

# Zero carbon homes



David Adams

Director



# Agenda

- Zero Carbon Hub - background
- Zero carbon
- Implications for suppliers



# Zero Carbon – What does it cover

## Zero Carbon and Renewable Energy

*“A zero-carbon home delivers net zero carbon over the course of the year for all energy use in the home:”*

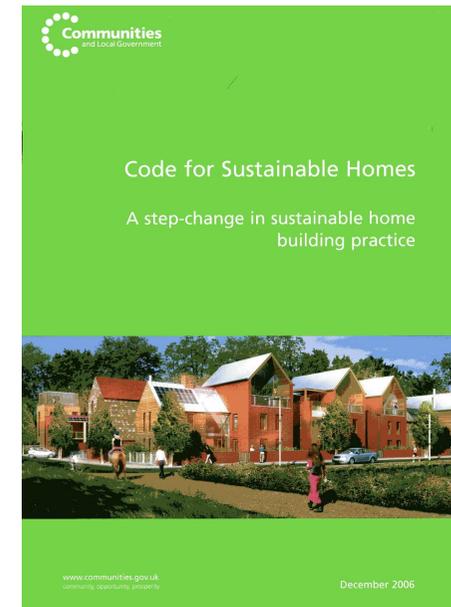
- cooking
- washing
- space heating, cooling
- ventilation, lighting, hot water
- electronic entertainment appliances



# Role of the Zero Carbon Hub

## BACKGROUND

- Nov 2006 - announcement of zero carbon new homes 'aspiration' from 2016
- Dec 2006 - Launch of the 2016 Task Force
- Jul 2007 - Building A Greener Future
- Nov 2007 - Callcutt Review reports
- Jun 2008 - Zero Carbon Hub announced
- Dec 2008 - Government launch consultation on revised definition of zero carbon





# ZC Hub – Why?

- “Government and the housebuilding, construction products and energy supply industries should jointly sponsor a delivery unit to monitor, co-ordinate and guide the zero carbon programme.” Callcutt Oct 07

The challenge:

1. an unprecedented performance step change (with associated risks)
2. whilst increasing housebuilding delivery by > 40%
3. on a short timescale



# Role of the Zero Carbon Hub

## PURPOSE AND STRATEGIC OBJECTIVES

*Facilitate the mainstream delivery of low and zero carbon homes*

- Provide leadership and create confidence
- Reduce risk and clear obstacles
- Disseminate information



2016 TASKFORCE

**Paul King, Chair**  
(UK-GBC)

**ZERO CARBON  
HUB BOARD**

**Neil Jefferson, CEO**  
**David Adams, Director**

**Imtiaz Farookhi**  
NHBC

**Mike Freshney**  
HBF/RD Ltd

**Ray Morgan**  
LGA

**John Tebbit**  
CPA

**Bob Ledsome**  
CLG

**Trevor Beattie**  
HCA

**Madeline Logan**  
PA/Office Manager

ZERO CARBON HUB WORKSTREAMS

**Energy efficiency**

**Rob Pannell**  
Head of House Building

**Energy supply**

**Energy Supply**  
Manager

**Examples and scale up**

**Clive Turner**  
Information Manager

**Skills and training**

**Annie Hall**  
Manager

**Consumer engagement**

**Matt Robinson**  
Comms Manager



# ZC – in the UK.....





# Elsewhere in the world....

- Very difficult to compare energy performance, different climates, difference in carbon intensity of grids, etc.
- Scandinavia - approx. 25% better than current UK standards
- Germany and Austria - Passivhaus is approx. Code Level 4, but is designed to be low energy, not low carbon
- Canada - Government incentives such as R-2000 homes and Super E



# ZC – abroad....



Western Harbour, Malmo



Hammarby Sjostad

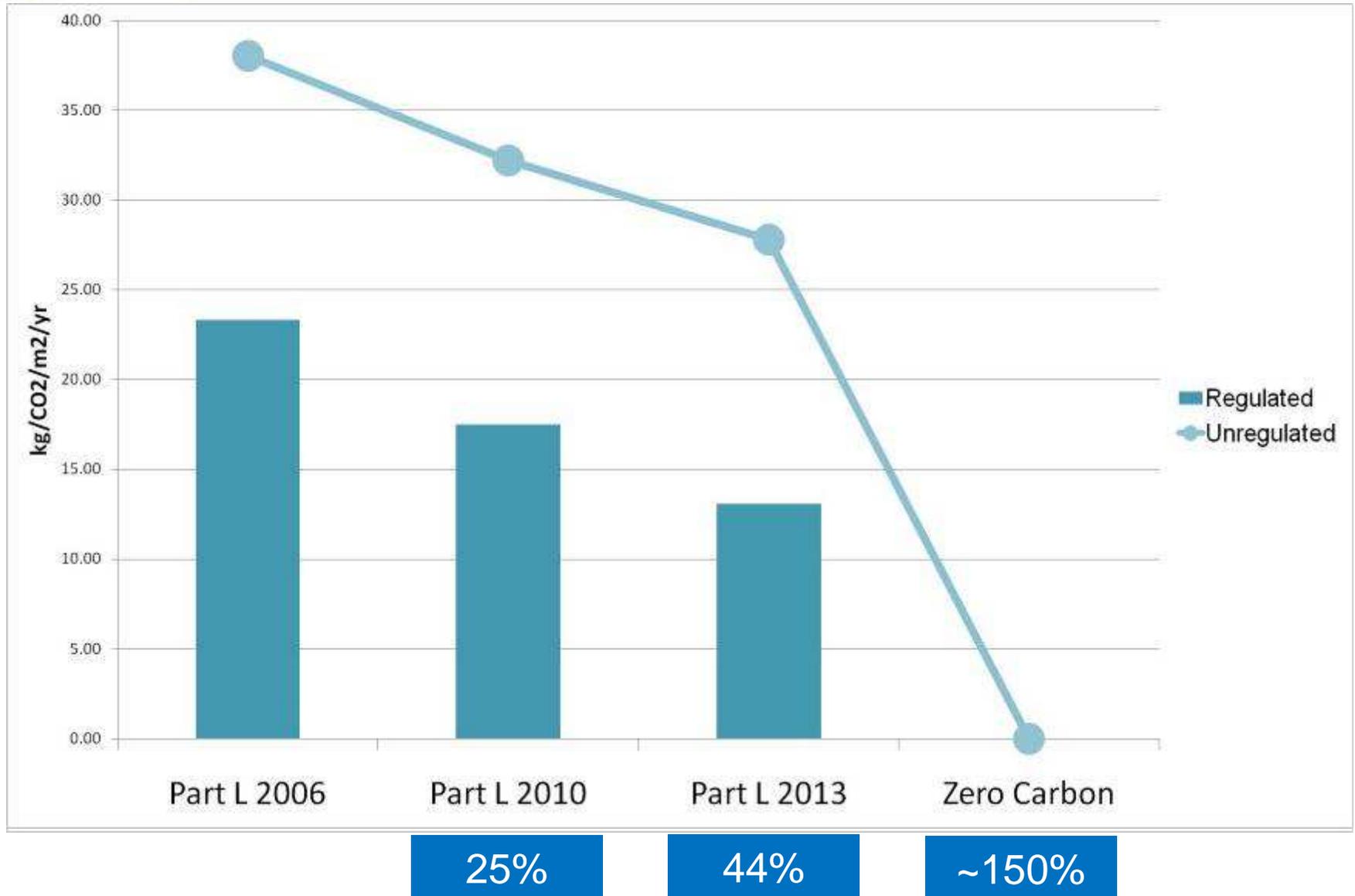


# ZC – energy.....



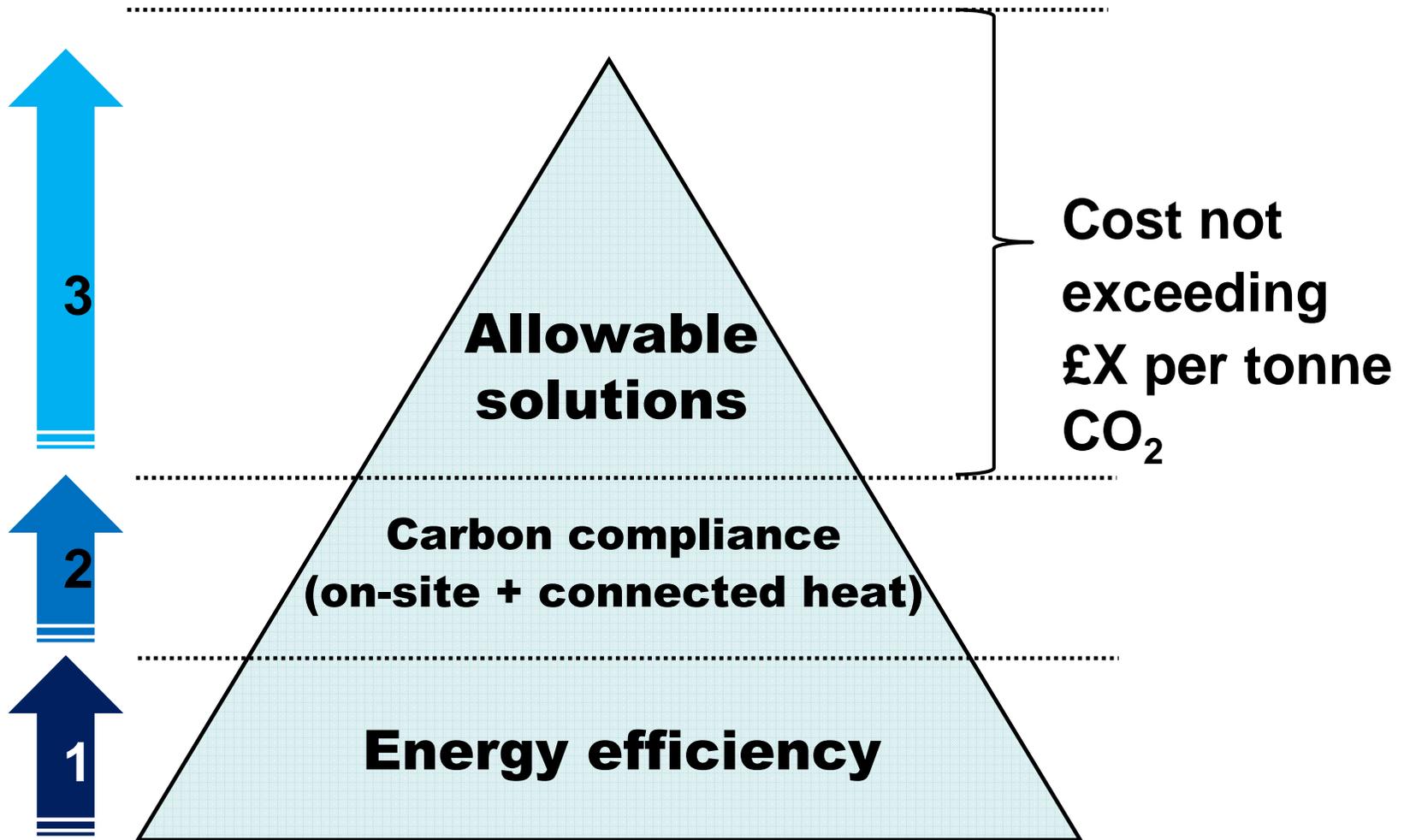


# What does zero carbon emissions mean?



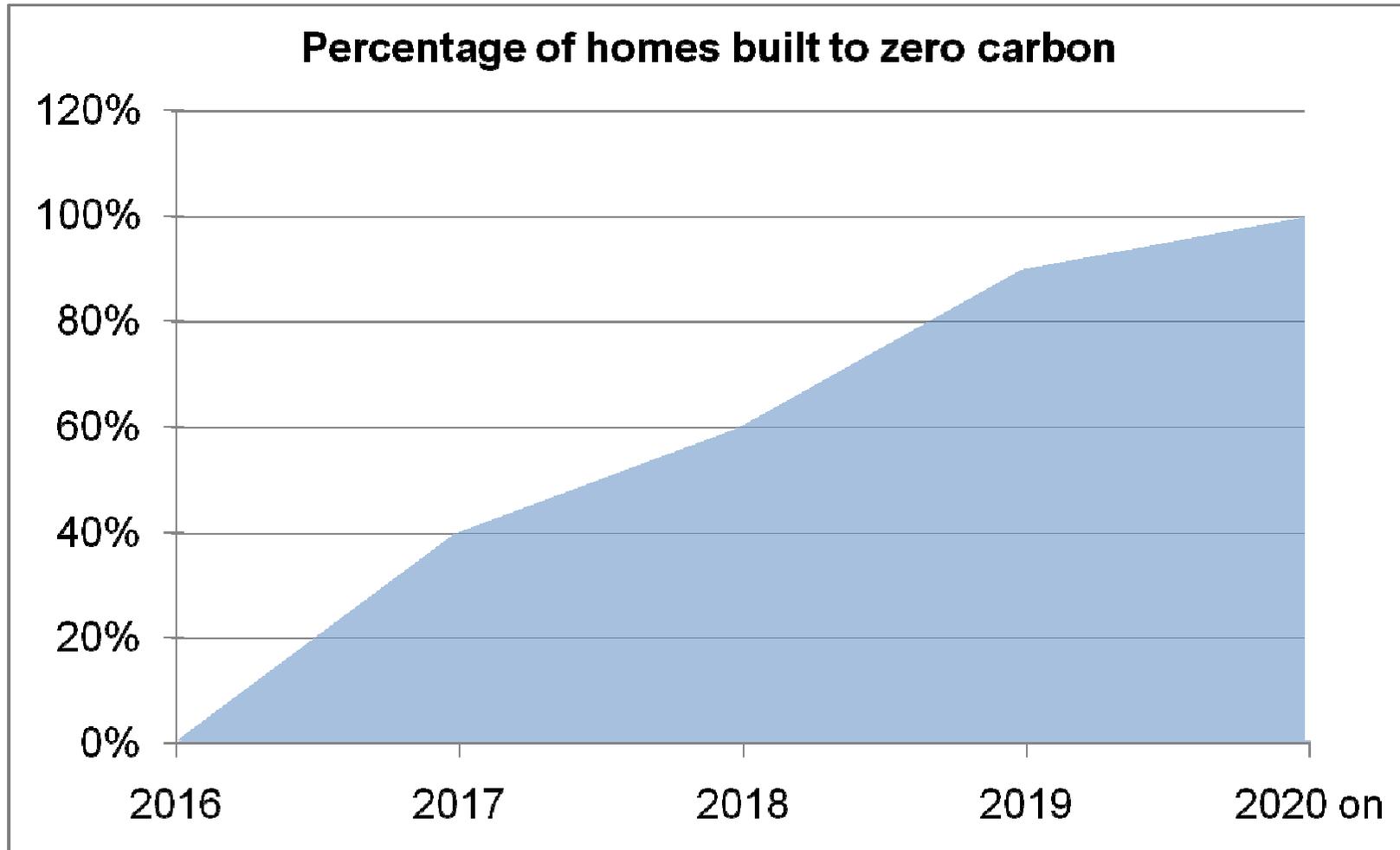


# Zero carbon hierarchy





# ZC Hub – Trajectory

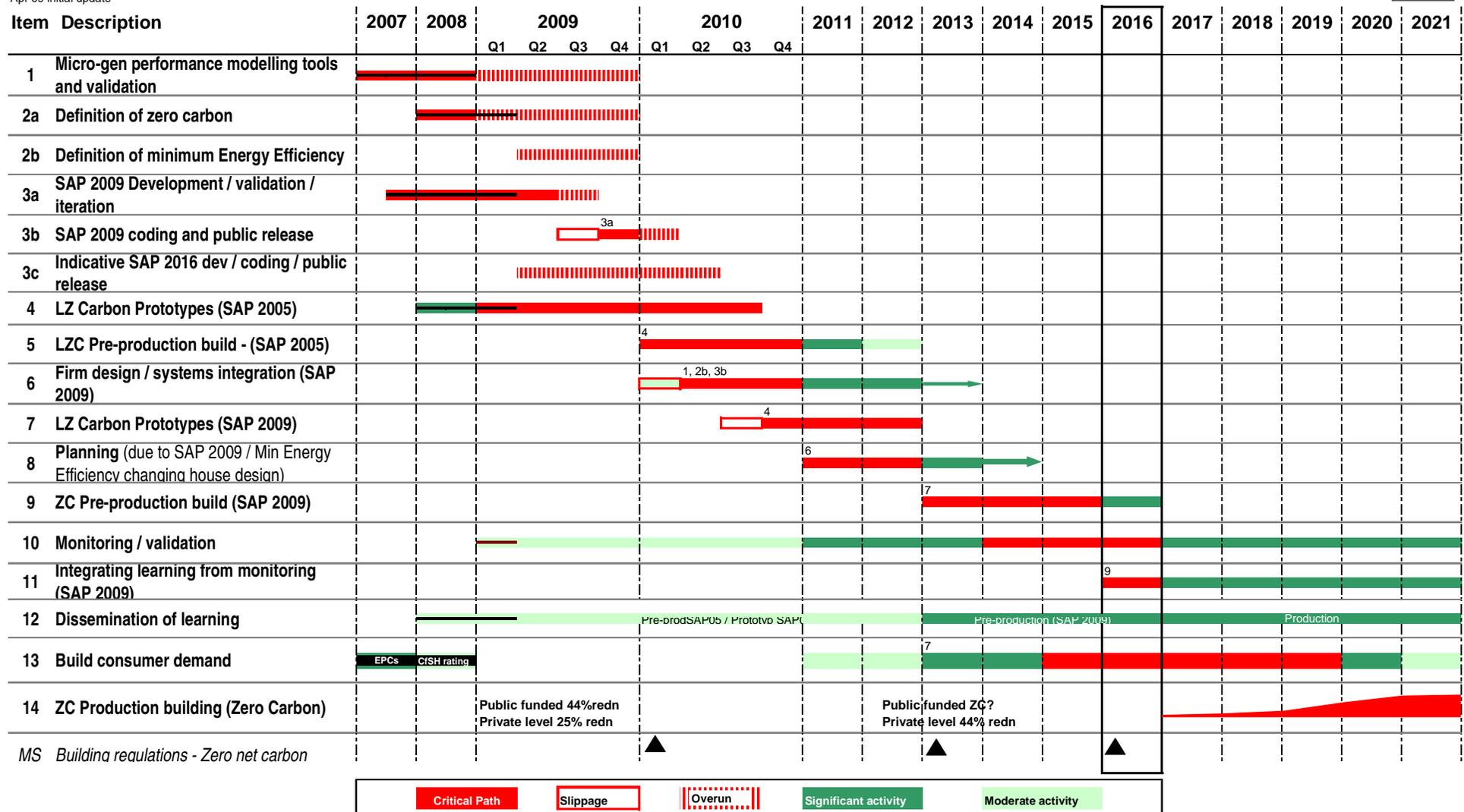




# ZC Hub – Programme

## Zero carbon homes delivery time line

Apr 09 initial update





# ZC Hub – Work groups

Include:

- Time line to zero carbon
- Costs of zero carbon Homes
- Time line to zero carbon
- *Carbon compliance assumptions (SAP)*
- Post Occupancy Evaluation Protocol
- *Allowable solutions verification*
- *Minimum Energy Efficiency*
- Costs of Zero Carbon
- Community infrastructure task group



# What it means to housebuilders?

- New build will become increasingly differentiated from existing
- Find ways of marketing benefits to homebuyers
- Find ways of making zero carbon pay
- Technically more difficult
  - New detail designs / designs
  - Construction practice becomes critical
  - New applications of old products
  - New products
- .....



# What it means to suppliers?

- New construction techniques
  - Detail design
  - Product selection
  - Whole house design
- Relative competitive performance of products
  - SAP
  - Actual performance
- Understanding the “whole house implications”
- Supporting house builder learning
- Developing the supply chains
- .... business opportunity and risk



**Thank you**

David Adams