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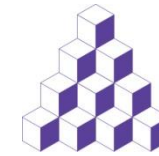
Greater Manchester Heat Network Programme

Jonathan Sadler
Manchester City Council

APSE Climate Change and Renewables Advisory Group

31st May 2012

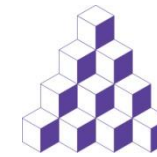
Overview



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- Background & Introduction
 - GM Heat Network Programme: overview
 - Projects & Work To Date
 - Next Steps
 - Key Points
-

Background & Introduction (1)



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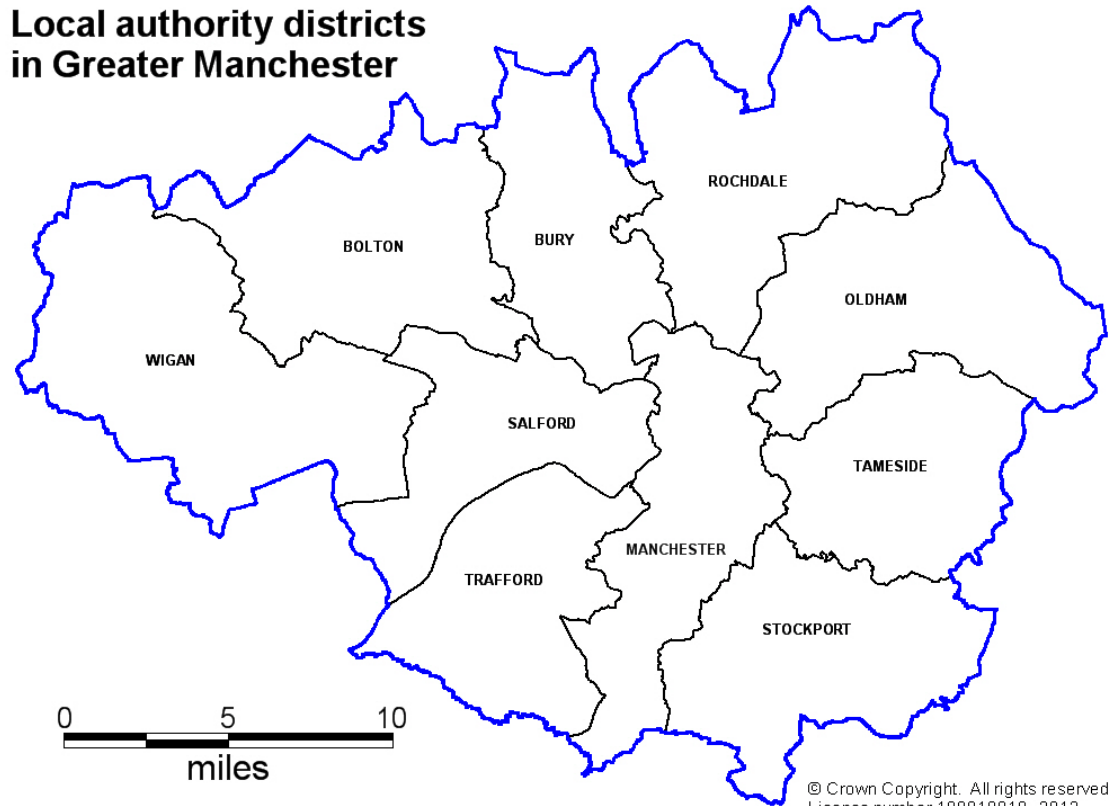
- 2.6m residents

- 1,272km²

- €55.3m GVA

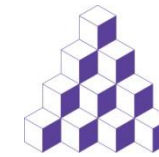
- GMCA & LEP

Local authority districts
in Greater Manchester

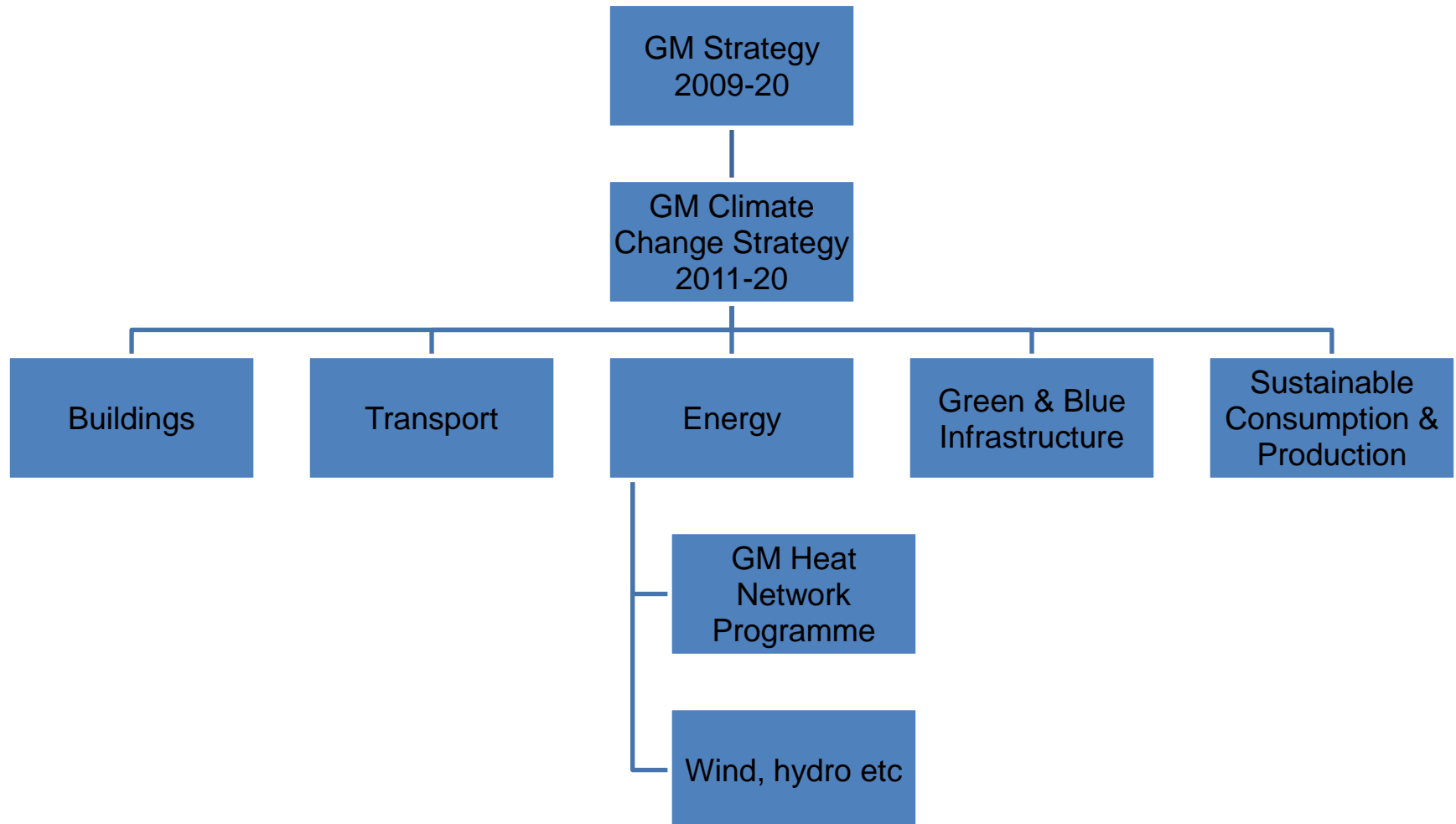


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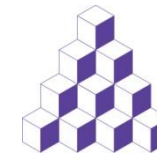
Background & Introduction (2)



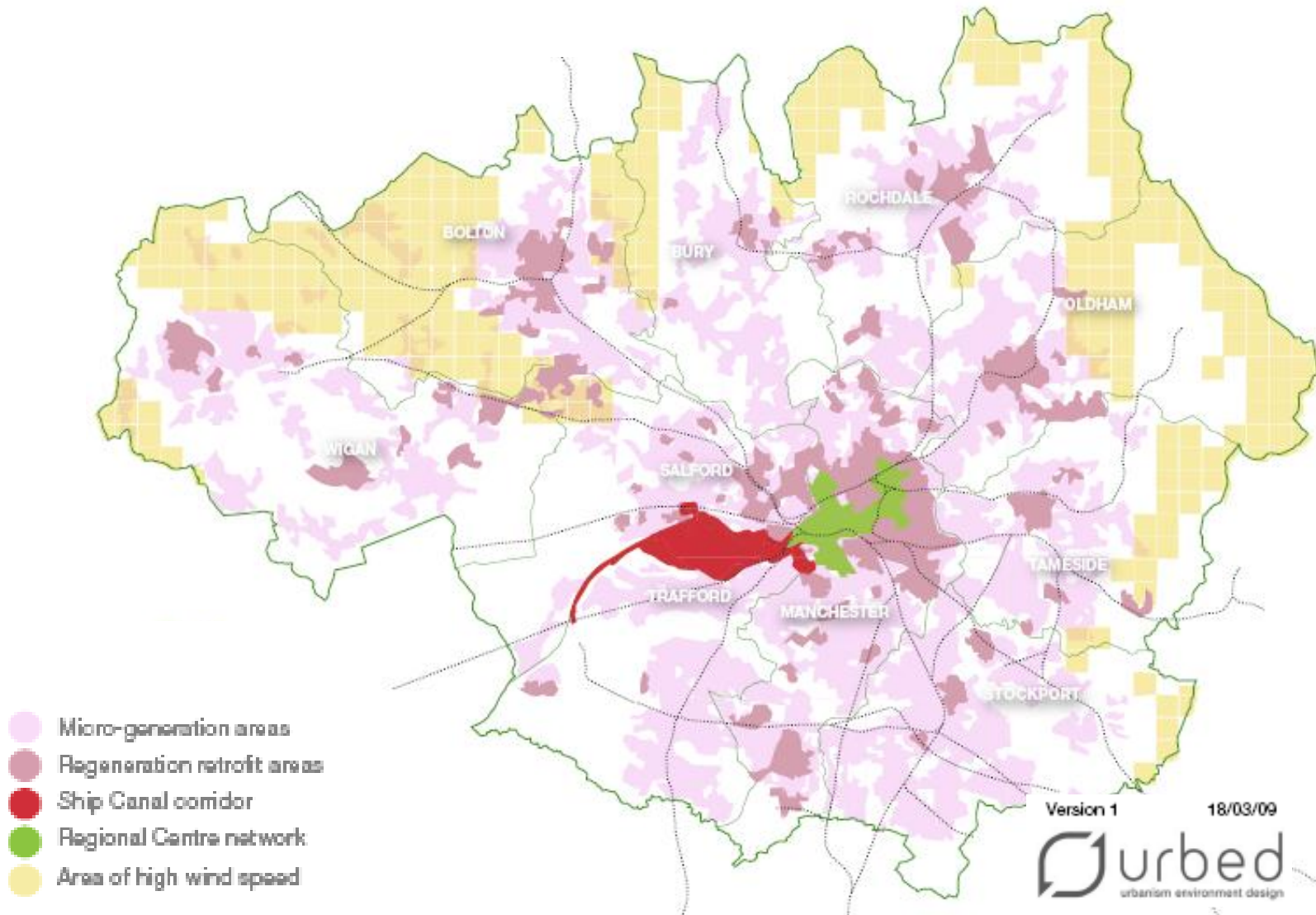
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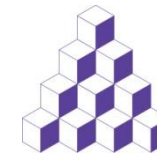
Background & Introduction (3)



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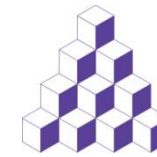


GM Heat Network Programme



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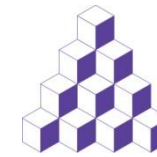
Phase 1 – identifying opportunity			Phase 2 – project development				Phase 3 – detailed design				Phase 4 - delivery
Opportunity mapping	Political support	Objective setting	Data gathering	Project definition	Options appraisal	Feasibility study	Detailed financial modelling	Detailed business modelling	Soft market testing	Procurement	Delivery
Tameside	Trafford – Carrington	Rochdale Salford		Bolton	Trafford – Stretford Rd Bury Wigan	Mcr - Town Hall Oldham Stockport					



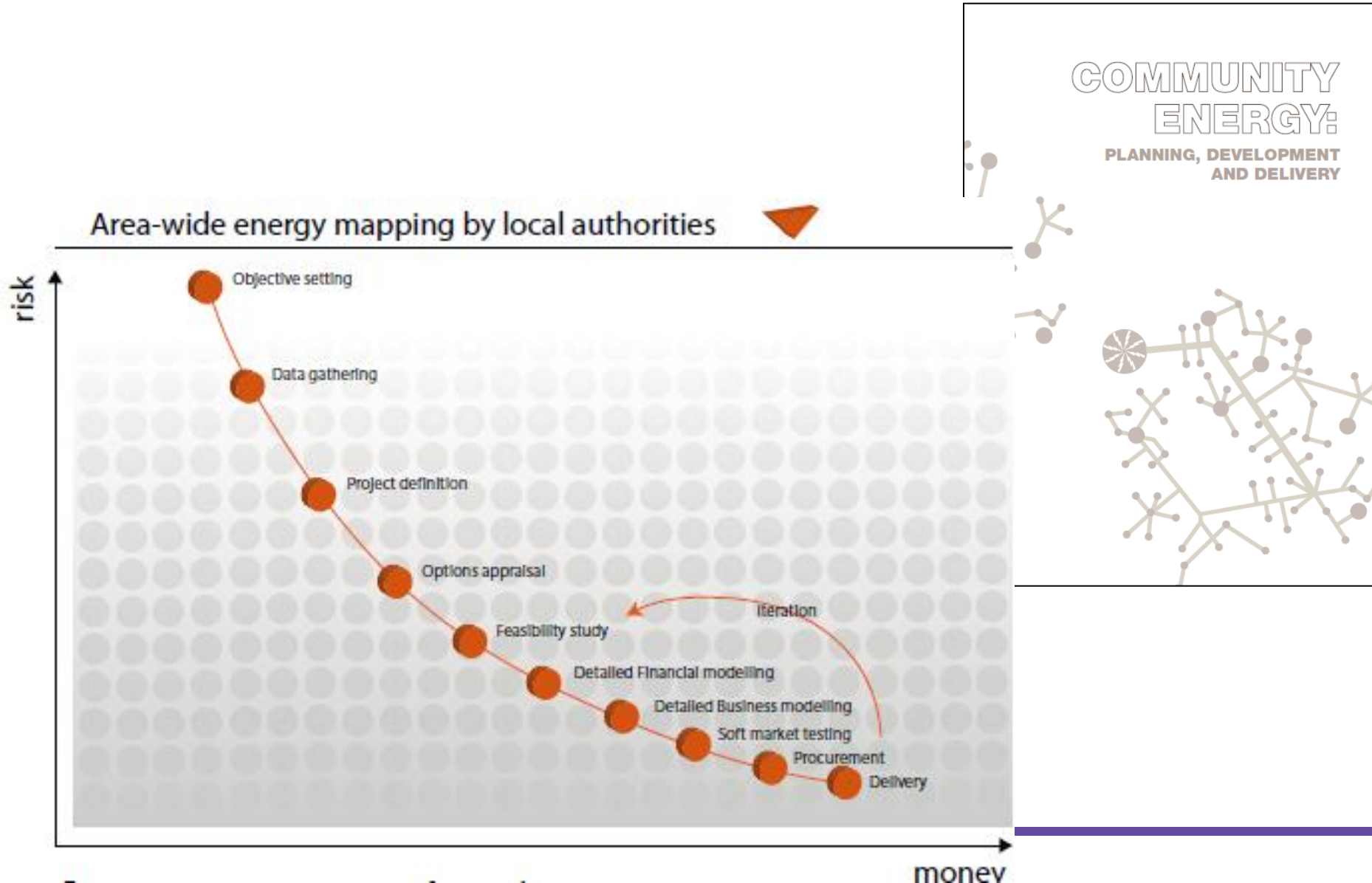
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Projects

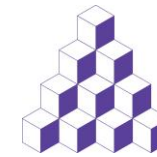
Project Development Process



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Manchester – Town Hall



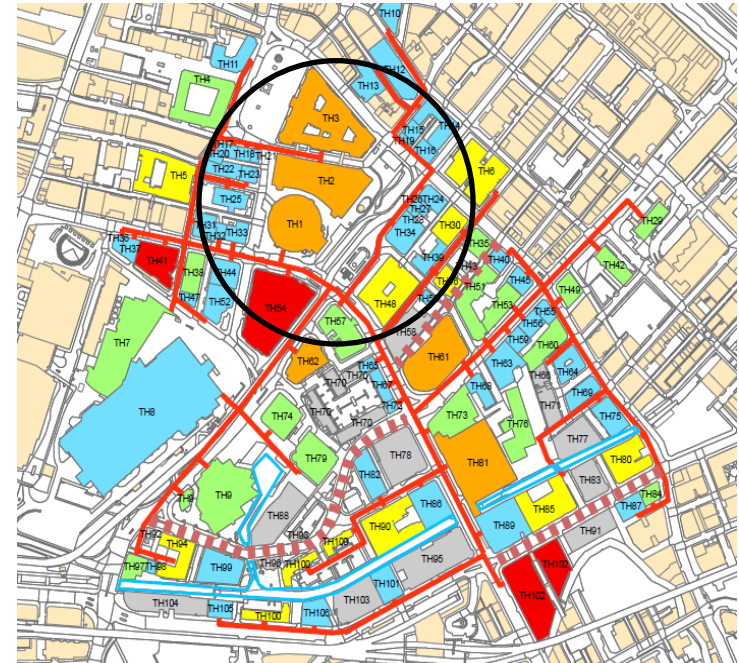
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Project Overview

- 1 of 4 city centre clusters
- 5 buildings:
 - Town Hall (Grade 1 Listed)
 - Town Hall Extension (Grade 2* Listed)
 - Central Library (Grade 2* Listed)
 - Midland Hotel
 - 1 St Peter's Square (new build office)
- €5.8m
- 1,375 tonnes CO₂

Technical Overview

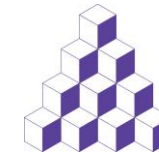
- 1 no. 2,000kVa CHP unit
- 2 no. 2.9MWth gas boilers
- 2 no. 20,000 litre thermal stores
- CHP unit = 60% of the heat demand
- 100% electricity used locally; no grid connection



Funding to date

- MCC (£40k)
- Carbon Trust SDA (£40k)

Oldham – St Mary's



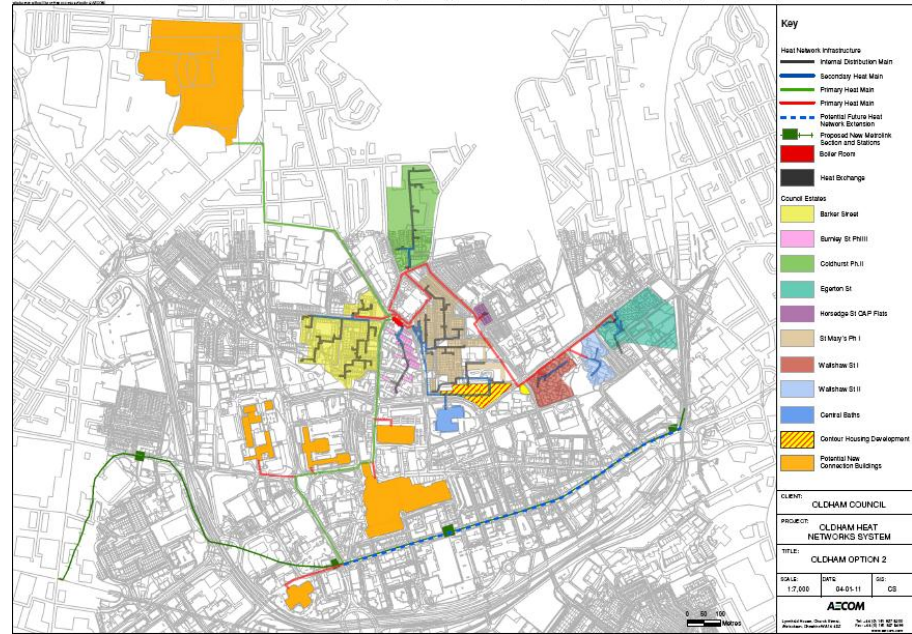
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Current Scheme

- 1,400 First Choice (social) homes
- Leisure centre
- 3 boilers: a dual fuel, gas and gas-oil fired boiler
- And 4 pass boilers which heat the primary air from the flue.

Project Overview

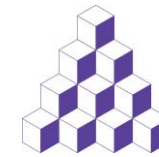
- Option 1:
 - Gas boiler replaced with biomass
 - No network expansion
 - €12.4m
- Option 2:
 - Gas boiler replaced with biomass
 - Network expansion to: 6 existing buildings; 2 new build
 - €19.7m



Funding to date

- OMBC
- Carbon Trust SDA

Bury – Town Centre



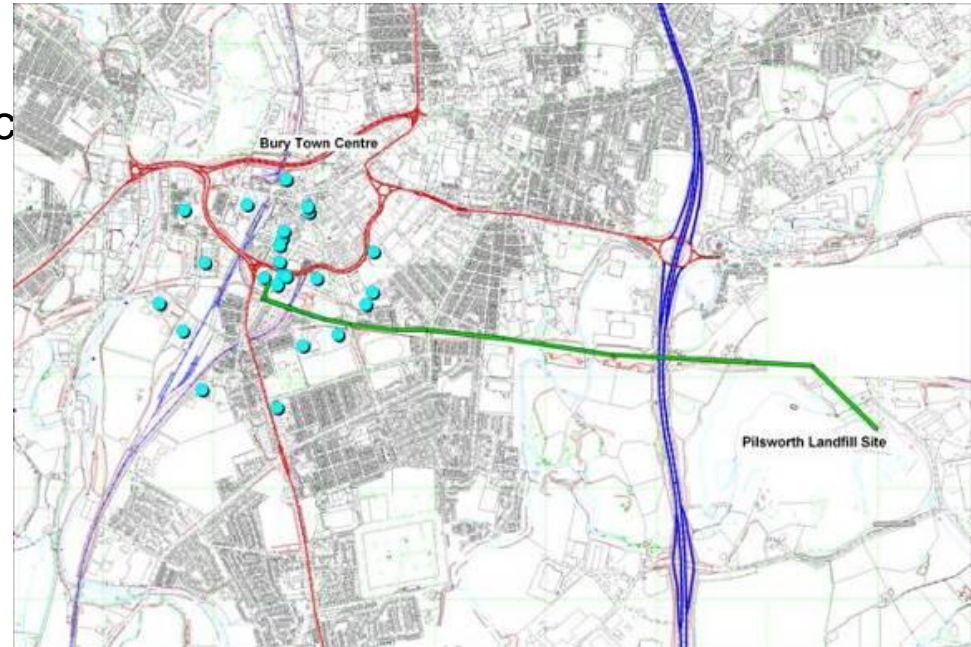
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Project Overview

- Landfill gas at Pilsworth used for elec generation; 40% efficient
- Heat recovery project
- 1.5km pipeline to Bury Town Centre
- Option A: 17 buildings connected
- Option B: 26 buildings connected

Technical Overview

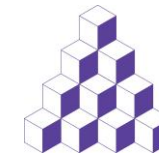
- Option A
 - Coolant only heat recovery
 - 600kW
 - €4.6m
- Option B
 - Coolant and exhaust heat recovery
 - 1250kW
 - €6.2m



Funding to date

- BMBC (£15k)
- Carbon Trust SDA (£15k)

Stockport – Town Centre



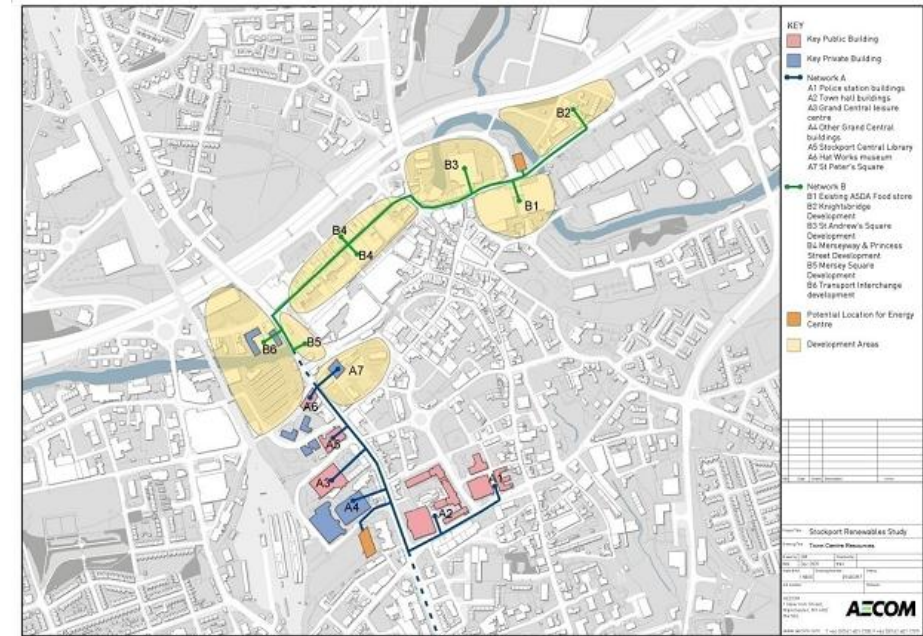
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Project Overview

- Phase 1a of wider network
- 5 buildings:
 - Stockport Town Hall
 - Stopford House
 - Fred Perry House
 - Grand Central Pool
 - Stockport College

Technical Overview

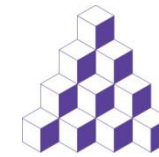
- Option 1:
 - 1 no. 571 kWe gas fired reciprocating CHP
 - €3.7m
- Option 2:
 - 1 no. 500 kWe biomass gasification CHP
 - €5.7m



Funding to date

- SMBC

Next Steps (1)



What we have:

- 6 projects; €92.39 - €103.47 million
- No/limited in-house capacity and/or expertise

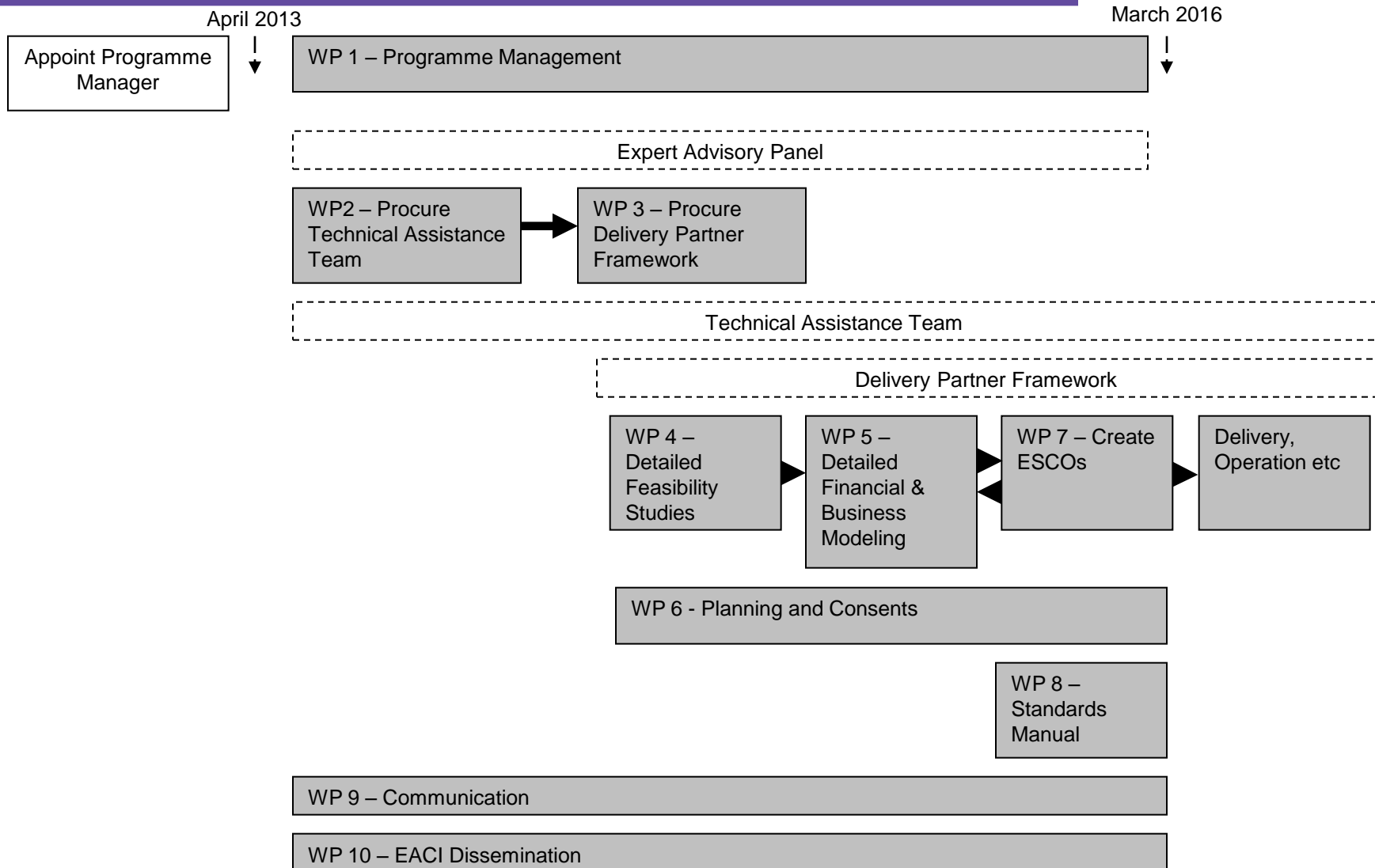
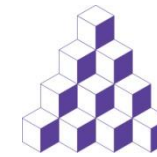
What we need:

- €4.51 million for project development & procurement work (4-5% of total capital cost)
- Secure (private) investment
- Secure delivery partner(s)

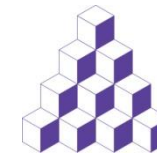
Next Steps:

- €3.36 million from IEE MLEI PDA (75%)
-

Next Steps (2)



Key Points



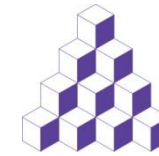
- Designated resource & support: officer, senior officer & politician

- Project development expertise

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- Project development ££ is key barrier – EU funding available
- Capital funding available but private sector want 12-15% IRR
- Work at scale:
 - Economies of scale for project development & procurement
 - Attract investors and delivery partners

Further Information



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Community Energy: design, development and delivery

http://www.tcpa.org.uk/data/files/comm_energy_plan_devdel.pdf
