Rack Centre in Collaboration with PwC Presents
Africa: The Next Digital Frontier - Series 2
Digital Infrastructure as A Key Enabler For Growth.
16TH September 2021
2:00 PM (WAT), 1:00 PM (GMT+1)

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Africa: The Next Digital Frontier - Series 2

# Digital infrastructure as a key enabler for growth.

**Andile Ngcaba**
Chairman & Founding Partner, Convergence Partners

**Lanre Kolade**
CEO, CSquared

**Norman Albi**
CEO, AFR-IX telecom

**Susan Mulikita**
Chief Regulatory Officer Bandwidth and Cloud Services Group (BCS)

**Elmo Hildebrand**
Partner, TMT Africa Leader PwC South Africa

**Dr. Ayotunde Coker**
CEO, Rack Centre

**Femi Osinubi**
Partner West Africa Technology Leader, PwC Nigeria

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Register Here https://www.rack-centre.com/interconnect-days/

Enquires: events@rack-centre.com

- Dr Ayotunde Coker has over 30 years' international experience across Europe, USA, Asia and Africa.
- His distinguished career included roles at Ford of Europe, Egg Bank UK, the first European Internet Bank, BP, UK Criminal Justice, and he was at some point Group IT Director at UK Ministry of Justice, Group CIO of Access Bank, and then MD/CEO of Emerging Markets Payments, West Africa.
- He is currently the MD/CEO of Rack Centre - The Leading Carrier Neutral Tier III Data Centre in West Africa o
- He is Chairman of the Africa Data Centre Association.
- He recently received the Distinguished Manufacturing Alumnus Award for 2020 from Cranfield University, UK.
- He has a BSc in Mechanical Engineering from the University of South Wales, is an award-winning post graduate alumnus of Cranfield University UK, Fellow Institute of Directors (UK), Fellow British Computer Society, Honorary Senior Member Chartered Institute of Bankers of Nigeria. He holds a PhD (Honoris Causa) by ESCAE University, Republic of Benin.

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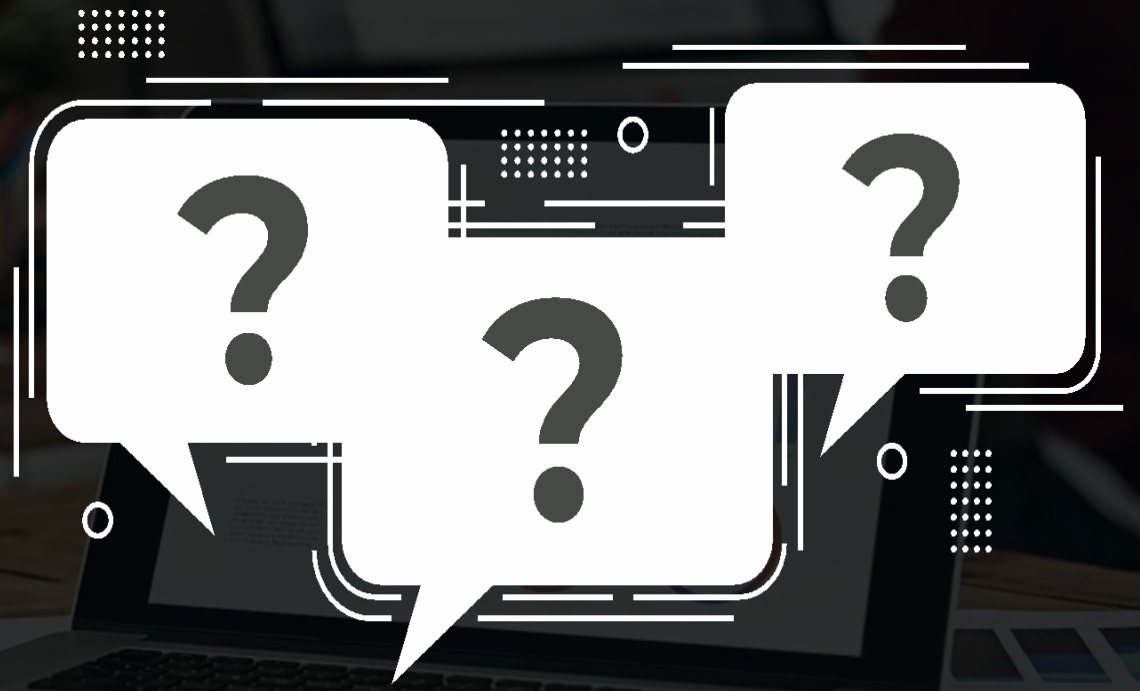
- Andile Ngcaba is the founder and Executive Chairman of Convergence Partners Investments.
- He established Convergence Partners in 2006 as an impact investment holding and private equity firm focusing on technology around the African continent. Mr Ngcaba is also highly passionate about philanthropy, and works on several projects through his family foundation, the SolCon Foundation.
- Mr Ngcaba holds a Masters of Commerce majoring in Information Systems from the University of Witwatersrand; he also has an honorary Doctorate in Commerce from the University of Fort Hare. Andile also serves as an Adjunct Professor at the Nelson Mandela University in the faculty of Computer Science.
- As a technologist, Mr Ngcaba has been driving Pan African initiatives designed to build a digital Africa throughout his career. Andile has also actively been involved in public policy development at the National, Continental and Global levels through various bodies, including the ITU, ICANN and the African Union.
- Mr Ngcaba was also recently appointed to the South African Presidential Fourth Industrial Revolution Commission. This commission advises the South African government on how it can leverage technology to develop the economy.

# Poll



- Femi Osinubi is a Partner at PwC Nigeria and currently leads our Risk Assurance, Technology & Digital businesses across PwC West Africa.
- He has spent over 20 years of his career delivering consulting services and industry experience across various sectors like Telecoms, Financial Services and Oil and Gas in Europe, Middle-East, the Caribbean and Africa.
- Femi, is at the forefront for the adoption of emerging technologies and innovation across several sectors in Nigeria.
- Femi is a Computer Science graduate, Fellow Chartered Accountant and holds an MBA from Warwick Business School United Kingdom.

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# Digital Infrastructure

**An overview of the critical areas for digital infrastructure expansion**

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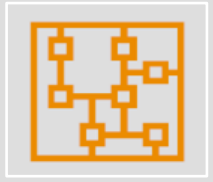
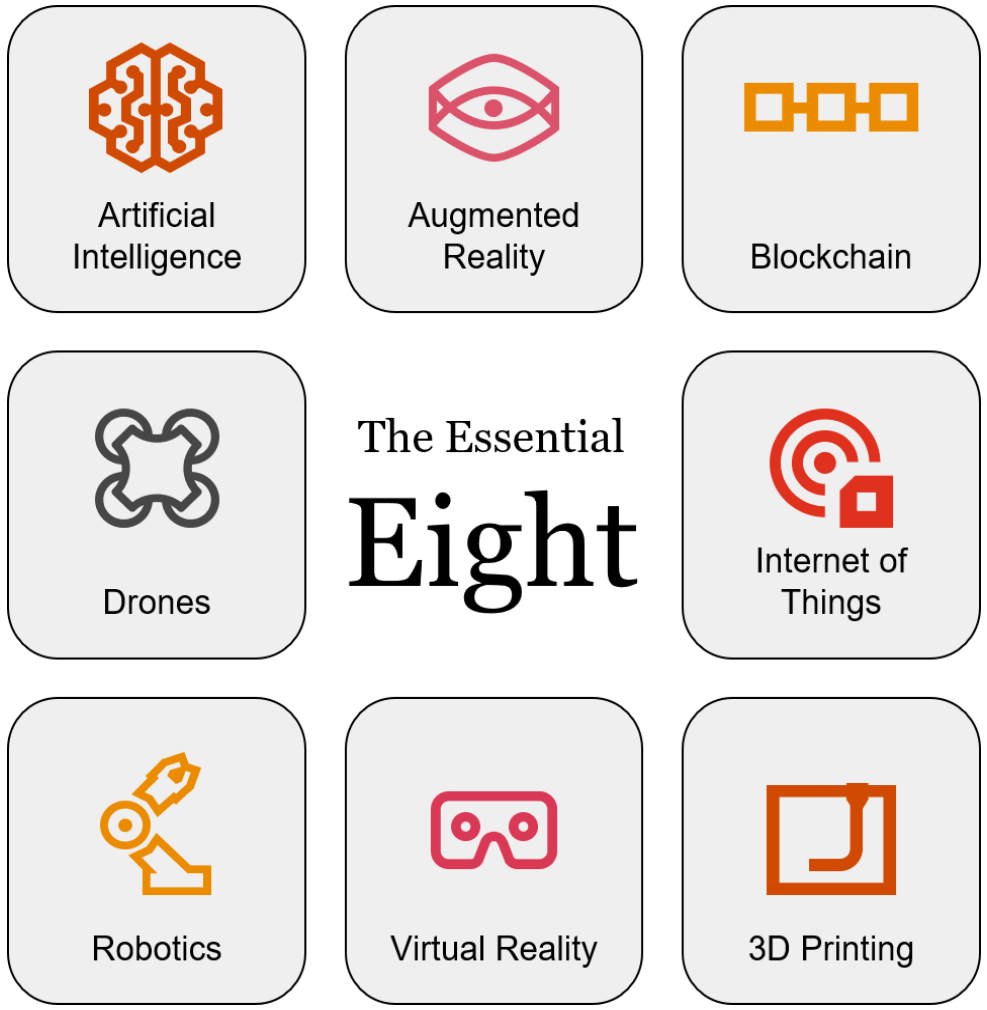
September 2021

# Global transformations are reshaping business needs and megatrends are changing the way we live

| A | D | A | P | T |
|---|---|---|---|---|
| **Asymmetry** Increasing wealth disparity and the erosion of the middle class | **Disruption** The pervasive nature of technology and its impact on individuals, society and the climate | **Age** Demographic pressure on business, social institutions and economies | **Polarisation** Breakdown in global consensus and a fracturing world, with growing nationalism and populism | **Trust** Declining confidence in the institutions that underpin society |



# The world has come a long way in its Digital journey.




**5.0**

**Future - Personalization**
Industry 5.0 will be focused on human intelligence working in harmony with cognitive computing, workers will provide value added tasks in production leading to mass personalization for customers

**4.0**

**Today - Digitization**
Introduction of connected devices, data analytics and artificial intelligence to further automate processes

**3.0**

**1970 - Automation**
Automation using electronics and computers

**2.0**

**1870 - Electrification**
Mass production using assembly lines

**1.0**

**1780 - Mechanization**
Industrial productions based on machine powered by water and steam

# Digital Infrastructure required to achieve Industry 4.0 and beyond.

"Digital technologies have fundamentally reshaped our lives by **expanding the base of information**, reducing the costs for information sharing, transmission and acquiring, and bringing innovation that lead to the greater connectivity among people, businesses and governments" - (World Bank, 2016).

## Infrastructure/Communication Layer

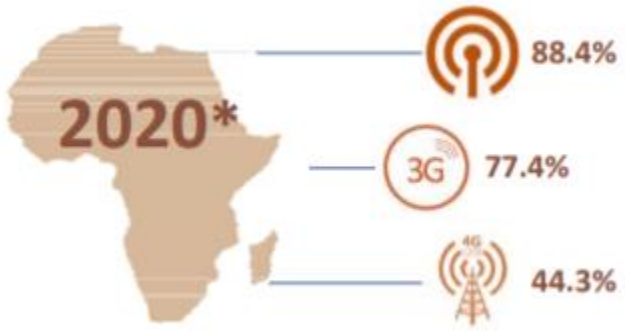
- Internet
- Broadband
- Data Centers
- Mobile networks
- Power
- Communication Satellites

## Consumption Layer

- End user devices
- Internet of Things (IoT)
- Apps
- API Gateways

# Current state of Digital Infrastructure (selected)

## Mobile network coverage

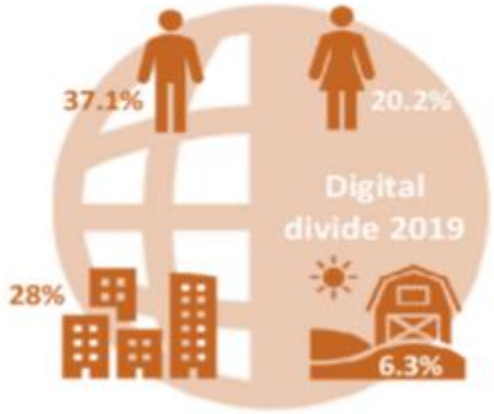



*Estimate

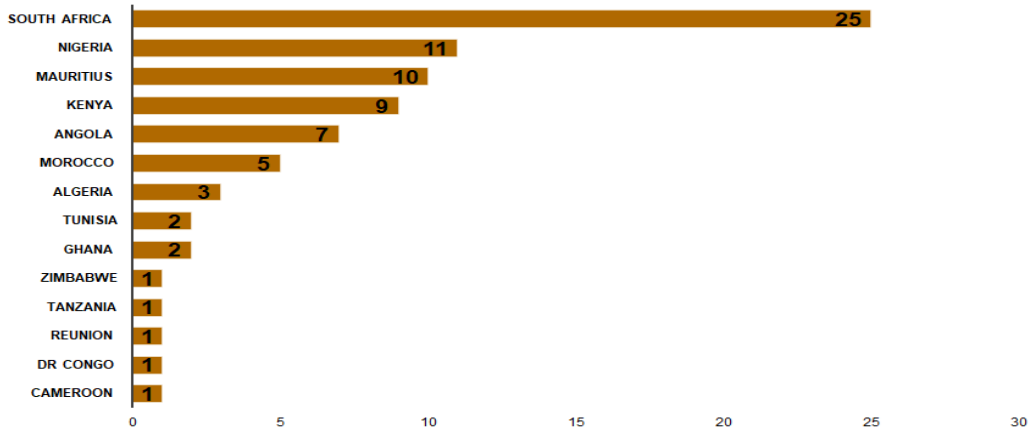
## Internet access and use

| | 2017 | 2020* |
|---|---|---|
| Individuals using the Internet (%) | 24.8 % | 28.6 % (2019) |
| Internet access using mobile broadband per 100 inhabitants | 25.5 | 33.1 |
| Internet access using fixed broadband per 100 inhabitants | 0.4 | 0.5 |

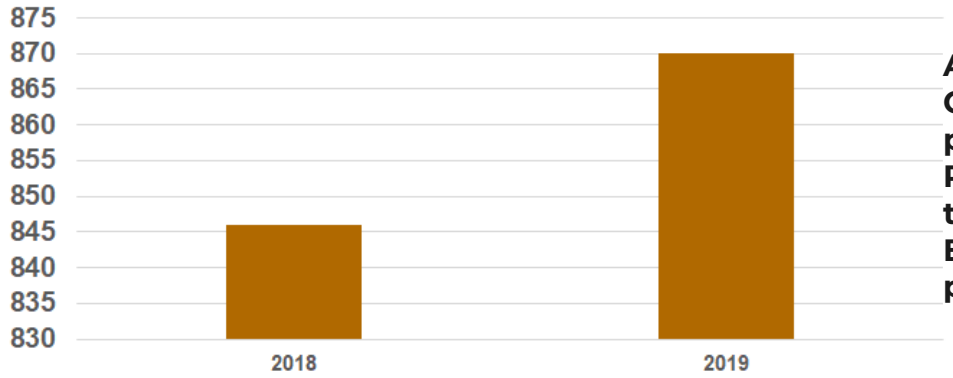
## Digital divide




## Number of Data Centres in Africa




## Africa's Energy supply in terawatt-hours (TWh)




**African Energy Chamber projects Africa's Power Demand to Keep Rising Between 4-5% per year**

# Africa's path to industry 5.0 is laden with challenges underpinned by a lack of adequate digital infrastructure

**Insufficient power**
10,000MW of energy and 700 more data centers are required to meet the demand for data centers on the continent – According to African Data Centers Association (ADCA)

**Growing cyber risk**
Increasing use of mobile, personal and smart devices increases **cyber risk**

**Sustainability**
With a projected increase in data usage**, the carbon footprints** of data centers is bound to escalate

**Last Mile Connectivity**
Internet penetration is yet to reach the furthest areas of Sub-Saharan Africa due to connectivity challenges

**Infrastructure Investment**
Readiness for the fifth generation (5G) of connectivity is slow in many parts of the continent

**Low broadband Penetration**
Broadband penetration still lagging behind

**Legacy Systems**
Majority of enterprises are still working on-premise resulting in limited integration opportunities

**Limited Number of Data Centers**
Local data centers are insufficient to meet capacity demand Currently there are 79 colocation data centers from 14 countries in Africa.

**Big data, small processing power**
The volume of data generated is projected to increase exponentially as more people come online yet the processing capability is limited

**Poor Business resilience in digital infrastructure**
This is critical for keeping the continent online.

# Africa's digitalization journey will require improved infrastructure in order to deliver significant gains for the continent

Without high-speed networks and highly secure, available, and reliable data centers, there can be no digitalization at-scale for African countries

**Improved tech infrastructure will support increased internet connectivity**

**Connectivity Infrastructure**

**Power**

**Data centres**

**Technology drivers: 5G, Internet of Things**

# Thank you

At PwC, our purpose is to build trust in society and solve important problems. We're a network of firms in **155 countries** with over **284,000 people** who are committed to delivering quality in assurance, advisory and tax services. Find out more and tell us what matters to you by visiting us at www.pwc.com

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- Susan has more than 25 years' ICT/telecommunications legal, regulatory and management experience operating at a senior level in the public and private sector. In her career, she has held roles that saw her take responsibility for the administration of telecommunication and ICT law, policy, regulation and stakeholder management. For many years Susan held senior portfolios as a regulator responsible for functions covering licensing, markets development, tariff regulation, consumer affairs and competition management. She has also held senior roles in regulated entities across local, multicultural and international environments.
- Susan holds a Bachelor of Laws Degree and a Master of Laws (ICT) degree in addition to other academic and professional qualifications.
- She is a qualified practitioner of Telecoms/ICT Policy, Law, Regulation and Management and is also qualified to practice Law in Zambia.
- Susan's involvement in the development and administration of ICT/telecommunications legal and regulatory frameworks makes her a seasoned authority in that regard.
- Outside her professional space, Susan enjoys the outdoors, running, cooking, reading, travelling and spending time with her family and children. She also devotes some of her time to mentoring younger people who she believes are the future and deserve as many opportunities as they can possibly have in the quest to be good citizens.

- Norman Albi is the CEO of AFR-IX telecom
- A seasoned Telecommunications Engineer with an MBA in Business and Administration from IESE Business School with 20 years of experience working for telecommunications operators.
- He is the Chair of the ACE submarine cable Commercial Group and responsible for the development of the commercial model.
- For the last 8 years, Norman has been holding the Chief Executive Officer position at AFR-IX Telecom, developing state of the art Data Communication Networks in Africa.
- AFR-IX telecom is a licensed operator that delivers Data, MPLS, SDN and advanced Managed solutions to Corporates and Telecommunication Operators in West, Central, Southern and Eastern Africa regions.
- AFR-IX telecom has becoming a leader provider and holds licenses in Spain, Portugal, USA, South Africa, Nigeria, Ghana, DRC, Mali, Burkina Faso, Sierra Leone, Niger and Cameroun.
- AFR-IX telecom has the most reliable and largest Metro Ethernet Pan African Network and offers a global coverage service in Africa. Thanks to its more than 60 POPs in Africa, Europe and America,
- AFR-IX provides reliable and resilient connectivity with countries connected by subsea and terrestrial cables.

- Lanre has been the Group Chief Executive Officer for CSquared since November 2018.
- He has over 21 years of experience in the telecommunications industry spanning both Francophone and Anglophone Africa.
- Before joining CSquared, he was Managing Director of Vodacom Business in Nigeria. He also previously served as Managing Director of Vodacom Business for the West, East, Central, & South-East regions in Africa.
- Lanre started his career at SITA, a business solutions company; he then went on to attain leadership roles in telecommunication firms GS Telecom and Gateway Communications.
- He is a graduate of Wits Business School, London Business School, and Obafemi Awolowo University, holding a BSc in Electrical Engineering/Telecoms.
- Lanre is passionate about Africa and he firmly believes that increased connectivity and digital transformation can have positive knock-on effects on economic development and growth, especially for the motivated and vibrant youth in all parts of the continent.

- Elmo is a Partner in PwC's Advisory Services and leads the Telecoms Media and Technology industry for PwC Africa and has more than 20 years' experience mainly in client advisory and market development, servicing clients across Africa and Europe.
- Elmo builds trust in society by helping clients to solve complex problems. He finds ways to unlock value for clients through technology-led business transformation by leveraging the insights, knowledge and experience in the Global PwC Network of Member Firms.

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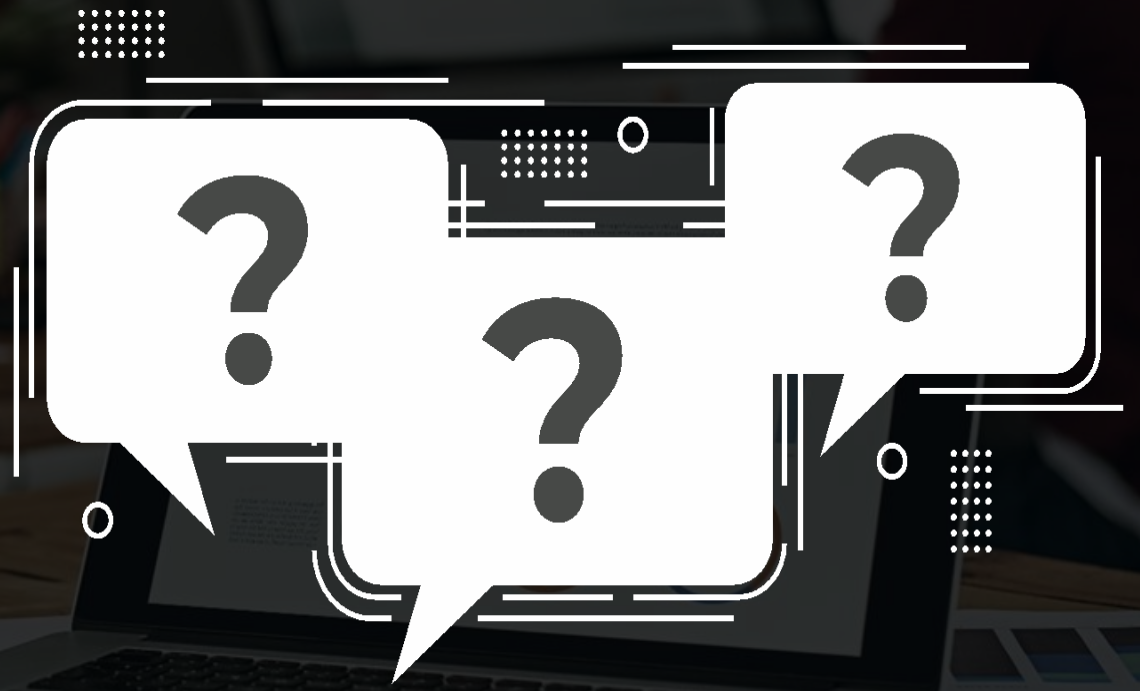
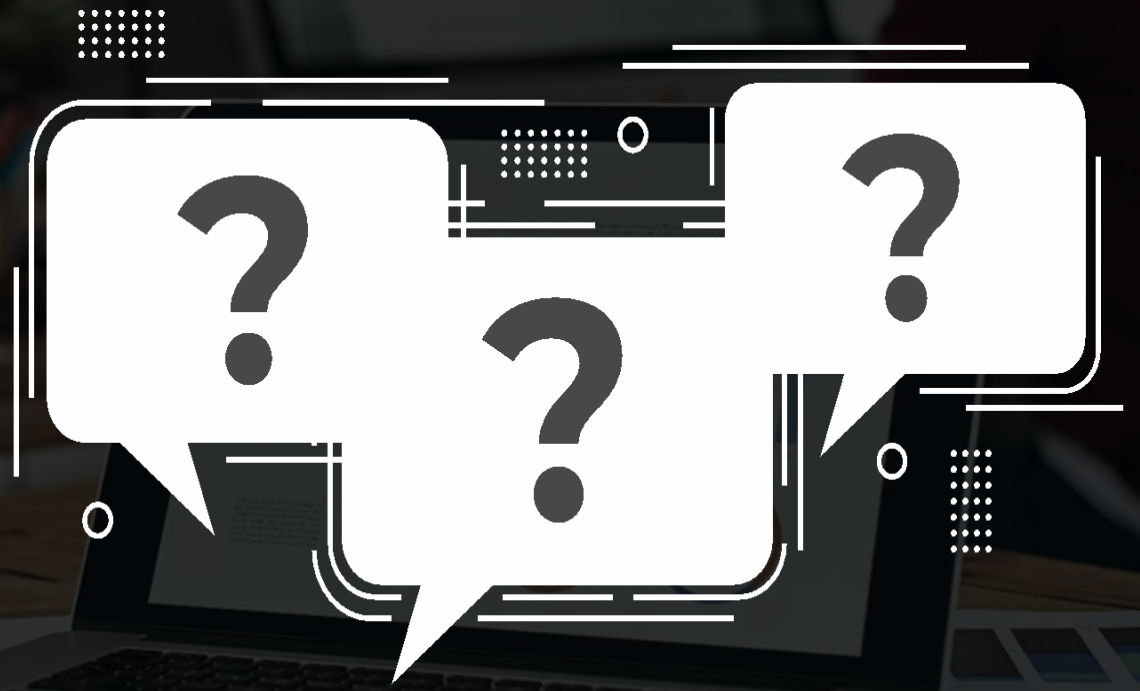
# Q&A



# Poll Results



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