



Apogee Interactive, Inc. Recognized for

2021

Technology Innovation Leadership

North American

Energy Analytics Industry

Excellence in Best Practices

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Background and Company Performance

Industry Challenges

Energy utility digital customer engagement has never been as important as it is today, with the energy industry transforming consumer relationships to face energy transition challenges. Effective demand and supply-side management requires consumers to be engaged in the energy supply mechanisms, made more feasible and cost effective today than ever due to technological developments.

In addition, the recent emphasis on integrating smart meters into the big data energy analytics produces near term financial benefits in cost reduction, program targeting, and enhanced customer relationships. This also opens many possibilities for enhanced relationships across the value chain.

Engaging today's customers is far from easy. They now insist on personalized, relevant, and impactful communications. Customers sift out and only pay attention to a few of the messages in all their media channels. They want to know how they can reduce costs, be more comfortable and in many cases be part of the energy transition to a lower carbon world by being an active partner to their energy suppliers.

Technology Leverage and Business Impact

Commitment to Innovation and Creativity

Apogee Interactive is a US-based energy analytics company founded in 1993 that provides energy utility solutions for smart grid integration, home energy analysis, energy management, and billing data presentment. Apogee's models use customer, weather, smart grid and other available information to produce energy insights that are meaningful to customers. The three value elements of the Apogee solutions are enhanced program participation, increased customer satisfaction and improved operational efficiencies. These applications have been found useful to many departments within utilities including energy efficiency, customer service, call center, field auditing, marketing, and corporate communications. They explain energy bills, avoid high bill calls, increase first call resolution, promote programs, deliver energy efficiency kWh and thermal savings, predict future costs and savings on alternative energy pricing, and optimize operational efficiencies for utilities.

Apogee's energy analytics platform operates in a Software as a Service (SaaS) framework as a bridge between energy consumers, utilities, billing companies, and smart-meter providers converting data into easy to understand, useful information.

The ability to provide a comprehensive energy engagement solution that includes bill change explanations and predictions including renewable energy integration provides Apogee a competitive edge over its competitors. The company benefits from its state-of-the-art offering that provides progressively enhanced analytics as its clients move from simple billing data to smart-meter data and other customer personalization inputs. There are many companies who can use historical data to provide customers with rate comparisons but Apogee stands alone in its ability to predict how customers will benefit from alternative pricing models while also educating them about how their behaviors can influence that decision even when customers have rooftop solar installed. This has been

the holy grail of energy forecasting and Apogee is the only firm in the world who has proven they can do it.

The company has a variety of service offerings including:

- **ENVOY:** A proactive outbound communication solution that utilizes artificial intelligence (AI) to analyze customer information, target specific customers, and deliver personalized messages via video, text, or email. The use of Apogee's outbound personalized video messaging has proven to reduce high bill calls to the call center by 15% and increased program participation by 10%.
- **ENERGY ADVISOR ENTERPRISE:** A home energy analysis application to forecast and provide actionable recommendations based on the customer's energy consumption behavior. It includes predictive analytics that forecast future energy costs in the context of the weather, solar, and EVs for effectively assessing energy consumption.
- **ENERGY ADVISOR EPIC:** An energy analytic solution designed to engage low-income customers. This agenda is transitioning into energy burden or affordability.
- **CUSTOMER SERVICE REPRESENTATIVE TOOL:** A tool designed for CSRs to provide customers with insights about bill changes as well as recommended rates or utility programs with proven impacts on first call resolution. In addition, use of the IVR version of this tool can dramatically increase call containment within the IVR.

Frost & Sullivan forecasts that the digital engagement platform developed by Apogee will be essential to help utilities and consumers transition from traditional monthly billing to hourly based billing mechanisms. Moreover, this advanced hourly based modeling will support enhanced revenue generation agendas as utilities move from energy throughput value models to relational models in the future.

Technology Incubation

Apogee has always partnered with energy utilities to help their customers see that their energy provides care about their well-being, understand their energy use, and to feel they have choices and can control their costs. Apogee's clients range from the smallest cooperative and municipal companies to the largest investor owned. The product range starts with the best energy use estimation models, and offers progressively more granular views of energy prediction and cost savings as customer bills and then smart grid data is included in this analysis. Time based reviews of this data offer customers as well as their energy providers proof that customers are saving energy and money, as well as situations where customers can be alerted to changes either due to the weather (mid cycle high bill alerts), or deterioration and failure of their large energy users (e.g., refrigerant leaks in the air conditioner). These advanced analytics offering non-intrusive appliance-level energy consumption monitoring helps customers optimize their bill and overall energy usage, as well as providing a "stickier" relationship to their energy provider. Apogee believes this will become the key differentiator for energy retailers in the future.

The company has time proven innovation roadmap through their client user group interactions, step-by-step monitoring of actual customer interactions including feedback, and testing procedures to ensure the operational performance and commercial viability of its energy analytics platform evolution. Apogee maintains an in-house R&D mechanism

for technology development and pilot testing. To improve its value proposition for utilities, Apogee has expanded its partnership programs with industrial stakeholders offering integrated solutions based on analytical tools. Apogee's model is to provide callable routines any company can use to embed Apogee analytics into their online and phone applications.

Commercialization Success

Apogee has transformed its technical expertise from delivering CD-i technology in 1993 to facilitating virtual energy audit and personalized video-based system assessment for commercial-, residential-, and utility-based consumers. Frost & Sullivan lauds Apogee for its technical and market expertise in terms of software and system integration along with ensuring smart client engagement. Additionally, the company's in-house capabilities to develop, test, and commercially introduce software technologies provide a competitive advantage compared to its competitors.

The company maintains a significant number of utility consumers including Xcel Energy, CenterPoint Energy, Lakeland Electric, Georgia Power, Con Edison, Los Angeles Department of Water & Power, CoServ, and Exelon. Apogee's solutions include consumer energy cost analysis, communicating rates, energy analytics, video assessment, energy auditing, energy forecast, energy advisor, and low-income communication systems.

Furthermore, key insights of a commercialization success by Apogee is the following Xcel Energy Case Study.

Case Study: Xcel Energy

Xcel Energy used Apogee's outbound messaging platform to send personalized videos from 2019 until May 2020 using advanced technology to improve the customer's experience. The videos included a video bill explanation, an annual energy summary, and Xcel's COVID-19 response. The videos provided customers with timely and personalized information that improved Xcel's brand perception resulting in an increase of 7 points in Xcel's Net Promoter Score, now totaling 36 points, above the industry standard of 15. The COVID-19 message addressed customers' needs during the pandemic, produced extraordinary results with open rates of 58% and click-through rates of 14%. Xcel's survey results concluded 1 out of 2 customers reported an improved perception. These unique videos deliver custom billing data in a timely manner to Xcel's customers. In 2021, the project has gone full scale delivering calls to action that drives multiple program initiatives. Using the outbound communications platform Xcel Energy continues to enhance their customer's experience.

Frost & Sullivan has analyzed Apogee's technical capabilities to suit commercial requirements of day-to-day energy consumption monitoring and control for utilities along with commercial and residential consumers.

Application Diversity and Growth Potential

Apogee's energy analytics platform supports a wide range of commercial applications. These include smart meter data management where the software platform bridges energy scheduling and consumption trends for consumers and utilities respectively through a data-based mechanism and an AI-aided solution. Energy bill optimization through assessing energy bills helps the software project future bills based on different electricity

utilization scenarios. Time-based billing assistance by real-time energy consumption monitoring assists in bill reduction. Revenue enhancement enables easy bill payment for consumers along with energy optimization for utilities for revenue enhancement.

Apogee's energy analytics platform provides a range of solutions across all verticals of the electricity supply value chain, ranging from operators to end users. This diverse application portfolio has been the key factor in differentiating Apogee's software solution from competitors.

In terms of growth potential, the company's technical capabilities, R&D structure, and technological versatility demonstrate high commercial viability and brand strengthening. For instance, in 2020 Apogee and Xcel Energy were recognized for their outbound personalized video messaging campaign by the Association of Energy Service Professionals (AESP). Key achievements of Apogee's video messaging technology during the campaign included more than 9 million outbound video messages generated to create positive customer impressions. This messaging resulted in a more than 15% reduction in the frequency of high bill calls to the utility. The outbound video messages also garnered click-through rates of more than 35%, and more than 95% of utility customers reported they found the video-based bill explanation useful.

Based on the response received from utility customers, Apogee has enhanced its platform from simply naming items on the bill to providing analysis that explains days of service, behavior impact, weather effects, and rate changes to customers. This makes the platform more accessible and self-explanatory for customers while ensuring strong growth prospects for the company itself.

Frost & Sullivan thinks that Apogee's energy analytics platform derives value, strengthens brand equity, reinforces customer loyalty, and enhances growth potential through its efficient commercial feasibility and operational versatility.

Conclusion

Apogee's energy analytics platform is efficient and commercially viable in terms of operational and economic integration for electric utilities and end-use consumers. The company's end-customer engagement, application diversity, technical capabilities, and AI-based bill management mechanism provide a clear demarcation between the company's technology and that of its competitors. Moreover, Apogee's strong client relationships and project implementations with leading electric utilities demonstrate its reliability and business capabilities to effectively address persisting industry challenges smartly.

With its strong overall performance, Apogee Interactive has earned Frost & Sullivan's 2021 Technology Innovation Leadership Award.

Significance of Technology Innovation Leadership

Technology-rich companies with strong commercialization strategies benefit from the demand for high-quality, technologically innovative products that help shape the brand, resulting in a strong, differentiated market position.



Understanding Technology Innovation Leadership

Technology innovation leadership recognizes companies that lead the development and successful introduction of high-tech solutions to customers' most pressing needs, altering the industry or business landscape in the process. These companies shape the future of technology and its uses. Ultimately, success is measured by the degree to which a technology is leveraged and the impact it has on growing the business.

Key Benchmarking Criteria

For the Technology Innovation Leadership Award, Frost & Sullivan analysts independently evaluated 2 key factors—Technology Leverage and Business Impact—according to the criteria identified below.

Technology Leverage

- Criterion 1: Commitment to Innovation
- Criterion 2: Commitment to Creativity
- Criterion 3: Technology Incubation
- Criterion 4: Commercialization Success
- Criterion 5: Application Diversity

Business Impact

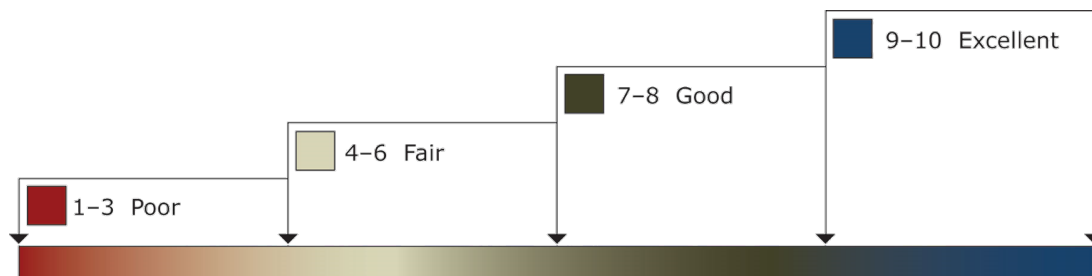
- Criterion 1: Financial Performance
- Criterion 2: Customer Acquisition
- Criterion 3: Operational Efficiency
- Criterion 4: Growth Potential
- Criterion 5: Human Capital

Best Practices Award Analysis for Apogee Interactive

Decision Support Scorecard

To support its evaluation of best practices across multiple business performance categories, Frost & Sullivan employs a customized Decision Support Scorecard. This tool allows research and consulting teams to objectively analyze performance according to the key benchmarking criteria listed in the previous section, and to assign ratings on that basis. The tool follows a 10-point scale that allows for nuances in performance evaluation. Ratings guidelines are illustrated below.

RATINGS GUIDELINES



The Decision Support Scorecard considers Technology Leverage and Business Impact (i.e., the overarching categories for all 10 benchmarking criteria; the definitions for each criterion are provided beneath the scorecard). The research team confirms the veracity of this weighted scorecard through sensitivity analysis, which confirms that small changes to the ratings for a specific criterion do not lead to a significant change in the overall relative rankings of the companies.

The results of this analysis are shown below. To remain unbiased and to protect the interests of all organizations reviewed, Frost & Sullivan has chosen to refer to the other key participants as Competitor 1 and Competitor 2.

<i>Measurement of 1–10 (1 = poor; 10 = excellent)</i>			
Technology Innovation Leadership	Technology Leverage	Business Impact	Average Rating
Apogee Interactive	9.5	9	9.25
Competitor 1	8	8	8
Competitor 2	7	7.5	7.25

Technology Leverage

Criterion 1: Commitment to Innovation

Requirement: Conscious, ongoing development of an organization's culture that supports the pursuit of groundbreaking ideas through the leverage of technology.

Criterion 2: Commitment to Creativity

Requirement: Employees rewarded for pushing the limits of form and function by integrating the latest technologies to enhance products.

Criterion 3: Technology Incubation

Requirement: A structured process with adequate investment to incubate new technologies developed internally or through strategic partnerships.

Criterion 4: Commercialization Success

Requirement: A proven track record of commercializing new technologies by enabling new products and/or through licensing strategies.

Criterion 5: Application Diversity

Requirement: The development of technologies that serve multiple products, multiple applications, and multiple user environments.

Business Impact

Criterion 1: Financial Performance

Requirement: Overall financial performance is strong in terms of revenue, revenue growth, operating margin, and other key financial metrics.

Criterion 2: Customer Acquisition

Requirement: Overall technology strength enables acquisition of new customers, even as it enhances retention of current customers.

Criterion 3: Operational Efficiency

Requirement: Staff is able to perform assigned tasks productively, quickly, and to a high quality standard.

Criterion 4: Growth Potential

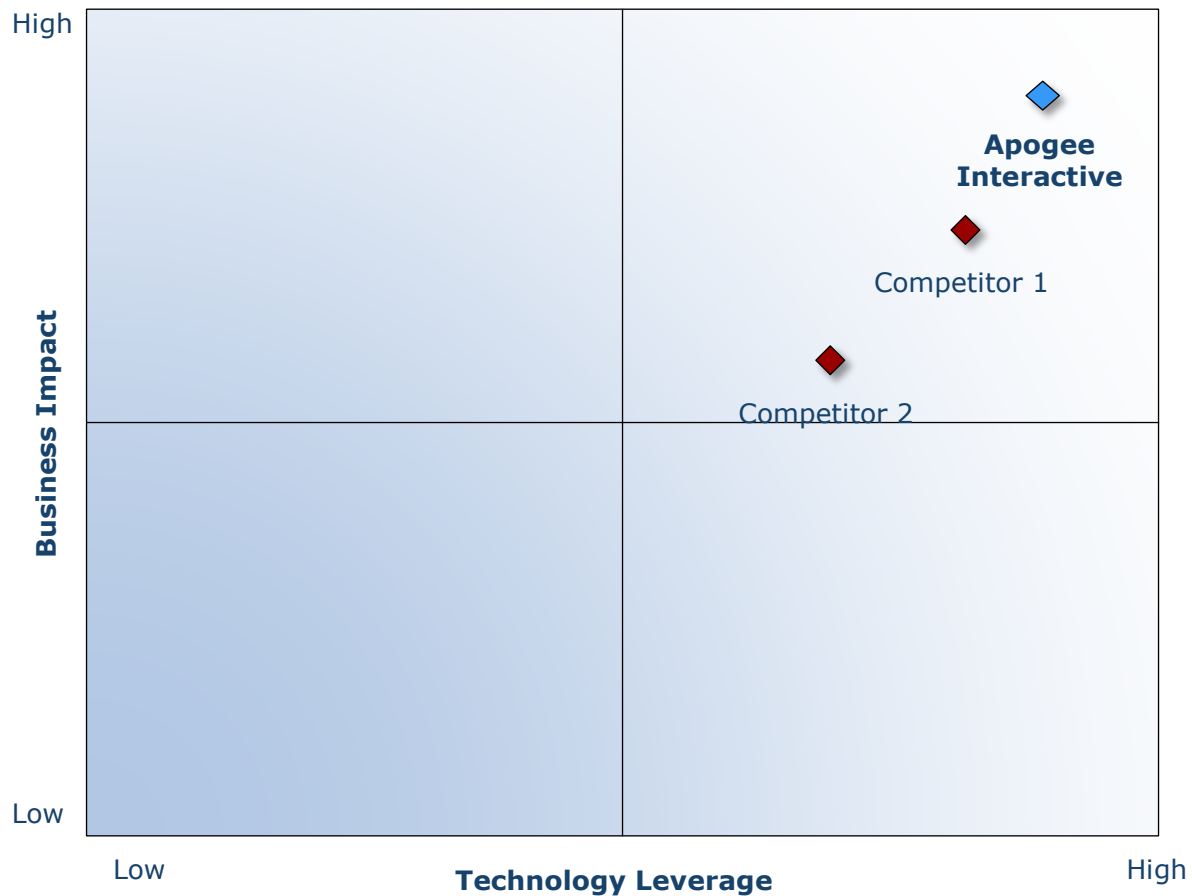
Requirements: Technology focus strengthens brand, reinforces customer loyalty, and enhances growth potential.

Criterion 5: Human Capital

Requirement: Company culture is characterized by a strong commitment to customer impact through technology leverage, which enhances employee morale and retention.

Decision Support Matrix

Once all companies have been evaluated according to the Decision Support Scorecard, analysts then position the candidates on the matrix shown below, enabling them to visualize which companies are truly breakthrough and which ones are not yet operating at best-in-class levels.



Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Frost & Sullivan analysts follow a 10-step process to evaluate award candidates and assess their fit with select best practices criteria. The reputation and integrity of the awards are based on close adherence to this process.

STEP	OBJECTIVE	KEY ACTIVITIES	OUTPUT
1 Monitor, target, and screen	Identify award recipient candidates from around the world	<ul style="list-style-type: none"> Conduct in-depth industry research Identify emerging industries Scan multiple regions 	Pipeline of candidates that potentially meet all best practices criteria
2 Perform 360-degree research	Perform comprehensive, 360-degree research on all candidates in the pipeline	<ul style="list-style-type: none"> Interview thought leaders and industry practitioners Assess candidates' fit with best practices criteria Rank all candidates 	Matrix positioning of all candidates' performance relative to one another
3 Invite thought leadership in best practices	Perform in-depth examination of all candidates	<ul style="list-style-type: none"> Confirm best practices criteria Examine eligibility of all candidates Identify any information gaps 	Detailed profiles of all ranked candidates
4 Initiate research director review	Conduct an unbiased evaluation of all candidate profiles	<ul style="list-style-type: none"> Brainstorm ranking options Invite multiple perspectives on candidates' performance Update candidate profiles 	Final prioritization of all eligible candidates and companion best practices positioning paper
5 Assemble panel of industry experts	Present findings to an expert panel of industry thought leaders	<ul style="list-style-type: none"> Share findings Strengthen cases for candidate eligibility Prioritize candidates 	Refined list of prioritized award candidates
6 Conduct global industry review	Build consensus on award candidates' eligibility	<ul style="list-style-type: none"> Hold global team meeting to review all candidates Pressure-test fit with criteria Confirm inclusion of all eligible candidates 	Final list of eligible award candidates, representing success stories worldwide
7 Perform quality check	Develop official award consideration materials	<ul style="list-style-type: none"> Perform final performance benchmarking activities Write nominations Perform quality review 	High-quality, accurate, and creative presentation of nominees' successes
8 Reconnect with panel of industry experts	Finalize the selection of the best practices award recipient	<ul style="list-style-type: none"> Review analysis with panel Build consensus Select recipient 	Decision on which company performs best against all best practices criteria
9 Communicate recognition	Inform award recipient of recognition	<ul style="list-style-type: none"> Announce award to the CEO Inspire the organization for continued success Celebrate the recipient's performance 	Announcement of award and plan for how recipient can use the award to enhance the brand
10 Take strategic action	Upon licensing, company is able to share award news with stakeholders and customers	<ul style="list-style-type: none"> Coordinate media outreach Design a marketing plan Assess award's role in strategic planning 	Widespread awareness of recipient's award status among investors, media personnel, and employees

The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan's 360-degree research methodology represents the analytical rigor of the research process. It offers a 360-degree view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often companies make important growth decisions based on a narrow understanding of their environment, resulting in errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry players and for identifying those performing at best-in-class levels.

360-DEGREE RESEARCH: SEEING ORDER IN THE CHAOS



About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, helps clients accelerate growth and achieve best-in-class positions in growth, innovation, and leadership. The company's Growth Partnership Service provides the CEO and the CEO's growth team with disciplined research and best practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages nearly 60 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on 6 continents. To join Frost & Sullivan's Growth Partnership, visit <http://www.frost.com>.