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## INTRODUCTION

# 0. What is e-Procurement?

## INTRODUCTION

E-Procurement refers to the process of conducting all processes related to providers (such as buying, receiving, product payment, etc) online.

When an organisation decides to use e-Procurement, it is possible to constantly access, in real time, all information related to the process; the client is always aware of the state of the order, whilst the provider has real-time information regarding the needs of the client.

E-Procurement allows the integration of the business and the providers; their information becomes similar to the information of a company department. Providers will be aware of when it is necessary for the company to make an order and they will be able to send it accordingly, whilst the company will be able to follow the order and simply control when it arrives, instead of having to carry out a complete analysis and then ask for the required product.

<b>TITLE</b>
<b>1. e-Sourcing</b>
<b>ABSTRACT</b>
<p>E-sourcing involves the identification of new suppliers, products and services, using internet technology. With e-sourcing we can search worldwide for suppliers, products and services, which until then were unknown to us.</p> <p>E-Sourcing refers to internet-enabled applications and decision support tools that facilitate interactions between buyers and suppliers through the use of online negotiations, online auctions, reverse auctions and similar tools. E-Sourcing is associated with online auctions, which enable price reductions by introducing the element of competition. They are visible, clearly structured and make the procurement process transparent (Engelbrecht-Wiggans and Katok, 2006).</p>
<b>GENERAL DESCRIPTION OF THE SPECIFIC ACTON</b>
<p><b>Why e-Sourcing?</b></p> <p>e-Sourcing allows the organisation to search, evaluate and hire providers online. Through the use of this e-tool, it becomes a lot easier for you as start-up to search the provider that best fits the needs of your business, to compare your options and to hire the best choice.</p> <p>Now, why is it useful to use e-sourcing in a start-up? Often, when we create a company, the last thing we have in mind is to have the most efficient relationship with providers, to optimise our purchases. However, bear in mind that by using e-sourcing, it becomes easier to identify which products you need in the company, and you obtain a continued analysis of the company situation in relation to provision.</p> <p>You can also use e-sourcing to find the best provider for your needs and budget. Consider that when you simply settle with the first provider you see, it is possible that the conditions, price, risk, etc, is not the most suitable for you. However, by using e-sourcing you make sure the best financing and logistical conditions are met.</p> <p>There are different ways of using e-sourcing as a start-up. When you decide to make use of it, the first question that should come to your mind is which e-sourcing platform you would like to use. There are many options currently available, some of them directly operating as e-procurement platforms (for example, companies such as SAP and Oracle offer e-procurement options, inside of which you can profit from e-sourcing). In order to select the one that is going to work best for you, it is important to consider;</p> <ul style="list-style-type: none"> <li>- Think of what you want to accomplish with e-sourcing: you may simply want to find sourcing, or you may want to handle contracts. Depending on this, there will be different applications that will work better for you.</li> <li>- Are you going to let your whole team use the system you choose, or is it only going to be used by the part of your start-up in charge of dealing with sourcing? You may prefer a system that allows you to provide flexibility on what can be done by each user, or you may wish for everyone to have the same access.</li> <li>- Do you prefer a system that can be used only from your office, or something you can access anywhere?</li> </ul>

### **How to use e-Sourcing?**

1. Define your needs: it is essential to provide the most concrete definition of your needs in order to ensure you are going to make the most out of e-sourcing. It is not only about providing a lot of information, but to provide information that is exact and well-defined; otherwise, there is a risk that the providers you are offered are not going to be the best choice for you
2. The bigger the market, the better: e-sourcing is in some ways, an auction. If you are working in a market where there are many providers, it will be better than a market with fewer options. If you find yourself in a market with little provider competition, you should try to create the best relationship possible with the provider, as you do not have many choices.
3. Always remember e-sourcing is a long-term goal: do not just try to speed things up by using e-sourcing, take action that will benefit you in the long-run. Carrying out successful e-sourcing will not only allow you to buy with better conditions, but to decrease your internal costs.

### **ACTION TYPE**

Simple actions that can be implemented immediately without requiring an investment

### **CONNECTED ACTIONS**

Connected to e-tendering and e-reverse auctioning

### **TIME REQUIRED TO IMPLEMENT**

Time required to implement the process will depend on the tool chosen; between 1 and 3 months you should be able to keep track.

In less than one month you can probably decide on the best e-sourcing tool for your company and the points to consider when finding providers. However, bear in mind that e-sourcing is a long-term process, which means that using it over time will probably improve its advantages to your company.

### **POSITIVE AND NEGATIVE PART OF THE SOLUTION**

Positive:

- Improved quality and user experience through the use of high-quality online software;
- Improved control over the purchasing process;
- Faster implementation possibilities of achieved savings;
- Higher ethical standard due to 'audit trails' in the system;
- Time savings for the purchasing team and the suppliers;
- Well-structured data for suppliers;
- Better opportunities to screen suppliers in advance;
- Better and faster feedback to suppliers;
- Fixed price templates to make 'apples with apples' comparisons possible;
- Better and faster analysis and modelling tools;
- Transparency to all parties;

Negative:

- In some cases, e-sourcing platforms try so hard to being advantageous that they end up being more difficult to use than the traditional way of sourcing. Bear in

<p>mind when choosing how to do e-sourcing, to avoid ending up with a tool that is too difficult to use.</p> <ul style="list-style-type: none"> <li>• Another negative point is over searching; e-sourcing allows you to look for the perfect candidate, but it can end up being a "dream" candidate, rendering the company incapable of finding the perfect match</li> <li>• This means, that by adding too many points to the wish list that are not important, the candidates that end up appearing will probably be too expensive or not right for your business</li> </ul>
<b>ESTIMATED EXPLOITATION</b>
easier and more suppliers, products or services with a few mouse clicks
<b>ICT COMPETENCE</b>
Intermediate
<b>ENGLISH LANGUAGE SKILLS</b>
Intermediate
<b>WORKSHOP LEVEL</b>
Established
<b>CROSS BORDER REMARKS</b>
e-Sourcing is a tool easy to use internationally; it is actually one of its main advantages, the facility to find suppliers all over the world. However, take into account that whilst the internet makes it easier to contact other countries, having goods delivered from one country to another can be tricky. Always do your research on required documents, allowed goods for transport, and anything else that may be needed to transport your supplies from their home country to yours.
<b>ADDITIONAL RESOURCES</b>
<ul style="list-style-type: none"> <li>• KB Manage, <i>e-Sourcing</i>: <a href="https://www.kbmanage.com/concept/e-sourcing">https://www.kbmanage.com/concept/e-sourcing</a></li> <li>• Determine Inc., <i>eSourcing vs. eProcurement: What are the differences?</i> <a href="https://www.determine.com/blog/sourcing-vs-procurement">https://www.determine.com/blog/sourcing-vs-procurement</a></li> <li>• Alun Morris, <i>'E-sourcing can help your organisation collaborate on procurement'</i>: <a href="https://www.cips.org/supply-management/opinion/2015/january/e-sourcing-can-help-your-organisation-collaborate-on-procurement/">https://www.cips.org/supply-management/opinion/2015/january/e-sourcing-can-help-your-organisation-collaborate-on-procurement/</a></li> <li>• Marc Wins, <i>Effective E-sourcing: How to get started and achieve sustainable benefits?</i> <a href="http://www.procurement-academy.com/effective-e-sourcing-achieve-sustainable-benefits/">http://www.procurement-academy.com/effective-e-sourcing-achieve-sustainable-benefits/</a></li> <li>• Tom Wadlow, <i>Procurement for start-ups, where to begin?</i> <a href="https://www.supplychaindigital.com/procurement/procurement-start-ups-where-begin">https://www.supplychaindigital.com/procurement/procurement-start-ups-where-begin</a></li> </ul>
<b>INFORMATIVE TEXT</b>
Richard Engelbrecht-Wiggans, Elena Katok (2006). <i>Theory and Behavior in Reverse Auctions with Noncompetitive Contracts</i> , Management Science, 2006, vol. 52, issue 4, 581-596. Retrieved from <a href="https://econpapers.repec.org/article/inmormnsc/v_3a52_3ay_3a2006_3ai_3a4_3ap_3a581-596.htm">https://econpapers.repec.org/article/inmormnsc/v_3a52_3ay_3a2006_3ai_3a4_3ap_3a581-596.htm</a>

David Guiu (2016). *¿Qué es el e-sourcing?*, SOCIALetic. Retrieved from <https://www.socialetic.com/que-es-el-e-sourcing-pedir-presupuestos-ganar-clientes.html>

Mark Wins (May 18,2017). *Effective E-sourcing: How to get started and achieve sustainable benefits?*, Procurement Academy. Retrieved from <http://www.procurement-academy.com/effective-e-sourcing-achieve-sustainable-benefits/>

Schaack Philippe. (June 17). *E-sourcing para la gestión de compras en las empresas*, Gestipolis. Retrieved from <https://www.gestipolis.com/e-sourcing-gestion-compras-empresas/>

Nick Heinzmann (May 17, 2017). *3 Reasons Why E-Sourcing Providers Have Failed Procurement*, Spend Matters. Retrieved from <http://spendmatters.com/2017/05/17/3-reasons-e-sourcing-providers-failed-procurement/>

<b>TITLE</b>
<b>2. Collaborative Product Commerce (CPC)</b>
<b>ABSTRACT</b>
<p>Collaborative product commerce (CPC) refers to the process of creating technological synergy across the entire life cycle of a product.</p> <p>Nowadays, it is becoming more frequent to find products created by the combined work of companies which are located physically apart. Their life-cycle is shortening, and it is necessary to catch up and perform every activity as quickly as possible, whilst always being organised. CPC is a tool that allows those companies who are performing a combined creation of the product to virtually manage the product during its lifecycle. This way, the organisations working together in different physical locations are aware of the changes and can coordinate instantly.</p>
<b>GENERAL DESCRIPTION OF THE SPECIFIC ACTON</b>
<p>CPC is an e-business strategy for exploiting new Web-based commerce opportunities across product development and product life cycle processes. CPC opportunities include both inbound (business-to-business) and outbound (business-to-consumer) commerce such as collaborative product development, customer driven design, collaborative product and component sourcing, manufacturing/supply-chain collaboration, and product maintenance self-service portals.</p> <p>The main idea behind CPC was to help companies improve their management of the lifecycle of their products, allowing them to carry out the development process online. It allows to match everything that affects the product throughout the lifecycle, by allowing the relevant organisations to share information between them. This way, they do not have to wait until it is their “turn” to act to receive all the information, speeding up the process.</p> <p><b>Why is it interesting for start-ups?</b></p> <p>Normally, start-ups are not that big in the beginning, and the chances are you will not do every element of your product lifecycle by yourself. In order to compete in the market as lifecycles get shorter, it is necessary for all parties involved in the product lifecycle to communicate and share information (between departments, suppliers, providers, etc). This is what CPC offers, a place where these parties can share information and create a uniform product.</p>

It should also be considered that often, the only way to be competitive in the market – especially when competing with companies that are bigger or have more resources – is to learn and evolve faster than the rest, in order to have an advantage. CPC has created a pool of information that otherwise you would not individually have or would only have after someone else has figured it out and used it.

**How to use CPC?**

In order to use CPC in your organisation, you will have to follow a series of steps:

- Identify which business opportunities you can profit from. You will probably be more successful if you focus on less things and do them right, rather than trying out everything at once.
- Formulate the strategy you want to conduct. This is essential not only for CPC but for many stages; you need to have a plan, in order to effectively succeed; acting without sufficient planning and an end goal will probably end up costing you more and providing lower quality results.
- Providing the information that is going to be cooperative
- Look for potential partners and contact them
- Select the partners you are going to collaborate with and look for the optimal option
- Create an alliance with your partners
- State the cooperation standards

**ACTION TYPE**

Actions that have prerequisites (other actions need to be implemented first) and require investment

**CONNECTED ACTIONS**

Connected to procurement intelligence

**TIME REQUIRED TO IMPLEMENT**

Around 2 to 4 months to start implementing it. However, depending on the complexity of the product, it could take more time. The implementation process will last the whole lifecycle of the product

**POSITIVE AND NEGATIVE PART OF THE SOLUTION**

- Positive:
- This approach aids in optimising the design process, thus delivering additional business benefits through an extensive, multidisciplinary, system-centric vision of continuous design improvement
  - It helps to provide visibility of the product
  - It helps with saving time
- Negative:
- CPC is used online, and not everyone is comfortable with it; you may miss great collaborators simply because they do not want to work online
  - In order to effectively use CPC in your company, you require a collaborative environment that is not always available

**ESTIMATED EXPLOITATION**

Joint purchasing which can save costs
<b>ICT COMPETENCE</b>
Advanced
<b>ENGLISH LANGUAGE SKILLS</b>
Intermediate
<b>WORKSHOP LEVEL</b>
Established
<b>CROSS BORDER REMARKS</b>
CPC can promote the work of companies that are located in different countries. However, if you are interested in pursuing any legal ownership of the created product or your input towards it, take into account that each country has its own legal system. It could be helpful for you and the rest of the companies you have worked with to make sure that legal ownership is acquired in all relevant countries.
<b>ADDITIONAL RESOURCES</b>
<ul style="list-style-type: none"> <li>• Definition of CPC: <a href="https://www.gartner.com/it-glossary/cpc-collaborative-product-commerce">https://www.gartner.com/it-glossary/cpc-collaborative-product-commerce</a></li> <li>• What is CPC? <a href="https://www.techopedia.com/definition/31017/collaborative-product-commerce-cpc">https://www.techopedia.com/definition/31017/collaborative-product-commerce-cpc</a></li> <li>• Results of the 2011 International Conference on Engineering Education and Management <a href="https://link.springer.com/content/pdf/10.1007%2F978-3-642-24820-7.pdf">https://link.springer.com/content/pdf/10.1007%2F978-3-642-24820-7.pdf</a></li> <li>• Characteristics of Collaborative Product Commerce <a href="https://pdfs.semanticscholar.org/38dc/7bb6acb73a7b39620e137c22f24da0976ac7.pdf">https://pdfs.semanticscholar.org/38dc/7bb6acb73a7b39620e137c22f24da0976ac7.pdf</a></li> <li>• Defining Collaborative Product Commerce <a href="https://mthink.com/legacy/www.ascet.com/content/white_papers/ASC4_wp_true.htm">https://mthink.com/legacy/www.ascet.com/content/white_papers/ASC4_wp_true.htm</a></li> </ul>
<b>INFORMATIVE TEXT</b>
<p>Hung, Shin-Yuan &amp; Chang, She-I &amp; Yen, David &amp; Kang, Tsan-Ching &amp; Kuo, Chien-Pang. (2011). Successful implementation of collaborative product commerce: An organizational fit perspective. <i>Decision Support Systems</i>. 50. 501-510. 10.1016/j.dss.2010.11.007. Retrieved from <a href="https://www.sciencedirect.com/science/article/pii/S0167923610001880">https://www.sciencedirect.com/science/article/pii/S0167923610001880</a></p> <p>Jing S. (2012) Collaborative Product Commerce and Its Five-element Set Model of Discrete Manufacturing Enterprise. In: Zhang L., Zhang C. (eds) <i>Engineering Education and Management</i>. Lecture Notes in Electrical Engineering, vol 112. Springer, Berlin, Heidelberg. Retrieved from <a href="https://link.springer.com/chapter/10.1007/978-3-642-24820-7_35">https://link.springer.com/chapter/10.1007/978-3-642-24820-7_35</a></p> <p>Techopedia (October 03, 2017). <i>Collaborative Product Commerce</i>, retrieved from <a href="https://www.techopedia.com/definition/31017/collaborative-product-commerce-cpc">https://www.techopedia.com/definition/31017/collaborative-product-commerce-cpc</a></p> <p>M Think (2018) Defining Collaborative Product Commerce. Retrieved from <a href="https://mthink.com/legacy/www.ascet.com/content/white_papers/ASC4_wp_true.htm">https://mthink.com/legacy/www.ascet.com/content/white_papers/ASC4_wp_true.htm</a></p>



<b>TITLE</b>
<b>3. e-Tendering</b>
<b>ABSTRACT</b>
<p>E-tendering can be defined as the use of automated tools to facilitate a selection process, using internet technology.</p> <p>More concretely, it is the process of carrying out a tender process online. To tender is to invite or accept bids for a project. Tendering is normally used by governments when there are large projects with a final deadline and potential participants are required to present their proposals. Also, it refers to the process where a company receives a takeover offer and shareholders need to submit their shares.</p>
<b>GENERAL DESCRIPTION OF THE SPECIFIC ACTON</b>
<p>E-tendering or electronic tendering involves the creation and sending of requests for information or tenders to selected suppliers (long list) and the assessment of the received information or the tenders, leading to a short list or a selected supplier. E-tendering mainly takes place during selection, but the specification phase and contracting phase can also be affected.</p> <p>To use e-tendering, we first need to have an e-tendering system. In it we start the tender (tendering event). An e-tendering system can run at the organisation itself, or at an e-tendering service provider. Common e-tendering systems include: Negometrix (Negometrix), Ariba Enterprise Sourcing (Ariba), B2eSourcing (B2eMarkets), e-Sourcing (Commerce Hub), Commerce One Source (Commerce One), FullSource (FreeMarkets), Oracle Sourcing (Oracle) and mySAP SRM (SAP). E-tendering services are offered in the Netherlands by, Significant, FreeMarkets, Procuri and ICG Commerce, amongst others.</p> <p><b>How to use e-tendering?</b></p> <p>The overall working method is:</p> <ul style="list-style-type: none"> <li>• First, we develop the RFI or the RFP with the e-tendering system.</li> <li>• We also define the assessment criteria.</li> <li>• We then select the suppliers that are allowed to receive the RFI or the RFP: the long list.</li> <li>• We then inform suppliers of the tendering procedure.</li> <li>• The suppliers can then have all kinds of questions. These questions and the corresponding answers can be recorded in the e-tendering system, and simultaneously communicated to all suppliers.</li> <li>• The information and the offers are received and processed with the e-tendering system.</li> <li>• The system can also support the assessment of information and offers.</li> <li>• This ultimately leads to the choice of one or more suppliers to negotiate with.</li> <li>• We can also record the results of negotiations in the e-tendering system, including the final result of the tender: the suppliers to be contracted and the contracts to be signed.</li> <li>• The lost suppliers are informed, including argumentation, with the e-tendering system.</li> </ul>

<b>ACTION TYPE</b>
Simple actions that can be implemented immediately without requiring an investment
<b>CONNECTED ACTIONS</b>
Connected to e-reverse auctioning
<b>TIME REQUIRED TO IMPLEMENT</b>
Dependant on the e-tendering system/process selected, the amount of time needed will be longer or shorter. It should take less than one month to make it functional.
<b>POSITIVE AND NEGATIVE PART OF THE SOLUTION</b>
<p>Positive:</p> <ul style="list-style-type: none"> <li>• Continuation for the quotation request is shortened. Moreover, the process is traceable and strictly neutral. Knowledge and experiences are stored for future tenders.</li> <li>• e-Tendering guides you through the process step by step, making it easier to avoid making mistakes or forgetting something</li> </ul> <p>Negative:</p> <ul style="list-style-type: none"> <li>• It requires training of the employees to work with the new system.</li> <li>• Sometimes the amount of questions and parts included are too much and take a long time to complete</li> </ul>
<b>ESTIMATED EXPLOITATION</b>
Get a better deal from a tender through a larger reach
<b>ICT COMPETENCE</b>
Intermediate
<b>ENGLISH LANGUAGE SKILLS</b>
Intermediate
<b>WORKSHOP LEVEL</b>
Established
<b>CROSS BORDER REMARKS</b>
<p>e-Tendering has a real advantage in international terms; it is going to allow you to look for tendering opportunities all over the world; and especially in the EU, there are many international tendering processes.</p> <p>Make sure to always look out for these opportunities, not just national ones!</p>
<b>ADDITIONAL RESOURCES</b>
<ul style="list-style-type: none"> <li>• e-Tenders information website <a href="https://www.etenders.gov.mt/epps/home.do">https://www.etenders.gov.mt/epps/home.do</a></li> <li>• Example of tendering process, by the University of Wolverhampton <a href="https://www.wlv.ac.uk/business-services/university-procurement/supplying-the-university-/typical-tender-process-/">https://www.wlv.ac.uk/business-services/university-procurement/supplying-the-university-/typical-tender-process-/</a></li> <li>• Example of Public Contracts in Scotland <a href="https://www.publictendersscotland.publiccontractsscotland.gov.uk/web/login.html">https://www.publictendersscotland.publiccontractsscotland.gov.uk/web/login.html</a></li> </ul>
<b>INFORMATIVE TEXT</b>

Executive Compass (April 12, 2010). *What is e-Tendering?*. Retrieved from <https://www.executivecompass.co.uk/blog/bid-management/e-tendering/>  
Republic of Serbia Public Procurement Office (September 2016) *Strengthening Public Procurement in Serbia: E-Procurement System Analysis*, The World Bank. Retrieved from [www.ujn.gov.rs/download/files/cms/attach?id=943](http://www.ujn.gov.rs/download/files/cms/attach?id=943)

## TITLE

# 4. E-Reverse auctioning

## ABSTRACT

Auctioning is the process whereby a supplier offers certain products for sale to various potential customers, after which these customers can make an offer. Reverse auctioning is the mirror image of this: a customer communicates his needs for products to various potential suppliers. Then, it is the suppliers who make their bid during the auction. In the case of e-auctioning and e-reverse auctioning, the auction takes place on a website.

## GENERAL DESCRIPTION OF THE SPECIFIC ACTON

Auctioning is the process whereby a supplier offers certain products for sale to various potential customers, after which these customers can make an offer. Reverse auctioning is the mirror image of this: a customer communicates his needs for products to various potential suppliers. Then, it is the suppliers who make their bid during the auction. In the case of e-auctioning and e-reverse auctioning, the auction takes place on a website.

The starting point of an e-reverse auction is often a very concrete list of requirements, with conditions and conditions for the contract to be concluded. This list of requirements and conditions cannot be negotiated (anymore). E-reverse auctioning then makes it possible to go through the negotiation process in a short period of time, whereby the negotiation is mainly limited to offering a price.

An e-reverse auction consists of three phases:

- The preparation, in which the schedule of requirements and the conditions are drawn up. In this phase we select the suppliers and invite them to participate in the e-reverse auction. In some cases, the preparation also includes a trial auction.
- Installation and execution. First the technical preconditions for the e-reverse auction are established. We also detail the planning and communicate this planning with the suppliers. In this phase we also execute the e-reverse auction.
- The completion, whereby the contract with the 'winning' supplier is possibly further elaborated and subsequently signed. The duration and the (labour) costs of this phase are highly dependent on the preparation of the e-reverse auction.

### **Why is it good for a start-up?**

Many times, budget is limited in a start-up. Through e-reverse auctioning, you can state what you need, and providers will be the ones offering you their deals; this way, it becomes possible to acquire cheaper products.

It is also an interesting way of doing business; you can participate as a bidder, offering your products and services to an interested buyer.

However, bear in mind it is not always the best option for you (neither as a buyer or seller). If the product you want to bid on in the auction is not common and there are not many competitors, it is likely that the reverse auction will not be very successful, simply because there is a lack of competition. The same happens if you are offering your product in an e-reverse auction; if there are not many competitors, you will not be willing to put much effort into it, knowing you will probably get clients anyway.

**What to consider before using it:**

- Specifications of the products: generally, simple products are going to work better than complex products where you must consider more aspects before deciding to buy/sell
- Have a minimum number of suppliers who are eligible and willing to participate (for example, 3 or 4)
- Bear in mind that usually reverse auctioning works for short-term contracts
- If you need to have a strategic, important relationship with the provider, it may be better not to use reverse auctioning
- Usually, reverse auctioning works for larger purchases rather than smaller ones.

<b>ACTION TYPE</b>
Simple actions that can be implemented immediately without requiring an investment
<b>CONNECTED ACTIONS</b>
Connected to e-tendering
<b>TIME REQUIRED TO IMPLEMENT</b>
Setting the offer should take one or two days; obtaining responses depends on how much time you want to give for people to auction
<b>POSITIVE AND NEGATIVE PART OF THE SOLUTION</b>
<p>Positive:</p> <ul style="list-style-type: none"> <li>• Buyers save time and money through reverse auctions because all bids arrive in the same format, which simplifies comparison.</li> <li>• The buyer can easily eliminate certain bids that don't conform to the deadline or price requirements. In addition, the buyer has the flexibility to rule out a low bidder that doesn't meet the quality standards set by the buyer. E-procurement software allows buyers and sellers to communicate and refine the details of the bid.</li> </ul> <p>Negative:</p> <ul style="list-style-type: none"> <li>• A disadvantage to the buyer is the need to write detailed specifications up front, for the products or services they wish to buy. The deadline pressure of a reverse auction front-loads the need to create complete specifications. This differs from other methods, which typically involve a reiterative process in which the specifications are negotiated, corrected and refined over a period of time.</li> <li>• Misunderstandings stemming from incorrect or incomplete reverse auction specifications can result in a buyer selecting the wrong bidder. Depending on how the contracts are written, this can be a huge, expensive task to straighten out. In some cases, the buyer might have to enter into a new reverse auction, after amending the specification.</li> </ul>

<ul style="list-style-type: none"> <li>When there are not enough providers to have a competitive reverse auctioning, it is not a good solution</li> </ul>
<b>ESTIMATED EXPLOITATION</b>
It saves money and time
<b>ICT COMPETENCE</b>
Basic
<b>ENGLISH LANGUAGE SKILLS</b>
Intermediate
<b>WORKSHOP LEVEL</b>
Established
<b>CROSS BORDER REMARKS</b>
<p>e-Reverse Auctioning allows you to make a bid from any part of the world, if it is desired. On the one hand, this expands the chances of either buying what you are looking for/ selling at the price expected.</p> <p>However, also bear in mind the transport expenses and who is going to pay for them; the buyer or the seller?</p>
<b>ADDITIONAL RESOURCES</b>
<ul style="list-style-type: none"> <li>What is a reverse auction? <a href="https://www.purchasingauctions.com/what-is-a-reverse-auction/">https://www.purchasingauctions.com/what-is-a-reverse-auction/</a></li> <li>Benefits of reverse auctions <a href="https://www.purchasingb2b.ca/opinions/electronic-reverse-auctions/">https://www.purchasingb2b.ca/opinions/electronic-reverse-auctions/</a></li> <li>Unconventional Fundraising: How One Startup Auctioned Off An Equity Stake For \$22.5M <a href="https://www.forbes.com/sites/groupthink/2014/04/08/4881/#1ee24c4b6824">https://www.forbes.com/sites/groupthink/2014/04/08/4881/#1ee24c4b6824</a></li> <li>When to use reverse auctions: <a href="http://www.epiqtech.com/reverse_auctions.htm">http://www.epiqtech.com/reverse_auctions.htm</a></li> </ul>
<b>INFORMATIVE TEXT</b>
<p>Glenn Wheaton (December 30, 2009) <i>Reverse Auctions – When to use them</i>, EPIQ. Retrieved from <a href="http://www.epiqtech.com/reverse_auctions.htm">http://www.epiqtech.com/reverse_auctions.htm</a></p> <p>Quora (2011) <i>Is there any successful examples of reverse auction startups?</i> Retrieved from <a href="https://www.quora.com/Is-there-any-successful-examples-of-reverse-auction-startups">https://www.quora.com/Is-there-any-successful-examples-of-reverse-auction-startups</a></p> <p>Brandgos (November 29, 2016) <i>A Reverse Auction – The Great Business Model For Startup</i>. Retrieved from <a href="https://medium.com/@brandgos/a-reverse-auction-the-great-business-model-for-startup-3944b61b0d96">https://medium.com/@brandgos/a-reverse-auction-the-great-business-model-for-startup-3944b61b0d96</a></p> <p>Rob Bernshteyn (April 08, 2014). <i>Unconventional Fundraising: How One Startup Auctioned Off An Equity Stake For \$22.5M</i>, Forbes. Retrieved from <a href="https://www.forbes.com/sites/groupthink/2014/04/08/4881/#c71000068247">https://www.forbes.com/sites/groupthink/2014/04/08/4881/#c71000068247</a></p>

<b>TITLE</b>
<b>5. e-Ordering</b>
<b>ABSTRACT</b>
With e-Ordering, the internet is used for the operational purchasing process, such as requesting, approving, ordering, monitoring and receiving. In this process, catalogue applications are used.
<b>GENERAL DESCRIPTION OF THE SPECIFIC ACTON</b>
E-ordering is the electronic application, ordering and receiving of mainly facility products and services by the employees of an organisation, within the frameworks created in the tactical purchasing process. Completed on-call contracts are converted into an electronic catalogue (ordering catalogue), from which an employee can request and order.  The process for e-ordering is roughly as follows: <ul style="list-style-type: none"> <li>• Employees in the organisation receive an icon on their computer with which the ordering catalogue system can be started. An employee can search a product or service in the ordering catalogue system that matches his needs.</li> <li>• As soon as the employee has selected a product or service, an order request is created. Additional products or services can then be added to this. If the order request is complete according to the employee, he can submit it. Where necessary, an approval procedure is started and followed.</li> <li>• If after a period of time the products are delivered, or the services are provided, the recipient (usually the requesting employee) can register this in the ordering catalogue system.</li> <li>• In the end invoices from the suppliers also arrive. With the help of the orders sent and the registered receipts, the invoice can be made payable and payment made.</li> </ul> <p><b>Why is it interesting for start-ups?</b> This online ordering process can be very useful for start-ups, as it improves and fastens the process of request and order. It is also a good way of keeping everything together in one place (the orders, the delivery tracking and the invoices).</p>
<b>ACTION TYPE</b>
Actions that have prerequisites (other actions need to be implemented first) and require investment
<b>CONNECTED ACTIONS</b>
Connected to procurement intelligence
<b>TIME REQUIRED TO IMPLEMENT</b>
Setting it up could take one or two months, potentially more depending on the quantity of products available. It is a relatively long process at the beginning; but once all information is online, ordering can become very simple and e-ordering can become a daily routine
<b>POSITIVE AND NEGATIVE PART OF THE SOLUTION</b>
Positive: <ul style="list-style-type: none"> <li>• Purchasing becomes easier, you get a better overview of what each department needs, and you bundle all purchases in one invoice from one supplier.</li> </ul>

Negative: <ul style="list-style-type: none"> <li>• Everything is centralised, so losing one thing can mean losing all</li> </ul>
<b>ESTIMATED EXPLOITATION</b>
Easier and cheaper purchasing
<b>ICT COMPETENCE</b>
Basic
<b>ENGLISH LANGUAGE SKILLS</b>
Basic
<b>WORKSHOP LEVEL</b>
Established
<b>CROSS BORDER REMARKS</b>
e-Ordering can be done at international level; it allows you to request an order on an international database. You have to make sure that all required documentation is in order, and that the requested good is “legal” in your country (for example, quality restrictions may be different from one country to another, making a piece legal in its home country and illegal in the final destination).
<b>ADDITIONAL RESOURCES</b>
<ul style="list-style-type: none"> <li>• e-ordering: user guide for suppliers <a href="https://circabc.europa.eu/sd/a/33f3f278-adc6-4f08-87ab-2be23689e2ef/e-Ordering_guide_v1.0.pdf">https://circabc.europa.eu/sd/a/33f3f278-adc6-4f08-87ab-2be23689e2ef/e-Ordering_guide_v1.0.pdf</a></li> <li>• UN Procurement practitioner’s Handbook <a href="https://www.ungm.org/Areas/Public/pph/ch04s02.html">https://www.ungm.org/Areas/Public/pph/ch04s02.html</a></li> <li>• Advantages and Disadvantages of Ecommerce <a href="https://www.thebalancesmb.com/ecommerce-pros-and-cons-1141609">https://www.thebalancesmb.com/ecommerce-pros-and-cons-1141609</a></li> </ul>
<b>INFORMATIVE TEXT</b>
<p>ALSO International (2018) e-Ordering. Retrieved from <a href="https://www.also-international.eu/ec/cms3/en_2420/2420/our_service/x_tend_2/e_ordering_1/e_ordering_2.jsp">https://www.also-international.eu/ec/cms3/en_2420/2420/our_service/x_tend_2/e_ordering_1/e_ordering_2.jsp</a></p> <p>Oren Ezra (July 24, 2014) <i>5 reasons businesses should embrace an online ordering system</i>, Pepperi. Retrieved from <a href="https://www.pepperi.com/5-reasons-businesses-embrace-online-ordering/">https://www.pepperi.com/5-reasons-businesses-embrace-online-ordering/</a></p> <p>Ajeet Khurana (April 09, 2018). <i>Advantages and disadvantages of ecommerce</i>, The Balance small business. Retrieved from <a href="https://www.thebalancesmb.com/ecommerce-pros-and-cons-1141609">https://www.thebalancesmb.com/ecommerce-pros-and-cons-1141609</a></p>

<b>TITLE</b>
<b>6. Procurement Intelligence</b>
<b>ABSTRACT</b>
<p>Procurement intelligence means converting data into purchasing information to reflect and improve the performance of the purchasing function.</p> <p>In short, procurement intelligence entails the cycle from data to information and to action. Through the use of e-procurement systems, a lot of detailed data is recorded. This data provides a starting point to get an idea of how the purchasing function is performed. The data must be converted into information, for example, performance indicators. Actions can then be formulated and taken on the basis of this information.</p>
<b>GENERAL DESCRIPTION OF THE SPECIFIC ACTION</b>
<p>Procurement can be really useful for an organisation, but you always need to consider the long-term; and that is when procurement intelligence comes in.</p> <p>When a company uses procurement intelligence, they do not only collect and keep data, for future use; they take all this data and strategically organise it, ensuring they will have future access to current and historical information about all parts of the procurement cycle (spending, costs, budget, etc).</p> <p><b>Why should I use procurement intelligence?</b></p> <p>One of the main benefits of procurement is the possibility of obtaining information from different sources, that is reliable. Procurement intelligence is going to allow you to obtain details from the market that you will use in an effective manner, helping you to expand your business.</p> <p><b>How do I use procurement intelligence?</b></p> <p>Using procurement intelligence means organising all the data collected. If you are interested in implementing procurement intelligence, a professor at the University of Virginia and strategist, produced a step-by-step process to implement procurement intelligence:</p> <ul style="list-style-type: none"> <li>• Produce a clear set of goals to accomplish. If you are clear about what you want to accomplish, it will become easier to create a strategy that leads you there</li> <li>• Be ready to innovate, change and prepare yourself for them with alternative strategies. Businesses are in constant development and the only way to catch up is to be ready. The same goes for procurement; be aware of the changes and prepare alternative strategies to remain knowledgeable on it</li> <li>• Benefit from procurement in all parts of your organisation. Procurement intelligence is going to help you better adjust and administrate all parts of your business, but in order to do so you need to ensure all parts of it are registered in it.</li> </ul>
<b>ACTION TYPE</b>
Simple actions that can be implemented immediately without requiring an investment
<b>CONNECTED ACTIONS</b>
Connected to e-ordering and CPC
<b>TIME REQUIRED TO IMPLEMENT</b>



It is an immediate action; you can start to implement right away. Depending on the amount of information you have to turn into procurement intelligence, it may take longer; but processing all the information should not take more than a few weeks. It should be implemented before showing your team; depending on the number of areas it will be more or less time.

**POSITIVE AND NEGATIVE PART OF THE SOLUTION**

Positive:

- Purchasing intelligence makes it possible for organisations to generate purchasing information in a very flexible way.
- Through this useful purchasing information, purchasing intelligence can contribute to making the right decisions within the purchasing function.

Negative:

- Disadvantages such as the impossibility of converting real-time data into information related to purchasing objectives, the limited functionality, being personal, non-repeatable and non-scalable

**ESTIMATED EXPLOITATION**

Easier to find and convert data

**ICT COMPETENCE**

Advance

**ENGLISH LANGUAGE SKILLS**

Intermediate

**WORKSHOP LEVEL**

Established

**CROSS BORDER REMARKS**

Collecting information from international sources can be highly effective in order to better understand a certain topic or issue. However, when using procurement intelligence, bear in mind that some information may not be totally “in sync” with your needs; for example, if a research text is conducted only in one country, the results may not be the same you would get in yours.

Make sure to confirm all information before relying on it.

**ADDITIONAL RESOURCES**

- From Data & Spend Management to Decision Making <http://synertrade.com/en/solutions-buy-procurement/all-solutions/purchasing-intelligence/>
- What is procurement intelligence? <https://blog.procurify.com/2014/02/05/what-is-procurement-intelligence/>
- What is purchasing intelligence? [https://www.claas-supplier.net/csn-en/einkaufsorganisation/gruppe/purchase\\_intelligence](https://www.claas-supplier.net/csn-en/einkaufsorganisation/gruppe/purchase_intelligence)

**INFORMATIVE TEXT**

John William (November 23, 2013). *Importance of Procurement Intelligence*. Retrieved from <https://es.slideshare.net/williamsjohn164/importance-of-procurement-intelligence>

Quora (2017) *What is procurement intelligence?* Retrieved from <https://www.quora.com/What-is-procurement-intelligence>

Matt Lim (2017) *What is procurement intelligence?* Procurify. Retrieved from <https://blog.procurify.com/2014/02/05/what-is-procurement-intelligence/>

<b>TITLE</b>
<b>7. Web-based ERP</b>
<b>ABSTRACT</b>
The abbreviation ERP stands for Enterprise Resource Planning. An ERP system is a software package that brings together important information from different business departments. With an ERP package, business processes are automated, increasing productivity and reducing costs.
<b>GENERAL DESCRIPTION OF THE SPECIFIC ACTON</b>
<p>ERP is an abbreviation of Enterprise Resources Planning. Web-based ERP focuses on using internet technology in the operational procurement process of primary products and services. By using internet technology with ERP, we can communicate more easily with other organisations in the chain, including with suppliers and customers of our organisation. We can exchange information more easily and efficiently. This leads to an optimal chain.</p> <p><b>Why is it interesting for a start-up?</b></p> <p>First of all, it should be noted that ERP systems are less expensive than other options which perform the same function. Also, it is interesting to note that a web-based ERP can be accessed from anywhere; in case your business requires you travel a lot or work from different locations, it is useful to be able to access your ERP. Additionally, you will not need an expert or a concrete infrastructure to host the web-based ERP, which once again, diminishes costs.</p> <p>Also, web-based ERP systems are easy to maintain and implement. This comes in handy when you have your own start-up and various other things to think about; having simple, straight-forward tools are useful to save time and energy for more complicated aspects of the business.</p> <p>Web-based ERP, in conclusion, is positive for small businesses or emerging ones, as it helps manage all the data and administration of the start-up.</p> <p><b>How can web-based ERP be used?</b></p> <p>In order to make the most out of your web-based ERP, it is useful to consider certain points at the time of developing it.</p> <ul style="list-style-type: none"> <li>• First of all, think about what you want to use an ERP for. ERP can be used to flow information on a large amount of activities, and you need to decide in which departments you will use it (sales, financing, HR, etc). There are different applications available and depending on which departments you want to implement it into, some of them will be more useful than others.</li> <li>• Make sure you properly develop each path before including the rest of participants in it. For example, if you are creating a path for sales, make sure the sales manager has a clear plan before giving access to the rest of the team.</li> <li>• Consider unexpected costs and time expenditure; for example, training staff how to use the web-based ERP of your choice, no matter how simple it is, is going to require time and, if you need to hire someone to train your team, money.</li> </ul>

<ul style="list-style-type: none"> <li>The same happens with possible mistakes in the path development; even if you do not notice immediately, they are likely to appear, and you need to be prepared in case you have to assume costs you were not expecting.</li> </ul>
<b>ACTION TYPE</b>
Actions that have prerequisites (other actions need to be implemented first) and require investment
<b>CONNECTED ACTIONS</b>
Connected to e-sourcing and procurement intelligence
<b>TIME REQUIRED TO IMPLEMENT</b>
In one or two weeks you can make it functional; depending on the number of paths you want, it can take longer. It can be used throughout the product lifecycle
<b>POSITIVE AND NEGATIVE PART OF THE SOLUTION</b>
<p>Positive:</p> <ul style="list-style-type: none"> <li>Simpler communication with other organisations in the chain, including with suppliers and customers of your organisation. Also, more efficient information can be exchanged. This leads to an optimal chain.</li> </ul> <p>Negative:</p> <ul style="list-style-type: none"> <li>On the other hand, deploying your ERP software system to the cloud does have a few drawbacks. Most importantly, web-based ERP requires payment of regular hosting fees for the hardware. Over time, these costs can mount up and eventually even surpass the investment costs of an on-premise system.</li> <li>Another possible problem is that of reliability. Though today's networks are rock solid, slowdowns and outages do occur. Downtime could be very disruptive and costly. Data security and integrity is another concern. Most data networks are extremely secure and feature powerful encryption, but breaches do occur.</li> <li>Finally, many organisations experience a feeling of loss of control when their data is stored offsite. In such cases, the idea of off-site ERP might clash with corporate culture.</li> </ul>
<b>ESTIMATED EXPLOITATION</b>
Easier communication with other organisations in the chain
<b>ICT COMPETENCE</b>
Advance
<b>ENGLISH LANGUAGE SKILLS</b>
Intermediate
<b>WORKSHOP LEVEL</b>
Established
<b>CROSS BORDER REMARKS</b>
ERP allows simpler communication with other members of the chain, no matter the country in which they are located. However, before deciding which ERP software system you are going to use, it may be recommended to ensure that this software can be used in all the countries belonging to the chain.
<b>ADDITIONAL RESOURCES</b>
<ul style="list-style-type: none"> <li>What is ERP? <a href="https://www.webopedia.com/TERM/E/ERP.html">https://www.webopedia.com/TERM/E/ERP.html</a></li> <li>More about ERP fundamentals <a href="https://www.oracle.com/applications/erp/what-is-erp.html">https://www.oracle.com/applications/erp/what-is-erp.html</a></li> </ul>

- 7 Tips to Develop a Web Based ERP System  
<https://www.romexsoft.com/blog/develop-an-erp-system/>
- Web Based ERP Solutions <https://www.rishabhsoft.com/blog/web-based-erp-solutions>
- Benefits of a web-based ERP system  
<https://www.sagesoftware.co.in/blogs/benefits-of-a-web-based-erp-system/>

#### **INFORMATIVE TEXT**

Quora (2018) *How web-based ERP SOLUTIONS are best for modern businesses?* Retrieved from <https://www.quora.com/How-web-based-ERP-SOLUTIONS-are-best-for-modern-businesses>

Software Development (May 06, 2011) *Web Based ERP Solutions*, Rishabh Software. Retrieved from <https://www.rishabhsoft.com/blog/web-based-erp-solutions>

Serhiy Korzov (October 26, 2016) *7 Tips to Develop a Web Based ERP System*, romexsoft. Retrieved from <https://www.romexsoft.com/blog/develop-an-erp-system/>

BatchMaster (June 06, 2018) *Cloud-based ERP vs. Web-based ERP – What are the Key Differences?* Retrieved from <https://www.batchmaster.co.in/blog/cloud-based-erp-vs-web-based-erp/>

Sage ERP (September 21, 2016) *Benefits of a web-based ERP system*. Retrieved from <https://www.sagesoftware.co.in/blogs/benefits-of-a-web-based-erp-system/>