CONTINENTAL WORKSHOP

ICT harmonization in Africa - How to monitor and evaluate it? - What are the next steps to better adapt to the challenges of digital transformation?

2-6 September 2019
Addis Ababa, Ethiopia
Priority Areas
Rationale

- AUC & RECs have limited resources
- PRIDA has a limited duration (2 years)
- the Continental methodology for regulatory harmonization needs to be tested
- It would be unrealistic to apply the methodology to the comprehensive scope of all the ICT legislation & regulation issues

Implementation methodology for regulatory harmonization should first be applied to a limited number of key priorities reflecting the Continental policy agenda
1. Conditions of entry into the market (authorization / licensing regime)
2. Measures to reduce the cost of deploying broadband networks
3. Quality of service and consumer satisfaction:
4. International Roaming
5. Implementation of a cross-border dispute settlement mechanism
6. Affordability / accessibility of services due to lack of competition
7. Regulation by data
8. Digital taxation
9. Mobile Money
10. Net Neutrality
11. Protection of personal data and location of data
12. Over The Top Services (OTTs)
13. Electronic waste
14. Internet of Things (IoT)
15. Smart Cities
Others?
1. Conditions of entry into the market

Context

• A priori, no continental initiative on this issue at a pan African level.

• However it is pretty clear that there are heterogeneous and most of the time restrictive market access regimes (licensing regime), despite the prohibition of exclusive rights and, in some extent, the non-limitation of the number of licenses.

• The need for individual licenses for all types of networks open to the public, irrespective of the use or otherwise of scarce resources, and for the provision of the "public voice service", remain the norm while sectoral developments justify the shift to a unified authorization regime, or even a simple declaration, for all electronic communications, except those requiring the use of reserved radio resources.

• Next-generation telecommunication/ICT regimes are needed to lower barriers to entry, open markets, promote competition and agile forms of investment that address new business models and capital market constraints.
Conditions of entry into the market
authorization/licensing regime

Why?

Findings

• Extensive perimeter for individual licenses for all types of networks regardless of the use of scarce resources

• Spectrum licenses are not systematically technology neutral to promote efficiency

• No regulatory & operational mechanism whereby an operator on the market of a State may be authorized to provide services in all Member States of the same regional economic community

Outputs

<table>
<thead>
<tr>
<th>COMPETITION</th>
<th>💐</th>
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</thead>
<tbody>
<tr>
<td>AVAILABILITY (services)</td>
<td>💐</td>
</tr>
<tr>
<td>AFFORDABILITY (services)</td>
<td>💐</td>
</tr>
<tr>
<td>INTEGRATION (Networks and services at regional Level)</td>
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</tbody>
</table>
### Conditions of entry into the market

**authorization/licensing regime**

#### Relevance?

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Compliance</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>To avoid duplication with other similar initiatives on the continent</td>
<td>PARTIAL</td>
<td>One of the topics of the ICT Regulatory Watch Initiative (RWI) however limited to ECOWAS countries</td>
</tr>
<tr>
<td>Opportunity to set specific and harmonized enabling legislation/regulation</td>
<td>YES</td>
<td>Revision of legislation both at regional ad national levels: i) authorization/licensing regime, ii) spectrum awarding and iii) if the case may be, regional authorisations</td>
</tr>
<tr>
<td>Concrete results are expected and can be measured easily</td>
<td>YES</td>
<td>New legislation adopted; Competition: Number of operators Availability &amp; affordability: infra coverage; tariffs, etc.</td>
</tr>
<tr>
<td>Relevant to the goal of creating a single African digital market</td>
<td>YES</td>
<td>Harmonized, lighter and transparent national regimes are one of the ways to allow the development of integrated network and service at regional level</td>
</tr>
<tr>
<td>Consistent with the policies or strategies developed by AU in this area.</td>
<td>YES</td>
<td>Create an enabling environment that attracts investment and promotes sustainable competition in Telecom / ICT regional markets, infrastructure, and increasing access</td>
</tr>
<tr>
<td>Enough Members States are interested (&gt;15)</td>
<td></td>
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</table>
2. Reducing the cost of deploying broadband networks

Context

- There is still a significant deficit in broadband infrastructures and services in Africa, absolutely needed to provide the foundation for the digital transformation of the African economy and society.

- To prevent broadband Internet from being restricted to major urban areas, while limiting the use of public funds to expand their geographic coverage, developing countries need to develop policies and procedures that will reduce the cost of deploying fiber optic networks.

- To address these issues, it’s becoming clearer that ICT players will have to come together more to share their network infrastructure and services.

- Beyond Telecommunication infrastructure sharing, other interesting solutions maybe considered:
  - Access to excess capacity on existing fiber optic networks along energy or transportation infrastructure
  - To promote the coordination of civil works in new infrastructure construction projects between the so-called public service network sectors (transport, water, energy) and telecommunications

- Coordination of civil works between infrastructure projects can indeed generate significant financial savings because the construction of infrastructure (railway projects, roads, terrestrial fiber optics, etc.) involves a lot of civil works (digging trenches, etc.) which constitute the major part (70-90%) of the cost of deploying optical fiber networks.
Reducing the cost of deploying broadband network

Why?

### Findings

- Significant deficit in broadband infrastructures and services in Africa
- Ineffectiveness of infrastructure sharing frameworks
- Intersectoral co-ordination initiatives for civil works are rare, especially in the absence of a legal and regulatory framework to facilitate (through incentives or obligations) synergies between public service network projects (transport, water, energy) and broadband network projects

### Outputs

<table>
<thead>
<tr>
<th>COMPETITION</th>
<th>NEUTRAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVAILABLE (services)</td>
<td>![Thumbs Down]</td>
</tr>
<tr>
<td>AFFORDABILITY (services)</td>
<td>![Thumbs Down]</td>
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<tr>
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Reducing the cost of deploying broadband network

Relevance?

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</tr>
</thead>
<tbody>
<tr>
<td>To avoid duplication with other similar initiatives on the continent</td>
<td>PARTIAL</td>
<td>PIDA promotes a Multisectoral Infrastructure Corridor Approach which in theory should avoid duplication in future cross-border infrastructure planning connects the sectors of transport, energy, water and ICT</td>
</tr>
<tr>
<td>Opportunity to set specific and harmonized enabling legislation/regulation</td>
<td>NO</td>
<td>If a set of common practices could be considered in telecom infrastructure sharing, it seems difficult to harmonize norms and process relating to civil work coordination</td>
</tr>
<tr>
<td>Concrete results are expected and can be measured easily</td>
<td>YES</td>
<td>New legislation mandating infrastructure sharing and/or civil work coordination are adopted. The number of networks rolled out in coordination with other networks has increased</td>
</tr>
<tr>
<td>Relevant to the goal of creating a single African digital market</td>
<td>YES</td>
<td>Cost savings. Promote regional integrated Network (cf. PIDA)</td>
</tr>
<tr>
<td>Consistent with the policies or strategies developed by AU in this area.</td>
<td>YES</td>
<td>Idem supra. Foster Broadband network deployment</td>
</tr>
<tr>
<td>Enough Members States are interested (&gt;15)</td>
<td></td>
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</tbody>
</table>
3. Quality of service and consumer satisfaction

Context

- QoS of Telecommunication services is still a challenge in Africa with telcos and ISPs struggling to offer seamless connectivity of voice and data services.
- Despite significant improvement, bandwidth availability and related investment are in some countries insufficient to ensure basic QoS.
- In particular, QoS remains a critical issue for business development.
- Regulators face multiple challenges such as for example:
  - Shift from QoS to QoE;
  - Rise of new broadband services and technologies while the QoS indicators were originally built for voice services;
  - Increase and multiplication of customer expectations.
Quality of service and consumer satisfaction

Why?

<table>
<thead>
<tr>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>• More the concurrence is weak, less operators have incentive to improve QoS</td>
</tr>
<tr>
<td>• Most African Countries have adopted the enforcement approach with very limited aspects of the encouragement approach while fines have not the expected deterrent effect or quality improvement.</td>
</tr>
<tr>
<td>• This could be due to largely un-empowered customer bases</td>
</tr>
<tr>
<td>• Depending the Member State, NRA readiness to face the new QoS/QoE challenges is very different</td>
</tr>
</tbody>
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### Quality of service and consumer satisfaction

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</tr>
<tr>
<td>Concrete results are expected and can be measured easily</td>
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</tr>
<tr>
<td>Relevant to the goal of creating a single African digital market</td>
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<tr>
<td>Consistent with the policies or strategies developed by AU in this area.</td>
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<td>Enough Members States are interested (&gt;15)</td>
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**Comments**

Regional initiatives supported by ITU:
- WATRA Guidelines on Quality of Service (QoS) and QoE (Quality of Experience) Management;
- CRASA QoS/ QoE Guidelines

Opportunity to set continental QoS/ QoE Guidelines which provides a reference for Members States as a guiding tool for the national regulatory agencies (NRAs)

HOWEVER, there is already a lot of ITU initiatives and publications in this field

Compatible technical output likely difficult to gather

Complaints statistics not available or likely to be misleading

Telecommunication networks are interconnected on a national, regional, and global basis, and the QoS applied in one network or one country influences the end-to-end quality of that service, so the quality cannot be considered only at national or regional level, but also needs to be considered global. A harmonized and common approach to regulating QoS would enable greater quality prospects irrespective of the locations of the consumer and service provider (ITU)

Cf. General objective of promoting digital usages
4. International roaming Context

(1) Northern Corridor, West Africa Region

- The AU developed a set of IMR Guidelines for Regulators discussed and presented in September 2013

- Smart Africa Free Roaming Initiative is currently at an implementation stage on the basis of the following common framework:
  - The traffic is exempted from surcharges on International traffic.
  - No charges for receiving calls while roaming.
  - Prevailing local tariff rates in the visited country applies to inbound roamers with no discrimination between inbound roamer and local subscriber of visited networks.
  - Two pilots (1) projects were initiated which has been quite successful and gave birth to One Africa Network + demonstrated a compelling reason to establish an African Clearing House Regulation.
  - News steps are planned such as data tariffs, national & regional clearing houses Validation of regulatory draft ...

- ECOWAS has adopted on Roaming on Public Mobile Communications Networks in the Region, which was approved by the Council of Ministers in December 2017.
International roaming

Why?

Findings
Before AUC, Smart Africa, RECs initiatives
- From the consumers’ point of view:
  • Main obstacle is the unaffordable prices
  • Substitution offers such as buying a local SIM card, or using OTT (over-the-top) services on Wi-Fi networks, but drawbacks (registration for a SIM cart, accessing to WiFi...)
- From the operators’ point of view:
  • Few or no incentives to reduce roaming rates
  • High prices generate high margins
  • Current price-elasticity low (fear of bill shock, opacity...)
- From regulators’ point of view
  • Existence of structural bottlenecks preventing decrease in roaming rates, (price of international bandwidth, high level of MTR and ITR, existence of taxes or price floors on international incoming traffic...)

After launch of AUC, Smart Africa, RECs initiatives
As usual, we have not comprehensive and comparable data for the Continent, but seems to evolve positively

Outputs

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<tbody>
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## International roaming

### Relevance?

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<tbody>
<tr>
<td>To avoid duplication with other similar initiatives on the continent</td>
<td><strong>NO</strong></td>
<td>AUC Guidelines, Smart Africa Initiative, ECOWAS initiative</td>
</tr>
<tr>
<td>Opportunity to set specific and harmonized enabling legislation/regulation</td>
<td><strong>YES</strong></td>
<td>Regional tariff and QoS regulation on transborder communications</td>
</tr>
<tr>
<td>Concrete results are expected and can be measured easily</td>
<td><strong>YES</strong></td>
<td>e.g. The last results published by Smart Africa for Northern Corridor)</td>
</tr>
<tr>
<td>Relevant to the goal of creating a single African digital market</td>
<td><strong>YES</strong></td>
<td>• Revenues increase by 58%</td>
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<td></td>
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<td>• Costs reduction by 45%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Margin increase by 218%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Roaming traffic increase by 911%</td>
</tr>
<tr>
<td>Consistent with the policies or strategies developed by AU in this area.</td>
<td><strong>YES</strong></td>
<td>Obvious</td>
</tr>
<tr>
<td>Enough Members States are interested (&gt;15)</td>
<td></td>
<td>Cf. General objective of promoting digital usages</td>
</tr>
</tbody>
</table>
5. Implementation of a cross-border dispute settlement mechanism

**Context**

- While the independence of national regulators is far from being achieved in all the countries of the Continent and none of the RARs has any enforceable power, let alone coercive, it seems premature for a continental regulator with such skills to emerge.
- The BEREC often taken as a model, 10 years after its creation has only limited powers and entangled with those of the NRAs and the European Commission (cf. new regulation in December 2018).
- The powers of BEREC are exercised in the European context of a highly harmonized and binding regulatory framework in which the European Commission has strong control and sanctions powers which it does not hesitate to invoke.
- The case of the African continent is radically different (harmonization and weak constraints) which makes the BEREC model non-transposable.
- However, designing mechanisms for the settlement of cross-border disputes is a path that would be interesting initiative in the short term.
- For example, the cross-border regulation mechanism for access to national and international bandwidth within the ECOWAS area, as provided for in Article 9 of Regulation C / REG 19/12/16 deserves to be reviewed and extended to other topics than that of access to bandwidth.
Implementation of a cross-border dispute settlement mechanism

Why?

<table>
<thead>
<tr>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational mechanisms to solve transborder dispute do not exist while the footprint of networks are multi countries. Idem for Spectrum issue.</td>
</tr>
<tr>
<td>Attempts to take into account cross-border regulatory issue have been done through bilateral MoU (2 countries involved) or guidelines for transborder interconnection (CEEAC).</td>
</tr>
</tbody>
</table>

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</table>
## Implementation of a cross-border dispute settlement mechanism

### Relevance?

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<tbody>
<tr>
<td>To avoid duplication with other similar initiatives on the continent</td>
<td>YES</td>
<td>We are not aware of similar initiative (at continental level)</td>
</tr>
<tr>
<td>Opportunity to set specific and harmonized enabling legislation/regulation</td>
<td>YES</td>
<td>Guidelines of cross-border dispute settlement could be elaborated by RARs</td>
</tr>
<tr>
<td>Concrete results are expected and can be measured easily</td>
<td>YES</td>
<td>Number of cases handled and solved thanks to the cooperation process implemented</td>
</tr>
<tr>
<td>Relevant to the goal of creating a single African digital market</td>
<td>YES</td>
<td>Obvious (e.g.: PIDA)</td>
</tr>
<tr>
<td>Consistent with the policies or strategies developed by AU in this area.</td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>Enough Members States are interested (&gt;15)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. Affordability / accessibility of services due to lack of competition

Context

• First-generation ICT policies involving market competition, private participation, and light-touch regulation have led to near-universal access and affordability of mobile telephony but have so far been less successful in spreading broadband services.

• Much of the explanation lies in continued policy failures resulting in ineffective competition such as regulatory capture, troubled privatizations, excessive barriers to entry and monopoly control of international gateways providing international and national bandwidth.

• New dominance emerge with firms such as Amazon, Facebook, and Google not acting act as traditional monopolies. Their services but they have considerable leverage on multiple sectors due the considerable they obtain and manage.
Affordability / accessibility of services due to lack of competition

Why?

### Findings

- Tariff regulation are not agile enough
- Market analysis are not handled regularly and often not sufficiently focused on bottleneck
- Cost modelling remains on voice
- There is still lack of competition on wholesale capacity offers and for fixed broadband on the last mile
- There is no pan-African competition law and if it exists at regional or national level it is still very poorly implemented in Africa

### Outputs

- **COMPETITION**
  - (services)
  - thumbs down

- **AVAILABILITY**
  - (services)
  - thumbs down

- **AFFORDABILITY**
  - (services)
  - thumbs down

- **INTEGRATION**
  - (Networks and services at regional Level)
  - thumbs down
Affordability / accessibility of services due to lack of competition

Relevance?

<table>
<thead>
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<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>To avoid duplication with other similar initiatives on the continent</td>
<td>???</td>
<td>e.g.: market analysis guidelines, Broadband pricing guidelines, Broadband cost models etc.</td>
</tr>
<tr>
<td>Opportunity to set specific and harmonized enabling legislation/regulation</td>
<td>YES</td>
<td>Supply side indicators as network coverage, tariff on wholesale and retail market could be used</td>
</tr>
<tr>
<td>Concrete results are expected and can be measured easily</td>
<td>YES</td>
<td>Affordable an accessible broadband services are required to foster the e-commerce and any kind of business through the Continent</td>
</tr>
<tr>
<td>Relevant to the goal of creating a single African digital market</td>
<td>YES</td>
<td>Affordable an accessible broadband services are the foundation of the digital transformation of Africa</td>
</tr>
<tr>
<td>Consistent with the policies or strategies developed by AU in this area.</td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>Enough Members States are interested (&gt;15)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8. Digital taxation
Context

• Under their traditional telecommunications activity, operators, mainly mobile operators, are subject to "specific" taxes or to charges found in most countries of the world: universal service, R&D, control of authorization obligations ("regulatory charge") as well as charges for the use, management and control of scarce resources (frequencies and numbering).

• In addition to these old forms of taxation of the sector, new forms of taxation have emerged in recent years also specific, as they apply only to telecommunications operators, but are characterized by their chronic instability. In other words, their unpredictability for the actors of the sector and the fact that they do not benefit the sector but benefit either the general budget of the State or from other sectors.

• Some of these new forms of taxation directly impact the prices charged to users acting as "over VAT" collected by operators for the benefit of the State, which increases the weight of the cost of communications in the household budget, particularly in countries where GNI is the lowest.

• Some African governments are experimenting new taxes on Social Media and mobile money usages that could have detrimental effect on market development and digital inclusion.

The above context lead to several risks

• Risk of disincentive to investment
• Artificially increase of the cost of usages & equipment for users
• Putting a brake on digital inclusion
• While African states are still struggling to broaden their tax base due to the importance of the informal economy, they are already suffering the problems of erosion of the tax base and the transfer of benefits raised in the context of the digital economy.
Digital taxation e.g.: VAT Issue

“High risk that services & intangibles delivered over Internet (such as streaming films or music) were escaping VAT in any jurisdiction, and that there was also a broader challenge for tax authorities to collect the VAT on cross border supplies from online sales, particularly where these are acquired by private consumers from suppliers abroad (B2C or B2B sales)”

Digital taxation
Why?

(1) Specific competition issue related to gap between OTT and operators with respect to tax regime.
(2) Disparity in tax regime could impact private operators’ strategy to invest more in the countries with most light taxation.

Findings

| Disparity in the tax burden on the sector based on the country |
| Tendency to stack new taxes, some of which directly penalizes users |
| High level and lack of harmonization of customs duties |
| Lack of comprehensive understanding and consideration of the new tax challenges related to the digital economy |
| Collaboration between African States is required to be able to withstand Internet giants’ diktats who push consumer countries to abdicate tax revenues in addition to delivering information they underestimate the value |

Outputs

| COMPETITION (1) | ❌ |
| AVAILABILITY (services) | ❌ |
| AFFORDABILITY (services) | ❌ |
| INTEGRATION (2) | ❌ |
### Digital taxation

#### Relevance?

<table>
<thead>
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</tr>
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<tbody>
<tr>
<td>To avoid duplication with other similar initiatives on the continent</td>
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<tr>
<td>Opportunity to set specific and harmonized enabling legislation/regulation</td>
<td>YES/NO</td>
</tr>
<tr>
<td>Concrete results are expected and can be measured easily</td>
<td>YES</td>
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<tr>
<td>Relevant to the goal of creating a single African digital market</td>
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<tr>
<td>Consistent with the policies or strategies developed by AU in this area.</td>
<td>YES</td>
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</tbody>
</table>

**Comments**

- National initiatives such as taxing mobile money transactions or participation to OCDE task force on BEPS (1) but no collective reflexion & strategy at African continental level
- Tax legislation amendments at national level and tax cooperation mechanism between Member States on specific and common tax issues
  - Involves firstly the Finance ministries?
- Increase of State Member revenues
  - Better repartition of the tax burden between classic telecommunication activity and new economy
  - Tariff decrease on equipment and services for consumers
  - Increase of transborder electronic trade
- to reduce the administrative burdens on businesses arising from different Tax regimes
- The deeper trade integration is, the stronger becomes the rationale for tax harmonization.
  - The regional dimension of tax harmonization is thus a consequence of the regional dimension of economic integration
Priorities after access issues

With respect to the following priorities, Outputs in term of access (availability, affordability etc.) are not appropriate. Demand side indicators are more relevant but remain to be specified subject to their availability at continental level. Additionally, with the priorities below, we enter in a new era of regulation namely “collaborative regulations” to support the ICT dissemination in different areas like financial inclusion, heath and agriculture...

However, in any case a default of pan African approach would be detrimental in terms of integration.

“The wheel of collaborative regulation “ Source ITU
9. Mobile money
Context

• Sub-Saharan Africa dominates the world in terms of adopting and using mobile money

• In 2017, the Region had close to 250 mobile money accounts per 1000 adults, compared with 150 accounts per 1000 adults in Asia, 125 accounts per 1000 adults in Latin America and Europe, and 50 accounts per 1000 adults in the Mena area (Sources FMI)

• More and more money mobile services allow transactions between the mobile operators and the banks. An opportunity to accelerate financial inclusion while the average rate of bank account penetration is around 10%

• This evolution involves a lot of challenges that will have to be addressed in particular through regulations and the appropriate secure infrastructure
Mobile money
Why?

(1) Transborder transactions and interoperability cf. AfCFTA objectives

### FINDINGS

- Regulation has a material impact on mobile money adoption and usage
- Five major themes dominated the mobile money regulatory landscape: taxation, KYC, cross-border funds transfers, national financial inclusion strategies and data protection
- Security and trust are also fundamental: e.g.: consumer protection, data protection and privacy and cybercrime
- Majority of the regulatory frameworks is from central banks; however telecom regulators are also concerned on specific issues (VAS regime, access to codes USSD operators ...)

### OUTPUTS

<table>
<thead>
<tr>
<th>Internet Use</th>
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<tbody>
<tr>
<td>Digital Inclusion</td>
<td>👍</td>
</tr>
<tr>
<td>Cyber Security &amp; Consumer Protection</td>
<td>👎</td>
</tr>
<tr>
<td>Integration (1)</td>
<td>👎</td>
</tr>
</tbody>
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## Mobile money

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<tbody>
<tr>
<td>To avoid duplication with other similar initiatives on the continent</td>
<td>NO</td>
<td>Numerous fora exist on this topic with significant collaboration between providers and regulators to achieve the common goal of developing mobile money services.</td>
</tr>
<tr>
<td>Opportunity to set specific and harmonized enabling legislation/regulation</td>
<td>YES</td>
<td>Central bank regulation including regional central bank (WAEMU/BCEAO) on Digital Financial Services (DFS) + Peripheric telecom/ICT regulation USSD, VAS.</td>
</tr>
<tr>
<td>Concrete results are expected and can be measured easily</td>
<td>YES</td>
<td>Number of registered mobile money accounts</td>
</tr>
<tr>
<td>Relevant to the goal of creating a single African digital market</td>
<td>YES</td>
<td>Transaction volume per capita or per country</td>
</tr>
<tr>
<td>Consistent with the policies or strategies developed by AU in this area.</td>
<td>YES</td>
<td>Quality and variety of the offer</td>
</tr>
<tr>
<td>Enough Members States are interested (&gt;15)</td>
<td></td>
<td>Transborder transaction / e-commerce / AfCFTA</td>
</tr>
</tbody>
</table>

**Note:** Mobile Money could be considered per se as an indicator of Empowering society among other considers indicators that portray the evolving role of the digital economy in people’s life, how they access and use digital technologies, and their abilities to fully exploit their potential.
10. Net Neutrality

Context

• Net neutrality is a founding principle of the Internet which guarantees the free circulation, without discrimination of the content on the web.

• It has myriad implications around broadband network investment, connectivity prices, technology innovation, competition but also in terms of respect for the privacy of Internet users, guaranteeing freedom of expression and quality and continuity of services offered on the Internet.

• Thus, preserving the neutrality of the Internet is also, for some, a democratic issue. Net neutrality puts citizens on an equal footing and allows everyone to express themselves freely.

• On the other hand, guaranteeing the principle of Internet neutrality does not amount to refusing any traffic management practice.

• If broadband becomes more affordable and therefore more used in Africa, the question of Internet neutrality could become central in Africa as well and thus could preferably be treated in a harmonized way on the Continent.
### FINDINGS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Only the most recent frameworks mention expressly the Net Neutrality principle in Africa (Benin, Senegal Nigeria...) . Most of the others still rely on the former concept of Network Neutrality or Correspondence Neutrality.</td>
<td></td>
</tr>
<tr>
<td>From an economic point of view, considering the level of development of the broadband market in Africa, the European or the US debate on Net Neutrality is not transposable mutatis mutandis to the Continent.</td>
<td></td>
</tr>
<tr>
<td>There are no reliable data in Africa on Zero-rating (1) – the practice of excluding some traffic from overall data caps – despite it has received a considerable amount of attention in the debate about Net Neutrality.</td>
<td></td>
</tr>
<tr>
<td>Except for political reasons the Net Neutrality seems to be respected in the Continent.</td>
<td></td>
</tr>
</tbody>
</table>

---

(1) Zero-rated services, which enable some mobile operators to provide access to minimalized version of the given service without data charges are a non-neutral approach. Platform like Facebook, Wikipedia and Google have built special programs to use zero-rating as means to provide their service more broadly into developing markets.

(2) No pan African approach.

### OUTPUTS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>INTERNET USE</td>
<td>👍</td>
</tr>
<tr>
<td>DIGITAL INCLUSION</td>
<td>👍</td>
</tr>
<tr>
<td>CYBER SECURITY &amp; CONSUMER PROTECTION</td>
<td>-</td>
</tr>
<tr>
<td>INTEGRATION (1)</td>
<td>😞</td>
</tr>
</tbody>
</table>
## Net Neutrality

### Relevance?

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Compliance</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>To avoid duplication with other similar initiatives on the continent</td>
<td>YES</td>
<td>As far as we know, no pan African initiative on this topic</td>
</tr>
<tr>
<td>Opportunity to set specific and harmonized enabling legislation/regulation</td>
<td>YES</td>
<td>See the example of the new digital code in Benin or EU’s Regulation on open Internet access</td>
</tr>
<tr>
<td>Concrete results are expected and can be measured easily</td>
<td>PARTIAL</td>
<td>Compliance results could be expected such as adoption of Net Neutrality provisions in regional and national legislative framework. However impact on the market or society will be difficult to measure</td>
</tr>
<tr>
<td>Relevant to the goal of creating a single African digital market</td>
<td>YES</td>
<td>Would create a protective pan African legal environment for big and Small platforms against the operators' revendications for flexibility to get the larger OTTs to pay for the traffic they generate</td>
</tr>
<tr>
<td>Consistent with the policies or strategies developed by AU in this area.</td>
<td>YES</td>
<td>Consistent with the objective of fostering digital usages</td>
</tr>
<tr>
<td>Enough Members States are interested (&gt;15)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
11. Protection of personal data and location of data

Context

The latest jingle that “data is the new oil” hassled to the emergence of data protection laws across the world, creating a variety of legal and commercial challenges. Among other issues, one such challenge relates to data localization restricting the cross-border transfer of data.

The Cloud, the Blockchain, mainly the fact that Google, Apple, Facebook and Amazon (GAFA), and all digital platforms massively collect data from their users represents new dangers with regard to the protection of personal data - and therefore of privacy.

In Europe, the General Data Protection Regulation (GDPR) should fundamentally change the way data is processed in all sectors and should become a global standard by trying to prevent these risks with several innovations such as:

• Extra territoriality: application to companies outside the EU processing data on the activities of EU organizations and those targeting EU residents through profiling or offering goods and services to them;
• Requirement of "explicit" and "positive" consent of the user;
• Right to erasure, also called "right to digital neglect" (possibility to ask Google to delete a link to a Facebook page for example);
• Right to portability of personal data (to switch from one social network to another, for example);
• "Data protection from the design stage" and "security of the IS by default" (or also "security by design", that is to say the security and protection of the data from the design of the software of services);
• Right penalties of up to 4% of the annual worldwide turnover of a company or 20 million euros (highest amount retained), in case of non-compliance with the provisions of the GDPR;
• Creation of the European Data Protection Board.

In addition, the GDPR considers that this is a human rights issue because much of our data is shared online and creates the risk of misusing digital technologies to control citizens.

In Africa, this is a challenge as there is little legislation and, in some cases, national telecom regulators are required to manage data protection in the absence of national protection authorities.

However, the African Network of Personal Data Protection Authorities (ANPDPA) was created in 2016 and its office holders elected in 2018. Its first meeting was held in June 2019 in Ghana.
Protection of personal data and location of data

Why?

(1) To this point, the main markets to have implemented, or strongly considered pervasive data localization requirements have been relatively large economies: China, Russia, India. As a block, African markets would undoubtedly carry similar weight. But Africa is not a block, and the relatively small size of most markets makes the consequences (intended, and unintended) of data localization obligations difficult to read.

<table>
<thead>
<tr>
<th>FINDINGS</th>
<th>Many African countries have enacted or are in the process of enacting privacy and data protection laws, in addition to regional or pan African privacy regulations (Malabo convention)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Even frameworks that have been accepted at whatever level may not be fully in force</td>
</tr>
<tr>
<td></td>
<td>The legal frameworks for safe trans-border flow of data and information are inadequate. Very few countries have provisions in their law requiring companies to store user data in servers physically located in the country (Kenya, South Africa, others?)</td>
</tr>
<tr>
<td></td>
<td>There is no clear precedent for the impact data localization laws might have in African markets (1).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OUTPUTS</th>
<th>INTERNET USE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DIGITAL INCLUSION</td>
</tr>
<tr>
<td></td>
<td>CYBER SECURITY &amp; CONSUMER PROTECTION</td>
</tr>
<tr>
<td></td>
<td>INTEGRATION (1)</td>
</tr>
</tbody>
</table>
Protection of personal data and location of data

Relevance?

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Compliance</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>To avoid duplication with other similar initiatives on the continent</td>
<td><strong>PARTIAL</strong></td>
<td>See the initiative of the African Network of Personal Data Protection Authorities (ANPDPA)</td>
</tr>
<tr>
<td>Opportunity to set specific and harmonized enabling legislation/regulation</td>
<td><strong>YES</strong></td>
<td>Obviously current legislation could be improved and better implemented</td>
</tr>
<tr>
<td>Concrete results are expected and can be measured easily</td>
<td><strong>YES</strong></td>
<td>New legislations are adopted Data Protection Authority are operationalized Results based on demand side indicator could be difficult to measure</td>
</tr>
<tr>
<td>Relevant to the goal of creating a single African digital market</td>
<td><strong>YES</strong></td>
<td>Data and its corollary data protections beyond borders are key for electronic commerce</td>
</tr>
<tr>
<td>Consistent with the policies or strategies developed by AU in this area.</td>
<td><strong>YES</strong></td>
<td>Consistent with the objective of fostering digital usages and the cross-cutting theme of the Digital Transformation Strategy for Africa: cyber security, privacy &amp; personal data protection</td>
</tr>
<tr>
<td>Enough Members States are interested (&gt;15)</td>
<td></td>
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</tr>
</tbody>
</table>
As a result of rapid technological changes and falling prices, millions of tons of high-tech electronic devices are becoming obsolete making e-waste one of the major environmental challenges of the 21st century.

Electronic waste management is a major challenge for many African countries due to lack of awareness, environmental legislation and limited financial resources.

In addition, African countries are not only confronted with local waste, they are also importing electronic waste that is not hunted by the rest of the world. New and innovative solutions are needed to integrate the informal sector of e-waste recycling across the Continent into sound and sustainable e-waste management strategies.

Only a few countries in the Continent have policies and laws specific to e-waste. Some of them are developing various models of Extended Producer Responsibility (EPR) systems as part of their solution to the problem of electronic waste.

However recycling activities are still dominated by poorly equipped informal sectors, with inefficient resource recovery and environmental pollution.
Electronic waste
Why?

**FINDINGS**

Ways and means, policies and legislations that shall be adopted by the Continent to deal with this major challenge will be multiple:

- Consumer education
- Implementation of genuine producer responsibility (EPR) programs for electronics
- Legislative frameworks in line with best standards such as the European legislation on Reduction of Hazardous Substances (RoHS) and Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Effective prohibition of e-waste importation
- Taxation
- Control of the informal channels of recycling
- Etc.

These measures need to be adopted at continental level in order to concern a market size sufficient to impact the manufacturers; They require far beyond the ICT expertise gathered here.

**OUTPUTS**

Sustainable Development Goals (SDGs)
(Responsible Consumption and Production)
Electronic waste

Relevance?

- No relevant in the context of the project of ICT policy, legislation, regulation harmonization?
• All the major platforms - Apple, Facebook, Google - have a strong presence, (with the notable exception of Amazon) and a critical role in the transformation of telecommunication / ICT markets and their competitive dynamics.

• The new players raise a long list of questions related to their regulation,

• The issue of OTT voice services, given their fierce competition with traditional operators, is the most acute point of friction with telecom regulations, but OTT regulatory issues are far beyond this question and concern several regulators exercising in different fields:
  • dominant positions and competition (competition regulators);
  • telecommunications (telecommunications regulators);
  • the media (regulators of the press, broadcasting and advertising);

• The issues of net neutrality, digital taxation and the protection / location of personal data - which are already part of the regulatory priorities proposed in this section - covers some of the major regulatory issues related to the OTTs model.

• Other friction issues come because operators are subject to a number of costs that do not apply to OTTs:
  • Direct costs such as the price of licenses or spectrum
    • Indirect costs arising from different sectoral obligations: quality of service; taxes (payments to the government and the regulator, import taxes, universal service taxes); coverage requirements and sometimes price controls.
    • In addition, African governments have tended to view operators as a cash cow and impose a series of additional tax obligations on them, including schemes to tax incoming international incoming calls via single gateways.

• OTTs are not subject to this type of obligation and, therefore, from a regulatory standpoint, they do not compete on a level playing field. There are two choices that are usually suggested - (i) the same obligations are incumbent upon the OTTs operators; or (ii) the obligations of African operators are eased by changing market conditions which are neither obvious nor easy to implement.
Leaving aside the thorny issue of taxation, it is also difficult to see how regulatory obligations can be imposed on entities with little or no presence in a given African country.

The other key issue facing telecom regulators is that the level of data revenues is increasingly decorrelated from the infrastructure investment required.

It is conceivable that in the absence of coercive powers over OTTs, regulators could engage them on a voluntary basis to help address the continent’s major infrastructure challenges. A dialogue on how the market can be developed would benefit both data vendors and data services.

Some countries in Africa seem to have already initiated a reflection on the subject and there are two initiatives at the regional level:

- The African Council of Regulators under the Smart Africa Alliance issued a note on OTTs stating that the following issues have not been resolved in regulatory terms with respect to: the lack of protection of data of staff; the inability to identify the entity responsible for quality of service; the inability of States to identify users without referring to OTTs who may or may not provide the requested information; lack of knowledge of the rules for the use of personal data; lack of protection framework for vulnerable people (minors, disabled, women, etc.); inability to make emergency calls; the impossibility of enforcing safety orders, particularly listening and tracing; and the impossibility of determining a tax base or collecting royalties.

- The ICT Regulatory Watch Initiative funded by the World Bank in the ECOWAS zone also has a significant OTTs component (not published to date).
### OTTs

#### Why?

---

Rather favorable (1) to the OTT, the African legislative and regulatory frameworks do not take into account the disruption introduced by the OTTs: (explicit affirmation of the principle of Neutrality of the Net, the determination appropriate regime, establishment of conditions of fair competition between the operators / ISPs and OTTs, etc.)

The OTT disruption raises very different regulatory issues: Level playing fields between operators and OTT (obligations and charges); Investment, Tax, Data protection/privacy, competition and content issues

Different issues depend on various regulators or authorities:
- dominant positions and competition (competition regulators);
- telecommunications (telecommunications regulators);
- the media (regulators of the press, broadcasting and advertising);
- Tax administration

The extra territorial situation of the OTT (not based in the country where they deliver the services) raises very serious application difficulties

---

### Outputs

| Internet Use | ✔️ |
| Digital Inclusion | ✔️ |
| Cyber Security & Consumer Protection | ❌ |
| Integration (1) | ❌ |
## OTTs

### Relevance?

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>To avoid duplication with other similar initiatives on the continent</td>
<td>PARTIAL</td>
</tr>
<tr>
<td>Opportunity to set specific and harmonized enabling legislation/regulation</td>
<td>YES</td>
</tr>
<tr>
<td>Concrete results are expected and can be measured easily</td>
<td>YES</td>
</tr>
<tr>
<td>Relevant to the goal of creating a single African digital market</td>
<td>YES</td>
</tr>
<tr>
<td>Consistent with the policies or strategies developed by AU in this area.</td>
<td>YES</td>
</tr>
<tr>
<td>Enough Members States are interested (&gt;15)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart Africa Initiative</td>
</tr>
<tr>
<td>RWI</td>
</tr>
<tr>
<td>Country Initiatives</td>
</tr>
<tr>
<td>Yes, see the EU Directive on Open Internet and the Electronic Communication Code</td>
</tr>
<tr>
<td>The French Proposal for GAFA taxation</td>
</tr>
<tr>
<td>Except Tax revenues, indicators need to think about</td>
</tr>
<tr>
<td>Obvious</td>
</tr>
<tr>
<td>Cybersecurity and Data protection / Privacy</td>
</tr>
</tbody>
</table>
14. Internet of Things (IoT) Context

• The Internet of Things (IoT) refers to an ecosystem in which applications and services are driven by data collected from devices that act as sensors and interface with the physical world. Part of the underlying infrastructure of the IoT is machine-to-machine (M2M).

• Important IoT application domains span almost all major economic sectors including health, education, agriculture, transportation, manufacturing, electric grids and many more.

• Africa is an active player in this trend of connecting things to the Internet with very interesting and innovative use cases on the continent. In other words, IoT technologies are becoming a central part of the growth of the African economy.

• From policy, legislative and regulatory point of view, IoT bring several challenges:
  • Licensing (new IoT aggregators, scope of license etc..)
  • Spectrum (regulation will change based on the service and also technology, e.g. Long range (NB-IOT, Sigfox, LoRA) Vs short range (RFID, Bluetooth, WiFi); It will also change based on the band used (free vs licensed)
  • Numbering and addressing (IoT identifier)
  • International roaming
  • Interoperability and Standards (Discussed in detail other sessions)
  • Data protection Privacy, consumer protection and Security
  • Competition (platform competition, can the whole business or a smart city be treated as one customer reducing choice)
  • RoW: Use of Street furniture
  • (…)
There is no policy, legislation and a fortiori regulation related to IoT in Africa

Source: IUT

**Outputs**

- **Internet Use**
- **Digital Inclusion**
- **Cyber Security & Consumer Protection**
- **Integration**
## IoT Relevance?

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Compliance</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>To avoid duplication with other similar initiatives on the continent</td>
<td>PARTIAL</td>
<td>“Smart Cities” flagship initiative is led by the Republic Rwanda as part of the Smart Africa Alliance</td>
</tr>
<tr>
<td>Opportunity to set specific and harmonized enabling legislation/regulation</td>
<td>YES</td>
<td>Spectrum; Numbering and addressing; International roaming Interoperability; Data protection Privacy, consumer protection and Security; Competition (platform competition, can the whole business or a smart city be treated as one customer reducing choice); Use of Street furniture(…)</td>
</tr>
<tr>
<td>Concrete results are expected and can be measured easily</td>
<td>YES</td>
<td>Number of users Number of services</td>
</tr>
<tr>
<td>Relevant to the goal of creating a single African digital market</td>
<td>YES</td>
<td>Create a common set of tools to support the African cities to develop their own smart city initiatives.</td>
</tr>
<tr>
<td>Consistent with the policies or strategies developed by AU in this area.</td>
<td>YES</td>
<td>Consistent with the objective of fostering digital usages and to disseminate these usage in all the aspect of society and economy</td>
</tr>
<tr>
<td>Enough Members States are interested (&gt;15)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Once the short list of regulatory priorities has been defined, it is proposed to establish small groups of experts to work on 1 or 2 regulatory priority.

During the work to be done in small groups and per each of the selected priorities, the experts shall:

- Submit the priority to the SWOT \(^{(1)}\) & PESTLE \(^{(2)}\) framework analysis to analyze the priority
- Fill a dashboard determining objectives, indicators and expected outputs;
- Establish a work plan

To do so, several template are provided in order to feed into the framework.

Templates can be filled in French or English.

---

(1) Strength, Weakness, Opportunities and Threats
(2) Political, Economic, Social, Technology, Legal and Environment
Prior list of suggested priorities

Do you have other topics to propose?

• Conditions of entry into the market (authorization / licensing regime)
• Measures to reduce the cost of deploying broadband networks
• Quality of service and consumer satisfaction:
• Digital taxation
• Mobile Money
• Net Neutrality
• Protection of personal data and location of data
• Electronic waste
• Internet of Things (IoT)
• Over The Top Services (OTTs)
• Regulation by data
• Implementation of a cross-border dispute settlement mechanism
• Smart Cities
• Affordability / accessibility of services due to lack of competition
• International Roaming
• Others?
Do not forget that to be acceptable a priority requires to meet some criteria.

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>COMPLIANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>To avoid duplication with other similar initiatives on the continent</td>
<td>?</td>
</tr>
<tr>
<td>Opportunity to set specific and harmonized enabling legislation/regulation</td>
<td>?</td>
</tr>
<tr>
<td>Concrete results are expected and can be measured easily</td>
<td>?</td>
</tr>
<tr>
<td>Relevant to the goal of creating a single African digital market</td>
<td></td>
</tr>
<tr>
<td>Consistent with the policies or strategies developed by AU in this area.</td>
<td>?</td>
</tr>
<tr>
<td>Enough Members States are interested (&gt;15 ? )</td>
<td>?</td>
</tr>
</tbody>
</table>
Framework for Analysis of Priority Issues template

• Use SWOT & PESTLE Analysis to analyze selected priority issues

*Digital Taxation in the Digital Economy (As an example)*

<table>
<thead>
<tr>
<th></th>
<th>Strength</th>
<th>Weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>around Digital Taxation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>around Digital Taxation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>around Digital Taxation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>around Digital Taxation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal issues</td>
<td></td>
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<tr>
<td>around Digital Taxation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>around Digital Taxation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>around Digital Taxation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic issues</td>
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<td></td>
</tr>
<tr>
<td>around Digital Taxation</td>
<td></td>
<td></td>
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<tr>
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<tr>
<td>around Digital Taxation</td>
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<tr>
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<tr>
<td>around Digital Taxation</td>
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<tr>
<td>around Digital Taxation</td>
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</tr>
<tr>
<td>Environment issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>around Digital Taxation</td>
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<td></td>
</tr>
</tbody>
</table>

(1) Digital Taxation in the Digital Economy (As an example) Strength, Weakness, Opportunities and Threats
(2) Political, Economic, Social, Technology, Legal and Environment
Use this Dashboard Template to define objectives/indicators/expected outcomes

“Conditions of entry into the telecommunications template” (As an example)

<table>
<thead>
<tr>
<th>Regulatory priority</th>
<th>Conditions of entry into the telecommunications market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional or national champion</td>
<td>Designate a REC or country</td>
</tr>
</tbody>
</table>
| Sub domains | Authorization
| | Special incentives (eg tax)
| | Other |
| High level objective | Reduce barriers to market entry |
| Specific objectives | Development of Competition:
| | Geographical and tariff accessibility
| | -Quality of services, particularly in terms of available throughput
| | -Development of uses |
| Indicators for measuring results | 1) Harmonization / implementation in national law: Adoption of (the) measures to reduce the barrier to market entry
| | 2) Harmonization / impact
| | - Competition: Number of operators present on the national market (correlated or not with GNI population, etc.);
| | - Accessibility: infrastructure coverage; tariffs (notably lower prices recorded over the last 3 years), etc.
| | - Quality of services, especially in terms of available throughput
| | - development of utilization: penetration rate of services (different types and levels of services to be defined) |
| Expected results based on the above indicators | On the horizon of
| | The telecommunications activity regime has been modified on the basis of the principle of a general authorization. The licenses are reserved for the right to use the spectrum
| | At least one wholesale operator and two ISPs have entered the market
| | An average rate of X Mbit is available for X% of the population
| | Retail offer rates for X Mbits are below X
| | The penetration rate of offers (3G, 4G, Adsl, Ftth ...) is greater than X% |
Use this Work plan template

<table>
<thead>
<tr>
<th>Priority area</th>
<th>Operational objectives</th>
<th>Strategy / Flagship projects</th>
<th>SMART ¹ Targets (expected results)</th>
<th>Priority Actions</th>
<th>Priority 1=high, 3=low</th>
<th>Estimated start date (year)</th>
<th>Leading implementing partner (only one lead)</th>
<th>Supporting implementing partners (Multiple support)</th>
<th>Ongoing / planned projects</th>
<th>Estimated costs (EUR)</th>
</tr>
</thead>
</table>

¹ Specific, Measurable, Achievable, Realistic and Timely.
Roadmap and implementation Plan