EU COST ACTION TU 1204

PEOPLE FRIENDLY CITIES IN A DATA RICH WORLD

MANAGEMENT COMMITTEE MEETING 30 September – 2 October 2015

Future-proofing:

An evidence-based approach to urban planning

FutureAnalytics

Planning + Research + Economics

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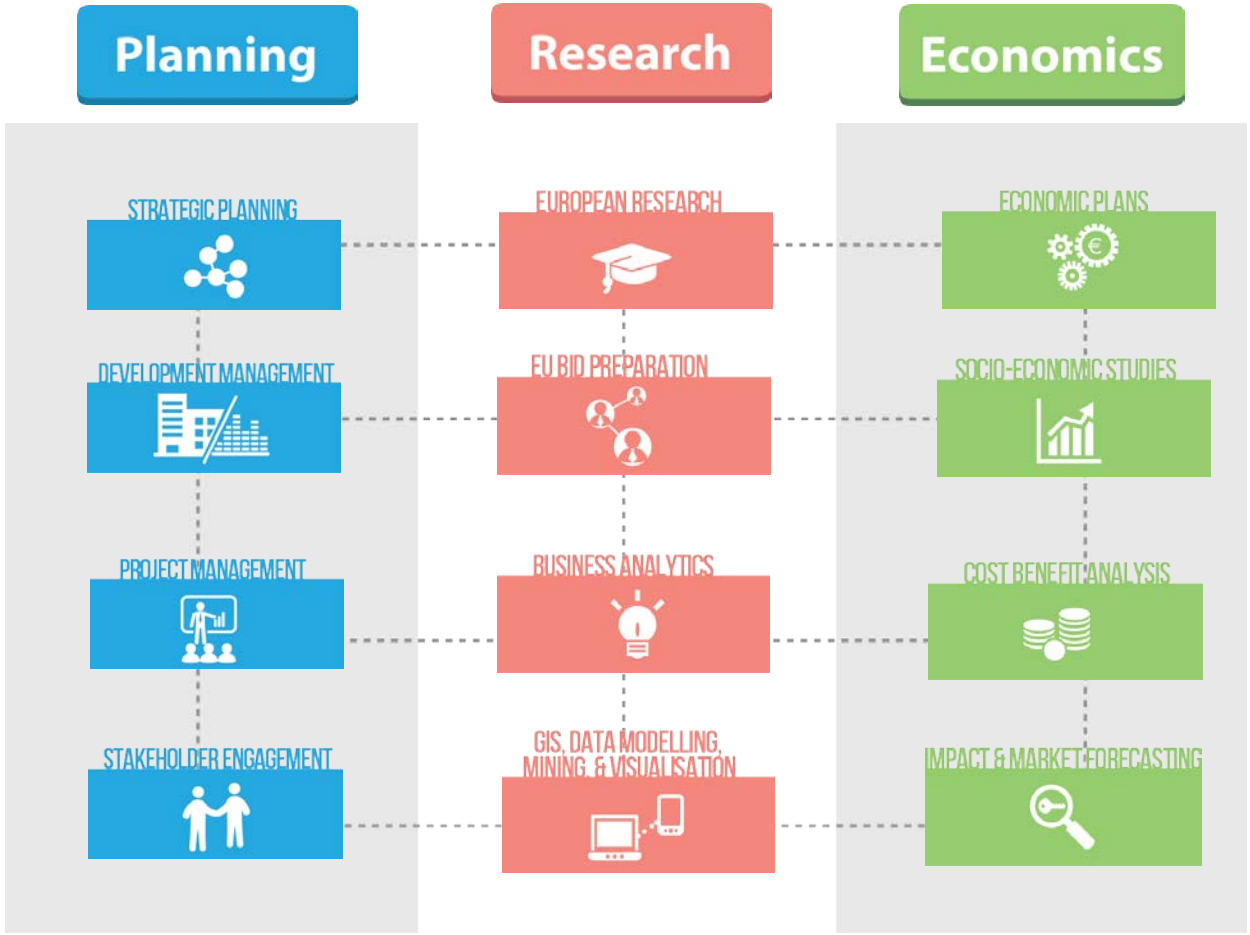
01 October 2015

Short Introduction to Future Analytics Consulting

Multi-disciplinary expertise and positive solutions based on a real life understanding of market conditions



Presentation Outline

How using … **modelling** … and … **analysis** centred on … **integrated data collection** and … **collation**

… can enable key decision makers and stakeholders develop policies and plans that can lead to enhanced, citizen-centric sustainable urban planning and development.

Demonstrated through a project focusing on Ireland's housing crisis.

Context

Planners require practical solutions

Informed decisions based on actionable intelligence

Increasing demand for evidence-based decisions (and rightly so)

Liveable communities, improving overall quality of life, protecting the environment and promoting economic development

Data collation, modelling, analysis, and visualisation can make a significant difference.

Presentation Overview

- Approach – *Housing Supply Requirements*
- Modelling Overview
- Key Findings
- Further Applications – *Housing Supply Capacity*
- Mechanism For Delivery

Approach

housing agency

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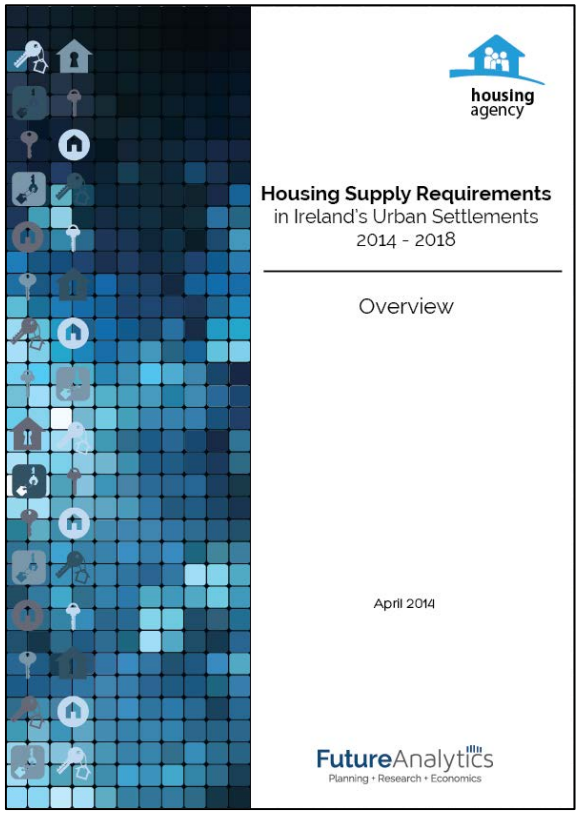
Approach

To determine **the level of projected housing supply required in urban settlements** over the next 5 years and in doing so, to identify the **areas where housing pressures may arise**.

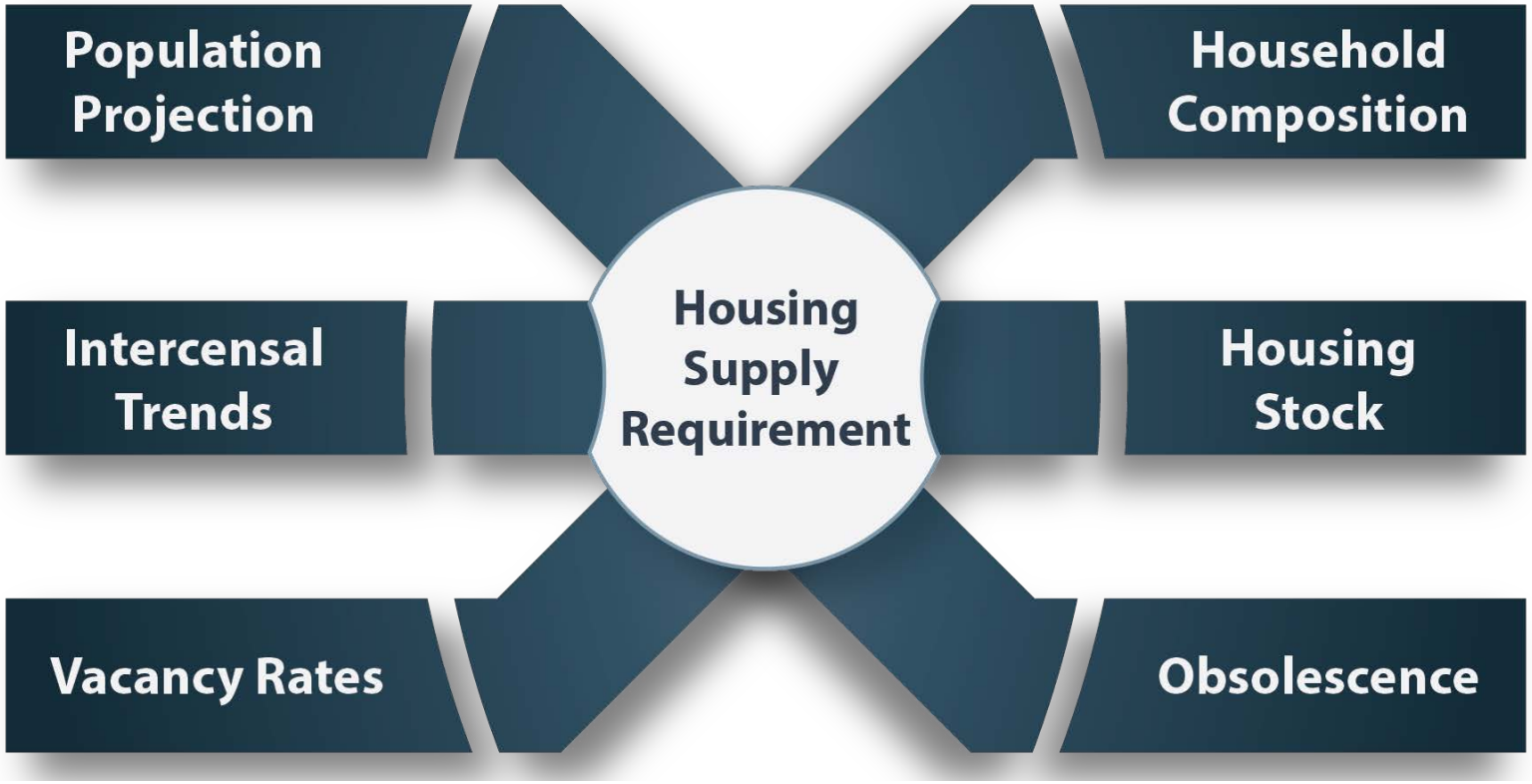
272 urban settlements identified for modelling, accounting for **two-thirds of the population**.

A focus on supply informs a **minimum projected requirement** which does not address any issue of 'pent up' housing demand.

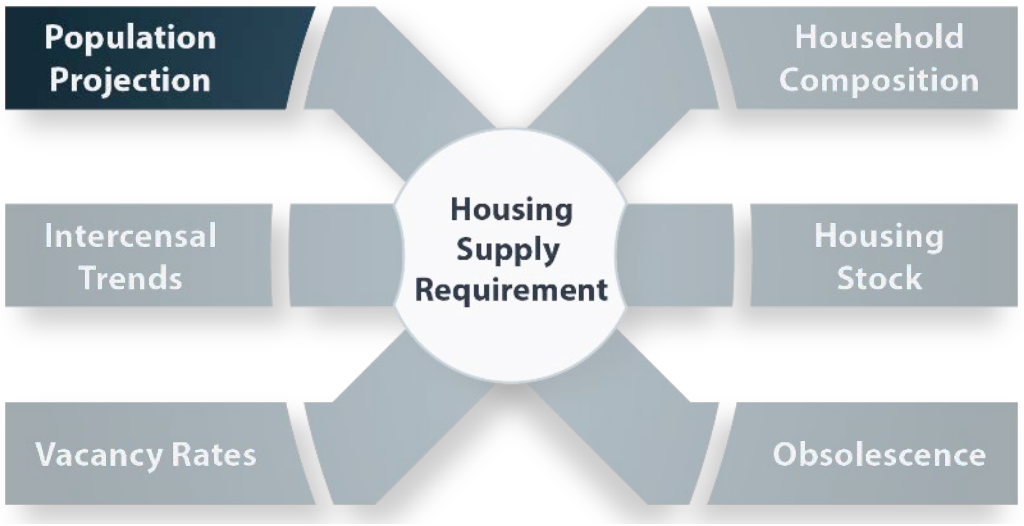


bit.ly/ HSR-Overview

Modelling Overview



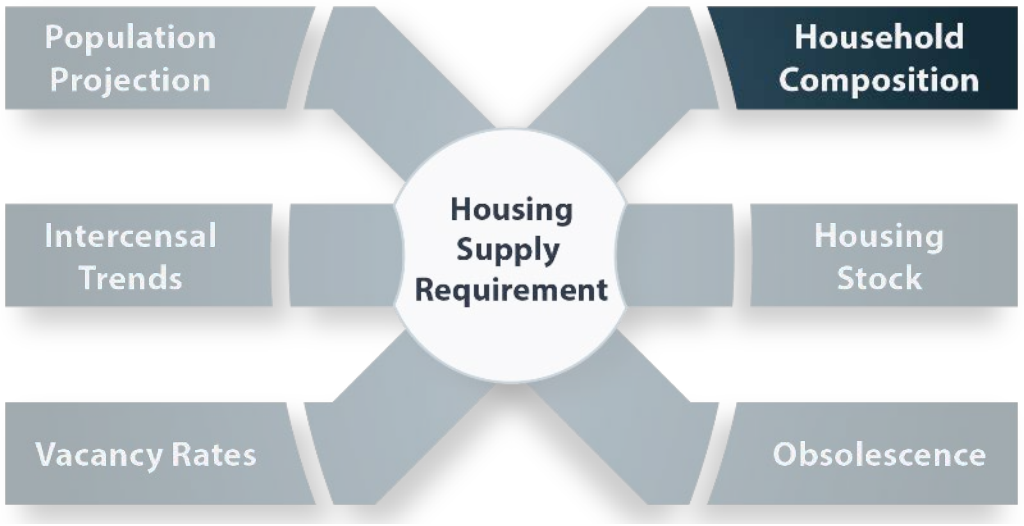
Modelling Overview



Demographic Component Model

- Regional Outlook: **M2F2 Traditional**
- **Assumptions:**
  - **Fertility** (TFR falling from 2.1 to 1.8 by 2026)
  - **Mortality**
    - Decreases of M 3.7%p.a. and F 2.5%p.a.
    - Current LE: Males 78.3 yrs, Female 82.8 yrs.
  - **Migration**
    - M2 International Migration Assumption
      - -21,600 (2011-2016)
      - +4,700 (2016-2021)
      - +10,000 (2021-2031)
    - **Traditional** Internal Migration (assumed reversal to 1996 stable pattern of inter-regional flows)

Modelling Overview



Household Composition

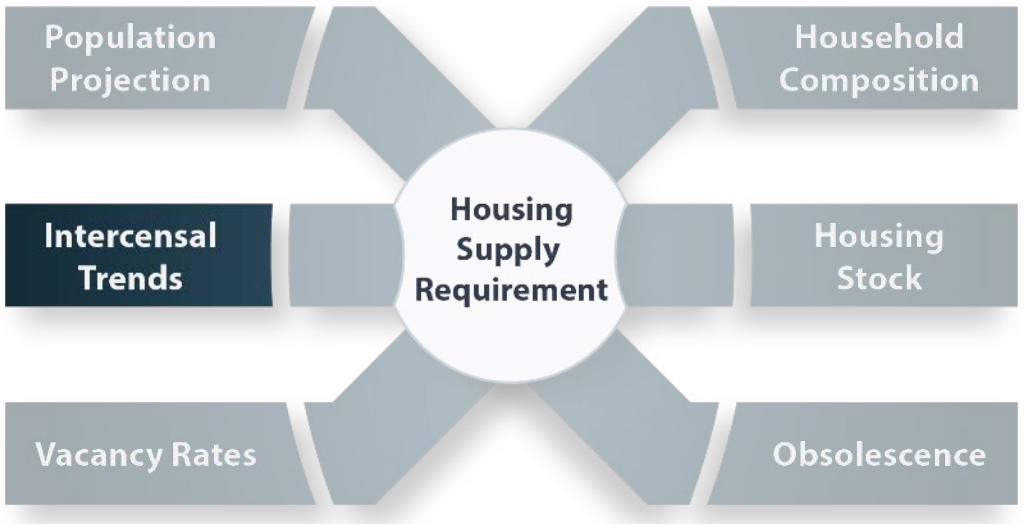
% of Population living in a 'x' person household

Nationally (Census 2011):

- **8.78%** in 1 person households
- **21.66%** in 2 person households
- **19.89%** in 3 person households
- **23.67%** in 4 person households
- **26.01%** in 5 +person households

The composition for each urban settlement is utilised.

Modelling Overview



Intercensal trends in household composition between 2002-2006 and 2006-2011.

Assumption: if these trends were to continue throughout the projected period.

Nationally, the identified trend showing increases towards smaller households (no. of people in occupancy).

This composition growth/ decline for each household type within each urban settlement is utilised.

Modelling Overview

Household Composition & **Intercensal Trends**

Process

- 272 identified urban settlements
- Consider the unique characteristics of the urban settlement **in census years 2002, 2006 and 2011.**

Modelling Overview

Household Composition & **Intercensal Trends**

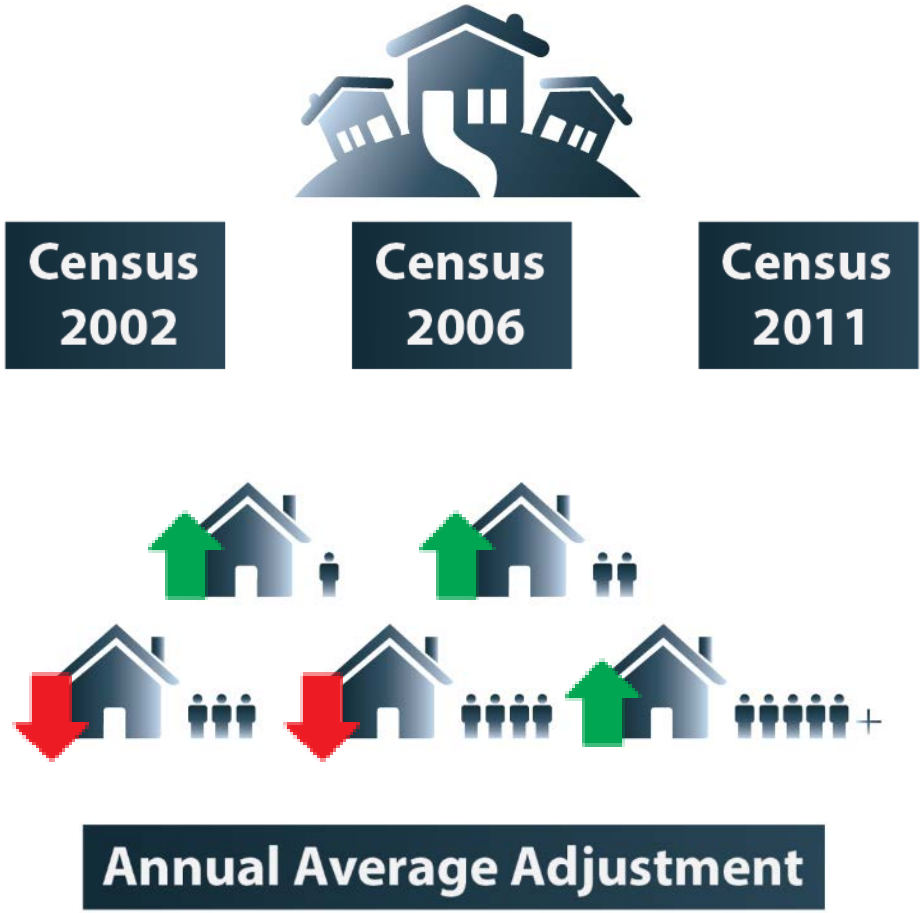
Census 2002 **Census 2006** **Census 2011**

Process

- 272 identified urban settlements.
- Consider the unique characteristics of the urban settlement **in census years 2002, 2006 and 2011.**
- Identify **the proportion of the urban settlement's population** who lived and currently live in each of the 'x' person per household bands.

Modelling Overview

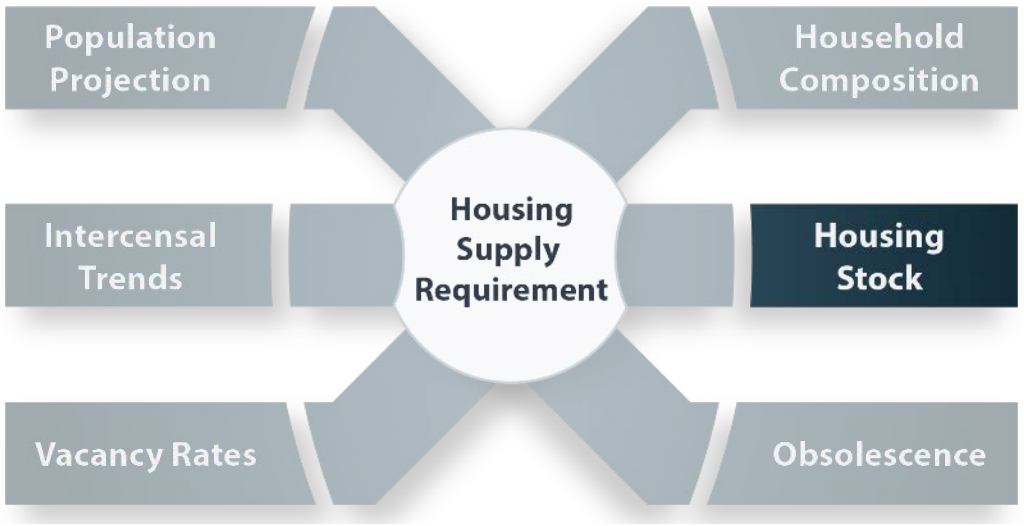
Household Composition & **Intercensal Trends**



Process

- 272 identified urban settlements.
- Consider the unique characteristics of the urban settlement **in census years 2002, 2006 and 2011**.
- Identify **the proportion of the urban settlement's population** who lived and currently live in each of the 'x' person per household bands.
- Note the **percentage change between census periods** for each household band. Each will increase and decrease at the expense of one another, as influenced by the factors affecting the urban settlement (population change, desire to live in smaller household sizes etc.)
- Determine the urban settlement's unique intercensal **annual average rate of adjustment**. Forming the assumption (should such trends continue) by which composition is projected.

Modelling Overview

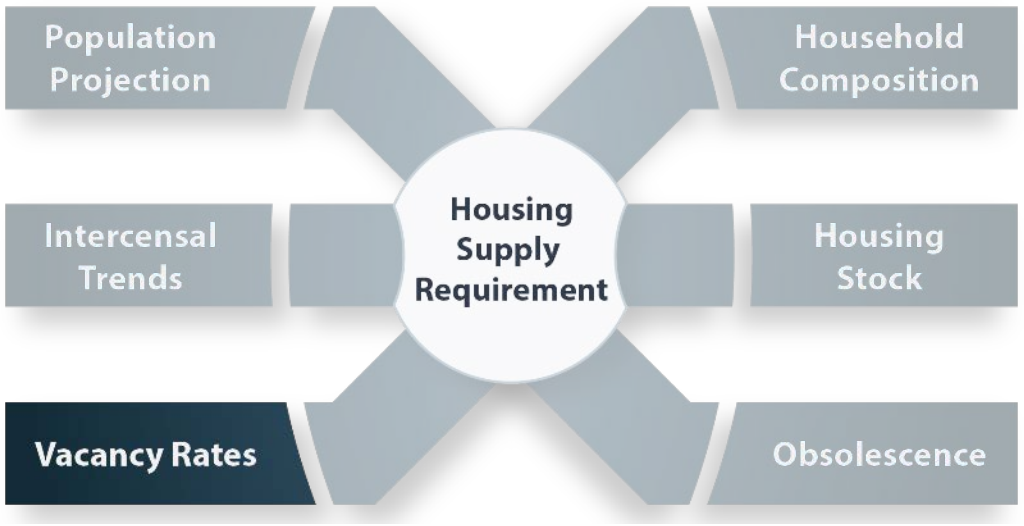


Housing stock (Census 2011) used as a base figure.

Assumption: No assumed rate for housing construction was applied.

Therefore, over the projected term, **each preceding year's supply requirement was assumed to have been met for the subsequent year** (and therefore part of the subsequent year's housing stock).

Modelling Overview

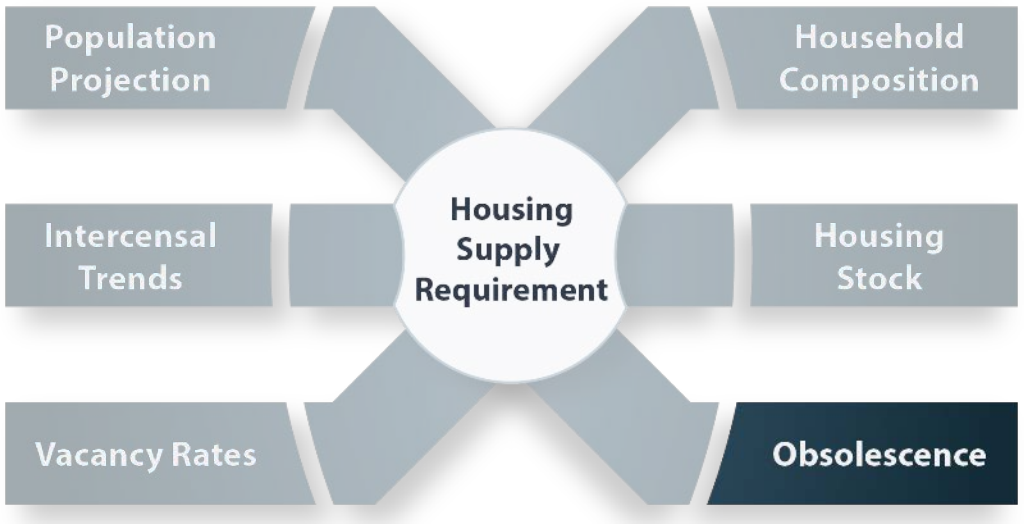


Specific vacancy rates set for **cities** and **urban settlements across each region**.

Housing Agency Research:

- Dublin City, Cork City, Galway City, Limerick City (**7%**); Waterford City (**10%**);
- Dublin Region & Mid-East Region (**7%**);
- Border Region & West Region (**14%**);
- Other Urban Centres (**10%**).

Modelling Overview



Obsolescence of Housing Stock

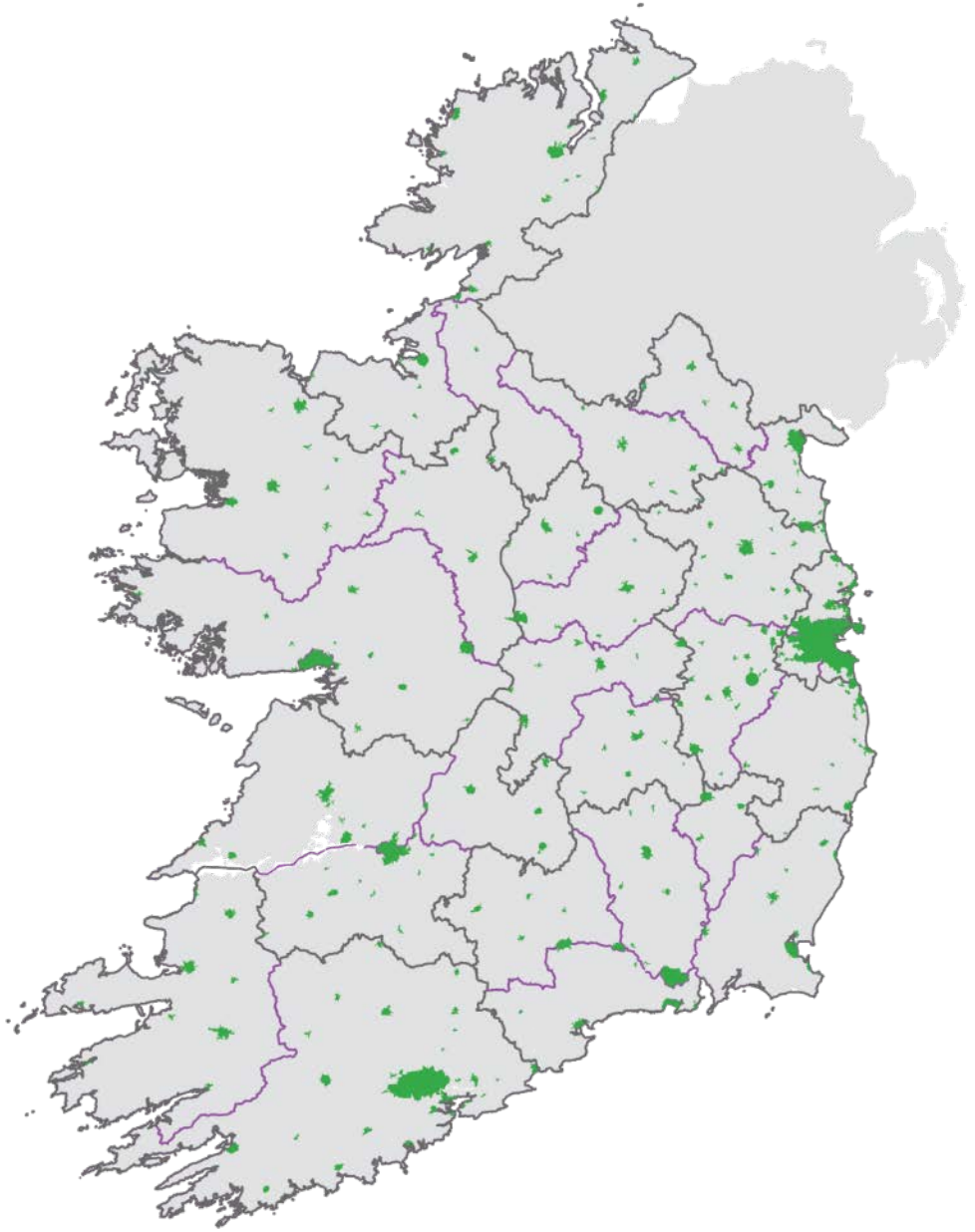
Assumption: An **obsolescence rate** of **0.5%** per annum was applied. Reflects commonly held market assumptions.

Key Findings

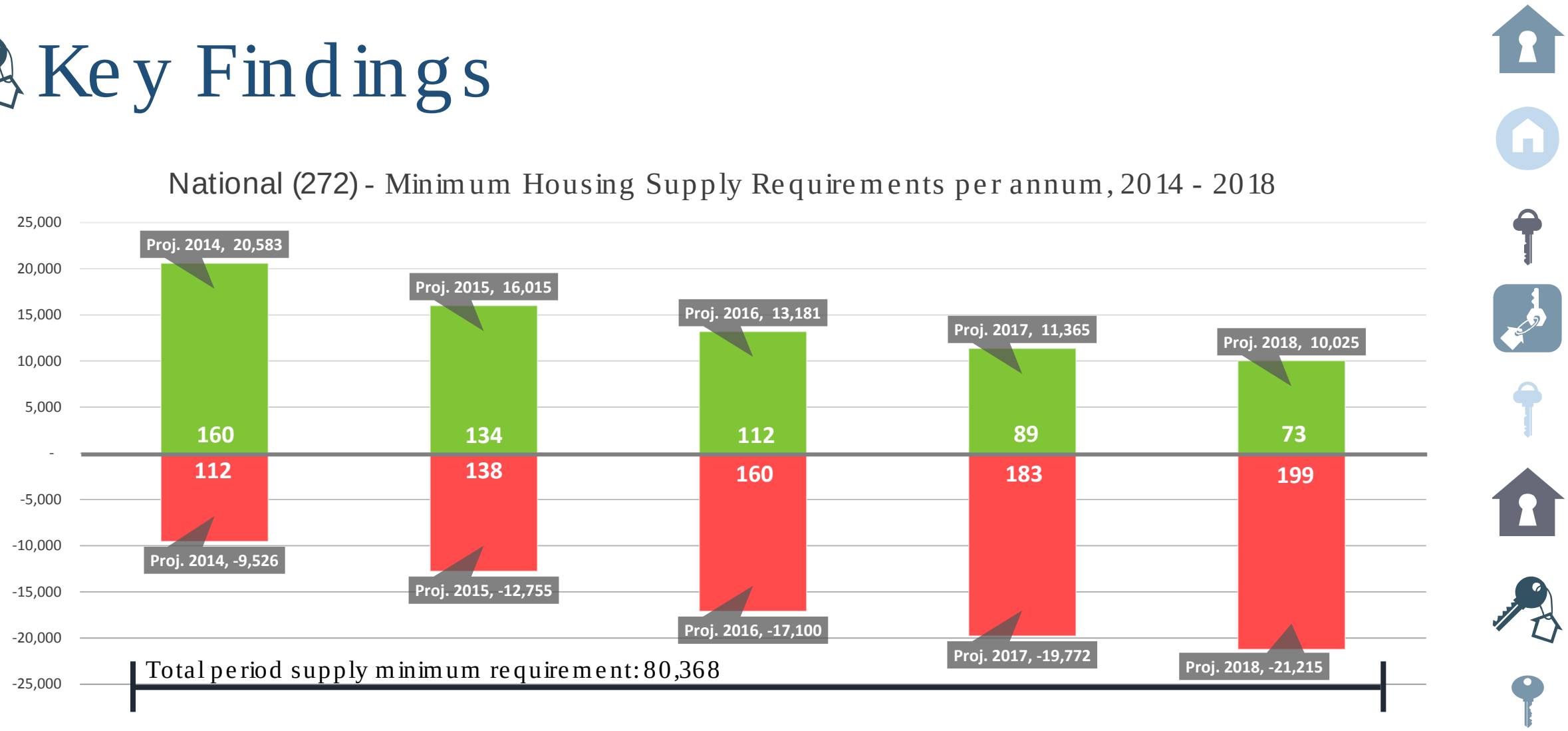
272 Urban Settlements **Nationally**:

- Approx. min of **80k units required** (over period 2014-2018)
- Average annual equivalent of approx. **16k units required**
- Peaking at a supply requirement of **21k units** in 2018

Urban Settlements In Ireland



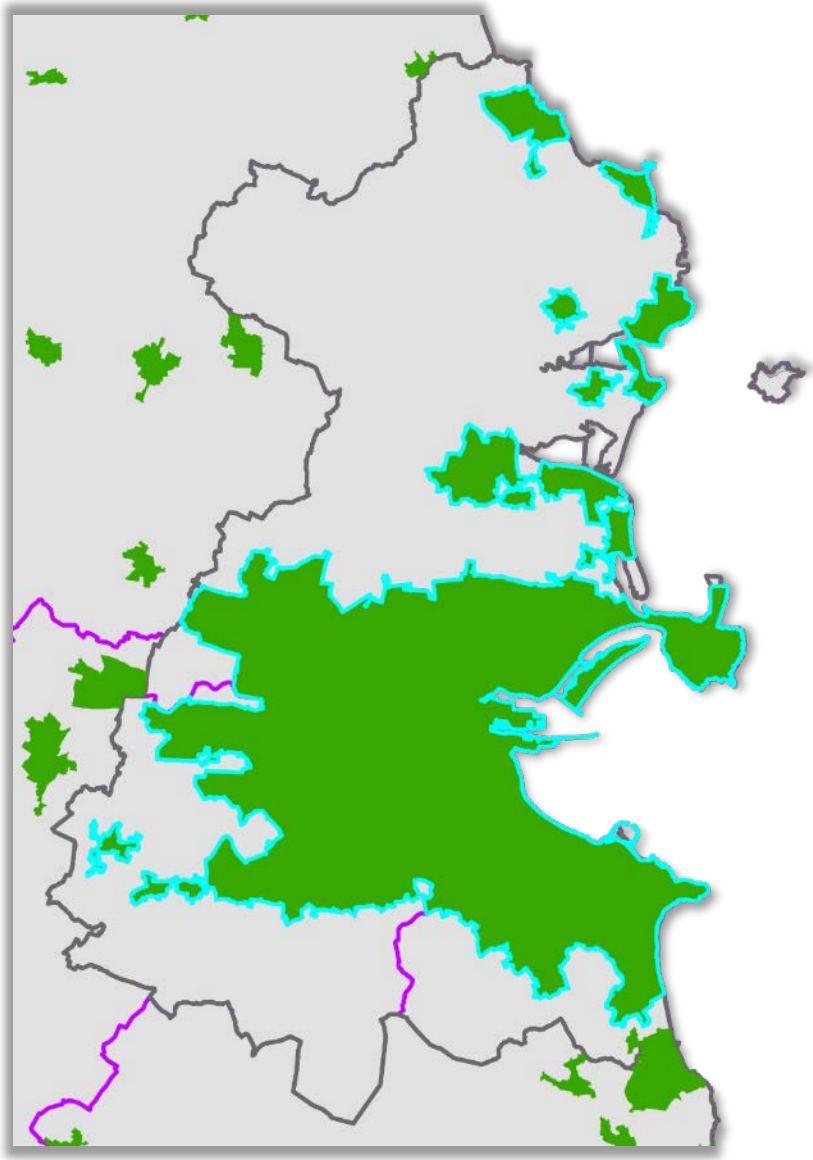
Key Findings



Key Findings

Across the **Principal Cities** (2014-2018, approx.):

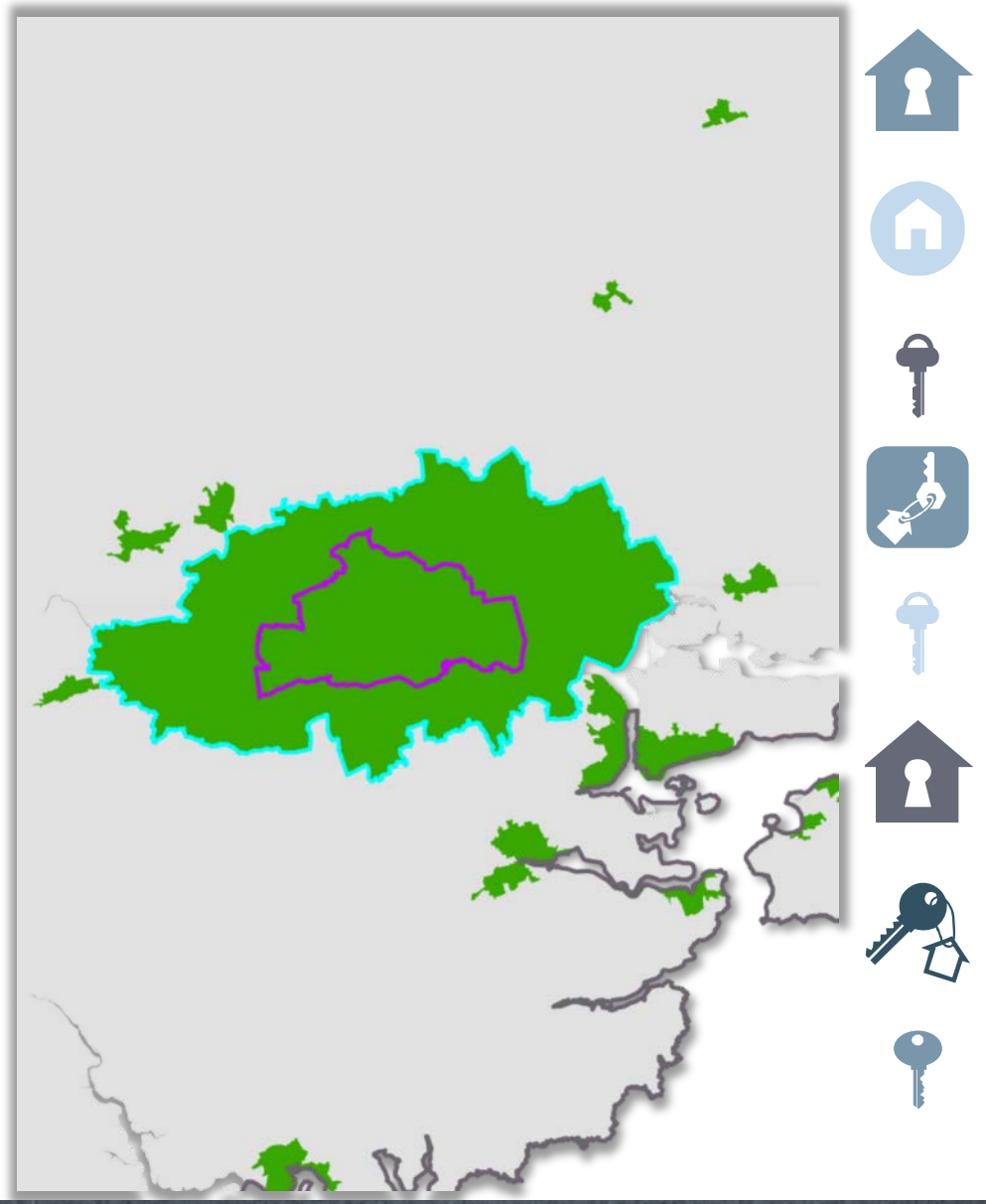
- Settlements within Dublin: **37.5k units**



Key Findings

Across the **Principal Cities** (2014-2018, approx.):

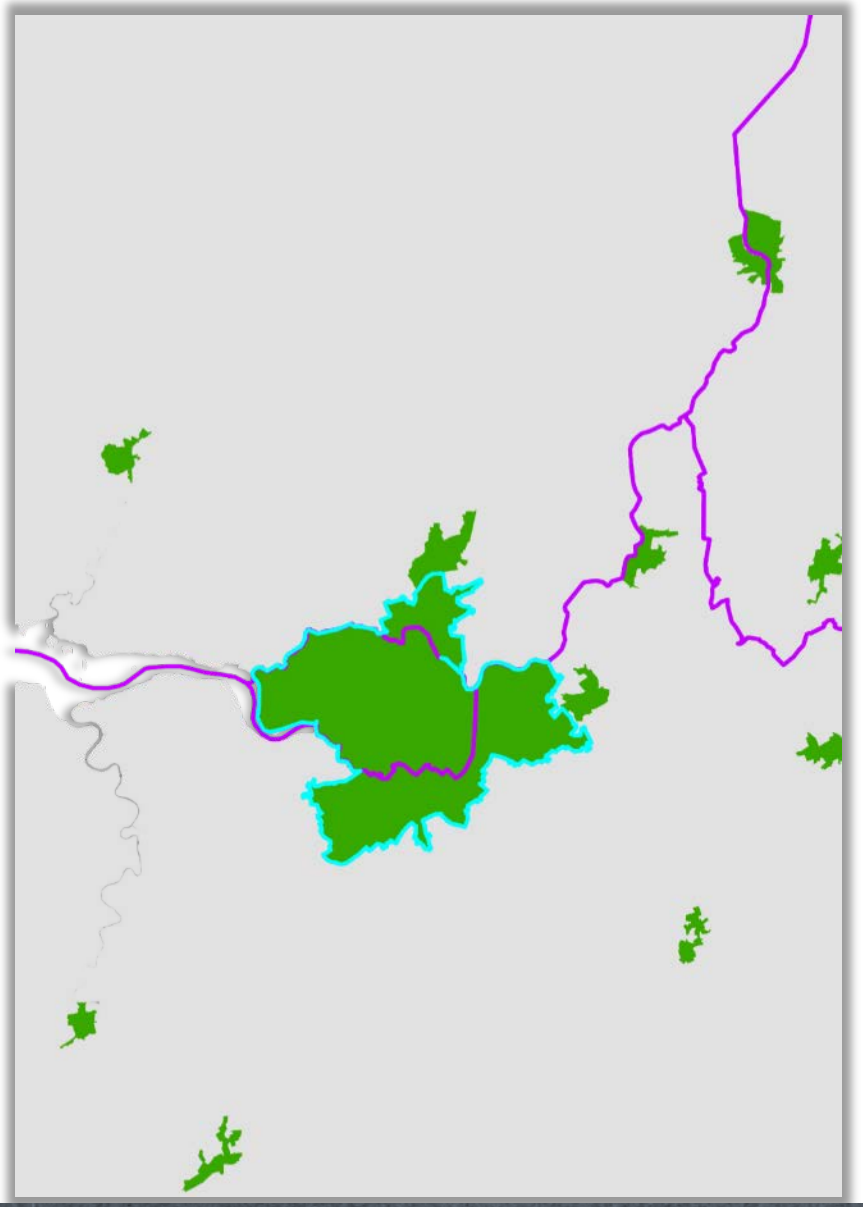
- Settlements within Dublin: **37.5k units**
- Cork City & Suburbs: **4.4k units**



Key Findings

Across the **Principal Cities** (2014-2018, approx.):

- Settlements within Dublin: **37.5k units**
- Cork City & Suburbs: **4.4k units**
- Limerick City & Suburbs: **2.3k units**



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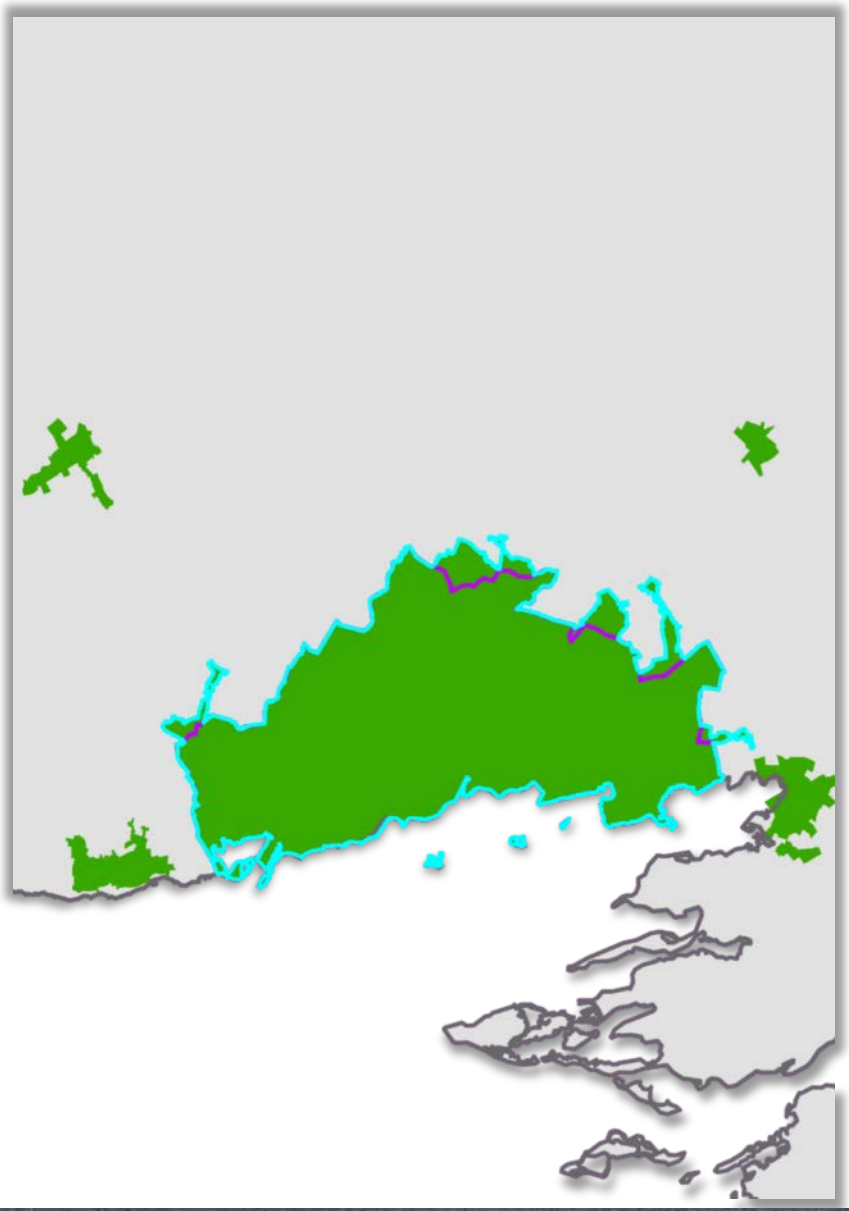

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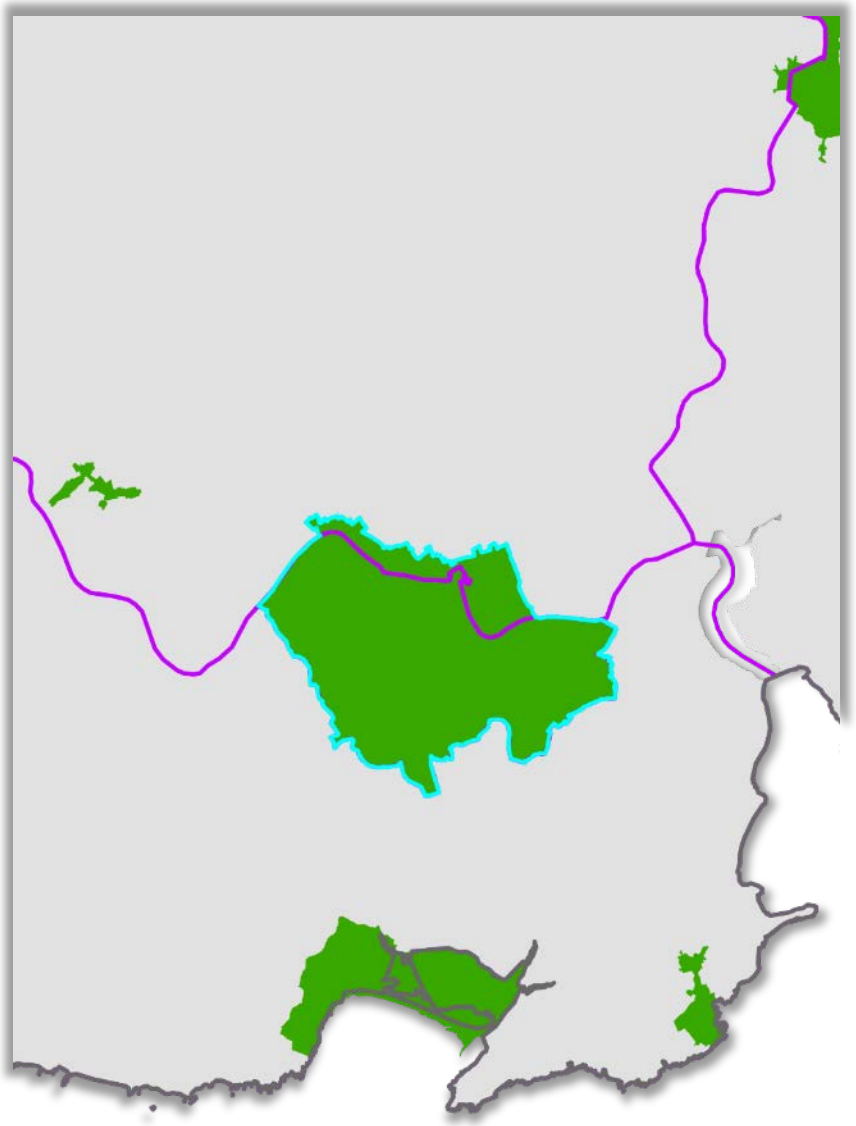
- Galway City & Suburbs: **2.6k units**
- Waterford City & Suburbs: **739 units**

Urban Settlements In Ireland



Thank you…

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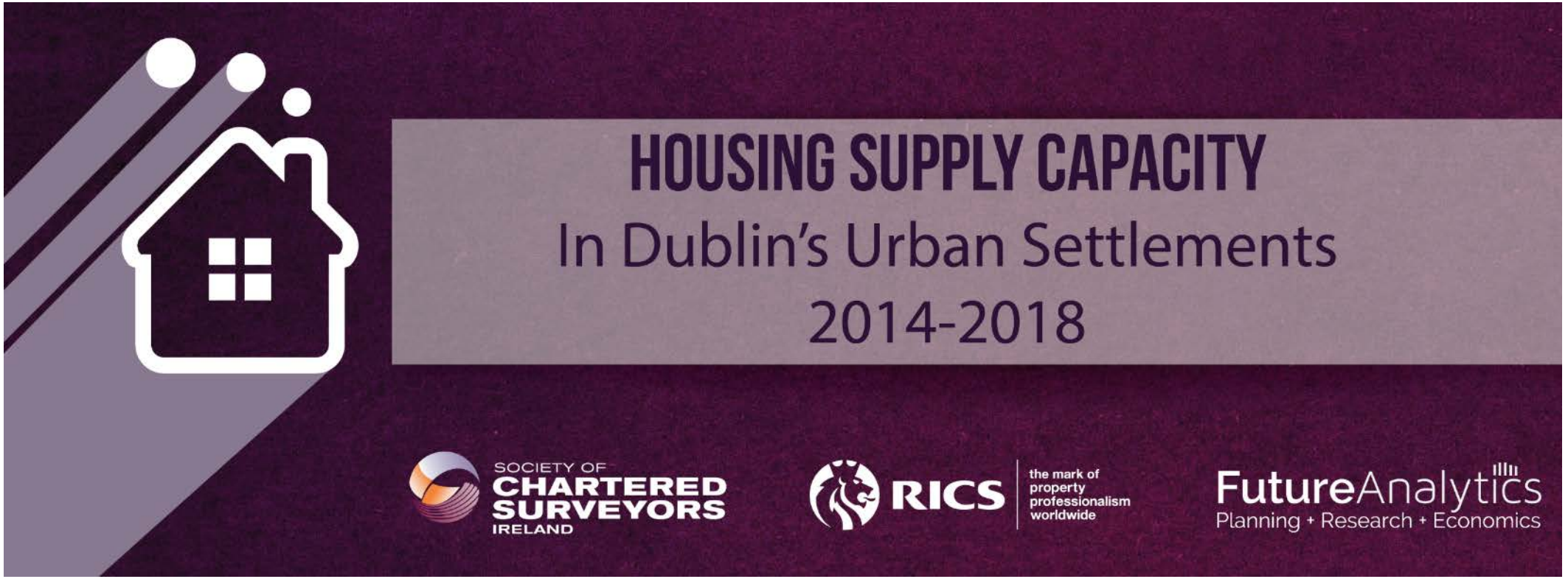
Further Applications

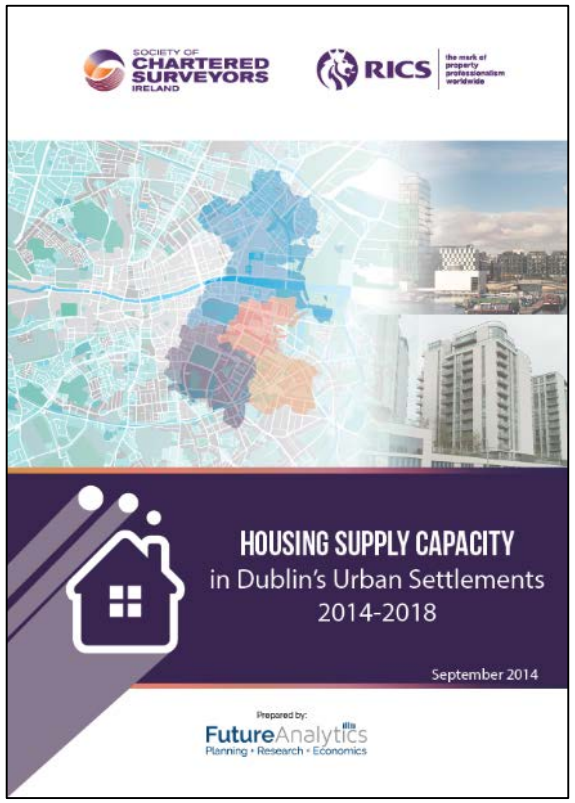


Further Applications Projecting Housing Supply Capacity

Explores **capacity of lands zoned for residential development to meet the minimum housing requirement 2014-2018** within the Dublin Region.

It considers this alongside the **quantum of granted (extant) planning permission for residential development.**

The analysis is centred on the **delivery of the requisite minimum housing units** for the projected population of the Dublin Region **between 2014-2018.**



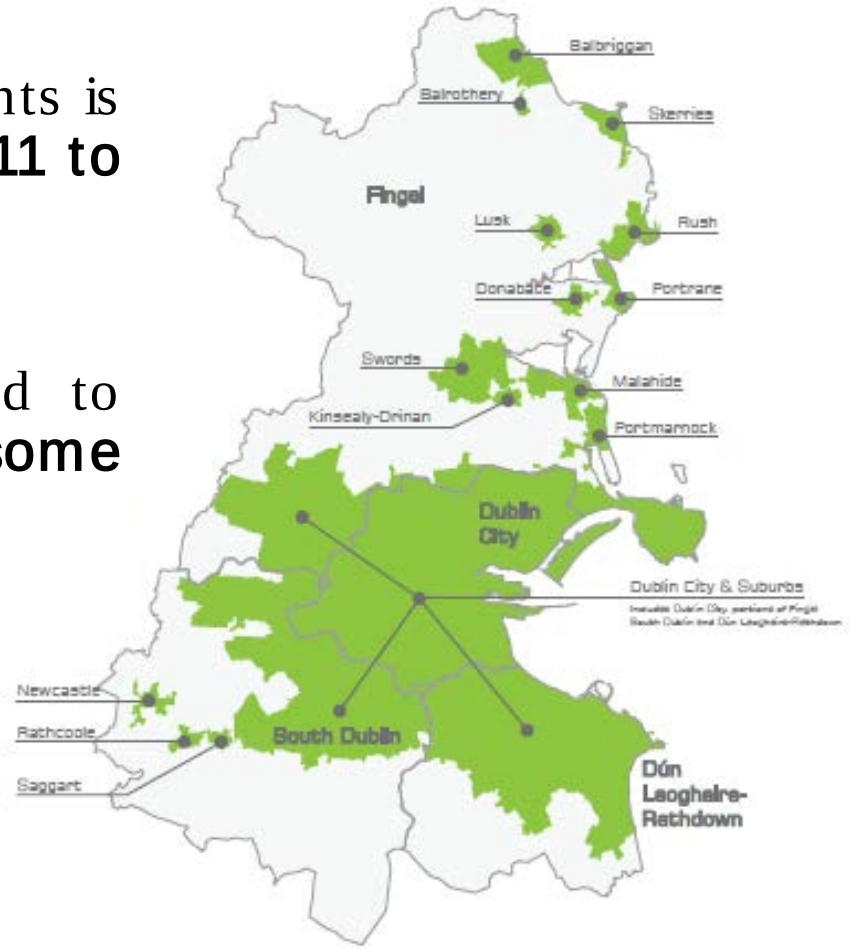
bit.ly/ HSCR-Report

Further Applications

Projecting Housing Supply Capacity

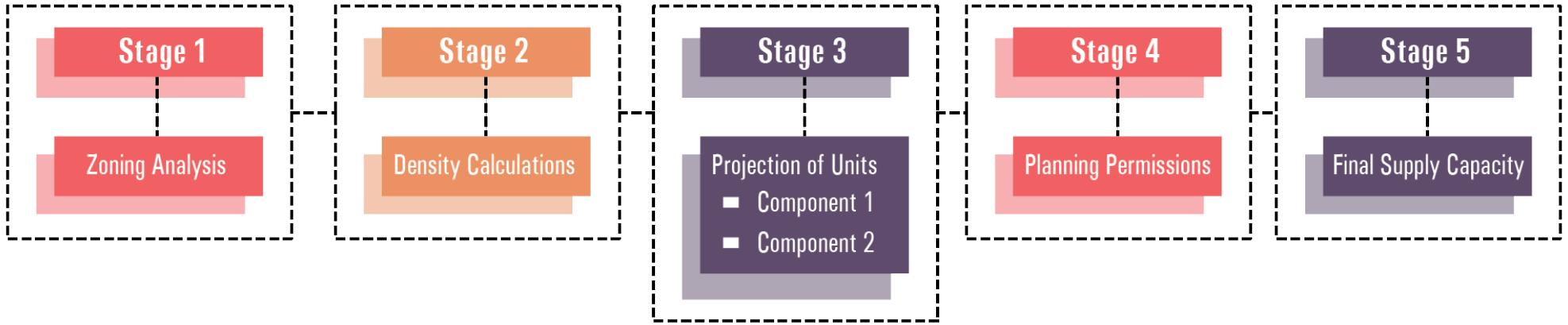
The total population in these urban settlements is expected to **increase from 1,242,620 in 2011 to 1,286,462 by 2018**.

At a minimum, these settlements will need to accommodate an increase in population of **some 43,842 persons over this period**.



Further Applications Methodology Overview

The following sets out an overview of the different elements of the analysis undertaken to inform the findings:



Further Applications Key Findings

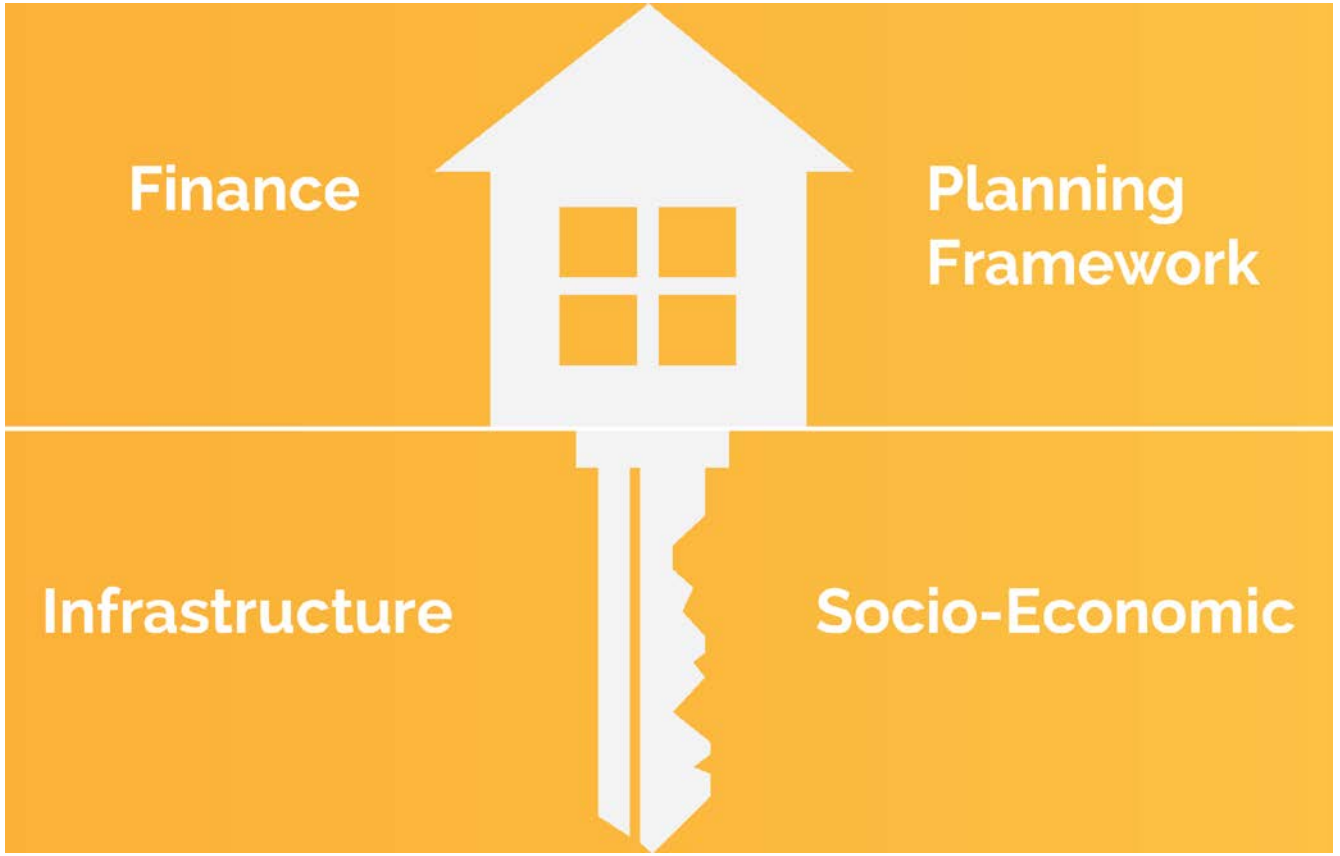
THERE ARE 2,233 ha OF LAND ZONED AND POTENTIALLY AVAILABLE FOR RESIDENTIAL DEVELOPMENT IN THE DUBLIN REGION

THE DUBLIN REGION HAS CAPACITY TO SUPPLY A MINIMUM OF 102,500 ADDITIONAL HOUSING UNITS

A FURTHER 269,000 PERSONS COULD BE ACCOMMODATED IN THE DUBLIN REGION UNDER MINIMUM RECOMMENDED DENSITIES

A SHORTFALL OF OVER 8.8k HOUSING UNITS EXISTS BETWEEN UNITS GRANTED AND THE REGION'S MINIMUM REQUIREMENT (2014-2018)

Mechanism For Delivery



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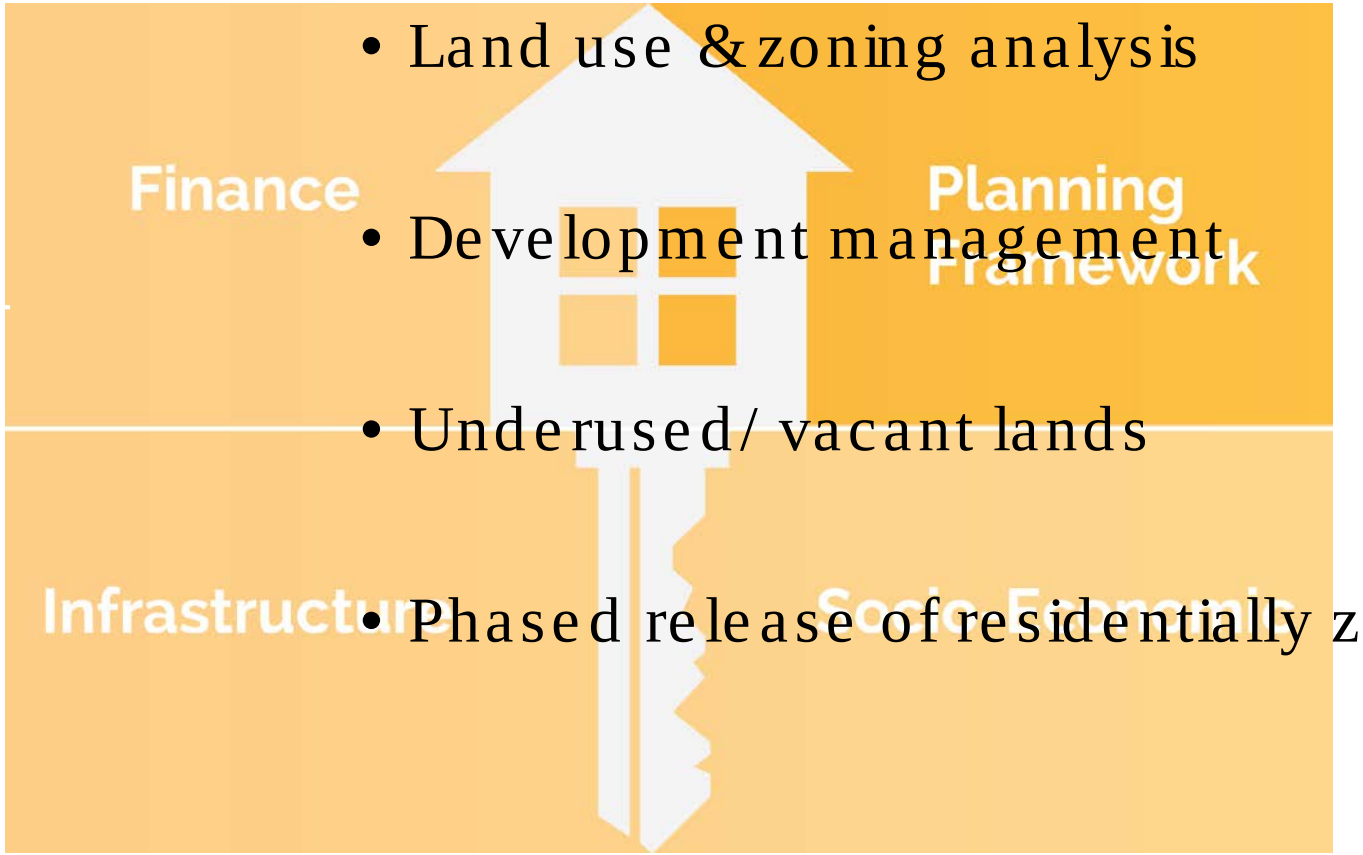


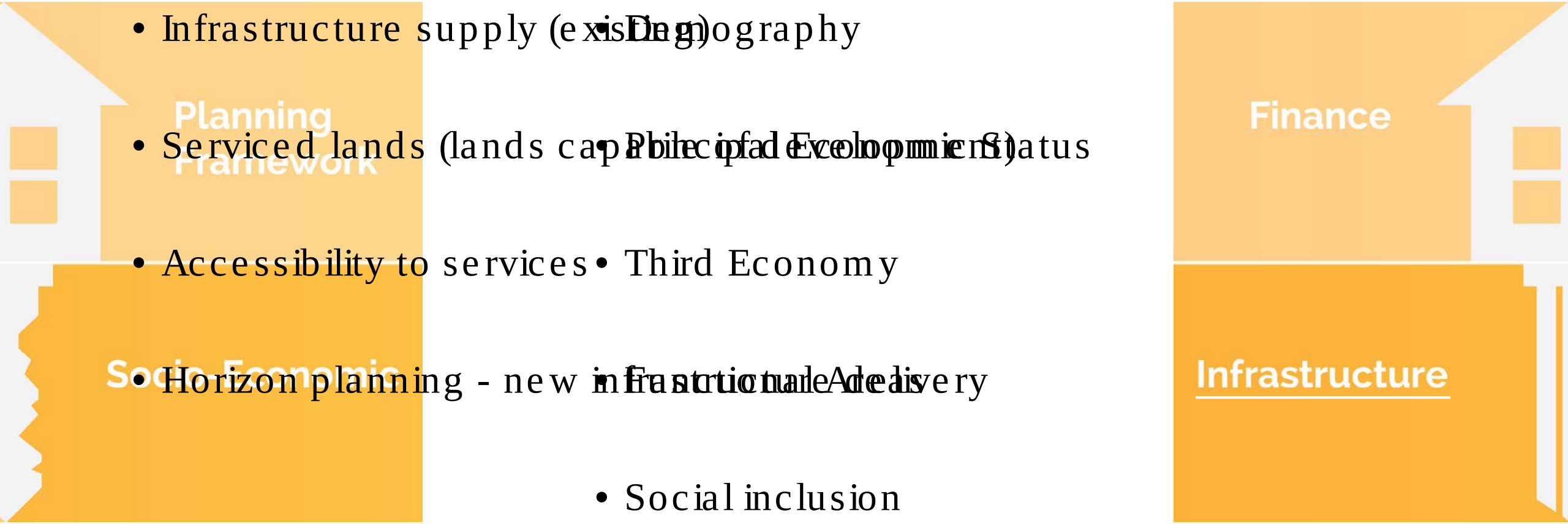
- Land use &zoning analysis
- Development management
- Underused/ vacant lands
- Phased release of residentially zoned lands

Mechanism For Delivery

- Demography
- Principal Economic Status
- Third Economy
- Functional Areas
- Social inclusion

Mechanism For Delivery

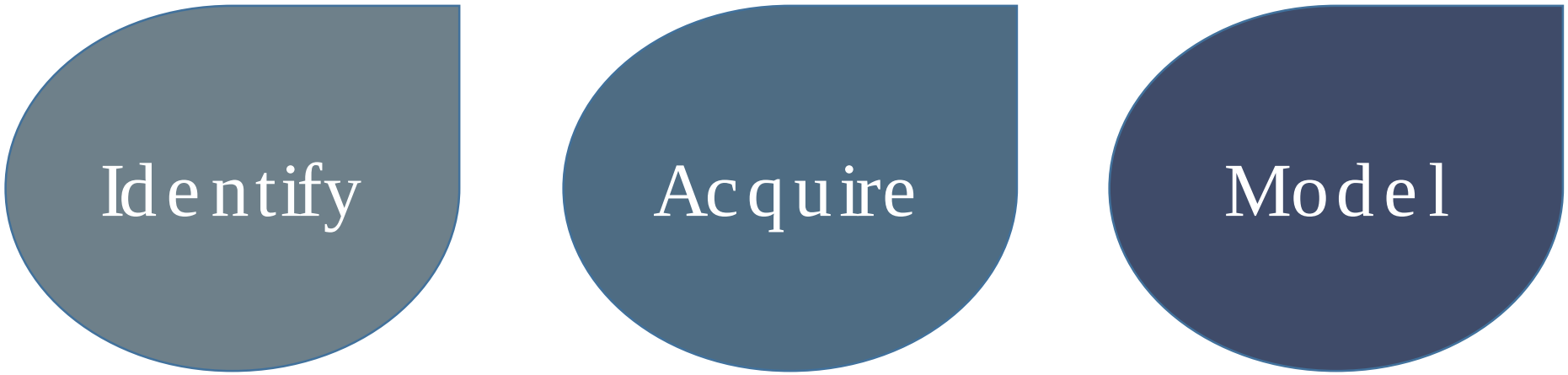
- Infrastructure supply (existing)
- Serviced lands (lands capable of development)
- Accessibility to services
- Horizon planning - new infrastructure delivery
- Demography
- Principal Economic Status
- Third Economy
- Infrastructure Ages
- Social inclusion



Mechanism For Delivery

- Disposable income
- Consumer confidence
- Housing affordability
- Cost of living
- Access to credit

Mechanism For Delivery



Roadmap for implementation

Thank you…

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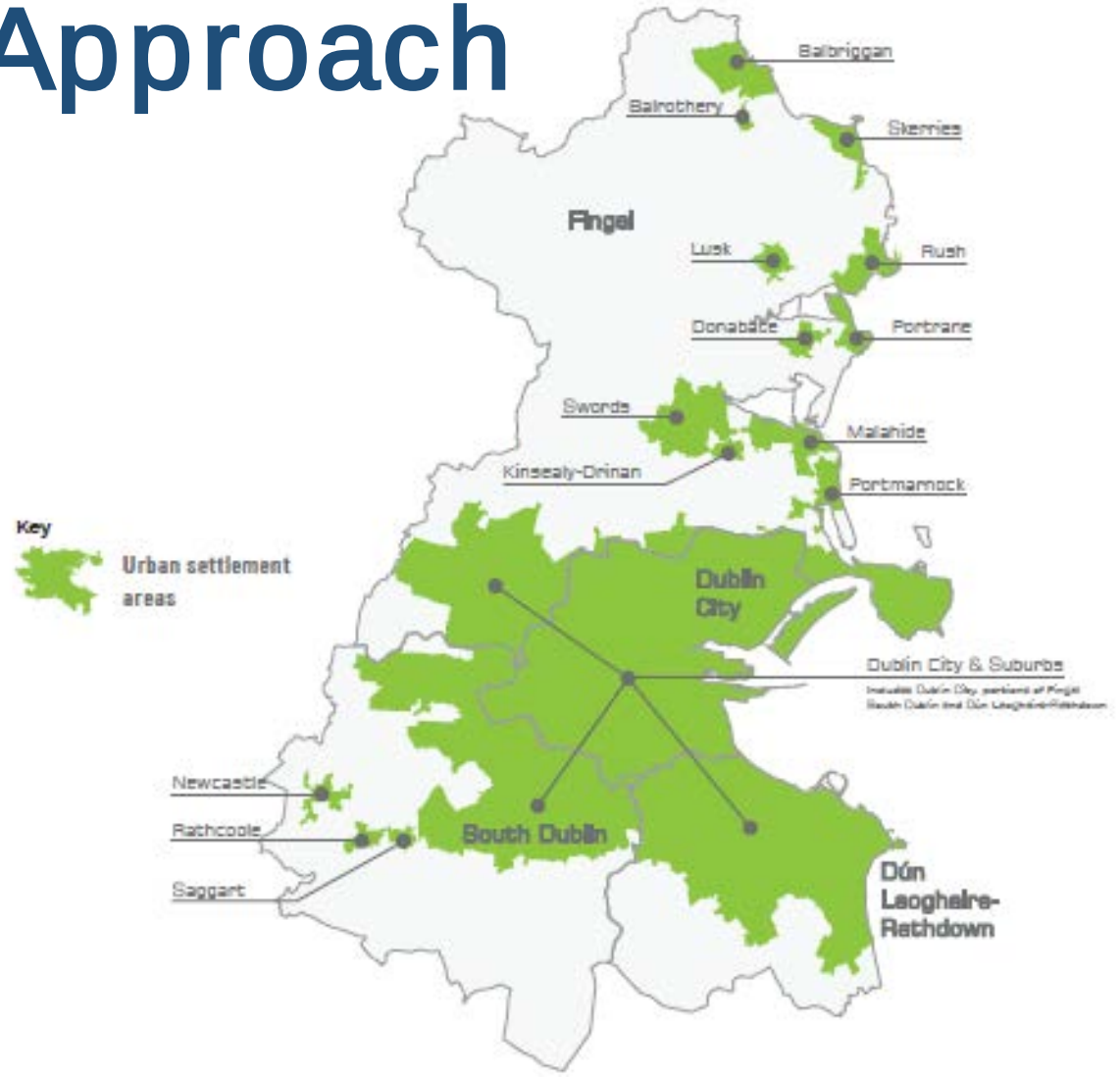
Introduction and Approach

- This analysis explores the **capacity of lands zoned for residential development to meet the minimum housing requirement 2014-2018** within the Dublin Region.
- The analysis is centred on the **delivery of the requisite minimum housing units** for the projected population of the Dublin Region **between 2014-2018.**
- It considers this alongside the **quantum of granted (extant) planning permission for residential development.**
- The analysis builds off the Housing Agency/ FAC publication **'Housing Supply Requirements in Ireland's Urban Settlements 2014-2018' (April, 2014).**

Introduction and Approach

- These selected settlements are those having a **resident population of 1,000 persons or more** based on CSO Census 2011.

- These settlements account for some **97.6% of the Dublin Region's population in 2011**.



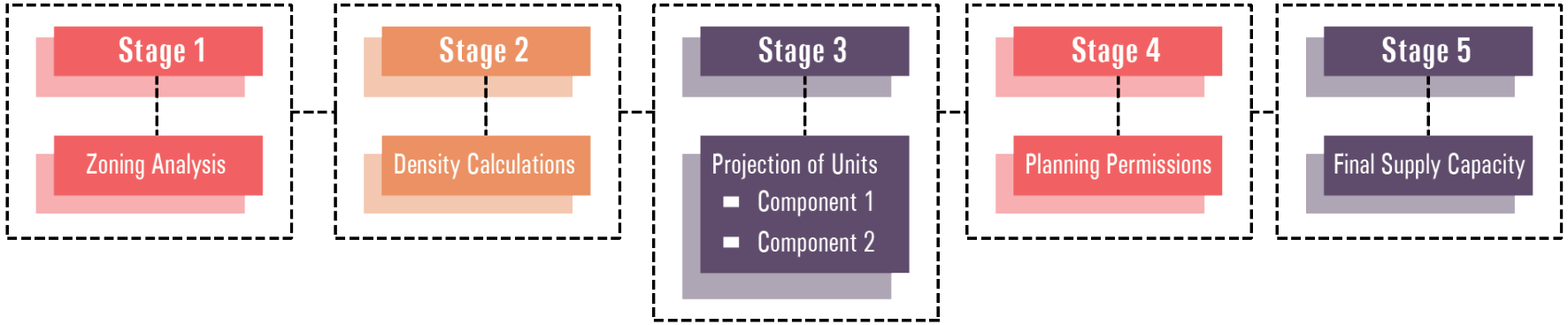
Introduction and Approach

- Based on the 'Housing Supply Requirements in Ireland's Urban Settlements 2014-2018' publication, the total population in these urban settlements is expected to **increase from 1,242,620 in 2011 to 1,286,462 by 2018**.

- Accordingly, at a minimum, these settlements will need to accommodate an increase in population of **some 43,842 persons over this period**.

Introduction and Approach

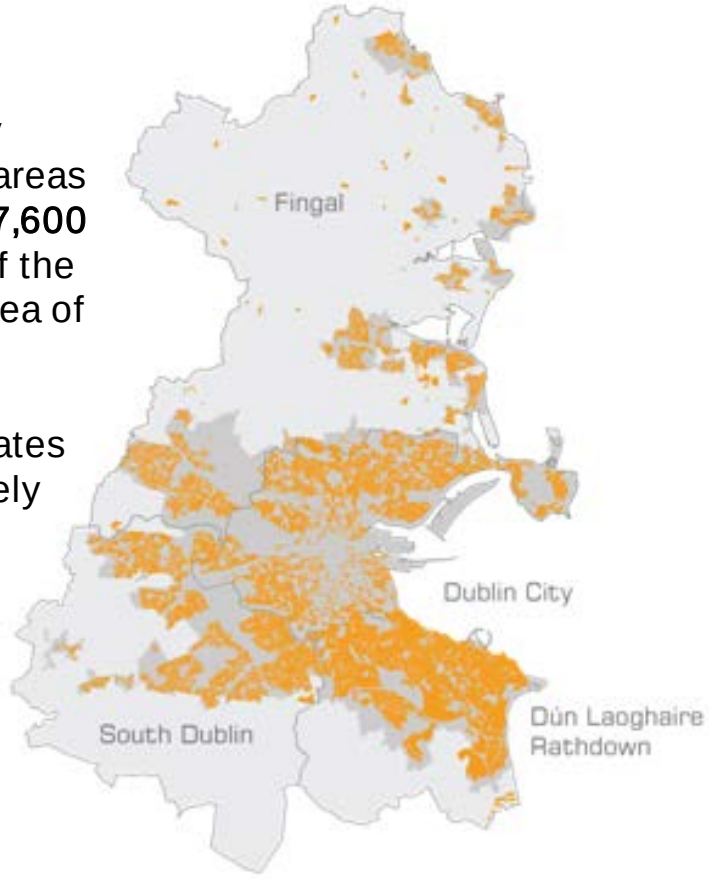
- The following sets out an overview of the different elements of the analysis undertaken to inform the findings:



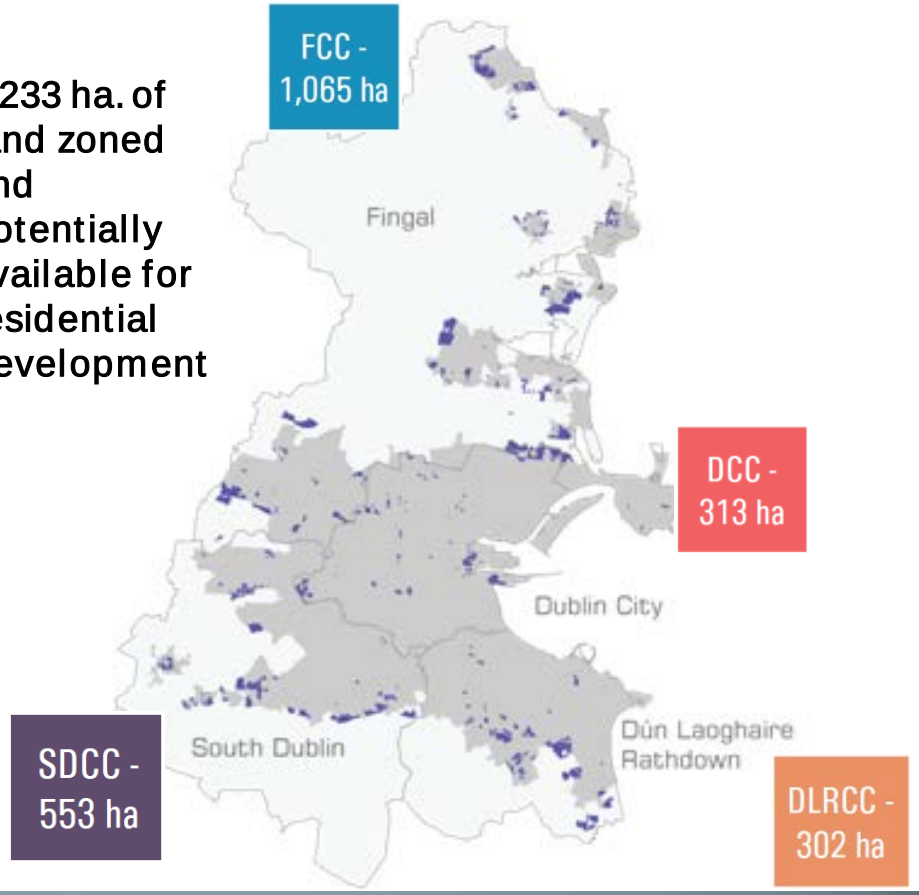
Methodology Overview

Zoning Analysis

Existing residentially developed areas occupy c. **17,600 ha.** or 19% of the total land area of the Dublin Region and accommodates approximately **529,310 dwellings**



2,233 ha. of land zoned and potentially available for residential development



Methodology Overview

Density Calculations

- A **sustainable density framework** has been applied to the identified lands, to ascertain the capacity of these lands to accommodate future populations.

- This **density framework** is based on the analysis of all relevant Local Area Plans and Development Plans, Residential Density Guidelines and relevant public transport policies.

Methodology Overview

Projection of Units

- **Component 1: Household Size.**

  The area of land (for residential development) multiplied by the density capacity for each parcel, to generate a 'Units per Hectare'. This is then merged with the average household size for the county to determine the level of population growth that this quantum of new residential development can accommodate.

- **Component 2: Household Composition**

  This determines the future requirement for particular household types and the need for units within these types (one-, two-, three-, four and five or more person households). By assessing the distribution in housing composition in the Dublin Region, this split is projected forward to 2018 to capture the expected minimum housing requirement.

Methodology Overview

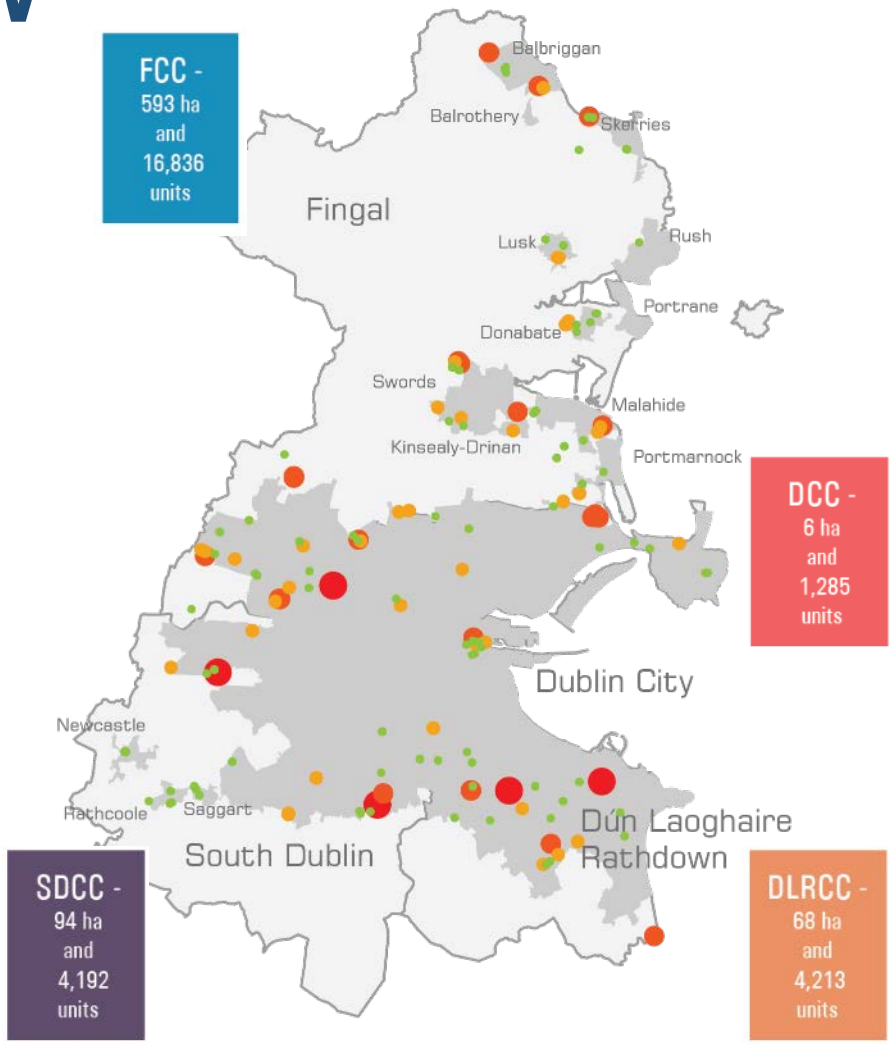
Planning Permission Analysis

Key

Small Application - Min 25 Units

Large Application - Max 2,314 Units

Granted (Extant) Planning Permissions for New Residential Development (from 2008 to June 2014)



Key Findings

- There are **2,233 hectares (ha) of land zoned and potentially available for residential development, which is 2.4% of the** total land area in the Dublin Region.

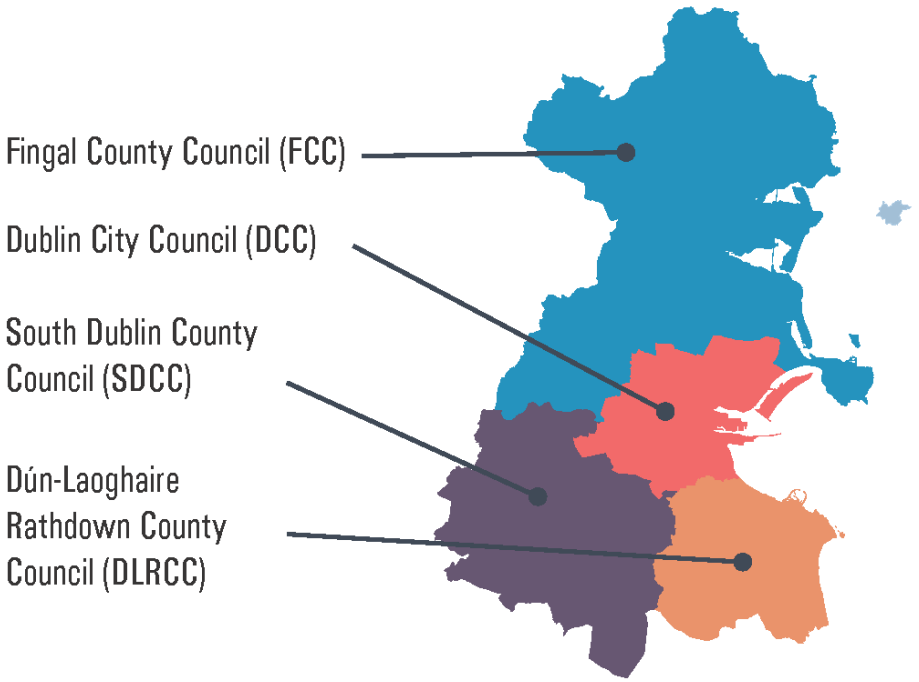
- This zoned land can deliver approximately **102,500 additional housing units under the minimum recommended density** scenario.

- This can result in the provision of housing for approximately **269,000 additional persons.**

- There is a **minimum housing requirement of 35,433 between 2014 – 2018. However, currently there is a total of just 26,526 planning permissions,** resulting in **a shortfall of 8,907 units over the five-year period.**

Key Findings

Local Authority	Zoned for Residential Development	Minimum Housing Requirement (2014-2018)	Granted Planning Permissions	% Surplus/ Deficit
DCC	313 ha	13,751 Units	1,285 Units	– 91%
FCC	1,065 ha	9,617 Units	16,836 Units	+ 75%
DLRCC	302 ha	3,299 Units	4,213 Units	+ 28%
SDCC	553 ha	8,766 Units	4,192 Units	– 52%
Total	2,233 ha	35,433 Units	26,526 Units	– 25%



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