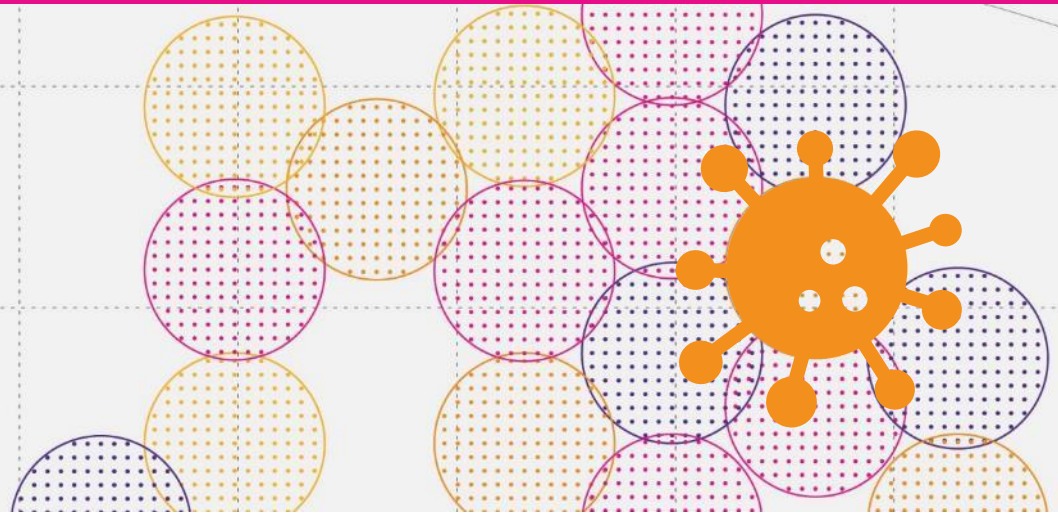


Spectrum policy reactions to the Covid-19 pandemic

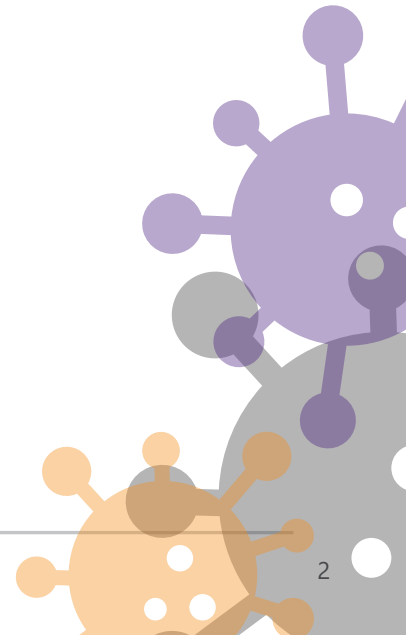
June 2022

Tim Miller

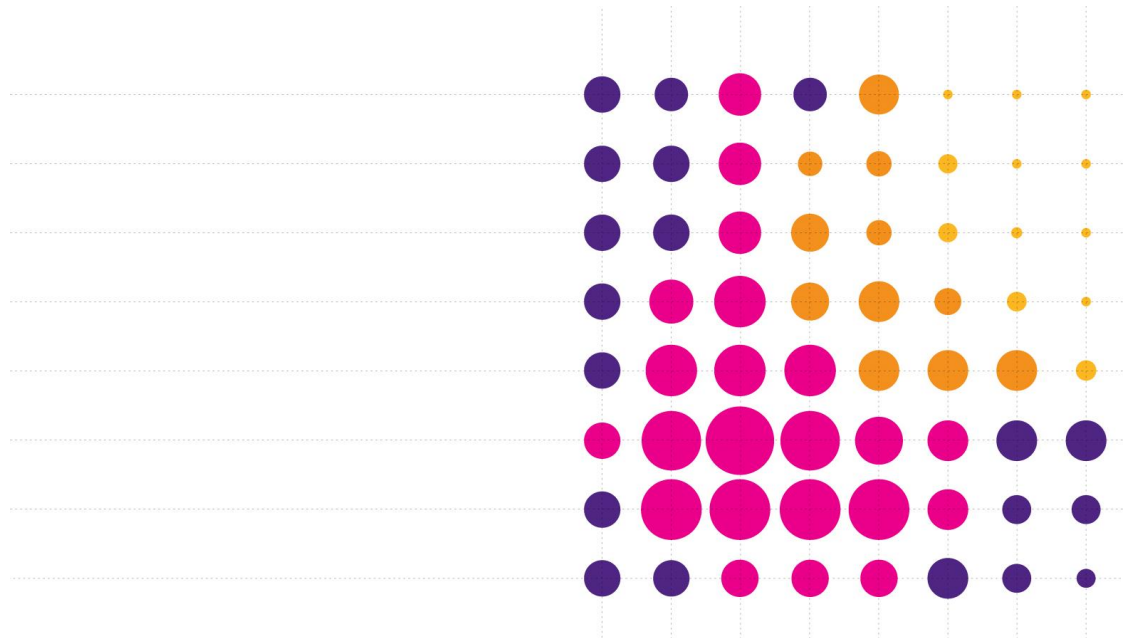


A bit of background

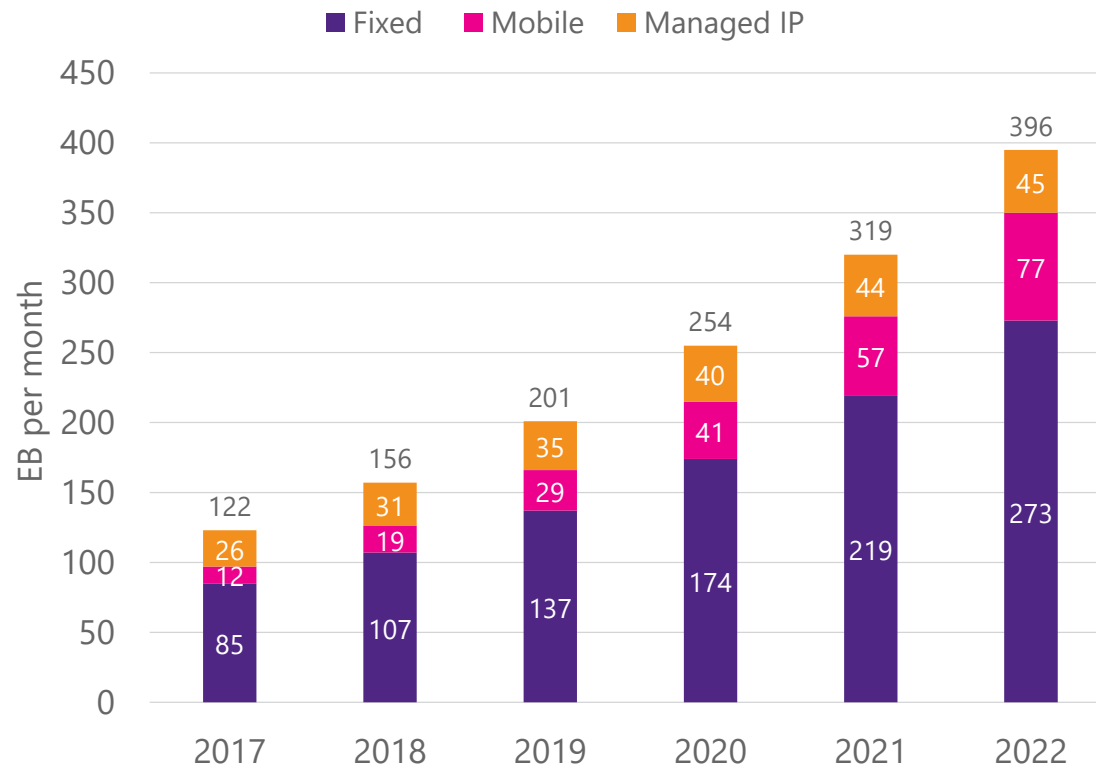
- Study for the World Bank
 - PPDR, consumer broadband, short-term and medium-term emergencies, need for network resilience, regulatory intervention, breaking down of competition constraints, challenges faced by operators, longer term changes to regulatory frameworks ...
- Case studies with huge variation
- **What can we learn for next time?**



Demand for Internet access



There has been a consistent increase in demand



Greater mobile use
– particularly in
developing
countries

Video the largest
share of data

Increasing need for
reliability and
bandwidth

Covid-19 changed the nature of this demand

"As Covid-19 spread, our networks saw **massively changing demand** due to lockdowns and communication needs."

Traffic time-of-day
and locations
shifted

Increased use of
fixed networks
where available

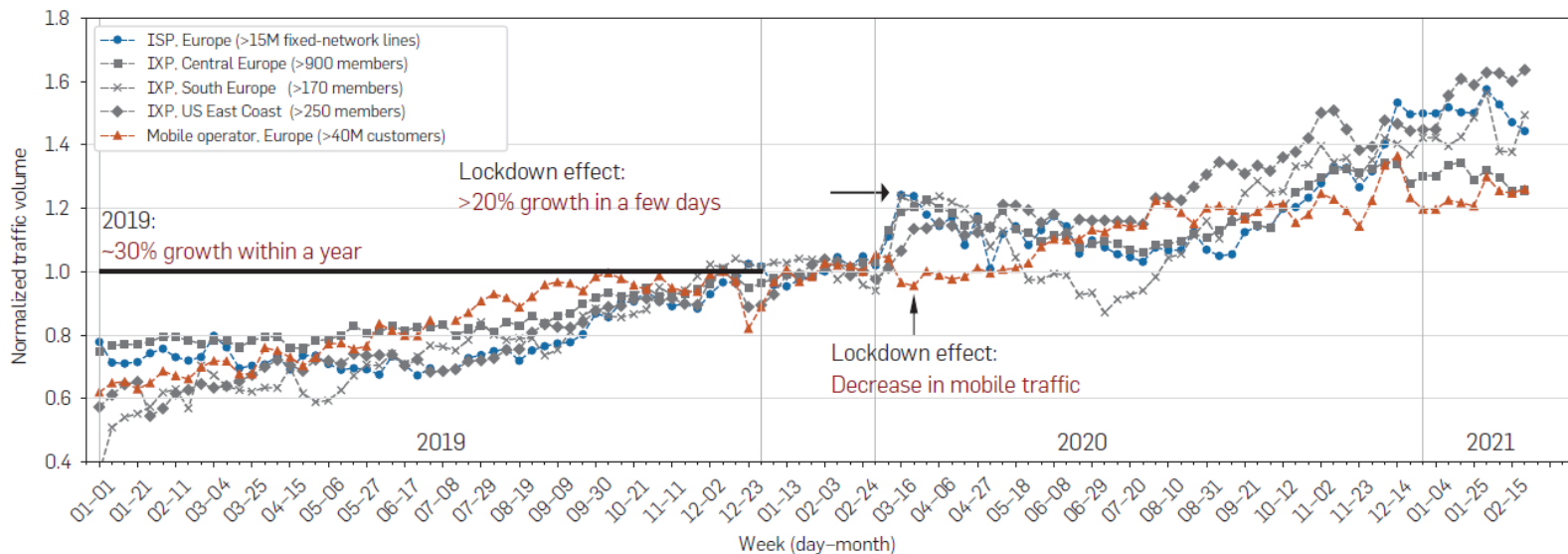
Demand for better
connections

Increased use of
video conferencing
and office
applications

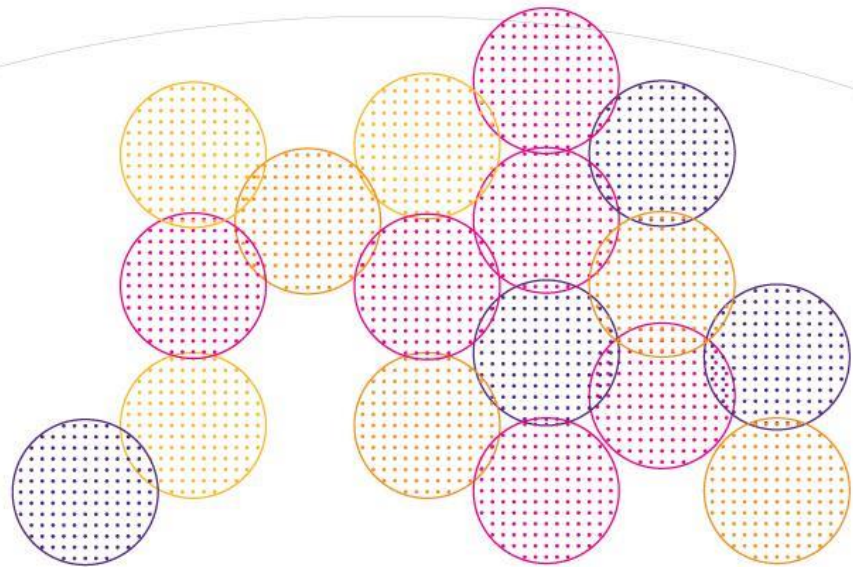
Changing use of
voice and direct
messaging

The change was immediate and rapid

- Increased demand for bandwidth at all times of the day
- Initial movements to fixed networks where available
- Large increases in demand for some services
 - Online gaming (+400%), VPN (+110%), live TV streaming (+70%)



Regulatory responses



Regulators implemented many general policies

Increasing
broadband speeds

Providing free
services to
consumers

New FWA
networks

Allowing more
flexible IMT
spectrum use

Network
management

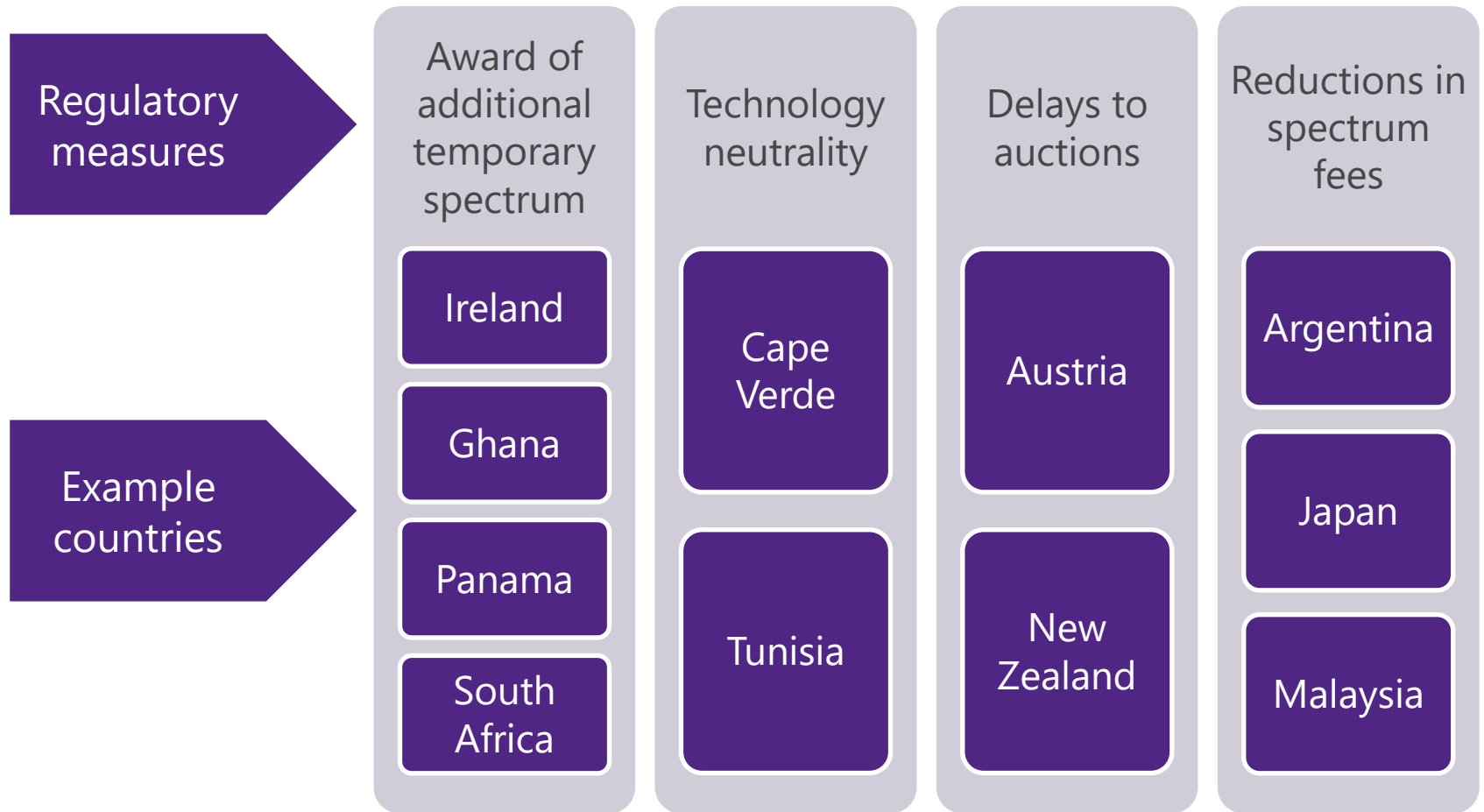
Government-
subsidised
broadband
services

Easing regulatory
and competition
requirements on
licensees

Addressing fake
Covid-19 news

Tracking
applications

Spectrum policies changed in four key ways



Market context was key to determining policy

Is spectrum available?

- Spectrum cleared for auction
- New transitions to 5G with established ecosystem
- Devices enabled

Is there a capacity constraint?

- Existing investment in large networks
- Market shares and competition

Who should measures apply to?

- Potential competition issues
- Finance to take advantage of policy

Should measures be temporary?

- Long term certainty to allow investment
- Limited regulatory analysis

“Covid-19 came along at the **right time** – we had spectrum that was unused waiting to be awarded, and operators waiting to deploy it”

Regulators had varied success in improving quality



Initial falls in service quality

Recovery and exceeding previous quality

What can we learn?



There is no one correct policy option

- Decisions based on market context and needs
- Multiple policies may be appropriate



Regulators must communicate with operators

- Provide incentives as well as solutions
- Reiterate temporary nature of measures



Continuous monitoring required

- Scenarios can change frequently
- New technologies may make issues obsolete

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