

Fostering innovation in regulatory approaches: How can regulators cultivate an innovation-driven culture in regulatory work and decision-making? What new skillsets and mindsets do they need today?

As demonstrated by Nobel Prize winners Acemoglu, Johnson, and Robinson, institutions play a pivotal role in fostering and sustaining economic development. This insight underscores the false dichotomy often drawn between regulation and innovation — an idea that remains relevant amid the challenges of today's digital economy.

Regulators are uniquely positioned to shape environments that enable innovation in Information and Communication Technologies (ICTs), while simultaneously safeguarding users from harm, fostering inclusion both within and across countries, and promoting healthy competition.

Instruments such as regulatory sandboxes offer a pragmatic way to strike a balance between encouraging innovation and managing associated risks.

Adapting and enhancing regulatory capacity: How should regulatory mandates, capacity and decision-making evolve to balance market innovation with digital inclusion and support the achievement of broader social and economic policy goals? What institutional mechanisms can enhance regulatory responsiveness to emerging digital business models and evolving risks?

Globally, ICT regulators have had to adapt their mandates, shifting from merely connecting individuals to addressing broader gaps in access and meaningful use of digital services. Emerging technologies, such as Artificial Intelligence (AI), clearly illustrate the evolving nature of the regulator's role. It is no longer sufficient to provide connectivity; users must also be equipped with the skills to use digital tools, be protected from harm across diverse demographics, and have affordable access to services that are increasingly essential to daily life.

Ongoing training is equally vital for those within regulatory agencies, who are tasked with enabling inclusive access to the digital economy. Addressing today's challenges is important, but a forward-looking perspective is essential. Regulators must anticipate future trends to ensure that digital transformation benefits all.

Harnessing transformative technologies for regulatory excellence: How can regulators better leverage Artificial Intelligence, big data, Internet of Things, blockchain and other digital technologies to enhance decision-making, compliance monitoring and regulatory agility? What technology tools and applications can regulators use to strengthen transparency, stakeholder engagement and public trust in regulatory processes?

Quantum technologies offer a clear example of how cutting-edge scientific advances are increasingly shaping the work of ICT regulators in complex ways. On one hand, quantum computing enables the rapid processing of massive volumes of data, unlocking insights that were previously out of reach. On the other hand, it threatens to undermine current cryptographic systems, potentially putting the broader economy and citizens' privacy at risk.

Regulators must therefore strike a careful balance — leveraging the benefits of emerging technologies such as AI, blockchain and quantum computing and communications, while staying vigilant to the new risks they introduce.

AI alone holds significant promise to enhance regulatory efficiency and optimize resource allocation. However, its deployment must be guided by appropriate safeguards and ethical considerations.

At ANATEL, we have been exploring the use of blockchain to strengthen information integrity online, an initiative with strong potential for broader adoption by regulators around the world.

Cross-border cooperation for building national, regional and digital ecosystems: How can regulators leverage regional and international cooperation to foster harmonized regulatory approaches, knowledge exchange and capacity-building?

Telecommunications are inherently transnational, placing the ICT sector in a unique position of advantage when it comes to international collaboration. Today, the development of technical standards and the exchange of regulatory experiences have become integral to the daily work of regulators.

Nevertheless, there is still room for growth in this area. Regional and international organizations— such as the Inter-American Telecommunications Commission (CITEL) and the International Telecommunication Union (ITU) — must actively work to renew and strengthen ties among national authorities. This includes scaling up successful local initiatives, fostering inclusive dialogue, and acknowledging the diversity of cultures and needs across regions.