

# The implications of Zero Carbon for the 'Supply Side'

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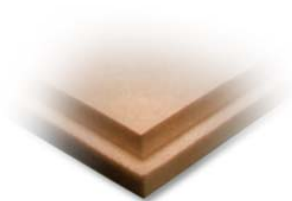
Knauf Insulation



# Knauf Insulation - introduction

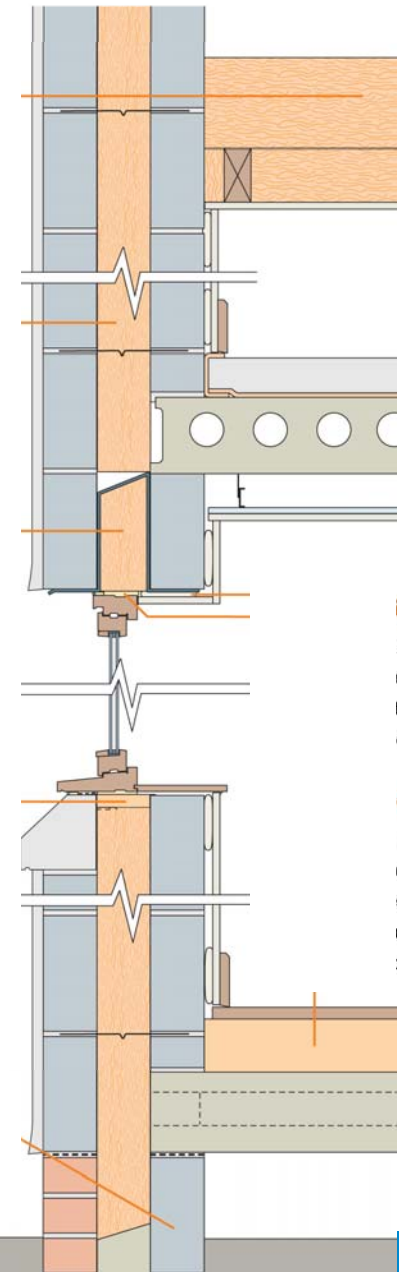


- Largest insulation manufacturer in UK, 4 sites
- Fastest growing insulation manufacturer in the world
- Manufacturing operations in the UK, Europe, Russia and the USA
  - Employs 5,000 people
  - Sales revenue of £1 billion
- UK operation previously known as Alcopor, Owens Corning, Pilkington
- Brands include: Crown, Drytherm, Supafil, Rocksilk, Space Blanket, Polyfoam
- Sister company to Knauf Drywall



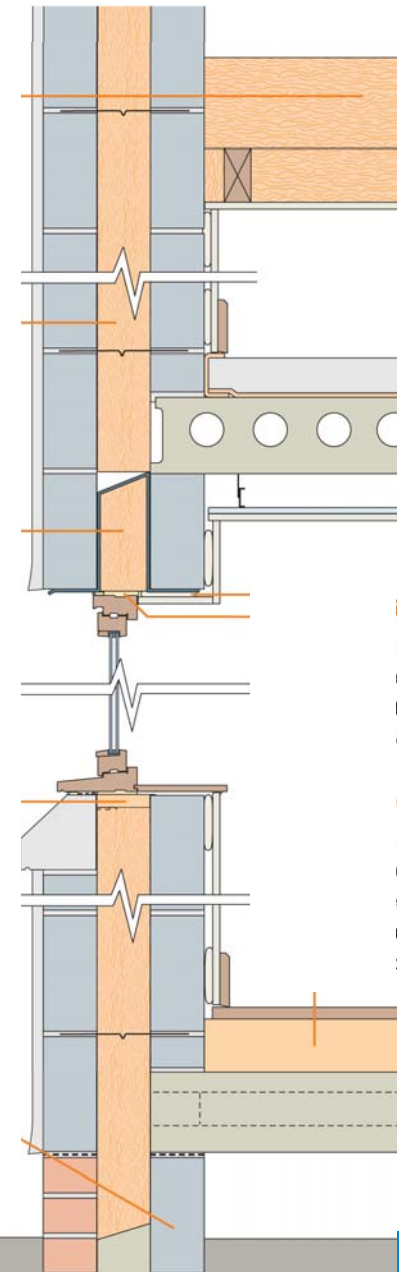
# Supply side environment

- Housebuilders are efficient
  - Meet current home buyers needs
  - Meet legislative requirements
  - Consistently make money!
- As a construction product supplier
  - Tough commercial environment
  - Typically significant pressure on prices
  - Range of levels of profitability
  - Constant drive to reduce costs



## Supply side environment cont.

- Result....
  - relatively low investment in product innovation
  - pressure on technical support budgets, etc...
  - lean
  - high investment and focus on reducing manufacturing costs
- ..... a bit dull



# Typically where does most investment go?

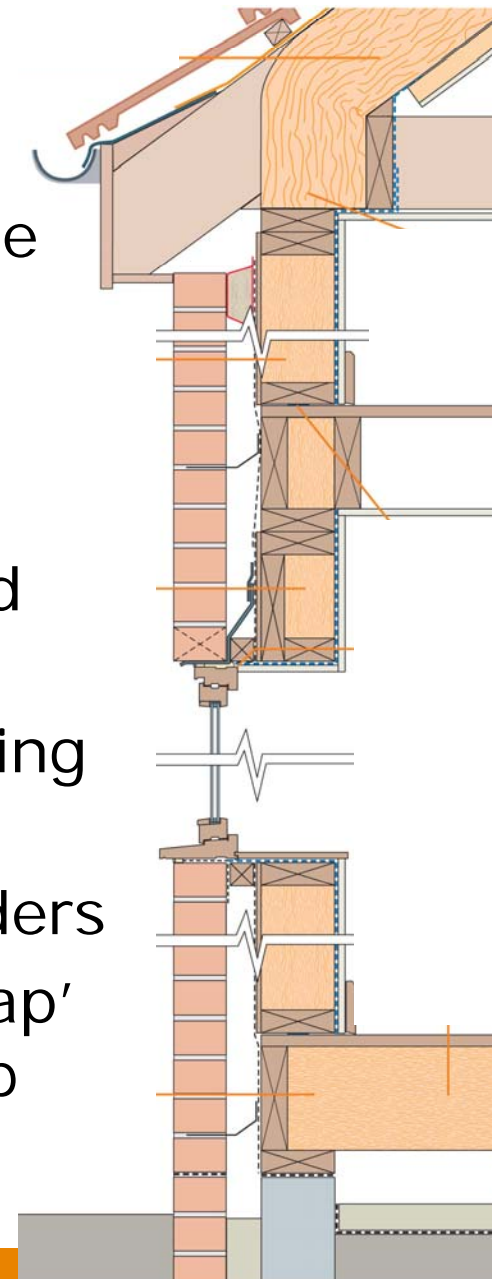
**KNAUF**INSULATION  
*it's time to save energy*





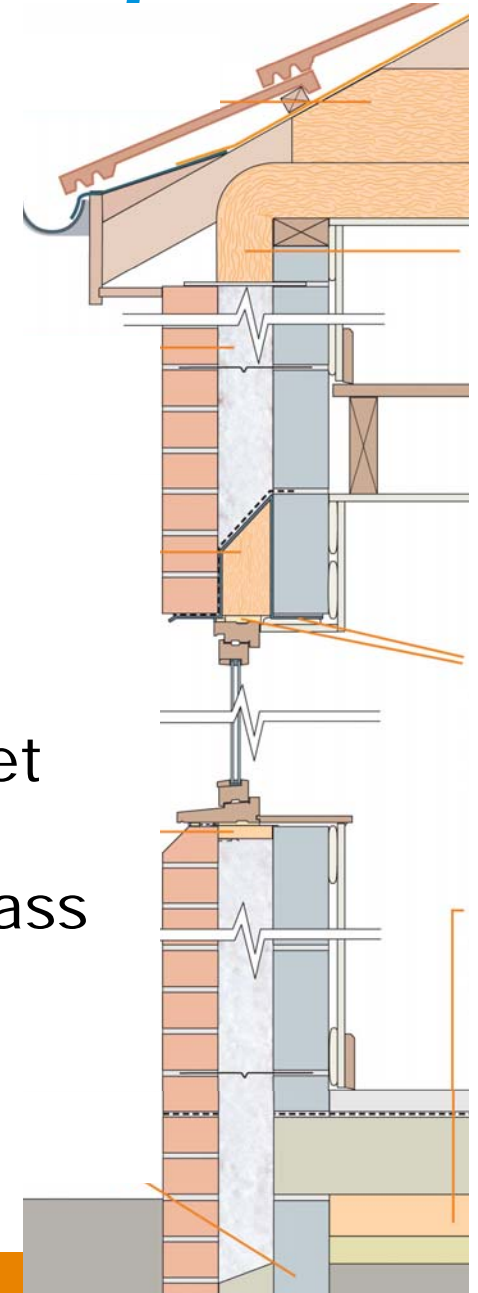
# The 'opportunity' of ZC for the supply side

- A technical 'step change' creates dialogue
- Interest in robust system solutions
- Increased demand for quality products
- Completely new product requirements
- New markets – supply and fit, embedded design teams?
- Stronger relationships built through solving problems
- ..a dynamic market rewards market leaders
- Also.... an increased energy efficiency 'gap' with existing housing – pushes the refurb market



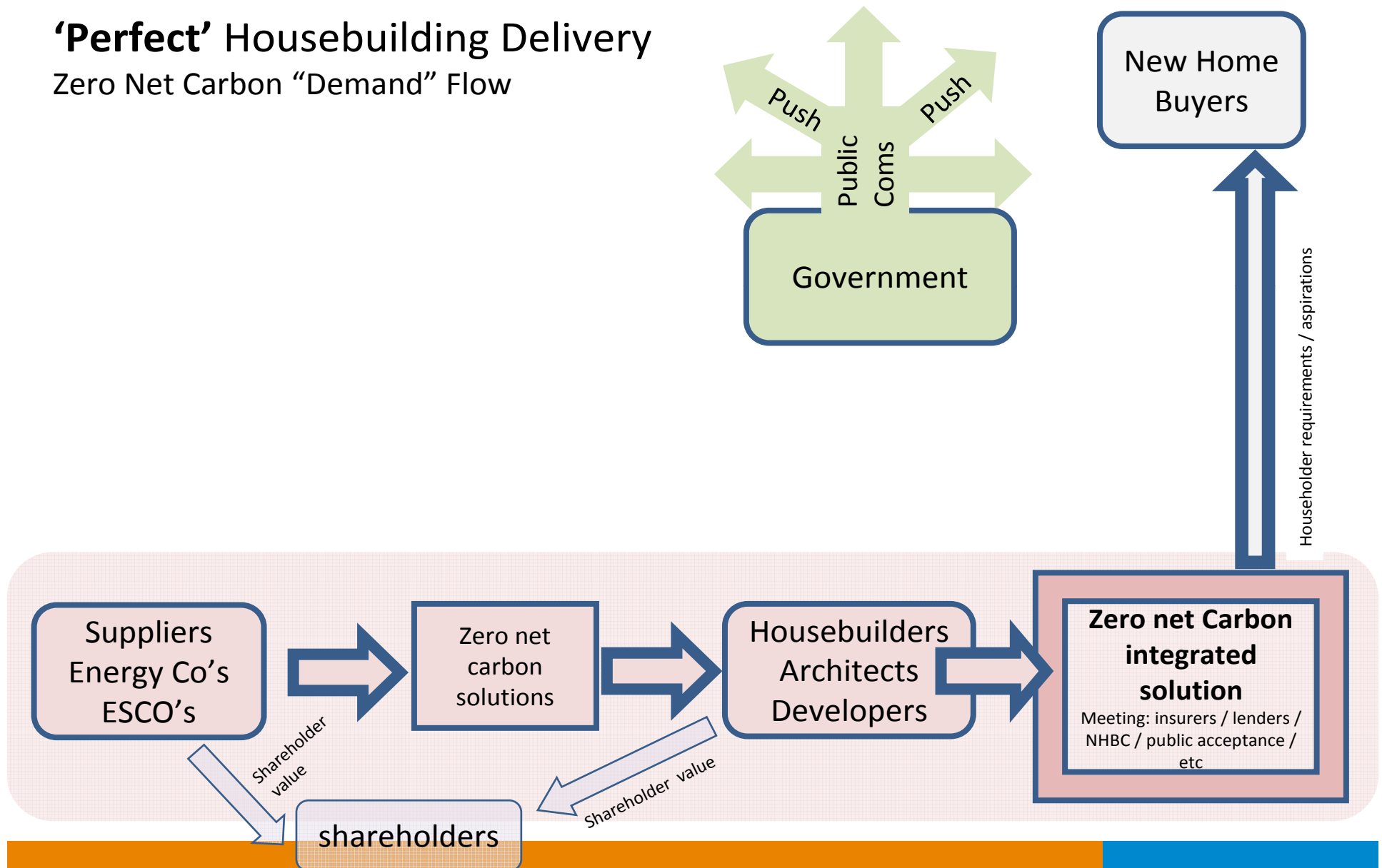
# The challenge of ZC

- A new range of competitors / partners
- How will construction practice changes impact existing products?
- Identifying, developing and investing in potential winning solutions
  - business critical
  - complex picture
  - high stakes
- Ramping up production in line with market demand
- 'Real life' verification of performance / mass scale demonstration
- How will products 'score' within SAP?
- How is Zero Carbon defined?

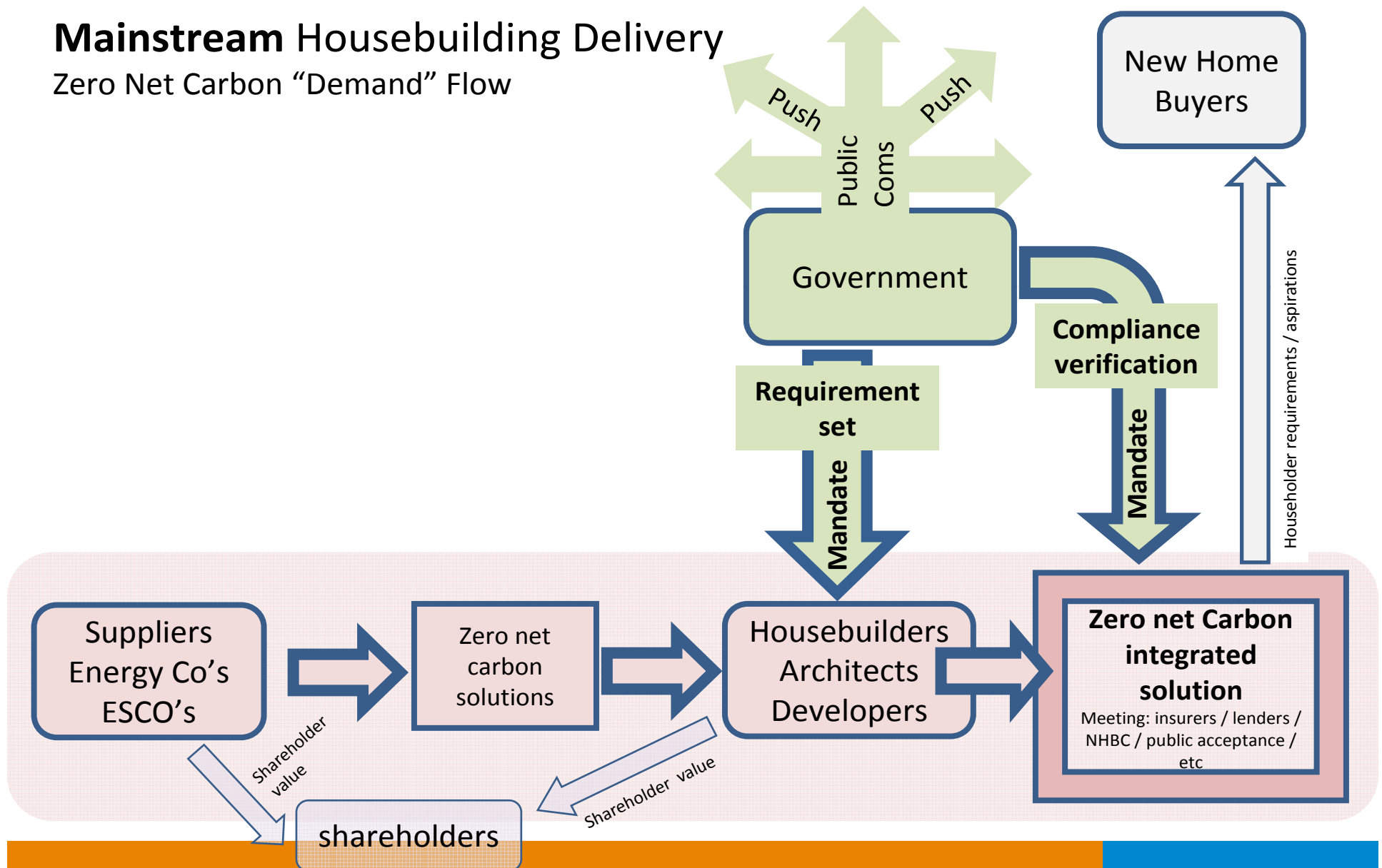


# Zero Carbon Regulation

**'Perfect'** Housebuilding Delivery  
Zero Net Carbon "Demand" Flow







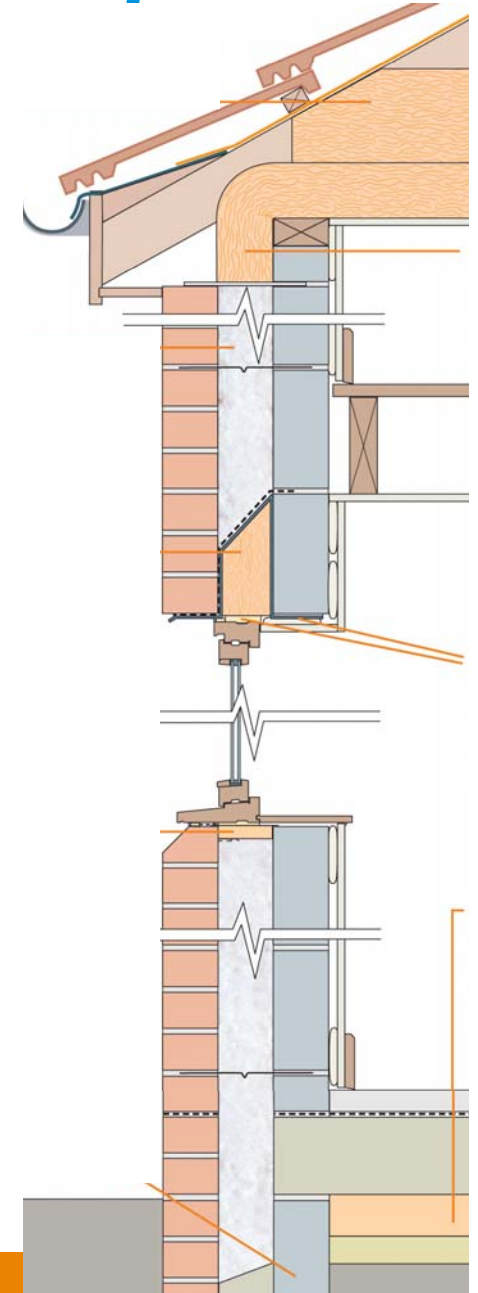
## A view of regulations

- The regulation defines the market
- A significant 'business opportunity' if:
  - A real need is being addressed
  - Clearly defined outcome
  - Strong expectation of viability
  - Sufficient notice period
  - Timing is firm
  - Enforcement is robust

= Business confidence

= Engagement of strong business motivators – greed and fear

= Precipitates significant investment



## ZC Supply side - conclusion

- All sectors of society will be significantly challenged to:
  - achieve a 60% reduction in CO2 by 2050
  - address energy security
- Zero carbon homes are a business opportunity for product manufacturers
- Step change can be 'less hard' than incremental
- Engage your suppliers!
- ... a much more interesting future