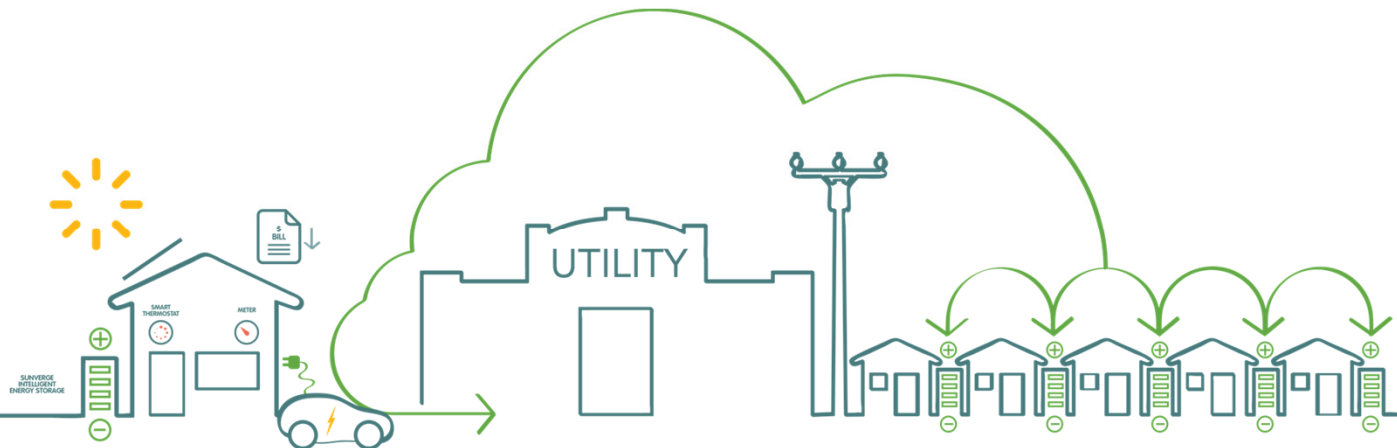




**Hawaiian Electric**  
**Maui Electric**  
**Hawai'i Electric Light**

## Modern Grid Technology & Leading Practices Workshop

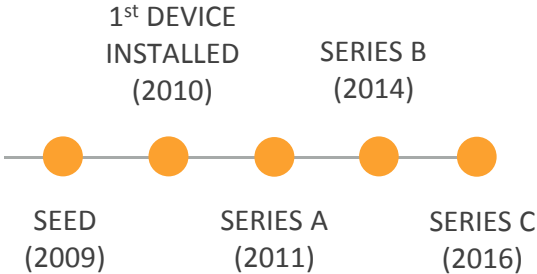
May 10, 2017



# Company Background – Proven Track Record

FOUNDED  
**2009**

HEADQUARTERED IN  
SAN FRANCISCO



**90**  
EMPLOYEES



CUSTOMERS

North America  
(AZ, CA, HI, KY, NY,  
NV & Canada)  
New Zealand  
Australia  
South Korea  
Germany

**750**

Systems Under  
Management  
Globally



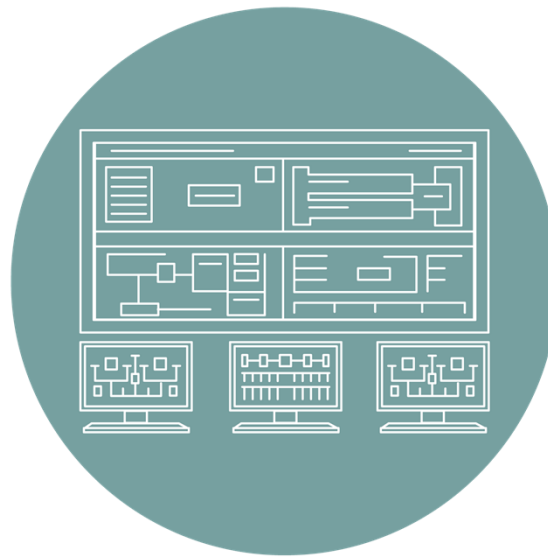
# Consumer: the Agent of Change and Disruption



## CONSUMERS

Driving change with increasing adoption of DERs and

 bidirectional grid  
SUNVERGE



## AGGREGATORS

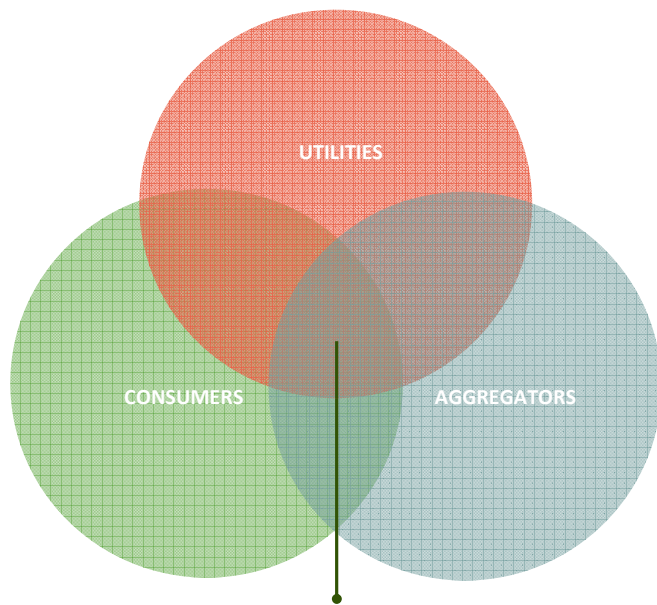
Seek new and recurring growth drivers



## UTILITIES

Face demand and cost challenges

# Emerging Platform in Interdependent Energy Ecosystem



**Facilitating PLATFORM  
Emergence**

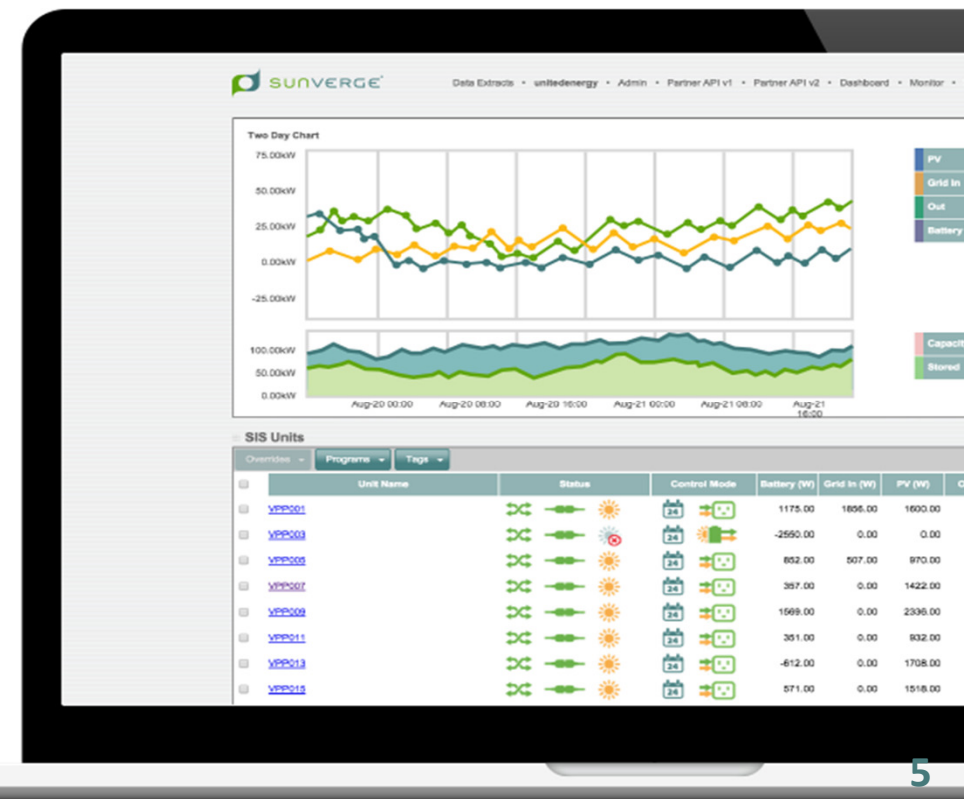
## DER platform Benefits and Value

CONSUMERS		AGGREGATORS		UTILITIES
Residential	Commercial	DER	Demand Response	
	Maximize PV investment	Aggregate PV and storage	Distributed storage as a DR resource	Peak Load, Load Reduction & Shifting
	Bill Management	Provide VPP offerings to utilities	Better Customer comfort & Increase participation	Meet Renewable Goals
	Backup Power	Create additional services revenue streams	Location-aware and targeted DR	Frequency Regulation Voltage Management
	Demand Charge Reduction	Wholesale Markets participation	Maximize Utilization & Capacity	Distribution asset upgrade Deferral

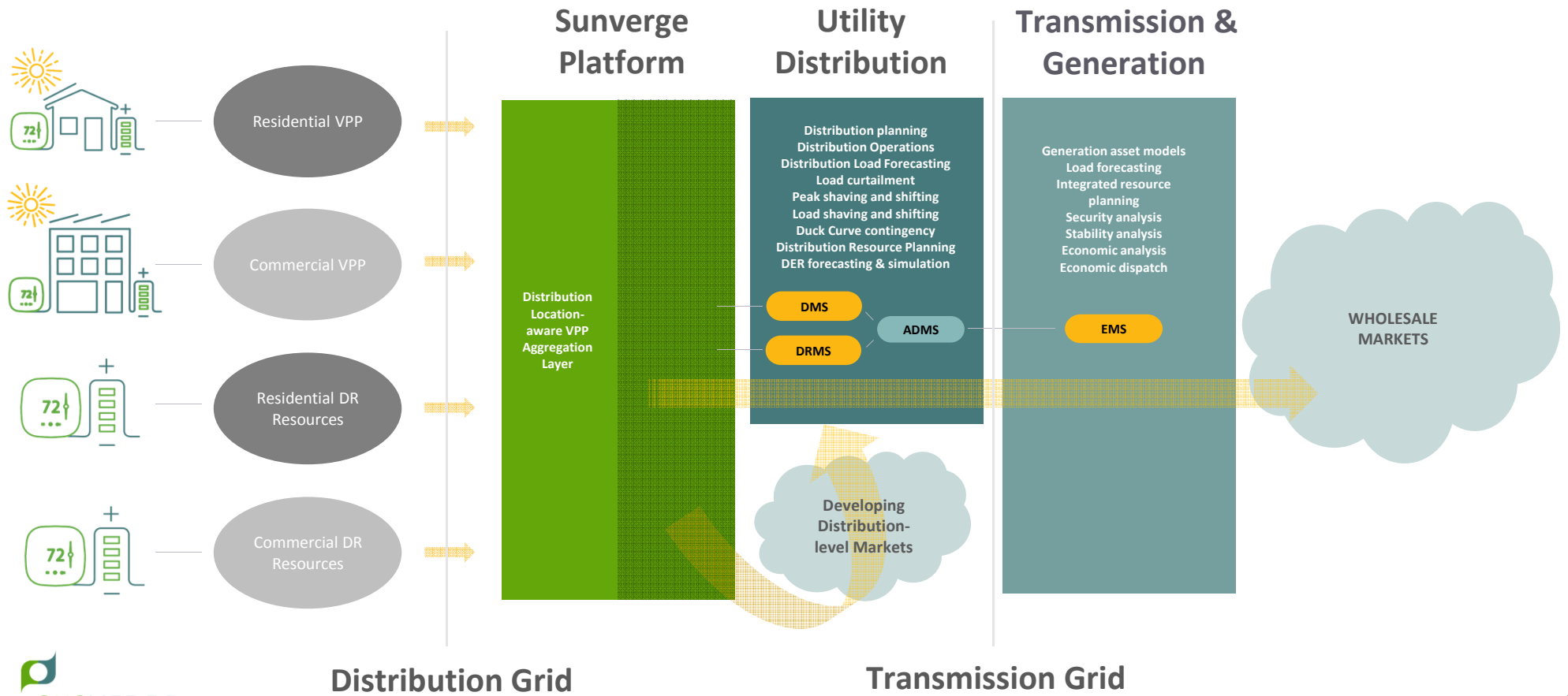
# The Sunverge Platform

Intelligent platform facilitating and enabling energy transactions between Consumers, Utilities, and Aggregators

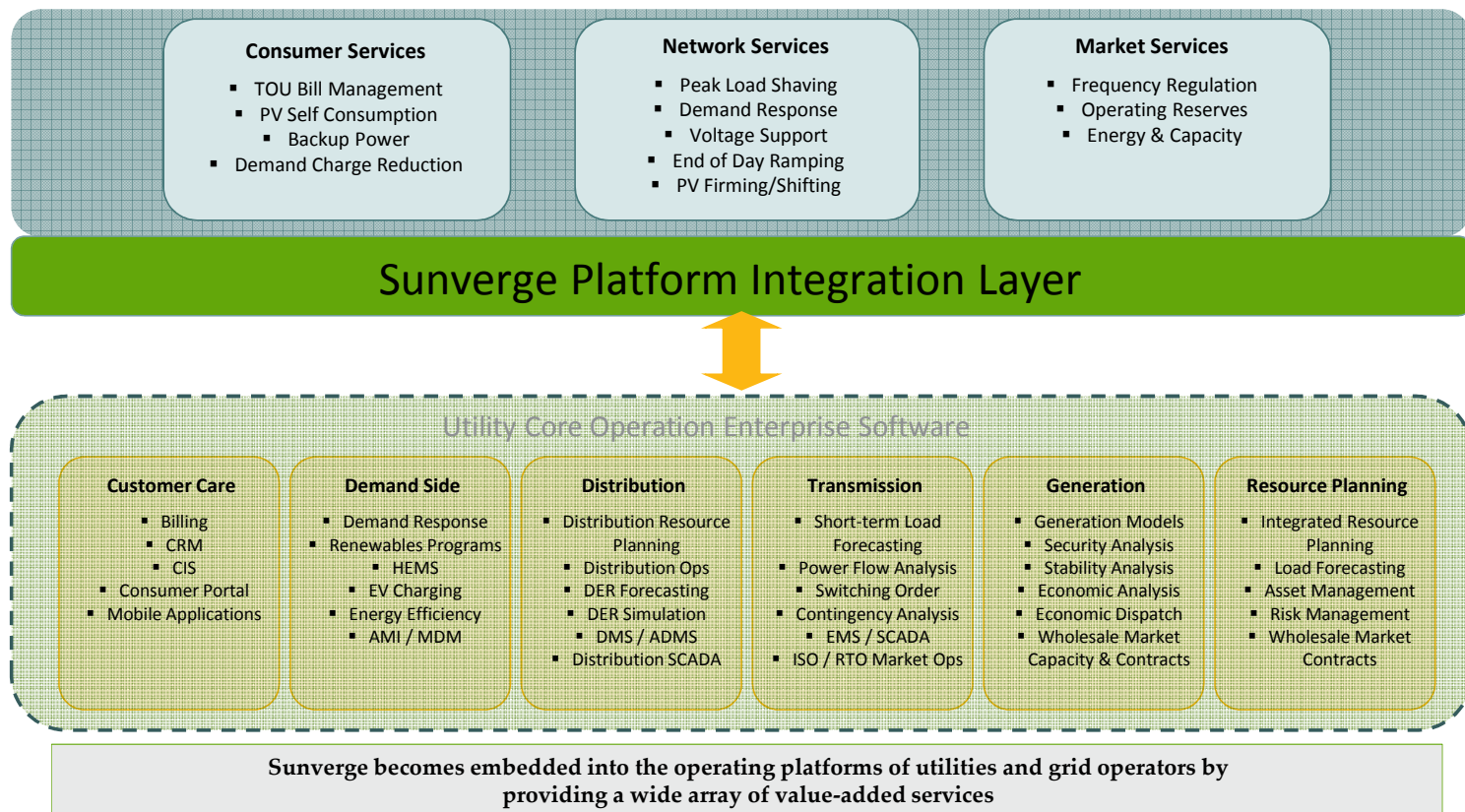
- End-to-end managing, controlling, aggregating and orchestrating portfolios of Distributed Energy Resources (DERs) and smart home devices
- Aggregating residential and commercial Distributed Energy Resource (DERs) into Virtual Power Plants (VPP) generation assets overlaid on Utility Distribution Grids
- Control and optimize use of VPP assets to better manage dynamic T&D network and supply events
- Manage and facilitate bidding of excess and emergency energy supply into wholesale Markets
- Facilitate an array of ancillary services and ecosystems for behind and in front of the meter
- Enabling Integration of Demand-Side Management and Grid Management
- **Capacitate the emergence of Distribution level transactional Markets and tangential ancillary service markets**



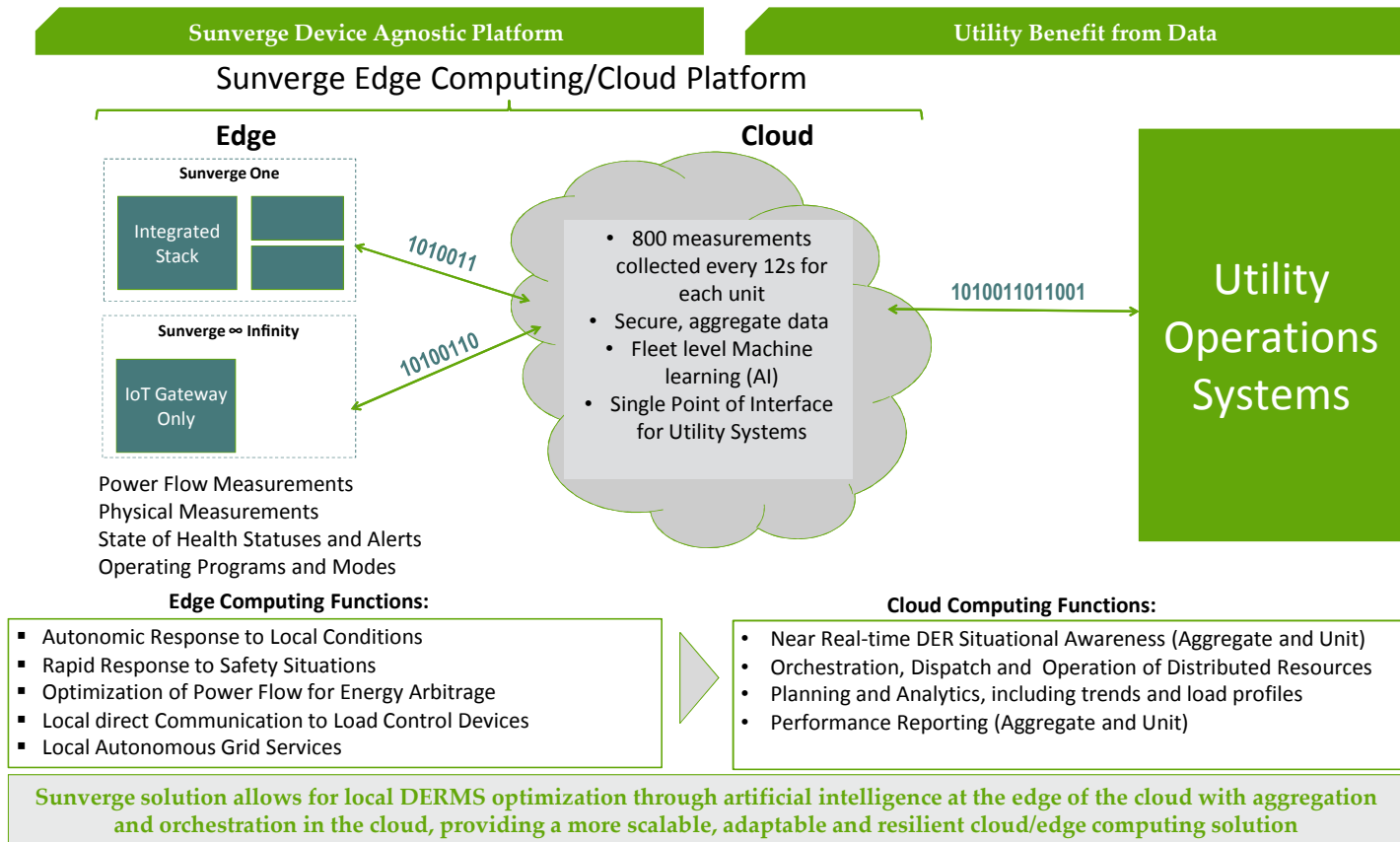
# The Sunverge Platform



# Integrate to Core Utility Operations

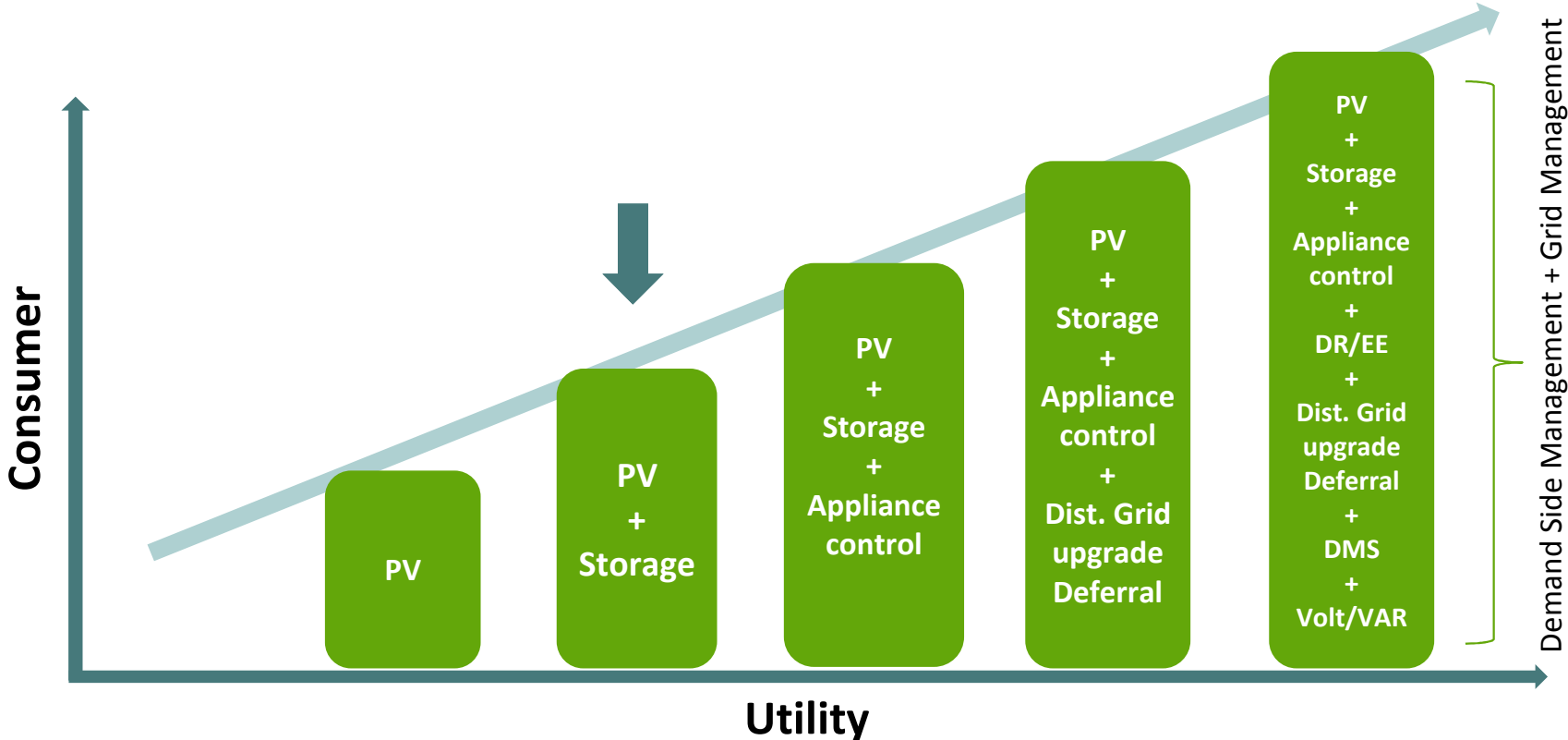


# Sunverge's Ability to Collect and Process Edge-of-Grid Data is Unparalleled





# Value Scale



# Distributed Storage: The Missing Link for the Smart Grid & Transactional Energy Markets

Distributed storage delivers greater reliability, customer Satisfaction and less grid stress and congestion than centralized or substation-level storage.

