The telecommunications regulatory framework: South Africa

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Topics to be covered

1. Why regulate?
2. Who/what regulates?
3. What is regulated?
   - Principles of regulation and forbearance
4. Recent regulatory events in South Africa
5. ...and elsewhere

Why regulate?

Why regulate?

- To **protect the public interest** in having available, affordable, accessible communications services of a reasonable quality
  - To ensure the safety and security of communications for emergency and security reasons
- To **promote competition** by ensuring a level playing field
  - To ensure growth and innovation at reasonable prices
- To **allocate scarce resources** in a fair and efficient manner i.e. land, numbers and spectrum
- To **promote national policy goals** including connectivity for all
- To **meet internationally applicable standards and treaties** to which the country has committed e.g. WTO and other trade agreements

Why regulate?

- To anticipate **harm** ex-ante, or to deal with **harm** ex-post

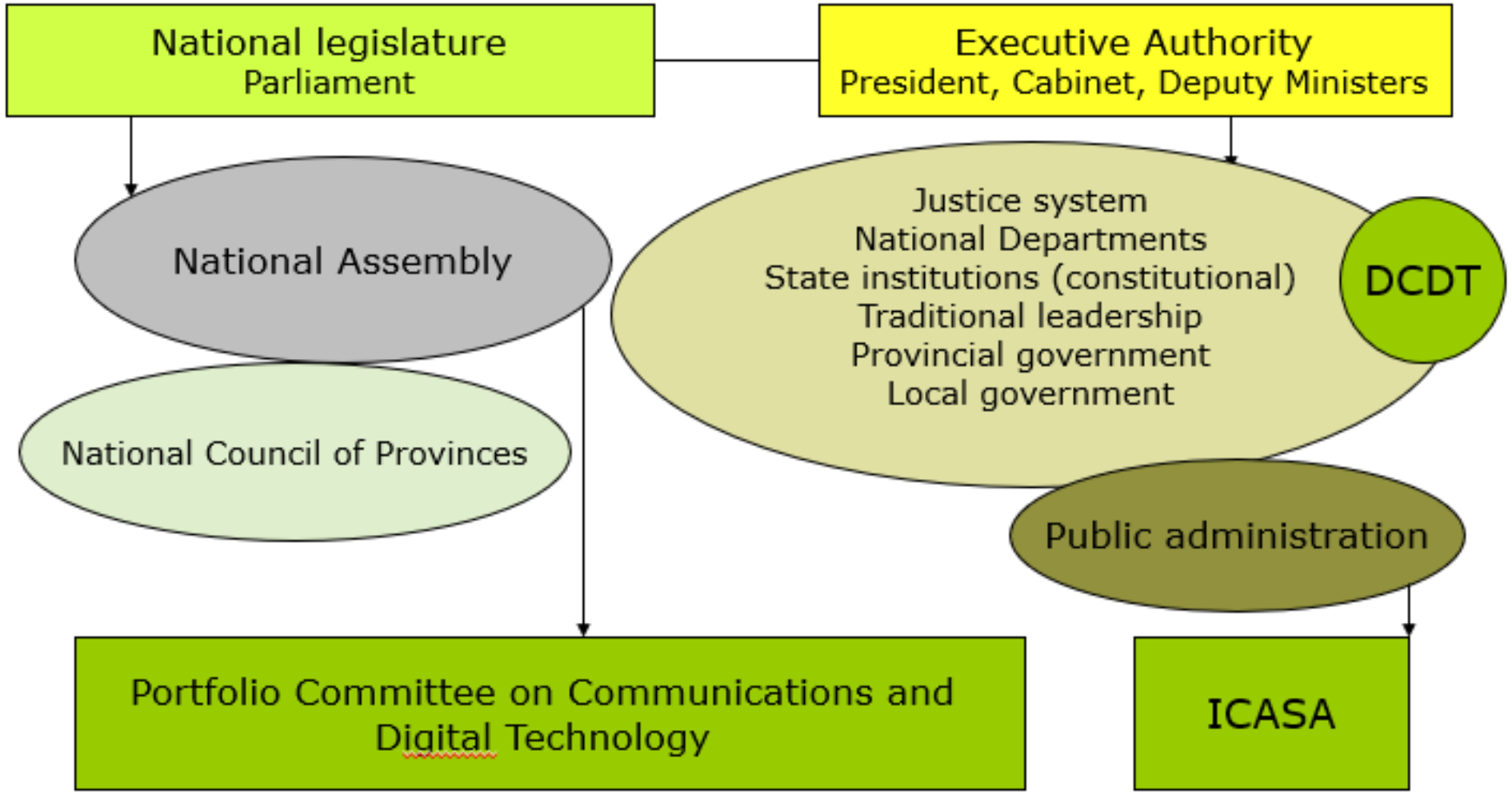
- To **reduce the risk of industry capture** by powerful entities or political interests
  - This will promote the interests of the few and not the many

- To ensure that industry stakeholders **prioritise public welfare** over private gains
  - Profit maximisation is ideal for shareholders but not for consumers

- To reassure investors that the country is adopting **international best practise**
  - Recognisable frameworks and clear and predictable decision-making by a regulatory authority can encourage investment

Who/what regulates?

Government



ICASA

Sector laws are **primary legislation**. The Minister is **not** a regulatory authority, but a policy maker. Policies are **not** primary legislation.

- The Independent Communications Authority of South Africa was created under the Act of the same name, and is the regulator for the ICT sector
  - It is mandated to carry out the functions in this Act and the sector law, the Electronic Communications Act (ECA), including to:
    - encourage investment
    - ensure efficient use of frequency spectrum
    - promote competition
    - promote BBBEE
    - promote the interests of consumers with regard to price, quality and the variety of electronic communication services
    - refrain from undue interference in the commercial activities of licensees while taking into account the electronic communication needs of the public
    - promote stability in the ICT sector

ICASA

- It consists of a Council of 9 members + a management team including a CEO, COO and CFO
- Councillors may be charged with specific responsibilities e.g. radio frequency management, licensing, ownership and control, or broadcasting
- The Council may constitute a committee to undertake work in relation to any matter in the Acts, which must include 1+ councillors
- The Complaints and Compliance Committee is a permanent committee but is constituted anew to hear individual complaints, and includes 1+ councillors

What is regulated?

What is regulated?

- Provision of ECS
- Construction, operation and maintenance of ECN and provision of ECNS
- Allocation of radio frequency and numbers
- Behaviour of licensees
- Interaction between licensees; and between licensees and consumers
    - ICASA also regulates broadcasting and postal services

What is regulated?

- SPECTRUM
- Grant of class and individual licences and exemptions
- Interconnection and call termination charges
- Facilities-leasing/sharing
- Number portability
- Consumer interaction
- Provision of emergency service numbers, and other special numbers
- Ownership and control of licences
- Applications for transfers, renewals and amendment of licences
- Type approval
- Universal service (connecting the unconnected)
- Market reviews (identifying dominant licensees and market failure)

Secondary legislation includes regulations and guidelines e.g. for 5G:

- Process and Procedure Regulations, 2010 as amended
- Terms and Conditions Regulations, 2010 as amended
- Radio Frequency Spectrum Regulations, 2015 as amended
- Interconnection Regulations, 2010
- Facilities-Leasing Regulations, 2010
- Licence conditions
- ++++

Principles of regulation & forbearance

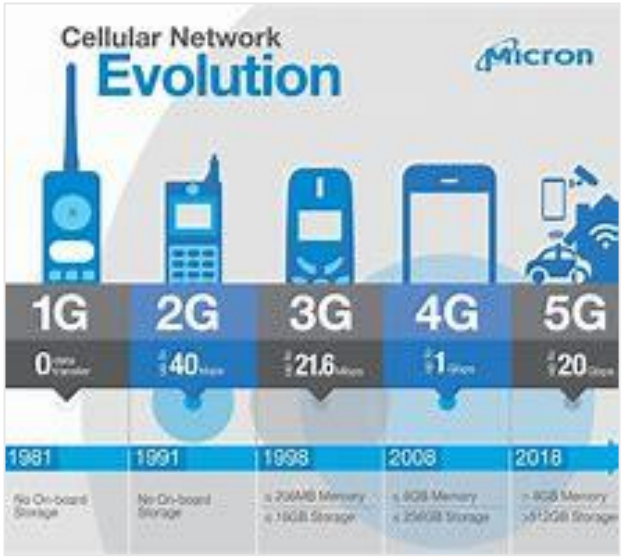
- Regulation should not take place in a vacuum, or simply because a power or a discretion exists (may)
- Regulation should take place only when necessary, unless primary legislation mandates/directs certain regulatory actions (must/shall)
- Regulation must have a purpose and achieving that purpose must be found to outweigh any other considerations – after having taken all relevant considerations into account
    - Impact assessments can determine if the cost (financial and inconvenience) of an intervention will likely outweigh the benefits

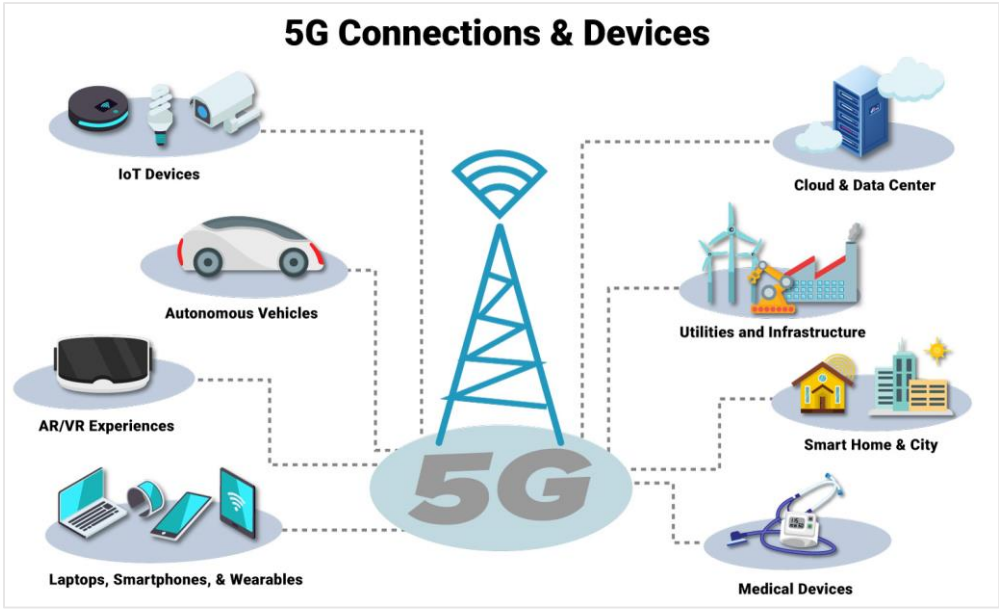
Principles of regulation and forbearance

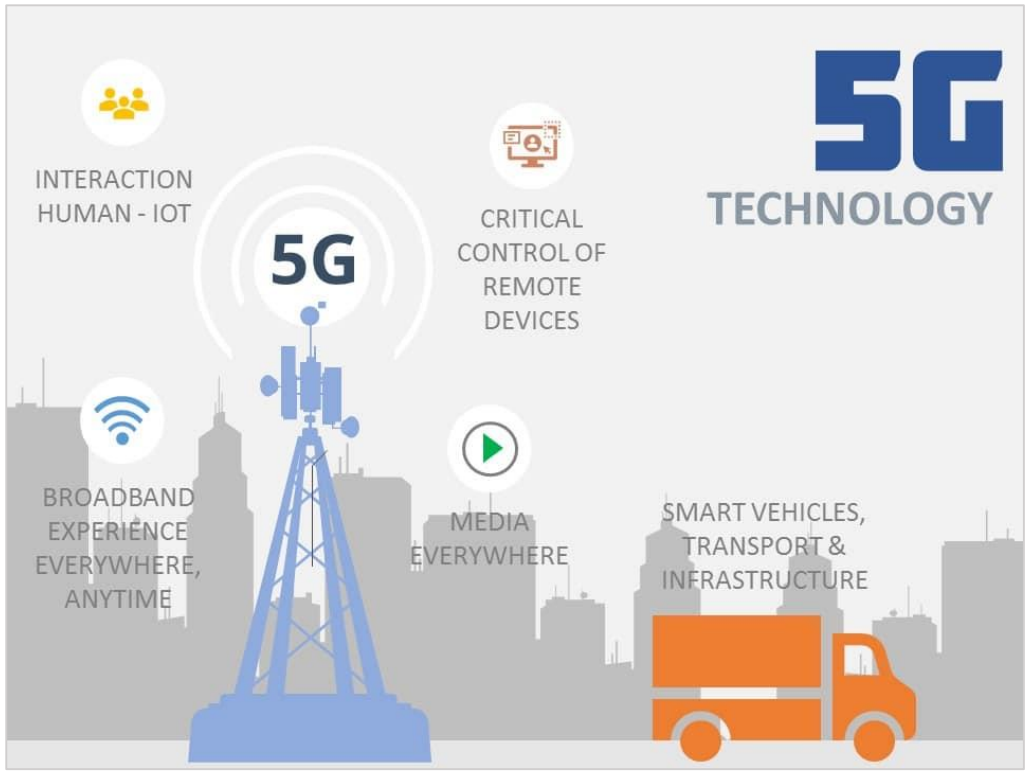
- For RIA to be successful, it needs to:
  - always start at the inception phase of the regulation-making process;
  - clearly identify the problem and desired goals;
  - identify and evaluate all potential alternative solutions (including non-regulatory ones);
  - always attempt to assess all potential costs and benefits, both direct and indirect;
  - be based on all available evidence and scientific expertise;
  - be developed transparently with stakeholders; and
  - communicate the results clearly

Recent regulatory events

Context


Cellular Network
Evolution
Micron
1G
2G
3G
4G
5G
0
40
21.6
1
20
1981
1991
1998
2006
2018


5G Connections & Devices
IoT Devices
Cloud & Data Center
Autonomous Vehicles
Utilities and Infrastructure
AR/VR Experiences
Smart Home & City
5G
Laptops, Smartphones, & Wearables
Medical Devices


INTERACTION
HUMAN - IOT
5G
CRITICAL
CONTROL OF
REMOTE
DEVICES
5G
TECHNOLOGY
BROADBAND
EXPERIENCE
EVERYWHERE,
ANYTIME
MEDIA
EVERYWHERE
SMART VEHICLES,
TRANSPORT &
INFRASTRUCTURE


ICASA
INDEPENDENT COMMUNICATIONS
AUTHORITY OF SOUTH AFRICA
The State of 5G
in South Africa
From Readiness to
Recommendations

- The Fourth Industrial Revolution (4IR) will be driven by 5G technology (speeds of 10-30Gbps, compared to 4G/LTE-A's 100Mbps-1Gbps)
- It is suggested that it will 'make it easier to receive coverage in previously hard-to-reach areas'*

  Harnessing 5G for South Africa: the benefits and challenges - The Media Online, Accenture, 2021

- The most significant growth in [5G] in the last few years has been in the next tier of metro suburbs, secondary cities, and many towns

  South Africa's fibre and 5G war (mybroadband.co.za), February 2024

- 5G spectrum was granted during COVID but has only just been turned on in Sandton
- 5G-ready devices are extremely expensive
- Concerns about radiation continue and are increasing

- **Turn to Team Digital Co-X at Vodacom Business to collaborate on everything CaaP.**

For businesses, robust connectivity remains the cornerstone for efficient collaboration, enabling teams to share ideas and information in real-time and driving innovation.

Employees benefit from the flexibility of remote work and access to diverse resources, boosting job satisfaction and performance.

Customers, in turn, enjoy transcendental and personalised services, creating delightful experiences and loyal clients.

As the digital landscape evolves, investing in connectivity becomes paramount for staying competitive.

It's not just about technology; it's about fostering a connected ecosystem that propels businesses, employees, and customers into the future of success.

Connectivity-as-a-Platform: Transforming the Digital Landscape (mybroadband.co.za), 11/3/2024

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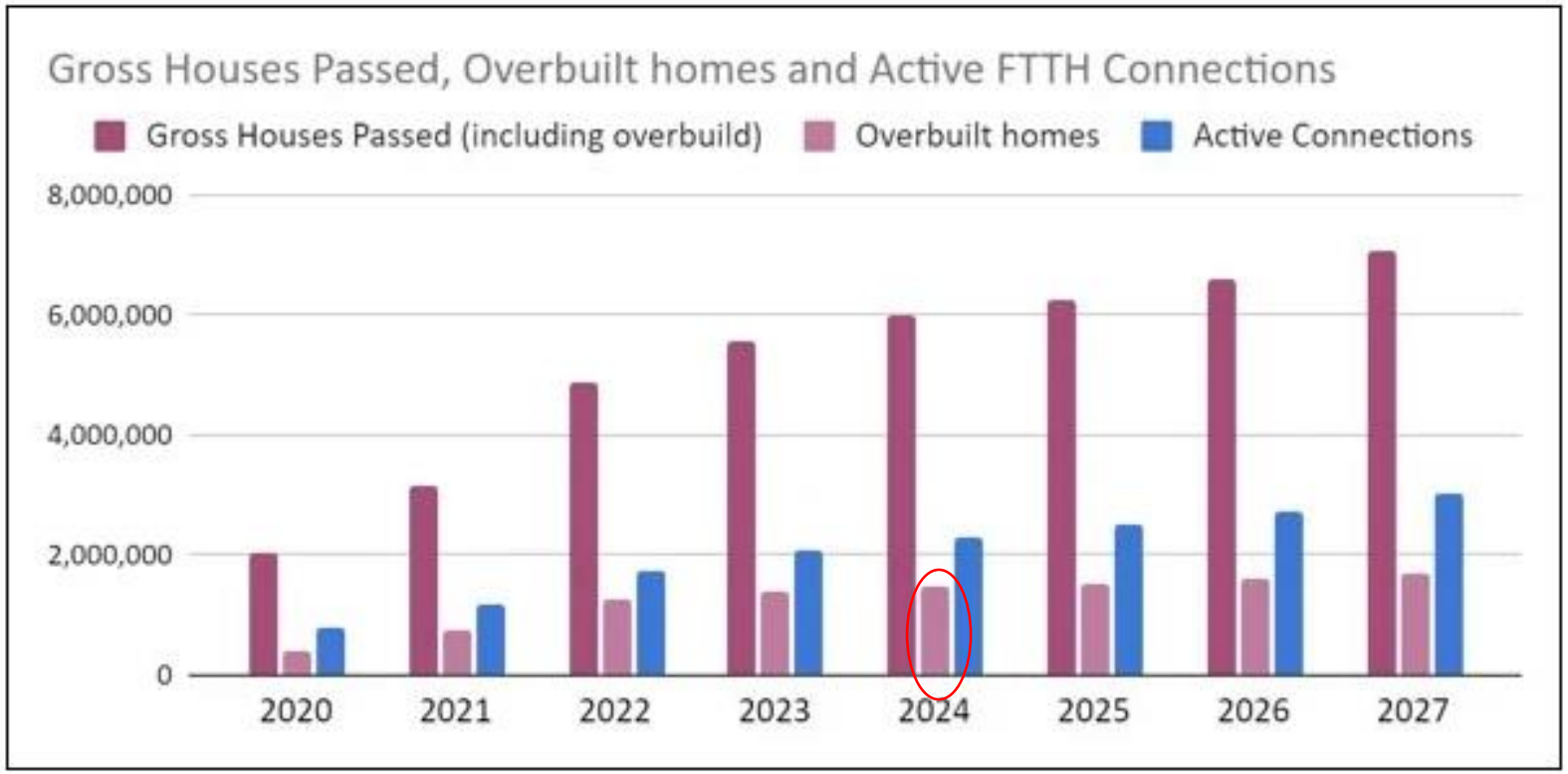

South Africa's fibre and 5G war (mybroadband.co.za), February 2024 (BMI-T)

Fibre and 5G fixed wireless access providers are in an escalating battle for customers as key players in both technologies invest in expanding their coverage. This is according to BMIT's latest SA Broadband Report.

Mobile operators are also adding coverage and capacity to their LTE networks. BMIT found that fixed-LTE remains by far the leading broadband medium in South Africa — by coverage and subscriber numbers. Telkom periodically alternated between prioritising fibre and mobile network investments, but is now investing in both. Telkom is tailoring its 5G/LTE/fibre mix to the data needs of each suburb and selling its tower assets to fund the updated strategy.

NATIONAL POLICY ON RAPID DEPLOYMENT OF ELECTRONIC COMMUNICATIONS NETWORKS AND FACILITIES, MARCH 2023

5. OBJECTIVES

The objectives of this policy are to:

a) Balance the rights of licensees to enter onto private and public land with the rights of property owners, by ensuring compliance with reasonability and due care;

b) Facilitate access to rights of way, wayleaves, servitudes and other approvals with emphasis on intergovernmental co-operation;

c) Enable the rapid deployment of broadband infrastructure in an efficient, cost-effective, environmentally responsible manner;

d) Facilitate the achievement of the goals and targets set out in the National Broadband Policy, 2013 - SA Connect;

e) Promote the sharing of broadband infrastructure;

f) Enable the development of a dispute resolution mechanism.

4.2 This policy has a national scope and licensees have right of way to enter upon and use public and private land for the deployment of broadband infrastructure.
4.3 Wayleaves, use of servitudes and other approvals are required from a variety of institutions in different spheres of government. The Constitution of the Republic of South Africa states that the different spheres of government (national, provincial and local) will "perform their functions in a manner that does not encroach on the geographical, functional or institutional integrity of government in another sphere" but also provides that the different spheres must co-operate with "one another in mutual trust and good faith by … coordinating their actions and legislation with one another; … adhering to agreed procedures; and avoiding legal proceedings against one another".
4.4 The policy is subject to local government and other legislation, to the extent applicable, noting the need for co-operation between different spheres of government.
4.5 In addition, the Minister of Cooperative Governance and Traditional Affairs **has issued** a standard draft by-law for deployment of electronic communications facilities as contemplated in section 14 of the Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000) that provides for a uniform wayleave process for broadband infrastructure deployed at municipal level (Government Notice No. 3087, Government Gazette No. 48113 of 24 February 2023).

Recent regulatory events in South Africa

- The proposed amendment of the ECA
  - This will, if adopted, have a significant effect on regulation because it:
    - creates a new licence category – the ECF
    - empowers the COGTA Minister to pass a national standard bylaw on wayleaves
    - introduces spectrum sharing for high demand (on approval) and other (on notice)
    - proposes to oblige licensees with 90% national coverage to grant access to MVNOs and provide national roaming possibly with wholesale price regulation
    - amends provisions to deal with competition regulation
      - granting ICASA powers to intervene in contract terms, pricing and business practises

These changes are made apparently to give effect to the CompCom Data Market Inquiry

Recent regulatory events in South Africa

Assessing the proposed ECA amendments

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Do they enable good regulation?

- ➢ No – this cannot pass a RIA
- ➢ Not really – can one Minister empower another Minister? Can COGTA force municipalities to adopt a 'standard' bylaw?
- ➢ Not really – it's already in the RFS Regulations in a general sense
- ➢ Yes – although strictly speaking, the Facilities-Leasing Regulations + Chapter 10 of the ECA already empower ICASA to do this
- ➢ No – isn't this "undue interference in the commercial activities of licensees"?

Recent regulatory events in South Africa

- CompCom blocks CIVH/Vodacom deal to create Maziv
  - Maziv says, “the investment will allow Maziv to add fibre infrastructure to an estimated 1 million additional homes in low-income areas, generate up to 10,000 new jobs, commit at least R10billion to capital expenditures, and support the establishment of small to medium-sized businesses through a fund established specifically for this purpose with R300million of committed capital” and “the deal will be advantageous for the market because it will make Vodacom fibre assets commercially available on an open-access, transparent, and non-discriminatory basis”
  - CompCom says “it may deny low-income consumers the benefits South Africa's wealthier and urban consumers enjoy from fixed competition's favourable effects on mobile products”
  - ICASA granted “conditional approval”

Recent regulatory events in South Africa

- Applications were submitted to ICASA by Cell C Ltd for the approval of the transfer of control of its I-ECNS, I-ECS and RFS licences to the Prepaid Company (Pty) Ltd as it is increasing its Cell C shareholding by 4.04% to move from a non-controlling holding of 49.5% to a controlling share of 53.5%
  - Written comments were due 24/1/2024 with responses by Cell C due 12/2/2024 and public hearings are to be held "if necessary"
  - Cell C said the licences will continue to be owned by Cell C, Cell C will continue to provide the licensed services, the spectrum licences will not be transferred to any party and Cell C will continue to hold, use, and pay for the spectrum
    - Analysis by Daily Investor analyst put the value of Cell C's spectrum between R3.8bn and R6.2bn '…which is significantly higher than Blue Label's current market cap of R3.5bn; so it makes sense for Blue Label to gain control of Cell C's spectrum and safeguard this asset should the mobile operator face liquidation…' (7/1/2024)
- ICASA has published a notice advising that Starlink is "illegal" in RSA despite type-approving some equipment (satellite systems)

…and elsewhere

- As part of the global GSMA Open Gateway* initiative, RSA+ other MNOs can now implement Number Verification + SIM Swap, as **Application Programme Interfaces (APIs)**are made available to mobile commerce, financial institutions + developers to create new services to combat digital fraud and protect subscribers
- WRC23 agreed on new mobile low-band spectrum (<1 GHz) and mid-band spectrum in the 3.5-6GHz ranges, to allow the mobile sector to plan the next wave of communications development through **5G-Advanced and beyond** + more low-band spectrum in the 470-694 MHz band in EMEA which can help expand capacity for the internet connectivity of rural communities, moving to digital equality and bridging the urban/rural connectivity divide
- Introducing **OpenRAN** – an evolution in the part of a telecommunications network that connects user devices to the network wirelessly – in essence, the bit between your smartphone and the nearest base station. OpenRAN's key principle is to standardise and decouple the components of the RAN so they are interchangeable and vendor-neutral**

* GSMA Open Gateway is a framework of common network Application Programmable Interfaces (APIs) designed to provide universal access to operator networks for developers. GSMA Open Gateway helps developers and cloud providers enhance and deploy services more quickly across operator networks via single points of access to the world's largest connectivity platform

** OpenRAN and the future of mobile networks - TechCentral

European Commission

EU Electronic Communications Code

The European Electronic Communication Code is crucial
to achieving Europe's Gigabit society
and ensuring full participation of all EU citizens in the digital economy.

The updated rules will facilitate the rollout of 5G in Europe. The **deployment of 5G** is expected to generate €213 billion in revenues worldwide in 2025 and could lead to €113 billion in benefits per year across these sectors:

WITH BETTER CONNECTIVITY, WHAT WE WILL BE ABLE TO DO IN 2025?

Time to download a	2017 typical European legacy networks 20 Mbps	2025 Fiber to the home networks 0.4 Gbps
CT Scan	14 minutes	40 seconds
Top smartphone storage	3.6 hours	102 seconds
4K movie	11 hours	33 minutes
Medium size corporate server restore	28 days	33 hours
Human genome	33 days	39 hours

KEY DELIVERABLES OF THE TELECOM RULES FOR BUSINESSES:

The new rules will:

- Pave the way to the deployment of 5G networks, with:
  - Availability of radio spectrum for 5G by end of 2020 in the EU;
  - spectrum licensing periods of 20 years to ensure return on investments for network operators;
  - better coordination of radio spectrum assignments, so that investment in 5G networks can happen in different Member States at the same time.
- Facilitate the roll-out of new, very high capacity fixed networks, with:
  - Focus on infrastructure competition and return on investment in new networks;
  - rules for co-investment that will be more predictable and promote risk sharing in the deployment of very high capacity networks;
  - specific rules for wholesale-only operators with significant market power.
- Ensure equality of treatment of all players in the telecom services sector, whether traditional or web-based, by clarifying the definition of electronic communication services.

The European Electronic Communication Code is crucial
to achieving Europe's Gigabit society
and ensuring full participation of all EU citizens in the digital economy.

The updated rules will facilitate the rollout of 5G in Europe. The **deployment of 5G** is expected to generate €213 billion in revenues worldwide in 2025 and could lead to €113 billion in benefits per year across these sectors:

automotive
health
transport
energy

FCC NEWS from the Federal Communications Commission

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For Immediate Release

FCC APPROVES Wi-Fi MANAGEMENT SYSTEMS TO OPERATE IN 6 GHz BAND

WASHINGTON, February 23, 2024—The FCC's Office of Engineering and Technology today approved seven applications for automated frequency coordination systems to operate in the 6 GHz band under the FCC's rules for unlicensed operations. With today's action, the FCC is approving these companies to operate spectrum management services in the band which is critical to allowing standard power Wi-Fi to begin operating in 6 GHz band.

"Automatic Frequency Coordination system operational approvals mark a major milestone for widespread deployment of unlicensed operations in the 6 GHz spectrum band and for the unlicensed ecosystem overall," **said FCC Chief Engineer Ron Repasi**. "6 GHz standard power and fixed client device deployments under AFC control will expand access to new technology, applications and services. This is an exciting time for the industry, and for American consumers and business."

The Public Notice released today approves the applications of Qualcomm, Federated Wireless, Sony, Comsearch, the Wi-Fi Alliance, the Wireless Broadband Alliance, and Broadcom. These systems can now move forward in managing access to this spectrum by Wi-Fi devices.

CHAIRWOMAN ROSENWORCEL ADVANCES SUPPLEMENTAL COVERAGE FROM SPACE FRAMEWORK

New Rules to Be Voted at March Open Meeting Would Harness the Power of Satellites to Enhance Mobile Phone Operations & Fill Wireless Coverage Gaps

WASHINGTON, February 21, 2024—FCC Chairwoman Jessica Rosenworcel today shared with her fellow Commissioners draft final rules to establish a new regulatory framework to facilitate innovative collaborations between satellite operators and wireless providers. These partnerships leverage the growth in space-based services to provide smartphone users ubiquitous connectivity, even in remote, unserved, and underserved areas.

The FCC seeks to establish clear and transparent processes to support supplemental coverage from space. Connecting consumers to essential wireless services where traditional terrestrial mobile service is not available can be life-saving in remote locations and can open up innovative opportunities for consumers and businesses.

"A single network future is possible," **said Chairwoman Rosenworcel**. "By taking advantage of satellite connectivity, we can enhance our smartphones and get rid of 'dead zones.' This groundbreaking framework will ensure continued U.S. leadership and establish a clear and predictable regulatory approach to these partnerships in support of innovation and competition."

At its March 14 Open Meeting, the Commission will vote on the Chairwoman's proposed Report and Order. If adopted, this framework allows satellite operators collaborating with terrestrial service providers to seek FCC authorization to operate space stations on certain licensed, flexible-use spectrum currently allocated to terrestrial services, provided they satisfy certain licensing prerequisites—including having a spectrum lease from a terrestrial licensee within a specified geographic area. Once authorized, a satellite operator could then serve a wireless provider's customers should they need connectivity outside of coverage areas. For example supplemental coverage from space could enable service in the middle of the Chihuahuan Desert, Lake Michigan, Hawaii's Hana Highway, the 100-Mile Wilderness, or the Uinta Mountains.

The rules would also establish, on an interim basis, a requirement that terrestrial providers must route all SCS 911 calls to a Public Safety Answering Point using either location-based routing or an emergency call center. The proposed action will also include a Further Notice of Proposed Rulemaking to seek further comment on this and other critical public safety issues to ensure these services adequately meet consumers' needs and expectations for critical services. The Further Notice would also seek comment on issues associated with protection of radio astronomy services.