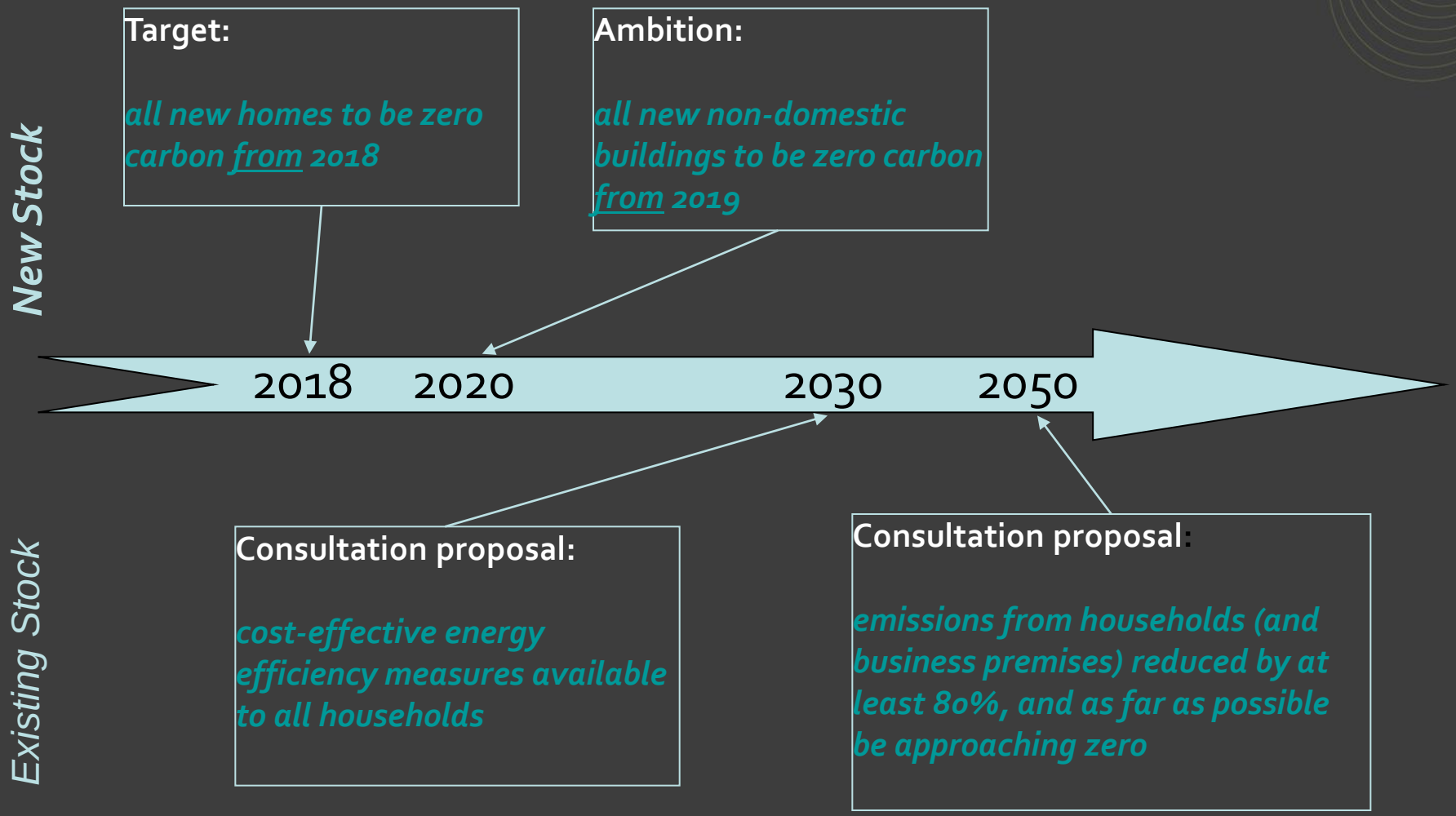
Benefits of Area Based Regeneration and the Scale of the Issue

Carbon Reduction Timeline



Drivers for Change

EPBD recast:
- existing buildings -

- MS to set Minimum energy performance requirements **for renovation of technical systems**, as well as for **building elements** (roof, wall, etc.) *if technically, functionally and economically feasible*, whenever they are retrofitted or replaced
- MS to **take measures, such as targets**, to stimulate the transformation of buildings that are refurbished into nearly zero energy buildings

Directorate-General for Energy and Transport

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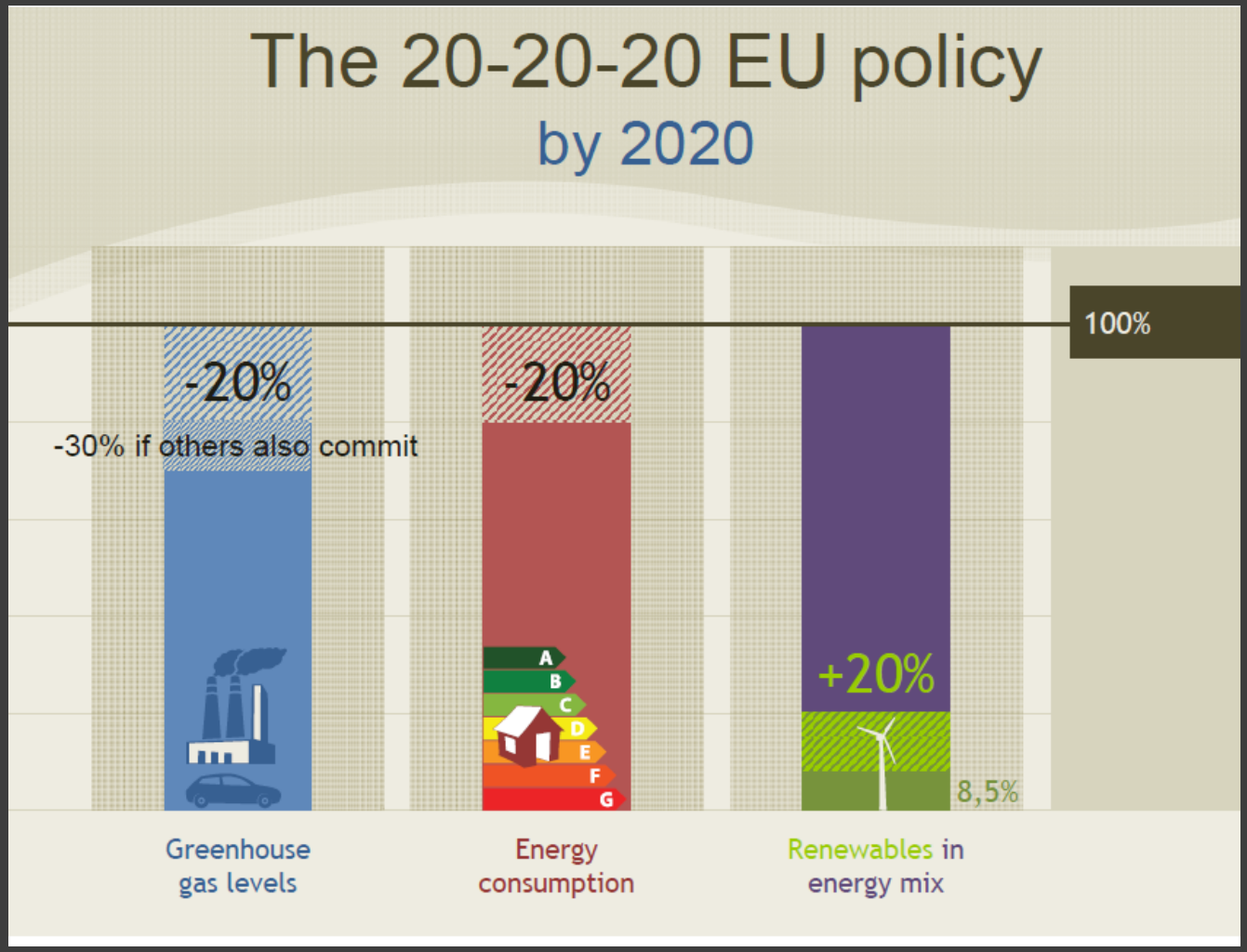
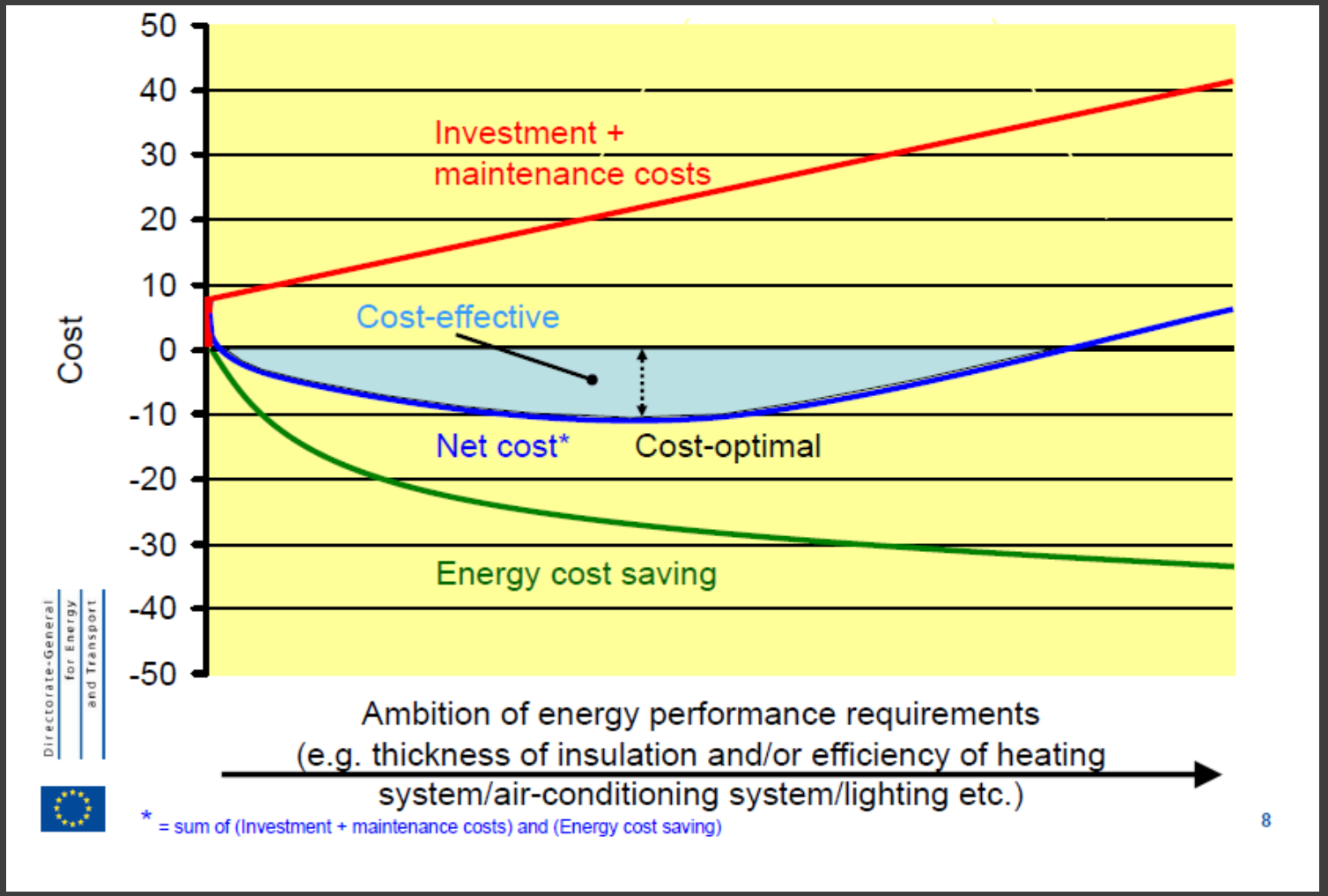
Drivers for Change



Cost optimal approach



Scale

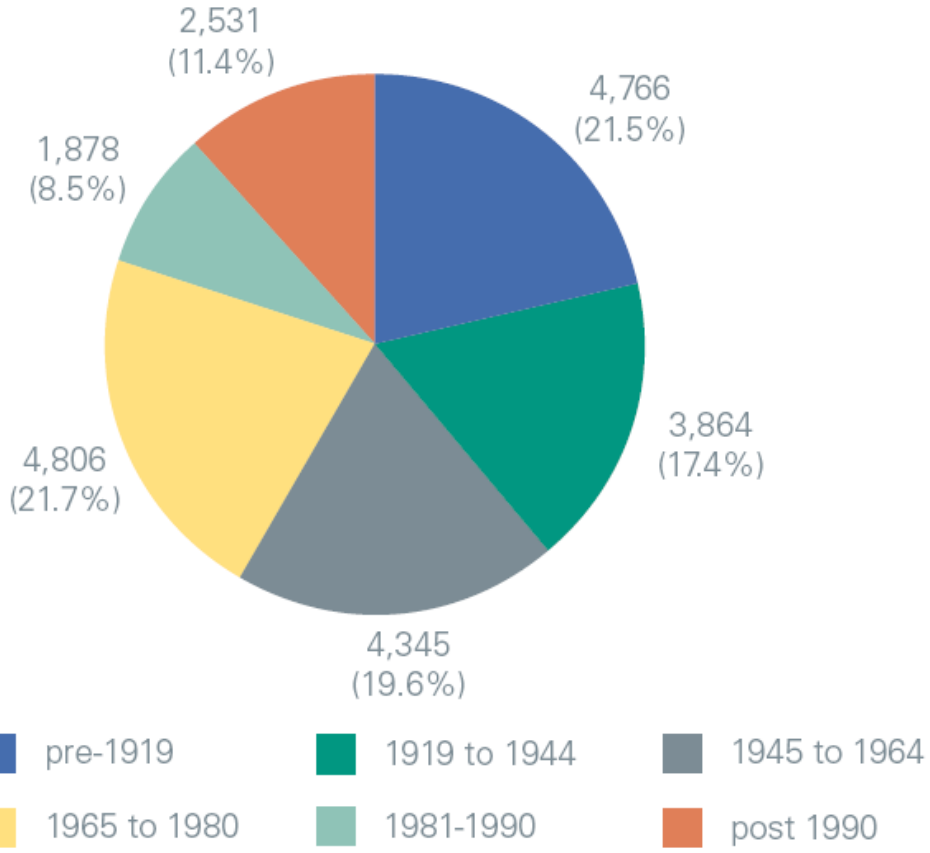
- In Wales there are approximately 440,000 solid walled properties.
- To improve them to a modest standard will cost circa £10k for just the fabric.
- To complete them by 2020 we need to do 55,000 a year just in Wales, by 2030 its about 25,000 a year

Scale

- This means 1145 or 509 a week depending on how long we have
- That's £440,000,000 just for the fabric
- That’s about 2,640,000 m_2 of insulation
- So where does that get us

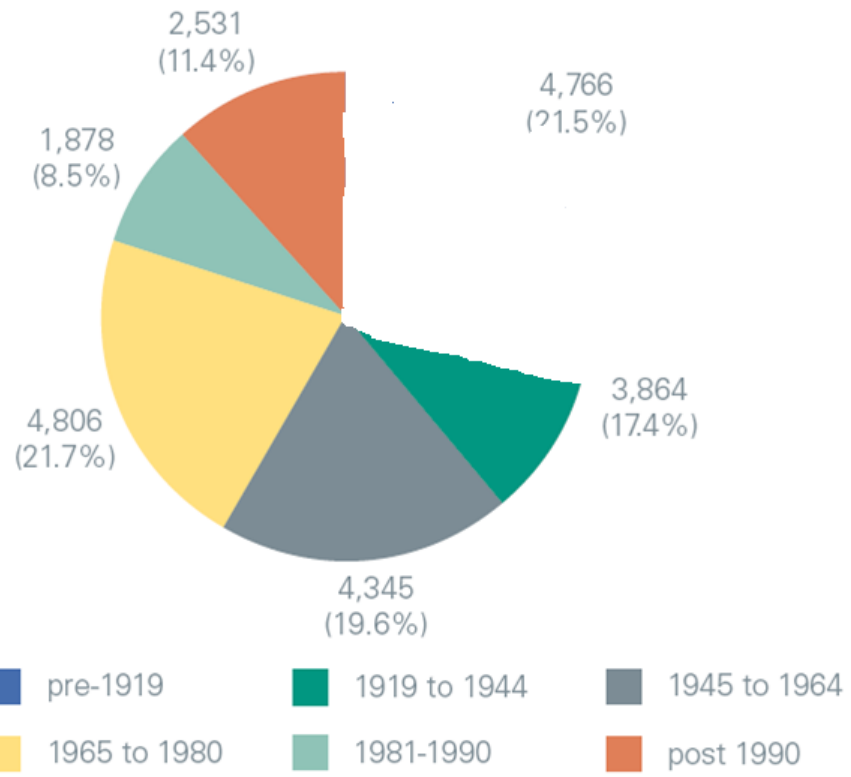
The context – age of housing stock

Figure 1.2: Number (000s) and percentage of homes by age, 2007

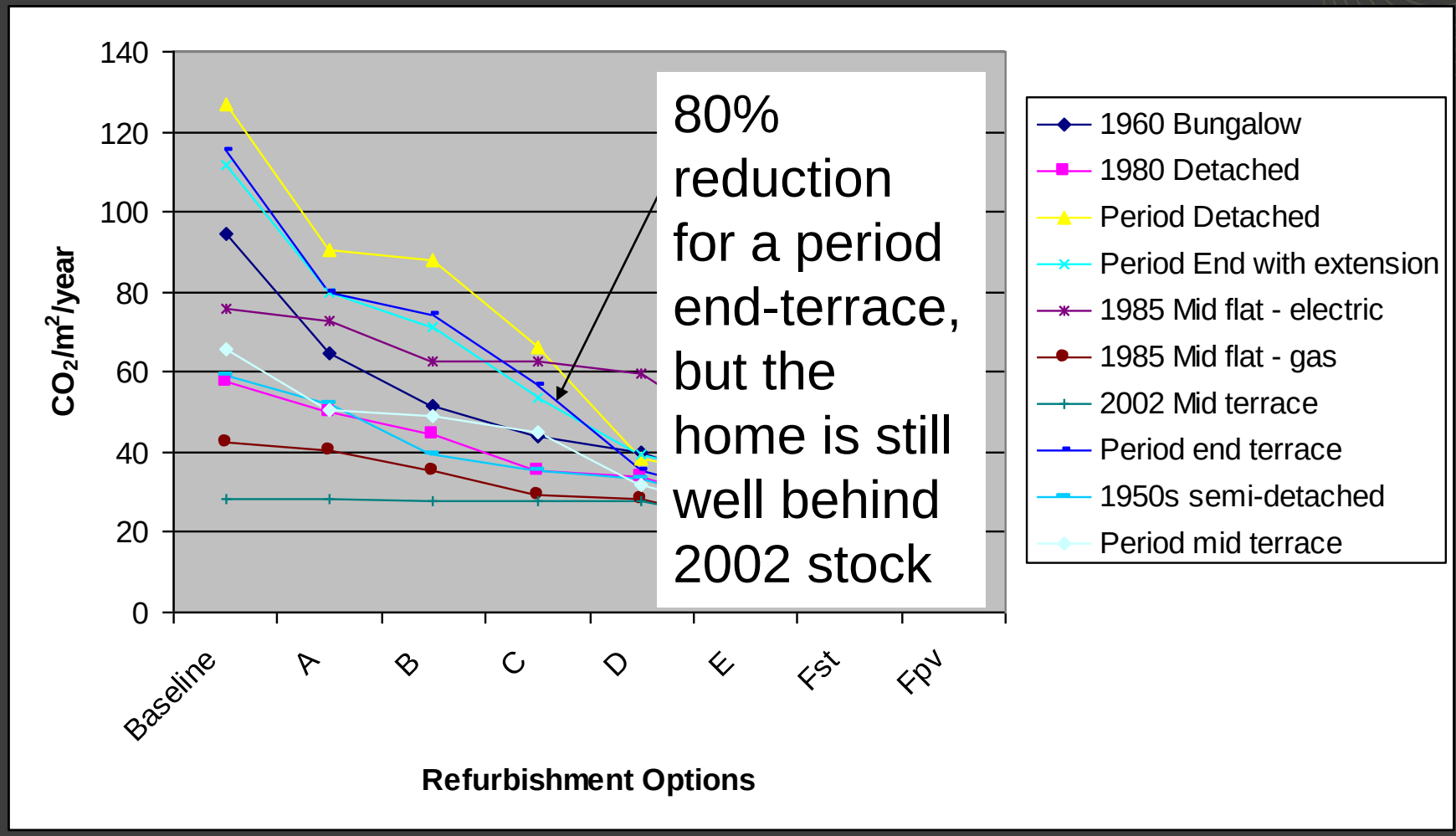


Base: all dwellings

Figure 1.2: Number (000s) and percentage of homes by age, 2007



Base: all dwellings


140
120
100
80
60
40
20
0
$CO_2/m^2/year$
Baseline
A
B
C
D
E
Fst
Fpv
Refurbishment Options
80% reduction for a period end-terrace, but the home is still well behind 2002 stock
1960 Bungalow
1980 Detached
Period Detached
Period End with extension
1985 Mid flat - electric
1985 Mid flat - gas
2002 Mid terrace
Period end terrace
1950s semi-detached
Period mid terrace

Scale

- The only way to deliver these targets is mass installation
- Area based regeneration, that can be undertaken sympathetically
- Using the right solutions.

- Thank you for listening