Recommendation of the Council on Broadband Connectivity

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Background Information

The Recommendation on Broadband Development was originally adopted by the OECD Council on 12 February 2004 ("2004 version of the Recommendation") on the proposal of the Committee on Digital Economy Policy (CDEP). It was revised by the Council on 24 February 2021, on this occasion it was renamed Recommendation on Broadband Connectivity.

The Recommendation provides a reference for policy makers and regulatory authorities within and outside of the OECD. Using the goals of the Recommendation as a "roadmap", countries may be better able to unleash the full potential of connectivity for the digital transformation and to ensure equal access to connectivity for citizens and companies.

OECD's work on Connectivity

Through CDEP, the OECD has worked on developing evidence-based policies to maximise the benefits of the digital transformation of economies and societies, supported by the Internet and ICTs more broadly, for many years. Connectivity is an essential pillar without which this digital transformation is not possible. The OECD was one of the first organisations working on connectivity through the creation of the CDEP's Working Party on Communication Infrastructures and Services Policy (WPCISP) in 1988, working on communication policy since the privatisation of telecommunication companies.

When the OECD adopted the 2004 version of the Recommendation, the iPhone had not even been launched. Since that time, the OECD was at the forefront of setting policies for the Internet and already foresaw the importance of widespread and affordable broadband as a prerequisite for the digital transformation. The 2004 version of the Recommendation called on Adherents to implement a set of policy principles to assist the expansion of broadband markets, promote efficient and innovative supply arrangements, and encourage effective use of broadband services.

Since 2004 however, a broad array of country-specific policy measures have emerged to promote broadband deployment, to foster use, and to protect consumers. Market mechanisms are still seen as the preferred approach overall, but there has been increasing recognition that public policy interventions (at national, regional or local levels) may be needed in order to ensure full, affordable, and timely coverage, and to avoid exclusion of disadvantaged groups, also including through not-for-profit operators. In addition, simply being connected is not enough to support advanced applications. The quality of the connection is increasingly important. The Recommendation on Broadband Connectivity responds to these trends and significantly revises the 2004 version of the Recommendation, taking into account the latest developments in technology, policy making and regulation.

An inclusive process for revising the Recommendation (2019-2021)

The revision was developed through a multi-stakeholder process and benefitted from the knowledge and experience of the WPCISP. It was conducted in line with the 2016 CDEP Standard-Setting Action Plan and was supported by reports on Broadband Policy and Technology Developments *(forthcoming)* and Emerging Trends in Competition for Communication Infrastructures and Services *(forthcoming)*. A synthesis of responses to an implementation questionnaire *(forthcoming)*, sent to CDEP and WPCISP delegates in early 2019, also informed the revision.

An informal multi-stakeholder drafting group supported the work on an ongoing basis and assisted the Secretariat in developing the revised Recommendation. Beyond discussions in the WPCISP and CDEP, consultation with a number of other committees across the OECD helped ensure that the perspectives of policy-makers in related areas were also taken into account, including the Competition Committee and the Regulatory Policy Committee.

Scope of the Recommendation

The revised Recommendation builds on the 2004 version of the Recommendation and reflects the wide-ranging developments in technology and policy making since its adoption. It acknowledges the

importance of connectivity for the digital transformation, the promotion of equal opportunities for all, and the need for policies supporting access to ubiquitous deployment through a holistic set of provisions developed in a thorough multi-stakeholder process.

The revised Recommendation is structured around five key provisions focused on:

- Fostering competition, investment, and innovation in broadband development.
- Measures to eliminate digital divides and reduce barriers to broadband deployment.
- Measures to ensure resilient, reliable, secure, and high-capacity networks.
- Minimising negative environmental impacts of communication networks.
- Regularly assessing broadband markets.

Relevance to COVID-19 Response and Recovery

The COVID-19 crisis has thrown into stark relief the importance of connectivity and communication infrastructure. The global pandemic underscores the necessity of unleashing the full potential of connectivity for the digital transformation and the promotion of equal access to connectivity for citizens, companies and organisations has only become more evident. As mobility restrictions are enforced to contain the spread of COVID-19, more and more of the estimated 1.3 billion citizens of OECD Member countries are working and studying from home and critical international policy co-ordination is now being conducted online in fora such as the G7 or G20. Along the entire Internet value chain, fixed and mobile broadband operators, content, cloud providers, and Internet Exchange Points (IXPs) are experiencing a surge in Internet traffic compared to before the outbreak.

Internet bandwidth at Internet exchange points, by country
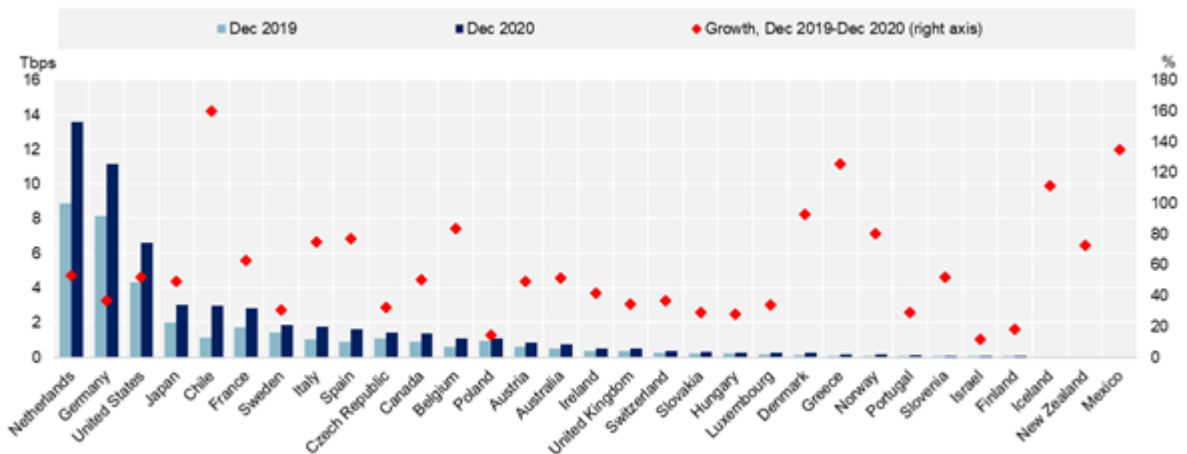
Note: Internet Exchange Points (IXPs) are bulk traffic exchange crossroads where multiple networks connect to exchange traffic. For Colombia, Estonia and Latvia, data are not available for Dec 2020. For Korea, data will soon be available.
Source: OECD based on Packet Clearing House (2021)

The Recommendation on Broadband Connectivity responds to the need for a holistic set of policies and regulation to ensure that citizens and organisations are connected well and that connectivity is expanded to areas that are lacking adequate levels of Internet access.

For more information, see:

- [Keeping the Internet up and running in times of crisis](#)

For further information please consult: https://www.oecd.org/sti/broadband/
Contact information: cisp@oecd.org

Implementation

The [first report](#) on the implementation of the 2004 version of the Recommendation was transmitted to the Council in 2008. It concluded that the Recommendation's principles had been instrumental in fostering broadband development and that the policy guidance included in it had served policy makers in advancing broadband development. The next report, which will focus on the state of play regarding the implementation, dissemination, and continued relevance of the revised Recommendation, will be transmitted to Council in 2026.

To support the implementation of the revised Recommendation, the Council instructed the CDEP, through the WPCISP to:

- serve as a forum for exchanging information on connectivity, identifying best practices for policy and regulation, and fostering multi-stakeholder and interdisciplinary dialogue to further effective broadband deployment and adoption;
- collect data and develop indicators on its implementation, and assess the short-, medium-, and long-term, positive and negative environmental impact of communication networks and the effects of policies to reduce negative impacts;
- provide practical guidance on its implementation;
- review the OECD baseline broadband speed and other quality characteristics on a regular basis to reflect innovation and progress in broadband services; and
- monitor the benefits brought by connectivity to the least advantaged groups in society and Adherents' progress in eliminating digital divides.

THE COUNCIL,

HAVING REGARD to Article 5 b) of the Convention on the Organisation for Economic Co-operation and Development of 14 December 1960;

HAVING REGARD to the Recommendation of the Council concerning Structural Separation in Regulated Industries [OECD/LEGAL/0310], the Recommendation of the Council for Enhanced Access and More Effective Use of Public Sector Information [OECD/LEGAL/0362], the Declaration for the Future of the Internet Economy (The Seoul Declaration) [OECD/LEGAL/0366], the Declaration on Green Growth [OECD/LEGAL/0374], the Recommendation of the Council on Information and Communication Technologies and the Environment [OECD/LEGAL/0380], the Recommendation of the Council on Principles for Internet Policy Making [OECD/LEGAL/0387], the Recommendation of the Council on International Mobile Roaming Services [OECD/LEGAL/0388], the Recommendation of the Council on Regulatory Policy and Governance [OECD/LEGAL/0390], the Recommendation of the Council on Consumer Policy Decision Making [OECD/LEGAL/0403], the Recommendation of the Council on Digital Security Risk Management for Economic and Social Prosperity [OECD/LEGAL/0415], the Recommendation of the Council on Consumer Protection in E-commerce [OECD/LEGAL/0422], the Declaration on the Digital Economy: Innovation, Growth and Social Prosperity (Cancún Declaration) [OECD/LEGAL/0426], the Recommendation of the Council on Artificial Intelligence [OECD/LEGAL/0449], and the Recommendation of the Council on Digital Security of Critical Activities [OECD/LEGAL/0456];

RECOGNISING the importance of connectivity for the digital transformation, the promotion of equal opportunities for all, the need for policies supporting access to ubiquitous deployment and use of broadband infrastructure and services, as well as the promotion of effective competition among economic actors;

RECOGNISING that governments and regulatory authorities have an important role to play in spurring connectivity;

RECOGNISING the importance of effective competition, increased investment, a sound institutional framework, and the primary role of the private sector in providing connectivity;

RECOGNISING the positive and negative impact of communication networks and services on the environment;

RECOGNISING the importance of connectivity, digital inclusion, network capacity and resilience to mitigate the impact of emergency situations, such as the Covid-19 pandemic;

RECOGNISING that such ambitious goals have to be met in a timely manner, while involving a wide and diverse range of stakeholders;

On the proposal of the Committee on Digital Economy Policy:

I.   RECOMMENDS that Members and non-Members having adhered to this Recommendation (hereafter the "Adherents") foster competition, investment, and innovation in broadband development by:

1.   Promoting competition in all markets for high-capacity network infrastructures and services with non-discriminatory policies to expand and achieve end user choice for connectivity at competitive prices capable of supporting modern applications.

2.   Considering policies, including voluntary network sharing, co-investment, or open access, that under certain local circumstances and market structures may enhance competition.

3.   Implementing policies that encourage investment in resilient and scalable infrastructure, increased network coverage and high-capacity networks, thereby facilitating the availability of broadband services.

4.	Developing policies and regulations that are non-discriminatory and designed to foster innovation and expand end-user choice among competing technologies and services.

5.	Supporting innovation, research, and development to improve connectivity, its use, and its applications.

6.	Developing processes and fostering multi-stakeholder dialogue that includes consumers, network operators, government at national and sub-national levels, and regulatory authorities, in particular when facilitating the phase out of legacy networks, ensuring that the views of all stakeholders are properly considered.

7.	Adopting and implementing robust legal and regulatory frameworks for connectivity in which decisions are made in an independent, impartial, objective (evidence- and knowledge-based), proportionate, and consistent manner and periodically reviewing those frameworks to ensure their continued adequacy and appropriateness and identify improvements where necessary.

II.	**RECOMMENDS** that Adherents take measures to eliminate digital divides and reduce barriers to broadband deployment by:

1.	Promoting access for all and fostering the adoption and effective use of advanced broadband services at affordable prices, accessible for everyone, including all locations, genders, abilities, and socio-economic circumstances. This should include promoting programmes for low-income and other non-adopting households.

2.	Taking timely measures to close gaps in unserved and underserved areas or demographics which are not being adequately addressed while striving to avoid distorting competition, for example through promoting demand aggregation in rural and remote areas.

3.	Strengthening consumer rights and increasing consumer choice by eliminating information asymmetries, enhancing competition in the communication services markets, and ensuring consumers are empowered in their relationships with providers of communication services through mechanisms such as fairness in contract terms, the availability of dispute resolution procedures, and regulatory supervision.

4.	Reducing barriers to broadband deployment through regulation and policies to enable infrastructure investment, while safeguarding competition and investment incentives, such as:

   a.	simplified licensing procedures, streamlined access to rights of way and public infrastructure and permits for network construction;

   b.	facilitating access to passive infrastructure; and

   c.	incentivising communication network operators to co-operate in network development activities involving civil construction works in order to minimise costs, disruption, and environmental impacts.

5.	Taking measures to support efficient, transparent, and predictable spectrum management, guided by long-term societal and economic benefits. These measures may include best practice competitive allocation processes, spectrum sharing and other innovative approaches.

6.	Promoting and investing in the improvement of digital skills to enable the effective use of broadband services by citizens of all incomes, ages, genders, and abilities. This should include facilitating the development of locally relevant and easy-to-use applications and content to increase usage and demand.

III.	**RECOMMENDS** that Adherents take measures to ensure resilient, reliable, secure, and high-capacity networks by:

1.   Publishing open, verifiable, granular and reliable subscription, coverage and, where available, quality-of-service (QoS) data through periodic reporting, including on persisting network outages, to promote network improvements and inform end-user choice.

2.   Promoting measures to ensure the resilience of communication networks, such as network diversity and redundancy, to minimise the risk of network disruption, and evaluating the effectiveness of such measures.

3.   Taking measures, including legal measures where necessary, to secure communication networks and make those networks resilient to digital security risk.

IV.   RECOMMENDS that Adherents minimise negative environmental impacts of communication networks, by:

1.   Supporting and promoting smart and sustainable networks and devices.

2.   Encouraging communication network operators to periodically report on their environmental impacts and initiatives taken to improve them and to report on the positive environmental effects of connectivity.

V.   RECOMMENDS that Adherents regularly assess the state of connectivity through the collection, analysis, and publication of data on the availability, performance and adoption of connectivity services and infrastructure deployment to determine whether public policy initiatives are appropriate, and whether and how they should be adjusted.

VI.   INVITES the Secretary General to disseminate this Recommendation.

VII.   INVITES Adherents to disseminate this Recommendation at all levels of government and to relevant regulatory authorities.

VIII.   INVITES non-Adherents to take account of and adhere to this Recommendation.

IX.   INSTRUCTS the Committee for Digital Economy Policy, through its Working Party for Communication Infrastructures and Services Policy, to:

a.   Serve as a forum for exchanging information on connectivity, identifying best practices for policy and regulation, and fostering multi-stakeholder and interdisciplinary dialogue to further effective broadband deployment and adoption and facilitate a global dialogue on broadband metrics, policies, and practices;

b.   Collect data and develop indicators on the implementation of this Recommendation as well as the short-, medium-, and long-term, positive and negative environmental impact of communication networks;

c.   Provide practical guidance on the implementation of the Recommendation, including for countries at different levels of network development;

d.   Review the OECD baseline broadband speed and other quality characteristics on a regular basis to reflect innovation and progress in broadband services;

e.   Monitor the benefits brought by connectivity to the least advantaged groups in society and Adherents' progress in eliminating digital divides; and

f.   Report to the Council on the implementation, dissemination, and continued relevance of this Recommendation no later than five years following its adoption and at least every ten years thereafter.

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- **Arrangement, Understanding and Others**: several ad hoc substantive legal instruments have been developed within the OECD framework over time, such as the Arrangement on Officially Supported Export Credits, the International Understanding on Maritime Transport Principles and the Development Assistance Committee (DAC) Recommendations.