Procurement is often not the lead function of sourcing processes

A sourcing process is naturally a cross-functional workstream. However, many organisations struggle with the fact that the internal functions involved do not necessarily have the same goals regarding the sourcing outcome. In many cases, these departments even have conflicting interests. For example, while Procurement focuses on delivering commercial targets, the R&D department might be much more interested in obtaining a superior solution or product offering.

These conflicts lead to inefficiencies and additional workload for Procurement and deteriorate the negotiation outcome. Procurement often faces a double challenge; having to negotiate with external parties as well as with internal stakeholders. Having to follow preferences of internal stakeholders or having to justify a specific supplier nomination which is not in line with stakeholders’ views, forces Procurement into a passive role and ultimately distracts this function from becoming a strategic, value-driving factor in the organisation.

How can Procurement achieve impactful results in such an environment of conflicting interests? Game theory provides an unconventional answer to this question in proposing a methodology that unites all functions behind a common objective, ultimately empowering Procurement within the organisation.
Lack of commitment reduces Procurement’s negotiation power

In a typical Procurement process, the cross-functional team makes a sourcing decision only after all discussions with suppliers - such as negotiations and technical discussions - have taken place (see Figure 1a).

This approach has disadvantages for all participating parties, both within and outside your organisation:

- **Procurement**: During the negotiation phase, Procurement is in a weak bargaining position, as it is not empowered to make independent sourcing decisions. It cannot make committed statements to the suppliers, and cannot, therefore, reward attractive offers with a contract. The role of Procurement is reduced from negotiating to merely collecting offers from suppliers, since the awarding decision will be made by the cross-functional approval team.

- **Other internal functions**: The participating functions cannot be sure that their preferences are taken into account in the awarding decision. For example, engineering’s preference for a technically strong supplier might be overruled in the final discussion, because management favours a commercially attractive offer over a high-end technical solution.

- **Suppliers**: The awarding process is a “black box” to the suppliers, since the sourcing decision will be made after the discussions with suppliers have taken place, based on criteria they do not know and cannot control. A supplier therefore will be very reluctant to give a price reduction or improve the technical specification as they cannot be sure whether and how this will actually improve their chances in the awarding process.

![Figure 1a – traditional sourcing process](image)

![Figure 1b – sourcing process optimised by game theory](image)
A Procurement process designed by game theory

In contrast, a Procurement process optimised by game theory contains the same tasks and milestones, but rearranges their order to enable commitment both internally and externally.

In particular, the cross-functional alignment is pulled forward (see Figure 1b). This crucial step is now conducted before the commercial negotiation takes place. Obviously, the stakeholders cannot decide which supplier will be nominated (as the commercial negotiation has not taken place yet), but they can align on the commercial and non-commercial elements that will drive the awarding decision.

The aim of the cross-functional alignment is to get a holistic view of the suppliers and make them comparable, taking into account all commercial and non-commercial aspects of their offer. To achieve this, a Bonus/Penalty evaluation is used.

Bonus/ Penalty: A holistic supplier evaluation on a monetary basis

In the Bonus/Penalty evaluation, each function independently defines their relevant non-commercial sourcing criteria and evaluates the suppliers according to these criteria. This evaluation must be conducted in monetary terms, so that a supplier's commercial and non-commercial performance becomes comparable.

The monetary evaluation examines non-commercial elements (such as project management capabilities, KPI reliability or technical performance). These are added to the quoted price, artificially increasing or decreasing the supplier's total business case, see Figure 2a.

This means that the result of the Bonus/Penalty evaluation reflects the supplier's total value of ownership (TVO) and incorporates both the supplier's commercial offer and non-commercial performance. It is called Comparison Price, as it is used in the final stage of the sourcing to compare different suppliers and to establish a sourcing decision. Such a comparison is shown in Figure 2b where supplier A is awarded the business, as their Comparison Price is below the one from supplier B.

![Figure 2a - Bonus/Penalty evaluation](image)

![Figure 2b – Comparison Price](image)
The game-theoretical sourcing process enables a committed negotiation

The above described Bonus/Penalty evaluation is critical, as it enables cross-functional alignment. All functions know that the final sourcing decision will be made on a Comparison Price basis and will therefore include their preferences regarding non-commercial criteria, as well as the commercial offer.

With a thorough Bonus/Penalty evaluation, the functions’ active input to the sourcing is concluded. Before the final negotiation phase, all functions align internally and commit to their individual Bonus/Penalty evaluation, empowering Procurement with the mandate to source based on a Comparison Price.

In the following negotiation phase, Procurement can then conduct fully committed negotiations with suppliers. In contrast to the classical awarding process, it does not have to obtain yet another final internal sourcing approval, but can independently award the business, as long as the sourcing decision is based on the Comparison Price.

With well-defined sourcing restrictions, preferences and a clear mandate from all functions, Procurement can freely choose its negotiation strategy, including negotiation techniques requiring commitment, such as rule-based negotiations (introduced in our last white paper, Procurement Redefined). This ultimately drives the best negotiation result, both under commercial and non-commercial aspects.

The Bonus/ Penalty evaluation has further benefits

The Bonus/Penalty evaluation helps the organisation to find the best supplier at the best price, but it has even further benefits:

- **Increase in competition:** The Bonus/Penalty evaluation makes suppliers comparable - even if they have considerable differences (for example opposing technologies, discrepancies in quality or performance, etc.) - and exposes them to a common market. This means that competition is increased - or sometimes even created in the first place - in markets where suppliers have so far successfully maintained their monopolistic niche.

- **Creation of internal transparency:** A definition and commercial evaluation of the awarding criteria forces each function within your company to provide a clear, objective justification to their preferences. Opposing viewpoints from different functions regarding a supplier can thus be detected more easily and earlier in the sourcing process.

- **Incentivisation of suppliers:** An anonymised version of the list of Bonus/Penalty criteria should also be shared with the suppliers. By knowing which criteria are relevant to your company, suppliers become incentivised to optimise not only their quotations but also the non-commercial aspects of their offer to match your company’s needs, and are ultimately able to submit more attractive offers.

- **Stronger relationship with suppliers:** The Bonus/Penalty evaluation unfolds its full potential in repeated negotiations. In many cases, Procurement has successive negotiations with the same supplier set. By providing a consistent Bonus/Penalty evaluation in all assessments, your company clearly states its preferences and proves its credibility towards the suppliers. They, on the other hand, have the opportunity to amend their strategy and product base to your specific needs - including long-term changes which cannot be made within the time of a single sourcing. Over time, you will establish a strong partnership with your supplier base, to source tailored solutions to meet the challenges of your company.
The application of game theory will ensure that Procurement becomes an empowered strategic leader and value driving force, uniting all functions and achieving impactful results throughout the organisation.

Preview: market design in the automotive industry

In this white paper, we have focused on game theory’s value added to processes within your company (such as optimising the negotiation process and strengthening Procurement’s position).

In our next white paper, we will go one step further to show how game theory can improve the position of your organisation within the market of your industry, and how you can even actively change the conditions of this market in your favour.

We will illustrate this case with examples from the automotive industry. This industry is generally considered to be small (featuring a low number of participants) and slowly changing (as there are significant entry costs), and is therefore well-suited to illustrate game theory’s ability to shape market structures.