

Infrastructure and Urban Technical Competency Framework

(1 August 2022)

SECTION 1

About the FCDO Advisory Cadres

World-leading technical and analytical capability is central to FCDO's mission. FCDO Advisers embody these capabilities, playing a key role in the delivery of the UK's international objectives and development impact in particular.

Advisers have a central role in the design, implementation, appraisal, and evaluation of international development programmes; in the development and implementation of foreign and development policy; and in diplomacy and international partnerships. They play an expert role in inter-disciplinary thinking and thought leadership, linking programmes and bringing deep expertise to maximise impact. They have strong links with specialist networks, research organisations, and professional bodies in the UK and globally.

Advisers are accredited to one or more of thirteen Advisory Cadres. These are professional bodies within FCDO and cover: Climate and Environment, Conflict, Economics, Education, Evaluation, Governance, Health, Humanitarian, Infrastructure and Urban, Food and Agriculture, Private Sector Development, Social Development, and Statistics. The Economics, Statistics, and Evaluation Cadres are linked to government-wide advisory services. Each Cadre has a Head of Profession (HoP), who is responsible for ensuring that professional standards are maintained both within the Cadre and for those wishing to join. The HoP provides thought leadership, quality assurance, and supports continuing professional development.

Adviser Capabilities

Advisers have certain capabilities in common. These include but are not limited to the following:

- **Expertise and thought leadership** in international policy and investment, applicable across a range of themes and geographies, and with a focus on development impact
- **Use of evidence** to inform policy and programming including the use of political economy analysis
- **Policy and programme delivery**, from design through to implementation and appraisal
- **International influence and diplomacy**, thinking and working politically and cooperatively, and through appropriate challenge, to shape norms and approaches
- **Brokering partnerships** with governments, civil society, the private sector, multilaterals, research organisations and professional bodies in the UK and globally
- **Delivering value for money** by applying key economic and commercial concepts
- **Safeguarding** to ensure the UK does-no-harm by integrating gender equality, child protection, disability inclusion, preventing sexual exploitation and abuse, and sexual harassment
- **Tackling climate change and restoring nature**, ensuring that programmes are aligned with the Paris agreement on climate change and UK commitments on nature
- **Embodying Civil Service behaviours** in applying, communicating, influencing, and leading technical and evidence-informed processes and engagement
- **Knowledge of data** relevant to operating sector and context, and application of professional expertise in interpretation and analysis of this in support of intended outcomes
- **Systems thinking**, recognising inter-linkages, real-world dynamics, and complexity to help design effective policies and interventions.
- **Innovation and digital development**, proactive in exploring and validating innovative approaches, technology solutions and creative ways to address the world's challenges.

SECTION 2

Infrastructure and Urban Advisers

Infrastructure and Urban Advisers identify and design strategies, interventions and programmes that are evidence-based, suited to different contexts and support reform at scale. They also apply knowledge of equity and inclusion to maximise the impact of investments on the poorest and most marginalised, especially women and girls and those with disabilities. They are skilled at seeing opportunities to innovate. Technical knowledge is combined with relationship management skills and FCDO core values.

Infrastructure and Urban Advisers also require strong influencing and diplomatic skills, being able to use their knowledge of evidence and research to support the enabling environment, implementation and service delivery. In particular to deliver the UK governments global ambitions on climate and environment and those on economic development and trade. They also respond to crises, disasters and humanitarian situations.

Development impact is often secured through cross-cutting and inter-disciplinary approaches - advisers are therefore encouraged to affiliate or accredit to other cadres - infrastructure either directly or indirectly influences the attainment of all the Sustainable Development Goals (SDGs), including 72% of the targets.

Infrastructure and Urban Advisers continue to develop their own capabilities and those of the wider FCDO to ensure the department maintains the depth and breadth of infrastructure and urban experience and expertise to deliver UK's global leadership.

Cadre members will fulfil this role by:

- a) Supplying high quality technical expertise to support and guide FCDO's ambitions including the design of strategies, plans, policies, programmes, rules, and guidance
- b) Partnering strongly with directorates which, in delivering the UK's international ambitions, focus on climate and environment and economic cooperation and growth
- c) Drawing on the best available evidence, consulting with other specialisms or sources of knowledge and working with others to assure quality
- d) Tailoring interventions to the development aspirations of ODA recipient countries in ways that are consistent with UK and international commitments and ambitions
- e) Promoting and championing infrastructure and urban achievements, learning and development and professional excellence
- f) Ensuring skillsets remain relevant through continuing learning and professional development
- g) Developing strong partnerships, knowledge sharing and relationships with partner governments, bilateral and multilateral organisations to ensure coherence and establish trust and reliability.

Infrastructure and Urban Technical Competencies

Five technical competencies are outlined below – four primary ones plus one specialist. Each of the four primary competences is described by five knowledge, application and practice areas which are common to all four primary competencies. The competency descriptions list issues of relevance and importance but are not exhaustive. Advisers are not expected to have knowledge and practice experience in all issues but are expected to provide evidence across all five areas. Competencies 1, 2 and 3 are 'sequential' in that they describe upstream and enabling environment issues (#1) followed by implementation (#2) and lastly by downstream effects (#3) but they are inextricably linked – an understanding of impact on users and beneficiaries (competence #3) should inform and influence the enabling environment (competence #1). Competence #4 is explicitly focused on the urban and local context as an important distinction from national and sectoral infrastructure.

Competence 1: Climate-resilient, sustainable and inclusive infrastructure - the enabling environment, financing and governance

Knowledge, application and practice areas:

- 1.1 Institutions (rules-of-the-game) and stakeholders: *how to establish, work with the status quo and improve and reform the institutions for infrastructure at the global, regional, national and local levels, as well as the UK's position on these* - understand the role of G7/G20 infrastructure initiatives and other international actors such as the UN and its specialist bodies, the MDBs, the IFC, OECD, multilateral and bilateral organisations and regional bodies (eg AU, SADC, UNECA, ASEAN, etc.); PPIAF; infrastructure policy development and implementation; sector reform; UK departments and agencies working internationally
- 1.2 Instruments and mechanisms: *how to meet the massive financing gap for infrastructure through a variety of means* - public finance, debt (including bonds), equity, guarantees, funds, climate finance, PPPs, private finance, blended finance, taxes tariffs and transfers; technical assistance; also recognizing country-specific arrangements; the pitfalls of tied aid
- 1.3 Framing principles, issues and context response: *how to frame FCDO response* - alignment with the relevant international agreements (e.g. Paris agreement) and FCDO partnership principles as it affects infrastructure; alignment with democracy and open societies; recognize Quality and Resilient Infrastructure Investment (Ise-Shima principles); apply Economic, Social and Governance (ESG) safeguards - especially to promote anti-corruption and inclusion mechanisms; the role of regulation and the importance of and approaches to national/sectoral/local planning; options for capacity building and self-financing; ensure SEAH safeguarding; promotion of inclusive and participatory planning; use of digital twins; recognize infrastructure inter-dependencies and systems thinking; understand issues of scale, regional and transboundary infrastructure; use of context specific and practical Political Economy Analysis
- 1.4 Evidence of impact: *how to demonstrate what does and does not work* – DFID's Multilateral Aid Review and other similar reviews and the 'Best Buys' findings; refer to the work of others such as the IGC, ICAI, MDB and OECD evaluations as well as sector-specific bodies; familiarity with data sources, key research and think-tanks
- 1.5 UK levers: *how to make the most of what the UK can offer* - professional bodies such as ICE; academia and its networks (eg UKCRIC); the UK's consultant and contracting sectors; industry bodies and specialist agencies such as TfL or CrossRail; trade opportunities; civil society such as EAP and EWB as well as sector specific entities such as TransAid and WaterAid; Royal Academy of Engineering; diplomatic networks and relationships; OGDs; HMT, IPA; and long-standing UK collaborations in infrastructure and urban sectors in partner countries

Competence 2: Climate-resilient, sustainable and inclusive infrastructure – its implementation, delivery, operation and decommissioning

Knowledge, application and practice areas:

- 2.1 Institutions (rules-of-the-game), stakeholders: *how to support better delivery of infrastructure* – the roles of external actors such as the MDBs, UK entities, and international and regional players as well as national and local governments and agencies in-country; how national and sectoral planning is translated into strategies and budgeted implementation plans and ultimately into (bankable) projects; different roles of public and private sector; administration and devolved bodies, national and sub-national mandates; how the infrastructure industry works
- 2.2 Instruments and mechanisms: *how finance is converted into assets* – options for infrastructure and resilience delivery models and mechanisms and programme management, oversight and verification, public and private finance, PPPs and SPVs, procurement processes, State-Owned-Enterprises, Technical Assistance, alternative and innovative instruments (BoTT and similar arrangements, concessions; IPA's 5-case business model; operations of BII and PIDG) recognizing country and project needs; economic (e.g. cost-benefit) analysis and ensuring sound cash flows
- 2.3 Framing principles, issues and context response: *how we can support partner governments to frame and implement their approach* – use of Private Sector Participation (PSP); applying ESG standards; use

of FIDIC, NEC and country-specific procurement; ensuring transparency and accountability (CoST); safeguarding and Health and Safety such as ‘considerate construction’; EIAs and SEAs - and use of technical assistance for such approaches; approaches to the circular economy, energy efficiency and building standards

- 2.4 Evidence of impact: *how to demonstrate what does and does not work* – implementers and utility performance; use of carbon accounting; project delivery reporting (on time and within budget); service delivery standards (e.g. maintenance spend/new construction and upgrading spend ratio, staff/thousand water customers, wastewater discharges, water quality, power outages, road safety data)
- 2.5 UK levers: *how to make the most of what the UK can offer* - industry, trade bodies, professional bodies; the UK’s consultant and contracting sectors; UK OGDs and agencies; IPA; academic networks and think tanks and civil society

Competence 3: Climate-resilient, sustainable and inclusive infrastructure - services delivered and impacts

Knowledge, application and practice areas:

- 3.1 Institutions (rules-of-the-game), stakeholders: *how to get better outcomes from infrastructure for users and beneficiaries* – utilities and SoE performance; regulators and independent monitoring bodies; private sector operators; watchdogs, consumer groups and the media; manufacturing, industry and businesses dependent upon good infrastructure
- 3.2 Instruments and mechanisms: *how to finance and govern service delivery* - infrastructure maintenance budgeting; life-cycle costs/rewards analysis; road funds; service delivery agreements, concessions, subsidies, operation effectiveness (such as road funds; billing and revenue generation; twinning arrangements for TA and support)
- 3.3 Framing principles, issues and context response: *how we can support partner governments to get good outcomes* - willingness to pay and willingness to charge, tariffs, customer surveys, safeguarding; Doing Business Surveys; affordability
- 3.4 Evidence of impact: *how to demonstrate what does and does not work* - utility performance, road safety, carbon accounting, jobs and employment, SMEs, service coverage, basic services provided, Doing Business Surveys; standard sector performance data (kWh generated, water supply l/c/d)
- 3.5 UK levers: *how to make the most of what the UK can offer* – research organisations, professional bodies, and civil society; accountability and transparency organisations (CoST)

Competence 4: Climate-resilient, sustainable and inclusive urban planning, development and management (urban specific issues complementary to competences 1, 2 and 3)

Knowledge, application and practice areas:

- 4.1 Institutions (rules-of-the-game), stakeholders: *how to produce livable cities* - national ministries and local government; town planners and regulators; the UN (Habitat) and the MDBs; community and civil society groups including representatives of the urban poor, other international actors such as C40, IIED, Cities Alliance, SDI and WRI; the Resilience Shift; greening urban and infrastructure development, infrastructure sector agencies and coordination between the national, provincial, sectoral and local
- 4.2 Instruments and mechanisms: *how to finance urban development and management* – national financing frameworks, fiscal transfers, revenue generation, taxes and tariffs – property, business rates, land-based financing mechanisms - land pricing and management
- 4.3 Framing principles: *how we can support partner cities and municipalities* - decentralization; rural-urban links; urban land tenure and land markets, understanding different needs of megacities, growing economies, secondary cities, small towns, locations vulnerable to rising sea-levels, stressed cities (e.g. through drought); safeguarding requirements; slum upgrading; housing; sponge cities; smart cities, urban renewal and heritage protection
- 4.4 Evidence of impact: *how to demonstrate what does and does not work* – service delivery standards and coverage; population surveys; Doing Business Surveys
- 4.5 UK levers: *how to make the most of what the UK can offer* - RIBA, BEAG, RTPi, research and academia, local government associations

Competence 5: Specialisms - strengthening and promoting our expertise

Deep sector knowledge or experience in specific infrastructure sectors and relevant professional areas - (transport, energy, water, waste, ICT, cyber, telecoms, nuclear, housing and architecture, ports, satellite/space); sources of energy (geothermal, hydrogen); data, digital and smart approaches; private sector; contracts, quantity surveying, procurement, arbitration and legal, climate and environment; manufacturing, agri-business and labour-based approaches; extractives / natural resources; seismic and structural engineering; disaster risk-financing; social (health or education) sectors; humanitarian, conflict and stability; labour, health and safety issues; research etc.

Knowledge and practice areas should be demonstrated under the same headings as competences #1 to #4.

SECTION 3

Assessing Adviser Capability

Assessments will be based around a review of evidence that describes the extent of knowledge and expertise applicants hold in the relevant competencies and against capability levels from the FCDO Capability Framework: *Awareness, Foundation, Practitioner, and Expert* (within *Expert* the HoPs Group differentiate between *Expert* and *Senior Expert*). Note that particularly for *Senior Expert* level, consideration will be given to candidates' ability to give high quality demonstration of technical leadership and an ability to communicate and influence in their evidence.

The TCFs are structured so that competencies are clearly defined and can be expressed at *Practitioner*, and *Expert* and *Senior Expert*.

Practitioner:

- Strong and confident day to day application of capability in common or standard situations but may need to seek expert support on more complex issues
- Holds several years of relevant experience* and may be augmented by a formal qualification of direct relevance**
- Minimum level for entry to the relevant Cadre – successful Technical Assessment dependent on fulfilling all stated criteria in the TCF

Expert:

- Recognised for specialist or technical knowledge and/or skill, underpinned by extensive experience applying it in practice on complex issues; connected with other experts
- Holds several years of relevant experience* and may be augmented by a formal qualification of direct relevance**
- Standard level for entry to the relevant Cadre – successful Technical Assessment dependent on fulfilling all stated criteria in the TCF

Senior Expert:

- Recognised for deep specialist or technical knowledge and/or skill, underpinned by extensive experience applying it in practice on complex issues; connected with other experts
- Holds significant years of relevant experience* and may be augmented by a formal qualification of direct relevance**
- Evidence of applying specialist knowledge and skill as well as displaying leadership qualities in a range of contexts.
- Accreditation dependent on fulfilling all stated criteria in the TCF and assessment against 2 Civil Service Behaviours: Leadership and Communicating and Influencing.
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* *Relevant experience* is defined as work experience in one or more sectors of direct relevance to the competency

** Infrastructure advisers will have a science based or infrastructure-relevant first degree and an infrastructure-relevant second degree or equivalent qualification, and overseas experience. Many are qualified and trained in an engineering discipline with strong project management skills, others have backgrounds in other built environment professions such as architecture and urban planning as well as in economics, environment, private sector development or procurement. At senior expert and expert level, registration as a full member of a Chartered Institution within the ambit of the UK Engineering Council, or an equivalent professional institution, is strongly encouraged; at practitioner level advisers will be required to work towards this. For some posts a professional qualification may be mandatory and where an adviser does not have such a professional qualification they will be required to work towards it.

Assessment Framework

The table below sets out the framework for how capability will be assessed against the competency. The framework is based around the standard 1-7 scoring system used for Civil Service recruitments. As with recruitment there is an application, a sift of applications and if that stage is passed, an interview. During an accreditation round, the sift panel will agree a pass mark for all competencies. This could be, for example, a score of 4. A sift will score all competencies at or above the pass mark for an applicant to pass from sift to interview. If a candidate applies for a level and does not pass, the sift panel can at their discretion agree whether they might still pass at a lower level. For example, an applicant might apply at Expert level but during the sift stage the panel might not pass them on all competencies, but after discussion agree to progress them to interview at Practitioner level.

Prior to interviews, the interview panel will again set a pass mark for all elements of the assessment. An interviewee must score higher than the pass mark in all areas to be considered for accreditation. If a candidate applies for a level and does not pass, the interview panel can at their discretion accredit the candidate at a lower level. Candidates who pass at a particular level cannot be considered for accreditation at a higher level, regardless of their scores. They must re-apply for accreditation at a higher level in a future accreditation round. The full set of accreditation requirements are specified in Section 4 below.

Standard scoring for assessment		
Score	Classification	Definition
7	Outstanding Demonstration	The evidence provided wholly exceeds expectation at this level
6	Strong Demonstration	Substantial positive evidence; includes some evidence of exceeding expectations at this level
5	Good Demonstration	Substantial positive evidence of the competency or behaviour
4	Acceptable Demonstration	Adequate positive evidence and any negative evidence would not cause concern
3	Moderate Demonstration	Moderate positive evidence but some negative evidence demonstrated
2	Minimal Demonstration	Limited positive evidence and/or mainly negative evidence demonstrated
1	Not Demonstrated	No positive evidence and/or substantial negative evidence demonstrated

SECTION 4

Routes to Infrastructure and Urban Accreditation

It is recommended that people working at Foundation and Awareness levels, which provides a pathway to Practitioner and Expert levels, hold a conversation with the HoP (Infrastructure & Urban) at an early stage on that journey.

Accreditation Route →		Standard			Specialist		
Capability levels →		Practitioner	Expert	Senior Expert ***	Practitioner	Expert	Senior Expert ***
Competencies	1. Climate-resilient, sustainable and inclusive infrastructure – the enabling environment, financing and governance	Practitioner demonstration of knowledge, application, practice and experience in three of the four standard competencies	Expert demonstration of knowledge, application, practice and experience in three of the four standard competencies	Senior Expert demonstration of knowledge, application, practice and experience in three of the four standard competencies	Practitioner demonstration of knowledge, application, practice and experience in two of the four standard competencies and a specialism	Expert demonstration of knowledge, application, practice and experience in two of the four standard competencies and a specialism	Senior Expert demonstration of knowledge, application, practice and experience in two of the four standard competencies and a specialism
	2. Climate-resilient, sustainable and inclusive infrastructure – its implementation, delivery, operation and decommissioning						
	3. Climate-resilient, sustainable and inclusive infrastructure – services delivered and impacts						
	4. Climate-resilient, sustainable and inclusive urban planning, development and management						
	5. Specialism						

*** Note that for *Senior Expert* level consideration will be given to candidates' ability to give high quality demonstration of technical leadership and an ability to communicate and influence in their evidence.