The 5 trends Utility leaders will care about in 2023

Utility customers want more

Utility leaders are paying attention to the future now. In 2022, coming out of the depths of the COVID Pandemic, customers want more from their utility; a better customer experience, ease of using distributed energy resources, and finding rates that are affordable. To support a better Customer Experience, Technology's place within the Utility continues to grow with the modernization of their overall architecture and using agile methods to deploy large transformations.

Utility leaders are evolving to keep up with customer expectations

Those increased customer expectations means Utilities are changing models to support cleaner energy solutions while also focused on customer experiences and cybersecurity. To keep up with the evolving customer demand and the goal to become a net-zero utility, utilities are improving operating models combined with technology solutions.

All these transformations can only be successful if Data are trustworthy. Utilities are asking themselves "do we trust our Data? How is all that data being used to help with wildfire reduction? Asset management? Predictive algorithms?

Working across Utilities gives Unify the lay of land into next year

Meeting customer demands, safety, grid-reliability, and cost are key targets for leaders within Utilities, and Unify has identified five supporting trends that will continue in 2022 and well into 2023:

1. Achieving Net Zero targets by 2035

2. Improving the everchanging Customer Experience

3. Advancing Data Capabilities

4. Fortifying Cybersecurity and Critical Infrastructure Protection

5. Modernizing Technology

Net Zero Targets by 2035

Achieving net zero by 2035 is an aggressive yet needed road that Utilities must take to decarbonize. With states pushing regulation for decarbonization, utilities are adjusting their business models to include clean energy strategies. American Utility companies are voicing that they are ready and can almost reduce 80% of their carbon emissions by 2030.

However, the major hurdle for Utilities is modernizing technology to reach full carbon neutrality and become the net zero organization. Within the U.S., states are passing state-based climate regulation. Washington state for example has passed the Clean Climate Act to reduce greenhouse gas emissions, which will result in gas utilities across the state to immediately execute and invest in gas decarbonization programs.

As utilities continue and increase their investments for net-zero initiatives, these organizations will focus on the change at the entire enterprise. All lines of business along the utility life cycle from generation, transmission, distribution, customer operations and asset management will be involved.

Improving the everchanging Customer Experience

The Utilities industry has been transforming how they design the customer journey. Customer expectations have matured, the pandemic has enhanced those requirements, and as the market starts to show levels of uncertainty from inflation issues to economic anxiety, customers want a smoother transactional experience.

Utility customers want to have a conversation with their utility; asking questions, getting updates, etc. Outages have resulted in customers wanting to have better outage communications, expectations of when outages will take place and when the outage will be repaired with accurate details. Customers want paying their bills to be easy so that rather than having to go through 5-7 clicks, they're done in 2-3 clicks. Utilities are taking lessons from wireless carriers and their user-journeys for bill pay. Another major trend is wild-fire management and notification where customers need enhanced information on accurate evacuations, weather data, and fire warnings.

Improving the Customer experience requires accurate and real-time data. This requirement means Utilities have to focus on how they treat, interpret, and build data science models and ensure accuracy of their data.

Advanced Data Capabilities

Without Advanced Data Capabilities, nearly all the major initiatives that Utilities want to execute in 2022 and 2023 will fail. Utilities today can tap into large amounts of existing data. Nearly all lines of business have some sort of repository that captures data about their assets, to SCADA signal feeds, customer information, employee efficiency and financial models for rate cases.

Having accurate and trustworthy data for Utilities will boost AI and Predictive Analytics. Utility leaders want to be able to accurately predict asset management scenarios from repairs, replacement, and prevention of wild-fire due to faulty equipment. In addition, using AI technologies to support electric and gas pricing, demands, storing and forecasting. To support Net-Zero targets, AI and Predictive Analytic models will also be used for decarbonization and to manage the Grid. Algorithms and Data Science models are capable of evaluating thousands of factors and making thousands of decisions points within 24 hours. Using this power allows Utilities to maximize customer preferences, accurately generate electricity, and pull power from battery storage during unforeseen spikes.

The evolution and maturity of data at the enterprise will continue. Trustworthy data is the root of all major transformations taking place in Utilities today. Once the Utility establishes a proficiency and trust of their data, transformational results will become much easier to achieve.

Cybersecurity and Critical Infrastructure Protection

The speed at which Utilities are adopting new technology and digitizing grid connectivity is faster than it has ever been. Assets across the grid are connecting through IoT 5G devices in order to become nimble, proactive, safer, and community-focused utilities. The more connection points, the more vulnerabilities potentially exist on the network. The Utilities industry is vulnerable to cyber-attacks and even more vulnerable with the current state of geo-political challenges.

Earlier in 2022, when the Ukraine-Russian war started, the FBI reported an increased spike of unusual scans to the Utility sector. Utilities are having to reconsider the security technology layers to address new coordinated threats. They are looking at updated NERC CIP requirements combined with customized application and grid security protection. Lines of Business within the Utilities, like Generation, Transmission, and Distribution will start to have policies pushed by a centralized group but those business units will be responsible for decision-making to improve their overall security capabilities. Enhanced Training will also need to take effect. As attacks become more complex and social engineering/phishing threats increase there is a growing need to support training and awareness of security policies.

Continued Technology Modernization

2021 and the first half of 2022 was a rocky road for the utilities industry. Hit with wild-fire, asset challenges, grid complexity issues, cybersecurity threats, and delayed technology transformations.

5G is on the roadmap for utilities grid modernization. The industry will seek to modernize and transform their grid operations through ADMS, OMS, DER, IoT technologies to help with reliability and cost reduction. Not only will 5G help with better and faster communication, but the technology will also help power producers use renewable energy strategies and sources.

Cloud adoption continues to grow for Utilities. The way the industry is creating, collecting, managing, and interpreting their data is affecting their overall Utility performance across all lines of business. Infrastructure strategies, cloud operating models and simplification of the IT environment will continue heavily into 2022 and 2023.

Agile ways of working are expanding their presence from IT into the Lines of Business. Digital Leaders are championing the benefits of Agile methods not only for software development but for creating a Product-centric Operating Model.

Conclusion

Utility leaders will be pressed to focus on these trends otherwise risk the utility to be out of touch with the evolving demands of their customers. Decarbonization projects to support Net-Zero targets will not only improve overall top-line and bottom-line revenue of the utility but help focus on the local community and health of the environment. Customer experiences continue to change and become adept to instant transactional models. Utilities will need to implement technologies and applications to support an improved customer experience. Behind the scenes, advanced data capabilities continue to be a focus to ensure data can be trusted to focus on existing trends. A combination of technology and cybersecurity will greatly affect how the utility protects and adapts to modernizing the infrastructure.

Unify is well versed in these trends and our consultants come with deep expertise. If you have any questions and want to learn more, please reach out to us at milan.dave@unifyconsulting.com.