SUBMISSION FROM THE CHARTERED INSTITUTE OF LOGISTICS AND TRANSPORT IN IRELAND IN ADVANCE OF THE MINISTER FOR COMMUNICATIONS, ENERGY AND NATURAL RESOURCES' FORMAL PROPOSALS TO GOVERNMENT IN SEPTEMBER 2013 ON A NATIONAL POSTCODE

Executive Summary

The Minister for Communications, Energy and Natural Resources will bring a formal proposal for a National Postcode to Cabinet in September 2013. The Chartered Institute of Logistics and Transport in Ireland recommends the adoption of a unique identifier postcode system, which should be granular, scalar, open-sourced, decodeable, and capable of use beyond the simple provision of letter mail delivery.

Introduction

The Chartered Institute of Logistics and Transport in Ireland ("the Institute") is the independent professional body for people engaged in logistics and all modes of transport. The Institute is part of an international body with 30,000 members worldwide. As a professional body, the Institute does not lobby on behalf of any sectoral interest, but seeks to take an independent, objective and considered view on matters of public policy.

On 3rd July 2013, Communications Minister, Pat Rabbitte, announced that, after consideration of tenders received for the development and implementation of a National Postcode, he would bring a comprehensive proposal to Government for approval in September[1].

In advance of the Minister's formal proposal, the Institute wishes to set out its views on a number of key factors which should be considered prior to specifying a National Postcode System.

Background for this Submission

ComReg published two tenders in 2005 concerning postcodes, one for a proposed technical specification for a postcode system, and one for a cost/benefit analysis for the "Proposed Irish Postcodes Project". It also published a report at that time on need for a postcode system, and the merits of various technical solutions[2]. It noted that Ireland was the only European country without a postcode system. The Department of Communications, Energy and Natural Resources published a tender in 2010 for project management of the implementation of a National Postcodes System.

These tenders were followed by a very comprehensive Oireachtas report (The Postcodes Report (Revised) by the Joint Committee on Communications, Energy and Natural Resources) in April 2010[3]. While this report did not take a position for or against the

introduction of postcodes, it did detail a number of principles that should be considered in the design of any postcode system for Ireland. The Minister at the time envisaged a six-character ("ABC 123") postcode.

The issue has remained dormant until recently, when the current Minister, Pat Rabbitte, announced his intention to bring a proposal to Cabinet.

Postcodes

The Universal Postal Union (UPU), a UN body, defines a postcode as a "unique, universal identifier that unambiguously identifies the addressee's locality and assists in the transmission and sorting of mail items." Ireland is the only country in the EU and is one of the very few developed countries that does not have a national postcode system.

Starting with Ukraine in 1932, most countries in the developed world adopted postcodes throughout the 20th century to speed up and simplify postal deliveries. The format of the postcode depended on the operational use to which it was put: some countries opted to identify the destination post office, others the delivery route, and others the destination locality or district. Switzerland adopted a West-East system based on the railway routes and post-car routes used to deliver mail.

Most post code systems in use today are decades old, and share the obvious but important characteristic that they were developed purely to assist the sorting and delivery of mail.

What is interesting about the use of postcodes (in those countries that use them), is their increasing use for the exploitation of online postal services. The UPU in its last statistical report (2011)[4] cited the expansion of postal services into non-mail delivery areas such as track-and-trace, tariff information, postcode lookup, sale of philatelic products, and email services. These statistics point to an on-going decline in global letter mail volumes (-3.7%), at the same time as global parcel volumes are increasing (+2.1%). This is particularly relevant when considering the reservations of some, such as the Communications Workers' Union (CWU), to the introduction of postcodes.

The CWU summarised its objections to postcodes in its 2012 Report[5] as: Costs of introduction and maintenance; the need for An Post to change its technologies to adopt postcodes; the facilitation of competition against An Post; the fact that the proposed postcodes did not provide unique identifiers (versus the fact that the An Post GeoDirectory does); data protection issues and the explosion of junk mail.

Non-Mail Uses for Postcodes

In the last number of years has been a notable increase in the use of postcode data outside the sphere of standard letter mail delivery. The requirement to provide a postcode is now

ubiquitous (outside Ireland) for access to mail order services, telephony, taxi services, cable and satellite TV, insurance products, and many more.

Postcodes have also been a core feature in the delivery of satellite navigation systems such as Garmin, TomTom, Navman, etc. The entry of these products to Ireland was slowed by the absence of a postcode system, as many early adopters will testify. While most proprietary satnav systems now incorporate up-to-date street data, the problem of navigating to non-unique or remote rural locations remains.

Within the logistics sector, there are a number of providers of proprietary routing and planning software packages, such as Fleetboard, Isotrak, Paragon etc. These systems are regularly used by Irish businesses to optimise routing and scheduling, to plan deliveries, and to estimate workloads and distances when for tendering for business. The efficiency and effectiveness of these systems is substantially degraded by the absence of a postcode system; in most cases, the manual entry of a customer or destination longitude/latitude by operators is required in order to exploit these systems fully. A granular postcode system (explained below) would, for example, not merely allow a customer to specify a particular warehouse in an industrial estate, but could direct a truck to a particular loading dock. This would provide material savings in transport costs for manufacturers, retailers, and their transport service providers.

The rise of the smartphone has generated geo-location applications, such as Foursquare and Facebook Places, which were not around when ComReg initiated its tender round in 2005. These applications already use geo-location data to offer commercial, social and entertainment services. The potential to tie geo-location to actual addresses would open up new opportunities for developers and businesses to offer new and innovative services in the future.

The state's emergency response services would also be substantial beneficiaries of a national postcode. The National Ambulance Service (NAS) has advised the Institute that the provision of a postcode (or other similar identifier) would greatly assist the NAS in: confirming locations; providing clarity around addresses; improving response times; decrease call-taking times; and ensuring rapid access to any patient. Logically, these benefits would also flow to the Gardai and the Fire Services in the delivery of their emergency services.

Non-emergency state services are also heavily dependent on address data. In 2011, the Primary Care Reimbursement Service (PCRS) of the HSE paid doctors, pharmacists, dentists and optometrists for services costing €2.5bn delivered to 3.4m people in the community[6]. Their services cover 75% of the state's population. While the PPSN is used as the unique patient identifier for these people, the delivery of services (and scheme membership cards) requires an accurate postal address.

These figures are dwarfed by those of the Department of Social Protection (DSP). In 2011, the DSP disbursed approximately €21bn to the 2.2m people in the state in receipt of some form of welfare payment[7]. While the PPSN is also used by the DSP as the unique identifier for welfare payments, the home address is a key component for the accurate delivery of payments.

While accurate figures or estimates for the number of duplicated or misdirected payments for these two departments are not readily available, the quanta of spending undertaken by them annually is so large, that an error rate of 0.05% translates to a figure of over €10m.

The common thread running through all these issues is the fact that approximately 35% of Irish address, personal and commercial, are non-unique.

Summary of Common Positions Regarding Postcode Adoption:

In favour of postcode adoption	Against postcode adoption
1. Improving efficiency (though not necessarily speed) of postal services 2. Provision of unique addresses to the approx. 35% of Irish addresses currently without them 3. Facilitate the efficient and prompt despatch of emergency services; Gardai, Fire, Ambulance and Doctor-on-Call 4. Facilitate the expansion of mail-order business 5. Facilitate the expansion of retail home-delivery services such as supermarket deliveries, DIY and convenience/fast food 6. Improve spatial data for health service planning, education planning, and the delivery of government services 7. Facilitate the expansion of GPS routing services 8. Facilitate competition in the postal sector 9. Ensure state compliance with EU postal Directives 96/67/EC, 2002/39/EC, 2008/6/EC 10. Facilitate the current and future needs of the Smart Economy 11. Improve the efficiency of road usage in the logistics sector (reduction in "lost miles")[8] 12. Improve accuracy of the Local Property Tax (LPT) system	1. Costs of introduction and maintenance 2. Facilitating competition in the postal sector 3. Counter to the traditional value of local place names 4. Adverse effect on property values in some urban areas 5. Data protection, particularly privacy, concerns 6. Increased use of promotional mail

13. Intelligent tagging of location-based property	

Data Protection Concerns

In 2006, the Data Protection Commissioner ("the Commissioner") expressed a number of data protection concerns to the National Postcodes Project Board[3]. In summary, the Commissioner stated that "a person's home address is an important part of their identity. In the case of a single-occupancy, owner-occupied dwelling, it is, in practice, a unique identifier. In the case of a family home, it typically identifies a small group of related individuals… in most cases, a 1 to 1 match between a postcode and a dwelling would raise significant privacy/data protection issues. It is a model I would have serious reservations about… In expressing such reservations, I would have regard to issues such as the potential for ready identification of sensitive information about individuals where postcodes were used for purposes other than mail delivery."

The Oireachtas Joint Committee report recorded a number of reservations with the Commissioner's opinion and noted that it was not informed by a legal opinion. It noted that An Post already markets its GeoDirectory commercially (with the tagline "Gives every building in Ireland a unique identity"). It also noted that the register of electors and the telephone directories specify the addresses of named individuals. The Joint Committee recommended that the Commissioner "consider afresh" his opinion of 2006, and also that a legal opinion on data protection issues should be sought before any postcode system was introduced.

In effect, the Oireachtas Joint Committee could not reconcile the Commissioner's data protection concerns about one-to-one postcodes with the fact that such concerns should logically already exist with the GeoDirectory (c.100% of addresses uniquely expressed), the register of electors (c.65% of addresses uniquely expressed), and telephone directories (c.65% of addresses uniquely expressed).

The Institute broadly concurs with the Oireachtas Joint Committee's view that data protection issues do not, in fact, arise from the use of a one-to-one postcode system. However, the *perception* that such issues *might* arise could militate against the acceptance of a new system by the public. These concerns could be allayed by the adoption of a policy on the degree of detail provided in publicly or commercially available databases. For example, the register of electors could be published with a postcode to an "area" level of detail (20-50 dwellings), while a Revenue, HSE or Social Welfare database could maintain addresses down to a "unique identifier" level of detail (explanations below).

The Institute considers it advisable that the Minister should seek comprehensive legal advice prior to bringing a formal proposal on postcodes to Cabinet, and that the adoption of

a postcode system should be accompanied by measures to ensure public confidence regarding the integrity of personal data.

Post-Towns versus Unique Identifiers

Post-Towns and Unique Identifiers are two approaches to the formulation of a national postcode. A Post-Town is an artificial construct, based upon an area within which there would be a number of postal routes. A Post-Town structure for Dublin would look similar to the current postal district structure (Dublin 1, 2, etc.). A Post-Town structure would not identify individual properties. A Unique Identifier would, on the other hand, identify individual addresses, and provide a one-to-one relationship between a property and a postcode.

In July 2006, the National Postcodes Project Board (NPPB) recommended the adoption of a six-character postcode in the (ABC 123) format, based upon a Post-Town architecture[9]. This would structure the country into small spatial areas within each Post-Town known as "blockfaces" composed of an indeterminate number of properties. The NPPB conceded that "the issue of non-unique addresses in unnamed thoroughfares remains unresolved", with its recommended solution. It quoted as one of its significant deciding factors the Data Protection Commissioner's opinion that "establishing a one to one relationship between a postcode and a property raises data protection issues."

The NPPB, in favouring the ABC 123 format, also rated "memorability" as an important consideration for a postcode. However, with most people now capable of memorising multiple ten-digit mobile phone numbers, the Institute does not consider memorability to be a key deciding factor.

While not advocating any one solution, the 2010 Oireachtas Joint Committee report was cognisant of the limitations of a Post Town solution, and was sympathetic to the advantages of a unique identifier solution. The Joint Committee identified many of the advantages that would accrue beyond the mail delivery sector with the adoption of a unique identifier.

The Institute considers that a National Postcode would only constitute value for money if it is capable of producing unique identifiers.

Principles for a National Postcode

The Institute considers the following principles to be important in the decision to adopt a National Postcode:

> **It should be granular:** A postcode should be capable of providing a detailed, precise and unambiguous identifier for each individual address.

It should be scalar: A postcode should be capable of expressing a greater or lesser degrees of granularity by extending or reducing the number of characters in the postcode. (For example, a scalar system such as OpenPostcode divides the country into successively smaller 5x5 grids. Five characters would identify a postal area, six characters an individual address, and seven characters a part of a property, such as a gate.) A scalar code would be able to accommodate any material privacy concerns by specifying the level of detail that could be made available in any particular database.

Open-sourced: A postcode should be derived from a source that is publicly available and free to use. It should be unlicensed, or if licenced, the licensor should be the Minister or ComReg; who would provide it to individuals or commercial bodies free of charge.

It should be decodeable: A postcode should be directly translatable to longitude/latitude coordinates. This would allow the postcode to interact with other data sources, improve its usefulness, and "future-proof" it.

It should be "Beyond Post": The An Post GeoDirectory already has address identifiers for approximately 2.2m unique addresses in the Republic of Ireland. An Post does not require postcodes to deliver mail (although market liberalisation requires that a system to identify and efficiently deliver to postal customers be available). Since most of the justification for the adoption of a postcode is outside the letter mail sector, a value-for-money postcode must be capable of delivering the requirements of these services. A Post-Town system is not capable of these additional levels of functionality, and would be a waste of money.

Summary and Recommendations:

The Institute considers that a National Postcode based on a Post-Town architecture would be an analogue solution in a digital age. The adoption of such a solution would be a serious waste of taxpayers' money and is not necessary to address privacy concerns which are at best of dubious legality. Lastly, it would be a squandered opportunity to adopt a bold, leading-edge solution which could exploit all the recent developments in GIS systems, smartphones and navigation technology. Ireland should therefore adopt a National Postcode based on the principles above, and capable of providing unique identifiers for every address.

Perhaps the best description of the opportunity currently before the Minister comes from the HSE's submission to the Oireachtas Joint Committee in 2010:

"We suggest that the Government has an excellent opportunity to adopt the most innovative, pragmatic and practical address finding system in the world. This is

preferable to simply adopting an approach designed for an earlier era predating the technologies and service requirements of a modern society". (Howard Johnson, Carmel Cullen, Health Information Unit, HSE, 2010).

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http://www.comreg.ie/_fileupload/publications/comreg0507.pdf

3. The Postcodes Report (Revised), Joint Committee on Communications, Energy and Natural Resources Second Report 2010:

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http://www.upu.int/fileadmin/documentsFiles/resources/postalStatistics/brochureStatistics2011En.pdf

5. CWU National Executive Council Report 2012:

http://www.cwu.ie/_uploads/documents/Conference_Docs/NEC_Postal_Report_2012.pdf

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http://www.dcenr.gov.ie/NR/rdonlyres/9A989A87-03EA-484E-B0F5446FCF037D1A/0/NationalPostcodeProjectBoardRecommendationofNPPBonImplementationofPostcodesReport2006.doc

Available Geo codes in Ireland:

GeoDirectory: http://www.geodirectory.ie/Home.aspx

OpenPostcode: http://www.openpostcode.org/

Loc8Code: http://www.myloc8ion.com/

Go Code: http://www.gocode.ie/