REVUE DE PRESSE SECTORIELLE
NUMERIQUE
UNE PUBLICATION DU SERVICE ÉCONOMIQUE REGIONAL
DE NEW DELHI

G En bref

NUMÉRIQUE :

- Renesas, société japonaise de semi-conducteurs, signe un accord avec TATA Motors et Tejas Networks (groupe TATA) pour concevoir, développer et fabriquer des semi-conducteurs pour le marché indien.
- **L'Inde n'a plus que trois supercalculateurs parmis les 500** plus rapides au monde. Le pays devra relever plusieurs défis pour atteindre le niveau du supercalcul exascale.
- Selon NASSCOM et la société de conseil Avasant, l'Inde prévoit de mettre au point un ordinateur quantique de 50 qubits d'ici à 2026.
- Mathew Foxton, PDG d'Idemia Inde, affirme qu'une loi sur la protection des données est nécessaire pour que l'Inde puisse créer une infrastructure d'identité fédérée.
- L'entreprise indienne Sahasra prévoit d'investir 92 MEUR pour mettre en place une unité d'assemblage, de test et de conditionnement de puces au Rajasthan.
- Les entreprises indiennes ont perdu plus de 2 MEUR en raison de vols de données en 2021-22, soit une augmentation de 25 % par rapport à l'année précédente.

TÉLÉCOMMUNICATIONS:

- Après avoir investi 50 MUSD dans des centres de données à Chennai, Noida, Vizag, Navi Mumbai et Hyderabad, le groupe Adani va participer aux enchères 5G en Inde.
- Le gouvernement indien repousse à nouveau la date limite de candidature au programme de subvention PLI pour le secteur des télécommunications.

Revue de presse

1. NUMÉRIQUE

Tata Group Partners With Renesas To Manufacture Semiconductors

Medianama, 04/07/2022

Tata Group will partner with Renesas Electronics Corporation to design, develop, and manufacture semiconductors for electronics systems in the Indian and emerging markets, as per a press release issued by Renesas. The Japanese company has signed an agreement with two companies— Tata Motors and Tejas Networks (both are part of the Tata Group), the release revealed.

Why it matters: The global economy, including India, has been reeling under a semiconductor crisis causing major disruptions to supply chains worldwide. The deal is expected to help Tata soften the blow of the semiconductor shortage to its business. It is also likely to provide an upper hand to the company in the 5G roll-out which will take place later this year.

What does this partnership entail?

What is Tejas' plan for this partnership: Tejas will use Renesas' technical knowledge in implementing "next-generation wireless network **solutions", the companies said in their** statement. The products will be limited to India initially and then be sold in the global markets eventually.

The semiconductors developed under the partnership will be deployed in radio units used in telecom networks which includes 4G, 5G, to Open Radio Access Network (O-RAN).

What is O-RAN: The technology enables open 5G RAN deployments, in addition to aiding wider interoperability.

What is Tejas: It is an optical, broadband and data networking products company which counts telecom service providers, internet service providers, utilities, security and government entities as its customers. Tata Group picked up a controlling stake in the company in July last year through its subsidiary— Panatone Finvest Ltd.

How will this deal help TCS' plan for private captive networks: Tata Consultancy Services (TCS) Chief Operating Officer N Ganapathy Subramaniam had earlier asked the government to allocate 5G spectrum directly to private enterprises in an interview with Economic Times.

The Union cabinet then gave its approval later in June, paving the way for enterprises to set up private captive networks. It also announced that the 5G auction will take place in the last week of July.

Renesas has also entered into a partnership with TCS to establish a Joint System Solution Development Centre in Bengaluru.

The planned innovation center will work on system solutions for the IoT (Internet of Things), infrastructure, industrial and automotive segments.

What kind of sops are being offered by the Union government: The partnership is likely to benefit **from the Indian government's scheme to** incentivise manufacturing of semiconductors in India. The state had announced incentives worth Rs. 76,000 crore for companies in December last year.

Here are some of the incentives:

The Schemes for Setting up of Semiconductor Fabs and Display Fabs in India will offer fiscal support of up to 50 per cent of project cost on pari-passu basis to eligible applicants.

The Ministry of Electronics and Information Technology (MeitY) will modernise the Semi-conductor Laboratory (SCL) in Mohali.

The Design Linked Incentive (DLI) Scheme will offer a product-design-linked incentive of up to 50 per cent of eligible expenditure and product deployment linked incentive of 4-6 per cent on net sales for five years.

India's supercomputing capabilities fall behind its peers

Mint, 06/07/2022

NEW DELHI: Growth in supercomputing capabilities notwithstanding, India's supercomputer output has been dropping off the list of the world's most powerful machines.

From having two of the top 100 supercomputers in the world in 2020, the country now has none in that bracket, and only three in the top 500, according to a global ranking service for the fastest supercomputers in the world, called Top 500.

Supercomputers can accelerate calculations by providing exponentially larger computing power than regular machines. In May 2020, researchers at US Oak Ridge National Lab ran thousands of simulations to find drug compounds that could stop the covid-19 virus from infecting host cells. They completed the simulations in just 2-3 days using IBM's Summit supercomputer.

The computing power of a supercomputer is measured in floating-point operations per second, or FLOPS. One PetaFlops is equal to 1,000,000,000,000,000 (one quadrillion) FLOPS, or one thousand TeraFlops. The world's fastest supercomputer, Frontier, located at the Oak Ridge National Laboratory, offers a peak performance of 1,685 PFlops.

"The baseline behind every supercomputer is faster performance. The world is moving to ExaFlops and we are still on PetaFlops," said Preeti Syal, a tech policy expert, who used to work with Niti Aayog. "We are always two years behind. If we continue to play catch up we will always remain behind."

Suryachandra Rao, project director at IITM, noted that leaders like China and the US are looking at exascale level computing and that is the next milestone that India also has to reach. However, he also pointed out that India faces a dual challenge of expanding the capability and also making such resources for more researchers and institutes. "It is a step in the right direction," he said.

"At this moment the idea is to enable more people to use such resources. Ten years back, we used to have 1 or 2 systems. Now we are setting up at different locations. This will build capacities and allow more users to access it," he added.

Rao said earlier weather and climate forecasts were the only priority. Now there are many other applications for supercomputing.

But in addition to having supercomputers, having the latest hardware is equally important. Syal noted that how India is making these supercomputers or the components used in them is also important to take their performance of supercomputers to the next level.

Building more cases is the next challenge for the NSM. Syal said currently the use cases are limited. "Globally, most of the usage comes from industry. What we are doing instead is letting research institutions drive it. They will never be able to think in terms of commercialization. These research institutions should also be linked directly to big industry players."

Budget is another challenge. Rao said his institute is working on increasing the capacity of Pratyush. Though, he said, their requirement is at least 150 PFlops they will be able to get somewhere around 10-20 PFlops due to budget constraints.

Centre for Development of Advanced Computing (C-DAC) didn't respond to Mint's

email query till the time of writing. A department of MeitY, C-DAC is responsible for designing, developing, and commissioning supercomputers under NSM.

Inside India's quest to ride quantum wave

Mint, 15/07/2022

NEW DELHI : If India achieves its target of about 30 million electric vehicles in the next two years, it will also need many more electric charging stations. But how does one identify the best location for these stations? Should they be placed at existing gas stations, malls, or metro stations?

Given the million possibilities, Jitesh Lalwani, founder and CEO of Artificial Brain Tech Inc., believes quantum computing can provide the answers. His company, based in the US and Pune, has developed an algorithm that leverages the power of quantum computing accessed via cloud.

"The algorithm solves this problem by considering the point of interest and already existing electric charging locations and then optimally placing new charging points to cover as many people as possible," says Lalwani.

But why not use high-performance computers (HPCs) for the task? HPCs process data and perform complex calculations at high speeds. "These are very complex problems that classical computers (conventional ones we use in our everyday lives such as laptops, desktops, and even HPCs) are not capable of solving. And even if they do, it will take them millions of years," he explains.

Lalwani claims his company's quantum algorithm returns result from an actual quantum computer in less than three seconds for 8543811434435330 (8.5 * 10^15) combinations.

Artificial Brain now plans to modify this quantum algorithm to find optimal locations for wind and solar farms, too.

Chennai-based Quantica Computacao is another company that's betting on quantum computing. It aims to develop quantum cryptographic tools to help protect banking transactions. It is also working on quantum machine learning (ML) and artificial intelligence (AI) tools to help researchers accelerate their algorithms.

These two startups underline that quantum computing is no longer an esoteric science confined to research labs—it is beginning to find business applications. More of this later. First, let's demystify the quantum computer.

The science

The computers we see and use in our homes and offices today process information with bits (ones and zeroes). They are referred to as classical or conventional computers. Quantum computers, on the other hand, use quantum bits or qubits that can process the ones and zeroes simultaneously due to a property known as superposition which allows them to process a lot more information than traditional computers. In October 2019, Google said it had performed a calculation on a quantum processor in 300 seconds that would have been practically impossible to achieve with the algorithms available at the time. The report was published in Nature magazine.

Quantum computing also rides on 'quantum entanglement', a property that Albert Einstein referred to as "spooky action at a distance" since it allows quantum particles to connect regardless of their location in the universe.

On 27 January, scientists from two premier Ahmedabad-based laboratories of the Department of Space—the Space Applications Centre and Physical Research Laboratory—jointly demonstrated quantum entanglement with real-time Quantum Key Distribution (QKD) between two buildings separated by a distance

of 300 metres. QKD allows any two parties to generate random secret keys that can be shared exclusively to encrypt and decrypt messages. This makes the communication very secure, especially vital for defence and strategic agencies across the globe.

Race for pace

Companies like International Business Machines Corp. (IBM), D-Wave Systems, Google, Microsoft, Amazon, Nvidia, and Intel have begun providing cloud-based quantum services. IBM has built over 30 quantum computers in the last four-five years, of which over 20 are active right now with IBM providing access to them through the IBM Cloud. However, while most tech companies use the quantum gate approach (similar to logic gates in conventional computers), D-Wave uses both 'quantum annealing' and quantum gates.

Also referred to as adiabatic quantum computing, D-Wave's quantum annealing approach can determine the lowest energy state of a system using the superposition property of qubits. The University of Southern California Information Sciences Institute (USC-ISI), for instance, has used D-Wave's quantum computer to advance data analysis for the discovery of Higgs bosons, and methods for doing error correction with quantum annealing. Informally known as the 'God Particle', the Higgs bosons is the fundamental particle associated with the Higgs field, responsible for giving other fundamental particles their mass.

And all companies are focused on adding more qubits. While IBM aims to launch a 4,000-qubit quantum computer by 2025, D-Wave's Advantage2 system is expected to feature 7,000 qubits with a new qubit design. However, given that both these companies (IBM's gate-based Vs D-Wave's annealing approach) are building these computers with different technologies, it's not fair to compare these two approaches. "It's better to have options for different objects and implementations," says Federico Spedalieri, research assistant professor at USC-ISI.

Google's parent Alphabet, meanwhile, is building advanced quantum computing hardware with a focus on developing quantum AI. Alphabet also has a dedicated "secretive" team working on quantum tech, which it has now spun off into a separate company called SandboxAQ with AQ standing for 'AI and Quantum'. Google plans to have a one million qubit quantum computer ready by 2030.

Microsoft, on its part, offers access to quantum computers from numerous makers on its Azure cloud platform, while Intel is developing its own silicon-based quantum computing hardware.

How is India placed?

The quantum ecosystem in India is growing at an accelerated pace with support from government agencies and participation from the academia, service providers, and the startup community, points out a report titled The Quantum Revolution in India, which was jointly published by Nasscom and management consulting firm Avasant this February.

India, for instance, plans to develop a quantum computer with about 50 qubits by 2026. India also has a Quantum Simulator platform built by the Indian Institute of Sciences (IISc), Bengaluru, Indian Institute of Technology (IIT)-Roorkee, and Pune-based Centre for Development of Advanced Computing (C-DAC), which allows users to do quantum simulation using computing resources from C-DAC's high-performance computers like PARAM Shavak and PARAM Siddhi.

In a recent interview to Mint, Murray Thom, vice president of product management at D-Wave, underscored that with over 25,000 users, India has the third highest quantum cloud service sign-ups since it began providing access to users like Lalwani in India in 2020.

Dario Gil, senior VP and director of IBM Research, too, pointed out in an interview to Mint that IBM is having "many conversations right now with some IITs and leading centres for training to

develop a curriculum and certification. The Qiskit (a software development kit in Python used to programme quantum computers) textbook is now also available in Tamil, Bengali and Hindi".

Indian IT services providers, too, are getting their feet wet in this space. Last September, Infosys said it is partnering with Amazon Web Services to develop quantum computing capabilities. This April, Tech Mahindra's research and development arm, Makers Lab, announced it has set up a quantum centre of excellence called QNxT in Finland to leverage the country's expertise in quantum computing. It also plans to set up quantum centres in Pune and Hyderabad to explore applications in sectors like telecom, 5G, energy, and healthcare.

Tata Consultancy Services (TCS) is working on quantum algorithms for applications in optimization, ML, image processing, molecular simulations and use cases such as portfolio and risk, transportation, logistics, and communication. HCL, meanwhile, is developing use cases for transport and logistics, finance, and security. Zensar is focusing on areas like drug discovery, genomic analysis, fraud detection, advanced materials, credit risk optimization, and supply chain optimization.

The adoption of quantum technologies across industries could thus potentially add $280–310 billion of value to the Indian economy by 2030, with the manufacturing, high-tech, banking, and defence sectors at the forefront of quantum-led innovation, according to the Nasscom-Avasant report.

Globally, IBM is working with the likes of JP Morgan Chase, Goldman Sachs, Wells Fargo, Mizuho Bank, Daimler, energy companies, and some materials companies, according to Gario. Sectors such as pharmaceuticals, chemicals, automotive, and finance could see short-term benefits of anywhere between $300 billion and $700 billion in value from the technology, according to a December 2021 report by McKinsey and Co., titled Quantum computing: An emerging ecosystem and industry use cases.

Big challenges

Before quantum computers can solve business problems better than classical computers (known as the 'quantum advantage') or even those that the former cannot solve (called 'quantum supremacy'), many hurdles have to be overcome.

For one, quantum computers are highly prone to interference that leads to errors in quantum algorithms running on it. According to the McKinsey report cited above, while multiple quantum-computing hardware platforms are being developed, it will be important to achieve "fully error-corrected, fault-tolerant quantum computing, without which a quantum computer cannot provide exact, mathematically accurate results". That said, some companies, including Google, have announced plans to have fault-tolerant quantum-computing hardware by 2030.

Second, most quantum computers cannot function without being super-cooled to a little above absolute zero since heat generates error or noise in qubits. But this June, the Pawsey Supercomputing Research Centre in Perth said it is working with German-Australian startup Quantum Brilliance to test the latter's two-qubit diamond quantum 'accelerator' that uses synthetic diamonds and runs at room temperature in any environment. The Centre is currently testing it by pairing it with their new state-of-the-art supercomputer, Setonix. Running quantum computers at room temperature may prove a game changer.

Finding the right talent is another big hurdle. The National Mission on Quantum Technologies and Applications (NM-QTA), a government of India programme, aims to create a workforce of over 25,000 in India over the next five to seven years, but there is an acute shortage of candidates with doctorates in quantum physics, engineering, and statistics.

That said, the Defence Institute of Advanced Technology (DIAT) in Pune, launched an MTech in quantum computing in 2020. IISc Bangalore followed by offering the same course a year later. IBM has partnered with top-tier academic institutions in India to provide access to IBM quantum systems, while Microsoft Garage India has joined hands with IIT Roorkee to conduct lectures on quantum computing for an entire semester.

Startups are pitching in, too. QpiAI, a startup that leverages quantum computing and AI to offer solutions to different industries, offers a module-based study for AI and quantum certification, while Qulabs Software, another quantum solutions firm, offers six-month internship projects at the company.

Others like Sumant Parimal, founding partner of research and advisory firm Innogress, are focusing on building the ecosystem. Innogress plans to set up the Greater Karnavati Quantum Computing Technology Park in Gujarat to enable everything from "R&D to design and engineering, simulation to testing and manufacturing to packaging and skilling".

"We are talking to potential technology partners and investors. It will require an initial capex of around $300 million. It's a 5–10-year road map," says Parimal.

He has a point. China and the European Union rank first and second on public funding for quantum computing with investments of $15 billion and $7.2 billion, respectively, according to a McKinsey report. The US, the UK, and India follow at a distant third, fourth and fifth place, respectively, with a little over $1 billion each.

To be sure, the Indian government did announce NM-QTA with a total budget outlay of ₹8,000 crore for a period of five years to be implemented by the department of science and technology in 2020 but it is yet to get Cabinet clearance.

Despite these hurdles, quantum computing is set to grow but is likely to see a hybrid computing-operating model that combines conventional computing with emerging quantum computing before the latter comes of age. As the McKinsey report puts it: "Change may come as early as 2030, as several companies predict they will launch usable quantum systems by that time."

It also advises companies to start formulating "their quantum computing strategies, especially in industries such as pharmaceuticals that may reap the early benefits of commercial quantum computing".

Idemia official says data protection law vital for India's federated ID project

Biometric News, 21/07/2022

India must introduce its personal data protection legislation if it is to press ahead with its federated identity infrastructure to link IDs, stated Mathew Foxton, regional president and executive vice president for branding and communication of Idemia India, as reported by Business Standard.

Earlier this year, India held consultations with stakeholders on a proposed legislation to set up a federated ID system which will give Indians more control over their digital IDs and facilitate KYC and online identification processes.

The project, spearheaded by the Ministry of Electronics and Information Technology (MeitY), is coming under the Indian Enterprise Architecture (IndEA) 2.0 framework which seeks to make sure that all developments in the domain of technology agree with government organizations' business perspectives.

The federated identity project would link an individual's separate identity profiles such as passport and Aadhaar.

Participating in a webinar on the proposed ID structure, Foxton said the data protection

legislation, which is still being worked on by **Indian authorities, is a "must-have."**

"India has massive advancements, particularly in terms of national programs and as a country is well-positioned to build digital identity-based solutions and services. Even though a digital identity is required for a wide variety of activities online, there is no one-size-fits-all approach to **implement ID and access systems," said Foxton** as cited by Business Standard.

An IT expert also quoted by the publication said while the project is being developed, there is a lot they are learning especially from private sector actors from where they are picking up best practices to build a solid and workable system.

India's data protection regulation, premised on the Information Technology Act 2000, is yet to come into force. There have since been discussions and consultations by both government and private sector stakeholders about how to expand the scope of the legislation in order to make it more relevant and easily enforceable.

Sahasra to invest Rs 750 crore to set up memory chip unit

BusinessToday, 24/07/2022

Electronics firm Sahasra Semiconductors has said it expects to become the first company to set up a memory chip assembly, test and packaging unit in the country and start selling locally-made chips by December.

Sahasra Semiconductors chairman and managing director Amrit Manwani told PTI that the company plans to invest a total of Rs 750 crore in setting up the unit at Bhiwadi in Rajasthan.

"We will invest Rs 150 crore in this financial year for setting up the ATMP facility in Elcina manufacturing cluster in Bhiwadi, Rajasthan. We expect it to be operational by the end of this year. Once the market is established and we touch revenue in the range of Rs 250-300 crore then we will again invest Rs 600 crore. In total, we plan to invest Rs 750 crore initially," Manwani said.

He said that the first full financial year of the company's commercial production is expected to generate a revenue of around Rs 50 crore, which is expected to grow to Rs 500 crore by 2025-26.

Semiconductors are converted into a complete product ready for sale at ATMP (Assembly, Testing, Marking and Packaging) units. It is the next step after the wafers or chips are produced at a fabrication plant.

Manwani said the company has already invested Rs 60 crore in the current fiscal and by March 2023 it will complete the investment of Rs 75 crore. The remaining Rs 75 crore will be invested in 2023-24.

The company has largely invested in buying equipment and setting up clean room facilities required for semiconductor packaging.

"We expect the first set of equipment to leave from Singapore this week and arrive at our factory by mid-August. Many equipment will come between August and September. We will have trial runs probably in November and we will be able to commercialise production by December of this year," Manwani said.

Sahasra Semiconductors is one of the companies whose proposal to set up an ATMP unit has been approved under the Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS) of production linked incentive scheme.

Manwani said that the company has been in the business of selling semiconductors after importing them but has now decided to plunge in the packaging of the semiconductors due to growth opportunities in the domestic market

arising out of government policies, geopolitical situation and concerns around security.

He said that the Sahasra group has sold memory products for a Japanese and a US-based technology companies but after their exit from memory products in India, the company started selling products in its own brand name.

"The demand for memory products is identified. We will not only utilise the semiconductors for our captive consumption but will give out to brands who demand for it. We have been one of the important players in the memory segment. We have been supplying pen drives, SD cards and also solid state drives for the computer segment," Manvani said.

He said total demand for semiconductors is around Rs 7000-10,000 crore and the company is confident of garnering 5-7 per cent market share by 2025-26.

"There is huge demand coming for domestically made products both from original equipment makers and the retail market. People are looking for domestically made products in the wake of dollar fluctuation, India China stand-off, US-China stand off. People want an alternate source to China. We believe customers will definitely welcome domestically manufactured memory semiconductors," Manvani said.

He said that locally manufactured memory products will be preferred by companies for security purposes as memory products are also installed in data servers, high-end industrial PCs as well as in communication equipment.

"Both the government and private organisations desire that these things should be locally manufactured," Manwani said.

Indian firms lost an average of INR 176 million to data breaches last fiscal

Mint, 27/07/2022

NEW DELHI: Indian firms lost a whopping ₹176 million on an average in financial year 2021-22 to data breaches, a 25% increase from ₹140 million in FY20, and up 6.6% from ₹165 million in FY21, according to a new report.

The report, titled 'Cost of a Data Breach', by IBM and Ponemon Research Institute, was based on real-world data breaches experienced by 550 organisations globally between March 2021 and March 2022, and said India alone saw a massive 29,500 breaches during the period, with the average per record cost of a data breach hitting an eleven-year high.

India's average per record cost of a data breach in 2022 stood at ₹6,100, a 3.3% increase from ₹5,900 in 2021, a 10.4% increase from ₹5,522 in 2020, the report added.

The global average cost of a data breach also reached an all-time high of $4.35 million for organisations, with breach costs increasing nearly 13% over the last two years, said the report.

"These incidents are contributing to rising costs of goods and services," said Viswanath Ramaswamy, Vice President, Technology, IBM Technology Sales, IBM India and South Asia. He added that 60% of global businesses have raised their prices as a result of data breach, contributing to inflation, and inadvertently passing on the cost to customers. Hackers are exploiting circumstances to force organisations to pay ransoms, which is further compounded by the cyber skills shortage.

The perpetuality of cyberattacks also sheds light on the "haunting effect" data breaches are having on businesses, with the IBM report finding 83% of organisations experiencing more than one data breach in their lifetime globally.

Another factor rising over time is the after-effects of breaches on these organisations, which linger for long , as nearly 50% of breach costs are incurred more than a year after the breach. For example, the study found that post

breach response costs for Indian businesses increased from ₹67.20 million in 2021 to ₹71 million in 2022, an increase of 5.65%. Other cost of data breaches come from lost business, detection and escalation.

The report also revealed that in India, industrial (₹9,024), services (₹7,085) and IT (₹6,900), are the top three industries that recorded highest per record costs.

The study revealed that the three primary initial attack vectors for data breach are - stolen or compromised credentials at ₹216 million, phishing at ₹206 million, and accidental data loss or lost device at ₹190 million. Increase in third party involvement, cloud migration and IoT and OT (Operational technology) environment contributed to the highest cost increase.

Other reports have also shed light on the cost of data breaches that are rising rapidly, world over, as a 2021 CyberSecurity Ventures report saw cost of data breaches increasing 10% year-over-year. The global cost of cybercrime is also spiking and could reach $10.5 trillion per year by 2025. To put the rapidly rising cost of cyberthreats in perspective, the annual cost was about $3 trillion in 2015.

Ramaswamy said that the report clears that businesses cannot evade cyberattacks. "To stay on top of growing cybersecurity challenges investment in zero-trust deployments, mature security practices, and AI-based platforms can help make all the difference when businesses are attacked," he said.

2. Télécommunications

Adani Group to participate in India's 5G auction

Lightreading, 12/07/2022

Indian conglomerate Adani Group is to participate in the country's upcoming 5G auction, using any spectrum it acquires to build a private network supporting its own activities.

"As India prepares to roll out next-generation 5G services through this auction, we are one of the many applicants participating in the open bidding process," said the company in an official statement. "We are participating in the 5G spectrum auction to provide private network solutions along with enhanced cyber security in the airport, ports and logistics, power generation, transmission, distribution and various manufacturing operations."

It is unclear if Adani Group would bid for a pan-India 5G spectrum license or target cities where its business interests are concentrated.

The company also claims that its 5G investment will support charitable efforts in education, healthcare and skills development. The Adani family, including the chairman of Adani Group, Gautam Adani, recently promised to donate 600 billion Indian rupees (US$7.5 billion) to charity through the Adani Foundation.

The rollout of a digital platform that includes apps, edge data centers and industry command-and-control centers will need "ultra high quality data streaming capabilities through a high frequency and low latency 5G network across all our businesses," said the company in its statement.

Adani Group has already partnered with EdgeConnex to set up a 50:50 joint venture in February 2021. That was backed by an investment of INR3.75 billion ($47 million) for setting up data centers in several cities, including Chennai, Noida, Vizag, Navi Mumbai and Hyderabad.

An alternative for the Adani Group would have been to partner with a telco to build a 5G private network for its numerous ports and airports as well as other group companies. This would probably have cost less than bidding in the 5G auction, although it would have given it less

control and forced it to collaborate with an operator.

One possibility is that the company enters the consumer mobility space in the future. It could even buy an operator – ailing Vodafone Idea being the most likely candidate – to enter the telecom market.

Vodafone Idea is likely to be the operator most affected by Adani Group's move. A fourth auction participant would result in a more competitive bidding process and drive up prices, making it harder for Vodafone Idea to acquire spectrum.

Govt extends PLI application deadline for telecom products till August 5

ET Tech, 19/07/2022

The last day to submit applications for **participating in the government's production**-linked incentive (PLI) scheme for design-led manufacturing of telecom and networking products has been extended to August 5 from the earlier deadline of July 20.

The extension, according to an official statement, was done following requests by interested companies and to encourage wider participation. The government last month started inviting applications from interested companies for design-led manufacturing of telecom and networking products.

The Department of Telecommunications had, while announcing incentives of Rs 4,000 crore for design-led manufacturing, also extended by a year the PLI scheme for telecom and networking equipment. The design-led manufacturing plan, which will operate under the umbrella of telecom PLI, plans to provide applicants an additional incentive of 1% for incremental production.

The PLI scheme for telecom and networking equipment was first announced in February 2021 with an incentive outlay of Rs 12,195 crore.

Applications of 31 global companies and eight local companies were approved as part of the plan. These companies have collectively pledged to undertake incremental production worth Rs 1.82 trillion over the next five years.