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# Building an Effective Enterprise Architecture Capability

*Using TOGAF® and The Grip Approach*

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## **Executive summary**

The success of Enterprise Architecture (EA) initiatives depends heavily on the way an organization adopts the right EA frameworks and tools, and embeds the practice of EA. EA supports implementation of change in a coordinated way. Building an EA Capability is a process of change in itself, and thus can be supported by EA methods and tools. In this White Paper we describe how a high-level approach for the initiation and development of the EA capability can be derived from TOGAF®, complemented by the Grip Approach: a practical way to manage and govern the process of building an effective EA capability.

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## Introduction

Businesses need to change continuously to keep up with the dynamics in their environments. But many organizations struggle to keep business processes and technology aligned with changes in the direction of their businesses. Enterprise Architecture (EA) has become a popular discipline for managing change in a controlled and structured way, with a strong focus on business needs.

EA is a conceptual tool with many different perspectives and ways to add value. This diversity makes EA powerful because organizations can use its techniques on various levels. For example, on the strategic level, EA supports decision making by providing integrated business and technology roadmaps. On a more tactical level, EA delivers value by providing support for the definition and coordination of change programs, or by proposing and promoting the use of enterprise standards for individual projects.

But unfortunately, there is no such thing as a magic recipe or a one-size-fits-all method for EA. The success of EA initiatives depends heavily on the way an organization adopts the right frameworks and tools, and embeds the practice. Building an EA capability requires evolution, rather than revolution: it takes time to find out what deliverables are most needed and how these deliverables will result in tangible value for the organization.

Management and scientific literature acknowledge this notion. For example, Gartner states that EA is not about one-shot change [1], and Ross, et al. show that EA-enabled change is implemented one project at a time [2]. Our experience is consistent with this: a think big, but start small approach to building and embedding an EA capability is of the essence. Successful initiatives will result in business demand for more sophisticated EA products.

The maturity of the EA capability, or EA practice, has to grow along with this demand for EA products. EA products, and more importantly the effective use of those products in decision making throughout the organization determine the actual value of EA. Therefore, the EA practice should be firmly embedded in change processes, since it magnifies the impact of IT on business performance [3].

This White Paper is based on our own research at BiZZdesign with partners and also on our consulting experience. We have helped many organizations worldwide to be more successful with EA initiatives and practice building. We have found that while EA is an organizational change method, building an EA capability itself is an investment in organizational change.

We will describe how to structure this change process by leveraging the widely accepted industry standard for EA, TOGAF®<sup>1</sup> (The Open Group Architecture Framework) [8]. We also describe how The Grip Approach<sup>2</sup> [9] helps organizations to manage and govern the process of change.

## What is Enterprise Architecture?

Organizations need to adapt to changes in their environment in order to maintain business success. Change can come from all directions, including changing product or market combinations, emerging technologies, new regulations, etc. As a result, organizations face many questions every day. Some typical questions are depicted in the figure on the next page. At first glance, it may seem that these issues are unrelated. However, they do share a common, more fundamental question: How should we organize ourselves? Organizations are complex structures because of their size, variety of products and services, and increasingly global locations and partnerships. They are made up of people, processes and technology that must work together to be successful. The change necessary to keep up with business dynamics can only be achieved in an integrated and coordinated way. This is what EA is all about.

But what exactly is EA? Although EA has been around a few decades already, there are still multiple definitions in use. Some organizations even avoid “Enterprise Architecture” as a name altogether for reasons including this lack of a clear definition, or because they consider it to be merely a part of IT. Other organizations consider it just too theoretical. Also, we often see ambiguity around the role of the Enterprise Architect. In one organization the Enterprise Architect is a direct report to the CIO (or even the CEO) while in another organization the Enterprise Architect plays a role in an IT project team who must ensure project deliverables comply with internal IT standards.

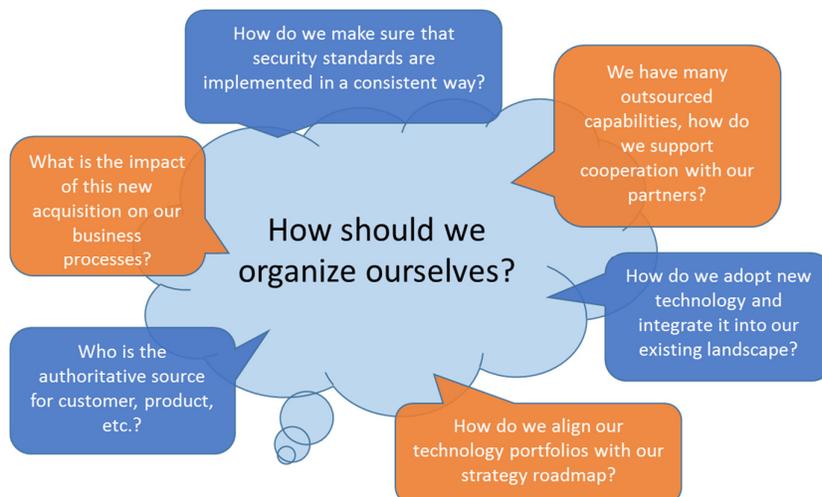
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<sup>1</sup> TOGAF and ArchiMate are registered trademarks of The Open Group

<sup>2</sup> GripManager is a product name of BiZZdesign; GripCard is a registered trademark of JdG Hld BV (Netherlands)

A complete and useful definition is as follows: “EA is a conceptual tool that helps organizations understand their own structure and the way they work. It provides a map of the enterprise and it serves as a route planner for business and technology change. Important uses of it are in systematic business and IT planning/architecting and in enhanced analysis and support for decision-making” [4].

From this definition we can derive a number of characteristics of EA: it provides organizations with a better insight into their complexities, it defines the structure and principles that lead to predictable outcomes of change initiatives, and it results in solutions that are coherent and maximize value.



Organizations face many questions

In order to understand the scope of EA, though, we must understand the meaning of “organization” in this context. In EA an organization, business or enterprise is any group working toward a common goal. This White Paper uses the three terms interchangeably. Therefore, an enterprise might include, for example, a corporation and its trading partners, a consortium of researchers in different institutions, a manufacturer and its supply chain. The scope of EA may vary across different initiatives; one initiative may concern all business units within a company, while another might focus on one business unit and its suppliers.

Another characteristic is that EA can refer both to a product as well as a process aspect. The product aspect of EA refers to descriptions of current or potential future states of the enterprise, which are often captured in documents containing diagrams, text, tables and lists. These descriptions are also commonly captured in models developed with specialized software tools.

The process aspect of EA refers to the development and usage of these descriptions, and, most importantly, the guidance of the organizational changes these descriptions specify. Efficient and accurate EA guidance requires careful attention to the creation, use, preservation and reuse of these descriptions. In addition, effective change leadership requires executive sponsorship, governance, assignment of responsibility and integration with other disciplines such as engineering and project management.



### The Enterprise Architecture Capability

This White Paper is about the development of the EA capability, which includes the people, processes and technology that are needed to execute EA processes, deliver EA products, and lead organizational change.

#### People

EA people requirements are aligned with specific needs, e.g. some organizations require a single Enterprise Architect while others require a large Enterprise Architecture organization, with individuals assigned to specific architecture domains. These domains typically vary in granularity. One organization might have a single Enterprise Application Architect, for example, another might divide these responsibilities among several areas such as finance,

human resources, production control and CRM. Some organizations consider Business Architecture, which is concerned with the structure, motivation and function of organizations to be part of EA; others place it in a separate organization.

EA teams can be structured in different ways. The EA team may be centralized in a single organization, federated among business unit organizations, or fully distributed across teams with specific business or technical responsibilities. Also in the area of management roles in EA there are several options. The EA function may be led by a manager or executive that makes sure the EA people, processes and technology are working together properly, or by a chief enterprise architect that must sign off on all major deliverables. Managers and executives also sponsor EA initiatives and serve on architecture review boards or play other governance roles. Finally, Enterprise Architects and their management may report into various levels of the organization, both within and outside of IT.

### Processes

EA processes need to define the steps necessary to create, manage, and maintain EA products. These processes must also define EA interactions with other functions such as governance, risk and compliance, project and program management, and the systems development lifecycle (SDLC). These interactions need to be clearly defined, socialized and agreed upon by all relevant stakeholders.

### Technology

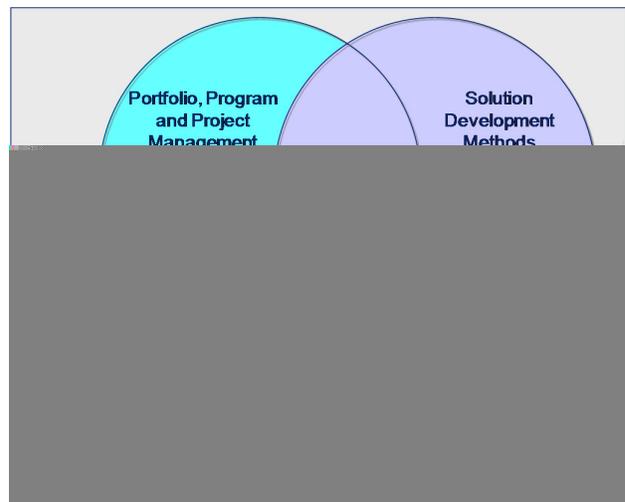
The selection and implementation of EA technology, including software tools and infrastructure, is a critical part of EA capability development. Some organizations use only general purpose productivity and collaboration tools for word processing, spreadsheets, diagramming and presentations, while others use specialized EA software that can that can dramatically increase the effectiveness of the EA capability.

The winning configuration of people, processes and technology for an EA capability is different for each organization. While it is beyond the scope of this White Paper to list all the possibilities, it does show how the TOGAF standard provides valuable guidance.

### Using Enterprise Architecture

Organizations that want to use EA may develop their own approach or leverage one of several standard EA frameworks. Several publications are available that help organizations select a framework or methodology based on its specific requirements. For example, [11] specifically describes the process of choosing the right methodology for EA, and also includes a comparison of a number of EA frameworks.

EA frameworks differ in terms of coverage. Some focus on the product aspect and provide a classification of EA deliverables; examples are Zachman [5] and ArchiMate® [6]. Other frameworks also include the process aspect of EA; examples are Gartner [7], and TOGAF [8]. We favor TOGAF and ArchiMate since they are open standards. Compared to proprietary framework development, the transparent nature of open standards processes results in greater assurance of quality, completeness and industry acceptance.



Integration of management frameworks [8]

Before EA can actually be deployed in an organization, an effort is necessary to define the practice of EA. The selected EA framework, or a combination of EA frameworks, standards and best practices, need to be customized in order to be able to embed it effectively in the organization.

The exact nature and extent of this customization effort, and who should be involved in it, depends on many factors, including type, size, and level of federation of the organization, but also factors that are harder to quantify like the culture, history -including possible previous attempts to introduce EA- and political atmosphere of an organization.

EA is a discipline that supports cooperation and alignment in the organization. Therefore, EA does not operate in isolation. An essential factor for successful development of the EA capability is its integration with other disciplines

that may or may not be already present in an organization. As part of this integration an information exchange takes place in which knowledge about the current and future state of the business is fed into other management frameworks and decision making processes. The integration also includes the alignment of processes, in order to be clear about what deliverables are available and due to particular stakeholders under particular conditions. EA supports various management frameworks, at different levels and in different domains. For example in the business domain EA is indispensable for successful business transformation. In the same way, EA interacts with and supports disciplines such as technology procurement, requirements engineering, risk management, and portfolio management.

Building an EA capability is a process of organizational change

EA methods and tools can be used to support organizational change. This change can pertain to many things such as the redesign of business processes after a merger, or the implementation of a new core transaction system. But also the development of an EA capability is a process of organizational change, for which the same EA methods and tools prove to be very helpful.

So far we described what EA is, and what important aspects are for the effective use of EA in an organization. Also, there are several arguments described above suggesting that – in order to maximize business value in the short and long run – EA as a conceptual tool and ‘route planner’ for the enterprise should be developed in an incremental manner, growing from not-existent to a fully matured EA capability. As the maturity of the EA capability grows, the impact on the organization of EA processes and products will grow along.

In the next part of this White Paper we will focus on the practical aspects of the introduction and development of the EA capability in the organization. In order to devise an effective program that organizes and coordinates the many steps of that process, we will build on the methods and techniques found in TOGAF, the Open Group Architecture Framework. While TOGAF provides guidance for the structure, another important ingredient to tackle challenges is a practical tool for the management and governance of the development process. We have brought together our expertise and experience in order to develop such a tool, that we call The Grip Approach. We will first elaborate on the EA framework TOGAF, before we describe how The Grip Approach can be used to build a strong and effective EA Capability.

## What is TOGAF?

TOGAF is an architectural framework, and offers a complete toolkit for building an EA. Earlier we mentioned a number of factors to consider when selecting the right EA framework for a specific organization.

In that respect, TOGAF is an open standard, with a significant name recognition and industry support. Experience and best-practice cases are shared among the community, and are input to updates to the standard. TOGAF covers all the aspects relevant for a complete EA approach. It is a comprehensive standard, yet flexible. In our consulting practice TOGAF proves to be relatively easy to customize, and it provides detailed guidance on integration and combination with other management frameworks and methodologies such as SOA, security frameworks, and modeling languages.

TOGAF focuses on the process aspect of EA with significant support for the product aspect. The core component of the TOGAF framework is the Architecture Development Method, or ADM. The ADM describes the steps in the process of developing an EA, while the Architecture Content Framework recommends specific sets of artifacts to be produced by one phase and consumed by another. The TOGAF standard also provides a model for an EA Capability called the Architecture Capability Framework. As the ADM and the Architecture Capability Framework are the most relevant parts of the TOGAF standard for this White Paper, we will focus on these

TOGAF® Architecture Development Method (ADM) [8]



Other components of TOGAF include techniques and methods in support of the ADM, as well as an Architecture Content Framework that defines viewpoints for a comprehensive EA description. Moreover, an abstract structure for the Enterprise Repository and two reference models are part of the TOGAF standard.

### The TOGAF ADM

The Architecture Development Method (ADM) is depicted in the above and shows what the steps are and the order in which they are typically executed. The ADM starts with a preliminary phase as depicted at the top of the figure, outside the circle. In this phase, the organization is assessed and prepared for the implementation of change. Then phase A involves determining principles and creating a high-level vision of the enterprise that encompasses desired change. In phases B, C and D, this high-level vision is elaborated for the business, information, application, and technology domains. Gaps between the current and the target situation are identified. Phases E and F involve defining the approach to implement the change, determining priorities, and initiating programs and projects. In phase G the actual implementation is underway. Governance processes make sure that the work in progress is kept aligned with the EA. Phase H and Requirements Management are ongoing processes that continuously check if the current EA is still the best fit given business dynamics, goals and business strategy. For more detailed information on TOGAF and the ADM refer to the TOGAF 9.1 Specification [8].

### The Architecture Capability Framework

A valuable point of reference in the TOGAF standard for organizations looking to set up an EA Capability is the Architecture Capability Framework. The figure on the left gives an overview. The “Skilled Resource Pool” describes typical roles of the architecture functions, and also provides guidance for the necessary level of skills and knowledge for these roles. The framework also describes best practices for embedding the EA Capability in the organization, as well as for executing architecture governance. It visualizes the relationships between EA, project and portfolio management and business operations.

Architecture capability framework [8]

### Four high level phases

One of the advantages of the TOGAF standard and the ADM in particular is that it is a very complete description. It covers every aspect on the path from strategy to implementation of any type of business change. But these details can be overwhelming. The picture on the next page summarizes the ADM in four steps:

1. Getting the organization committed and involved;
2. Getting the architecture right;
3. Making the architecture work;
4. Keep the process running.

This helps Enterprise Architects grasp the scope and goals of the ADM and explain it to stakeholders more easily.

These four high-level steps prove in our experience to be an effective starting point for EA Capability development. As the maturity of the capability is still low, there is not yet a need for the impressively detailed guidance that the ADM provides. Instead, the focus should be on essential guidance for activities to initiate, demonstrate and evolve the EA capability. Moreover, as the capability matures, the ADM process model can be further implemented and used for planning and execution of more challenging EA efforts.

## Building an effective EA capability using The Grip Approach

Building an EA capability is a process of business change. It is best to think big but start small by managing the process as a program with iterative and incremental steps, based on a long term vision, often spanning 3-5 years. Each step must add measurable and visible value, and priorities should be based on the needs and the change capacity of the organization. The TOGAF standard, and specifically the Architecture Development Method (ADM) and the Architecture Capability Framework, can be leveraged as a structure for setting up or improving an Architecture Capability in your organization.

The missing ingredient, though, is a method for managing this process. Based on our experience with the implementation of organizational change, including the building of EA practices, we developed The Grip Approach. We now describe The Grip Approach and explain its use with TOGAF to build an effective EA capability. We use a case study based on an actual situation to support our explanation.

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### Building the EA capability at a North American Telecommunications Company

The Telco is a key player in the telecommunications industry in North America, and operates several lines of business (LoBs). The company had expanded dramatically in just a few years' time through many mergers and acquisitions.

As a result, the technology landscape had evolved to be very heterogeneous, and was characterized by local rather than global optimization. Some business functions, e.g. customer administration and billing, seemed to be duplicated and supported by different technology over the various LoBs. In order to face these challenges, the organization decided to leverage EA techniques and build an EA capability. EA would provide the company with a better understanding of its many bits and pieces and more importantly, how they are connected and supposed to work together. These insights would support decision making on various topics, such as rationalizing business capability and technology portfolios. The EA capability would also help the company with strategic and tactical planning such as adoption of new technology standards and planning of new product releases.

The Telco examined standards and frameworks for EA that could help accelerate the development of the EA capability. Some standards were already in use, but the main focus of the existing standards was on requiring the use of certain modeling languages and software tools, and on component design rather than on EA. The Telco found that the TOGAF standard included elements that would fill current gaps, of which the most important were a coherent and flexible process model for EA as well as a clear focus on EA issues. While TOGAF would ultimately provide structure and guidance for EA processes, it would first be used for building the EA capability.

At the start of the initiative, a team was formed and tasked with setting up the EA practice. The team members received formal training and certification in TOGAF. This not only brought to the table all the details of the standard, it also started the discussions on how EA and TOGAF would bring value to The Telco. The team decided to develop the EA Capability incrementally using the TOGAF Architecture Development Method (ADM). The focus of the first iteration was on the adoption and adaptation of the framework for effective use in the organization. This first iteration was structured in four steps based on the ADM:

1. Getting the organization committed and involved
2. Getting the Architecture Capability right
3. Making the Architecture Capability work
4. Keep the process running

We will describe key activities within each of the four steps following the guidance found in TOGAF, and illustrate the use of The Grip Approach in order to manage and govern the process.

### The Grip Approach

The Grip Approach was developed by BiZZdesign in order to support the management and governance of change processes in organizations. It is based on the balanced score card concept [9]. The Grip Approach provides insight into the change process and its progress. It is generic, and has flexibility for easy adaptation, in order to align with the terminology specific to each organization. The method is supported with a simple web-based tool. GripManager combines key functions that are needed to support The Grip Approach, including the flexibility to break down a complex task into sub-tasks, and link to personnel responsible for completing each task. Also, progress can be managed and governed by defining milestones and deliverables. In this way, at all times reports can be generated that visualize progress. Moreover, the actual deliverables can be stored and maintained in the GripManager, and an approval process can be configured, allowing traceability of version and approval history.



The Grip Approach was initially set up for the practical support of change processes in general and was successfully applied in various change initiatives such as business process transformation projects and large scale enterprise application integration projects [3]. We have since expanded The Grip Approach for the development of an EA capability via the simplified ADM steps described above.

### What is Grip?

Grip means that an organization maintains a firm grasp on the change process. The organization is in control at all times. Grip involves:

- Having a clear overview of all activities: planned, in-flight, and finished;
- Clearly defining roles and responsibilities;
- Maintaining insight into the current status of the change process;
- Transparent and coherent progress reporting.

## GripCards

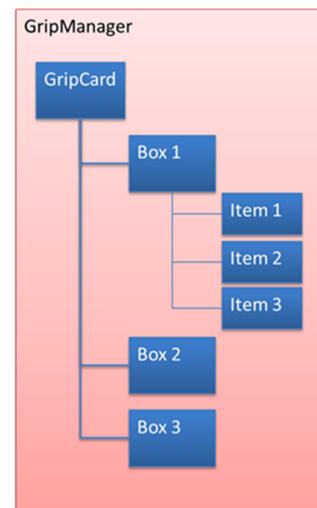
In The Grip Approach, a change process is divided in a number of steps. This aligns well with the stepwise and iterative style of the TOGAF ADM, which provides a basic structure for developing an EA capability.

For each step, a balanced scorecard, or GripCard is set up. On each GripCard a breakdown of activities can be defined. These activities can be flexibly selected and customized for a specific organization depending on many factors including size, maturity, formality, etc. In GripManager, activities on a GripCard can be divided into boxes, and subdivided into items, as depicted in the figure on the right.

### Assign roles to activities

Roles can be assigned to all levels of activities documented on GripCards. This makes ownership and accountability of activities explicit.

The EA capability has multiple aspects, including people, processes and technology. These aspects need to be developed individually, so that they contribute to the value of the EA capability as a whole. But the development of the individual aspects needs to be realized in coherence and alignment with the other aspects. That is why we see in practice that, during the development of the EA capability, multiple initiatives are underway simultaneously and in different parts of the organization. For example, while one team is working on the definition of EA modeling standards, another team is working on documenting Architecture principles, while yet another team is tasked with the integration of the portfolio management process with EA. In order to keep an overview of who is responsible for each activity, roles or names can be assigned to activities on the GripCard, Box, and Item levels. In GripManager, reports can be generated based on assigned roles and names.



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### At The Telco: Getting the organization committed and involved

The main goals of this first phase were to set up the initiative, formally kick it off and subsequently start building a vision for the role and added value of EA. This is an essential step, as a clear understanding of the vision and goals of EA is indispensable to attain executive sponsorship and ultimately get the organization committed and involved. Another activity in this phase was to perform an assessment of the current state of affairs in order to define the road map for the development of the EA capability.

The ultimate vision for EA to add value to the business was to enhance decision making at the corporate level by bringing together multiple perspectives on the enterprise. Specific goals included:

- Identification and elimination of duplicate enterprise functions
- Consolidation of technology platforms enabling reuse
- Simplification of the enterprise capability portfolio enabling agility
- Introduction of enterprise standards enabling more effective corporate governance

Given the current state of the architecture function, the team proposed a phased approach. Based on the high level goals, sub-goals for the first iteration were defined. The focus for this iteration was on getting the EA function organized, and effectively integrated with other management frameworks, with a focus on the dominant project management office (PMO).

The goal was to design EA support in such way that it would allow the projects to deliver consistent and repeatable solutions that are in alignment with business needs. The key components of this design included standardized EA deliverables, and a consistent engagement model for interaction with the project management framework that was in use and maintained by the project management office. With this in place, projects would be able to leverage EA deliverables, including high-level design documents that outline principles, standards and requirements for the project in an early phase. This would ensure a better fit within the existing technology landscape, and would support enterprise synergies such as reuse of functionality and consolidation of platforms.

At The Telco, the team defined a number of tasks as part of this phase and according to The Grip Approach, a GripCard was created in order to structure the process and keep track of progress. Also, roles were

assigned to each of the tasks and documented following The Grip Approach. The picture below shows the resulting GripCard in the GripManager.

The screenshot shows the BiZZdesign GripManager interface. At the top, there is a navigation bar with the BiZZdesign logo and 'GripManager® 1.0.0-SNAPSHOT'. Below the navigation bar, there are several tabs: 'MY GRIPCARD', 'MY TASKS', 'REPORT', 'GRIPCARD CONFIGURATION', 'MANAGE USERS', and 'USER INFO'. The main content area is titled 'Building the Architecture Capability' and includes a subtitle 'Gripcard for Strategic (Download Gripcard document)' and the author 'Sven Van Dijk'. The GripCard is divided into four main sections, each with a list of tasks and their status indicators (represented by colored squares):

- 1. Getting the organization committed and involved**
  - 1. Determine long-term vision for the EA capability (Green)
  - 2. Perform a current situation maturity and value assessment (Yellow)
  - 3. Think big, start small: determine goals and objectives for the first iteration (Orange)
  - 4. Identify and involve key stakeholders, and kick-off the initiative! (Green)
- 2. Getting the architecture capability right**
  - 1. Select and tailor standards and best practices for the people, process, and technology domains (Green)
  - 2. Embed standards and best practices in the organization (Orange)
  - 3. Train/educate employees in architectural roles (Red)
  - 4. Engage stakeholders (Yellow)
- 3. Making the architecture capability work**
  - 1. Finalize the organization specific, and integrated framework (Yellow)
  - 2. Organize "coaching on-the-job" for employees in architectural roles (Orange)
  - 3. Educate stakeholders (Orange)
  - 4. Select a pilot project (Red)
- 4. Keep the process running**
  - 1. Measure results and evaluate pilot project (Red)
  - 2. Compare against goals and objectives for this iteration (Red)
  - 3. Review vision, and plan next iteration (Orange)
  - 4. Communicate success to stakeholders! (Yellow)

One of the outcomes of the assessment of the current architecture function was that several architecture groups existed, but they were scattered across the organization, and in a rare case even not aware of each other's existence. Moreover, each of these groups were using their own frameworks and tools, and had their own set of stakeholders and ways to interact with them. In summary, there was definitely a baseline EA Capability, but lacking a solid foundation for EA.

**Key activities in the phase *Getting the organization committed and involved*:**

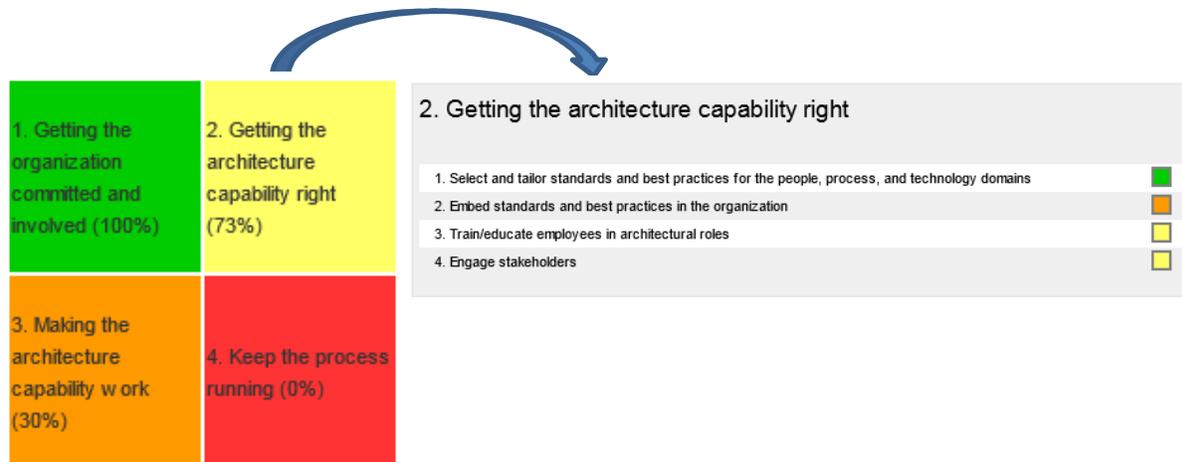
- Determine long-term vision for the EA capability
- Perform a current situation maturity and value assessment
- Think big, start small: determine goals and objectives for the first iteration
- Identify and involve key stakeholders, and kick-off the initiative

**Keep track of status**

Status indications for the high-level steps as well as individual initiatives are an integral part of The Grip Approach. Milestones in the process can be realized by progressing and ultimately delivering on the items that are part of the GripCard. Also, priorities can be assigned to items. Progress and priority determine the status on the level of the box and the GripCard. These milestones, as well as priorities can be configured in the GripManager tool, and based on this information the progress of the implementation process can be visualized in a simple dashboard format.

## Generate management dashboards

At any time, reports can be generated that visualize progress. Reports on an overview level are formatted as management dashboards, with the use of colors to create a heat map representing progress. In the GripManager tool these reports can be generated automatically, and can be drilled down to underlying activities in boxes and



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### At The Telco: Getting the architecture capability right

The real design work for the Architecture Capability happens in this phase. The Architecture Capability consists of the people, processes and technology necessary to execute EA processes and deliver EA products.

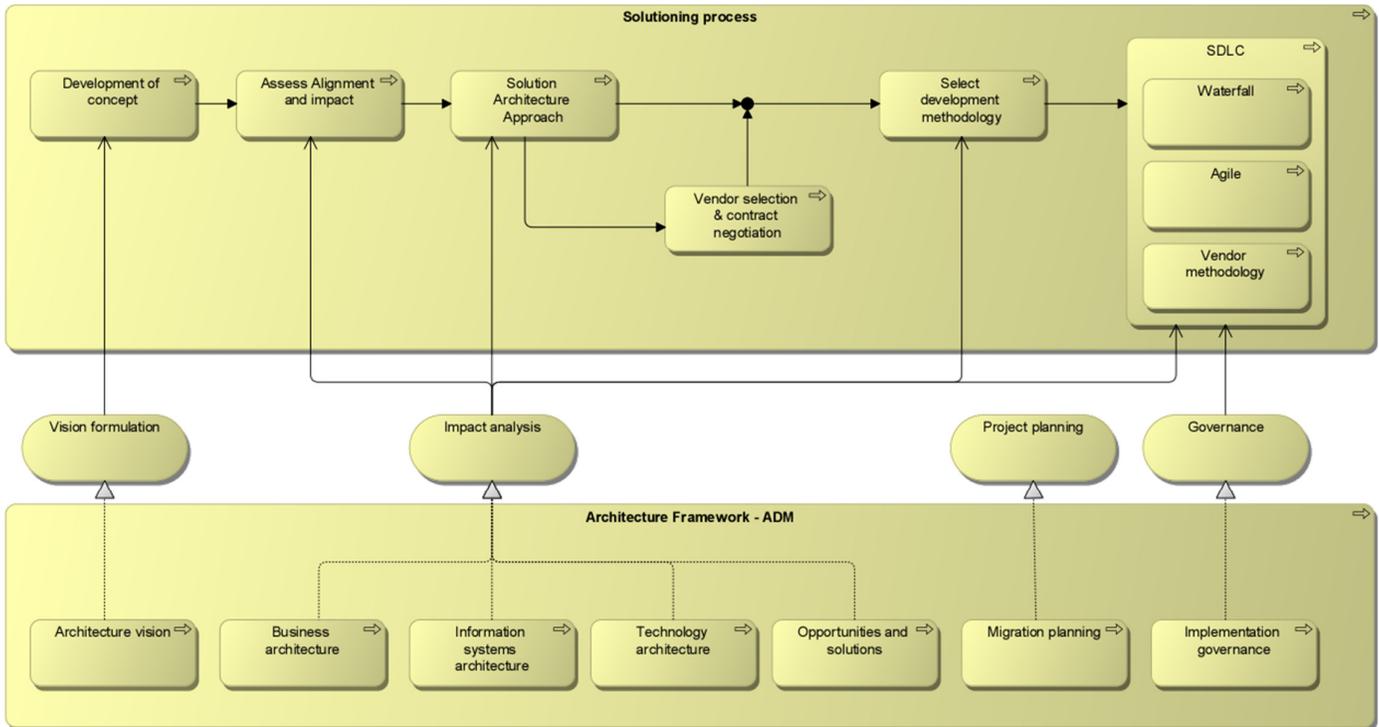
In the people domain, a design of the organization of the EA capability needed to be created. The Telco leveraged the Architecture Capability Framework from TOGAF as guidance for the definition of roles and the necessary skills and knowledge for each role. For this part, the team worked in close cooperation with the human resources department in order to formally define and document role descriptions and associated training needs. The roles and reporting structures were modeled as a traditional organizational chart.

In the process domain the focus was on the integration with the project management framework. Key stakeholders from the Project Management Office (PMO) were involved to define the integration points between the EA processes (based on the TOGAF ADM) and the project management processes that were based on both traditional waterfall and agile development approaches. Models of both processes and integration points were used to build common understanding and consensus.

The diagram on the next page is a simplified visualization of the design that resulted from this project. The ArchiMate® modeling language is used here to depict how an ADM cycle can guide one to many solution development efforts. Similar to the TOGAF standard, the ArchiMate language is an open standard by the Open Group. It focuses on modeling at the level of EA, and is in this example used to capture both EA and PMO process frameworks, while focusing on the interactions between them. For more information on the ArchiMate language, see the ArchiMate specification [6].

The efforts in the technology domain at the Telco focused on an assessment of the tools already available. It turned out that most of the teams used their own software for modeling and analyzing architecture models, but also that some software tools were not in use since there were no guidelines on how to use them.

The team acknowledged that an essential aspect for EA modeling is stakeholder communication: the variety of target audiences including stakeholders with business and technical backgrounds need to be addressed in language that is clearly understood. This was the most important principle underlying the consolidation effort for EA tooling.



The integrated design of the Architecture Capability in this phase resulted in a number of deliverables including the above mentioned process description but also organization charts, templates for deliverables, a set of technology principles and standards for EA tools. The structure of the Grip Approach was leveraged in order to make these artifacts available in a central place. The deliverables from this initiative are by definition living documents, since the output from this first iteration will be input for the next one. The Grip Approach and GripManager allowed the team to reuse the content and manage versions.

**Key activities in the phase *Getting the architecture capability right*:**

- Select and tailor standards and best practices for the people, process, and technology domains
- Embed standards and best practices in the organization
- Train/educate employees in architecture roles
- Engage stakeholders

**A central repository for EA artifacts**

The activities that are executed as part of the EA initiative, and defined on a GripCard result in deliverables. Examples of deliverables are templates for EA artifacts that will be used for future EA projects, such as an Architecture Definition Document (ADD). A template lists the sections that are expected to be completed as part of an EA project, and includes documentation, guidance and best practices on how to populate the sections of the document. Other deliverables can be of an organizational nature, such as descriptions of roles in the EA team (Lead Architect, Domain Architect, Member of the Architecture Board, etc.) as well as an organizational chart of the EA capability. These deliverables should be located in a central place for easy retrieval. The GripManager tool can act as a repository for EA artifacts and provide version control as these artifacts are maintained. Moreover, ownership for particular EA artifacts can be assigned and managed in the GripManager tool.



## 1. Finalize the organization specific, and integrated framework

Go back

Description	Integrate domain architectures into an organization specific Architecture Framework
Documentation	EA Capability components in the people, process, and technology domain
Percentage completed	80% (Open)

Questions and answers	History
EA deliverable document templates	
Statement of Architecture Work (SoAW) Statement of Architecture Work SoAW_TEMPLATE.docx	
Architecture Development Document (ADD) Architecture Development Document ADD_TEMPLATE.docx	
Architecture Contract Architecture Contract_TEMPLATE.docx	

### At the Telco: Making the architecture capability work

After some weeks of intensive work, the team was able to integrate the various bits and pieces (people, processes and technology) into an organization specific Architecture Framework (TAF, Telco's Architecture Framework). Characteristics of the resulting framework included consistency, integration of business, application, information and technology architecture, and a business focus from strategy to implementation. The team not only focused on the design work itself, but also on the continuous involvement and collaboration with stakeholders. This did require a number of small meetings, presentations and town hall meetings, in order to gain enough visibility in the organization, but possibly even more valuable were the occasional ad-hoc meetings at the coffee machine.

So TAF 1.0 was ready to deliver value, but as always: the proof of the pudding is in the eating. A pilot project was selected to test the EA framework. While the newly designed EA processes and products had a clear positive impact on the pilot projects in terms of quality, cost and on-time delivery of projects, there was also valuable feedback that was incorporated in a second iteration.

#### Key activities in the phase *Making the architecture capability work*:

- Finalize the organization-specific integrated framework
- Organize coaching for employees in architectural roles as they do their jobs
- Educate stakeholders
- Select a pilot project

### Expand the Grip Approach for EA projects

Once the EA capability is in place and growing in maturity, it adds value by identifying and initiating EA projects. For these projects, The Grip Approach can be reused. With the GripManager tool configured and running, new GripCards can be created to manage and govern EA projects. The initial GripCards that were defined for building the EA

capability itself, can be taken as starting point, and expanded for an EA project by adding more detailed activities based on the TOGAF ADM. These activities can be explicitly captured on GripCards. The project documents and deliverables are created based on the templates available in the GripManager, and completed deliverables can be approved and stored in the GripManager in its role as central repository of EA artifacts.

### At the Telco: Keep the process running

For the pilot project, a new GripCard was configured, by building on the existing configuration. The four high-level ADM steps were expanded to match the steps as defined in TAF (Telco's Architecture Framework), as depicted in the figure below.

The screenshot shows the BiZZdesign GripManager interface. The header includes the BiZZdesign logo and 'GripManager® 1.0.0-SNAPSHOT'. Below the header is a navigation bar with tabs: MY GRIPCARD, MY TASKS, REPORT, GRIPCARD CONFIGURATION, MANAGE USERS, and USER INFO. The main content area is titled 'EA project' and contains a sub-header 'Gripcard for Strategic (Download Gripcard document) Sven Van Dijk'. The dashboard displays 10 activity cards, each with a title and a list of tasks with progress indicators (colored squares):

- A. Architecture Vision**
  - Develop Architecture Vision (Green)
  - Define principles and standards (Green)
  - Determine stakeholders (Yellow)
- B. Business Architecture**
  - Develop target architecture for Business (Yellow)
  - Perform gap analysis (Orange)
  - Determine roadmap components (Red)
- C. Information systems Architecture**
  - Develop target architecture for Application and Information (Yellow)
  - Perform gap analysis (Yellow)
  - Determine roadmap components (Orange)
- D. Technology Architecture**
  - Develop target architecture for technology (Green)
  - Perform gap analysis (Green)
  - Determine roadmap components (Yellow)
- E. Opportunities and Solutions**
  - Perform integrated gap analysis (Yellow)
  - Develop initial architecture roadmap (Orange)
  - Define transition architectures (Red)
- F. Migration Planning**
  - Develop Implementation and Migration Plan (Orange)
  - Coordinate Implementation with stakeholders (Orange)
  - Perform business value and cost analysis (Orange)
- G. Architecture Governance**
  - Provide Project Start Architecture (PSA) (Red)
  - Perform Architecture Reviews for projects (Red)
  - Manage exceptions (Red)
- H. Change Management**
  - Monitor and review Change Requests (Red)
  - Monitor and Analyze performance (Red)
  - Execute Architecture Board meetings (Red)
- RM. Requirements Management**
  - Monitor Architecture Requirements (Red)
  - Manage Architecture Requirements (Red)
  - Make Architecture Requirements available (Red)

Think big, but start small was the guiding principle for the development of the EA capability in this organization. The first iteration included an initial design and test of an organization specific architecture framework, based on the TOGAF standard. Although this first iteration resulted in added value for a selected group of stakeholders, the ultimate goal for EA was not yet achieved. Subsequent iterations were needed to further develop the EA capability.

Input for the next iteration not only came from the learning experiences and feedback of the first iteration, but also from the reassessment of business priorities at this point in time. At The Telco, the consolidation and rationalization of technology portfolios became an urgent priority. This resulted in shifting the focus to the introduction and effective management of enterprise standards.

#### Key activities in the phase *Keep the process running*:

- Measure results and evaluate pilot project
- Compare against goals and objectives for this iteration
- Review vision and plan the next iteration
- Communicate success to stakeholders

## Summary and conclusion

In order to cope with business dynamics, organizations need to change continuously. Enterprise Architecture (EA) has become a popular discipline for managing change in a controlled and structured way, with a strong focus on business needs. Before EA can be effectively used in an organization, an effort is necessary to build an EA Capability. The EA Capability is the business function that includes the people, processes and technology that are needed to execute EA processes, and deliver EA products.

The success of EA initiatives depends heavily on the way an organization adopts the right EA frameworks and tools, and embeds the practice of EA in the organization. Building an EA capability is evolution, rather than revolution, and should be approached based on a long term vision and structured as an iterative process with measurable added value per each step. A “think big, but start small” adage is of the essence: while the EA Capability is gradually evolving to its envisioned position, it should deliver value early on, by identifying those EA deliverables that are needed the most, and defining priorities accordingly. What those deliverables are is specific to the organization, and depends on type and size of the organization, but also its culture, history and other factors.

EA supports implementation of change in a coordinated way. Building an EA Capability is a process of change in itself, and thus can be supported by EA methods and tools. In this White Paper we described how a high-level approach for the initiation and development of the EA capability can be derived from TOGAF, and especially its core component the Architecture Development Method (ADM). This high level approach consists of four steps:

- Getting the organization committed and involved
- Getting the Architecture Capability right
- Making the Architecture Capability work
- Keep the process running

The steps above provide a solid structure for the process of setting up an EA Capability in the organization. But in order to be successful, there is a need for another ingredient: a practical way to manage and govern the process. In this White Paper we described how to leverage The Grip Approach to this end. The Grip Approach provides oversight for change processes in general. By translating the four high-level steps above to the structure of the Grip Approach, the organization has a strong tool for keeping track of the success of the EA capability.

The Grip Approach is supported by an easy-to-use, web-based tool: GripManager. The steps in the process can be managed and governed based on balanced scorecards (GripCard). Progress can be tracked and visualized. Moreover, the GripManager tool acts as a central repository for EA artifacts. Once the EA Capability is established, the Grip Approach can be refined for use in EA projects. The GripManager can be configured accordingly. With the GripManager tool configured and running, additional GripCards can be created to manage and govern EA projects. The initial GripCards that were defined for building the EA capability itself can be taken as starting point, and expanded for an EA project by adding more detailed activities based on the TOGAF ADM.

Many organizations struggle to build an effective EA practice. In this White Paper we showed how the combination of the TOGAF framework with The Grip Approach enables the development and continuous improvement of an EA capability.

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