



A NATIONAL SUMMIT ON
**SMART GRID AND
CLIMATE CHANGE**

DECEMBER
2-3 2014
WASHINGTON, DC

Workshop Panel 1 Segmentation & Personalization



Jennie Stephens
University of Vermont



Jamie Wimberley
DEFG/EcoAlign



David Weitz
Conservation
Services Group



Judith Schwartz
To the Point

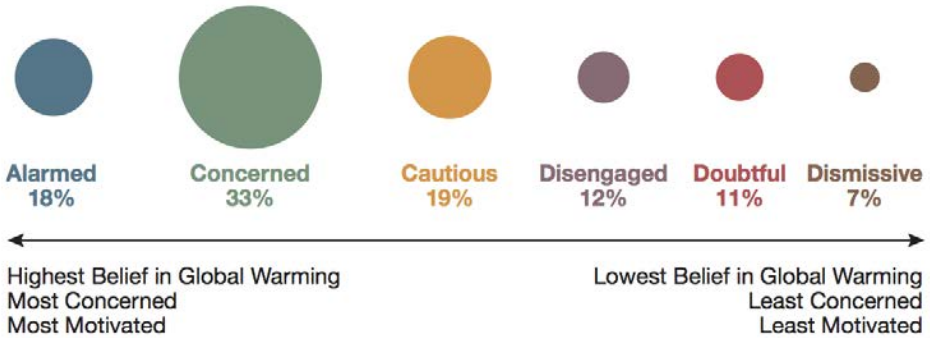
Five Decades of Segmentation

- 1960s demographics (age, assets, jobs, etc.)
- 1978 VALS (SRI Values and Lifestyles)
- Psychographics
- Diffusion of innovation/chasm (adoption)
- Attitudinal (core beliefs)
- Behavioral (actual/past behavior)
- Social norms (societal trends)
- Comfort with technology (digital natives)

Six Americas

Figure 1: Proportion of the U.S. adult population in the Six Americas

Proportion represented by area

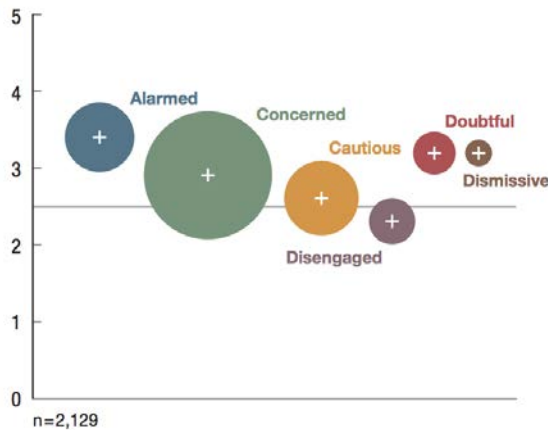


n=2,129

Source: *Global Warming's Six Americas 2009: An Audience Segmentation Analysis*

Figure 26: Number of energy efficiency improvements made to home

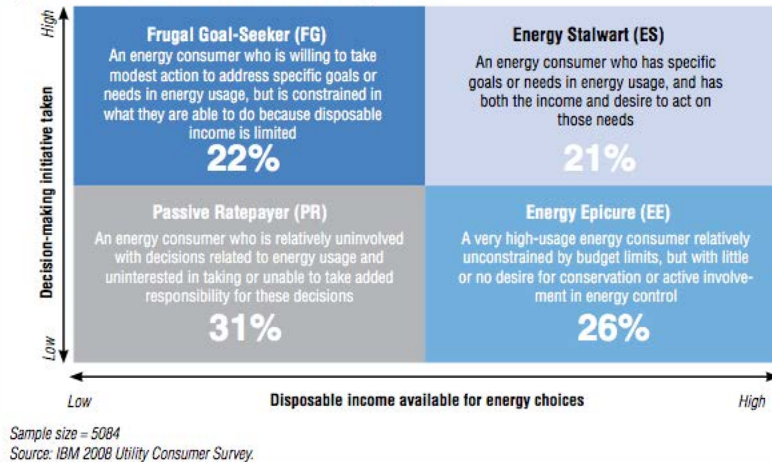
Number of improvements made from the following list of five: Insulating the attic; caulking and weather-stripping the home; installation of an energy-efficient water heater; installation of an energy-efficient furnace; installation of an energy-efficient air conditioner.



n=2,129

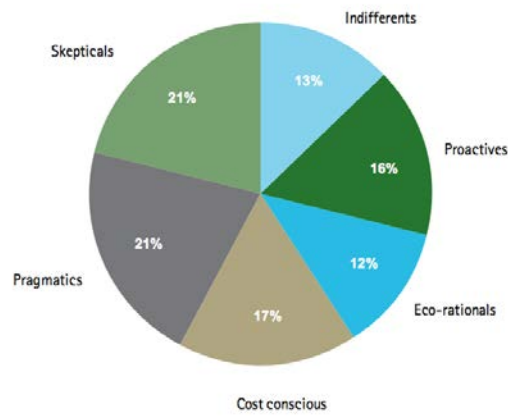
Source: *Global Warming's Six Americas 2009: An Audience Segmentation Analysis*

FIGURE 5.
Types of residential and small commercial energy customers.



Source: IBM

Figure 20.
Six consumer segments have been identified according to their preferences for the different components of electricity management programs.



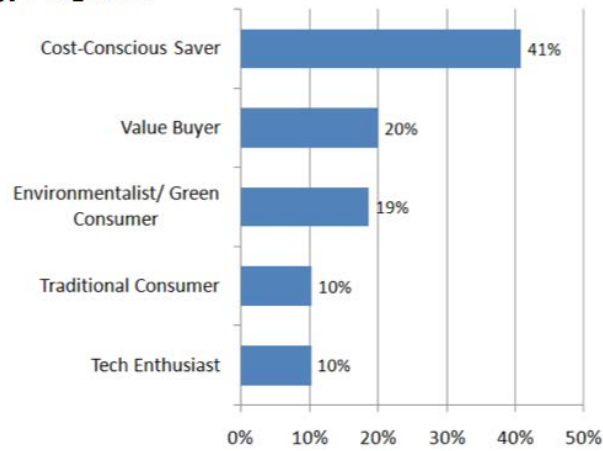
Electricity management program components:

- Impact on your electricity bill
- Utility control
- Your environmental impact
- Self-action required

Source: Understanding Consumer Preferences in Energy Efficiency
Base: All respondents
Methodology note: Results based on a conjoint analysis

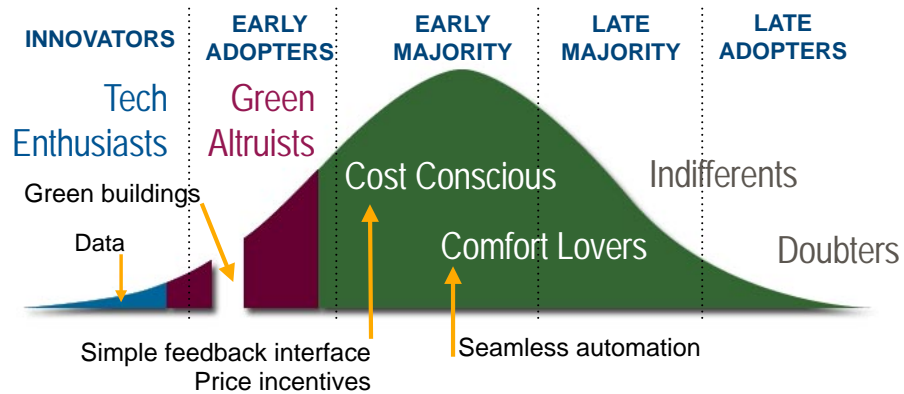
Accenture 2010

Chart 3: Motivation on the Use of New Technologies/Participation in New Energy Programs



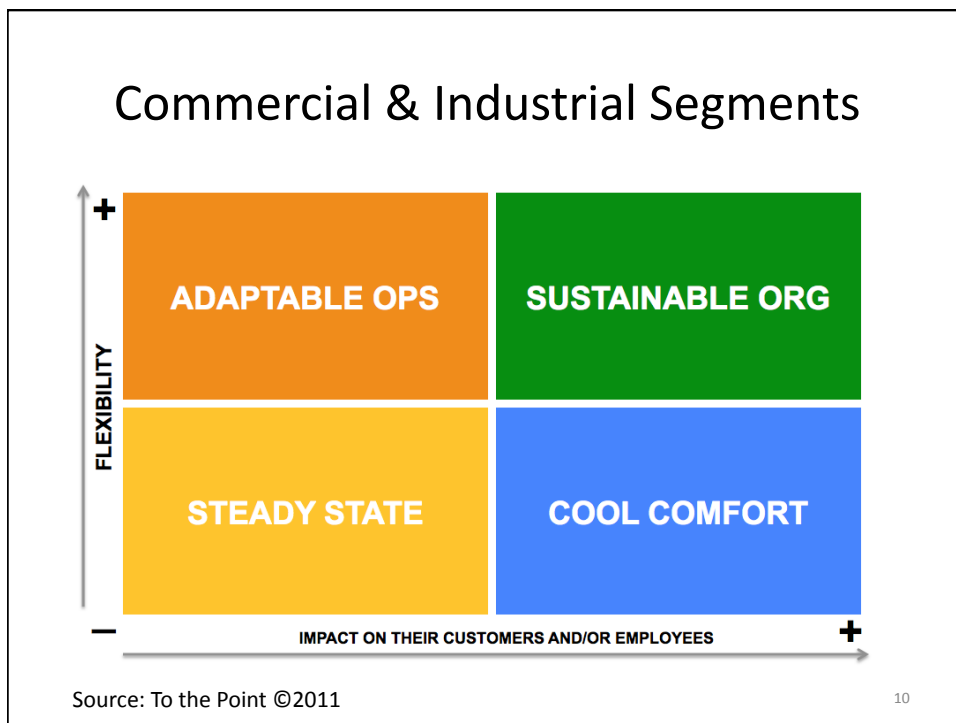
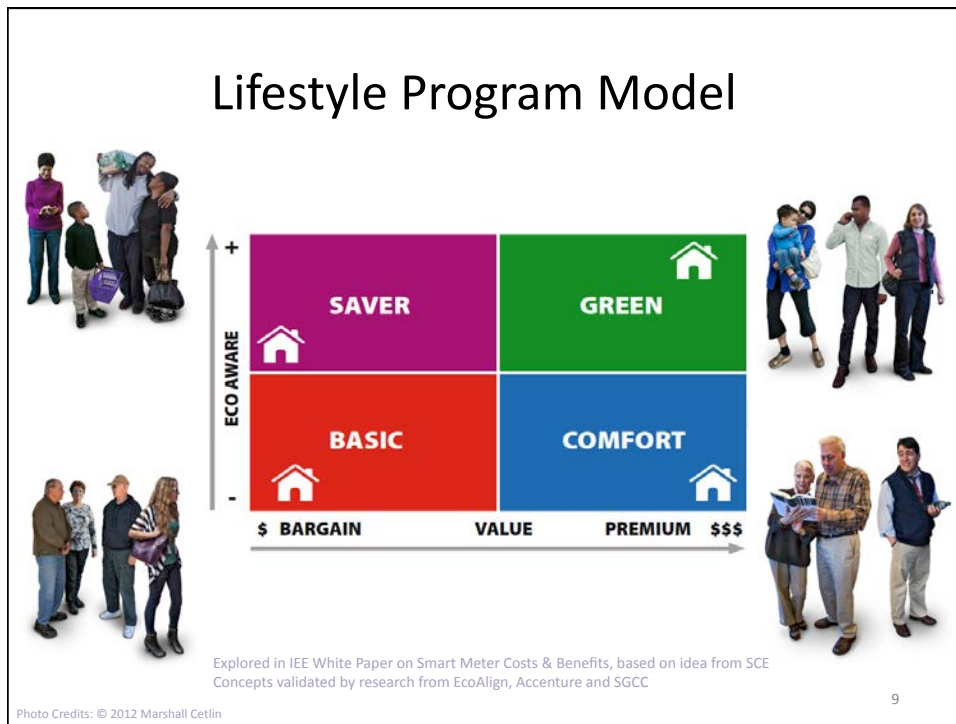
Source: DEFG/EcoAlign

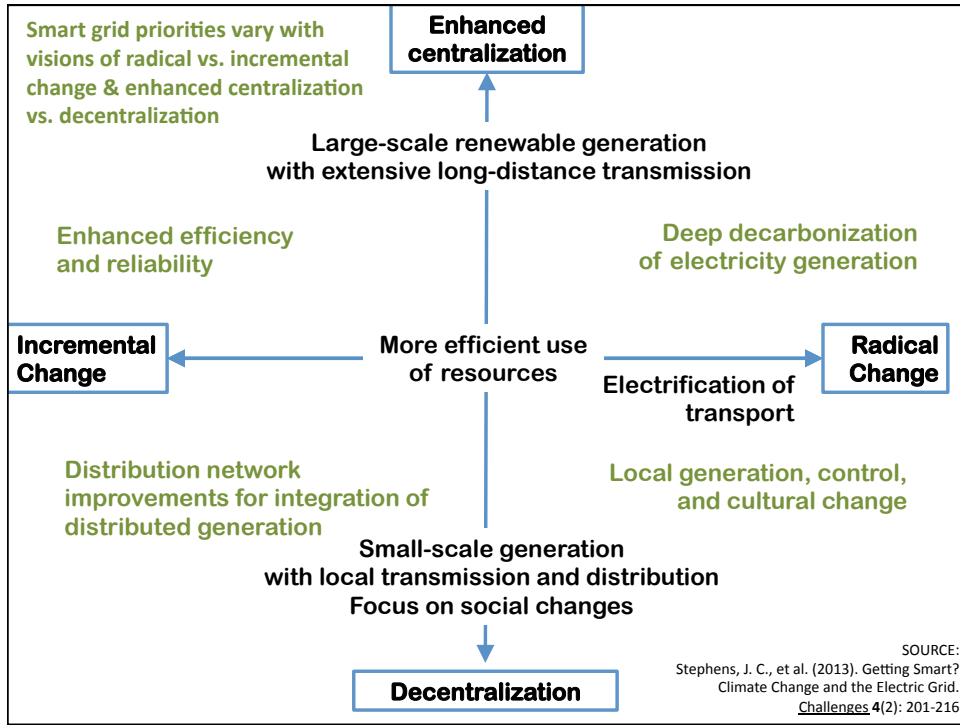
Energy Worldviews



Source: To the Point

Diffusion of Innovations: Everett Rodgers
 Crossing the Chasm: Geoffrey Moore
 Worldview triggers: Judith Schwartz





Diversity of Smart Grid priorities/perspectives

Key Actors	Priorities & Perspectives
Consumers	Reliability, low-rates, reduced environmental impact – but sense of limited influence
Government (National, Regional, State, Local)	Jurisdictionally complex regulation
Private Sector	Accountable to shareholders
Electric Utilities	Maintaining reliable service, responding to consumers and regulators
Technology companies	Innovative & entrepreneurial
Environmental advocates	Low carbon shift & renewable energy, local land use
Energy system researchers	Technologically optimistic – tend to assume minimal social change

Jennie C. Stephens, PhD



Energy Savings Potential Model

Actual house used to develop building model using:



location
size
vintage
foundation type
consumption data

"Most Efficient" model of same house defines end case



$$\text{Savings Potential} = \text{Actual House} - \text{Most Efficient Model}$$

Conservation Services Group 2014

Customer Targeting



Conservation Services Group 2014