Understanding the Customer behind the Data

Smart Efficiency Requires Smart Data: Using Data to Better Serve Customers

Midwest Energy Efficiency Alliance
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Integration to Provide Reliable, Safe, Affordable, Cleaner Energy and Expanded Customer Choice
What do customers tell us they care about?

Meaningful Insights

What people care about and find valuable

Data utilities have (consumption + other data)

WHO DID WE TALK TO?

EPRI surveyed a consumer panel on smart homes, and asked...
“If your home could talk, what would you want it to tell you?”

Using Data to Provide Insights of Value to Customers (EPRI 3002013357)
“If your home could talk, what would you want it to tell you?”

Traditional
Related to electricity delivery, efficiency

Transitional
Nexus with IoT/home automation; alternative energy services & DERs

Nontraditional
Completely new space for utilities, non-energy related
Smart Home Voice Assistant

Top Perceived Benefits of Smart Home Voice Assistants
US Consumers

- Voice assistants have gained traction as the hub of the smart home
- Amazon Echo Dot was the highest seller during “Prime Day”
- Behind wireless speakers lies a whole ecosystem

Source: BI Intelligence Survey (n = 865), February 2017
intelligence.businessinsider.com
Shaping customer-centric content

1. Identify a topic customers care about
2. Brainstorm insight ideas
3. Design customer outreach

Target Life Stage

Emotions to Evoke

Behavioral Levers

Content

Trigger Points

Game Elements

Customer Needs and Ideas

Other aims to craft ideas: events

Behavioral Levers

Shaping customer-centric content
Key takeaways from customer panel on smart homes

- Top topics: cleaning, pets, health, scheduling, food
- Energy not a priority
- Focus on relevant areas
  - Scheduling, security, troubleshooting, maintenance, etc.
- Brainstorm based on customer-generated ideas
- Test value to customers
Customers & Smart Homes

Understand customer interactions with smart homes as an ongoing journey

- High resolution data from appliances and devices at premise level and community level
- Monthly household survey to reveal stories behind and beyond the load behaviors

Onboarding & move-in experience
- Appliances features
  - Smart home perceptions
    - Summer usage behaviors
    - Interactions with Voice assistant
      - Smart outlets
      - Home security
      - Winter usage behaviors

Provide learning lessons for future smart neighborhood
Identify gaps and opportunities in the interactions between smart tech, customers and utility
### Core Functions of Connected Home Ecosystems

<table>
<thead>
<tr>
<th>Optimization</th>
<th>Orchestration</th>
<th>Aggregation</th>
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<tbody>
<tr>
<td>Use of data and customer inputs to provide autonomous programming and response targeted for a specific need</td>
<td>Coordinated programming and response of end-use loads with a premise</td>
<td>Grouping of end-use loads, typically of the same end-use to respond to particular utility controlled signals</td>
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**Examples** – Whisker Labs and Nest Labs  
**Examples** – Amazon Alexa, Google Home, Apple HomePod, Samsung SmartThings  
**Examples** – EnergyHub, AutoGrid.
Sources of Customer Data

- Sensor Data
- Meter Data
- Customer Load Data
- Systems Data
- External Data

Energy Management Circuit Breaker
Leveraging AMI data analytics for customer services

- Targeted customer offerings using analytics of AMI and building data
- Applications for energy efficiency, DR and electrification
- Existing AMI analytics products have not yet scaled to commercial and residential programs
Together...Shaping the Future of Electricity