Quality of Service:
Practices around the world

Malta, 21 November 2019

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who
we are

regulation made simple

Cutting through the complexity of regulation in:

telecommunications

media

digital economy

postal

and ⚖ as applied in the above sectors

competition law

News Alerts

Monitoring

Benchmarks

Databases

Enquiries

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Regulatory approaches

QoS: Command and control

regulator

QoS: Encouragement and transparency

industry

QoE: Consumer empowerment

consumer

Europe

Europe
Example: Fixed and mobile telephony

Out of 10 EU member states studied:

- Obligation to publish QoS performance for voice telephony in seven EU member states

- Targets set in only three EU member states

Source: Cullen International

Service quality indicators for fixed and mobile telephony
(Cullen International)

	Obligation to publish actual QoS performances	Measurement audited	Targets set	Penalties apply when targets not met
Belgium	✓	✓	✗	✗
Czech Republic	✗	✗	✗	✗
France	✓ Mobile only	✓ Mobile only	✓ Fixed USO and Mobile only	✓ Fixed USO only
Germany	✗	✗	✗	✗
Ireland	✓ Fixed USO only	✓ Fixed USO only	✓ Fixed USO only	✓ Fixed USO only
Italy	✓	✓ Fixed USO only	✓	✓
Netherlands	✗	✗	✗	✗
Spain	✓	✓	✗	✗
Sweden	✓ Mobile only	✗	✗	✗
United Kingdom	✓ Fixed USO only	✗	✗	✗

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Europe
Examples of NRAs' tools to empower end users (mobile)

	NRA measurements	Consumers survey	Certified speed test	Coverage maps	Providers' rankings
Belgium	✓	✓	✓	✓	✓
France	✓	✓	✓	✓	✓
Germany	✗	✗	✓	✓	✗
Ireland	✓	✓	✗	✗	✓
Italy	✓	✗	✓	✓	✓
Spain	✗	✗	✗	✗	✗
Sweden	✗	✗	✓	✓	✗
UK	✓	✓	✓	✓	✓

Source: Cullen International

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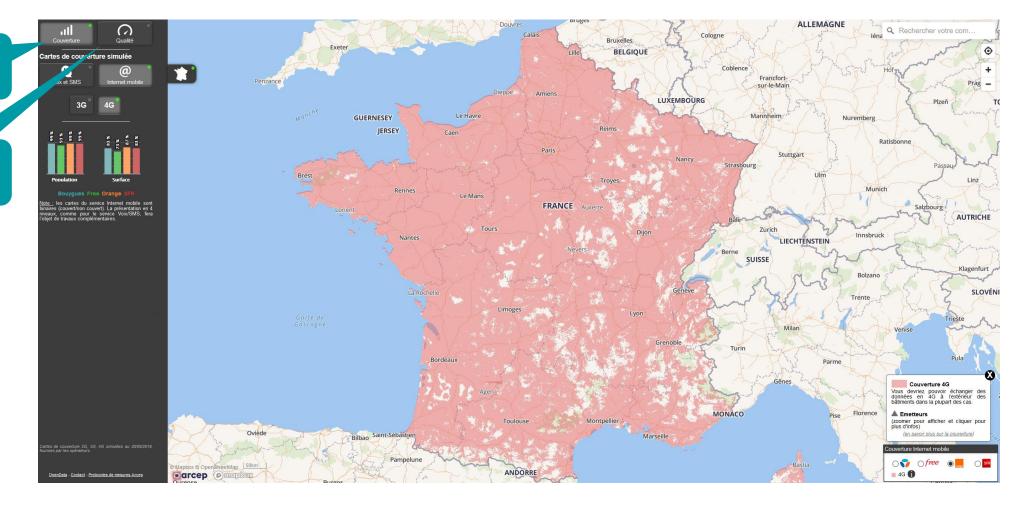# End user empowerment: France

Mobile networks: improved coverage maps

Coverage: Simulation by providers

Quality: measured by ARCEP

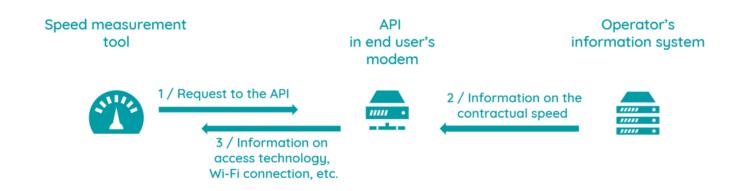Source: ARCEP (example for Orange 4G mobile broadband coverage)

QoS measurements: France

Fixed networks: improved QoS measurements from third parties

- ARCEP code of conduct for speed measurement tools

- ARCEP imposes on all fixed broadband operators with more than 1m active users to install a software in the user's modems to improve QoS measurements.

- The API will work as a kind of "ID card of the internet access", giving information to speed measurement tools that comply with ARCEP's Code of Conduct

End user empowerment: Croatia

NRA speed tests:

- **Fixed: HAKOMetar**
  User complaint button integrated directly in the application

- **Mobile: HAKOMetar Plus**
  Interactive map showing the measurement results
  at the location they took place

End user empowerment: Croatia

Mobile broadband and voice services:

- All providers to offer a *"Try & Buy"* period of minimum 5 days

- Free trial SIM card

End user empowerment: Romania

First mobile coverage map
exclusively based on NRA field measurements

Americas

Americas
QoS targets for fixed and mobile broadband

Country	Targets set	Imposed on all operators	Measurement audited	Obligation to publish	Specific penalties
Argentina	✔	✔	✔	✔	✔
Brazil	✔	✔	✔	✔	✔
Canada	✖	✖	✖	✖	✖
Chile	✔	✔	✖	✔	proposed
Colombia	✔	✔	✔	✔	✔
Costa Rica	✔	✔	✔	✔	✔
Ecuador	✔	✔	✖	✖	✖
Mexico	✔ (mobile)	✔	✔	✔	✖
Paraguay	✔	✔	✖	✖	✖
Peru	✔	✔	✔	✔	✔
United States	✖	✖	✖	✖	✖

Source: Cullen International

End user empowerment: USA
Fixed broadband maps

Federal Communications Commission

Source: FCC

Latin America:
NRAs tools to empower end users

- Speed tests, coverage maps and price comparison apps made widely available by NRAs in Latin American countries
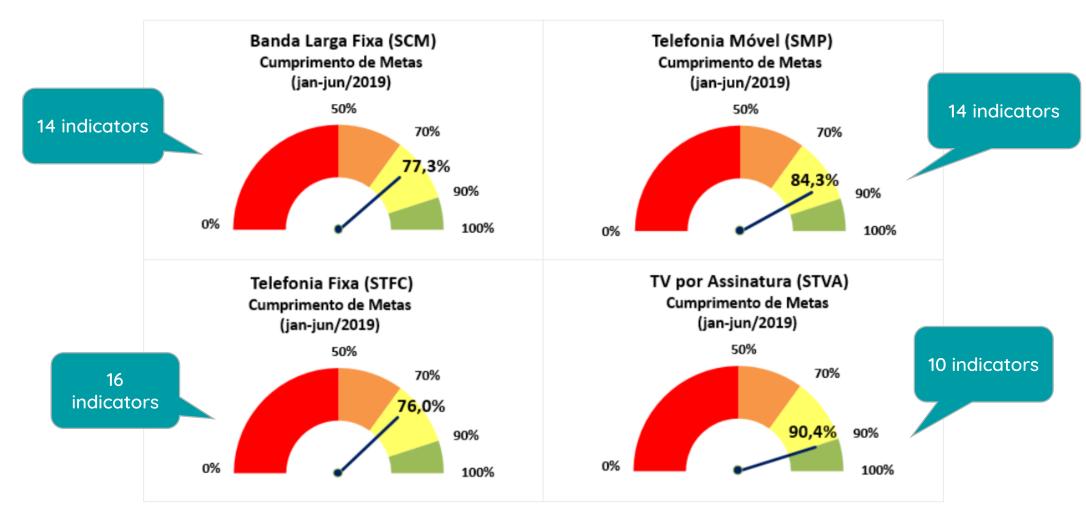

	Apps available
	No mobile app

Sutel Interactiva
Reference

MINTIC vive digital

SEÑAL MÓVIL
ECUADOR

COMPARATEL
Tu comparador de tarifas

te veo
osiptel

Comparador de Planes y Tarifas
Servicios de Telecomunicaciones

Calidad Móvil - Chi
CORTxT, Inc.
★★★★★ FREE

ANATEL Anatel Serviço Móvel
Reference

EAQ Brasil Banda Larga
Utilities

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In Latin America: mixed approaches
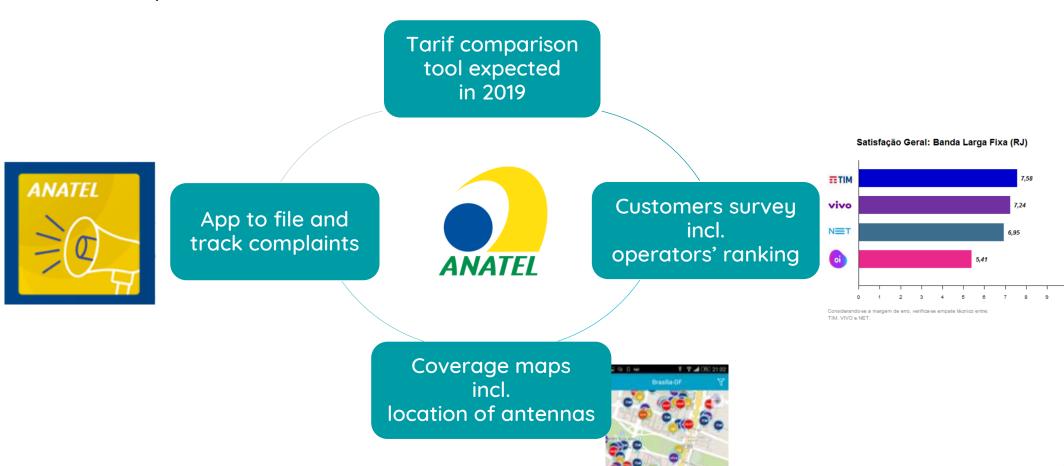# Example: Brazil

Targets, compliance control and sanctioning

Source: Anatel (2019)

In Latin America: mixed approaches
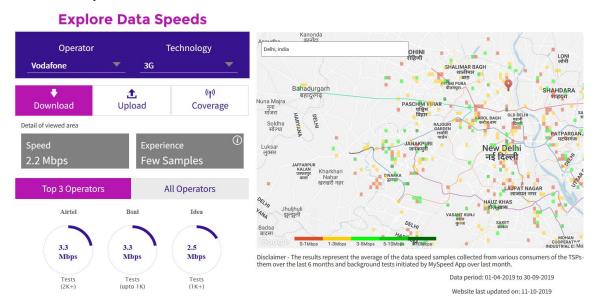# Example: Brazil

End user empowerment tools

Tarif comparison tool expected in 2019

App to file and track complaints

Customers survey incl. operators' ranking

Coverage maps incl. location of antennas

Satisfação Geral: Banda Larga Fixa (RJ)

TIM 7,58
vivo 7,24
NET 6,95
oi 5,41

Considerando-se a margem de erro, verifica-se empate técnico entre: TIM, VIVO e NET.

A look at …

India

TRAI mobile broadband speed test tool

- NRA broadband speed test tool
  - Results sent to TRAI on a voluntarily basis and displayed on an interactive map.
  - Anonymised information sent on data speed, network information, device used and location

- Upcoming mobile coverage map for the whole country, based on information from the providers
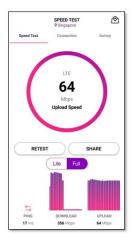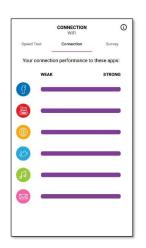
Source: TRAI

Singapore
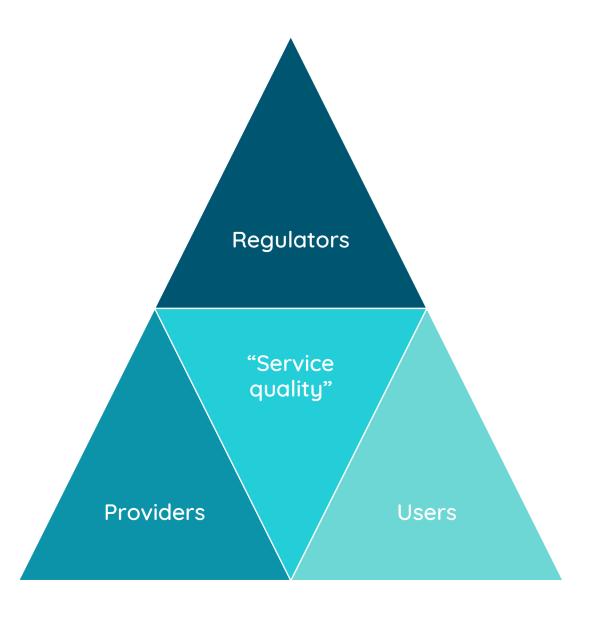
End user empowerment tool: IMDA mobile app

- Mobile app running in the background
- Information sent to the regulator
- Publication of an interactive report every 6 months
- Identification of trends and information exchange with providers

Source: IMDA

To conclude…

- No magic formula

- Many approaches are possible, even a mix of approaches

- General trend towards more empowerment of end user's

Thank you

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