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Collaborative digital regulation country review: Oman's digital transformation and collaborative regulation

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This country review is part of a series of case studies and country reviews developed in the framework of the ITU work stream on collaborative digital regulation.

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Foreword

I am delighted to present this new study, the tenth in the series of Collaborative Digital Regulation Country Reviews.

The digital age has brought about unprecedented advancements in technology and connectivity, but with it come a host of new challenges for regulators and policymakers. The International Telecommunication Union (ITU) has made it one of our priorities to support countries in enacting effective, collaborative policy and regulation to ensure that the benefits of digital transformation are shared by all.

For over 20 years, ITU and our partners in the wider global regulatory community have made enormous progress in analysing, mapping and understanding the evolving role that regulation plays in society and in economies. Through this effort, we now have a clear-eyed view of the path ahead for all countries, no matter where they are, in their journey towards Fifth generation collaborative digital regulation, or G5, that has emerged as the gold standard for regulators and policymakers seeking to promote an enabling environment for digital transformation. The G5 framework marks a shift of scope beyond a narrow consideration of telecommunications/ICT to a far broader one of each country's readiness to exploit a fully enabled digital economy and society.

Taking the work one step further, ITU has developed a series of national country reviews on collaborative digital regulation, in partnership with government authorities, national stakeholders and recognized experts. Based on ITU's established evidence-based tools, the ICT Regulatory Tracker and the G5 Benchmark, the country reviews offer a comprehensive assessment of the regulatory and governance frameworks, policies, and practices in each studied country.

The country reviews are an important tool for regulators and policymakers as they work to create an environment that promotes investment, competition, digital innovation, protects consumers, and ensures that the benefits of digital transformation are widely shared. They highlight diverse experiences and different policy and regulatory patterns while exploring good practices, challenges and lessons learnt by regulators in navigating digital transformation. The country reviews also help develop a better understanding of the role and impact of collaboration and collaborative governance, and the use of new tools for regulating ICT markets.

Each country assessment is unique in focusing on the specificities of national regulatory and institutional frameworks for digital markets to thrive and on collaborative governance. While all country reviews follow a similar methodology, the process of developing the study is necessarily highly collaborative and tailored to the country's specific needs and priorities. For each country, the reviews capture hard-won gains, and provide actionable insights and pointers of immense value to other countries eyeing a similar path as they navigate the rapidly evolving digital landscape. Equally they deliver a practical and inspiring message of empowerment, of overcoming resistance and securing acceptance of the work's value and of what it can deliver.

First launched in 2021, the Collaborative Digital Regulation Country Reviews series has been leveraging country-specific experiences in moving the global digital agenda forward and aligning it with the 2030 Sustainable Development Goals (SDGs). The series also plays a central role in ITU's efforts to measure the impact and benefits of G5 collaborative digital regulation, and support ITU Members in their journey to achieving SDGs and inclusive, sustainable digital transformation through meaningful policy and regulatory reform that will benefit all.

I hope that this series will serve as a catalyst for further collaboration and the advancement of digital regulation globally. I recommend this study as an enlightening and practical tool together with our regulatory metrics to all national regulators and decision-makers as they work to achieve meaningful connectivity and accelerate an inclusive and sustainable digital transformation through regulation that is open, cross-sectoral, and above all, collaborative.

Dr Cosmas Luckyson Zavazava
Director of the Telecommunication Development Bureau
International Telecommunication Union

1 Introduction

As the Sultanate of Oman works to implement a 20-year policy agenda intended to reshape the economy and society, this country review presents an overview of policy, legal, and regulatory frameworks as they relate to digital transformation. It also explores existing collaborative regulatory practices and areas of potential overlap as the ICT sector continues to evolve in Oman and around the world.

The research and analysis process involved a review of policy, legal, and regulatory instruments as well as interviews conducted with stakeholders in both the public and private sectors. These stakeholder interviews provided valuable insight and context regarding the frameworks in place, indicating both the positive and challenging impacts on their activities, operations, and the overall sector. This country review also leverages ITU resources, including the ITU Digital Innovation Profile (DIP) of Oman, and the the ITU unified framework introduced in 2023, that assesses the state of readiness of policy, governance, and legal frameworks to enable digital transformation.

This country review provides a high-level policy brief and recommendations informed by research, analysis, stakeholder interviews, and ongoing global discussions on digital technologies and services.

2 Market environment

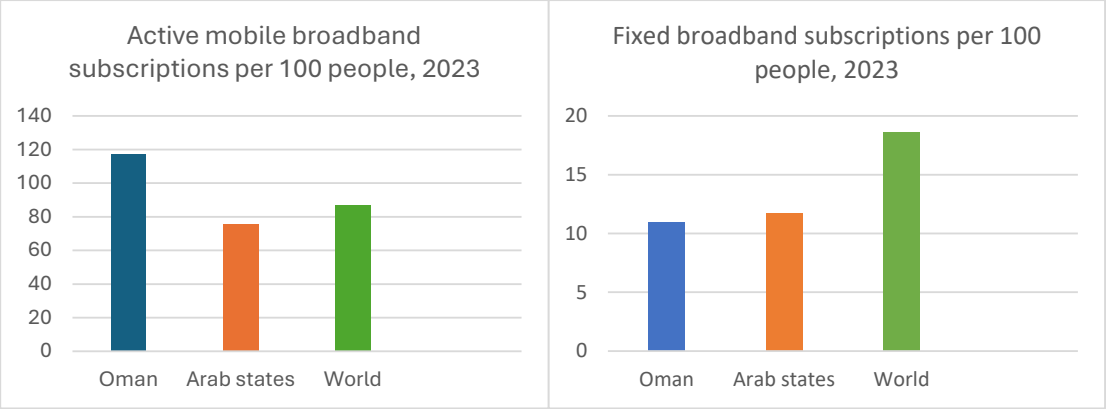
2.1 Sector overview

This section presents a snapshot of the ICT and digital markets sector landscape in Oman, including comparisons to regional and world averages. It indicates and helps analyse the country's regulatory framework and considers Oman's priorities, strengths, and targets for future development, as well as the progress made by Oman in digital transformation and collaborative regulation efforts.

According to the ITU ICT Development Index (IDI), a composite indicator measuring the level of development of the ICT sector, Oman received a score of 91.7 in 2024, representing a 1 per cent increase from 2023.[1] The IDI considers, among other indicators, factors such as households with Internet access, population covered by mobile networks, and bandwidth per Internet user.[2]

In terms of broadband penetration, while Oman far exceeds both the regional and world averages for active mobile broadband subscriptions, fixed broadband subscriptions lag behind both regional and world levels (see Figure 1).

Figure 1: Broadband availability, 2023



Source: ITU Data Hub[3]

In recent years the public sector has made significant progress in digital transformation in Oman. According to a 2023 report from the Ministry of Transport, Communications, and Information Technology (MTCIT), government institutions participating in the Government Digital Transformation Programme (GDTP) (2021-2025) recorded an average digitization rate of 72 per cent across three governorates.[4] The average performance is measured every six months, taking into account three main perspectives: service maturity, institutional readiness for digital transformation, and the actual impact of digital transformation, each encompassing multiple dimensions and indicators.[5] The remaining governorates have achieved a performance

1 ITU, Measuring digital development – The ICT Development Index (2024), https://www.itu.int/hub/publication/D-IND-ICT_MDD-2024-3/
2 ITU, Methodology of the ICT Development Index: Version 3.1(October 2023), https://www.itu.int/en/ITU-D/Statistics/Documents/IDI/IDI_2023_Version3_1_Oct2023.pdf
3 ITU Data Hub, Fixed and mobile subscriptions (2023), https://datahub.itu.int/dashboards/?id=2&e=OMN
4 MTCIT, Annual Report – Government Digital Transformation Program 2021 – 2025 Summary Performance measurement report (2023), https://www.mtcit.gov.om/ITAPortal/Data/English/DocLibrary/20246271447565 82/Digital%20Transformation%20Annual%20Report%202023.pdf
5 Telecommunications Regulatory Authority, email correspondence, 18 December 2024.

average of 54 per cent towards GDTP goals over the same period. The programme, discussed further in Section 3.2.3, is aimed at building a sustainable knowledge society and increasing the efficiency of the public sector by developing the IT industry, improving the quality of government services, and enhancing infrastructure to simplify service procedures for citizens, businesses, and government institutions.[6] The Government has stated that it plans to commit OMR 170 million (USD 441.5 million) over a five-year period to re-engineering and fully digitalizing government services by developing digital solutions, improving digital infrastructure, and enabling national competencies in digital transformation, future skills, and change management.[7]

Aligned with Oman Vision 2040, the nation's 20-year national economic and social plan, Oman seeks to transition from an oil-based economy to a diversified, knowledge-based economy.[8] The plan aligns with key international and national indicators that guide its strategic direction. In an interview, MTCIT emphasized that improvement in Oman's global rankings on such indices is an important consideration in current ICT sector activities.[9] As of 2021, international indicators have shown an improvement in Oman's performance, with its ranking in the Global Innovation Index improving from 84 in 2020 to 76 in 2021.[10] The Oman Vision 2040 plan is discussed further in section 3.2.1.

2.2 Digital ecosystem in Oman

To understand the digital ecosystem landscape in Oman, ITU in its Digital Innovation Profile (DIP) considers key components that provide an overview of the innovation ecosystem in the country.[11] These key components include parameters such as vision and strategy, capital, market, infrastructure, and policy. Collectively, this assessment provides visibility into challenges and opportunities relevant to an innovative digital ecosystem while also helping Oman build a competitive, sustainable, and ICT-enabled economy to accelerate the national digital economy.

2.2.1 Strategies

Oman has established a comprehensive national vision supported by strategic frameworks, such as Oman Vision 2040, discussed further in section 3.2.1. Oman Vision 2040 is also reinforced by various strategies such as the National Innovation Strategy, which aims to transform the national economy through innovation rather than heavy reliance on oil and gas, thereby advancing the goal of socio-economic development aligned with global standards.[12] Since 2003, the Ministry of Transport, Communications, and Information Technology (MTCIT) has also developed a series of technology-focused strategies such as the Digital Oman Strategy and the National ICT Strategy.[13] The current digitization strategy for Oman is the National Digital

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6 Ministry of Justice and Legal Affairs, Royal Decree 6/2021 Promulgating the Basic Statute of the State, https://www.mjla.gov.om/modules/decrees/download.php?file=951. Unofficial translation: https://www.wipo.int/wipolex/en/legislation/details/22022.

7 Omanuna, The Official E-Government services portal, Digital Transformation Program, https://oman.om/en/home-top-level/whole-of-government/egovernment/digital-transformation-program; Telecommunications Regulatory Authority, email correspondence, 18 December 2024.

8 Oman Vision 2040, https://www.oman2040.om/vision?lang=en

9 Interview with MTCIT, 23 July 2024.

10 Oman Vision 2040 Implementation Follow up Unit, Annual Report (2021), https://www.oman2040.om/assets/downloads/report-2021-citizen-en.pdf

11 ITU, Digital Innovation Profile: Oman (2023), https://www.itu.int/hub/publication/d-inno-profile-oman-2023/ .

12 UNCTAD, Intersessional Panel of the United Nations Commission on Science and Technology for development (2022), https://unctad.org/system/files/non-official-document/CSTD2022-23_c07_CW_Oman_en.pdf

13 These strategies are among those replaced by the National Digital Economy Program.

Economy Programme (NDEP), discussed further in section 3.2.2.[14] However, the ITU digital innovation assessment identified a need for stronger operationalization and allocation of funds for the effective implementation of these strategies. In 2014, MTCIT also published a National Broadband Strategy (NBS) intended to drive social and economic benefits through the provision of broadband to all Omani residents and businesses.[15] The three key outcomes identified in the NBS are (i) to provide high-speed, affordable broadband to all residents; (ii) to provide world-class broadband to all businesses in order to make them globally competitive; and (iii) to ensure that rural and remote communities have access to broadband connectivity to bridge the digital divide. These outcomes are supported by three NBS pillars: a telecommunication regulatory framework, broadband demand, and broadband infrastructure.

The assessment from ITU of Oman's ICT policies and regulations shows that while Oman Vision 2040 has encouraged innovation in the public sector, engagement with innovators across other sectors has been uneven. The assessment notes that over the last few years, the public sector has primarily focused on developing policies, frameworks, strategies, and guidelines to support the implementation of the Oman Vision 2040. Additionally, the public sector has promoted ICT and entrepreneurship initiatives within primary, secondary, and tertiary education systems. Notably, in line with NBS objectives, Oman has undertaken regulatory reforms to address new and emerging technologies and has continued to expand broadband access. Despite these efforts, slow and delayed execution or implementation of regulations and initiatives have resulted in missed opportunities for innovation in e-governance. Although the Ministry of Commerce, Industry and Investment Promotion (MCIIP) is undertaking efforts to foster innovation and sector development, the DIP notes that innovators find the resulting processes to be costly and slow.

2.2.2 Infrastructure

The ITU DIP notes that Oman has strong energy and telecommunication infrastructures and has seen success in Internet connectivity services leveraging fibre-optic deployment and the rollout of 5G mobile connectivity. Concurrently, the analysis by ITU found that there are challenges concerning the lack of penetration of Internet services in rural areas that hinders access to digital government services and the continued restriction of some voice-over-IP (VOIP) services that constrain critical components of innovative business models.

The Government of Oman has undertaken efforts to accelerate the availability of hard infrastructure and to strengthen and expand the development of soft infrastructure. To encourage the adoption of technology, the Government funded a programme to provide economically disadvantaged families with essential equipment for their homes. However, government-funded technology-adoption efforts, including those intended to provide IT equipment for household use, have encountered challenges. These challenges include high equipment costs and the limited distribution of certain components due to the relatively small domestic market size. Some efforts, such as the Oman Satellite Project have helped bridge the gap between rural and urban areas, which utilized government support for the provision of Internet access to

[14] MTCIT, National Program for Digital Economy, https://www.mtcit.gov.om/ITAPortal/Pages/Page.aspx?NID=292792&PID=581101.

[15] Ministry of Transport and Communications, National Broadband Strategy (2014), https://oman.om/docs/default-source/default-document-library/%D8%A7%D9%84%D8%A7%D8%B3%D8%AA%D8%B1%D8%A7%D8%AA%D9%8A%D8%AC%D9%8A%D8%A9-%D8%A7%D9%84%D9%88%D8%B7%D9%86%D9%8A%D8%A9-%D9%84%D9%84%D9%86%D8%B7%D8%A7%D9%82-%D8%A7%D9%84%D8%B9%D8%B1%D9%8A%D8%B6(%D8%A8%D8%A7%D9%84%D8%A7%D9%86%D8%AC%D9%84%D9%8A%D8%B2%D9%8A%D8%A9-%D9%81%D9%82%D8%B7).pdf?sfvrsn=ed8bde63_0.

nearly 600 rural villages and communities over a ten-year period.[16] The DIP also notes that the Government has developed training programmes to build ICT skills and expand exposure to technology outside of urban areas which is a key consideration given that 14 per cent of the population resides in rural areas. Additional soft infrastructures supported by government investment over a 15-year period include innovation parks, knowledge centres, education facilities, incubators, and research centres. However, the DIP notes that funding is also needed to ensure that these spaces can attract and nurture new innovators.[17]

2.2.3 Human capital and innovation ecosystem

The DIP notes that as of 2023, the country boasts a strong pool of human capital with solid academic knowledge in technical disciplines.[18] In addition, Oman is considered as a potential platform for testing of emerging technologies due to its geographic location and geopolitical stability.

Nevertheless, Oman's technology sector and ICT professionals still require international exposure, advanced technology training, and practical experience in the digital sector. Young innovators, in particular, are lacking in the business development, operational, and entrepreneurial skills necessary to transform innovations into viable ventures. Although the number of citizens with programming skills has grown, this demographic group also has the second-highest unemployment rate in the country. ITU also noted the absence of a formal ICT sector network to promote and advocate for digital innovation ecosystem matters. The absence of such formal networks and of a centralized stakeholder directory further hinders multi-stakeholder engagement and collaboration.

Furthermore, public administration digitization initiatives have not yet translated into ICT-based opportunities for start-ups or small and medium enterprises (SMEs). ITU reports that government projects are awarded to large companies with more extensive portfolios, while SMEs and start-ups also face a lengthy and complex tender application process for public procurement opportunities. In early 2022, MTCIT launched the *Jadara* programme, to encourage government entities to purchase local startup products in the ICT sector and promote the entry of these products into the local market, thereby contributing to the growth of the sector in Oman.[19] The *Jadara* programme provides the following services:

- assisting start-ups to establish proof of value (POV) to demonstrate the product utility for government entities, with MTCIT facilitating product testing for up to three months;
- coordinating communication and collaboration between start-ups and targeted government entities; and
- promoting locally developed ICT products.

To date, following product evaluation, MTCIT has supported 33 start-ups in promoting their products to targeted government entities. In addition, the ministry has provided proof of concept (PoC) project assistance to seven start-ups targeting various government entities.[20]

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16 TRA, TRA Initiative to Provide Fixed Internet Services to Villages and Rural Communities via Satellite 2020 (Afaq) (January 28, 2021), https://tra.gov.om/En/ViewInitiatives.jsp?code=39.

17 ITU, Digital Innovation Profile: Oman (2023), p. 7, https://www.itu.int/hub/publication/d-inno-profile-oman-2023/.

18 ITU, Digital Innovation Profile: Oman (2023), p. 8, https://www.itu.int/hub/publication/d-inno-profile-oman-2023/.

19 MTCIT, *Jadara* Programme, https://www.sas.om/SASEN/Pages/Registration.aspx

20 TRA, email correspondence, 18 December 2024.

2.2.4 Investment and financing

As of 2023, Oman has promoted several sources of seed funding and idea-stage investment for start-ups including private sector funding programmes, government banks, government funding schemes, sponsorship programmes, and university incubation centres. Additional support mechanisms include Innovation Development Oman (IDO) and the Oman Technology Fund, both under ITHCA (formerly the Oman ICT Group). However, these resources remain insufficient to meet the demands for business growth funding. The research and development sector also faces issues related to limited funding support. It is also noted that budgetary constraints in recent years have resulted in reduced public and private sector spending and lower investment levels, thereby hindering the availability of funds for start-ups and SMEs. While Oman has attracted international investments through its economic free zones foreign direct investment (FDI) in the ICT sector remains relatively low.

3 Policy, legal, and regulatory instruments

3.1 ICT policy and legal framework

Table 1: Selected laws and regulations relevant to digital regulation and transformation

Instrument	Year	Scope
Basic Statute of the State[21]	2021	Supreme law of Oman that establishes the foundation for all other laws and regulations. Notably, Article 36 provides for the inviolability and confidentiality of electronic correspondence of all kinds, telephone, telegraphic, postal correspondence, and other means of communication.
Telecommunications Regulatory Act[22]	2002, as amended	• Governs the telecommunication sector, • Establishes the Minister of Transport and Communications[23] as responsible for setting policy, • Establishes the Telecommunications Regulatory Authority (TRA) as the administratively autonomous sector regulatory authority, including oversight of spectrum, licensing, and technical specifications, as well as preparing suitable conditions for competition among licensees. • Instructs TRA to coordinate with concerned ministries, government units, chambers of industry, unions, and other sector organizations. A revised telecommunications law is under development.[24]
Executive Regulations of the Telecommunications Regulatory law[25]	2011, as amended	Establishes regulations, including those pertaining to officials of the TRA, rules and procedures for meetings, licence applications and procedures, licence conditions, type approval of telecommunication equipment, rules for using telecommunication services, agreements in the telecommunication market, interconnection and access, and dominant licensees' obligations.
Law on Competition Protection and Monopoly Prevention[26]	2014	• Establishes the competition regime, prohibiting monopolistic and anti-competitive activity. • Establishes penalties for violations

[21] Constitute, Constitution of Oman 1996 (rev. 2011), https://www.constituteproject.org/constitution/Oman_2011

[22] TRA, Telecommunications Regulatory Act and Amendments (2015), https://tra.gov.om/pdf/telecom-act-2015-english.pdf

[23] A role now filled by MTCIT.

[24] TRA, email correspondence, 18 December 2024.

[25] TRA, Executive Regulations, https://tra.gov.om/GeneratedPage.jsp?menu=17

[26] Royal Decree No. 67/2014, Law on Competition Protection and Monopoly Prevention, https://tejarah.gov.om/storage/01J00HETYVFQDE0XS72HYN2V5G.pdf. Unofficial translation at https://www.wipo.int/wipolex/en/legislation/details/19893.

Table 1: Selected laws and regulations relevant to digital regulation and transformation (continued)

Instrument	Year	Scope
Implementing Regulations for the Law on Protection of Competition and Prevention of Monopoly[27]	2021	Establishes the competition regulatory framework, including criteria for concerned markets, dominance, and mergers and acquisitions.
TRA Ex-Post Regulations (Anti-Competitive Behaviour)[28]	2013, as amended	• Defines anti-competitive behaviour in the telecommunications sector, empowers TRA to make exemptions, • Empowers TRA to monitor the market, investigate possible anti-competitive behaviour, issue guidelines, and impose penalties. 2020 amendments added a complaints procedure annex.
TRA Ex-Ante Regulations (The Regulation of Dominance)[29]	2020	• Outlines procedures for market definition and determination of dominance. • Empowers TRA to impose remedies on dominant licensees.
Royal Decree 39/2025 issuing the Electronic Transactions Law[30]	2025	Decree replacing the 2011 electronic transactions law and modernizing the regulatory framework. Electronic transactions can be defined as any contract, agreement, or communication that is executed wholly or partially by electronic means. The provisions pertain to electronic transactions, documents, signatures and trust services, and penalties imposed for violation of provisions.
Universal Service Policy and its Implementation Strategy[31]	2009	• Sets out the universal service policy, funding mechanism, and programme administration. • Includes provision of broadband to schools.

Source: ITU based on policy, legal, and regulatory instruments

[27] Ministry of Commerce, Industry & Investment Promotion Ministerial Decision No. 18 / 2021, Implementing regulations for the Law on Protection of Competition and Prevention of Monopoly, https://tejarah.gov.om/storage/01J037WJ472DHPRXB0C076CSZX.pdf.

[28] TRA, Decision No. 70/2013 regarding Ex-Post Regulations (Anti-Competitive Behavior), https://tra.gov.om/pdf/70-2013-en.pdf; TRA, Decision No. 59/2020 amending some provisions on Decision No. 70/2013 on Ex-post Regulations (Anti-competitive Behavior), https://tra.gov.om/En/DownloadFile.jsp?type=PublicationList&code=216.

[29] TRA, Ex ante Regulations, https://tra.gov.om/pdf/549_ExAnteRegulation.pdf.

[30] Royal Decree 39/2025 issuing the Electronic Transactions Law, https://www.mtcit.gov.om/ITAPortal_AR/Data/SiteImgGallery/20254211028357 11/%D9%82%D8%A7%D9%86%D9%88%D9%86%20%D8%A7%D9%84%D9%85%D8%B9%D8%A7%D9%85%D9%84%D8%A7%D8%AA%20%D8%A7%D9%84%D8%A7%D9%95%D9%84%D9%83%D8%AA%D8%B1%D9%88%D9%86%D9%8A%D8%A9.pdf.

[31] TRA, Universal Service Policy and its Implementation Strategy, https://www.tra.gov.om/pdf/334usoimplementationpolicy.pdf.

3.2 Legal and regulatory framework for emerging technologies development

3.2.1 Existing instruments

Oman has developed and adopted a range of instruments that provide the frameworks essential for advancing the country's digital transformation, while promoting and facilitating the development of emerging technologies (Table 2).

Table 2: Emerging technology legal, regulatory, and policy instruments

Laws, regulations, and frameworks			
Topic	Instruments	Key topics addressed	Responsible authority
Data protection	Royal Decree 6/2022 promulgating the Personal Data Protection Law (PDPL)[32]	Provisions pertaining to notifications on data subjects, consent, rights of data subjects, sensitive personal data obligations of the data controller, and breach notifications. Repeals data protection provisions of electronic transactions law.	Competent administrative division of MTCIT
Data protection	Ministerial Decision 34/2024 issuing the Executive Regulations to the PDPL[33]	Regulations pertaining to consent for processing of personal data, permitting process for processing sensitive personal data, rights of data subject, obligations of data controller and data processor, method for transferring personal data abroad, complaint and consumer redressal mechanism and enforcement	Competent administrative division of MTCIT
Cybercrime	Royal Decree 12/2011 issuing the Cybercrime Law[34]	Cybercrimes, violation of safety, confidentiality of data and electronic information and information systems, misuse of information technology tools, forgery and information fraud, content crimes	Originally the Information Technology Authority,subsequently MTCIT
Internet of things (IoT)	Regulation for the provision of Internet of things services	Authorization, obligations, and rights of IoT providers	TRA
	IoT Security Standard 2022[35]	IoT security guidance for stakeholders, mandatory and voluntary security controls	TRA

[32] Royal Decree 6/2022 promulgating Personal Data Protection Law, https://qanoon.om/p/2022/og1429/
[33] Ministerial Resolution No. 34/2024 issuing the Executive Regulations of the PDPL, https://qanoon.om/p/2024/mtcit20240034/
[34] Royal Decree 12/2011 issuing the Cyber Crime Law, https://www.mtcit.gov.om/ITAPortal/MediaCenter/Document_detail.aspx?NID=54
[35] TRA, IoT Security Standard 2022, https://tra.gov.om/En/DownloadFile.jsp?type=DocumentList&code=552.

Table 2: Emerging technology legal, regulatory, and policy instruments (continued)

Laws, regulations, and frameworks			
Topic	**Instruments**	**Key topics addressed**	**Responsible authority**
Telecom-munications regulation	Guidelines of regulatory sandbox rules for telecommu-nications[36]	Enables innovators to test products and services relying on telecommunication technolo-gies, allows TRA to exempt from regulatory obligations	TRA
Cloud computing	Regulation organizing Cloud computing services and data centres	Licensing and provision of cloud computing services, provision of data centre services	TRA
	Cloud Governance Framework[37]	Adoption of cloud services in the Government of Oman	Information Technology Authority (MTCIT), IT leads within agencies
Fintech	Fintech Regulatory Sandbox Framework[38]	Banking, payments and other financial services solutions	Central Bank of Oman
Social media and online marketing	Regulation governing the practice of the activity of marketing and promotion on Internet websites and social media[39]	Social media marketing	MCIIP
Policies and programmes			
AI and advanced technologies	National Programme for AI and Advanced Digital Technologies[40]	AI and advanced technologies	MTCIT
Open data	National Open Data Initiative[41]		MTCIT, NCSI

Source: ITU based on policy, legal, and regulatory instruments

[36] TRA, Decision No. 89/2021 Issuing Guidelines of Regulatory Sandbox Rules for Telecommunications, https://tra.gov.om/En/DownloadFile.jsp?type=DocumentList&code=307.

[37] Information Technology Authority, Cloud Governance Framework (2017), https://www.ita.gov.om/itaportal/Data/English/DocLibrary/20181112105310819/ITA%20-%20Cloud%20Governance%20Framework%20v.1.pdf.

[38] Central Bank of Oman, Fintech Regulatory Sandbox Framework, https://cbo.gov.om/sites/assets/Documents/English/Fintech/FRSFrameworkEnglish.pdf.

[39] Ministry of Commerce, Industry, and Investment Promotion, Ministerial Decision 619/2022 Issuing the Regulation Governing the Practice of the Activity of Marketing and Promotion on Internet Websites and Social Media, https://qanoon.om/p/2022/mociip20220619/.

[40] MTCIT, National Program for AI and advanced technologies, https://www.mtcit.gov.om/ITAPortal/Pages/Page.aspx?NID=292589&PID=200721#:~:text=The%20National%20Program%20for%20AI%20and%20advanced%20technologies,-About%20the%20Program&text=Accelerating%20the%20transfer%20of%20modern,intelligence%20applications%20and%20advanced%20technologies.

[41] Omanuna, The Open Data Initiative, https://oman.om/en/home-top-level/open-data#:~:text=The%20Oman%20Open%20Data%20portal,%2C%20investor%2C%20researcher%20or%20developer.

MTCIT noted that an internal AI policy for the Government was already in place, and that efforts were underway to finalize and publish a comprehensive national AI policy by the end of 2024.[42]

In addition, according to an interview with a press outlet, the head of the Telecommunications Regulatory Authority (TRA) stated that a smart city regulatory framework is being developed in conjunction with the Ministry of Housing and Urban Planning and MTCIT.[43] The smart city framework development effort stems from the inclusion of smart, sustainable cities among the priorities in Oman Vision 2040, and in the Oman National Spatial Strategy.[44]

3.2.2 Laws, regulations, and policies aligned with GSR best practice guidelines

To assess how the legislative agenda of Oman aligns with international best practices, it is useful to consider the key recommendations issued at the annual ITU Global Symposium for Regulators (GSR). At each GSR, ICT regulators from around the world adopt best practice guidelines on various aspects of ICT regulation and strategies for implementing effective policy, legal, and regulatory frameworks.

In reviewing the policy, legal, and regulatory frameworks of Oman, the following areas of alignment with GSR best practice guidelines from the past five years are evident:

- **Data governance**: The Personal Data Protection Law (PDPL) addresses consent for processing personal data, the rights of data subjects, and the obligations of data controllers. Further, the PDPL provides the process for consent for processing personal data, sensitive personal data, transferring personal data abroad, complaints and consumer redressal, and enforcement. The presence of a clear, strong data governance framework is a prerequisite for the trust required to build strong digital ecosystems, as described in the data governance component of the GSR 2024 Best Practice Guidelines, and in the data shielding aspect of the GSR 2020 Best Practice Guidelines.[45] However, national stakeholders noted a lack of clarity regarding data hosting, residency and localization requirements, that may create uncertainty when considering the adoption of cloud-based services.[46]
- **Research and development**: Oman's National Programme for AI and Advanced Digital Technologies, supports the implementation a national plan for research and investment and the establishment of emerging technology companies. This is in line with the GSR 2023 guidelines which highlight financial or fiscal support for research and development in digital technology, open technology innovation, and innovative business models.[47] The pillars of the programme also aim to enhance the productivity of sectors pertaining to AI and advanced technologies.
- **Sustainability**: Sustainability has been a consistent component of each edition of the GSR best practice guidelines over the years. Oman's Government Digital Transformation Programme (GDTP), National Digital Economy Programme (NDEP), and Oman Vision 2040 each promote sustainability in the digitization of the national economy, an approach

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42 Interview with MTCIT, 23 July 2024.

43 Oman Observer, Framework to regulate smart cities this year: TRA, March 12, 2024, https://www.omanobserver.om/article/1150953/oman/framework-to-regulate-smart-cities-this-year-tra.

44 Ministry of Housing and Urban Planning, Oman National Spatial Strategy 2040: National Planning Standards, August 2023, https://www.housing.gov.om/cmsapi/files/content/Books_publication/ONSS%20National%20Planning%20Standards_August%202023_FINAL%20PDF_compressed.pdf.

45 ITU GSR 2024 Best Practice Guidelines, https://www.itu.int/itu-d/meetings/gsr-24/wp-content/uploads/sites/24/2024/08/GSR-2024_BestPracticeGuidelines.pdf; ITU, GSR 2020 Best Practice Guidelines, https://www.itu.int/en/ITU-D/Conferences/GSR/2020/Documents/GSR-20_Best-Practice-Guidelines_Final_E.pdf

46 Interview with operators, 9 July 2024.

47 ITU GSR 2023 Best Practice Guidelines, https://www.itu.int/en/ITU-D/Regulatory-Market/Documents/GSR23/GSR-23_Best%20Practice%20Guidelines-E.pdf

that is aligned with the green digital transformation and sustainability best practices highlighted in the GSR 2024, GSR 2023 and GSR 2020 guidelines.[48]

- **Collaboration and stakeholder engagement**: In 2024, MTCIT sought input on a comprehensive national policy for AI, calling upon various industry sectors to contribute towards the policy.[49] This is an example of collaborative regulation, a longstanding component of GSR best practices, dating back to 2009.

3.3 Key cross-sectoral policies and activities

3.3.1 Oman Vision 2040

The Oman Vision 2040 plan was approved in December 2020 by Sultan Haitham bin Tariq, the Sultan of Oman. It underpins the national strategies and five-year development plans of Oman, taking into account the economic and social conditions and the capacity of Oman to progress alongside local, regional, and global developments.[50] The Oman Vision 2040 plan focuses on reshaping the roles between the public, private, and civil sectors to:

- ensure effective economic management;
- achieve a diversified, developed, and sustainable national economy;
- ensure fair distribution of development gains among governorates; and
- protect the natural resources and unique environment of Oman.

Furthermore, the Vision aims to modernize the educational ecosystem, support scientific research and innovation, develop healthcare regulations, and lay the foundations for social well-being for all segments of society. The Vision was developed in stages with the help of expert committees and teams working in line with international best practices. Oman Vision 2040 sets out pillars and national priorities, which are supplemented by strategic directions, indicators, and targets.

The pillars identified by Oman Vision 2040 pertain to people and society, economy and development, government and institutional performance, and environmental sustainability. The pillars broadly cover 12 national priorities which have been set through consideration of the following concerns:

- defining the roles between public, private, and civil society institutions;
- attaining a diversified and sustainable economy;
- enhancing the education system through initiatives to modernize and support scientific research and innovation;
- conserving natural resources and various elements of the environment;
- developing healthcare systems and services; and
- ensuring that there is a balance of development capabilities between governorates.

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48 ITU GSR 2024 Best Practice Guidelines, https://www.itu.int/itu-d/meetings/gsr-24/wp-content/uploads/sites/24/2024/08/GSR-2024_BestPracticeGuidelines.pdf; ITU GSR 2023 Best Practice Guidelines, https://www.itu.int/en/ITU-D/Regulatory-Market/Documents/GSR23/GSR-23_Best%20Practice%20Guidelines-E.pdf; ITU, GSR 2020 Best Practice Guidelines, https://www.itu.int/en/ITU-D/Conferences/GSR/2020/Documents/GSR-20_Best-Practice-Guidelines_Final_E.pdf.

49 MTCIT, Public Consultation on the National Artificial Intelligence Policy https://www.mtcit.gov.om/ITAPortal/Pages/Page.aspx?NID=873053&PID=1342222

50 Oman Vision 2040 Implementation Follow-up Unit, Vision Document 2040, https://www.oman2040.om/oman2040?lang=en

Oman Vision 2040 has established a set of international and national indicators for each of its priorities to promote the position of Oman in various fields. Indicators help to measure the achievements of the Vision through the efforts made toward achieving each national priority. The Oman Vision 2040 Implementation Follow-up Unit identified the main indicators, and these indicators are presented in Table 3.

Table 3: Oman Vision 2040 main indicators

International indicators	National indicators
• Global Innovation Index (World Intellectual Property Organization) • Global Competitiveness Index (World Economic Forum) • Skills (one pillar of the Global Competitiveness Index) • Government effectiveness, World governance indicators (World Bank) • Environmental Performance Index (Yale University)	• GDP per capita • Real GDP growth rate • Non-oil sectors share of GDP • Net inflow of foreign direct investment (FDI) to GDP • Citizens' employment share of total jobs created in the private sector

Source: Oman Vision 2040 Implementation Follow-up Unit

While Oman Vision 2040 initially included 67 indicators (34 international and 33 national), the 2022-2023 Oman 2040 Annual Report stated that the Government was revising the indicator portfolio to be comprised of five international indicators and 34 national indicators.[51] This re-engineering of the Oman Vision 2040 indicators is being conducted through a collaborative effort by the Ministry of Economy, the Oman Vision 2040 Implementation Follow-up Unit, and the National Centre for Statistics and Information.

The Oman Vision 2040 Implementation Follow-up Unit (Unit) was created by a 2020 royal decree that transferred holdings and responsibilities from the existing Implementation Support and Follow-Up Unit to the new entity.[52] The Unit reports to the Council of Ministers and monitors the activities carried out by public and semi-government entities overseeing the roles of various sectors involved in implementing Vision's programme in accordance with their capabilities. Additionally, the Unit aims to follow up on the targets, results, and indicators, while also creating a motivating environment to achieve the objectives of the vision. The Unit also works on policies to simplify procedures and services, supports stakeholder entities, develops procedures to ensure the best services to customers from government entities, and promotes cooperation between private and government entities to work toward Oman Vision 2040 goals.

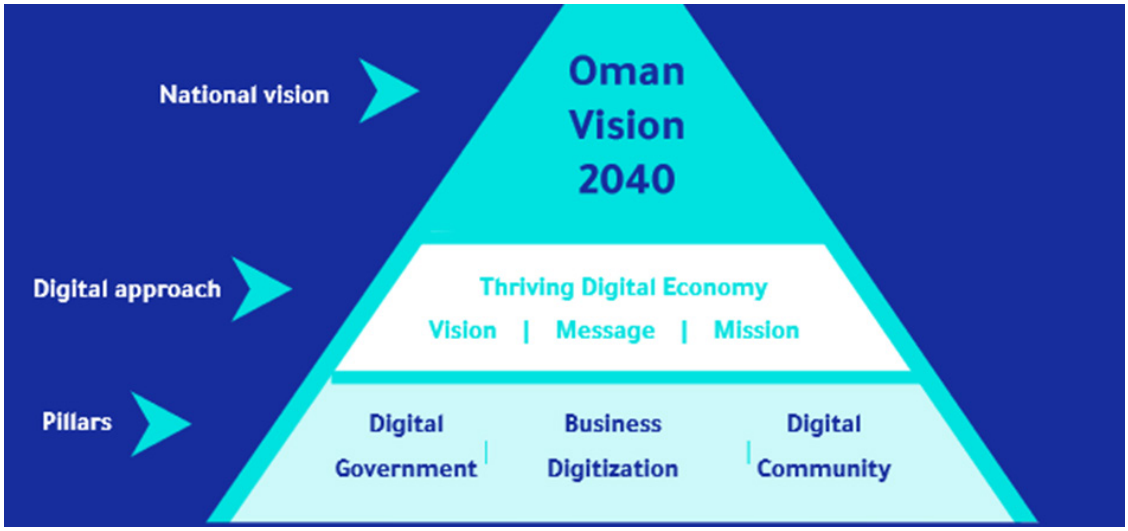
[51] Oman Vision 2040 Implementation Follow-up Unit, Oman Vison 2040 Report: 2022-2023 (June 2023), p. 16, https://www.oman2040.om/Oman2040Report?lang=en.

[52] Royal Decree 100/2020 Establishing the Oman Vision 2040 Implementation Follow-Up Unit, Determining Its Competences, and Adopting Its Organizational Structure, https://www.oman2040.om/cc-content/themes/vision2040/assets/downloads/2020-100-royal-decree.pdf.

3.3.2 National Digital Economy Programme

The National Digital Economy Programme (NDEP) was introduced to develop a prosperous digital economy that contributes to the overall national economy.[53] NDEP outlines a set of pillars, executive programmes, and action plans along with medium- and long-term targets aligned to the Oman Vision 2040 (Figure 2).

Figure 2: National Digital Economy Programme – Targets



Source: MTCIT

The National Digital Economy Programme also aims to cultivate a digital economy via a secure advanced infrastructure that enables a digital government to harmonize economic and social development plans. NDEP is structured around three pillars to achieve these national objectives:

- accelerating the transition to digital smart government,
- enhancing the digital society, and
- enabling business digitization.

NDEP aims to develop skills and competencies that meet labour market requirements and future digital demands. In addition, it aims to establish smart government transformation programmes and provide effective governance mechanisms. NDEP will help create a digital society to meet future requirements while also providing a supportive environment to help companies in the adoption of emerging technologies to advance their business digitization capabilities.

NDEP has established a range of programme targets for the 2020-2025 period, identifying supervisory bodies for each. Notably, MTCIT is responsible for four of the nine targets, as shown in Table 4.

[53] MTCIT, National Program for Digital Economy, https://www.mtcit.gov.om/ITAPortal/Pages/Page.aspx?NID=292618&PID=200398

Table 4: National Digital Economy Programme overview – programmes and strategies 2021-2025

Overall supervision	The Financial and Economic Committee of the Council of Ministers				
Supervisory body	**Ministry of Transport, Communication, and Information Technology**	**Telecom-munications Regulatory Authority**	**Central Bank of Oman**	**Ministry of Economy**	**Ministry of Commerce, Industry, and Investment Promotion**
Executive programmes	Space Cybersecurity Digital transformation Digital industry AI and advanced technologies	Infrastruc-ture	Fintech	Empowering the digital economy ecosystem	E-com-merce

Source: ITU, adapted from MTCIT

3.3.3 Government Digital Transformation Programme 2020-2025

The Government Digital Transformation Programme 2020-2025 (GDTP) aims to establish a sustainable knowledge society and increase the efficiency of the public sector by building national capacity, enhancing infrastructure, developing the IT industry, and improving the quality of government services.[54] The programme is also intended to improve the delivery of government services, thereby meeting the objective of simplifying procedures for senior citizens, the business sector, and government institutions. This programme is one result of the five-year plans to fulfil the targets for Oman Vision 2040.[55]

MTCIT, working closely with teams within the target organizations, has developed standardized models to enable government entities to develop digital transformation plans. Four implementation tracks are defined to achieve the programme's visions and national directions, each implementation track having its own goals, indicators, and projects:

- **Excellence in e-services**: The Government aims to increase the country's ranking in the United Nations E-Government Survey E-Services Development Index from 24 in 2020 to 20 in 2025. This track is intended to raise the standards and quality of digital service channels to achieve a rewarding user experience. The implementation track is also intended to increase the availability and accessibility of e-services through smart and mobile devices, and to increase the availability of open government data for vital sectors. Separately, the

[54] MTCIT, Government Digital Transformation Programme, https://www.mtcit.gov.om/ITAPortal/Pages/Page.aspx?NID=292734&PID=200797

[55] Oman Vision 2040 Implementation Follow-up Unit, Annual Report 2021, https://www.oman2040.om/cc-content/themes/vision2040/assets/books/report-general-en/index.html#p=132

programme aims for 80 per cent of government services to be processed completely electronically by 2025, as compared to 34 per cent in 2020.[56]

- **Inefficiency of digital solutions and infrastructure**: This track aims to digitally transform infrastructure for priority service entities to support Oman Vision 2040. It also encourages the development, in cooperation with the private sector, of an increased percentage of digital and smart applications. Further, it aims to reduce spending and avoid duplication in the development of digital transformation projects. Separately, the programme will develop common central systems and new digital solutions and applications to be shared, applied, and used.
- **Empowering national capabilities and managing digital change**: This track is intended to enable the programme to invest in capacity-building and skills for digital transformation, fostering knowledge and experience exchanges between the public, private, and academic sectors. By 2025, the programme aims to launch a strategy for building national capabilities in the public sector and for 100 per cent of government employees to be trained in various digital transformation areas. Finally, by 2025, work under this track will result in the issuance of the Government Digital Transformation Programme (GDTP) guidelines.
- **Community participation and awareness**: This stream is intended to increase interaction and community participation in e-services and digital transformation initiatives, and enhance the quality of digital channels and partnerships with the private sector and SMEs to implement transformation initiatives and projects effectively.

3.3.4 National Programme for AI and Advanced Digital Technologies

The National Programme for AI and Advanced Digital Technologies (AI programme) was established by MTCIT in 2020.[57] The ministry published documents over the course of the programme's development, culminating in a programme and implementation document approved by the Council of Ministers in September 2024.[58] The AI programme is a cross-sectoral undertaking intended to promote the adoption and localization of AI technologies to support economic and development sectors. The programme is based on three pillars:

- promoting and adopting AI in the economic and development sectors;
- localization of AI technologies; and
- governance of AI applications and advanced digital technologies with a human-centred vision.

The AI programme comprises 26 ongoing initiatives across the three pillars, including support for Omani factories and SMEs adopting AI, building AI into government services, training workers and educators, updating various regulatory frameworks, creating an Omani-focused large language model, and implementing quantum computing initiatives.[59] The AI programme

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[56] MTCIT, Government Digital Transformation Programme, https://www.mtcit.gov.om/ITAPortal/Pages/Page.aspx?NID=292734&PID=200930

[57] MTCIT, Future Opportunities for Artificial Intelligence Applications and Advanced Technologies in the Sultanate of Oman (June 2021), p. 14, https://www.mtcit.gov.om/ITAPortal/Data/English/DocLibrary/202161395323666/Future%20Opportunities%20for%20Artificial%20Intelligence%20(AI)%20Applications%20in%20the%20Sultanate%20of%20Oman%202.pdf.

[58] MTCIT, National Programme for Artificial Intelligence and Advanced Digital Technologies (September 2024), https://www.mtcit.gov.om/ITAPortal/Data/SiteImgGallery/2024926111734167/National%20Program%20for%20AI%20and%20Advanced%20Digital%20Technologies%20-%20Public%20Version.pdf.

[59] MTCIT, National Programme for Artificial Intelligence and Advanced Digital Technologies (September 2024), pp. 27-35, https://www.mtcit.gov.om/ITAPortal/Data/SiteImgGallery/2024926111734167/National%20Program%20for%20AI%20and%20Advanced%20Digital%20Technologies%20-%20Public%20Version.pdf.

also includes multiple initiatives to revise and introduce legal and regulatory frameworks to enable and promote AI and advanced technologies.

The AI programme operates under a governance structure that includes multiple stakeholders. The Financial and Economic Committee of the Council of Ministers provides general supervision, while the Digital Economy Technical Committee is responsible for monitoring and guidance. MTCIT is responsible for legislation as well as implementation control and supervision. The programme also relies of the implementation role of government and the private sectors more generally, and the investment activities conducted by the Oman Investment Authority and investment companies. There is, however, a lack of public information regarding any specific collaborative mechanisms or activities among the various stakeholders.

4 Collaborative governance

4.1 Institutional setup

Several government and regulatory institutions, including the Telecommunications Regulatory Authority (TRA) and MTCIT, play key roles in Oman's efforts to accelerate and capitalize on digital transformation. These institutions along with affiliated departments and agencies hold responsibilities that extend beyond communications, to encompass financial services, competition, and commerce (Figure 3).

Figure 3: Key institutions relevant to Oman's digital transformation

Source: ITU analysis.

Collaborative approaches that engage various regulatory authorities and stakeholders are crucial to the ongoing digital transformation of Oman.

4.1.1 Institutional mandates and activities

This section provides a high-level overview of the missions, key activities, and levels of independence or oversight of national institutions in order to better understand the critical roles they play in the digital transformation of Oman (Figure 4).

Figure 4: Key Omani digital transformation institutions

Ministry of Transport, Communications, and Information Technology		
Mission	**Key digital activities**	**Reporting**
To provide an advanced, secure and integrated transport, communications, and information technology infrastructure that supports urban and economic development, while aligning with the sustainability goals and future aspirations towards achieving Oman Vision 2040.	ICT sector policy-making and supervision, digital strategy formulation and implementation, oversight of several NDEP 2025 programme targets	The Minister of Transport, Communications, and Information Technology is a member of the Council of Ministers and reports to the Sultan
Telecommunications Regulatory Authority		
Mission	**Key digital activities**	**Independence**
A body with financial and administrative autonomy, responsible for regulating the telecommunication and postal services sectors according to international best practices	Ensure provision of affordable telecommunication services, promote the use of telecommunication services, ensure optimal spectrum use, safeguard interests of customers and suppliers, encourage commercial activity in the telecommunication sector, regulate ICT sector competition	Established by law with financial and administrative autonomy Chaired by independent member appointed by Council of Ministers Other members appointed on recommendation of Council of Ministers
Ministry of Commerce, Industry, and Investment Promotion		
Mission	**Key digital activities**	**Reporting**
Collaborate with partners to deliver quality e-services alongside a supportive legislative framework, driving investment, trade expansion and industry resilience in order to nurture a knowledge-based competitive economy fostering sustainable growth.	Create a pro-enterprise environment that attracts investment, encourages Omani manufacturers to adopt Fourth Industrial Revolution technologies	The Minister of Commerce, Industry, and Investment Promotion is a member of the Council of Ministers and reports to the Sultan
Central Bank of Oman		
Mission	**Key digital activities**	**Independence**
To be recognized as a credible and value driven dynamic central bank contributing to the prosperity and overall economic development of Oman.	Oversees fintech and mobile financial services	Board of Governors appointed by the Sultan Minister of Economy currently serves as Deputy Chair of Board of Governors

Ministry of Information		
Mission	**Key digital activities**	**Reporting**
To develop the Omani media so as to enhance the status of Oman internally and externally, through regulating the media work, improving the performance of the media professionals and showing commitment to providing highly effective and efficient media services.	Propose draft laws and issue regulations related to fields of work, issue publications and studies related to media, provide citizens with information about internal and external developments, maintain national press and provide necessary facilities	The Minister of Information is a member of the Council of Ministers and reports to the Sultan
Ministry of Education		
Mission	**Key digital activities**	**Reporting**
To prepare a generation to achieve the economic and social development of society through optimizing of educational and learning processes in school administration.	Developing school connectivity, study plans to upgrade connectivity in conjunction with ISPs and TRA, provides input on NDEP projects within ministry scope, determines IT subject matter for grade 1-12 students, collaboration with outside entities to develop IT curriculum	The Minister of Education is a member of the Council of Ministers and reports to the Sultan
Ministry of Higher Education, Research, and Innovation		
Mission	**Key digital activities**	**Reporting**
To create a higher educational system characterized by high quality and community partnership.	Collaboration with TRA on innovation-related issues and broadband connectivity at institutions of higher education, coordination with MTCIT to identify and develop training programmes for graduates with bachelor's degrees in key ICT fields	The Minister of Education, Research, and Innovation is a member of the Council of Ministers and reports to the Sultan
Oman Vision 2040 Implementation Follow-up Unit		
Mission	**Key digital activities**	**Independence**
Follow up the implementation of Oman Vision 2040 plans and programmes, strengthen partnerships between entities, and enable them to achieve the Vision's objectives	Follow up on achievement of Oman Vision 2040 targets, results, and indicators; support implementing entities, develop procedures that provide best services to customers of service-based government entities, promote cooperation between government entities and private sector to ensure implementation of Vision plans and projects	Reports to Council of Ministers Chairman appointed by royal decree

Source: ITU analysis.

4.1.2 Key institutions

4.1.2.1 Ministry of Transport, Communications, and Information Technology

The Ministry of Transport, Communications, and Information Technology (MTCIT) is the Government of Oman authority for establishing policy direction across the ICT sector, and is responsible for formulating and implementing national digital strategies and programmes. According to its official website, the mission of MTCIT is "to raise the level of efficiency in government performance, support innovation in service delivery, and enhance spending and economic growth through the use of information and communication technology."[60] The ministry initiated the development of significant digital sector laws including the Cybercrime Law and the E-Transactions Law and is leading efforts to develop a comprehensive ecosystem of regulatory sandboxes in Oman, beginning with the Fintech Regulatory Sandbox and the Regulatory Sandbox for Telecommunications.[61]

MTCIT aims to empower the public sector to achieve outstanding innovative performance, provide smart services, proactive procedures, and an engaging digital experience for citizens. The ministry plays a key role in implementing both the National Digital Economy Programme (NDEP) and the Government Digital Transformation Programme (GDTP), as described in Section 3.3. The role of MTCIT in directing, coordinating, and monitoring NDEP implementation was highlighted in interviews with several stakeholders. In recent months, MTCIT has been organizing events aimed at introducing and promoting NDEP across the country.

In addition, MTCIT's Directorate General of ICT Sector Stimulation and Future Skills is working to develop Oman's digital ecosystem and industry, particularly through support for developing specialized skills in emerging technologies and raising awareness of information technologies across the economy.[62] The activities of the Directorate include investment promotion, industry development, and preparing Omani youth for careers that leverage digital skills.

4.1.2.2 Oman Telecommunications Regulatory Authority

The Telecommunications Regulatory Authority (TRA) was established in March 2002 as part of the Telecommunications Regulatory Act, intended to liberalize and modernize the telecommunication sector in Oman. Over the past 23 years, TRA has adopted regulations and undertaken activities aimed at strengthening and developing the sector, including regulations addressing matters such as numbering, interconnection, tariffs, quality of service, domain names, and voice over Internet protocol (VoIP).[63] TRA has also developed and carried out programmes intended to expand access to ICT services, particularly in rural areas.[64] TRA's telecommunication sector staff are organized into departments addressing technical specifications, Internet domains, licensing and compliance, tariffs and costing, competition, and consumer affairs. As

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60 MTCIT, About the Ministry, https://www.mtcit.gov.om/ITAPortal/About/About.aspx, accessed 19 October 2024.

61 MTCIT, Sandboxes Ecosystem, https://www.mtcit.gov.om/ITAPortal/Pages/Page.aspx?NID=583053&PID=581747, accessed 19 October 2024.

62 MTCIT, ICT Stimulation and Future Skills, https://www.mtcit.gov.om/ITAPortal/Our_Projects/Our_Projects_List.aspx?svc=657&NID=188&Odt=37, accessed 19 October 2024.

63 TRA, Initiatives and Projects, https://tra.gov.om/En/GeneratedPage.jsp?menu=12, accessed 19 October 2024; TRA, Decisions and Regulations, https://tra.gov.om/En/DecisionsRegulations.jsp?menu=19, accessed 19 October 2024.

64 TRA, Coverage Projects, https://www.tra.gov.om/En/Projects.jsp?menu=13, accessed 19 October 2024.

further discussed in Section 4.3.1.1, TRA is responsible for regulating competition in the ICT sector of Oman.

As the ICT sector has evolved, so too has the sector regulatory framework developed and implemented by TRA. TRA has continued to develop a regulatory framework governing a liberalized sector while considering or introducing regulations on matters including the Internet of things (IoT) and satellite direct-to-device communications. Over the last several years TRA has conducted a number of public consultations . Recent consultations have addressed matters including spam and scam messages, technology regulations, spectrum use, satellite technology, billing accuracy, sustainability, and smart cities. In 2012, the mandate of TRA was expanded to include oversight of the postal sector in Oman.

TRA is also responsible for managing the country's spectrum resources. Key activities include planning, assigning, and monitoring spectrum use, international coordination, and type approval. Spectrum staff are organized into seven departments, comprising departments responsible for assignment and licensing, planning and strategy, engineering and coordination, quality of service and universal service, and satellite monitoring.

As further discussed in Section 4.3.1.3, TRA collaborates with counterpart agencies across the region and beyond. In particular, the TRA participates in ITU activities, including major spectrum planning events such as the World Radiocommunication Conferences and related preparatory processes.

4.2 Stakeholder mapping

As part of the stakeholder analysis conducted jointly with TRA, a stakeholder mapping exercise identified a range of stakeholders with which the regulator aims to maintain, strengthen, and develop collaborative relationships.

The stakeholder mapping completed by TRA is presented in Table 5.

Table 5: TRA stakeholder mapping summary

Cherish	**Entities with which TRA is already working and seeks to maintain and expand collaborative relationships** • National Centre for Statistical Information • Oman Vision 2040 Implementation Follow-up Unit • Royal Oman Police (ROP) • Ministry of Housing and Urban Planning • Ministry of Labour • National Records and Archives Authority • Oman Public Prosecution • Ministry of Justice and Legal Affairs • Ministry of Finance • Huawei • TmDone • Ministry of Transport, Communications and Information Technology • Cyber Defence Centre • Ministry of Economy • Oman Telecommunications Company (Omantel) • Omani Qatari Telecommunications Company (Ooredoo) • Oman Future Telecommunications Company (Vodafone) • Majan Telecommunication LLC • Connect Arabia LLC • Awasr Oman & Co • Oman Broadband Company • Oman Towers • Helios Towers • Oman Post and Asyad Express • DHL • The Ministry of Commerce, Industry and Investment Promotion • Authority for Development SME
Reinforce	**Entities with which TRA seeks to reinforce and formalize or operationalize collaborative relationships** • Central Bank (Sandbox) • The Ministry of Information • Sultan Qaboos University • Public Authority for Special Economic Zones and Free Zones • Financial Services Authority • Ministry of Education • Authority for Public Services Regulation • ROP (Customs) • Oman Logistics Centre (MTCIT) • Ministry of Endowments and Religious Affairs • Petroleum Development Oman

Table 5: TRA stakeholder mapping summary (continued)

Connect	**Entities with which TRA seeks to explore potential collaboration opportunities** • Ministry of Heritage and Tourism • Ministry of Health • Environment Authority • Oman Investment Authority • Individual governorates.
Keep on radar	**Entities with which collaboration is not currently warranted, but may be appropriate in the future** • Ministry of Energy and Minerals • Muscat Municipality • Civil Aviation Authority • Oman Credit and Financial Information Centre (Mal,ah) • Rihal • DataMining • Oman Data Park • Datamount • OmanTaxi, thawani, tasdeed, wareed, Talabat, Khedmah Delivery, UVL Robotics, Odys Aviation • Consumer Protection Authority • Oman Logistics Association

Source: TRA

The stakeholder mapping indicates a wide range of current and potential collaborators, mainly across government and regulatory spheres but also including businesses and associations. However, while the stakeholder mapping indicates collaborative engagement with Oman's mobile operators, this observation is not reflected in the comments of stakeholders in section 4.4.

4.3 Collaborative practices

Oman's regulators and ministries are engaged in a number of collaborative activities. In some cases, these engagements leverage the inputs or expertise of multiple parties to advance the regulatory framework or address challenges. In other cases, the activities are better described as integrations or cooperation, sharing necessary operational information to accomplish specific tasks. This section summarizes information obtained from a range of interviews with both public- and private-sector stakeholders.

4.3.1 TRA collaborative activities

As the regulator of the telecommunication sector, TRA engages in a wide range of collaborative activities related to both the telecommunication and digital sectors.

4.3.1.1 Intragovernmental collaboration

In an interview, TRA identified multiple collaborative regulatory activities undertaken with various government ministries or authorities.[65] While these do not encompass all entities or issue areas identified in the stakeholder mapping in section 4.2, concrete examples of such engagements include:

- collaboration with Oman's electricity sector to enable telecommunication operators to leverage fibre-optic cables to extend connectivity;
- collaboration with the transport sector to coordinate on the deployment of fibre-optic cables when new roads and communities are planned;
- collaboration with the Urban Planning Institute and the Ministry of Housing and Urban Planning to ensure telecommunication sector needs are considered during the planning phase for new developments, including smart cities;
- collaboration with MTCIT on postal sector issues;
- collaboration with the Ministry of Higher Education on innovation-related issues and broadband connectivity at institutions of higher education; and
- collaboration with the Ministry of Information concerning spectrum authorizations for use by broadcasters.

Describing TRA's approach to collaborating on telecommunication sector issues with entities such as those above, officials outlined three main steps:

1. Explaining the challenges facing operators to the entity with which TRA seeks a collaborative arrangement,
2. Establishing a memorandum of understanding (MoU), and
3. Consulting relevant stakeholders, in some cases including the public, to address the concerns of stakeholders together with the relevant partner institutions.

Although MoUs are not publicly available, TRA officials stated that MoUs have been established with the Ministry of Commerce, Industry, and Investment Promotion (MCIIP), as well as with the electricity sector and the financial sector authorities. The MoU with the electricity sector authority was characterized as serving as a legal reference on how to enable electricity infrastructure to be leveraged by telecommunication operators to provide services. Box 1 provides additional information on Oman's approach to competition issues in the telecommunication sector.

[65] Interview with Telecommunications Regulatory Authority, 26 June 2024.

Box 1: Regulation of telecommunication sector competition in Oman

The MoU with MCIIP is based on a shared understanding between MCIIP and TRA that the regulator is the appropriate authority to address competition-related matters within the telecommunication sector[1]. This includes matters related to mergers and acquisitions in the telecommunication sector. The Telecommunications Act, adopted in 2002, includes provisions for the TRA to address competition matters in the telecommunication sector and predates the adoption of Oman's 2014 Competition Law. In line with this authority, TRA adopted ex post competition regulations in 2013, later amended in 2020, after the introduction of Oman's amended Competition Law.[2] The introduction of the Competition Law led to the adoption of the telecommunication sector competition MoU. However, active collaborative engagement between TRA and MCIIP on competition matters has yet to be initiated.

In the event of a legal dispute, both entities would work cooperatively to develop their respective positions and arguments.[3] Given the infrequent nature of such cases, TRA considers that there is at present no need for a standing committee or working group comprised of TRA and MCIIP representatives to address competition matters.

Under the current regulatory framework distinct roles are assigned to the Telecommunications Regulatory Authority (TRA) and the Ministry of Commerce, Industry and Investment Promotion (MCIIP). While TRA notes the potential for collaboration with MCIIP in the event of a legal dispute, the current arrangement is effectively a division of responsibilities rather than a collaborative approach to competition regulation.

Looking ahead, TRA recognizes the potential for enhanced cooperation with MCIIP, particularly in the context of legal disputes. It remains unclear at this stage whether and how a revised telecommunication law would affect the competition regulation framework. However, a revised telecommunication law may offer an opportunity to develop a more collaborative approach to competition regulation.

Source: ITU based on TRA interview

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1 The MoU between TRA and MCIIP was originally between TRA and the Competition Protection and Monopoly Prevention Center. The latter organization's functions were subsequently transferred to MCIIP.

2 TRA, Decision No. 70/2013 regarding Ex-Post Regulations (Anti-Competitive Behaviour), https://tra.gov.om/pdf/70-2013-en.pdf; TRA, Decision No. 59/2020 amending some provisions on Decision No. 70/2013 on Ex-post Regulations (Anti–competitive Behaviour), https://tra.gov.om/En/DownloadFile.jsp?type=PublicationList&code=216.

3 Interview with Telecommunications Regulatory Authority, 26 June 2024.

Although not a regulatory-focused arrangement, in 2022 TRA signed an MoU with the National Records and Archives Authority (NRAA) for the latter to operate and manage TRA's electronic records and documents system.[66] TRA was the first of a planned 20 government entities to employ the "Wusool system," a component of Oman's ongoing government digitalization process.

4.3.1.2 Internal collaboration

In terms of internal working methods, TRA officials emphasized that teamwork is a core value within the organization, leading to frequent collaboration.[67] When an issue involves multiple aspects, such as technical, economic, and financial considerations, the decision of the TRA is based on input from all relevant internal stakeholders, which is consistent with established international good practices.

4.3.1.3 International collaboration

TRA expressed a strong commitment to regional and international collaboration.[68] Officials cited TRA membership in a number of regulatory fora including ITU, and the Arab Network for Regulatory Authorities in Communications and Information Technology (AREGNET), an association of regulators from 17 countries across the region. In addition, TRA has signed bilateral agreements with foreign regulators. These include MoUs with Morocco's National Telecommunications Regulatory Authority (ANRT) regarding the coordination and exchange of regulatory experiences between the two institutions and with Tunisia's National Frequency Agency (ANF) to develop cooperation and for ANF to benefit from Omani experience in spectrum management.[69]

TRA also participates in telecommunication and postal initiatives organized by the Arab League, the Gulf Cooperation Council, and the Arab Information and Communication Technology Organization (AICTO). TRA holds membership in a number of international organizations including GSMA, the Asia Pacific Top Level Domain Association (APTLD), the Governmental Advisory Committee (GAC) of the Internet Corporation for Assigned Names and Numbers (ICANN), and the Regional Internet Registry for Europe Network Coordination Centre (RIPE NCC).[70]

4.3.2 Ministry of Transport, Communications, and Information Technology

The Ministry of Transport, Communications, and Information Technology (MTCIT) highlighted its collaboration with TRA on a day-to-day basis, consistent with the roles of each entity as defined under the Telecommunications Law. As noted by MTCIT, the Ministry is responsible for setting

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66 NRAA, Signing a memorandum to operate the access system for managing documents and electronic documents, 30 August 2022, https://nraa.gov.om/%d8%aa%d9%88%d9%82%d9%8a%d8%b9-%d9%85%d8%b0%d9%83%d8%b1%d8%a9-%d8%aa%d8%b4%d8%ba%d9%8a%d9%84-%d9%86%d8%b8%d8%a7%d9%85-%d9%88%d8%b5%d9%88%d9%84-%d9%84%d8%a5%d8%af%d8%a7%d8%b1%d8%a9-%d8%a7%d9%84%d9%85/.

67 Interview with Telecommunications Regulatory Authority, 26 June 2024.

68 Interview with Telecommunications Regulatory Authority, 26 June 2024.

69 ANRT, MoU between ANRT and the Regulator of the Sultanate of Oman, 1 March 2019, https://www.anrt.ma/en/a-propos/communiques/memorandum-dentente-entre-lanrt-et-le-regulateur-du-sultanat-doman?csrt=692014522994407295; ANF, un protocole d'accord avec la l'Autorité de régulation des télécommunications à Sultanat d'Oman, 3 February 2020, https://www.anf.tn/index.php/fr/actualites/un-protocole-daccord-avec-la-lautorite-de-regulation-des-telecommunications-sultanat.

70 TRA, Overview, https://www.tra.gov.om/En/GeneratedPage.jsp?menu=122.

the overall strategy and the legal framework, while TRA implements the strategy in line with the law and regulates sector activity. MTCIT and TRA teams meet regularly, and TRA shares quarterly reports on telecommunication services and operators in the market.

As the focal point and lead entity for digital transformation efforts in Oman, MTCIT works with a range of regulators, ministries, and other agencies, while also hosting a number of internal teams. In this role, MTCIT noted that an extended committee meets annually to discuss digital transformation progress, while there are also operational teams within the ministry, each focused on one of eight key digital transformation performance indicators (KPIs).[71] Each operational team meets quarterly and produces reports that are sent to the extended high-level committee to enable decision-making based on identified achievements and challenges.

MTCIT cited an example of collaboration focused on work with the Ministry of Higher Education (MoHE) to improve the position of Oman in the international rankings related to ICT skills development. To attain this objective, MTCIT proposed training programmes for graduates in IT, programming, coding, cybersecurity, and related fields. As such programmes are developed, MoHE assumes responsibility for sharing of progress reports with international organizations to reflect the updated ICT skills development programmes and activities in Oman. MTCIT provides some funding and works together with MoHE on the budget for training programmes as well as following up on programme progress and results.

MTCIT is also coordinating Oman's Govstack project, encompassing approximately 65 government digitalization initiatives between MTCIT and other entities. These initiatives, comprising web portals, cloud services, and skills development initiatives, assign clear roles and responsibilities to participating stakeholders. The overall objective is to improve efficiency, reduce expenses, and increase the performance ranking of Oman in international digital and social development indices.

MTCIT also highlighted a key challenge in its collaborative efforts: the practical difficulties in coordinating regular meetings with large numbers of stakeholders. Such challenges are not unique to MTCIT and include the difficulty inherent in convening a group of stakeholders on a regular basis and the requirements for regular commitments of time and resources from all participants. In addition, as with many meetings or gatherings of stakeholders, there can be challenges in reaching consensus or a path forward due to varying positions and priorities.

4.3.3 Ministry of Commerce, Industry, and Investment Promotion

The Ministry of Commerce, Industry, and Investment Promotion (MCIIP) reported that its Competition Centre is currently implementing two key instruments, one addressing domestic competition practices, and another focused on international dumping, developed in collaboration other entities and authorities including the Consumer Protection Authority (CPA), the National Centre for Statistics and Information (NCSI), and international organizations.[72]

MCIIP representatives also described a customer experience project being implemented in cooperation with MTCIT's digital transformation team. As part of this digitization process, MCIIP engages with customers and stakeholders both before and after the project implementation, ideally securing a no-objection certificate, and then applies a stakeholder engagement strategy.

[71] Interview with MTCIT, 23 July 2024.
[72] Interview with MCIIP, 10 July 2024.

MCIIP also conducts quarterly feedback meetings to obtain qualitative feedback insights from service centres and to take stock of recent activities. MCIIP also engages in social media "listening" to monitor what investors or other stakeholders post online regarding challenges encountered when investing in Oman.

4.3.4 Central Bank of Oman

The Central Bank of Oman (CBO) stated that it engages directly with banks and other financial sector entities to determine their needs as it advances initiatives related to digitalization and new fintech services.[73] CBO also reported that it shares draft regulations with licensed institutions prior to final issuance to solicit industry feedback. In some cases, this exercise has taken the form of a public consultation, particularly concerning new financial sector technologies.

Likewise, CBO has engaged with other regulatory authorities providing input on their draft regulations. One example cited was the submission of comments from CBO in response to TRA's consultation on cloud computing and data centres.[74] CBO emphasized its commitment to collaboration and the provision of support to other agencies whenever possible.

However, some activities characterized by CBO as collaborative did not necessarily involve substantive collaborative exchanges or joint problem-solving. In some cases, CBO described a working relationship in which the regulator issued mandates requiring financial sector companies to take action or implement new capabilities, such as tokenization, direct debit, and mobile payment systems. Concerning the relationship between CBO and MTCIT, the engagements primarily involved information sharing rather than collaboration on regulatory issues spanning the financial and telecommunication sectors.

4.3.5 Consumer Protection Authority

The Consumer Protection Authority (CPA) reported on collaboration with entities including the Ministry of Commerce, Industry and Investment Promotion (MCIIP), the Oman Public Prosecution, and the Royal Oman Police.[75] However, some of these collaborations may be more accurately described as system integrations, as they refer to the linking of systems to assist, for example, in addressing consumer complaints against retail establishments. Similarly, CPA noted a system integration with MCIIP regarding systems related to new business activities in the Omani market.

While it represents a different type of collaboration or knowledge exchange, CPA also noted that it has conducted study visits to other countries to study how they address consumer protection issues similar to those faced in Oman. Among the countries visited during these international knowledge exchange missions were the People's Republic of China, Japan, the Republic of Korea, and Thailand.

4.3.6 Ministry of Information

The Ministry of Information (MoI) reported that the Ministry of Transport, Communications, and Information Technology (MTCIT) periodically convenes meetings with government

[73] Interview with CBO, 1 July 2024.
[74] TRA, Consultation Report: Data Centers and Cloud Computing, 9 June 2021, https://www.tra.gov.om/En/DownloadFile.jsp?type=DocumentList&code=291.
[75] Interview with CPA, 2 July 2024.

entities to share ideas and discuss challenges related to the implementation of the national digital transformation plan. During these meetings, MTCIT provides guidance with regard to addressing specific challenges encountered by participating entities.[76]

MoI highlighted that interactions with MTCIT were generally more process-oriented than collaborative. MoI primarily reports on progress under Oman's National Digital Economy Programme (NDEP), for which MTCIT is responsible for implementation. In line with MTCIT guidance, MoI is working to digitalize a range of public-facing systems. As part of the digital transformation process, the Ministry of Information holds periodic check-in meetings with MTCIT, initially every three months and currently every six months. MTCIT provides the digital transformation budget as well as relevant expertise to assist MoI with the digitalization process. MTCIT and also assigns MoI, and other government entities, a score reflecting their digital transformation progress.

MoI also described engagements with the Ministry of Commerce, Industry and Investment Promotion (MCIIP), the Ministry of Labour, the Royal Oman Police, and the Muscat municipality, as well as integration with banks relating to MoI's payment gateway. The majority of these engagements however, are better described as systems integration rather than collaborative regulation activities.

4.4 Private sector role

Mobile operators in Oman reported that there are several mechanisms in place for providing information and inputs to TRA. Operator representatives indicated that they can, for example, engage with TRA at any time on any matter to express concerns or provide feedback.[77] Additionally, TRA conducts public consultations in which mobile operators and other stakeholders can share inputs, in line with international best practices.

However, operators also noted challenges with the current arrangements. First, while they can provide feedback to TRA, operators do not see meaningful outcomes or responses. This was particularly noted regarding the need to update the regulatory framework of Oman to address broader ICT sector issues rather than focussing solely on more traditional telecommunications issues. Second, operators noted that while public consultations are a good practice, by the time a consultation is initiated, the draft instrument has often already been developed and operators can only react to the draft, rather than being involved at earlier stages of policy drafting or development.

Operators identified multiple challenges concerning Oman's policy, legal, and regulatory frameworks, including a need for greater collaboration. Among the most prominent challenges identified was the need for greater policy and regulatory coherence. Operators noted that while the Government, through Oman Vision 2040 and the National Digital Economy Programme (NDEP), is focused on developing ICT services and technologies, TRA remains focused on the regulation of more traditional telecommunication services. This divergence creates uncertainty among operators and hinders investment and innovation. A related challenge identified in discussion with mobile operators is the status of the Telecommunications Law, which the operators noted has been under review and revision for several years. Operators expressed frustration that the law is outdated and does not reflect the current or future potential ICT

[76] Interview with MoI, 26 June 2024.
[77] Interview with operators, 9 July 2024.

sector. Operators also shared concerns that the long development timeline means that it may be already outdated. Operators reported that they would welcome a new law that enables an appropriate level of sector oversight but also seeks to permit flexibility and foster innovation.

Operators also stressed the need to ensure clarity regarding overlapping or potentially conflicting vertical and horizontal laws or regulations, particularly concerning areas such as competition and data privacy. One operator suggested the potential value of having a single point of contact for issues that may involve multiple sector regulatory authorities. For example, one operator questioned why entities licensed by TRA for mobile financial services must also engage with CBO. Another example highlighted conflicting requests and requirements regarding data privacy originating from government bodies and TRA.

Lack of regulatory clarity regarding data hosting and data residency was also cited as an issue. Operators noted that, particularly in a market the size of Oman, software-as-a-service solutions are particularly attractive, but uncertainty over data governance rules limits their ability to procure international solutions. As one operator noted, TRA often prohibits new services that are not explicitly addressed by the legal framework rather than working collaboratively with operators to identify acceptable regulatory approaches within the existing legal framework.

Operators also noted that they have fewer opportunities for engagement with policy-makers or legislators compared to TRA. In general, TRA, as the licensing entity for the operators, is their primary point of contact. One operator noted that during the early stages of developing Oman Vision 2040 there were labs in which government and private-sector stakeholders worked together to discuss key issues, but this appeared to be the exception rather than the rule for collaboration between operators and policy-makers. Operators emphasized that they do not have direct engagement with legislators, with one operator noting that TRA is intended to be their representative before the government and legislators, relaying priorities and concerns. Operators welcomed opportunities or mechanisms that could enable all stakeholders, including policy-makers, the regulator, and operators to seek alignment on strategies and approaches to meeting the targets and goals established in the policy documents driving the digital transformation of Oman.

5 Overall readiness of national legal, policy, and governance frameworks for digital transformation

5.1 Unified framework evaluation of enabling environment

In the *Global Digital Regulatory Outlook 2023*, ITU introduced a unified framework for assessing the policies, governance, and legal frameworks that support digital transformation. The unified framework combines established ITU tools for assessing policy, regulation, and governance in telecommunication and digital markets, including the *ICT Regulatory Tracker* and the *G5 Benchmark*. The framework provides a set of benchmarks that can be used to evaluate countries' readiness for digital transformation, as well as their policy, regulatory, and governance capacity based on data that countries report to ITU. By offering a comparative benchmark analysis the unified framework enables regulators and policy-makers to compare their frameworks with peers, while identifying strengths, gaps, and priority areas for reform.

This section presents an overview of the nine pillars of the framework, along with achievement levels attained for each pillar in Oman relative to regional and global averages.

Box 2: ITU unified framework

ITU unified framework for digital transformation readiness assessment

National digital policy agenda: This pillar includes various aspects, such as the development of national broadband and digital strategies, integration with universal access and service efforts, and a focus on [vulnerable] populations, such as women and girls, persons with disabilities, and youth.

Regulatory capacity: This pillar includes factors, such as the existence of an independent ICT sector regulator with enforcement powers and regulatory responsibility for licensing, spectrum, universal service/access, broadcasting, and Internet content.

Good governance: This pillar includes factors, such as a requirement to carry out a regulatory impact assessment before implementing regulatory changes, a mechanism for appealing regulatory decisions, a requirement for ex-post and rolling policy reviews, and protection of access to information and fundamental freedoms.

Collaborative governance: This pillar includes factors, such as collaboration with a range of domestic authorities and ministries. These include the authorities responsible for broadcasting, spectrum, cybersecurity, data protection, finance, competition, and energy, as well as ministries responsible for health, education, and the environment.

Stakeholder engagement: This pillar addresses engagement practices, including mandatory public consultations before implementing regulatory changes, industry codes of conduct, and mechanisms for regulatory experimentation.

Legal instruments for ICT/telecommunication markets: This pillar considers the presence of instruments such as ICT accessibility policies, an ICT licensing framework, requirements to publish reference interconnection offers and publication of interconnection prices, infrastructure sharing rules, and number portability mechanisms.

Box 2: ITU unified framework (continued)

Legal instruments for digital markets: This pillar considers the presence of instruments, such as strategies addressing the Internet of things (IoT), AI, and cloud computing; data protection rules; and policies on e-government, e-education, and e-health.

Market rules: This pillar considers the presence of market-oriented characteristics, including competition in various services and foreign ownership in various components of the broadband value chain.

Regional and international collaboration: This pillar considers the country's engagement in regional and international collaborative efforts, such as regional ICT initiatives, World Trade Organization (WTO) telecommunication services commitments, and agreements on key sector issues.

Source: ITU Global Digital Regulatory Outlook 2023.

While in the Arab States region overall levels of achievement were approximately in line with the global average for most of the nine pillars in 2023, the progress of Oman exceeded both the regional and global averages for eight of the pillars (Table 6). The progress of Oman notably outpaced regional and global averages with respect to regulatory capacity and legal instruments for ICT/telecommunications markets, but lagged behind both regional and global averages with respect to good governance.

Table 6: Thematic benchmark targets achieved, 2023

Thematic benchmark	Target achieved		
	Oman	Arab States	World
National digital policy agenda	**55%**	37%	43%
Regulatory capacity	**85%**	57%	63%
Good governance	**32%**	42%	58%
Collaborative governance	**66%**	33%	42%
Stakeholder engagement	**50%**	34%	34%
Legal instruments for ICT/telecom markets	**94%**	52%	59%
Legal instruments for digital markets	**46%**	37%	39%
Market rules	**68%**	36%	59%
Regional and international collaboration	**40%**	23%	36%
OVERALL READINESS	**64%**	41%	51%

Source: ITU, 2023. See gen5.digital

5.2 Level of regulatory maturity and policy implementation

Oman's policy, legal, and regulatory frameworks comprise a combination of forward-oriented policies and programmes that prioritize digital development, instruments designed to provide a framework for digital services and issues, and long established laws. This mix presents a

situation for stakeholders where some legal frameworks are not fully aligned with the current ICT and digital services landscape, even as other instruments actively advance the digital development of Oman. As a result, stakeholders may experience uncertainty when policies, laws, and regulations are not fully aligned.

5.2.1 Digital policies

Oman has adopted several significant policy documents and initiatives that address digital development and that have implications for collaborative regulation. Nearly all stakeholders interviewed referenced Oman Vision 2040 (described in section 3.2.1) and the National Digital Economy Programme (NDEP) (described in section 3.2.2) as frameworks guiding efforts by the Government of Oman to drive digital transformation. These policies serve as guiding frameworks for the development of digital infrastructure, skills, and services over the coming decades.

It is notable, however, that Oman's universal service policy dates back to 2009. Multiple stakeholders identified gaps in connectivity and inadequate infrastructure outside of urban areas as an ongoing challenge in Oman. Stakeholder feedback indicates that a revised approach to achieving universal broadband access is needed.

5.2.2 Laws and regulations

As outlined in section 3.1, Oman has several longstanding laws and regulations governing, or related to, the ICT sector, as well as policies designed to drive digital transformation over the next 15 years. However, there is arguably a need to review and revise multiple instruments to ensure that they are fit for purpose currently and for several years into the future. The most recent of these laws, the Competition Law, was enacted 10 years ago.

The Telecommunications Regulatory Act, the instrument with perhaps the greatest impact on the ICT sector in Oman, has undergone amendments but was originally drafted more than 20 years ago. It has been cited by both TRA and private-sector stakeholders as being a bottleneck to the development of Oman's digital sector and to the establishment of a coherent legal and regulatory framework for ICT services given the current changed market conditions and the broader technology landscape. As reported by TRA, the law is oriented toward traditional telecommunications services and does not provide the regulator with the authority to supervise or develop a regulatory framework for more advanced and emerging digital services.[78] The focus of this law on traditional services, in turn, contributes to operator concerns that TRA is focused on legacy services rather than current and future services, creating uncertainty regarding the regulatory framework that will govern emerging technologies and innovative services. Multiple stakeholders noted that the Government is developing an updated telecommunications law, but the contents and scope of the new law are not yet publicly available and there is no indication of an estimated completion date.

Oman has also introduced several horizontal laws, such as those governing data protection and competition, that in some cases overlap with sector-specific laws. This misalignment between the various instruments and resulting uncertainty were cited by private-sector stakeholders as a challenge to operating effectively within the digital sector of Oman.

[78] Interview with Telecommunications Regulatory Authority, 26 June 2024.

Considering the level of legal and regulatory development with respect to emerging technologies and services, Oman has adopted or is developing instruments and programmes to address issues such as data protection, cybercrime, fintech, open data, IoT, AI, and smart cities, as reflected in section 3.3.1. Notably, Oman has introduced regulatory sandboxes in the fintech and telecommunication sectors. however, the limited scope of TRA authority over more modern or innovative digital communication services may limit the utility of the current telecommunications regulatory sandbox. While the TRA has stated that it has authority to govern IoT under the Telecommunications Law, it is not yet regulating emerging technologies such as AI.[79]

Overall Oman is advancing regulatory initiatives related to a range of new technologies, though in some cases limitations remain. The Ministry of Transport, Communications, and Information Technology (MTCIT) plays a key role in the majority of these emerging areas, serving as a central coordinator for emerging technologies, but also presenting a potential risk of creating a bottleneck or single point of dependency in the governance process.

[79] TRA, email correspondence, 18 December 2024.

6 Recommendations

Oman's policy, legal, and regulatory framework presents a mix of forward-looking policies and regulatory activities and instruments, as well as laws and practices that have yet to be adapted to fit a digital-focused economy grounded in collaborative regulation.

Oman has implemented multiple strategies aimed at marshalling government resources to transition the country from an oil-based economy to a knowledge-based economy. Broad strategies, such as Oman Vision 2040, and more targeted plans, such as the National Digital Economy Programme (NDEP), represent multi-stakeholder, long-term efforts to chart a new course for Oman and include important elements related to the development of the ICT sector and digital services.

However, key components of Oman's legal framework, and particularly the laws governing telecommunications and competition, are at least 10 years old. The rapid pace of development in the global ICT sector, and indeed the evolution from a sector focused on telecommunications to one encompassing a range of communication technologies, underscores the need for legal frameworks to keep pace or to be restructured in a manner that allows for flexibility and evolution. Multiple stakeholders in both the public and private sectors noted the need to revise the Telecommunications Law to reflect a more modern and diverse digital sector and to provide regulatory clarity regarding emerging and innovative services.

As the ICT sector itself continues to evolve and digital services are incorporated into commerce, education, healthcare, entertainment, and into every sector of the economy, there is an increasing need for enhanced collaboration among stakeholders. Effective collaboration should ideally occur on multiple levels and between a range of stakeholders, including ministries, regulators, businesses, and end users. The transition to a collaborative regulatory approach requires a concerted effort and, in some cases, a shift in organizational and institutional culture. In Oman, collaborative regulatory activities in which multiple stakeholders collectively discuss sector issues or address regulatory challenges, are still in early stages. In some cases, what stakeholders present as collaboration may be better described as system integration or data-sharing. Additional work is required to both create additional structured mechanisms for collaboration and ensure that such activities fully leverage the expertise and experiences of all relevant stakeholders.

Overall the policy, legal, and regulatory framework in Oman presents a mix of strengths and challenges. This section highlights key recommendations intended to strengthen and accelerate the implementation of frameworks in Oman that enable growth in the domestic digital sector and strengthen engagement with the global digital economy.

A review of the collaborative activities noted in stakeholder interviews and indicated in published material has resulted in the identification of three potential approaches to strengthening stakeholder collaboration and developing a more adaptive, future-ready policy, legal, and regulatory framework.

6.1 Emphasize results-driven collaboration on policy and regulatory challenges

As noted in section 4.3, discussions with multiple stakeholders revealed that activities and engagements described as 'collaborative' could more objectively be described as compliance with top-down directives or as service integrations and transactions. While these activities have value, they do not fully leverage the strengths and knowledge of all stakeholders to address shared challenges or shape future policy and regulatory frameworks. To effectively advance the goals of Oman Vision 2040 and the National Digital Economy Programme, engagements between stakeholders should be structured to i) enable the sharing of information, experiences, and challenges from all participants; ii) collaboratively develop approaches, next steps, or solutions that enable more effective and efficient achievement of national policy objectives or resolution of sector challenges; and iii) work toward meaningful outcomes that address challenges, obstacles, or gaps facing the ICT sector and digital service stakeholders. Adopting such a results-driven approach to collaboration would enable all participants to contribute their expertise, strengths, and perspectives to the development of policy and regulatory approaches that better position Oman for continued digital development and innovation. In particular, the TRA-MCIIP MoU described in Section 4.3.1.1 could be enhanced to establish a formal, well-defined process for addressing competition-related issues. This would provide clarity and transparency to stakeholders and reduce the risk of legal disputes.

6.2 Improve transparency and stakeholder access to key documents, decision-making, and collaborative activities

The ministries and regulatory authorities in Oman currently do not regularly publish or share documents that govern or describe collaborative relationships between entities, such as memoranda of understanding (MoUs). Similarly, detailed information regarding decision-making processes or collaborative exercises is not readily accessible to stakeholders, creating information gaps and a lack of public records related to decision-making. This can lead to uncertainty on the part of stakeholders not directly involved in the decision-making process as they may be unsure as to whether their inputs or concerns have been considered. While there is a legitimate need to keep certain information or proceedings confidential or only available to limited audiences, there appear to be significant opportunities for government entities to make more information available and increase the transparency of the decision-making process.

Such transparency could be enabled by, for example, through regular publication of meeting agendas and minutes or through regular meetings or workshops with stakeholders, as well as the addition of MoUs or similar agreements to entity websites. The ongoing digitalization efforts of the Government to implement a uniform platform for sharing information and conducting routine administrative activities may offer opportunities to collect information on collaborative relationships and activities and more easily share it with interested stakeholders. An added benefit of greater transparency is an increased level of accountability. When stakeholders can review activities undertaken by regulators or other entities, they are better able to monitor progress toward objectives and understand challenges or obstacles that may delay a process.

6.3 Create standing working groups or committees to address sector issues

An approach that builds on aspects of both of the preceding recommendations is to establish standing working groups, committees, or other groupings that involve multiple stakeholders working to identify, discuss, and develop solutions to issues or problems. For example, a working group meeting regularly to assess the relevance of the Telecommunications Law to Oman's current and evolving ICT sectors could involve the Ministry of Transport, Communications, and Information Technology (MTCIT), the Telecommunications Regulatory Authority (TRA), and licensees, as well as potentially the participation of other entities that have areas of responsibility that intersect with ICT sector activities, such as the Central Bank of Oman (CBO) and the ministries responsible for education, utilities, and commerce. By creating a regular channel for communication and collaboration, uncertainty would be reduced while areas of concern to one or more stakeholders could be addressed from multiple perspectives.

6.4 Incorporate meaningful public consultation and stakeholder engagement processes

Feedback from industry and other regulatory entities suggests that public consultation processes and timelines for the development of new policies and instruments could be improved. As discussed in section 4.4, industry stakeholders reported that the current TRA practice of initiating consultation only after a draft instrument is proposed, is less effective than involving stakeholders at an earlier stage in the instrument development process. Although TRA adopted a regulation on public consultations in 2008, the Government of Oman should consider undertaking a comprehensive review of public consultation processes and standards. This review could include the setting of minimum comment periods, defining clear time limits for regulators to consider feedback inputs, and establishment of consistent procedures for issuing a new or updated instruments.

For cross-jurisdictional matters, consultations could be co-designed by multiple regulatory authorities to ensure alignment.

More generally, TRA and other regulatory authorities should consider the implementation of regular mechanisms or channels for private-sector engagement. The exact form of such engagements may vary across regulatory authorities or sectors but could include regularly scheduled stakeholder fora, or public-sector participation in relevant industry events.

6.5 Complete the revision or replacement of the Telecommunications Law

As discussed in section 5.2.1, multiple stakeholders highlighted the need to update the Telecommunications Law, or perhaps to develop a broader ICT or digital sector law, given that the current Telecommunications Law was originally enacted more than 20 years ago. Over this period the ICT sector has undergone significant change, driven by the rapid development of mobile services, the increasing importance of broadband connectivity, the emergence of over-the-top (OTT) services and digital platforms, the widespread adoption of cloud services and data centres, and the increasing use of, and need for protection of personal data, among other developments. In failing to adequately address these developments in ICT the current Telecommunications Law creates significant gaps and uncertainty in Oman's legal and

regulatory framework. This lack of clarity has led some operators and investors to limit or scale back investment in innovative new services. An updated sector law should therefore establish a clear framework for the governance of existing and potential new and emerging services and technologies, while incorporating sufficient flexibility to allow for innovation in both services and regulatory approaches.

6.6 Clarify areas of legal or regulatory overlap

As telecommunication and digital services continue to evolve and to be employed across multiple sectors, there is an increasing need to establish clear divisions of responsibility and to identify areas requiring collaboration among ministries and regulatory authorities. For example, regulation of competition is a common area of collaboration between ICT sector regulators and competition authorities. Ideally such collaboration should be guided by a clear delineation of responsibilities in ICT and competition laws, or a formal agreement between regulatory authorities outlining how regulatory authorities address competition issues in the ICT sector. In Oman, the current arrangement, as described by the Telecommunications Regulatory Authority, is based on a memorandum of understanding (MoU) on how to address the overlap between the Telecommunications Law and the Competition Law. This can lead to uncertainty for service providers and potential legal conflicts. In the cases where MoUs are adopted, it would be beneficial for stakeholders to have access to the documents to best understand how issues potentially subject to oversight by multiple regulators will be addressed. In a potential example of a model approach, the introduction of the Personal Data Protection Law (PDPL) repealed the data protection provisions of the Electronic Transactions Law, thereby removing the potential for such legal conflict.

6.7 Communicate legal and regulatory framework updates to all stakeholders

In addition to updating legal and regulatory instruments and introducing new regulations, it is critical for stakeholders, notably operators and consumers, to understand the intent and impact of new instruments. To the extent that legal and regulatory changes are driven by or aligned with policies such as Oman Vision 2040, this should be clearly indicated. Legal and regulatory certainty is a prerequisite for innovation and investment in any sector, including the ICT sector and any other sector that leverages digital services. Further, the publication of clear roadmaps by TRA and other regulatory authorities that set out their short to mid-term plans as well as longer-term objectives would provide further certainty to stakeholders and increase the level of accountability for regulators. When all stakeholders are informed about regulatory efforts and intended timelines, all affected parties can plan appropriately, including engaging with regulators on emerging issues and planning for regulatory changes that affect business plans. Regulatory roadmaps can also serve as key tools for regulatory collaboration, enabling regulators to better coordinate their activities in areas of overlapping jurisdiction.

6.8 Implement current, agile, and anticipatory governance and regulatory frameworks

Beyond the revision of a particular instrument, Omani stakeholders would benefit from the adoption of legal and regulatory frameworks that better allow the Telecommunications Regulatory Authority and other regulators to keep pace with developments in technology

and services. This approach aligns with ITU guidance supporting the use of agile and flexible frameworks as crucial components of effective digital regulation and digital transformation. The introduction of more flexible, agile frameworks will also create opportunities to update frameworks that in some cases were designed for an earlier era when the ICT sector and available digital services were quite different from the current and evolving ICT ecosystem.

In addition, Omani regulatory authorities should consistently apply strategic foresight to identify emerging and future issues. For example, regulators should continuously monitor areas where regulatory frameworks may constrain activity or innovation, identifying gaps that create uncertainty as new technologies and services emerge, and detecting conflicts between existing frameworks or between frameworks and broader policies or programmes. Such forward-looking monitoring, informed through collaboration with operators, service providers, and other stakeholders governed by regulatory frameworks, will help regulators to keep abreast of the evolving digital landscape.

6.9 Simplify legal and regulatory frameworks

In addition to anticipating the need for regulatory changes to accommodate an evolving sector, policy-makers and regulators in Oman should also explore opportunities to simplify and streamline legal and regulatory frameworks. As the sector continues to evolve, there may be, for example, licensing categories or reporting obligations that have become obsolete or that impose costs that exceed their benefits. The same applies to agreements between regulatory bodies and other entities. In conjunction with the development of the revised Telecommunications Law, it may be prudent to determine the relevance of existing MoUs. Where such agreements are no longer aligned with the current legal or regulatory framework or sector conditions, there may be value in their revision or discontinuation.

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