

ASPEN ENERGY WEEK

DESIGNING TRANSITIONS FOR THE NEW ENERGY ECONOMY

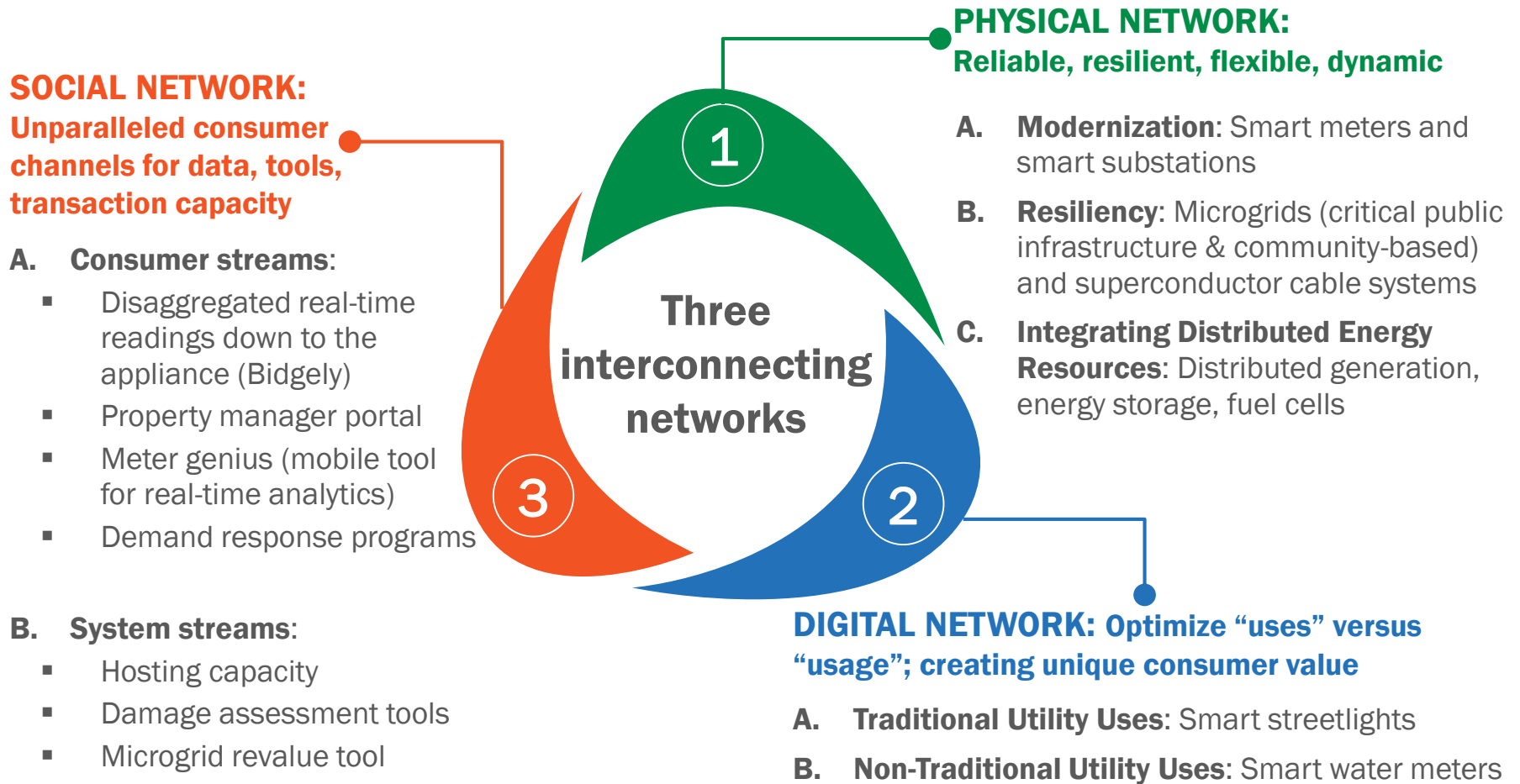
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Technology Driving the Evolving Utility Business Model

The Utility of the Future will feature technological optimization of 3 interconnecting networks



... and depend on bending the cost curve to insure affordability: Telogis, Conservation Voltage Reduction, Data Analytics

How could the platform model apply to us: imagining the utility of the future as four interconnected layers

Overview of layer	Layer objective	Associated functions								
<p>4 Services & solutions marketplace</p> 	<p>Enable interactions between producers and consumers for energy and utility-enabled products and services</p>	<p>Producer</p> <ul style="list-style-type: none"> i  Lead gen / marketing & sales ii  Installation / integration iii  Ongoing ops and maintenance 			<p>Marketplace</p> <ul style="list-style-type: none"> iv  Marketplace curation v  Transaction execution 		<p>Consumer</p> <ul style="list-style-type: none"> vi  Product / service selection vii  Financing solutions viii  Customer service 			
<p>3 Transactive commodity exchange</p> 	<p>Enable a liquid, efficient and transparent exchange for commodity transactions</p>	<p>i  Market rules and governance</p>	<p>ii  Enabling pricing transparency</p>	<p>iii  Compliance and M&V</p>	<p>iv  Trading and settlements exchange</p>					
<p>2 System operation and planning</p> 	<p>Plan, operate and maintain an evolving, open, & reliable system at the lowest total cost over the medium to long-term</p>	<p>i  Long-term planning</p>			<p>ii  Real-time system operations</p>					
<p>1 The physical asset base</p> 	<p>Build and maintain the distribution grid on time, on budget, and with optimal reliability</p>	<p>i  Execution of grid investment plan</p>	<p>ii  Implementation of new grid edge infrastructure</p>	<p>iii  Ongoing grid operations and maintenances</p>						

Each layer has application for both energy & utility-enabled solutions (e.g., water, gas, smart cities)

Comed's Goldilocks Solution

Regulatory Continuum



Freer Markets
More Competition

Mixed Model

More Regulations
More Mandates

Comed's Response

services
& solutions

transactive commodity exchange

system operation & planning

physical asset base

How might we migrate to the Connected Communities vision? What are the opportunities to create value at each stage?



Modernize for Reliability

Resiliency and Security

Customer Choice – DER Acceleration

Zero Carbon / Electrification

“Connected Communities”

GRID

Customer

Policy

Providing communities with a modern, reliable grid that minimizes disruptions to their citizens’ daily lives

Protecting the community from cyber-security attacks and extreme weather events through a secure and resilient power system

Enabling community members to adopt distributed energy technologies and transact with one another on an open marketplace

Helping cities and communities achieve emission reduction goals through building a cleaner, more sustainable electric grid

Delivering the package of urban services to communities of the future through optimal management of their infrastructure

Strategic foundations








Customer – centricity:

Affordability, Customization, Community

Outward Focus:

Coalitions

Community of the Future in Bronzeville: **Demonstration of value proposition** at the neighborhood level.

PROJECTS UNDERWAY NOW							
Ideathon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ComEd Dash Electric Vehicle Pilot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Aris Off-Grid Lighting	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>			
CIVIQ Waypoint Demonstration		<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Green Apple Day	<input type="checkbox"/>		<input type="checkbox"/>			<input type="checkbox"/>	
Home Energy Portal	<input type="checkbox"/>					<input type="checkbox"/>	
Energy Efficiency Upgrades	<input type="checkbox"/>		<input type="checkbox"/>			<input type="checkbox"/>	
Smart Home Bundle	<input type="checkbox"/>					<input type="checkbox"/>	
Peer-to-Peer EE Marketplace	<input type="checkbox"/>		<input type="checkbox"/>			<input type="checkbox"/>	
PROJECTS UNDER DEVELOPMENT							
Microgrid	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Workforce of the Future Expo	<input type="checkbox"/>		<input type="checkbox"/>			<input type="checkbox"/>	
Sensor Strategy Projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smart Community Garden				<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Vertical Farm Nanogrid			<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Highschool STEM Program						<input type="checkbox"/>	
Mobility Program Expansion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	



- Robust outreach plan for community and stakeholder engagement.
- Advisory council of community, faith-based and business leaders to collaborate on Community of the Future Initiatives.
- Causal loop impact assessment to inform rigorous measurement of neighborhood impacts.