

RE:FIT

BUILDING ENERGY EFFICIENCY FOR TOMORROW

London's building retrofit programme

Tristan Oliver

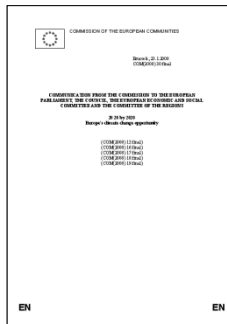
Technical Team Lead

RE:FIT Programme Delivery Unit (PDU)

The Mayor's Commitment

Today

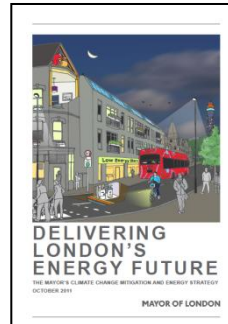
2020
European 20-20-20
Target



- Reduction in greenhouse gas emissions by **20%** below 1990 levels by 2020
- **20%** increase in renewables
- **20%** cut in energy consumption

2025

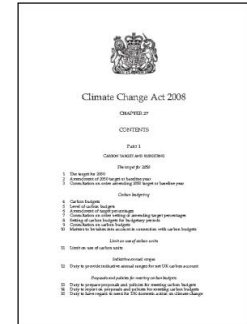
London Mayor's
Climate Change Target



- Reduction in greenhouse gas emissions by **60%** below 1990 levels by 2025

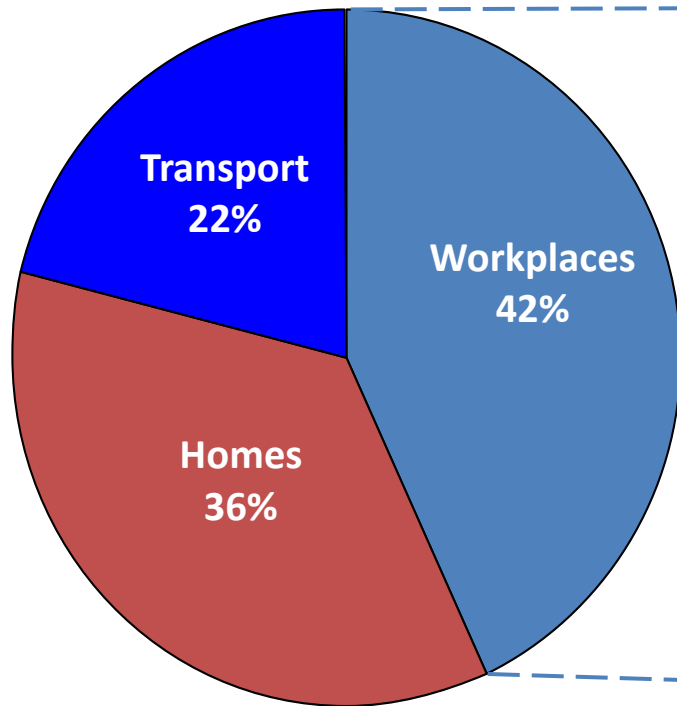
2050

UK Climate Change Act
(2008)

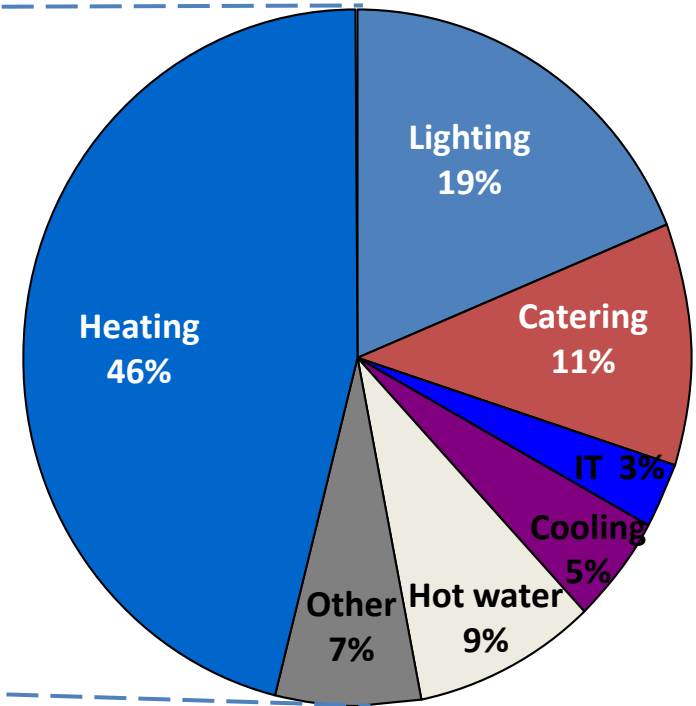


- Reduction in greenhouse gas emissions by **80%** below 1990 levels by 2050.

42% of London's CO₂ emissions are from workplaces



**CO₂ emissions from London, 2008
(excluding aviation)**
100% = 44.7 million tonnes CO₂



**Commercial & Public Sector CO₂ emissions from
London, 2008**
100% = 19.2 million tonnes CO₂

Public sector comprised of health (23%), education (47%) and offices (30%)

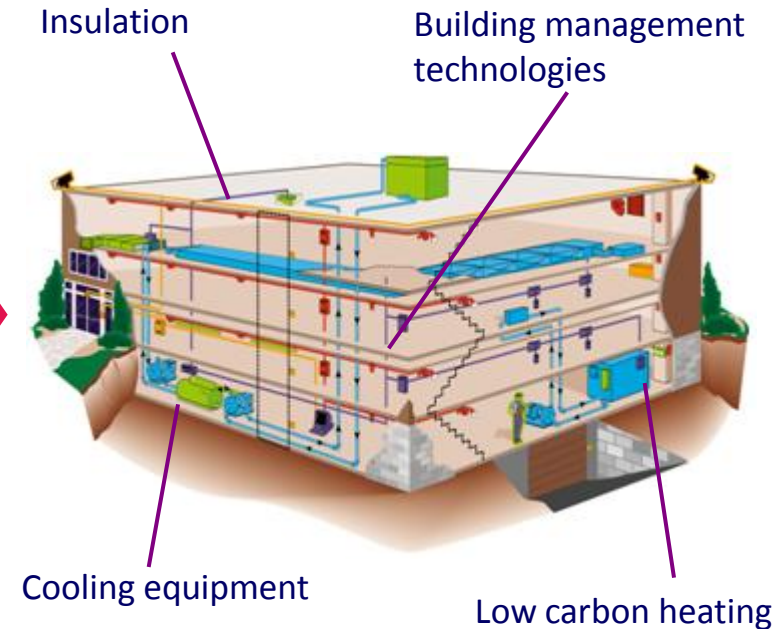
The RE:FIT Building Energy Efficiency Programme

Energy Performance Contracting approach:

The public sector building owner identifies a portfolio of buildings to retrofit, sets a target percentage energy savings and a payback period

Then run a competitive mini-competition to select an Energy Service Company (ESCO) to carry out the works and guarantees the resulting energy savings

This guarantees the payback of the investment with the delivery risk transferred to the ESCo



RE:FIT allows public bodies to make substantial cost savings, reduce energy bills and the carbon footprint of their buildings

Energy Conservation Measures include:

Control improvement measures

- VSDs on pumps and fans
- PC control / BMS controls

Technology upgrade measures

- Voltage optimisation
- Lighting & controls
- Heat recovery

Renewable measures

- Photovoltaic panels
- Solar thermal

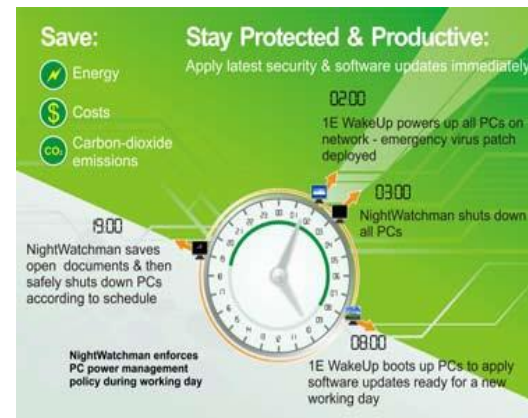
Building fabric measures

- Cavity wall/ loft insulation
- Draught proofing

Energy Plant

- CHP/ Boilers/ Chillers

Integral MLS Digital Detector



1E Nightwatchman software for PC auto shutdown



Framework of Approved Suppliers

- Balfour Beatty
- COFELY (GDF SUEZ)
- MITIE
- EDF Energy
- E.ON Sustainable Energy Business
- Hoare Lea Consulting Engineers (Parkeray)
- Honeywell
- Hurleypalmerflatt
- Interserve
- Johnson Controls
- Schneider Electric
- Willmott Dixon



New framework of suppliers to be in place for January 2013

Retrofits completed/near completion on 111 buildings including:

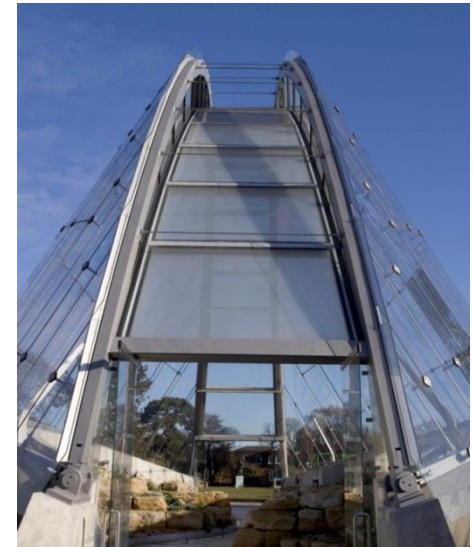
- Hospitals
- Universities
- Cultural Centres
- Office buildings
- Schools
- Fire stations
- Police buildings



£2.1m energy bill savings pa
£13.3m investment

Memoranda of Understanding signed by 54 London organisations including:

- 21 of the 33 London Boroughs
- 16 NHS Organisations
- 17 others



2008

2010

2012

**First London
Fire Station**

RE:FIT Pilot
42 buildings
£1m energy
bill savings
per annum

111 buildings
£2.1m energy
bill savings
per annum
£13.3m
investment





2012

**Pipeline of
325 buildings**

Savings of
over **£7m** p.a.
in energy bills

£39m
investment

2015

**Target 600
buildings**

Savings of up
to **£12m** in
energy bills
per annum

2025

**Target 40% of
public sector
organisations**

Savings of up
to **£80m** in
energy bills



- The GLA secured funding from the European Commission under the European Local ENergy Assistance Programme
- ELENA funds the Programme Delivery Unit (PDU) to further drive take up of the RE:FIT programme and provide support
- 90% of the £2,671,000 funding is provided by ELENA and 10% by the GLA



ELENA : le mécanisme européen d'assistance technique pour les projets énergétiques locaux

La lutte contre le changement climatique figure au premier rang des priorités de l'Union européenne et ce défi ne pourra être relevé sans la contribution active des acteurs locaux. ELENA est un mécanisme d'assistance technique qui, par le biais d'aides non remboursables, vise à soutenir l'élaboration de programmes d'investissement dans ce domaine.



The PDU has to leverage its cost 25 times in investment

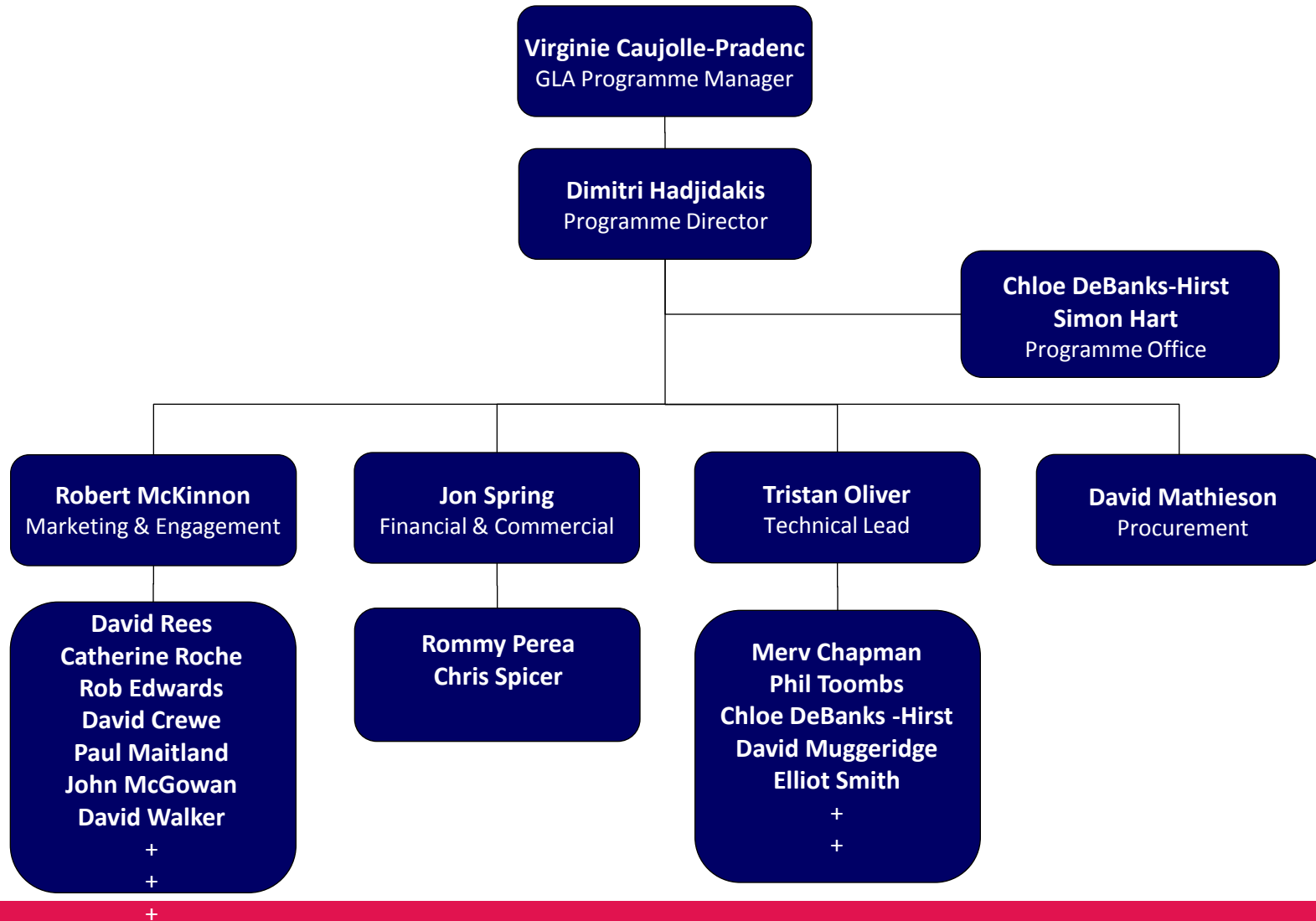
The role of the Programme Delivery Unit

- Combines the expertise of **Turner & Townsend** and **PA Consulting**
- Manages the RE:FIT framework
- Facilitates the uptake by London-based Public Sector organisations
- PDU plays a key role throughout
- Supports clients through all programme stages
- Uses experience and lessons learnt to develop best practice templates and standards



The GLA has committed to save approximately 100,000 tonnes of CO₂ over 3 years through the PDU

The Programme Delivery Unit Team



Own Funding

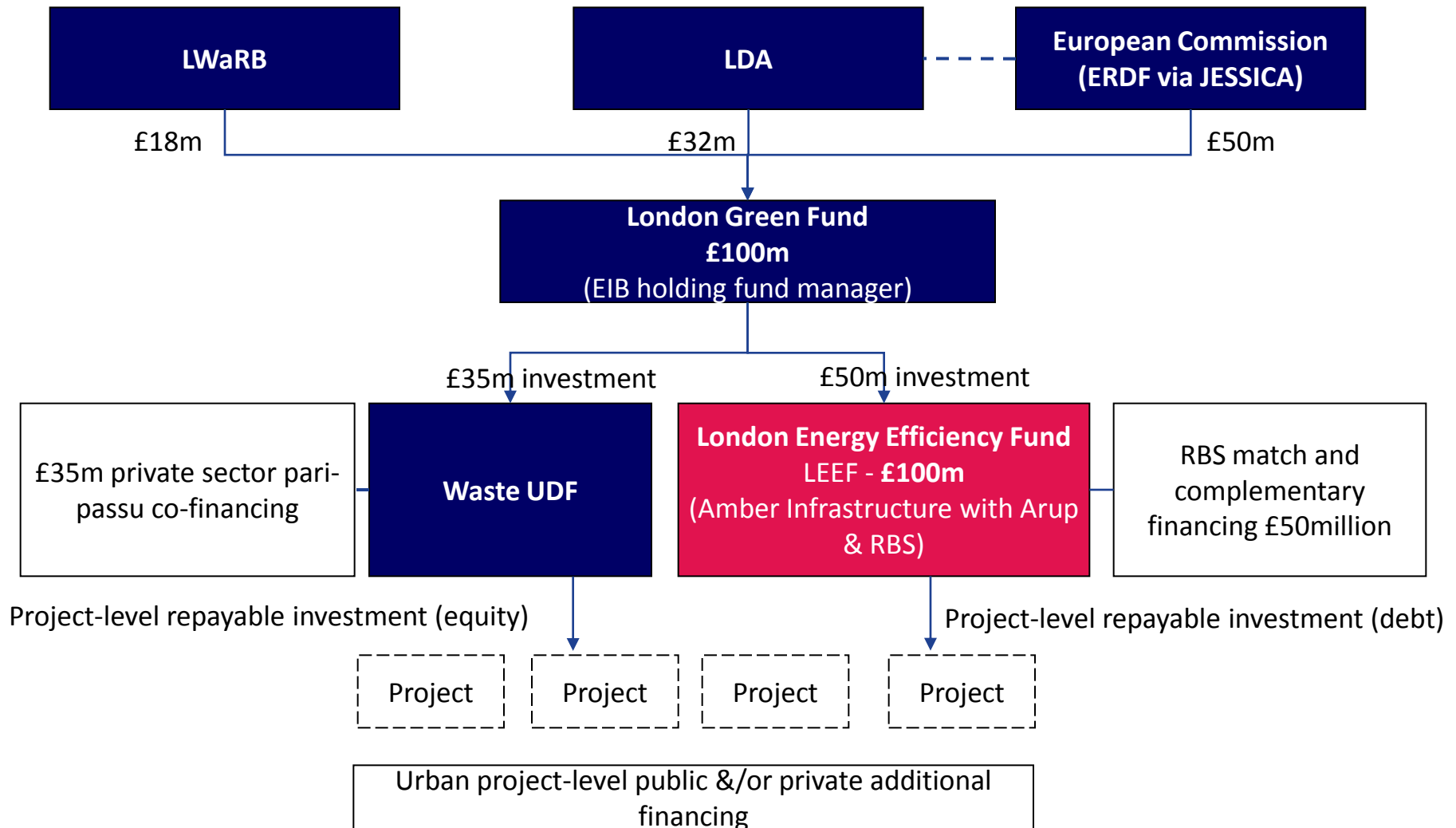
or

Borrowing – on balance sheet

- **London Energy Efficiency Fund**
- **Banks**
- **Salix**
- **Public Works Loan Board**
- **Others**

New funding options under the 2013 framework

London Energy Efficiency Fund



The GLA is currently procuring a new RE:FIT Framework to help users of RE:FIT and further develop this market sector.

The new RE:FIT framework will be available to users from January 2013.

Planned improvements on current framework include:

- Extended range of funding options
- Simpler tendering options to make smaller projects more viable
- Clearer pricing & contractual powers



- **Significant Mayoral support**
- **Savings are guaranteed**
- **Barriers of alternative procurement routes removed**
- **The PDU will support you at every step through the RE:FIT process and provide as much or as little support as you need**
- **A tested, readily accessible and constantly updated and improved approach**
- **The Programme Delivery Unit is funded and ‘free’ to support Public Sector organisations**

RE:FIT

BUILDING ENERGY EFFICIENCY FOR TOMORROW

QUESTIONS ?

MAYOR OF LONDON