

Smart Energy Automation

Design Collaboration With Therm, A Retail Energy Platform



THERM approached Primal Loop to develop an interactive user interface for its retail energy automation platform. Founded in 2016, Therm is a technology firm specializing in the creation of automating the energy retail process through a fully configurable cloud-based Software-as-a-Service (SaaS) model. Therm ultimately sought to produce a user experience that united the needs of customers, brokers, Independent Service Providers (ISVs), the suppliers, and market research firms.

About Therm

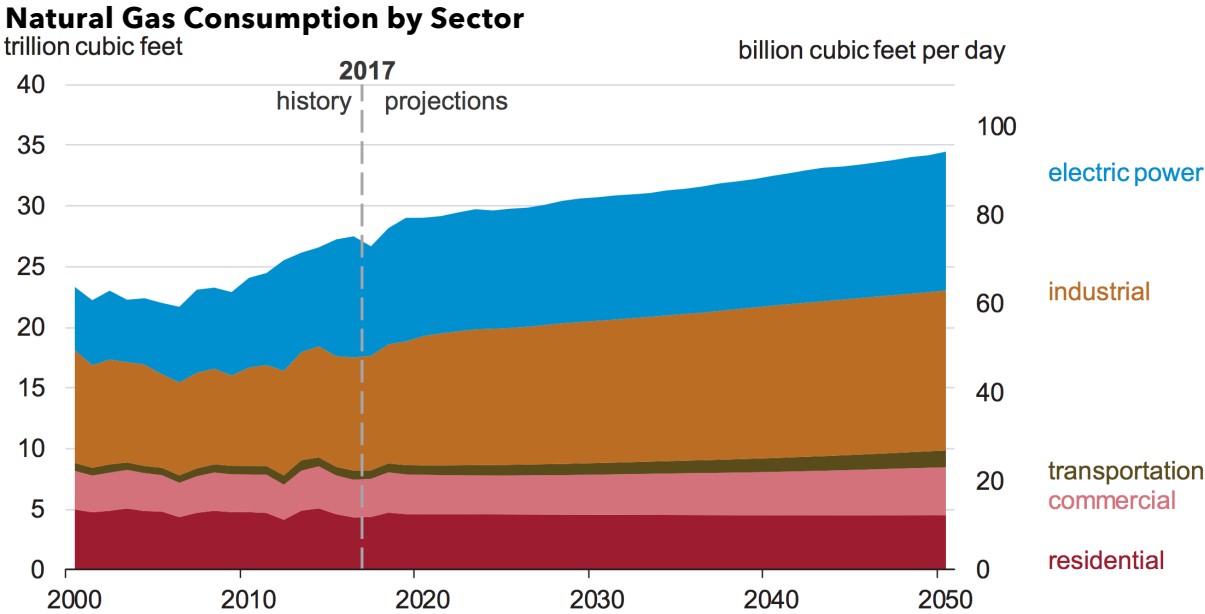
Therm works seamlessly across these five areas. Customers use Therm to monitor energy usage, whereas energy brokers use the product to manage bids from suppliers. Brokers use Therm to manage Requests for Proposals (RFP) and to actively sell to customers eligible for renewal. ISVs use Therm to procure power and natural gas according to measured demands. Suppliers



use Therm for a full range of services including gas and power scheduling, pricing analytics, risk and asset management, usage monitoring, load forecasting, and contracts. Finally, market research firms identify industry trends and acquisition targets using Therm’s market metrics.

The Challenge

Primal Loop was to unite the needs of these five end-users (customers, brokers, ISVs, suppliers, and market researchers), while using automation to simplify many of the complex logistics of the natural gas supply industry, in an intuitive and easy-to-use interface. The natural gas supplier market is currently a \$43 billion industry with a projected 50% increase in net use through 2040 due primarily to demand from industrial and electric power sectors.¹ Recent policy changes such as the FERC-issued Order No. 712,² along with the deregulation of power and gas markets,³ has offered significant industry opportunities. Energy trading for retailers offers some advantages in terms of profitability. But complex logistics, along with prohibitive financial barriers,⁴ and outdated manual technologies make market entry difficult.



U.S. Energy Information Administration

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¹ www.eia.gov/outlooks/aeo/pdf/AEO2018.pdf
² www.ferc.gov/whats-new/comm-meet/2008/061908/G-4.pdf
³ www.dnvgl.com/services/retail-energy-benchmarking-platform-31070
⁴ www.mckinsey.com/~media/mckinsey/dotcom/client_service/risk/working%20papers/47_energy_trading.ashx

An important challenge Therm addresses is that, technologically, the energy retail industry still relies on the entry of the majority of its important data through manual, human-entered spreadsheet values. Not only does this slow down important data pipelines, but it also introduces unnecessary errors into the process, since humans often make mistakes. Yet far from a minor isolatable issue, the problem of non-automated processes plagues the energy retail industry. Affected areas of activity include:

- Pricing fixed-rate gas contracts
- Selling gas contracts to end-customers
- Purchasing gas from producers
- Integrating with pipeline operators and utilities
- Scheduling gas on pipelines and with utilities
- Managing their physical gas position

Importantly, each of these activities is complex and interrelated with other components in the system. A single human error can create a domino effect across the entire system.

The Solution

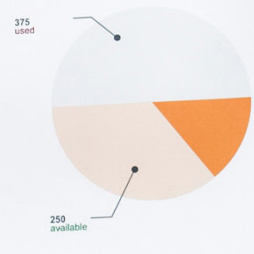
Together with Therm, Primal Loop created a suite of natural gas industry products that impact a specified group of different use cases. With Therm's automation features at its core, the platform's primary features include energy broker management; gas flow scheduling; financial forecasting; customer relationship management (CRM); bid pricing and proposal creation based on national market data, storage, capacity, and supply. Ultimately the product suite required this full set of functionality across multiple user profiles.



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Ohio Natural Gas Industrial Price (Dollars per Thousand Cubic Feet)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2001	5.90	8.25	7.72	7.61	5.24	8.45	5.74	4.87	7.00	5.47	4.87	5.13
2002	6.04	5.64	5.26	5.49	4.84	5.04	4.88	5.33	6.00	5.67	6.05	5.97
2003	6.58	7.29	8.30	8.43	8.50	9.48	9.65	8.61	8.91	8.65	8.75	8.86
2004	8.66	8.40	8.61	8.25	8.89	9.22	8.86	8.63	7.92	8.73	10.10	9.85
2005	9.97	9.19	9.68	11.09	11.12	11.00	11.11	11.27	12.26	14.68	14.05	13.84
2006	13.35	13.01	11.91	10.99	11.38	11.12	10.38	10.53	10.73	9.23	10.65	11.52
2007	10.21	10.54	10.73	10.56	10.89	11.34	11.22	9.86	10.16	9.74	11.02	11.02
2008	11.45	11.97	12.65	13.61	14.84	14.99	15.90	15.13	12.90	12.79	11.89	11.91
2009	10.28	9.65	8.91	7.93	7.59	7.55	7.48	7.49	8.31	7.83	7.77	7.59
2010	7.33	7.14	6.88	7.50	9.32	9.82	9.99	10.39	9.36	6.78	7.01	6.89
2011	6.52	6.45	6.33	7.57	8.12	9.29	9.49	8.52	7.59	7.69	6.29	5.99
2012	5.49	4.88	4.91	7.75	6.95	7.30	7.56	5.89	5.68	5.94	5.41	5.16
2013	5.75	5.41	5.61	5.90	6.56	7.63	6.72	6.19	6.53	7.34	6.05	5.92
2014	6.11	7.37	6.91	7.36	8.11	8.56	7.03	7.18	8.10	7.30	7.07	6.95
2015	5.26	5.44	5.22	5.28	5.71	7.24	5.40	6.09	6.64	5.61	4.74	4.65
2016	4.36	4.17	4.10	4.25	5.33	5.58	6.76	6.46	6.43	6.07	5.45	4.95
2017	6.87	6.56	5.85	6.54	8.06	9.21	8.69	7.85	8.04	7.24	6.42	6.24
2018	NA	NA	NA	6.11	6.65	7.44	NA					



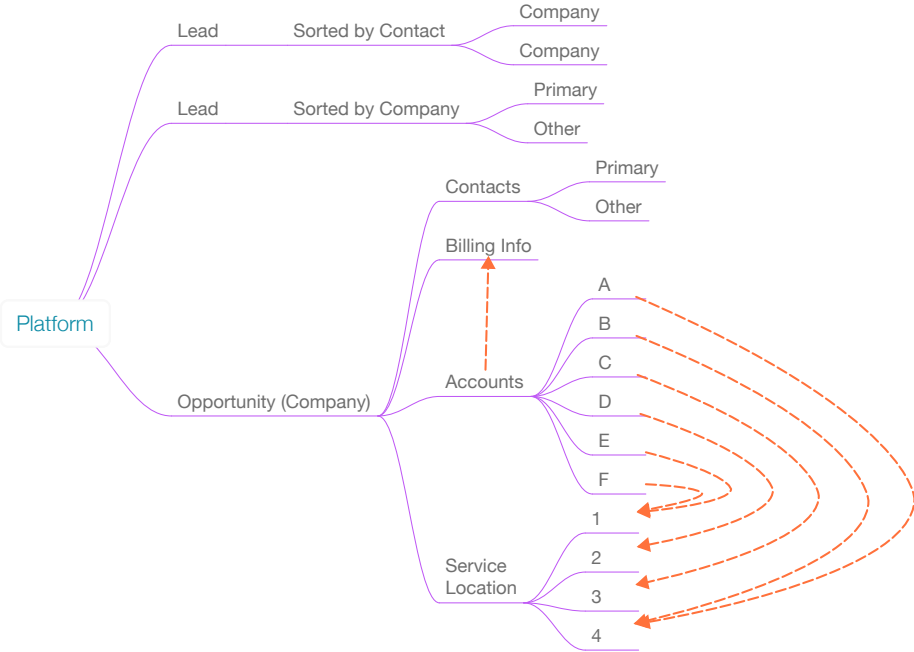
- = No Data Reported; -- = Not Applicable; NA = Not Available; W = Withheld to avoid disclosure of individual company data.

Realtime Dashboard

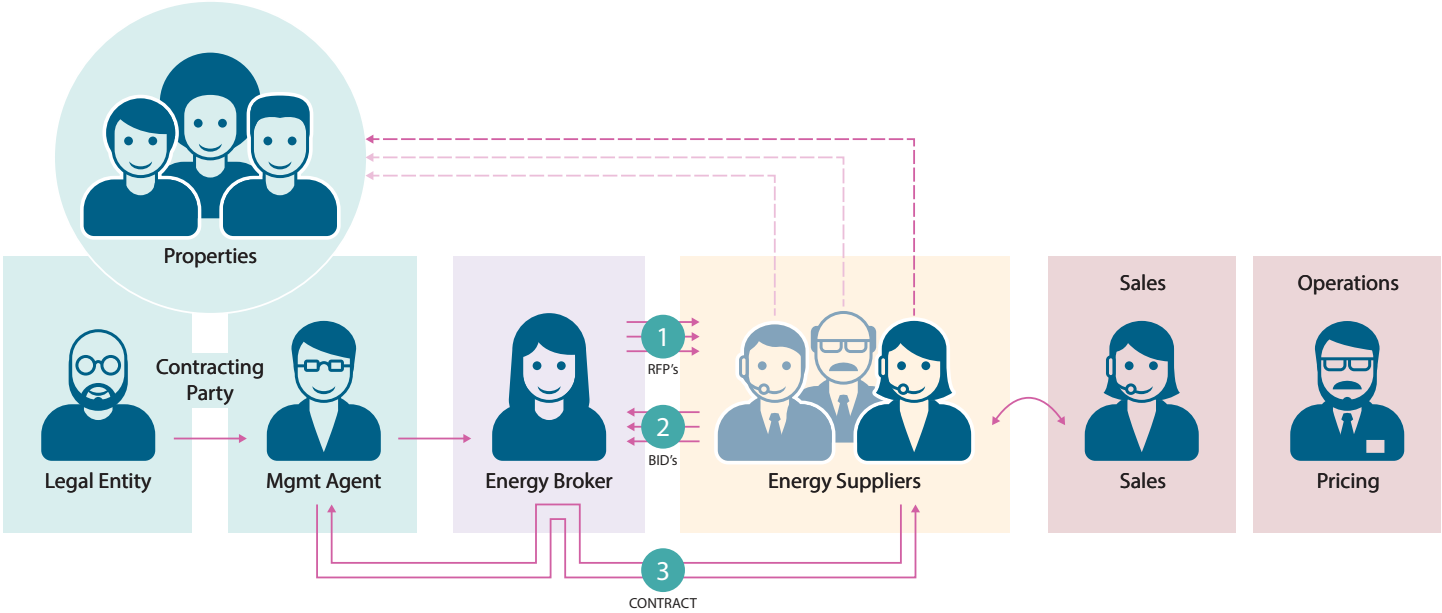


Marketing Chart





In order to determine the specific needs of each user group, Primal Loop conducted detailed project and research plans in consultation with Therm. Using existing customer data, Primal Loop created a series of detailed “proto-personas”—each a description of an abstracted user profile—and prioritized these user types in UI/UX wireframes based on each proto-persona’s motivations. Primal Loop used these wireframes to augment the Therm CEO’s original sketches. Overall, this process allowed Primal Loop to focus on core functionality while keeping in mind the multifunctional approach demanded by each of the different user groups.



The Outcome

The results of Primal Loop's unique UI/UX tool for Therm have been extraordinary. With Primal Loop's suite of multifunctional product designs, Therm has secured major accounts across the natural gas retail industry, with initial customers reporting remarkable financial gains due to the product. Specifically, customers indicated improvements across sales, pricing efficiency, and IT costs. An astounding twenty-fold improvement was reported in pricing: over the previous five deals per day, a pricing analyst could now price 100 deals per day. In sales, rather than eight RFPs, a single sales support member could now respond to 80 RFPs per week. Finally, Therm led to a 40% reduction in IT costs. Primal Loop is excited to have worked with Therm to create the multifunctional interface that led directly to these impressive financial gains.

KEY RESULTS

- 10:1 Sales efficiency improvement
- 20:1 Pricing efficiency improvement
- 40% Internal it costs reduction
- 16% Net profit increase

