

“War Games” and Other Interactive Techniques for Solving Complex Management Problems

As the pace of regulatory and market change continues to accelerate, energy and utility executives are facing increasingly complex and dynamic problems that cannot be addressed effectively by conventional means.

Sources of change	Examples
Regulatory environments	More or less (de)regulation, rate structure changes, regulatory requirements/mandates, incentives for conservation initiatives
Customers’ standards and preferences	Sources of energy (environmental concerns), service needs (pricing options, interactive pricing)
Industry dynamics	Industry consolidation (including private equity’s role), emerging competitors, emerging services/service providers (outsourcing options, etc.)
Environmental topics	Complex capital investment decisions faced by power generators trying to comply with carbon-related regulations
Technology	Intelligent grids (AMI, GPS), demand response capabilities, storage solutions

The strategies required to address these issues go beyond traditional analysis and can benefit from the collective judgment and wisdom of management teams. Collecting and harnessing this knowledge in a constructive way—one that stimulates discussion and debate—can be a complicated task but is possible with the aid of focused techniques and tools.

In our work with clients, Oliver Wyman has developed techniques designed to generate constructive tension in an interactive environment. The goal is to enable management teams to arrive at well-thought-out, collective solutions. Some of these tools include:

- *“War game” simulations*: to help predict the behavior and response of potential competitors, such as when a state deregulates electric markets
- *Interactive problem modeling*:
 - *M&A strategy*: to arrive at the most cohesive approach for particular acquisition candidates
 - *Initiative portfolio optimization/planning*: to optimize the implementation approach for transformation program initiatives

Predicting deregulated market dynamics through war game simulation

An emerging theme among utilities and energy companies is growing uncertainty about the future, driven by issues such as rate case regulation and shifting customer/public sentiment (e.g., with regard to renewable energy). We have found that the collective wisdom of the organization can be of great benefit in meeting these kinds of challenges and determining how they will impact the organization’s future prospects.

As an example, a retail electric provider recently faced a policy change that would represent a major step toward deregulation in its served markets. Some of the questions the client needed to address are:

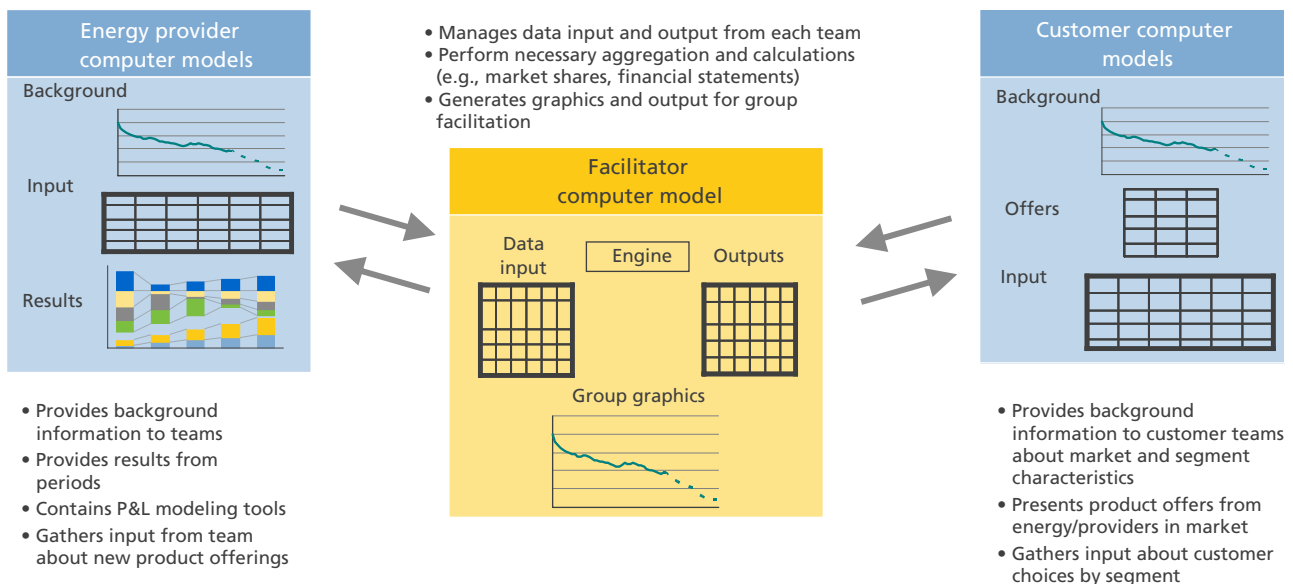
- How will various market participants act when the market is deregulated?
 - What pricing strategies might competitors adopt?
 - What product offers might competitors develop?
 - What are likely to be the reactions of other market participants, including customers and suppliers?
- How might regulators respond to different situations?

A powerful way of understanding these issues was to develop a custom “war game” and engage managers in various sessions of the game. Managers were divided into teams, with each team acting as a different participant in the market (customer segments, competitors, etc.) and charged with gaming the potential behavior of those market participants.

Example game setup



Supporting infrastructure



A large group of managers across the company were able to apply their knowledge of various market components by simulating them in the game (e.g., how will this customer segment respond to fixed priced contracts or “green” power? How would this REP adjust pricing if faced with churn rates that are this high?). This process helped to collectively educate managers about large market issues and called on their skills and experience to help project potential market outcomes.

Through Oliver Wyman’s facilitation of periodic readouts throughout the game (with the aid of interactive readouts of market share changes, financials, etc.), top managers were able to gain real-time insights about market dynamics. These were then applied in the next round of the game, to set off another chain of market effects. Running several sessions for managers throughout the company led to a set of comprehensive insights about the markets:



Illustrative game outcomes

- Unexpected REP strategies, many of which do not depend on pricing controls
 - Cross-subsidizing of retail business
 - Short-term pricing model to build scale and cash out in an M&A deal (small insurgent)
- Cherry picking of attractive customer segments, putting pressure on margins
 - Convergence of margins in various customer segments
- Significant customer stickiness, despite indications that price drives decision making
- Significant loss of margin, without higher share retention, among incumbent suppliers who cut prices to existing customers
- Limited efforts to distinguish offers, other than by price
- Superior retention of incumbent customer base by some competitors versus others

Strategic imperatives

- Better recognize potential competitive actions that are both related and unrelated to removal of pricing controls
 - Actions may be required today
- Improve customer knowledge and segmentation to enable better margin management and offer targeting, particularly within incumbent segments
- Minimize price reductions for existing customers, even in the face of aggressive competitor pricing
- Evaluate opportunity for home services offers
- Improve customer awareness of company and value of brand
- Ensure top-quality customer service experience

Games like this one provide several benefits over traditional approaches

New perspective

- Participants focus on key business issues and economic relationships
- Participants assume role of customers and competitors
- Staff take managerial perspective on business

Consensus building

- Game provides common experience and set of business perspectives
- Debrief sessions provide forum for discussion of important decisions, allow for exchange of points of view, and enable development of consensus on direction to be taken

Team building

- Dedicated day indicates to participants their value to the business and to their managers
- Game is fun to play and promotes creative engagement in business issues

By encouraging managers to share knowledge and perspectives in a dedicated and creative forum, a war game exercise can be a novel tool for developing solutions around certain complex problems. While the example above described a specific situation, the approach can be used to inform many similar questions:

- What would happen if regulatory schemes were completely restructured and move to fixed pricing or other conservation-based models?
- How would various renewable portfolio standards levels impact customer and merchant behaviors, our cost structure, etc.?
- How would new technologies such as distributed generation, viable storage solutions, and expanded DMS penetration affect our approach to system planning, rates, etc.?
- How will power auctions affect the price of energy to consumers? How will we respond or plan for this?

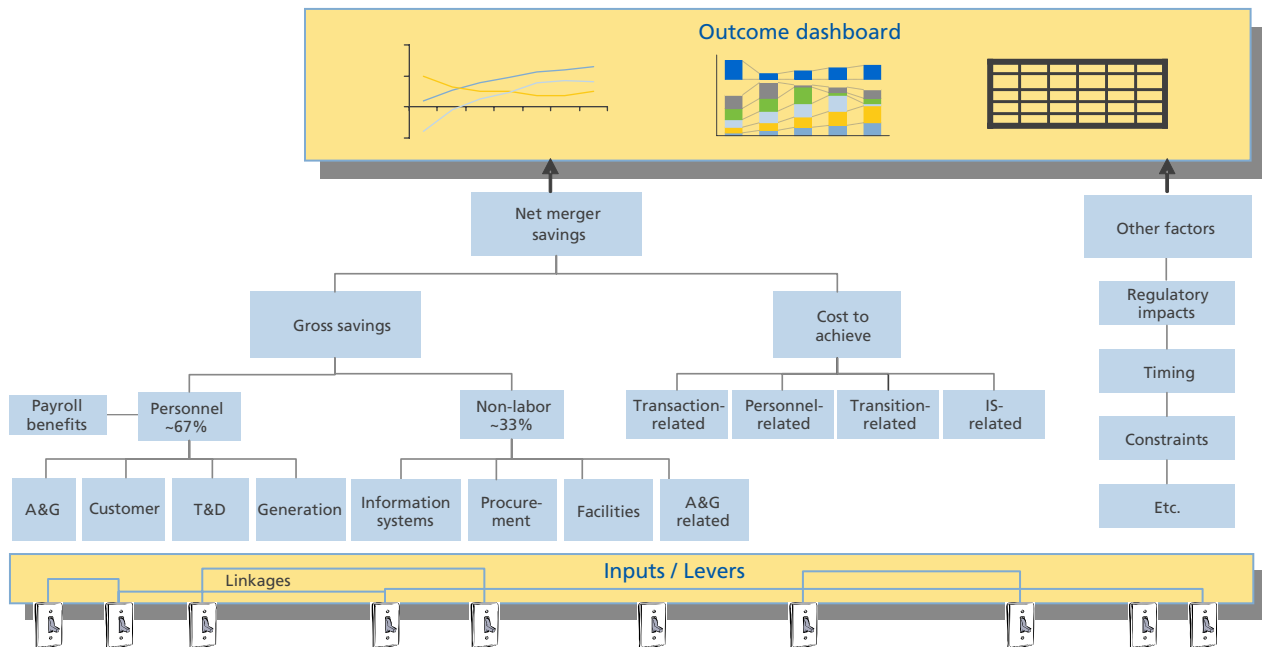
Optimizing M&A strategy through Interactive Strategy Models®

While the broad topic of mergers and acquisitions is on the minds of most industry executives lately, determining the approach and strategy for a particular transaction can be complicated. Particularly in light of the changing environment in energy/utility M&A (e.g., regulatory stances, private equity competition), determining the optimal path up front is critical to realizing value down the road.

The stakes are high and the process can be nerve-racking. With data about a potential target often limited and timeframes usually tight, much of the “bet” is based on assumptions. It is critical that these assumptions are sound, incorporating as much available background knowledge as possible.

Oliver Wyman has found that an effective way to manage this process is to integrate the collective wisdom of a select client team and M&A experts into an Interactive Strategy Model®. We develop these models for clients to allow real-time assumption inputs and then facilitate interactive workshops to gather and refine the inputs. This allows key personnel to understand the overall M&A picture and the key drivers of value and to provide appropriate input in their areas of expertise (functional, financial, regulatory, etc.) in the context of all other considerations.

Illustration of an interactive merger assessment model



The benefits of such an interactive approach are that it enables several important activities:

- The collection of organizational knowledge in real-time while viewing the impact of various levers on outcomes/success metrics
- On-the-fly refinement of assumptions based on outcomes
- Stimulation of constructive debate and discussion among the team to challenge thinking and arrive at more refined inputs
- Trade-off analyses of the many levers involved in a transaction

Workshop type sessions with the core team create a forum that results in a much more refined solution with a much faster turnaround – critical factors in a process that can have such a high impact on company value.

Planning and optimizing an initiative portfolio

In our work with clients on performance improvement or transformation engagements, developing improvement opportunities is often just the beginning of the hard work. The real challenges start with implementation; in particular, the critical step of implementation planning to achieve the *blend of goals* associated with any improvement program.

There are tradeoffs to all potential improvement programs that need to be tested and balanced across a number of dimensions. Because of the sheer number and complexity of these dimensions, it is often not possible to empirically optimize across all of them. The judgment of management at the most senior levels of the organization is required to help navigate this path.

In recent engagements, for example, headcount reductions were an extremely sensitive issue. Understanding the tradeoffs between various headcount reductions and meeting savings targets was critical to defining the path forward.

A powerful way of navigating this process is to incorporate the various initiatives of a transformation program into an interactive model that allows a management team to make real-time tradeoffs and see the impact of various choices/paths. Such a tool, together with active facilitation from an outside advisor, can help the management team build a comprehensive and balanced strategy while at the same time laying the foundation for buy-in and ownership of outcomes. In the example above, we were able to determine the right blend and sequencing of initiatives to meet savings targets yet minimize organization disruption and head count reductions in critical areas.

Initiative characteristics to consider

- O&M savings vs. capital savings
- FTE reductions (labor issues)
- Timing impacts
- Costs to achieve
- Difficulty to achieve
- Regulatory impacts
 - Ability to implement
 - Impacts on rate discussions

Illustrative tool for facilitating optimization of initiatives

Group	Initiatives	Implement?			Timing	O&M Savings	Capital Savings	FTEs	FTE\$ O&M	Risk	Comments
		As planned	Adjusted	Not at all							
Operations (FS/ Dist)	-Job Productivity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100	\$ -	\$ -				
	-GPS rollout	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100	\$ (2,062)	\$ (229)	(30)	\$	69	Moderate
	-Job site reporting	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100	\$ (1,581)	\$ (176)	(23)	\$	69	Moderate
	-Further job hr improvement	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	75	\$ -	\$ (1,375)	(18)	\$	-	High
	-Outside meter soft offs (30 days)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NA	\$ (644)	\$ -	(8)	\$	76	Stretch goal
	-Addit inside meter soft offs (30 days)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	50	\$ (537)	\$ -	(7)	\$	76	Stretch goal Theft risk if CGI
	-CGI & leak standby	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	125	\$ (967)	\$ -	(13)	\$	76	Low
	-Reduced leak calls (low end)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100	\$ (752)	\$ -	(10)	\$	76	Moderate Requires CS change
	-Express sets	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100	\$ -	\$ (537)	(7)	\$	-	Moderate
	-Shift work to utility/staker classification	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100	\$ (2,059)	\$ -	-	\$	#DIV/0!	Moderate
	-Stop at the meter	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	85	\$ (1,451)	\$ -	(19)	\$	76	High Regulatory approval
	-Miss dig outsourcing	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-	\$ (401)	\$ -	(10)	\$	40	High Sensitivty Dependent on production assume 1st hour
	-Leak survey outsourcing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	50	\$ (863)	\$ -	(19)	\$	35	Low Dependent on production assume 1st hour pro
Dispatch	-Centralization of dispatchers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100	\$ (1,095)	\$ -	(15)	\$	73	Moderate
	-Outbound call center	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	150	\$ (130)	\$ -	(2)	\$	65	Moderate
	-Additional analyst support	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	150	\$ 151	\$ -	2	\$	75	Moderate
Etc..											

Key questions answered

- How do the various initiatives impact overall success metrics?
- What are the interrelationships between initiatives?
- What combination of initiatives achieves the desired goals while minimizing downsides and risks?
- Ultimately, what is the right *approach* to the overall change program?

This technique has been effectively used with many clients to help them make tradeoffs in planning a change program and achieve the right *blend* of initiatives. In every case, the resulting solution was improved because it captured the collective wisdom of the management team.

Summary

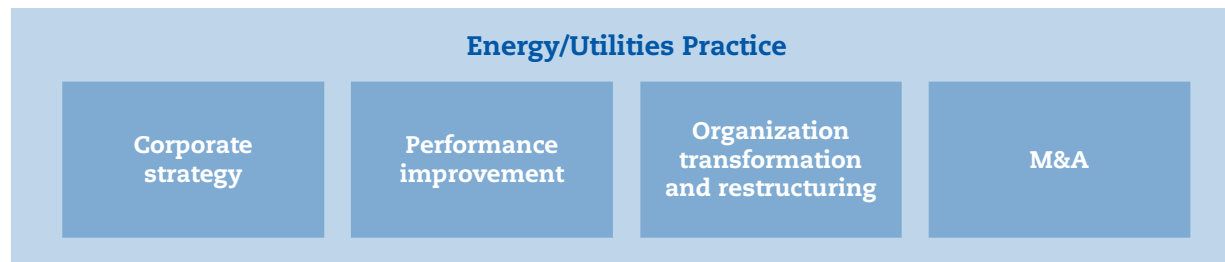
As the challenges energy companies and utilities face become more complex, developing processes, systems, and techniques to harness organizational wisdom in solving these challenges is becoming increasingly important. A range of non-traditional tools can encourage constructive thinking, enhance management interaction, and ultimately harness this collective knowledge and experience. Managers that can leverage tools such as these or develop their own optimization methods will reap the rewards of enhanced flexibility and competitiveness.

Oliver Wyman

Oliver Wyman is building the leading global management consultancy, combining deep industry knowledge with specialized expertise in strategy, operations, risk management, organizational transformation, and leadership development. The firm works with clients across a range of industries to deliver sustained shareholder value growth. We help managers to anticipate changes in customer priorities and the competitive environment, and then design their businesses, improve their operations and risk profile, and accelerate their organizational performance to seize the most attractive opportunities.

Oliver Wyman's Energy Practice

Our dedicated consultants have significant experience in the energy and utilities sector. Previous clients include more than 75 electric and natural gas utilities in North America and Europe, as well as a range of unregulated service providers to energy companies and utilities.



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