

Strategic Gaming[™] and Procurement

How game theory can help with supplier management

How we work to improve procurement



- Typically we work on projects (e.g., supplier negotiations) to help our clients understand their levers and how far they can push
- In so doing, we often provide our clients with tools they can use as they negotiate
- Naturally, this involves some coaching, and we can also provide formal training that instills long-term organizational capability
- Finally, we can work to ensure that decisionmaking processes complement these capabilities



Supplier negotiations example





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It turns out, there was a lot of leverage

10-50-90 range of estimates for what Supplier could place with others 0 10 20 30 40 50 60 70 Rigs Pulled by Supplier

Delta NPV to Nash if Supplier Pulls Rigs

Nash's value rises even if the supplier tries to walk away, and based on the supplier's other opportunities, it is highly unlikely that the supplier can move more than 30

Delta NPV to Supplier if Pulls All Rigs 10-50-90 range of estimates for what Supplier could place with others 0 10 20 30 40 50 60 70 Rigs Supplier Can Place With Others

Supplier will be shooting itself in the foot if it walks away from doing business with Nash



Deal structuring & qualitative assessment

Player		Deal Term 1	Deal Term 2	Deal Term 3	Deal Term 4	These 4 terms define the deal structure By putting ourselves in the shoes and minds of the players, we qualitatively assess their preferences on each of the deal terms; here we see there will likely be alignment on deal terms 2 & 4, misalignment on 1 & 3		
	Blue	Left No Center Yes		Weak	High			
	Red			In between	Low			
	Green	Right	Strong					

This approach is often a useful first cut to framing the dimensions of a deal and qualitatively assessing where there are likely win-wins and misalignment; quantitative evaluation can and should, in most cases, follow from such an exercise



Economic modeling (negotiations)





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Including uncertainties, we can evaluate the range of value from different deals



By identifying and modeling key uncertainties and risks for each player, we can generate s-curves to show the range of potential value. In this case, they provide useful negotiation insights.



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Projects deliver clear, detailed road maps



Such road maps are typically supplemented with detailed plans for key interactions and other action items



Sources of value-add across 50 projects that used Strategic Gaming[™]

	Shar	e of p	rojects	s featu	iring e	ach so	urce o	fvalue	e-add	
6	10%	20%	30%	40%	50%	60%	70%	80%	90%	1009
				I		I	I			
В	etter Ur	nderstan	ding of	the Gan	ne: 100%	6				
										_
B	etter In	sights in	to Othe	r Player	s: 90%					
			1		0.00/					
B	etter Organizational Alignment: 84%									
N				040/						
N	lew Gan	ne Chang	ging ide	as: 84%						
D	ottor To	ctical Id	0001 710	/						
D	etter la		eas: 717	0						

Expectations for procurement projects

Clarity about the potential interactions and deal terms, the win-win space, potential levers

Through analysis and development of tactics for eliciting information, more insights into suppliers

Ensure procurement is aligned with other functions

Creative strategic and tactical ideas to elicit information, send messages, make credible commitments; specify the optimal timing of actions

These sources of value have led to billions of dollars in value capture or savings versus clients' momentum strategies

Procurement projects and value savings

Project	Estimated Savings		
Major equipment on upstream expansion project	\$50-100 mln		
Contractor agreement negotiations, Australia LNG project	\$100-200 mln		
Major equipment contract for Australia LNG project	\$100-200 mln		
Equipment contract for Australia LNG project	\$20-30 mln		
Workover rig supplier contract	\$35-50 mln/year		
Re-negotiation of contractor agreement, African LNG project	\$200 mln		
Housing contract at oil & gas camp	\$70-100 mln		
Co-gen contract, onshore oil fields	\$10-30 mln		
Refinery steam contract	\$200-300 mln		



Value add examples

Re-negotiation of contractor agreement: An oil and gas client needed to renegotiate the terms of a multi-billiondollar agreement with a contractor, and was starting from what it perceived to be a relatively weak position. Using Strategic Gaming, we showed how the balance of power could be shifted with a comprehensive approach that drew on levers revealed by our analysis. These included ways to extract key cost information from the contractor and to use an arbitration threat to gain concessions. In addition, we helped specify terms that would reduce our client's disproportionate and high risks and create more of a win-win. We also provided a detailed strategic and tactical dynamic road map to support swift and successful execution of this comprehensive approach. This led to a bottom-line improvement of approximately \$200 million.

Workover rig supplier contract negotiations: An oil and gas major was faced with repeated price increases on short-term contracts from a key supplier of a particular type of rig. With 75% price increases over the previous 3 years, a recent request for 15% more, and a near-monopoly position for the supplier, the client felt it was at the supplier's mercy. Using Strategic Gaming, we showed the client that it was actually in a strong bargaining position because the supplier had few other alternatives and other suppliers could be brought in to partially displace the key supplier over time. This meant the client could safely reject the 15% increase demand, saving approximately \$35 million for the year. In addition, a creative plan was developed to do away with short-term contracts and constant price increase requests by bidding out the work under long-term contracts to several suppliers. By changing the game in such ways, the client could save 15-20% of its \$250 million in annual expenditures and avoid constant renegotiations.

Client testimonials

"You guys played this very well. I didn't expect to achieve this level of savings."

"This helped me cut costs and level the playing field with my key suppliers."

"The game preparation enabled us to control the negotiations and leave with concessions that exceeded our wildest expectations."



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