

Global ICT Regulatory Outlook 2018

Summary



Introduction

This edition of the Global ICT Regulatory Outlook builds on its predecessor first edition. New this year is unique evidence from around the world charting the evolution of policy and regulation in ICTs and, by extension, in the digital economy.

This is an exciting time for regulators – and what they need more than ever, is detailed evidence to support their decision-making, enabling them to lead the way in digital transformation with confidence.

This report is based on inputs from 190 countries and offers an objective/neutral perspective on the latest trends driving ICT policy and regulation. Regulatory topics are explored through factual graphic analysis and complemented by country experiences. This

powerful combination enables us to decipher complex, multi-faceted issues and make sense of the rich body of regulatory experience from all regions. While some findings are intuitive, others offer surprises.

One overriding strength of the report – and a source of its credibility – is its direct link to the every day work of ICT regulators worldwide and its bottom-up, empirical approach.

The insights and patterns revealed by the extensive, cross-sector analysis indicate the general direction of regulation over the next years and allow us to chart the trends – sustained or emerging – in regulatory leadership for the digital transformation.

The state of ICT regulation globally

The state of ICT regulation worldwide is very much 'in flux'. Countries' approaches are converging on some topics and diverging on others and regulatory practices vary significantly.

In the Global ICT Regulatory Outlook 2017, we explored the evolution of ICT regulatory trends over the preceding decade. We set out the ITU concept of 'generations' of ICT regulation – now widely shared – analysing prime evidence and charting possible ways forward (see Figure 1).

Our findings hold true. The rise of G4 regulation has proved unstoppable. By the end of 2017, a third of countries had climbed aboard the bandwagon – no longer an exclusive club – of fourth generation regulators (see Figure 2). In just ten years, G4 has become the gold-standard for every ICT regulator.

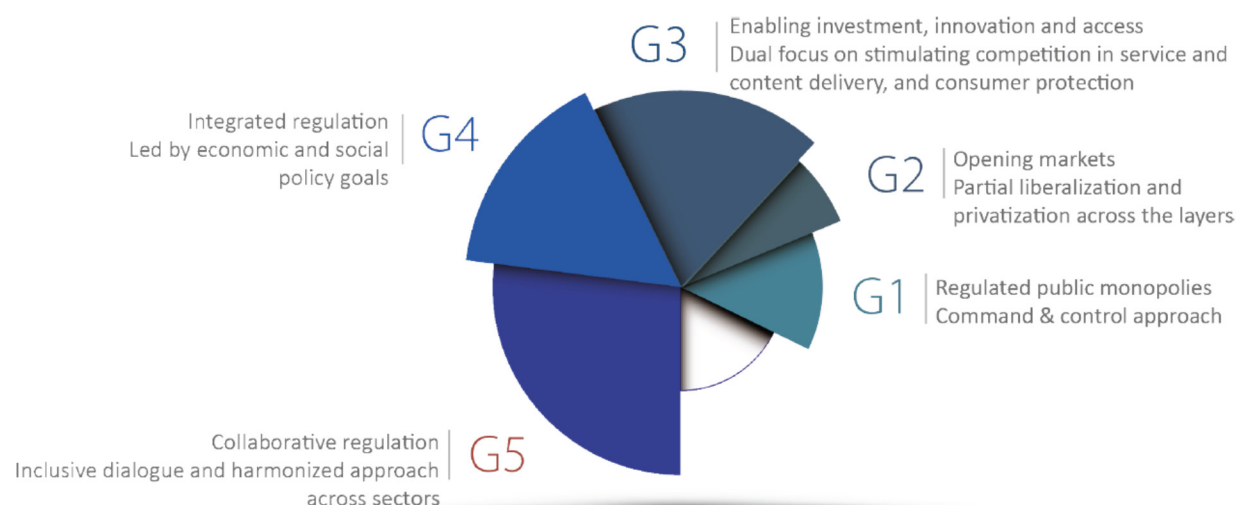
As regulation evolves worldwide, we discern three tiers of regulators, nearly equal in number:

- The highest tier – fourth-generation – is made up of achievers who have

moved along the wave of the Fourth Industrial Revolution, have stood their ground to protect consumer interests, have opened up markets and are advancing investment for social and economic goals.

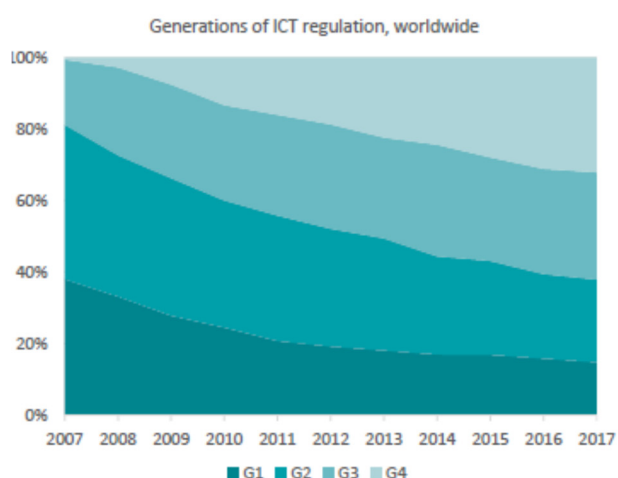
- The middle tier – third-generation – has been moving ahead, pushing limits and markets towards more adaptive, competitive regulatory regimes.
- The low tier grouping – first and second generation of regulators – is both losing ground and shrinking in number. Countries neither appreciate nor benefit from a lack of advancement in their market structure and regulatory instruments. In another ten years, the near-extinction of this tier seems likely. The progress and sophistication of ICT regulation is in effect a powerful statement of development ambitions and no country can afford to miss the considerable opportunity represented by an increasingly open and vibrant market.

Figure 1: Generations of ICT regulation



Source: ITU

Figure 2: Evolution of regulatory frameworks, worldwide, 2007-2017



Note: The bottom chart shows the evolution of the average scores of the ICT Regulatory Tracker, per pillar

ICT Regulatory Tracker data	Score breakdown/Gs
2007-2009: data for 187 countries	G1: [0; 40)
2010-2013: 188 countries	G2: [40; 70)
2014: 189 countries	G3: [70; 85)
2015-2017: 190 countries	G4: [85; 100]

(in points).
Source: ITU

Reviewing the top countries in terms of regulatory maturity in 2017, there is little surprise. Italy tops the table with an overall score of 97.3, stealing the trophy from Ireland by a small margin (see Table 1). Europe largely leads the way, with only two non-European countries in the top ten, and five non-European countries in the top 25 (see Table 1). Overall, in broad terms, Europe rises

impressively to the challenges of the digital economy with sound regulatory regimes, including veterans such as Portugal and Belgium as well as new entrants such as Latvia. Australia is the highest ranked non-European country, at eighth in the table. Latin America is the second most-represented region, featuring the Dominican Republic, Mexico and Brazil. Oman closes out the honorary top 25 country rankings to reflect the ambition of the Arab region in revamping much of their regulatory toolbox. Oman is also the only non-European new entrant in the world top 25 in 2017.

Table 1: ICT Regulatory Tracker 2017, Top 25

Rank	Country	Score
1	Italy	97.3
2	Ireland	97
3	Finland	95
3	Lithuania	95
3	Malta	95
3	Portugal	95
3	Romania	95
8	Australia	94.5
8	Turkey	94.5
10	Norway	94
11	Greece	93.3
12	Croatia	93
12	Montenegro	93
14	Dominican Rep.	92.7
15	Hungary	92.5
15	Switzerland	92.5
17	Mexico	92
17	Belgium	92
17	Poland	92
17	Slovenia	92
21	Brazil	91.5
21	Latvia	91.5
23	France	90.5
23	Germany	90.5
25	Oman	90.3

Source: ITU, ICT Regulatory Tracker 2017, itu.int/go/tracker

The 2017 ranking of the ICT Regulatory Tracker also reveals an improvement in the level of regulatory maturity across all regions. The regulatory divide persists, however, between Europe where four in five regulators have reached G4, or the fourth generation of ICT regulation, and the other regions. The Americas follow behind with 40 per cent and in Arab States 20 per cent of countries have reached G4. In Africa, Asia-Pacific and CIS, only around ten per cent of countries are in the most advanced generation of regulation, G4.

[Read the full report](#) to find out about:

- The state of ICT regulation in the six BDT regions
- The full ranking of the ICT Regulatory Tracker and a list of G4 countries
- Major trends emerging over the past ten years based on the evidence provided by the ICT Regulatory Tracker

What does the ICT Regulatory Tracker do?

The Tracker pinpoints the changes taking place in the ICT regulatory environment. It facilitates benchmarking and the identification of trends in ICT legal and regulatory frameworks. The Tracker does not measure the quality, the level of implementation or the performance of regulatory frameworks in place, but records their existence and features. It helps track progress and identify gaps in regulatory frameworks, making the case for further regulatory reform towards achieving a vibrant and inclusive ICT sector.

For details, see the note on methodology and the annexes of the report

Policy and regulatory trends

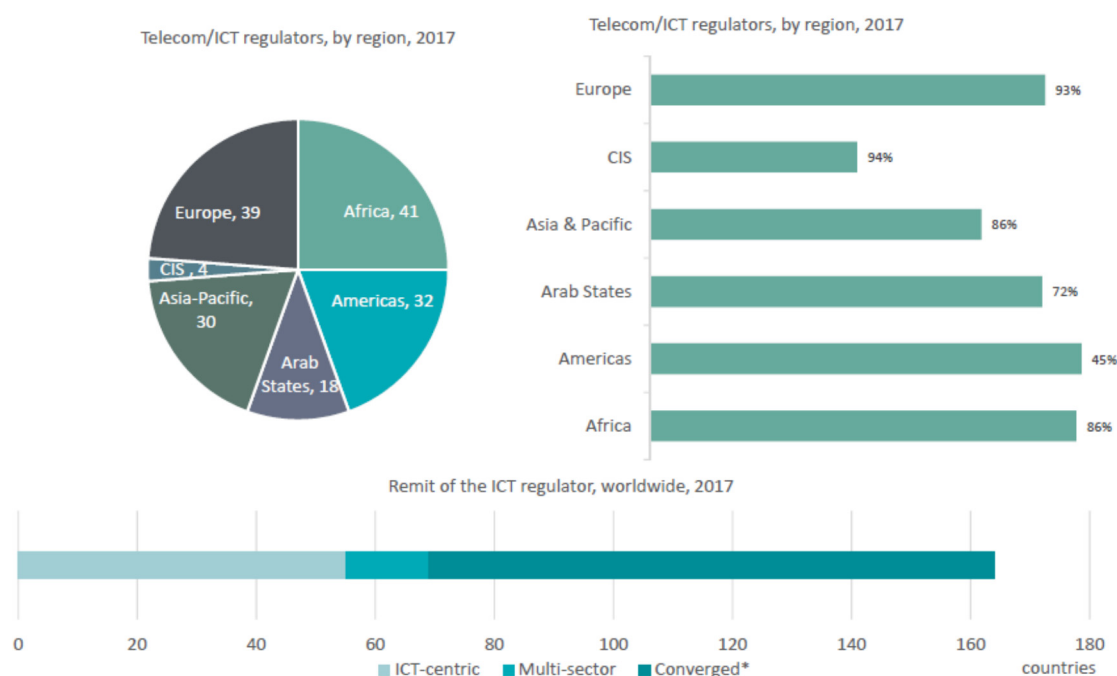
The 2018 Outlook throws light on how policy and regulatory approaches have evolved and examine the main challenges. The analysis builds on unique and authoritative ITU data about regulatory practices across Member States. It charts the road ahead in finding the right balance for every market and consumer group. It is not intended to provide a comprehensive view – nor does it define any one approach as ‘correct’. Our aim is to make a measured, authoritative and evidence-based contribution to important public discourse on high-profile regulatory issues, informing and helping guide decision-making in fast-changing digital markets.

In earlier years ICT regulators were watchdogs, gatekeepers and arbiters. Their role has evolved to that of facilitator and partner in shaping ICT and digital markets.

The job of a modern-day regulator involves a degree of Socratic questioning: is it best to have or not to have certain regulations – and best for whom? What regulations will lead most effectively to social and economic goals? What shelf life should regulations have? The eyes of market players and consumers are on regulators for guidance, consent and protection. They have become the sherpas of the digital transformation and guardians of its growing pains.

ICT regulators worldwide number 164 at the end of 2017 (see Figure 3), and the trend of creating new, separate regulatory agencies seemed to have reached a plateau. However, a new wave is coming – [read the full report to learn about it.](#)

Figure 3: ICT regulators, by region, 2017



Notes:

1) Total: 164 regulators (2017)

2) Data for 190 countries and economies based on the ICT Regulatory Tracker 2017.

3) The values correspond to the number of regulators per region.

4) Converged refers to a regulatory mandate including broadcasting transmission and/or broadcasting content.

Source: ITU

Policies for digital

ICT policies have formed the bedrock for regulators and both have evolved together to address market failures and to respond to social demands and expectations. And the spectrum of policy goals has widened significantly over the past three decades (see Figure 4), ranging from ensuring everyone can have access to a fixed phone within walking distance right through to capturing the potential of AI for the digital transformation of societies. While most digital policies currently focus on stimulating investment in broadband networks and connecting uneconomic areas, a fast-growing community of countries is looking ahead and gearing up for 5G, IoT and AI – and beyond.

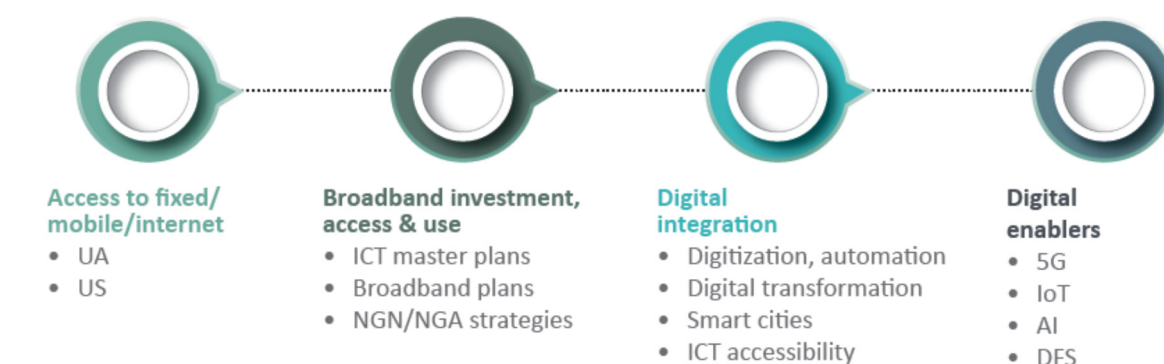
Digital policy frameworks are currently dominated by ICT-centric policies, such as classic telecom universal access and service (UAS) policies, ICT policies and broadband plans. Broadband plans outnumbered UAS policies by almost 30 per cent, reaching 155 in 2017. A third of countries worldwide have adopted ICT accessibility policies for persons

with disabilities, redefining digital inclusion. UAS policies and broadband plans have now reached a plateau; very few countries have adopted new such policies since 2012, while accessibility policies are on the rise. There is likewise a clear trend towards more holistic approaches to harness the benefits of the digital economy.

National broadband plans have been trending in popularity since the last world financial crisis in 2008-09, until recently. In 2017, eight out of ten countries worldwide (or a total of 155) had a broadband plan of some sort and the trend is consistent across all regions. Europe has been the trendsetter and leader as virtually all European countries today are tooled up with a set of targeted broadband policy principles. In Africa, the Americas and Asia-Pacific, around 80 per cent of countries have a plan, close to the world average.

A new generation of digital policies is coming of age – [read the full report](#) to learn about it.

Figure 4: Changing focus of ICT policies



Note: UA = Universal access; US = Universal service; NGN/NGA = Next generation networks/ access; IoT = Internet of things; AI = Artificial intelligence; DFS = Digital financial inclusion

Source: ITU

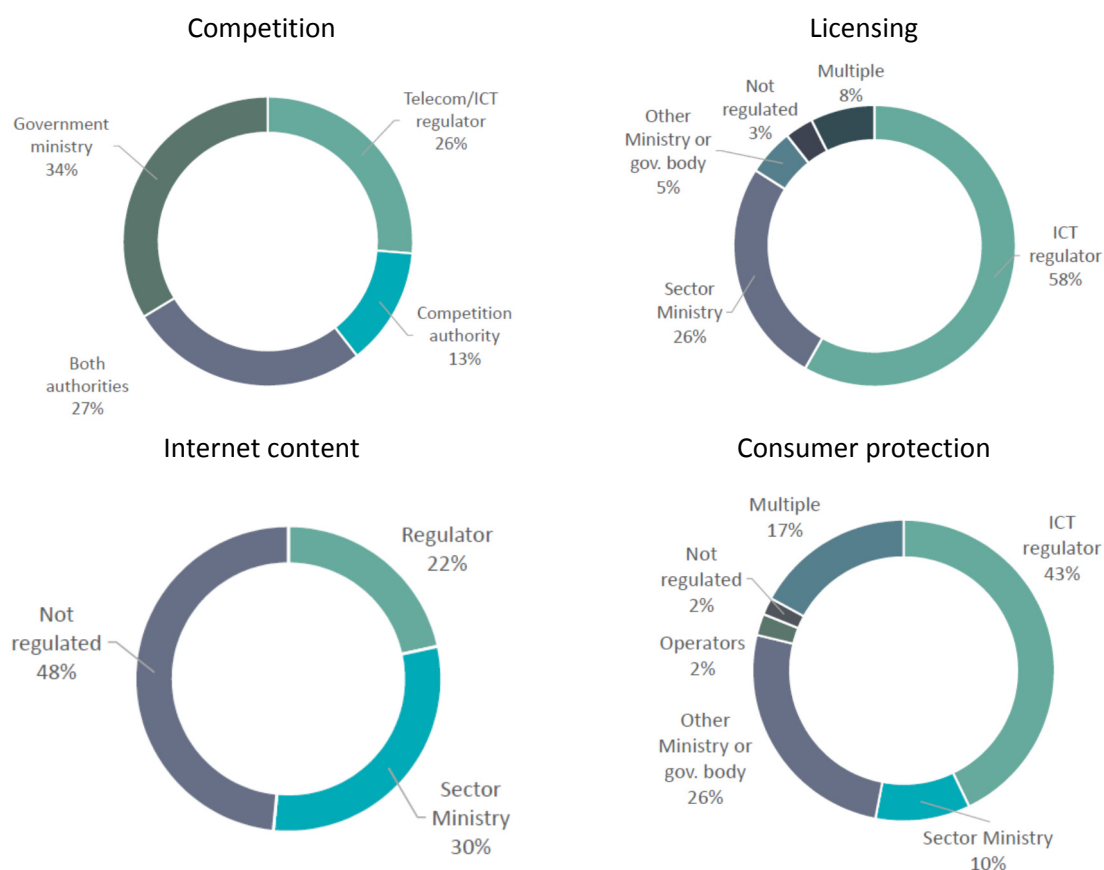
Who regulates what?

The regulatory landscape presents a mixed picture. Many pillars of ICT regulation are also at the core of regulators' efforts in enabling the digital economy. And while many longstanding issues are multi-faceted and complex, new issues are emerging and challenging regulators to formulate viable regulatory responses. The Outlook 2018

looks at some major areas where this is the case: competition, licensing, consumer protection, infrastructure sharing and spectrum. Below is a snapshot of who regulates what in the global ICT sector (see Figure 5).

[Read the full report to learn more about the underlying trends.](#)

Figure 5: Who regulates what in 2017?, worldwide



Source: ITU

Digital platform regulation

Digital platforms have become a true melting pot of technologies, ideas and business models bound up with many new, big regulatory issues – from competition to consumer protection to universal access. It may even be necessary for stakeholders and policy-makers to ‘unlearn’ many lessons learned in pre-digital rulebooks to deal with digital platforms.

Digital platforms have managed to remain under the regulatory radar for a long time. Since their inception and despite generating extensive and contentious public debate globally, they have generally been exempt from or non-categorized for the purposes of regulation – and in effect have enjoyed a prolonged regulatory honeymoon. Often, existing regulations (from ICT regulators or others) may not apply, simply due to the categorization problem, as digital platforms can straddle different industries.

Arguably, regulatory models are bound to evolve towards more harmonized regulatory approaches to regulating digital markets irrespective of who provides services and with a strong focus on consumer protection. Ultimately, the status of market players in the regulatory process is likely to be elevated to a partner and ally, moving away from the

traditional relationship between regulators versus regulated entities. Collaborative regulation is the next frontier and digital platform regulation may serve as a launch pad towards it.

A growing number of regulators have turned their attention to digital platforms with varying expectations. One in five had been given a mandate to regulate digital platforms in 2017, although in the majority of countries, that mandate may appear vague. According to ITU data, social media and CDNs are addressed frequently in most regulatory frameworks, together with related issues such as child grooming, sexual predation and hate speech. Countries with national digital platform regulations in place stands at 7 per cent of countries worldwide, with 10 per cent of countries looking into issuing regulatory rules. A number of countries are planning or adopting possible regulation over digital platforms – [read the full report to learn about them and the status of status of digital platform regulation globally and in the regions.](#)

Africa, Asia-Pacific and Europe have the highest number of regulators with a digital platform mandate. Europe has the strongest regulatory focus on digital platforms, with the highest number of national regulations in place. Europe is also the region with the most consistent regulatory treatment of digital platforms.

Figure 6: Maturing patterns for digital platform regulation



Source: ITU

What regulatory framework for data privacy?

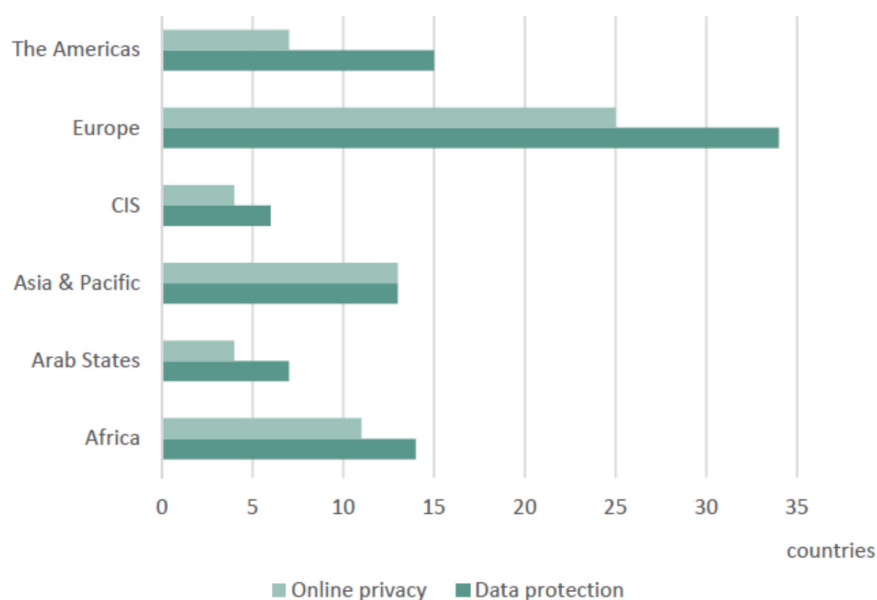
A number of countries have clearly defined personal data protection laws (Figure 7). According to ITU data, 109 countries have legislation that secures either the protection of data or privacy, or both. This is up from 83 countries in 2015, indicative of a clear trend worldwide. Various national efforts are underway and draft legislation is under discussion in around 10 per cent of countries.

Historically, national data protection authorities have monitored issues relating to privacy and regulated the use of data through privacy, data protection laws, cybercrime legislation, rules pertaining to privacy and sharing of specific types of data (e.g. health or financial data), and now rules about electronic

transactions. Currently, over 70 countries have established a separate data protection regulator. In some countries, mainly federal states, there are multiple data protection bodies, often with a limited geographic jurisdiction. Globally, there is a strong global trend towards the establishment of special data protection authorities with strong enforcement powers.

[Read the full report to learn more about the new questions regarding online privacy and data protection and the regulatory options.](#)

Figure 7: Data protection and online privacy legislation, by region, 2017



Source: ITU

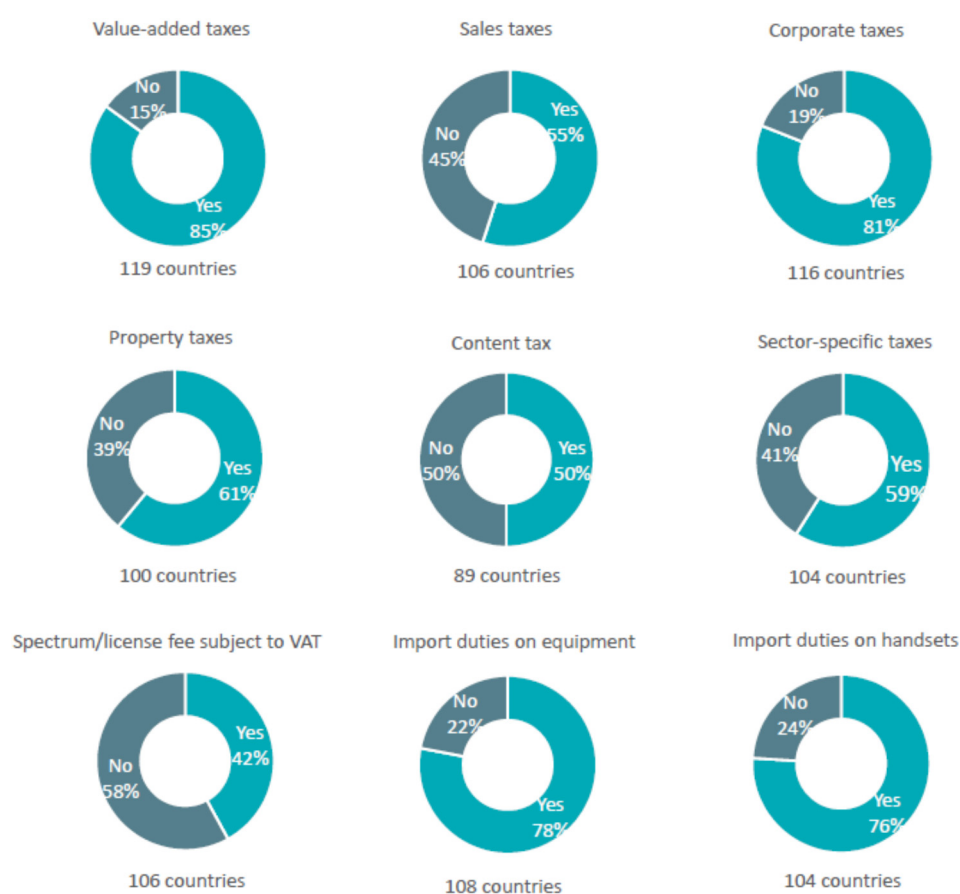
Taxation in the digital ecosystem

Although the digital transformation is well under way, the issue of taxation of digital services and content remains ‘work in progress’. While digital transformation is improving productivity, employment and competition worldwide, taxation could damage or enhance these benefits. Much depends on the way governments address these policies and strategies. Adding further complexity, the number of taxation options is growing – but it remains unclear as to how these taxation approaches can work with respect to digital services and digital platforms, including OTTs.

The level of application of telecommunication/ICT taxes varies significantly across the world. The most widely applied taxes worldwide are VAT, corporate taxes and import duties. However, 59 per cent of countries apply sector-specific taxes. Figure 8 shows the percentage of various taxes applied to the telecommunication/ICT sector at world level.

For more details on regional practices and taxation trends as well as the steps to build on in furthering the digital transformation, [read the full report.](#)

Figure 8: Type of taxes applied to ICTs, world



Source: ITU Tariff Policies Survey, 2017

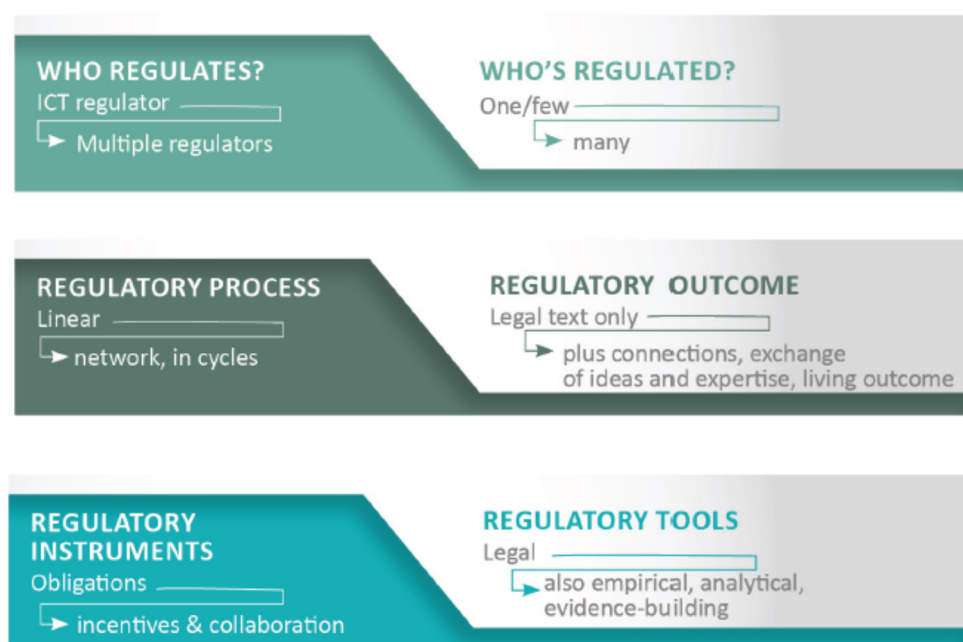
Collaborative regulation: reaching the next frontier together

We are already seeing technology paradigms that challenge existing regulatory patterns and frameworks. From the imminent entry in markets of 5G and the Internet of Things, to the profusion of cloud services and artificial intelligence, finding the regulatory sweet spot requires a new perspective and not mere incremental improvement. New technological phenomena will drive and define a new paradigm for regulation – for many regulatory issues, what is coming down the road will cause fundamental upheaval rather than seamless evolution. Many existing core regulatory questions and fixtures will take on a new meaning and will need to be re-tooled (see Figure 9).

Regulatory upheaval from new technologies will give rise to the fifth generation (G5) of regulation. Countries need to leap forward to the next level of regulation, with a new attitude and a new toolbox – and regulators will need to reflect on their roles and revisit their responsibilities.

A discussion on the benefits and challenges of collaborative regulation as well as lessons learnt from the front runners in this regard are featured in [the full report](#).

Figure 9: Regulatory upheaval for new and emerging technologies



Source: ITU

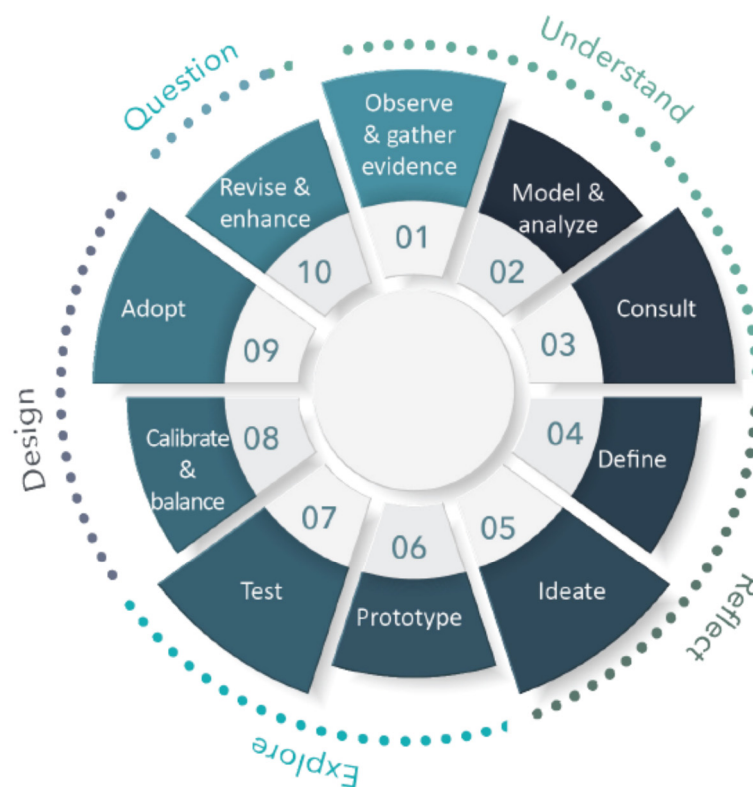
Regulatory thinking cycle 2.0

A broad framework for exploring new technologies and design principles should form the basis for a revisited regulatory thinking cycle, one that supports collective thinking on new technological paradigms led by regulators.

The cycle we propose covers ten steps (see Figure 10).

To know more about the regulatory thinking cycle 2.0, [read the full report](#).

Figure 10: Regulatory thinking cycle 2.0



Source: ITU

Regulatory collaboration: 'power coupling'

In the midst of a changing balance between economy and society, regulators must rely more than ever on market mindfulness and resourcefulness – even more than on legally established rules. Collaboration among institutions is not merely 'nice to have' or an amenity but an essential ingredient for regulatory relevance, coherence and impact.

Collaboration requires leadership. Collaborative leadership builds on a shared purpose and vision. It opens the way to diverse perspectives and possibilities. It provides a positive drive for problem solving and compromise. It capitalizes on the best of the organizations involved, as mutual interest is obvious.

We have carried out in-depth research on current collaborative practices among regulators involved in digital markets. We have gathered fresh, first-hand evidence on the existence and depth of collaboration between the ICT regulator and their peers dealing with competition, consumer protection, finance, energy, broadcasting, spectrum management and Internet issues. [The key findings of this research are featured in the 2018 Global ICT Regulatory Outlook.](#)

Looking through this 'magnifying glass' at the state of collaboration in 2018, we provide a succinct overview of global and regional trends in each area and for each 'power coupling'. We refer to them in this way because their united action has a multiplier positive effect on digital markets – and their meaningful partnership is more than the sum of their parts.

What is the difference between collaborative regulation and regulatory collaboration?

Collaborative regulation or 5th generation regulation (G5) is a broad notion that ITU has defined based on the concept of generations of ICT regulation (see Figure 9). It marks a fundamental shift in the way regulation is executed and the stakeholders that it brings together – from policy-makers, single-sector and multi-sector regulators to market players of any size. Collaborative regulation puts consumer benefits and protection in its focus and leverages the resources of government institutions and industry to deliver them, through organic consultation, collaboration and conciliation. Collaborative regulation is driven by leadership, incentive and reward rather than by command and control schemes. The concept also refers to the set of new tools used by regulators to tackle the issues related to digital transformation and the data economy.

Regulatory collaboration refers to the ICT regulator working closely with peer regulators in other sectors. It is defined by:

1. The breadth of collaboration – whether the ICT regulator collaborates with authorities in charge of competition, consumer protection, finance, energy, broadcasting, spectrum management and Internet issues;
2. The depth of collaboration – whether regulators have engaged in informal, formal collaboration, or have put in place other hybrid mechanisms.

Both concepts are linked and reflect the interplay of institutions and regulatory frameworks in regulating digital markets.

Source: ITU

All indications emphatically underline that we need more collaboration – better channels and more bandwidth. Although there has been unequivocally agreement on the benefits of collaboration, progress has been stalled by power battles, lack of resources and misconceptions. In 2019, we will investigate the causes of this limited take-up of

collaboration and its impact. However, we have a pressing message for regulators across the board: solid progress towards inclusive and collaborative regulation is needed for the good of all users of digital services, now and into the future.

Which countries are leading the way in shaping digital markets through regulatory collaboration?

As one might expect, such countries include regional leaders and those countries already categorized as G4, or on the verge of attaining this level:

- Botswana, Burkina Faso and Malawi, three African countries in the regional top 5 have established collaboration practices, including formal collaboration, involving single-sector and multi-sector regulators.
- In Brazil and Chile, informal regulatory collaboration enriches no fewer than five areas from competition to energy, and underpins a national network for policy-making.
- Regulators in Jamaica and the US enjoy more formal regulatory collaboration in at least half of the eight areas in our research.
- Some regions offer a more diverse though very positive picture of regulatory collaboration: Sudan and UAE (both G3 regulators) join Morocco and Oman (G4 regulators) as leaders in collaboration.
- Armenia is the only CIS country engaged in regulatory collaboration across several areas.
- All top 5 countries in Asia-Pacific have a consistent record of informal regulatory collaboration in half of the researched areas. Beyond these countries however, little collaboration is occurring.
- Europe is the most advanced region in regulatory collaboration, with 29 countries engaged in some form of collaboration. In France and Spain, the ICT regulator is involved in collaboration in seven areas while the vast majority of European regulators cover four or more areas. From Bosnia and Herzegovina to Ireland and from Malta to Turkey, various regulators and country sizes engage in collaboration, making a strong case for the benefits it can deliver.
- The Netherlands and Norway set the gold standard in 2018 and top the global list for regulatory collaboration, covering most areas and with formal mechanisms in place.
- Our extensive research and analysis show that countries in G1 and G2 categories generally do not engage in collaboration, and those in the G3 category are rare. G4 countries engage far more in collaboration across all regions, and point the way forward to G5, wholly collaborative regulation.

Source: ITU

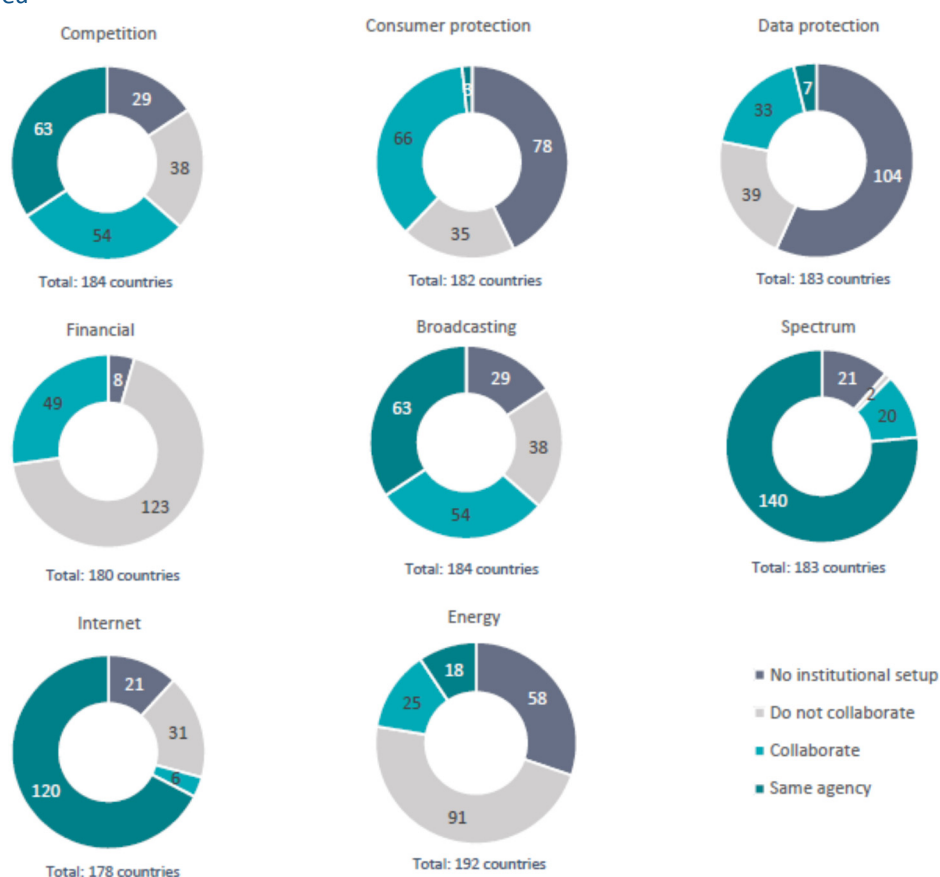
In preparing this report and conducting extensive research, we have also had direct contact with regulators. We gathered conclusive evidence on the breadth and depth of regulatory collaboration. Our findings are helpful in drawing the global map of regulatory collaboration, allowing us to pinpoint achievements and gaps – and help provide guidance on where to concentrate efforts and resources. The evidence also

makes the case for sound collaboration across governments.

The critical threshold of regulatory collaboration today covers between 10 and 40 per cent of existing ICT regulators, depending on the thematic area (see Figure 11).

[To learn about gold medal winners and lost opportunities in regulatory collaboration, read the full report.](#)

Figure 11: The state of regulatory collaboration in 2018, by area



Legend:

No institutional set-up = no ICT regulator or a specialized agency in the focus areas, or either

No collaboration = no track for regulatory collaboration between the ICT regulator and sector-specific or multi-sector regulators

Collaborate = a total figure for countries engaged in some form of collaboration (informal, semi-formal or formal)

Same agency = the ICT regulator is part of a converged or multi-sector regulator

Note: Figures give the number of countries in each category.

Source: ITU

Five vectors defining the future of regulation

In the 2018 Global ICT Regulatory Outlook, based on our evidence, analysis and intuition, we argue that the following five vectors will define the future of regulation – embodied in the 5th generation of regulation:

- **Holistic reach for greater impact:** silo-style ICT sector regulation isn't viable in the digital world. G5 regulation will mirror the interplay between digital infrastructure, services and content across industries and national borders. What drives G5 is the impact of enforced rules based on a sound understanding of the realities of digital markets and the linkages among industries.
- **Adaptive, agile focus:** Rather than the traditional focus on specific issues or players, G5 regulation will strive to troubleshoot and repair market failures or gaps in consumer protection 'on the go'. G5 rules will not be less precise, but they will vary according to context and market behaviours, leveraging muted regulatory response only when and where it is needed.
- **Trust-based compact:** Trust will be the glue of G5 teams and the guarantee for success of regulatory response. Trust among regulators and the regulated is not negotiable and makes the traditional hierarchy fade. It is the beginning of a more positive, more equal relationship built on shared values, transparency and a new generation of incentives.

- **Participative leadership:** G5 is about leadership, not about command. It requires an active, open attitude since G5 regulators cannot afford to stand still. They are in need of expression that can speak loudly when necessary or keep its counsel, too. G5 regulators are the trailblazers of the digital transformation.

- **Collaboration is the leading vector,** the transformer of regulation into G5. Broad and constant collaboration, structured and unstructured, is essential for ensuring that regulation makes sense and can deliver positive market and consumer outcomes. Everyone has a seat at the consultation table, from government sector and multi-sector regulators to all breeds of market players to consumer associations. Although government agencies will remain in the driving seat, contributions from all parties are of value in the quest to find the shortest, least challenging path to the digital future.

[Read the full report](#)
[Global ICT Regulatory Outlook 2018](#)

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