

# ADVANCING TOWARD GRID MODERNIZATION — MEETING CUSTOMER NEEDS

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# Maui Energy Conference

**Session 4: Advancing Toward Grid Modernization –  
Meeting Customer Needs**

March 25, 2015



**Hawaiian Electric  
Maui Electric  
Hawai'i Electric Light**

# Perspective

- ◆ More collaboration is needed - we have much more agreement than disagreement, so let's build on that (lower bills, more renewables, resiliency, choice)
- ◆ Major drivers are all moving at a different pace – markets, grid modernization, customer expectations, technology and public policy (how do we keep these moving as a system to best serve the public and our communities)



# Customer Focused Strategy

## Challenges

- ◆ As more segments are created, who is accountable to customers for outcomes?
- ◆ Working through the transitions, investment cycles and technology may not match the pace of change (all sides)
- ◆ Diversity
- ◆ Fairness and sustainability while preserving choice

## Opportunities

- ◆ Optimization of resources as a system, not each part for the best total cost
- ◆ Greater transparency and engagement (feedback and market signals)
- ◆ Technology creates segmentation options – culture of innovation
- ◆ Connecting the right solutions to problems; i.e.; Energy Excelsior, GEMS, OBF



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# Final Thought

- ◆ Keep bringing the discussion back to how, when and why changes help all customers and our community as a whole. Sustainability of choices is critical.



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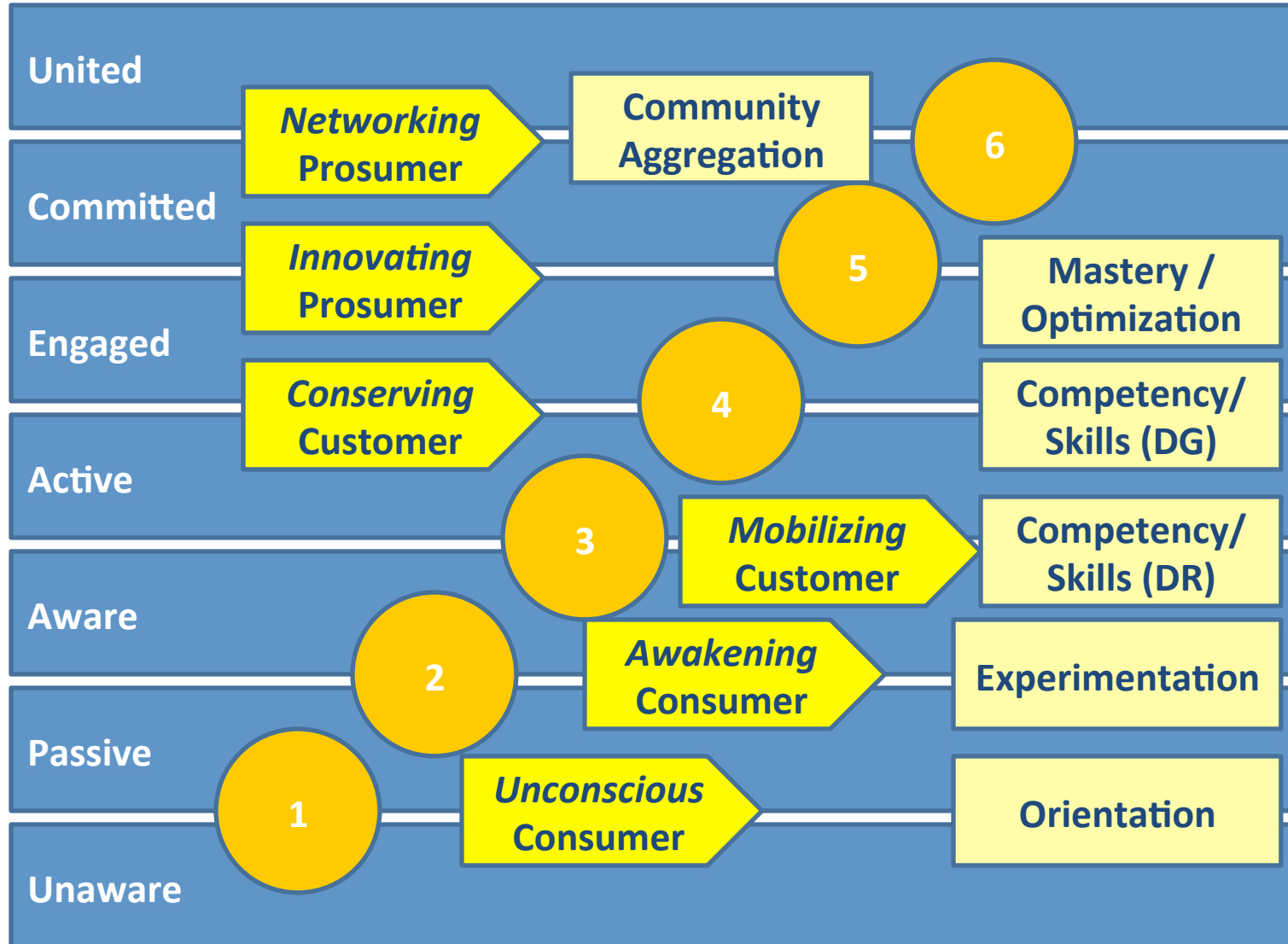


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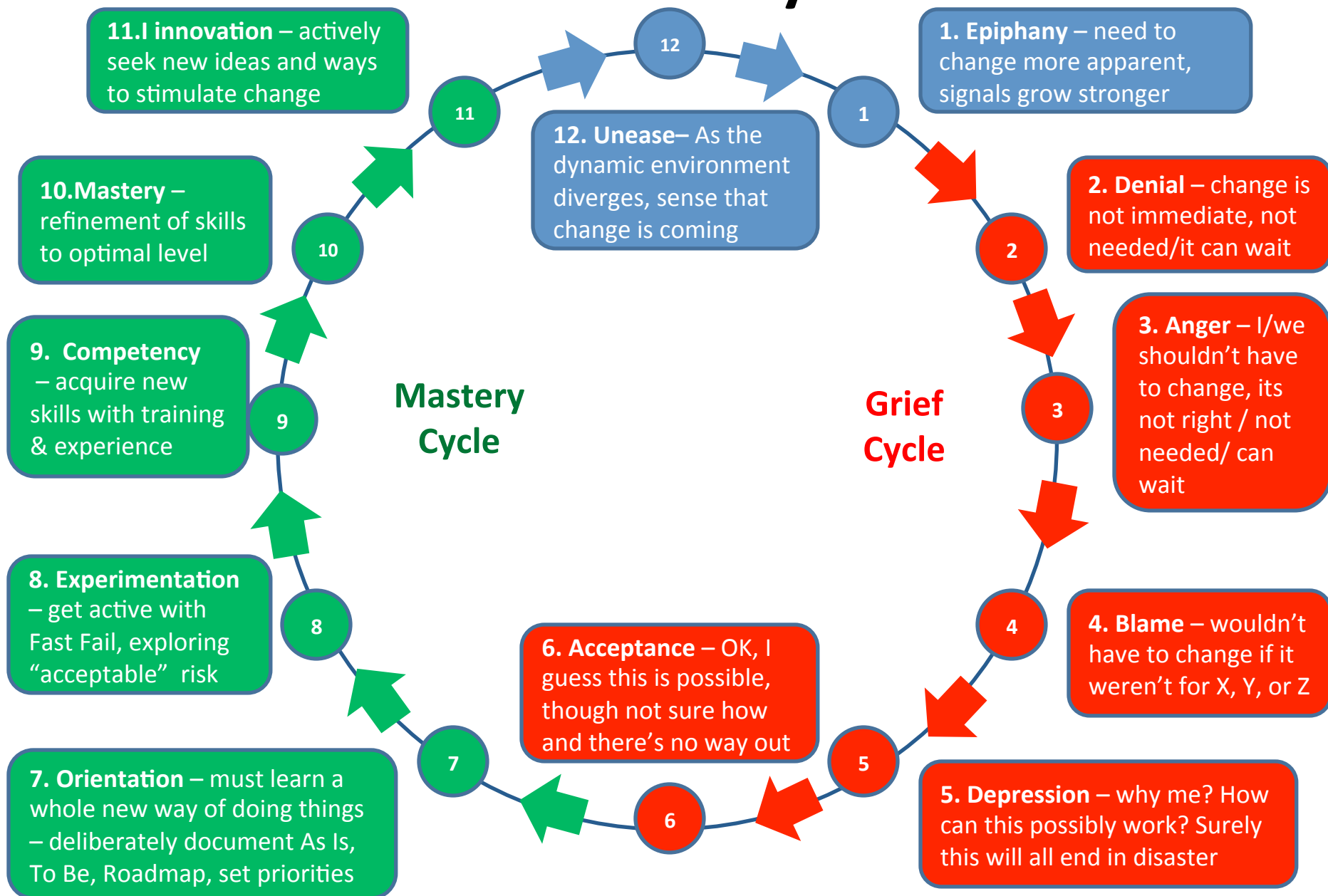
Consumer  
State

# Consumer Maturity Model ©

Utility  
Messaging



# Innovation Cycle<sup>©</sup>





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The background of the slide shows two large, grey, industrial-grade energy storage units. The unit on the left is a tall, rectangular cabinet with a perforated metal door and the 'stem' logo repeated vertically on its side. The unit on the right is a similar cabinet but with a more complex front panel featuring a handle and various labels. Both units are situated in a room with concrete block walls and a yellow safety mat on the floor.

# Going hybrid with Stem

The leaders in distributed energy storage

**Tad Glauthier**

Vice President, Hawai'i Operations for Stem, Inc.

Prepared for Maui Energy Conference  
March 25th, 2015



# The Stem system

Cloud-based energy intelligence platform that leverages smart storage, helping businesses control demand charges and providing utilities with flexible capacity.



# PowerScope: A platform for action



## Visualize

View precise data on past, present and future energy use



## Identify

Predict load spikes within the utilities billing cycle



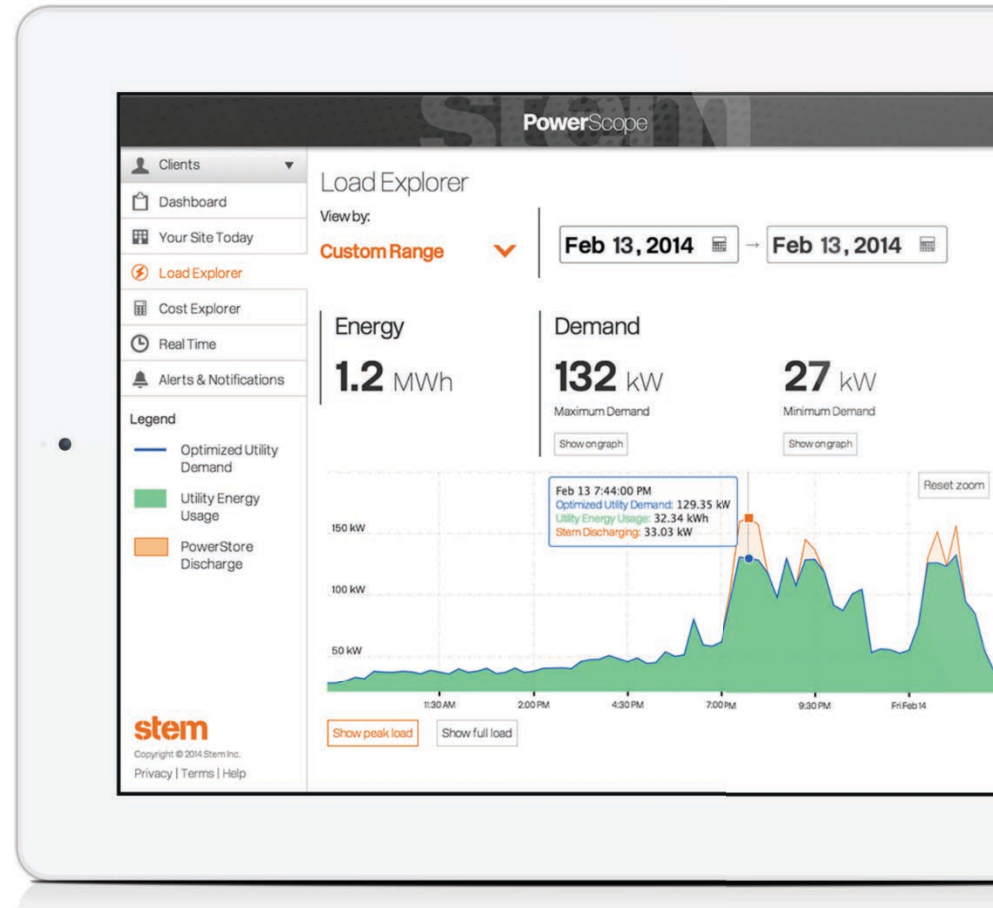
## Optimize

Integrate tariff considerations for usage spikes



## Control

Deploy on-site storage for optimal financial impact





# Grid Response with Hawaiian Electric

Leadership in sustainability

# Mahalo

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