



# **OECD Review of the Public Sector**

**Submission**

**by**

**Engineers Ireland**

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## 1. EXECUTIVE SUMMARY:

Engineers Ireland welcomes the opportunity to contribute to the OECD Review of the Public Sector. As a membership organisation of 23,000 engineers across both public and private sectors of the Irish economy, we have based our submission on a series of separate submissions to Government over the past number of years, summarised in the remainder of this document.

In reviewing these submissions, it is our conclusion that implementation of the major recommendations will only be enabled through substantial public administration reform. In particular, infrastructure planning needs to be delegated to large regions, with properly funded, accountable institutions that can enforce a regional versus a local perspective. Only with such clarity and focus will the major infrastructural projects needed to underpin growth and an improving quality of life be delivered. A key component in the support for such a regional body is the expertise of an empowered secretariat, with high-level engineering expertise present at decision-making level. In an increasingly technological society, leadership in technology is as important in the public sector as it is in the private sector. Ensuring an adequate supply of engineers for future growth is therefore vital.

## 2. REGIONAL PLANNING:

As a member of the Urban Forum, Engineers Ireland supports this group's recommendations made to the OECD in a separate submission. In particular in planning terms, we support the need for a strengthened Regional Tier, to which power and responsibility for non-national infrastructure and planning should be devolved from central level. Such a regional Tier should in turn set binding, rather than advisory, policy directions for the county/local level. In particular,

- National development planning should be binding at regional level.
- Restructured regional authorities should have directly elected mayors and senators, and appropriate staffing.

Regional Authorities should make plans for strategic land use and regional infrastructure, which should be complied with by local authorities' Development Plans. They should be responsible for funding of all non-national infrastructure, except any infrastructure "called-in" at national level. This means a general devolution of funding allocation from central government by means of a general (non-itemised) block grant, to be spent at the discretion of the regional authority based on its regional plan, subject to overall compliance with national policy set out in NSS/NDP.

## 3. LOCAL GOVERNMENT:

Engineers Ireland has been broadly supportive of the Better Local Government (BLG) initiative, which was designed to help modernise local authority structures. We believe that the single most important outcome of "Better Local Government" is the delivery of a high level of service, over a wide spectrum of activities, to the customers of local authorities.

In our discussions on BLG with the Department of Environment, Heritage & Local Government, Engineers Ireland has emphasised that all organisations require high performing individuals who have the confidence, authority, experience and expertise to address key issues for their sector. Issues such as Health & Safety, Value for Money, Risk Management and Project Management of external contractors (where engineering work is contracted out), dictate that a high level of engineering expertise is maintained and developed within each Local Authority. As part of the democratic process, projects and proposals need to be put before councillors and members of policy committees, and individuals with the necessary technical ability, knowledge of the local government system, seniority and experience are needed to do this effectively. It is essential that a sufficient range of engineering expertise is available to the County Manager to advise in such circumstances.

Engineering will continue to be a key function in local government and therefore it is vital that the local authorities continue to attract, retain and develop engineering talent. Having an attractive career structure for engineers, with emphasis on continuing professional development (CPD), is crucial to achieving

this. This will only occur if there are clear career paths and opportunities for these professionals, which encourage and leverage their personal development.

Engineers Ireland is concerned that, following the BLG reforms, engineering expertise is not necessarily available at senior management level within the local authority structure. We note that the need for specific senior expertise is already well recognised for other professionals in the Local Authority sector, such as HR or Finance. It is our view that informed engineering opinion is central to decision-making in the sector.

Indeed the comments about the need for leadership in technology apply not just in the Local Government sector, but also across the Irish economy. As Ireland becomes a more technological society, high-level engineering skills will become even more important in decision-making for all organisations in both the public and private sectors.

From an organisational perspective, the linkage between local and central government is often sub-optimal. In this respect, Appendix A gives an important example of the current structural and funding difficulties that arise in the provision of Water Services.

#### **4. SEANAD:**

As a nominating body to the Industrial & Commercial Panel of the Seanad, Engineers Ireland feels that the election process for this panel is inequitable. The nature of the electorate and the voting pacts adopted by the political parties mean that it is almost impossible for an independent candidate to be elected, irrespective of their personal, professional and career credentials.

#### **5. PLANNING FOR STRATEGIC INFRASTRUCTURE:**

It has been highlighted in many international reports that Ireland's infrastructure deficit continues to impact negatively on competitiveness. Despite significant investment in the 2000-2006 National Development Plan (with further substantial investment planned in NDP 2007-2013), Ireland's planning system remains an impediment to the efficient roll-out of infrastructure projects. In particular,

- It takes too long for infrastructure projects to get to construction stage
- The timescale and outcome of the planning process is too long
- The process costs too much

The Planning & Development (Strategic Infrastructure Act) 2006 was enacted in July 2006 to try to address these issues, with An Bord Pleanála charged with dealing with applications for strategic infrastructure projects. The progress of projects through this mechanism must be monitored carefully, to ensure that the intention behind the Act is fulfilled in practice. In addition, the role of the

Courts System to support this process must be ensured, with consideration given to the establishment of a specialist division of the High Court to deal with challenges to infrastructure projects, with mandatory timescales for decisions.

## **6. AVAILABILITY OF ENGINEERS - DEPARTMENT OF EDUCATION & SCIENCE:**

In 2005, Engineers Ireland, together with the Irish Academy of Engineering published a report entitled "Engineering a Knowledge Island 2020" (copy enclosed). The report reviewed the island of Ireland's economic development over the previous fifteen years, indicating a correlation between economic growth and the number of engineers on the island. In order to support Ireland's transition to a knowledge economy with strong GDP growth, the report estimated that the number of engineers should grow at 7% per annum.

The demand for engineers in the last two years appears to have been adequately met through a combination of domestic supply, and an increased number of immigrant engineers. However, the pipeline for the domestic supply of engineers in the short-term is not good, as evidenced by the current student engineering population. Looking further ahead, the 5<sup>th</sup> report of the Expert Group on Future Skills Needs "Tomorrow's Skills – Towards a National Skills Strategy" has identified a significant shortage of skills in 2020 at Levels 6 & 7, which are largely engineering and technology qualifications. On the plus side, the number and range of activities promoting engineering as a career is increasing, with the Forfás *Discover Science & Engineering* Programme and Engineers Ireland's own *Steps to engineering* programme good examples of the activity which exist. However, these and other programmes must be expanded significantly in order to address future skills shortages in engineering.

Our concern in this area relates particularly to the 2002 Report of the Task Force on the Physical Sciences. This well-researched report was highly regarded by all stakeholders, presenting a suite of recommendations to address the drop-off in interest in science at all levels and to ensure science literacy for all.

Unfortunately, many of the important recommendations of the report remain unimplemented. We feel that the Department of Education & Science must give top priority to the implementation of the remaining recommendations. In addition, it is vital for the Department to have a strong linkage with the Department of Enterprise, Trade & Employment to coordinate activities to promote science, engineering and technology.

## **7. HIGHER EDUCATION AND TRAINING AWARDS COUNCIL (HETAC):**

In December 2003, HETAC published a discussion paper on "Titles of Named Awards", seeking comments from interested parties. Engineers Ireland was concerned that the titles used to differentiate between Level 7 (Ordinary Bachelor Degree in Engineering) and Level 8 (Honours Bachelor Degree in Engineering) awards in the National Framework of Qualifications may confuse

applicants, unless the distinction between the two levels was very clearly understood.

Because of this, Engineers Ireland sent comments to HETAC in which we recommended that the proposed named award of “Bachelor of Engineering”, at level 7 in the National Qualification Framework, be replaced with the award title “Bachelor of Engineering Technology”, to better reflect the learning outcomes of these programmes and to avoid confusion.

From then until 2005, Engineers Ireland and others attempted to persuade HETAC to adopt this recommendation, without success. HETAC did not give us its reasons for not accepting this recommendation, apart from stating its general policy to minimise the range of award titles in the national framework. The anticipated confusion amongst students, parents and employers has become a reality since then, a confusion that can only be effectively resolved by adopting Engineers Ireland’s recommendation on the titling.

## **8. TRANSPORT:**

Investment in public transport infrastructure makes sense for Ireland’s economic and social development. Following decades of under-investment, Dublin’s public transport system does not meet the needs of a modern, progressive European capital. The frustration of commuters is well documented, and while there have been some welcome improvements in recent years (notably the LUAS, the DART upgrade and investment in new mainline rolling stock), most of this has been piecemeal and the fact that integrated ticketing has not yet been introduced in Dublin is nothing short of scandalous.

The Government’s ambitious and visionary Transport 21 blueprint sets out a vision for modernising Ireland’s transport infrastructure. However, more than 18 months after the launch of Transport 21, we still await the formal establishment of one of its key elements, the Dublin Transportation Authority (DTA). A much greater sense of urgency and timely delivery is required in this respect from the Department of Transport; a clear demonstration of intent in this regard would be the accelerated establishment of the DTA.

What is clear is that Ireland’s future transport system must be designed around the real movements of people in, out and around our cities. The focus must be on the overall end-to-end customer experience, ensuring compatibility between all modes of transport to minimise door-to-door journey times (location, ticketing, technology, timetabling, role of park-and-ride). Issues such as health and safety, sustainability, environmental impact, social inclusion and the role of pedestrians must be considered up front. And technology, in areas like integrated ticketing and real-time information systems for passengers, must be speedily delivered. With the capacity of the construction industry at an all-time high, and a well-signalled slowdown in the housing construction market, the timing is good to start bringing some of the major transport projects to construction stage more quickly.

It is important to remember that infrastructure projects are for the long term and our decisions will impact several generations to come. Ireland has a history of building things too late and too small! It is vital that we learn from the M50 motorway experience and give ourselves the capacity to grow rather than constraining the potential of our economy by making short-term savings on long-term projects. The Department of Transport needs to think bigger and act much faster to take the pain out of commuting and make Ireland a better and more attractive place to live and work. The Department of Finance, as the ultimate financial approval body, must also ensure that short-term exchequer constraints do not result in a scaling-back of essential transport projects.

## 9. ENERGY:

Together with the Irish Academy of Engineering and the Energy Institute, Engineers Ireland made a submission on the Energy Green Paper in December 2006. The Green Paper emphasised Ireland's obligations under the Kyoto protocol for Climate Change to limit Carbon Dioxide emissions to 13% above the 1990 level by 2012. We believe this to be a daunting target, and together with diversification of supply sources, can only be achieved by measures such as:

- Greater efficiency in the use of energy in buildings, and more use of renewable energy in buildings consistently across local authorities.
- Greater efficiency in the use of energy in transport through reducing congestion, promoting public transport and switching to biofuels and more fuel-efficient vehicles.
- More emphasis on renewable energy resources for power and heat generation, and use of best technology to achieve optimum energy conversion (efficiency) of fossil fuel generating plant.

Nuclear energy is currently prohibited in Ireland. However, given that the lead-time for the construction of a nuclear power plant is in the region of 12-15 years, Engineers Ireland recommends that provision be made to actively monitor technical developments in nuclear energy, so that the necessary technical and operational expertise can be made available quickly, should this become a viable option for Ireland in the future. The issue of nuclear power must be comprehensively studied and debated.

Increased use of coal for power generation would have a negative impact on Ireland's carbon footprint. However, the plentiful supply means that developments in clean coal technology should be monitored and researched as a possible future fuel for Ireland.

The structure of the electricity supply industry in Ireland is in a state of change. It is important that whatever structure is chosen ensures that the organisation is incentivised to ensure the availability of a top-class electricity infrastructure and has the ability to attract and offer career paths for its professional staff.

Energy supply and climate change represent the greatest challenges to joined-up Government in Ireland. It is vital that the Department of Communications, Energy and Natural Resources, along with the related Government departments, show leadership on this agenda to ensure Ireland's economic and social development is not compromised.

## **10. HEALTHCARE:**

In 2005, Engineers Ireland and the Irish Academy of Engineering published a report entitled "A Picture of Health 2030". The report lays down a set of recommendations to be undertaken to achieve success not just in creating world-class healthcare for the people of Ireland, but also which will make Ireland a global leader in healthcare practice and innovation. (copy enclosed)

Our healthcare system needs to move to promoting wellness rather than merely treating the sick, shifting from costly late-stage intervention to early cost effective detection and prevention. Many of the next generation of medical and technological breakthroughs, devices and therapies will come from a convergence of diverse technologies and collaborations between different disciplines. The environment for such collaborations must be created and the requisite infrastructure must be built – in IT, in education & research, in clinical practice and translational medicine.

Health & healthcare planning should therefore be a core aspect in every area of Government planning, policy and activity, with a grand coalition for healthcare established across Government departments. Health impact assessments should be a requirement in all policy and planning initiatives. The requisite advanced IT infrastructure must be built across the healthcare and medical systems.

## **11. PUBLIC PROCUREMENT - DEPARTMENT OF FINANCE:**

New forms of public sector construction contract and conditions of engagement for consultants were introduced at the start of 2007. The focus of the contracts is to allocate risk away from the client in order to try to achieve cost certainty. In addition to expressing serious concerns about the workability of the new contracts, the construction industry believes that the Government and taxpayer will not achieve value for money under the new regime. It is important to note that the old forms of contracts have been working well, delivering both cost predictability and value for money in recent years. Given the importance of the construction industry to Ireland's economy, Engineers Ireland is concerned that no effective, transparent mechanism has been put in place to adequately monitor the impact and experience of the new forms of contract. We are also concerned that the overriding focus on price over quality in engaging consultants may impact severely on the resources allocated to contracts; with limited resources available, consultants may not be able to explore alternative



design solutions for clients, thereby impacting negatively on the quality of the final design.

## **12. COMPETITIVENESS AND THE DEPARTMENT OF ENTERPRISE, TRADE & EMPLOYMENT:**

Through Enterprise Ireland, IDA, Forfás and Science Foundation Ireland, the Department of Enterprise, Trade & Employment focuses on growing Ireland's competitiveness, improving our research focus and investment, attracting foreign direct investment and developing a strong, indigenous productive sector. Engineers Ireland is very supportive of what the state has achieved to date in this area; for example, the mix of supports and incentives to support near market product development, applied R&D and fundamental research is working well and should be continued. It is important to note that the productivity of the public sector is vital in supporting the Department's competitiveness agenda. The OECD review of the Public Sector is very welcome in this regard, as international benchmarking will be important in setting the direction for Public Service reform.

Enclosures:

- Engineering a Knowledge Island 2020
- A Picture of Health 2030

**▪ Appendix A:****Interaction of Local Government & Central Government in Water Services Provision**

A prime example of the problem with the current local government /central government structure relates to the provision of Water Services infrastructure. The Water Services Infrastructure Programme is a large on-going investment programme to provide wastewater and water treatment plants and infrastructure that is essential for public health and environmental protection. The private sector also provides wastewater treatment plants for developments in areas without municipal works and the group water sector provides drinking water in some rural areas.

The municipal plants are provided by Central Government using the local authorities as their agent. The programme is managed and funded by the Department of the Environment, Heritage & Local Government (DoEHLG). The Local Authorities hire consultants and contractors to design and build these plants. Design, build and operate (DBO) contracts have been preferred in recent years and in these cases, the Local Authority does not operate the treatment plant.

However, the delivery of this infrastructure is not keeping pace with needs due to previous under-funding and the rapid growth in population. Pollution is occurring and public health has been compromised in particular instances. It is very clear that a world-class service is not being delivered.

The responsibility for preventing pollution and protecting the environment rests with the Local Authority and the Local Authority is open to prosecution for pollution caused by overloaded wastewater treatment works, or failing to deliver wholesome drinking water.

The process for delivering the capital works is highly inefficient and a major constraint in providing the water services infrastructure is staff numbers on Capital Project Teams to project manage the programme. The Local Authorities identify the projects that need capital investment and make a submission to the DoEHLG which decides what projects to include in the Water Services Investment Programme. There then begins a long series of back and forth steps between the Local Authority (LA) and the Department. Local Authorities do not have the staff to do the preliminary work and this has to be hired out to consultants. The LA must get permission from the Department to take on temporary staff, as well as permission from the Department to hire in consultants. These permissions often take months to come through. Each time consultants are hired, there is a public procurement process which again adds months to the time-line.

When the consultants' reports are prepared and vetted by the Local Authority they are forwarded to the DoEHLG for further study. After some months, comments and questions will come back from the Department and the LA will then take these up with the consultant. In some cases this will result in further surveys or assessments that are seasonal. After the further report is received from the consultant it is again forwarded to the Department and the cycle continues. In this way a project can be years in the planning stage even when included on the Water Services Investment Programme. If a project has not yet been accepted onto the programme then the time-line can be 15 years or more.

The Local Authorities have the duty of preparing County and City Development Plans but have no control on when the investment funding will come through for the water and wastewater infrastructure. This has the result of development occurring with a series of private wastewater treatment works and the municipal plant being hopefully put in place years later.

The Local Authority priorities need to be clarified at local level, as the delivery of clean water and prevention of pollution are not always getting clear priority.

The sharing of responsibility between the DoEHLG and the Local Authorities should be delineated in a clearer more transparent manner, with the role of regional authorities explored. The controls on temporary staff and hiring in consultants should be looked at with service indicators developed for the turnaround time of these permissions.

In addition, the current funding model is not working effectively for water services infrastructure. At present, local authorities must get permission from the DoEHLG to take out a loan. Local Authorities should have the flexibility of entering into arrangements with developers to get a municipal treatment works built with contributions from developers. This would result in a reduction in the amount of public funds required, but for this to work the developers would have to see a reduced timeline in delivery also.

It should be noted that there has been a significant improvement in the delivery of LA services in the last 5-10 years due to improved operational structures and levels of accountability. However these real improvements cannot keep up with the rapid population increases and demands for services.