. Huawei is a key part of Mannai's technology stack partnership, and without the VAP status, it would be rather difficult for Mannai to provide top services to meet their client base demands.

The relationship Mannai fostered with Huawei was one of its success stories in 2019, so Mannai will continue to invest in Huawei's business, expand its business with a greater range of solutions, capitalize on the advantages of both parties, and maintain rapid growth.

Focusing on the *Qatar 2022 World Cup* and *Qatar Vision 2030*, Mannai will work with Huawei to serve the nation with the latest and best technological solutions. Together, Mannai and Huawei's vision is to win enterprise customers, excel in joint offerings and services to customers while helping them realize their business goals with Huawei's solutions. ▲

Partner Card

Mannai Trading Company WLL (Mannai) is a subsidiary of Mannai Corporation QPSC, a Qatar Stock Exchange listed company. Mannai ICT Division is Qatar's leading systems integrator. Mannai ICT provides end-to-end solutions throughout the whole technology stack. Starting from passive networking, to active networking, over servers & storage to peripheral IT hardware, integrated IT solutions, to customized software applications. Mannai InfoTech, a leading Information and Communication Technology solutions provider in Qatar, is a department under Mannai ICT.



Sunrise: An Enterprise's Digital Transformation Journey

By Robert Wigger, CBO of Sunrise

Sunrise is the largest non-state-controlled telecommunications company in Switzerland, providing individual customers and businesses with mobile, Internet, TV, and landline services. Sunrise services more than 3.5 million customers, making it the second-largest telecommunications company in Switzerland. Sunrise has successfully positioned itself as the leading challenger and aims to become the reputable telecommunications provider in Switzerland, while gaining market share and capitalizing on its strong position in the mobile market and its positive momentum in the Internet, TV, and B2B enterprise domains.

Sunrise has already launched the first End-to-End (E2E) standardized Swiss 5G network. 5G technology will facilitate future applications, including self-driving vehicles, the Internet of Things (IoT), and real-time production process control. With its '5G enables B2B' vision, business customers will use 5G to replace wireline access and benefit from mobile broadband and VPN services, with up to 1 Gbit/s speeds.

Digital Transformation in Traditional Industries

Sunrise is one of the leading communications service suppliers for large and small businesses in Switzerland. Designed for business customers, Sunrise B2B provides a comprehensive range of services — including mobile services, connectivity devices (Internet, multi-

site, in-house networking, and landline voice) and 'Work Smart' services that feature cloud-based apps and system integration — building an 'Unlimited Mobile Workplace.' Sunrise is focused on consistently providing high-quality services, and making B2B service simpler.

Sunrise continues to expand its services for business customers and has introduced cloud-based apps, the most advanced cloud-based Internet VPN, and Wireless Local Area Network (WLAN) services. Sunrise also combines mobile and connectivity services, enabling landline calls over cloud-based apps with additional chat, email, video, file, and desktop sharing features. This service helps business customers work securely and conveniently from their mobile offices, and reduces costs by up to 65 percent.

To meet the need for fast broadband Internet, Sunrise is currently building 5G in the 3.5 GHz range, with speeds up to 2 Gbps. Sunrise is progressing with its plan to secure Switzerland's leading digital infrastructure position within Europe with 5G, and is continually supplying new cities and towns with the technology.

For B2B customers, 5G-based mobile broadband solutions are important, as these solutions use wireless networks instead of fixed-line connections. Sunrise's 'First on 5G' strategy supports business customers — especially those outside densely populated areas — by providing network services that do not require fixed wired connections. Sunrise, as Switzerland's 5G pioneer, launched its second 5G network and the world's first standardized 5G network at Laax Ski Resort, on Crap Sogn Gion Mountain (2,252 m above sea level).

Realizing Enterprise Digital Transformation through Innovation

Innovation is reflected in products, services, and convergence. Sunrise delivers success by emphasizing innovation, while delivering solutions that are customer-focused.

Sunrise provides large companies with tailored, scalable, secure telecoms solutions. Its solutions include professional services and support for customers on their journey toward digitalization and their transition to using cloud-based services. For small companies, Sunrise invests in expanding its portfolio of standardized, straightforward products, and strengthening direct and partner sales channels to increase its market reach.

Delivering attractive, innovative, flexible workplaces to its business customers, Sunrise uses its products and services to achieve its 'Unlimited Mobile Workplace' goal. Sunrise's services are provided using Sunrise's own expert resources, supported by strategic, selective cooperation with leading global partners.

Huawei is Sunrise's long-term technological partner. The two

companies collaborated on an early 5G demonstration in 2017. Sunrise publicly presented the live 5G network demo, providing a glimpse into the future of mobile networks with eye-opening experience showcases, such as the parallel provision of multiple 4K TVs, live 360-degree videos, and Virtual Reality (VR) and Augmented Reality (AR) use cases. Guests from business, politics and civic sectors, alongside the media, watched as the download data throughput reached 3.28 Gbit/s in the 3.5 GHz (band 42) frequency band — a world record.

But Sunrise did not stop there. After setting the 5G world record, Sunrise built the Sunrise Showcase — the Joint Innovation Center (JIC) — with Huawei, helping Sunrise put Switzerland's 5G B2B business into operation.

• 5G Green Farm: Smart Farm Detection Delivers More Production

• Background: Swiss agriculture receives a lot of support from the government, and farmland accounts for 50 percent of the country's total land mass. In recent years, there has been a clear trend to consolidate land (the number of farms has reduced by 10 percent, and the average farm size has increased by 10 percent). While the average farm area is now 20 hectares, the average number of employees per farm is just five. Inspecting 20 hectares of farm requires 60 person-days, and large-area patrolling work cannot be efficiently completed manually. In addition, 70 percent of Swiss farmers do not have specific agriculture training, meaning field inspection accuracy is typically poor, and excessive amounts of pesticides are sprayed. Now, however, drones can be used, requiring only 30 minutes to complete the task. This shows that automation



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and intelligence are becoming indispensable in the workplace.

- **Innovation:** The 5G drone and the weeding robot automatically patrol fields. 5G's high-bandwidth uplink (faster than 50 Mbit/s) enables large-capacity plant-protection images to be uploaded to the cloud in real time. In this manner, working efficiency is improved 200-fold, compared with traditional manual operation. 5G pipes support cloud GPU computing, real-time photo analysis, and efficient analysis report output in real time. Farmers can now immediately view farmland analysis reports on the platform, receive work plan recommendations, and plan drone paths. In addition, cloud software identifies areas of dead grass based on uploaded photos and directs the robot's weeding actions in real time. As a result, working efficiency is improved 20-fold.

- **5G Town: Bringing the Mountain to the**

People

- **Background:** Tourism is an important industry in Switzerland. It has an annual revenue of CHF44.7 billion (US\$45.6 billion), while the industry receives 19 million tourists annually, and provides 175,000 full-time jobs. Laax is the leading ski resort in Switzerland, with 235 kilometers of snow lanes, and 100 square km of snowfields. In summer, the mountain boasts scenic hiking spots, with 230 km of mountain bike tracks, and 250 km of hiking routes. In the last five years, however, the export-output value has stagnated, so promotion is necessary to attract visitors.

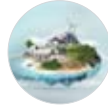
- **Innovations:** Sunrise and Laax collaborated using 5G to promote scenic spots by shortening their virtual distance from people. They used drones to send 4K videos of local festivals and activities, breaking the monopoly of TV stations, and building 4K live broadcast platforms. Tourists can watch live broadcasts using the Laax app. Its network requirements included a 30 Mbit/s uplink bandwidth,

and under 20 milliseconds latency. The VR scenic spot live broadcast used 8K VR 360-degree live streaming to provide crystal-clear scenic experiences to tourists. Sunrise and Laax also delivered new AR skiing experiences using AR skiing glasses that enable users to analyze skiing speeds, routes, and distances, while also enabling User-Generated Content (UGC) live broadcasting with family members and other skiers. 5G enables 4K live broadcasting, 8K VR live broadcasting, and new AR skiing experiences to bring scenic spots to tourists and attract more visitors through new promotion methods.

- **5G Smart Manufacturing: Saving 30 Million Euros Each Year with 5G + Industry 4.0**

- **Background:** Manufacturing is the largest industry in Switzerland. Its annual output value is CHF340 billion (US\$348 billion), exceeding 25 percent of Switzerland's total GDP. Using its large bandwidth and low latency, 5G delivers wireless control, machine vision, Automated Guided Vehicle (AGV) scheduling, and predictive maintenance in smart manufacturing scenarios. Switzerland's manufacturing industry has been actively exploring 5G applications because of its own demand for wireless and intelligent evolution. For example, the pioneering technology company ABB is experimenting with industrial AI applications, based on 5G technology and machine vision with large bandwidths and low latency, to improve its automatic assembly production lines. At Seiko, the manufacturing enterprise best known for its watches, because of high-speed milling, excessive vibration may occur, resulting in poor milling rates. The failure rate can reach up to 25 percent. Predictive maintenance is important for Seiko because it significantly improves production and reduces the failure rate.

- **Innovations:** Blade integration disks' high precision requirements (1-10 microns) and high milling speeds (up to 1G) require an end-to-end,



Sunrise is a 5G pioneer. By the end of 2019, Sunrise was providing more than 384 cities and towns with 5G and successfully implementing its '5G for People' scheme as an alternative to DSL.
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ultra-low latency (less than 10 ms). It is required to send monitoring data and return adjustment instructions. This is only possible with 5G. 5G and edge computing jointly implement the minimum E2E delay. The predictive maintenance supported by 5G greatly reduces the failure rate, saving 30 million euros (US\$33 million) per plant per year. Users can also view analysis reports at any time using 5G tablets. Sunrise and Huawei provide 5G indoor coverage, Multi-access Edge Computing (MEC) solutions, and E2E network integration. Manufacturing companies and partners provide software such as Seiko devices, sensors, data analysis apps, and dashboards. The combination of low latency 5G and AI enables predictive maintenance to help Seiko manufacturing reduce the failure rate, saving 30 million euros (US\$33 million) per factory.

For these innovations, Huawei was the natural innovation partner for many reasons:

- Huawei products and solutions cover a wide range, including fixed and wireless networks, intelligent computing, cloud, and AI. Carriers can cooperate with enterprises and verticals on their digital transformation journeys.
- With a proven track record of over 30 years in the networking field, Huawei provides customers with the most extensive range of products, including WLAN, switches, routers, security devices, campus network controllers, and AI-based network analyzers. Huawei is an industry leader in offering advanced network technologies such as Wi-Fi 6. Huawei's campus network products and solutions have been deployed in more than 100 countries and regions worldwide, serving countless customers in fields such as government, education, finance, and transportation.

Sunrise is a 5G pioneer. Connect, the independent network tester, awarded Sunrise the 2019 Innovation Award for its fast 5G network expansion, stating that "Sunrise takes off with 5G and brings fast Internet

even to remote regions." By the end of 2019, Sunrise was providing more than 384 cities and towns with 5G and successfully implementing its '5G for People' scheme as an alternative to DSL. A series of measurements in parallel to the Connect mobile network test confirm that Sunrise has the best 5G network in Switzerland and the DACH region overall, with the widest coverage and fastest connections. A 5G analysis by RootMetrics by IHS Markit shows that Sunrise has the most extensive and fastest 5G network in Switzerland.

To meet the need for fast broadband Internet, Sunrise is currently building 5G in the 3.5 GHz range, with speeds up to 2 Gbps. Sunrise is progressing with its plan to secure Switzerland's leading digital infrastructure position within Europe with 5G, and is continually supplying new cities and towns with the technology. 5G roaming has been commercially launched with leading partner networks in 2019. According to the *BILANZ Telekom Rating 2019*, Sunrise is the "Best Universal Provider for SMEs," "Best Universal Provider for Large-Scale Companies," and "Best Mobile Communications Provider for Business Customers." Sunrise was also the overall winner of the *Computerworld Top 500 Satisfaction Survey 2019* and was rated the "Best Telecom, Network, and Internet Provider." ▲

Customer Testimonials



"It is a privilege to count Huawei as a technology partner. Clearly, Huawei is the top innovator worldwide in the area of 5G technology. But in addition to its technical expertise, Huawei brings to the table an understanding of telco operators' problems, a broad product portfolio, and critically, a 'can do' attitude to tackle difficult and complex problems. Furthermore, in all interactions, Huawei behaves as a truly committed partner."

— Robert Wigger, CBO of Sunrise



EZY Pakistan: Breaking Barriers and Building Supply Expressways

Headquartered in Singapore, EZY operates in 15 Asian countries, including the Philippines, Vietnam, Indonesia, India, and Pakistan. In 2015, EZY became a Huawei distributor in Pakistan. It focused on selling mainstream Internet Protocol (IP) and Information Technology (IT) products, covering industries such as finance, education, and electric power. In just a few years, the Compound Annual Growth Rate (CAGR) reached 50 percent, and EZY became a top distributor in Pakistan's ICT industry.

During the rapid development of Huawei's enterprise business in Pakistan, Huawei encountered many difficulties in supply collaboration with EZY. When Huawei's supply chain team visited EZY's partners, EZY's business director pointed out that Huawei's supply period was abnormally long, and the logistics efficiency was low. The challenge was to find a way to achieve efficient production and sales collaboration, break down the two major 'barriers' — the long supply period and the inefficiency of the collaboration — and build a more efficient supply lane.

Focusing on Pain Points and Setting Targets

In 2018, Pakistan's foreign exchange policy tightened (the foreign exchange reserve was set at less than US\$10 billion), the rupee seriously depreciated, the trade profit levels of Small- and Medium-sized Enterprises (SMEs) decreased, and the other foreign exchange

performance indicators declined. The nation's End-to-End (E2E) supply period was 24 days, ranking last in the Middle East. EZY failed to obtain rebates on Management By Objective (MBO) supply incentives. Meanwhile, the demand for improving efficiency and reducing costs was increasing for channel partners at all levels.

Huawei Supply Chain and EZY organized a channel supply meeting with Tier-2 agents in the Karachi region. By listening to all of the parties' requirements and suggestions and reviewing internal cases after the meeting, Huawei and EZY identified six major obstacles to building a fast supply track.

- PSI management wasn't well coordinated, and long lead times for materials weren't accurately forecast.
- Quasi-terminal products were subject to the production mode (Original Equipment Manufacturer), resulting in a long production period.

Through in-depth cooperation and collaboration, Huawei and EZY are identifying ways key businesses in the supply chain can optimize their practices from the perspective of customer requirements, build first-class supply service capabilities, create value for customers, and build the core competitiveness that supports the business growth of both parties.

- Because of the deterioration of the international trade environment, the Pakistan's customs office now requires an approval of Import Contract (IC).

- The number of freight forwarders was high — 58 — and their qualities and capacities varied significantly.

- The estimated goods volume was inaccurate, or the packing list couldn't be provided in time.

- When applying for a customs clearance Type Approval Certificate (TAC) — an import license used for customs clearance of terminal-type spectrum equipment — each party was responsible for its own operation. The process was long and had to be repeated by each party.

Huawei Supply Chain outlined the supply business process, pain points, and requirements to EZY. After learning about the partner's business plans and annual requirements for important products, Huawei Supply Chain took on various challenges and analyzed the feasibility of multiple measures based on real-world scenarios. The supply chain set three targets: shorten the E2E supply cycle, improve logistics quality and reduce the number of freight forwarders, and switch the supply center to Dubai.

Growing Steadily, Avoiding Opportunism

Our strategy of steady growth requires us not to think opportunistically to seek quick results and instant benefits. Instead, Huawei Supply Chain, together with customers and partners, must work together to build a solid foundation and make continuous improvement based on optimization solutions.

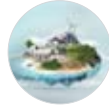
- **Optimize the goods preparation process and shorten the goods preparation time:** EZY reported that the Optical Network Terminal



Huawei Supply Chain and seven Tier-2 resellers gathered at EZY headquarters in Karachi for a workshop

(ONT) product supply period was long (45 days). Huawei and the distributor proactively visited Cybernet, an ISP customer in Karachi, to gain insight into its specific requirements for the lead time supply. The customer also shared the internal PSI system with Huawei. By optimizing the internal risk control and applying for the advance stock channel of the supply center, EZY solved the problem regarding quasi-terminal products, which were criticized by the customer because of the long lead time. The production and shipment can now be completed within a week of the Purchase Order (PO) being issued.

- **Optimize the estimation system and align it with the offline shipment:** We urged IT personnel to optimize the goods volume estimation system based on the instances in which deviations from estimates occurred, improved the accuracy of real-time shipment data, reduced the inaccurate logistics costs incurred because of



inaccurate volume estimates, and helped channel partners move the logistics booking time from after production to before production, reducing the waiting time of the serial process and achieving efficient logistics delivery between both parties.

- **Optimize the logistics cooperation mode and improve the booking efficiency:** EZY originally delivered free on board (FOB) contracts to more than 10 Tier-2 resellers with limited logistics capabilities at the departure port for transportation. After quantitative comparison and analysis of statistics, they identified efficiency weaknesses in specific logistics links, worked with EZY and Tier-2 resellers to discuss optimization measures, and designed and applied logistics MBO incentives. EZY will gradually reduce the proportion of Tier-2 resellers' transportation. When more mainstream freight forwarders are used for logistics booking, the booking period will be shortened from seven to 10 days to two to three days.

- **Optimize the customs clearance waiting period and reduce the application cost:** Pakistan has strict foreign exchange controls, so Huawei Supply Chain's ability to provide expert enablement for partners while providing great services is critical to this partnership. It proactively streamlines its internal process, applies for IC in advance, to adapt to new scenarios, and guides customers to apply for IC, reducing the shipment waiting time by three days.

For example, Huawei Supply Chain proactively applied for TACs from Pakistan Telecom Authority (PTA) in advance, and authorized agents at all levels. This solved the problems that were caused by being unable to share TACs among channels, and reduced the application time by 15 days on average.

Through a series of optimization measures for in-depth collaboration between Huawei and EZY, the end-to-end supply period was shortened to 13.1 days in 2019 — 11 days shorter than that of 2018. >>

Through a series of optimization measures for in-depth collaboration between the two parties, the E2E supply period was shortened to 13.1 days in 2019 — 11 days shorter than that of 2018. EZY obtained MBO supply incentives for the first time, ranking first among all distributors in the Middle East. Channel partners at all levels also appreciated Huawei's proactive application for TAC authorization for agents at all levels. This was exemplified in a third-party customer satisfaction survey in which Huawei Supply Chain scored 81.7 points — 8.7 points more than any of its competitors.

Expanding the Cooperation and Seeking Mutually Beneficial Results

Huawei Supply Chain and EZY will conduct wider supply collaboration and streamline the supply model from the Dubai supply center to local supply centers. This will further shorten Huawei's product supply cycle for end customers (25 days for sea transportation and 10 days for air transportation). Huawei's supply will be upgraded from fast lanes to expressways, which will support EZY's business expansion, as well as other channel partners, and achieve benefits for Huawei, channel partners, and customers at all levels. ▲

Customer Testimonials



"It has been a tremendous journey with the global leader in ICT solutions — Huawei — from 2014 to now, and it will continue to be one. Gaining the Pakistan market for Huawei wouldn't have been possible for EZY without Huawei's support. I'd like to thank Huawei's team for their support toward improving supply chain issues between EZY and Huawei. Huawei is our core product, being a VAD, and we value Huawei's strategy and work accordingly. BP also play a vital role, so we will continue conducting BP sessions in this regard in order to recognize Huawei as a brand, and will not only assure to continue the same experience but will definitely try to improve further."

— Saeed Sheikh, CEO / MD Pakistan & MEA, EZY TECHNOLOGIES PVT LTD.



VSTECS Enhances Business Proposition to Partners through Professional and Technical Services

By James Lee, Vice President, Enterprise Solutions Group, VSTECS (Singapore) Pte., Ltd.

VSTECS is a leading Information and Communications Technology (ICT) products and services provider in the Asia Pacific region. Established in 1985, the company is a wholly-owned subsidiary of VSTECS Holdings, a company listed on the Hong Kong Stock Exchange (0856.HK). Its network includes more than 40,000 active channel partners in the Asia Pacific region, making it the preferred partner for global ICT vendors looking to achieve business growth in the Asia Pacific market.

VSTECS operates in three main businesses: Enterprise Systems, IT Services, and Distribution. Enterprise Systems provide Multinational Corporations (MNCs), local governments, and domestic companies with IT infrastructure design, installation, and implementation services. Its IT services cover a comprehensive range of technical support and training services to meet the technical requirements of global customers, including 24/7 technical support for mission-critical operations and businesses. VSTECS uses a well-established and highly efficient logistics and IT infrastructure to deliver products quickly and efficiently for its Distribution business.

VSTECS's Challenges and Cooperation Strategies

VSTECS and Huawei first began to collaborate in the Chinese market in 2013. Today, VSTECS is one of Huawei's leading distributors and core service partners in the country. This partnership wasn't without difficulties in the initial stages.

- VSTECS's regional teams weren't familiar with Huawei's business platform and had to consult with Huawei's service

managers on their roles and responsibilities, impacting service quotation efficiency. Teething problems like a lack of technical knowledge and rationalization of service processes also meant that business opportunities were lost to competing distributors.

- The collaborative efforts and commitment by VSTECS and Huawei in knowledge transfer and adjustment of service processes overcame these initial issues. In due course, both parties have raised the service delivery standards beyond those expected by customers.

VSTECS and Huawei managed to sustain their success in China through service cooperation. This has helped VSTECS's regional teams realize the importance of technical capabilities; only with strong technical capabilities can they win the mindshare and commitment of distributors and their second-tier resellers, enhancing customer perception of products and the value of solutions at the same time. They also realized that by using localized, value-added technical services they can help resellers increase competitiveness and effectively identify customer Operation and Maintenance (O&M) pain points, to solve O&M challenges and increase O&M value for

As a leading ICT products and services provider, VSTECS has transformed itself — from a single-country distributor for Huawei to a global service partner, improving its service capabilities, building service product competitiveness, and aligning service sales resources.

customers during technical support.

With these developments in mind, VSTECS finalized its regional service development strategy in 2015. It aims to establish itself as the leading ICT product and technology service provider in the Asia Pacific region by improving services sales and delivery capabilities, and providing value-added services for resellers. This strategy paves the way for the future development of the service business.

Furthermore, VSTECS accelerated the implementation of its regional strategy by determining specific cooperation content and scheduling regular meetings with Huawei's regional teams. At these meetings, VSTECS discusses service organization interaction, delivery process adaptation, skill improvement targets and plans, and joint service sales targets.

Improving Service Capabilities

In 2015, VSTECS, supported by Huawei's policies, also invested heavily in its service business, achieving remarkable results in terms of technical capabilities, service platforms, project delivery, and maintenance services.

- **Technical capabilities:** VSTECS became a Huawei Certified Service Partner (CSP) in 2015, and it has since built technical capabilities in various aspects, such as sales and technology. By

2017, VSTECS had obtained 21 certificates and become a Huawei five-star CSP in the data communication and enterprise IT fields.

- **Service platform and lab environment:** VSTECS established service sales teams after learning about Huawei's service quotation platform, and began independently completing service configuration and quotation. VSTECS also set up labs to provide resellers with sales and technical support. In these labs, as well as product and technical training, they worked with resellers to offer proof-of-concept services and integrated third-party applications and solutions to enhance resellers' competitiveness in their go-to-market efforts.

- **Project delivery:** Through collaboration with Huawei in delivering joint projects, VSTECS improved their best practices and the competitiveness of their professional services. For example, in an Asia Pacific regional project for one of China's leading Internet Service Providers (ISPs), VSTECS and Huawei's technical support team overcame challenges and implemented standardized installation as well as alarm platform interconnection. The project's success reinforced the foundation for VSTECS's future projects. Similarly, in a data center project for a regional leading Internet enterprise, VSTECS's technical experts worked with Huawei's data center experts to resolve problems related to integrating Disaster Recovery (DR) architecture within the customer's devices and applications. Upon completion, the project was lauded by the customer's infrastructure operation director.

- **Maintenance and management services:** VSTECS released a multi-vendor technical service for resellers and customers that helped meet VSTECS's requirements for local provider services. The service was based on the features and delivery interface of Huawei's Co-Care service product. To ensure customer satisfaction, VSTECS also obtained the necessary spare parts and remote technical services by signing back-to-back service contracts (Co-Care, for example) with multiple vendors, including Huawei.

The development of the sales and delivery capability for VSTECS technical service products has helped achieve profit growth by addressing key business challenges through



Partner Card

VSTECS is a leading ICT products and services provider in the Asia Pacific region. Established in 1985, the Group is a wholly-owned subsidiary of VST Holdings Limited, a company listed on the Hong Kong Stock Exchange (0856.HK). With three main businesses — Enterprise Systems, IT Services, and Distribution — VSTECS has a network of more than 40,000 active channel partners across China, Thailand, Malaysia, Singapore, Indonesia, the Philippines, Cambodia, and Myanmar. VSTECS is well-positioned to be a regional partner of choice, suitable for global-leading ICT vendors tapping into Asia Pacific's ICT spending growth.

digitalization, expert advice, and ongoing capability development.

Facilitating MNC Project Delivery

VSTECS has multiple sales and service organizations in the Asia Pacific region. With increasing demand from Multinational Customers (MNCs), service cooperation between VSTECS and Huawei expanded to MNC projects in 2017. Indeed, VSTECS was Huawei's first global CSP that could meet the quick project delivery expectations of MNC customers.

In a storage system project for a well-known European enterprise, VSTECS collaborated with the customer's domestic reseller team to successfully deliver a storage solution for its subsidiary in Singapore. Within four days, VSTECS had aligned the delivery content and completed delivery design review and countersigning, storage system implementation and application integration, as well as project acceptance and archiving. The project met the customer's requirements for quick project delivery.

Through the expansion and delivery of MNC projects, VSTECS gradually established a business network that involved distributors in China as well as in European countries, helping them successfully deliver multiple MNC projects in the Asia Pacific region. MNC customers included multiple well-known ISPs and Over-the-Top (OTT) enterprises in China.

By the end of 2019, VSTECS had obtained more than 250 certificates in six countries within the Asia Pacific region. These certificates recognize the company's product and solution delivery capabilities in multiple technical fields, including cloud computing, datacom, storage, unified communications, and video surveillance.

Developing Installed Base Opportunities

VSTECS actively participates in Huawei's service incentive programs. In fact, its service sales teams recently adopted Huawei's installed base development business strategy and aligned with Huawei's service team to determine its installed base renewal operation mode.

To achieve this, VSTECS manages reseller installed bases using Huawei's installed base management system. It has also increased its number of outbound calls to resellers, to promote its willingness and efficiency regarding service contract renewal. Another strategy has

been to establish framework and development processes, to develop cooperation with Huawei's service contract renewal team.

Finally, VSTECS has collaborated with internal technical teams to analyze equipment capacity, performance, and use rate, and recommend technology updates to optimize products and solution value for customers.

Six months after adopting the installed base strategy, VSTECS was able to independently develop distributor installed bases. As a result, the company's service contract renewal performance increased from 12 percent to 71 percent, becoming a benchmark among regional service partners in the service contract renewal business.

Business Prospects

In 2020, VSTECS will continue to provide technical support for distributors, renew installed base contracts, deliver MNC projects, fulfill contracts, and increase its cooperation with Huawei.

To do so, it will help Huawei's CSP resellers and customers develop proactive and preventative technical skills as well as self-service capabilities using Huawei's eService platform.

This increased cooperation will also entail promoting Huawei's Powered Service, a collaborative service product, by identifying the service requirements of products and solutions and the service capabilities of resellers. VSTECS will also help resellers deliver excellent services with Huawei's remote and onsite technical support, and enhance customer perception of products and solution value. ▲

Customer Testimonials



"Huawei has leading-edge technologies in cloud computing, storage, enterprise networks, unified communications, and collaboration, and is constantly evolving new technologies that impact the ICT sector. As a strategic partner of Huawei, VSTECS Singapore will work hand-in-hand with Huawei to achieve more business wins for both parties, by providing comprehensive solutions to enterprise customers, and by delivering pre-sales and post-sales support to partners and customers."

— Sebastian Chong, President, VSTECS Singapore

Huawei and Meltec: Working Together to Achieve Success

The Business-to-Business (B2B) market in Colombia makes up more than 40 percent of the total revenue of the country's carrier companies. Throughout the use of domestic product developers, Colombia's carriers have also established a variety of standardized, connectivity-based products to fulfill business demands.

The South American country sets high standards for its carriers: all equipment and solutions must be tested and approved by the government, with approval for a single product often taking months, as each function is tested.

Huawei's Enterprise Business Group (EBG) — one of the few distributors accepted by Colombia's highly selective carrier market — it has been a key supplier in Colombia over the last 15 years and has earned carriers trust by delivering innovative products and



In Colombia, the distribution business of Huawei's Enterprise Business Group helped carrier resales grow 91 percent in 2019. A mutually beneficial partnership between Huawei and Meltec — a certified Huawei Value-Added Partner — has helped to promote stable growth for both companies, delivering positive market expansion through efficient, focused, and fully aligned collaboration.

solutions and strengthening relationships with partners and customer.

Approximately four years ago, the country's carriers decided to more actively involve Huawei's products and solutions in their standardized products, through one of Huawei's Value-Added Partners (VAPs) — Meltec Communication S.A.

Established in 1987, Meltec's core business focuses on wholesale telecommunications distribution within South America and, working together with Huawei and its carrier customers, they deliver high-quality equipment to end-users.

Early Cooperation Challenges

In 2016, Meltec began working with Huawei EBG as the latter's distributor. The earliest projects were completed by very small specialized teams, collaborating with what was then, Huawei's relatively undeveloped EBG. Unsurprisingly, at this stage, distribution processes weren't clearly established and resources were limited.

In that same year, Huawei represented just five percent of Meltec's total revenue. Today, after four years of the partnership, Huawei accounts for 40 percent of Meltec's total revenue, with the remaining 60 percent split between 10 other vendors.

But before such success could be achieved, various challenges had to be overcome, sorely testing the cooperation.

Meltec's commercial department, for example, had to spend an extended period of time studying the ins-and-

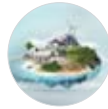
outs of Huawei's products and solutions in order to deepen the partnership. Huawei's products and solutions weren't mainstream in Colombia in 2016, so the commercial department developed new skills to sell products and solutions to domestic carriers that hadn't been seen in the region before. Marketing department also adapted the message with a new value added proposition for these new markets, product and services.

And it wasn't just Meltec's commercial and marketing department that faced challenges adapting to its new partner: the entire company had to adjust its internal processes for the partnership to be a success.

A Developing Partnership

As a distributor, Meltec invested in training its engineers and owned its position as Huawei 4-star Certified Service Partner (CSP). As the partnership became more successful however, and as cooperation and dedication increased, Huawei suggested that Meltec should further develop its relationship by becoming a Huawei VAP: this would be a way for Colombia's carriers and end-users to receive greater support, at the same time allowing Meltec to provide its customers with more services, ultimately increasing the company's profit margins.

Indeed, this change in the relationship benefited both: Huawei gained an additional VAP, and Meltec was able to increase its service offerings and profitability. And the partnership was far from one-sided: Meltec quickly helped improve Huawei's B2B solution delivery.



Huawei's regional partners — including Meltec — regularly provided carriers with equipment recommendations, based on the technologies they had used themselves, as well as the company's previous knowledge and experience. >>

Although Huawei had 30 years of experience in delivering carrier solutions, its B2B experience was limited. So, although somewhat of an unknown quantity, for Colombia's carriers, it was a relatively easy decision to include Huawei — a clearly experienced solution provider — in key infrastructure projects. But for projects in which carriers were reselling to B2B, Huawei's lack of experience was an obstacle.

With constant effort from both partners, Huawei's B2B market share did begin to grow. Huawei's regional partners — including Meltec — regularly provided carriers with equipment recommendations, based on the technologies they had used themselves, as well as the company's previous knowledge and experience.

How Did the Partnership Work?

The first step to success required Huawei and Meltec to research carriers' most frequently sold equipment, identify carriers' needs and requirements, and structure its products and solution portfolio accordingly. After that, both teams approached their carrier counterparts, armed with a wide-ranging portfolio. Carriers first tested Huawei's products and solutions then later approved them for use. At this point, Meltec was also involved to ensure the entire portfolio met the country's specific high standards.

Huawei supplied Meltec with the equipment most commonly used or re-sold by carriers, to be stored in local warehouses for quicker delivery to carriers as well as other customers. Using this stored inventory, Meltec was able to fulfill delivery times much quicker than before, and therefore could also receive payment much faster. Additionally, Huawei guaranteed that its price would remain "unbeatable," to further

ensure Meltec's market competitiveness.

In 2018, Meltec became a Huawei EBG VAP and the business group's most important partner in Colombia.

The two companies furthered their cooperation by signing a supply contract for carrier B2B standardized solutions, named Material Requirements Planning (MRP). The contract outlined a daily equipment supply rate, which was defined according to carrier re-sale requirements.

How Was Business Growth Achieved?

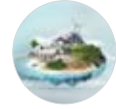
By October 2019, Huawei had already grown its business by 91 percent (compared to the whole of 2018), largely attributable to the core values that it had stuck to.

- **Customer first:** Both Huawei and Meltec placed customer satisfaction at the forefront of their business model. It didn't matter which company distributed the equipment; both Huawei and Meltec understood the importance of customer satisfaction.

Meanwhile, to ensure that customers received the best service possible, both Huawei and Meltec demonstrated respect to their partners and competitors, kept their promises, and made concerns known when they arose.

- **Dedication:** Both companies assigned dedicated teams to handle the carrier business, and built deep relationships with customers and key distributors.

Huawei and Meltec's dedicated teams proved essential: carrier-distributor relationships were built; challenges were solved; and open, collaborative communication channels were formed. These dedicated teams were headed by Huawei's B2B director (who was responsible for the account channel) as well as Meltec's carrier



Carrier business is a two-way street: Huawei supplies its partners with excellent cost-efficient solutions, and it relies on various partners — such as Meltec — to open up new business opportunities to ensure business growth reaches new heights. >>

account manager and Huawei's brand manager.

- **Constant improvement:** Meltec strictly followed the improvement guidelines set by Huawei's teams. The guidelines suggested focusing on one product first, providing weekly forecasts, and holding biweekly follow-up meetings.

Both companies remained up-to-speed with each other's business challenges by holding additional biweekly meetings that coincided with customer-satisfaction meetings, where they discussed the distribution status of customers and overall service satisfaction. Such open, two-way communication provided both companies with the control and clarity needed to improve distribution policies and efficiently manage the distribution business.

- **Open and resourceful:** Meltec and Huawei constantly innovated products to help support carriers and customers. Meanwhile, Meltec was always looking at ways to increase Huawei's channel participation and employ the resources at their disposal.

Meltec frequently promoted Huawei's products and solutions in other projects, to improve the equipment's visibility and increase its MRP demand.

- **Integrity:** Both Meltec and Huawei recognized that trust is the most important value in a successful partnership.

Even when facing challenges at the very start of the relationship, Meltec remained steadfast and, soon enough, its profit margins increased, proving that the company's trust in Huawei hadn't been misplaced. Today, the partnership's success has meant that many more companies are actively looking for ways to work and cooperate with Huawei.

- **Teamwork:** The remarkable business growth seen in 2019 was only made possible because of the collaboration and teamwork of both companies.

Crucially, both companies remained constantly aware that making customers happy — reducing

distribution processing time — was by far the most important aspect. And it wasn't just Meltec and Huawei involved in collaboration. Carriers played their part, too, understanding that both Huawei and Meltec needed their support to efficiently meet distribution requirements.

In 2020 and beyond, Huawei plans to apply similar working models to other carriers with Meltec. This involves using team building to introduce Huawei's account, channel, channel account, and channel brand managers to partnerships. It also means focusing on localizing business processes, and aligning business processes with carriers.

Carrier business is a two-way street: Huawei supplies its partners with excellent cost-efficient solutions to compete against regional competitors, and it relies on various partners — such as Meltec — to open up new business opportunities to ensure business growth reaches new heights. ▲



Partner Card



MELTEC was founded in 1987 and holds more than 32 years of experience in the telecommunication industry. The company's was initially focus on outstanding electronic measurement services and, in 1991, strengthening its innovate vein, became a cell phone distributor, as well as Motorola two-way radios. This initiative lead to the consolidation of a strong distribution channel structure in Colombia, which, in 1999, resulted in Meltec Comunicaciones S.A. creation, a fully dedicated technology and communication infrastructure company.

Today, the Meltec Comunicaciones has a consolidated distribution channel network (resellers and ISP's) of more than 500 companies and more than 300 clients with continually sales. In addition, the company was recognized by experts as one of the most influential ICT companies in Colombia for the past four years.

Building Trust with IAM and Huawei Horizon Digital Platform

By Shi Xiaojing, Director of the Strategic Cooperation Dept., Shenzhen Bamboocloud Technology Co., Ltd.

Cutting-edge technologies like 5G, Artificial Intelligence (AI), and the Internet of Things (IoT) are no longer distant fantasies — they are here. Their arrival signifies that an intelligent world, where everything is connected, sensing, and intelligent is now a real possibility. To adapt, organizations face the daunting task of digital transformation, which must be tailored to their industry, domain, and business scenarios. Deciding how transformation strategies are deployed to improve competitiveness has become the defining challenge that could determine the very future of these organizations.

To facilitate the digital transformation journey, Huawei's Horizon Digital Platform integrates leading ICT technologies to enable business collaboration and agile innovation. Huawei, with this intelligent, open platform that is flexible, secure and easy-to-use, aims to build a foundation for the digital world that connects businesses from different industries with platform partners like Bamboocloud. Their IAM, as a core component of the Horizon Digital Platform, is dedicated to eliminating information silos and

establishing extensive connections to ensure the secure sharing of data.

IAM Elevates the Core Capabilities of Huawei Horizon Digital Platform

IAM is a fundamental security platform for ICT construction, serving as an information carrier that interconnects various personnel, equipment, and resources. It incorporates different organizational

As one of the core components of Huawei's Horizon Digital Platform, Identity and Access Management (IAM) from Bamboocloud ensures end-to-end security for the management of identities, access, and risks, instilling trust for governments and enterprises during digital transformation.

resources — such as departments, personnel, processes, and data — into a shared intelligent digital ecosystem. Indeed, IAM is an essential ingredient for digital transformation by supporting an organization's information security and risk management.

Bamboocloud, as Huawei's strategic global partner in IAM development, has integrated an IAM platform into the Horizon Digital Platform — serving as a core capability for industries such as Intelligent City, Intelligent Campus, and Police Cloud. The IAM platform has provided real-world success, with deployments in multiple projects.

With people at the core, the IAM platform serves as a unified source for personnel, organization, and permission data. The platform is packed with features, such as AI integrated identification, rights and domain management, intelligent risk detection and control, and compliance audit, to enable all-round digital identity management. User identity data from various channels can be aggregated, managed, and shared to create digital identity profiles. In addition, a digital identity behavior track system can provide public services with comprehensive, proactive, and precise management capabilities.

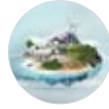
Intelligent technologies are employed by the IAM to monitor all access on the platform, combining authentication chains to detect a range of risks, including abnormal behavior, unauthorized access, and concealed attacks. Comprehensive monitoring enables the platform to sense real-time changes of the security environment during user access, implement dynamic access control, flexibly adjust security control

policies, and continuously evaluate the security and risk status of devices, systems, users, and data flows. Together, these measures provide intelligent defense and protection for all users' digital identities. Furthermore, the platform offers hyper-convergence certification and an enablement center that integrates multiple security authentication methods — such as digital certificates, facial images, fingerprints, voiceprints, gestures, and dynamic passwords — into a unified management portal. These two features allow the continuous and dynamic configuration of authentication modes to meet the needs of different service scenarios.

IAM Enables Intelligent Operations for Shenzhen Airport

The first phase of the 'Airport of the Future' project for Shenzhen Airport involved the infrastructure layer, basic/application platform layer, and service application layer. During this period, the project focused on the construction of ICT infrastructure (network, data center, and communications), foundational platforms (cloud, big data, IoT, and online video analysis), as well as applications. Tying everything together, the digital platform integrated messages, services, data, and IAM for airport platforms and applications, to effectively integrate and reform airport services. Meanwhile, the operation efficiency, security, and service quality of the airport also improved significantly.

A basic IAM platform was deployed in the first phase, and initially used by airport employees to improve user experience and processing efficiency. It integrated 43 application systems,



Bamboocloud's IAM provides the Horizon Digital Platform with high-quality data by analyzing behavioral models developed from identity data. The two companies strive to produce fruitful results and lead the ICT industry to a new direction through cooperation. >>

covering six sub-projects — such as cloud computing, unified communications, wireless, security, and industry platform. In the second phase, next-generation authentication and authorization will be deployed, featuring AI biometric recognition technologies, intelligent risk control, and compliance audit, providing end-to-end security assurance for the intelligent operations of Shenzhen Airport.

Thanks to the comprehensive identity management capability of the IAM platform, airport employees can enjoy the benefits of One-ID management. By eliminating information silos, unified access and Single Sign-On (SSO) are available on a host of applications, vastly simplifying the login process while also improving security. Moreover, rights and domain management allow IDs to be automatically assigned to users based on their positions and roles. Various authorization modes are also supported, such as manual authorization by administrators, role-based batch authorization, and automatic authorization based on user attributes.

Reshaping the Industry Landscape as Strategic Partners

From both a technical and market perspective, the strategic cooperation between Huawei and Bamboocloud is mutually beneficial. Huawei has an open, flexible, and secure ICT infrastructure platform that offers 'device-pipe-cloud' synergy, which is widely applied in fields such as public security, intelligent transportation, and campus security. Meanwhile, Bamboocloud has vast experience in the IAM field, leading the industry in terms of technology, expertise, customer success cases, and brand recognition. With equal dedication to building a prosperous industry

ecosystem, the partnership is a natural fit for both parties.

Based on Huawei's extensive experience in digital transformation, the Horizon Digital Platform is designed to be a scenario-oriented full-stack comprehensive solution. The versatile IAM system built on the platform serves multiple purposes, such as intelligent security, convenient access, facility management, and office administration. By working closely together, Huawei and Bamboocloud ensure continuous optimization and update of core capabilities and solutions, maximizing business value for customers.

Huawei Horizon Digital Platform is the engine that drives digital transformation for various industries, providing continuous support for organizational transformation. To support that goal, Bamboocloud's IAM provides the Horizon Digital Platform with high-quality data by analyzing behavioral models developed from identity data. The two companies strive to produce fruitful results and lead the ICT industry to a new direction through cooperation.

IAM has been growing rapidly around the world, but has only recently been embraced by Chinese customers. With high customer stickiness, IAM is a platform-type identity management system that ensures security for all connections. Being people-centric, it enables intelligent connections and management of various types of applications, while eliminating information silos. Huawei and Bamboocloud are both committed to developing standards for the identity management industry in multiple fields, such as Intelligent City, cloud security, and IoT security — with the aim of creating a trusted digital identity management to support both organizational business and security. ▲



DI.GI. Improves Customer Satisfaction with World-Class Services

By Luca Gotti, Infrastructure Solution Leader of DI.GI.

With global digital transformation taking hold throughout enterprises around the world, new technologies — such as cloud computing, big data, and Artificial Intelligence (AI) — are maturing. As this trend progresses, traditional ICT enterprises face ever-greater technical challenges, as their customers demand more.

Cooperating with Huawei to Fulfill Requirements of Customers

An integrator for more than 40 years in the Italian ICT market, with headquarters in Milan and Rome, DI.GI. serves enterprises of all sizes from every market sector. In recent years, it has faced many technical challenges, and has had to adapt its multi-brand and multi-level products and solutions to fulfill the increasingly high requirements of its customers.

Seeking support to address these ramped up requirements, DI.GI. began cooperating with Huawei in 2013. The decision to work with Huawei followed an in-depth technical evaluation by DI.GI.'s infrastructure solution team that took into consideration the extensive portfolio of Huawei products and their quality, the innovative nature of its solutions, related roadmaps, and its service support capabilities.

In the early stages of cooperation, however, DI.GI. lacked a comprehensive understanding of Huawei's products and solutions. It also encountered several further difficulties and challenges on its path of development.

For example, DI.GI. didn't have sufficient technical service capabilities in the Internet Protocol (IP) and Information Technology (IT) domains for Huawei's product service. Meanwhile, its customer service quality management needed to be improved because it lacked guidelines to guarantee successful project implementation.

Soon after beginning its cooperation with Huawei, DI.GI. set out to address these challenges. For example, in 2015, it assigned dedicated engineers to take Huawei's IT Career Certification courses. Later that year, DI.GI. obtained Huawei's 4-Star Certified Service Partner (CSP) certification in the IT product domain, helping the company further strengthen the partnership with Huawei and gain more trust from its customers.

From 2015 to 2018, during the implementation of several significant IT projects, DI.GI. engineers received service development requirements for network solution design and configuration from customers — requirements that were beyond the company's existing capabilities.

To align with these new service development requirements, DI.GI.

In the future, DI.GI. will continue to improve its engineers' technical skills, as well as improve its efficiency when providing Huawei solutions to the market. It will also continue to provide high-quality technical support for end-customers, and continue to build and service its competitiveness.

began focusing on obtaining IP product domain certification, as its single IT domain certification could no longer fulfill customer needs. As a result, DI.GI. decided to expand its cooperation with Huawei. And, with the support of Huawei's Channel Service Manager, DI.GI.'s engineers received the necessary training to acquire IP product domain certification. Then, in the second half of 2018, having been certified as a 3-Star CSP in the IP domain, DI.GI. began delivering various network product projects.

In 2019, seeking to gain more understanding of Huawei's channel policy and ensure service quality levels, DI.GI. encouraged its engineers to participate in Huawei's career certification training and exams.

DI.GI. engineers passed a total of 15 training programs and exams as Huawei Certified ICT Associate (HCIA), Huawei Certified ICT Professional (HCIP), or Huawei Certified ICT Expert (HCIE), improving the company's overall service support capabilities, while also becoming a benchmark partner for the regional service delivery business.

In May 2019, Huawei launched the Service Quality Alignment program for partners to improve their delivery quality and enhance customer satisfaction by providing standardization and specifications for installation, implementation, and maintenance services. It also provided standardized cyber security requirements to service partners.

From June to September 2019, DI.GI. sent six dedicated engineers to attend service quality alignment training, with all of them passing the related service quality exam.

DI.GI. has 17 HCIA engineers, six HCIP engineers, and two HCIE

engineers, covering IP and IT product domains, and has obtained Huawei's Gold Business Partner, 5-Star CSP-IT domain, and 4-Star CSP-IP domain qualifications.

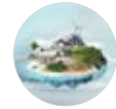
Employing Huawei's OceanStor Dorado Solution for CDLAN

Relying on its strong service team, DI.GI achieved great service delivery results in 2019. Many projects were successfully delivered, including several for renowned Internet Service Providers (ISPs) and Over The Top (OTT) companies in Italy, covering both IT and IP product domains.

For example, CDLAN, a telco operator and ISP that promotes its ecosystem of digital services through a range of ICT solutions developed over 20 years, recently expanded with the creation of Caldera21 — a new high performance data center at its Caldera Park location in Milan. To improve its Storage as a Service (STaaS) offerings for its cloud customers, CDLAN requested new equipment to be installed in its Caldera21 data center, as well as its data center in Rome.

DI.GI. arranged for its HCIE experts to interface with CDLAN, to discuss the solution's architecture and planning. After several rounds of consultation, and demonstrating its product and solution expertise, DI.GI.'s HCIE experts finally gained CDLAN's trust, and the project moved forward.

CDLAN and DI.GI. chose to employ Huawei's OceanStor Dorado 5800 V3 and 5500 V5 as the project's main storage systems to provide services for both the Milan and Rome data centers. These products guaranteed the required levels of performance, as well as



By the end of 2019, DI.GI. had been responsible for the delivery of 51 Co-Care maintenance contracts, and handled 69 Co-Care tickets with support from Huawei's Technical Assistance Center (TAC). >>

the flexibility and scalability identified during the project definition phase. Two storage system features in particular were highlighted as key for future project delivery.

The SmartMulti-Tenancy feature divides physical storage space into multiple logical resources; it also addresses data security and privacy challenges while reducing Operations and Maintenance (O&M) costs incurred in public and private cloud environments where multiple enterprises employ a single storage system.

The second standout feature — Hyper-Replication — enables storage systems in two different data centers to process services simultaneously. This establishes a mutual backup relationship, in which the storage system in one data center can take over services if the other's storage system has a failure — eliminating data loss and reducing service interruption.

Before project delivery began, Huawei organized training sessions based on the established 'three stages and nine steps' on-site service process for CSPs. This provides specifications for installation implementation as well as maintenance services and service request processes.

During the delivery phase, DI.GI. handled the project's physical installation, wiring, configuration, and on-the-job training for CDLAN staff. After delivery, DI.GI. visited the customer regularly to identify project delivery improvement points and optimize the project. DI.GI's project delivery confidence soared as the CDLAN project was implemented successfully.

Meanwhile, Huawei's storage solutions exceeded CDLAN's expectations in terms of performance and reliability, and allowed them to provide services to their customers with efficiency and scalability while remaining compliant with all

applicable quality standards.

Future Prospects: Continuing to Build and Service Competitiveness

To improve its project delivery capabilities, DI.GI. also prioritized improving its Co-Care maintenance capabilities (Huawei Co-Care service is a collaborative solution for certified partners that helps maintain a more efficient and stable network environment and improve network productivity). By the end of 2019, DI.GI. had been responsible for the delivery of 51 Co-Care maintenance contracts, and handled 69 Co-Care tickets with support from Huawei's Technical Assistance Center (TAC).

By providing remote and on-site technical support, Huawei ensures valuable delivery of products and solutions to customer interfaces, safeguarding IT construction, O&M, and customer operations.

In the future, DI.GI. will continue to invest, to further improve its engineers' technical skills, as well as improve its efficiency when providing Huawei solutions to the market. It will also continue to provide high-quality technical support for end-customers, and continue to build and service its competitiveness, with the aim to become a 5-star CSP in both IP and IT domains. ▲



Partner Card

"Since 1980, our commitment has been to succeed in delivering high-technology projects and services. We are aimed at allowing customers to reach shared goals, making them aware they have a resilient, reliable and punctual partner. We believe that constant update of our offerings is a specific duty to customers who rely on us in order to understand and anticipate their needs."

Overcoming the Shortage of ICT Talent: Huawei's Talent Ecosystem Strategy

By Mr. Bradd Feng, Director, Talent Ecosystem Development Department, Huawei EBG

Emerging technologies — such as Artificial Intelligence (AI), big data, cloud computing, and the Internet of Things (IoT) — have become crucial for the Information and Communications Technology (ICT) industry as well as the global economy's wholesale digital transformation. However, the ICT industry's rapid growth is facing an undeniable challenge: a shortage of high-quality talent.



Huawei is tackling the ICT industry's severe talent deficiency by developing standards, building a talent alliance, and communicating talent value. Huawei aims to supply the ICT industry with more than one million professionals by 2024, to sustain the industry's rapid growth.

Growing Pains: A Shortage of High-Quality ICT Talent

In the next two to three decades, technological development will establish an intelligent world in which everything is sensing, connected, and intelligent. Before that can happen, however, the ICT industry requires high-quality talent with innovative ideas and technological capabilities. The industry's future will be driven by such new talent, and those who possess interdisciplinary skills will be highly sought after by large- and small-sized companies alike.

The knowledge-intensive ICT industry relies heavily on its talent — a situation exacerbated by the industry's explosive growth. For instance, according to the National Bureau of Statistics and Ministry of Education, China needed a staggering 7.65 million ICT professionals in 2017.

Meanwhile, a mismatch between the talent pool's technical capabilities and the interdisciplinary skills the industry requires is hindering talent recruitment. In other words, the industry lacks highly talented individuals with the innovative capabilities that are essential to drive new growth.

The overall talent shortage is also caused by talent concentration in emerging technologies, such as cloud computing, big data, IoT, and AI. At the same time, companies' strict employment requirements result in fewer candidates being hired.

The China ICT Talent Ecosystem Whitepaper explains the industry's current talent recruitment trends. It notes that cloud computing companies are recruiting talent with cloudification service consulting and guidance capabilities. Elsewhere, companies working in the big data field require talent to display data analysis and business intelligence; IoT companies look for talent that is able

to apply knowledge and understanding of the technology to multiple scenarios; and AI companies need talent that can foster in-depth industry integration, since AI technology is at its breakthrough stage, with many applications needed to be developed for a wide range of scenarios.

To sustain rapid growth, the industry must answer two key, pressing questions: How can talent be developed to meet the industry's ever-growing demand? How can the high-quality training of talent be accelerated to meet that demand with the urgency required?

Tackling Talent Shortage: Building a Talent Ecosystem

Huawei prioritizes its talent and their value. Of Huawei's 188,000 employees, 45 percent are involved in innovation and Research and Development (R&D). Indeed, Huawei is focused on building an open, collaborative, mutually beneficial talent ecosystem, developing ICT talent and facilitating the industry's growth and transformation. Huawei builds its talent ecosystem by sharing its experience in development, management, and talent cultivation through collaboration with partners, educational institutions, organizations, and government authorities.

Huawei's talent ecosystem strategy involves setting talent standards, building a talent alliance, and promoting the value of talent.

- **Setting Talent Standards**

Huawei Certification provides an industry-leading ICT talent development standard and an overall architecture for certification. Based on the 'platform + ecosystem' strategy and 'cloud-pipe-device'

synergy, Huawei provides ICT Vertical Certification, Platform and Service Certification, and ICT Infrastructure Certification, to personnel who are responsible for technical infrastructure, developers, and end-users. The certification system is divided into three levels — Associate, Professional, and Expert — based on previous experience and technical requirements.

Huawei Certification covers many industry domains, providing talent with clear career development pathways and proper evaluation standards. Over the past two years, more and more certifications have been released — covering cloud computing, cloud service, big data, IoT, AI, intelligent computing, AI-native database GaussDB, and Kunpeng processors — and all have gained widespread industry recognition.

In total, the Huawei Certification program has released 100 certification exams, covering 22 technical categories. With this program, Huawei certified more than 250,000 professionals from around the world by the end of 2019, providing great benefits to customers and partners alike.

- **Building a Talent Alliance**

Talent development is challenging and time-consuming. It requires

both dedication and heavy investment to build a talent ecosystem that can thrive. And partners are essential to establishing the success of the ecosystem.

Huawei has actively been expanding its partnerships and deepening the collaboration between enterprise and education. It has partnered with more than 900 universities and colleges around the world — including Polytech Nice Sophia (France), Henley Business School (UK), the University of Malaya (Malaysia), the University of Alicante (Spain), and Shanghai Jiao Tong University (China) — providing teaching materials, training, lab construction, and student certification to more than 45,000 students every year.

Meanwhile, Huawei cooperates with global training partners to provide training and certification services for professionals worldwide, in order to sustain talent supply. By the end of 2019, more than 110 Huawei Authorized Learning Partners (HALPs) had been developed around the world, with 4,700 Huawei certification exam centers located in 183 countries and regions.

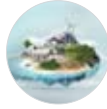
Huawei also works with partners to accelerate talent cultivation and address the talent shortage in emerging technology domains.

Huawei has collaborated with partners to establish the AI Talent

Huawei ICT Competition for Worldwide Students

Technical Competition Between Global College/University Students, Facilitating International Talent Development and Exchanges





In total, the Huawei Certifications program has released 100 certification exams, covering 22 technical categories, with more than 100,000 professionals from around the world awarded certification, providing great benefits to customers and partners alike. >>

Development Program, for example, addressing the AI domain's talent shortage. More than 10,000 students are expected to obtain Huawei Certified ICT Associate-Artificial Intelligence (HCIA-AI) certification through Huawei ICT Academies within three years.

Similarly, Huawei is addressing the big data domain's talent shortage, working with global partners and higher education institutions with the aim of training more than 10,000 certified big data experts within three years. Meanwhile, Huawei has also been developing the Kunpeng computing industry by releasing the Kunpeng Talent Program, with the aim of cultivating more than 200,000 professionals in technical fields such as using Kunpeng processors and GaussDB, intelligent computing, and AI, all within five years.

Teaching materials play a fundamental role in the construction of the ICT talent ecosystem. Huawei has been coordinating well-known professors, in-house technical experts, and publishing editors since 2018, to jointly publish a series of training materials, which focus on technological evolution and industry development. Nine big data textbooks were launched in 2018, and 12 IoT textbooks and eight AI textbooks will be published in 2020.

- **Showcasing Talent Value**

Huawei holds many international ICT competitions — to help talent showcase their technical capabilities and to foster the exchange of ideas with industry leaders. Huawei aims to build an environment that encourages learning, promotes development, and boosts talent value. Huawei ICT Competition 2018–2019, held in May 2019, attracted more than 100,000 students from over 1,600 universities and colleges in 61 countries. The Huawei ICT Competition

2019–2020 will likely surpass these figures, with more than 130,000 participants expected to attend from over 70 countries.

Huawei has also released the end-to-end Huawei Talent Platform, to provide a better experience for various types of global users. The platform helps learners to improve their capabilities and assists them with career development by offering a one-stop service, covering registration, learning, online course purchase, examination, certification, and job seeking.

Huawei understands that the ultimate goal of talent development is long-term employment. To this end, Huawei organizes online and offline job fairs to match the right talent with the right enterprise. This way, talent supply is streamlined and enterprises receive individuals with the skill sets they need.

Talent Ecosystem: Foundation for the ICT Industry

The talent ecosystem is the cornerstone for the 'platform + ecosystem' strategy, where people are the most important part of the ecosystem and the foundation for maintaining the vitality and continuous growth of the industry chain. Huawei hopes to tackle the ICT industry's severe talent deficiency by developing standards, building alliances, and communicating talent value. By 2024, Huawei expects to have built a vibrant ICT talent ecosystem and developed more than one million industry professionals.

Furthermore, Huawei is putting more effort into ensuring equal, high-quality education. In doing so, Huawei aims to achieve the goal of the TECH4ALL digital inclusion initiative — to help more people benefit from digital technology than ever before. ▲

Playing the Game at One of the Best Huawei Training Centers in Europe

By Petrova Natalya, CEO, Training Center Microtest

The University of Seattle, Washington State, uses an online *game* — FoldIt — to crowdsource research that helps scientists working in the field of protein structure prediction.

In their own words: “We’re collecting data to find out if humans’ pattern-recognition and puzzle-solving abilities make them more efficient than existing computer programs at pattern-folding tasks. If this turns out to be true, we can then teach human strategies to computers and fold proteins faster than ever!”

Similarly, the language learning app Duolingo inherits plenty of structures from video games — from an in-game currency (called ‘lingots’) to leaderboards, experience points, and reward badges — all in an effort to engage and encourage users.

In both cases, what we’re witnessing is ‘gamification’: the idea that games and game structures can serve as powerful platforms in other arenas, from learning to complex research projects.

From Russia with Love

Founded in 1996, the Microtest Training Center specializes in training and certifying IT experts. Today with 700 staff and six branches around the country, Microtest was in fact the first partner in Russia authorized to conduct courses on Huawei equipment. And the fit is a good one: both Microtest and Huawei share key core values — openness and cooperation.


As the oldest Huawei authorized training center in Russia — officially accredited as a Huawei Authorized Learning Partner (HALP) — Microtest constantly explores ways to innovate methodologies that can build a supporting environment and foster competency in Huawei technologies, products, and solutions. Furthermore, the company prioritizes increasing the qualification level of the instructors themselves, as well as finding new ways to engage students in the learning process. Perhaps this is why Microtest was named Huawei’s best Authorized Learning Partner in Europe for 2016-2017.

In the Game

One such way of investing individuals in the learning process is to turn toward the trend for gamification. To develop its education ecosystem and promote certification, Microtest launched a unique project in 2016: IT-Games PRO. With a mandatory certification exam as its natural endpoint, IT-Games PRO is an ongoing learning model that combines coaching, training, practice, and testing, with teamwork a key focus, and competitive elements — learning from the world of games — built-in. Its storytelling and troubleshooting features add further layers of texture, transforming the learning experience into something truly engaging and active, quite different from traditional, passive pedagogical models.

Building on the success of IT-Games Pro, Microtest and Huawei launched the ‘*Huawei Hunger Games 2018*’ just two years later, an educational gaming championship concept involving some of the best corporations in Russia, including Russian Railways, Sberbank, and Yandex. Twenty-six unique education- and entertainment-related projects were entered, and participants passed 100 Huawei exams in total. Unsurprisingly given this result, they provided extremely positive feedback. The event proved highly effective and undoubtedly played its part in stimulating a new wave of interest in Huawei IT-certification: more than 400 certification exams were passed at Microtest Training Centers during the second half of 2018.

Buoyed by these successes, Microtest and Huawei launched an even more ambitious gaming concept involving some of the largest



Microtest was in fact the first partner in Russia authorized to conduct courses on Huawei equipment. And the fit is a good one: both Microtest and Huawei share key core values — openness and cooperation.

companies in Russia — ‘*Huawei Certified Internetwork Expert (HCIE) Huawei Camp 2019.*’

The camp’s main goals were to provide IT specialists with experience to boost their confidence and quickly provide training for a large volume of participants, ultimately injecting a significant number of newly HCIE-trained experts into the market.

In ways like this, Microtest has long been committed to the popularization of Huawei professional IT certification in Russia, given that a large share of enterprise networks in Russia are already constructed with Huawei equipment. Microtest actively promotes Huawei certification to its clients as a way of rapidly building an internal knowledge base and an evaluation program for IT specialists within a company, saving both time and money, with no need for companies to self-develop their own standards.

Global Scale

Moving forward with Huawei, Microtest is planning a campaign to promote the full suite of Huawei certifications in Russia — including Huawei Certified ICT Associate (HCIA), Huawei Certified ICT Professional (HCIP), and HCIE — and is making efforts to demonstrate to Russian IT specialists that there is considerable demand for Huawei certified experts on a global scale. This means that, on gaining certification, IT professionals are opening doors for their future careers in other developing markets, notably the five major emerging national economies of the BRICS nations — Brazil,

Russia, India, China, and South Africa — as well as countries across the African continent.

Close cooperation with Huawei is ongoing, including the development of new mutual KPIs, as well as discussions about further ways to create and develop fresh educational projects for students, big corporations, and partners, including a plan to jointly run an HCIE club.

Huawei views the construction of an open ecosystem to help build the information society as one of its key goals. In 2020 and beyond, Microtest will remain committed to playing its part in the creation of a talent ecosystem, at all levels: from students (basic level training), through to specialists (at an intermediate level), and experts (the highest level possible). In this way, the company assists Huawei in expanding its market opportunities, in identifying prospective talents, and in encouraging all to develop and evolve their own competencies. ▲

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Partner Card

Founded in 1996, the Microtest Training Center specializes in training and certifying IT experts. Microtest is authorized by global IT market leaders (Huawei, PostgresPro, SAP, Astra Linux, and IC Agile) and offers more than 2,500 courses, including certified and authorial courses, workshops, and business games. The company’s regional network covers Moscow, Ekaterinburg, Tuymen, and more.



K Labs: Fostering Talent with Huawei Training and Certifications

K Labs specializes in telecommunications and ICT technical training, delivering both technology-independent and vendor certification courses. K Labs headquarters is in Italy, but the company delivers training in many other countries, providing delegate courses, including theoretical knowledge and practical experience. K Labs's course catalog is available in four languages and includes more than 90 courses, focusing on the fields of data centers, cloud computing, IP networking, mobile and fixed access, 5G, performance testing, multimedia broadcasting, ICT security, big data, IoT, blockchain, and AI.

K Labs customers are mostly network operators, manufacturers, systems integrators, finance enterprises, governments, and utility companies.

Interview with Lorenzo Passarini, K Labs Director

K Labs delivers different types of Huawei certification training courses. In your opinion, why should an engineer consider getting a Huawei certification?

Well, Huawei is a multinational networking and telecommunications company that provides equipment and services to the global market. Today, it is not a challenge to invest in Huawei. It is certain that the ICT market will require more and more engineers able to build the future networks using Huawei equipment and solutions.

K Labs is an independent training organization. What do you think about the Huawei certifications compared to those of other vendors in terms of value and quality?

Huawei has got a dedicated team for training and certification that works at central and local levels. When I visited Huawei's headquarters in China, I was impressed by how Huawei takes care of the training partner feedback to continuously improve the quality of the training and certifications. It is something that I have never seen

from other vendors.

Regarding the quality, I can say that getting a Huawei certification does not mean just passing an exam. Huawei encourages the candidates to attend training before to take an exam. This gives great added value to Huawei certifications, because the certified engineers have really experienced installing, configuring, and managing Huawei equipment.

Compared to other vendors, Huawei better supports K Labs because it provides free certification vouchers for trainers and students, arranges "train the trainer" sessions, and supports K Labs with training labs and technical support teams.

K Labs is involved in training teachers and professors of colleges and universities who have become Huawei ICT Academy Partners in Europe. What do you think of the Huawei ICT Academy program? And why should a school or university be interested in this?

Engineers that want to face new ICT challenges should approach the job market with proper technology knowledge. Universities are doing a great job in providing such skills, but today that is not enough. Huawei ICT Academy program integrates the students' skills with the emerging vendor technologies. This is a great opportunity for university students. In China, 40 percent of the students with the

“If you are planning for a year, sow rice; if you are planning for a decade, plant trees; if you are planning for a lifetime, educate people.” This Chinese proverb reflects K Labs’s attitude toward Huawei’s training programs, and it’s this belief in educating people that has encouraged us to become the most important Huawei Authorized Learning Partner (HALP) in Western Europe.

certification have been able to find jobs with better salaries. And, at the same time, for the universities, Huawei ICT Academy is an opportunity to provide a unique curriculum for students, getting students ready for employment.

The authorized learning partnership between Huawei and K Labs started over 12 years ago. How has the partnership evolved over the years, and what do you expect it will mean for K Labs in the future?

Yes, we have been working with Huawei since 2006. At that time, very few people knew who Huawei was, and K Labs was a small company. But Huawei and K Labs trusted each other, and we started a training cooperation with the Carrier Business Group and later with the Enterprise Business Group, growing together and setting up a real partnership.

Today, K Labs is the most important HALP in Western Europe, providing training on the entire Huawei training portfolio, including routing and switching, storage, cloud, data center, WLAN transmission, access, LTE, and 5G, and to prepare ICT engineers to

pass HCIA, HCIP and HCIE certification exams.

Since we have been working as a HALP, we have trained more than 3,200 students in Western Europe.

Today, the Huawei brand is well known both in the consumer business for the smartphones and in the enterprise market. In fact, many engineers and students from universities can now implement cost effective and reliable Huawei solutions in the ICT industry.

That is what Huawei and K Labs have been doing over the last 12 years, and what we are going to do in the future for a long time.

What Is K Labs’s Main Strength?

I think the main strength of our company is represented by the pool of 18 instructors. All of them are K Labs employees and have got HCIP certification level. Seven of them are also HCIE.

They have very good skills in terms of using Huawei’s technologies, technical experience with the training lab, and remarkable communications abilities.

As the cooperation between Huawei and K Labs is expanding across several countries, multi-language capabilities are required. That’s why K Labs instructors are able to deliver the courses in five different languages.

Huawei and K Labs have in common the ability to invest in the new technologies, the first in developing technology solutions, the second in transferring the related knowledge to partners and customers.

Together, we want to understand better how the training market will evolve in the future, what the customers need, and share our experience with companies from other regions.

I am sure that together Huawei and K Labs will succeed in future technology challenges, like 5G, Big Data, IoT and AI. ▲



Excellent Training Partner Award at CeBIT



Huawei ICT Academy: Building a Talent Ecosystem and Boosting the ICT Industry's Development

By Talent Ecosystem Development Department, Enterprise Business Group, Huawei Technologies Co., Ltd.

In the digital era, ICT — a leading industry in the digital economy — faces great challenges in optimizing its industrial structure and accelerating digital transformation. As the industry transforms, the key to maintaining rapid development, seizing opportunities, and making progress in the new era is treating talent as the industry's most important resource.

Breaking the Bottleneck of the Integration of Industry and Education in the Cultivation of Talent

In the traditional talent cultivation model, higher education prioritizes theories and concepts but neglects practices and capabilities. Talent supply and demand are somewhat disconnected, and the model struggles to support the industry's development. In this context, a long-term strategy that includes resource sharing, complementary advantages, and joint development between universities and enterprises is needed to efficiently match the talent supply with the demand; achieve mutual benefits among universities, enterprises, and talent; and support the industry's development.

Theoretically, the cooperation between universities and enterprises can be key in promoting a solution to the talent dilemma. In practice, however, the cooperation between universities and enterprises can be

difficult to implement. The integration of industry and education has encountered a bottleneck. There are three main reasons.

Firstly, the talent cultivation model of collaborating and cultivating people isn't fully developed. Generally, collaboration between universities and enterprises is spontaneous and shallow.

Secondly, some enterprises aren't active in the training process, and they aren't aligned with the talent cultivation goals of universities. The content of the courses doesn't match the professional standards, and the teaching process isn't aligned with the industry's production processes. The prioritization of theories over practices is an ongoing problem.

Thirdly, there are problems in colleges and universities, such as teachers lacking motivation to participate in industry-education cooperation projects and a lack of desire to learn among students.

Based on more than 30 years of technical accumulation and talent cultivation practices, Huawei ICT Academy has developed innovative university-enterprise cooperation solutions for 927 universities worldwide, covering course development, teacher training, and internships. The solutions cover three phases: talent cultivation, certification, and transfer. Huawei has worked with universities to build a talent ecosystem that provides momentum for the ICT industry.

The challenge is to achieve efficient communication between the ICT industry and the education industry, and solve the talent shortage problem.

As a global leading ICT solution provider, Huawei advocates for an open, shared, ICT talent ecosystem that benefits all parties. In 2013, Huawei launched its ICT Academy, a school-enterprise cooperation project that involves higher education institutions, to help build that talent ecosystem. Over the past six years, Huawei has invested heavily in exploring practices with universities and colleges and replicating successful experiences. Huawei has built a talent supply chain covering the entire process of learning, certification, and employment — by deepening the cooperation mechanism between universities and enterprises, aiming to promote industry development, and innovate talent development models based on enterprise requirements. Huawei helps universities cultivate ICT talent that meets industry requirements, providing high-quality talent for industry development.

By the end of 2019, Huawei ICT Academy had been deployed in China, Southeast Asia, the Middle East, Africa, Europe, Latin America, and the Southern Pacific, covering 72 countries. The universities that cooperate include some of the most highly rated in China, such as Shanghai Jiao Tong University and Fudan University, as well as world-renowned universities, including Bauman Moscow State Technical University, University of Malaya, and the University of New South Wales. The Polytech Nice Sophia and other engineering colleges, as well as the Shenzhen Vocational Technical College, the UK's Northeast Surrey Technical College, and other

leading higher vocational colleges are also included. In total, 927 colleges and universities are involved. More than 45,000 students are trained every year. In 2019, Huawei and over 1,300 partners jointly held 51 talent fairs around the world, attracting more than 21,000 students and providing more than 3,600 high-quality ICT personnel to the industry.

Huawei ICT Academy: Multi-Dimensional Solutions Addressing Talent Ecosystem Pain Points

Based on Huawei's technical accumulation, talent cultivation experience, and industry resources in the ICT industry over the past 30 years, the Huawei ICT Academy project supports Huawei's 'platform + ecosystem' strategy. Based on industry requirements, the project addresses the pain points of the industry's talent gap and integrates the resource advantages of both universities and enterprises. Huawei provides a comprehensive solution that covers the entire talent development process from course development, trainer enablement, to lab environment setup, and from talent certification, competition, to employment. The solution works with the government, universities, and enterprises to build a new ICT talent development model and an effective talent ecosystem. Huawei also provides multi-dimensional solutions for different types of talent and different levels of needs to ensure that Huawei's school-enterprise cooperation solutions effectively match the needs of higher education institutions and enterprises, and promote the development of various types of ICT talent.

As digitalization accelerates in various industries, colleges and



Huawei has held four annual ICT contests, with the number of participants and countries involved increasing each year. The fifth competition, now being held in more than 70 countries around the world, is expected to involve more than 150,000 students.
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universities urgently need to reform traditional teaching content and focus more on cutting-edge technologies, ensure that courses keep up with the times, guarantee that teaching materials are related to industry practices, and help students become more employable. To meet these demands, Huawei works with college and university teachers to jointly develop courses based on Huawei's understanding of the industry, technical accumulation, and practices, industry position analysis, and Huawei-certified talent certification standard system, and builds a practical course system that adapts to industry talent requirement. The course covers a wide range of technical fields, including routing and switching, storage, cloud, WLAN, cloud computing, big data, IoT, and artificial intelligence. It provides teachers and students in cooperative colleges and universities with a one-stop open platform for online learning and practice. Such courses can greatly improve the efficiency and quality of talent cultivation. After signing a contract with Huawei ICT Academy, universities can get course authorization provided by Huawei and the free training that integrates courses, practice, and certification — achieving independent teaching and operation.

For example, in 2014, the University of Alicante, a top university in Spain, signed a contract with Huawei to become the first Huawei ICT Academy in Western Europe. Huawei arranged for experts to provide HCIA-Routing & Switching training for four ICT Academy teachers, enabling the university to teach students routing and switching independently.

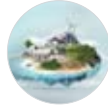
Huawei's certification exam is an important means to test students' learning achievements and is very significant in improving the quality of talent development of Huawei ICT Academy. Most students can pass Huawei certification exams after completing related courses, proving that they are

qualified for basic positions in the industry. For students, Huawei certification can improve their employment competitiveness. For universities, Huawei certification can improve the employment rate of schools. For enterprises, Huawei certification can reduce the training costs of enterprises. In 2018, the University of Alicante added the HCIA-Cloud course, and Huawei's technical courses have become mandatory.

Huawei ICT Competition: Promoting Education, Learning, and Development Through Competition

The ultimate goal of talent cultivation is to transfer new employees to the industry. Improving students' practical capabilities and employment competitiveness in this process has always been critical in cooperation between schools and enterprises, and this is also one of the important indicators for tracking talent cultivation achievements.

Huawei has held annual ICT competitions since 2015. Through cooperation with governments, enterprises, universities, training institutions, and industry organizations, Huawei aims to provide international competition and communication platforms for college students worldwide, increase their ICT knowledge, and stimulate their interest in learning and innovation capabilities, and improve their self-learning and problem-solving abilities, to promote learning through competition. To better guide students, teachers need to further expand their professional technical fields, focus on cultivating students' innovation, team collaboration, and ability to adapt to changes, and reflect on their teaching methods based on the performance and competition results of students to improve the practicality and relevance of teaching and promote teaching through competition. For universities and participating enterprises, participating in Huawei ICT Competition



At the end of 2017, Huawei released its new corporate vision and mission, and focused on its role as a foundation for the intelligent world. In the ICT talent ecosystem, Huawei aims to become a foundation for cultivating digital economy talent. >>

is a good opportunity for talent supply and demand communication. It helps promote upgrading the talent development model, promote employment, and promote development through competition.

Huawei has held four annual ICT contests, with the number of participants and countries involved increasing each year. Thirty teams and 7,550 students from China attended the first competition, held in 2015. The fourth competition, in 2019, was held across 61 countries, involving more than 100,000 students from more than 1,600 universities and colleges. Innovation competitions were also held to evaluate students' innovative application and solution design capabilities of new technologies such as AI, cloud computing, big data, and IoT, and comprehensively cultivate students' ICT technical capabilities. The fifth competition, now being held in more than 70 countries around the world, is expected to involve more than 150,000 students.

The University of Malaya is the oldest and highest-ranking university in Malaysia. It has cooperated with Huawei for seven years and joined Huawei ICT Academy in 2018. While using Huawei's knowledge to enrich teaching content, strengthen students' knowledge, and improve their skills, the University of Malaya has also participated in Huawei ICT Competition. In the 4th Huawei ICT Competition Global Final, the Academy of Computing Sciences and Information Technology of the University of Malaya competed with 65 teams from 30 countries and won first prize in the network competition.

The Huawei ICT Competition isn't just important for students because it can help them improve their skills; it can also boost their competitiveness in the job market. For example, after she participated in Huawei's ICT Academy project and Huawei's ICT competition and won third prize of the Honor Cup in the ICT Competition in Russia, Huawei

hired Bauman Moscow State Technical University (BMSTU) student Tishina Elizaveta as a service engineer.

"Huawei ICT Academy can help Huawei discover new talent, and help students improve their technical knowledge as well as define their career development direction," Elizaveta said.

BMSTU is one of Russia's most historic and most prestigious academic universities. It has cultivated more than 160,000 outstanding technical personnel. In the 4th Huawei ICT Competition Global Final, two BMSTU students won the opportunity to compete on behalf of Russia with top students from other countries. During the competition, they were able to identify their strengths and weaknesses and clarify their future career development direction.

Becoming a Foundation for Cultivating Talent in the Digital Economy

At the end of 2017, Huawei released its new corporate vision and mission, and focused on its role as a foundation for the intelligent world. In the ICT talent ecosystem, Huawei aims to become a foundation for cultivating digital economy talent. In the new era of ICT development, Huawei will accelerate scientific and technological innovation; it will also invest in knowledge innovation and talent development. Through furthering cooperation between schools and enterprises, Huawei aims to align school majors and industry sectors, course content and professional qualifications, teaching structures and production processes, and talent development and employment.

By bridging the gap between demand of enterprises and the supply from schools, Huawei hopes to provide more technical and skillful talent, more advanced technologies, and more support to innovation and entrepreneurship — to facilitate a virtuous cycle and support the sustainable development of the ICT industry. ▲

GUIDELINE

STANDARDS

RULES

REGULATION

PROCEDURE

COMPLIANCE

LAW

Huawei Compliance System Safeguards Partner Ecosystem Development

By Partner Strategy and Operation Department, Enterprise Business Group, Huawei Technologies Co., Ltd.

In the global Information and Communications Technology (ICT) industry, there are regular discussions about concerns related to trade compliance, cyber security, data and privacy protection, environmental protection, and anti-corruption and anti-bribery policies. Industry leaders must address the issues in order to build a healthy business ecosystem. Meanwhile, ICT companies need to address these issues if they want to survive and thrive in the market.

Since its establishment in 2011, Huawei's enterprise business has grown rapidly worldwide, even in the face of uncertainty. Huawei's enterprise business, with the support of its global customers and partners, has grown 10-fold in sales performance and achieved a compound annual growth rate of 40 percent since it was established. In this context, Huawei's operational compliance has become even more important for Huawei Enterprise Business Group (EBG) to sustain its business growth. To address future challenges, Huawei EBG will optimize its operational compliance systems.

Compliance Management Systems: Building the Foundation for Huawei's Global Operational Compliance

Huawei conducts its business with integrity and abides by international conventions as well as all applicable laws and regulations in the countries and regions in which it operates. This is the cornerstone of Huawei's operational compliance, and it has long been a core principle of Huawei's management team.

With the guidance and oversight of the company's top executives, the efforts to strengthen a culture of operational compliance are ongoing. Huawei takes the following measures to establish its global operational compliance culture:

- **Establishing dedicated organizations:** Huawei establishes dedicated compliance and oversight teams to further bolster the management and oversight of its global business operations. By providing its employees with training and awareness programs, performance appraisals, and accountability management sessions, Huawei consistently reinforces the awareness of laws and operational compliance among its employees at all levels.
- **External communication:** Huawei actively and openly shares its operational compliance journey with its business partners, providing insight into its experience developing global operational compliance systems.
- **Construction of overseas compliance systems:** Huawei continuously optimizes its operational compliance systems in its

Following more than 10 years of sustained investment and continuous efforts, Huawei has built global trade compliance systems that comply with the industry's standards. Meanwhile, Huawei's global trade compliance systems help ensure that the company upholds local laws and regulations at all times.

overseas subsidiaries. To date, Huawei has drafted legal compliance handbooks in more than 100 countries to ensure compliance with local laws and regulations after analyzing local legal requirements as well as the requirements raised by industry associations.

- **Internal management supervision:** Huawei defines its compliance responsibilities by selecting and training compliance officers in all of its subsidiaries. Huawei has also established oversight-oriented subsidiary boards that manage and oversee the subsidiaries operational compliance. This ensures that Huawei's subsidiaries' compliance work aligns with local legal requirements as well as its own compliance strategies.

- **Inviting external consultants:** Huawei invites external consultants to review its compliance in key domains and proactively works with relevant stakeholders through its compliance initiatives to foster mutual understanding and trust.

Huawei is committed to strengthening compliance in multiple business domains, including trade, cyber security, data and privacy protection, anti-corruption practices, and trade secrets protection. By increasing its compliance investment, Huawei continues to optimize its global operational compliance systems to meet industry standards.

Huawei also regularly collaborates openly and proactively with government agencies, passing governmental audits in Europe and Japan. By strengthening its compliance and increasing its compliance transparency, Huawei continues to earn the respect and recognition of more and more governments and partners around the world.

Trade Compliance: Establishing a Complete Internal Compliance System Through More Than a Decade of Efforts

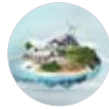
Huawei was one of the first companies in China to establish

a comprehensive trade compliance system. Huawei has been developing its trade compliance system with industry best practices for more than 10 years. The system complies with all applicable laws and regulations of the countries and regions in which it conducts business, including the export controls and sanctions imposed by the United Nations, the US, and the European Union.

- **Organization and regulation development:** Huawei aligns its trade compliance system with the industry's best practices, and it has established an integrated trade compliance management organization to manage trade compliance across multiple regional offices. Huawei has also established dedicated specialist teams to ensure trade compliance in its global offices. These teams help the trade compliance system adapt to local law changes, while they also integrate trade compliance into global offices' rules and processes, and manage and oversee trade compliance at each stage of business operation, including procurement, R&D, and sales, as well as supply and services.

- **Third-party audits and evaluation:** Huawei invites independent consulting firms to provide external audits and trade compliance advice to ensure the trade compliance system's suitability and effectiveness. Huawei was among the first few companies in China to invite consultants from the US to design, audit, and evaluate its own trade compliance system. In 2007, Huawei invited authoritative consultants from the US to provide instructions on how to better ensure trade compliance. Since then, Huawei has invited independent third parties from the US to evaluate, review, and refine its trade compliance system based on feedback. Upon request, these audit reports are provided to government agencies and partners to enhance mutual understanding and trust.

- **Employee training:** Huawei continuously raises its employees'



More than 100 of Huawei's subsidiaries have aligned their own systems with local laws and the requirements of local industry associations, and have drafted legal compliance handbooks. >>

trade compliance awareness by holding more than 100 trade compliance training sessions for managers and employees across the company every year. The format varies from session to session, and the sessions allow employees to fully understand their export control responsibilities and obligations as well as the company's. Huawei's employees must also agree to and sign the Business Conduct Guidelines (BCG) every year. The BCG includes the commitment to observe applicable export control laws and regulations.

Security and Trust: Investing US\$2 Billion Over Five Years to Ensure Industry-leading Security and Privacy Protection

A fully connected, intelligent world is built on security and trust. Additionally, cyber security — crucial to building an intelligent world — is a responsibility that is shared by industry competitors, value chain suppliers, and the wider society. Huawei, as an industry leader, has made cyber security and privacy protection its top priorities, and continues to invest in an ongoing basis while also ensuring openness and transparency with its partners and customers. Huawei's cyber security and privacy protection compliance is best demonstrated by its desire to continuously optimize its software engineering capabilities and practices, and develop resilient networks and high-quality products for its customers. Huawei supports stable network operations and ensures business continuity under all circumstances.

- **US\$2 billion over five years:** Huawei plans to invest US\$2 billion over the next five years to enhance its software engineering capabilities. This investment will help improve its response to the cyber security and privacy protection challenges affecting the ICT industry. It will also help position Huawei as an industry-leading supplier with

compliant cyber security systems.

- **11 security certifications:** Huawei actively works toward achieving the industry's mainstream cyber security and privacy protection certifications. In 2018, Huawei's major products were awarded 11 international mainstream security certifications.

- **100 percent certified:** Huawei requires its key staff members to obtain cyber security and privacy protection certification.

- **2,778 evaluated suppliers and 582 DPAs:** Huawei has evaluated 2,778 of its mainstream suppliers for possible cyber security risks, and their corrective action plans have also been verified. Huawei has signed Data Protection Agreements (DPAs) with 582 suppliers to ensure privacy protection, and performs regularly checks on these suppliers to ensure they remain compliant.

- **170 countries and regions, 1,500 networks, 3 billion people:** Huawei is committed to providing uninterrupted network services to more than 3 billion people around the world and delivering stable operations to more than 1,500 networks in over 170 countries and regions. Huawei has delivered network services for about 300 major events, including the 2018 FIFA World Cup in Russia, and the 18th Shanghai Cooperation Organization (SCO) Summit in Qingdao, China. Huawei has also provided network services during natural disasters such as the magnitude 7.7 earthquake in Sulawesi, Indonesia.

Prohibiting Compliance System Manipulation with Anti-Corruption and Anti-Bribery Policies

With integrity at the core of the company's operations, Huawei strictly enforces a zero-tolerance policy for bribery and corruption. Huawei has launched various programs to improve its anti-corruption and anti-bribery management system. Huawei's employees and its third-party business

partners are required to comply with the laws and regulations of the countries and regions in which its conducts business, as well as customers' anti-corruption and anti-bribery requirements. Moreover, all employees must understand and agree to the company's Business Conduct Guidelines (BCG). Huawei also shares its anti-bribery requirements with its partners, requiring them to sign an "honesty and integrity" agreement. Huawei has also established complaint channels that employees can use to report possible violations.

Huawei complies with all applicable laws and regulations in the countries and regions in which business is conducted, as well as all relevant international conventions. Following the company's guiding principles, Huawei continues to improve its anti-corruption and anti-bribery processes and management systems. Huawei has also established anti-corruption and anti-bribery practices in 145 subsidiaries worldwide. Based on these efforts, Huawei continues to improve its anti-corruption and anti-bribery management system in the following ways:

- **Culture of integrity and compliance:** Huawei has adopted multiple initiatives to foster a culture that is anti-corruption and anti-bribery. These include oaths taken by managers, anti-corruption and anti-bribery training programs for employees and partners, and disciplinary action for violators. These initiatives aim to increase employees' compliance awareness and deter possible violators.

- **Compliance management:** Huawei regularly conducts compliance audits to identify potential risks in its business scenarios. It develops corresponding control measures and oversees its implementation. Its compliance management system is regularly reviewed by examining its possible risk control points. Based on the review's results, corrective measures are taken to improve the anti-corruption and anti-bribery compliance management system.

- **External communications:** Huawei actively seeks communication with its industry peers, consultants, partners, and NGOs to discuss security compliance, making its anti-corruption and anti-bribery stance clear. Huawei ensures that its stakeholders clearly understand the company's compliance regulations and policies.

Intellectual Property Rights and Trade Secret Protection: Strictly Complying With and Applying International Conventions

Huawei applies international Intellectual Property Rights (IPR) rules and handles IPR affairs in accordance with international conventions. It proactively addresses IPR issues through various channels, including cross-licensing and business partnerships.

By December 31, 2018, Huawei's total number of patents granted had reached 87,805, of which 43,371 were granted in China, and 44,434 were granted outside of China. More than 90 percent of these patents are for inventions. In addition, Huawei investment in R&D continuously enriches the company's IPR portfolio. Indeed, Huawei is one of the world's largest owners of patents.

Huawei strictly complies with laws and regulations that protect trade secrets, and the company embeds requirements to protect trade secrets into its policies, instructions, and processes. Huawei has proactively built a global system for tracking related legislation, and actively communicates with judicial bodies, associations, law firms, and other consulting firms through workshops and other formats. Huawei, through this collaboration, has built a comprehensive trade secret protection system, and it remains resolute against any practices that infringe on the trade secrets of others.

Adhering to Operational Compliance and Business Ethics

It is appropriate that Huawei, as an industry leading ICT infrastructure provider, prioritizes its responsibilities as a corporate entity, and actively collaborates with its customers, employees, and industry partners to create a healthy ecosystem.

Huawei's global operations are built on compliance management. It remains committed to delivering business integrity and compliance. Following more than a decade of sustained investment and hard work, Huawei has built global compliance systems that meet industry standards. More than 100 of Huawei's subsidiaries have aligned their own systems with local laws and the requirements of local industry associations, and have drafted legal compliance handbooks. These steps ensure that Huawei remains within the boundaries of the law wherever the company operates. ▲



Digital Platform

Fertile Soil for Cultivating the Digital Platform Ecosystem

By Wang Changcheng, Alliance & Solution Cooperation Department, Enterprise Business Group, Huawei Technologies Co., Ltd.

To date, 228 enterprises on the *Fortune Global 500* list, including 58 of the *Fortune Global 100*, have chosen Huawei as their digital transformation partner. These enterprises appreciate Huawei's 'Platform + Ecosystem' strategy, which is driving industrial digital transformation.

Huawei's digital solutions are converged, intelligent, and inheritable. It integrates and connects new Information and Communications Technology (ICT), such as big data, the Internet of Things (IoT), Artificial Intelligence (AI), converged communications, video, and Geographical Information Systems (GISs) across devices, networks, and the cloud. The ecosystem embodies Huawei's concepts of openness, collaboration, and shared success. Dedicated to constructing a Costa Rican-style ecosystem, Huawei creates a favorable environment based on its digital solutions to boost partners' business growth and help them achieve digital transformation.

Solid Digital Foundation and 'Fertile Soil' for Ecosystem Cultivation

Huawei not only offers a solid digital solution, but also provides

soft, fertile soil for the ecosystem. This figurative 'soil' is similar to the literal soil of the Earth, which constitutes the loose surface of the lithosphere and supports the survival of terrestrial plants and animals.

Based on the cloud, Huawei's digital solutions enable business collaboration and agile innovation for its customers by building a foundation for the digital world that integrates ICT platforms with various types of data. Digital transformation cannot be completed with any single technology. Clouds depend on the large amount of data generated by devices; and clouds and devices are best connected through ubiquitous networks. Therefore, pervasive intelligence can only be achieved by coordinating the IoT, big data, video, converged communications, security, GIS, AI, and other new ICT. That's where Huawei's strongest capabilities, which are as solid as the Earth's

Leveraging a solid digital solution and open cooperation mode, Huawei guides and supports partners to cultivate the fertile soil for constructing a digital ecosystem that empowers partners to develop joint solutions on the platform. Together, we are building a robust ecosystem for a mutually beneficial coexistence.

lithosphere, come into play.

Huawei's digital solutions are open and collaborative, featuring co-construction and sharing for mutual benefits. Huawei has invested heavily in a cooperative ecosystem to develop the soft, 'fertile soil' needed to construct an open digital ecosystem. In doing so, Huawei aims to expand the industry market space and to form a community of common interests for a mutually beneficial coexistence.

Policy Support and Regulation

Currently, Huawei has a digital platform and fertile soil to grow the ecosystem. The next step is to improve the 'soil' and regulate partner operations. Huawei conducts technical training, experience sharing, and joint solution launch activities with partners. More importantly, it invests intensively in cultivating the ecosystem to develop, promote, and sell joint solutions with partners, which will expand the market space and bring shared success.

In 2019, the development fund, marketing fund, and partner management modules are appearing in the Huawei Enterprise business partner policies. This supports and regulates solution partners in scenarios such as joint solution development, joint marketing, implementation, and partner selection for projects.

- **Development fund**

Incentives are granted to solution partners who have invested heavily in key business fields to support joint solution development. This fund encourages solution partners to continue long-term cooperation when they have worked with Huawei for many years, but have yet to see a return on investment.

- **Marketing fund**

This fund is offered to solution partners to increase investment in the joint marketing of developed solutions. It will help partners promote solutions to customers, extend solution influence, acquire project leads, and facilitate solution deployment.

- **Partner management**

A hierarchical partner resource pool is built to provide reliable solutions for customers and to ensure solution delivery. This approach will regulate solution partner selection and project changes; create a fair, competitive environment; and protect partner rights and interests. In this way, Huawei and partners can deliver high-quality, reliable, and transparent solutions to customers.

Development and marketing funds help fertilize the soil. By regulating partner management, we can protect partners' initial investments, prevent soil degradation, support partners, and serve customers — thus building a robust ecosystem.

A Solid Platform for Partners to Thrive

After Huawei released its 'Platform + Ecosystem' strategy, iSoftStone partnered with Huawei in multiple business fields. The two parties complement each other, developing solutions with differentiated competitiveness to rapidly respond to various digital needs and offer scenario-specific solutions and services. Huawei provides a data foundation, connection tools, and an ecosystem via technological innovation so that iSoftStone is able to focus on customer needs and core services, significantly improving its efficiency.

In November 2018, software giant iSoftStone and Huawei unveiled an Intelligent Operation Center (IOC) Solution for



Huawei Southern Pacific OpenLab leverages solution partner policies to actively expand its cooperative ecosystem and to conduct joint development, promotion, and market expansion with partners. In particular, it has made breakthroughs in video cloud solution cooperation. >>

the Smart Campus, based on Huawei's digital solutions. This lightweight, scalable solution covers a variety of scenarios and integrates the Application Building Cloud (ABC) for page orchestration, service orchestration, twin assets, and core assets; plus the Relationship, Open, Multi-Ecosystem, and Any-Connect (ROMA) for APIs, FDI, and MQS capabilities of Huawei's enablement platform. It offers multiple Smart Campus applications, such as comprehensive situation displays, smart security management, personnel management, vehicle management, and asset management.

In the joint solution, ROMA connects to southbound devices and systems. As a result, development at the application layer does not need to worry about southbound protocol types or data types. The solution unifies access standards, simplifies application integration, and enables cloud-pipe-device synergy. It provides a one-stop digital technology platform with full connection, video cloud, location, AI, and integrated communications services, which facilitates application building. The display layer and application layer use the ABC development mode and provide Graphical User Interfaces (GUIs) and service orchestration capabilities.

With Huawei's digital solutions, application integration and service orchestration become more convenient and efficient. A large number of components and specialized assets are embedded into the platform. Component-based development facilitates asset accumulation and greatly shortens the delivery time, increasing project development efficiency by 40 percent. The joint solution has been successfully deployed in multiple projects, such as the Linyi Economic Development Zone, the Myanmar Shwedagon Pagoda, and a Smart Campus in Shandong Province. iSoftStone continues to flourish and thrive using the Huawei digital ecosystem platform.

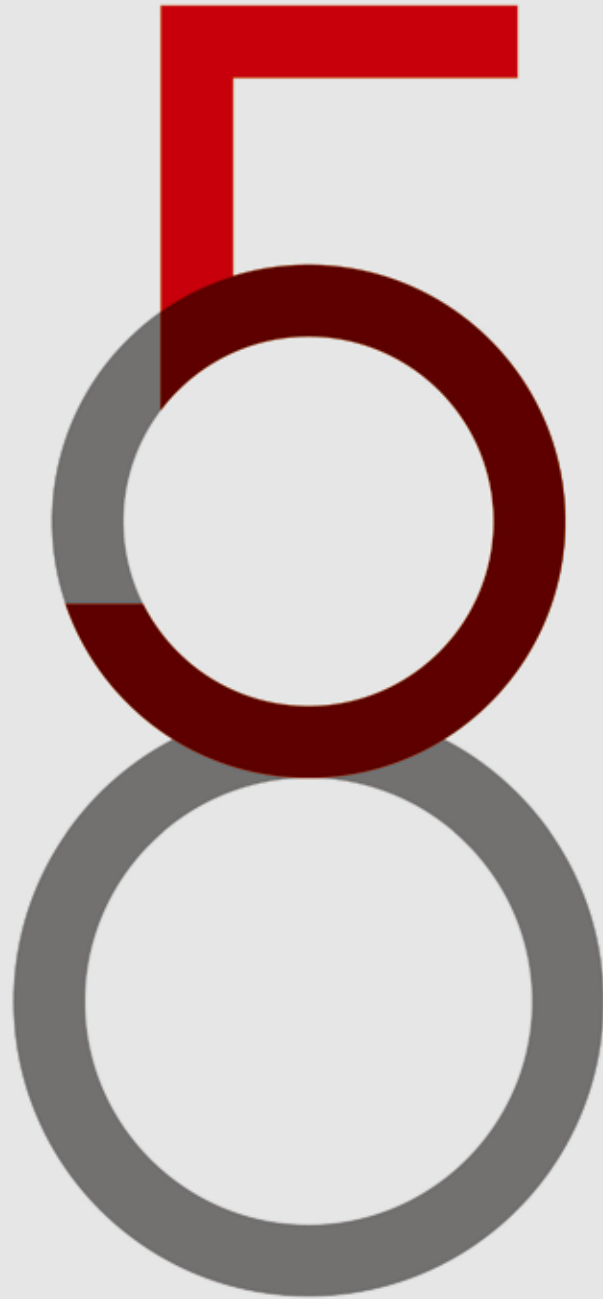
A Large Ecosystem in Which All Players Can Prosper

The Southern Pacific Region has a large ecosystem, containing software companies from China, India, and Western countries. Huawei Southern Pacific OpenLab leverages solution partner policies to actively expand its cooperative ecosystem and to conduct joint development, promotion, and market expansion with partners. In particular, it has made breakthroughs in video cloud solution cooperation.

Chinese partners such as Intellifusion and Seemmo offer facial and feature recognition capabilities for humans, vehicles, and other objects; Vaxtor provides license plate recognition and vehicle-attribute recognition capabilities; and Huawei's digital solutions support service and data aggregation to facilitate partner application development, interconnection, and service orchestration. This ultimately helps partners develop their service capabilities on the platform. Together, they produce award-winning solutions, like the Huawei Video Cloud Solution, which has won recognition from customers in Singapore's public security projects.

The cooperation of partners in public security projects grows from the fertile soil of the Huawei ecosystem. Southern Pacific OpenLab will further develop and test partner capabilities through projects, and it will build a regional resource pool for the video cloud, facilitating solution partner selection for similar projects.

Leveraging a solid digital solution and open cooperation mode, Huawei guides and supports partners, cultivates the fertile soil for ecosystem construction, and empowers partners to develop joint solutions on the platform. Ecosystem participants absorb nutrients from the soil and also make the soil more fertile. Together, we will build a robust ecosystem for a mutually beneficial coexistence. ▲



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