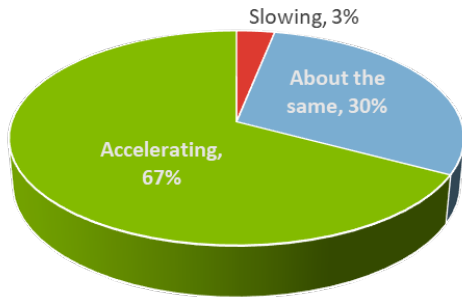




2019 BRIDGE Index™ Utility Industry Survey

An Industry in Transformation – The Technology

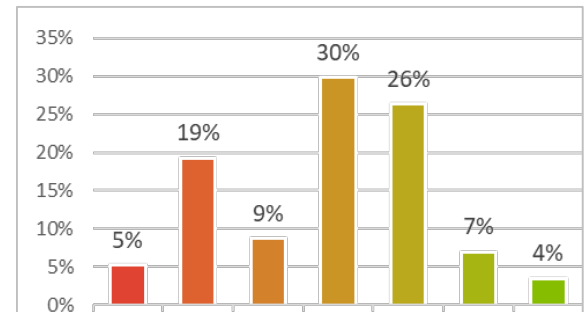
Pace of Technology Change



Broad Industry Reach



Operational Analytics Maturity



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- Executive overview: An inflection point
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Executive Overview: An Inflection Point

Celebrating its 8th year, the BRIDGE Index™ survey was created to provide objective, research-driven insights to current and future priorities across a broad cross-section of North American utility decision-makers.

The utility industry continues to be at a crossroad – but transformation is accelerating. While industry participants are at different stages of the transformation maturity model, many have moved beyond just contemplating changes to taking action supported by substantive investments in capability, infrastructure and talent.

To better understand and describe this acceleration, a shift in research approach was adopted. The 2019 BRIDGE Index has been redesigned and reformatted to deliver the following reports.

1. Industry in Transformation – The People (Published)
2. Industry in Transformation – The Technology (Published)
3. Industry in Transformation – The Business (Coming soon!)

BRIDGE is available to work with you to achieve a deeper understanding by tailoring an analysis to your unique market, regulatory, and business environment.



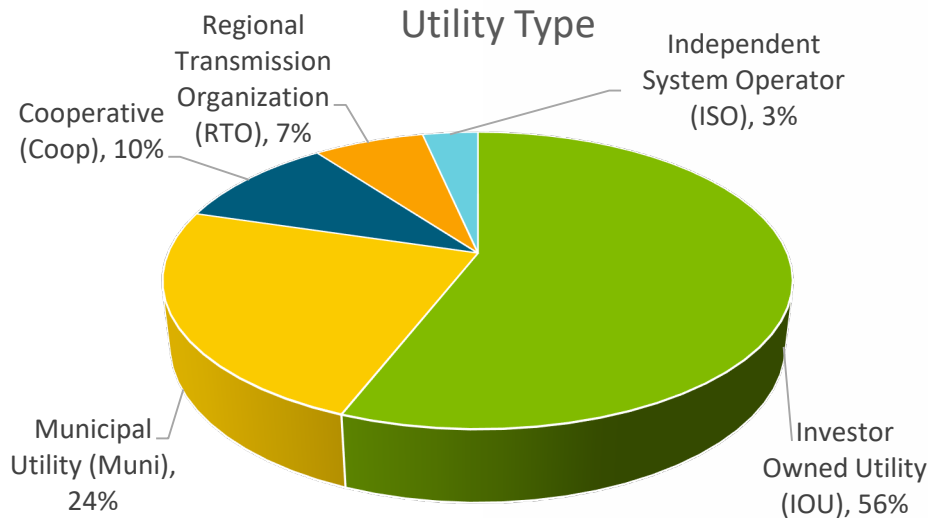
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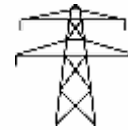


Broad Range of Utility Respondents

Survey reach: Over **20,000** North American Utility Employees



Generation
28%



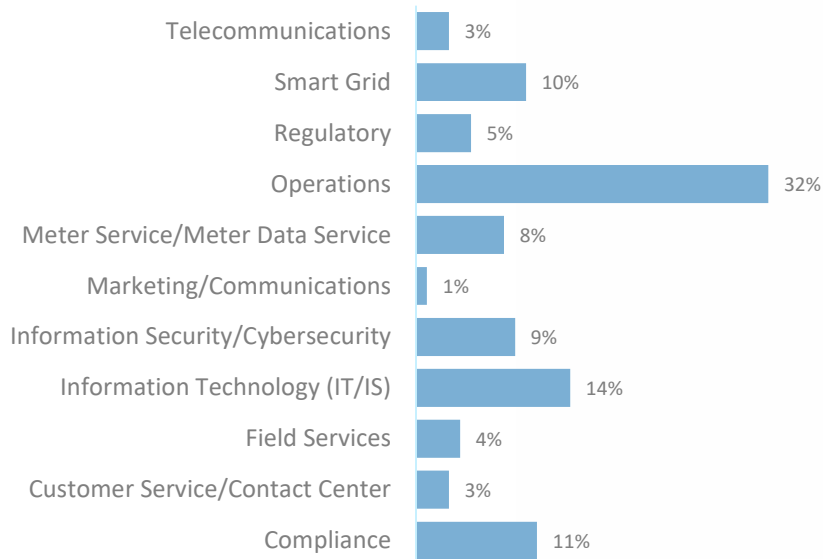
Transmission
35%



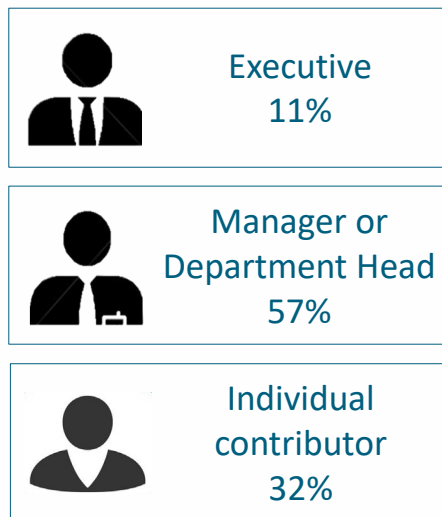
Distribution
37%

Respondents by Organization / Role

By Organization

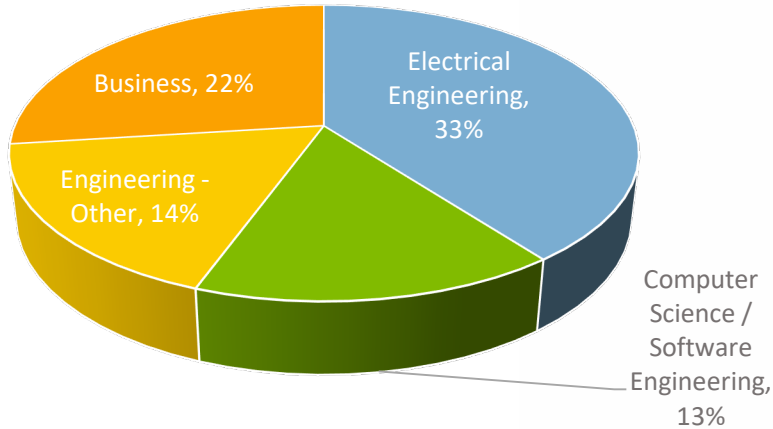


By Role

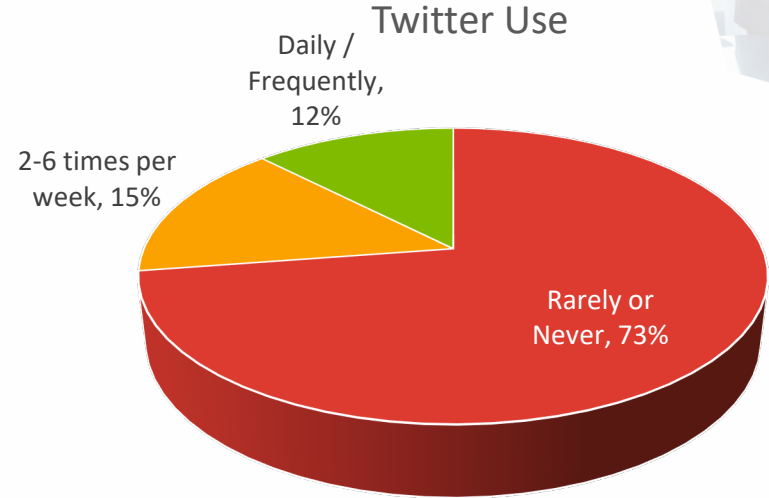


Additional Respondent Attributes

Undergraduate Area of Study

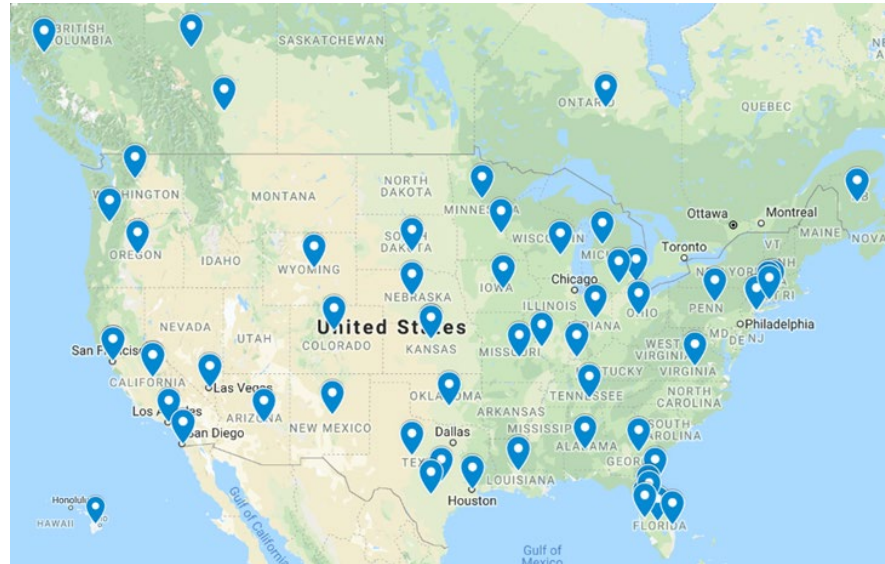


Twitter Use



Representative Set of Respondents

- Ameren
- Arizona Public Service
- Austin Energy
- Avangrid Networks
- Avista
- BC Hydro
- Black Hills Energy
- Bonneville Power Administration
- Central Hudson Gas & Electric
- Cleco Power
- Consumers Energy Company
- Cuming County Public Power District
- DTE Energy
- Duke Energy
- Entegra TC
- Eversource
- Fort Pierce Utilities Authority
- Golden Spread Electric Cooperative
- Great River Energy
- Huntsville Utilities
- Imperial Irrigation District
- IPL
- Lakeland Electric

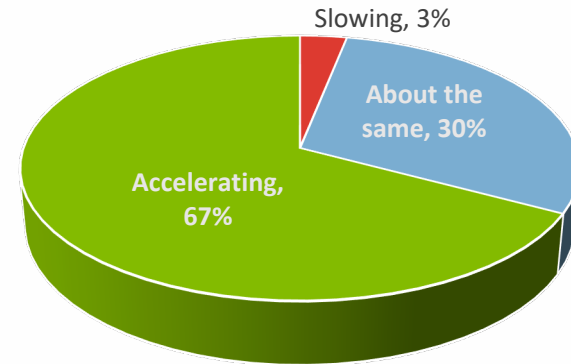


- National Grid
- NaturEner LLC
- Newport Utilities
- Nova Scotia Power Inc
- NV Energy
- Oglethorpe Power Corporation
- Orlando Utilities Commission
- PacifiCorp
- Pasco County Utilities
- Pattern Energy Group
- Peak Reliability
- PG&E
- Portland General Electric
- PPL Electric Utilities
- San Diego Gas and Electric
- Sempra
- Southern California Edison
- Tri-State G & T
- United Illuminating
- Unitil Service Corp
- Vectren
- Westar Energy
- Xcel Energy

Signs of Accelerating Industry Transition

- 70% experienced acceleration in the pace of technology changes over the past 2 years
- 67% expect the pace of technology changes will accelerate within their company in the coming year
- 93% expect the availability of tools to analyze and process data within their company, to increase in the coming year

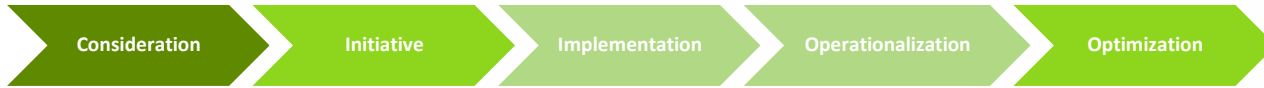
Anticipated Pace of Technology Changes



“You’re probably falling behind. The broad acceleration of technology change and complexity, combined with the loss of institutional knowledge due to retirements, is driving the need for innovative and automated approaches to knowledge transfer and change management.”

- BRIDGE Energy Group

ADMS Matures to “Initiatives” While DERMS Still Under “Consideration”



ADMS

- 63% have an ADMS initiative
- 85% of those with an ADMS initiative consider it part of their overall grid modernization strategy

DERMS

- 74% considering commercial DERMS solutions
 - But 40% feel that current commercial DERMS solutions do NOT meet their needs
 - 57% with non-engineering background (e.g., business) feel that current commercial DERMS solutions do NOT meet their needs
- Only 35% are planning a moderate/significant DERMS initiative in the coming 2 years

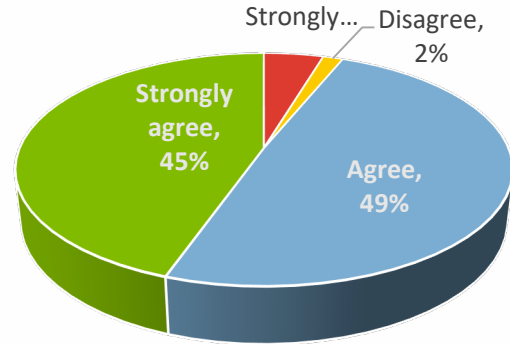
“Time is of the essence. If your ADMS or DERMS initiative is 2+ years out, consider initiating some interim actions to achieve benefits now while also validating key use cases for future implementations.”

- BRIDGE Energy Group

Integration is Critical & ADMS is Foundational to Achieve that Integration

- 94% agree that integration of systems and information is critical for the grid of the future
- 92% feel that ADMS is foundational to achieving desired level of integration

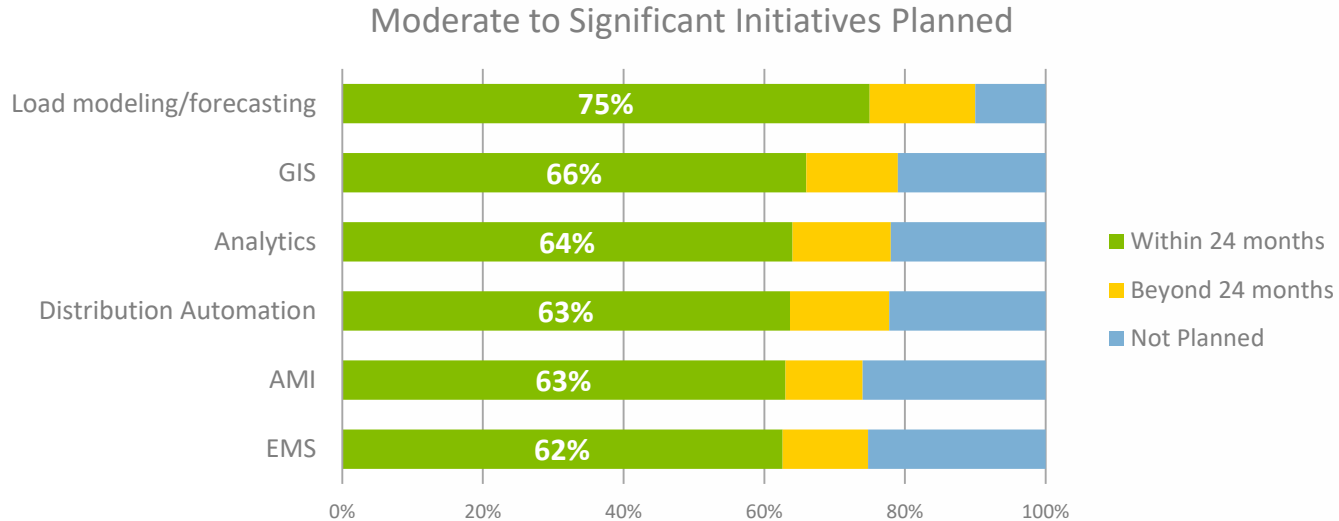
Integration Critical for Grid of Future



“Integration is central to nearly all modernization initiatives but there’s no need to wait for your ADMS solution to begin realizing those benefits. Tackling foundational system/data integration and data governance initiatives now will pay dividends for all integration-dependent projects, including analytics and ADMS deployments. Leveraging an experienced external team can accelerate the identification, prioritization and realization of those interim benefits.”

- BRIDGE Energy Group

Leading Tech Projects Planned



“The number and diversity of planned projects will stress existing human capital plans. Expected shortfalls can be addressed by incorporating external skilled workers in the ‘gig economy.’ However, be sure to use appropriate methods and services in order to avoid costly potential pitfalls.”

- BRIDGE Energy Group

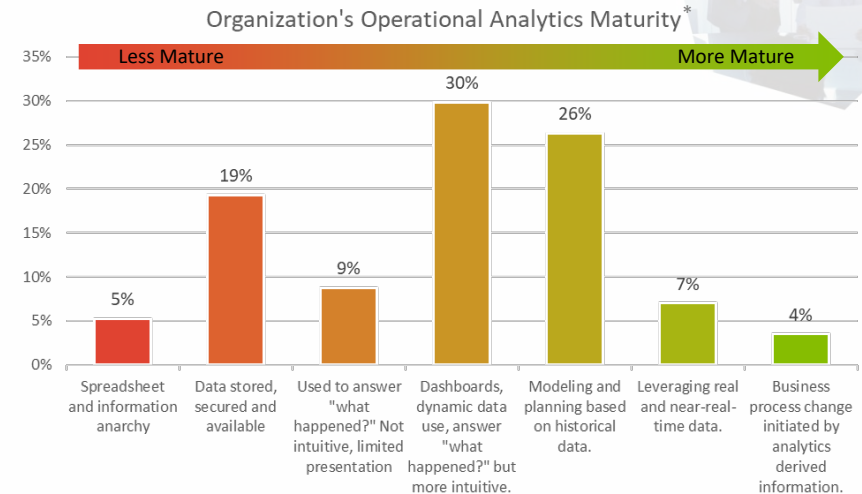
Analytics Maturing ... Slowly

- 51% of IOUs above midline on maturity
- 75% of muni/co-ops below midline on maturity

“Analytics maturity is highly correlated to end-user adoption, being able to realize the benefits, and communicating that value to the organization. Leverage experience and appropriate tools to increase awareness and user adoption in analytic projects.”

“Also, different utilities, and even different teams within a utility, often are at different levels of analytics maturity, making it critical to identify these differences and then tailor projects and their rollouts to the teams’ state.”

- BRIDGE Energy Group



*Maturity model from Utility Analytics Institute, data from BRIDGE Index™

Biggest Issue Impacting Ongoing / Planned OT and Analytics Projects

- Integration of systems and integration of data are top impediments to OT and Analytics projects
- And there's more data coming
 - 94% have seen their Grid Modernization projects increase the amount of data collected
 - 97% expect their Grid Modernization projects to increase the amount of data collected in the coming year (43% say significantly increase)

“A consistent issue hindering key projects is the integration of systems and data. Broad cross-functional and cross-team benefits can be realized by increasing investment in core integration and data governance. Decisions regarding the value and use of data must be made before projects begin.”

- BRIDGE Energy Group



Additional Insights

- 50% are/will consider outsourcing OT Operations and Support in the future
 - 62% of IOUs are/will consider
- 75% are not extracting a lot of value from the available system/user data

“We continue to see growing interest in all forms of outsourcing, including cloud-based solutions and managed services as utilities look for ways to improve operations, expand capabilities, and reduce costs.”

- BRIDGE Energy Group

“BRIDGE’s industry experience confirms that better upfront planning and change management improve the effectiveness and ROI of every project, and significantly improves the value extracted from related systems and data.”

- BRIDGE Energy Group

For More Information

Meet Our Experts

Discuss creative and pragmatic solutions to your T&D Operations, Analytics and Security goals.

Contact BRIDGE at:

Main: 1.508.281.7133

Toll Free: 1.888.351.8999

www.BridgeEnergyGroup.com

Join Our Panel

Your opinion matters – Influence the questions by becoming a panelist for the 2020 survey.

Email us at:

Research@BridgeEnergyGroup.com



BRIDGE Energy Group

BRIDGE Energy Group is a consulting and systems integration firm transforming Transmission & Distribution operations.

Leveraging operations, technology, analytics, visualization and real-time systems expertise, BRIDGE delivers innovative and pragmatic solutions.

BRIDGE focuses on solving utility challenges and improving grid security and reliability while increasing profitability and efficiency for our clients.



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