



Appendix G

International review of long-term infrastructure strategy and prioritisation

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July 2020

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Introduction

The Infrastructure Commission for Scotland's (the Commission) Phase 1 Report recommendations support more integrated system wide infrastructure prioritisation, with decision making designed to achieve inclusive economic growth and net zero carbon emissions, an inclusive net zero carbon economy. It is anticipated that implementation of the recommendations across the Scottish and UK Government, the wider public sector and the private sector will provide analytical and strategic level capacities to inform government budgetary decision making. During Phase 1 the Commission also concluded that this would be supported by the development of independent long-term advice highlighted in the Phase 1 recommendation 23 (Box 1).

Box 1 – Phase 1 Report Recommendation 23

By 2021, a body should be given the responsibility by the Scottish Government to provide independent, long-term, evidence based advice to Scottish Ministers on investment decisions for the social, economic and natural infrastructure needs required to deliver an inclusive net zero carbon economy.

During Phase 2, to inform the implementation of its Phase 1 recommendation the Commission has undertaken work to evaluate options for independent long-term advice provision. This review has identified several organisations which work with, but sit independent of or outside of, government and are either instrumental in the delivery of independent and long-term advice or provide a vehicle for comprehensive public engagement. It is a desk-based review which also includes a review of the Commission's initial call for evidence responses.

The Commission also recognises that within an international context there are also examples of good practise infrastructure strategy and prioritisation that is undertaken wholly within government structures. Therefore, this report provides an overview of a selection of countries in Europe and Asia.

Many governments and independent advisory organisations provide a plan of infrastructure investment, helping both the wider public sector, private industry and the third sector to plan, including skills requirements. There are also differences across countries in the level of centralised and regional decision making, planning systems and funding models. There are differences in approaches on the connection between infrastructure prioritisation, budget allocation, the number of government departments involved, frameworks for collaboration at a national, regional and local level, the planning system, funding models,

as well as the utilisation of independent advice for each country.

What has been evident throughout the Commission's research is that no country takes the same approach, including the role assigned to independent advisory organisations where relevant. There are similarities with most having some form of strategy, although frequently relatively short to medium term in nature, and often limited to sector(s) or geographical locations. There is not a set formulae of infrastructure decision making which can be transposed for Scotland, each country has developed systems which suit their unique circumstances. Therefore, this report looks to provide an overview to aid the Commission to provide advice to the Scottish Government on the infrastructure decision making system which will suit Scotland's circumstances.

Summary of Findings

This report looks at the following organisations and countries:

Independent Prioritisation and Strategy Organisations

- > UK – National Infrastructure Commission (NIC)
- > Australia – Infrastructure Australia (IA)
- > Australia – Infrastructure Victoria (IV)
- > New Zealand – New Zealand Infrastructure Commission (Infracom)

Independent Public Debate Organisations

- > France – Commission Nationale du debat public (CNDP)
- > Canada
 - > Quebec - Bureau d'audiences publiques sur l'environnement (BAPE)
 - > Montreal - Office de consultation publique de Montreal (OCPM)

Government Led

- > Netherlands
- > Denmark
- > Germany
- > Singapore
- > Hong Kong
- > China

Independent Strategy & Prioritisation Organisations

The National Infrastructure Commission, Infrastructure Australia, Infrastructure Victoria, and the New Zealand Infrastructure Commission have all been created in response to challenges in the effective planning and prioritisation of capital infrastructure spending decisions within their respective countries. Each organisation is discussed in more depth in their individual areas of this report. This summary section provides an overview and comparison of approaches.

The NIC, IA, and Infracom are all organisations which were established as a result of identified gaps within infrastructure planning at a national level. The NIC was founded due to a need for political consensus and the ability of governments to make long term decisions. Similarly, IA was the result of concerns that infrastructure investment decisions were overly political which in part led to uneven infrastructure investment. In New Zealand, Infracom was created as central and local infrastructure decision making was not sufficiently integrated, political decision making having a preference for new infrastructure rather than outcomes focused, and the lack of visibility of a pipeline of infrastructure projects.

The independent organisations all have a commitment to be transparent, achieved by the publication of their research, reports, and recommendation. In addition, they all have the autonomy to carry out research and publish findings and recommendations on subjects of their choosing, further cementing their commitment to transparency. They make them available to stakeholders, the public and all political parties which enables them to step outside of the political landscape and broker support across political divides, ensuring a continuation of the principles at any change of government.

The common theme, amongst the independent organisations, is clearly a need to ensure that infrastructure investment can be planned on a long-term basis outside of standard political decision making and regardless of the government administrative backdrop. A point which was clearly highlighted by Infrastructure Australia, who had previously been perceived as being too close to the government of the day, who then came under threat when that government changed.

All four organisations report to a nominated Minister with either an infrastructure, or in the case of the NIC the Treasury, remit. All of the independent organisations, except the NIC, which is an executive agency to the UK Treasury, are statutory bodies. It is worth noting that the original intention was to create NIC as a Statutory Body, however due to Brexit related Parliamentary business pressures the legislation for this was suspended and NIC was created in its current form. Only the NIC works within a fiscal target, with their recommendations and advice needing to be consistent with an economic investment envelope of between 1.0% and 1.2% of GDP per annum. IA however, consider projects over Aus\$100 million, with movement since 2018 towards assessment of projects of Aus\$30 million in certain circumstances, but there is no set limit to the

number of projects that they can consider.

They all develop a version of a national strategy, assessment or audit which are similarly focused, and all are refreshed every five year, or every parliamentary cycle. For Infracom their 30-year strategy will incorporate the Infrastructure Plan, due to be first published in 2021. A key strength of these strategy documents for all of the organisations is that they are a pre-budget process and therefore are pre-allocation on a sector level, under this principle they have the opportunity to advise governments on achieving key policy ambition, which in the case of Scotland would be an inclusive net zero carbon economy.

It is worth noting that in three of the organisations there is a statutory obligation for a government response, IV, NIC and Infracom. IV must receive a response to their strategic plan within twelve months and the NIC's charter commits the UK Government to respond to reports and recommendations within six to twelve months. The New Zealand Government have 180 days within which to respond to Infracom. Two organisations, NIC and Infracom, are both obligated to report on the progress that the respective governments have made against recommendations, NIC through an annual monitoring report, and IV within their annual reports, a process which continues to hold governments to account. However, ultimately, as would be expected, each Government retains decision making and policy development responsibilities.

The purpose of the organisations' centre around the improvement of infrastructure planning and quality to support sustainable economic growth, with most bodies recognising the need to consider the spatial elements of regional or urban/rural growth dynamics. Only Infracom and IV have a remit which include social infrastructure, although since 2017 IA have been broadening their remit to include schools and hospitals, but not other forms of social infrastructure. Infracom also specify social wellbeing as part of their remit, this is reflective of the political environment within which the body has been established. New Zealand, as is Scotland, is a founding member of the WEGoⁱ (Wellbeing Economy Governments), part of the Wellbeing Economy Allianceⁱⁱ which has a vision for a global economy which delivers human and ecological wellbeing. None of the organisations have natural, blue and green, infrastructure as part of their remit, an area that was identified within the Commission's Phase 1 work as important to stakeholders and the public of Scotland.

In support of the long term strategies the independent bodies provide advice on specific relevant topics, in the case of the NIC, IA and IV these can be mandated by the relevant Minister, but all have the scope to pursue research they deem relevant. They also maintain various methods of infrastructure prioritisation. Infrastructure Australia prepare an Infrastructure Plan every five years to support their Audit, which is then translated into a Prioritisation List of nationally important infrastructure project, published annually. IV produce a combined plan and prioritisation

list, which again is published annually. The NIC do not produce an Infrastructure Plan nor a project pipeline/prioritisation list, they do, however, work across the infrastructure system to counteract siloed working. Infracom, which was only established in September 2019, has already developed a pipeline of major projects to support government, agencies, local authorities and others to deliver major infrastructure, based around New Zealand's PPP scheme, this is updated on a quarterly basis.

In addition, Infracom, IA and IV all provide some level of specific project advice. IA and IV review individual projects, whereas Infracom have a strategic and coordination role. The project assessments are viewed as the most difficult and controversial of the independent bodies work as these attract more public, media and political scrutiny than strategic documents. This element adds an additional level of complexity in comparison to the NIC.

All four independent infrastructure advice organisations conduct extensive stakeholder engagement, work closely with the government of the day, government departments and agencies, and run public consultation exercises. The engagement centres around either their strategies', posed infrastructure challenges or those challenges identified by the organisations. Infracom seems to be the only one of these organisations which has a role in public consultation for individual projects, although the premise being that they will be consulted and be part of steering and working groups rather than conduct the consultation.

All of the independent organisations have Boards of between 7-12 members, they are appointed by the relevant Minister who oversees the organisation. The Boards are drawn predominantly from the private sector and academia, although some include people from inside government or with previous government experience. Staffing levels are relatively small with 30-40 full time equivalents, with roughly 50% of each bodies budget being spent on associated costs. Budgets themselves are also relatively small of £4.5 - £5.7 million per annum. Given the size of the organisations it can be argued that focusing on the national level by setting strategies, assisting with the creation of robust planning, investment and policy criteria is where they can add most value. This should help to create the right environment within which regional and local policies can be successfully developed.

The four organisations which focus on providing infrastructure advice all predominately operate within the strategy and prioritisation stage of the infrastructure lifecycle, although with business case reviews IA and Infracom also operate on the edges of the structuring and planning stage, with Infracom also responsible for the national Public Private Partnership scheme.

As the most recent organisation, Infracom appears to have conducted international research to design a model which incorporates best practice from other international advice organisations. In particular, the focus on developing a strategy which will incorporate an infrastructure plan as

well as it being their intent to develop a list of projects and priorities to improve both the quality and impact of infrastructure development. They also have a wider focus on public engagement, although not specified, the model chosen places an emphasis on public opinion while avoiding the heavy resource commitment of the French and Canadian models discussed below.

The NIC's 2019 Resilience Study Scoping Reportⁱⁱⁱ highlights that 'to be resilient, we need to move beyond managing individual risks or assets, to thinking about the system as a whole and how the services we all rely on can be sustained and disruptions minimised.' It is with this kind of understanding that a scope and remit of a body to provide independent infrastructure advice should be considered.

The area of focus which is most clearly missing for all four independent bodies is the evaluation of the effectiveness of the recommendations and policies advised by each of the bodies. This in itself may be a reflection on the size of the organisations and the length of time in existence for most. However, this appears to be a clear gap in the work of the organisations, or of Governments to evidence the outcomes; presenting a potential opportunity for a body in Scotland that provides long-term independent advice under recommendation 23 of the Commission's Phase 1 Report. However, it must be recognised that the infrastructure and planning weaknesses are long standing and are unlikely to be eradicated in short time periods.

Independent Public Debate Organisations

The three independent organisation which focus on public debate and consultation all have similar remits with the French CNDP and Montreal's OCPM basing themselves on the Quebec BAPE model which was established in 1978. They were all created as part of wider acts of parliament and all bodies report to a Minister or Executive Committee of Ministers.

They all express their core purpose as providing the public with information and providing a vehicle within which to harness public opinions. They were created in recognition that planning consents for large infrastructure projects were often delayed, in some cases for many years, due to significant objections to planning permissions and that a vehicle was required to ensure appropriate and sufficient public engagement.

They operate a front-loaded process which occurs prior to planning permission being granted, which has been shown to speed up the planning process as modifications to projects can be made prior to a planning submission, thus reducing re-submission time lags. None of the organisations can prevent a project going ahead, they provide information to decision-makers (Governments and Councils) to aid decision making. Their interaction with the public is extensive and they

can often act as brokers between the project owners and the public to bring about modifications which would either improve the project and/or make it more acceptable to the public, although the process does not guarantee a project will go ahead. The consultation process is often labour intensive and project owners have raised cost concerns in the past, as there is an approximate cost of £1 million from developers per project^{iv}.

Within the National Infrastructure Commissions report on International Infrastructure Governance^v they highlight a significant drawback to independent public consultation approach: 'whilst the consultation stage is perceived as early from the perspective of a single project, it is, however, a late stage when considered against the wider process of establishing infrastructure need, undertaking strategic option assessments and making investment decisions.' Although these are comments relate to CNDP they are also true of both of the Canadian organisations.

Although not taking on the responsibility form public engagement, consultation and information provision, the significance of the process has been recognised within Infracom's remit as they have an oversight role for these activities with developers retaining responsibility. Significantly, the experience from these organisations could be utilised when consideration is given to recommendation 22 (Box 2) of the Commission's Phase 1 Report.

Box 2 – Phase 1 Report Recommendation 22

By 2022, the capacity and capability requirements for an informed approach to public engagement and participation needs to be clearly established and implemented by the Scottish Government, to ensure that short and long term outcome trade offs are effectively debated, understood and taken into consideration.

Annex A provides an overview table of each of the independent organisations identified.

Government Led Approaches

The research also considers a selection of countries who are recognised as being successful in their strategic planning and delivery of infrastructure. The Commission has considered countries in Europe and Asia. Europe, in the main, has infrastructure of a high standard, although there is recognition that since the economic crash there has been under investment. For Asia, the New Zealand Infrastructure Commission^{vi}, identified that 'the government of Singapore, Hong Kong and China have a single-minded focus on infrastructure'.

Within Europe the Netherlands and Denmark approach infrastructure planning through collaboration - politically, with citizens and with businesses. The Dutch place economic and social infrastructure on an equal footing, are considered, by Statista, to be second only to Singapore^{vii} in the quality of their infrastructure and have the highest penetration of broadband in the world at 99% of households. In Denmark they recognised a need to reform their infrastructure system and now run all major infrastructure projects by Acts of Parliament. They also have a comprehensive Public Private Partnership for transport infrastructure. German infrastructure is dense and modern, they are particularly recognised for the quality for their transport and telecommunications infrastructure. However, the Transport Research Arena noted that the German system is considered as politically motivated with a recognition that often new transport infrastructure projects are favoured over maintenance of existing assets^{viii}.

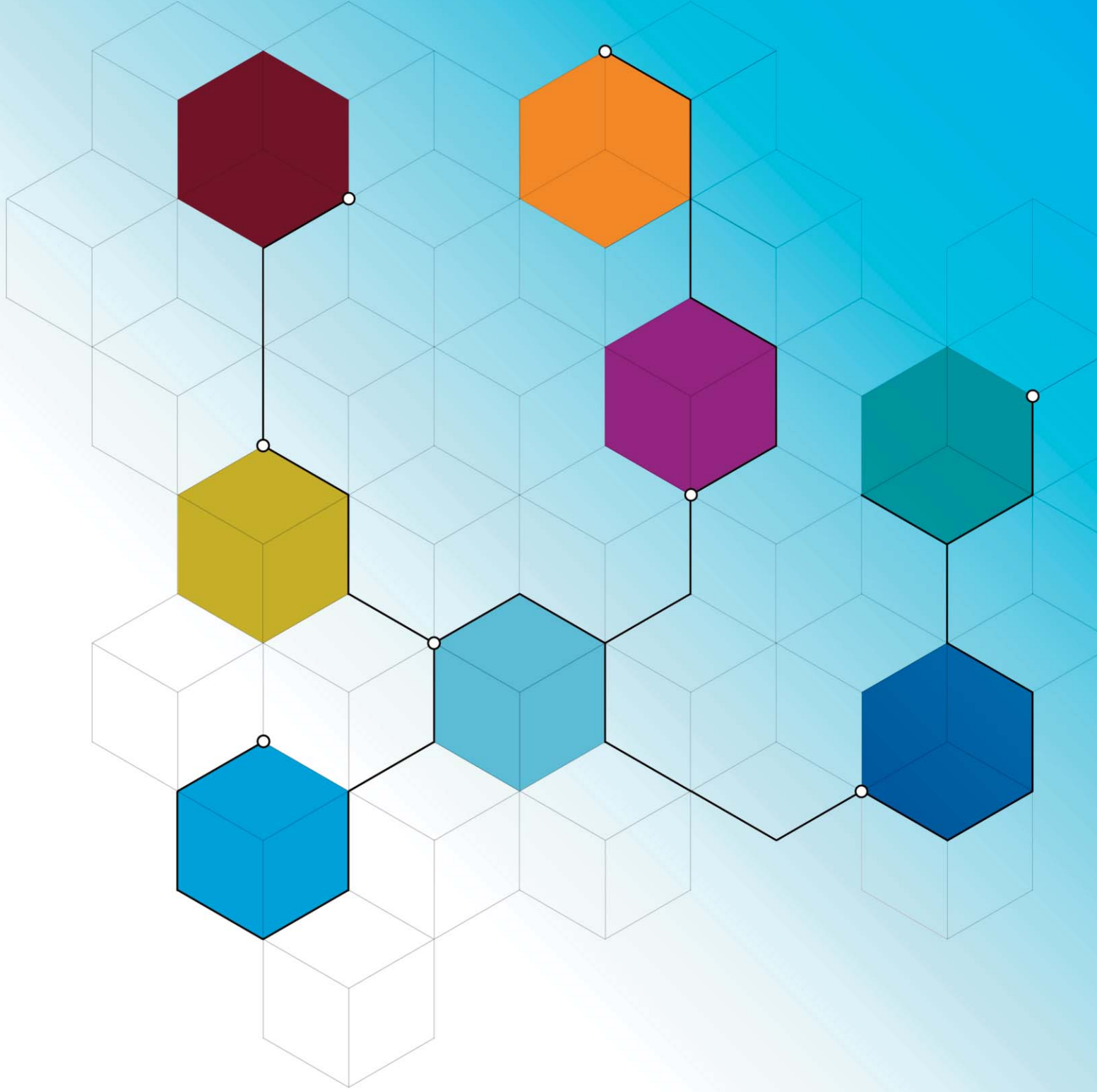
In Asia, the report looks at China, Hong Kong and Singapore. All three started their infrastructure planning from a lower base than within Europe. In China, there has been heavy infrastructure investment since the 1990's in recognition of the impact of high quality infrastructure on economic growth. As a result, seven of the world's largest ports are now in China, including the largest at the Port of Shanghai. However, much of the economic growth, and therefore infrastructure, has been concentrated in the eastern cities of the country, China is now embarking on a programme to spread wealth more evenly.

Hong Kong have their 2030+ Plan which is their infrastructure strategy and is considered as an exemplar of integrated long term strategic spatial planning^{ix}, as part of this they have invested heavily in transport infrastructure to improve air quality, the ease of doing business and congestion within the city. In Hong Kong, the Chief Executive (Head of the Hong Kong Government), is voted into power in a college electoral system which does not allow citizens to vote and is heavily influenced by the business and professional communities, impacting on the business collaboration and focus for Hong Kong's infrastructure.

In the case of Singapore there was a particularly bold ambition to transform from a third world country into a modern metropolis. The decision was taken to create the Urban Redevelopment Authority (URA) as a result of gaining independence and recognising that there had been 120-years of under investment in infrastructure. Singapore is officially a Republic based on parliamentary democracy, however, the People's Action Party has dominated its legislature since 1959 which has given the government, and thus the URA, the scope to plan and execute those plans without the political considerations, as a result of a more open democracy, which have created the need for independent advisory organisations within the UK, Australia and New Zealand. The URA publish their Concept Plan, which is a fifty-year strategy every 10-20 years, however, their Master Plan, which provides the means to realise the strategy over a 10-15 year timescale is refreshed every five years.

The URA have a simply defined mission 'to make Singapore a great city to live, work and play'. They are focused on developing in a sustainable way as well as providing a quality living environment with their latest Master Plan concentrating on inclusive and green neighbourhoods. In addition to their strategy and development plan they are also Singapore's main government land sale agent and are significantly involved in planning and project evaluation. The URA are moving focus from working for the people, to working with the people. To this end they are placing a greater emphasis on public consultation, including having a gallery space to conduct interactive consultation. Their focus is on government funded infrastructure and does not have the same reach and scope as the French and Canadian public consultation organisations.

Notably, across the government led reviewed countries that have been successful at infrastructure planning is a political system which is conducive to decision making, whether that be collaboration across political parties, open dialogue with citizens or communism where there is no political opposition. Their approaches to infrastructure have been successful as they developed within these political landscapes.



Independent advice organisations

A review of individual organisations

PHASE 2: DELIVERY FINDINGS REPORT

UK – National Infrastructure Commission

The National Infrastructure Commission (NIC) was established by the UK Government in October 2015 to put infrastructure at the centre of its economic and industrial strategies. The NIC was created in response to the Independent Armitage Review of Infrastructure⁴ which identified a 'need for political consensus and the ability of governments to make long term decisions when beset by shorter term financial and political imperatives.'

The NIC remit includes supporting sustainable economic growth across the UK, to improve the UK's international competitiveness and to improve the quality of life for people living in the UK. Their recommendations and advice must be consistent with an economic investment envelope of between 1.0% and 1.2% of GDP each year between 2020 and 2050 and include prioritisation and rationale for any recommendations. The NIC are responsible for providing an assessment for recommendations which considers costs to businesses, consumers, public bodies and other end users of infrastructure. The remit of the NIC, which is issued via a remit letter at the start of each new parliament, contains a binding fiscal remit which the NIC must work within throughout each Parliament. This does not include the fiscal remit for any devolved infrastructure investment decisions.

The NIC have a similar sectors remit to the Infrastructure Commission for Scotland (ICfS). They cover energy, transport, water and wastewater (drainage and sewerage), waste, flood risk management and digital communications. Unlike ICfS who consider social infrastructure and housing as part of the infrastructure remit of the Commission, NIC do not consider social infrastructure and only consider interactions between other infrastructure and housing. Neither commission have land use or agriculture as part of their remit.

Beyond the specifics set out in their remit the NIC have discretion to independently design its programme of work, methodologies and recommendations. All reports represent the NIC Commissioner views and are not government statements. All reports and recommendations receive a formal government response within six to twelve months of publication, once endorsed the recommendations become a statement of government policy.

Key commitments of the NIC include delivering:

- > A National Infrastructure Assessment once in every Parliament, including recommendations on infrastructure needs;
- > Specific studies on pressing infrastructure challenges as set out by the government; and
- > An annual monitoring report, monitoring progress against the NIC previously endorsed recommendations.

The NIC works across the infrastructure system when making recommendations to counteract siloed working methods, they also engage extensively across society, government, parliament, devolved governments and industry. To support their work the NIC charter sets out that the government will share any relevant information and provide data on reasonable requests for analysis, the costs of which must be detailed in the NIC annual report.

The NIC is independent of Government and has been set up as a Non-Departmental Public Body. They currently have a board of ten non-executive commissioners, accountable to the Chancellor, with ministers deciding whether to endorse the NIC recommendations. Commissioners are appointed for a term of 5 years and a maximum period of ten years. Commissioners are paid a fee of £20, 000 per annum for 2 days per week and the chair received £85,200 for 3 days per week in 2018/19.

There is also a secretariat team of roughly 40 civil service staff including a Chief Executive, who reports to the Permanent Secretary of the Treasury. The secretariat conduct analysis, gather evidence, run consultations, stakeholder engagement, and in conjunction with Commissioners develop recommendations. NIC staff are employed by the NIC within agreed overall pay remit guidelines of the Treasury, they stand as a separate government department and staff work under the Civil Service Code and Civil Service Pension arrangements. The NIC has a delegated budget of £5.7 million for 2020/21, £5.2 million expenditure in 2019/20 of which roughly £3 million was for staffing costs.

The NIC works predominately within the strategy and prioritisation but also within the planning and structuring of the infrastructure lifecycle within the UK. They also provide recommendations on how the government and industry can set out plans at the operational and maintenance level of the lifecycle. Their independence from Government enables them to make recommendations on what could be considered potentially controversial issues, they aim to build political consensus. This consensus comes from a clear, transparent analysis of what infrastructure is needed; what are the key trade-offs and dependencies are; and how these needs can be best met.

References:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/571097/Fiscal_Remmit_2016.pdf

<https://www.gov.uk/government/publications/national-infrastructure-commission-terms-of-reference>

<https://www.nic.org.uk/what-we-do/>

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/585374/NIC_framework_document_web.pdf

<https://www.nic.org.uk/who-we-are/>

<https://www.nic.org.uk/our-work/>

<https://www.gov.uk/government/publications/national-infrastructure-commission-annual-report-1-april-2018-to-31-march-2019>

<https://www.nic.org.uk/wp-content/uploads/NIC-Corporate-Plan-202021-to-202223-Final.pdf>

<https://www.raeng.org.uk/publications/responses/independent-armitt-review-of-infrastructure>

<https://www.nic.org.uk/our-work/resilience/>

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/601897/Strategic_Infrastructure_FINAL_for_web_v2.pdf

Australia – Infrastructure Australia

Infrastructure Australia was established under the Infrastructure Australia Act 2008, they are an independent and impartial advisor to national and state governments, industry, and communities on the long-term and strategic prioritisation of nationally significant infrastructure projects. Infrastructure Australia was established due to concerns that investment decisions had become overly politicised and despite the majority of Australian citizens living within cities, the Australian Government invested little.

They are an independent statutory agency working as a corporate entity since 2014. They work closely and collaboratively across government and infrastructure sector stakeholders and focus on raising the quality of infrastructure planning and decision making, as well as defining an actionable agenda of reforms and investments throughout Australia under the authority of the Department of Infrastructure and Regional Development. Since 2018 Infrastructure Australia's remit has been widened to include some forms of social infrastructure, mainly schools and hospitals.

Infrastructure Australia have two key functions:

- > Evaluating business cases for nationally significant investment proposals seeking more than Aus\$100 million in Australian Government funding for inclusion on the Infrastructure Priority List^{xi}, with movement since 2018 to Aus\$30 million for some cases; and
- > Setting the policy agenda on the long-term opportunities for infrastructure reform to improve living standards and national productivity.

Since 2014, after an amendment to the 2008 Act, Infrastructure Australia has been led by an independent Board of twelve who represent a wide range of sectors and jurisdictions, as well as a CEO who reports to the Board. The CEO is supported by a leadership team who cover the four key areas of Project & Advisory; Policy & Research; Public Affairs; and Corporate Services with an overall average staffing level of 30 people who are all public sector workers. Board members as well as staff receive salaries with the Chair and CEO receiving Aus\$116,840 and approximately Aus\$500,000 respectively in 2018/19. The overall budget for Infrastructure Australia is circa Aus\$9.9 million in 2018/19, of which Aus\$5.1 were salary costs.

The work and publications of Infrastructure Australia

Infrastructure Australia works on a five-year cycle and they are responsible for producing four key sets of documents throughout that time:

- > Australian Infrastructure Audit^{xii} - refreshed every 5 years;

- > Australian Infrastructure Plan^{xiii} - refreshed every 5 years following the Audit with progress reported two-yearly through Prioritising Reform;
- > Infrastructure Priority List - published annually but a live document which is updated throughout the year with each new business case; and
- > Infrastructure Reform Series^{xiv} - on-going publications.

The 2019 **Australian Infrastructure Audit** puts community at the centre of infrastructure decision-making, measuring service delivery against the key outcomes of access, quality and cost^{xv}. The Audit is the basis of the Infrastructure Australia's work and recommendations. It is an infrastructure needs assessment on a fifteen-year timescale.

The **Australian Infrastructure Plan** is the routemap for infrastructure reform which considers the opportunities and challenges that have been identified within the Australian Infrastructure Audit and require a policy action intervention. As a result of the success of the previous Plans the Australian Government has committed a ten-year spending programme of Aus\$100 billion from 2019/20 on infrastructure which will fund the Infrastructure Plan. The Plan was first published in 2016 and is a fifteen-year rolling plan which specifies national and state level infrastructure priorities, it is due to be refreshed in 2021.

The **Infrastructure Priority List** responds to the opportunities and challenges identified in the Audit which require intervention via investment in infrastructure. It is a prioritisation process through the publicly available Assessment Framework that ensures there is a consistent pipeline of nationally significant infrastructure projects. The List is published annually but updated with each new business case, it provides guidance on specific infrastructure investments that are nationally significant for the short, medium and long-term. Infrastructure Australia conduct the engagement as part of the business case assessment work. The List is a mixture of proposed projects and projects identified by Infrastructure Australia as gaps or opportunities of national significance.

The **Reform Series** papers act to ignite the national infrastructure needs conversation and to maintain the momentum established by the Australian Infrastructure Plan. They give advice on how best to implement policy responses.

It should be noted that unlike other independent bodies, there is no requirement for the Australian Government to respond to any of the advice or recommendations made by Infrastructure Australia.

Infrastructure Australia operates predominately in the strategy and prioritisation stage of the infrastructure lifecycle with some elements of the structuring and planning lifecycle being evident within the Infrastructure Priority List process.

CASE STUDY

Planning Liveable Cities



Planning Liveable Cities^{xvi} was released in December 2018 as part of Infrastructure Australia's Reform Series. It proposes a 'place based' approach to infrastructure planning, providing advice to governments, industry and the community on how to appropriately sequence the complex task of delivering housing and infrastructure to ensure the necessary access to facilities and services for existing and new residents.

Between 2017 and 2047, Australia's population is projected to increase by over 11^{xvii} million people from a base of 24.5 million^{xviii}. Around 80% of this growth will occur in their five largest cities – Sydney, Melbourne, Brisbane, Perth and Adelaide. To support this growth and prepare for the future, Australia needs to deliver new housing and substantially upgrade the capacity of many of their infrastructure networks. The report makes clear that infrastructure frequenting is not about providing all future infrastructure needs upfront, it is about identifying and planning for the trigger points that will necessitate new and upgraded infrastructure, ensuring that infrastructure is operational at these trigger points and the collaboration needed to achieve this.

Based on a review of Australia's five largest cities, Infrastructure Australia found six common challenges:

- > Infrastructure delivery is struggling to keep pace with rapid population growth and change;
- > Australia's three-tiered governance structure can make it challenging to consistently deliver liveable places;
- > Sector-led infrastructure planning can lead to uncoordinated outcomes for communities;
- > Communities are increasingly disappointed by their experience of growth;
- > Australia's infrastructure funding mechanisms have not kept pace with growth; and
- > Governments and industry lack a shared understanding of the capacity of different infrastructure networks.

The report makes nine recommendations to change the way Australia delivers new housing and infrastructure in its largest cities, proposing changes to current planning systems, governance frameworks and funding arrangements to better manage rapid population growth.

The approach is built on collaboration across levels of government and with industry, providing a vision of infrastructure needs through the lens of outcomes for a place and community, rather than outcomes for a single project or sector.

References:

<https://www.infrastructureaustralia.gov.au/>

<https://www.infrastructureaustralia.gov.au/publications/australian-infrastructure-audit-2019>

<https://www.infrastructureaustralia.gov.au/publications/australian-infrastructure-plan-2016>

<https://www.infrastructureaustralia.gov.au/infrastructure-priority-list>

<https://www.infrastructureaustralia.gov.au/reform-series>

<https://www.infrastructureaustralia.gov.au/about-us>

<https://www.infrastructure.gov.au/infrastructure/>

<https://www.infrastructureaustralia.gov.au/who-we-are>

<https://investment.infrastructure.gov.au/>

https://budget.gov.au/2019-20/content/bp4/download/bp4_10_staffing.pdf

https://www.infrastructureaustralia.gov.au/sites/default/files/2019-10/annual_report_2019_web_final.pdf

<https://www.infrastructureaustralia.gov.au/publications/planning-liveable-cities-place-based-approach-sequencing-infrastructure-and-growth>

<https://www.worldometers.info/world-population/australia-population/>

<https://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/3222.0>

https://www.infrastructure.gov.au/infrastructure/publications/files/Australian-Government-Response-to-Australian-Infrastructure-Plan_Nov-2016.pdf

<https://www.infrastructureaustralia.gov.au/sites/default/files/2019-08/Australian%20Infrastructure%20Audit%202019.pdf>

<https://www.infrastructureaustralia.gov.au/listing/newsletter/ceos-update-october-2019>

Australia - Infrastructure Victoria

Infrastructure Victoria have been providing independent advice on infrastructure to government since October 2015 as a result of the Infrastructure Victoria Act 2015. Their core functions:

- > Production of a **30-year infrastructure strategy** for Victoria in 2016, which will be refreshed every three to five years, with the Victorian Government having a statutory obligation to make a formal response within 12-months;
- > Development of a 5-year **Infrastructure Plan Projects Pipeline**;
- > Provide written advice to government on **posed infrastructure questions**; and
- > Publishing **original research** on infrastructure-related issues

In addition, they support government departments and agencies in the development of sectoral infrastructure plans. They are currently working on infrastructure priorities for the regions of Victoria^{xix}, the prioritisation work will build upon the development of profiles for the regions, aimed at understanding needs and strengths of each region, with recommendations from the work being made through the refreshed 30 year strategy. Since 2018 they have produced an Infrastructure Plan Projects Pipeline, this highlights the progress that has been made on delivering the infrastructure agenda and also identifies the projects and initiatives the state requires. They also support the Victoria Government by providing an assessment of the governments progress against the five-year plan within the Infrastructure Victoria Annual Report.

Infrastructure Victoria cover the nine key sectors of transport; culture, sport & community; digital; education & training; energy; environment; health & human services; justice & emergency services; and water.

Infrastructure Victoria is led by a CEO with a board of seven, including a Chair, three public sector and four from private or non-government sectors. In addition, there is a team of 33 staff. Their work includes regular engagement through consultations but also includes a strong emphasis on community and stakeholder engagement to build consensus. One of the key ways in which Infrastructure Victoria achieve this is through their research programmes which involve and stimulate community discussions, along with other research, this aims to raise the bar on long-term, evidence based infrastructure planning. For example, in the development of its 30-year strategy Infrastructure Victoria used a citizens' jury process as part of its consultation.

Infrastructure Australia works on the strategy and prioritisation level of infrastructure needs, they do not directly fund or oversee infrastructure programmes or projects. Their budget in 2018/19 was Aus\$10.12 million for running costs and research.

It is worth noting that throughout Australia there are several state level organisations which operate in a similar way to Infrastructure Victoria and all have been established by statute. Building Queensland is the only one of the bodies that has a slightly different focus, they consider projects rather than policy and planning. The Australia state independent infrastructure bodies are:

- > Infrastructure New South Wales
- > Building Queensland
- > Infrastructure Tasmania
- > Infrastructure South Australia
- > Infrastructure Western Australia

References:

- <https://www.infrastructurevictoria.com.au/advice/>
- <https://www.infrastructurevictoria.com.au/wp-content/uploads/2019/04/Infrastructure-Victoria-Act-2015.pdf>
- <https://www.infrastructurevictoria.com.au/project/research-infrastructure-priorities-for-the-regions/>
- <https://www.infrastructurevictoria.com.au/project/research-regional-infrastructure-needs/>
- <https://www.infrastructurevictoria.com.au/report/executive-summary/>
- <https://www.infrastructurevictoria.com.au/wp-content/uploads/2019/04/Funding-and-financing-draft-additional-information-paper.pdf>
- https://www.parliament.vic.gov.au/file_uploads/FINAL_IV_Annual_Report_2018-19_WEB_dXhWsTBp.PDF
- <https://www.vic.gov.au/victorian-infrastructure-plan>
- <https://www.infrastructurevictoria.com.au/wp-content/uploads/2019/04/Infrastructure-Victoria-Annual-Report-2017-18.pdf>
- <https://www.infrastructurevictoria.com.au/legislation/>

CASE STUDY

Transport Network Pricing

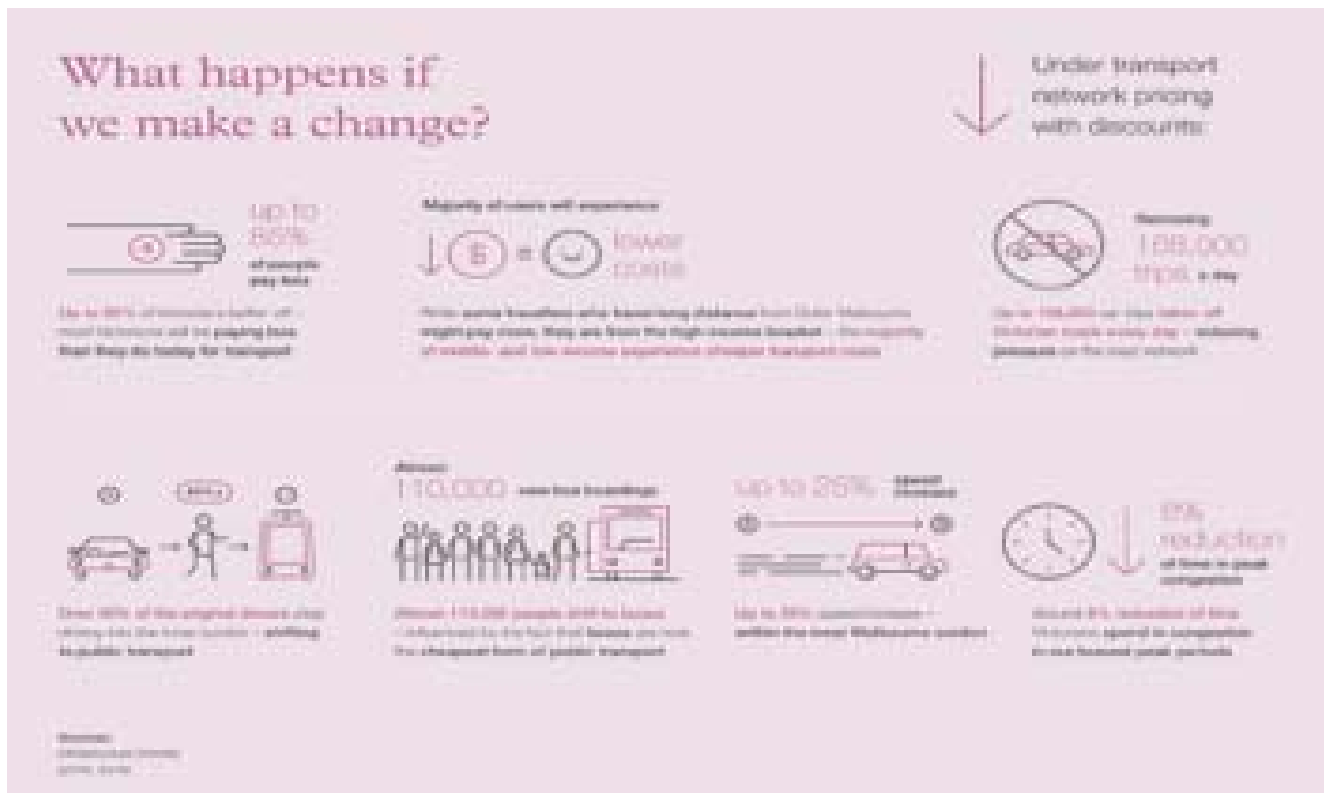
In 2016 Infrastructure Victoria’s 30-year strategy identified that Victoria’s transport network was already struggling with congested roads and crowded public transport. With a growing population this situation is expected to deteriorate rather than improve. Since then they have concentrated research efforts on potential solutions to fix congestion, Good Move: Fixing Transport Congestion^{xx}. Infrastructure Victoria used enhanced modelling, international case studies and direct access to community opinion to pull together solution scenarios.

The research identified the conditions under which the public are prepared to change their travel behaviour, that the network-wide required changes to pricing of roads, public transport and parking, as well as the new investment in infrastructure. Their research highlights that although additional road capacity is necessary, this in itself will not be able to fix Victoria’s congestion problems, there is a need for a complementary pricing system which builds in mode and travel time flexibilities.

Infrastructure Victoria have made a number of recommendations to the Victoria Government, which are currently being considered, these include:

- > Reviewing and trialling variations in public transport fares across all modes of transport. This will include specific fares for time, location and mode as well as different fares for different control groups across the income spectrum;
- > Introducing a distance-based pricing for electric vehicles;
- > Increasing and extending parking levies and zones; and
- > Trials of demand-based charging in Melbourne City Centre, railway stations and park and ride hubs.

The graphic below shows the expected benefits to Victoria with the adoption of the recommendations within the report



New Zealand – New Zealand Infrastructure Commission

The New Zealand Infrastructure Commission (Infracom), Te Waihangā, was established in September 2019 to ensure that New Zealand gets the quality infrastructure investment needed to improve long-term economic performance and social wellbeing. Infracom was established after it was identified that infrastructure decisions were not well integrated across central and local government, that there was a lack of visibility for the infrastructure pipeline and an overriding government focus on building new assets rather than on desired outcomes. It is an advisory only autonomous crown body with an independent board. Infracom are also responsible for maintaining New Zealand's Public Private Partnership model for infrastructure.

Infracom has been tasked with delivering a 30-year strategy by 2021, the strategy will be refreshed every five years. The strategy will replace the current 2015 Thirty Year Infrastructure Plan^{xvi} developed by New Zealand's Treasury. It will look at New Zealand's infrastructure as a whole, determine how well it is working, identify priorities and barriers to good outcomes. In addition, Infracom will develop a pipeline of major projects which will aid in its aim to support government agencies, local authorities and others to procure and deliver major infrastructure projects. These two overarching functions provide Infracom with their roles and objectives:

- > Assess how the current infrastructure system is performing as a whole;
- > Develop a shared understanding of a long-term infrastructure vision;
- > Identify priority infrastructure needs;
- > Identify and comment on the barriers to delivering good infrastructure outcomes;
- > Publish long-term capital intentions;
- > Publish a pipeline of infrastructure projects;
- > Provide best practice guidance on infrastructure procurement and delivery; and
- > Support Project Procurement and delivery.

The New Zealand Government is required to respond to recommendations and policy advice provided by Infracom within 180 days of receiving them.

To help the board deliver its objectives there is an Infrastructure Transaction Unit (ITU) which takes forward objectives 6-8. Support will be provided to government, agencies and local authorities based upon the complexity and size of a project and can take the form of, amongst others, business case development, market engagement and negotiations.

The Infrastructure Pipeline aims to bring central, local and private infrastructure projects into one pipeline, providing the market with better information about timing, sequencing and scale of future credible and committed infrastructure projects over the medium term. The ITU will provide analysis and advice regarding boom and bust cycles, opportunity to better coordinate procurement and delivery as well as leverage infrastructure investment. The pipeline consists of a mix of central and local government, state owned companies, council, university and hospital projects.

Public service departments and agencies planning projects of greater than NZ\$50 million must work with Infracom by following guidance, consult, allow assessment of the project business case, invite participation in steering & working groups and use Infracom standard documentation. Any modifications must also be agreed with Infracom.

Infracom's has a board of seven directors who have been appointed for a period of three years. The Chair is responsible for reporting to the Minister for Infrastructure, Regional Economic Development, and the Minister of Finance. When the New Zealand Government announced Infracom they approved initial funding of NZ\$4.24 million for establishment, they have a budget of NZ\$9.1 million in 2019-20 and NZ\$13.5 million in 2020-21. The Treasury also monitors the performance of the Commission and provides advice to Ministers on the Commission's long-term infrastructure strategy and other recommendations.

The New Zealand Infrastructure Commission operates predominately in the strategy and prioritisation stage of the infrastructure lifecycle with some elements of the structuring and planning lifecycle being evident within the Infrastructure Pipeline process. They also provide advice on the delivery stage although they are not directly involved.

References:

- <https://infracom.govt.nz/>
- <https://infracom.govt.nz/strategy/>
- <https://infracom.govt.nz/major-projects/what-we-do/>
- <https://infracom.govt.nz/projects/about-the-pipeline/>
- <https://infracom.govt.nz/strategy/what-is-the-strategy/>
- <https://www.simpsongrierson.com/articles/2019/new-zealand-infrastructure-commission-te-waihangā-an-innovative-approach-to-infrastructure>
- <https://infracom.govt.nz/assets/infrastructure-commission-loe.pdf>
- <https://treasury.govt.nz/information-and-services/nz-economy/infrastructure/infrastructure-ministers>
- <https://treasury.govt.nz/information-and-services/nz-economy/infrastructure/historical-infrastructure-documents>
- <https://treasury.govt.nz/information-and-services/nz-economy/infrastructure>
- <https://treasury.govt.nz/information-and-services/nz-economy/infrastructure/nz-infrastructure-commission>
- <https://www.stuff.co.nz/national/politics/118108303/government-unveils-12b-infrastructure->

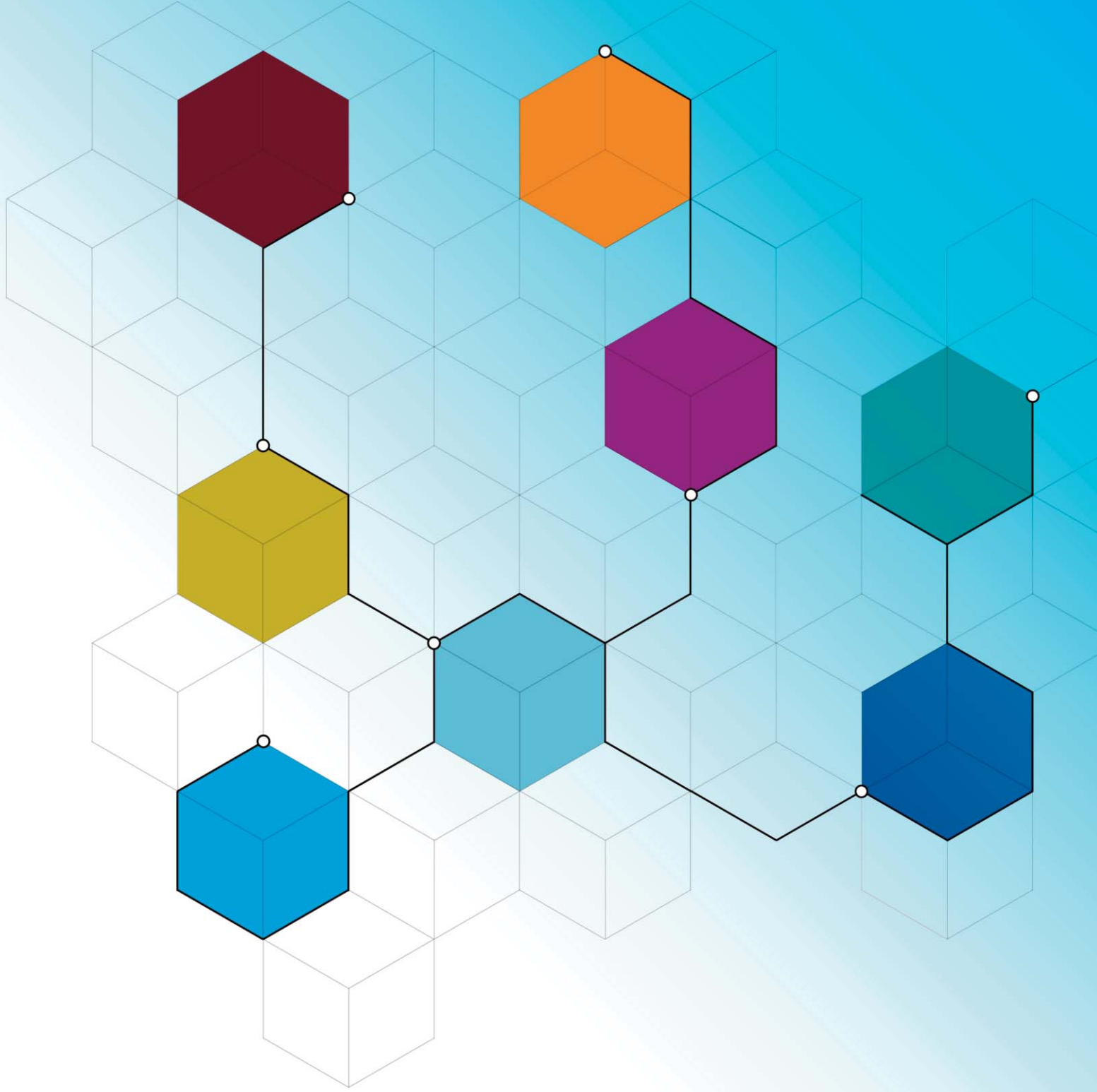
boost-much-of-it-focused-on-roads-and-rail

<https://www.interest.co.nz/news/98244/new-zealand-infrastructure-commission-unveiled>

<https://www.interest.co.nz/news/101288/stephen-selwood-says-new-zealand-infrastructure-commission-key-addressing-countrys>

file:///C:/Users/PaulaRichardson/Infrastructure%20Commission%20for%20Scotland/Infrastructure%20Commission%20for%20Scotland%20-%20Secretariat%20(1)/Phase2/Research/International/Lifting-our-gaze-EY-Infracom.pdf

<https://www.chapmantripp.com/publications/the-new-zealand-infrastructure-commission-te-waihangā>



Independent public engagement organisations

A review of individual organisations

PHASE 2: DELIVERY FINDINGS REPORT

France

The Commission Nationale du debat public, the National Commission for Public Debate (CNDP), was created in 1995 by the Law 95-101 on strengthening environmental protection, known as the Barnier law. CNDP became an administrative authority in 2002 and expanded and strengthened its role in 2016 and again in 2018 as a result of law 2018-148. The CNDP now has the power to engage complementary experts to aid in conflict resolution for a project, conduct public debates or to organise consultations to replace public enquiries.

CNDP is an independent administrative authority made up of 25 members whose core role is to ensure that public policies and infrastructure projects which have a socio-economic or environmental impact have contributions and opinions from the general public, users and residents. Their role is to inform decision making through consultations and public debates including drafting reports to reflect the engagement and provide feasibility conditions for projects to go ahead. This is a four-month pre-application stage process with the CNDP's purpose not being to ensure that a project gains acceptance, but to help ensure developers understand public opinion and any required adjustments. The CNDP produce a final report which reflects the opinions and feasibility conditions for the project to go ahead, developers have three months within which to respond. The National Infrastructure Commission^{xxii} noted that 'Whilst the CNDP's report holds no legal status, the CNDP has significant influence and can undertake a monitoring approach to help ensure commitments are followed through the consenting process.'

The CNDP has 4 core missions, summarised as:

- > Ensure the constitutional right to information and citizen participation;
- > Organise and conduct public debates independently and neutrally;
- > Develop and synthesize the results of the debates; and
- > Issue opinions, recommendations and expertise on participation procedures.

To achieve their missions the CNDP embodies the four core values of independence; neutrality; equal treatment and the argument – the expression of individuals points of view.

All projects over €300 million must use the CNDP for public debate, those of between €150 and €300 million can choose to refer themselves. The CNDP can then choose to accept or decline the public consultation process. If they accept, they then have the option to run the process themselves, contract out or ask the developer to run the process with the CNDP taking an overview role. If CNDP choose to run the process they draw upon a cohort of 250 guarantors who have been trained to conduct consultation procedures throughout France.

The Institute of Civil Engineers^{xxiii} estimate that CNDP's annual budget is £1 million for central operations with additional developer costs of around £2 million for engagement processes. With the Institute for Government^{xxiv} stating in 2018 that they believed that a similar scheme in the UK would have running costs of between £2 million and £5 million annually.

The CNDP supports the structuring & planning stage of the infrastructure life cycle. It does not assist France to prioritise those projects which should go ahead nor seek to establish those which will be of most benefit. However, it does help developers to produce planning applications that were more likely to be successful as a result of the pre-planning public engagement.

References:

- <https://www.debatpublic.fr/>
- <https://www.debatpublic.fr/son-role>
- <https://www.debatpublic.fr/ses-missions>
- <https://www.debatpublic.fr/ses-valeurs>
- <https://www.debatpublic.fr/sa-composition>
- <https://www.nic.org.uk/wp-content/uploads/NIC-International-Infrastructure-Governance-Report.pdf>
- https://www.researchgate.net/publication/328391897_Environmental_Law_of_France
- http://risknat.org/projets/riskydrogeo/docs/guide_pratique/Acivite1_Ateliers/Presentations%20Atelier1/A1P13-Coastal%20changes/programs/france.html
- https://infracompass.github.io/ind_country_profile/FR
- https://ec.europa.eu/transport/facts-fundings/scoreboard/countries/france/investments-infrastructure_en
- https://translate.google.com/translate?hl=en&sl=fr&u=http://www.citego.org/bdf_fiche-document-487_fr.html&prev=search
- <https://www.ice.org.uk/ICEDevelopmentWebPortal/media/Documents/Media/Policy/nna-submissions/Learning-from-France-using-public-deliberation-to-tackle-infrastructure-planning-issues.pdf?ext=.pdf>
- https://www.instituteforgovernment.org.uk/sites/default/files/publications/IFG_infrastructure_decision_making_WEB.pdf

Canada

Quebec - Bureau d'audiences publiques sur l'environnement

The Bureau d'audiences publiques sur l'environnement (BAPE) is an independent impartial government agency created in 1978 as a result of the Environment Quality Act. They report to the Minister of the Environment and the Fight against Climate Change for the Quebec Government.

The BAPE is a public consultation body whose core function is to inform and consult with citizens on projects and policy relating to the quality of the environment. Their work helps to guide government decision making for the projects that the Minister of the Environment mandates to the bureau.

They achieve this by following the values of respect, impartiality, fairness and vigilance. The Minister of the Environment assigns or mandates to the BAPE as a result of a notice being filed by a project owner. A file investigation is then established and a commission commenced.

Commissions' are conducted for a number of infrastructure areas including dams & dykes; river, stream & water table works; ports; road works; rail stations, yards & tracks; airports; oil, gas & electricity works; factories; water plants; mining (excluding quarries and sand); waste disposal & landfill; and parks amongst others. These are large public interest and environment focused activities.

The Commissions' of Inquiry are established by the President assigning a Chair, who is normally a full-time member, along with two or three part-time members. The Commission run a public consultation and information gathering exercise, holding face to face sessions, debates and taking written submissions. The project commission is made accessible to local citizens by a temporary consultation centre being established close to the location of the project, as well as information being available at their offices in Quebec and Montreal. At the conclusion of the public consultation process the BAPE produce a report setting out the public opinion, analysis and providing recommendations or modifications for the project. It is not within the BAPE remit to reject or accept a project, this responsibility lies with the Minister of the Environment and ultimately the Council of Ministers.

The BAPE is made up of five full time members including a President and Vice-President who are appointed by the Quebec Council of Ministers. Additionally, there are nineteen part-time members who can be called upon by the BAPE for the purposes of running a commission, also appointed by ministers. The BAPE also employs approximately fifty members of staff. In 2018/19 the total BAPE budget was just over C\$6 million of which C\$4.5 million was for staffing costs.

The BAPE was the inspiration for the French Commission Nationale du

debat public and the Montreal Office de consultation publique de Montreal. It operates at the structuring and planning stage of the infrastructure life cycle. It should be noted however, the BAPE process has often come under criticism, citizens have opinioned that the projects are often too developed and at too late a stage for consultation to have any meaningful impacts, a fact which has resulted in calls for the abolition of the Bureau^{xv}.

Montreal – The Office de consultation publique de Montreal,

The Office de consultation publique de Montreal (OCPM) is an independent body, created in 2002, under section 75 of the Charter of Ville de Montreal, to collect the publics opinions through consultations on behalf of the municipal council or executive committee of the City of Montreal. The consultation process includes issuing of public notices, information sessions, opinion hearing sessions and production of a report to bring all of the evidence together. In addition to attending a public meeting, submissions can be made in writing to the commission. With the use of digital submissions and communications the number of consultees has increased from a handful per project in 2002 to several thousand in 2018.

Consultations are predominately related to town and country planning, but they can also include projects submitted by the executive committee or municipal council. The consultations allow an in-depth understanding of a project as well as its challenges. The OCPM report sets out public opinion, analysis and the Commission's recommendations, it is presented to the Mayor of Montreal to aid decision making two weeks prior to being made available online. It has been recognised however, that the actions from the reports' recommendations are difficult to track and outcomes difficult to trace, first identified in 2008 and still applicable in 2018.

OCPM cover projects on:

- > Real Estate – the majority of OCPM consultations relate to real estate including new developments and repurposing of buildings. In their 2018 annual report^{xvii} it was noted that there is a movement towards land-use planning and public policy;
- > Institutional Projects – for any project with collective facilities including health, cultural, education & university, as well as parks and recreational facilities;
- > Historic or Natural District – consulting on the two heritage sites for Montreal including the public consultation on their Protection and Development Plan;
- > Urban Planning – supporting Montreal city centre boroughs to develop better urban planning and the redevelopment of brownfield sites; and

CASE STUDY

The Office de consultation publique de Montreal McGill College Avenue Redevelopment

The redevelopment project for McGill College Avenue in downtown Montreal is an example cited by the OCPM in their 2018 annual report. In infrastructure terms it is a relatively small scale and localised project. McGill College Avenue is one of Montreal's most prestigious streets with tens of thousands of students, workers and tourists travelling along it every day. The plans propose a public square, a reduction in the number of vehicle lanes from three to two and creation of a public plaza. The consultation took several forms, firstly an information pack^{xxvii} then two information evenings, the first presenting the City's plans, and the second offering complementary presentations. The OCPM also organised a series of on-site animation activities by closing off part of the street. Moreover, the Office was on site with a scale model and

animation material, in the entrance halls of a number of the office buildings lining the avenue and in the surrounding area. That on-site presence aimed to gather opinions from the primary users of McGill College Avenue, i.e. the people who work in the office towers along the avenue. Those activities reached a broad spectrum of the people concerned. In total, almost 1500 participations (391 in person and 1,149 on-line) were compiled for the consultation, the on-line sessions took place by either viewing information sessions, responding to the online questionnaire, or contributing an opinion online on the Office Web site. The report was submitted in February 2019 recommending taking advantage of on-going local developments, development of green space and direct access to a planned light rail station.



- > Right of Initiative – since 2010 citizens have had the right to propose innovative ideas, directions or projects which are important to them which are of public interest.

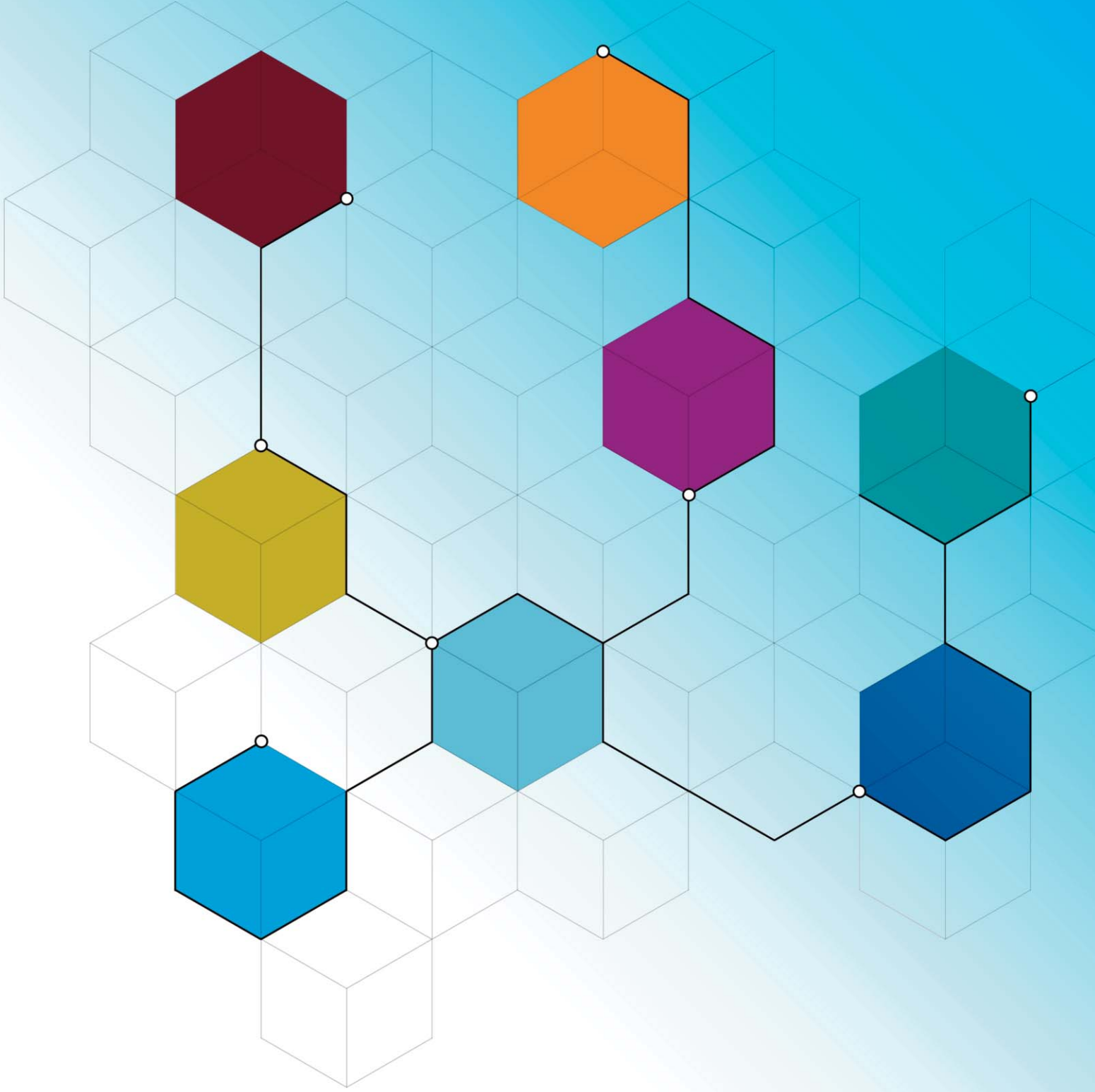
In addition to their own consultations the OCPM also has a role in making recommendations on the governance of public consultations in Montreal regardless of who is conducting the consultation. This work has grown to include the training of public officials in the development and delivery of public consultation.

The OCPM has a president, a large team of thirty-five ad hoc commissioners ranging from engineers, lawyers, planners and administrators. The Commissioners are allocated to a project by the President as each project mandate is received. They are supported by a secretariat team of eleven as well as nine collaborators who are analytical, communications and IT experts.

The budget for the OCPM was C\$2.5 Million in 2018, of which just over C\$1 million was on staffing costs, a further C\$1 million was spent on professional and administrative services. An additional C\$650,000 was provided due to the high volumes of work experienced by the OCPM by Montreal City Council, who provide all funding.

References:

- <https://www.infrastructure.gc.ca/site/alt-format/pdf/plan/icp-pic/IC-InvestingInCanadaPlan-ENG.pdf>
- <https://www.infrastructure.gc.ca/index-eng.html>
- <https://cib-bic.ca/en/>
- <http://report2018.ocpm.qc.ca/>
- <https://ocpm.qc.ca/consultations-publiques>
- <https://ocpm.qc.ca/participer>
- https://ocpm.qc.ca/sites/ocpm.qc.ca/files/pdf/P99/3.1_mcgill_projet_ocpm_an-lr.pdf
- <https://www.makingmtl.ca/mcgillcollege>
- https://www.tresor.gouv.qc.ca/fileadmin/PDF/budget_depenses/16-17/quebecPublicInfrastructure.pdf
- https://www.canlii.org/fr/qc/legis/regl/rlrq-c-q-2-r-23/derniere/rlrq-c-q-2-r-23.html#SECTION_II_PROJETS_ASSUJETTIS_A_LA_PROCEDURE_D_EVALUATION_ET_D_EXAMEN_DES_IMPACTS_SUR_L_ENVIRONNEMENT_4583
- <https://www.infrastructure.gc.ca/site/alt-format/pdf/plan/icp-pic/IC-InvestingInCanadaPlan-ENG.pdf>
- <https://www.quebec.ca/en/government/ministere/environnement/>
- <https://www.quebec.ca/en/government/ministere/environnement/organismes-lies/>
- <https://voute.bape.gouv.qc.ca/dl?id=00000111506>
- <https://www.bape.gouv.qc.ca/fr/bape/role-bape/>
- <https://www.bape.gouv.qc.ca/fr/bape/presentation-bape/>
- <https://www.bape.gouv.qc.ca/fr/bape/structure-organisationnelle/>
- <https://participedia.net/organization/1585>
- <https://www.ledevoir.com/societe/actualites-en-societe/218773/restaurer-la-credibilite-du-bape>



Government Led Approaches

PHASE 2: DELIVERY FINDINGS REPORT

Government Led approaches

Europe

Europe has good infrastructure with well developed transport, digital, utility, housing and public service buildings. Infrastructure quality varies across the countries of Europe but is predominately of a good standard. However, there has been recognition of the degraded and aged nature of some of Europe's infrastructure, which can be evidenced by such tragedies as collapse of the Morandi Bridge in Genoa with the tragic loss of 43 lives.

Investment in infrastructure has been declining since 2010 across the Euro area, at times being below the investment requirement to maintain the current assets^{xxxiii}. The European Union, in recognising this decline, has voted for a €43.85 billion budget between 2021 and 2027 for the Connecting Europe Facility (CEF), supporting infrastructure that goes beyond national borders^{xxxix}.

Netherlands

The Netherlands is a consociational state, meaning that politically there is a common striving for consensus on important issues, between politicians, but also with the community as a whole.

The Netherlands has high population densities, making investment and maintenance of infrastructure cost effective. However, there is limited land space and a vulnerability to flooding as 26% of the land area is below sea level, containing 21% of the population^{xxx}.

With this as a backdrop, the Dutch Government has sought to ensure balance in the needs of economic and social infrastructure through a national spatial plan, the Dutch Multi-Year Programme for Infrastructure, Spatial Planning and Transport (MIRT)^{xxxi}. The MIRT is a national and regional level government collaboration on infrastructure planning, it includes provinces, municipals, transport regions and water boards amongst others, as well as some business involvement. It works to a national set of ambitions and goals for infrastructure, water risk management and socio-economic outcomes.

The Dutch infrastructure system has been shown to be effective as the Netherlands was ranked^{xxxii} second in the world, just behind Singapore, for the quality of their infrastructure in 2019. It has dense, high quality infrastructure with Europe's largest port (6th largest in the world) and one of Europe's largest airports (Amsterdam). They are ranked sixth on the World Bank's Global Logistics Performance Index^{xxxiii} and they have 100% digital infrastructure with the world's highest broadband penetration per capita at 99% of households^{xxxiv}, as well as the world's fastest average broadband speed. In 2018, the Netherlands was ranked best in Europe regarding its transport network and water and energy supply^{xxxv}.

Denmark

Denmark has a political system which is based upon consensus, with 14 parties represented in the Danish parliament. No party has had a majority since 1909 and therefore there are always multiple parties forming a ruling coalition. Coupled with a challenging landscape there was a need for comprehensive national and local level planning competencies. These were introduced in 2007 with a new Planning Act^{xxxvi}, removing most planning and environmental responsibilities from the county or local level. Denmark assesses and consents to large scale infrastructure projects through an Act of Parliament, which regulates the entire project. At a strategic level projects are selected to increase long term socio-economic growth.

As a result of the Danish high credit rating the government is able to underwrite the State Guarantee Model^{xxxvii} (SGM). The SGM is a public sector model to privately finance construction projects. The loans are guaranteed by the financial markets or by the state. The Danish Government guarantees the loans in return for a guaranteed commission, due to the favourable terms of the loans the construction industry is able to meet their commitment, service the loan, maintain and operate the asset, and generate a profit. With the exception of the value of the guarantee the state provides no support, but in most instances will receive an income from the asset. Income is generated via user charges.

Aberdeen City Council provided an example of an infrastructure project in Copenhagen within their submission to the Commission's Initial Call for Evidence^{xxxviii}. They stated that 'Examples such as Copenhagen western expansion towards the airport which saw a metro expansion, roads, cycleways and even playgrounds constructed in advance of housing and retail, have helped to 'de-risk' sites for the development industry. This place-based approach has created excellent quality environments even during long construction phases and by de-risking the sites the likely hood of a site being mothballed is greatly reduced.'

Germany

Germany is a democratic federal republic. The legislative is invested to both the Parliament and the regional states, although a member of one can be a member of the other. The Christian Democratic Union and Social Democratic Party of Germany have been the main opposition parties since 1949.

Germany has dense and modern infrastructure and is particularly noted for having transport and telecommunications infrastructure amongst the best in the world. The Government infrastructure investment strategic decision making is made through their National Strategy for Critical Infrastructure Protection (CIP) Strategy. The CIP is in recognition

the disruptions and breakdowns of the energy supply, in mobility, communications, or emergency and rescue services may cause serious societal and economic damage and affect large segments of the population^{xxix}. The strategy took stock of the existing measures to protect the critical infrastructure as well as defining the main risks, threats and vulnerabilities of infrastructure. It is then guided by joint action and co-operation by the state, society and business and industry^{xl}.

Germany also has a transportation plan which is updated every 10-15 years. The Federal Transportation Infrastructure Plans (FTIPs)^{xli}, with the current plan being the FTIP 2030. The FTIPs is the main strategic mechanism for planning the upgrading of federal transport infrastructure, it is prepared by the Federal Ministry of Transport and Digital Infrastructure but needs to be adopted by the Federal Cabinet. It contains all of the requirements for the structural preservation of the transport system and the planned project investments for roads, railways and waterways. The FTIPs is a framework and not a funding plan, nor is it statutory. It has been raised that the decision making for the FTIPs can be too politically motivated, for example; less economically efficient new construction of motorways in regions of light traffic is sometimes preferred by political leaders over economically more efficient upgrading of motorways in more congested regions^{xlii}.

Asia

New Zealand's Infrastructure Commission stated^{xliii} 'In Asia, the governments of Singapore, Hong Kong and China have a single minded focus on infrastructure. They pursue a national development model for planning, funding and delivering infrastructure, based on spatial plans. Notably, while each of the three Asian systems supports varying degrees of democratic decision making, none are democratic in the western sense.' We have discussed the Singapore system in more detail from page 24.

China

China, officially the People's Republic of China, has been a communist country since 1949. The state owns the majority of the land, although there is an increasing amount of home ownership and privatisation, the Chinese Government still conduct decision making predominantly unopposed. Infrastructure development is a top priority for the Chinese Government with the recognition that a modern economy requires reliable roads, rail, digital and utility infrastructure to enable it to thrive.

China has the National Development and Reform Commission^{xliv} (NDRC) which is government led with a dedicated Minister. They are responsible for creating the five-year plans which prioritise

infrastructure investment across the country, including private industry, with the 14th plan due for publication in 2021. These 5-year plans are supported by annual plans.

The NDRC are responsible for economic and social infrastructure, including monitoring trends and providing forecasts. They operate at all spatial levels and across all sectors. They are involved in the purchase and maintaining of material supplies and land, as well as formulating and implementing sustainability measures and climate change commitments.

Although China's infrastructure is not yet at the level of the western world, there has been significant investment by the government since the 1990's. For example, between 2001 and 2004 investment in rural roads grew by 51% annually^{xlv}. Seven of the world's largest ports are in China, including the largest at the Port of Shanghai. Much of the economic growth, and therefore infrastructure, has been concentrated in the eastern cities of the country. However, the government is embarking on a programme of infrastructure development to spread wealth more evenly and has commenced a programme investment in northern and western areas of the country.

Hong Kong

Since 1997, when sovereignty transferred from the UK to China, Hong Kong has been a Special Administrative Region of China. The Hong Kong government has a high degree of autonomy from China in all matters barring defence and foreign affairs. The Chief Executive of Hong Kong, who is the head of the Hong Kong Government, is elected via electoral college vote, there are a limited number of people able to vote and those who can come from the business and professional communities.

The Hong Kong Development Bureau^{xlvi} is an agency of the Government of Hong Kong, they are responsible for urban planning and renewal, land administration, housing, infrastructure development and heritage conservation. They report to the Secretary for Development and were created in 2007.

The Hong Kong 2030+, jointly owned by Hong Kong Development Bureau and the Hong Kong Planning Department, is a spatial plan that provides the sustainable vision for development of the city. The plan provides an evidence base for opportunities, challenges and projections a vision along with a planning goal, which promotes:

- > Planning for a liveable high-density city;
- > Embracing new economic challenges and opportunities; and
- > Creating capacity for sustainable growth.

The planning goal is the connection between the national strategy and tangible development. In their Building Regions Report^{xvii}, Infrastructure New Zealand describe the HK2030+ plan as ‘an exemplar of integrated, long-term strategic spatial planning.’

The extensive public transport investment by the Hong Kong Government is an prime example of how the plan has been deployed. The provision of low cost, fast, efficient, widespread and interconnected public transport has been aimed at lowering emissions and improving health equalities. This has been coupled with policies to reduce car ownership including a high tax regime.

Hong Kong has been successful in creating a thriving business environment by providing world class infrastructure, as well as low tax rates. The city is classed as a transport hub with a port and airport classed amongst the best in the world.

Singapore

Singapore established the Urban Redevelopment Authority (URA) in 1974 as a Statutory Board, under the Minister of National Development. The URA has its routes in the 1960’s, with the UN being invited by the Singapore Government to provide expert help in urban planning in 1962-63. The URA were initially challenged to change a third world country into a modern metropolis.

Within a few decades Singapore has managed to transform itself into a global economic hub which Statista ranks first globally for overall infrastructure^{xviii}, in comparison the UK ranks 11th. Mercer has also ranked Singapore as Asia’s highest-ranking city for quality of life^{xix}, ranked 25 in the world, in contrast Edinburgh and Glasgow are ranked 45 and 48 respectively. Singapore has a stable government, strong rule of law and an effective regulatory system. It is a financial, shipping and trade hub with the Singaporean Government having pro-business economic and trade policies. As a result, Singapore is ranked as the easiest place in the world to start, run and do business by the World Bankⁱ.

The URA is Singapore’s land use and conservation agency, they have the simple defined mission ‘to make Singapore a great city to live, work and play’.

They are focused on developing Singapore in a sustainable way as well as providing a quality living environment placing people and quality of life as priorities. This vision is achieved through their key activities:

- > Develop and maintain the **Concept Plan** to guide development over a fifty-year period, first published in 1971, the plan’s main aim is to ensure that there is sufficient land to meet long-term needs;
- > Develop and maintain the **Master Plan**, a statutory land use plan

which guides development over the medium term of 10-15 years, realising the Concept Plan strategies within detailed plans;

- > Evaluating and granting **planning approvals**;
- > Main **government land sales agent**, attracting private and Foreign Direct Investment to develop sites, they also develop grant approvals for development projects;
- > **Conservation authority**; and
- > **Community partnership**, to enliven public spaces by creating car-lite and people friendly spaces;

The Concept and Master Plan’s are the foundations for all infrastructure activities, including turning the plans into reality. The Plans are reviewed periodically with the latest Concept Plan published in 2011¹ and the latest five-year review of the Master Plan being published in 2019. These plans are the basis for infrastructure spending in Singapore, almost 80% of which is publicly funded, with the government due to spend US\$9.8 billion in 2020 and US\$10.7 billion in 2021ⁱⁱ.

The current Master Plan concentrates on inclusive and green neighbourhoods, rejuvenating familiar places, as well as building capacity and resilience for sustainable growthⁱⁱⁱ. The Plan defines Singapore as a city in a garden, over the Master Plan timescale there are ambitions to add an additional 1,000 hectares of parks to the current 7,800 hectares. This will mean that most Singapore residents will be able to easily walk to a park area. To help achieve this the URA are looking at innovative plans for underground planning and use of space, in particular for utilities and services such as public transport, roads and parking but also include an expansion to the current underground shopping malls. Moving these services underground will help to free up land space, enhance connectivity and accessibility, as well as increase Singapore’s resilience. See the case study for further details.

The Master Plan is supported by the Special and Detailed Control Plans (SDCP), unlike the Concept and Master Plans the SDCPs are non-statutory. They are development control plans which include parks; waterbodies; public spaces; landed housing areas; street blocks; building height; urban design; conservation areas; connectivity; and underground plans amongst others. The SDCPs are used by the URA when they process development applications.

The planning work that the URA is responsible for balancing economic, social and environmental considerations which are set through the broad strategies of the Concept and Master Plan’s as well as identifying land for various needs. The planning sets out the necessary infrastructure and resources to support the land use. They utilise data analytics technology to make more robust data driven decision, create better planning outcomes and understand the changing needs of the population.

¹ The Concept Plan was first published in 1971 and then reviewed in 1991, 2001 and most recently in 2011.

In the URA's Annual Report^{liii} they highlight that the Singapore Government have emphasised the need to shift focus from working for the people to a focus of working with the people. To this end, the URA are more fully adopting a people-centric planning approach, utilising public consultation sessions which citizens are encouraged to participate in. In part, this is achieved at the Singapore City Gallery, which is an interactive exhibit space to present the planning journey as well as the URA's vision for the city in an experimental way. There are also opportunities for members of the public to come forward and lead programmes of work, supported through the URA's volunteer programme which aims to give Singaporeans the opportunity to be involved in planning the city by sharing their plans and initiatives.

The URA Board has 13 members, including the Chair and Deputy Chair. The organisation has a complex and wide structure which includes a CEO, 4 deputy CEOs/Chief Urban Designer 12 Directors as well as running the URA academy with a Dean.

The URA highlight the fact that their success is through making the URA a great place to work with core values of service, integrity, respect, teamwork and innovation guiding their work.

To support the work of the URA they have a corporate governance structure which incorporates the URA Board; a Staff Review Committee; a Finance and Investment Committee; and an Audit and Risk Committee. The Board and Committees provide guidance for the organisation and provide several frameworks, functions and conduct guidelines.

Due to the additional functionality of the URA they have significantly greater levels of income and operating costs. In 2019 the total operating income was S\$250 million (£143 million) with operating expenses of S\$218 million of which S\$120 million was on manpower and staff benefits.

The URA also have three Advisory Committees to ensure that they bring together experts in their fields to help with the development of the City:

- > **International Panel of Experts** – a panel of international architects, urban planners and developers. Bringing together best practice on global trends to address Singapore's planning challenges for the medium to long-term.
- > **Design Advisory Committee** – reviewing URA's urban designs and guidelines as well as advising on local best practices and industry trends. Promoting and encouraging innovative architecture and urban design.
- > **Heritage and Identity Partnership** – providing advice on ways to retain and protect buildings, and ideas to sustain the built heritage and memories of places as part of development plans.

This includes promoting greater public understanding of Singapore's built heritage and identity

In addition to the URA the Singapore Government set-up Infrastructure Asia in April 2018. A government led organisation to help connect local and international stakeholders for joint projects. They do so by providing facilities to allow key partners from developers; financiers; professional services; technical and engineering services; multilateral institutions; and international events. The organisation aims to bring in private and foreign investment to support infrastructure development in Singapore. Initial reviews of the service by Landfall Strategy Group^{liv} highlight the success of the programme for bringing in FDI to Singapore.

To support Infrastructure Asia the Singapore Business Federation launched the private sector led Singapore Business Federation Infrastructure Committee (SBF IC) in August 2018. Their role is to support the Singapore Government to develop Singapore as the infrastructure hub for Asia. They are project driven and will focus upon four key sectors: utilities; transport; telecommunications and the built environment. The fourteen strong SBF IC Committee consists of members from across infrastructure related sectors. The SBF IC define their up-coming work as^{lv}:

Sectoral Research 2020 – which will be undertaken by KPMG, to identify infrastructure gaps and propose solutions.

Ministerial Dialogue 2020 – to share and discuss the findings of the Sectoral Research.

Collaboration Starts at Home – SBF IC will collaborate with relevant government agencies to organise a series of outreach events aimed at building local companies' capabilities.

In conclusion, the URA are seen as being instrumental in bringing about the impressive change in Singapore's physical landscape since the Singapore gained its independence², the city has been transformed into a country ranked first for infrastructure as well as a global business hub. The URA operate across all four stages of the infrastructure lifecycle. At the strategy and prioritisation level they develop the Concept Plans; at the structuring and planning stage they develop and operate the Master plan; at the delivery and construction phase they are responsible for land sales and planning and finally at the operation and maintenance stage the URA are responsible for operating the car parking within the central area of Singapore. The wide scope of their remit reflects that they are closely attached to government as does the level of their budget.

² Singapore gained independence from the UK on 16 September 1963 becoming a Malaysian state, they gained independence from Malaysia on 9 August 1965.

CASE STUDY

Underground Developments

Singapore is one of only three surviving city-states in the world, it is one of the smallest countries with a land mass of only 682.7 square kilometres³, in comparison Scotland has a land mass of 80,077 square kilometres. Singapore is made up of sixty-four islands housing a population of 5.8 million people.

As a result of the land restrictions that Singapore is faced with, they are constantly seeking innovative ways in which to solve land space issues. Since 1989 the Urban Redevelopment Authority (URA) has been planning, authorising and encouraging building underground to make optimal use of land and to improve the quality of the living environment. This has resulted in underground developments of over 82 kilometres of underground rail network as well as the world's first underground train depot, nearly 10% of their expressway; car parks; an ammunition facility; the Jurong Rock Caverns holding 1.47 million cubic metres of crude oil and petroleum; underground pedestrian walkways; utility tunnels and plants; as well as a seven floor shopping mall.

The URA recognised that they had comprehensive infrastructure plans for the surface land which needed to be replicated for the underground space, so to utilise underground potential further the URA have set out in their Draft 2019 Master Plan a strategic resource 3D map of underground space availability. The intention is that this will encourage public and private developer use. The extension of the plans for underground building will free up surface land for people-centric uses. Ms Hwang Yu-Ning, the URA's Chief Planner stated:

“The underground plan is part of our strategy to create spaces for the future and create capacity for growth. Providing the plans for the underground provides transparency to the developers. This is more for the shallow underground, but we are also looking at plans for the deeper caverns. That’s for deeper utilities and structures that will go underground.”

The new mapping has been brought about by the URA, ARUP study: Underground Developments^{vi}, the report highlighted that within Singapore the surface land mass use includes 17% industry and commerce; 13% transport infrastructure; and 3% utilities. To meet the new and growing needs of Singapore, the report recommends that some of these could be moved underground with the freed up land being used for housing, community uses and greenery to improve the quality and vibrancy of everyday life.

Within the 3D plan there are development opportunities for additional rail, road and utilities infrastructure as well as an extensive expansion to the Underground Pedestrian Network. An example of this is the new substation in the Labrador, Pasir Panjang area, which has the capacity to power more than two public housing towns. Building the substation underground frees up three hectares of land.



3 In comparison Scotland has a land mass of 80,077 square kilometres and a population of 5.4 million people

References:

- https://www.ura.gov.sg/-/media/Corporate/Resources/Publications/Annual-Reports/PDFs/AnnualReport-2018_2019.pdf
- <https://www.ura.gov.sg/Corporate/Data/Resources/Publications/Annual-Reports/Web-AR-19/AnnualReport2018-2019/AR-landing>
- <https://www.asean.mercer.com/our-thinking/career/how-does-asia-pacific-fare-in-mercers-quality-of-living-index.html>
- <https://www.statista.com/statistics/264753/ranking-of-countries-according-to-the-general-quality-of-infrastructure/>
- <https://www.ura.gov.sg/-/media/Corporate/Resources/Publications/Financial-Statements/PDFs/URA-Financial-Report-FY18-19.pdf>
- <https://www.ura.gov.sg/Corporate/Get-Involved/Plan-Our-Future-SG/Innovative-Urban-Solutions/Underground-space>
- <https://www.ura.gov.sg/Corporate/Planning/Concept-Plan>
- https://eresources.nlb.gov.sg/infopedia/articles/SIP_1569_2009-09-18.html
- <https://www.bbc.co.uk/news/world-asia-15971013>
- <https://www.nationsonline.org/oneworld/History/Singapore-history.htm>
- <https://www.enterprisesg.gov.sg/industries/hub/infrastructure-hub/overview>
- <https://www.reuters.com/brandfeatures/infrastructure2030/singapore-hub>
- <https://www.github.org/countries/singapore/>
- https://www.eria.org/uploads/media/Research-Project-Report/RPR_FY2007_2_Chapter_8.pdf
- <https://www.khl.com/international-construction/singapore-to-remain-world-leader-in-infrastructure/140306.article>
- <https://www.rikvin.com/press-releases/singapores-infrastructure-ranked-best-in-the-world/>
- <https://www.doingbusiness.org/en/rankings>
- <https://www.gov.uk/government/publications/exporting-to-singapore/exporting-to-singapore>
- <https://www.landfallstrategy.com/commentary/2019/9/14/singapore-amp-hong-kong-a-tale-of-two-cities>
- <https://www.landfallstrategy.com/commentary/2018/7/18/in-uncertain-seas-positioning-small-countries-to-succeed>
- <https://www.landfallstrategy.com/>
- <https://www.centreforpublicimpact.org/case-study/building-digital-government-singapore/>
- <https://www.infrastructureasia.org/Our-Network>
- <https://www.sbf.org.sg/business-advocacy/sbf-committees/sbf-infrastructure-committee>
- <https://www.mckinsey.com/industries/public-sector/our-insights/new-challenges-for-asias-governments>
- <https://www.mas.gov.sg/development/infrastructure-finance>
- https://eresources.nlb.gov.sg/infopedia/articles/SIP_1607_2011-11-01.html
- <https://www.savills.com/prospects/cities-singapore-cbd.html>
- <https://www.pinsentmasons.com/out-law/news/singapore-to-establish-one-stop-infrastructure-office>
- <https://www.ura.gov.sg/Corporate/Media-Room/Media-Releases/pr19-41>
- <https://worldstrides.com/blog/2017/08/11-interesting-facts-singapore/>
- <https://www.worldometers.info/world-population/singapore-population/>
- https://www.ura.gov.sg/-/media/Corporate/Get-Involved/Plan-Our-Future-SG/Underground-Works/Benchmarking_Study.pdf?la=en
- <https://santandertrade.com/en/portal/analise-markets/singapore/economic-political-outline>
- <https://www.channelnewsasia.com/news/singapore/ura-draft-master-plan-planning-development-underground-11383936>

Annex A

Comparison Table of Independent Organisations

Country	UK	Australia	Australia Victoria	New Zealand	France	Canada - BAPE	Canada - OCPM
Organisation	National Infrastructure Commission	Infrastructure Australia	Infrastructure Victoria	New Zealand Infrastructure Commission	Commission Nationale du debat public (CNDP)	Bureau d'audiences publiques sur l'environnement (BAPE)	Office de consultation publique de Montreal (OCPM)
Established	2015	2008	2015	September 2019	1995, strengthened role from 2016	1978	2002
Purpose / Mission	Support sustainable economic growth	Raising the quality of infrastructure planning and decision making. They also define actionable agenda of reforms	Infrastructure strategy, provide advice to Government and create original research	To ensure New Zealand gets the quality infrastructure needed to improve long-term economic performance and social wellbeing	Ensure that public policies and infrastructure projects with a socio-economic or environmental impact have consultation and public debate included	Inform and consult with citizens on projects and policy relating to the quality of the environment.	Collect public opinions through public consultation for the municipal council and City of Montreal.
Independent	Independent statutory non-departmental public body	Independent statutory agency	Independent statutory agency	Independent statutory agency	Independent administrative authority	Independent public consultation body	Independent body
Infrastructure Lifecycle	Predominantly within Strategy & Prioritisation but also within Planning & Structuring	Predominantly within Strategy & Prioritisation, some elements of Structuring & Planning with the Infrastructure Priority List	Strategy & Prioritisation	Strategy & Prioritisation, elements of Structuring & Planning through the Infrastructure Pipeline. They will also provide advice on delivery through procurement support	Structuring & Planning	Structuring & Planning	Structuring & Planning
Commissioners / Members	10 non-executive Commissioners	Independent Board of 12 Commissioners	Independent Board of 7 Commissioners	Independent Board of 7 who have been appointed for 3 years	25 Members	5 full-time members and 19 part time members, the President allocates members to be Commissioners on specific projects	A President and a large team of 35 ad hoc Commissioners
Staffing	40	30	33	No available data	No available data	50	11, plus 9 additional collaborators who provide additional analytical etc. support
Annual Budget	£5.7 million 2020/21, of which roughly £3 million on staff costs including Commissioners	Aus \$12.1 million in 2018/19, roughly 50% on staffing, including Commissioners	Aus \$9.9 million in 2018/19 of which Aus \$5.1 million were staffing costs	Initial funding of NZ\$4.25 million for establishment, NZ\$9.1 million 2019-20, NZ\$13.2 million 2020-21	Not available, however Institution of Civil Engineers estimated in 2018 that running costs of £1 million and that a similar scheme in the UK would have running costs of between £2-5 million per annum.	C\$6 million in 2018/19, of which C\$4.5 million was on staffing costs including members costs	C\$2.5 million in 2018, C\$1 million on staffing costs and an additional C\$1 million on professional and administrative services. They were awarded an addition C\$650,000 by the Montreal City Council due to higher than average workloads.
Spending envelope	1.0% to 1.2% of GDP each year between 2020 and 2050	None they evaluate business cases for proposals of Aus\$100 million in Australian Government funding, some projects assessed from Aus\$30 million since 2018	None they support Government departments and agencies on the development of sector infrastructure plans.	None	None but any project over €300 million must use CNDP, projects between €150 and €300 million can choose to use CNDP	None	None

Country	UK	Australia	Australia Victoria	New Zealand	France	Canada - BAPE	Canada - OCPM
Governance / Government Department	Treasury	Department of Infrastructure and Regional Development	Victoria Government - Special Minister of State	Minister for Infrastructure, Regional Economic Development, also the Minister of Finance	Department for Energy, Transport, Ecology and Planning led by the Deputy Prime Minister	Minister of the Environment and Fight against Climate Change	Municipal Council of Montreal and Montreal City
Delivery of infrastructure	No	No	No	No Responsible for the NZ PPP scheme	No	No	No
Workload designation	Freedom to choose beyond remit of audit, specific requests from Ministers and an annual Monitoring Report	Agreed timescales on Audit, Plan and Priority List. However, Remit papers can be of the Commissions' choosing	Beyond core requirement on strategy, prioritisation and government posed questions they have the autonomy to conduct and publish original research	Established as Strategy, business cases and Pipeline projects. Beyond this they have autonomy to research and publish best practice guidance	By project, no autonomy to choose workload although they can contract out project consultations	Mandated by the Minister	Projects which are issued by the Municipal Council and City of Montreal, also make recommendation to other organisations
Infrastructure Audit / Strategy	Yes National Infrastructure Assessment once every parliament (circa 5 years)	Yes refreshed every 5 years on a 15-year timescale	Yes 2016, 30-year Infrastructure Strategy is due to be refreshed in 2020	Yes 30-year Strategy to be delivered in 2021, then refreshed every 5 years	No	No	No
Infrastructure Plan	No however, works across sectors and identifies key trade-offs	Yes refreshed every 5 years	Yes Infrastructure Plan Projects Pipeline, started in 2018, will be updated annually	Yes The Strategy document will incorporate the Infrastructure Plan. Due to be first published in 2021	No	No	No
Infrastructure Prioritisation / Pipeline	No however, works across sectors and identifies key trade-offs	Yes published annually, a living document which is updated with each business case	Yes Infrastructure Plan Projects Pipeline, started in 2018, will be updated annually	Yes Pipeline of projects, based upon the 30-year Strategy - bringing central, local and private infrastructure projects into one place	No	No	No

Country	UK	Australia	Australia Victoria	New Zealand	France	Canada - BAPE	Canada - OCPM
Public Consultation	Yes as part of the stakeholder management, not related to specific infrastructure projects	Yes as part of stakeholder management but not for specific projects. Communities can submit business cases for inclusion on the Priority List	Yes in relation to strategy and plan but not specific projects	Yes collaborative approach with local communities. Consultation exercises for projects of greater than NZ\$50 million	Yes core purpose of the organisation is to run public debates prior to planning permission being granted, report with feasibility conditions.	Yes the core purpose of the BAPE is public consultation on projects, which the Minister of the Environment assigns.	Yes fundamental role of OCPM, completed through face to face as well as written and digital channels
Sectors	Energy, transport, water & wastewater, waste, flood risk, digital	Energy, water, telecommunications and from the 2020 priority list social infrastructure	Transport; culture, sport & community; digital; education & training; energy; environment; health & human services; justice & emergency services; and water	Not defined but cover economic and social infrastructure	Not defined by sector, but by economic cost	Dams and dykes, river, streams and water table work; ports; road works; rail stations, yards % tracks; airports; oil, gas and electricity works; water plants. Mining (excluding quarries and sand); waste disposal and landfill; and parks	Real estate, institutional projects (health, cultural, educational, universities, parks and recreational facilities); historic and natural districts. In addition, they have a Right of Initiative work programme which is where communities can bring forward projects
Government response	Received within 6 to 12 on reports and recommendations from UK Government, once endorsed they become government policy	No evidence of regular government responses. Government response received for the first Infrastructure Audit	12 months for response to Strategy	180 days from the government receiving reports to response	Government departments, agencies and private investors have 3 months to respond to the CNDP's reports	At the end of the consultation the BAPE produces a report, the Minister and the Council of Ministers will then make a decision on the file. There is no formal response to the BAPE	At the end of the consultation OCPM provides a report to the Mayor of Montreal to aid decision making on the project. No formal response is received.
Specific Projects work	No	Business case assessment but no delivery of projects	No	Not delivery - but will support with procurement and responsibility for New Zealand's PPP model	Not delivery - but project by project public consultation	Not delivery - but project by project public consultation	Not delivery - but project by project consultation

Bibliography

-
- A**
- Abrao, A.C.;
Brazilian Infrastructure Investment Opportunities; Beyond the Election;
 Oliver Wyman;
 June 2018:
https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2018/june/Panorama_Brasil_Infrastructure_Presentation_Final.pdf
- Alvin, C;
Marina Bay Sands;
 Singapore Infopedia;
 November 2011:
https://eresources.nlb.gov.sg/infopedia/articles/SIP_1607_2011-11-01.html
- Armitt, J, Sir;
Independent Armit Review of Infrastructure;
 Royal Academy of Engineering;
 Website access Jan 2020
<https://www.raeng.org.uk/publications/responses/independent-armit-review-of-infrastructure>
- Australian Bureau of Statistics;
Main Features; Introduction;
 Australian Bureau of Statistics;
 Website access April 2020
<https://www.abs.gov.au/AUSSTATS/abs@nsf/mf/3222.0>
- Australian Government;
Infrastructure; Australian Government;
 Website access April 2020:
<https://www.infrastructure.gov.au/infrastructure/>
- Australian Government;
Infrastructure Investment Program;
 Australian Government;
 Website access April 2020
<https://investment.infrastructure.gov.au/>
- Australian Government;
Part 2 Staffing of Agencies;
 Australian Government;
 Website access April 2020
https://budget.gov.au/2019-20/content/bp4/download/bp4_10_staffing.pdf
- Australian Government;
The Australian Government's Response to Infrastructure Australia's - Australian Infrastructure Plan;
 Australian Government;
 November 2016: https://www.infrastructure.gov.au/infrastructure/publications/files/Australian-Government-Response-to-Australian-Infrastructure-Plan_Nov-2016.pdf
-
- B**
- Barrow, K;
Swedish National Transport Plan Prioritises "Reliable and Robust" Infrastructure;
 International Railway Journal;
 October 2017
https://www.railjournal.com/in_depth/swedish-national-transport-plan-prioritises-reliable-and-robust-infrastructure
- BBC News;
Singapore Profile – Timeline;
 BBC News
 May 2018:
<https://www.bbc.co.uk/news/world-asia-15971013>
- Bednarz, C;
The 10 Busiest Airports in the World;
 National Geographic;
 October 2018:
<https://www.nationalgeographic.com/travel/lists/transportation/worlds-busiest-airports-things-to-do-layover/>
- BMVI – German Government;
Transport Infrastructure;
 BMVI – German Government;
 Website accessed June 2020
<https://www.bmvi.de/EN/Topics/Mobility/Transport-Planning-Investment/Federal-Transport-Infrastructure-Plan/federal-transport-infrastructure-plan.html#:~:text=The%20current%20Federal%20Transport%20Infrastructure%20Plan%20is%20the%20FIP%20202030.&text=The%20German%20Bundestag%20takes%20a.selected%20projects%20enshrined%20in%20law.>
- Brown, A;
Singapore to remain world leader in infrastructure;
 KHL;
 September 2019:
<https://www.khl.com/international-construction/singapore-to-remain-world-leader-in-infrastructure/140306.article>
- Bundesamt Fur Sicherheit in der Informationstechnik;
Critical Infrastructure Protection; Survey of World-Wide Activities;
 Bundesamt Fur Sicherheit in der Informationstechnik;
 April 2004:
https://www.bsi.bund.de/SharedDocs/Downloads/EN/BSI/Kritis/paper_studie_en_pdf.pdf?3f__blob%3DpublicationFile
-
- C**
- Canada Infrastructure Bank;
Homepage;
 Canada Infrastructure Bank;
 Website access April 2020:
<https://cib-bic.ca/en/>
- Centre for Public Impact;
Building a digital government in Singapore;
 Centre for Public Impact;
 April 2016
<https://www.centreforpublicimpact.org/case-study/building-digital-government-singapore/>
- Centre for Public Impact;
South Korea's Infrastructure Prioritisation Plan;
 Centre for Public Impact;
 March 2016
<https://www.centreforpublicimpact.org/case-study/infrastructure-prioritization-plan/>
- Chen Y., Matzinger S., Woetzel J.;
Chinese Infrastructure: The Big Picture;
 McKinsey and Company;
 June 2013
<https://www.mckinsey.com/featured-insights/winning-in-emerging-markets/chinese-infrastructure-the-big-picture#>
- Chew, V;
Urban Redevelopment Authority;
 Singapore Infopedia;
 September 2009:
https://eresources.nlb.gov.sg/infopedia/articles/SIP_1569_2009-09-18.html
- Commission Nationale Du Debat Public;
Home Page;
 Commission Nationale Du Debat Public;
 Website access April 2020: <https://www.debatpublic.fr/>
- Commission Nationale Du Debat Public;
Sa composition;
 Commission Nationale Du Debat Public;
 Website access April 2020: <https://www.debatpublic.fr/sa-composition>
- Commission Nationale Du Debat Public;
Ses missions;
 Commission Nationale Du Debat Public;
 Website access April 2020
<https://www.debatpublic.fr/ses-missions>

Commission Nationale Du Debat Public;
Ses valeurs;
 Commission Nationale Du Debat Public;
 Website access April 2020
<https://www.debatpublic.fr/ses-valeurs>

Commission Nationale Du Debat Public;
Son role;
 Commission Nationale Du Debat Public;
 Website access April 2020
<https://www.debatpublic.fr/son-role>

Copenhagen Business School;
Seminar Presenting the Findings of the Swedish Infrastructure Commission;
 Copenhagen Business School;
 February 2016;
<https://www.cbs.dk/en/cbs-event-en/2965/semnar-presenting-the-findings-of-the-swedish-infrastructure-commission>

Copenhagen Capacity;
Infrastructure in Greater Copenhagen;
 Copenhagen Capacity;
 Website access April 2020
<https://www.copcap.com/set-up-a-business/infrastructure>

Copenhagen Infrastructure Partners;
Introduction;
 Copenhagen Infrastructure Partners;
 Website access April 2020
<https://cipartners.dk/about/>

Cooke, H;
Government Unveils \$12b Infrastructure Boost, much of it Focused on Roads and Rail;
 Stuff;
 December 2019
<https://www.stuff.co.nz/national/politics/118108303/government-unveils-12b-infrastructure-boost-much-of-it-focused-on-roads-and-rail>

Coast A.C.A, Bertol G;
Brazil's Great Infrastructure Opportunity;
 Brink News;
 June 2018;
<https://www.brinknews.com/brazils-great-infrastructure-opportunity/>

Counsel, B;
The New Zealand Infrastructure Commission - Te Waihangā;
 Chapman Tripp;
 May 2019;
<https://www.chapmantripp.com/publications/the-new-zealand-infrastructure-commission-te-waihangā>

D

Davies, N, Atkins, G, Slade, Dr D;
How to Transform Infrastructure Decision Making in the UK;
 Institute for Government;
 February 2018
https://www.instituteforgovernment.org.uk/sites/default/files/publications/IfG_infrastructure_decision_making_WEB.pdf

Deloitte;
Urban Redevelopment Authority Financial Statement for the Financial Year Ended 31 March 2019;
 Deloitte;
 June 2019
<https://www.ura.gov.sg/-/media/Corporate/Resources/Publications/Financial-Statements/PDFs/URA-Financial-Report-FY18-19.pdf>

Development Bureau;
Welcome Message from the Secretary for Development; Development Bureau;
 Website access April 2020
<https://www.devb.gov.hk/en/home/index.html>

Doray, L;
2018 Annual Report;
 Office De Consultation Publique De Montreal; 2018;
<http://report2018.ocpm.qc.ca/>

Duffin E.;;
Quality of Infrastructure: countries with the best infrastructure in 2019;
 Statista;
 October 2019
<https://www.statista.com/statistics/264753/ranking-of-countries-according-to-the-general-quality-of-infrastructure/>

E

Enterprise Singapore;
Overview;
 Enterprise Singapore;
 Website access May 2020;
<https://www.enterprisesg.gov.sg/industries/hub/infrastructure-hub/overview>

European Commission;
Investment Plan; Denmark;
 European Commission;
 Website access April 2020;
https://ec.europa.eu/commission/strategy/priorities-2019-2024/jobs-growth-and-investment/investment-plan-europe-juncker-plan/investment-plan-results/investment-plan-denmark_en

European Commission;
Mobility and Transport; European Commission;
 Website access April 2020;
https://ec.europa.eu/transport/facts-fundings/scoreboard/countries/germany/investments-infrastructure_sv

European Commission;
Mobility and Transport - France;
 European Commission;
 Website access April 2020
https://ec.europa.eu/transport/facts-fundings/scoreboard/countries/france/investments-infrastructure_en

European Transport Forum;
Why Europe needs more than a Infrastructure Upgrade;
 European Transport Forum;
 February 2019
<https://www.europeantransportforum.eu/mediaroom/why-europe-needs-more-than-an-infrastructure-upgrade/>

F

Federal Office of Civil Protection and Disaster Assistance – German Government - Kritis;
Critical Infrastructures;
 Federal Office of Civil Protection and Disaster Assistance - German Government - Kritis;
 Website access April 2020;
https://www.kritis.bund.de/SubSites/Kritis/EN/introduction/introduction_node.html

Federal Office of Civil Protection and Disaster Assistance – German Government - Kritis
Publications on Critical Infrastructure Protection
 Federal Office of Civil Protection and Disaster Assistance – German Government - Kritis;
 Website access April 2020;
https://www.kritis.bund.de/SubSites/Kritis/EN/publications/publikationen_node.html

Federal Office of Civil Protection and Disaster Assistance – German Government - Kritis
Up Kritis
 Federal Office of Civil Protection and Disaster Assistance – German Government - Kritis
 Website access April 2020;
https://www.kritis.bund.de/SubSites/Kritis/EN/activities/national/cipimplementationplan/cipimplementationplan_node.html

Federal Office of Civil Protection and Disaster Assistance – German Government - Kritis
UP KRITIS Public-Private Partnership for Critical Infrastructure Protection
 Federal Office of Civil Protection and Disaster Assistance – German Government - Kritis;
 Website access April 2020;
https://www.kritis.bund.de/SubSites/Kritis/EN/publications/Fortschreibungsdokument_engl_.html

Federal Ministry of the Interior, Building and Community – German Government

Critical Infrastructure Protection

Federal Ministry of the Interior, Building and Community, Website accessed June 2020:
<https://www.bmi.bund.de/EN/topics/civil-protection/critical-infrastructure-protection/critical-infrastructure-protection-node.html>

Federal Ministry of the Interior, Building, and Community – German Government

National Strategy for Critical Infrastructure Protection (CIP Strategy)

Federal Ministry of the Interior, Building, and Community – German Government
 June 2009:
https://www.bmi.bund.de/SharedDocs/downloads/EN/publikationen/2009/kritis_englisch.html;jsessionid=66ED5091E450833D43FDF38048B06272.2_cid287

Federal Ministry of Transport and Digital Infrastructure

Homepage;

Federal Ministry of Transport and Digital Infrastructure;
 Website access April 2020
<https://www.bmvi.de/EN/Home/home.html>

Financial Times;

South Korea Announces \$51bn Infrastructure Spend Ahead of Elections;

Financial Times;
 June 2020
<https://www.ft.com/content/5dd041b4-31dc-11ea-9703-eea0cae3f0de>

Flanders State of the Art;

Infrastructure & Construction Market in Sweden;

Flanders State of the Art
 June 2019
https://www.flandersinvestmentandtrade.com/export/sites/trade/files/market_studies/2019-Infrastructure%20Construction%20market%20Sweden.pdf

Forbes, S;

New board member Stephen Selwood says the New Zealand Infrastructure Commission, which is being set up by the government, is the key to addressing the country's infrastructure deficit;

Interest.co.nz;
 August 2019: <https://www.interest.co.nz/news/101288/stephen-selwood-says-new-zealand-infrastructure-commission-key-addressing-countrys>

Forbes, S;

New Zealand Infrastructure Commission Unveiled;

Interest.co.nz;
 February 2019:
<https://www.interest.co.nz/news/98244/new-zealand-infrastructure-commission-unveiled>

Ford, R, Smith M, Wilson, M;

National Infrastructure Governance Report;

National Infrastructure Commission;
 June 2017
<https://www.nic.org.uk/wp-content/uploads/NIC-International-Infrastructure-Governance-Report.pdf>

Francoeur, Gilles, L;

Restoring BAPE's Credibility LeDevoir;

November 2008
<https://www.ledevoir.com/societe/actualites-en-societe/218773/restaurer-la-credibilite-du-bape>

Frey, K;

Inefficiencies in Germany's Federal Transport Infrastructure Plan;

Transport Research Arena 2014, Paris;
 2014
<https://thepep.unece.org/sites/default/files/2017-11/Inefficiencies%20in%20Germany's%20Federal%20Transport%20Infrastructure%20Plan.pdf>

G

Geet, Van, Thomas, M;

Framing a Crisis - Policy Design Dynamics - Fitting Goals and Instruments in Transport Infrastructure Planning in the Netherlands;

Taylor & Francis Online;
 October 2019
<https://www.tandfonline.com/doi/full/10.1080/25741292.2019.1678232>

Global Infrastructure Hub; Germany;

Global Infrastructure Hub;

Website access
 April 2020:
<https://www.gihub.org/countries/germany/>

Global Infrastructure Hub; Singapore;

Global Infrastructure Hub;

Website access
 May 2020:
<https://www.gihub.org/countries/singapore/>

Government Computing;

How Denmark Made it to the Top in e-Government;

Government Computing;
 July 2018;
<https://www.governmentcomputing.com/back-office/news/denmark-made-top-e-government>

Government of Canada;

Infrastructure Canada - Services and Information: Government of Canada;

Website access
 April 2020
<https://www.infrastructure.gc.ca/index-eng.html>

Government of Canada - Canlii;

Regulation respecting environmental impact assessment and review, CQLR c Q-2, r 23;

Government of Canada - Canlii;
 June 2020
https://www.canlii.org/fr/qc/legis/regl/rlrq-c-q-2-r-23/derriere/rlrq-c-q-2-r-23.html#SECTION_IL_PROJETS_ASSUJETTIS_A_LA_PROCEDURE_D_EVALUATION_ET_D_EXAMEN_DES_IMPACTS_SUR_L_ENVIRONNEMENT_4583

Government of Denmark -Denmark.dk;

Infrastructure in Denmark;

Denmark.dk;
 Website access April 2020
<https://denmark.dk/innovation-and-design/infrastructure>

Government of Denmark - Denmark.dk;

Government and Society webpage;

Denmark.dk;
 Website accessed June 2020
<https://denmark.dk/society-and-business/government-and-politics>

Government of the Netherlands;

Home Page;

Government of the Netherlands;
 Website access
 April 2020
<https://www.government.nl/topics/spatial-planning-and-infrastructure/spatial-planning-in-the-netherlands>

Government of Quebec;

Introducing the BAPE;

Government of Quebec;
 Website access
 April 2020:
<https://www.bape.gouv.qc.ca/fr/bape/presentation-bape/>

Government of Quebec;

Ministry of Environment and Climate Change;

Government of Quebec;
 Website access April 2020:
<https://www.quebec.ca/en/government/ministere/environnement/>

Government of Quebec;

Organizational structure;

Government of Quebec;
 Website access April 2020:
<https://www.bape.gouv.qc.ca/fr/bape/structure-organisationnelle/>

Government of Quebec's;

Québec's Public Infrastructure;

Government of Quebec's; March 2016: https://www.tresor.gouv.qc.ca/fileadmin/PDF/budget_depenses/16-17/quebecPublicInfrastructure.pdf

Government of Quebec;

Search;

Government of Quebec;
Website access April 2020:
<https://www.bape.gouv.qc.ca/fr/recherche/>

Government of Quebec;

The organization and its commitments;

Government of Quebec;
Website access April 2020:
<https://www.quebec.ca/en/government/ministere/environnement/organismes-lies/>

Government of Quebec;

The role of BAPE;

Government of Quebec;
Website access
April 2020
<https://www.bape.gouv.qc.ca/fr/bape/role-bape/>

Government of Victoria;

Victorian Infrastructure Plan;

Government of Victoria;
Website access April 2020:
<https://www.vic.gov.au/victorian-infrastructure-plan>

H

HM Treasury;

National Infrastructure Commission Framework Document;

National Infrastructure Commission;
January 2017:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/585374/NIC_framework_document_web.pdf

HM Treasury;

Remit Letter for National Infrastructure Commission (NIC);

HM Treasury;
November 2016:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/571097/Fiscal_Remmit_2016.pdf

Holm, Kaj, V, Nielsen, Horstmann, T;

The Danish State Guarantee Model for Infrastructure Investment;

OECD - International Transport Forum;
2018:
https://www.itf-oecd.org/sites/default/files/docs/danish_state_guarantee_model_4.pdf

Hong Kong Monetary Authority;

Forward Looking Hub for New Businesses;

Hong Kong Monetary Authority;
Website access
April 2020
<https://www.hkma.gov.hk/eng/key-functions/international-financial-centre/hong-kong-as-an-international-financial-centre/forward-looking-hub-for-new-businesses/>

Hong Kong 2030;

Towards a Planning Vision and Strategy Transcending 2030, Public Engagement;

Hong Kong 2030;
October 2016
https://www.hk2030plus.hk/document/2030+Booklet_Eng.pdf

I

InfraCompass;

Denmark; Overview data;

InfraCompass;
Website access April 2020:
https://infacompass.github.org/ind_country_profile/DK

InfraCompass;

France; Overview data;

InfraCompass;
Website access April 2020:
https://infacompass.github.org/ind_country_profile/FR

Infrastructure Asia;

Our Network;

Infrastructure Asia;
Website access April 2020:
<https://www.infrastructureasia.org/Our-Network>

Infrastructure Australia;

What we do;

Infrastructure Australia;
Website access April 2020:
<https://www.infrastructureaustralia.gov.au/>

Infrastructure Australia;

An Assessment of Australia's Future Infrastructure Needs;

Infrastructure Australia;
August 2019: <https://www.infrastructureaustralia.gov.au/publications/australian-infrastructure-audit-2019>

Infrastructure Australia;

Australian Infrastructure Plan 2016;

Infrastructure Australia;
February 2016:
<https://www.infrastructureaustralia.gov.au/publications/australian-infrastructure-plan-2016>

Infrastructure Australia;

Infrastructure Priority List;

Infrastructure Australia; Website access April 2020:
<https://www.infrastructureaustralia.gov.au/infrastructure-priority-list>

Infrastructure Australia;

Reform Series;

Infrastructure Australia;
Website access April 2020:
<https://www.infrastructureaustralia.gov.au/reform-series>

Infrastructure Australia;

About us;

Infrastructure Australia;
Website access April 2020:
<https://www.infrastructureaustralia.gov.au/about-us>

Infrastructure Australia;

Who we are;

Infrastructure Australia;
Website access April 2020:
<https://www.infrastructureaustralia.gov.au/who-we-are>

Infrastructure Australia;

Annual Report Infrastructure Australia Report to Parliament 2018–19;

Infrastructure Australia; October 2019:
https://www.infrastructureaustralia.gov.au/sites/default/files/2019-10/annual_report_2019_web_final.pdf

Infrastructure Australia;

Planning Liveable Cities; A place-based approach to sequencing infrastructure and growth;

Infrastructure Australia;
December 2018
<https://www.infrastructureaustralia.gov.au/publications/planning-liveable-cities-place-based-approach-sequencing-infrastructure-and-growth>

Infrastructure Australia;

An Assessment of Australia's Future Infrastructure Needs;

Infrastructure Australia;
June 2019
<https://www.infrastructureaustralia.gov.au/sites/default/files/2019-08/Australian%20Infrastructure%20Audit%202019.pdf>

Infrastructure Australia;

CEO's Update;

Infrastructure Australia;
October 2019:
<https://www.infrastructureaustralia.gov.au/listing/newsletter/ceos-update-october-2019>

- Infrastructure Canada;
Investing in Canada – Canada’s Long-Term Infrastructure Plan;
Ottawa;
2018
<https://www.infrastructure.gc.ca/site/alt-format/pdf/plan/icp-pic/IC-InvestingInCanadaPlan-ENG.pdf>
- Infrastructure New Zealand;
Building regions; Infrastructure NZ Calls for Enhanced Regional Government;
Infrastructure New Zealand;
August 2019
<https://www.infrastructure.org.nz/media/7850552>
- Infrastructure New Zealand;
Home Page;
Infrastructure New Zealand;
May 2020
<https://infrastructure.org.nz/>
- Infrastructure New Zealand;
Infrastructure New Zealand Board Members;
Infrastructure New Zealand;
May 2020
<https://www.infrastructure.org.nz/Our-Board>
- Infrastructure Victoria;
Advice;
Infrastructure Victoria;
Website access April 2020:
<https://www.infrastructureaustralia.gov.au/listing/newsletter/ceos-update-october-2019>
- Infrastructure Victoria;
Annual Report 2017-18;
Infrastructure Victoria;
September 2018:
<https://www.infrastructurevictoria.com.au/wp-content/uploads/2019/04/Infrastructure-Victoria-Annual-Report-2017-18.pdf>
- Infrastructure Victoria;
Annual Report 2018-19;
Infrastructure Victoria;
September 2019:
https://www.parliament.vic.gov.au/file_uploads/FINAL_IV_Annual_Report_2018-19_WEB_dXhWsTBp.PDF
- Infrastructure Victoria;
Good Move; Fixing Transport Congestion – March 2020;
Infrastructure Victoria;
Website access April 2020
<https://www.infrastructurevictoria.com.au/report/executive-summary/>
- Infrastructure Victoria;
Funding and Financing Draft Additional Information Paper;
Infrastructure Victoria;
May 2016
<https://www.infrastructurevictoria.com.au/wp-content/uploads/2019/04/Funding-and-financing-draft-additional-information-paper.pdf>
- Infrastructure Victoria;
Infrastructure Priorities for the Regions;
Infrastructure Victoria;
Website access April 2020
<https://www.infrastructurevictoria.com.au/project/research-infrastructure-priorities-for-the-regions/>
- Infrastructure Victoria;
Infrastructure Victoria Act 2015;
Infrastructure Victoria;
October 2015:
<https://www.infrastructurevictoria.com.au/wp-content/uploads/2019/04/Infrastructure-Victoria-Act-2015.pdf>
- Infrastructure Victoria;
Regional Infrastructure Needs;
Infrastructure Victoria;
Website access April 2020
<https://www.infrastructurevictoria.com.au/project/research-regional-infrastructure-needs/>
- Institute Civil Engineers;
Enabling Better Infrastructure;
June 2020
<https://www.ice.org.uk/ICEDevelopmentWebPortal/media/Documents/Media/ice-enabling-better-infrastructure-report.pdf>
- Institute Civil Engineers;
National Infrastructure Prioritisation;
Institute Civil Engineers;
Website access April 2020
<https://www.ice.org.uk/news-and-insight/enabling-better-infrastructure/national-infrastructure-prioritisation>
- Institution of Civil Engineers;
Enabling Better Infrastructure;
Institution of Civil Engineers;
Website access April 2020:
<https://www.ice.org.uk/ICEDevelopmentWebPortal/media/Documents/Media/ice-enabling-better-infrastructure-report.pdf>
- Institution of Civil Engineers;
Infrastructure, Shaping Hong Kong;
Institution of Civil Engineers;
January 2016:
https://www.ice.org.uk/ICEDevelopmentWebPortal/media/Documents/Regions/Asia%20Pacific/W2237-ICE-Shaping-Hong-Kong-2015-WEB_20160104.pdf
- International Transport Forum;
Strategic Infrastructure Planning International Best Practice;
OECD; National Infrastructure Commission
2017
<https://www.itf-oecd.org/sites/default/files/docs/strategic-infrastructure-planning.pdf>
- Ipsos Mori;
Global Infrastructure Index;
Public Satisfaction and Priorities – 2018;
Ipsos Mori;
2018:
<https://www.ipsos.com/sites/default/files/ct/news/documents/2018-11/global-infrastructure-index-2018.pdf>
- Invest HK;
World Class Infrastructure;
Invest HK;
Website access April 2020
<https://www.investhk.gov.hk/en/why-hong-kong/world-class-infrastructure.html>
- Invest in Holland, Broadband website;
Invest in Holland;
Website accessed June 2020:
<https://investinholland.com/infrastructure/broadband/#:~:text=With%20the%20highest%20broadband%20penetration,wired%20and%20cyber%20secure%20countries.>
- Invest in Holland;
Infrastructure;
Invest in Holland;
Website access April 2020:
<https://investinholland.com/infrastructure/>
-
- J**
- Jhagroe, S; Framing a Crisis;
Exceptional Democracy in Dutch Infrastructure Governance;
Taylor & Francis Online;
July 2015
<https://www.tandfonline.com/doi/abs/10.1080/19460171.2015.1066690>
-
- K**
- Kirkegaard J.F.;
Europe Is Falling Behind on Infrastructure Spending;
Peterson Institute for International Economics;
May 2019:
<https://www.piie.com/research/piie-charts/europe-falling-behind-infrastructure-spending>

KPMG;

Brazil's Infrastructure and Privatization Market is Heating up;

KPMG;

Website access April 2020:

<https://home.kpmg/xx/en/home/insights/2019/03/brazils-infrastructure-and-privatization-market-is-heating-up.html>

KMPG;

Infrastructure 100 World Markets Report;

KMPG;

<https://assets.kpmg/content/dam/kpmg/pdf/2014/11/infrastructure-100-world-markets-report-v3.pdf>

L

Landfall Strategy Group;

Home Page;

Landfall Strategy Group;

Website access April 2020;

<https://www.landfallstrategy.com/>

Lee, K;

South Korea's Infrastructure Vision;

Reconnecting Asia;

April 2018;

<https://reconnectingasia.csis.org/analysis/entries/south-koreas-infrastructure-vision/>

Lim, H;

Chapter 8, Infrastructure Development in Singapore;

Singapore Institute of International Affairs;

March 2008

https://www.eria.org/uploads/media/Research-Project-Report/RPR_FY2007_2_Chapter_8.pdf

M

Marshall, T;

Learning from France; Using Public Deliberation to Tackle Infrastructure Planning Issues;

International Planning Studies;

February 2016: <https://www.ice.org.uk/ICEDevelopmentWebPortal/media/Documents/Media/Policy/nna-submissions/Learning-from-France-using-public-deliberation-to-tackle-infrastructure-planning-issues.pdf?ext=.pdf>

McKinsey & Company;

The Brazilian Experience in Financing Infrastructure;

Website access April 2020:

<https://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/the-brazilian-experience-in-financing-infrastructure>

Meyer, A; Brazil Infrastructure;

Brazil;

Website access April 2020:

<https://www.brazil.org.za/brazil-infrastructure.html>

Ministry of Infrastructure and the Environment – Government of the Netherlands;

Summary National Policy Strategy for Infrastructure and Spatial Planning;

Ministry of Infrastructure and the Environment – Government of the Netherlands;

March 2011

<https://www.government.nl/documents/publications/2013/07/24/summary-national-policy-strategy-for-infrastructure-and-spatial-planning>

Ministry of Infrastructure and Water Management – Government of the Netherlands;

The Dutch Multi-Year Programme for Infrastructure, Spatial Planning and Transport (MIRT) - Summary;

Ministry of Infrastructure and Water Management– Government of the Netherlands;

February 2018

<https://www.government.nl/documents/leaflets/2018/02/07/the-dutch-multi-year-programme-for-infrastructure-spatial-planning-and-transport-mirt—summary>

Monetary Authority of Singapore;

Overview;

Monetary Authority of Singapore;

Website access

May 2020

<https://www.mas.gov.sg/development/infrastructure-finance>

N

National Development and Reform Commission – People's Republic of China;

Home Page;

National Development and Reform Commission – People's Republic of China;

Website access April 2020

<https://en.ndrc.gov.cn/>

National Infrastructure Commission– People's Republic of China;

Corporate Plan 2020-21 to 2022-23;

National Infrastructure Commission – People's Republic of China;

April 2020

<https://www.nic.org.uk/wp-content/uploads/NIC-Corporate-Plan-202021-to-202223-Final.pdf>

National Infrastructure Commission– People's Republic of China;

International Infrastructure Governance Report;

National Infrastructure Commission;

June 2017

<https://www.nic.org.uk/wp-content/uploads/NIC-International-Infrastructure-Governance-Report.pdf>

National Infrastructure Commission;

Resilience – Completed Study

National Infrastructure Commission

Website access April 2020

<https://www.nic.org.uk/our-work/resilience/>

National Infrastructure Commission

Resilience Study Scoping Report

National Infrastructure Commission

September 2019

<https://www.nic.org.uk/publications/resilience-study-scoping-report/>

National Infrastructure Commission

Our work

National Infrastructure Commission

Website access April 2020: <https://www.nic.org.uk/our-work/>

National Infrastructure Commission

What we Do

National Infrastructure Commission

Website access April 2020:

<https://www.nic.org.uk/what-we-do/>

National Infrastructure Commission

Who we are

National Infrastructure Commission

Website access April 2020:

<https://www.nic.org.uk/who-we-are/>

Nations Encyclopaedia

Brazil - Infrastructure, Power, and Communication

Nations Encyclopaedia

Website access April 2020: <https://www.nationsencyclopedia.com/economies/Americas/Brazil-INFRASTRUCTURE-POWER-AND-COMMUNICATIONS.html>

Nations Encyclopaedia

Denmark - Infrastructure, Power, and Communication

Nations Encyclopaedia

Website access April 2020: <https://www.nationsencyclopedia.com/economies/Europe/Denmark-INFRASTRUCTURE-POWER-AND-COMMUNICATIONS.html>

Nations Encyclopaedia

Hong Kong - Infrastructure, Power, and Communication

Nations Encyclopaedia

Website access April 2020:

<https://www.nationsencyclopedia.com/economies/Asia-and-the-Pacific/Hong-Kong-INFRASTRUCTURE-POWER-AND-COMMUNICATIONS.html>

Nations Encyclopaedia

Germany - Infrastructure, Power, and Communication

Nations Encyclopaedia

Website access April 2020: <https://www.nationsencyclopedia.com/economies/Europe/Germany-INFRASTRUCTURE-POWER-AND-COMMUNICATIONS.html>

Nations Encyclopaedia

Sweden - Infrastructure, Power, and Communication

Nations Encyclopaedia

Website access April 2020: <https://www.nationsencyclopedia.com/economies/Europe/Sweden-INFRASTRUCTURE-POWER-AND-COMMUNICATIONS.html>

Nations Encyclopaedia

The Netherlands - Infrastructure, Power, and Communication

Nations Encyclopaedia

Website access June 2020:

<https://www.nationsencyclopedia.com/economies/Europe/The-Netherlands-INFRASTRUCTURE-POWER-AND-COMMUNICATIONS.html>

New Zealand Infrastructure Commission

About the Pipeline

New Zealand Infrastructure Commission

Website access April 2020:

<https://infracom.govt.nz/projects/about-the-pipeline/>

New Zealand Infrastructure Commission

Annual Letter of Expectations

New Zealand Infrastructure Commission

Website access April 2020:

<https://infracom.govt.nz/assets/infrastructure-commission-loe.pdf>

New Zealand Infrastructure Commission

Infrastructure investment for New Zealand's long-term economic performance and social wellbeing

New Zealand Infrastructure Commission

Website access April 2020:

<https://infracom.govt.nz/>

New Zealand Infrastructure Commission

Lifting our Gaze

New Zealand Infrastructure Commission

Website access Jan 2020:

<https://infracom.govt.nz/assets/Uploads/Lifting-our-gaze-EY-Infracom.pdf>

New Zealand Infrastructure Commission

Strategy

New Zealand Infrastructure Commission

Website access April 2020:

<https://infracom.govt.nz/strategy/>

New Zealand Infrastructure Commission

What is the Strategy

New Zealand Infrastructure Commission

Website access April 2020:

<https://infracom.govt.nz/strategy/what-is-the-strategy/>

New Zealand Infrastructure Commission

What we do

New Zealand Infrastructure Commission

Website access April 2020:

<https://infracom.govt.nz/major-projects/what-we-do/>

News Online

History of Singapore

News Online

Website access April 2020:

<https://www.nationsonline.org/oneworld/History/Singapore-history.htm>

O

OECD

National Place-based Policies in the Netherlands

OECD

August 2010:

<http://www.oecd.org/cfe/regional-policy/45901622.pdf>

OECD

National Strategy for Critical Infrastructure Protection in Germany

OECD

Website accessed June 2020:

<https://www.oecd.org/governance/toolkit-on-risk-governance/goodpractices/page/nationalstrategyforcriticalinfrastructureprotectioningermany.htm>

Office De Consultation Publique De Montreal

Avenue McGill College Project

Office De Consultation Publique De Montreal

August 2018:

https://ocpm.qc.ca/sites/ocpm.qc.ca/files/pdf/P99/3.1_mcgill_projet_ocpm_an-lr.pdf

Office De Consultation Publique De Montreal

Consultations Publiques

Office De Consultation Publique De Montreal

Website access April 2020

<https://ocpm.qc.ca/consultations-publiques>

Office De Consultation Publique De Montreal

Pourquoi et Comment Participer

Office De Consultation Publique De Montreal

Website access April 2020:

<https://ocpm.qc.ca/participer>

Oxford Economics

International Research on Regional Economies

Oxford Economics

May 2019:

<https://www.scottishfuturetrust.org.uk/storage/uploads/internationalresearchonregionaleconomiesmay2019.pdf>

P

Perryer S.

How China Uses Infrastructure as a Means of Control

World Finance

July 2019:

<https://www.worldfinance.com/featured/how-china-uses-infrastructure-as-a-means-of-control>

Pillay, M.

Singapore to Establish 'one stop' Infrastructure Office

Pinsent Masons

September 2019:

<https://www.pinsentmasons.com/out-law/news/singapore-to-establish-one-stop-infrastructure-office>

PPIAF

Country Case Study

Korea

PPIAF

March 2009:

<https://ppiaf.org/sites/ppiaf.org/files/documents/toolkits/highwaytoolkit/6/pdf-version/korea.pdf>

PWC

Crunch Time for Brazilian Infrastructure

PWC

2013:

<https://www.pwc.com/gx/en/capital-projects-infrastructure/pdf/brazil-article.pdf>

-
- R**
- Railway Pro
Sweden Presents EUR 70 Billion National Transport Plan
 Railway Pro
 June 2018:
<https://www.railwaypro.com/wp/sweden-presents-eur-70-billion-national-transport-plan/>
- Reuters
50 years of growth as Asia's Infrastructure Hub
 Reuters
 Website access April 2020:
<https://www.reuters.com/brandfeatures/infrastructure2030/singapore-hub>
- Rikvin
Learn
 Rikvin
 Website access April 2020:
<https://www.rikvin.com/learn/>
- Risnat
France - Legislative and Administrative Framework
 Risknat
 Website access April 2020:
http://risknat.org/projets/riskydrogeo/docs/guide_pratique/Acivite1_Ateliers/Presentations%20Atelier1/A1P13-Coastal%20changes/programs/france.html
- Robinson, Nicholas, A, Burlison, E, Lin-Heng, L
Environment Law of France
 Research Gate
 October 2018:
https://www.researchgate.net/publication/328391897_Environmental_Law_of_France
- Röding, Boman, K
The Government's Plan for Infrastructure – How we Build Sweden Strong and Sustainable
 Government Offices of Sweden
 June 2018:
<https://www.government.se/press-releases/2018/06/the-governments-plan-for-infrastructure—how-we-build-sweden-strong-and-sustainable/>
-
- S**
- Santander
Singapore; Economic and Political Outline
 Santander
 Website access April 2020:
<https://santandertrade.com/en/portal/analyse-markets/singapore/economic-political-outline>
- Savills
Prospects; Evolution, not revolution for Singapore's CBD
 Savills
 June 2019:
<https://www.savills.com/prospects/cities-singapore-cbd.html>
- Schwab K.
The Global Competitiveness Report 2018
 World Economic Forum
 2018:
<http://www3.weforum.org/docs/GCR2018/05FullReport/TheGlobalCompetitivenessReport2018.pdf>
- Scottish Land Commission
Research on Interventions to Manage Land Markets and Limit the Concentration of Land Ownership Elsewhere in the World
 Scottish Land Commission
 2018:
https://landcommission.gov.scot/downloads/5dd6c67b34c9e_Land-ownership-restrictions-FINAL-March-2018.pdf
- Scottish Government
Wellbeing Economy Governments (WEGo)
 Scottish Government
 2017:
<https://www.gov.scot/groups/wellbeing-economy-governments-wego/>
- Ship Technology
The World's 10 biggest Ports
 Ship Technology
 October 2013:
<https://www.ship-technology.com/features/feature-the-worlds-10-biggest-ports/>
- Sim, F
Urban Redevelopment Authority Draft Master Plan
 Going Underground to Free up Space on the Surface
 CAN:
 March 2019:
<https://www.channelnewsasia.com/news/singapore/ura-draft-master-plan-planning-development-underground-11383336>
- Simpson Grierson
New Zealand Infrastructure Commission; an Innovative Approach to Infrastructure
 Simpson Grierson
 April 2019:
<https://www.simpsongrierson.com/articles/2019/new-zealand-infrastructure-commission-te-waihanganga-innovative-approach-to-infrastructure>
- Singapore Business Federation
SBF Infrastructure Committee
 Singapore Business Federation
 Website access May 2020:
<https://www.sbf.org.sg/business-advocacy/sbf-committees/sbf-infrastructure-committee>
- Skilling, D
New Challenges for Asia's Governments
 McKinsey & Company
 June 2009:
<https://www.mckinsey.com/industries/public-sector/our-insights/new-challenges-for-asias-governments>
- Skilling, D
Singapore & Hong Kong; A Tale of Two Cities
 Landfall Strategy Group
 September 2019:
<https://www.landfallstrategy.com/commentary/2019/9/14/singapore-amp-hong-kong-a-tale-of-two-cities>
- Slade, D
Consultation on Infrastructure; What France can Teach us
 The Planner
 February 2020:
<https://www.theplanner.co.uk/opinion/consultation-on-infrastructure-what-france-can-teach-us>
- Statista
Ranking of Countries with Best Infrastructure in 2019
 Statista
 Website access April 2020:
<https://www.statista.com/statistics/264753/ranking-of-countries-according-to-the-general-quality-of-infrastructure/>
- Stead D, Meijers E.
International Transport Forum – Urban Planning and transport infrastructure provision in the Randstad, Netherlands
 OECD, July 2015:
<https://www.itf-oecd.org/sites/default/files/docs/stead.pdf>
- Stevens, B, White, J
Transcontinental Infrastructure Needs to 2030/2050
 OECD 50
 June 2011:
<https://www.oecd.org/futures/infrastructureto2030/49996793.pdf>
- Sund Baelt
The State Guarantee Model
 Sund Baelt
 Website access April 2020:
<https://sundogbaelt.dk/en/the-state-guarantee-model/>

T

The Treasury

Historical Infrastructure Documents

The Treasury

Website access April 2020:

<https://treasury.govt.nz/information-and-services/nz-economy/infrastructure/historical-infrastructure-documents>

The Treasury

Infrastructure

The Treasury

Website access April 2020: <https://treasury.govt.nz/information-and-services/nz-economy/infrastructure>

The Treasury

Infrastructure Ministers

The Treasury

Website access April 2020:

<https://treasury.govt.nz/information-and-services/nz-economy/infrastructure/infrastructure-ministers>

The Treasury

New Zealand Infrastructure Commission - Te Waihanga

The Treasury

Website access April 2020:

<https://treasury.govt.nz/information-and-services/nz-economy/infrastructure/nz-infrastructure-commission>

The World Bank

Ease of Doing Business

The World Bank

Website access April 2020:

<https://www.doingbusiness.org/en/rankings>

The World Bank

International Logistics Performance Index

The World Bank

2018:

<https://lpi.worldbank.org/international/global>

Transport Research Arena

Inefficiencies in Germany's Federal Transport Infrastructure Plan

Transport Research Arena

Paris

2014:

[https://thepep.unece.org/sites/default/files/2017-](https://thepep.unece.org/sites/default/files/2017-11/Inefficiencies%20in%20Germany's%20Federal%20Transport%20Infrastructure%20Plan.pdf)[11/Inefficiencies%20in%20Germany's%20Federal%20Transport%20Infrastructure%20Plan.pdf](https://thepep.unece.org/sites/default/files/2017-11/Inefficiencies%20in%20Germany's%20Federal%20Transport%20Infrastructure%20Plan.pdf)**U**

UK Government

Doing Business in Singapore

Singapore trade and export guide

Gov.UK

April 2016:

<https://www.gov.uk/government/publications/exporting-to-singapore/exporting-to-singapore>

UK Government

National Infrastructure Commission

Terms of Reference

Gov.UK

October 2015:

<https://www.gov.uk/government/publications/national-infrastructure-commission-terms-of-reference>

UK Government

National Infrastructure Commission Annual Report 1 April 2018 to 31 March 2019

Gov.UK

October 2019:

<https://www.gov.uk/government/publications/national-infrastructure-commission-annual-report-1-april-2018-to-31-march-2019>

UK Government

Strategic Infrastructure Planning

International Best Practice

Gov.UK

March 2017:

<https://www.gov.uk/government/publications/strategic-infrastructure-planning-international-best-practice-2>

Urban Redevelopment Authority

Annual Report 2018/2019

Urban Redevelopment Authority

Website access April 2020: <https://www.ura.gov.sg/Corporate/Data/Resources/Publications/Annual-Reports/Web-AR-19/AnnualReport2018-2019/AR-landing>

Urban Redevelopment Authority

Concept Plan

Urban Redevelopment Authority

Website access April 2020:

<https://www.ura.gov.sg/Corporate/Planning/Concept-Plan>

Urban Redevelopment Authority

Underground Space

Urban Redevelopment Authority

Website access April 2020:

<https://www.ura.gov.sg/Corporate/Get-Involved/Plan-Our-Future-SG/Innovative-Urban-Solutions/Underground-space>

Urban Redevelopment Authority

Underground Development

Urban Redevelopment Authority

Website access April 2020:

https://www.ura.gov.sg/-/media/Corporate/Get-Involved/Plan-Our-Future-SG/Underground-Works/Benchmarking_Study.pdf?1a=en

Urban Redevelopment Authority

Winning Proposal Lights the Way to Connections with Others

Urban Redevelopment Authority

Website access May 2020:

<https://www.ura.gov.sg/Corporate/Media-Room/Media-Releases/pr19-41>

Up Kritis

Public-Private Partnership for Critical Infrastructure Protection

Up Kritis

February 2014:

https://www.kritis.bund.de/SharedDocs/Downloads/Kritis/EN/UP_KRITIS.pdf?__blob=publicationFile**W**

Wellbeing Economy Alliance

Website accessed

Wellbeing Economy Alliance

May 2020:

<https://wellbeingeconomy.org/>

World Economic Forum

Improving Infrastructure Financing in Brazil

World Economic Forum

March 2019:

<https://www.weforum.org/reports/improving-infrastructure-financing-in-brazil>

World Economic Forum

Port of Rotterdam - Dutch once again have best infrastructure in Europe – The Global Competitiveness Report 2019

World Economic Forum

October 2019:

<https://www.portofrotterdam.com/en/news-and-press-releases/world-economic-forum-dutch-once-again-have-best-infrastructure-in-europe>

WorldoMeter

Singapore Population

Worldometer

Website access April 2020:

<https://www.worldometers.info/world-population/singapore-population/>

WorldoMeter

Australian Population

Worldometer

Website access April 2020:

<https://www.worldometers.info/world-population/australia-population/>

WorldStrides

Home Page

WorldStrides

Website access May 2020:

<https://worldstrides.com/blog/2017/08/11-interesting-facts-singapore/>

Wuhl, S

The National Commission for Public Debate (CNDP)

Cited Territories Governance

2009:

https://translate.google.com/translate?hl=en&sl=fr&u=http://www.citego.org/bdf_fiche-document-487_fr.html&prev=search

Endnotes

- i Scottish Government; Wellbeing Economy Governments (WEGo), 2017: <https://www.gov.scot/groups/wellbeing-economy-governments-wego/>
- ii Wellbeing Economy Alliance; Website accessed May 2020: <https://wellbeingeconomy.org/>
- iii National Infrastructure Commission; Resilience Study Scoping Report; National Infrastructure Commission; September 2019: <https://www.nic.org.uk/publications/resilience-study-scoping-report/>
- iv Marshall, T; Learning from France: Using Public Deliberation to Tackle Infrastructure Planning Issues; International Planning Studies; February 2016: <https://www.ice.org.uk/ICEDevelopmentWebPortal/media/Documents/Media/Policy/nna-submissions/Learning-from-France-using-public-deliberation-to-tackle-infrastructure-planning-issues.pdf?ext=.pdf>
- v Ford, R, Smith M, Wilson, M; National Infrastructure Governance Report; National Infrastructure Commission; June 2017: <https://www.nic.org.uk/wp-content/uploads/NIC-International-Infrastructure-Governance-Report.pdf>
- vi New Zealand Infrastructure Commission; International Context; New Zealand Infrastructure Commission; Website accessed July 2020: <https://infracom.govt.nz/strategy/international-context/>
- vii Duffin E.; Quality of Infrastructure: countries with the best infrastructure in 2019; Statista; October 2019: <https://www.statista.com/statistics/264753/ranking-of-countries-according-to-the-general-quality-of-infrastructure/>
- viii Transport Research Arena; Inefficiencies in Germany's Federal Transport Infrastructure Plan; Transport Research Arena; Paris; 2014: <https://thepep.unecp.org/sites/default/files/2017-11/Inefficiencies%20in%20Germany's%20Federal%20Transport%20Infrastructure%20Plan.pdf>
- ix Urban Redevelopment Authority; Underground Development: Urban Redevelopment Authority; Website Access 04/2020: https://www.ura.gov.sg/-/media/Corporate/Get-Involved/Plan-Our-Future-SG/Underground-Works/Benchmarking_Study.pdf?la=en
- x Armit, J, Sir; Independent Armit Review of Infrastructure; Royal Academy of Engineering; Website accessed April 2020: <https://www.raeng.org.uk/publications/responses/independent-armit-review-of-infrastructure>
- xi Infrastructure Australia; Infrastructure Priority List; Infrastructure Australia; Website accessed April 2020: <https://www.infrastructureaustralia.gov.au/infrastructure-priority-list>
- xii Infrastructure Australia; An Assessment of Australia's Future Infrastructure Needs; Infrastructure Australia; August 2019: <https://www.infrastructureaustralia.gov.au/publications/australian-infrastructure-audit-2019>
- xiii Infrastructure Australia; Australian Infrastructure Plan 2016; Infrastructure Australia; February 2016: <https://www.infrastructureaustralia.gov.au/publications/australian-infrastructure-plan-2016>
- xiv Infrastructure Australia; Reform Series; Infrastructure Australia; Website accessed April 2020: <https://www.infrastructureaustralia.gov.au/reform-series>
- xv Infrastructure Australia; Annual Report Infrastructure Australia Report to Parliament 2018–19; Infrastructure Australia; October 2019: https://www.infrastructureaustralia.gov.au/sites/default/files/2019-10/annual_report_2019_web_final.pdf
- xvi Infrastructure Australia; Planning Liveable Cities: A place-based approach to sequencing infrastructure and growth; Infrastructure Australia; December 2018: <https://www.infrastructureaustralia.gov.au/publications/planning-liveable-cities-place-based-approach-sequencing-infrastructure-and-growth>
- xvii Australian Bureau of Statistics 2018; Australian population projections: 2017 (base) to 2066, cat. 3222.0, Commonwealth of Australia; Canberra; November 2018: <https://www.abs.gov.au/AUSSTATS/abs@nsw/3222.0>
- xviii Infrastructure Australia; Planning Liveable Cities; Infrastructure Australia; December 2018: https://www.infrastructureaustralia.gov.au/sites/default/files/2019-06/ifa_225232_planning_liveable_cities_report_2018_fa_web_lr.pdf
- xix Infrastructure Victoria; Infrastructure Priorities for the Regions; Infrastructure Victoria; Website Access 04/2020: <https://www.infrastructurevictoria.com.au/project/research-infrastructure-priorities-for-the-regions/>
- xx Infrastructure Victoria; Good Move: Fixing Transport Congestion – March 2020; Infrastructure Victoria; Website Access 04/2020: <https://www.infrastructurevictoria.com.au/report/executive-summary/>
- xxi The Treasury; Historical Infrastructure Documents: The Treasury; Website Access 04/2020: <https://treasury.govt.nz/information-and-services/nz-economy/infrastructure/historical-infrastructure-documents>
- xxii National Infrastructure Commission; International Infrastructure Governance Report; National Infrastructure Commission; 06/2017: <https://www.nic.org.uk/wp-content/uploads/NIC-International-Infrastructure-Governance-Report.pdf>
- xxiii <https://www.ice.org.uk/ICEDevelopmentWebPortal/media/Documents/Media/Policy/nna-submissions/Learning-from-France-using-public-deliberation-to-tackle-infrastructure-planning-issues.pdf?ext=.pdf>
- xxiv Davies, N, Atkins, G, Slade, D, Dr; How to transform infrastructure decision making in the UK; Project Management Institute; 02/2018: https://www.instituteforgovernment.org.uk/sites/default/files/publications/IFG_infrastructure_decision_making_WEB.pdf
- xxv Francoeur, Gilles, L; Restoring BAPE's Credibility LeDevoir: 11/2008: <https://www.ledevoir.com/societe/actualites-en-societe/218773/restaurer-la-credibilite-du-bape>
- xxvi Doray, L; 2018 Annual Report: Office De Consultation Publique De Montreal: 2018: <http://report2018.ocpm.qc.ca/>
- xxvii Office De Consultation Publique De Montreal: Avenue McGill College Project: Office De Consultation Publique De Montreal: 08/2018: https://ocpm.qc.ca/sites/ocpm.qc.ca/files/pdf/P99/3.1_mcgill_projet_ocpm_an_lr.pdf
- xxviii Kirkegaard J.F.; Europe Is Falling Behind on Infrastructure Spending; Peterson Institute for International Economics; May 2019: <https://www.piie.com/research/piie-charts/europe-falling-behind-infrastructure-spending>
- xxix European Transport Forum; Why Europe needs more than an Infrastructure Upgrade; European Transport Forum; February 2019: <https://www.europeantransportforum.eu/mediaroom/why-europe-needs-more-than-an-infrastructure-upgrade/>
- xxx National Infrastructure Commission; International Infrastructure Governance Report; National Infrastructure Commission; June 2017: <https://www.nic.org.uk/wp-content/uploads/NIC-International-Infrastructure-Governance-Report.pdf>
- xxxi Ministry of Infrastructure and Water Management; The Dutch Multi-Year Programme for Infrastructure, Spatial Planning and Transport (MIRT); Ministry of Infrastructure and Waste Management – Government of the Netherlands; February 2018: https://www.government.nl/binaries/government/documents/leaflets/2018/02/07/the-dutch-multi-year-programme-for-infrastructure-spatial-planning-and-transport-mirt--summary/107287_MIRT_ENG_WEB.pdf
- xxxii Duffin E.; Quality of Infrastructure: countries with the best infrastructure in 2019; Statista; October 2019: <https://www.statista.com/statistics/264753/ranking-of-countries-according-to-the-general-quality-of-infrastructure/>
- xxxiii The World Bank; International Logistics Performance Index; The World Bank; 2018: <https://lpi.worldbank.org/international/global>
- xxxiv Invest in Holland, Broadband website; Invest in Holland; Website accessed June 2020: <https://investinholland.com/infrastructure/broadband/#:~:text=With%20the%20highest%20broadband%20penetration,wired%20and%20cyber%2Dsecure%20countries.>
- xxxv Schwab K.; The Global Competitiveness Report 2018; World Economic Forum; 2018: <http://www3.weforum.org/docs/GCR2018/05FullReport/TheGlobalCompetitivenessReport2018.pdf>
- xxxvi <https://naturstyrelsen.dk/media/nst/Attachments/planlovenpengelsk2007.pdf>
- xxxvii Holm, Kaj, V, Nielsen, Horstmann, T; The Danish State Guarantee Model for Infrastructure Investment; OECD - International Transport Forum; 2018: https://www.itf-oecd.org/sites/default/files/docs/danish_state_guarantee_model_4.pdf

- xxxviii Infrastructure Commission for Scotland; Initial Call for Evidence and Contributions – Initial Call for Evidence Submissions; Infrastructure Commission for Scotland, January 2020: https://infrastructurecommission.scot/storage/225/Appendix_C.pdf; https://infrastructurecommission.scot/storage/226/Appendix_D.pdf
- xxxix Federal Ministry of the Interior, Building and Community – German Government; Critical Infrastructure Protection; Federal Ministry of the Interior, Building and Community, Website accessed June 2020: <https://www.bmi.bund.de/EN/topics/civil-protection/critical-infrastructure-protection/critical-infrastructure-protection-node.html>
- xl Federal Ministry of the Interior, Building, and Community – German Government; National Strategy for Critical Infrastructure Protection (CIP Strategy); Federal Ministry of the Interior, Building, and Community – German Government; June 2009: https://www.bmi.bund.de/SharedDocs/downloads/EN/publikationen/2009/kritis_englisch.html;jsessionid=66ED5091E450833D43FDF38048B06272_2_cid287
- xli BMVI – German Government; Transport Infrastructure; BMVI – German Government; Website accessed June 2020: <https://www.bmvi.de/EN/Topics/Mobility/Transport-Planning-Investment/Federal-Transport-Infrastructure-Plan/federal-transport-infrastructure-plan.html#:~:text=The%20current%20Federal%20Transport%20Infrastructure%20Plan%20is%20the%20FTIP%202030.&text=The%20German%20Bundestag%20takes%20a,selected%20projects%20enshrined%20in%20law.>
- xlii Transport Research Arena; Inefficiencies in Germany's Federal Transport Infrastructure Plan; Transport Research Arena; Paris; 2014: <https://thepep.unecr.org/sites/default/files/2017-11/Inefficiencies%20in%20Germany's%20Federal%20Transport%20Infrastructure%20Plan.pdf>
- xlili New Zealand Infrastructure Commission; International Context; website accessed July 2020: <https://infracom.govt.nz/strategy/international-context/>
- xliv National Development and Reform Commission; People's Republic of China; Home Page; Website accessed June 2020: <https://en.ndrc.gov.cn/>
- xlv Chen Y., Matzinger S., Woetzel J.; Chinese Infrastructure: The Big Picture; McKinsey and Company; June 2013: <https://www.mckinsey.com/featured-insights/winning-in-emerging-markets/chinese-infrastructure-the-big-picture#>
- xlvi Hong Kong Development Bureau; Website; Website accessed June 2020: <https://www.devb.gov.hk/en/home/index.html>
- xlvii Infrastructure New Zealand; Building Regions – A vision for local government, planning law and funding reform; Infrastructure New Zealand; August 2019; page 29: <https://infrastructure.org.nz/media/7850552>
- xlviii Statista: Ranking of Countries with Best Infrastructure in 2019; Statista: Website Access 04/2020: <https://www.statista.com/statistics/264753/ranking-of-countries-according-to-the-general-quality-of-infrastructure/>
- xliv Mercer; Mercer Ranks the Quality of Living in Asia-Pacific; Mercer; website accessed 04/2020: <https://www.asean.mercer.com/our-thinking/career/how-does-asia-pacific-fare-in-mercers-quality-of-living-index.html>
- l The World Bank: Ease of Doing Business: The World Bank: Website Access 04/2020: <https://www.doingbusiness.org/en/rankings>
- li Brown, A: Singapore to remain world leader in infrastructure: KHL: 09/2019: <https://www.khl.com/international-construction/singapore-to-remain-world-leader-in-infrastructure/140306.article>
- lii Urban Redevelopment Authority: Annual Report 2018/2019: Urban Redevelopment Authority: Website Access 04/2020: https://www.ura.gov.sg/-/media/Corporate/Resources/Publications/Annual-Reports/PDFs/AnnualReport-2018_2019.pdf
- liii Urban Redevelopment Authority: Annual Reports: Urban Redevelopment Authority: Website Access 04/2020: <https://www.ura.gov.sg/Corporate/About-Us/Annual-Reports>
- liv Skilling, D: Singapore & Hong Kong: A Tale of Two Cities: Landfall Strategy Group: 09/2019: <https://www.landfallstrategy.com/commentary/2019/9/14/singapore-amp-hong-kong-a-tale-of-two-cities>
- lv Singapore Business Federation: SBF Infrastructure Committee: Singapore Business Federation: Website Access 05/2020: <https://www.sbf.org.sg/business-advocacy/sbf-committees/sbf-infrastructure-committee>
- lvi Urban Redevelopment Authority: Underground Development: Urban Redevelopment Authority: Website Access 04/2020: https://www.ura.gov.sg/-/media/Corporate/Get-Involved/Plan-Our-Future-SG/Underground-Works/Benchmarking_Study.pdf?la=en