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

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1 Introduction

As 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 involved a review of policy, legal, and regulatory instruments as well as interviews conducted with stakeholders in the public and private sectors. The stakeholder interviews provide valuable insight and context for the frameworks in place, indicating the positive and challenging impacts on their activities and operations as well as on the overall sector. The report also leverages ITU resources, including the Unified Framework introduced in 2023 for considering the readiness of countries' policy, governance, and legal frameworks to enable digital transformation and the ITU digital innovation profile of Oman.

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

2 Market environment

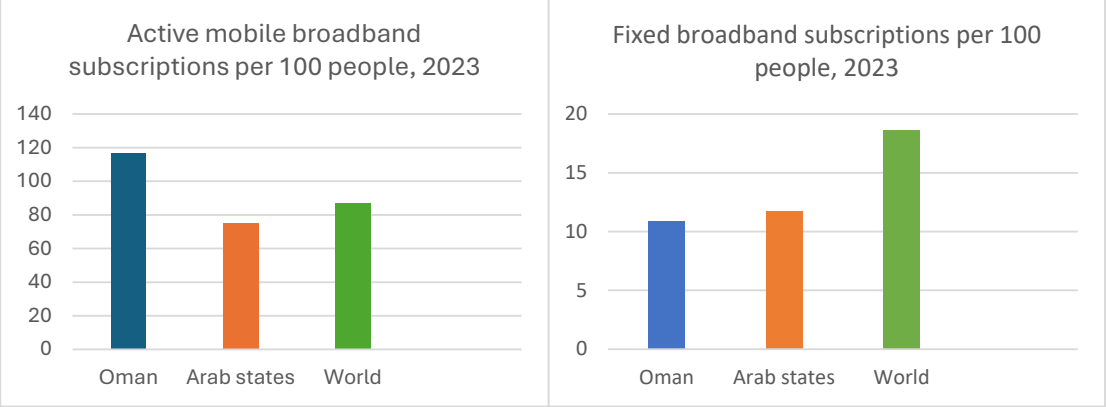
2.1 Sector overview

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 its digital transformation progress and collaborative regulation efforts.

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

Considering 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 figures (see Figure 1).

Figure 1: Broadband availability, 2023



Source: ITU Data Hub[3]

Oman's public sector has made significant progress in digitization in recent years. The Ministry of Transport, Communications, and Information Technology (MTCIT) announced in a 2023 report that government institutions' digital transformation under the Government Digital Transformation Programme (GDTP) (2021-2025) averaged 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 digital transformation actual impact, each of which takes into account multiple dimensions.[5] The Sultanate's remaining governorates have achieved a performance 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

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.

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 stated that it plans to commit OMR 170 million (USD 441.5 million) over a five-year period to re-engineering government services and fully digitizing services by developing digital solutions, improving digital infrastructure, and enabling national competencies in digital transformation, future skills, and change management.[7]

With the launch of Oman Vision 2040, the Sultanate's 20-year national economic and social plan, Oman seeks to transition from an oil-based economy to a diverse knowledge-based economy.[8] The plan looks towards key international and national indicators that relate to its strategic directions. In an interview, MTCIT reinforced 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 showed an improvement in Oman's performance, with its ranking in the Global Innovation Index increasing 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 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 country's digital economy.

2.2.1 Strategies

Oman has a well-developed vision with supporting strategies such as Oman Vision 2040, further discussed in section 3.2.1. Oman Vision 2040 is also further supported by various strategies such as the National Innovation Strategy, which aims to transform the national economy with innovation instead of heavy reliance on oil and gas, thereby fulfilling the goal of socio-economic development aligned with global standards.[12] Further, MTCIT has developed a series of technology-focused strategies since 2003, such as the Digital Oman Strategy and the National ICT Strategy.[13] The current digitization strategy for Oman is the National Digital Economy Program (NDEP), discussed further in section 3.2.2.[14] However, the ITU 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.

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

innovation assessment identified a need for operationalization and allocation of funds for the implementation of these strategies. MTCIT also published a National Broadband Strategy (NBS) in 2014 intended to drive social and economic benefits through the provision of broadband to all Omani people 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 close the digital divide. The three NBS pillars address the telecommunications regulatory framework, broadband demand, and broadband infrastructure.

ITU's assessment 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. It notes that over the last few years, Oman's public sector has concentrated on developing policies, frameworks, strategies, and guidelines to support the implementation of the Vision. Additionally, it 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 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) undertakes 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 observes that Oman has strong energy and telecommunication infrastructures and has seen success in internet connectivity services leveraging optical fibre and the rollout of 5G mobile connectivity. Concurrently, the ITU's analysis found that there are challenges concerning the lack of penetration of internet services in rural areas that hinder access to digital government services and the restriction of some voice-over-IP (VOIP) services that affect the critical components of innovative business models.

The Omani government has undertaken efforts to accelerate the availability of hard infrastructure and to strengthen and expand soft infrastructure. To encourage the adoption of technology, the Omani 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 include high equipment costs and the lack of distribution of certain components due to the overall small market size. Some efforts, such as the Oman Satellite Project have helped bridge the gap between rural and urban areas, which earmarked government support for the provision of internet access to nearly 600 rural villages and communities for 10 years.[16] The DIP also notes that the government has developed training

[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.

[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.

programmes to build ICT skills and expand exposure to technology outside of urban areas – a key consideration when considering that 14 per cent of Oman's population lives in rural areas. Additional soft infrastructures supported by government investment over the past decade and a half 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 new innovators.[17]

2.2.3 Human capital and innovation ecosystem

The DIP also observes that as of 2023, the country boasts a pool of human capital with academic knowledge of technical skills.[18] In addition, Oman has been considered as a potential platform for testing technologies due to its geographic location and geopolitical stability.

However, Oman's technology sector and its professionals still require international exposure, advanced technology training, and practical experience in the digital sector. Moreover, young innovators are missing business-building and operational skills and the ability to prove themselves to be notable entrepreneurs with innovations. While there has been growth in the country's citizens with programming skills, this demographic also has the second-highest unemployment level in the country. ITU also noted the absence of an ICT sector network to promote and advocate for digital innovation ecosystem matters. This absence of formal networks and the unavailability of a stakeholder directory further stifles multi-stakeholder collaborations.

Furthermore, public administration digitization plans have not fuelled ICT-based opportunities for start-ups or SMEs. According to ITU, government projects are awarded to companies with more extensive portfolios. SMEs and start-ups also find the tender application process for public procurement opportunities to be lengthy and complex. In early 2022, MTCIT launched the Jadara programme, which focused on encouraging government entities to purchase local startup products in the ICT sector and encourage the entry of these products into the local market, thereby contributing to the growth of the sector in Oman.[19] The Jadara programme offers the following services:

- supporting startups to determine Proof of Value (POV) to validate that the product will be useful for government entities, with MTCIT facilitating product testing for up to three months;
- taking necessary actions and coordinating between startups and targeted government entities; and
- promoting locally developed products.

To date, MTCIT has supported 33 startups promoting their products to targeted entities after evaluating these products. In addition, the ministry has supported seven startups to carry out seven proofs of concepts in different entities.[20]

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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 Program, 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 had available start-up seed funding and idea-stage investments through resources such as private sector programmes, government banks, government schemes, sponsorship programmes, and university incubation centres. Innovation Development Oman (IDO) and the Oman Technology Fund, both under ITHCA (previously known as the Oman ICT Group), are also available as resources. However, these funds do not appear to meet the demands for growth funding. The research and development sector also faces issues of limited funding. It is also noted that the past several years have presented budgetary challenges, translating into lower spending and lower investments, thereby hindering the availability of funds for start-ups and small and medium enterprises (SMEs). Oman has seen international investments through its economic free zones but suffers from low foreign direct investment (FDI) in the ICT sector.

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 telecommunications 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, industry chambers, 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 telecom 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 Oman's 2011 electronic transactions law and modernizing the regime. Electronic transactions can be defined as any contract, agreement, or communication in this regard to be partially or wholly implemented 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 Oman's 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 Emerging technology legal and regulatory framework

3.2.1 Existing instruments

Oman has developed and adopted multiple instruments that guide and establish frameworks that are necessary for the country's digital transformation by promoting and enabling 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 notification to 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 Cyber Crime 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 telecommunications technol-ogies, 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 Oman's government	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 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 is already in place, and efforts are 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 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 flows from the inclusion of smart, sustainable cities in Oman Vision 2040 as well as the Oman National Spatial Strategy.[44]

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

To further understand how Oman's legislative agendas align with international best practices, we can consider 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 different aspects of ICT regulation and regulatory strategies to implement policy, legal, and regulatory frameworks.

In reviewing Oman's policy, legal, and regulatory frameworks, 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) pertains to issues of consent to process personal data along with the rights of data subjects and the obligations of 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 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 Technologies, which would help implement a national plan for research and investment and the establishment of emerging technology companies, is in line with the GSR 2023 guidelines highlighting financial or fiscal support for research and development in digital technology, open technology innovation, and innovative business models.[47] Further, the pillars of the programme look at enhancing the productivity of sectors pertaining to AI and advanced technologies.
- **Sustainability**: Sustainability has been a component of each edition of the GSR best practice guidelines over several years. Oman's GDTP, NDEP, and Oman Vision 2040 each encourage sustainability in the process of digitization of the Sultanate economy,

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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

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

- **Collaboration and stakeholder engagement**: In 2024, Oman's MTCIT sought input on a comprehensive national policy for AI, calling upon different industry sectors to contribute towards the policy.[49] This presents a recent example of collaborative regulation, a component of GSR best practices dating back as far as 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 Oman's national strategies and five-year development plans, taking into account the economic and social conditions and Oman's capacity to progress alongside local, regional, and global changes.[50] It 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 Oman's natural resources and unique environment.

Furthermore, the Vision aims to modernise 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 committees and teams including experts and 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 a sustainable environment. The pillars broadly cover 12 national priorities which have been set by considering 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 modernise and support scientific research and innovation;
- conserving natural resources and different elements of the environment;
- developing health care 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 Oman's position in different fields. The indicators help measure the achievements of the Vision through the efforts made toward each national priority. The Oman Vision 2040 Implementation Follow-up Unit identified the main indicators as those 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 FDI to GDP • Omanis' 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 5 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 follows up on the work carried out by public and semi-government entities and observes the roles of different sectors related to the Vision's programme as per their capabilities. The Unit aims to follow up on the targets, results, and indicators, while also aiming at creating a motivating environment to achieve the objections of the vision. Furthermore, the Unit follows up on policies to simplify procedures and services, supports 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.

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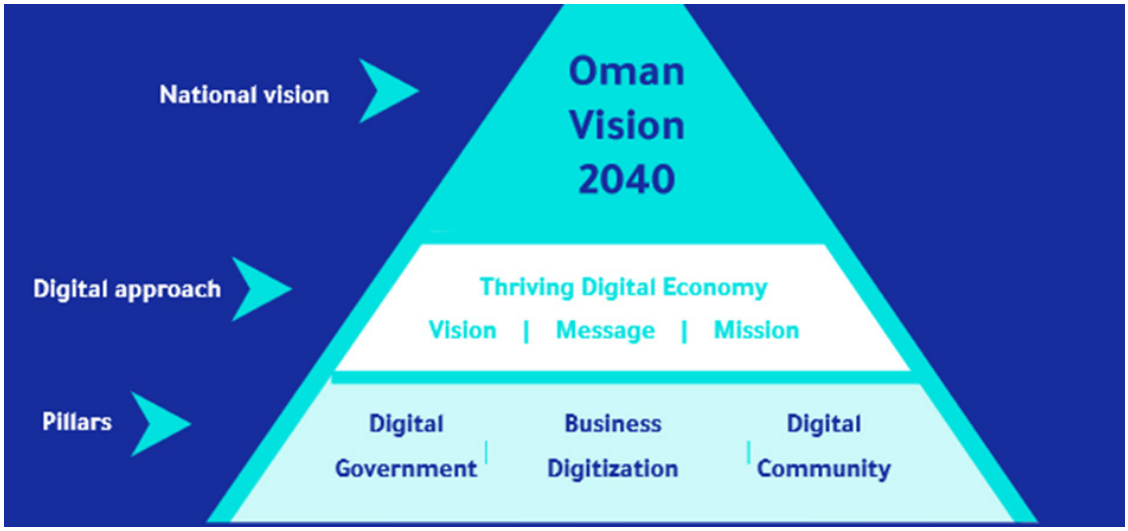
51 Oman Vision 2040 Implementation Follow-up Unit, Oman Vison 2040 Report: 2022-2023 (June 2023), p. 16, https://www.oman2040.om/Oman2040Report?lang=en.

52 Royal Decree 100/2020 Establishing the Oman Vision 2040 Implementation Follow-Up Unit, Determining Its Competences, and Adopting Its Organisational 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

Further, it aims to cultivate a digital economy using a secure advanced infrastructure that facilitates a digital government to harmonise economic and social development plans. NDEP's three pillars to achieve national goals are:

- 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. Further, it aims to establish smart government transformation programmes and provide effective governance mechanisms. It will also help create a digital society to meet future requirements while also providing an environment for companies to adopt modern technologies to support business digitization.

NDEP identifies 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	Empower-ing Digital Economy Ecosystem	E-Com-merce

Source: ITU, adapted from MTCIT

3.3.3 Government Digital Transformation Programme 2020-2025

Oman's 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 has developed standardised models to enable government entities to develop digital transformation plans along with work teams in the target entities. There are four implementation tracks defined to achieve the programme's visions and national directions, each with its own goals, indicators, and projects:

- **Excellence in e-services**: The government aims to increase the country's rank in the United Nations E-Government Survey E-Services Development Index from 24 in 2020 to 20 in 2025. Further, it aims to raise the standards and quality of digital service channels to achieve a rewarding experience. The track also aims to increase the availability and accessibility to e-services through smart and mobile devices and to increase the availability of open government data for vital sectors. Separately, the programme aims for 80 per cent

[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

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**: The programme aims to digitally transform infrastructure for priority service entities that help achieve Oman Vision 2040. It also encourages an increased percentage of digital and smart applications developed in cooperation with the private sector. Further, the programme 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 stream is intended to enable the programme to invest in capacity-building and skills for digital transformation. It will also enable digital transformation 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. Lastly, by 2025, work under this stream will result in the issuance of the GDTP guidelines.
- **Community participation and awareness**: This stream is intended to increase interaction and community participation in the field of e-services and digital transformation. Further, it seeks to enhance the quality of digital channels and partnerships with the private sector and SMEs to implement transformation initiatives and projects.

3.3.4 National Programme for AI and Advanced Digital Technologies

The National Programme for AI and Advanced 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 localisation 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;
- localisation of AI technologies; and
- governance of AI applications and advanced digital technologies with a human-centred vision.

The AI programme identifies 26 ongoing initiatives across the three pillars, such as support for Omani factories and SMEs incorporating 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 also includes multiple initiatives related to revising and introducing legal and regulatory frameworks to enable and promote AI and advanced technologies.

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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.

The AI programme also includes 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 and MTCIT is responsible for legislation as well as implementation control and supervision. The programme also notes the implementation role of government and the private sector more generally and the investment activities conducted by the Oman Investment Authority and investment companies. There is, however, no 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 TRA and MTCIT, play key roles in Oman's efforts to accelerate and capitalise on digital transformation. These institutions include departments and agencies with responsibilities for matters including not only communications, but also 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 in Oman's ongoing transformation.

4.1.1 Institutional mandates and activities

This section provides a high-level overview of institutions' missions, key activities, and levels of independence or oversight to understand their critical roles in Oman's digital transformation (Figure 4).

Figure 4: Key Omani digital transformation institutions

Ministry of Transport, Communications, and Information Technology		
Mission	**Key Digital Activities**	**Reporting**
Provide a sophisticated transport, communications, and information technology infrastructure that is secure and integrated with urban and economic development, which aligns with the requirements of sustainability and future in achieving Oman Vision 2040.	ICT sector policymaking 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 telecom and postal services sectors according to international best practices	Ensure provision of affordable telecommunications services, promote the use of telecommunications 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 a 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 the Sultanate 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 economic and social development of society through optimising 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 characterised 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 programs, strengthen partnership between entities, and enable them to achieve the Vision's objectives	Follow up 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

MTCIT is the Government of Oman body responsible for establishing policy direction across the ICT sector, including responsibility for formulating and implementing government digital strategies and programmes. As described on the ministry website, its main mission 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 important digital sector laws – the Cybercrime Law and the E-Transactions Law. MTCIT also leads efforts to develop a comprehensive ecosystem of sandboxes in Oman, beginning with the Fintech Regulatory Sandbox and the Regulatory Sandbox for Telecommunications.[61]

MTCIT seeks to enable the government sector to achieve outstanding innovative performance, provide smart services, proactive procedures, and a rewarding digital experience. Notably, the ministry plays key roles in implementing the NDEP and the GDTP, as described in Section 3.3. MTCIT's role in directing, coordinating, and monitoring NDEP implementation was highlighted in interviews with several stakeholders. In recent months, MTCIT has been organising events introducing and promoting NDEP across the country.

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

4.1.2.2 Telecommunications Regulatory Authority

TRA was established on in March 2002 as part of the adoption of the Telecommunications Regulatory Act, intended to liberalise and upgrade Oman's telecommunications sector. Over its 22-year history, TRA has adopted regulations and undertaken activities intended to strengthen and develop 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 programs intended to expand access to ICT services, particularly in rural areas.[64] TRA's telecommunications sector staff are organized into departments addressing technical specifications, internet domains, licensing and compliance, tariffs and costing, competition, and consumer affairs. As further discussed in Section 4.3.1.1, TRA is responsible for regulating competition in the ICT sector.

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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.

As the ICT sector has evolved, so too has the sector regulatory framework developed and implemented by TRA. The authority has continued to develop a regulatory framework governing a liberalised sector while considering or introducing regulations on matters including the internet of things and satellite direct-to-device communications. TRA has carried out several public consultations per year over the last several years. Recent consultations have addressed matters including spam and scam messages, technology regulations, spectrum use, satellite technology, billing accuracy, sustainability, and smart cities. In addition, TRA became responsible for oversight of Oman's postal sector in 2012.

TRA is also responsible for managing Oman's spectrum resources. Key activities include planning, assigning, and monitoring spectrum use, international coordination, and type approval. Spectrum staff are organized into seven departments, including 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 conferences such as World Radiocommunication Conferences and related preparatory processes.

4.2 Stakeholder mapping

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

The 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 & Urban Planning • Ministry of Labour • National Records & 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 formalise or operationalise 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 Center (MTCIT) • Ministry of Endowments and Religious Affairs • Petroleum Development Oman

Table 5: TRA stakeholder mapping summary (continued)

Connect	**Entities with which TRA would like to explore potential collaboration opportunities** • Ministry of Heritage and Tourism; • Ministry of Health; • Environment Authority; • Oman Investment Authority; and • 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 the 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 engage in several collaborative activities. In some cases, these are engagements that leverage the inputs or expertise of all participants to advance the regulatory framework or address challenges. In other cases, the activities are better described as integrations or cooperation, sharing necessary information to complete particular tasks. This section summarises information obtained from a range of interviews with public and private-sector stakeholders.

4.3.1 TRA collaborative activities

As the telecommunications sector regulator, TRA has the widest range of collaborative activities relevant to the telecommunications and digital sectors.

4.3.1.1 Intragovernmental collaboration

In an interview, TRA identified multiple collaborative regulatory activities in which it participates with other government ministries or authorities.[65] While not addressing all of the entities or issue areas reflected in the stakeholder mapping in section 4.2, concrete examples of such engagements include:

- collaboration with Oman's electricity sector to enable telecommunications 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 telecommunications sector needs are considered during the planning phase for new developments, including smart cities;
- collaboration with MTCIT with regard to postal 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 telecommunications-sector issues with entities such as those above, officials outlined three key steps:

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

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

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

Box 1: Regulation of telecommunications sector competition in Oman

The MoU with MCIIP is built on a common understanding between the ministry and TRA that the regulator is the appropriate authority to address competition-related matters within the telecommunications sector[1]. This is the case for matters related to mergers and acquisitions in the telecommunications sector. Notably, the Telecommunications Act, adopted in 2002, includes provisions for the TRA to address competition matters in the telecommunications sector and predates the adoption of Oman's 2014 competition law. Similarly, TRA adopted ex post competition regulations in 2013, though these were amended in 2020, after the introduction of Oman's horizontal competition law.[2] The introduction of the competition law led to the adoption of the telecommunications sector competition MoU. However, active collaborative engagement between TRA and MCIIP on competition matters has yet to be initiated.

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

The current regulatory framework assigns distinct roles 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 notes 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 telecommunications law would affect the competition regulation framework. However, it 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 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.

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 stated that teamwork is a core value within the organization, leading to frequent collaboration.[67] As described, when an issue involves multiple aspects – such as technical, economic, and financial considerations – the TRA's decision is based on input from all relevant internal stakeholders, which is consistent with established international good practices.

4.3.1.3 International collaboration

TRA indicated a strong commitment to regional and international collaboration.[68] Officials cited TRA membership in 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 overseas 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 spectrum management experience.[69]

TRA also participates in telecommunications and postal activities organised by the Arab League, the Gulf Cooperation Council, and the Arab Information and Communication Technology Organization (AICTO), and is a member of 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

On a day-to-day basis, MTCIT highlighted collaboration with TRA, in line with the roles of each entity as defined by the telecommunications law. As noted by MTCIT, the ministry sets the strategy and the legal framework, while TRA implements the strategy in line with the law and regulates sector activity. MTCIT/TRA teams meet regularly and the regulator shares quarterly reports on telecommunications services and operators in the market.

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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.

MTCIT, as the focal point and lead entity for Oman's digital transformation efforts, necessarily works with a range of regulators, ministries, and other agencies, while also hosting multiple internal teams. In this role, MTCIT noted that a large 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 larger committee to enable decision-making based on achievements and challenges.

MTCIT provided an example of collaboration focused on work with the Ministry of Higher Education (MoHE) to improve Oman's position in international rankings with regard to ICT skills. To reach this objective, MTCIT suggested training programmes for graduates with bachelor's degrees in IT, programming, coding, cybersecurity, and related fields to MoHE. As such programmes are developed, MoHE is responsible for sharing progress with international organizations to reflect updated 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.

In addition, MTCIT is coordinating Oman's Govstack, approximately 65 government digitalization initiatives between MTCIT and other entities, such as web portals, cloud services, and skills development initiatives in which each stakeholder has defined roles and responsibilities. The overall objective is to increase efficiency, reduce expenses, and increase Oman's social performance ranking in global and international indicators.

MTCIT also highlighted a key challenge of its collaborative efforts: coordinating 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

MCIIP noted that its Competition Centre is currently implementing two instruments – related to competition practices locally and international dumping – for which it is working with other entities 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 for which the ministry is working with MTCIT's digital transformation team. In describing the digitization process, MCIIP indicated that it listens to customers, consults both before and after the project – ideally to obtain a no-objection certificate – and has a strategy for stakeholder engagement.

MCIIP also conducts feedback meetings to obtain qualitative feedback from service centres quarterly to take stock of recent activities. In addition, the ministry carries out social media "listening," monitoring what investors or other stakeholders post online regarding hurdles encountered when investing in Oman.

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

4.3.4 Central Bank of Oman

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

CBO has engaged with other regulatory authorities in response to those agencies' draft regulations. One example noted was CBO's submission of comments in response to TRA's cloud computing and data centre consultation.[74] CBO stated that it seeks to collaborate and be helpful to other agencies whenever possible.

However, some activities characterised by CBO as collaborative did not necessarily involve meaningful collaborative exchanges or joint problem-solving. In some cases, CBO described a working relationship in which the regulator issued mandates for financial sector companies to take action or implement changes, such as tokenization, direct debit capabilities, and mobile payments. In the case of CBO's relationship with MTCIT, the engagement described the transfer of information as opposed to engagement on regulatory issues spanning the financial and telecommunications sectors.

4.3.5 Consumer Protection Authority

The Consumer Protection Authority (CPA) highlighted collaborations with entities including the MCIIP, Oman Public Prosecution, and the Royal Oman Police.[75] However, some of these engagements may be more accurately described as integration, as they refer to the linking of systems to assist in addressing consumer complaints against retail establishments, for example. Similarly, CPA noted an integration with MCIIP regarding systems related to new activities in the Omani market.

While it represents a different type of collaboration or knowledge exchange, CPA noted that it has visited other countries to study how they address consumer protection issues similar to those faced in Oman. Among the countries cited were China, Japan, Korea, and Thailand.

4.3.6 Ministry of Information

The Ministry of Information (MoI) noted that MTCIT periodically calls Omani government entities to join meetings and share ideas and challenges related to the execution of the digital transformation plan. As part of these meetings, MTCIT provides guidance, including with regard to addressing specific challenges.[76]

Other collaborations with MTCIT highlighted by MoI were generally more process-oriented than collaborative. MoI primarily referred to progress under Oman's NDEP, wherein it reports to MTCIT, the ministry responsible for the implementation of the programme. MoI is working, in line with MTCIT guidance, to digitalise numerous systems provided to the public, in particular.

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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.
76 Interview with MoI, 26 June 2024.

As part of the digital transformation process, MoI has periodic check-ins with MTCIT – initially every three months and now every six months. MTCIT provides the digital transformation budget as well as some relevant expertise to assist MoI with the digitalization process. MTCIT also provides MoI (as well as other Oman government entities) a score reflecting their digital transformation progress.

MoI also described engagements with MCIIP, the Ministry of Labour, the Royal Oman Police, and the Muscat municipality, as well as integration with banks regarding MoI's payment gateway. The majority of these engagements appear to reflect systems integration rather than collaborative regulation.

4.4 Private sector role

Oman's mobile operators note that there are several mechanisms in place for providing information and input 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] Similarly, TRA provides public consultation opportunities in which 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 for the need to update Oman's regulatory framework to focus more broadly on ICT sector issues as opposed to more traditional telecommunications matters. Second, operators noted that while public consultations are a good practice, by the time a consultation is initiated, the draft instrument has already been developed and operators can only react to the draft, as opposed to being involved at earlier stages of 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 the government, through Oman Vision 2040 and NDEP, is focused on developing ICT services and technologies, while TRA is focused on the regulation of more traditional telecommunications services. The government's focus on new services and technologies while the regulator is not addressing such matters leads to uncertainty among operators and stifles investment and innovation. A related challenge identified in discussion with 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 potential future ICT sector, and also shared concerns that the long development timeline likely means that it may be already outdated. Operators welcome a new law that enables an appropriate level of sector oversight but also seeks to permit flexibility and innovation.

Another aspect of policy coherence identified by operators was the need to ensure a clear understanding of overlapping or conflicting vertical and horizontal laws or regulations. The need for such clarity was identified concerning issues including competition and data privacy. One operator suggested the potential value of having a single point of contact for issues that may involve multiple sector authorities. One example provided addressed the issue of mobile financial services, with the operator questioning the rationale for an entity licensed by TRA to

[77] Interview with operators, 9 July 2024.

need to also engage with CBO. Another example highlighted was conflicting requests and requirements originating from the government and TRA regarding data privacy.

On a related note, operators cited a lack of regulatory clarity regarding data hosting and data residency. They noted that, particularly in a market the size of Oman, software-as-a-service offerings are attractive, but the ability to procure them from international vendors is unknown due to uncertainty over data governance requirements. As one operator noted, TRA tends to prohibit new services that are not clearly addressed by the legal framework rather than working collaboratively with operators to identify an acceptable regulatory approach within the existing framework.

Operators also noted that they have fewer opportunities for engagement with policymakers or legislators as 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 operator-policymaker collaboration. Operators were clear that they do not have direct engagement with legislators, with one noting that TRA is intended to be the voice of the operators before the government and legislators, relaying priorities and concerns. Operators welcomed opportunities or a mechanism by which all Omani stakeholders – in this case including policymakers, the regulator, and operators – could ensure alignment on approaches to meeting the targets and goals established in the policy documents driving Oman's digital transformation.

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 considering policy, governance, and legal frameworks enabling digital transformation. The unified framework combines ITU's established tools for assessing policy, regulation, and governance in telecommunications 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 information that countries report to ITU. As noted, when the unified framework was introduced, such a benchmark analysis enables regulators and policymakers to compare their frameworks with peers, while pinpointing strengths, gaps, and priorities for future reforms.

This section presents an overview of the nine framework pillars, as well as the percentages of each that have been achieved in Oman as compared to the region and the global average.

Box 2: ITU Unified Framework

ITU's Unified Framework for consideration of digital transformation

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 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 consultation before implementing regulatory changes, industry codes of conduct, and mechanisms for regulatory experimentation.

Box 2: ITU Unified Framework (Continued)

Legal instruments for ICT/telecom 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.

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 Organisation (WTO) telecommunications services commitments, and agreements on key sector issues.

Source: ITU Global Digital Regulatory Outlook 2023.

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

Table 6: Thematc 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.

5.2 Level of regulatory maturity and policy implementation

Oman's policy, legal, and regulatory frameworks include forward-oriented policies and programmes that prioritize digital development, instruments intended to provide a framework for digital services and issues, and longstanding laws. This mix presents stakeholders with a combination of legal frameworks that are not fully aligned with the current ICT and digital services environment and instruments that are simultaneously advancing Oman's digital development. As a result, there is some uncertainty among stakeholders when policies, laws, and regulations are not in complete agreement.

5.2.1 Digital policies

Oman has also adopted several notable 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/or NDEP (described in section 3.2.2) as frameworks under which the whole of the Omani government is working to enable digital transformation. This positions these key policies 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 to 2009, as multiple stakeholders identified a lack of connectivity or suitable infrastructure outside of urban areas as a challenge in Oman. Stakeholder feedback indicates that a new or updated approach to ensuring universal broadband access is warranted.

5.2.2 Laws and regulations

As presented in section 3.1, Oman has several longstanding laws and regulations governing or related to the ICT sector, as well as policies intended to drive digital transformation over approximately the next 15 years. However, there is arguably a need to review and revise multiple instruments to ensure that they are fit for purpose at present and ideally for several years into the future. The most recent of these laws, the competition law, was issued 10 years ago.

The Telecommunications Regulatory Act – the instrument arguably with the greatest impact on the ICT sector – has been amended but was originally drafted more than 20 years ago. It has been cited by both TRA and private-sector stakeholders as a bottleneck to the development of Oman's digital sector and a coherent legal and regulatory framework for ICT services in the current market conditions and the broader technology landscape. As noted 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 digital services.[78] The law's focus on traditional services, in turn, contributes to operator concerns that TRA is focused on legacy services rather than current and future services, creating uncertainty over the framework that will govern 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 publicly available at present and there is no indication of an estimated completion date.

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

Oman has introduced horizontal laws, such as those governing data protection and competition, though these in some cases overlap sector-specific laws. The resulting uncertainty and a certain lack of alignment between the various instruments were cited by private-sector stakeholders as a challenge to operating in Oman's digital sector.

Considering Oman's level of legal and regulatory development with respect to emerging technologies and services, Oman has adopted or is developing instruments or programmes addressing matters such as data protection, cybercrime, fintech, open data, IoT, AI, and smart cities, as reflected in section 3.3.1. Notably, Oman has implemented regulatory sandboxes in the fintech and telecommunications sectors. The limitations on the scope of TRA authority over more modern or innovative digital communication services may, however, limit the utility of the current telecommunications regulatory sandbox. The TRA stated that it has authority to govern IoT by virtue of the Telecommunications Law, but is not yet regulating AI.[79]

Oman is thus advancing regulatory initiatives related to a range of new technologies, though with limitations in some cases. It is noteworthy that MTCIT plays a key role in the majority of these emerging areas, enabling the ministry to serve as a central coordinator for emerging technologies, but also presenting a risk of acting as a bottleneck or single point of failure.

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

6 Recommendations

Oman's policy, legal, and regulatory framework presents a mix of forward-looking policy and regulatory activities and instruments, as well as laws and practices that have not been adapted to fit a digital-focused economy that fully incorporates collaborative regulation.

Oman has implemented multiple strategies intended to marshal 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 NDEP, present multi-stakeholder, long-term efforts to chart a new course for Oman and include elements related to the ICT sector and digital services.

However, key components of Oman's legal framework – notably 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, places pressure on 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 sector and to provide regulatory certainty regarding new and innovative services.

As the ICT sector itself continues to evolve and as digital services are incorporated into commerce, education, healthcare, entertainment, and nearly every sector of the economy, there is an increasing need for collaboration among stakeholders. This collaboration ideally occurs 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 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 integration or data-sharing. Additional work is required to both create additional collaborative opportunities and ensure that such activities leverage the expertise and experiences of all relevant stakeholders.

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

A review of the collaborative activities noted in stakeholder interviews and indicated in published material results in the identification of three potential approaches to strengthening stakeholder collaboration and developing a more forward-looking policy, legal, and regulatory framework.

6.1 Emphasise results-driven joint collaboration on policy and regulatory challenges

In discussions with multiple stakeholders, as noted in section 4.3, activities and engagements described as 'collaborative' could more objectively be described as compliance with top-down directives or as integrations and transactions. While these are important activities, they are not necessarily leveraging the strengths and knowledge of all stakeholders to address challenges or shape future regulatory frameworks. In the interest of meeting the goals of policies such as Oman Vision 2040 and NDEP, engagements between entities should be designed 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. Such an approach to collaboration would allow 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 handling competition issues to provide clarity and transparency to stakeholders and to avoid any legal disputes.

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

Oman's ministries and regulatory authorities currently do not regularly publish or share documents that govern or describe collaborative relationships between entities, such as MoUs. Similarly, little detailed information regarding decision-making processes or collaborative exercises is easily accessible to stakeholders, creating information gaps and a lack of public records related to decision-making. This leads to uncertainty on the part of stakeholders not directly involved in a process regarding 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 entities throughout the Omani government to make more information available.

Such transparency could be enabled by, for example, regular publication of meeting agendas and minutes or regular meetings or workshops with stakeholders and the addition of MoUs or similar agreements to entity websites. The government's digitalization effort to implement a uniform platform for sharing information and conducting routine 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

One approach that incorporates aspects of both of the previous recommendations is to develop ongoing 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 on the question of the suitability of the telecommunications law to the current Omani and global ICT sectors could involve MTCIT, TRA, and licensees, as well as potentially participation by other entities that have areas of responsibility that intersect with ICT sector activities. These may include, for example, CBO as well as 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 can be addressed from multiple perspectives.

6.4 Incorporate meaningful public consultation and engagement processes

In addition, feedback from industry and other regulatory entities suggests that public consultation processes and timelines for the development of new policies and instruments should be improved. As noted in section 4.4, industry stakeholders noted that TRA practice of initiating consultation after a proposed instrument is drafted is less effective than involving stakeholders at an earlier stage. While TRA noted the adoption of a regulation on public consultations in 2008, the Government of Oman should consider a comprehensive review of public consultation processes and standards, including minimum comment periods and limits on the length of time that regulators could consider inputs before issuing a new or updated instrument. Further, in the case of matters that span multiple jurisdictions, consultations could be co-designed by multiple regulators.

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

6.5 Complete the revision or replacement of the telecommunications law

As noted in section 5.2.1, multiple stakeholders highlighted the need for an updated telecommunications law – or perhaps more broadly, an ICT or digital sector law – to address the fact that the current law was originally developed more than 20 years ago. The ICT sector has undergone significant change in that period, including the rapid development of mobile services, the increasing importance of broadband connectivity, the introduction of over-the-top (OTT) services and digital platforms, the increasing use of cloud services and the need for data centres, and increasing use of – and need for protection of – personal data, to name just a few changes. The current law creates significant gaps and uncertainty in Oman's legal and regulatory framework, causing operators and investors to limit or question the wisdom of investment in innovative new services. An updated sector law should provide a clear framework for the governance of existing and potential new services and technologies, including flexibility to allow for innovation in both services and regulatory approaches.

6.6 Clarify areas of legal or regulatory overlap

As telecommunications and digital services continue to evolve and to be employed across sectors, there is an increasing need to ensure clear divisions of responsibility or required areas of 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 governed by either or both of a clear delineation of responsibilities in ICT and competition laws or a formal agreement between regulatory authorities regarding how to address competition issues in the ICT sector. Oman's current arrangement, as described by TRA, is an MOU based on a common understanding of how to address the overlap between the telecommunications law and the competition law. This leads to uncertainty for service providers. 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 PDPL repealed the data protection provisions of the electronic transactions law, eliminating such a 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

More broadly than the revision of a particular instrument, Omani stakeholders would benefit from the adoption of legal and regulatory frameworks that better allow TRA and other regulators to keep pace with developments in technology and services. This aligns with ITU activities 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 date back to a time when the ICT sector and available digital services were quite different.

In addition, Omani regulatory authorities should employ strategic foresight to identify emerging and future issues on an ongoing basis. For example, regulators should consistently monitor for early friction points where regulatory frameworks are constraining activity or innovation, gaps that create uncertainty as new technologies and services emerge, and conflicts between existing frameworks or between frameworks and broader policies or programs. Such monitoring – informed by the operators, service providers, and other stakeholders governed by regulatory frameworks – dovetails with the need for regulators to keep abreast of the changing digital environment.

6.9 Simplify legal and regulatory frameworks

In addition to anticipating the need for regulatory changes to accommodate a changing sector, Oman's policymakers and regulators should also consider opportunities to simplify and streamline legal and regulatory frameworks. As the sector evolves, there may be, for example, license categories or reporting obligations that are obsolete or that impose a cost that outweighs their benefit. The same applies to agreements between regulatory entities or other bodies. In conjunction with the development of the revised telecommunications law, it may be prudent to determine if existing MoUs are necessary. If an agreement is no longer aligned with the legal or regulatory framework or sector conditions, there may be value in revising or eliminating it.

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