White Paper

Enterprise Architecture

Is it Just Innovation Management/Application Portfolio Management?

WP0113 | October 2013

Karl Schulmeisters

Karl Schulmeisters is Technology Advisor for the Carver Global Health Group where he provides expert leadership in Business Process Architecture, Enterprise Architecture and Cloud Computing. Karl's current emphasis is on the impact and integration of disruptive technologies into traditional enterprise IT organizations: Cloud, Mobility, Consumerized IT, Machine Learning/Big Data and Social Media.

Karl Schulmeisters is an internationally recognized speaker – his most recent speaking engagement was at the Congress on the Future of Engineering Software in St. Petersburg Russia. He welcomes your comments at *karl.schulmeisters@cg-hg.com*

This is the fourth in a series of white papers on Best Practices in moving to an Enterprise Architecture discipline. The first was an overview: Enterprise Architecture (EA) Inside Out or Outside In, in which I summarized two approaches to initiating an EA project: from the technology side (Inside Out) and from the Business Goals side (Outside In).

In the second, Enterprise Architecture (EA) Inside Out, I dived into some best practice approaches for engaging with business leaders on starting with business goals and moving towards a technology library approach by using tools like Orbus' iServer to capture the business goals and business processes involved in leveraging the ITIL Process Maturity Model to identify what level of work is involved.

The third white paper Enterprise Architecture (EA) Outside In looked at EA starting in the Information Technology or Technology R&D organization at the technical management level and moved "outwards" to integrate with Business Processes and Business Goals. All three papers are available on the Orbus Software website.

This white paper will look at two common business processes that are often confused with Enterprise Architecture (Innovation Management and Application Portfolio Management) and how they can be used as starting points for building out an EA Practice.

EA has Similarities with Innovation and Application Portfolio Management

If you look at the two definitions of Innovation Management and Application Portfolio Management below, you will see that they have some striking similarities:

- Both are focused on the management of technology processes
- Both provide a holistic and centralized view of these processes and their impacts
- Both involve incorporating and balancing business goals with technical goals

Innovation management is the discipline of managing the process of Innovation. This includes a set of tools that allow managers and engineers to cooperate with a common understanding of goals and processes with a focus on enabling an organization to focus its creative efforts on internal and external opportunities (Wikipedia 2013a).

Some of the groundbreaking work in the field of Innovation Management can be found in this research paper (Kelly and Kranzberg 1975).

Application Portfolio Management (APM) is the centralized management of processes, methods, and technologies to analyze and collectively manage a group of current or proposed projects based on numerous key characteristics, including technical as well as business goals (Wikipedia 2013b).

APM is also sometimes called Project Portfolio Management (PPM). We will use the APM terminology for this paper in keeping with Orbus Software's iServer based APM solution (Orbus Software 2013).

Also note that in these three ways, Innovation Management and Application Portfolio Management are similar to Enterprise Architecture, the purpose of which is, according to The Open Group Architectural Framework (TOGAF):

"to optimize across the enterprise the often fragmented legacy of processes (both manual and automated) into an integrated environment that is responsive to change and supportive of the delivery of the business strategy" (Open Group 2011)

Given these similarities it is not unusual to see Application Portfolio Management sometimes presented as Enterprise Architecture, as well as Enterprise Architecture used to manage Innovation. I suggest though that each approach is incomplete.

EA is more than Innovation or Application Portfolio Management

Enterprise Architecture is more than just Application Portfolio Management. While both share the similarities of tracking and managing technology assets within an organization, Enterprise Architecture seeks to incorporate longer term business goals and decision making into its processes.

Application Portfolio Management on the other hand, is primarily a tactical discipline focused on optimizing the delivery of projects today. While most of the tools and resources that PPM will use are also used by Enterprise Architecture, they diverge in the tactical tracking of project delivery.

In many ways Innovation Management is the other end of that spectrum. Where Application Portfolio Management is focused on tactical execution, Innovation Management seeks to improve an organization's anticipation of the future, enabling it to adapt its roadmaps and create new ones in response to changes in current and future outcomes.

To the extent that EA is focused on integrating future goals and roadmaps into existing technology, it aligns well with innovation management. Where EA and Innovation Management have a potential conflict, albeit a healthy one, is that Innovation Management also includes early adoption experiments to anticipate and even create disruptive technologies. EA on the other hand seeks to reduce rapid strategic changes because those lead to technology duplications and expensive orphaning.

Innovation Management is Outside-In EA

While I have just made the case for why Innovation Management is different to Enterprise Architecture, I will now somewhat reverse myself. My previous white papers have offered advice on how to develop an Enterprise Architecture practice in an organization in the absence of an existing one. In suggesting that Innovation Management is a candidate for Outside-In Enterprise Architecture, I seek to continue this.

First to recap; an Outside-In EA approach is one that starts with business goals and roadmaps and moves down towards a detailed IT inventory. This approach is a natural fit with an Innovation Management practice. Innovation at its core, is about envisioning or creating a future goal or state, and then figuring out how to achieve that. In an Outside In approach to EA, we start with business goals and roadmaps, and work our way down to the systems and technologies these goals impact, and identify what is the scope of changes that will be required.

Clearly there is alignment. But the key here is to also identify where there is a divergence. The tooling for Goal and Roadmap tracking and management, as well as the inventory of technologies, is a great support structure for tracking and managing the costs and impacts of a particular proposed innovation. However, once EA provides the management team with an identification of the affected business processes, technologies and anticipated costs, it should not have a final say in how the final decisions on goals is actually made.

The risk a strong EA process creates in an organization comes from the very stability and re-use goals that are at the core of EA. It is possible to stifle innovation with too rigid of an EA process. For example, an organization that has a solid EA practice with a strong virtualized server environment and a well advanced server consolidation is likely to raise a lot of objections to implementing an external cloud based

CRM system. After all such a system would not be reusing any of the existing management tools, nor taking advantage of the infrastructure management tooling in place.

So in integrating Innovation Management with Enterprise Architecture, care must be taken to position the Enterprise Architecture process as an analytic process that aides in decision making but does not drive it. In the hypothetical case just mentioned, the proper role for EA would be to:

- Identify the costs associated with moving to an external cloud based CRM system (new management tools, training costs)
- Identify the systems that would be impacted and the time frame that deployment would require
- Identify which existing roadmaps (both technology and business) need to be updated
- Identify which application architectures would be impacted

But after that, the decision is up to the organizational leadership. EA managers should not over or under-state the risks and costs.

And if this is a first time deployment of an EA practice in the organization – in other words the precise Outside-In starting point discussed in my earlier paper, then this becomes a great example for demonstrating how EA can help manage innovation regardless of the final decision that the leadership team makes.

Application Portfolio Management is Inside-Out EA

As with Innovation Management, I return to Application Portfolio Management as offering a synergistic path to create or expand an Enterprise Architecture practice. In my previous white paper Enterprise Architecture Inside-Out, I highlighted the use of the Information Technology Infrastructure Lifecycle (ITIL) measures as a structure for evaluating how to deploy an EA practice in an organization.

For an Application Portfolio Management system to be put in place, a technology organization must at least be working on ITIL Maturity Level II (see Enterprise Architecture Inside-Out for details). This includes an inventory of relevant IT systems, infrastructure and processes, and how they interact with the organization's higher level business processes. And in this the alignment between EA and APM is very close.

In fact iServer's Application Portfolio Management offering is a great tool for implementing the APM process precisely because it uses the same iServer technology repository that Orbus' Enterprise Architecture tooling uses.

ITIL – Information Technology Infrastructure Lifecycle (ITIL) Process Maturity Model

ITIL offers a Process Maturity Model for assessing your organization's IT Process management maturity. This helps identify what are the current capabilities of your IT organization as well as what the most effective "next steps" are in the process of improving your IT service capabilities (ITIL 2013).[v]

Where they diverge then is that APM moves on from the inventory of infrastructure and processes to tactical management of actual projects. On a daily and even weekly basis, the exposure to an EA view then is going to be the anticipatory planning for impacts to higher level business processes with the tactical deadlines and status filtered out.

For example, using an Enterprise Architecture approach to help corral the portfolio of applications in an IT organization would involve an inventory of the projects themselves, the technologies they are using, documenting their current state and roadmaps for future states, and the business processes they support. From this, EA would be used to help the leadership team formulate guidelines and policies for introducing new technologies into projects, and perhaps even make decisions to re-platform or obsolesce various projects.

But EA would not be involved in tracking the actual delivery dates or iterative development stages of the projects regardless of what the processes used are (Agile, CMMI etc.).

Let me make a quick note here. Agile with its iterative development processes that often introduce new technologies in a rapid fashion would at first seem contradictory to an EA practice. This need not be so. Integrating Agile Development with an EA practice simply means that part of the evaluation criteria that goes into setting the goals for a particular agile sprint includes conformance with the IT Portfolio standards. Furthermore Enterprise Architecture's documentation of Business Goals, Business Processes and Business Roadmaps enables the creation of more complete "user stories" and use requirements.

Thus EA can be an integral part of helping Agile development to succeed on large projects. But to do so it is critical that the right value be demonstrated rather than EA being the restriction or bottleneck to the process.

Building beyond Innovation or Application Portfolio Management

The one area where both Innovation Management and Application Portfolio Management intersect is when the innovative or disruptive change originates with the IT organization. Examples of such a change can be dramatic; such as the arrival of the World Wide Web, or they can be more subtle such as the recognition of employees asking to be able to connect to corporate networks with personal Consumerized IT devices.

Both of these changes were technology changes that appeared first on the IT horizon even though their implications on business goals, and processes have been profound. Those organizations that have been most successful at capitalizing on these disruptive innovations are invariably ones that have had a solid Enterprise Architecture practices in place. One that is integrated into the organization's Innovation Management processes.

Enterprise Architecture thus provides a bridge between Innovation Management and Application Portfolio Management.

Summary

I would like to offer the following points as a wrap up to this series of four white papers.

- Even though a full organization wide Enterprise Architecture practice is complex to undertake, it is not only possible but critical to start by demonstrating the tangible benefits of an EA practice early on.
- Enterprise Architecture usually is not one single set of tooling. Although solutions like Orbus Software's iServer offer a robust point of integration that can be leveraged by other related processes such as Application Portfolio Management, human processes and corporate culture are part of what is affected by EA as well
- As important as having a solid Enterprise Architecture is in this technologically complex and rapidly changing world, an EA practice should keep in mind that it is a support system for making business decisions. And it should be implemented in a manner that doesn't ossify the organization.

Enterprise Architecture carried out correctly is an incredibly powerful tool. If conducted poorly it can be an expensive millstone. Keep in mind that Enterprise Architecture is there to serve the decision making processes of the organization, not constrain those processes.

References

ITIL (2013) ITIL: from Knowledge, to Proficiency, to Implementation [online] Available at: <http://www.itil.org/en/vomkennen/itil/index.php>

Kelly, P. and Kranzberg, M. (1975) Technological Innovation: A Critical Review of Current Knowledge Volume 1 The Ecology of Innovation [pdf] Available at: <http://smartech.gatech.edu/jspui/bitstream/1853/42155/2/g-43-602_91411_v2_fr.pdf>

Open Group (2011) TOGAF® Version 9.1, an Open Group Standard Introduction [online] Available at: <http://pubs.opengroup.org/architecture/togaf9-doc/arch/>

Orbus Software (2013) Application Portfolio Management Solution [video online] Available at: <http://orbussoftware.com/videos/application-portfolio-management-solution>

Wikipedia (2013a) Innovation Management [online] Available at: <http://en.wikipedia.org/wiki/Innovation_management#cite_ref-1>

Wikipedia (2013b) Project Portfolio Management [online] Available at: <http://en.wikipedia.org/wiki/Project_portfolio_management>

Orbus Software
3rd Floor
111 Buckingham Palace Road
London
SW1W 0SR
United Kingdom

+44 (0) 870 991 1851
enquiries@orbussoftware.com
www.orbussoftware.com