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ORGANIZATION MAP DEVELOPMENT FOR THE EDUCATION SECTOR USING THE TOGAF STANDARD: THE CASE OF THE GREEK MINISTRY OF EDUCATION

by

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To Maria, the eternal warrior.

Until we meet again.

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Abbreviations

ADM	Architecture Development Method
APQC	American Productivity and Quality Center
CMO	Common Ministerial Order (Κ.Υ.Α.)
DoD	Department of Defense
DoDAF	Department of Defense Architecture Framework
EA	Enterprise Architecture
FEAF	Federal Enterprise Architecture Framework
IFEAD	Institute for Enterprise Architecture Developments
HEI	Higher Education Institution
IISPM	Integrated Information System for Personnel Management (ΟΠΣΥΔ)
IS	Information Systems
IT	Information technology
ITS	Information Technology Systems
IVT	Institution of Vocational Training (IEK)
NAFv4	The NATO Architecture Framework version 4
PCF	Process Classification Framework
SPSC	Supreme Personnel Selection Council (Α.Σ.Ε.Π.)
TAFIM	Technical Architecture Framework for Information Management
TOGAF	The Open Group Architecture Framework

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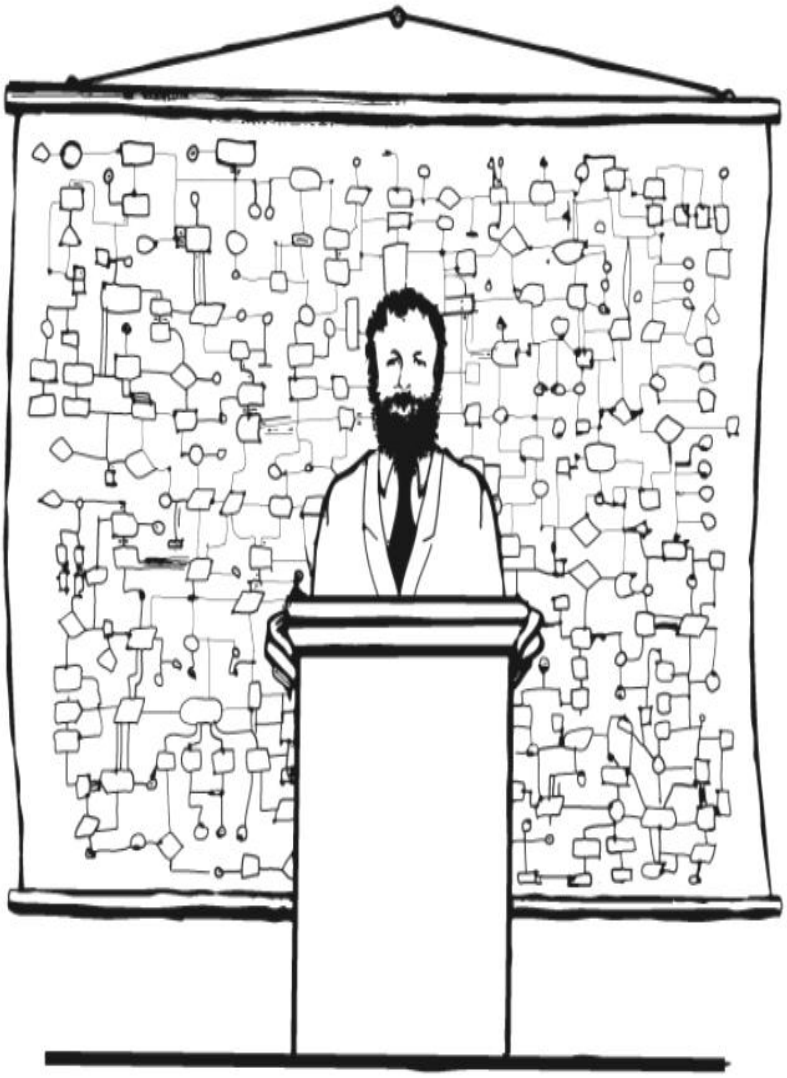


"Now that you have an overview of the system, we're ready for a little more detail"

Source: wikipedia.org

Abstract

This thesis aims at achieving two ends. The first is to explain what Enterprise Architecture is, and how it can be of practical use to any business or organization, public or private, in the event they come across change , be it unforeseen or anticipated. The second is to present to the reader the way to tackle it, with the help of specific EA tools and constructs that can assist any entity cope with difficulties, minimize risks and reach informed decisions for them to thrive and rise above challenges successfully. For the sake of the present thesis, a public organization was used, that of the Greek Ministry of Education and Religious Affairs, and, more specifically, a part of it, namely the Directorate for Appointment and Recruitment of Primary and Secondary Education Personnel.

The first part familiarizes the reader with the basic terms of Enterprise Architecture, analyzes its benefits and significance. What is more, it makes a retrospection of some of the most well-known organizational frameworks in existence. It also introduces and explains the concept of organization maps.

The second part analyzes the organizational framework the author has chosen to utilize in this thesis which is the Open Group TOGAF standard, and its tool, the organizational map.

The third part showcases the situation concerning the use of EA tools in the public sector in general, and in the Greek public sector more specifically. Then, the Greek Ministry of Education and Religious Affairs is described in detail.

In the last part, the methodological steps that led to the designing of the Directorate for Appointment and Recruitment of Primary and Secondary Education Personnel organization map are displayed one-by-one.

Key-words: enterprise, enterprise architecture, organizational map, TOGAF, framework, Open Group

Introduction

"All we ever know is our models, but never the reality that may or may not exist behind the models. …Our models may get closer and closer but we will never reach direct perception of reality."

Stephen Hawking

There is a very important question looming in the corners of each entity's effort to move forward, excel, and succeed: "*Who knows the most about our organization?"* The answer might seem puzzling, because it involves so many: Everybody!

In today's international business landscape, businesses are looking for appropriate synergies among business units, functions, and geographies. They are looking to extend their boundaries with joint ventures and strategic partnerships. This is next to impossible without inspired, visionary leadership to design the appropriate business processes. On top of that, these business processes need to support integration and transparency on many levels: IT, financial, HR and of course, a strong digitized platform to support those processes. Therefore, in order to be complete, the architecture of an enterprise by definition requires collaboration and communication from all areas and levels of the enterprise.

In a nutshell, businesses turn to Enterprise Architecture (EA) for two main reasons. The first is because they desire to develop the business in all its aspects (be it vision, strategies or IT systems) and the second one is because they want to ensure its quality (Persson & Stirna, 2001). What is more, Enterprise Architecture is -as is largely described by many successful companies who dominate the field like Gartner and Ardoq- a discipline that can help an enterprise triumphantly tackle present or future challenges that usually come with the form of change. They help them by adjusting policies and projects to achieve targeted business outcomes that capitalize on relevant business disruptions.

From the above one can comprehend what a crucial role EA can play in the development of a business or organization and how many involved parts and information have to be taken into consideration to make sure that no aspect is left unresearched. All this, to the best interest of practically everyone involved in that business, at least -according to Steven Hawking's quote at the beginning of the introduction- on paper.

UNIT 1: LITERATURE REVIEW

In this unit, the terms *enterprise*, *enterprise architecture*, *organization mapping and organization framework* will be discussed and analyzed, along with the reasons why they are so important to take into consideration when dealing with an organization.

1.1 Enterprise architecture

In this section, an effort is made to answer what an enterprise and what enterprise architecture is, and what its advantages to an organization are.

1.1.1 What is an enterprise?

Even nowadays, there is lack of commonly accepted vocabulary in the field of enterprise architecture – a term which is elaborated in the next section- and it is noticed that, very often, the same term is used with different meanings and different terms are used with the same meaning (Lapalme, 2012). Since a universally-acknowledged definition does not exist to this day, one must begin with the very basics.

According to Cambridge Dictionary, an enterprise is "*an organization, a company, or a business"* or *"a business activity in general",* as well as (interestingly enough) *"a business plan or project, especially one that is difficult or that may fail or lose money"*[1] . The last part of the definition embodies the concept of risk. Thus, the creation and managing of an enterprise can be a jeopardous venture by people who are willing to assume risks by investing time and money into something which may or may not be successful, but which will attribute a lot of profit to them, if it is. (Knight, 1964; Deakins & Freel, 2012)

Moreover, according to Giachetti (2021), the term enterprise covers various types of organizations, independently of their size, ownership, modus operandi, or location. For him, an enterprise is the sum of people, information, processes, and technologies. Therefore, it becomes very clear that to even describe what an enterprise consists of can prove to be a challenging task, given the fact that there are a multitude of components that form its entirety along with a variety of ways in which they interconnect.

Davenport (1998), in a very insightful article, stresses the utmost importance of this interconnection among different units of an enterprise and how important their communication is. If the enterprise is just a set of fragmented components, neither value not profit is added to it.

[1]Definition of enterprise. (2022). *Cambridge Dictionary*.

Thus, a question arises: how can it all be descriptively represented in such a way, that all the segments of an enterprise are included, so that a comprehensive view of what this enterprise is and entails and how its different components interconnect is created? An effort to tackle the answer to that question can be found in section 1.2. .

1.1.2 What is Enterprise Architecture?

Many specialists in the field IT have offered definitions of EA, some of which are mentioned in the present section.

Enterprise architecture (EA) represents a higher-order view of an enterprise's processes and systems, how they interconnect, and the extent to which these processes and systems are shared by different parts of the enterprise. EA aims to help in the creation of a platform that will aid in the materialization of an organization's future goals and serve as a blueprint for reaching their vision (Tamm, Seddon, Shanks & Reynolds, 2011). In it lies the ability to provide a clear and comprehensive picture of an entity, whether an organization (e.g., federal department, agency, or bureau) or a functional area that cuts across more than one organization (Kappelman, 2010).

As Zachman puts it (2007), if one is dealing with an object whose structure is so simple that all of its components can be described without struggle, then one is in no need of EA. EA comes to the forefront when 1) what one is trying either to create or to describe is very complex to the extent that one cannot detect or remember all the details at once, and 2) when this object or entity is prone to constant on-going change. The latter part, that of change, is also included in the EA definition of one of the leading IT specialists in the world, Gartner: "…*identifying and analyzing the execution of change toward desired business vision and outcomes*"[2].

The Institute for Enterprise Architecture Developments (IFEAD) sees in EA a complete representation of an enterprise. They consider it an action plan that functions as the connective force among its vision, goals, strategy, processes, IT software and hardware, as well as infrastructure and materials involved (2006).

The list above is not extensive; however, it offers a satisfactory insight into the meaning and contents of Enterprise Architecture.

[2] Definition of Enterprise Architecture (EA) - Gartner Information Technology Glossary Gartner_Inc https://www.gartner.com/en/information-technology/glossary/enterprise-architecture-ea

1.1.3 The importance and benefits of EA

If an organization wishes to be successful, it should undoubtedly be led by a vision. According to Suranga, (2014) vision is the major concept of strategic planning of an organization. It is how the organization sees itself in the future and provides it with a direction it should be working toward. Of course, it is not easy to do that, and the more complex the vision, the more complex the network or routes to follow, in order to make it a reality. In other words, a certain strategy must be deployed. This is the part where EA comes in.

The belief that the use of EA can lead to the realization of many benefits, either direct or indirect, is shared by many authors, namely Aier (2014), Boh and Yellin (2007), Lange (2016), Schmidt and Buxmann (2011) and others. Of course, as Niemi and Pekkola point out (2020), for the benefits of EA to be realized, a series of separate constructs and the multiple ways in which they interconnect, are required. That is, it is not always a simple, linear procedure of a construct leading to a certain benefit, without anything else occurring in between. In most cases, there is interweaving of multiple constructs that lead to the realization of any benefit possible to emerge from the use of EA. That is, all the benefits that are realized are not immediate, but might be coming as indirect results of other benefits. For example, EA process quality leads primarily to documentation quality and at the second level, in process cohesion.

EA is similar to strategy, in that it aims to describe the organization's vision, but in excruciating detail. An entity cannot afford not to utilize all the knowledge it possesses to the best of its ability. Of course, to do that, a combination of big-picture mentality and optimizing the role and knowledge of the parts as well is required. This means that the parts should not be optimized separately from the whole or vice versa. Everything should be aligned toward the vision of the organization.

i. Alignment

On that note, one of the key benefits EA is supposed to be "bringing to the table" is that of *alignment.* What alignment does is pave the way for an organization to offer information resources to the most important business tasks and operational activities. This alignment is defined as the condition where agency information systems support, and are supported by, the agency business strategy. According to Ross et al. (2006), EA could pave the way to the aligned cooperation between business processes and IT processes, thus leading to more reliable, accurate and timely information at the disposal of the organization, easing the way for system interoperability. Enterprise architectures can enable alignment in important ways:

1) Business and information systems unite under a common organization framework. The

enterprise architecture plays the role of a graphic representation/roadmap, allowing people to see how the different parts of the organization interrelate.

2) The current and future states of the business and the ITS (information technology systems) are defined and described. The gap analysis between the "as is" and "to be" states, becomes the foundation for planning the next steps, in terms of strategy and operational procedures (Gregor, Hart & Martin, 2007).

ii. Decision- making

Bernard (2005) claims EA leads to higher-quality and quicker decision making, which, in its turn, leads to enhanced performance and possibly a reduction in costs altogether. According to Pérez-Castillo, Ruiz & Piattini (2020), EA modeling has played a decisive role in creating models that accurately represent behavior and assets of companies and navigate them through the maze of appropriate business decisions. In Clark, Barn & Oussena's opinion (2011), if an EA system cannot support decision- making, it is not a successful one. It goes without saying that a necessary prerequisite for any EA system to efficiently support the decision – making processes, the information at its disposal must be up-to-date and coming from reliable sources (Johnson, Lagerström, Närman & Simonsson, 2007).

iii. Cost

With today's rapid digitization and excessive complexity, most organizations are struggling to manage their existing assets and keep up with the latest demands and developments in the business-related IT sector. Running an organization is an intricate web of decisions, each of which can lead to a different path. However, if EA is used in the context of a well-thought-out strategy, it can support the decision-making executives to determine which costs can and should be reduced, which departments produce what costs and how these can be rationalized**.** Thus**,** it can assist in understanding and controlling costs more effectively, since with the help of EA, one is able to know -with greater clarity-what business or technical value an asset brings and how their IT and business assets interconnect. (Granger, 2022)

For some (Foorthuis, van Steenbergen, Brinkkemper & Bruls, 2015), EA works in two levels. At the level of the whole organization, it has been noticed that there was improvement in minimizing complexity and achieving business/IT alignment, but, at the level of a sole project costs and risks decreased due to the use of EA.

The view that EA contributes to cost reduction is also shared by Yunis, Surendro and Telaumbanua, (2010). In his book "*An Introduction to Enterprise Architecture",* Bernard (2005) explains how the establishment of an EA program in an enterprise can reduce cost in

many circuitous ways. A few examples are by reengineering business processes so that fewer people are required, by reducing reworks or shortening the decision-making cycles.

To sum up the above points, any benefits, along with many secondary and indirect ones that derive from them, contribute to adding value to the organization, via identifying and assisting in the understanding of the links between operational execution and strategic goals and how these links affect business outcomes at the end of the day (Whitmire, 2022).

1.1.4 What is an organization framework?

As seen in the previous sections, EA provides us with all the facts we need regarding an organization. What is more, an organization map has the ability to depict the relationships among all the units of an organization that interact.

An Enterprise Architecture Framework maps all of the business and IT processes within the enterprise and how they relate and interact to fulfill the enterprise's mission. It provides organizations with the ability to understand and analyze weaknesses or inconsistencies to be identified and addressed (Urbaczewski & Mrdalj, 2006). It provides principles and practices for creating and using the architecture description of a system. It structures architects' thinking by dividing the architecture description into domains, layers, or views, and offers models for documenting each. This allows for making systemic design decisions on all the components of the system and making long-term decisions around new design requirements, sustainability, and support (Gillis, 2022).

A thorough and more concrete explanation of what an organization framework is comes from the Open Group (2018): According to its authors, it should describe a method for modeling a to-be state of an organization via a set of building blocks and be able to show how they fit together. It should contain a set of tools and provide a common vocabulary. It should also include a list of standards and compliant products that can be deployed to successfully apply these building blocks.

There are over 90 EAFs in the literature or on the web (Kaisler & Armour, 2017). Some of the most well-known are:

- **The Zachman Framework (see image 1)**: It is a generic classification scheme to utilize for thoroughly describing representations of any complex object. Zachman (1987) was inspired by the construction of an airplane. His framework is composed by one dimension, with the point of view of each fundamental participant: the owner, the designer and the builder; and a second dimension, with a set of six questions that will

give different levels of descriptions for each view: the data (What), the process (How), the environment (Where), the stakeholders (Who), the time (When) and the business goals affected (Why) (Gonçalves, Ferreira & Campos, 2021). What it endeavors is to enable focused concentration on selected aspects of an object without one losing their sense of the holistic perspective of it (Zachman, 1996).

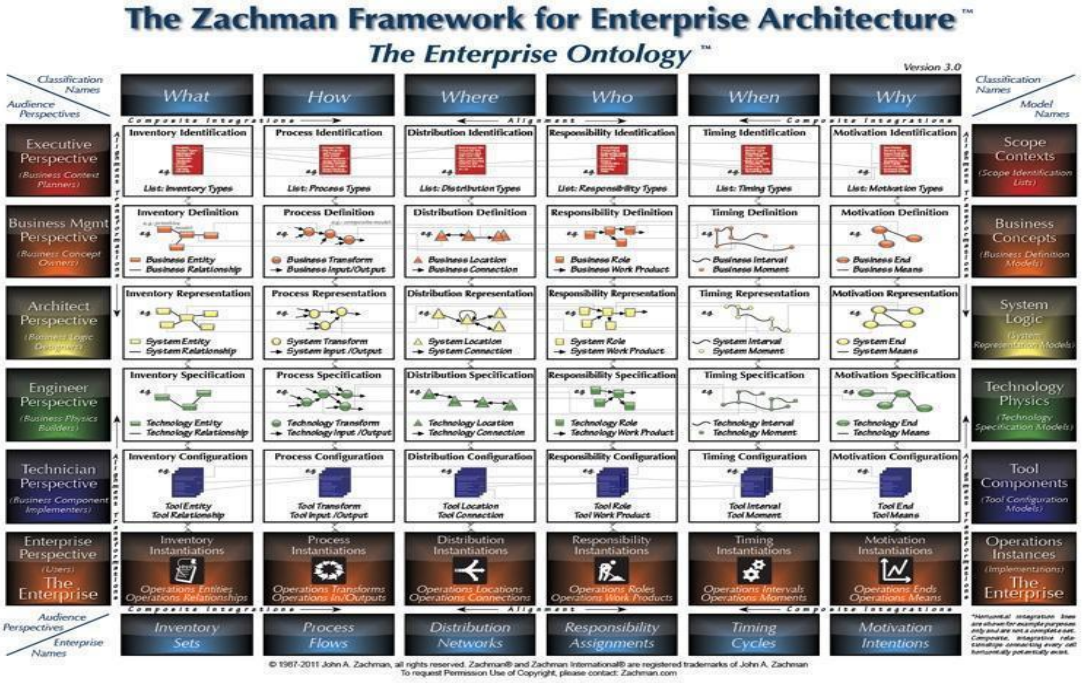


Image 1. The Zachman framework.

- **Department of Defense Architecture Framework (see image 2):** The Department of Defense Architecture Framework (DoDAF) defines a common approach for presenting, describing and comparing DoD (Department of Defense) enterprise architectures across organization, joint or multinational boundaries. It also promotes the use of common terminology, assumptions, and principles to facilitate integration better. All Viewpoint (AV) models provide information pertinent to the entire Architectural Description. DoDAF provides visualization infrastructure for specific stakeholders' concerns through viewpoints organized by various views. These views are artifacts for visualizing, understanding and assimilating the broad scope and complexities of an architecture description through tabular, structural, behavioral, ontological, pictorial, temporal, graphical, probabilistic, or alternative conceptual means.

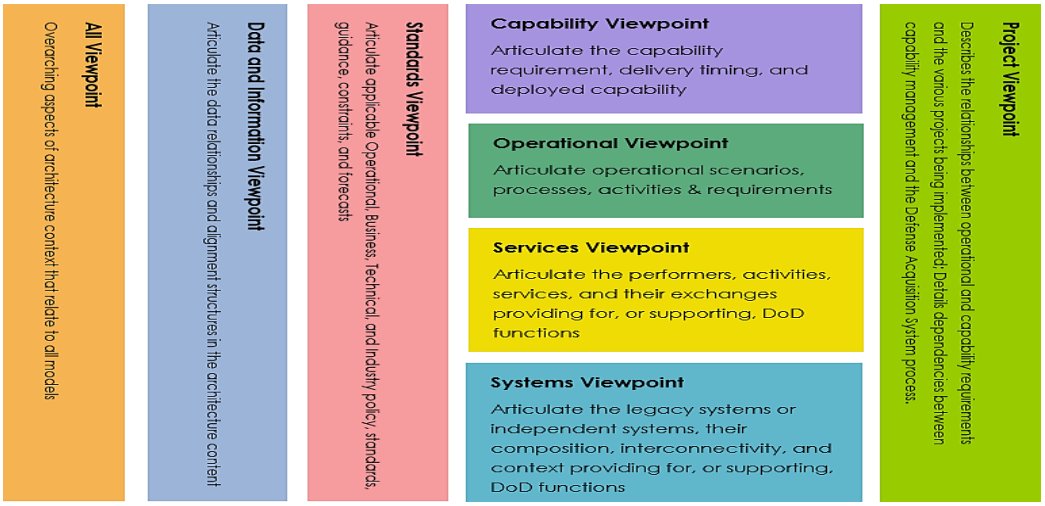


Image 2: The DoDAF framework

- **The Federal Enterprise Architecture Framework (see image 3):** The Federal Enterprise Architecture Framework (FEAF) was developed and published by the US Federal Chief Information Officers Council. In 2013, the second version (v2) was released by the White House[3], which includes a suite of tools to help government planners implement the Common Approach. It consists of a set of interrelated "reference models" that describe the six sub-architecture domains in the framework:
  - ✔ Strategy
  - ✔ Business
  - ✔ Data
  - ✔ Applications
  - ✔ Infrastructure
  - ✔ Security

These are designed to facilitate cross-agency analysis. By applying all six reference models, agencies can view the strategic goals at the highest organization level to the software and hardware infrastructure that enable achievement of those goals. Collectively, the reference models comprise a framework for describing important elements of federal agency operations in a common and consistent way.

[3] see https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/egov_docs/fea_v2.pdf

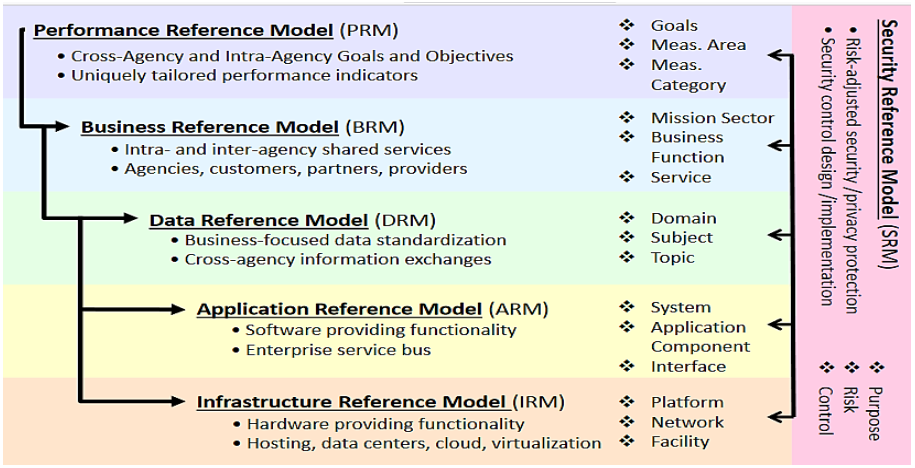


Image 3: The FEA Framework

- **The NATO Architecture Framework version 4 (NAFn4) (see image 4):** The aim of NAFv4 is to provide a standard for developing and describing architectures for both military and business use. The objectives of the framework are to:

✔ provide a way to organize and present architectures to stakeholders

✔ specify the guidance, rules, and product descriptions for developing and presenting architecture information,

✔ ensure a common approach for understanding, comparing, and integrating architectures,

✔ act as a key enabler for acquiring and fielding cost-effective and interoperable capabilities, and

✔ align with architecture references produced by international standard bodies like International Standards Organization (ISO), Institute of Electrical and Electronic Engineers (IEEE), The Open Group (TOG) and others.

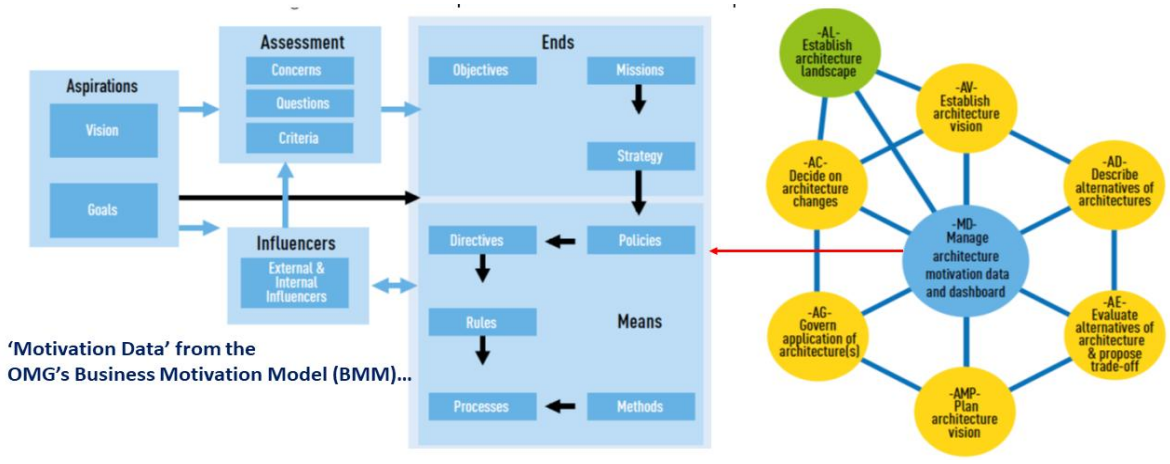


Image 4: The NATO Architecture Framework version 4

1.2 Organization maps

Since the inception of Information Technology (IT), the complexity and size of enterprise information systems used by organizations have dramatically increased. To manage and organize these systems, logical constructions and representations in the form of models were needed to tackle the challenges. Organization maps or frameworks are used commonly in the IT domain to construct blueprints of an enterprise for organizing and optimizing system components, interfaces, processes, and business capabilities, among others (Dumitriu & Popescu, 2020).

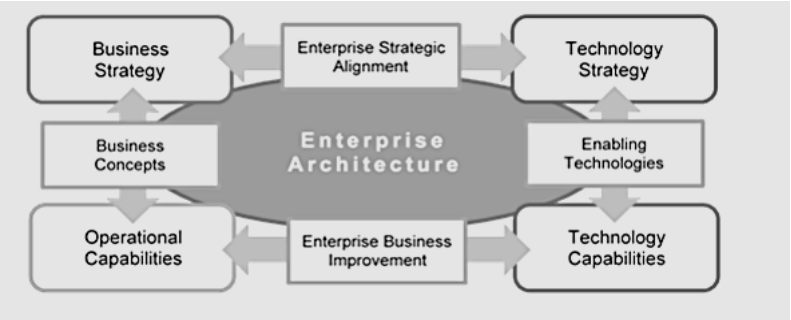


Image 5: Holistic view of an Enterprise Architecture framework.

Organization maps are an enterprise architecture construct to assist the architect in identifying the various relationships between the functional and structural elements of an enterprise and how they interconnect, in order to "*analyze the cross-dependencies and foster synergy"* (Capstera, 2022).

To achieve, use, and maintain such an enterprise-wide view, strong facilities for integration, communication, flexibility and support are required. These are:

- ✔ *Integration* is necessary to obtain different views of the enterprise, for connecting tasks to be performed to the relevant tools, and to establish connections between the tools themselves.
- ✔ *Communication* is of the essence between people, ensuring that the information is distributed within the organization, between tasks that are performed so that information can be used where it is relevant, and between the tools used to perform the tasks so that relevant data can be passed between them.
- ✔ *Flexibility* is also important to allow an organization to adapt to changing goals and environment (Uschold, King, Moralee & Zorgios, 1998).

An organization map goes well beyond the traditional hierarchy chart by depicting internal and

external relationships and collaborations from a business unit or business entity perspective. An organization map is a blueprint of the enterprise that shows business units, organization decomposition, and other types of relationships that exist in relation to the organization, internal or external. The difference with traditional hierarchical models of a business is that hierarchical models do not accurately represent horizontal relationships (The Open Group, 2018). That is why the authors of the TOGAF standard use the term ecosystem, since an ecosystem is a concept that recognizes the existence of multiple members of an organization, be it orchestrators, collaborators or stakeholders, that must work with and around each other for this system to work, ideally optimizing the collective benefit that comes from their pursuit of common goals (The Open Group, 2018 ; Sarafin, 2021). It is a model that is being increasingly pursued by today's organizations in their struggle for higher flexibility and adaptability in the constant changes and challenges of our era (Hedges & Furda, 2019).

UNIT 2: ORGANIZATION MAP: THE TOGAF STANDARD

In the present section, the TOGAF framework and its constituents will be presented and analyzed, so that the way it is structured is clear and understood, since it is the framework that was used for the case study of the present thesis. All the information for the following sections has been drawn from the relevant Open Group Publications, if not otherwise stated, namely the *Organization mapping guide* and the *TOGAF Standard Version 9.2*.

2.1 What is the TOGAF standard?

The Open Group Architecture Framework (TOGAF) is an enterprise architecture methodology that offers a high-level framework for enterprise software development. The creators, which form a team of experts called "The Open Group", call it a *foundational framework,* which means that it can be used by EA architects to develop any kind of architecture in any context. It provides the methods and tools for the planning, producing, using, and maintaining an Enterprise Architecture. It is based on an iterative process model supported by best practices and a reusable set of existing architecture assets.

2.1.1 The Open Group

The Open Group is a global consortium that enables the achievement of business objectives through technology standards. It consists of the so-called Open Group Architecture Forum, which is composed of a set of officers, technical reviewers and of course multiple members from more than 580 organizations including customers, systems and solutions suppliers, academics, and consultants across multiple industries.

2.1.2 The structure of the TOGAF document

The original TOGAF Framework document was published in 1995 by "The Open Group", and since then, it has been maintained by its members, who belong to the Architecture Forum. The initial development of TOGAF (Version 1) was based on the Technical Framework of Architecture for Information Management (Technical Architecture Framework for Information Management-TAFIM), which was developed by the US Department of Defense (DoD). The DoD gave the "Open Group" explicit permission and encouragement to set up TOGAF based on TAFIM, which was the result of many years of development.

The latest version of the TOGAF standard (Version 9.2) was officially announced on April 16, 2018. This is the first update since the previous one (Edition 9.1), released in 2011.

Undoubtedly, the most significant change in the recent TOGAF Standard Version 9.2 (2022) is the introduction of the so-called 'TOGAF Library', a reference library containing instructions, templates, patterns, and other reference materials, in order to accelerate the creation of new architectures.

TOGAF has been designed to support four areas of architecture. They constitute subsets of the overall business architecture and are:

The Business Architecture	strategy, governance, organization, and key business processes
The Data Architecture	description of the organization's logical and physical data assets and resources
The Application Architecture	sum of applications, their interactions, connection to business processes
The Technology Architecture	software and hardware capabilities that are required to support the deployment of business, data, and application services

Table 1: TOGAF EA subsets (source: https://pubs.opengroup.org)

The TOGAF standard document includes six parts.

PART I (Introduction) This part provides a high-level introduction to the key concepts of Enterprise Architecture and, in particular, the TOGAF approach. It contains the definitions of terms used throughout this standard.

PART II (Architecture Development Method) This part is the core of the TOGAF framework. It describes the TOGAF Architecture Development Method (ADM), a step-by-step approach to developing an Enterprise Architecture.

PART III (ADM Guidelines & Techniques) This part contains a collection of guidelines and techniques available for use in applying the TOGAF approach and the TOGAF ADM. Additional guidelines and techniques are available in the TOGAF Library.

PART IV (Architecture Content Framework) This part describes the TOGAF content framework, including a structured metamodel for architectural artifacts, the use of reusable Architecture Building Blocks (ABBs), and an overview of typical architecture deliverables.

PART V (Enterprise Continuum & Tools) This part discusses appropriate taxonomies and tools to categorize and store the outputs of architecture activity within an enterprise.

PART VI (Architecture Capability Framework) This part discusses the organization, processes, skills, roles, and responsibilities required to establish and operate an architecture function within an enterprise

The above structure was devised so that different areas of specialization can be considered in detail, but also in order for each area to be addressed on its own, if the architect so desires. Although all parts form a consistent whole, it is also attainable to select particular parts for adoption while leaving others out of the design, according to each organization's needs.

2.1.2.1 The ADM Method [4]

The Architecture Development Method (ADM) is the description of the method for creating and managing an Enterprise Architecture model, keeping it functional throughout the period it is in use, and lies in the very heart of the TOGAF standard. It must be stressed that, throughout the ADM cycle, there needs to be frequent validation of results against the original expectations, both for the whole ADM cycle as well as for results coming from a particular phase of the process. Of course, for each repetition of the cycle for this validation to be made possible, the architect is faced with many decisions, among which some are:

a) How broad will the coverage of the enterprise be

b) how meticulous and granulated it will be and,

c) for how long.

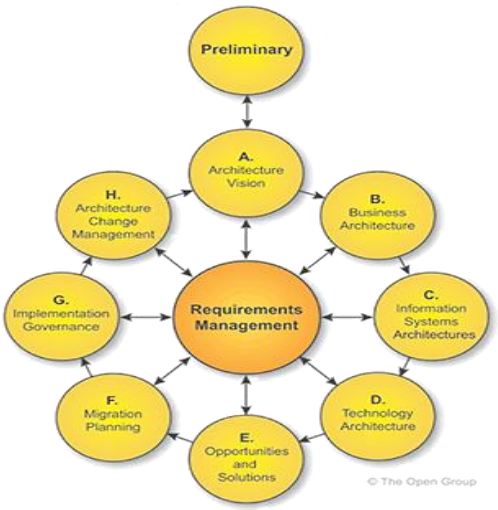


Image 6: Architecture Development Cycle

[4] The ADM is found and analyzed in Parts II and III of the TOGAF document, as seen in section 2.1.2

In some more detail, the phases within ADM are as follows:

Preliminary Phase: It describes the activities that are required for the preparation and onset of the business architecture, ensures compliance with business instructions, defines the architectural framework, as well as the architectural principles of the organization.

Phase A: Architecture Vision: It describes the original phase of an architecture development cycle. It includes information about the scope, the stakeholders and business requirements of the organization, confirming business goals and constraints, evaluating readiness of the organization for change and securing the final approval to proceed.

Phase B: Business Architecture: This phase is about selecting the appropriate modeling processes and their granularity level, developing the architecture description and checking for internal consistency and accuracy.

Phase C: Information System Architectures: It describes the development of information systems for an architectural project, including the Data Architecture and Application Architecture development.

Phase D: Technology Architecture: It describes the development of technologies for an architectural project.

Phase E: Opportunities and Solutions: It generates the initial complete version of the Architecture Roadmap, based upon the gap analysis and candidate Architecture Roadmap components from Phases B, C, and D.

Phase G: Migration Planning: It finalizes the architecture roadmap and the supporting Implementation and Migration Plans, and introduces the formation of transitional architectures for use if necessary.

Phase G: Implementation Governance: It provides an architectural monitoring of the materialization of the previous phases.

Phase H: Architecture Change Management: It defines the procedures for managing changes in the new architectures.

Requirements Management: It examines the process of managing the requirements of the architecture throughout the ADM cycle.

2.2 EA and Organization Map in the TOGAF standard: Definitions and importance

In section 2.2, the TOGAF creators' definitions of "Enterprise Architecture" and "Organization map" are provided, since this is the first step toward immersing the readers into the philosophy

behind the Open Group Framework, which is of capital importance for its correct implementation.

2.2.1. EA definition and benefits in the TOGAF standard

For the authors, EA is a network of components which relate in various ways to one another. These components evolve and undergo revisions over time, according to the needs and challenges of an organization, in terms of how they are designed and what their governing principles are. They view the enterprise as a system and their efforts align toward finding the golden ratio between promoting the concepts and terminology drawn from other relevant standards, and the ones that are familiar to the majority of the TOGAF readers. They are adamant about the fact that it is not just another IT architecture, and this emanates from their description of enterprise. An enterprise is much more than its IT systems. Apart from the technology that is deployed, the architecture crosses multiple systems, and multiple functional groups within the enterprise, including stakeholders, suppliers, partners, customers.

Thus, they claim that, sure, EA can bring along effective and efficient digital transformation and IT operations, through:

- ✔ reduction of IT systems complexity,
- ✔ increased interoperability,
- ✔ lower IT maintenance costs,

but for them, EA brings and harmonizes *all* the components of an enterprise and not just the IT- related ones.

2.2.2 Definition and importance of organization mapping in the TOGAF standard

The organization map is one of the main components in EA because it contributes to structuring the organization context for the whole Enterprise Architecture endeavor. It is actually a building plan that can depict:

- The main organization units, partners, and stakeholders which form part of an enterprise and
- How the above relate and are (if so) interwoven, be it in formal or informal ways.

Organization maps differ from the traditional ways of portraying the structure of an organization in certain key points which are shown in the table below for a more graphic understanding of them:

	Organization charts	Organization maps
top- down relationships	✔	✔
horizontal relationships	✘	✔
peer- to peer relationships	✘	✔
many to-many relationships	✘	✔
fluidity	✘	✔
formal organization structure	✔	✔
internally- oriented	✔	✔
external relationships with the organization	✘	✔
assists understanding of change	✘	✔
affected by changes- shorter life cycle	✘	✔
Can be deployed as strategic planning tool	✘	✔

Table 2: Organization charts vs. organization maps

Thus, as one can make from Table 2, the advantages of organization maps are numerous and exceed by far the ones offered by organization charts. They offer a more rich and in-depth view to an organization, as opposed to the more piecemeal rationale of a chart, depicting all kinds of internal as well as external relationships. Organization maps are change-oriented, in the sense that – if constructed properly – they can be used as a tool for assessing how any change in the organization's business models might result in change and to what extent.

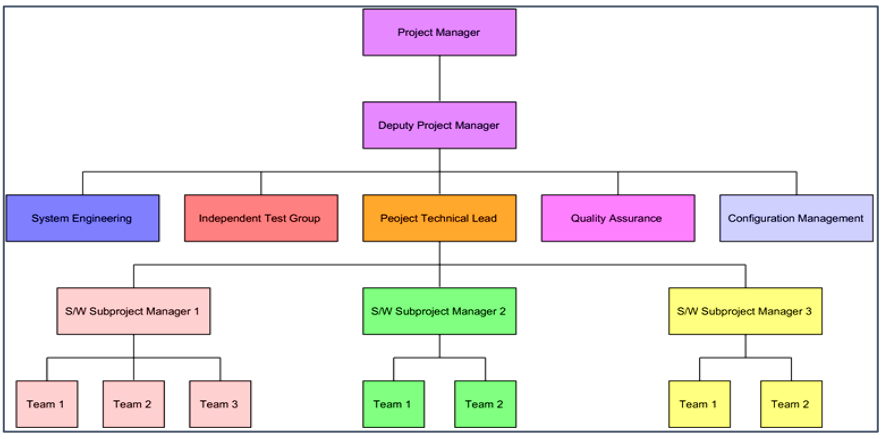


Image 7: Organization chart

(source: https://knowhow.visual-paradigm.com)

The last point is what makes organization maps much more sensitive to alterations. Any change that might occur to a business could have a potential effect on its lifecycle, meaning it might instigate modifications that affect the organization's structure and relationships, thus changing the entire map.

A final point that needs to be stressed is that organization maps' effectiveness lies a great deal - apart from their explicitness, wider scope and complexity- to the delineation of relationships. In other words, it is *relationship-based*. Organization maps invest a lot in keeping track of how different groups within and outside the company interact and connect, because any changes in these synergies will affect the entire organization. An example of an organization map follows:

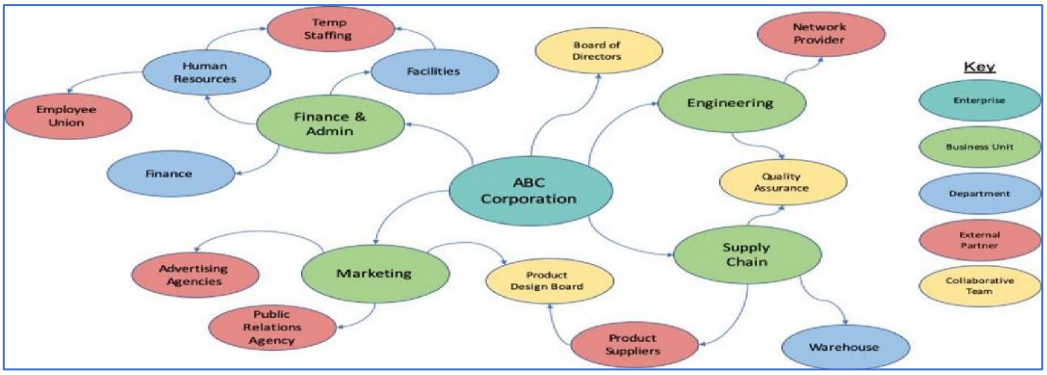


Image 8: Organization map
(source: https://pubs.opengroup.org)

Pertaining to section 2.1.2.1, the TOGAF framework supports the use of organization maps in Phases A and B.

- **In Phase A**, the architect searches for and uses existing organization descriptions, even if only in the form of conventional organization charts.
- **In Phase B,** the architect builds out the organization map with the detail and relationships needed to ensure the business needs are understood. Thus, it shows an organization unit's relationships to other entities and all sorts of transactions among them.

To conclude, organization maps enhance one's understanding of how an organization works can be used as tools by those who are higher up the authority chain to plan strategically and provide an overall decisively more transparent image of the organization.

The transparency issue plays a significant role in the facilitation of change management. An

organization map embraces the concept of change as something likely to happen, and aims at assisting affected business units to deal and make the most of it.

UNIT 3: ENTERPRISE ARCHITECTURE AND THE PUBLIC SECTOR

In this chapter, we discuss the contemporary reality in the public sector in terms of how it is organized and what challenges it is faced with. Furthermore, examples of the use of EA in Education are showcased, to ease us into the case study in Unit 4. Finally, a presentation and some historical elements about the Greek Ministry of Education follow, since it is the organization that will serve as the model for this thesis' organizational map case study

3.1 The current situation

When it comes to organizations, public entities are some of the most complex ones to map. Their size is significant (to say the least), and their organizational structure is very often intricate and in dire need of rationalization. It is a common phenomenon for many directorates or departments to be obsolete, serving no purpose whatsoever in the structure of an entity.

What is more, the public sector in general is characterized, even to this day, by vast heterogeneity in their business processes and also in the IT systems they deploy. The latter prevents –to a large extent- interoperability among different entities in the public sector, and a holistic approach is rendered challenging (Seppänen, Penttinen, and Pulkkinen, 2018). All the above, hinder the smooth transition of governments to the digital era, which is the actual means to the end of simplifying the everyday transactions of citizens with the State.

At this point, it must also be added that governments and other public agencies work in cooperation with a multitude of third parties to deliver certain services, thus shifting the responsibility for their quality not only internally, within their own organizations, but also on public sector partners as well as a range of third-person suppliers, partners and providers. If we add the increasing expectations of today's citizens to all of the above, we will realize that there are major pressures for the deployment of broader collaboration within and between entities, so as to deliver high-quality services to the public (Tizard, 2012).

Over the last few years, under the burden of the previous challenges, along with the extended presence of IT systems in every aspect of everyday life, a shift has been noted toward increasing the quality of provided services in the public sector, while reducing costs as well as minimizing existing redundant processes as much as possible.

3.2. The use of EA in the public sector

Public administration is an array of heterogeneous organizations with different business processes and information systems. Thus, public sector EA involves a wide variety of stakeholders and organizations, resulting – as we already mentioned in section 3.1 - in considerable entanglement (Seppänen, Penttinen & Pulkkinen, 2018).

The idea to use EA in the public sector for improving its efficiency is not a new concept. Hjort-Madsen (2007) researched the question of whether EA planning adoption affects ISs and supports administrative transformation in US governments, following the *Clinger-Cohen Act* in 1996. Lemmetti and Pekkola (2012) as well as Hiekkanen et al. (2013) examined how EA was used and adapted in the Finnish public sector, where it was introduced by means of legislation. Guijarro (2007) investigated the use and utility of different interoperability frameworks for e-government in Europe and the US public sector. The Government of Canada recently issued a white paper [5] in 2021, providing recommendations on how systems could be implemented over the following years via the Service and Digital Target Enterprise Architecture, to provide Canadian citizens with more cohesive and sustainable digital interactions with the Government of Canada.

The focus of EA in the public sector varies from the whole-of-government to specific domains. Some examples are the use of EA for e-healthcare (Kaushik and Raman, 2015), the creation of a reference requirements set for public service provision (Tambouris et al., 2014), federated identity management (Baldoni, 2012) .Whole-of-government approach has been of interest in the developed countries, such as Canada (as mentioned above), Denmark, Japan, Netherlands, New Zealand and Norway (Christiansen and Gøtze, 2007; Janssen and Hjort-Madsen, 2007; Aagesen et al., 2011), and also in developing countries like Namibia (Shaanika and Iyamu, 2014) and Vietnam (Dang and Pekkola, 2016).

3.3 EA in Education

The management of educational organizations does not differ significantly from that of other public services, since the general principles of public administration are followed in their case as well.

Still, to this day, the field of education is one of the most under-researched ones when it comes to the deployment of EA, according to a systematic literature review by Dang and Pekkola

[5] A government white paper is a Cabinet-approved document that explains a political issue and proposed legislation to address it. The purpose of a white paper is to introduce a new government policy to test the public's reaction to it. (https://www.thecanadianencyclopedia.ca/en/article/white-paper)

(2017). Even in cases where EA in education is investigated, the main focus lies on Higher Education Institutions (HEIs). Bourmpoulias and Tarabanis (2020) verify this finding in their mapping study, which reveals that almost 87% of papers included in it, focus on tertiary education, assuming this is because the environment tertiary education institutions operate in is fast-paced and highly competitive, possibly in an effort to procure substantial funding sources.

The problems reported from relevant studies that led educational institutions to EA deployment do not differ from the ones of other fields of the public sector. Among them (to name a few), we can trace data inconsistency and redundancy (Supriadi, Kom & Amalia, 2019), low-quality information and services (Ibrohim & Suganda Girsang, 2019) which do not suffice for efficient decision making or even worse, lead to erroneous choices (Alamri, Abdullah, & Albar, 2018; Clark,, Barn, & Oussena, 2011).

Endeavors made by educational institutions so far to employ EA, in an effort to improve the quality of their services and become more efficient, have not always been successful. The reasons are diverse. One of the most important ones seems to be the lack of knowledge about and familiarity with EA meaning and principles (Ajer & Olsen 2018; Oderinde, 2011; Olsen & Trelsgård, 2016). Then ,there is the level of difficulty of adapting the ready-made theoretical EA frameworks to fit specific situations and organizations. The transition ,more often than not, proves daunting and poses a great challenge for any organization (Pardo et al. 2004; Jansssen and Cresswell, 2005; Hjort-Madsen, 2009).

3.4 An example of a public educational organization: The Greek Ministry of Education and Religious Affairs

Since the present thesis aspires to create an organization map using a Greek public organization, the Greek Ministry of Education and Religious Affairs, the author feels compelled to provide the readers with background information on the educational administration in Greece, as well as on the entity in question, to make the case study that is to follow more comprehensible to them.

3.4.1. The structure of the administration of Greek Education

The structure of the Ministry according to the presidential decree 18/2018 is as follows:

A. The Offices of the Ministry

a) the Political office of the Minister,
b) the Political Office of the substitute minister [6],
c) the Political Offices of the Deputy Ministers,
d) the Office of the General/Administrative Secretary of the Ministry,
e) the Office of the Deputy General/Administrative Secretary of the Ministry,
f) the Office of the General/Sectoral Secretary of Religious Affairs,
g) the Office of the General/Regional Secretary of Youth

B. The independent units under the Minister

a) the Internal Audit Department,
b) the Department of Parliamentary Scrutiny,
c) the Press Office,
d) the Legislative Initiative Department,
e) the Office of Scientific Advisors

C. General Directorates

a) the General Directorate of Strategic Planning, Programming and Electronic Government,
a) the General Directorate of Digital Systems, Infrastructure and Examinations
b) the General Directorate of Financial Services,
c) the General Directorate of Human Resources,
d) the General Directorate of Primary and Secondary Education Studies,
e) the General Directorate of Primary and Secondary Education Staff,
f) the General Directorate of Higher Education,
g) the General Directorate of International, European Affairs, Education of Expatriates and Intercultural Education

D. Thirteen (13) Regional Directorates of Primary and Secondary Education

[6] The term *substitute* is used by the author, since in Greek there are two separate wordings for the respective positions: *Αναπληρωτής Υπουργός /anaplirotis ipourgos/ -> Substitute Minister* and *Υφυπουργός /ifipourgos/ ->Deputy Minister*, but in English the term is the same (substitute), so a way had to be found to portray that difference. Interesting fact: the position of substitute minister is vacant in the present government.

E. Independent units

a) the Independent Directorate of Private Education
b) the Independent Department for Coordination and Monitoring of Refugee Education
c) the Independent Human Resources Department of the Regional Services of the Ministry
d) the Independent Directorate for Collection, Submission of Documents and other matters

F. The General Secretariat of Religious Affairs

G. The General Secretariat of Research and Technology

H. The General Secretariat of Vocational Education, Training, Lifelong Learning and Youth

I. The General Secretariat of Lifelong Learning

J. Press Office

K. Office of the State Legal Council

L. Commissioner of the Court of Auditors Office

3.4.2 The pathologies of the administration in Greek public Education

According to Raptis & Vitsilaki (2007), the Greek educational system is deeply influenced by the Weberian (bureaucratic) model of administration, especially regarding the sectors pertaining to matters of authority, responsibility, control and delegation of responsibilities.

Other negative elements still seem to be the centralized nature of the public administration, the manning of higher-ranking positions based on political criteria (a fact that also favored increased clientelism and corruption), poor deployment of human resources, the lack of interest on the part of workers to the needs of citizens (which led to the creation of evil cooperative relations and lack of trust, on the part of the citizens). A very common occurrence is also the overlapping of responsibilities, bureaucracy and reluctance toward modernization efforts (Katsikas, Filinis & Anastasatou, 2017).

Finally, one of the most frequently met problems, not only in the Greek public education field but in the Greek public sector in general, are overregulation along with legal fragmentation, which can be found in other European countries as well (Sotiropoulos and Χριστόπουλος, 2017). The reasons for the above phenomena are many but, however plentiful they may be, the fact remains that they over complicate the work of public sector employees, thus impeding their

work to a tremendous degree, causing mistakes, confusion and delays. To give the reader a taste of these phenomena, Appendix I showcases the main laws, presidential decrees and other legislative documents regarding the organization and governance of education in Greece, leaving outside the changes or parts that have been abolished or replaced. In order to follow the course of these alterations, one ideally needs access to an online legal library (database) - which usually comes with a monthly or yearly subscription.

UNIT 4: METHODOLOGY

In the present thesis, it has been decided to use the TOGAF standard to create the organization map of only one of the Directorates of the Greek Ministry of Education and Religious Affairs. The reason why the author opted for such a small part of the aforementioned organization will be made clear during the analysis of the methodology. Needless to say, the size and complexity of such entities are enormous and impossible to cover in the narrow space of a Master's Thesis. This dissertation aims at highlighting the benefits that can be drawn from using EA tools and methodologies in organizing similar entities and to that end, it will be proven that the example provided here can be used as the standard along which other public organizations can be mapped.

4.1 Organization map construction methodology

According to the TOGAF authors (2022), a specific methodology is required to draw an organization map. The first step is to create a table with descriptions of certain elements pertinent to the organization.

1. It all starts with naming the scope of the enterprise that is to be mapped. By scope, we refer to the name and main goal/vision of the enterprise. This description might also include names of customers or other partners, so long as they are directly linked to the overall range of vision of the enterprise.
2. In the second row of the table, the organization units (or lines of business), that essentially comprise the enterprise are recorded. It must be stressed though, that they are not named according to their official title, but rather based on their main organization function (for example: not *general directorate of teaching staff* but: *human resources management*).
3. Underneath the organization units follow: a) the functional area these units belong to b) the departments pertaining to each functional area and c) the external partners that are involved in each department
4. The next step on the list is to record and describe business capabilities, per organization unit. This can be a powerful tool that can help interested parts pinpoint many issues that have or might arise in any area of the organization. For it to be truly useful, it should be a many-to-many mapping, to reveal as many as possible of the existing relationships in the organization.
5. Next, value flows (or streams) can optionally be recorded. The value stream is

shown in figure 9 as an end-to-end series of activities that create an overall result for a customer, stakeholder, or end-user. Each of the stages gradually adds value from one to the next.

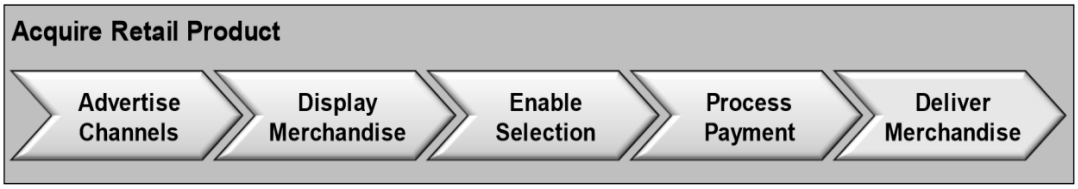


Image 9: example of a value stream
(source: https://pubs.opengroup.org)

6. Finally, information flows could be drawn that portray a collection of the core information concepts of any organization unit (usually in the forms of nouns), and their relationships to one another. A simple representation of such a flow can be seen in figure 10.

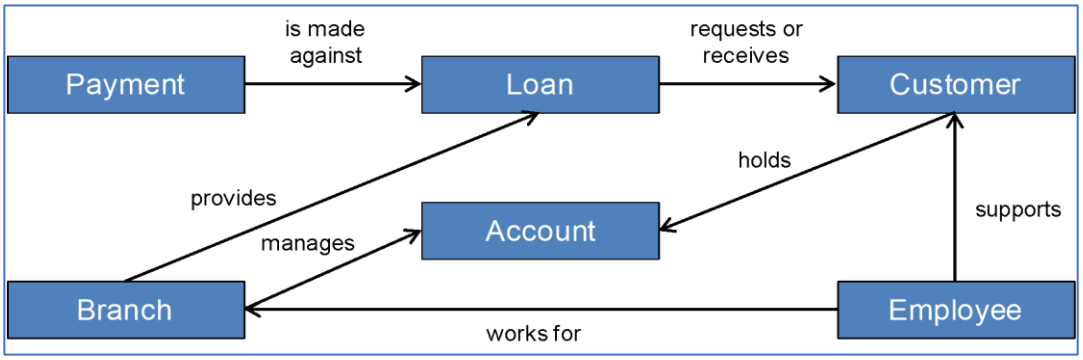


Image 10: Information flow for a Financial Institution
(source: https://pubs.opengroup.org)

A useful note to be drawn at this point is that *location* might play a role in how certain relationships among organizational units, stakeholders or any other relevant part interrelate. It is up to the Architect to decide if such a row will be included in the formation of their organization map.

As a concluding remark, we must emphasize that if the above procedure is followed carefully in terms of capturing all elements and relationships as accurately as possible, it will result in providing solutions should problems arise, combining all assets in the enterprise's disposal, including infrastructure, data, technology etc.

4.2. First deliverable: Elements of the organization

Following the methodology described in 4.1, the author has created a schematic representation

of that table for stages 1-4, which is -as we have seen- the first step in the TOGAF standard procedure of mapping the entire organization.

The information gathered following the analysis of the organization under examination, the Greek Ministry of Education was excessive, thus the author had to resort to the creation of two maps. They can be found in Appendices III and IV, along with the webpage where they have been stored, in case someone desires a higher quality resolution to study them more extensively. Both maps were designed with the help of the software WonderShare EdrawMind V9.0.10 (free edition).

Apart from the tool that assisted the author in the schematic representation of the elements of the organization, the main source of information deployed at this stage was the Presidential Decree 18 (2018), which describes the entity of the Ministry in detail, a sample of which can be found in Appendix II ,not only for the sake of saving the reader time from searching for it, but also as evidence to the author's claim of overregulation and legal fragmentation plaguing the public sector in Greece (see 3.4.2) .

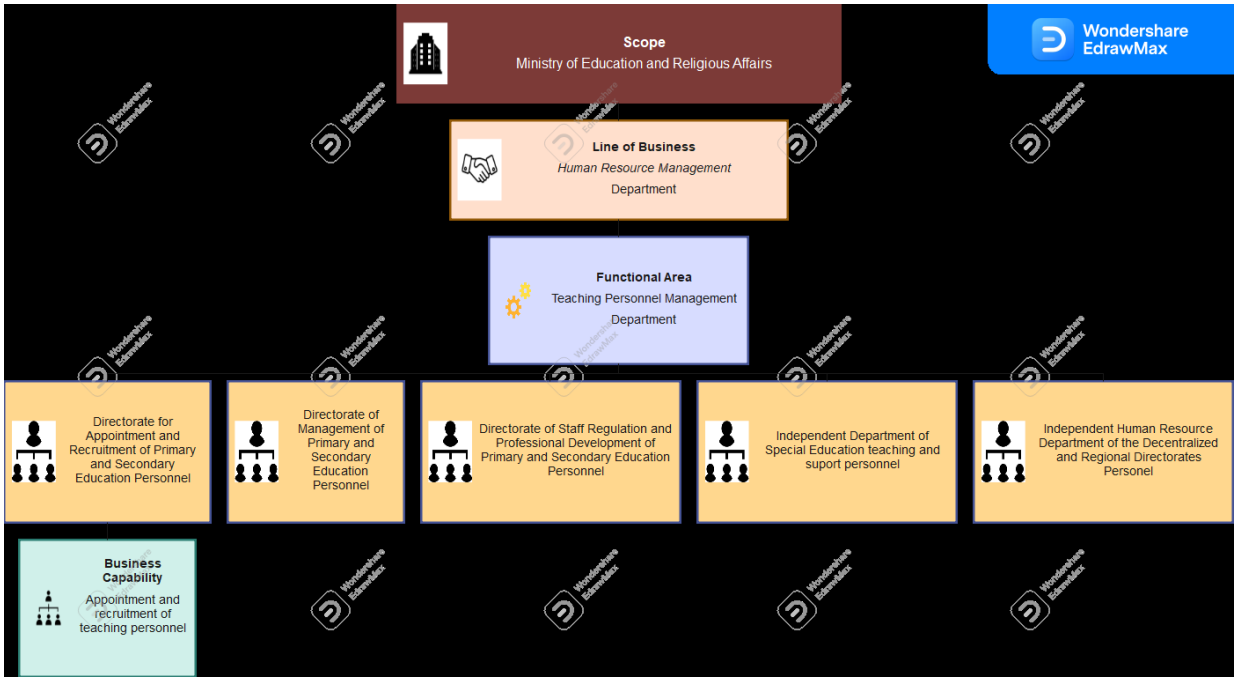
After naming the scope of the enterprise (which is the name of the entity), the author proceeded with the *lines of business* of the organization. After studying the General Directorates and Independent Departments found higher up in the Ministry organizational chart, the main functions the organization performs were extracted, a total of ten (10) as can be seen in Appendix III.

To construct line 3, the author had to pinpoint the f*unctional areas* of the entity. That is an umbrella term used to name a concept broader than a *department*. It stands for a more specialized function than the line of business and can incorporate multiple departments or directorates performing the same function. Appendix IV portrays a total of 45 functional areas, next to which their respective departments (in gray color) can be seen.

4.3 Second deliverable: Business capability table

Since -as mentioned at the beginning of this unit- the word limitations of a Master's thesis do not permit a full-length analysis of an entity, especially of one as big as that of a Ministry, the author opted to construct the map of one of the most crucial Directorates of the Ministry, pertaining to the line of business *"Human Resource Management"* and the functional area *"Teaching Personnel Management"* (see Appendix III), that is the *Directorate for Appointment and Recruitment of Primary and Secondary Education Personnel* (see Appendix IV*).* A graphic representation of exactly where this Directorate belongs in the construction of the elements of

organization map follows:



The above image has been drawn with the help of another WonderShare Edraw tool, Wondershare EdrawMax (trial version).

4.3.1 What is a business capability?

According to the Open Group authors (2018), a business capability is described as the ability that a business (in this case an organization) possesses, that will help it accomplish a purpose or lead it to a certain outcome. To put it more simply it is *"the ability to do something"* (The Open Group, 2018; p.2). It merely describes what a business can do, without any details about the way it is realized, the reasons why it is performed and other similar information. It is simply a verbal depiction of what needs to be performed by the organization, in order for it to realize its mission.

4.3.2 How is a business capability defined?

Defining a business capability (BC from here on) accurately requires following a set of steps which are as follows:

1. Naming the BC

To correctly assign a name to a BC, a noun should be deployed instead of a verb, because

nouns are indicative of *what* needs to be done, and that is the essence of a BC, as we saw in the previous paragraph. The name should not be complicated, thus serving the purpose of being easily understood by anyone involved in its fruition. It should not be a duplicate of a department, because a department's existence is more volatile and could change over time.

The name of the BC should be followed by a short description starting with the words *" the ability to…."*, providing enough details to set it apart from other BSs, and trying to be as concise and precise as possible.

2. Breaking the BC down to its components

In order for a BC to be realized, many constituent parts are necessary, namely a) roles 2) processes 3) information and 4) resources. A very consequential point to be stressed here is that the above parts may change over time, but the BC is a lot more time-resistant.

- Roles are represented by practically anyone involved in delivering the BC. These could range from business units within the organization to external partners and stakeholders. Those being involved in delivering one BC could also be involved in that of others as well.
- Processes are the operations realized to enable a BC. By recording and analyzing them, one can examine how effective they are in terms of helping the organization reach its strategic goals.
- Information is all the knowledge necessary for the realization of a BC, not solely appertaining to this particular BC delivery, but being shared with others as well, aiding the execution of value streams[7].
- Resources can be anything from technology and money deployed to buildings and vehicles that participate in the delivery of a BC. An example is shown below:

[7] *"A value stream is depicted as an end-to-end collection of value-adding activities that create an overall result for a customer, stakeholder, or end-user."* (The Open Group, 2022)

Name		**Recruitment Management**
Description		The ability to solicit, qualify, and provide support for hiring new employees into the organization.
Components	Roles	User: • Recruiter Stakeholders: • Manager • Candidate Employee
	Processes	Evaluate New Hire Requisitions Recruit/Source Candidates Screen and Select Candidates Hire Candidate
Name		**Recruitment Management**
	Information	Candidate/Applicant Details Position Descriptions Recruitment Agency Data Industry Standard Role Definitions
	Resources	Recruitment Management Application HR Application Social Media Application

Image 11: Business capability example: Recruitment management (source: https://pubs.opengroup.org)

Below, the reader can see the table that has been created after the extraction of the capability of the *Directorate for Appointment and Recruitment of Primary and Secondary Education Personnel*, whose map the author decided to create.

Name	Appointment and recruitment of teaching personnel
Description	The ability to plan and carry out the required procedures for permanent appointments and recruitment of substitute teachers in primary and secondary education
Roles	
Role_1	Political Leadership of the Ministry
Role_2	General Directorate of Primary and Secondary Education Personnel
Role_3	Directorate for Appointment and Recruitment of Primary and Secondary Education Personnel
Role_4	Independent Department of Special Education teaching and support personnel
Role_5	Primary Education teaching Staff Appointments and Recruitment Department A
Role_6	Secondary Education teaching Staff Appointments and Recruitment Department B
Role_7	Primary and Secondary Education Administrative Support Department C
Role_8	Decentralized Directorates of Primary and Secondary Education
Role_9	Regional Directorates of Primary and Secondary Education
Role_10	Ministry of Interior
Role_11	Ministry of Finance
Role_12	Tech support group of IISPM (ΟΠΣΥΔ) (Integrated IS for Personnel Management)

Role_13	Supreme Personnel Selection Council (SPSC)
Role_14	Department B of Postgraduate Studies
Role_15	Potential candidates
Processes	
Process_1	Submission of a request by the Ministry of Education and Religious Affairs to SPSC
Process_2	Issuance of Notice by SPSC
Process_3	Submission of candidate applications
Process_4	Verification of candidate documentation
Process_5	Drawing-up of temporary rating tables of candidates
Process_6	Submission of an objection request
Process_7	Drawing-up of final rating tables of candidates
Process_8	Drawing-up of appointee tables
Process_9	Issuance of Common Ministerial Order (CMO) by Ministers of Education and Finance
Process_10	Publication of rating tables and CMO in the Government Gazette
Process_11	Issuance of appointment deeds
Process_12	Registration of newly-hired personnel in the Human Resource Registries
Process_13	Issuance of appointment of substitute and hourly-paid teachers

Information	
Information_1	Candidate standard education qualifications information
Information_2	Candidate previous work experience information
Information_3	Candidate additional qualifications information
Information_4	Candidate social criteria information
Information_5	Information on type of positions available for candidates to apply for
Information_6	Information on number, type and location of positions available
Information_7	Information on deadlines for application submission
Information_8	Information on ways of submitting an application and necessary documentation
Information_9	Information on entry requirements
Information_10	Information of points awarded per criterion fulfilled by candidates
Information_11	Information on list and timeline of procedures
Resources	
Resource_1 (ITS)	IISPM
Resource_2 (ITS)	Electronic application system of SPSC
Resource_3 (ITS)	Electronic fee application (e-Παράβολο)
Resource_4 (ASSET)	Digital portal of public administration (gov.gr)
Resource_5 (ASSET)	Expertise and knowledge of the administrative employees of the Ministry of Education

Resource_6 (ASSET)	Expertise and knowledge of the administrative employees of SPSC
Resource_7 (ASSET)	Expertise and knowledge of the administrative employees of Regional Directorates of Primary and Secondary Education
Resource_8 (ASSET)	Applications and documentation of candidates
Resource_9 (ASSET)	Information technology infrastructure of administrative services of Regional Directorates of Primary and Secondary Education
Resource_10 (ASSET)	Information technology infrastructure of administrative services of SPSC
Resource_11 (ASSET)	Information technology infrastructure of administrative services of the Ministry of Education and Religious Affairs
Resource_12 (ASSET)	National budget funding

Table 3: BC Appointment and Recruitment of teaching personnel

As far as the above BC is concerned, its realization would not be deemed possible without the contribution of several external partners' contribution, whose help in the procurement and verification of several official documents necessary for the process of the appointment and recruitment of new personnel to be finalized is invaluable. However, they were not included in the original table due to their number, which is quite impressive. For that reason, a new table has been formed, in order to assist the reader in understanding the nature and different categories of each external partner involved in the BC. As is made evident, we are talking about 33 of them in total, the involvement of which is - more often than not- crucial in the BC's processes.

	Belongs to public sector	Does not belong to public sector
Related to education	· HEIs (AEI) · Lifelong Learning Centers (ΚΕΔΙΒΙΜ) · Citizens' service centers (ΚΕΠ) · Independent Department for the Implementation of European Legislation (ATEEN) · Junior and Senior High schools · Vocational Training Institutes (IEK) · Center of Greek Language · Higher School of Pedagogical and Technological Education (ΑΣΠΑΙΤΕ) · Second Chance schools (ΣΔΕ) · National Organization for Certification of Qualifications & Vocational Guidance (ΕΟΠΠΕΠ) · Vocational Apprenticeship Schools of NSO (former ΟΑΕΔ)	· Private Schools · Language institutes · Computer learning centers
Not related to education	· Supreme Personnel Selection Council (Α.Σ.Ε.Π.) · General Secretariat of IS · Disability certification centers · Conscription services · First instance courts · National printing Office · interdisciplinary organization for the recognition of academic titles and information (ΔΟΑΤΑΠ) · Foundation for Research & Technology (ITE) · Military Units · Health Committees · Ministry of Maritime affairs and Insular Policy · Ministry of Culture and Tourism · Embassies/Consulates · National insurance entities	· Centers for sign language learning · Centers for Braille language learning · Federation of the Deaf · Notaries · Lawyers

Table 4 : External partners involved in the realization of the *"Appointment and recruitment of teaching personnel"* business capability

4.4 Third deliverable: Information map

Information is the combination of data and a context for interpreting that data. The interpretation comes from associating the data with business capabilities, processes and

decisions, and these associations provide the context for interpreting the data. Knowledge results from the ability to apply information to solve a problem or create value (Lankhorst, 2017).

According to the OpenGroup (2022), information plays a decisive role in whether a business or organization will be successful. Accurate, timely, and relevant information is of the utmost importance for valid decision-making, and, as we have already said, one of EA's goals is to help organizations with exactly that. Knowledge serves in applying information in such a way so as to solve a problem or create value. It is therefore necessary for architects to understand what information matters most to a business before developing or proposing solutions. An Information Map provides a framework to give rise to that understanding.Businesses acquire, store, and use many types of information in the process of their operations. So, information is key to the strategic planning of any organization, a true weapon in the experts' hands.

In Business Architecture terms, information is considered to be an intangible, conceptual representation of things that exist in the real world. "Information concepts" are the basis of the architectural elements that are used to make those intangible things explicit. Thus, defining the basic ones that support a particular enterprise, constitute the very heart of Information Mapping, a tool which then enables analysis of the relationship between information and other concepts such as business capabilities.

Information Mapping provides the visual representation of the information that is critical to a business, and is the first step to a more detailed analysis of how the business operates today – or how it should operate at some future point in time. The benefits are numerous:

- More effective business strategy
- More constructive use of information at the organization's disposal
- Assists in breaking down barriers across departments and partners
- Enhanced collaboration

4.4.1 Information map of the Directorate for Appointment and Recruitment of Primary and Secondary Education Personnel

Before initiating the structuring of an information map, one should be cautious not to limit oneself to information that can solely be captured in strict data models. Of course nowadays, this problem is resolved when labeling business information as data but when a term is met:

that the reason for the importance of this information is thoroughly understood, and an analysis has been carried out to portray how it relates to and fits in the business' well-understood logic. That being said, the author has proceeded with the creation of the information map of the Directorate for Appointment and Recruitment of Primary and Secondary Education Personnel, based on the following steps, proposed by the Open Group authors:

1. Extract and modify the information concepts that apply
2. Add definitions that make the most sense in context (a business glossary)
3. Build out areas such as products or customers (common taxonomy to guide decisions)
4. Provide a reference for mapping business capability gaps (driven by ability to deliver value) to the key information needed as part of solving those gaps

An example of such a map can be seen here:

Information Concept Definition & Dependency Mapping

Information Concept	Information Concept Category	Information Concept Definition	Information Concept Types	Related Information Concepts
Agreement	Primary	A Legally binding contract entered into between the organization and a legal entity or individual.	Reseller, Bank, Supplier, Landlord, Employee, Carrier Customer, Consumer, Enterprise Customer	Asset, Policy, Order, Agreement, Financial Account, Payment, Facility, Channel, Conveyor, Network, Tax
Agreement Term	Secondary	A legally enforceable condition set forth within the bounds of an agreement.	Financial, Penalty, Partner Complying, Customer Impacting, Business Entity	Agreement, Agreement Term, Location
Asset	Primary	A tangible good, such as equipment, computer, furniture, tool, software system, and other objects of intrinsic value that are used in a business context or packaged as goods into products offered to customers.	Equipment, Software, Computer, Machine, Desk, Cable Wire, Lights	Asset, Location, Agreement, Partner, Channel, Facility
Brand	Primary	Named aspect of a product or offering, a category of products or offerings, or an organizational identity, representing it by a unique name, symbol, mark or logo, and value proposition, and cultural identity that distinguishes it from other products, offerings, or organizational identities in the market.	Global, Regional, Product, Company	Market, Product, Business Entity
Campaign	Primary	Outreach activity that targets a specific population, for example, customers, human resources, partners, and patients, to achieve a certain goal, such as marketing awareness, hiring activities, and health awareness.	Product, Brand Awareness, Employee, Social Good	Program, Product, Market, Location
Channel	Primary	Digital, analog, or physical conduit through which products, related services, or communications are delivered or received, including the Internet, phone, delivery service, satellite, radio, or physical means.	Digital, Partner, Direct	Partner, Policy, Product, Asset, Facility, Location
Customer	Primary	An individual or other legal entity that has, plans to have, or has had a legally binding agreement with the organization, or otherwise is a recipient or beneficiary of the organization's products and services.	Retail, Individual, Corporate, Preferred	Strategy, Plan, Program, Market, Product, Customer, Partner, Human Resource, Channel, Location
Finance	Primary	Monetary aspects and resources of the organization.		
Financial Account	Secondary	A named container of monetary value that is organized into debits, credits, liabilities, equity, and related categories such as customer, savings, checking, payables, general ledger, budgetary, and receivables categories.	Customer, Partner, Budgetary, Savings, Receivables, Ledger	Agreement, Order, Customer, Partner
Financial Transaction	Secondary	A monetary event or related exchange across businesses, agreements, and financial accounts.	Buy, Sell, Payment	Financial Account

Image12: Reference Table for an Information Map

source:https://pubs.opengroup.org

The author, to construct her information map, deployed two tools. The first was the second deliverable, the business capability table constructed in 4.3.2. The second one was the APQC Education Process Classification Framework (PCF), version 7.2.1 (2019). APQC is short for American Productivity and Quality Center and helps organizations adapt to rapidly changing environments, build new and better ways to work, and succeed in a competitive marketplace, focusing on productivity, knowledge management and quality improvement initiatives, among

others.

Thus, the Education PCF served as a business glossary and process guide for the education sector, to provide commonly acceptable and industry-neutral vocabulary that can be used and understood internationally, since it is often updated with insights and paradigms from all over the world. Where exact terms have been used, those are typed in red. Since the *Directorate for Appointment and Recruitment of Primary and Secondary Education Personnel* performs the BC *"appointment and recruitment of teaching personnel",* based on the categories of the Education PCF (seen in image 13) , the author consulted and on occasion utilized terminology from category 6 "Develop and manage Human Capital" part (for that see Appendix).

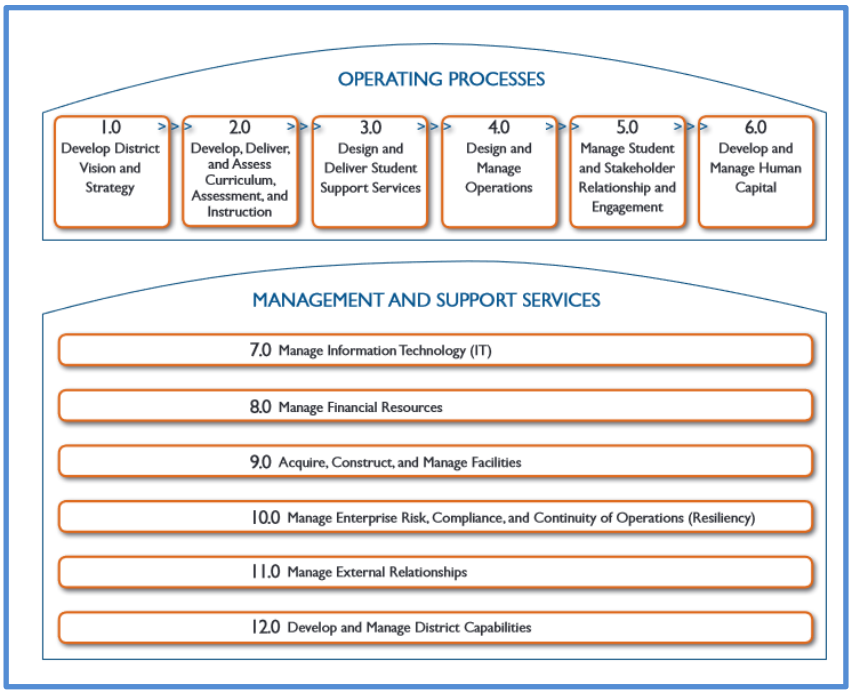


Image 13: PCF for Education
source: apqc.org

What follows is the Reference Table for the Information Map for the Directorate for Appointment and Recruitment of Primary and Secondary Education Personnel , based on the evidence from the BC "appointment and recruitment of teaching personnel", since an Information Map is most closely tied to the business capability map, where information concepts are used by business capabilities.

Information Concept Definition and Dependency Mapping for the *Directorate for Appointment and Recruitment of Primary and Secondary Education Personnel* *of the Greek Ministry of Education and Religious Affairs*				
Information concept	Information concept category	Information concept definition	Information concept types	Related information concepts
Recruitment / appointment	Primary	Procedure of hiring teaching staff, either permanent or substitute one	teacher, primary education, secondary education, Ministry, School, permanent, substitute	budget, needs, candidate, school
Notice	Secondary	Opening a job requisition for interested parts who fulfill the requirements to fill an application	application, requirement, candidate	deadline, qualification, issuance of notice
Application	Secondary	A form candidates fill to express interest in the job posted , stating their qualifications and whether they meet minimum requirements	qualifications, requirements, job description	Resource, deadline, asset
Job description	Secondary	A description of the duties that will have to be performed by the interested parts if hired	teacher, education, specialty, lesson	school, requirement
Deadline	Secondary	The latest time or date by which something should be completed.	requirements, notice, application	needs, recruitment/appointment, notice

Selection	Secondary	The procedure of selecting the necessary number of candidates that fulfill the requirements	candidate, requirements, candidate selection tools	Needs, budget ,asset
Candidate	Primary	The person who expresses interest for a job posting and fills in an application form in order to be considered for it	application, notice	requirement, selection, qualification, recruitment/appointment
Qualification	Secondary	A formal accomplishment or asset in the form of a degree, language certificate or similar ,that could increase a candidate's chances of being hired because it awards more points	degree, certificate, points, work experience	selection, application
Requirement	Secondary	Gather necessary skill requirements for being hired, which if not met, excludes a candidate from the selection process	candidate, condition, job description	selection, application
Needs	Primary	The number of teachers that need to be hired, based on the needs of schools, after vacant posts have been recorded	teacher, vacant post, specialty	recruitment/appointment, candidate, application
Budget	Primary	Determine HR costs that the State can spend on permanent and substitute personnel	Finance, Ministry, needs, government, costs	Recruitment/appointment, notice
Resource	Primary	Any tangible or intangible asset used to carry through the recruitment/appointment process in the education sector	building, staff, technology, knowledge	Recruitment/appointment, budget, needs

Table 5: Information Concept Definition and Dependency Mapping for the Directorate for Appointment

The primary concepts are highlighted in gray, while the secondary follow right underneath them. This table contains all the information critical to the organization to enable the Directorate's BC to be realized.

Summing up, the point of constructing the above tool was to provide the Enterprise Architect and other practitioners with powerful methods to locate business value and offer guidelines for all later phases of the architecture design.

4.5 Fourth deliverable: Organization map

After having gone through the previous three levels of design and analysis of this particular component of the Ministry of Education and Religious Affairs, the *Directorate for Appointment and Recruitment of Primary and Secondary Education Personnel*, we come to the culmination of it all, which is the creation of the TOGAF organization map. It has been designed with the help of the software WonderShare EdrawMind V9.0.10 (free edition) and can be found in Appendix V. As one can see, each element of the organization has been assigned a different shape and color. Also, arrows have been utilized, which show us the nature of each of the relationships in the map. The arrows and their equivalent relationships have been designed according to the Archimate specification, a modeling language supported by the Open Group. The explanation of these relationships can be found on the map itself, as well as the arrow notation can be observed in table 6. A summary of the Archimate specification relationships is found in Appendix VII.

The identification of organization units and relationships among them provides one of the four critical pillars of Enterprise Architecture. The organization map identifies the business units or third parties that possess or use business capabilities, which participate in the value streams and have a relationship with business information concepts. If all these are appropriately mapped, it ensures that the aim of Enterprise Architecture is fully understood. This will set the foundation -painstaking as it may be- in case the organization finds itself obliged to look for solutions in any of the fields it is concerned with.

Units interacting	Arrow	Relationship
Ministry of Finance and Ministry of Interior	→	triggers
Ministry of Interior and Ministry of Education	→	triggers

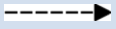
Ministry of Education and Human Resource Management		has assigned
Human Resource Management and Departments		is assigned to
Human Resource Management and business capability		realizes
Human Resource Management and Independent Department of Special Education teaching and support personnel		is assigned to
Department of administrative support and departments of appointment and recruitment		serves
Decentralized Directorates of Primary and Secondary Education and departments of appointment and recruitment		flows to
Supreme Personnel Selection Council and candidates		serves
Supreme Personnel Selection Council and various services		associated with
Supreme Personnel Selection Council and Department B of Postgraduate Studies		associated with
Regional Directorates of Primary and Secondary Education and Candidates		associated with
Candidates and various services		flows
Department B of Postgraduate Studies and Candidates		flows
Candidates and Tech support group of IISPM		are accessed by
Tech support group of IISPM and Human Resource Management		serves

Table 6: Archimate Relationships in the TOGAF organization map

5. DISCUSSION

This thesis' aspiration was to present the benefits of the use of Enterprise Architecture in all its aspects, so it can respond effectively to all the problems and challenges of today's intricate global web of demands, processes and duties. What is more, at least according to its advocates, the role of enterprise architecture is to enable organizations to be innovative, moving ahead of their time, anticipating changes before they knock on their door.

While researching for the topic of this thesis, many thoughts and questions emerged on the part of the author. What remains to be done in this section, is for these thoughts to be expressed and to check if these questions have been answered.

One of the first realizations the author came to, even at the very beginning of this thesis, is that the education field in general and the K-12 education field in particular, are both vastly under-researched. The same goes for the public sector in total, with few (mostly developed) countries using Enterprise Architecture to improve their efficiency, as we saw in 3.2 and 3.3. Thus, when deciding to see how EA could work in these environments, very little feedback was on the author's disposal. Adding to that the fact that, in public administration, things might differ substantially from one country to another, matters are only made worse. The reasons for this gloomy picture could be numerous and certainly not exclusively pertaining to the public sector alone.

More often than not, in public administration the current environment different public organizations operate in was established a long time ago, without any EA principles at its backbone. That is particularly true for heavily beaurocratic Greece, who has been taking baby steps toward the interoperability and process simplification fields over the past three years or so. That being said, because of this, public organizations tend to work in fractured ecosystems, one department or directorate working under the same Ministry or public organization having no idea what responsibilities and tasks the other departments or directorates are responsible for. The result of that is poor-quality services for the main customers of the public sector: the citizens.

Speaking from personal experience, one phone call to the Greek Ministry of Education could easily prove the above point. The first attempt to receive an answer very often leads to a marathon of failed attempts to find the employee one can get a valid answer from. This is because a) the customer does not know what department is responsible to answer their question 2) the organization's phone book is not up-to-date so the citizen might have to make several

calls to even find the department they *think* can help them with their problem and 3) not even the official organization chart of the public entity is up-to-date, signaling even more trouble for the already troubled citizen. The latter was something the author came across herself, when trying to do the very simple thing of recording all the departments pertaining to the Greek Ministry of Education, soon finding out that the organization presidential decree 18 (2018) and the chart -where all official organization charts for all public sectors are found- in the page https://hr.apografi.gov.gr do not match!

Another aspect of the problem is that up until recently, interoperability in the public sector was a huge issue, leading to fragmented processes and very often repetitious actions being demanded on the part of the citizens. Certain official documents, for example a wedding or birth certificate, should not have to be filed to public entities over and over again, and via IT systems supported by interoperability, any changes that might occur in someone's status should be automatically detected (provided that all data have been digitized).

This brings us to yet another major issue: IT systems and IT specialists. For many of the above problems to be diminished, information technology has a center-stage role to play. Employing IT to provide enhanced services to your citizens involves a handsome part of the country's budget. Most civil servants, whose job relies on using IT systems on a daily basis, experience that lack of IT cohesion among different organizations, causing significant software complexity and increased IT support costs, along with increasing reliance on individual knowledge and experience. However, individual knowledge and experience on how to perform business processes might differ significantly and this is yet another reason why EA has a place in the public sector reform.

All the previous thoughts lead us to the pressing question that involves the organization under discussion: how can an organization map help improve the services being offered by the Greek Ministry of Education and Religious Affairs?

An organization map is one of the first tools Enterprise Architects will have to create so that they take on the painstaking work of applying EA on the entire organization. The reason for that coincides with one of the most important reasons why, very often, 75 % of EA projects fail. For enterprise architects to solve business challenges, they need to have an in-depth knowledge of the business and its customers. This procedure, delving into every detail of the organization, its processes, the information it receives and produces, its business capabilities and how they are delivered can be extremely strenuous and require a ton of work on behalf of the EA architect.

Thus, TOGAF organization maps endeavor to do exactly that: portray the as-is situation of an organization in terms of relationships among different units of an entity and what type these relationships are. Of course, as we have seen, its structure is a whole process involving the creation of other artifacts as well , that work interdependently with one another, in order for the Architect to grasp a thorough understanding of an organization. However, even though the TOGAF standard has had its share of negative criticism along with other EA standards (Dang &Pekkola,2017), the fact that it has been created and is reviewed by a large number of contributors helps keeping it up-to-date with current developments and demands of the modern world.

So, what can one achieve by creating a TOGAF organization map? What are the benefits it offers to an EA architect, who is there to help the organization become a better version of itself?

First and foremost, one can get the big picture of an organization. Oftentimes, the problem begins with how an organization is structured. We get to inspect all its units and sub-units. Is redundancy noticed? Do two or more departments perform similar tasks? If so, why are they separate departments or directorates, making things more complicated? In a case such as this, then, an organizational map, with the help of the supporting tools included in the thesis, could fight redundancy in the organization and get rid of duplicate units as well, even by deleting them altogether or by merging them.

Doing away with redundant units has two additional benefits. Firstly speeding up business processes, since the line of employees one has to turn to is decreased in a more tightly-knit unit. Secondly, it causes less strain on the budget, because now less people need to be on the pay roll doing exactly what another is already doing. Finally, it offers faster services to the citizen or the other stakeholders.

Furthermore, by inspecting the direction of relationships, an Architect could make suggestions about simplifying them. Are too many units involved in the delivery of a business capability? Are they enough? All of these questions are of the essence when we are talking about organizations as big and high- intensity ones as that of a Ministry that operates on multiple levels of services with an extremely broad variety of stakeholders and external partners. Thus, communication in all levels of an EA initiative is indispensable.

6. CONCLUSION

According to what a TOGAF expert, Vish Viswanathan, Managing Principal of CC and C Solutions based in Sydney Australia said in a Forbes article:

"*Failure of EA initiatives is often not the failure of the EA itself. It's often the fact that C-level management hasn't taken the time to set the Key Performance Indicators (KPIs) for the EA team and the Chief Enterprise Architects properly."* (Bloomberg, 2014)

This means that EA is not magic and will not work on its own, unless it is backed up by strong executive initiative and how it is handled by those involved in it. TOGAF is a strong EA tool, but, just like in many aspects of life, it all comes down to the most basic elements of all: people.

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Legislation

1. Presidential Decree 18/2018
2. SPSC notice 20/18-04-2022
3. circular 48772/E1/29-04-2022

Appendices

Appendix I. Legislation pertaining to the organization and governance of education in Greece

1. **Constitution of Greece**, as revised by resolution dated May 27th, 2008 by the H' revisionary Parliament session.
2. **Law 4763/2020** (Government Gazette 254 A΄) ”National System of Vocational Education, Training and Lifelong Learning, transposition into Greek law of Directive (EU) 2018/958 of the European Parliament and of the Council of 28 June 2018 on proportionality control before the introduction of new legislation (OJ L 173), ratification of the Agreement between the Government of the Hellenic Republic and the Government of the Federal Republic of Germany on the Hellenic-German Youth Foundation and other provisions”.
3. **Law 4713/2020** (Government Gazette 147A΄) "Modernization of private education and other urgent provisions under the Ministry of Education and Religions."
4. **Law 4692/2020** (Government Gazette111 A΄)"Upgrading of the School and other provisions".
5. **Presidential Decree 18/2018** (Government Gazette 31/issue A/2018): "Organization of the Ministry of Education, Research and Religious Affairs".
6. **Law 4452/2017** (Government Gazette 17/issue A/2017): “Regulation of issues regarding the State Certificate of Foreign Language Proficiency, the National Library of Greece and other provisions”.
7. **Joint Ministerial Decision 41087/29-11-2017** (Government Gazette/4249/issue B/5-12-2017):"Standard Regulation of Operation for Municipal Child and Infant/Child Centres".
8. **Law 4485/2017**(Government Gazette 114/issue A/4-8-2017): "Organization and operation of higher education, regulations for research and other provisions".
9. **Law 4386/2016** (Government Gazette 83/ issue A/11-5-2016):“Regulations for Research and other provisions”.
10. **Law 114/2014** (Government Gazette 181/issue A/29-8-2014): "Organization of Ministry of Education and Religious Affairs".
11. **Law 4283/2014** (Government Gazette 189/issue A/10-9-2014): "Foundation and organisation of Council of National Policy on Education and other provisions".
12. **Presidential Decree 152/2013** (Government Gazette 240/issue A/5-11-2013):

"Evaluation of primary and secondary education".
13. **Law 4186/2013** (Government Gazette 193/issue A/17-9-2013): "Restructuring of Secondary Education and other provisions". It includes provisions for the transformation of General and Vocational Upper Secondary Schools, Vocational Training Institutes and Special Education structures. It establishes Schools of Vocational Education, as well as Lifelong Learning Directores. Last, it supplements new provisions regarding Higher Education Institutions.
14. **Law 4142/2013** (Government Gazette 83/issue A/9-4-2013): "Authority for Quality Assurance in Primary and Secondary Education''. This Law provides for the establishment of the Authority for Quality Assurance in Primary and Secondary Education, and in particular its mission and responsibilities, the set up of the Council, the President, while it also regulates issues related to assessment decisions of the Authority, and finally the criteria for the evaluation of the educational work.
15. **Ministerial Decision 30972/2013** (Government Gazette 614/issue B/15-3-2013): "Evaluation of the Educational Work of the School Unit - Self-evaluation procedure".
16. **Law 4115/2013** (Government Gazette 24/issue A/30-1-2013): "Organization and operation of the Institute for Youth and Lifelong Learning and of the National Organization for the Certification of Qualifications and Vocational Guidance and other provisions". It sets the rules of operation and organization of the two above mentioned bodies. Chapter three contains other provisions for issues under the auspices of the Ministry of Education and Religious Affairs, Culture and Sports.
17. **Law 4093/2012** (Government Gazette 222/issue A/12-11-2012): "Approved Medium Term Fiscal Strategy 2013-2016 - Emergency Measures of Implementation of Law 4046/2012 and the Medium Term Fiscal Strategy 2013-2016". By this law, the Medium Term Fiscal Strategy 2013-2016 is approved. Pages 5580 – 5590 contain provisions relating to the Ministry of Education, Culture and Sports.
18. **Law 4076/2012** (Government Gazette 159/issue A/10-8-2012): "Regulating issues of Higher Education Institutions and other provisions". It provides for issues relating to Higher Education Institutions collective services, as well as other provisions for all education levels.
19. **Law 4009/2011** (Government Gazette 195/issue A/6-9-2011): "Structure, operation, quality assurance of studies and internationalization of higher education institutions". It provides general rules on the structure and operation of higher education. It regulates the framework for autonomy, structure and bodies of Higher Education Institutions. It provides for the assessment and transparency, as well as issues relating

to reaching and other staff. It distinguishes studies between those of first, second and third cycle. It regulates student issues, issues pertaining to the funding of Higher Education Institutions, as well as issues relating to quality assurance and accreditation in higher education.
20. **Law 3966/2011** (Government Gazette 118/issue A/24-5-2010): "Institutional Framework for Model Experimental Schools, foundation of the Institute for Educational Policy, Organisation of the Institute of Computer Technology and Publications "DIOFANDOS" and other provisions". This law establishes the Educational Policy Institute, abolishes the Centre for Educational Research, Teacher Training Agency and the Pedagogical Institute, renames the Research Academic Computer Technology Institute into Computer Technology Institute and Publications "Diophantus", and regulates the institutional framework of Pilot Schools.
21. **Law 3879/2010** (Government Gazette 163/issue A/21-9-2010): "Development of Lifelong Learning and other provisions". It provides for the regulation of Lifelong Learning in Greece. It regulates responsibilities of Lifelong Learning bodies. It also sets the Lifelong Learning National Network.
22. **Law 3852/2010** (Government Gazette 87/issue A/7-6-2010): "New Architecture of Local Government and Decentralized Administration-Kallikratis Programme". The municipalities and regions constitute the first and second levels of local government. The decentralized administrations are formed as single units for the decentralized services of the state and exercise decisive authority in state affairs of their region.
23. **Law 3848/2010** (Government Gazette 71/issue A/19-5-2010): "Upgrading of teacher role-establishment of assessment and meritocracy rules in education and other provisions". It describes the process of selection of teaching staff in primary and secondary education. It defines the education staff selection process, as well as regulating issues relating to status and evaluation of teachers in primary and secondary education. It also provides for the operation of Higher Education Institutions (access, writings, teaching staff, research fund, Hellenic Quality Assurance and Accreditation Agency). It also comprises issues of ecclesiastic education, post-secondary education centers and issues relating to the General Secretariat for Research and Technology.
24. **Law 3794/2009** (Government Gazette 156/issue A/4-9-2009): "Regulation of issues regarding the university and technological sector of high education and other provisions". It deals with issues of Universities and Technological Education Institutes. It also contains provisions for all education levels.
25. **Law 3699/2008** (Government Gazette 199/issue A/2-10-2008): "Special Education of

persons with disabilities or with special educational needs''. This law regulates the institutional framework for the organization and operation of Special Needs Education in Greece. It also contains provisions for pre-primary, primary and secondary education.

26. **Law 3696/2008** (Government Gazette 177/issue A/25-8-2008): "Establishment and operation of colleges and other provisions". Colleges are established as providers of post-secondary education and training in Greece.
27. **Law 3653/2008** (Government Gazette 49/issue B/21-3-2008): "Institutional framework for research and technology and other provisions". The Law defines the purpose, the content and the management of expenditures of the National Program for Research and Technology, regulates the design and implementation of research policy, establishes the National Council for Research and Technology and the National Agency for Research and Technology, introduces international cooperation and the participation of Greece in the European Research Area, as well as in European and international intergovernmental organizations and finally establishes research centers and institutes.
28. **Law 3549/2007** (Government Gazette 69/issue A/20-3-2007): "Reform of the institutional framework for the structure and operation of Higher Education Institutes".
29. **Law 3475/2006** (Government Gazette 146/issue A/13-7-2006): "Organization and operation of secondary vocational education and other provisions". The law provides for the organization of secondary vocational education, it renames the Unified Lyceums into General, it organizes Upper Secondary Vocational Schools and Vocational Schools, it sets the curriculum and the professional rights of graduates, while it regulates issues of private Upper Secondary Vocational Schools and Vocational Schools.
30. **Law 3467/2006** (Government Gazette 128/issue A/21-6-2006): "Selection of primary and secondary education executives, regulation of issues of administration and other provisions". It regulates administrative staff selection issues in primary and secondary education. It also refers to issues of administration of education and to other provisions concerning all levels of education.
31. **Law 3376/2005** (Government Gazette 191/issue A/2-8-2005): "Foundation of European Education School".
32. **Law 3374/2005** (Government Gazette 189/issue A/2-8-2005): "Quality assurance in higher education. System for transfer and accumulation of credit units – Diploma Supplement". This law introduces quality assurance in higher education, and also establishes the Quality Assurance Agency. It also provides for the organization of

undergraduate and postgraduate programs based on the European Credit Transfer System, as well as the issue of the Diploma Supplement.

33. **Law 3369/2005** (Government Gazette 171/issue A/6-7-2005): "Systematization of Lifelong Learning and other provisions". It defines the general principles of Lifelong Learning, as well as the bodies responsible for Lifelong Education and Lifelong Training. It describes the Lifelong Education and Lifelong Learning programmes and introduces their certification. Last, it establishes the Institutes of Lifelong Education and Lifelong Learning.
34. **Law 3328/2005** (Government Gazette 80/issue A/1-04-2005): "National Academic Recognition Information Center". This law deals with the establishment, structure and functions of National Academic Recognition Information Center.
35. **Law 3255/2004** (Government Gazette 138/issue A/22-7-2004): "Regulation of issues in all grades of education". This law deals with the establishment of Departments at Universities, establishment of branches and departments in Technological Education Institutions, joint postgraduate degrees in the framework of international - transnational collaborations, as well as other issues of primary and secondary education.
36. **Presidential Decree 127/2003** (Government Gazette 114/issue A/12-5-2003): "Formation, organization, operation, administrative support and seat of National Council of Education".
37. **Law 3027/2002** (Government Gazette 152/issue A/28-6-2002): "On issues of the Organization of School Buildings for Higher Education and other provisions''. It defines the process of expropriation and requisition of immovable property by the School Building Organization S.A. as well as the operation of its personnel. It also defines regulations for the establishment, merger and abolishment of Technological Education Institutes and provides for the renaming of University departments. It establishes the School of Pedagogical and Technological Education and abolishes SELETE.
38. **Joint Ministerial Decision 16065/2002** (Government Gazette 497/issue B/22-4-2002): "Model operation regulation of municipal and community public law legal persons of nurseries and kindergartens".
39. **Law 2986/2002** (Government Gazette 24/issue A/13-2-2002): "Organization of Regional Services of Primary and Secondary Education, evaluation of the teaching work and staff, training of teachers and other provisions". It organizes the prefectural services of primary and secondary education and defines the selection procedure of the prefectural directors. It regulates issues pertaining to the evaluation of the teaching

process and of the teachers, as well as for their continuous training.
40. **Law 2909/2001**(Government Gazette 90 A΄)"Arrangements for Admission to Higher Education and other provisions".
41. **Law 2880/2001** (Government Gazette 9/issue A/30-1-2001): "Programme 'POLITEIA' for the reform and modernisation of public administration and other provisions".
42. **Law 2817/2000** (Government Gazette 78/issue A/14-3-2000): "Education of persons with special educational needs and other provisions". It describes the meaning, purpose and status of education of people with special educational needs. It also establishes the Centers for Diagnosis, Evaluation and Support, while it also regulates organizational issues of special education staff.
43. **Law 2009/1992** (Government Gazette 18/issue A/14-2-1992): "National System of Vocational Education and Training and other provisions".
44. **Law 1566/1985** (Government Gazette 167/issue A/30-9-1985): "On the structure and operation of Primary and Secondary Education and other provisions". It describes the purpose, structure and levels of primary and secondary education, the administration of schools, while it also regulates issues of teaching and administrative staff. The same law provides for the re-foundation of the Pedagogical Institute. What is more, provisions for the training and further education of teachers are included. Also, the law regulates issues related to special education and training of people with disabilities. It also lays down provisions on the School Vocational Guidance, organization of student life, the institutions for people participation, parental organizations and other special topics.
45. **Presidential Decree 9/1985** (Government Gazette 6/issue A/21-1-1985): "Foundation of Research Institute of Computer Technology".
46. **Law 1320/1983** (Government Gazette 6 A΄)"Recruitment in the Public Sector and other provisions".
47. **Law 682/1977** (Government Gazette 244/issue A/1-9-1977): "On private schools of general education and boarding schools". It regulates issues related to the establishment of private schools of general education and boarding schools.

source: https://eurydice.eacea.ec.europa.eu

Appendix II. Presidential Decree 18/2018 (sample pages)

θ) την ανάπτυξη και την προαγωγή της επιστήμης, της έρευνας, της καινοτομίας, της τεχνολογίας, της κοινωνίας της πληροφορίας,

ι) τη μέριμνα για την ποιοτική αναβάθμιση της εκπαίδευσης της νέας γενιάς και της δια βίου μάθησης.

Αρθρο 2[2]

Διάρθρωση Υπηρεσιών του Υπουργείου

1. Οι υπηρεσίες του Υπουργείου διαρθρώνονται ως εξής:

Α. Τα Γραφεία του Υπουργείου είναι:

α) το Πολιτικό Γραφείο του Υπουργού,

β) το Πολιτικό Γραφείο του Αναπληρωτή Υπουργού,

γ) τα Πολιτικά Γραφεία των Υφυπουργών,

δ) το Γραφείο του Γενικού/Διοικητικού Γραμματέα του Υπουργείου,

ε) το Γραφείο του Αναπληρωτή Γενικού/Διοικητικού Γραμματέα του Υπουργείου,

στ) το Γραφείο του Γενικού/Τομεακού Γραμματέα Θρησκευμάτων,

ζ) το Γραφείο του Γενικού/Τομεακού Γραμματέα Έρευνας και Τεχνολογίας,

«η) το Γραφείο του Γενικού/Τομεακού Γραμματέα Νέας Γενιάς»,[3]

~~**«θ) το Γραφείο του Γενικού/Τομεακού Γραμματέα Δία Βίου Μάθησης**~~[4]**»**[5]

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[2] **Ν.4559/2018- ΦΕΚ: 142/Α/2018 άρθρα 31 και 32:Αρθρο 31 Μεταβατικές διατάξεις Κεφαλαίου Ε΄ 1.** Ο Γενικός/Τομεακός Γραμματέας Νέας Γενιάς και Δια Βίου Μαθησης, ο οποίος, κατά την έναρξη ισχύος του παρόντος, προΐσταται της Γενικης Γραμματείας Νέας Γενιάς και Δια Βίου Μαθησης, μετονομάζεται σε Γενικού/Τομεακού Γραμματέα Νέας Γενιάς και προΐσταται της Γενικης Γραμματείας Νέας Γενιάς. 2. Μεχρι την πλήρωση της θέσης του Γενικού/Τομεακού Γραμματέα Δια Βίου Μαθησης, σύμφωνα με τις διατάξεις του ν. 4369/2016, ο Γενικός/Τομεακός Γραμματέα Νέας Γενιάς της παραγράφου 1 προΐσταται της Γενικης Γραμματείας Δια Βίου Μαθησης. Αρθρο 32 1. Στο Γραφείο του Γενικού Γραμματέα Νέας Γενιάς, συστήνονται οι ακόλουθες θέσεις: α) δυο (2) θέσεις ειδικών συμβούλων, β) δύο (2) θέσεις ειδικών συνεργατων, γ) επτά (7) θέσεις ειδικού επιστημονικού προσωπικού, δ) δύο (2) θέσεις διοικητικών υπαλλήλων. 2. Η πλήρωση των θέσεων αυτών γίνεται σύμφωνα με τις διατάξεις του άρθρου 55 του π.δ. 63/2005 (Α΄ 98) για τους ειδικούς συμβούλους, ειδικούς συνεργάτες και διοικητικούς υπαλλήλους των Γενικων Γραμματέων και του άρθρου 33 του ν. 2190/1994 (Α΄ 28) για το ειδικό επιστημονικό προσωπικό των Γενικών Γραμματειων, αντίστοιχα. 3. Η πλήρωση των θέσεων των υπηρεσιων της Γενικης Γραμματείας Νέας Γενιάς γίνεται με μετάταξη ή από απαση προσωπικού από θέση του Δημοσίου ή νομικού προσώπου δημοσίου δικαίου ή νομικού προσώπου ιδιωτικού δικαίου του δημόσιου τομέα ή με σχέση ιδιωτικού δικαίου, κατά παρέκκλιση των διατάξεων για το ΕΣΚ (ν. ~~4440~~/2016, Α΄ 124) και καθε αντίθετης, γενικης ή ειδικης διατάξης, με κοινή απόφαση του Υπουργού Παιδείας, Έρευνας και Θρησκευμάτων και του κατά περίπτωση αρμόδιου Υπουργού.
[3] Η υποπερίπτωση η΄ της περίπτωσης Α΄ αντικαθίσταται με την παρ. 1α του άρθρου 30 του νόμου 4559/2018,ΦΕΚ-142/Α/3.8.2018

[4] **Ν.4763/2020- ΦΕΚ: 254/Α/21.12.2020, άρθρο 170**: Από την έναρξη ισχύος του παρόντος καταργούνται: ...10. **Η περ. Θ' της παρ. 1 του άρθρου 2**, η περ. γ΄ της παρ. 2 του άρθρου 10 όπως ισχύει μετά την αντικατάσταση της με την παρ. 2 του άρθρου 209 του ν. 4610/2019 (Α΄ 70) και η παρ. 5 του άρθρου 10 όπως ισχύει μετά την τροποποίηση της με την παρ. 3 του άρθρου 38 του ν. 4589/2019 (Α΄ 13) και την τροποποίηση του πρώτου εδαφίου της με την παρ. 4 του άρθρου 30 του ν. 4559/2018 (Α΄ 142), οι περ. ζ΄και θ΄ της παρ. 4 του άρθρου 15γ, η περ. γ΄ της παρ. 2, οι περ. θ΄, ια΄, και ιε΄ της παρ. 3 και η παρ. 5 του άρθρου 34 και οι παρ. 3 και 4 του άρθρου 66 του π.δ. 18/2018 (Α΄ 31).

Β. Οι αυτοτελείς μονάδες υπαγόμενες στον Υπουργό είναι:

α) η Διεύθυνση Εσωτερικού Ελέγχου,

β) το Τμήμα κοινοβουλευτικού ελέγχου,

γ) το Γραφείο Τύπου,

δ) το Τμήμα Νομοθετικής Πρωτοβουλίας,

ε) το Γραφείο Επιστημονικών Συμβούλων.

Γ. Οι Γενικές Διευθύνσεις του Υπουργείου που υπάγονται στον Γενικό/Διοικητικό Γραμματέα του Υπουργείου ή στον Αναπληρωτή Γενικό/ Διοικητικό Γραμματέα του Υπουργείου, είναι:

α) η Γενική Διεύθυνση Στρατηγικού Σχεδιασμού, Προγραμματισμού και Ηλεκτρονικής Διακυβέρνησης,

«β) η Γενική Διεύθυνση Ψηφιακών Συστημάτων, Υποδομών και Εξετάσεων.»[6]

γ(β) η Γενική Διεύθυνση Οικονομικών Υπηρεσιών,

δ(γ) η Γενική Διεύθυνση Ανθρώπινου Δυναμικού,

ε(δ) η Γενική Διεύθυνση Σπουδών Πρωτοβάθμιας και Δευτεροβάθμιας Εκπαίδευσης,

στ(ε) η Γενική Διεύθυνση Εκπαιδευτικού Προσωπικού Πρωτοβάθμιας και Δευτεροβάθμιας Εκπαίδευσης,

ζ(στ) η Γενική Διεύθυνση Ανώτατης Εκπαίδευσης,

η(ζ)η Γενική Διεύθυνση Διεθνών, Ευρωπαϊκών Θεμάτων, Παιδείας Ομογενών και Διαπολιτισμικής Εκπαίδευσης.[7]

Δ.Στον Γενικό/Διοικητικό Γραμματέα του Υπουργείου ή στον Αναπληρωτή Γενικό/Διοικητικό Γραμματέα του Υπουργείου υπάγονται και οι δεκατρείς (13) Περιφερειακές Διευθύνσεις Πρωτοβάθμιας και Δευτεροβάθμιας Εκπαίδευσης.

Ε. Οι αυτοτελείς μονάδες που υπάγονται στον Γενικό/ Διοικητικό Γραμματέα του Υπουργείου είναι:

α) η Αυτοτελής Διεύθυνση Ιδιωτικής Εκπαίδευσης,

β) το Αυτοτελές Τμήμα Συντονισμού και Παρακολούθησης της Εκπαίδευσης Προσφύγων,

γ) το Αυτοτελές Τμήμα Ανθρώπινου Δυναμικού Περιφερειακών Υπηρεσιών,

δ) η Αυτοτελής Διεύθυνση Συγκέντρωσης, Υποβολής Παραστατικών και λοιπών θεμάτων.

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[5]Στην περίπτωση Α΄ προστίθεται υποπερίπτωση θ με την παρ. 1β του άρθρου 30 του νόμου 4559/2018,ΦΕΚ-142/Α/3.8.2018

[6]Στην περίπτωση Γ΄ της παραγράφου 1 του άρθρου 2 του π.δ. 18/2018 προστίθεται υποπερίπτωση β΄ με την παρ.1β του άρθρου 38 του νόμου 4589/2019,ΦΕΚ-13/Α/29.1.2019

[7] Οι υποπεριπτώσεις β΄, γ΄, δ΄, ε΄, στ΄ και ζ΄ της περίπτωσης Γ΄ της παραγράφου 1 του άρθρου 2 του π.δ. 18/2018 αναριθμούνται σε γ΄, δ΄, ε΄, στ΄, ζ΄ και η΄, αντίστοιχα με την παρ.1α του άρθρου 38 του νόμου 4589/2019,ΦΕΚ-13/Α/29.1.2019

2.Η Γενική Διεύθυνση Στρατηγικού Σχεδιασμού, Προγραμματισμού και Ηλεκτρονικής Διακυβέρνησης συγκροτείται από τις ακόλουθες οργανικές μονάδες:

α) Διεύθυνση Στρατηγικού Σχεδιασμού και Συντονισμού,

«β) Διεύθυνση Ηλεκτρονικής Διακυβέρνησης και Απλούστευσης Διαδικασιών»[12]

~~**γ) Διεύθυνση Ηλεκτρονικών και Δικτυακών Συστημάτων,**~~

γ(δ) Διεύθυνση Τεχνικών Υπηρεσιών,

«~~**ε) Διεύθυνση Εξετάσεων και Πιστοποιήσεων,**~~

~~**στ) Διεύθυνση Εκπαιδευτικής Τεχνολογίας και Καινοτομίας.»**~~[13]

Αρθρο 10

Διεύθυνση Στρατηγικού Σχεδιασμού και Συντονισμού

1. Επιχειρησιακός στόχος της Διεύθυνσης Στρατηγικού Σχεδιασμού και Συντονισμού είναι ο προγραμματισμός και συντονισμός των πολιτικών και δράσεων του Υπουργείου.

2. Η Διεύθυνση Στρατηγικού Σχεδιασμού και Συντονισμού συγκροτείται από τις ακόλουθες οργανικές μονάδες:

α) Τμήμα Α' Συντονισμού και Προγραμματισμού Πολιτικών,

β) Τμήμα Β' Στατιστικής και Ποιοτικής Επεξεργασίας Δεδομένων,

~~**«γ) Τμήμα Γ' Οργάνωσης και Απλούστευσης Διαδικασιών.»**~~[14]

~~*«γ) «Τμήμα Γ΄ Στρατηγικού Σχεδιασμού της Γενικής Γραμματείας Νέας Γενιάς και Γενικής Γραμματείας Διά Βίου Μάθησης.»*~~[15] [16]

δ) ε.Τμήμα Δ΄ Πολιτικής Σχεδίασης Εκτάκτου Ανάγκης.».

3. Το Τμήμα Α' Συντονισμού και Προγραμματισμού Πολιτικών είναι αρμόδιο για:

α) τη σύνταξη του ετήσιου Προγράμματος Δράσης του Υπουργείου,

---

[12] Η περίπτωση β΄ αντικαθίσταται με την παρ. 2β αα του άρθρου 38 του νόμου 4589/2019,ΦΕΚ-13/Α/29.1.2019

[13]Καταργούνται οι περιπτώσεις γ΄, ε΄ και στ΄ και η περίπτωση δ΄ αναριθμείται σε γ΄ με την παρ. 2β ββ του άρθρου 38 του νόμου 4589/2019,ΦΕΚ-13/Α/29.1.2019

[14]Στην παραγραφο 2 καταργείται η περίπτωση γ΄ και οι περιπτώσεις δ΄ και ε΄ αναριθμούνται σε γ΄ και δ΄, αντίστοιχα, οι οποίες αντικαθίστανται με την παρ. 3α του άρθρου 38 του νόμου 4589/2019,ΦΕΚ-13/Α/29.1.2019

[15] Η περίπτωση γ΄ της παραγραφου 2 του άρθρου 10, όπως αντικαταστάθηκε με την παρ. 4 του άρθρου 30 του ν. 4559/2018 και την παρ. 3 του άρθρου 38 ν. 4559/2018 (Α΄ 142), αντικαταστάθηκε με το άρθρο 209 παρ.2 του **Ν.4610/2019**- ΦΕΚ: 70/Α/7.5.2019.

[16] **Ν.4763/2020- ΦΕΚ: 254/Α/21.12.2020, άρθρο 170**: Από την έναρξη ισχύος του παρόντος καταργούνται: ...10. Η περ. θ΄ της παρ. 1 του άρθρου 2, **η περ. γ΄ της παρ. 2 του άρθρου 10 όπως ισχύει μετά την αντικατάστασή της με την παρ. 2 του άρθρου 209 του ν. 4610/2019 (Α' 70)** και η παρ. 5 του άρθρου 10 όπως ισχύει μετά την τροποποίησή της με την παρ. 3 του άρθρου 38 του ν. 4589/2019 (Α' 13) και την τροποποίηση του πρώτου εδαφίου της με την παρ. 4 του άρθρου 30 του ν. 4559/2018 (Α' 142), οι περ. ζ΄και θ΄ της παρ. 4 του άρθρου 15γ, η περ. γ΄ της παρ. 2, οι περ. θ΄, ια΄, και ιε΄ της παρ. 3 και η παρ. 5 του άρθρου 34 και οι παρ. 3 και 4 του άρθρου 66 του π.δ. 18/2018 (Α' 31).

β) τον χειρισμό κάθε άλλου συναφούς θέματος.

4. Το Τμήμα Β΄ Διορισμών και Προσλήψεων Εκπαιδευτικού Προσωπικού Δευτεροβάθμιας Εκπαίδευσης είναι αρμόδιο για:

α) την υλοποίηση των διορισμών μόνιμων εκπαιδευτικών και των προσλήψεων αναπληρωτών στα σχολεία δευτεροβάθμιας εκπαίδευσης,

β) τον χειρισμό κάθε άλλου συναφούς θέματος.

5. Τμήμα Γ΄ Διοικητικής Υποστήριξης Πρωτοβάθμιας και Δευτεροβάθμιας Εκπαίδευσης είναι αρμόδιο για:

α) τη σύνταξη των πράξεων που απαιτούνται για τη σύσταση των οργανικών θέσεων,

β) τον προγραμματισμό και τη διενέργεια των προαπαιτούμενων διαδικασιών για τους διορισμούς και τις προσλήψεις στην πρωτοβάθμια και τη δευτεροβάθμια εκπαίδευση,

γ) τον χειρισμό κάθε άλλου συναφούς θέματος.

Αρθρο 40

Διεύθυνση Διοίκησης Εκπαιδευτικού Προσωπικού Πρωτοβάθμιας και Δευτεροβάθμιας Εκπαίδευσης

«1. Ο επιχειρησιακός στόχος της Διεύθυνσης Διοίκησης Προσωπικού Πρωτοβάθμιας και Δευτεροβάθμιας Εκπαίδευσης είναι η διενέργεια των διαδικασιών κινητικότητας και, ειδικότερα, μεταθέσεων, αποσπάσεων, μετατάξεων και, προκειμένου για Π.Σ. και ΠΕΙ.Σ., τοποθετήσεων με θητεία και ανανεώσεων της θητείας του εκπαιδευτικού προσωπικού πρωτοβάθμιας και δευτεροβάθμιας Εκπαίδευσης και η παρακολούθηση και υλοποίηση των πειθαρχικών διαδικασιών.»[95]

2. Η Διεύθυνση Διοίκησης Εκπαιδευτικού Προσωπικού Πρωτοβάθμιας και Δευτεροβάθμιας Εκπαίδευσης συγκροτείται από τις ακόλουθες οργανικές μονάδες:

α) Τμήμα Α΄ Κινητικότητας Εκπαιδευτικού Προσωπικού πρωτοβάθμιας εκπαίδευσης,

β) Τμήμα Β΄ Κινητικότητας Εκπαιδευτικού Προσωπικού δευτεροβάθμιας εκπαίδευσης,

γ) Τμήμα Γ΄ Πειθαρχικών Διαδικασιών Εκπαιδευτικού Προσωπικού Πρωτοβάθμιας και Δευτεροβάθμιας Εκπαίδευσης.

«3. Το Τμήμα Α΄ Κινητικότητας Εκπαιδευτικού Προσωπικού πρωτοβάθμιας εκπαίδευσης είναι αρμόδιο για:

α) τη διενέργεια και υλοποίηση των μεταθέσεων, αποσπάσεων και μετατάξεων των εκπαιδευτικών πρωτοβάθμιας εκπαίδευσης, καθώς και των τοποθετήσεων με θητεία και των ανανεώσεων της θητείας εκπαιδευτικών πρωτοβάθμιας εκπαίδευσης σε ΠΕΙ.Σ. και

β) τη σύνταξη των σχετικών πράξεων και εγκυκλίων και τον χειρισμό κάθε άλλου συναφούς θέματος.

[95] Η παρ.1 του αρθρου 40 αντικαταστάθηκε με το αρθρο 21 παρ.9 του N.4713/2020 - ΦΕΚ: 147/Α/29.7.2020

4. Το Τμήμα Β΄ Κινητικότητας Εκπαιδευτικού Προσωπικού Δευτεροβάθμιας Εκπαίδευσης είναι αρμόδιο για:

α) τη διενέργεια και υλοποίηση των μεταθέσεων, αποσπάσεων και μετατάξεων εκπαιδευτικών δευτεροβάθμιας εκπαίδευσης, καθώς και των τοποθετήσεων με θητεία και των ανανεώσεων της θητείας εκπαιδευτικών δευτεροβάθμιας εκπαίδευσης σε Π.Σ. και ΠΕΙ.Σ. και

β) τη σύνταξη των σχετικών πράξεων και εγκυκλίων και τον χειρισμό κάθε άλλου συναφούς θέματος.»[*]

5.Το Τμήμα Γ΄ Πειθαρχικών Θεμάτων Εκπαιδευτικού Προσωπικού Πρωτοβάθμιας και Δευτεροβάθμιας Εκπαίδευσης είναι αρμόδιο για:

α)τις πειθαρχικές υποθέσεις του εκπαιδευτικού προσωπικού πρωτοβάθμιας και δευτεροβάθμιας εκπαίδευσης και ειδικότερα για την παρακολούθηση και την υλοποίηση των πειθαρχικών διαδικασιών,

β) τον χειρισμό κάθε άλλου συναφούς θέματος.

Αρθρο 41

Διεύθυνση Υπηρεσιακής Κατάστασης και Εξέλιξης Εκπαιδευτικού Προσωπικού Πρωτοβάθμιας και Δευτεροβάθμιας Εκπαίδευσης

1.Ο επιχειρησιακός στόχος της Διεύθυνσης Υπηρεσιακής Κατάστασης και Εξέλιξης Εκπαιδευτικού Προσωπικού Πρωτοβάθμιας και Δευτεροβάθμιας Εκπαίδευσης είναι ο χειρισμός θεμάτων υπηρεσιακής κατάστασης του προσωπικού Πρωτοβάθμιας και Δευτεροβάθμιας Εκπαίδευσης και οι διαδικασίες επιλογής στελεχών.

2.Η Διεύθυνση Υπηρεσιακής Κατάστασης και Εξέλιξης Εκπαιδευτικού Προσωπικού Πρωτοβάθμιας και Δευτεροβάθμιας Εκπαίδευσης συγκροτείται από τις ακόλουθες μονάδες:

α)Τμήμα Α΄ Υπηρεσιακής Κατάστασης και Εξέλιξης Εκπαιδευτικού Προσωπικού Πρωτοβάθμιας Εκπαίδευσης.

β)Τμήμα Β΄ Υπηρεσιακής Κατάστασης και Εξέλιξης Εκπαιδευτικού Προσωπικού Δευτεροβάθμιας Εκπαίδευσης.

γ) Τμήμα Γ΄ Επιμόρφωσης Εκπαιδευτικού Προσωπικού Πρωτοβάθμιας και Δευτεροβάθμιας Εκπαίδευσης.

δ) Τμήμα Δ΄ Στελεχών Πρωτοβάθμιας και Δευτεροβάθμιας Εκπαίδευσης.

3. Το Τμήμα Α΄ Υπηρεσιακής Κατάστασης και Εξέλιξης Εκπαιδευτικού Προσωπικού Πρωτοβάθμιας Εκπαίδευσης είναι αρμόδιο για:

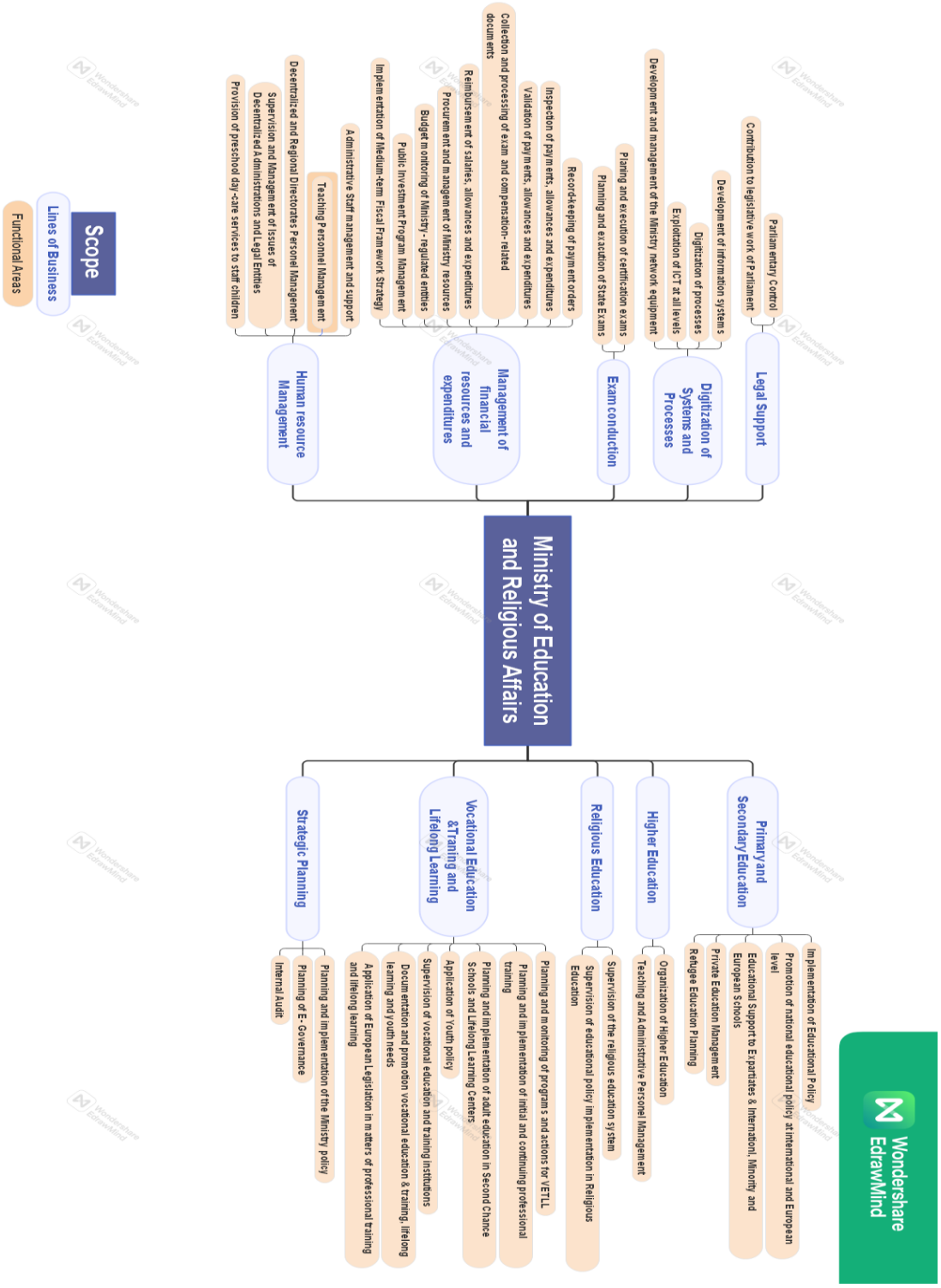
α) κάθε θέμα που αφορά στην υπηρεσιακή κατάσταση των δημόσιων εκπαιδευτικών της πρωτοβάθμιας εκπαίδευσης,

β) την αξιολόγηση και την τήρηση μητρώου των εκπαιδευτικών της πρωτοβάθμιας εκπαίδευσης και την παρακολούθηση της βαθμολογικής και μισθολογικής εξέλιξής τους.

[*] Οι παρ.3 και 4 αντικαταστάθηκαν με το άρθρο 21 παρ.10 του N.4713/2020 - ΦΕΚ 147/Α/29.7.2020

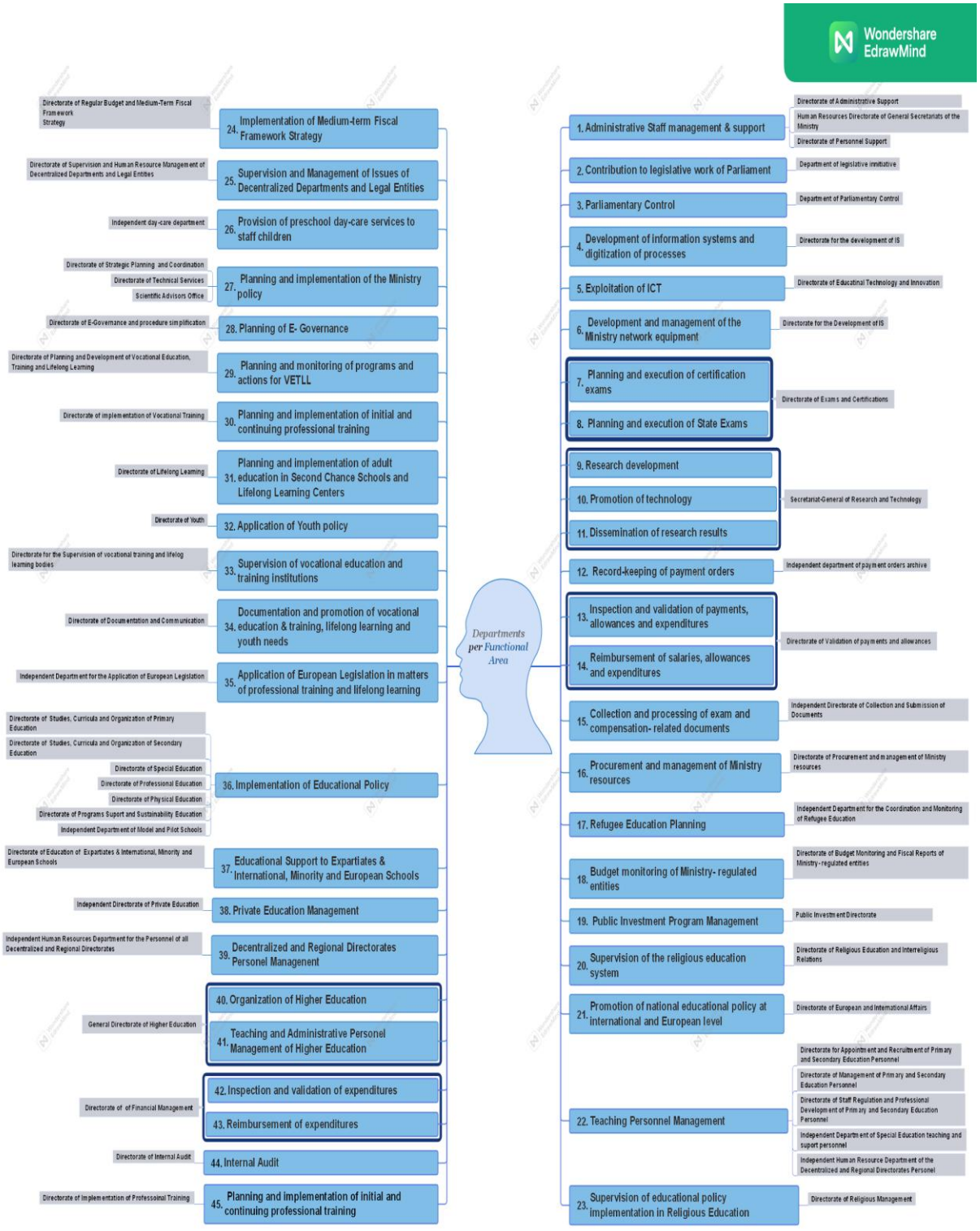
source: docman.gr

Appendix III. Ministry of education map: Scope-Lines of Business-Functional Areas



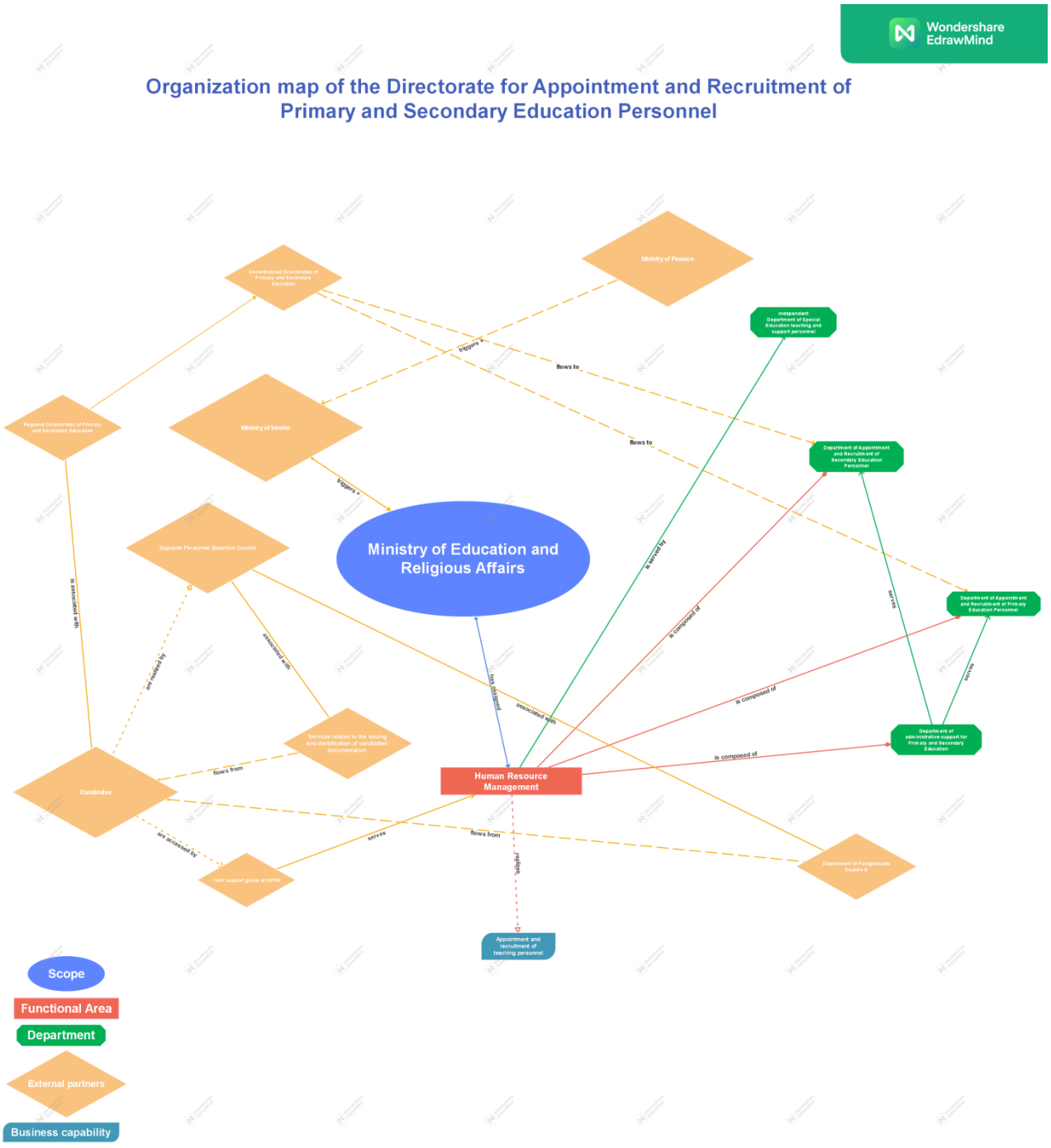
map can be found in:
https://viewer.edrawsoft.com/public/s/0fe0b377549923

Appendix IV. Ministry of education map: Departments per functional area



map can be found in:
https://viewer.edrawsoft.com/public/s/817a3607390430

Appendix V. Organizational Map of the Directorate for the Appointment and Recruitment of Primary and Secondary Education Personnel



map can be found in:
https://viewer.edrawsoft.com/public/s/0f474520449479

Appendix VI. The APQC Education Process Classification Framework

6.0 Develop and Manage Human Capital (10007)

6.1 Develop and manage human resources (HR) planning, policies, and strategies (17043)

- 6.1.1 Develop human resources strategy (17044)
  - 6.1.1.1 Identify strategic HR needs (10418)
  - 6.1.1.2 Define HR and business function roles and accountability (10419)
  - 6.1.1.3 Determine HR costs (10420)
  - 6.1.1.4 Establish HR measures (10421)
  - 6.1.1.5 Communicate HR strategies (10422)
  - 6.1.1.6 Develop strategy for HR systems/technologies/ tools (10432)
  - 6.1.1.7 Manage employer branding (20606)
- 6.1.2 Develop and implement human resources plans (17045)
  - 6.1.2.1 Gather skill requirements according to district strategy and educational and operational needs (10423)
  - 6.1.2.2 Plan employee resourcing requirements per department and campus (10424)
  - 6.1.2.3 Develop compensation plan (10425)
  - 6.1.2.4 Develop succession plan (10426)
  - 6.1.2.5 Develop employee diversity plan (10427)
  - 6.1.2.6 Develop other HR programs (10428)
  - 6.1.2.7 Develop HR policies (10429)
  - 6.1.2.8 Administer HR policies (10430)
  - 6.1.2.9 Plan employee benefits (10431)
  - 6.1.2.10 Develop work force strategy models (10433)
- 6.1.3 Monitor and update plans (10417)
  - 6.1.3.1 Monitor HR performance measures (10434)
  - 6.1.3.2 Analyze contribution to district goals and objectives (10435)
  - 6.1.3.3 Communicate plans and provide updates to board of education/trustees (10436)
  - 6.1.3.4 Determine value added from HR function (20493)
  - 6.1.3.5 Review and revise HR plans (10438)

6.2 Recruit/Source and Screen/Select employees (10410)

- 6.2.1 Create and develop employee requisitions/vacancy posting (10439)
  - 6.2.1.1 Align staffing plan to work force plan and district strategies/resource needs (10445)
  - 6.2.1.2 Develop and open job requisition (10446)
  - 6.2.1.3 Develop job description (10447)
  - 6.2.1.4 Post requisition (10448)
  - 6.2.1.5 Manage internal/external job posting Web sites (10449)
  - 6.2.1.6 Change/Update requisition (10450)
  - 6.2.1.7 Notify hiring manager (10451)
  - 6.2.1.8 Manage requisition date (10452)
- 6.2.2 Recruit/Source candidates (10440)
  - 6.2.2.1 Determine recruitment methods (10453)
  - 6.2.2.2 Perform recruiting activities/events (10454)
  - 6.2.2.3 Evaluate recruitment effectiveness (20494)
- 6.2.3 Screen/Select candidates (20123)
  - 6.2.3.1 Identify and deploy candidate selection tools (10456)
  - 6.2.3.2 Interview candidates (10457)
  - 6.2.3.3 Test candidates (10458)
  - 6.2.3.4 Select and reject candidates (10459)
- 6.2.4 Manage pre-placement verification (10444)
  - 6.2.4.1 Complete candidate background information (10460)
  - 6.2.4.2 Conduct pre-employment screening (20495)
  - 6.2.4.3 Recommend/Not recommend candidate (20496)
- 6.2.5 Manage new hire/rehire (10443)
  - 6.2.5.1 Draw up and make offer (10463)
  - 6.2.5.2 Negotiate offer (10464)
  - 6.2.5.3 Hire candidate (10465)
- 6.2.6 Track candidates (20497)
  - 6.2.6.1 Create applicant record (10466)
  - 6.2.6.2 Manage/Track applicant data (10467)
  - 6.2.6.3 Archive and retain records of non-hires (10468)
- 6.2.7 Manage substitute teaching staff (20498)
  - 6.2.7.1 Identify substitute qualifications and requirements (20499)
  - 6.2.7.2 Develop substitute hiring methods (20500)
  - 6.2.7.3 Identify and deploy substitute scheduling and tracking tools (20501)
  - 6.2.7.4 Monitor substitute use and effectiveness (20502)

6.3 Manage employee on boarding, development, and training (20599)

- 6.3.1 Manage employee orientation and assignment (10469)
  - 6.3.1.1 Create/Maintain employee on-boarding program (10474)
  - 6.3.1.2 Introduce new employees to managers (20503)
  - 6.3.1.3 Introduce workplace (20504)
  - 6.3.1.4 Evaluate the effectiveness of employee on-boarding program (11243)
- 6.3.2 Manage employee performance (10470)
  - 6.3.2.1 Define performance objectives (10479)
  - 6.3.2.2 Review, appraise, and manage employee performance (10480)
  - 6.3.2.3 Evaluate and review performance program (10481)
- 6.3.3 Manage employee development (10472)
  - 6.3.3.1 Define employee development guidelines (10487)
  - 6.3.3.2 Develop employee career plans (10488)
  - 6.3.3.3 Manage employee skill and competency development (17051)
- 6.3.4 Develop and train employees (10473)

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- 6.3.4.1 Align employee, school, and district development needs (10490)
- 6.3.4.2 Align learning programs with competencies (10491)
- 6.3.4.3 Establish training needs by analysis of required and available skills (10492)
- 6.3.4.4 Develop, conduct, and manage employee and/or management training programs (10493)
  - 6.3.4.4.1 Reinforce training and development (20506)
  - 6.3.4.4.2 Provide coaching, mentoring, peer sharing (20507)
- 6.3.4.5 Manage examinations and certifications (20125)
  - 6.3.4.5.1 Liaise with external certification authorities (20126)
  - 6.3.4.5.2 Administer certification tests (20127)
  - 6.3.4.5.3 Appraise experience qualifications (20128)
  - 6.3.4.5.4 Administer certificate issue and maintenance (20129)

6.4 Manage employee relations (17052)

- 6.4.1 Manage health and safety (20505)
- 6.4.2 Manage labor relations (10483)
- 6.4.3 Manage collective bargaining process (10484)
- 6.4.4 Manage labor management partnerships (10485)
- 6.4.5 Manage employee grievances (10531)

6.5 Reward and retain employees (10412)

- 6.5.1 Develop and manage reward, recognition, and incentive programs (10494)
  - 6.5.1.1 Develop salary/compensation structure and plan (10498)
  - 6.5.1.2 Develop benefits, reward, and incentive plan (10499)
  - 6.5.1.3 Perform competitive analysis of benefit, rewards, and incentives (10500)
  - 6.5.1.4 Identify compensation requirements based on financial benefits and HR policies (10501)
  - 6.5.1.5 Administer compensation, rewards, and incentives to employees (10502)
  - 6.5.1.6 Reward and motivate employees (10503)
- 6.5.2 Develop and manage employee engagement and satisfaction (20508)
  - 6.5.2.1 Determine key elements that affect workforce engagement (20509)
  - 6.5.2.2 Differentiate engagement elements for different workforce groups and segments (20510)
  - 6.5.2.3 Determine workforce engagement and satisfaction assessment methods (20511)
  - 6.5.2.4 Administer assessments (20512)
  - 6.5.2.5 Establish engagement and satisfaction performance measures (20513)
  - 6.5.2.6 Analyze and report engagement and satisfaction results (20514)
- 6.5.3 Manage and administer benefits (10495)
  - 6.5.3.1 Deliver employee benefits program (10504)
  - 6.5.3.2 Administer benefit enrollment (10505)
  - 6.5.3.3 Process claims (10506)
  - 6.5.3.4 Perform benefit reconciliation (10507)
- 6.5.4 Manage employee assistance and retention (10496)
  - 6.5.4.1 Deliver programs to support work/life balance for employees (10508)
  - 6.5.4.2 Develop family support systems (10509)
  - 6.5.4.3 Review retention and engagement indicators (10510)
  - 6.5.4.4 Review compensation plan (10511)
- 6.5.5 Administer payroll (10497)

6.6 Redeploy and retire employees (10413)

- 6.6.1 Manage promotion and demotion process (10512)
- 6.6.2 Manage separation (10513)
- 6.6.3 Manage retirement (10514)
- 6.6.4 Manage leave of absence, sabbatical (10515)
- 6.6.5 Develop and implement employee reduction in force policies and regulations (10516)
- 6.6.6 Manage deployment of personnel (10517)
- 6.6.7 Relocate employees and manage assignments (17055)
- 6.6.8 Manage former employees (20515)
  - 6.6.8.1 Manage employee relocation process (20516)

6.7 Manage employee information (20134)

- 6.7.1 Manage reporting processes (10522)
- 6.7.2 Manage employee inquiry process (10523)
- 6.7.3 Manage and maintain employee data (10524)
- 6.7.4 Manage human resource information systems (HRIS) (10525)
- 6.7.5 Develop and manage employee metrics (10526)
- 6.7.6 Develop and manage time and attendance systems (10527)
- 6.7.7 Manage/Collect employee suggestions and perform employee research (10530)

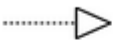
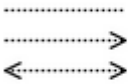
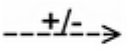
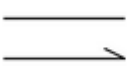
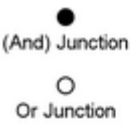
6.8 Manage employee communication (17057)

- 6.8.1 Develop employee communication plan (10529)
- 6.8.2 Conduct employee engagement surveys (16944)

6.9 Deliver employee communications (10532)

Source:apqc.com

Appendix VII. Summary of the Archimate specification relationships

Structural Relationships		**Notation**	**Role Names**
Composition	Represents that an element consists of one or more other concepts.		← composed of → composed in
Aggregation	Represents that an element combines one or more other concepts.		← aggregates → aggregated in
Assignment	Represents the allocation of responsibility, performance of behavior, storage, or execution.		← assigned to → has assigned
Realization	Represents that an entity plays a critical role in the creation, achievement, sustenance, or operation of a more abstract entity.		← realizes → realized by
Dependency Relationships		**Notation**	**Role Names**
Serving	Represents that an element provides its functionality to another element.		← serves → served by
Access	Represents the ability of behavior and active structure elements to observe or act upon passive structure elements.		← accesses → accessed by
Influence	Represents that an element affects the implementation or achievement of some motivation element.		← influences → influenced by
Association	Represents an unspecified relationship, or one that is not represented by another ArchiMate relationship.		associated with ← associated to → associated from
Dynamic Relationships		**Notation**	**Role Names**
Triggering	Represents a temporal or causal relationship between elements.		← triggers → triggered by
Flow	Represents transfer from one element to another.		← flows to → flows from
Other Relationships		**Notation**	**Role Names**
Specialization	Represents that an element is a particular kind of another element.		← specializes → specialized by
Relationship Connectors		**Notation**	**Role Names**
Junction	Used to connect relationships of the same type.		

source: https://pubs.opengroup.org/architecture/archimate3-doc/