

Lessons learned from using architecture frameworks

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Hello everyone, I hope the sound quality is ok. I'm very happy to be able to take part, even if it's remotely, because, as Dominique has probably told you, I'm in Hanoi, in Vietnam at the moment, on business. So, Dominique asked me to speak to you today **to share with you the lessons learned** (a project post-mortem) **from using architecture frameworks over the last few years.**

To do that, it is perhaps worth me first saying a few words of introduction about myself and my background, because, the very general post-mortem on the use of architecture frameworks that I'm going to present comes from my career, spanning more than 15 years, mainly from my activity in the company I founded in 2000 called Orchestra Networks.

I studied computer science and, prior to 2000, worked, in particular, as an information systems architecture consultant, especially on so-called SOA architecture. And so I co-founded, in 2000, the company Orchestra Networks; we are a software vendor in field of Master Data Management (MDM).

Today, Orchestra is a well-known company in the MDM market, a French company, which now has an international presence, which is quite a significant success in the software world.

We have offices, mainly in Paris, as the technological core of our product is made in Paris, but there are also offices in the United States, England, Germany, Vietnam. For the last 15 to 16 years now, we having been working with large corporate clients, faced with "heavy" management problems in terms of managing their data in the information system.

So, these large companies, for example -- I'm referring to them so that you can have a good understanding of my experience --, for example, in the banking sector, clients like Bank of New York, City Bank, BNP Paribas... In the industry sector, companies like Essilor, Michelin, Technip.... And in other domains too, entertainment with Paramount, UbiSoft, Viacom; and, more recently, the latest contracts that we have just signed, to give you a quick overview: McDonald's for South America, Brazil, Columbia, and more recently the software vendor Symantec in the Silicon Valley.

All these clients are confronted with issues of rationalizing their key data, which generally concerns their customer database, the description and management of customers, also the description of products and service offerings, the description of their organization, their tangible and intangible assets... So, this data really is the main data of the information system. From the moment we expect to work on this data, we can only do so if we have an architecture framework that is robust enough, of course, as the stakes are obviously quite high.

Therefore, in 2000, when we founded Orchestra Networks, the subject of data management was only just beginning. The architecture frameworks and methods focused more on process management; it was the heyday of workflows and process engineering. And then, gradually, after the first wave of growth, from 2005, the notion of MDM appeared (and was, incidentally, identified by the Gartner Group), which enabled companies to recognize the critical role played by data. As a consequence, approaching the IT system architecture without taking a close interest in this data was, without doubt, too risky.

2005 was also the moment that I met Dominique Vauquier on a project to overhaul the information system in an insurance company. When I discovered Praxeme at this time, I immediately saw the difference with the other usual architecture frameworks, in so much as this notion of modeling data -- which as you know is "semantic" with its derivations in logical layers --, was in complete accordance with the reasons why Orchestra Networks had been created in 2000, that is to say to give enterprises the tools to take data management back in hand.

We worked with Dominique in this insurance company for several years, 2 or 3 years, to refine the design and modeling methods and the derivation in logical models (that was 10 years ago). **And the market continued to mature and arrived at a very important level of maturity around 2011.** This is when Orchestra's revenues and growth began to seriously accelerate with important Data Governance projects (let's call it that) in companies, where we really saw people in organizations, fairly well placed in organization charts, responsible for data governance and whose objective was to actually bring really concrete solutions for managing this data to business teams.

So today, the landscape of the involvements we see, through our activity at Orchestra, is really a very, very big movement towards this notion of data management with two big areas: big data, that you all know, of course, -- I imagine extremely well -- and that concerns the very modern view of renovation, business intelligence, data scientists, statistical analyses, overall; and then MDM, with data which is highly focused on transactional management, data which is solidly anchored in the day-to-day execution of the transactions enterprises make.

So there we are. Well, I've been a little long in presenting my company and who I am but, it is important to briefly establish this first point so that you will be able to perhaps better perceive the reasons for my post-mortem that I am going to try and share with you now on these notions of Enterprise Architecture.

Enterprise Architecture and Data Management

So, the notion of Enterprise Architecture, we need to know what we are actually talking about. There have, of course, been many definitions over the past few years of architecture frameworks. So I will attempt to give you one more definition, even a quick one, just to check that the post-mortem that I'm about to present is part of a shared definition. Therefore, if we take a little image, a short metaphor, I will take the example of the definition of a motorized vehicle which, in terms of architecture is, in the end, composed of fairly standard and simple elements, at least for the main ones (obviously): a chassis, wheels, an engine block, and other mechanisms of this type; with the integration of these different sub-systems with each other, which are fairly well codified, fairly well known, for all automobile manufacturers whatever the vehicle.

The architecture framework, enterprise architecture, in metaphorical terms, is in fact this vehicle composed of these different codified, nomenclature elements, well known to

engineers in the automobile industry. But the reality of this architecture framework is that it has to be able to be leveraged in different use cases: first, obviously regarding driving license legislation. Here, differences appear depending on different cultures or countries. I'm in Asia at the moment, in Vietnam, and for those who have had any opportunity to travel in Asia, driving conditions are obviously radically different from Europe and the United States; the fact of driving on the right in some countries and on the left in others refers us back to issues on how cars are used.

Then the vehicle itself; we can either use it in towns or on different terrains which will lead to distinctions between sedans, four-by-fours, the individual or collective use of the vehicle, the transportation of people or goods... **So, obviously, all these use cases no longer have anything to do with the architecture framework, but are essential elements so that in real life, the architecture framework represented here by this quick metaphor can come to life.**

In reality, according to this definition, an architecture framework like TOGAF or Zachman is fundamentally positioned in accordance with the description of the structural elements and the interactions between them. So, in fact, it describes the car. **Now, enterprise architecture does not say anything about the enterprise's use of all these structural elements: the business teams and other roles in the enterprise therefore have to take this in hand to represent it and make use of it on a daily basis in real life.**

The fact is that in most enterprises today that we encounter in our line of work, enterprise architecture is 90% (if not 100%) within the scope of IT management and only very occasionally falls outside of this limit. Sometimes it will have some influence on the IT city planning or strategy management activities but not very often at the end of the day, and so the business teams have to take themselves in hand to find ways of gathering these needs together and formalizing them. They then send these needs to IT but without there necessarily being any clear-cut link between all the enterprise architecture efforts being made by these teams.

Unfortunately, in short: the architecture frameworks remain, on the whole, documents, studies... very intelligent, very precise... but whose availability to the real life of the enterprise in its business processes hardly exists at all. This is all the more true, as I mentioned in my introduction, from 2011. The data movement in enterprises really swept away certain work that was too technical in order to bring these problems and questions of data to the forefront. **And the fact is that these frameworks, like Zachman and TOGAF, when they were first created, did not allow a specific enough place for data architecture or for the way in which enterprises may conduct their activities to tackle this new economy and the digital economy.** For you know as well as I do that they pose extremely strategic problems for all enterprises, no matter what their sector of activity. So, as a consequence, what I can tell you is that for 100% of the time on our MDM projects, well, we don't need to use either TOGAF or Zachman (or this type of enterprise architecture). We have to, in fact, systematically equip ourselves with methodologies that enable us to really support unified data modeling and the data governance that goes with it. This is obviously where, in our opinion, Praxeme comes in, with a real position of enterprise method (and there the words have a meaning, because there is a real difference with enterprise architecture). **A true enterprise method has to enable us to keep the business teams on approaches that allow us to formalize the needs and to clearly filter these needs down to data management, not only, but in particular, in data management. And so we can see that semantic modeling, to reuse Praxeme's vocabulary, is used in 100% of MDM projects.**

Of course, that is not to say that 100% of MDM projects use the Praxeme method, which incidentally is a real shame (but that's a question that we can raise later about why Praxeme

today is not more visible in these projects), but in 100% of the cases, enterprises either build their bespoke enterprise method to put in place these MDM projects, or use methods brought by service providers with obviously different specificities depending on the situations.

So, we are today almost, in any case within our field of visibility as I tried to detail in my introduction: around 200 large corporations worldwide, in the US, in Europe, in Asia, also in Africa, particularly in South Africa. 100% of our projects put these architecture frameworks to one side in the hands of IT specialists; and when we turn towards business users who want to really bring a very operational added value to improvements in customer knowledge, better knowledge of product configurations, better knowledge of the geographic sites of the enterprise organization, well, we can easily do without these architecture frameworks. **On the other hand we need an enterprise method, without which nothing is possible.**

Ready to achieve the vision

Well, to end this panorama, we have to obviously understand what changes according to our vision of understanding of the market that is changing today in companies.

Obviously, there is this digitalization for this whole issue of more intensive harnessing of information, big data and MDM, which today (and there can be no doubt about it) are really the pivotal point of all architecture actions of the information system. But there are also, on the processes themselves, some quite complicated issues because we can see, within these large companies an increasing specialization of their teams. The teams are becoming more expert in their business areas, versatility is increasingly difficult because we have to be more and more efficient. **And so, the more specialized the teams are in their field, the more knowledge sharing becomes a decisive, even strategic element.**

Because we obviously have to bring unified processes and global, multidisciplinary, multi-team solutions. But as soon as knowledge sharing becomes more intense, it also requires strategies for modeling the structures in the information systems that allow us to support that. So we are obviously, as people in the art of technology, always fighting against silos on the IT plane, but in reality, on the business plane, silos are increasingly brought to the forefront, well we think so anyway, because the teams are becoming more and more specialized. This is something to analyze in terms of alignment between this specialization of business teams and the desire on the IS side to avoid making too many silos, which cause all the problems that we know about.

The second point is the globalization (and here it's so obvious): **enterprises operate on increasingly fragmented geographic territories, whether they be big, medium or small.** At the level of Orchestra Networks, my company, we are a small company with 200 employees in our teams, but we work with 15 different nationalities across all continents. So, on our small scale, we are a multinational too and this fragmentation of our teams poses considerable difficulties as well, in terms of knowledge sharing, in terms of the alignment of work processes. For all that too, we have to say, architecture frameworks like Zachman and TOGAF are of no real help, and provide no operational or concrete solution. But it is probably normal, besides, because this is not what these architecture frameworks set out to do, to work on notions such as these. Conversely, enterprise methods should be more flexible on use cases and able to adapt themselves to these new requirements.

And then, the third point which is quite particular and which is intensifying, is of course how things are commercialized. That is to say that **the products sold by companies, their services, are more and more specialized, both adapted to and personalized for each customer.** This poses considerable problems in terms, for example, of managing prices,

invoicing, and which brings a multitude of configurations at the data level, on all levels, whether it be the structure of offers, the structure of price setting, the structure of invoice systems... This all mean that the rather modern view of comprehending these subjects requires enterprise methods that are completely adapted {to the task}.

So, Orchestra Networks is a French company. If you look at the analyses from the Gartner Group, you will see that we are very well identified as a company in competition with Oracle, IBM and Informatica on the global MDM market. I think we can be proud of “French tech”, in the sense that Orchestra is showing its capability today to compete at this level. There is probably a reason, because in the French culture, data modeling (we have all known MERISE for a long time), there is a level of expertise in France, quite a strong one, on understanding what data modeling is about; and my company, fundamentally, is anchored in this discipline. And then, Praxeme too, a French methodology, which is something we can be proud of, is, without doubt, heavily influenced **by this culture à la française, of data modeling and this French method, which meets up with this French tech (so French tech and French method) today, in a world where data management really is the most important of subjects for enterprises.** It allows us to really propose solutions and approaches to the market, which are absolutely pertinent on a scale that goes beyond France, because there is no reason that a method like Praxeme should be limited to France and its neighboring countries. It is really a stake that French culture can carry on a very large scale.

So, for Praxeme to have a real chance of growing in this market, this market needs to be mature. It probably wasn't during the period 2000 – 2010, but from 2011 – 2012 (as I tried to show earlier), including at Orchestra, we saw this maturity becoming more and more important and we can say today that it is the right moment to increase our efforts to promote Praxeme, which today really meets enterprise concerns, as I just tried to describe a moment ago.

Well, I hope that the audio communication has been clear enough (yes, yes, no problems) (we have time for a few questions).

So, that's my quick post-mortem. I didn't want to be too long as it can be quite tiring for you to listen to me remotely, and it's not easy to judge your attention levels and reaction in the room, but that leaves us with enough time if some of you want to ask me questions now; it would be my pleasure to answer them.


