

# Asset management of gas distribution in the U.K

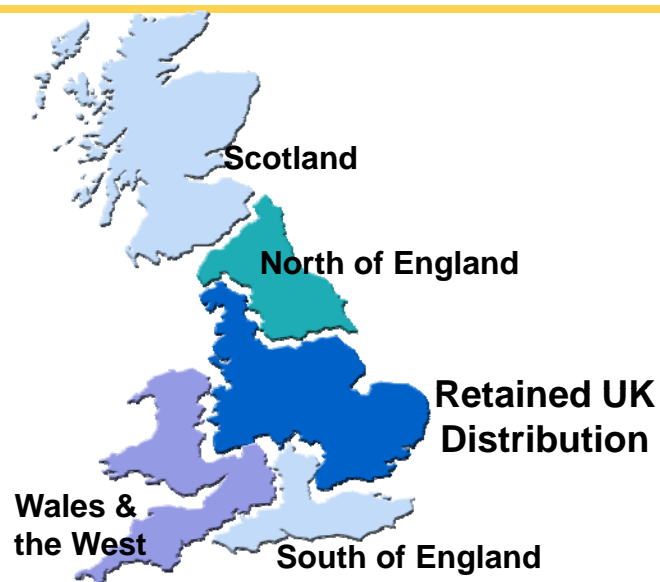
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Edward Syson  
Investment Strategy Manager

13 September 2007

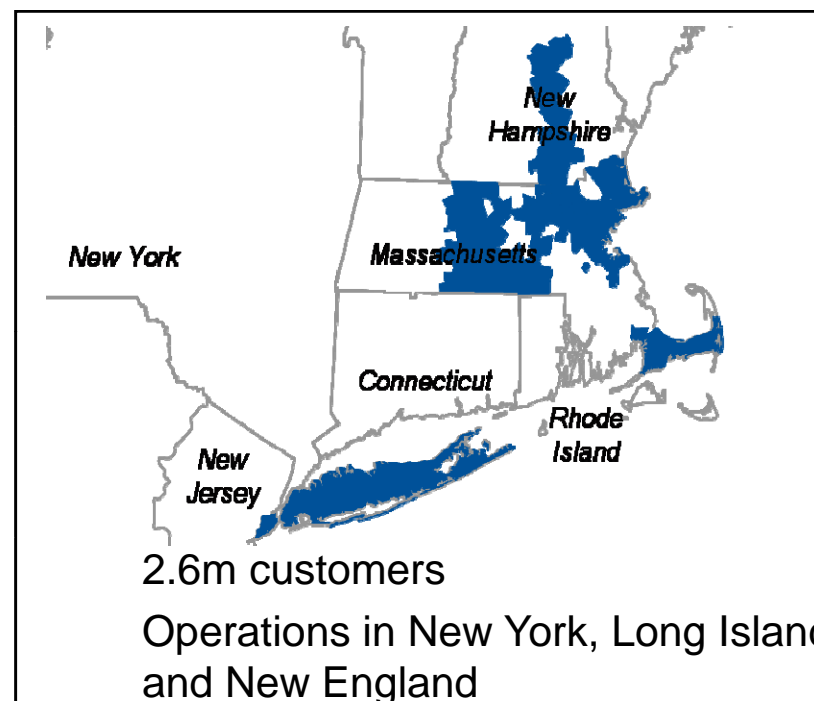
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# National Grid Gas Distribution



## UK Distribution

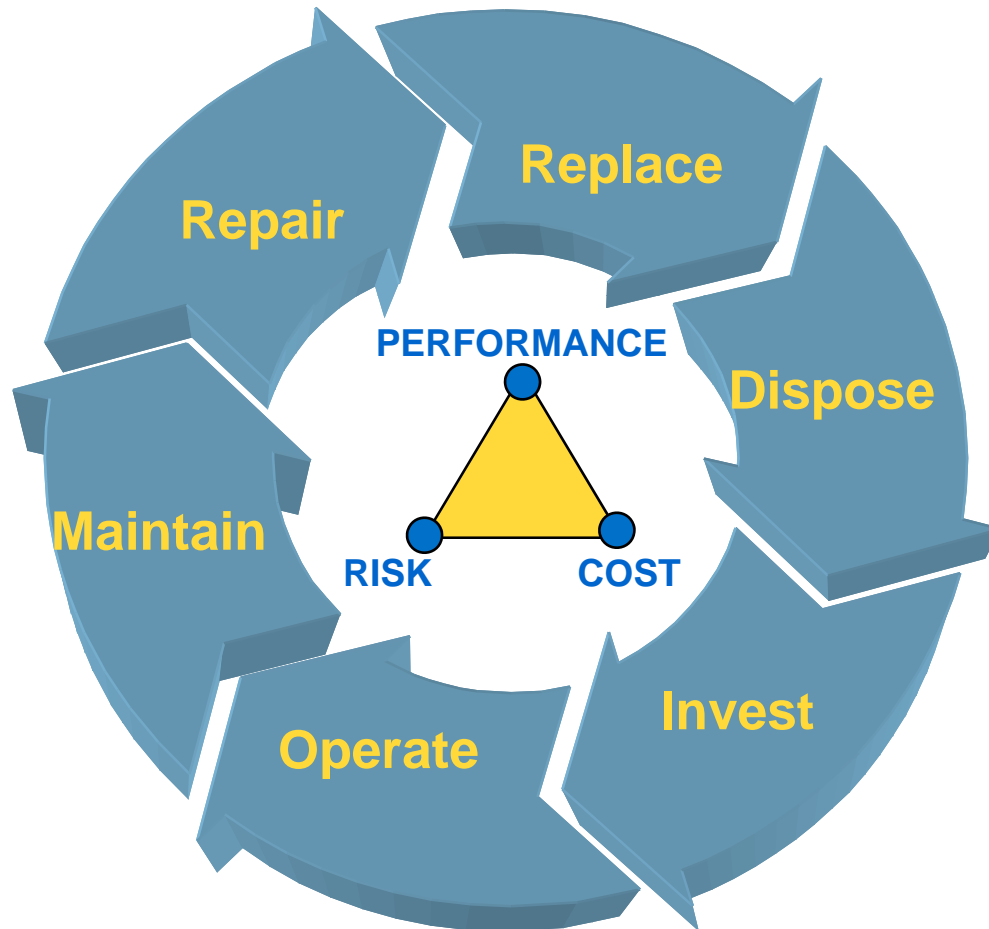
Turnover	£1.1bn
Profit	£0.4bn
Net Investment	£0.3bn
RAV 2005	£6bn
Customers	11m
Throughput	350TWh
Network Length	126,000km
Employees	4500
Service Area (% of UK)	26%



- ◆ Single and consistent operating model
- ◆ Quicker and more effective deployment of operational and safety best practice
- ◆ Effective consolidation of support activities

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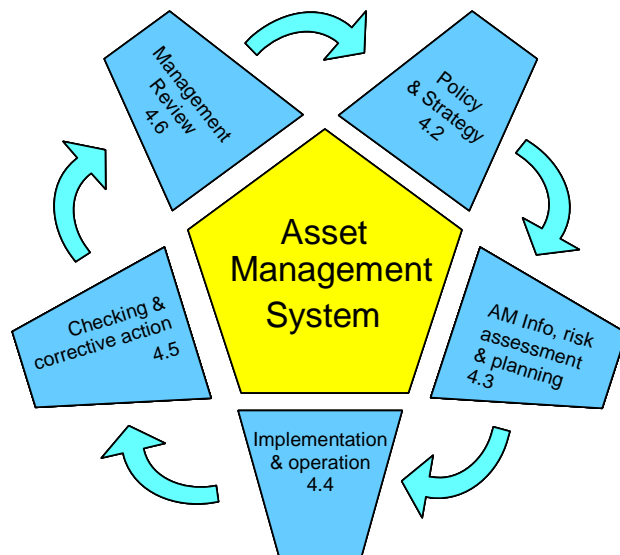
# Our Asset Management Approach



- ◆ Centralised asset management
- ◆ Single strategy for all networks
- ◆ Prioritisation across all networks
- ◆ Balance of cost, risk and system performance
- ◆ Developing long-term programmes for each asset
- ◆ Based around *PAS-55*

# PAS55 and National Grid Gas Distribution

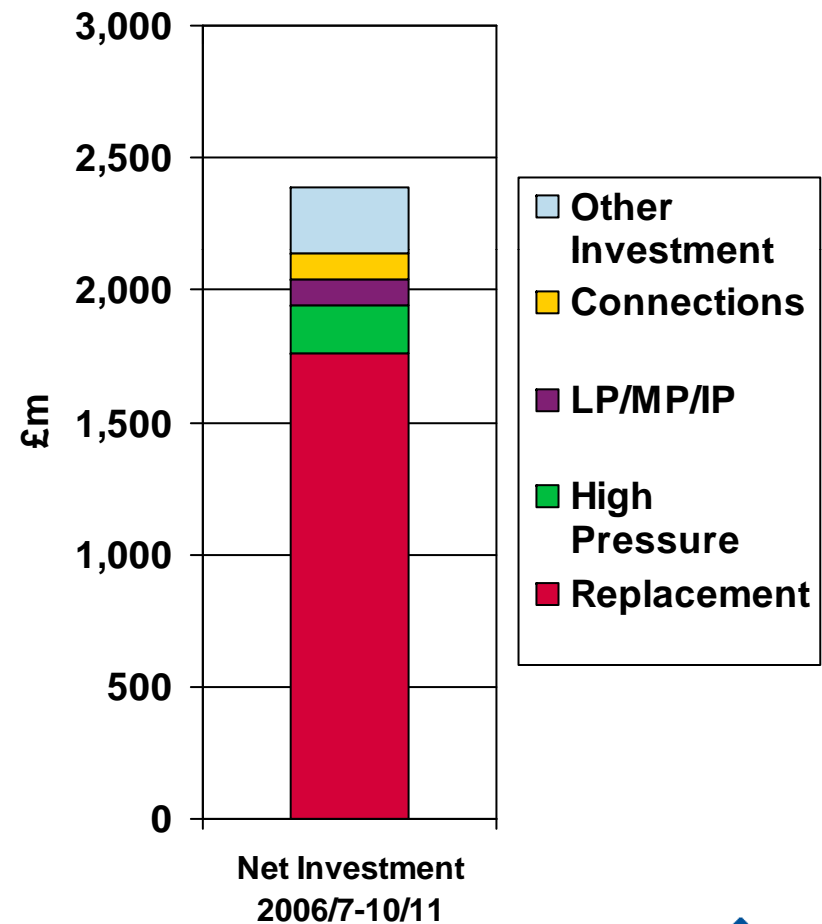
- ◆ British Standards Institution Publicly Available Specification (BSi-PAS55).
- ◆ Risk-based specification that contains a robust set of requirements against which to design and implement an asset management system.



- ◆ PAS55 is a recognised standard which supports UKD's *vision* to be a '*Gas Distribution Business recognised as World Leading at Home and Abroad*'.
- ◆ Agreed as a National Grid Group objective following a Group Global conference (Feb06).
- ◆ PAS55 is a standard Ofgem would like the industry to adopt and replaces their Asset Risk Management Survey.

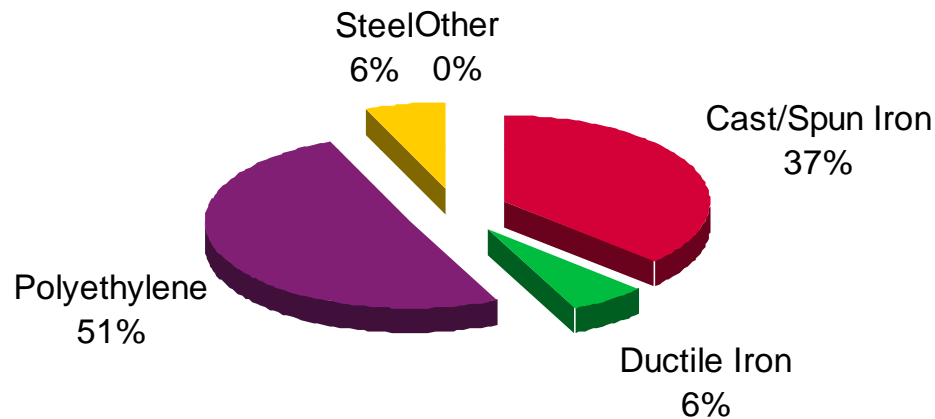
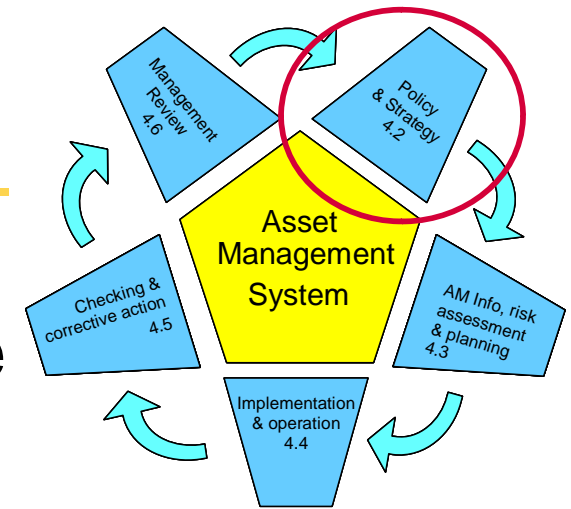
# Continued Requirement for Investment

- ◆ Will invest close to £2.5bn over next five years.
- ◆ Investment dominated by our mains and services replacement programme.
- ◆ During the next five years, gas demand is forecast to grow at approximately 2% per annum.



# Mains Replacement

- ◆ Strategy to deliver a 30 year iron mains replacement programme

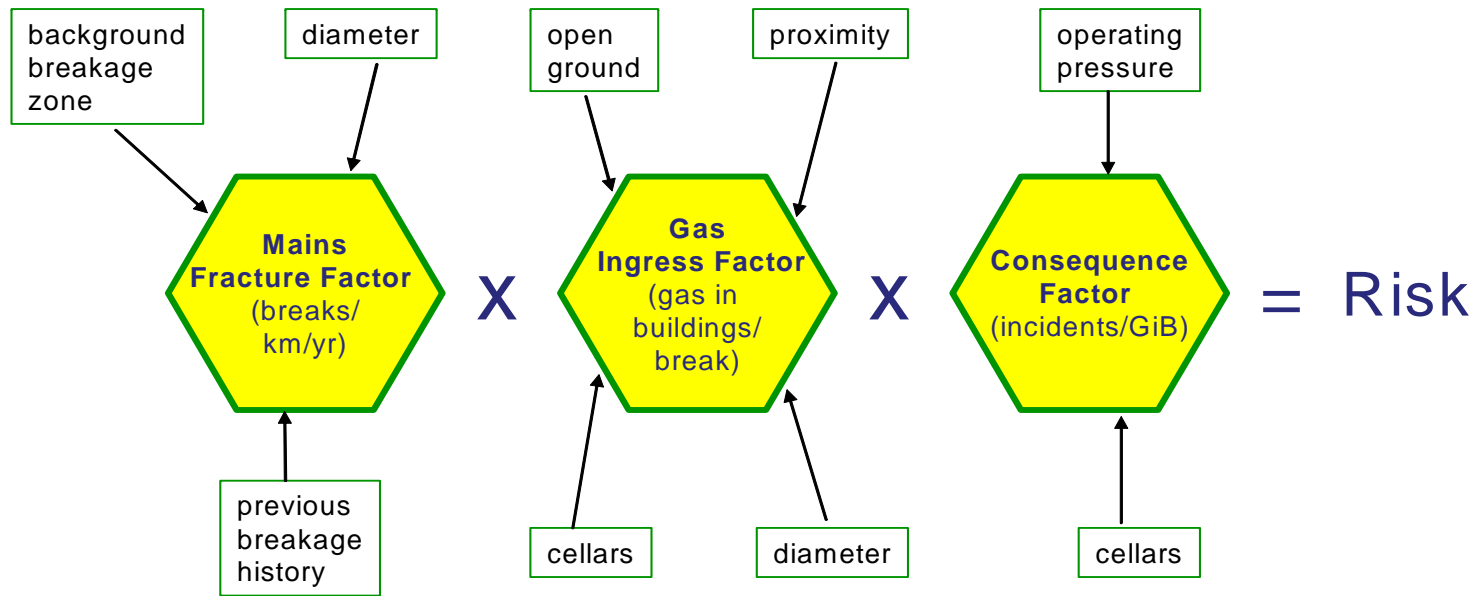
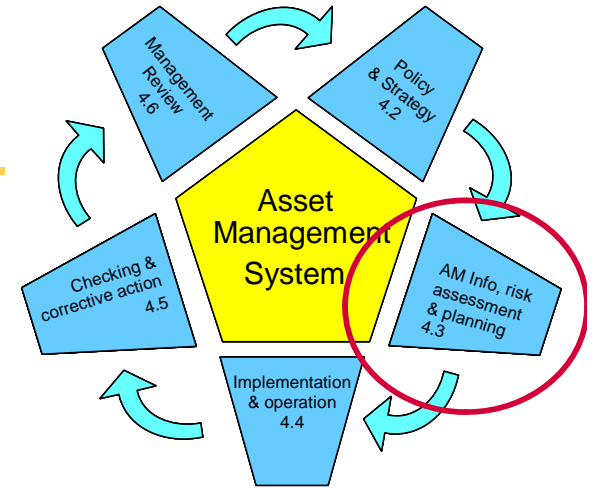


Network Population



# Mains Replacement

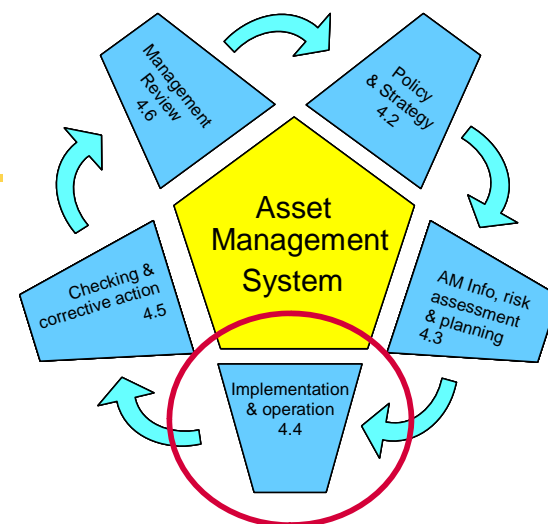
- ◆ Strategy to deliver a 30 year iron mains replacement programme
- ◆ Risk management



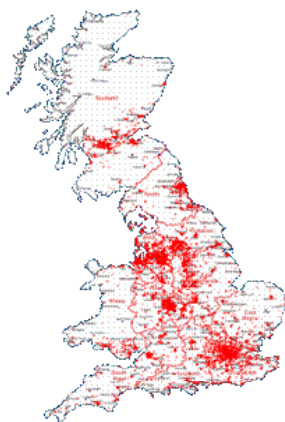
Risk is expressed in units of incidents per km per year  
 ( $10^{-6}$  incs/km/year)

# Mains Replacement

- ◆ Strategy to deliver a 30 year iron mains replacement programme
- ◆ Risk management
- ◆ Alliances

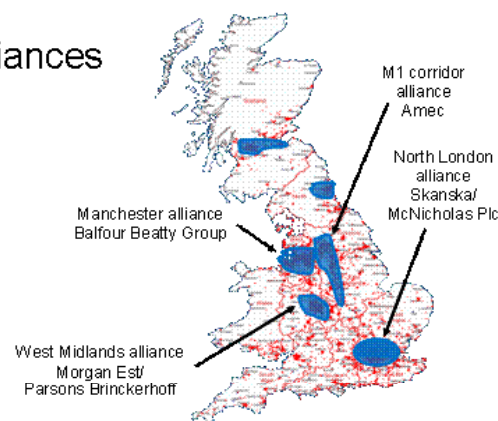


Traditional Approach



- ◆ Replacement in every local borough
- ◆ Forward view only 3 months out
- ◆ Collaborative coordination not possible
- ◆ Many schedule of rates contracts
- ◆ Transient contract workforce
- ◆ Safety culture not embedded

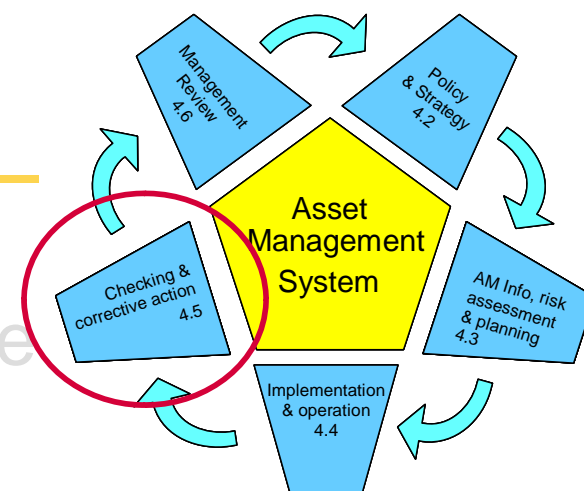
Alliances



- ◆ Four alliances established
- ◆ Average job length 2000 metres
- ◆ Delivered by six man teams
- ◆ Initial contract for 8 years with option for further 5 years

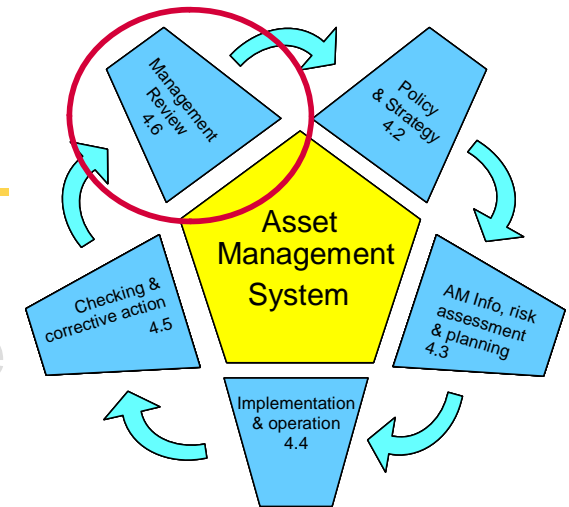
# Mains Replacement

- ◆ Strategy to deliver a 30 year iron mains replacement programme
- ◆ Risk management
- ◆ Alliances
- ◆ Weekly management information of work delivery and internal audits against policy and procedure



# Mains Replacement

- ◆ Strategy to deliver a 30 year iron mains replacement programme
- ◆ Risk management
- ◆ Alliances
- ◆ Weekly management information of work delivery and internal audits against plans
- ◆ Management review and continuous improvement
  - ◆ Tripartite discussions with HSE and Ofgem
  - ◆ Plus quarterly reporting back to HSE
  - ◆ Plus Ofgem regulatory reviews/updates



# Summary

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- ◆ National Grid has remained the largest network owner within the UK gas distribution sector
- ◆ Next five years invest £2.5bn in assets
- ◆ Dominated by our mains and services replacement programme
- ◆ Asset Mgt is a core competence that supports the National Grid vision
- ◆ UKD is using PAS55 to assess and develop this core competence to provide an effective and consistent approach towards meeting the strategic objectives of the business and the Group as a whole
- ◆ Our asset management system is key to delivering our strategic objectives in order to properly balance cost, risk and performance