



Review to Renew

Review of National Development Plan (NDP)

Response by the Irish Academy of Engineering

27th January 2021

Q1. Is the overall level of public spending on capital investment correct?

What is your view on the level of capital expenditure versus current?

Does the overall level of capital expenditure need to be increased or decreased?

What is the appropriate level of public investment (e.g., as a share of national income) taking into consideration factors such as Covid-19; the climate challenge; the overall fiscal position; demand for infrastructure; construction sector capacity constraints; international comparisons etc.?

If you think that the share should be increased, do you have a view on what areas of current spending should be scaled back?

Answer:

It is the view of the Academy that the level of capital expenditure is not sufficient to meet the existing commitments and emerging demands arising from the requirement to deliver the necessary Climate Actions, to boost the economy following the impact of the Covid emergency on economic activity, to recover from the 'lost decade' of underinvestment in infrastructure development, following the economic crash of 2008/9 and to provide for a growing population of some 1 million extra people over the period of this Plan.

Mostly, current expenditure is demand-led, with little capacity for reducing expenditure to meet the additional capital demand and a continuing public expectation of continued improvement in public services particularly the Health & Education Sectors.

Rationale:

Investment in infrastructure is recognised as being an efficient and effective driver of economic growth and is essential to meet society's needs and its development. It is generally accepted that there is capacity for borrowing to fund productive expenditure such as the provision of infrastructure which will prove economically viable and boost growth as it provides for the needed facilities.

Given low interest rates and availability of funds (through the ECB for Green projects), it makes sense to maximise the programme delivery within the capacity of the supply chain. This will ensure efficient delivery, achievement of outcomes and positive economic benefits enabling quicker recovery from recession. Whilst we recognise that this approach will add to Government borrowing, we believe that given the need to meet the challenges we face, it is justified and will pay dividends through enhanced economic growth.

We have to learn the lessons of the past where capital investment is increased in times of high state revenue and cut massively in times of reduced revenue. This led to poor value, higher prices than necessary, fractured supply programmes, loss of delivery capability and failure to meet programme outcomes.

Q2. What should the capital budget be spent on?

- **What is your view of the breakdown of capital expenditure across these areas?**
- **Does the share need to be adjusted?**
- **If so, what do you think the appropriate share of allocation across Departments or sectors is in order to ensure alignment with Government priorities?**
- **Is there a sector whose share could be reduced to allow greater investment in another sector?**

ANSWER:

The level of investment envisaged in the original plan was determined to address a combination of existing deficits in infrastructure and the requirements to provide for a growing population and for economic growth. In addition, the urgent need to provide climate actions for adaptation and mitigation measures, together with preventing a loss of biosystems requires additional investments in key areas such as energy conservation, and developing a circular economy.

The Covid Emergency has further exposed the limitations of Irish Infrastructure and has placed increased demands for better, faster, more reliable and secure Broadband, effective public transport systems to minimize car commuting and to deliver better health infrastructure.

The need to provide for Climate Actions through investing in technologies and infrastructure that ensure Ireland meets its EU obligations to reduce carbon emissions, has an added emphasis with the increased focus of the new EU Commission.

Accurate estimates of cost of the range of Climate Actions required to meet obligations, across the Energy Transport and Water Sectors, are imperative to allow spending decisions, about climate actions and other capital investment, to be informed by these facts.

The pressing social need for housing, water infrastructure, and sustainable transport continues to be a high priority across the country. The NDP must reflect the Programme for Government and be scaled up to the challenge of delivery of its aims.

RATIONALE:

The implementation of a range of Climate Actions across all Sectors is the most important priority for capital investment.

Allocation of funding between sectors of the economy is difficult and hard choices are made at a political level and there are few technical/scientific methodologies to guide these decisions to balance economic and social factors when choosing the scale of funding allocated.

Q3. What types of capital investment should be prioritised?

In the context of the Programme for Government priorities which include the economy, climate action, housing, balanced regional development, universal healthcare, social welfare policy, transport and education, how would you rank the Strategic Investment Priorities?

What is most important to you and why?

What do you consider to be the greatest challenge?

What would you add to this list?

ANSWER:

Prioritising, assessing and rating proposed investments

The Academy recommends that set of criteria are established upon which a prioritisation of programmes or projects across Sectors might be assessed and rated to determine their effectiveness at meeting the challenges arising. Such criteria are suggested here for examining specific proposals:

- (i) Climate change targets including decarbonisation, and emissions reductions.
- (ii) Environmental improvement targets including factors to reduce biodiversity loss, eliminating pollution, waste disposal.
- (iii) Potential to create employment and enterprise targets to enable a sustainable economy.
- (iv) Maintaining national competitiveness in terms of payback
- (v) Optimising North/South co-operation and are supporting efforts to mitigate Brexit impacts.
- (vi) Changes necessitated by the new normal following the Covid crisis.

There is a potential to develop a MultiCriteria Analysis (MCA), based on these or similar criteria at least for a portion of the Capital expenditure for which Departments & Agencies may apply to advance the critical infrastructure developments. In general, we believe that this approach derives from the EU Green Deal and wider global agreements.

Infrastructure Coordination Body:

Consideration should be given to setting up a National Infrastructure Coordination entity to oversee and coordinate the major infrastructural sectors, programmes and projects that will be undertaken to implement the policies outlined in the NPF and the projects planned in the NDP. This body should include representation from key private sector industries and professional bodies. An essential part of their brief should be to ensure that appropriate sequencing of cross-sectoral infrastructural investment is maintained to avoid the untimely construction of stranded infrastructure. An example of this would be that major residential developments, public or private, can only make sense if the necessary transport, water, communications, educational, commercial and community infrastructure is provided in tandem.

RATIONALE:

The capital investment across Sectors, must be directed to address the National priorities of addressing the climate crisis, the adverse environmental impacts of biodiversity loss, and the development of a circular economy, which will support these aims.

The impact of Covid on the working/living/commuting habits of citizens will need to be assessed to determine what changes are needed to the heretofore established criteria for the provision of city

infrastructure in this post-Covid Normal.

The impacts of Brexit on the economy and on society will need investment to mitigate its worst effects.

Sustainable transport infrastructure needs long term planning and sustained delivery given the scale of projects. We need to provide widescale light rail/Bus Rapid Transit (BRT) options or metro systems in Greater Dublin and similar facilities in Cork, Limerick and Galway.

We must continue to consolidate inner city and rural town development, making best use of available facilities. This requires high quality Broadband, strong town planning and sustainable connectivity with employment.

We aspire to eliminate or greatly reduce fossil fuel use in our transport infrastructure and the use of autonomous (or driverless) vehicles for private and public transport. This will only succeed if we have first class road infrastructure in place, especially across the National Road network.

The continued improvement of the water & wastewater infrastructure will also contribute to the overall Green aims of the next decade.

In our view, long term infrastructure delivery needs to take a 30 - 40 and even 50-year view of growth needs. This reflects the useful life of these assets.

Q4. How can the management and governance of public investment be improved?

Do the structures and rules for the management and governance of public investment need to be further improved?

If so, how can these be improved?

ANSWER:

Project Delivery requires effective partnership with the private supply chain, with appropriate management of risk, strong performance incentives and penalties for poor behaviours. The PSC needs to be implemented effectively.

Pre-tender, we need to have tight control over scope and definition of projects, supported by robust Business Case. This needs excellent Project Management of the Planning process & good governance oversight.

Ensuring capital investment projects are delivered within budget and defined targets

There are a number of factors that are critical in relation to project targets being met & they include:

- (i) An effective and timely planning system including the legal dimension
- (ii) Legislation that enables projects to proceed without undue delay
- (iii) Best practice project management proposals by relevant professional experts
- (iv) Boards or panels that have a responsibility for selecting projects and ensuring effective delivery (these could be National or Regional)

The effective delivery of infrastructure depends on an effective planning system which provides for extensive public engagement while avoiding delays resulting from unrepresentative and/or vexatious legal challenges. To update the planning system to deliver greater certainty of requirement and outcome, we urge that

- The Housing & Planning Development Bill re-introduced and
- The promised Marine Planning & Development Management Bill be enacted quickly.

Both of these Bills are necessary to facilitate the delivery of Ireland's climate objectives and to support the efficient delivery of the programmes and projects set out in Project 2040.

The enactment of the Water Environment (Abstraction) Bill is needed to provide for certainty, resilience and sustainability of managing water uses and should proceed with some urgency as the aforementioned legislation as the support of effective management of our water resources is an important dimension of sustainable development.

Funding certainty:

The capital delivery capacity of construction industry partners can expand to meet investment demands provided Government publishes and implements reasonably certain medium term (say 5 year) and indicative (say 10 year), capital investment plans. A level of certainty is needed for the industry to invest in efficiencies, purchase of construction plant, training etc to leverage efficiencies in the delivery system. A 2-year capital allocation plan is too short to provide the industry with the confidence to plan and invest in significant expansion.

Funding certainty would we believe be more likely to encourage private funding to supplement the public funds being made available.

Forms of contracts for construction and related services.

Government requires greater certainty of delivery of objectives for the funding provided. It needs to see projects delivered on time, with societal benefits realized when required. Government needs the best of the supply chain to help deliver the programmes. This means implementing best international practice, attracting the most responsible and capable design professionals and contractors.

There is an argument that delivery of modern infrastructure facilities is increasingly complex on a number of levels. The expertise residing in construction companies and needed for the for cost effective delivery of project has significantly increased over recent years. In addition, the health, safety and welfare legal requirements for construction of building and civil engineering projects has increased over the past decade and is more onerous on both client and contractor.

It is clear that the adversarial contract models in Ireland are a barrier to expansion of interest and limit existing competitive interest. This requires a complete rethink on the nature of our contracts, risk transfer and adversarial contract management.

A move to collaboration-type contracts will require a building of trust between the parties to the delivery of infrastructure. The basis for performance of the contract requires less focus on 'fixed price' and more on a fixed budget, with a shared commitment by all parties to its achievement.

Well-structured framework contracts can promote best practise and behaviours, by building in performance KPI's, whereby good performance is rewarded and poor behaviour is penalized up to and including exclusion from future tenders.

It is generally accepted that many projects go wrong from the start, by poor scoping, lack of rigorous governance, poor oversight or poor budget estimation (optimism bias). The PSC puts a useful framework in place to govern this approach. It requires the right people, skills, experience and systems in place to achieve success.

RATIONALE:

Projects fail to meet outcomes or exceed budget through increases in scope, late changes and poorly managed planning stages. This results in delays, extra costs and risks of being aborted. Delivery at present is bedevilled by disputes, claims for extra compensation, poor working relationships that prevent early cost mitigation, management of risk at least cost and poor client control over outcomes and outturns.

Delays in obtaining the necessary statutory approvals have become a major hazard for significant infrastructure projects and programmes. Our planning and licensing systems, while not perfect, compare very well with other developed economies across Europe. However, reforms are required in our legal system as no certainty can be provided in relation to the timing of the outcome of legal proceedings once instituted, irrespective of the lack of merit of any challenge. If the NDP is to be implemented in a timely and cost-effective manner, very significant reforms in the justice system are required, perhaps through legislative amendments and the use of the Commercial Court to deal with such challenges.

Taken together we believe that these Bills which seek to streamline the judicial review process in relation to planning decisions, while fully respecting the rights of NGOs and individuals under EU environmental Directives will contribute to the effectiveness of our planning system.

Timely resolution of legal challenges (judicial review) to planning matters should be dealt with by an Environmental/Planning Court building on the experience of High Court division dealing with SID matters.

Q5. How is the NDP affecting your region?

Notwithstanding that DPER will not be considering the merit of individual projects or sectoral policy strategies as this is a primarily matter for individual Departments and Agencies; how, in your opinion is the NDP affecting your region?

ANSWER:

The Academy fully supports the need to rebalance development and economic opportunity between the Greater Dublin Area (GDA) and the rest of Ireland. An Academy publication entitled “**THE ATLANTIC CITY REGIONS - DEVELOPMENT & CONNECTIVITY**” <link [here](#)> discusses these ideas in further detail.

The aligning of the NDP project priorities with the recommendations of the NPF, the RSEs and the MASPs is vital. In particular the projects which support the aim of the NPF to grow the population of the regional cities by 50% up to 2040 need to be prioritised. These include the projects that improve the physical and digital connectivity between these cities so that, in economic terms, they can work more closely together.

There should be an appropriate level of regional autonomy in investment decisions. Funding similar to the previous proposal for a Gateway Innovation Fund should be introduced, with some funding ring-fenced for joint projects between the city regions to encourage the full potential of each Region’s resources and skills.

To drive and coordinate progress of the NDP we strongly recommend the location of an NDP office in each region, which will liaise with and coordinate with government departments, state agencies and local authorities ensuring that priority actions are being progressed efficiently and effectively.

RATIONALE:

Project Ireland 2040 states that the three metropolitan areas of Cork, Limerick/Shannon and Waterford are planned to grow in population by 50% by 2040. For this target to be attainable in a substantial and sustainable manner, very significant infrastructural investment is required, the priorities being:

- Communications, especially high-speed broadband. This is particularly important in rural areas and will allow people to work from home, either part-time or full time, as well as the creation of jobs in towns and villages across the region, with growth in supplies and services to these. It will also allow education to be provided online and reduce travel requirements.
- Very significant improvements are required both within and between the metropolitan areas. This includes the promised Bus Connect programmes and light rail or bus rapid transport projects.

Without measures to address regional development, priority investment will tend to be driven by economic drivers – developers will invest where the economic returns are assured, in turn driving public investment there also. If public policy simply forces regional investment, contrary to a robust Business Case, this will result in inefficient outcomes and failure to meet key public objectives. It is important in our view, for local Planners & elected members to agree key development zones that will be supported with targeted additional investment.

Regulated Utilities are constrained in investing in extra capacity for smaller towns, unless backed by committed plans. This needs to be addressed with Local Authorities empowered to prioritise and fund selected development areas in each county.

We support investment in better water, roads, public transport, communications infrastructure across the Regions to re-invigorate rural Ireland, and to enable the necessary rebalancing of development away from the over-reliance in the GDA. Relieving some of the excessive development pressures which are leading to problems for the provision of housing, water and transport infrastructure there, with implications for carbon emission as well as the people living and working in the Capital.

It is also essential that strategic road projects are completed to facilitate the provision of more efficient public transport and freight connectivity between city regions. While the route from Galway to Limerick is now a motorway, the routes from Limerick to Cork, Waterford and Kerry are very slow, unsafe and inefficient as are the routes from Cork to Waterford and Kerry. The routes from Cork and Limerick to Ringaskiddy and Foynes ports are of poor standard and are unacceptable, particularly with the impact of BREXIT now becoming apparent.

To enable significant and sustainable growth to be achieved in the region, it will require the construction of major residential development as close as possible to the three city centres, duly enabled by all the necessary infrastructure. Key developments in this context will be the Cork Docklands, the North Quay in Waterford and the Limerick 2030 initiative.

Q6. What is your feedback on Project Ireland 2040 communications?

The National Investment Office in DPER has developed a suite of online interactive tools including the Project Ireland 2040 Tracker, Project Ireland 2040 Interactive Map, and the Project Ireland 2040 Annual and Regional Reports. Please give us your feedback on these.

ANSWER:

The Academy recommends that annual or bi-annual progress reports be published, on the implementation of the National Planning Framework (NPF) at both national and regional levels. This would include progress in adopting Regional Economic and Spatial Strategies, Metropolitan Area Strategic Plans, major urban redevelopment projects such as Cork Docklands and the North Quays in Waterford, and the delivery of strategic infrastructure. This report, to be co-ordinated by the Department of Housing, would complement DPER's Investment Projects and Programmes Tracker, which lacks a spatial dimension. We believe such reporting would strengthen transparency with society and hopefully lead to better buy-in by citizens to the aims of the Framework and Plan.

We would, further suggest greater coordination and input by the three Regional Authorities to ensure balanced progress and cooperation with central management.

Transparency across all funding sources

All expenditure, both that directed solely at and that contributing significantly to meeting climate change objectives, can be transparently and effectively monitored and reported on. Ireland can more effectively demonstrate to the EU and other international agencies the nature and scale of actions and investment undertaken in addressing the climate change challenge.

RATIONALE:

Earlier and much improved communication with special interest groups and the general public may help avoid unwarranted appeals and resulting delays and additional costs with critical infrastructure projects. We believe that the regional dimension will help to build broad national consensus on the Plan as a whole.

Q7. Is there anything else you would like to add?

ANSWER:

Effective Governance under the Public Spending Code (PSC) requires well-structured arrangements for oversight and review, populated by experienced independent professionals.

Government must carry out a review of environmental regulation and compliance with EU Directives. Ireland has adopted and transposed European regulations in an ad-hoc way which even the Chief Justice suggests is incapable of predicting outcomes with any certainty. Other countries do not have this problem to the same extent.

RATIONALE:

The Academy recognises that these suggestions together with some of those put forward in response to other questions of this consultation, such as a move to collaboration-type construction contracts, represent a significant piece of work and require the participation of both public and private sector participants. We believe however, that the modernisation of the delivery of National infrastructure needs such a major revision to meet the emerging digital economy and to realise its benefits in efficiency terms for the economy.