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## Drivers of Contemporary Housing Research and Design

**Karim Hadjri**

**Isaiah Oluremi Durosaiye**

The Grenfell-Baines School of Architecture, Construction and Environment

University of Central Lancashire, Preston, UK

# Summary

- **Contemporary Housing**
  - Definition and Evolution
- **Sustainable Design**
  - Concepts and Application
- **Inclusive Design**
  - Principles, Tools and Contexts
- **Community Participation**
  - Definition and what to know about it!
- **Emerging Designs in Contemporary Housing**
  - Examples

# Contemporary Housing: Definition?

- Civic Housing?
  - Support for home ownership – middle class
- Social housing?
  - Rent support (Social housing needs)
- Vernacular Architecture?
  - Unique to “Time & Place”



## Contemporary Housing: Definition

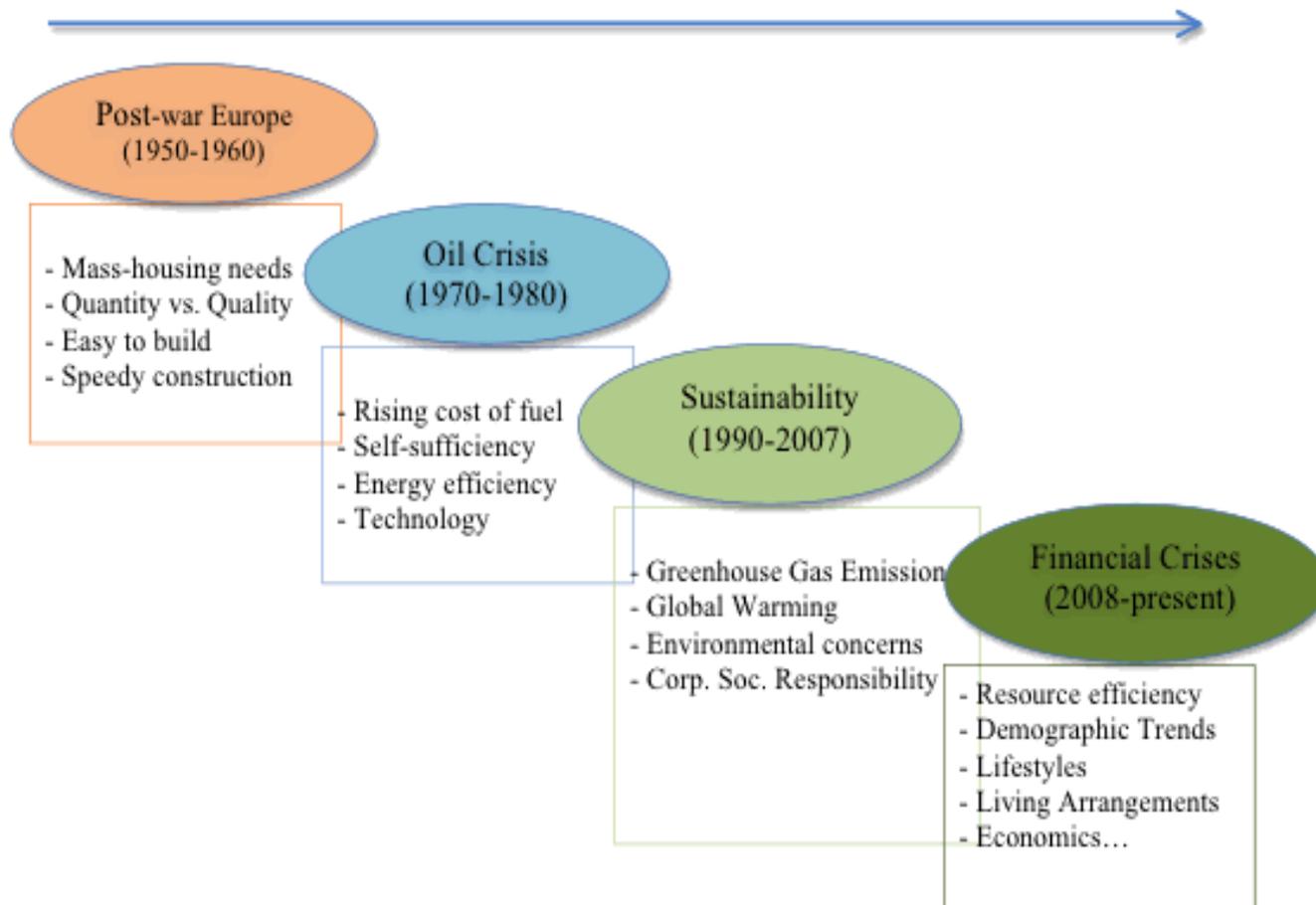
No EU Level Housing Policy, so...

**“... needs of the present occupants, while being environmentally sustainable, socially responsive and, at the same time, affordable...”**

Beyond Time & Place... Current & Dynamic!

# Contemporary Housing: Evolution

## The Contemporary Housing Timeline



## Design Principles

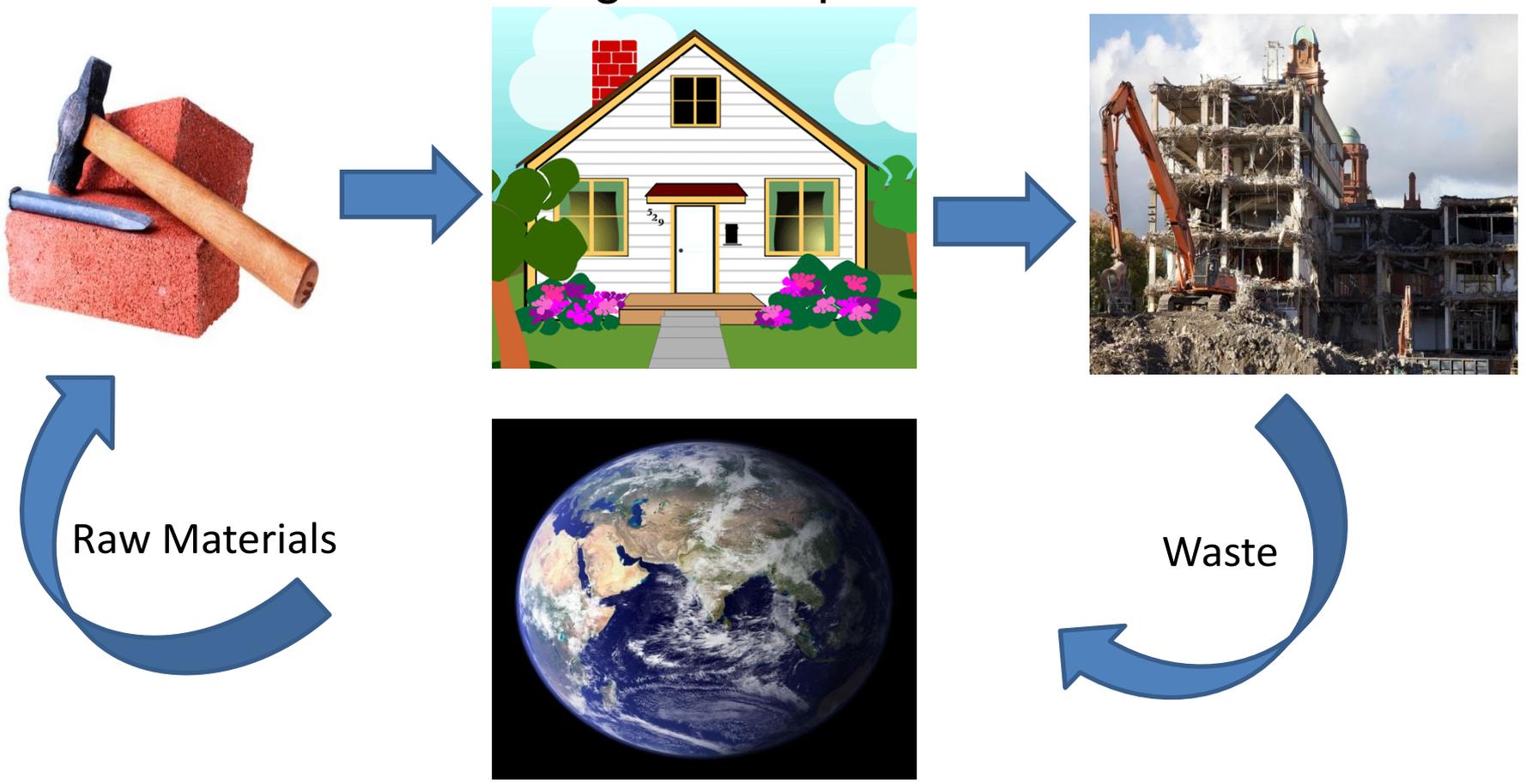
- Sustainable Design
- Inclusive Design
- Community Participation

## Sustainable Design

- Cradle-to-cradle
- Eco-systemic
- Compact building
- Socio-integrative

# Sustainable Design

- Cradle-to-cradle design concept



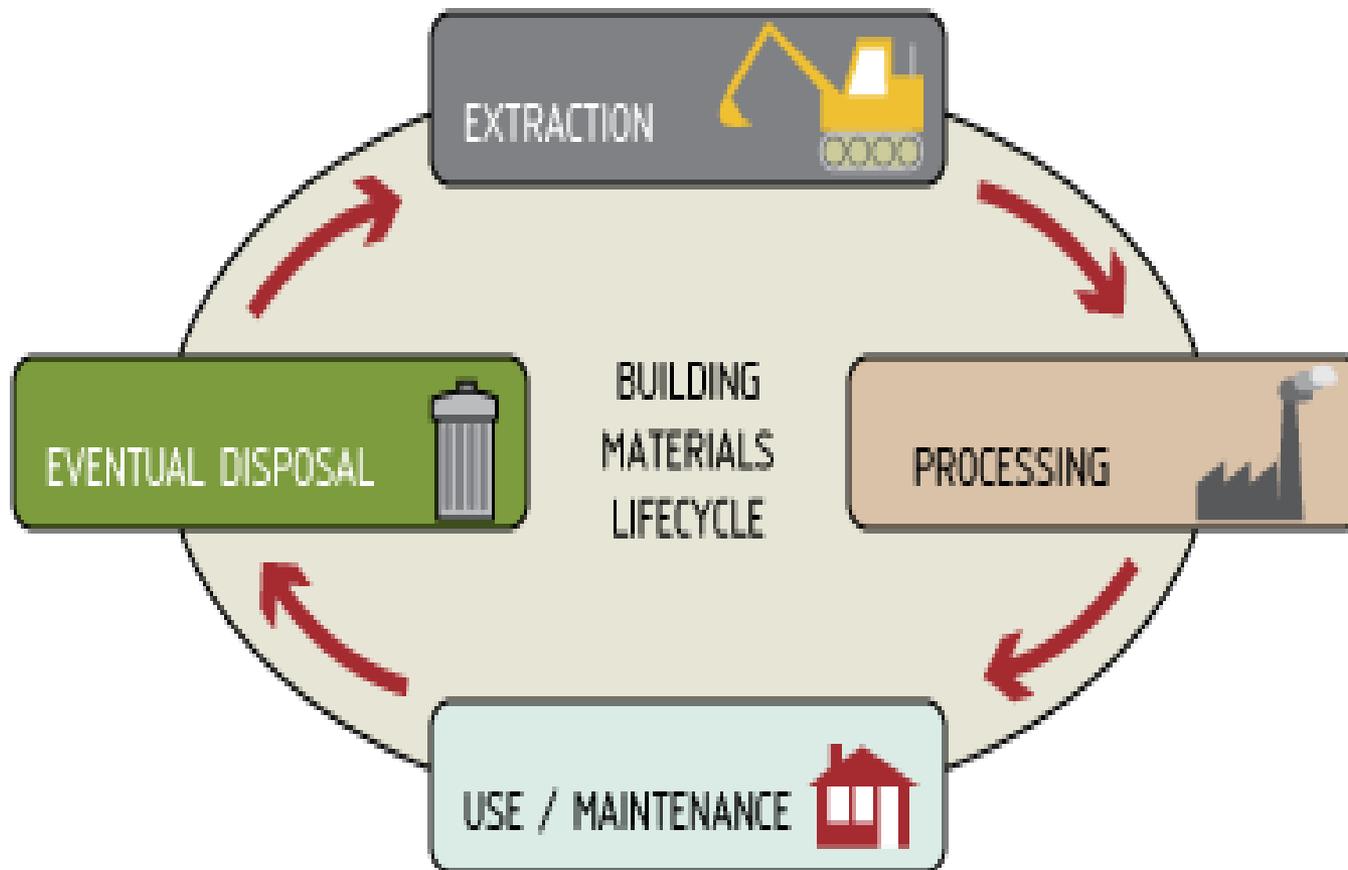
# Sustainable Design

- Cradle-to-cradle design concept



# Sustainable Design

- Cradle-to-cradle design concept

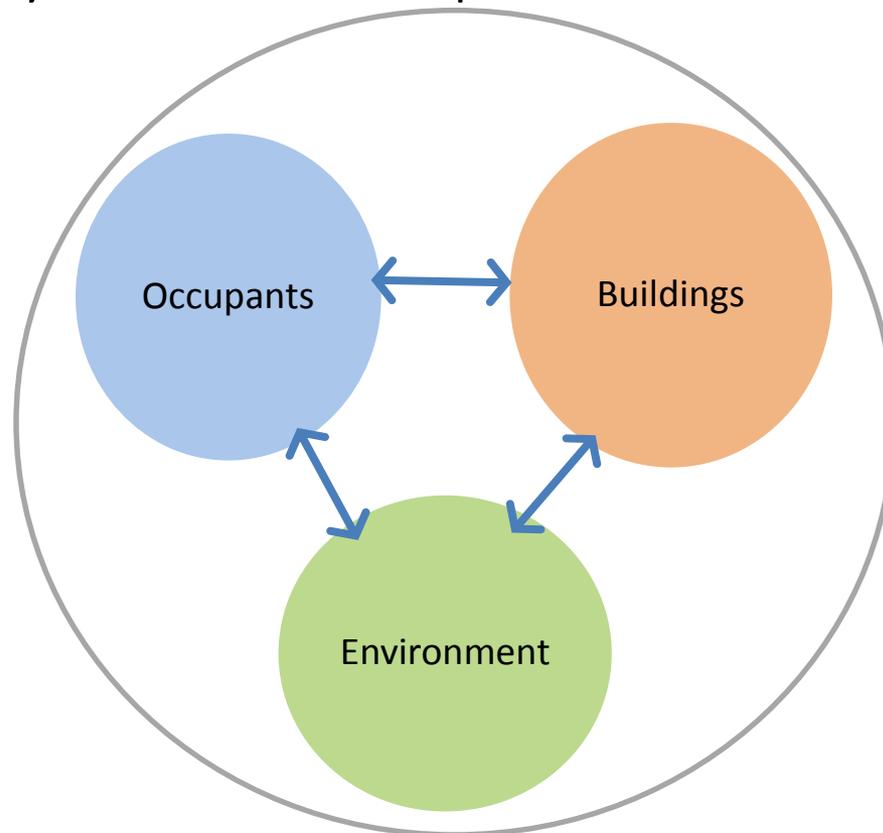


# Sustainable Design

- Cradle-to-cradle design concept - summary
  - Lifecycle Impact Assessment
  - ‘Designing out’ waste in building construction process
  - Sustainable building materials
  - Sustainable sources of building materials
  - Appropriate building construction technology
  - Resource & Energy consumption in usage stage
  - Deconstruction as opposed to Demolition

# Sustainable Design

- Eco-systemic design concept
  - Design for symbiotic relationships



# Sustainable Design

- Eco-systemic design concept
  - Design for Natural Equilibrium



# Sustainable Design

- The Compact building design concept
  - Urban development
  - Economies of scale
  - Access to green areas
  - Privacy and socialisation
  - Ethnic and Community identity
  - Social conflicts

# Sustainable Design

- **Socio-integrative design concept**
  - Recognises individual needs
  - Establishes social inclusion
  - Fosters individual - societal Interrelationship

# Inclusive Design

- What is it?
- Why the need?
- Principles
- Tools
- Contexts

# Inclusive Design

- What is it?
- Accessibility: Barrier-free Built environment...,



...but NOT stigmatising!!!

# Inclusive Design

- Why the need?
  - Demographic trends – ageing population
  - Living arrangements – multi-generational living, lone-parenthood
  - Social status and circumstances – income level, marital status
  - Diverse user groups – gender differences & requirements

# Inclusive Design

- Principles
- The Environment:
  - Requires no effort, special treatment or separation
  - Offers freedom to access, use and participate in its activities
  - Accommodates individual needs
  - Embraces diversity and differences
  - Legible and predictable
  - Flexible and safe to use regardless of age, gender, etc.

# Inclusive Design

- **Tools**

- Post-Occupancy Evaluation (Retrospective)
- Building Information Modelling (Proactive)
- Design Guidelines (e.g. Lifetime Homes in UK)
- Bespoke Design Frameworks



# Inclusive Design

- Contexts
  - Cater for marginalised user groups
  - Focus NOT diverted from majority of users
  - Appreciates and resolves ‘conflicts’ among user groups’ needs
  - Considers environment and settings where it is being applied
  - Available resources
  - Idealistic vs. Realistic goals

# Community Participation

- Definition
- Wheel of Participation
- What to know about Community Participation

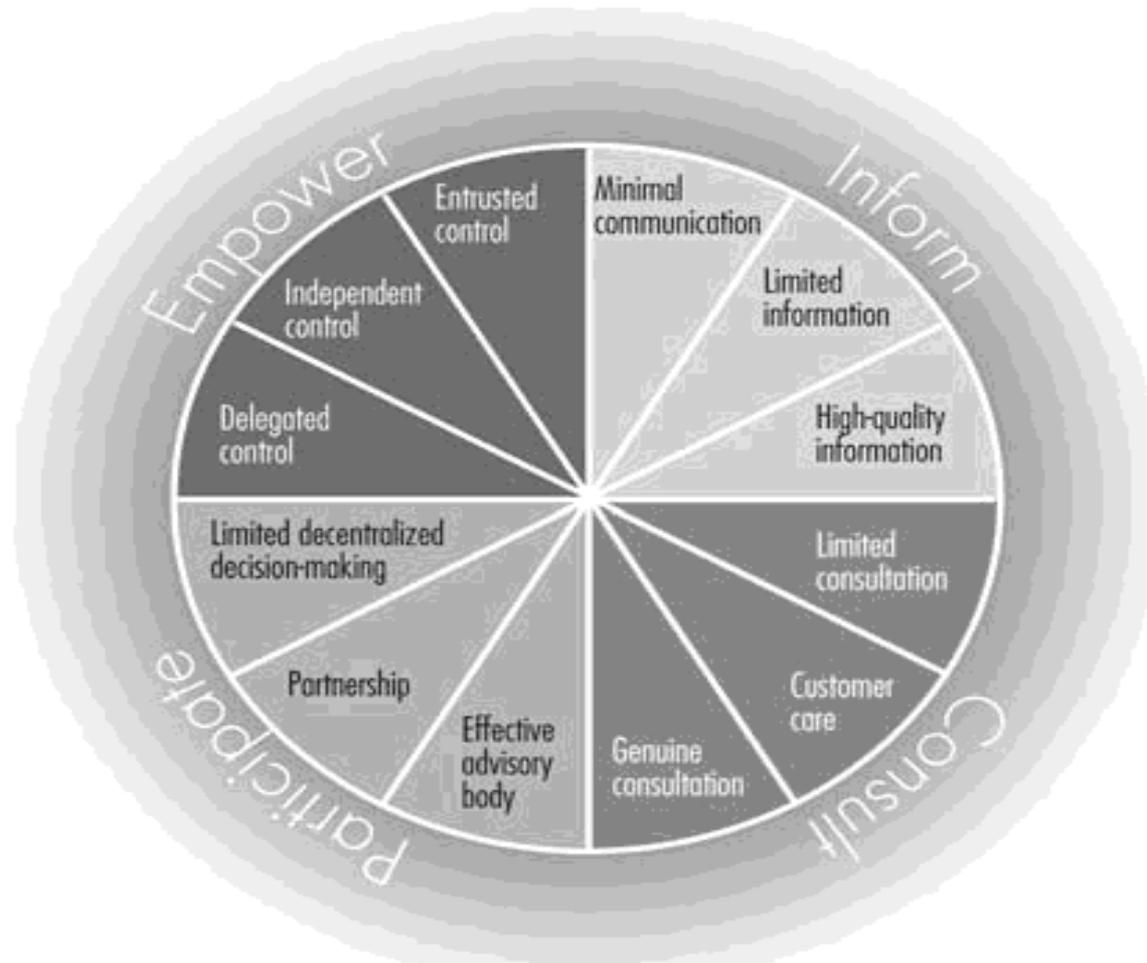
# Community Participation

- DEFINITION:

“...decentralisation of urban management by spreading decision-making among local entities and community involvement in the development of urban policies...”

(Davidson et al., 2007)

# Community Participation



The wheel of participation

(Source: Heritage & Dooris, 2009)

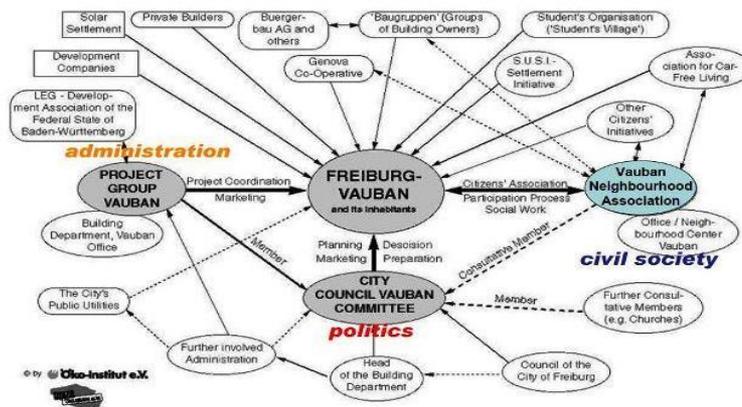
# Community Participation

- **Macro Scale Projects**
  - Urban planning and reconstruction
- **Multi-lateral and multi-dimensional collaboration**
  - Involving various stakeholders
- **Complementary to Sustainable and Inclusive Design**
  - Not viable on a stand-alone-basis
- **Systems Approach**
  - Interconnectivity with other elements of the system
- **Conflict Resolution**
  - Compromises and concessions

# Emerging Designs in Contemporary Housing

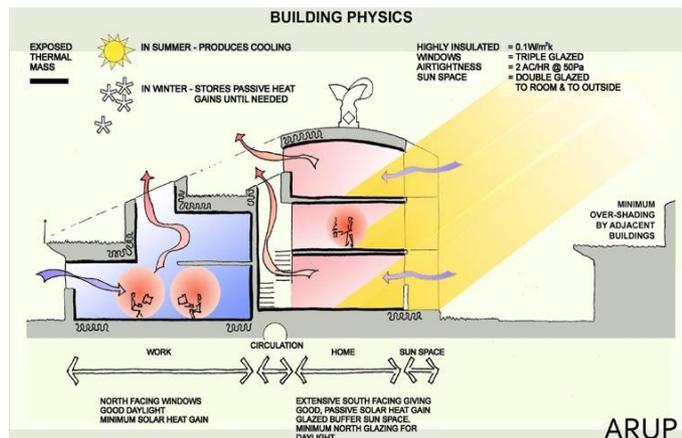
- Freiburg's Vauban District Project, Germany
  - 300-citizen participation in Forum Vauban
  - Home to 5,000 people and offers 600 jobs
  - Car-reduced residential area
  - UN HABITAT acclaimed "German Best Practice"
  - Several passive houses

## Structural Integration (1995-2004)



# Emerging Designs in Contemporary Housing

- Beddington Zero Energy Development
  - (BedZED) Housing Project, UK
  - First UK's large-scale sustainable community
  - Completed 2002
  - Houses 220 people + office space for 100 people
  - Homes range from studio to 4-bed apartments
  - 100% renewable energy



## Conclusion

- Three mutually reinforcing design principles driving contemporary housing research and design
- Socio-economic challenges are threats and opportunities
- Involvement and Participation of all stakeholders is essential – user-centred
- Research and Practice may lead to better Contemporary Housing

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**[iodurosaiye@uclan.ac.uk](mailto:iodurosaiye@uclan.ac.uk)**

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