

2022 Analytics Maturity Assessment Overview



The Analytics Maturity Assessment (AMA) is a self-assessment tool developed by the Utility Analytics Institute (UAI) Executive Advisory Council (EAC) in collaboration with UAI. UAI members are invited to participate every other year. As with any self-assessment, the results reflect the judgement and opinions of the individuals completing the survey.

UAI analyzes, assembles, and publishes the findings for its members. This self-assessment enables each participating utility to compare its current level on the analytics maturity curve overall and across the seven dimensions (Strategy, People, Analytics Governance, Business Process Integration, Data Governance, Analytics Capabilities, and Technology & Tools) to the other participating members.

A set of questions was developed for each dimension with points weighted based on response options. The minimum, maximum and average scores are shown for each domain (Leadership and Technical Competency) as well as the Total score. A four-quadrant model depicts the AMA scores of participating utilities across the two domains.

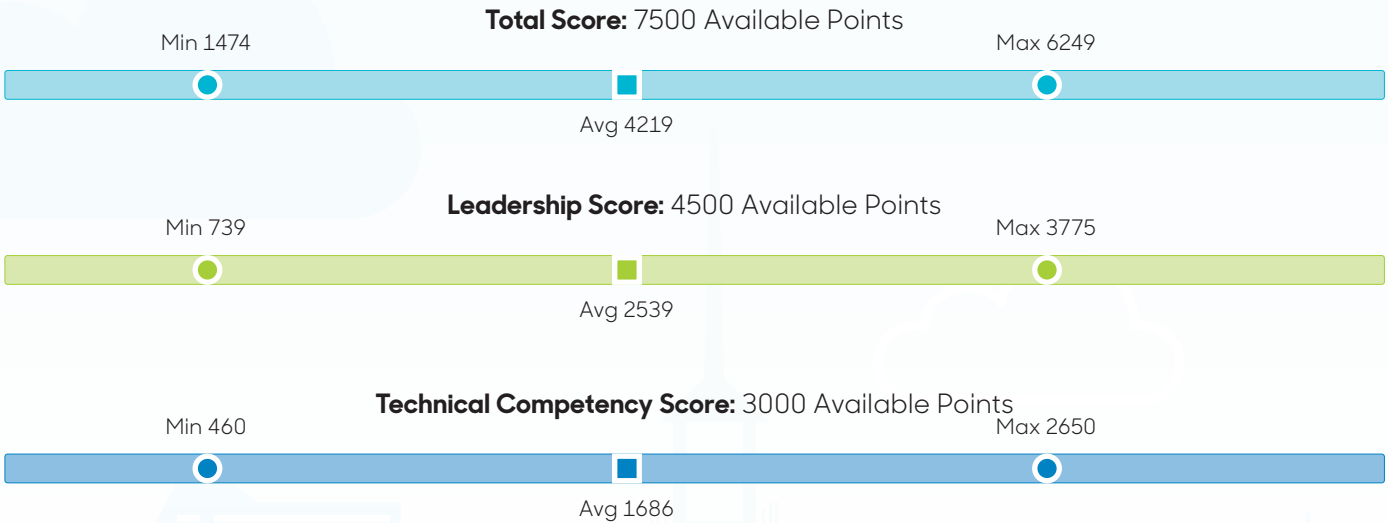
All survey information is confidential and will be shared only with the explicit permission of each utility's EAC representative(s) on a case-by-case basis. All other shared information will be aggregated, and the identity of individual utilities will remain anonymous.

LEADERSHIP

- **Strategy** – the degree to which a utility has defined, developed, and implemented an enterprise analytics strategy.
- **People** – the development and success of the organizational model that supports enterprise analytics.
- **Analytics Governance** – the capability of a utility to create and manage analytics processes, policies, and information.
- **Business Process Integration** – the degree to which data and analytics drive business processes and inform business KPIs.

TECHNICAL COMPETENCY

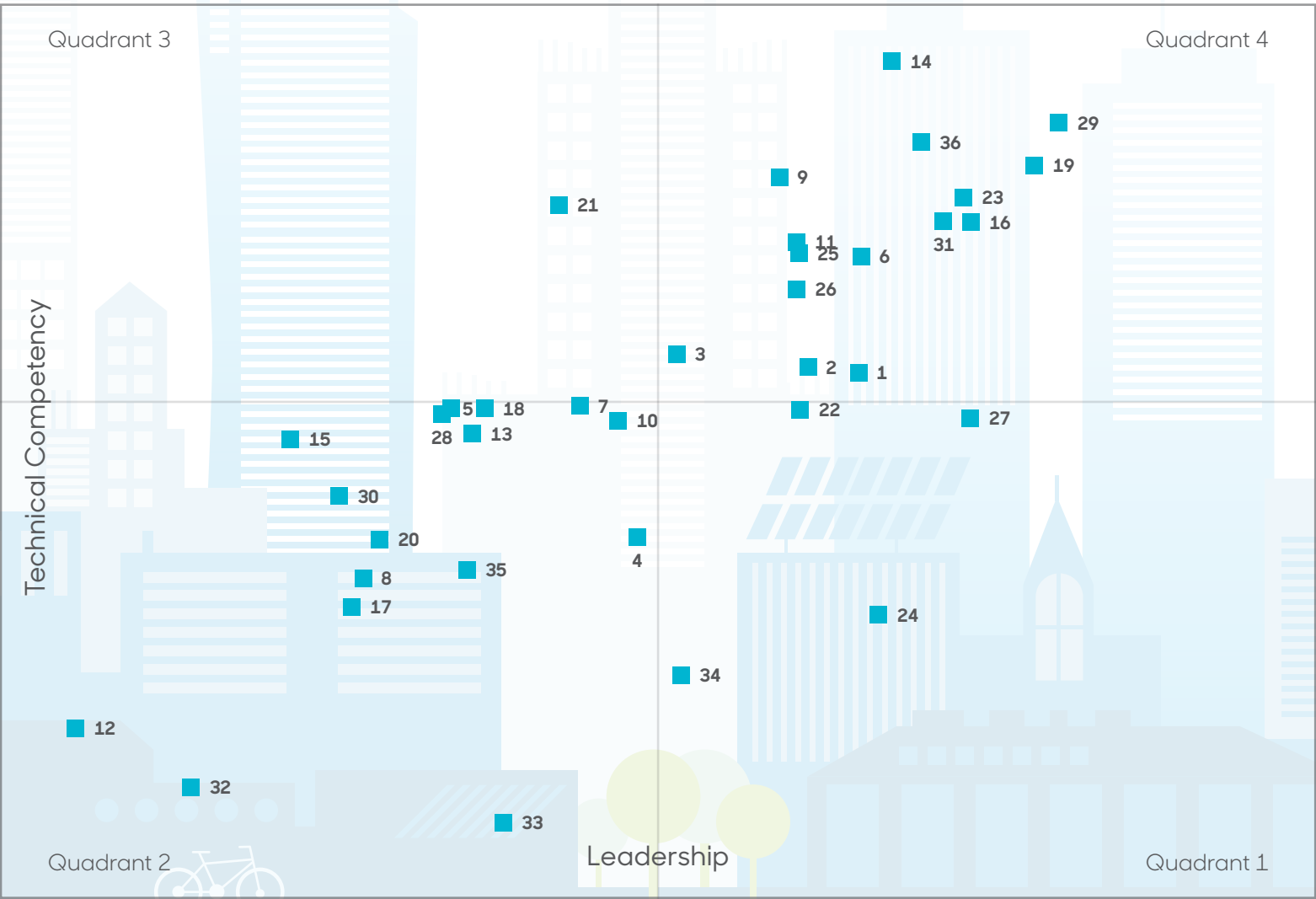
- **Data Governance** – the overall management of the availability, usability, integrity, and security of data used in an enterprise, including metadata management.
- **Analytics Capabilities** – the current and anticipated capabilities of different business groups to apply basic-to-advanced analytics.
- **Technology & Tools** – the ability to procure the appropriate tools and technologies, and the management of analytics technology adoption across different business groups.



47% of utilities fell below the average Total Score and Leadership Score.

56% of utilities fell below the average Technical Competency Score.

2022 Analytics Maturity Assessment Scores by Quadrant



Practical steps to move up the Analytics Maturity Curve

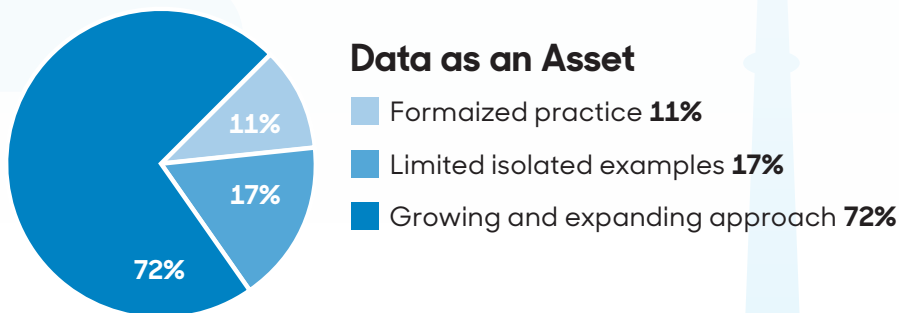
Insights from the 2022 UAI Analytics Maturity Assessment



Strategy:

The utility industry has not yet embraced the value of the massive amount of data it creates, but it is making progress with 11% surveyed formally managing and valuing data as an asset plus another 72% growing and expanding their approach.

Only half of utilities report they directly align their strategy with the overall business strategy of the organization and 39% have not identified long-term goals and initiatives.



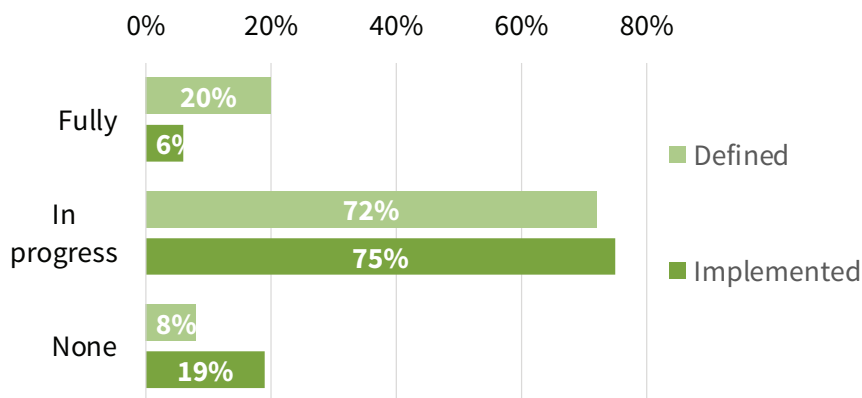
Recommendations:

Create a rolling roadmap prioritized in accordance with organizational mission and vision, establishing projects and their corresponding budgets as tactical actions on the scoreboard across business units. Doing so provides opportunities, including:

- Cross-functional partnerships to make customers' and employees' lives better.
- Increased organizational knowledge and visibility.
- Executive awareness and acceptance of analytics projects, progress, and business value.
- Visible project approval for securing resources.

Leave room in the schedule to help accelerate analytics acceptance across the organization by reaching out to business units and creating automated reports and processes for them.

Robust Enterprise-Wide Data & Analytics Strategy



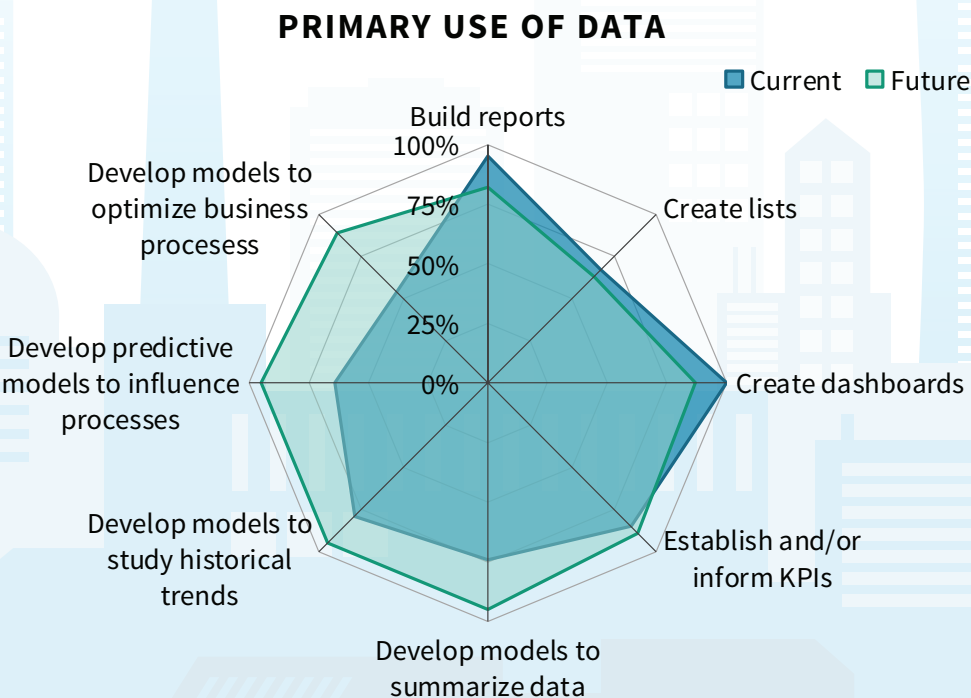
People (Use of Data):

The current use of analytics is primarily focused on building reports and creating dashboards, with 85% using data to establish KPIs, 74% using models to summarize data, and 79% using models to study historical trends.

About 50% of the utilities surveyed are using models to optimize business processes.

Over 90% of utilities expect to expand their use of models to predictive, prescriptive, and process automation over the next three years.

Other future uses are to include virtual simulation & modeling, self-service, cognition, robotics, AR/VR, Edge analytics, automation, AI/ML. These percentages are high considering that 31% of utilities have no plan to develop their staff.



People (Analytics Resources):

A team of analytics professionals requires a combination of business and technical skillsets from business analysis and project management to platform management, data engineering, code development, and statistical analysis.

100% of top scorers had defined roles and strategies for team development while only 22% of the lowest scoring utilities had defined the job roles and only 56% had a strategy to enhance the skillsets of their analytics professionals.

	Top 25% Total Score	Bottom 25% Total Score
Defined roles for analytics team	100%	22%
Strategy to develop analytics professionals	100%	56%

Recommendations:

- Continue working within the UAI community to define and standardize job roles.
- Deliberately plan and budget to increase the skillset of your analytics team; keep them educated and interested.
- Consider including consultants and software vendors on analytics project teams to both augment existing and train them.
- Include knowledge transfer in your strategic use of consultants and vendors. These partnerships are on-the-job training for your in-house analytics team and will broaden their perspectives as well as prepare them to maintain the products created.

Practical steps to move up the Analytics Maturity Curve

Insights from the 2022 UAI Analytics Maturity Assessment



People (Data Driven):

The graph below illustrates how executives perceive the value of data and analytics across the business units. These responses provide insights into where analytics evangelism can occur.

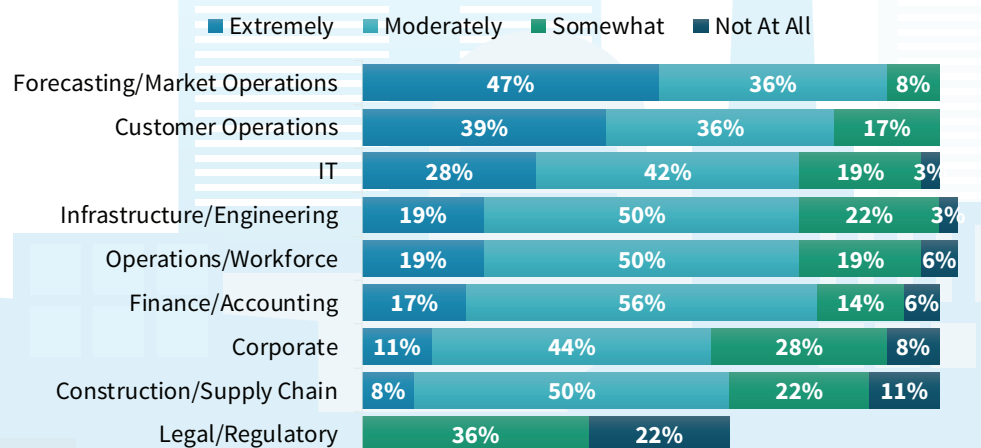
According to the survey, executives find little to no value in data for legal and regulatory problem solving, yet every business unit has regulatory requirements, vendor contracts, retention requirements for system data, and employee related resolutions.

Forecasting is identified as extremely reliant on data, yet only 17% of executives find data-driven decisions extremely valuable for Finance/Accounting, which sets budgets based on forecasted revenues and expenses, establishes rate structure, determines customer risk management, and establishes daily cash flow and reserve requirements.

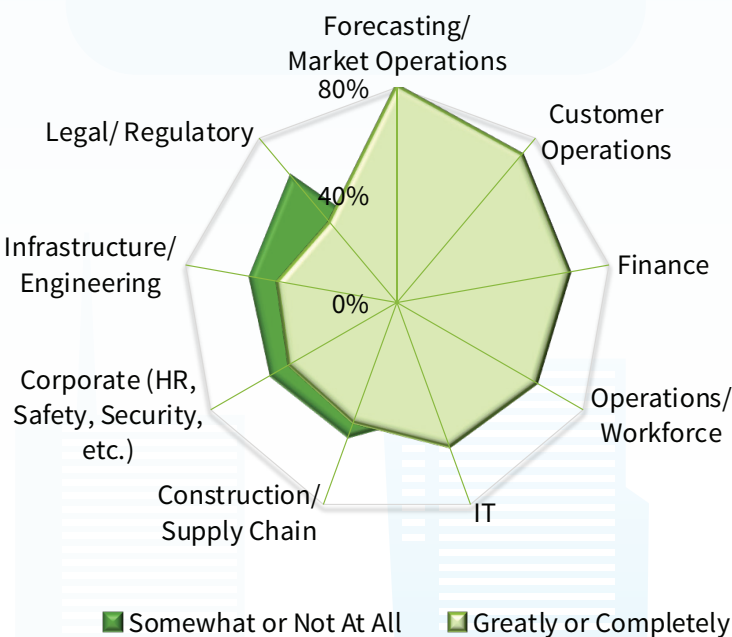
Recommendations:

- Bring representatives from the business units into the analytics and data governance teams. Their exposure to projects will provide insights for how they can use data for their own decision-making processes.
- Seek their input on subjects such as data retention, data security, return on investment, and model traceability for auditors.
- Ask them what problems they are trying solve and offer to help resolve it. Start small and gain their trust in the analytics process and acceptance of its business value. These are the projects you leave room for in your schedule.

Executive Level Data Driven Culture



Business Process KPIs Informed by Data & Analytics



Business Process Integration:

The radar chart indicates data and analytics is primarily used within Forecasting/Market Operations and Customer Operations with Finance, Operations/Workforce and IT making headway toward being data driven.

Recommendations:

- Don't forget the DATA in data and analytics. The low hanging fruit is the business units with the smaller dark area within the radar (Legal, Infrastructure, Corporate, and Construction).
- Help the business units see the value of data and analytics. Begin with automation of mundane processes.
- These teams will begin relying more on data as they become part of the process and trust the outcome. Automation is not a selfless endeavor. Through these efforts, the organization gains benefits such as:
 - Efficiencies in operations (measure it for them)
 - Access to data (established data pipelines)
 - Acceptance and support of analytics (cheerleaders)
 - Strengthened relationships (future project teams)

Analytics Capabilities:

The red box outlines the point where analytics capabilities begin to deteriorate across the organization.

Analytics maturity increases as data and analytics are accepted and incorporated across the entire organization.

Recommendations:

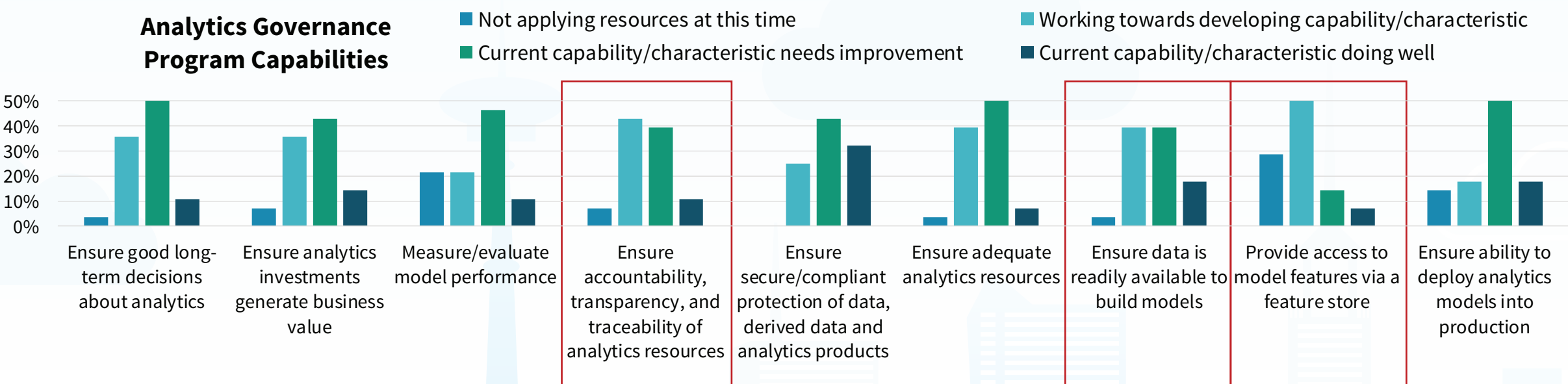
- Include the business value of gaining data as part of your project prioritization, then layout your project roadmap to incorporate new data sources gained from completed projects.
- Identify how you can re-use models, or at least the basis of the models, across business units. For example, can you recycle a demand forecast into customer operations or operations or supply chain?

Analytics Capabilities

	Forecasting	Finance	Infrastructure	Customer Ops	IT	Corporate	Operations	Construction	Legal
Gathering & Managing Data	91%	97%	91%	80%	97%	97%	94%	74%	74%
Adoption of Analytics Applications	91%	86%	86%	63%	94%	86%	75%	66%	57%
Basic Reporting	94%	100%	97%	89%	97%	100%	100%	91%	83%
Business Intelligence & Dashboard	86%	91%	91%	80%	94%	91%	86%	86%	60%
Statistical Analysis, Forecasting, Extrapolation	83%	82%	71%	63%	60%	60%	53%	51%	34%
Predictive Modeling	69%	44%	49%	46%	34%	31%	44%	34%	18%
Prescriptive Modeling	46%	29%	24%	31%	31%	29%	25%	17%	12%
Optimization Models	57%	29%	26%	31%	29%	26%	22%	23%	12%
ML/AI	31%	23%	29%	31%	34%	26%	25%	14%	12%

Practical steps to move up the Analytics Maturity Curve

Insights from the 2022 UAI Analytics Maturity Assessment

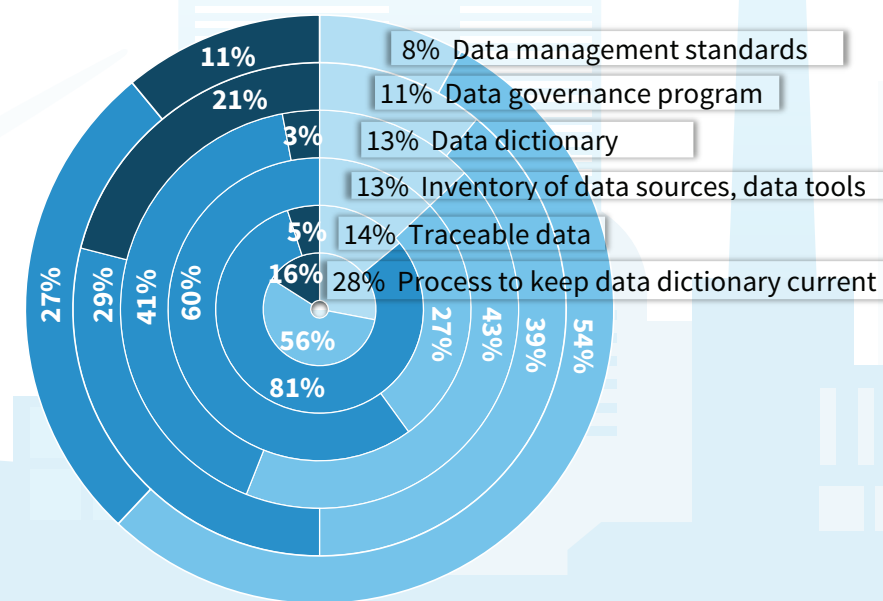


Analytics Governance:

The highlighted analytics governance capabilities stand out because they are the points where the percentage of utilities with undeveloped capabilities outweighs the utilities with current capabilities.

Recommendations:

- Consider including a "to be" business process model, model calculation methodology, and audit tables for calculation results in business requirements for each project to increase product documentation.
- Include external data sources within the data and analytics strategy and budget. Note data retention requirements in contracts.
- Include adding the model to the feature store as part of the project close process.



Data Governance:

Most utilities answered all data governance categories with either "No, but planning, developing, or implementing" or "In place but limited or needs improvement."

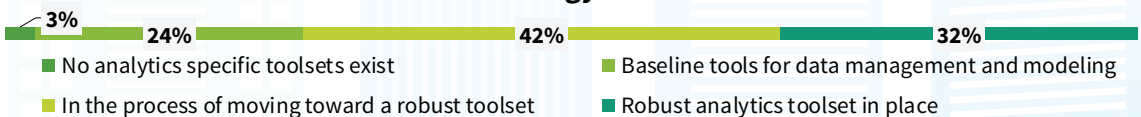
The data indicates data governance is essential to analytics maturity. Utilities with an enterprise data governance program had a 19% higher total average score. Utilities with a robust analytics platform had a 28% higher total average score. Utilities with both an enterprise data governance plan and a robust analytics platform had a 32% higher total average score.

Respondents indicate they will have most DMBOK components in process for completion over the next 1 to 5 years with these exceptions: 65% of utilities have current capabilities for data security management and 57% have capabilities for database operations management.

Recommendations:

- Consider an enterprise analytics platform sooner rather than later. These platforms include the tools to put data governance into place and force the thought process for implementation.
- Partner with vendors and consultants to speed up the implementation process and provide on-the-job training and guidance. Allowing the vendor to guide your 'customer success journey' moves the utility up the analytics curve faster and provides a success story for both sides of the deal.

Technology & Tools



Comprehensive Architecture in Place 26%

Substantial Integration of Data 13%

Additional Insights:

The Analytics Maturity Assessment can be used as a tool to measure each utility's progress over time providing valuable KPIs to gauge the business value provided by the resulting products.

On average, the utilities who answered the survey in 2020 and 2022 increased their Leadership scores by 17% and Technical Competency scores by 20%. However, the range of year over year scores by utility runs from a 29% decrease to an 82% increase.

This wide gap strongly suggests answers are subjective to the respondent's area of expertise and depth of knowledge about each question. As a group, utilities are stepping up to analytics maturity at a gradual pace. Though a few are racing in front of the pack, many are struggling to catch their stride.

Recommendations:

- Assign an analytics business value when assessing project prioritization.
- Consider creating an analytics maturity team consisting of members from each business unit with enough knowledge to provide a comprehensive response to the survey.