

# Issues in open source procurement in the European public sector

## *Part one: an inventory*

Open source is a natural way to implement open standards and attain interoperability. Despite the procurement policies currently in place aiming to create a level playing field, however, open source suppliers appear to have a hard time maturing and growing to a size that allows them to compete with their closed source cousins.

As a consequence, governments are suffering from high or even unsustainable IT costs. Large parts of their budgets are exported instead of being invested in regional companies and jobs. And public agencies are missing out on local talent and innovations. Recent research shows that the CSS-only market we are just leaving behind delivers lower welfare than a mixed market. So there is every reason to identify and address the current issues and so further the development of the open source supplier market.

In this article we present the issues in open source procurement in the public sector, as they were brought forward in interviews with representatives of the open source suppliers in the four largest European countries.

In a [follow-up article](#) we will present the responses from the governments and discuss their policies.

## **Overview**

We start with an overview of the problems as they were brought forward by the open source representatives of the four countries. These are followed by their stories and a generic overview of our findings. Then we have an analyst relating market circumstances to national business culture, we present the Swedish procurement model for open source that is bringing public agencies and open source suppliers closer together, and we bring some insights based on economic science that might have important implications for software procurement policies. Finally, we present our conclusions.

### **Spain:**

- open source suppliers are mostly small companies, with a few medium-sized firms (SMEs);
- large system integrators rely on these small open source specialists to provide expertise and maintain relationships with the community, since they do not have this capabilities themselves;
- there is sufficient demand for open source from public agencies, and it is increasing;
- public tenders are not (directly) accessible to open source suppliers;
- the public tender process is too formal for smaller companies;
- public agencies often explicitly ask for specific commercial products and companies, against public tender law;
- there are no policies to enable smaller businesses to participate in tenders;
- public agencies lack the the courage to purchase open source;
- open source suppliers get no support or encouragement from their governments;
- by excluding open source suppliers from participating, public agencies are missing out on local talent and innovations;
- by keeping the public market closed to local suppliers, large parts of IT budgets are exported instead of being invested in the regional industry and employment.

### **Germany:**

- open source suppliers are mostly small companies, with a few medium-sized and larger firms;
- small open source companies often lack capabilities in project management, professional consulting and support;
- the open source market is still very fragmented, hindering suppliers who need to provide highly integrated solutions;
- demand for open source from public agencies is limited;

- public agencies lack the expertise and the experience to purchase open source;
- the public sector is far behind the private sector;
- public tenders are not (directly) accessible to open source suppliers;
- open source is merely used to reduce the price of proprietary software;
- open source companies often lack the legal expertise to participate in public tenders;
- access to public tenders for SMEs can be frustrated in implicit ways, using all sorts of unnecessary and irrelevant requirements, policies, and references;
- as a result, open source suppliers have turned their backs on the public sector.

#### **The UK:**

- open source suppliers are mostly micro-businesses, with a few small companies;
- large system integrators rely on these small open source specialists to provide expertise and maintain relationships with the community, since they do not have these capabilities themselves;
- demand for open source from the national government is low, demand from local agencies is better;
- the public sector is way behind the private sector;
- public tenders are not accessible to open source suppliers;
- the public tender process is too formal for smaller companies;
- open source suppliers cannot carry this administrative and financial burden;
- although the right policies to create a level playing field for public tenders are already in place, their implementation is deficient;
- public agencies often explicitly ask for specific commercial products and companies, against public tender law;
- public tenders are only accessible to a small coterie of proprietary suppliers who always win the tenders;
- procurement lists are another way to limit access for open source suppliers;
- open source companies can be invited to tender just for statistics or show;
- access to public tenders for SMEs can be frustrated in implicit ways too, using all sorts of unnecessary and irrelevant requirements, policies, and references, even for very small tenders;
- open source suppliers gain no access to their public home market, and get no support or encouragement from their governments;
- policies specifically targeting SMEs are in place but not effective;
- all this has resulted in very low demand for open source in the public sector;
- as a result, open source suppliers and advocates have turned their backs on the public sector;
- although the supplier market, mostly built on a services-only model, is thought to be a viable business, open source companies are languishing;
- their small size and limited resources prevent open source companies and advocates from developing, growing and maturing their own markets;
- this lack of competition makes the public IT market supremely profitable for a handful of large companies;
- IT spending is unusually high, and no longer sustainable;
- open source suppliers who are unable to participate in their home markets may be forced to look elsewhere, or even relocate abroad;
- by keeping the public market closed to local suppliers, large parts of IT budgets are exported instead of being invested in the regional industry and employment.

#### **France:**

- this country has the largest open source market in Europe, with a lot of SMEs providing open source solutions, even targeting many other countries in the world;
- public demand is responsible for 40 to 45 percent of the French open source market;
- small open source companies cannot provide the continuity and trustworthiness larger companies can;
- large system integrators rely on these small open source specialists to provide expertise and maintain relationships with the community, since they do not have these capabilities themselves;
- smaller companies are organising themselves into alliances and grow into pure open source consortia;
- regional business clusters facilitate and fund theme-based projects;
- demand for open source from public agencies is high;
- public agencies specifically ask for open source based solutions in their tenders;
- public tenders are directly accessible to open source suppliers;
- open source companies do have the legal expertise to participate in public tenders;

- there are no procurement policies specifically for SMEs;
- open source suppliers and traditional vendors are converging, and this is also reflected in a shift in the licenses used for open source projects;
- cloud-based infrastructures carry the risk of a new lock-in.

## ***Spain: "no support and no priority"***

"The present-day open source services market in Spain is quite mature, with companies having extensive experience and wide knowledge of solutions for various sectors, covering almost all needs in the market. That is completely different from Latin America, where countries like Paraguay have a national open source policy but no companies to provide such services." So says [Ramón Ramón Sánchez](#), who works as a business development manager at Andago, a company developing open source e-government software. He is also the founder of the '[Iniciativa Focus](#)' (in Spanish; the Focus Initiative), a Spanish non-profit organisation promoting knowledge and deployment of free software in the Hispanic world.

"Most of the Spanish companies fully focusing on open source software are small, employing eight to fifteen workers, although there are businesses like Andago and Emergya having over sixty professionals." So saying, Ramón makes a sharp distinction from the large integrators. "These large firms offer a portfolio of solutions based on open source software that they do not develop but take good advantage of. Most of what they publish is open code but not free software. These companies emerged thanks to the commitment of public administrations to open source software and all the benefits that were involved with this."

"Having no alternative but to abandon a market in which they had a dominant position, the integrators decided to offer open source. However, I personally do not consider those companies to be free software businesses, as none of them contributes to the community or offers releases based on their products. They simply publish the code, developed outside the canons of free software, only because that is what the client – in this case the public administration – imposes."

## **Public demand**

According to Ramón, there is a lot of demand for open source software from Spanish public agencies. "And it's increasing, as the government better understands the opportunities, like technological independence, [code reuse](#), auditing, and the higher quality of the software. Unfortunately, tenders are generally not accessible to open source companies, as in many cases – against public tender law – commercial products and companies are explicitly asked for. In other cases, the statement of the tender is so demanding that it is impossible for a small company to participate. The requirements for economic background, certification and operational continuity are not only too high but also unnecessary."

"On the positive side, companies are working together and joining efforts. They frequently win contracts, though never those with the larger budgets. Most tenders are won by large integrators, who later on outsource the projects to the open source companies which do have the expertise and can provide quality services."

## **Small businesses**

Currently, there are no policies in place to enable smaller businesses to participate in tenders. "Only in a few and very specific cases are small companies favoured," says Ramón. "The administration lacks the courage on the technical and political side. Fortunately, open source companies provide equal or better quality and performance, as they have demonstrated throughout their lifetimes. What we need right now is a number of medium-sized companies with the right economic strength and experience to participate in public tenders on their own." According to Ramón, finding sufficient demand should not be a problem at all, making the services-oriented business model a viable one: "There are various categories of government tenders where open source software and tailor-made software solutions fit in."

"To enable this new market, government should promote and stimulate the free software sector, that way supporting the regional industry at the expense of external suppliers and large integrators who add no value to projects. They should recognize and encourage those companies generating local employment, contributing code, and using R&D as a factor for

change and quality. We need campaigns to promote the benefits of open source software, like we had years ago for legal software."

## Spreading the word

"However, at this moment little or nothing is being done. There are no concrete plans to support the open source software industry. Open source solutions and developments are not prioritized. Both the Focus Initiative and [ASOLIF](#) (in Spanish; Asociaciones Empresariales de Software Libre Federadas, the Federation of Free Software Business Associations) are constantly working to spread the word on the benefits of open source software. Unfortunately they do not have the financial support and force that those large multinational developers of proprietary software can deploy."

According to Ramón both the open source suppliers and the government should invest in developing the market. "The suppliers already do. Now the government should join in, to support the local industry. But citizens too should demand that their government adopts interoperable systems, which creates jobs and stimulates efficient governance, as opposed to current policies supporting big businesses and brands."

## Germany: suppliers focusing on the private sector

The German open source supplier market looks similar to that in Spain. According to Timo Mustonen, it basically consists of several smaller businesses and a few larger companies. "Although there is a lot of interest in open source software and it is now part of the new programme of the regional government, it has not yet turned into substantial demand. Commercial organisations deploy open source software more often, especially in the back-end of their infrastructures."

Mustonen focuses on open source innovation ecosystems at [MFG Baden-Württemberg](#), the Innovation Agency for ICT and Media, aiming to improve regional innovation and competitiveness by supporting entrepreneurship in small and medium-sized companies, and connecting them with application-oriented research and public funding programmes. "Under this umbrella we operate several networks such as the [Open Source Business Alliance](#) (in German; the OSB Alliance, formerly [Lisog](#) and the LIVE association). Having over 250 members, it is the biggest open source network in the German-speaking world. From major companies to researchers and public administrations, the OSB Alliance connects vendors, users and other stakeholders to find the best solutions based on open source software."

"Another example is the [Open Source Integration Initiative](#) (in German; OSII), which brings together a range of open source software applications for use by businesses. We aim to create a low-cost modular solution – a software stack – that meets the needs of many different operating processes."

"Together with its partners the OSII covers the [full spectrum](#) of IT solutions: from [groupware](#), CRM ([Customer Relationship Management](#)), ERP ([Enterprise Resource Planning](#)), DMS ([Document Management Systems](#)), [Business Intelligence \(BI\)](#), and [Identity and Access Management \(IAM\)](#), via [middleware](#) ([Enterprise Service Busses](#), ESBs) and the Linux operating system, to backup and archiving tools. The OSII works to ensure the smooth connection of all components in the software stack, creating a complete solution for corporate users."

## Supplier landscape

Thomas Uhl, deputy chairman of the OSB Alliance, confirms that the German open source market is populated by a mixture of several big players, midsize companies, and small businesses. "The large ones are HP, IBM, [Red Hat](#), and [SuSE](#) (now part of the [Attachmate Group](#)). Some of the midsize ones are [Zarafa](#) [a Dutch company providing an open source alternative to [Microsoft Exchange Server](#)], [Grau Data](#) [a German company specialising in data archiving], and [Ancud IT](#) [in German; a German open source integrator and developer]. Some of the small ones are [Agorum](#) [a German company providing [Agorum core](#), an open source DMS package, [Document Management System](#)], [Linbit](#) [an Austrian company providing the open source [DRBD cluster software](#)] and [Covic](#) [a German open source integrator and service provider]." The solutions provided by Red Hat, SuSE, Zarafa, Grau Data, Agorum, and Linbit are all part of the OSII software stack.

According to Uhl, demand for open source solutions and services from public agencies is not as much as hoped for. "In many areas the decision makers do not want to change anything. Often the public sector merely uses open source to reduce the price of proprietary software – as opposed to commercial customers, who are more open to change when they see an advantage using open source based solutions."

## Tenders available but not accessible

Although public tenders are available for smaller companies, they are hardly accessible. "It is very difficult for them to win a contract," Uhl says, "as in many cases a substantial company size, compelling client references, and country-wide offices are needed to fulfil the requirements."

"Furthermore, the legal expertise necessary to pursue tendered contracts is not always available to these companies. They often reduce the costs by building a provider network. We at the OSB Alliance try to educate our members so that their proposals can compete successfully. And even then, the laws defining the tender process itself (EVB-IT, [Ergänzende Vertragsbedingungen für die Beschaffung von IT-Leistungen](#), in German) sometimes get in the way."

"All in all, most of the smaller open source IT companies do not answer calls for tender in the public sector; they focus on the private sector instead, where there is enough demand for their services. Despite their small size, open source companies have a low turnover of staff and deep technical skills. However, project management skills and commercial consulting skills to provide a complete solution are often lacking."

Although the open source business model is mainly based on expertise-intensive consulting and services, subscriptions can be an important part of their revenue stream as well. "Some of our members are also resellers of subscriptions for larger open source companies," Uhl says.

## Maturing market

It appears that to create a level playing field for proprietary and open source software, tenders should become accessible to the smaller companies which make up most of the open source suppliers market. At the same time, these suppliers need to mature. "Open source is not often used in the public sector because the people in charge of IT administration want solutions which are highly integrated and provided by a single vendor under a single contract," Mustonen explains. "The problem here is that the open source market is still very fragmented."

According to Uhl, the market needs a very concrete intention by the public sector to implement IT systems based on open standards and open source. "That is a political and strategic issue for the government. [Munich](#) is a good example of that."

"At the beginning of this year, we at the OSB Alliance started the 'Public Affairs' working group, aiming to give decision-makers and politicians some facts on open standards and open source to avoid a vendor lock-in. For that is a major reason why open source is not as successful in the public sector as it should be."

A perfect example of the latter is the German city of Freiburg, which [plans to end its use](#) of the open source office productivity suite OpenOffice and revert to Microsoft Office for all of its nearly 2,000 desktop systems. The main reason for this backward step is interoperability problems: the ODF standards (Open Document Format) are not yet supported by other local, regional, federal and European public administrations.

## Open source procurement

"Theoretically it is perfectly possible and easy to acquire open source software for German public agencies using EVB-IT, the official template contract for IT procurement", says Peter Ganten, Chairman of the Board of the OSB Alliance. "The problem, however, is how to do it, which contract models to use, and what is allowed and what not. So decision-makers often prefer proprietary software, because the procurement departments know how to order it."

"To change this situation, the OSB Alliance will develop a paper explaining how to use EVB-IT for open source procurement and pointing decision-makers to successful past open source purchases by public agencies. There might also be some quirks in EVB-IT. We have a lawyer working on that together with the federal Ministry of the Interior."

The OSB Alliance works together with the FSFE ([Free Software Foundation Europe](#)) and other open source oriented organisations in Austria (OSSBIG, [Open Source Software Business Information Group](#)) and Switzerland (/ch/open, [Swiss Open Systems User Group](#)).

## ***The UK: "15 years behind"***

The open source market in the United Kingdom is also populated by a lot of very small companies. "By far the majority are micro-businesses and only a few are small. A handful of our large system integrators claim to be open source suppliers, but the truth is that they farm any work out to companies like ours," says Mark Taylor, the CEO of open source integrator Sirius. He was also the founder, and president for five years, of the [Open Source Consortium \(OSC\)](#).

"Sirius is the UK's flagship open source supplier. If we were a proprietary company we would be called a systems integrator. Sirius is a pure services company with five offerings designed to enable organisations to adopt open source: strategic consultancy, project work and systems integration, training, support and managed services all the way up to outsourcing. We have reached the scale to provide genuine 24/7 support manned by our own open source engineers, but we are the exception rather than the rule."

## **Still talking**

This, however, has not come about through the national government asking for open source solutions and services. "The truth is that there are a few green shoots showing at a handful of public agencies," says Taylor, "but these are still driven by individuals with a little vision, a little backbone, and an even rarer desire to do the right thing. Much more is happening in local government, where open source solutions have been gaining acceptance and momentum for several years now."

According to Taylor, the UK government is fifteen years behind commercial customers. "Companies are way, way ahead. They are far more sophisticated in their understanding, their grasp of the key distinctions, and in the subtlety of their requirements. In government the standard of debate has reached the level of the commercial sector in the late nineties, early 2000s: they are still talking rather than implementing, and still debating points long since settled in the private sector – like whether open source is secure or not!"

## **Newcomers not welcome**

Furthermore, public tenders are not accessible to open source suppliers. "They are routinely and habitually excluded," Taylor explains, "and this malpractice is not even questioned by the majority of public sector employees. In those rare cases where open source elements make it past the finish line, control remains in the hands, and subject to the whims, of the same small coterie – [called by at least one government minister an 'oligopoly'](#) – of suppliers that always win the tenders. But despite European rules, by far the majority of tenders specify the exact software product they want the solution to be based on, usually a proprietary one."

Another way to exclude smaller open source companies from participating are the revenue and other requirements. "It is usual for PQQs (Pre-Qualification Questionnaires) to run to several hundred pages, putting them way beyond the resources of all but the most determined SMEs. Should a few slip through to the ITT (Invitation to Tender), there will be multiple detailed requirements for discrimination policies, equal opportunities policies, health and safety policies, and a host of other policy documents most SMEs will not have even considered at their stage of development. We have seen this for tenders as small as a few thousand pounds. It is also standard practice at this point to demand multiple case studies of exactly the same kind of solution with exactly the same kind of organisation. This, of course, means that the tender is open only to a private club of organisations who are already in – newcomers strictly not welcome."

## Just for show

According to Taylor, this puts an extra burden on SMEs that are already too small to invest in tenders they are unlikely to win. "Of course, most SMEs are well aware that there is invariably a 'preferred supplier' and that if they are invited to tender it is simply to make up the numbers. This problem has become even worse with the new ['SME-friendly' policies](#): it is now common for SMEs to be invited to tender for projects that they will not be selected for, just for the agency to claim that SMEs were invited."

The [policies](#) that the Cabinet Office has created to develop a level playing field for open source and closed source suppliers, requiring SMEs to participate, are not widely implemented. "I am aware of several open source companies recently invited to an event, only to be told by the presenter that the tender in question would not be suitable for SME suppliers!"

"Another barrier preventing smaller open source companies from participating in calls for tenders is that the majority of public sector business goes through 'procurement lists'. There are no smaller open source companies on any of these official lists. Two initiatives have come from the Cabinet Office to bypass these lists: the [Contracts Finder](#) and the [GCloud](#). Neither of those is widely used. Of the £20 billion spent annually by the UK public sector on ICT, perhaps a few hundred thousand pounds go through these two initiatives. Furthermore, neither has been operating for more than a few months. The Contracts Finder is almost unusable and is no longer being developed. The GCloud is infrequently used, and almost ninety percent of all contracts that have gone through it have ended up with just one company, so one suspects something weird is going on there."

## Unsustainable IT budget

"All this is affecting the viability of local open source companies in a dramatic way," Taylor continues. "The UK is in savage recession. The public sector boasts of accounting for almost fifty percent of our GDP, and in terms of IT spending one suspects far higher, as government costs in this area are unusually high. As a consequence, public sector IT is a supremely profitable market for a handful of large companies. Open source suppliers on the other hand gain no exposure to their home market, and get no encouragement from their government. While the UK has some very fine indigenous open source talent and high participation in key projects, our open source companies are forced to look elsewhere, or even relocate abroad. An example of the latter is [Alfresco](#), the developer of an enterprise content management system, which is now primarily US based. What should be a thriving and growing component of our technology sector is left to wither on the vine."

When asked about the economic viability of the services-only business model that is inherent to open source software, Taylor is absolutely certain. "IBM is primarily a services business and considered quite viable. The giant consultancy firms are primarily services business and also quite viable. Much of the political debate around stimulating growth in Europe suggests that stimulating cross-border services business would be the most viable solution. Banking is a service business, and whilst neither politically popular nor currently stable after the near financial collapse around the world, it is still the largest single industry in the UK. Services-only business models are not only viable, they are essential to economic recovery both in the UK and across the rest of Europe."

## Policies bypassed and ignored

According to Taylor, the right policies to create a level playing field for government projects are already in place. "The public sector needs to actually follow them. Departments and public agencies need to be held financially accountable. The cosy relationship between the [current oligopoly](#) and the civil servants wasting taxpayer money needs to be broken up."

Although there are a few policy initiatives in the central government, mainly in the Cabinet Office and the Home Office, Taylor is no longer involved. "There are a few events being held and a few open source companies invited along. Nobody takes it particularly seriously."

"The Chancellor of the Exchequer should take the lead here. The UK government spends £20 billion each year on IT and cannot afford to continue to do so. The initiative from the Cabinet Office has failed. Only if the Treasury sees a genuine

move to open source as a strategic component of its austerity drive will other departments be driven to comply with the perfectly adequate open source policies that are already in place, but that are being routinely bypassed and ignored."

## ***France: taking the lead***

France appears to be in a [leading position in Europe](#). "We are well-known for our open source market," says [Jean-Pierre Laisné](#), works at Bull and leads the CompatibleOne project, an open source cloud broker that is part of the [Open Source Cloudware initiative \(OSCi\)](#). He is also the president of the [OW2 Consortium](#), the host of the OSCi project: "The consortium was originally founded by Bull, France Télécom, and Inria (the [French National Institute for Research in Computer Science and Control](#)), but now is an independent association thriving thanks to subscriptions of its members."

"According to a study by PAC ([Pierre Audoin Consultants](#)), France has the largest open source market in Europe. There are a lot of SMEs providing open source solutions. Among those you find very fast-growing companies like [Smile](#), which is one of the largest open source integrators. And we have several others currently experiencing medium growth. Then there are of course the traditional IT companies now providing open source solutions to their customers. Finally, we have a lot of start-ups and SMEs which have open source as their core business. They develop their own open source solutions and stacks or build their business on top of open source software. For example, [Talend](#) does that for [data integration](#) and BI ([Business Intelligence](#)). And [BonitaSoft](#) is well-known for its open source [Business Process Management \(BPM\)](#). As a whole it makes a large and very vibrant supplier market."

## **Competitiveness clusters**

According to Laisné, the French open source market is not only alive but also [very healthy](#). "They are doing good business these days. These companies are targeting not only the French market but many other countries in the world. Some of them have already [reached the United States](#)."

"It might be interesting to know that in France we have something called '[competitiveness clusters](#)' (in French; [business clusters](#)). They also engage in open source projects. These clusters consist of large, medium, and small companies, as well as academics, all collaborating in joint theme-based projects for a given geographic area. They have a specific working [method based on open source software](#)."

"The projects are [funded](#) (in French) by the government (i.e. the Ministry of Industry), regionally (by the [Paris region](#) for example), and by the Departments (les départements). The money comes from various sponsors, enabling companies and academics to join in R&D programmes."

"Furthermore, we have a [significant demand for open source](#) in France," Laisné continues, "Both large companies and public administration are substantial users of open source, and thus in need of open source suppliers. On top of that, there is a lot of institutional help to fund new companies and to allow companies to develop."

## **Ministry of Finance**

Where public tenders in other countries are explicitly asking for closed source software and proprietary brands – thereby violating procurement policies – French agencies specifically [ask for solutions based on open source](#). "For example, there is a [call for tender from the Ministry of Finance](#), one of the largest administrations in France, explicitly asking for support of open source software," Laisné says. "They are very precise in the list of open source packages they want to have supported and the conditions they expect. One of the requirements is for the subscribers to be well connected to the open source community. That way the ministry favours consortia combining on the one hand large companies, which can supply [level 1 and 2 support](#), and smaller, specialised, more agile companies on the other hand."

"So you have a consortium agreement that seals the relationship between the partners and the revenue each of them will get." The larger companies are able to fulfil the requirements for the continuity and stability of the supplier, while the SMEs provide the innovation and the connection to the community. "That is the way the Ministry of Finance is expecting this call



to be answered. For example, it would be very hard for a small company to provide a treasury plan for five years. In this case, a large company like Capgemini or Bull will provide that. They bring the trustworthiness to the deal."

To give an impression of present events: last month, a €2 million framework contract to provide open source support for three to four years was [awarded](#) to open source specialist Alter Way, system integrator Capgemini, and Java specialist Zenika by Disic (Direction Interministérielle des Systèmes d'Information et de Communication de l'État), the central IT department for the French government. The three will provide support for no less than 350 open source tools used by 15 of the 22 ministries in France. Not participating in this support contract is the Ministry of Economy, Finance, and Industry. The Ministry has issued a separate open source software support contract, not yet awarded. Disic is asking the three firms to make sure that improvements they make to the open source code are given back to the upstream developers. The current contract covers only maintenance and bug fixes. A second call for tender, not yet published, will cover the development of new features and the provision of training.

## Open source alliances

"Interestingly, we also have a bunch of small companies which themselves have built alliances to supply open source," Laisné says. "There are one or two examples of this sort where some small and medium-sized open source enterprises are making business together."

"So they build their own consortia, guaranteeing their customers that they are all pure open source suppliers. It would be very difficult for Bull, HP, or IBM to state that they are entirely devoted to open source. Since the full hundred percent of their revenue comes from open source projects, these smaller companies profile themselves as being entirely committed to open source, convincing their potential customers they can do the job in exactly the way the client wants."

Contrary to what one might expect, these SMEs do have the legal expertise to participate in tenders. "Of course, in a consortium in which Capgemini or Bull is participating, these large companies bring in the legal side of the tender. But the people at the small companies often come from large companies and most of them do have the experience to participate in tenders too. You should know that public demand is responsible for 40 to 45 percent of the French open source market. So we are more used to tenders than suppliers in other European countries. Even smaller companies simply need to have this expertise. On top of that, they generally get good input and support from the customers."

## Mutual understanding

"In France there are no procurement policies specifically for SMEs, to get a certain share of work for example," Laisné continues. "However, there is a lot of lobbying for SMEs to be able to participate in the tenders, and there is a mutual understanding between customers and suppliers that make this quite easy. In fact, in France it has actually proven to be a good idea not to regulate this, since we would not have known whether – let's say – a 25 percent share for SMEs of each government contract would have been a good or a bad decision. Nowadays SMEs are accounting for even more than 25 percent of the market!"

At the same time, Laisné emphasises that it took fifteen years to get here. "As in any country, public procurement is regulated very strictly in France. Back then we had to push a lot. Having the words 'open source' in the actual bid made it very difficult. Microsoft and IBM even called it anti-competitive. Today that is no longer the case. We convinced people that open source is not a product but a business model, a way to license software."

## Converging models

"Today we see open source and traditional vendors converging. Open source projects are getting closer to proprietary vendors on the one hand, and closed software companies are moving closer to open source on the other. Now both open and closed source companies are providing open source software. Proprietary software vendors say they do open source projects to, for example, stabilize the market. IBM and [Eclipse](#) (an [integrated software development environment, IDE](#)) are a good example of that. Another example is the composition of VMware's proprietary virtualization software and [Eucalyptus](#), an

open source platform for [cloud computing](#). These days it is a mix, and that too is very different from fifteen years ago."

According to Laisné, this convergence is also reflected in a shift in the licenses used for open source projects. "Years ago the GPL ([GNU General Public License](#)) was the de facto standard. Now we see the [Apache License](#) getting more and more traction."

"That makes it very hard to say how the open source movement and companies are doing, because they work together, almost in the same field. Open and closed source, both companies and market, are converging because customers ask for both. They want access to technology that is convenient and simple, and they want to avoid vendor lock-in. So proprietary vendors must adhere to the same requirements. I think the market is currently stabilizing in an open way."

## Cloud computing: a new lock-in

At the same time, Laisné warns about new lock-ins as we move to cloud-based infrastructure providers. "In a Microsoft zone you have the perfect lock-in. It is easy to get started; it looks very inexpensive and very convenient. But as you grow, and you need more, it gets more expensive. And if you want out, it is hard to migrate and there are hardly any alternatives. Despite the use of virtual machines and data stores, they are difficult to manipulate, change, and transport. I hope the European Commission and the European administration is aware of this new problem on the horizon."

"The freedom we have been enjoying over the last fifteen, twenty years is due to the open source movement. But now it looks like the cloud has such large economic interests, with regard to facilities and costs, that we risk getting back to closed systems again."

Despite the fact that cloud propositions are still generally considered not mature enough for mainstream use, Laisné sees suppliers telling their customers to get into their cloud: "'You pay us and we will take care of it.' That sounds very attractive, especially to SMEs who no longer have to maintain their own computer systems. However, there are issues related to liability, quality, and security that are currently holding them back."

"For public agencies another argument enters the equation: the human resources involved in maintaining their IT systems. For large legacy systems – mainframes – you may have 200 people doing backups, supporting users, keeping records and so on. If you move that functionality to the cloud, two-thirds of those people will have to find another job. Of course, people will not cooperate in a transition like this. However, eventually this commodity model will win, as governments do not have the money to maintain the current situation."

## Here to stay

The OW2 Consortium is currently building an ecosystem around open source. "That means that we have a process to select a technology and then do all the promotion," Laisné says. "We provide everything from technology to marketing. It is very similar to what the [Eclipse Foundation](#) is doing. We are a community and we thus make sure our committee members are aware, and safe, and can develop easily with what we have. In that way we are a facilitator to both producers and consumers of open source. But we also participate in discussions with customers and other producers. And we cooperate internationally with like-minded organizations."

"We currently have about a hundred projects up and running. But we are pursuing goals in the industry as a whole, so we don't target specific organizations, like public administration. We make sure that open source is here to stay."

## Collected issues

These stories make it clear that there are still a lot of issues to be addressed and problems to be resolved in the public open source market. Below is an overview of the problems as they were brought forward by the open source suppliers and representatives.

## **Open source companies**

- open source suppliers are mostly small companies, with a few medium-sized firms (SMEs);
- small open source companies often lack capabilities in project management, professional consulting and support, and cannot provide the continuity and trustworthiness larger companies can;
- the open source market is still very fragmented, hindering suppliers who need to provide highly integrated solutions.

## **System integrators**

- large system integrators rely on these small open source specialists to provide expertise and maintain relationships with the community, since they do not have these capabilities themselves.

## **Public agencies**

- public agencies in most countries lack the expertise, the experience, the will, and sometimes the courage to purchase open source;
- the public sector in most countries is way behind the private sector.

## **Public tenders**

- public tenders are not (directly) accessible to open source suppliers;
- public tender processes in most countries are too formal for smaller companies;
- open source suppliers can seldom carry this administrative and financial burden;
- open source companies often lack the legal expertise to participate in public tenders;
- some countries have policies specifically targeting SME's, others don't.

## **Tender malpractice**

- although the right policies to create a level playing field for public tenders are already in place in every European country, their implementation in most countries is deficient;
- public agencies in some countries often explicitly ask for specific commercial products and companies, against public tender law;
- public tenders in some countries are only accessible to a small coterie of proprietary suppliers who always win the tenders;
- procurement lists are another way to limit access for open source suppliers;
- in some countries open source is merely used to reduce the price of proprietary software;
- open source companies can be invited to tender just for statistics or show;
- access to public tenders for SMEs can be frustrated in implicit ways too, using all sorts of unnecessary and irrelevant requirements, policies, and references, even for very small tenders.

## **Consequences for the open source supplier market**

- open source suppliers in most countries gain no access to their public home market, and get no support or encouragement from their governments;
- all this has resulted in very low demand for open source in the public sectors of some countries;
- as a result, open source suppliers and advocates in some countries have turned their backs on the public sector;
- although the supplier market, mostly built on a services-only model, is thought to be a viable business, open source companies in most countries are languishing;
- their small size and limited resources prevent open source companies and advocates from developing, growing and maturing their own markets.

## **Consequences for the public sector**

- this lack of competition can make the public IT market supremely profitable for a handful of large companies;
- in some countries IT spending is unusually high, and no longer sustainable;

- by excluding open source suppliers from participating, public agencies are missing out on local talent and innovations;
- open source suppliers who are unable to participate in their home markets may be forced to look elsewhere, or even relocate abroad;
- by keeping the public market closed to local suppliers, large parts of IT budgets are exported instead of being invested in regional industry and employment.

### Other

- cloud-based infrastructures carry the risk of a new lock-in.

## Conclusion

It is clear that there is still a lot of work to be done in the public open source market. Although the situation in France appears to be heading in the right direction, open source markets in other countries are still deficient. But the good news is that the infrastructure is now in place. Tender laws and policies are reported to be adequate. Implementation, however, still needs a lot of effort and a change in attitude on the public side. The private sector can serve as an example here.

Open source companies, in turn, need to grow and mature before they can seriously and independently participate in public tenders. Until then, traditional integrators are bridging the gap between the needs of large public organisations and the limited capabilities of the mostly smaller open source suppliers. And there good news here too: open source suppliers in most countries appear to be well organized and well represented, they are organising themselves into alliances and consortia, and they are still growing and maturing.

## *Business culture*

The current situation in the European public open source market as it is described here provides a familiar sight to Mathieu Poujol, principal consultant for the middleware market at PAC ([Pierre Audoin Consultants](#)). According to him, France is actually doing a better job than the other countries, and it has to do with the local business culture. "The IT market in Germany is a package market. Of course, SAP is an important reason for this. So they prefer off-the-shelf software and open source has not yet managed to break through."

"In the UK customers would rather outsource their IT processes, and the service providers in this market traditionally have strong relationships with proprietary software vendors. Especially in their public cloud, everything is Microsoft-based. So that is the UK way of doing business."

"In France, however, outsourcing is not that big. Just as in Brazil, for example, they prefer custom-made software, making open source a [natural alternative](#). Large companies like Atos and Capgemini earn their living providing management and maintenance. In these cases tenders may even be avoided, as the software can be downloaded from the Internet for free. So it is not related to the tender process; all public agencies know what open source software is."

## Return on investment

According to Poujol, the public sector should learn from the private sector. "By using open source software you get years of R&D for free. Some people still think it is about the license costs for desktop and office software. But there the value of open source is low. Time-to-market is a far more important argument. The private sector uses open source software because of the Return on Investment (RoI). That is why Amazon and Google are using open source. If you build a car, you buy the tires from Michelin."

"A company like [Thales](#) provides the avionics for the Russian Sukhoi planes. Of course they want the software to be open for review. For another project, developing a communication system for the US government, Thales works together with an American company. Using open source and the cloud facilitates the development process. That is their secret sauce, and it

gives them a head start."

"Another example is the billing system for the [Astra satellites](#). Even though purchasing SAP was less expensive, the owners chose open source, so the software would not be proprietary. So openness, collaboration, and 'ownership' are three other strong arguments to use open source. Avionics, sonar, and other high-tech: that is where the true value of open source lies."

And, according to Poujol, Europa has a strong advantage there. "Most of the open source middleware has European origins, whereas most middleware in the US is closed source. Middleware layers are quickly becoming extremely important. That is something we should put to use. In open source software you have to be the first in your market, because customers choose the security of the biggest name, and that company will also have the strongest relationship with the community. The open source market is a tough environment, for there is no way to protect your software."

## **No understanding of IT**

Poujol identifies two major problems preventing open source companies to grow. "First, it is very difficult for open source companies to participate in tenders. The public sector should create rules to make it possible for different types of businesses to participate. Brazil, for example, provides excellent access to the public sector for SMEs. Another example is the US, where public agencies are required to spend a certain part of their budgets with small companies."

"Secondly, the European capital market functions poorly. In the US, start-ups can get a major boost and quickly grow into large companies. That happened to VMware, for example. Of course, this is not specific to open source. In France there are only five investment funds which really know IT, and that is because these people have a background in IT. But most investors come from finance, so they invest in projects where technology is not a big differentiator. Also the fact that these people are not able to help with the management and steering of a tech start-up, means that they don't invest, or invest too carefully. In this regard, the UK is doing better than France, Germany, Spain and Italy."

According to Poujol, governments have the same problem. "The people in charge have no understanding of IT. They think IT is a service business because you can not touch it. In fact, IT is more like heavy industry – a power plant, say – where you have to invest in technology for a period of ten years. For example, if BMW wants to produce a new car that releases like a compact yet delivers 170 horse power, they have to invest heavily in embedded IT – often based on open source. The big sales do not come until years later."

## ***Reducing tender issues***

The Swedish model described in an [earlier case story](#) might provide a good way to bring public agencies and open source suppliers closer together, hopefully reducing the current issues in the tender process. The National Procurement Services department (NPS) contracted five suppliers under a (tendered) framework agreement to provide open source software and services.

Currently, central government, the public educational sector, all twenty county councils, and 225 out of the 290 Swedish municipalities are participating. They call off mini competitions for contracts the suppliers then have to battle for. Last year these contracts were worth about €6 million in turnover.

The suppliers were above all selected on their ability to provide competence and comfort, and to deliver to the customers. At their turn, they are subcontracting 75 companies in total to provide all the required competences and services. According to the NPS, the five companies will provide sufficient contention for the mini competitions.

## ***Open versus closed source: a delicate balance***

Although a level playing field for open and closed source is still far from being a reality, regulators may need to fine-tune their policies in the future to maintain a delicate balance. Recent research based on economic models shows that a mixed market in which open source and closed source companies coexist delivers the highest welfare. This finding has been

publicised in '[The New \(Commercial\) Open Source: Does it Really Improve Social Welfare?](#)', a paper that is part of the dissertation of [Sebastian von Engelhardt](#). He is a post-doc at the Friedrich-Schiller-University in Jena, Germany, where he specializes in digital economics, IP rights, innovation and new institutional economics.

Von Engelhardt's research shows that out of three possible market situations, a CSS-only market – basically the circumstances we are just leaving behind – can generate the lowest welfare. Although the welfare in an OSS-only market may be higher, due to the sharing of development costs, it is not as high as the level that can be reached in a mixed market. That is caused by a phenomena he calls a 'quality cartel', where the shared software cannot be a differentiator. Hence in a pure OSS market production is suppressed drastically until CSS firms are present in sufficient numbers to enforce quality competition.

Unfortunately, the ratio of open to closed source companies that provides the highest welfare – a situation that requires a lot more of the former than the latter – is not stable. In those circumstances the closed source companies can easily be pushed out of the market, leaving behind a quality cartel of open source companies.

According to Von Engelhardt, the quality cartel is a new concept that was not seen in earlier models. Another interesting finding is that to maintain the welfare-optimal market balance, procurement preferences which concentrate government spending on open source software are actually increasing the mismatch between the equilibrium and welfare-optimal ratio. In a future where open source could become a dominant factor in the market, these policies should be replaced by governments funding open source projects themselves, so preventing a stall in software development. Of course, these models and their applicability need further investigation.

## **Conclusions**

An inventory of the market position of open source companies in the four large European countries paints a worrying picture. The interviews with suppliers and representatives produce quite a list of problems in the public open source market. Most of the issues involve tender malpractice, where public agencies stop open source suppliers from participating in the process, even to the point where they violate government procurement policies.

As a consequence, open source companies have a hard time maturing and growing to a size that allows them to compete with their closed source cousins. In some countries open source suppliers are turning their backs on the public sector, or even relocating abroad.

But the open source companies are not the only losers in this situation. As well as suffering from high and even unsustainable IT costs – with large proportions of IT budgets exported instead of being invested in the regional industry and employment – public agencies are missing out on local talent and innovations.

It is clear that there is still a lot of work to be done in the public open source market. Although the situation in France appears to be heading in the right direction, open source markets in the other countries are still deficient. But the good news is that the infrastructure is now in place. Tender laws and policies are reported to be adequate. The implementation, however, still needs a lot of effort and a change in attitude on the public side. The private sector can serve as an example here.

Open source companies, in turn, need to grow and mature before they can seriously and independently participate in public tenders. Until then, traditional integrators are bridging the gap between the needs of large public organisations and the limited capabilities of the mostly smaller open source suppliers. And there good news here too: open source suppliers in most countries appear to be well organized and well represented, they are organising themselves into alliances and consortia, and they are still growing and maturing.

Finally, recent research based on economic models shows that a mixed market delivers higher welfare than the CSS-only market we are just leaving behind. Ironically, since there is no differentiating value in the software, open source companies need a minimum number of closed source companies to keep them competing on quality and thus producing new software. To maintain the welfare-optimal market balance, procurement policies preferring the purchase of open source might in the future have to be replaced by programmes funding open source projects directly. Of course, we are still a long way from a market where open source threatens to drive out closed source companies completely.

## ***Follow-up***

In this article we presented the issues in open source procurement in the public sector, as they were brought forward in interviews with representatives of the open source suppliers in the four largest European countries.

In a [follow-up article](#) we will present the responses from the governments and discuss their policies.