The Irish Building Control Institute Conference 2013

The County and City Managers’ Perspective on Building Control Reform

David O’Connor
County Manager
Fingal County Council
“There is no substitute for knowledge.

You cannot manage what you don’t measure”

W. Edwards Deming
Only the person notifying has to sign it. No requirement for Building Owner to do anything.

No “Certification” or any kind of undertaking is required from any party.

Minimal penalty for non-notification.

References are for administrative convenience only.

Designer – where documentation may be obtained to prove compliance – must be identified. Drawings need not be submitted.

Builder name only is required and he is the person who can be contacted about building stages (e.g. foundations or drainage connections).

Building Control time taken up with chasing documentation – no useful information here.
The current requirement for “registration” of building activity renders it difficult, at best, to provide a view ... to say nothing of an overview ... of compliance with Building Standards ...

Information deficit ...
For **Building Control**

How do you hold your current Building Control data?

How is it held – paper or digital?

If it’s digital can you interrogate it?

How you can access it?
For your Council

Do you know the extent and variety of the data your organisation holds currently?

Where is it held?

How you can access it?
Big Data
Every day, we create 2.5 quintillion bytes of data.

90% of the data in the world today has been created in the last two years alone.

This data comes from everywhere: sensors used to gather climate information, posts to social media sites, digital pictures and videos, purchase transaction records, and cell phone GPS signals to name a few.
Government Announces €1 million Research Investment in CeADAR to Take Advantage of Fast-Growing Data

The Minister for Jobs, Enterprise and Innovation, announced details of the €1 million initial investment in a research programme in data analytics, a key sector growing at 40% per annum worldwide.
Relevance?
Who Inspects?

Variety of skills and training levels

Separate procedures, records and filing systems

Brings focus on benefits of consolidation

Introducing Business Process Review
Exploiting shared processes

Sharing procedures adds core-efficiency.

Sharing data, records, raising cross-discipline awareness provides intelligence.
Mike Flowers
NYC
“Director of Analytics”

Began his work on
Illegal Conversions

Big Data in the Big Apple
How New York’s first “director of analytics” revolutionized the city’s building inspections.
By Viktor Schönberger and Kenneth Cukier
Posted Wednesday, March 6, 2013, at 3:31 PM

http://www.slate.com/articles/technology/future_tense/2013/03/big_data_excerpt-how_mike_flowers_revolutionized_new_york_s_building_inspections.html
Momentum and Reform

In 2005 two firefighters died trying to rescue residents. New York City gets roughly 25,000 illegal-conversion complaints a year, but it has only 200 inspectors to handle them.

19 different agencies data – from property taxes, to foreclosure proceedings, and any service cuts.

Building type date, ambulance visits, crime rates, rodent complaints, and more.

Compared five years of fire data ranked by severity and looked for correlations in order to generate a system that could predict which complaints should be investigated most urgently.
Momentum and Reform

No standard way to describe location; every agency and department seemed to have its own approach.

Devised a system to identify buildings by using a small area in the front of the property based on Cartesian coordinates and then draws in geo-loco data from the other agencies’ databases. Their method was inherently inexact, but the vast amount of data they were able to use more than compensated for the imperfections.
Momentum and Reform

They included the Inspectors’ experience leading, for example, to an insight about how the new brickwork on the building’s exterior suggesting to him that the owner cared about the place.

Adding the permit information improved their system’s predictive performance by indicating that some suspected properties were probably not major risks.
Momentum and Reform

From June 2011 all “Illegal conversion” complaints were processed on a weekly basis. Ranking the top 5 percent for fire risk for inspection for immediate follow-up.

Previously in 13 percent of cases inspected warranted a Vacate Orders.

Now Vacate Orders are issued on 70 percent of buildings inspected.

By indicating which buildings most needed their attention, big data improved their efficiency fivefold.
Momentum and Reform

Concentrating on the biggest problems, inspectors’ newfound effectiveness had spillover benefits.

Fire hazard was lowered as fires in Conversions are 15 times more likely than other fires to result in injury or death for firefighters, so the fire department loved it.

Existing Data, largely unused after it was collected, was harnessed in a novel way to extract real value. Using a big corpus of information allowed connections that weren’t detectable in smaller amounts—the essence of big data.
Opportunity?
Building Control Reforms

Fall within the scope of Regulation as defined under Section 6 of the Building Control Act 1990. No new legislation is required.

This provides for “Certification”, lodgement of drawings, definition of “classes of persons” competent to certify etc. never used in Regulation.

Default to e-administration in any new regime.

Inspection issue for oversight purposes to be included in considerations of new regime.
Local Authority position

Reform must place responsibility with Building Owners and designated Certifiers (at both design & construction phases) – achieved under H&S.

Information quality must be significantly improved:

- Default to e-lodgement and processing in Regulation
- Commencement stage must be made onerous with severe penalties for non-notification;
- Drawings must be submitted with Commencement Notice;
- Certifiers (design and construction stages) must have publicly available accreditation;
- Completion Certifications must be introduced.

*Inspection and oversight can only be as effective as quality of the information of which it’s composed.*
# Duties of Person responsible for Building

## Commencement Stage

<table>
<thead>
<tr>
<th><strong>Existing</strong></th>
<th><strong>Proposed</strong></th>
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<tbody>
<tr>
<td>Building Owner identified on Notice.</td>
<td>Building Owner is identified on and must sign Commencement Notice.</td>
</tr>
<tr>
<td>Pays Commencement Notice Fee.</td>
<td>Pay the Commencement Notice Fee – <em>not known if late fee will apply</em></td>
</tr>
<tr>
<td><em>No penalties for late notice.</em></td>
<td>Must identify the person(s) with the required competencies assigned to</td>
</tr>
<tr>
<td></td>
<td>Design the Works</td>
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<tr>
<td></td>
<td>Supervise &amp; Coordinate the Works</td>
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<td>Complete (build) the Works</td>
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<td>sufficient to ensure compliance with the Building Regulations.</td>
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## Duties of Person responsible for Building Works Stage

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<td>No specific duties assigned building owner during Works. Is (with Builder) subject to prosecution.*</td>
<td>If, during the course of the Works and prior to Completion, the Owner changes the Person with the required competencies Assigned to supervise the Works, that change will require to be notified by the Building Owner to the Building Control Authority in writing without delay.</td>
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</tbody>
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*Building owner has general responsibilities as citizen to ensure that works carried out comply with the Building Regulations. He/she is expected to ensure that those carrying out work as their agents will do their work in accordance with regulation.*
## Duties of Person responsible for Building Completion Stage

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<td>No specific duties assigned*. No requirement for documentation on Completion.</td>
<td>The Building Owner must counter-sign the Certificate of Compliance on Completion previously prepared and signed by the person(s) with the required competencies he/she has assigned to</td>
</tr>
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*Building owner has general responsibilities as citizen to ensure that works carried out comply with the Building Regulations. He/she is expected to ensure that those carrying out work as their agents will do their work in accordance with regulation.

Design the Works  
Supervise & Coordinate the Works  
Complete (build) the Works  
sufficient to ensure compliance with the Building Regulations.
### Duties of Building Control Authorities

**Commencement Stage**

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<td>Record and Receipt provision of - Commencement Notices; - Maintain a register of Commencement Notices. - Require, from time to time, submission of drawings and documents from designers that demonstrate compliance of design with Building Regulation.</td>
<td>Keep a Register to record all - valid Commencement, Completion and other Notices and Certificates (including such “7-day notices”) - Dispensations from requirements granted; - Fire Safety Certificates; - Disability Access Certificates; - Decisions of the BC Authority of An Bord Pleanála in respect of any Certificate or Appeal for Certificates; - Enforcement Notice details; - Decisions of the Courts in respect of any Building Control matter.</td>
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### Duties of Building Control Authorities

#### Works Stage

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<td>Provide a general system of monitoring of construction activity and its compliance with Building Regulations, issuing such notices that arise from the matters of non-compliance during the provision of that service. Universal inspection is not required by BC Authorities arising from the general responsibilities of designers and other to comply with Building Regulation. Issuing Enforcement action arising from non-compliance.</td>
<td>Exercise monitoring and audit role over Compliance with Building Regulations, including oversight of activities, enforcement, to oversee the general competence of all parties to Works, to reinforce a culture of Compliance with Building Regulations. A risk-assessment model will be possible to deliver due to significantly increased amount and quality of information lodged and readily available for those purposes.</td>
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Duties of Building Control Authorities

**Completion Stage**

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<td>No assignment. No requirement for documentation recording Completion.</td>
<td>Ensuring lodgement of documentation now required on Completion. The provision for a Notice from the applicant that they will lodge Completion Certificates allows opportunities, but not duty, for compliance checking. This should be only on foot of valid cause (say during Works).</td>
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</table>
Emerging reformed Regulation

Implementation

– Construction Professionals and Builders have a “Code of Practice” idea allowing simple forms for Certification of Compliance as it gets around the thorny problem of prolonged argument of the wording. In addition their organisations can develop “best practice” models for peer review.

– A similar Code will now be developed for Local Authorities and this will likely be coordinated, as with the wider Code, through the Housing Agency and the good offices of John O’Connor CEO.