

District Energy

- Strategic drivers
- What is District Energy – Heating and CHP
- Opportunities (or Not)
- Project Process
- Funding issues
- Delivery issues
- Risks
- Decision making

Strategic Drivers

- The Council's ambitions (energy, investment, regeneration)
- Control over current and future energy costs
- Fuel poverty
- Regeneration
- Building performance and long term maintenance and replacement costs
- Potential revenue streams
- Reducing CO2
- Attracting external funding
- Reputation

City Wide DE Scheme

70,000,000 kWh energy
generated p.a.

11,000 tonnes CO2 saved p.a.

Providing heat chilled water &
electricity to

45+ commercial consumers

800+ residential consumers

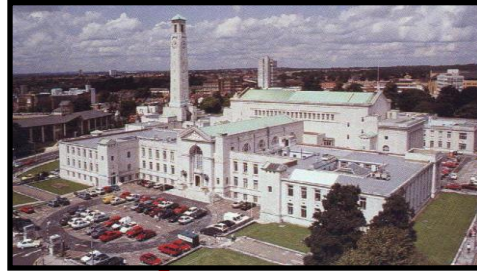


Southampton Geothermal Heating
Company, Southampton

Parkview



Civic Centre



RSH Hospital



BBC TV Studio's



Southampton Solent University

ABP



Skandia Life



The Heat Station



West Quay

IKEA

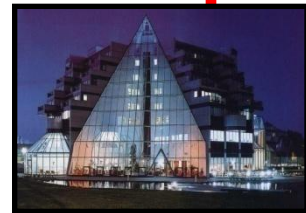


Carnival



Quays

DeVere Hotel



International Way CESP Scheme

- £16 million scheme
- Insulation and district heating
- 25% Council funded
- Controllable heat
- Heating cost reductions of over 30%
- Noise reductions

Thornhill Example

- Heat mapping and energy master planning completed
- Thornhill estate identified as priority location
- Initial concept development/feasibility completed
- OJEU Framework Contract completed (ECO)
- Engagement of intelligent client
- Development of commercial business case
- Technical design options
- Commercial close

Delivery Issues

- Why should the Council invest?
- Delivery structures:
 - Design and Build
 - Operate and Maintain
- ESCOs
 - Council owned
 - Joint Venture
 - Commercial
- Council Management Issues

Business Modelling & Risk

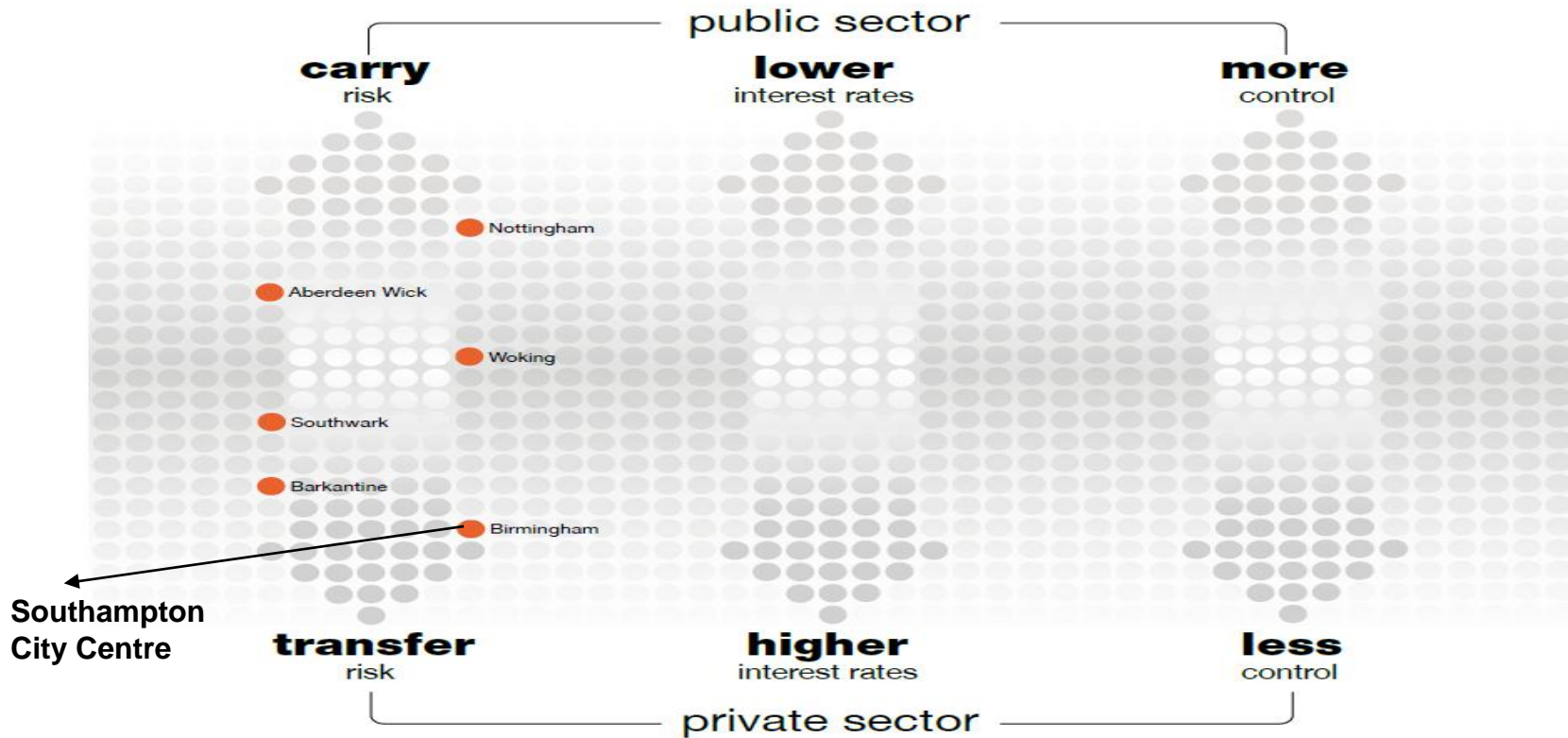


Figure 15: This diagram shows relationship between risk, control and the cost of capital for public and private sector projects

Project Process

- Project management requirements
- Key project tasks
 - Planning and Planning Framework
 - Funding
 - Contractor procurement
 - Stakeholder engagement and support
 - Planning Risk Management
- Timescales for delivery
- Corporate support

Key Requirements and Risks

- Internal project resources – smart client
- Corporate buy-in
- Procurement of a design, build operate and maintain (DBOM) contractor
- Securing off-takes including requirements to connect
- Land and relevant planning permissions, easements etc
- Securing the support of stakeholders to facilitate scheme delivery

Decision Making

- Heat Mapping and Master planning
- Feasibility study(s)
- Cabinet/Council approvals to develop a scheme business case
- ESCO structure
- Design and Build and Operate and Maintain
- Finances
- Offtake agreements
- Planning approvals and easements
- Cabinet approval to let the contract
- Contract completion and scheme operation