



Organizing Public Procurement

4

Fredo Schotanus

Abstract

This chapter introduces organizational structures for public procurement and explains that the procurement function of any organization is broad and involves more than the procurement department. It discusses several options that public organizations have for organizing their procurement function, depending on their maturity and organizational coherence. For example, coordinated purchasing is a common organizational form for small public organizations, whereas center-led purchasing might be more suited for larger public organizations. Both forms can facilitate the transition to sustainable and social public procurement, using among other things a central sustainable procurement policy and guidelines, offering resources, and sharing best practices. This chapter ends by zooming in on joint procurement as a specific organizational form for cooperating public organizations. It presents four types of joint procurement (Hitchhiking, Bus Ride, Carpooling, Convoy, and Formula 1 Team) and explains that simple forms of joint procurement can be used for commodities and simple or non-emotional tenders and more intensive forms of joint procurement are more suitable for complex tenders.

Keywords

Procurement organization structures · Procurement department · Coordinated purchasing · Center-led purchasing · Joint procurement structures · Economies of scale

F. Schotanus (✉)

Faculty of Law, Economics and Governance, Utrecht University, Utrecht, The Netherlands

e-mail: f.schotanus@uu.nl

Learning Objectives

After studying this chapter, the reader will be able to:

- Understand what the difference is between the purchasing function and the procurement department of a public organization.
- Understand the link between (inter)organizational structures and economies of scale, process, and knowledge.
- Explain in which situations different organizational structures for procurement are most suitable for a public organization.
- Understand the advantages, disadvantages, and obstacles of joint procurement.

4.1 Introduction

Due to the large financial impact and potential value of public procurement, the procurement function is an important function for many public organizations. It is, however, also a complex function. On the one hand, there are procurement-specific issues that relate to public value, legal, economic, and accountability characteristics, or technical reasons that lead to this complexity. On the other hand, there are organizational issues, such as many public officers and external parties involved with public procurement in different roles (e.g., director, budget holder, user, advisor, sustainability officer, accountant, contract manager). Because of this, public organizations must develop formal and regulated purchasing and contract management processes and procedures to ensure basic procurement values such as equality, non-discrimination, transparency, proportionality, and value for money (Harland et al., 2019).

Many public organizations have a procurement department to support purchasing and contract management processes within their organization. How this department is organized can vary considerably. It can be positioned close to general management or 'deeper down' in the organization, as a staffed department or integrated in other departments (Telgen, 2003). A procurement department can be involved in the organization in different ways: strategically alongside management looking at how to improve the organizational processes, tactically by thinking about strategic tendering processes, and operationally in relation to the processing of orders.

The coming years, the usage of joint procurement is likely to increase since it can offer the required scale, capacity, and knowledge for purchasing sustainable innovations related to the societal challenges we currently face. In addition, the concept is useful in times of crisis to prevent unwanted competition between EU Member States and to coordinate supply. For large investments in defense and security, it can also help to facilitate research and development and synchronize military equipment throughout EU Member States and other countries to promote operational effectiveness.

This chapter focuses on organizational aspects that are specific for public procurement. General organizational management aspects are out of scope. In this chapter, it is first explained what organizational procurement structures are available for public organizations. Next, a specific form of organizing public procurement is introduced, namely, joint procurement. In this specific form, procurement is organized jointly between two or more independent public organizations. This chapter concludes with an explanation for which situations, and for what types of works, supplies, or services, different forms of joint procurement are most suitable.

4.2 Purchasing Organization Structures

Organizational structure is a way in which responsibility and power are allocated and work procedures and control are carried out in an organization (Tran & Tian, 2013). Organizational structures consist of several elements, including the level of centralization, formalization, specialization, departmentalization, and the number of hierarchal levels. Formalization refers to the extent to which written rules and regulations are used in an organization. Higher levels of formalization are common for public procurement-related processes. Specialization refers to the extent in which jobs are specialized. For instance, a procurement department can have several general procurement professionals or procurement professionals who specialize in different markets. The number of hierarchal levels refers to vertical differentiation of an organization. There can be a short or long chain of command. Departmentalization refers to the way departments are structured (e.g., functional, process, buyer focused, geographical, or combinations).

The most studied organizational structure element is the level of centralization (Zheng et al., 2010). A central position will make it easier to gather information, to define a joint approach, to use one infrastructure, to make everyone buy from the same supplier, and to keep control. A decentralized level will be appreciated by the different departments in the organization because there is more room for flexibility and tailoring, and decisions are made faster.

The level of centralization is also an important element in organizational structure models developed specifically for procurement. One of these purchasing models is developed by Rozemeijer (Rozemeijer, 2000). This model identifies five basic organizational models for purchasing organization structures that have different levels and forms of centralization. The forms are named decentralized informal and voluntary coordination, coordination, centralized purchasing, center-led, and the federal organization of purchasing. In Figure 4.1 (Rozemeijer et al., 2003), these forms are plotted against purchasing maturity and organizational coherence.

Purchasing maturity refers to the level of purchasing professionalization of a public organization. A public organization in the lower stages has a low purchasing maturity level and an organization in the higher stages has a high purchasing maturity level. *Purchasing coherence* refers to the ability of an organization to generate synergies (Bals et al., 2018), which can be subdivided in economies of scale, economies of knowledge, and economies of process. In the context of purchasing,

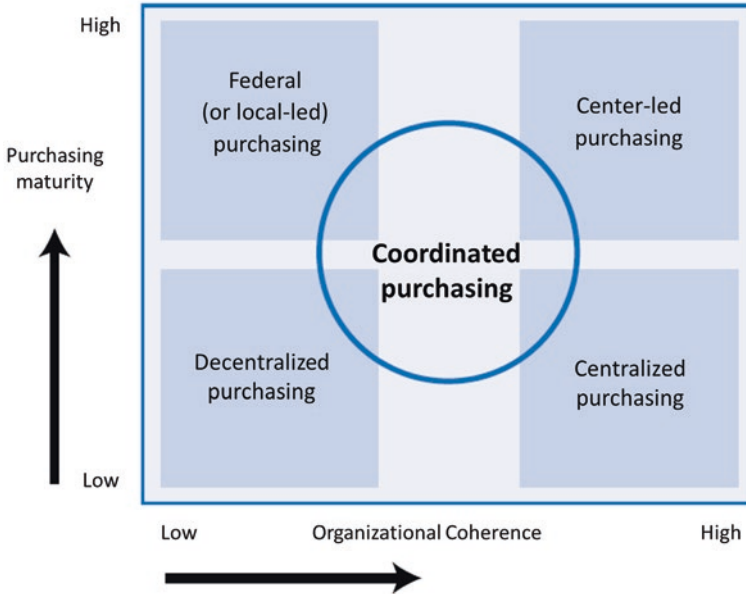


Figure 4.1 Organizational approaches for procurement

economies of scale generally mean that due to increased volume, certain fixed (transaction) costs decrease, leading to better price-quality-impact ratios. *Economies of knowledge or information* can be created by sharing knowledge and information or by better utilizing specific knowledge. For instance, the IT department of a public organization probably has more knowledge and experience about the IT market than the HR department. If this department is appointed as lead buyer for all IT-related purchases of an organization, this creates economies of knowledge. *Economies of process* refer to the concept of lower transaction cost and reduced workload. For example, assume there is an organization with several departments that have a similar demand. In this case, having one joint tender reduces duplications, as instead of many tenders only one tender is required. Similarly, if all departments use (almost) the same procurement documents, but tender by themselves, this also reduces transaction costs for both buyers and suppliers.

The Rozemeijer model indicates when different organizational structures for procurement can be applied. For instance, when both organizational coherence and purchasing maturity are moderate, a coordinated purchasing structure can be applied. In this case, this is likely to be more appropriate than decentralized purchasing. However, as is the same with many other matrix models, the model is not perfect. Other variables such as organizational size, environmental complexity and dynamics, extent of goal alignment, supplier management practices, and technology in use can also influence the choice for an optimal structure. For instance, large organizations tend to have a more complex purchasing structure than small organizations (Trent, 2004). This could mean that a small but coherent and mature

organization does not apply center-led purchasing, but a simpler structure, such as centralized purchasing. Also note that day-to-day practice always asks for adjustments because no two organizations are the same. Models are always starting points to design the purchasing function that best suits a specific organization and may not be up and running from the start but will evolve with time. Below, the properties and specifics of the decentralized, coordinated, centralized, center-led, and federal purchasing structures are described in more detail.

Decentralized Purchasing

In a decentralized purchasing structure, each department of a public organization is responsible for organizing its own tenders. Coordination or collaboration with other departments is voluntary, ad hoc, and informal (Rozemeijer, 2000). There is no centralized coordination other than through the general procurement policy. Decentralized purchasing structures place all responsibility for purchasing activities with the departments. In practice, the model is more often found in small- or medium-sized organizations with low purchasing maturity levels.

Advantages of this model are high levels of flexibility and low levels of management overhead (Rozemeijer, 2000). In practice, this can result in construction departments specializing in tenders for works, facility departments specializing in tenders for facilities, and so on. A disadvantage of this model is that there are less economies of scale, economies of process, and economies of knowledge. It can also be more challenging to drive sustainable public procurement to higher levels, as each department could reinvent the wheel. Concepts that require coordination, such as joint procurement, also become more difficult to organize. Finally, it can also occur that departments try to avoid EU public procurement law or are not aware of specific applicable rules. Especially when several departments have a similar demand with a contract value that exceeds EU tender thresholds, conflicts with EU procurement law may arise when departments tender individually.

Coordinated Purchasing

Coordinated purchasing consists of departments that are usually advised by a procurement department for specific tenders (Rozemeijer, 2000). Tenders for generic demand, such as office supplies or energy, are conducted by the procurement department. The procurement department oversees procurement issues of concern for the entire organization, and it seeks opportunities for the organization as a whole, where individual departments may not have an organization-wide overview. This model is often used by small- or medium-sized public organizations.

An advantage of this model is that some levels of economies of scale, economies of process, and economies of knowledge can be achieved due to the coordination function of the procurement department. This model can also help to realize policy objectives related to sustainability and social aspects to a larger extent than in a

decentralized model. Nevertheless, as the procurement department only has a consulting role, it can be challenging to realize policy objectives when they are not in the direct interest of departments.

The role of the procurement department is often ‘just’ an advisory one. The department needs to ‘sell’ its advice. This is especially challenging when an organization moves from a decentralized model to a coordinated model, as the other departments had previously only tendered by themselves. In a coordinated purchasing role, it is therefore especially important for the procurement department to have a close relationship with the other departments, more so than having a close relationship to the board (Rietveld, 2009). When the procurement department loses touch with other departments, it might not be involved in all tenders conducted by the other departments. This could lead to lower contract compliance for central contracts.

Centralized Purchasing

With a centralized purchasing approach, a central procurement department tenders on behalf of all departments. The other departments are consulted but are not responsible for their own tendering (Rozemeijer, 2000). An advantage of this model is that it can potentially achieve the highest levels of economies of scale, economies of process, and economies of knowledge. However, there is little user control and lower responsiveness to specific needs of departments. However, it is easier to realize policy objectives with this approach, as the central procurement department can oversee the benefits of the whole and impose such objectives. Nevertheless, central purchasing models are only rarely found in public procurement practice.

Center-Led Purchasing and Federal Purchasing

Center-led purchasing and federal purchasing (see the next subsection) are ways of organizing the purchasing function that avoid the rigidity of centralized structures and the fragmentation of decentralized structures (Rozemeijer, 2000). The main difference between the two is that in center-led purchasing ‘the center makes it happen’ and in federal (local-led) purchasing the ‘center supports and facilitates’. Both concepts typically fit best with large public organizations with multiple procurement departments or groups of public organizations that are closely related to each other, such as a group of ministries. Especially when policy objectives need to be realized by all procurement departments (and when required preconditions are fulfilled), a center-led model is preferred.

A center-led structure consists of mature decentral procurement departments and a central procurement office. The departments conduct the actual tenders, and the central office is responsible for setting policies, sharing knowledge, and control. The office also coordinates the types of tenders conducted by the departments. This prevents duplications and allows each department to become lead buyers and

specialize in different types of tenders. An advantage of this model is that economies of scale, knowledge, and process are utilized, while the disadvantages of a central model are reduced. The departments have more control, and there is a higher responsiveness to specific needs of departments.

Federal purchasing consists of a small central core organizational unit, hierarchically flat in structure, supporting the organization with knowledge, and coordinating several autonomous procurement departments (Rozemeijer, 2000). The departments are interrelated with a shared service center. The departments have a reporting line to their own board, not to the central core.

In the local-led purchasing organizational structure, each procurement department has a strong unique identity (with low overall coherence) and knows exactly what the level of demand is for a specific product category, region, or services. Decisions can be made quickly in such an organizational structure, without bureaucratic procedures (Rozemeijer, 2000), as there is no formal decision required from a central purchasing office. Coordination and integration are required as otherwise departments focus solely on their own purchasing needs, and economies of scale, process, and knowledge are lost. This can, for example, be done by using tender boards with a consulting role, joint training programs, joint traineeships, or annual procurement days.

4.3 Joint Procurement

A public organization does not have to procure everything singlehandedly. They can also collaborate with others or combine purchasing activities in different ways. In the literature, joint procurement can be described as horizontal cooperative purchasing, group purchasing, group buying, collaborative purchasing, joint purchasing, and more (Schotanus, 2007). This joint procurement manifests in different forms in the public sector, but it usually involves tenders in which two or more public organizations participate.

Joint procurement is becoming more and more common practice in the European Union. It is, for example, used in times of crisis to jointly procure medical countermeasures and to prevent unwanted competition between EU Member States. Joint procurement is also used for sustainable or innovative purchases such as circular bridges, complex machinery, or making existing buildings sustainable, and where individual organizations lack sufficient knowledge or scale to procure this by themselves. However, joint procurement is most used for standard purchases, such as electricity and office materials.

Joint procurement is not new—in many European countries such as Sweden, Germany, and the Netherlands, public organizations have been jointly procuring for many years. However, only 11% of all public tender procedures in the EU are carried out through joint procurement (European Commission, 2019). Although joint procurement is not always suitable, in the healthcare sector, for example, much higher percentages of joint procurement are found in the United States (between 30 and 50%) and in Germany (about 80%). This indicates there is more potential for

joint procurement in the EU. This is also acknowledged by the European Commission as joint procurement is one of the six strategic policy priorities in the EC's public procurement strategy. Advantages to using joint procurement are potential savings of price and time and quality improvements. Price savings and difficulties regarding measuring such savings (e.g., how to determine the difference between individual and joint prices) are extensively debated in the literature. Most studies indicate that joint procurement can lead to savings ranging from 5% up to 37% (Carrera et al., 2021). However, a few studies also report increased costs or no effects. It is often assumed that better price-quality-impact ratios realized by aggregating purchasing volume are the result of economies of scale. In practice, more professional procurement enabled by increased volume (e.g., economies of knowledge) can be just as important for realizing better ratios. Sometimes joint procurement is required to get access to certain supplies, to initiate innovation and large investments by suppliers, or to prevent unwanted competition between EU Member States for scarce supplies. In addition, large joint tenders can be more interesting to participate in for suppliers, which increases competition and visibility, which could also prompt more cross-border sellers to participate in tenders.

Disadvantages of joint procurement include coordination costs, synchronization costs (e.g., changing specifications and extending contracts), higher complexity, less flexibility, and less control. Time savings can also disappear if the decision to participate in a joint contract is the outcome of a long and intensive decision-making process. In fact, the amount of time invested may increase if a lot of coordination effort is required to satisfy the different demands of all departments. Finally, joint tender can be less interesting for small- and medium-sized enterprises (SMEs), leading to less competition. If SME involvement is an issue, this can be resolved by tendering in lots. Another solution is to jointly prepare purchasing documents, but to tender individually.

In theory, the advantages of joint procurement outweigh the disadvantages for many different situations in the public sector. Compared to the private sector, joint procurement seems to be very interesting for the public sector, especially for organizations like ministries, hospitals, schools, or municipalities. These types of public organizations often have similar organizational structures, similar networks, similar purchasing needs, mutual trust, very little or no competition, a common external environment, and one common goal: to maximize the value and impact of taxpayers' money.

However, in practice it appears that joint procurement does not always succeed. Several studies identified potential obstacles for joint procurement (Erridge & Greer, 2002; Laing & Cotton, 1997; Nollet & Beaulieu, 2005; Schotanus et al., 2010). Lack of cooperation of buying group members, inadequate communication, unreliable spend or contract data, contract synchronization issues, lack of trust, lack of competence and resources for organizing joint procurement, lack of commitment, lack of internal support (such as resistance by budget holders or specific product preferences), no common objectives, no equal influence of the group members,

and unfair allocation of gains and cost are all obstacles to successful joint procurement. Joint procurement could also be hindered by issues such as a lack of consideration of the supply market and supplier resistance, such as suppliers who temporarily offer much better prices to large group members to prevent them from joining a buying group (Walker et al., 2013).

4.4 Forms of Joint Procurement

In practice, different types of joint procurement are observed. A theory that explains these differences is New Institutional Economics. This theory assumes, among other things, that there exists a wide range of different hybrid organizational forms which can be defined as ‘coordination by network’ and ranges between ‘coordination by hierarchy’ and ‘coordination by market’ (Jones & Hill, 1988; Kivisto et al., 2003; Thompson et al., 1991). This theory also applies to joint procurement. In some cases, an organizational form leaning to coordination by hierarchy may be suitable, for instance, when several organizations work together in a large exceptional purchasing project and all participants need to agree on the joint specifications and supplier choice. In other cases, an organizational form leaning to coordination by market may be suitable, such as when several organizations have the same purchasing need for electricity and agree to outsource most of the procurement steps to an external party or to one of the group members.

For analyzing different forms of buying groups the highway matrix (Schotanus & Telgen, 2007) can be used, as is shown in Figure 4.2. Road transport is used as a metaphor for the main forms which are named: Hitchhiking, Bus Ride, Carpooling, Convoy, and Formula 1 Team. In Figure 4.2 these four forms are plotted against ‘influence by all members’ and ‘the number of different activities for the initiative’. The vertical axis, ‘influence by all members’, is defined as the extent to which all group members can perform an ‘active’ role in the group. The higher the influence, the more the organizational form leans to coordination by hierarchy. The lower the intensiveness, the more the organizational form leans to coordination by market. The horizontal axis, the ‘number of different activities for the initiative’, ranges from undertaking ‘one occasional cooperative activity’ to ‘continuously undertaking different activities within the same buying group’. These activities can be carried out by an external party or by the members themselves. Combinations of forms apply when different members of the same initiative score differently on one or both factors.

Simple works, supplies, and services are better suited for the lower side of the matrix. Products for which the value is very low or products which are highly specific are less suitable for joint procurement. Within a more intensive form of joint procurement like an F1-team, more complex products and services can be bought together. Within these forms, an organizational range exists from loosely structured relationships under the control of institutional purchasing managers to highly structured business models with complete autonomy. The formality, number of participants, and so

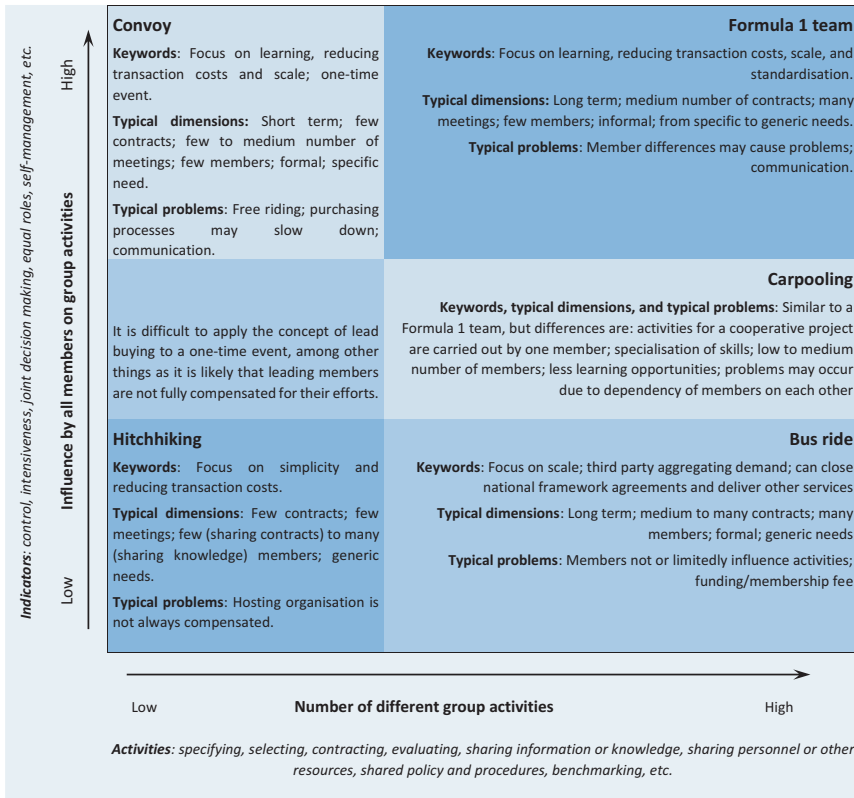


Figure 4.2 The Highway Matrix; a classification of forms of joint procurement

on may also differ per form. For instance, the more trust, commitment, experience, or knowledge on how to work together is available, the less formal agreements are necessary between the group members. More formality is needed with higher financial or juridical risks and interests, less organizational similarities, or a formal culture within one or more of the group members. Despite such differences per form, there are also several similarities *within* each of the forms in Figure 4.2. Lower prices and reduced transaction costs are potential advantages of all of the forms. Also note that in most forms of joint procurement, each group member has an individual contract with the joint supplier. Such indistinctive properties will not be discussed in the next subsections, alongside general properties and success factors of alliance theory that are not typical for joint procurement, like commitment, trust, and so on.

Hitchhiking

Hitchhiking can sometimes only involve the sharing of purchasing-related information with other organizations. However, most of the time it involves a large organization that establishes a contract on its own specifications, and this contract may be

used by other (smaller) group members who have a very similar purchasing need. The others usually cannot influence the specifications and supplier choice, just like a hitchhiker cannot influence the final destination of their ride. The names of the other group members and their potential purchasing volumes must be mentioned in the original tender documents. As a result, this is not a commonly used form of joint procurement.

Another difficulty may be that suppliers will not always allow smaller members to hitchhike on the contract of a large organization under the same conditions. This issue may be solved by a somewhat higher purchasing price and the other contract conditions unchanged. Despite a somewhat higher purchasing price, there are still reduced tender processing times and transaction cost savings, which are advantageous to both the supplier and the buyer. Another advantage for suppliers is that it might be beneficial to supply a whole region of cooperating organizations in one sector.

Example 4.1: A Hitchhiking Initiative for Sustainable Procurement

An example of a hitchhiking initiative is a buying group consisting of social housing associations. They have to make their buildings more sustainable, but under the condition that the rent will not increase. Some corporations lack sufficient capacity and knowledge to undertake this challenge. Individual corporations lack sufficient economies of scale to prevent rent increases while make their buildings more climate friendly.

The smaller housing associations make use of the buying power and capacity of one main buyer. This main buyer is relatively large compared to the other corporations and allows them to hitchhike on its contracts. When purchasing officers of the main buyer negotiate a new contract for their own organization, they state in their purchasing documents that smaller corporations will also use the contract under the same conditions.

Bus Rides

Bus rides mostly are group purchasing organizations (also known as GPOs) made possible by public or private external parties or central authorities. These parties can be for-profit organizations or non-profit organizations. They may host forum websites for purchasing-related discussions or establish agreements for common commodities on behalf of and for use through e-procurement or direct use by all their customers. The bidding process is based on the (expected) aggregate procurement volume and is carried out with the specific purchasing expertise of the external party (Harland et al., 2003). Most of the time there is no limit to the number of members or bus travelers and their geographical location, but they do have to pay a (membership) fee to cover related costs made by the third party.

The weakness of bus rides is that the members usually have no or hardly any control over the procurement process. Products and services which fit best with bus rides typically involve little alignment, are non-emotional and mostly standardized, and specifications of different group members are mostly the same.

Carpooling

Carpooling involves outsourcing tenders to one of the members: each tender is coordinated by the most suitable organization or external party according to their expertise, resources, or purchasing volume. The concept of carpooling is also known as external lead buying. This enables members to specialize in conducting typical tenders. Some consideration and evaluation will be necessary to determine which organization drives to which destination in the carpooling initiative. These meetings also allow the organizations to influence to some extent the tenders put out by the other members. Like bus rides, products and services which fit best with carpooling typically involve little alignment, are non-emotional, simple, and mostly standardized, and specifications are mostly the same. However, there is more room for customization as the group members typically meet regularly.

There are some typical risks involved in carpooling. One disadvantage is becoming dependent on the knowledge and skills of the other members. This especially applies to cooperatives in which the members differ in size and expertise. To become a successful carpooling cooperative, the members preferably have at least some similarities such as the same geographical location, sector, and network. As more consideration is necessary with carpooling than with hitchhiking or bus rides, carpooling initiatives usually have less members.

Convoy

A convoy is a more intensive form of joint purchasing and best suits one shared exceptional purchasing project. They can be useful tools to facilitate and stimulate more exceptional innovative or sustainable public procurement. Supply risks can be shared, and a larger body of knowledge can be used to deal with uncertainties. Typical convoys involve a considerable amount of consultation between the members to bring the specifications up to the same level, to agree with one another on the supplier choice, and so on. Convoys may be one-time events and the number of different cooperative activities for the initiative is therefore limited.

Due to the more exceptional character of a convoy, there are usually several learning moments during the joint project. It may also be difficult to work together with relatively unknown partners for one project. Organizational similarities and smaller mutual distances are therefore more important compared to less intensive

forms of joint procurement. For a convoy it is also especially important to try preventing potential ‘free rider problems’ or at least try to limit its effects. The free rider problem is the burden on one or more group members who do more or most of the work for the convoy, while other members do not do what is expected from them.

Example 4.2: A Convoy for Heavy Zero-Emission Vehicles

In this ‘big buyers initiative’, the municipalities of ten major European cities are working toward a joint market vision and strategy on zero-emission garbage trucks and cleaning vehicles (PIANOo, 2021). These cities jointly conduct market explorations, learn from each other’s experiences, and work together to develop specifications and award criteria, saving time. A common signal is being sent out to set the market in motion to develop zero-emission vehicles that fit a concrete need of these public buyers. Many more of such buyer groups have been initiated in several EU Member States.

Intensive joint procurement forms known as F1-teams often involve representatives of the management teams of the cooperating organizations meeting regularly in a steering committee to discuss joint projects. All parties usually can influence the specifications, supplier selection model, and so on. The project groups for these joint projects include at least one member of the steering committee and other representatives of most or all members. Together they carry out several steps of the procurement process and share the administrative work. Several F1-teams make use of a private or public external party to coordinate some of the activities. In practice, the costs and workload are often allocated equally or proportionally. For an F1-team, allocating the costs and workload equally is fairer and more stable on the long run (Schotanus et al., 2008). Cooperative initiatives like the F1-team can be informally or formally structured. Formal initiatives can be separate legal entities owned by their members. Criteria for highly structured initiatives are regular and organized meetings, several procedures, and rules such as joining and leaving rules, duties, and rights. In contrast with bus rides and carpooling, products and services jointly procured in an F1-team form involve alignment, can be emotional, complex, and customized and specifications can differ to a larger extent between different contracting authorities. Standardized products and services are not suitable for an F1-team, as F1-teams require too much coordination for such products and services. A carpooling initiative can be organized as an F1-team with one major difference: the project groups in a carpooling initiative consist of participants of *one* organization and not of *different* organizations.

4.5 Summary

This chapter introduced organizational structures for public procurement and explained that the procurement function of any organization is broad and involves not only the procurement department, but also other staff members and departments. To organize the procurement function, an organization has several options depending on their maturity and organizational coherence. The latter meaning the ability to use economies of scale, process, and knowledge. Coordinated purchasing is a common organizational form for smaller public organizations. Larger organizations that are mature and coherent are better suited to center-led purchasing. Both forms can facilitate the transition to sustainable and social public procurement, using among other things a central sustainable procurement policy and guidelines, offering resources, and sharing best practices, although this can be more difficult for a coordinated organization. This chapter ended by zooming in on joint procurement as a specific organizational form for cooperating independent public organizations and described four forms of joint procurement: Hitchhiking, Bus Ride, Carpooling, Convoy, and Formula 1 Team. Simple forms of joint procurement, such as Hitchhiking, can be used for commodities and simple or non-emotional tenders, whereas more intensive forms of joint procurement, such as the Formula-1 team, are considered more suitable for complex tenders. Joint procurement can create economies of scale, process, and knowledge; however, it can also make the purchasing process more complex, be less flexible, lead to coordination costs and group members having less control. Nevertheless, if organized well, the joint procurement has substantial potential value for public organizations and can become increasingly important.

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