

DCU – Our Energy Journey

Samantha Fahy

Director of Sustainability and Transport

5th International Workshop on UI Green Metric World University Rankings (IWGM)

15 April 2019, Cork, Ireland



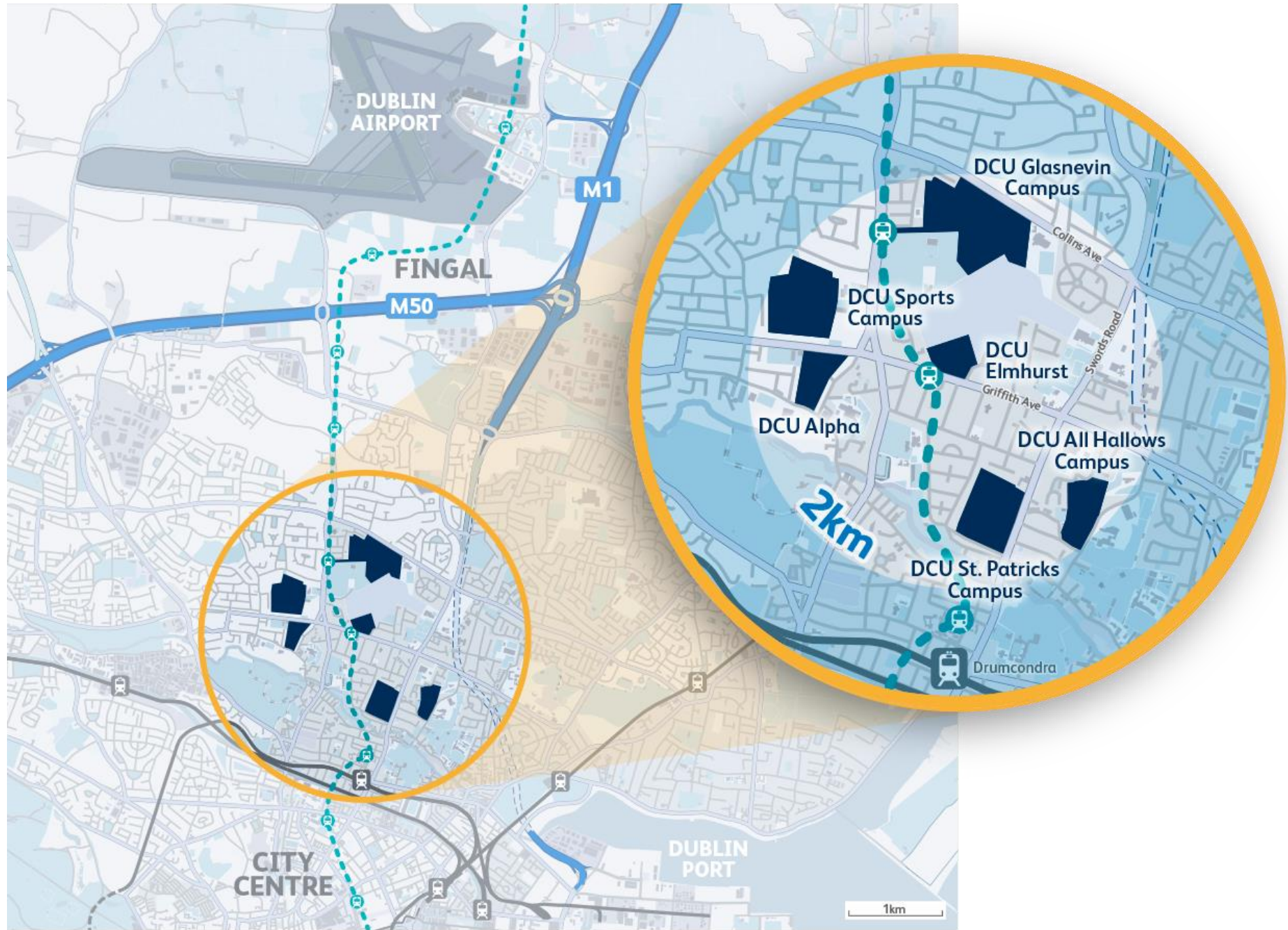
Talk Outline

- Overview DCU
- Our Energy Journey
- Challenges

DCU



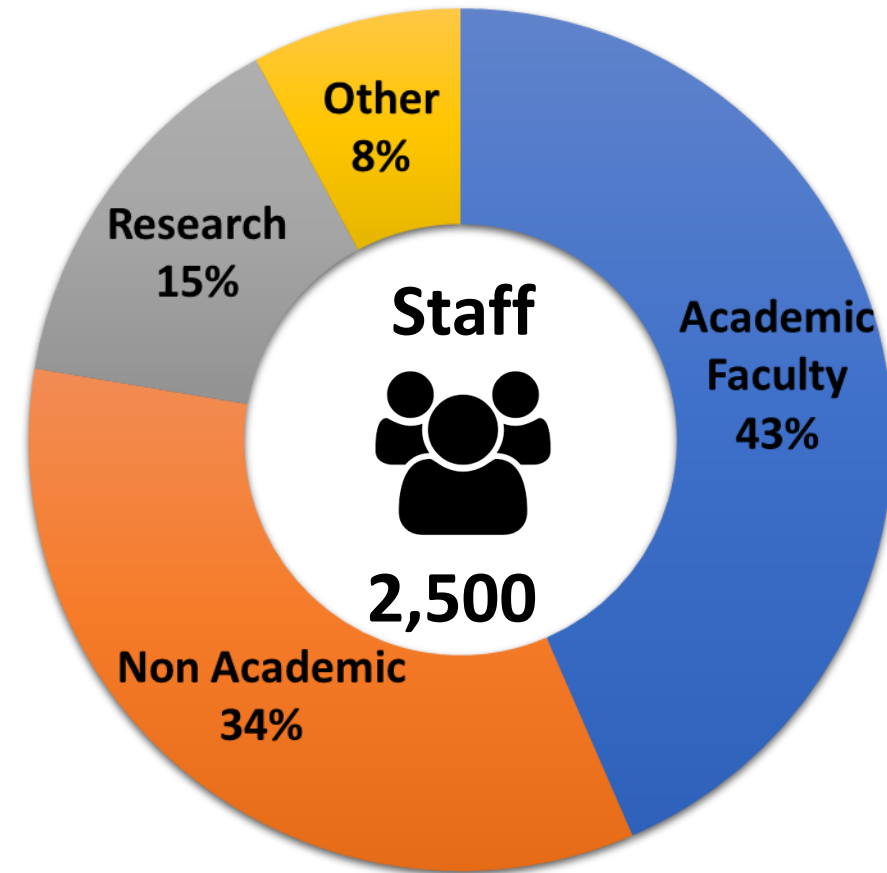
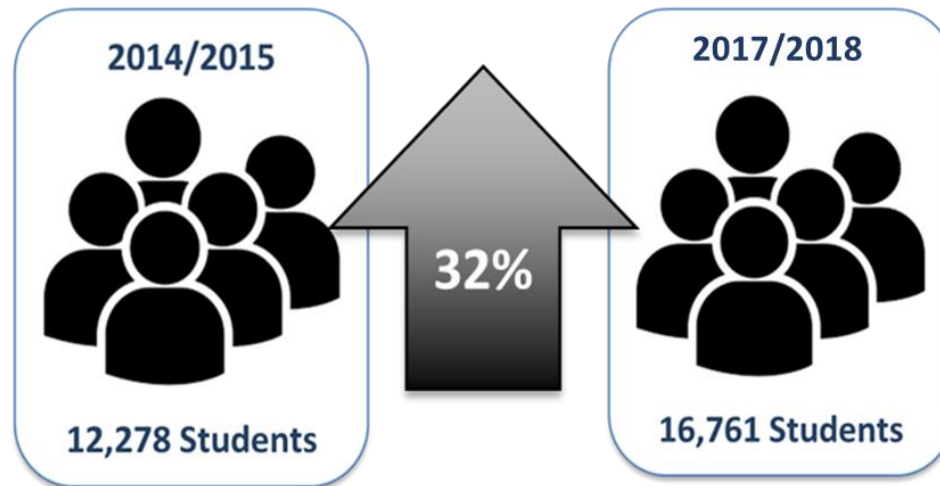
Ollscoil Chathair
Bhaile Átha Cliath
Dublin City University



The Numbers

Established in 1980, DCU has 80 Programmes across Five Faculties

- ❖ DCU Business School,
- ❖ DCU Institute of Education,
- ❖ Faculty of Science and Health,
- ❖ Faculty of Engineering and Computing
- ❖ Faculty of Humanities and Social Sciences



Sustainability at DCU

- *Initial Sustainable Development Policy in 2010/2011*
- *Created Sustainability Position in 2013*
- *RCE Dublin 2014*
- *FEE/An Taisce Green Campus Programme*
 - *First Green Campus Flag in 2014*
 - *Renewed and extended in 2017*
- *2017 : Sustainability at the Core*

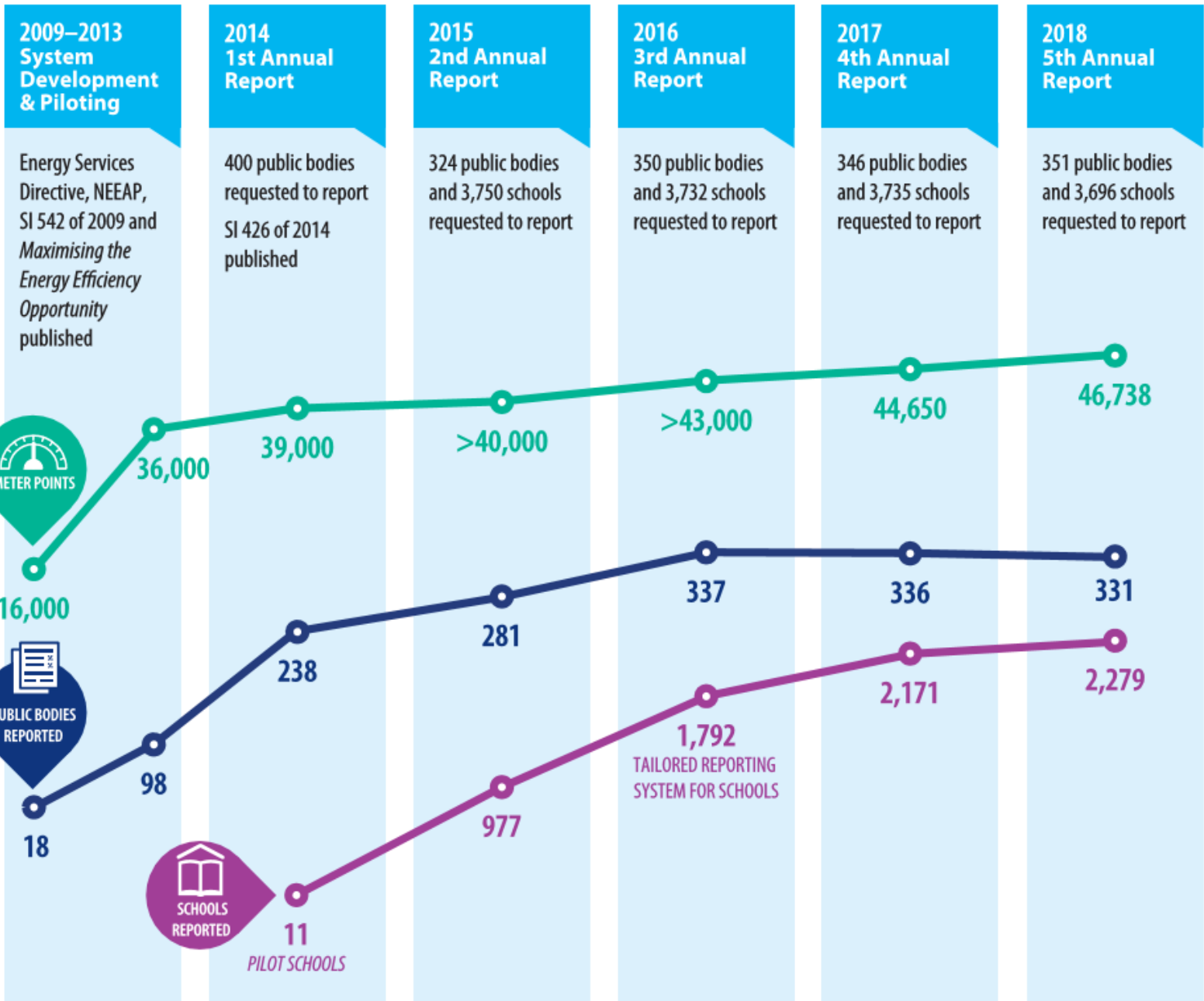
Our Energy Journey

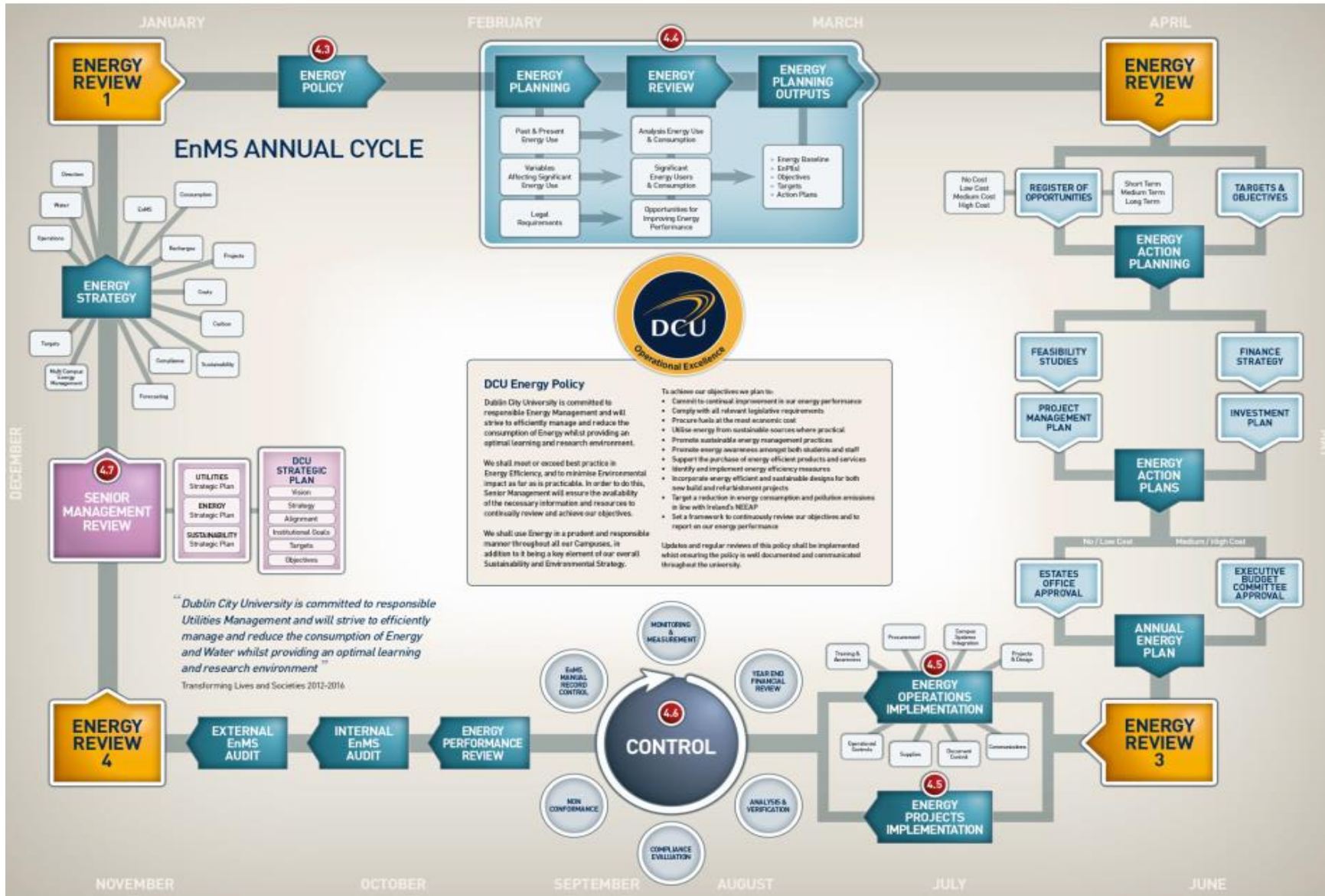
- SEAI Public Sector Energy Partnership Programme
- Upskilling of key staff
- DCU Energy Policy & ISO 50001
- SEAI Better Energy Grants for Living Lab with Pilot Projects
- Campus wide engagement
- SEAI Sustainable Energy Community

Public Sector



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Energy Policy

Dublin City University is committed to responsible Energy Management and will strive to efficiently manage and reduce the consumption of Energy whilst providing an optimal Learning and Research Environment.

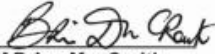
We shall continue to meet or exceed Best Practice in Energy Efficiency, and to minimise Environmental Impact as far as is practicable. In order to do this, Senior Management will ensure the availability of the necessary information and resources to continually review and achieve our objectives.

We shall use Energy in a prudent and responsible manner throughout all of our Campuses, in addition to it being a key element of our overall Sustainability and Environmental Strategies.

To Achieve our objectives, we plan to:

- Commit to Continual improvement in our Energy Performance and Management
- Comply with all relevant Legal and Other requirements
- Procure Fuels and Energy at the most favourable Economic Cost
- Utilise Energy from Sustainable Sources where practical and Promote Sustainable Energy Management Practices
- Promote Energy Awareness amongst both Students and Staff
- Support the Purchase of Energy Efficient Products and Services
- Identify and implement Energy Efficiency Measures
- Incorporate Energy Efficient and Sustainable Designs for both New Build and Refurbishment Building Projects
- Target a reduction in Energy Consumption and Pollution Emissions in line with Ireland's National Energy Efficiency Action Plan
- Set up a Framework to periodically Review our Objectives and Targets and to Report on our Energy Performance

Updates and regular reviews shall be implemented to ensure our Energy Policy is relevant, well documented and communicated fully throughout the University.


 Prof Brian MacCraith
 President
 Dublin City University

21. 7. 17
 Date



This is to certify that the
Energy Management System

OF

Dublin City University (DCU)

At

Glasnevin Campus, Glasnevin, Dublin 9
 Sports Campus, Glasnevin, Dublin 9
 St. Patricks Campus, Drumcondra Road Upper, Drumcondra, Dublin 9
 All Hallows Campus, Grace Park Road, Drumcondra, Dublin 9
 Alpha Innovation Campus, Old Finglas Road, Glasnevin, Dublin 11

Has been assessed by Certification Europe and deemed to comply with the requirements of

ISO 50001:2011

This certificate is valid for the activities specified below:

All natural resources within the direct control of DCU.

Certification of Registration remains the property of Certification Europe Ltd.
 The validity of this Certificate is maintained on the condition that the Management System is assessed through an on-going surveillance programme and continues to adequately meet the requirements of the standard.
 To verify this certificate validity please contact us at: info@certificationeurope.com

Date of Initial Certification: 19th December 2017

This Certificate is valid until: 18th December 2020

Chief Executive: Michael Brophy

Chairman: Padraic A. White

Signature:

Signature:

Client Registration No.: 2017/2603
 Certificate Reference No.: A1

Date of certificate issue: 19th December 2017



I Better Energy Works Programme Examples



BMS Systems



Boiler Upgrades



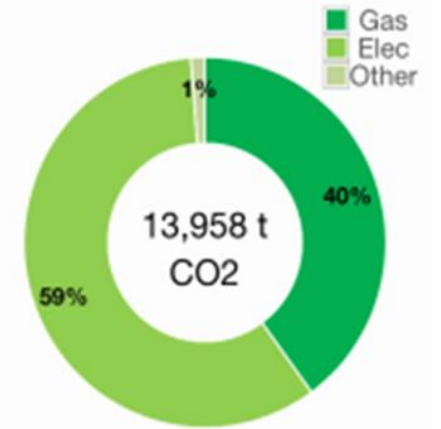
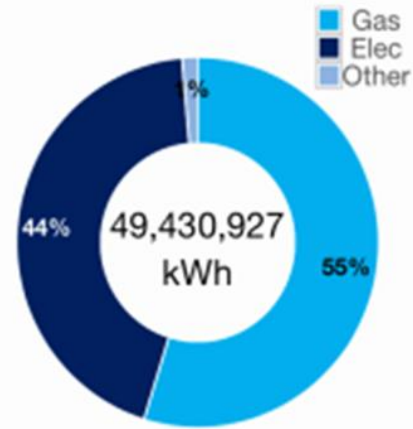
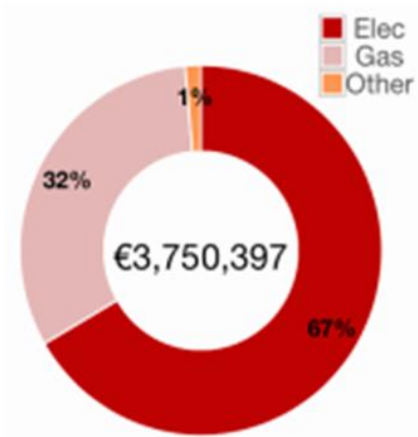
Insulation



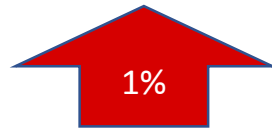
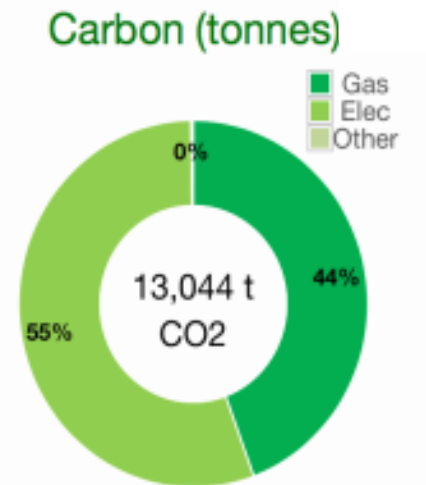
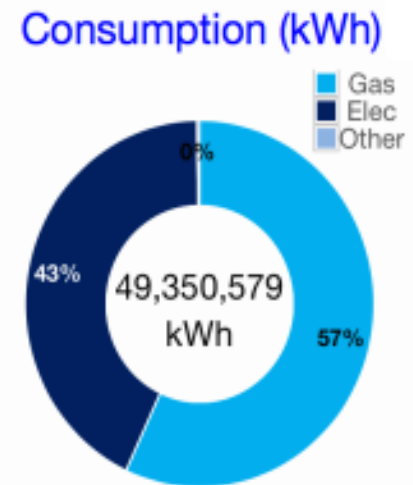
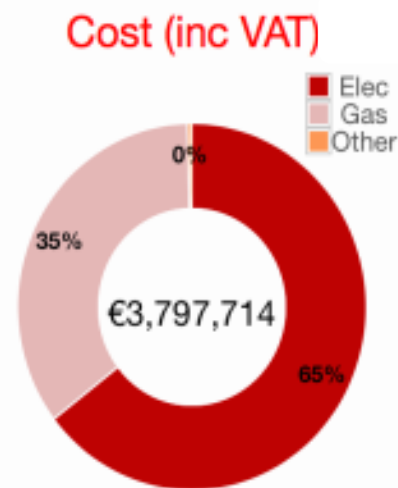
**200MWh in
Multi-storey**

2017 -> 2018

2017



2018

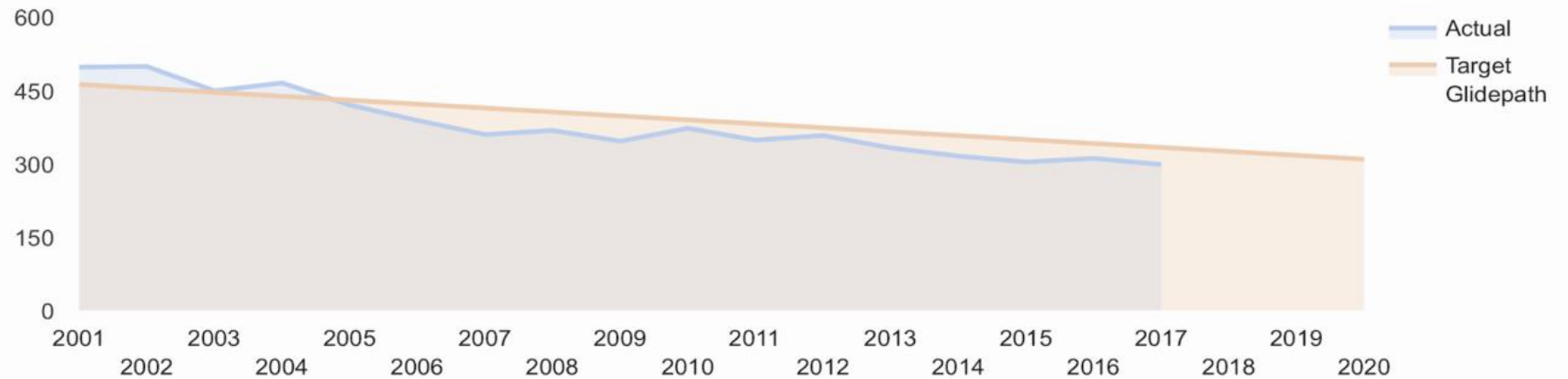


DCU Energy Performance Indicator 2017

Energy Performance Indicators - 2017

2017 EnPI = 300 $\frac{\text{kWh}}{\text{Equivalent Floor Area (m}^2\text{)}}$

Target EnPI = 311 $\frac{\text{kWh}}{\text{Equivalent Floor Area (m}^2\text{)}}$



4.0% better than 2016



35.3% better than baseline



3.5% better than 2020 target



10.4% better than target 'glidepath'



Level 2 Energy Performance Indicators (2017)

Electricity = 184

5.1% better than 2016



Thermal = 115 $\frac{\text{kWh}}{\text{Equivalent Floor ...}}$

2.2% better than 2016



Transport = 1 $\frac{\text{kWh}}{\text{Equivalent Floor ...}}$

1.2% better than 2016





DCU praised for energy efficiency as
Minister Bruton publishes SEAI report



Campus wide engagement

- Sustainability Office
- Sustainability @ Staff/Student Orientation
- An Taisce Green Campus Programme
- Display Energy Certificates
- Newsletter
- Info Screen
- T&L & Research links

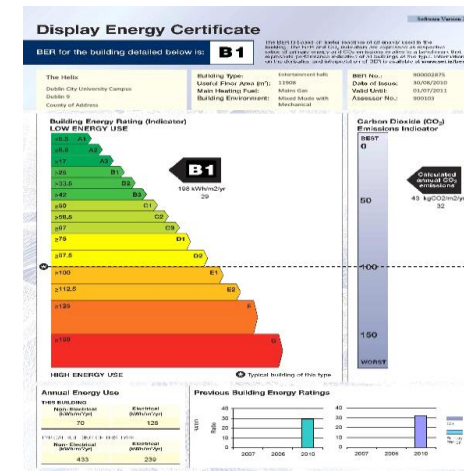
Last one out?



Lights out!

Turning off the light will save money and help reduce carbon emissions. Please help us protect the environment.

Thank you from the DCU Green Committee



Sustainable Energy Community SEC

- DCU Community Engagement
- Survey of home needs with home energy kits
- Identification of Register of opportunities
- Workshops on Grant applications
- Expand to Local community



Challenges

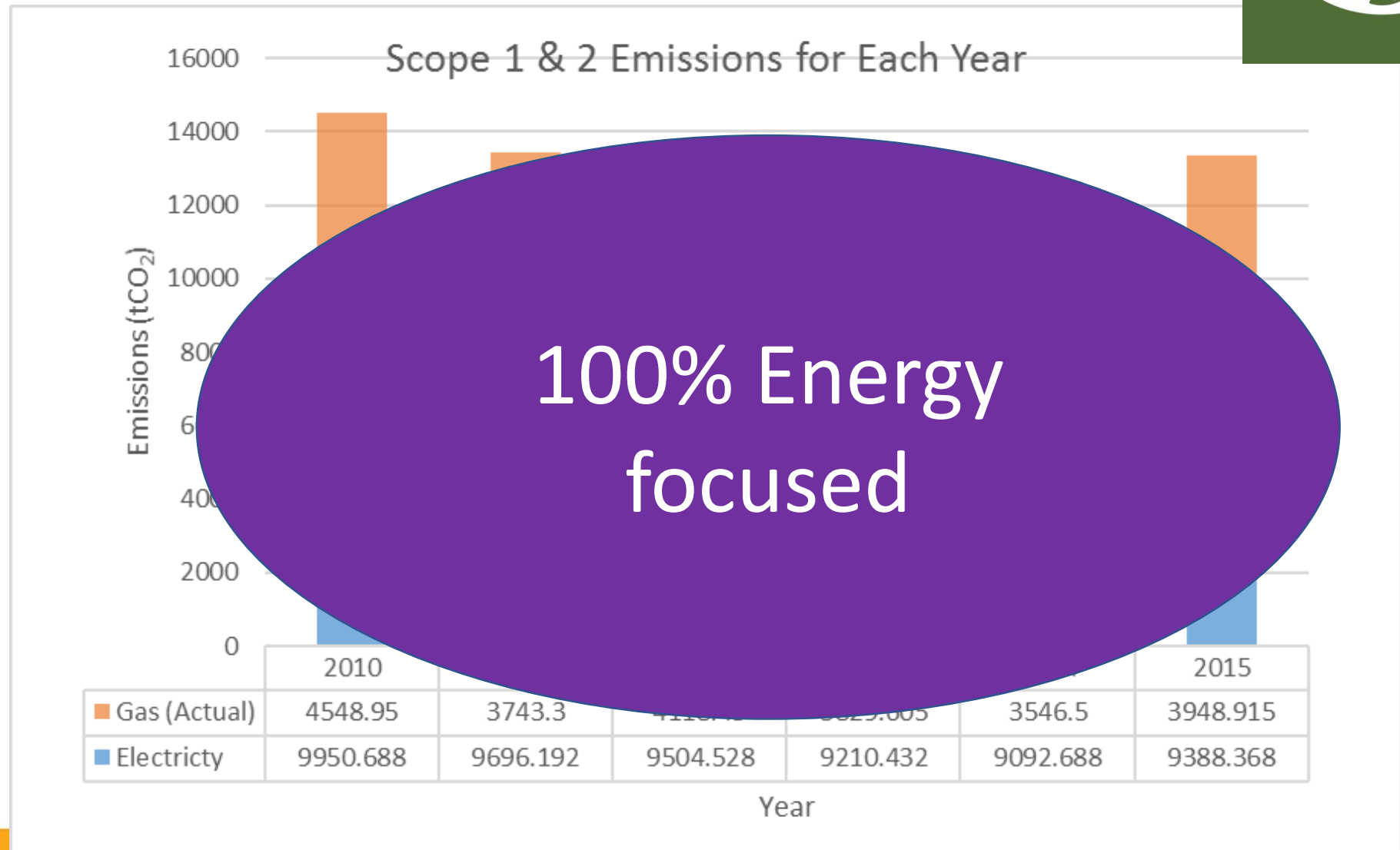
Growing University

- 20,000 students by 2022
- 70+ Buildings
- Refurbishments
- Extensions
- New Builds/NZEB
- Funding
- Carbon Budgets



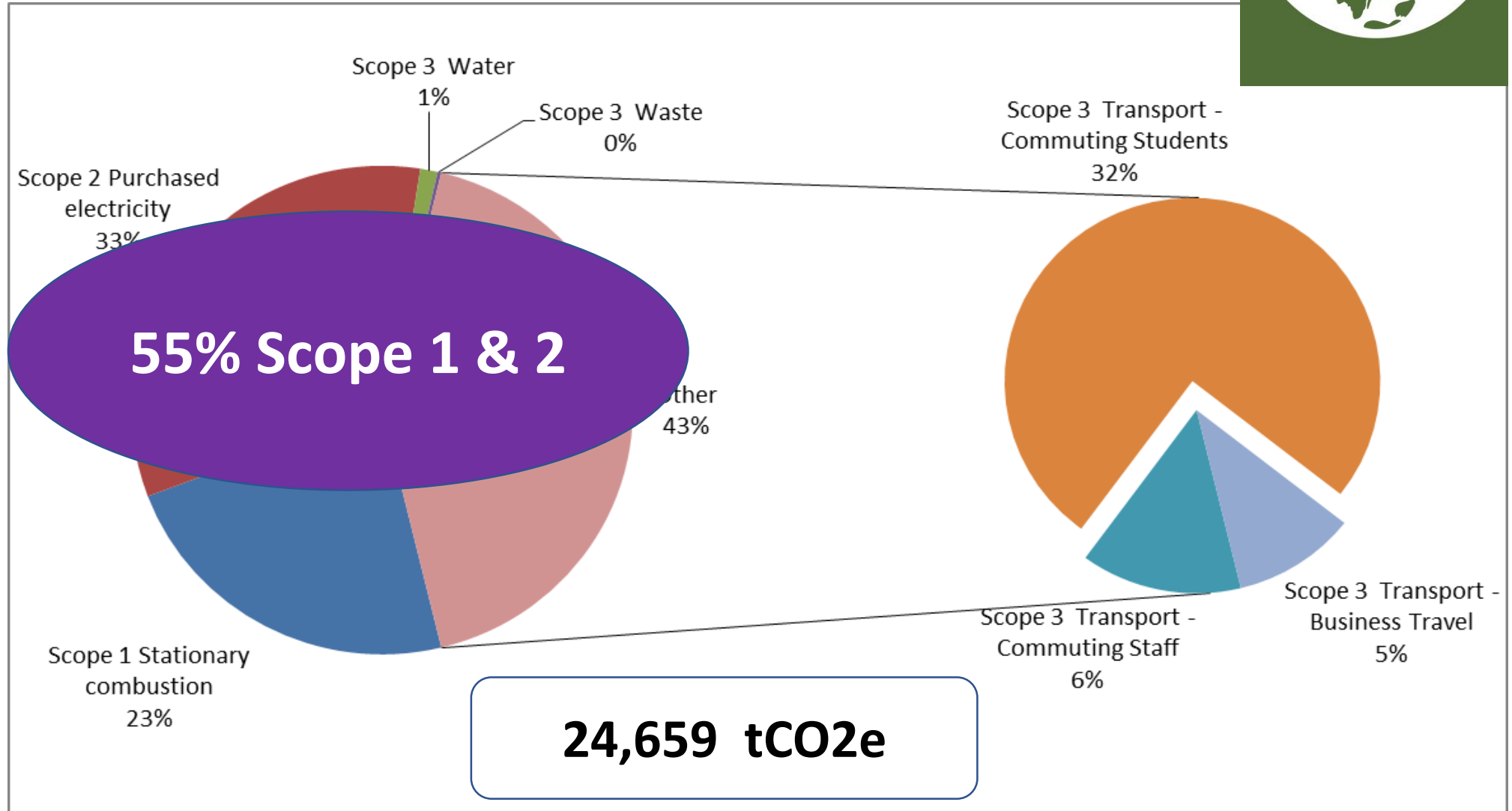


Carbon Footprint 2010 – 2015



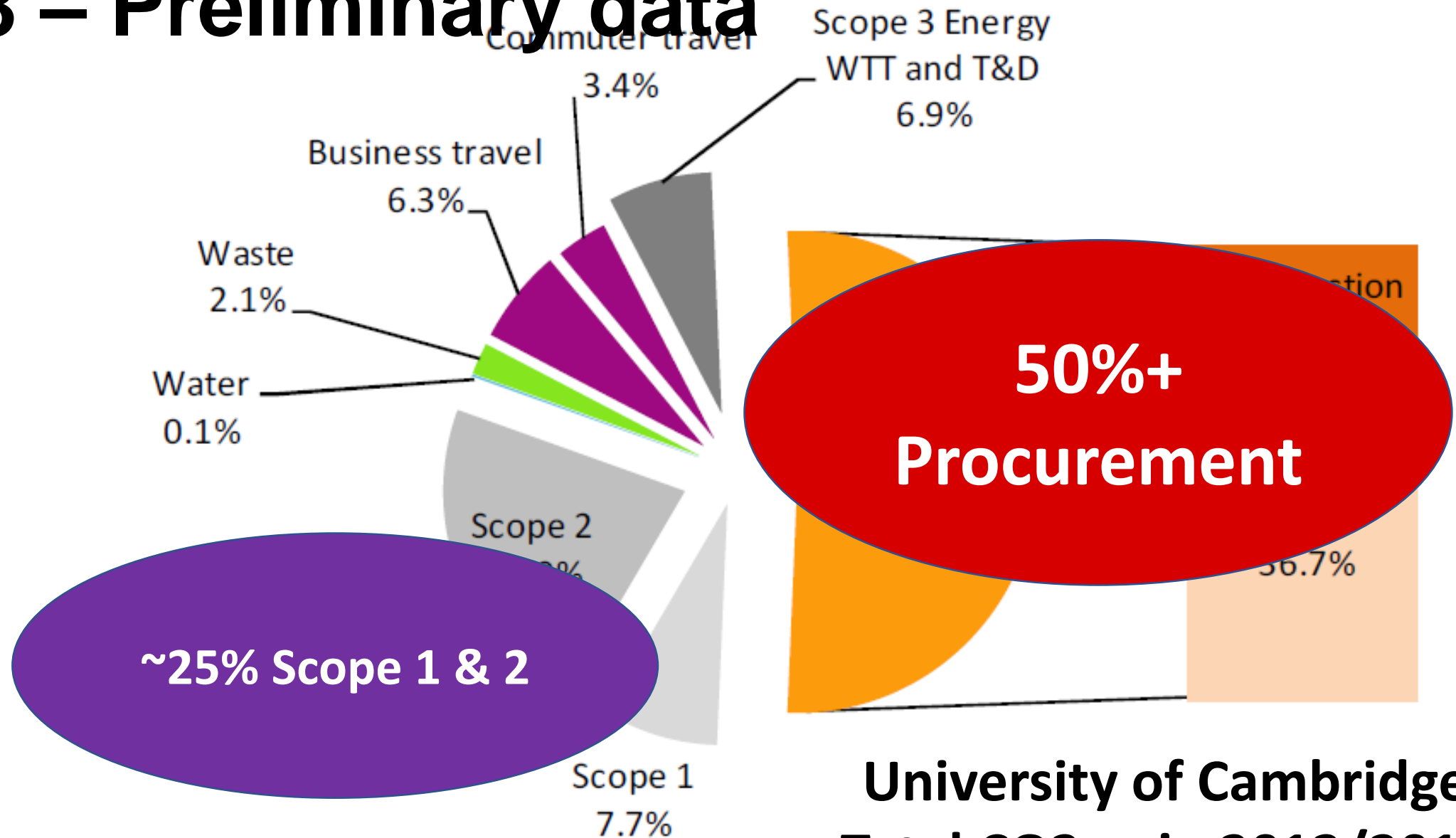


Carbon Footprint 2017*



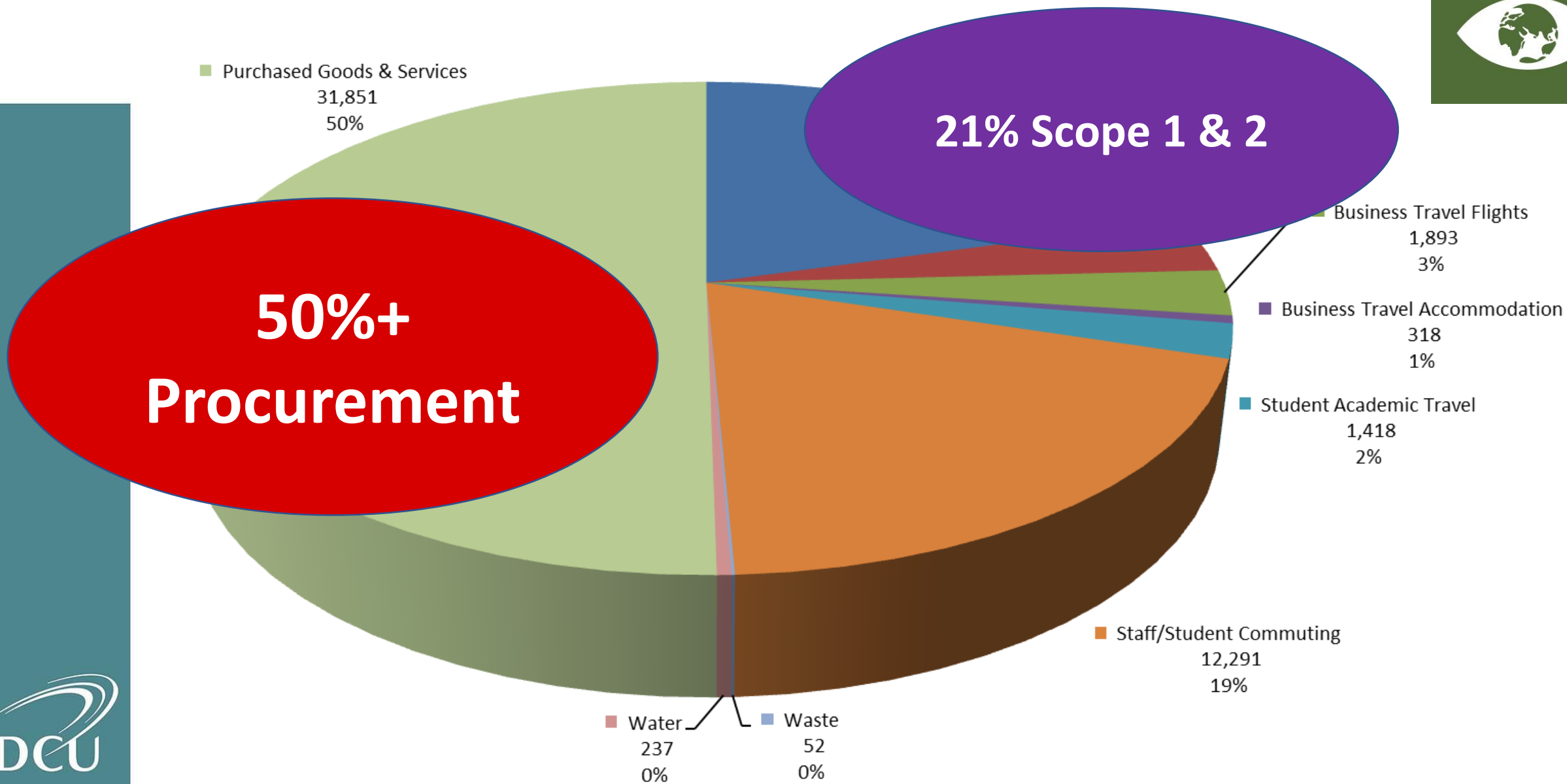
*Not Fully Comprehensive – no procurement.....

2018 – Preliminary data



**University of Cambridge
Total CO2eq in 2012/2013**

DCU 2018: GHG Protocol: tCO₂eq



**Purposefully
different,
consistently
excellent**

Thank You