

BEARS

Berkeley Education Alliance for Research in Singapore Limited

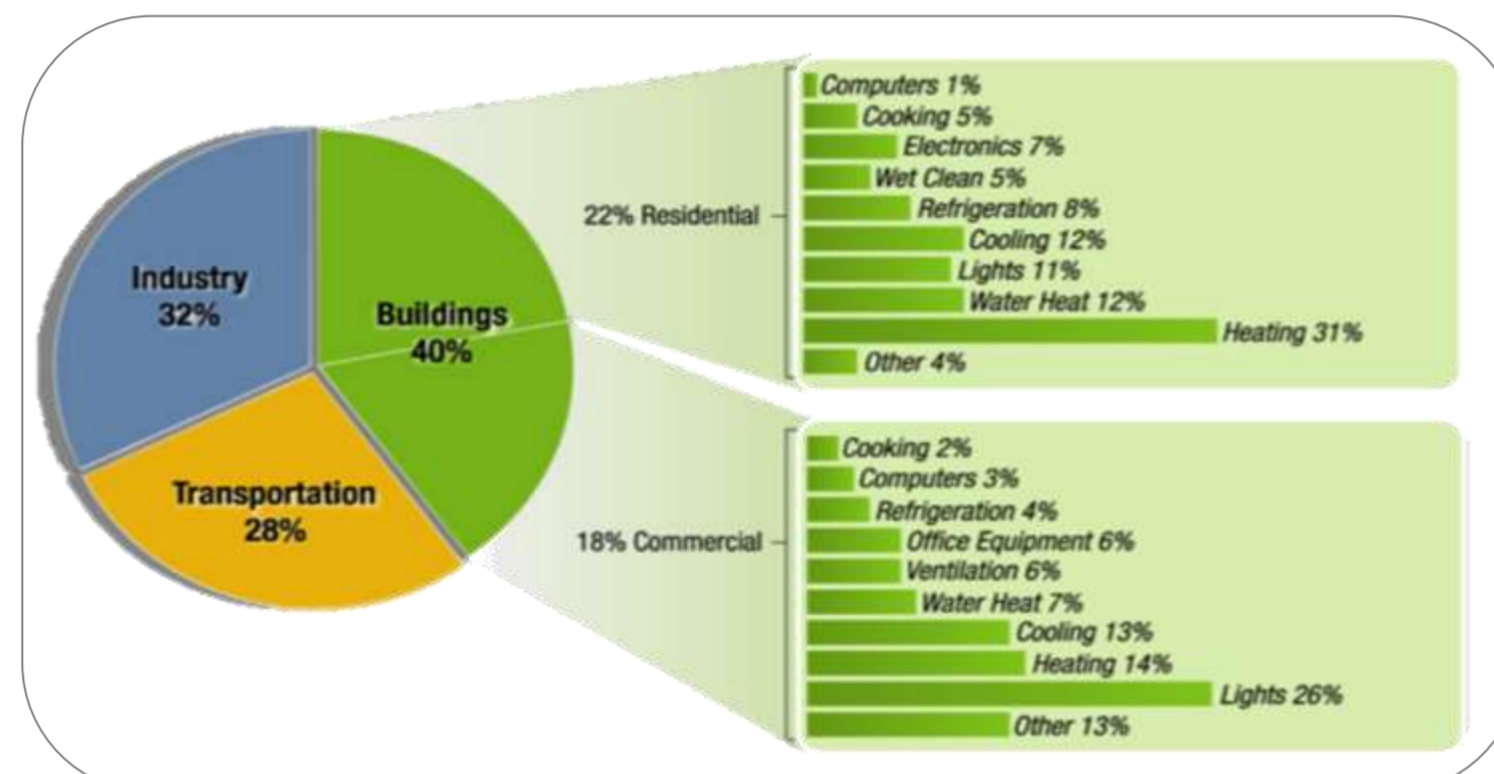


Funded by: NATIONAL RESEARCH FOUNDATION

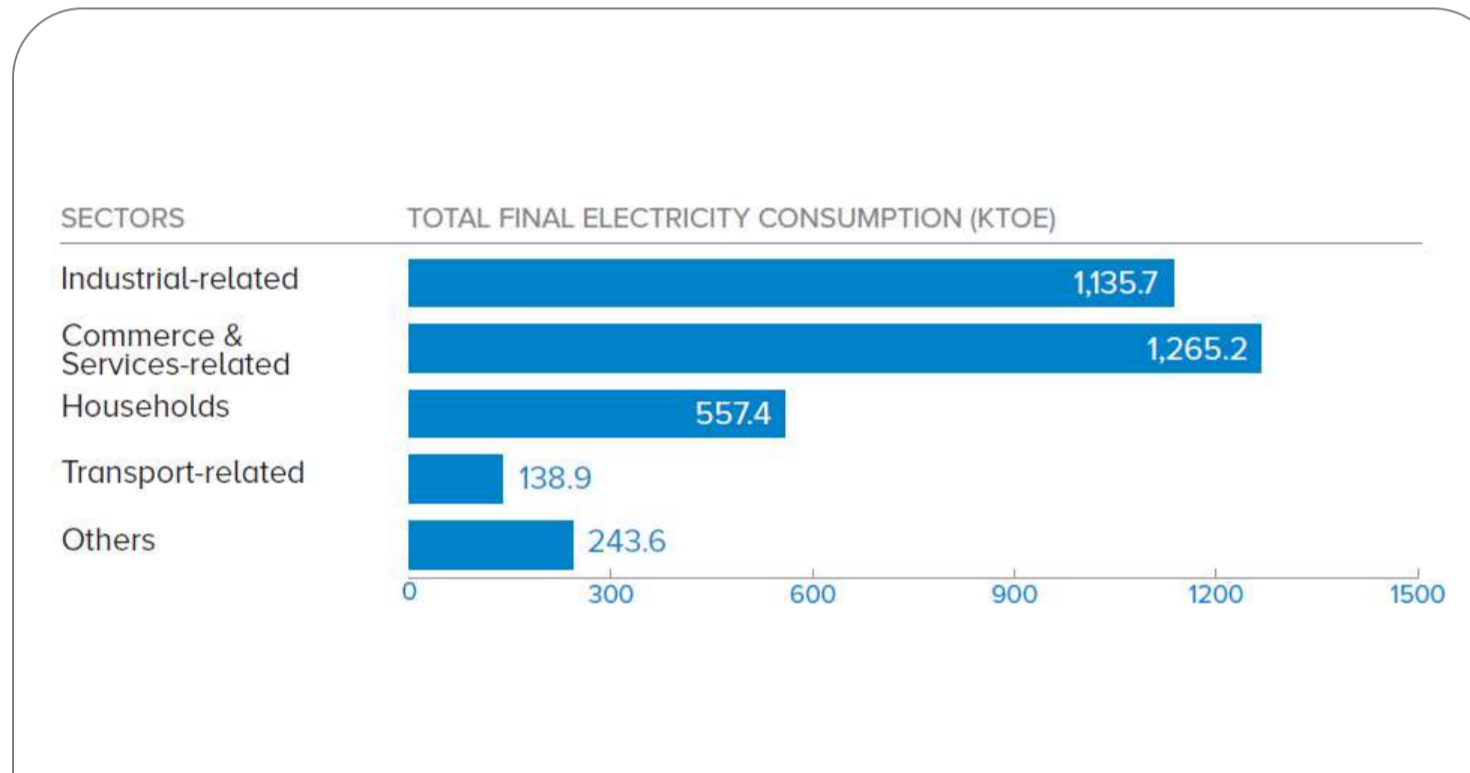
BEARS is a University of California Center for research, graduate education, and innovation. With close alliances at NTU and NUS, BEARS presently manages two major initiatives under the CREATE umbrella.

Singapore - Berkeley Building Efficiency and Sustainability in Tropic (SinBerBEST)

Using a paradigm of buildings as agile entities that manufacture on-demand built environments, our mission is to develop technologies that can dramatically improve building energy efficiency, while maintaining comfort, safety, security, and productivity in tropical buildings.

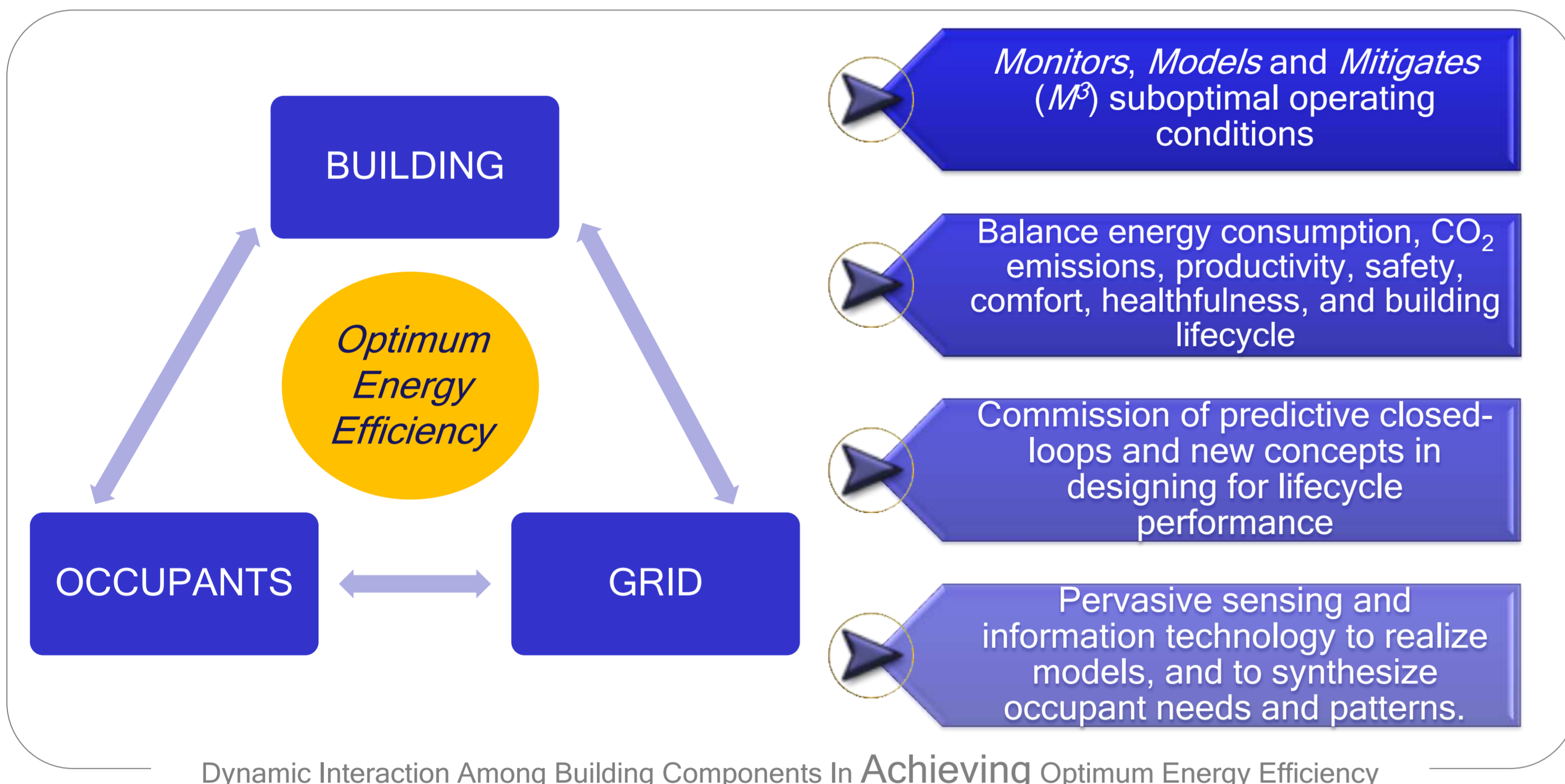


US consumes 3.3 TW annually, half of it in Buildings

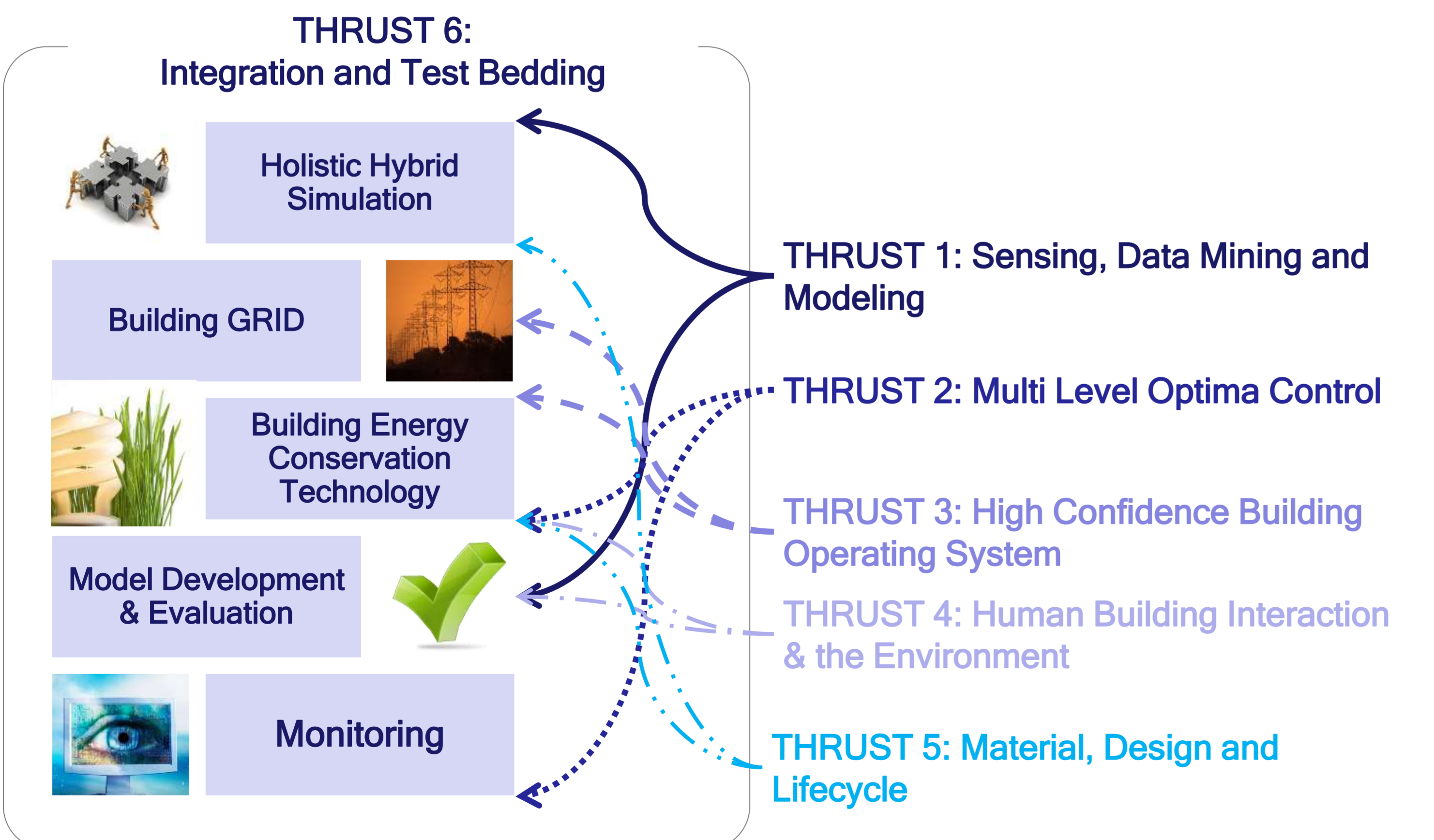


Final electricity consumption for Singapore as of 2009 stood at 3,340.8 ktoe*

Building energy can be reduced by establishing intelligent interaction between the grid, the building and its occupants and appliances. This requires a transformational paradigm shift in the design, commissioning, or retrofitting buildings.

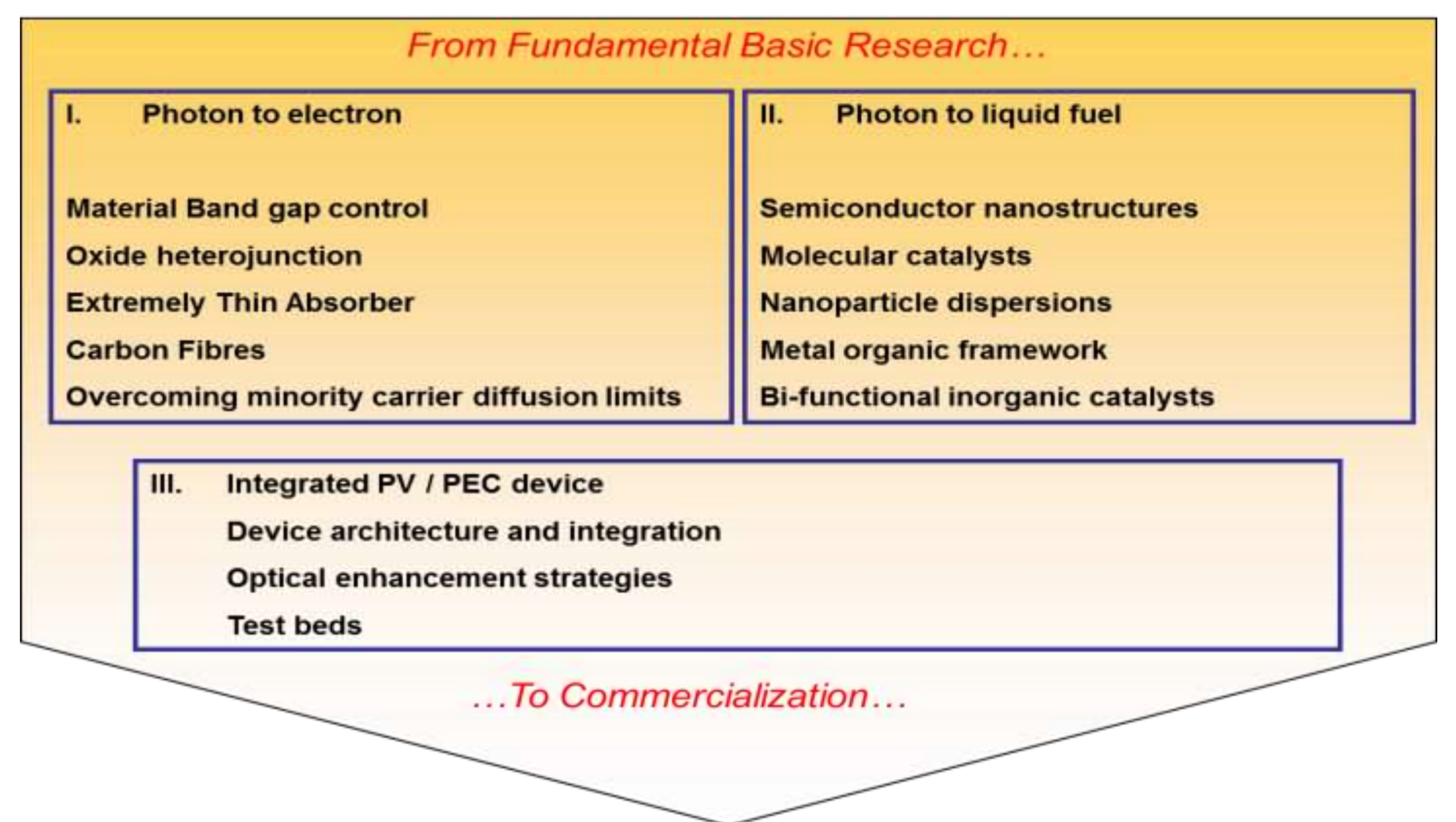


Dynamic Interaction Among Building Components In Achieving Optimum Energy Efficiency

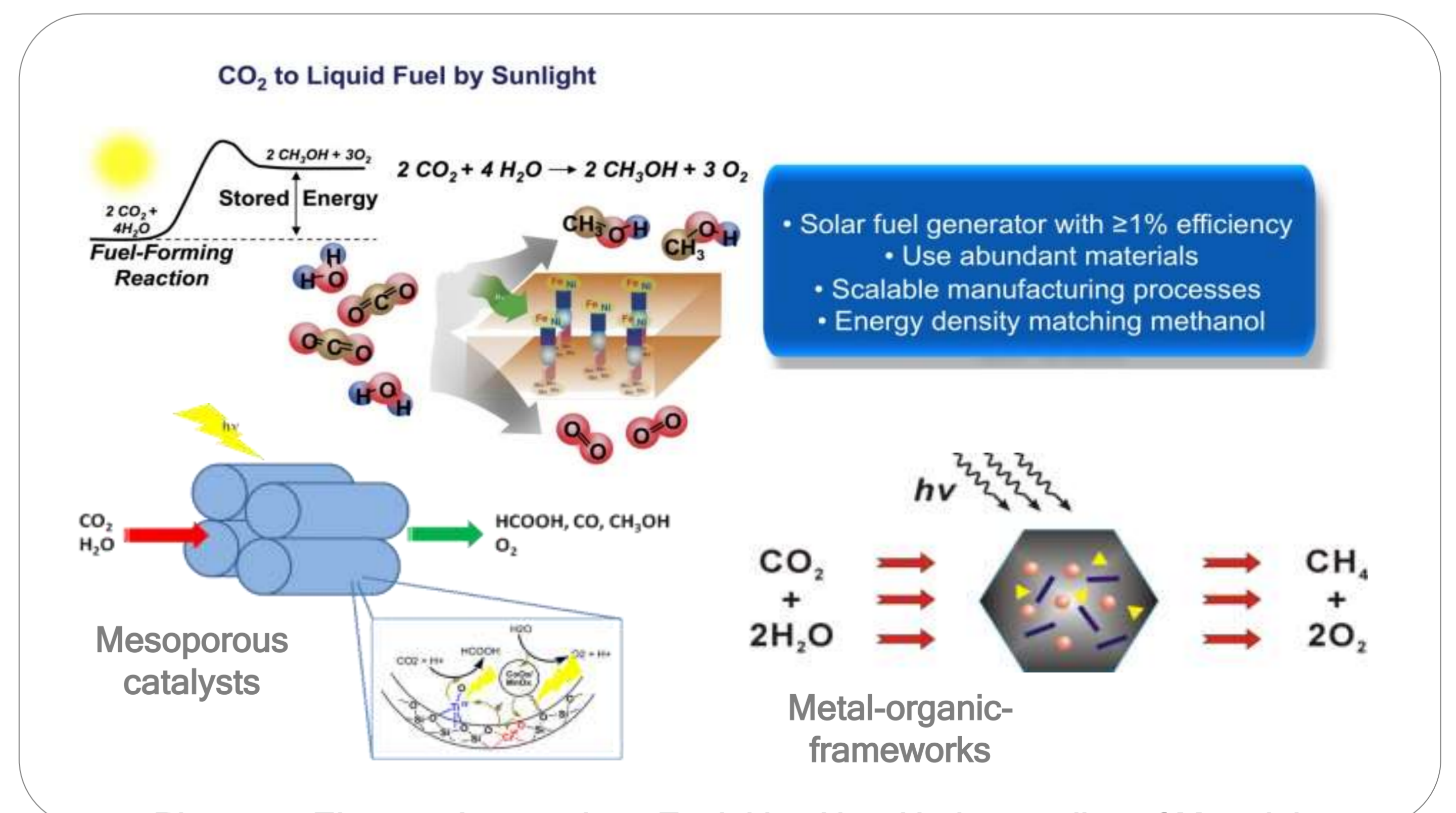


Singapore - Berkeley Research Initiative for Sustainable Energy (SinBeRISE)

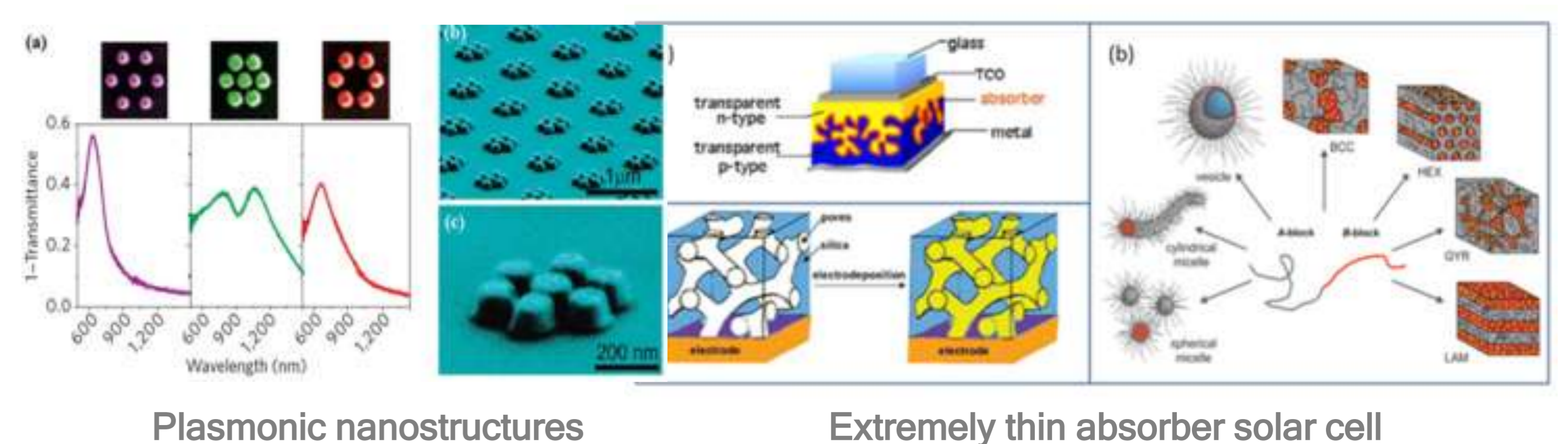
To address the grand challenge of affordable harnessing of Solar Energy through photovoltaic systems and photoelectrochemical fuel generation. SinBeRISE will focus on novel concepts that exploit modern technology to improve the efficiency and reduce device cost of solar energy conversion to electricity and usable fuel.



Photon to Fuel Approaches: Mimicry of Photosynthesis



Photon to Electron Approaches: Exploiting New Understanding of Materials



Government agencies:



Companies:

