



CRANicles

Communications Regulatory Authority of Namibia

SPECIAL EDITION

MARCH 2024



CRAN LAUNCHES 5G CONSUMER AWARENESS CAMPAIGN

IN THIS ISSUE

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5G AND HEALTH CONCERNS

To date, and after much research performed by the International Commission on Non-Ionizing Radiation Protection and, the Institute of Electrical and Electronics Engineers, through the International Committee on Electromagnetic Safety, there is no evidence that 5G causes any of these ailments.

HARNESSING 5G FOR ENTREPRENEURS

The arrival of 5G technology signals a new era of connectivity set to empower entrepreneurs and businesses across Namibia. As the world transitions into greater digitalisation, 5G stands poised to radically transform how enterprises operate, innovate and thrive.

CRANicles is an external publication prepared by the Communication & Consumer Relations department of the Communications Regulatory Authority of Namibia (CRAN).

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WHAT IS 5G? A CONNECTIVITY GAME-CHANGER



Join us as we pave the way to a smarter, safer and more connected Namibia.

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Editorial



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Dear Esteemed Stakeholder,

In this edition of CRANicles, we shine the spotlight on a groundbreaking chapter in Namibia's telecommunications journey, the launch of 5G technology. As the editor, it brings me immense joy to present insights into the transformative power of 5G, a technological leap that promises to redefine connectivity and shape our digital future.

This issue delves into the intricacies of 5G, unravelling its potential applications, debunking myths, and exploring its far-reaching implications for Namibia. The launch of 5G is not just a milestone, it is a testament to CRAN's commitment to staying at the forefront of technological advancements.

Join us on this exciting journey as we navigate the landscape of 5G, bringing you closer to the innovations that will reshape the way we connect and communicate. Thank you for your continued readership and engagement with the Authority.

We hope that you find this issue of our newsletter informative and enjoyable to read. As always, we welcome your feedback and suggestions for future editions by providing us your views, comments and/or queries by sending an email, for the attention of the Editor, to stakeholdercomms@cran.na. ■

Foreword



**MRS. EMILIA
NGGHIKEMBUA**

Chief Executive Officer

Dear Esteemed Stakeholder,

I extend a warm welcome to this special edition of our CRANicles publication, dedicated to the exploration of the transformative realm of 5G technology and its impact on our digital landscape.

In a world where progress hinges on connectivity, 5G emerges as a beacon of innovation and efficiency, promising unprecedented speeds, minimal latency, and seamless connections across myriad devices. It signifies not just an upgrade but a catalyst for the Fourth Industrial Revolution (4IR), reshaping industries, economies, and our digital experiences.

At CRAN, we are steadfast in our commitment to fostering an environment that embraces innovation and ensures the seamless integration of 5G technology for the benefit of all Namibians. This publication delves into the nuances of 5G, unravelling its potential applications, dispelling myths, and highlighting its role in propelling Namibia into a future defined by connectivity and innovation.

As we navigate the dynamic landscape of telecommunications, this exploration of 5G serves as a compass, guiding us toward a future where connectivity is not just ubiquitous but transformative. 5G is on the horizon for Namibia, and CRAN eagerly anticipates stakeholder cooperation and compliance in the strategic rollout of this technology.

May this publication be an enlightening resource, deepening your understanding of 5G and its far-reaching implications. Thank you for your continued support and interest in the evolution of communication technologies. ■

5G KEEPS YOU CONNECTED.

Experience seamless connection on the go with 5G – where every signal is a promise of safety, meeting the highest standards of reliability and security.

#5GForYouAndMe





EMBRACING THE FUTURE - CRAN LAUNCHES 5G CONSUMER AWARENESS CAMPAIGN

In a significant stride towards a digitally connected future, the Communications Regulatory Authority of Namibia (CRAN) unveiled its 5G Consumer Awareness Campaign at Droombos. This initiative aligns with the approved 5G Strategy, outlining the roadmap for the introduction of 5G technology in Namibia.

The primary objective of the campaign is to empower the public with knowledge about 5G implementation, shedding light on the myriad opportunities it brings to various industries. CRAN, as a leading regulatory authority, aims to dispel prevalent myths and misinformation surrounding 5G, emphasizing its safety and potential benefits.

Utilising a multi-channel approach, CRAN will leverage social media, radio advertisements, media releases, and feature articles in local newspapers to reach a diverse audience. The campaign seeks to debunk misconceptions, including unfounded claims linking 5G to health issues and COVID-19.

Importantly, CRAN highlights that 5G, while introducing advanced capabilities like faster speeds and low latency, does not pose harm to individuals. The campaign underscores 5G's role as a catalyst for economic growth, offering opportunities across sectors such as finance, tourism, health, education, mining, transport, and the Green Hydrogen Project.

Namibia's move towards 5G reflects a commitment to staying at the forefront of technological advancements, fostering a connected and innovative future for the nation. Stay tuned as CRAN navigates this transformative journey, bringing the benefits of 5G to every corner of Namibia. ■



“The campaign underscores 5G's role as a catalyst for economic growth, offering opportunities across sectors such as finance, tourism, health, education, mining, transport, and the Green Hydrogen Project.”



5G AND HEALTH CONCERNS

The next generation of wireless communication networks and services is in our midst. New figures from Global System for Mobile Communications Association (GSMA) Intelligence shows that the journey of commercial deployment of the fifth generation of wireless broadband, known as Fifth Generation (5G) wireless technology has already begun in the sub-Saharan Africa with South Africa being the first country in the region to launch 5G and had since been joined by handful of countries such as Botswana, Zimbabwe, Seychelles, Mauritius, and Madagascar. and Madagascar.

Furthermore, many operators across the sub-Saharan Africa are either planning or testing 5G technology or are already in the deployment stage. Namibia is no exception, on 29 September 2023, CRAN awarded spectrum for 5G to various telecommunications service providers through what is known as spectrum auction to fulfil rollout obligations aimed at ensuring communications service in all corners of Namibia. Subsequently, CRAN also launched a 5G Consumer Awareness Campaign focusing on educating consumers on the benefits of 5G technology and dispelling myths and misinformation around 5G.

At present, most telecommunication sources currently operate at frequencies below 6GHz, including radio and TV broadcasting and wireless sources such as local area networks and mobile telephony. With the increasing demand for higher data rates, better quality of service and lower latency to users. 5G wireless communications networks are planned to operate at frequencies above 6GHz and into the "millimetre wave" range (30 - 300GHz). Frequencies above 6GHz have been in use for many years in various applications such as radar, microwave links, airport security screening and in medicine for therapeutic applications.

However, the planned use of the aforesaid Radio Frequency (RF) to deploy wireless communications networks, particularly the 5G of wireless networks, has given rise to public concern about any possible adverse effects to human health. This article discusses the main difference between 5G and previous technologies e.g., 2G, 3G and 4G, as well as debunking the myths around the potential 5G health risks.

What are the main differences between 5G and previous technologies e.g., 2G, 3G, 4G etc?

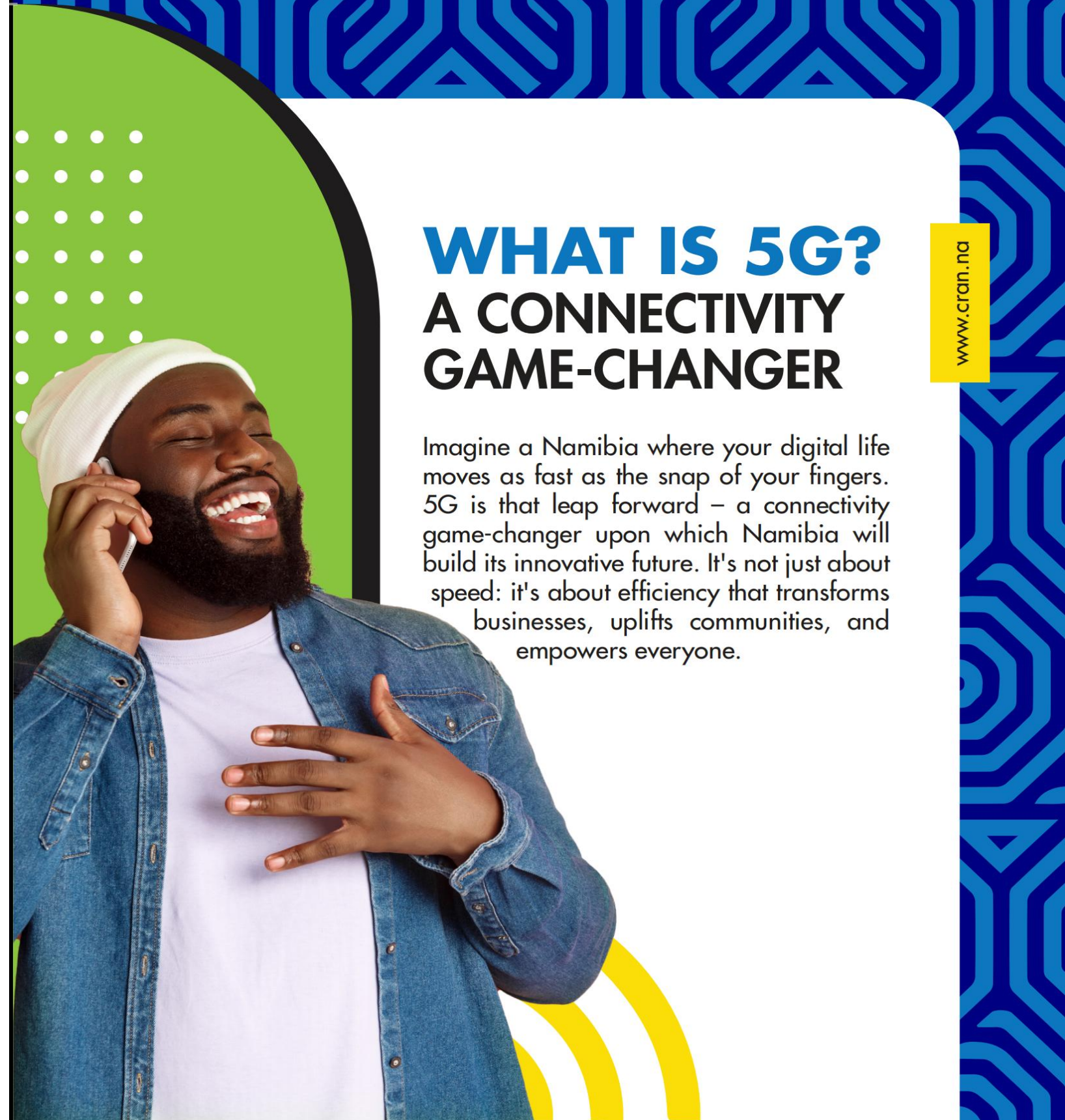
5G represents an evolution in telecommunication standards. 5G uses higher frequencies than previous wireless network technologies, making it 100 times faster and more efficient than its predecessors 2G, 3G and 4G.

5G is designed to provide more connectivity than was ever available before, with an extended capacity to enable next-generation user experiences, empower new deployment models and deliver services that will impact every industry making e-government, e-agriculture, e-health, digitalised logistics and many more a reality.

Furthermore, the radiation emitted by 5G will largely be the same as previous wireless networks technologies (2G, 3G and 4G), except that it will be exposing us to something called "millimetre waves" for the first time, that are not capable of penetrating past the skin, thus no consequences for public health are anticipated.

WHAT IS 5G? A CONNECTIVITY GAME-CHANGER

Imagine a Namibia where your digital life moves as fast as the snap of your fingers. 5G is that leap forward – a connectivity game-changer upon which Namibia will build its innovative future. It's not just about speed: it's about efficiency that transforms businesses, uplifts communities, and empowers everyone.





What are the potential health risks from 5G?

Since the release of 5G technology, many conspiracy theories claiming that 5G can spread the Coronavirus SARS-COV-2 which causes the condition COVID-19 has been making the rounds on social media. The myth supposedly gained traction with some people believing that electromagnetic radiation, like those produced by 5G have negative health effects and are somehow the cause of COVID-19, cancer, or any other ailments. This is false, there is no proof that the Electromagnetic Frequencies (EMFs) or 5G affects your risk of developing viral infections.

To date, and after much research performed by the International Commission on Non-Ionizing Radiation Protection and, the Institute of Electrical and Electronics Engineers, through the International Committee on Electromagnetic Safety, there is no evidence that 5G causes any of these ailments. No adverse potential health effect related to COVID-19, cancer or any other ailments has been causally linked with the exposure to frequencies used by 5G wireless technology. Suffice to say, 5G technology shall not harm public health. Similarly, all equipment to be utilised for 5G deployment meets local and international standards and shall be subjected to Type Approval by CRAN to ensure public safety. ■

Key Takeaway

- 5G is a wireless network technology that provides faster wireless communications, thus opening a true digital evolution that will enable the benefits of 5G across different industry e.g., Communications, Agriculture, Health, Education, Transport, etc.
- Currently, there are no solid evidence that 5G causes negative health effects in humans or animals. 5G technology, is not associated with contracting SARS-CoV-2, which causes COVID-19 or make you more susceptible to viral infections or any other ailments.

Authored by:
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HARNESSING 5G FOR ENTREPRENEURS

As the world transitions into greater digitalisation, 5G stands poised to radically transform how enterprises operate, innovate and thrive. CRAN recognises the immense potential of 5G to activate entrepreneurship and cultivate startups within the nation.

With unmatched speeds, ultra-low latency, and expanded bandwidth, 5G is the missing link for innovation. This next-generation network handles exponentially more data with virtually instantaneous transfers – enabling entrepreneurs to develop sophisticated smart applications and solutions that were unfathomable just years ago. From instant analytics to Artificial Intelligence (AI) optimisation, remote robotic control to virtual collaboration platforms, 5G unlocks realities previously confined to imagination.

Access to the digital economy remains a challenge for many African countries. However, Namibia is in a unique position to bypass this divide entirely through strategic and inclusive deployment of 5G infrastructure. By providing high-speed internet from urban hubs to rural villages, 5G ensures entrepreneurs have the same gateway to digital resources regardless of location or status. This connectivity liberates grassroots innovation and allows homegrown startups to flourish.

Contrary to some misconceptions, 5G technology does not only cater to large corporations. Its scalability makes it a valuable tool for Small and Medium-sized Enterprises (SMEs) as well. 5G networks are designed to be energy-efficient and cost-effective, making them accessible to startups and small businesses that are often constrained by limited resources.



In the world of e-commerce, 5G significantly enhances customer experiences through faster and more reliable online transactions. For tech startups, the low latency of 5G enables the development of cutting-edge applications, including Augmented Reality (AR) and Virtual Reality (VR) solutions. Moreover, 5G can revolutionise supply chain management, allowing businesses to track and manage their operations with unprecedented precision.

As Namibia embarks on its 5G journey, the entrepreneurial community stands to benefit immensely. By debunking myths and focusing on the factual benefits of 5G, CRAN is committed to supporting a technological environment where innovation and entrepreneurship can flourish. The future for Namibian entrepreneurs looks not only connected but also bright and promising with the advent of 5G. ■



5G KEEPS YOU CONNECTED.

Experience seamless connection on the go with 5G – where every signal is a promise of safety, meeting the highest standards of reliability and security.

#5GForYouAndMe

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All equipment that utilize 5G must meet local and international standards and will be type-approved by CRAN to ensure public safety.

Join us as we pave the way to a smarter, more connected Namibia.

5G AND RENEWABLE ENERGY IN NAMIBIA

Poised at the forefront of renewable energy adoption, Namibia is on the cusp of an energy revolution, significantly propelled by the integration of 5G connectivity. This advanced technology promises to enhance the efficiency, reliability, and scope of renewable energy sources, from solar and wind power to emerging green technologies, paving the way for a more sustainable and energy-efficient future in Namibia.

At the core of Namibia's renewable energy strategy are 5G-powered grids. These sophisticated networks, equipped with an array of sensors and Internet-of-Things (IoT) devices, provide detailed insights into energy consumption and distribution. This high-resolution data enables precise balancing of energy supply and demand, dynamic pricing, and improved grid reliability and accessibility. Such advancements are crucial for a country transitioning towards a more sustainable energy landscape. Despite the promise of 5G in renewable energy, misconceptions about its environmental impact persist. CRAN assures that Namibia's 5G networks adhere to stringent energy efficiency and emission reduction standards. Advanced antenna designs and beamforming techniques are to be considered in minimising energy usage and environmental impact. Far from being a detriment, 5G technology serves as a vital conduit in managing and optimising renewable energy sources, propelling Namibia towards its sustainability objectives.

By addressing and correcting misconceptions about 5G, CRAN empowers Namibian citizens to fully embrace and leverage the potential of this technology. Far from being hazardous, 5G is an enabler, unlocking the vast potential of Namibia's renewable resources like solar and wind energy. It promises enhanced grid resilience, broader energy access, and a sustainable, electrified future for all Namibians. The fusion of 5G and renewable energy is more than just a technological advancement; it is a paradigm shift for Namibia. As the nation continues to harness its abundant solar and wind resources, 5G stands as a key enabler, ensuring that these green energy solutions are not only sustainable but also universally accessible. In debunking myths and embracing innovation, Namibia is well on its way to becoming a beacon of renewable energy and technological progress in Africa.

One of the most transformative aspects of 5G in the world of renewable energy is its ability to connect remote and rural areas. This technology significantly improves the range and throughput of communication networks, making it feasible to bring renewable energy solutions to even the most isolated communities. Innovative pay-as-you-go systems, facilitated by 5G, lower financial barriers, allowing widespread access to micro solar grids and other clean energy sources. This inclusivity is key to achieving national electrification and energy independence. ■



5G FREQUENTLY ASKED QUESTIONS (FAQs)

1. What is 5G and how is it different from current technologies?

A: Think of 5G as the superstar of wireless networks! It's the latest global standard, following 1G to 4G. 5G connects virtually everything and everyone, including machines and devices, with unparalleled speed and efficiency. It's not just an upgrade, it's a game-changer.

2. What are the differences between the previous generations of mobile networks and 5G?

A: Each generation has been a step up:

- 1G brought us analogue voice in the 1980s.
- 2G introduced digital voice in the early 1990s.
- 3G, in the early 2000s, added mobile data.
- 4G LTE, in the 2010s, gave us mobile broadband.

Now, 5G is here to offer more connectivity than ever before!

3. How does 5G work?

A: 5G is like 4G LTE but supercharged. It uses OFDM and a new air interface, 5G NR, for greater flexibility and scalability. It's not just about faster broadband; it's about expanding into new areas like critical communications and massive IoT.

4. How is 5G better than 4G?

A: 5G outshines 4G with:

- Blazing speed.
- Greater capacity.
- Lower latency.
- More capabilities.
- Efficient spectrum usage.

5. How will 5G affect me?

A: 5G will transform your life with faster downloads, low latency, and more connectivity for devices. Imagine instant

cloud access, multiplayer cloud gaming, AR shopping, and real-time video collaboration!

6. Will 5G be available in rural areas of Namibia?

A: Absolutely! Just like a tractor works in rural Namibia, so will 5G. CRAN is committed to expanding 5G coverage to ensure everyone is part of our smarter, safer, and more connected future.

7. How does 5G benefit the average consumer in Namibia?

A: 5G keeps you seamlessly connected, enhancing your daily digital experiences with faster speeds and more reliable connections, ensuring you're always part of the digital world.

8. How will 5G impact sectors like healthcare and agriculture in Namibia?

A: 5G will be transformative, improving services in healthcare, agriculture, education, and more by enabling faster, more efficient, and innovative solutions.

9. Is 5G going to replace my Wi-Fi connection?

A: No, 5G and Wi-Fi are like teammates – each with its unique role. While 5G enhances cellular network coverage, Wi-Fi remains your go-to for local wireless connections. Together, they offer the best of both worlds.

10. Do I need a new phone if I want 5G?

A: To join the 5G revolution, you'll need a 5G-compatible smartphone. As 5G becomes more widespread, more devices and carrier options will emerge, bringing 5G to the mainstream.

11. Can I use 5G only on my smartphone?

A: 5G is not just for smartphones; it's for everyone and

5G FREQUENTLY ASKED QUESTIONS (FAQs)

12. Is 5G technology safe for my health?

A: Absolutely! Reputable organizations like the World Health Organization have found no health risks with 5G.

13. How do businesses use 5G?

A: 5G is a game-changer for businesses, offering high-speed data and reliable networks. It's ideal for industries that need speed and precision, like smart factories, enhancing operational productivity.

14. What are the safety standards for 5G equipment in Namibia?

A: All 5G equipment must meet stringent local and international standards. CRAN's Type Approval process will ensure every device is safe for public use.

15. Will 5G improve public safety and emergency services?

A: Indeed, 5G's fast and reliable connectivity will significantly enhance public safety services, enabling quicker response times and more efficient emergency management.

16. How does 5G ensure user privacy and data security?

A: 5G incorporates advanced security protocols, ensuring robust protection of user privacy and data, keeping you safe in the digital world.

17. How does 5G enhance network security?

A: 5G introduces advanced security features like IMSI encryption, ensuring that each user's identity is securely encrypted. Additionally, all traffic over 5G is encrypted and protected, adhering to strict mutual authentication policies for maximum data safety.

18. What are the long-term cybersecurity benefits of 5G?

A: While 5G's initial deployment is costly, it promises long-term economical and convenient benefits. As the market grows, 5G will become more competitive, offering enhanced cybersecurity features that protect against evolving threats.

19. How does 5G support AI, IoT, and cloud computing in terms of cybersecurity?

A: 5G's strong backbone is ideal for deploying AI, IoT, and cloud computing securely. It leverages network virtualization and deep packet inspection, allowing for meticulous data scrutiny and bolstered security in these advanced tech areas.

20. Can 5G accelerate the identification of cyber threats?

A: Yes, 5G's potential for high-speed data analysis and communication can significantly speed up the identification of cyber threats. This rapid detection allows for quicker responses to potential vulnerabilities.

21. What role does 5G play in cybersecurity audits for smart devices?

A: With 5G's integration into smart devices, cybersecurity audits can be more comprehensive. Its capabilities allow for a wider scope in identifying and restraining vulnerabilities across an array of connected devices.

22. Will the cost of 5G impact its cybersecurity capabilities?

A: Initially, 5G deployment may be expensive, but as more players enter the market, we can expect more competitive pricing and service offerings. This competition should not compromise cybersecurity capabilities, which are a fundamental aspect of 5G networks.

5G FREQUENTLY ASKED QUESTIONS (FAQs)

23. How does 5G ensure data protection during transmission?

A: 5G networks employ robust encryption protocols for all data transmissions. This means every bit of data sent over a 5G network is encrypted, ensuring that sensitive information remains protected from unauthorized access.

24. Does 5G's network virtualization contribute to cybersecurity?

A: Absolutely. Network virtualization in 5G combines hardware and software resources, creating a more secure and efficient network infrastructure. This approach enhances overall cybersecurity by facilitating better control and monitoring.

25. What is deep packet inspection (DPI) in 5G, and why is it important for cybersecurity?

A: DPI in 5G involves an in-depth analysis of data packets being transmitted over the network. This process is crucial for identifying and mitigating potential security threats, ensuring a safer online environment.

26. How will 5G impact global communication in terms of cybersecurity?

A: 5G will enhance global communication by providing faster and more secure data transfers. This improvement is vital for international organizations, allowing them to communicate and collaborate securely and efficiently.

INTRODUCING 5G THE SUPERSTAR OF WIRELESS NETWORKS

www.cran.na

5G IS FAST & RELIABLE

Speeds of up to 20 Gbps, low latency and reliable connectivity

5G IS SECURE

Advanced security features and protocols to protect user privacy and data

5G IS SAFE

Compliant with international public safety standards and not harmful to health

5G IS FOR EVERYONE

Nationwide coverage to ensure that no person, community or business is left behind