

An Enterprise Architecture Approach to Temporary and Permanent Governance Continuum

Bruno.Fragoso¹ and Andre.Vasconcelos¹

¹ INESC-ID, Instituto Superior Técnico, Lisboa, Portugal
@tecnico.ulisboa.pt

Abstract. This paper supports the assessment of the alignment of governance structures towards stakeholder's concerns. Considering the characteristics of governance structures and models in project, program and portfolio discipline, and left to the enterprise to handle its integration in the overall enterprise governance, this work contributes to the assessment of temporary governance structures' alignment under an actor-role permanent and temporary evaluation. As contributions from this work we can entail: i) a conceptual map for the temporary and permanent governance roles enrolled in enterprise transformation; ii) a proposal of a viewpoint for stakeholders with the concerns on the identification of permanent and temporary governance transformation roles and serve relations; iii) the views generated from the viewpoint proposal, where the instantiation of the architectural elements allow to add meaning and value to the represented models, adding the required data for the iv) evaluation of alignment of temporary and permanent governance roles against a stakeholder's concern. This last contribution opens the possibility to the stakeholders, either in design phase or in implementation phase, to assess the governance structure alignment adequacy to the expected outcomes of the projects. The demonstration presented, based in a real case study, allows to clarify the opportunities and follow up research in adding other evaluation metrics and taxonomies to the proposed solution.

Keywords: Enterprise Governance, Transformation Governance, Governance Alignment.

1 Introduction

The fast pace in the development of technology creates challenges for enterprises to survive, and thrive. One of such challenges is the ability of the enterprise to promote the required transformations from an As Is to a To Be state without occurrences or events that reduce value from the expected benefits.

An enterprise, understood as “any collection of organizations that has a common set of goals and, or a single bottom line” [1] requires to have in place the right instruments that allow to design, plan and implement such transformation within the enterprise, granting alignment between the organizations.

Governance, defined under the scope of this work as “the sum of organizational measures for continuously maintaining unity and integration in the (re-) development

and operation of an enterprise(...), concerns enterprise adaptation and renewal: ‘changing the mill’ [2] organizations, but also in alignment with the ‘running the mill’ organizations of the enterprise.

These temporary endeavors promote the ‘change of the mill’ putting the focus on the required transformation, resulting in a gradual change of the enterprise elements' behavior, or the result of a deliberate action [3].

A project, while “a transformation process designed to achieve a goal specified by a to-be state” [4] requires a governance to transform the organization, with a planned finish time, as opposed to governance structure for “running the mill” dealing with daily activities.

It is more and more required for the enterprise to have the agility to change and adapt to new realities (legal, compliance, environment, social or commercial) when a new temporary governing body is created to answer a given need.

As such, there is an empirical need in determine the adequacy of the governing body to deliver the expected value by the stakeholder on a given project. A concern that can be as distinct as to have a project driven on cost and time, or quality and technical expertise.

1.1 Problem Motivation

When approaching the governance concept in the context of enterprises that foster transformation processes for the strategy implementation, we can assume from state of the art that:

- Projects are temporary endeavors, with temporary governance structures [[5–8], [9]];
- Projects can be conceptualized as an instrument for the Enterprise to achieve its objectives - [[10], [11]]; or as organizations, relating with other organizations in the same Enterprise - [[12], [13], [14], [15], [16], [17]];
- Projects being either conceptualized as an instrument, or as an organization, have a vast research field on Governance as a key dimension that determines the success of the project (finish on time, on scope, and costs) - [[5–8], [13], [14], [18]];
- Is up to the Enterprise, more specifically for a formal and permanent governance structure, to integrate and grant unity in the organizational Governance of projects – [[8], [19] [20]];
- Enterprises tend to have permanent and temporary governance structures that coexist in sharing responsibilities and attributions according to its scope and objectives – [[21], [22]];
- The higher the maturity enterprises have in handling transformation processes, statistically, have better results - [[23], [24], [25]];

Considering such, it would be expectable to have in place a set of solutions addressing the alignment of temporary governing bodies' governance structures with the enterprise governance and formal authority scheme.

However, it remains evidenced that enterprises still struggle in making the process of strategy implementation as effective and efficient as possible, being the apparent interactions between the permanent governing bodies and temporary governing bodies

a critical organizational link, where potential misalignments are most likely to cause a negative impact on the strategy outcome.

In a literature review on project governance and stakeholders [26], its authors concluded that “project management literature lacks from an inclusive framework which defines the roles, relationships and positions of internal and external stakeholders inside and outside of the organization’s governance structure” [26]. On the other hand, the existent governance approaches are heavily formal, structural, and management-oriented [27].

So, how can we access and evaluate the alignment between temporary and permanent governance structures against a stakeholder’s concern?

To start answering this question, we detail in section 2. the need to validate the existence of a common authority and decisional layered vision of the Enterprise, and any temporary governance structure. By mapping the roles into such decisional layers, it will be possible to place the temporary and permanent roles at a same level in what concerns with their responsibilities and attributions (addressed in subsection 2.1). Also the ArchiMate suitability for the identified problem (addressed in subsection 2.2). Finally related work on the evaluation and metrics allowed to validate the alignment (addressed in subsection 2.3). In section 3 are presented: a conceptual model of the solution (addressed in subsection 3.1); a viewpoint and views of the solution (addressed in subsection 3.2); and the evaluation and alignment level for the governance structure in place against stakeholder’s concern (addressed in subsection 3.3).

Finally, section 4 provides a demonstration on the application of the solution to a real case in an enterprise, followed by the Conclusions and Further Work.

2 Related Work

Transformation of the enterprises have different speeds and priorities. The need to steer the enterprise demands accurate and precise information to support decision making. It matters now to understand what to detect. Patterns, rules, procedures, performance indicators or others, to allow, on design phase or during monitoring, to identify potential misalignments in temporary and permanent governance roles.

More than the relation on permanent and temporary governing bodies, the focus is required to be on the permanent governances’ roles that share the same actor assigned to a temporary governance role. Following the research in [28], the actor-role, “an entity that is capable of performing behavior, and has the responsibility to perform specific behaviors according to a status”, can be assessed on its influence authority from the enterprise permanent governance.

Considering such, the related work on the relevance in addressing a possible governance assessment based on actor-roles’ focus in three main requirements:

- The existence of a common authority and decisional level framework for permanent and temporary governing bodies – The authorities and the function level in which a determined temporary role is expected to operate within its temporary governance structure must be at the same level of authorities and functions of the layered enterprise where the project is undergoing. This will allow to have a clear authority line

- and a common layered vision of the permanent and temporary governance structures - addressed in subsection 2.1;
- The validity in using ArchiMate modelling language and framework for the architectural Viewpoint and the associated views – Assuming the adequacy of the meta-model and the scope of the solution of ArchiMate, it matters to understand the viewpoints and views that may already provide a representation of the elements relevant for the scope of his work - addressed in subsection 2.2; and
 - The evaluation and alignment measures required to assess and validate a temporary governance structure alignment towards a stakeholder concern – the architectural elements resulting from the representation of the set views require assessment metrics in order to determine the alignment level. Those assessment metrics are required to validate the need in assessing the actor-roles in the permanent and temporary governance structures against an expected structure in place by the stakeholder - addressed in subsection 2.3.

2.1 Common Authority and Decisional Level Framework

Standards such as ISO 215 series regularly refer to decisional levels in the organization as: Senior Management or Executive Level; Management; and Operations level. In particular in [5] the level of given liberty allows to place the different roles, such as Project Owner, at the executive level of the enterprise. It is visible and understandable the difficulty in imposing a solution that can be adopted to, a less complex organization in decisional levels to a more complex one, being accurate on a decisional level base. **Table 1** shows the identified roles or functions normalized into the standard, and classified under a specific decisional level according to [5–7].

Table 1. - Roles and Decisional Organizational Levels in ISO 215 series

	Project	Program	Portfolio
Senior Management/ Executive	Steering Committee	Program Governing Body	Portfolio Governing Body
	Project Sponsor	Program Sponsor	-
Management	Project Manager	Program Manager	Portfolio Manager
	Project Management Team	Program Management Team	Portfolio Management Team
Operations	Project Team	-	-

In that direction, the authors in [19] present a reference architecture on projects, programs and portfolios (PPP) governance model. Using ArchiMate, the proposed reference architecture allowed the verification of deviations between different projects, program and portfolio governance models at competences and roles levels.

As we can notice, the authors used the decisional layers presented in PM2 Methodology [29], as seen in the project organization model in **Fig. 1**.

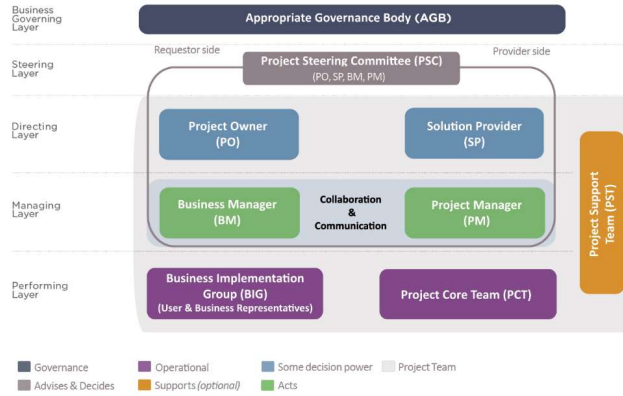


Fig. 1. Project Organization in [29]

The PM2 methodology from the European Commission [46], does a strong effort to align classic project management practices to the context of EU funded projects. Such alignment attempt is evidenced with the Project Owner and Project Manager's roles, which appear as part of different sides (Requestor side and Provider side) adapting in this sense to the reality of a project carried on under an outsourcing model.

Such a proposal on the project organization's layered vision, extrapolated for the overall organization, can provide relevant inputs when applied generally in analyzing the roles defined under a more classical project management approach. A better understanding of the decisional level in a layered vision of the project organization will foster a clearer view of such Governance's scope and the organizational landscapes.

Also, by granting a common decisional layered vision on the actor roles of one or more governing bodies, other elements allow to identify potential misalignments, such as a possible actor assuming a temporary role in a higher or lower decisional level than its permanent role.

For last, the number of roles and respective actors in each decisional layer can have significance, since the higher it is, the higher the risk of losing efficiency and quality in the negotiations and required compromises for decisions.

2.2 ArchiMate's Viewpoint and Views

ArchiMate [30] is the modeling language that has a vast number of resources and tools in the organization's design activities. The standard provides a set of entities and relationships with their corresponding iconography to represent Architecture Descriptions"[30]. This amplitude in the way ArchiMate allows the all organization to be represented under the correct level and aspect, seems to provide a coherent set of elements to assess a governance alignment.

As key attributes for the use of Archimate are: 1) the two main types of elements in the language are structure (nouns) and behavioral (verb) elements, [30]; and ii) it also distinguishes between the model elements and their notation. This last one allows a

more varied, stakeholder-oriented viewpoint, framing the notation to the context in place.

In **Fig. 2**, are referenced the elements under the respective aspects and layers, that are under the scope of the problem to address. The elements by itself allow us to understand the conceptual representation of the problem, locating it in strategy, business and migration & implementation layers. The elements include behavioral, active structure and motivation aspects, alongside one composite element.

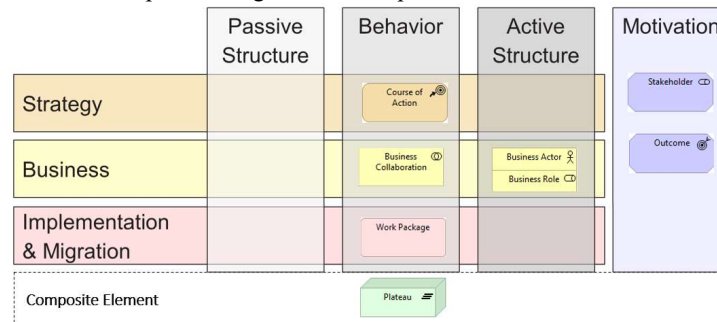


Fig. 2. Aspects, Layers and Elements in the scope of the problem

The viewpoint and related views required for the proposed solution become also a key feature in ArchiMate that expects to provide the necessary tools for the representation and communication necessities for its stakeholders.

Viewpoint & Views

Viewpoints, defined as “a specification of the conventions for constructing and using a view; a pattern or template from which to develop individual views by establishing the purposes and audience for a view and the techniques for its creation and analysis.” [1]” focus on particular aspects and layers. Such aspects and layers are determined, as seen, by the concerns of a stakeholder.

Looking at Basic Viewpoint classification in ArchiMate specification [30], the closer to the scope of this work is the Organization viewpoint from the Composition Category: “viewpoints that define internal compositions and aggregations of elements”.

As, “a viewpoint establishes the purposes and audience for a view and the techniques or methods employed in constructing a view” [1], the purpose expressed in this basic viewpoint falls short in addressing the concerns on designing, deciding and informing on two different organization viewpoints. One regarding the “running the mill” organization, and the other regarding the “changing the mill” organization.

Since by now we can state as required elements, common to organization viewpoint are elements such as: Actor, Role, Business Collaboration or Outcome, the proposal below for a Transformation Governance Viewpoint (**Table 2**), tries to address the concern on the identification of permanent and temporary governance transformation roles. While maintaining the scope as a multi layer & single aspect of the enterprise.

Table 2. Proposal of Transformation Governance Viewpoint

Transformation Governance Viewpoint	
Stakeholders	Enterprise, Process Architects, Transformation managers, PMO, EPMO
Concerns	Identification of permanent and temporary governance transformation roles and serve relation
Purpose	Designing, deciding, informing
Scope	Multi layer/ Single Aspect

The views, understood as the “representation of a system from the perspective of a related set of concerns” [1] have its conventions defined by the proposed viewpoint. Containing elements and relationships (concepts) framing the stakeholder’s concern.

In conclusion we can note that ArchiMate provides an adequate set of elements to allow an adequate representation of Governance Relationships in a given reality. Due to its language/ notation independence, a better evaluation of the permanent and temporary nature of the governance structures in place is possible by allowing stakeholder-oriented representation.

2.3 Evaluation and Alignment Level

[19] evidenced the validity in ArchiMate assessing different frameworks and classifications against a reference architecture for governance roles. This solution allows to better answer to the heterogeneity in complexity, scope, specificities that each transformation process can entail.

Stakeholder’s concern becomes in this sense the set of elements that represent his interests. Concern, understood as “an interest of a stakeholder with regards to the architecture description of some system, resulting from the stakeholder’s goals, and the present or future role(s) played by the system in relation to these goals” [1].

The stakeholder, restricted to the scope of this work as someone who has approval rights on the suitability of implementation, can determine the adequate governance by at a first stand choosing the focus to be in time and cost, or quality and technical expertise.

A commonly used approach to Project Organization [31, 32] focuses on the collaboration within two roles: i) project manager and ii) functional manager. Temporary and permanent roles respectively. Such organization is based upon two extremes: Project Hierarchy and Functional Hierarchy. If in project hierarchy it is denoted a stronger focus on time and costs control on the project, in functional hierarchy the focus is on quality and technical expertise [31].

As expected, a third category of project organization is the balanced matrix, where the collaboration and negotiation nature required for the project manager and the functional manager roles leads to a higher risk of conflicts and dead end negotiations.

In [32], the author indicates two other types, the Coordinated Matrix, between Functional Hierarchy and Balanced Matrix; and Secondment Matrix, between Balanced Ma-

trix type and Project Hierarchy. Both distribute the authority either to the project manager, or to the functional manager, but with a stronger collaboration link than the extremes (**Fig. 3**).

If in project hierarchy it is denoted a stronger focus on time and cost control on the project, and in functional hierarchy the focus is on quality and technical expertise [31].

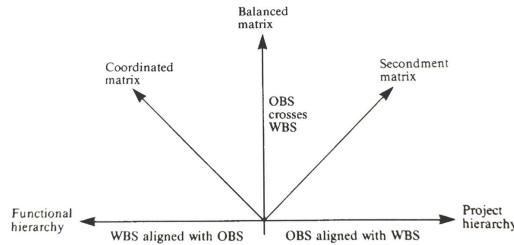


Fig. 3. Range of matrix structures in [32]

As such, the concern level on Time, Cost, Quality and Technical Expertise seems suitable to determine the alignment between the governance roles in place and their adequacy on the stakeholder concerns. Being possible to present an evaluation on permanent and temporary governance, based in the “matrix continuum” [31], with the purpose to map different characteristics evidenced by the elements in the architecture of the desired transformation action.

Beyond this representation, other approaches such as [33] apply the same matrix but under a Functional or Product influence in the decision making. That represents a different semantic over the governance roles in place, but with the qualities, and disadvantages, of the model.

As visible in the adapted representation of the Matrix Continuum, **Fig. 4**, we can determine as extremes the functional hierarchy and the project hierarchy for some qualities of the system, but with other sets of qualities being similar in the “middle” of a given governance structure. In fact, each model of governance structure is more suitable than others to other contexts, the awareness of the type of governance structure in place allows a double check on the alignment expected with the stakeholder’s concern.

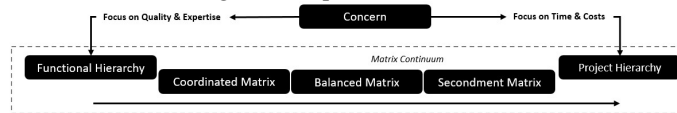


Fig. 4. Matrix Continuum [31, 32], adapted

Bringing to the reality of enterprises, and considering the complexity and own hierarchy of the enterprise, it matters to understand that, when centered in one same actor a temporary and a permanent role, the efficiency of the governance structure may not be the expected. This is because being a functional manager or a project manager, if in the same actor, misalignment tends to happen.

3 Temporary and Permanent Governance Continuum

Considering the existent models, tools and semantics, we present the solution’s conceptual model (addressed in 3.1), the views and viewpoints (addressed in 3.2) and how it allows us to promote the measurement and evaluation on the governance alignment (addressed in 3.3).

3.1 Conceptual Model

The proposed conceptual model in **Fig. 5** provides the required concepts to frame the conceptual domain of this work; at the same time that allows a more clear understanding on relations between each concept. If we remove the Permanent Role and the Permanent Transformation Governance roles, the conceptual model can be seen as any other project conceptual model. But, to assess permanent roles, under a permanent transformation governance roles plateau, in the governance continuum of a project, they become key concepts.

The course of action of the temporary plateau regarding governance in place is set to influence the outcome associated with the main stakeholder.

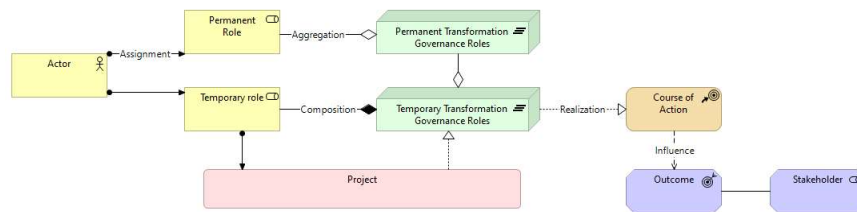


Fig. 5. Conceptual Model of Temporary and Permanent Governance Continuum

The rules associated with the proposed conceptual model are:

1. One actor can have one or more permanent or temporary roles;
2. One role can only have one assignment from one Actor;
3. There are two plateaus for transformation roles, one regarding temporary roles, and a second regarding the permanent roles;
4. Permanent Roles are related with business units from the operations of the enterprise, where the benefits of the transformation are expected to occur;
5. Temporary Roles are related with the governance structure for the temporary endeavor;
6. One actor with a temporary role and no permanent role in the enterprise is considered to be from an external governing body of the scope and benefits of the project;
7. The permanent roles of business areas outside the scope of the transformation are not referenced as permanent roles in an actor with a temporary role;
8. The alignment of temporary and permanent roles can be determined by the adequacy of stakeholder concerns on transformation events (Cost, Time, Quality, Technical Expertise) in place;

- 9. A concern (represented as outcome) on Time and Costs is in alignment with a temporary roles hierarchy reality of a given transformation event;
- 10. A concern on Quality and Technical expertise is in alignment with a permanent roles hierarchy model of a given transformation event.

3.2 Views and Viewpoint on Governance Continuum

Building upon Fig. 4 we can see that by applying the solution to the functional hierarchy and project hierarchy, as in Fig. 3, we can set as reference the representations in Fig. 6 and Fig. 7 while the two extreme governance structures expected for a project.

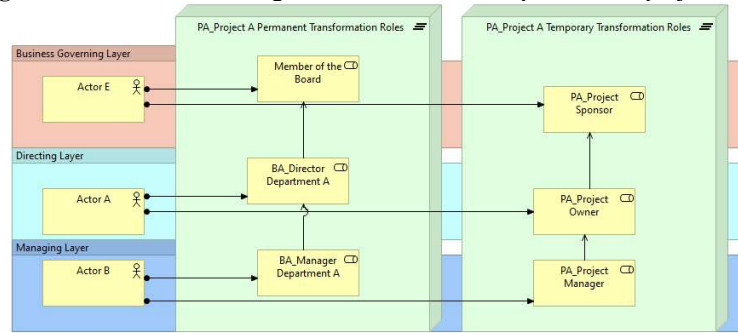


Fig. 6. Functional Hierarchy matrix view on ArchiMate

If in Fig. 6 we can evidence that all temporary roles in the project are assigned from actors that also have permanent roles in the enterprise, under the functional scope of the project. Hence, such view allows us to evidence when a governance structure in place presents the characteristics of a Functional Hierarchy Matrix.

In Fig. 7 we can see a more governance structure closer to the Project Matrix Structure, where Directing and Managing layers are performed by temporary roles.

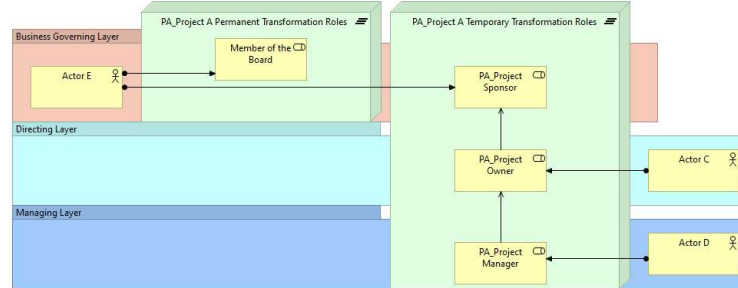


Fig. 7. Project Hierarchy matrix view on ArchiMate

For the two ‘opposite’ project governance structures we can evidence that, by evaluating the relevance of either permanent roles or temporary roles, we can determine if governance in place is more cost/time, or quality/ expertise oriented, due to the characteristics of the governance structure.

The balanced matrix hierarchy, in Fig. 8, is supposed to be in between the functional and project hierarchy. As said, the risk and the need for collaboration and negotiation in between different roles is a constraint/ risk to address in project implementation.

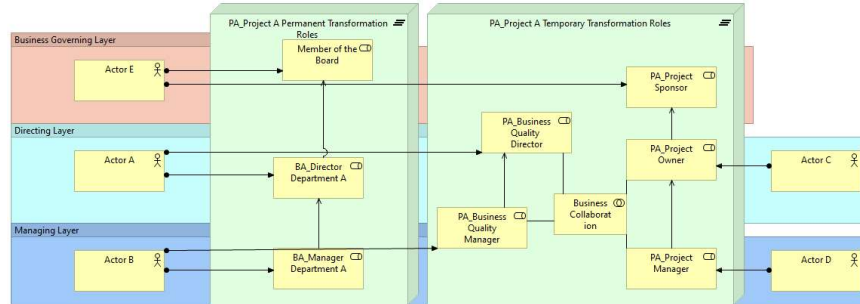


Fig. 8. Balanced Hierarchy Matrix view on ArchiMate

As set, it becomes clearer the validity in assessing governance alignment between a temporary governing body and the enterprise governing bodies, in a structured and formalized way.

3.3 Evaluation and Alignment level

The impact that the governance structure in place has in the project outcome, according with the different characteristics of the identified governance structures, is determinant in the value that brings in a project design phase, or ongoing project governance evaluation. By promoting an evaluation, and determining the influence on outcome, we can promote the alignment measure against a stakeholder’s concern.

The number of architectural elements and their associated semantics allow to evaluate in a quantifiable way the governance structure in place. As seen in Table 3, the three main governance matrix models are denoted in the ratio of permanent governance roles from the enterprise in the temporary governance structure.

Table 3. Assessment of functional, balanced and project governance structures

Functional Matrix	Actors	Roles	Temp Roles	Perm Roles	% Temp Roles	% Perm Roles
Business Governing Layer	1	2	1	1	50,00%	50,00%
Steering Layer	0	0	0	0	0,00%	0,00%
Directing Layer	1	2	1	1	50,00%	50,00%
Managing Layer	1	2	1	1	50,00%	50,00%
Total	3	6	3	3	50,00%	50,00%

Balanced Matrix	Actors	Roles	Temp Roles	Perm Roles	% Temp Roles	% Perm Roles
Business Governing Layer	1	2	1	1	50,00%	50,00%
Steering Layer	0	0	0	0	0,00%	0,00%
Directing Layer	2	3	2	1	66,67%	33,33%
Managing Layer	2	3	2	1	66,67%	33,33%
Total	5	8	5	3	62,50%	37,50%

Project Matrix	Actors	Roles	Temp Roles	Perm Roles	% Temp Roles	% Perm Roles
Business Governing Layer	1	2	1	1	50,00%	50,00%
Steering Layer	0	0	0	0	0,00%	0,00%
Directing Layer	1	1	1	0	100,00%	0,00%
Managing Layer	1	1	1	0	100,00%	0,00%
Total	3	4	3	1	75,00%	25,00%

As seen in section 2.3, we can now evidence that Project Matrix represents in its structure 100% of temporary roles. However, since that according to standards, a project sponsorship is always represent at the highest level by the enterprise. Considering that, the Project Matrix in Fig. 9 does not have 100% in temporary roles.

On the other hand, in same figure, we can see the Functional Matrix, with 100% of actors with permanent roles assuming temporary governance roles for that project.



Fig. 9. Temporary and Permanent Governance Continuum

Placing the values in a governance continuum between the functional governance matrix and the project governance matrix, we can evidence the shift in governance structure characteristics, such as the more biased information in functional matrix, to full focus on time and cost in the project matrix.

4 Case Study

Based on the proposed solution, we now assess its practical validity under a concrete case that occurred in a Public Company, with a formal PMO, where a concern from the Project Sponsor stop being met, after a change in the actors associated with the roles of a particular project.

The case in question happened in a company, that for anonymity purpose we call Company A. That company had a high maturity level in handling transformation, with a permanent structure with that function, a PMO.

Project A, had as Sponsor a Member of The Board of the company and he made notice to the PMO that there had been a change in the quality of the report of that particular project.

PMO argued that the governance model's recent changes is the only change that could have affected the quality and truth of information on the projects' status.

The mentioned recent organizational change in PMO's enterprise structure had re-allocated the project manager role to an actor that had a role in the business area where its director was also the project owner. The previous project manager was allocated from a pool of resources, managed by the PMO.

Such change, by altering the actor of a temporary role, created the constraint that affected the quality in the expected information from Enterprise PMO reports. To understand the cause, we have to look at the enterprise formal and permanent governance structure of involved actors-roles in two different moments: As Was and As Is.

By mapping the actor-roles under the scope, it was applied the conceptual model presented and the generated lists as are presented in Fig. 10. The same exercise was done for the As Is situation.

ID	Actor ID	Role	Decisional Level (1, 2, 3, 4, 5)	Governance Structure	Temp (0) / Perm (1)	Serves ID
1	Actor E	Member of the Board	1	Board	1	0
2	Actor C	Head of Department	3	Department A	1	1
1	Actor E	Project Sponsor	1	Project A	0	0
2	Actor C	Project Owner	3	Project A	0	1
4	Actor B	Project Manager	4	Project A	0	2

Fig. 10. Map of temporary and permanent actor-roles in Project A - As Was

With that information we can model in ArchiMate the identified actors, roles, decisional levels and governance structures. As we can see in Fig. 11, the generated views make also visually clear on the existent balance between temporary and permanent governance roles. This in what concerns the As Was situation, because regarding As Is, the generated view is the same as we have seen in Fig. 6.

If in Fig. 11 we can see the clear serve line in the temporary transformation roles, in the type of structure identified in Fig. 6, the serve relations becomes in line with what translates the “running the mill”, permanent governance. A mirrored serve relation from the permanent governance.

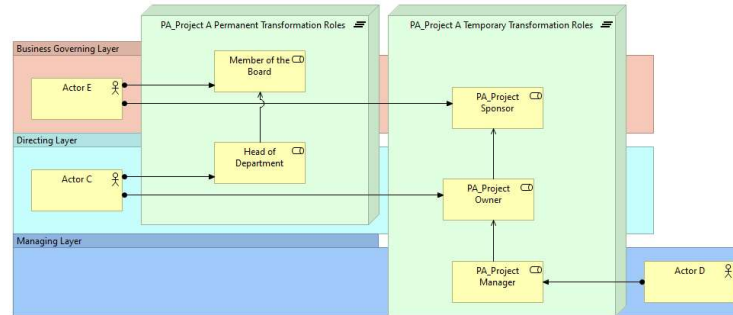


Fig. 11. Case A – governance structure as it was

After 1) mapping Actors under Scope of the project (As Was and As Is) and 2) modelling the different elements under the permanent and temporary plateaus, the structural differences that may have changed the quality in the reporting become visible.

The change in the assignment of the project manager role, changed the balance between temporary and permanent roles, by bringing it to a more functional matrix governance structure, instead of a more balanced one. Not coincidentally, one of the characteristics in governance models based in a more functional matrix is the higher risk of biased information to the stakeholders.

By making clear, through the generated views, the shift in balance between temporary and permanent roles, it allows to better identify in design phase, or implementation phase, the governance structure in place.

	ACTORS	ROLES	TEMP	PERM	% TEMP ROLES	% PERM ROLES
Business Governing Layer	1	2	1	1	50,00%	50,00%
Directing Layer	1	2	1	1	50,00%	50,00%
Managing Layer	1	1	1	0	100,00%	0,00%
Total	1	5	3	2	60,00%	40,00%

Fig. 12. Percentage on temporary and permanent actor-roles in Project A - As Was

	ACTORS	ROLES	TEMP	PERM	TEMP ROL	PERM ROLES
Business Governing Layer	1	2	1	1	50,00%	50,00%
Directing Layer	1	2	1	1	50,00%	50,00%
Managing Layer	1	2	1	1	50,00%	50,00%
Total	3	6	3	3	50,00%	50,00%

Fig. 13. Percentage of temporary and permanent actor-roles in Project A - As Is

In conclusion, and as seen in Fig. 14, the change in the temporary role allocation promoted an increase in the permanent role influence on the overall governance of the project A. By becoming a fully functional governance matrix, it also carried out its cons as a model. In this case the loss of quality in the reporting information.



Fig. 14. Project A - Governance Continuum Roles Influence

In what concerns with the proposed solution, we have now evidenced the validity of solution presented in section 3, allowing to assess and evaluate a temporary governance structure, under the enterprise relevant actor-roles, promoting a fine tuning in the impact that some variables have in project outcomes. In this case, temporary and permanent governance roles and a Stakeholder concern.

5 Conclusions and Further Work

The level of knowledge, theoretical or practical, in fields of study in enterprise efficiency and governance is vast and has allowed enterprises to increase their pace in transformations to adapt to new realities, business models, products, or services. The efficiency level required, and increasing, put to enterprises and their workers the pressure for delivery, with quality, under several types of concerns when dealing with transformation.

From this work we can assess the validity in the identified problem: the alignment on temporary and permanent governance roles, towards the stakeholder's concern on Time and Cost Vs. Quality and Expertise (or Functional Vs. Product as [33] put it.

As main contributions from this work we can highlight:

1. A conceptual map for the temporary and permanent governance roles enrolled in enterprise transformation (**Fig. 5**);
2. A proposal of Viewpoint for ArchiMate, and related views, with the concerns on the Identification of permanent and temporary governance transformation roles and serve relation (**Table 2**);
3. A method on assessing the governance structure in a project and classify according to governance structures characteristics (section 3- Temporary and Permanent Governance Continuum).

As for future work, adding other efficiency and control instruments are a way forward in the research. Two directions are being followed: i) the set of rules and elements to measure and represent the influence relationship between permanent and temporary governance roles; and ii) the identification of added rules onto the coherence of the governance structure, from different classifications and models.

Acknowledgements: "This work was supported by national funds through FCT, Fundação para a Ciência e a Tecnologia, under project UIDB/50021/2020

(DOI:10.54499/UIDB/50021/2020) and Project Blockchain.PT – Decentralize Portugal with Blockchain Agenda, (Project no 51, C632734434-00467077), WP 7: Interoperability, Call no 02/C05-i01.01/2022, funded by the Portuguese Recovery and Resilience Program (PPR), The Portuguese Republic and The European Union (EU) under the framework of Next Generation EU Program"

References

1. Lankhorst, M.: Enterprise Architecture at Work. Springer Berlin Heidelberg, Berlin, Heidelberg (2009). <https://doi.org/10.1007/978-3-642-01310-2>.
2. Dietz, J.L.G., Hoogervorst, J.A.P., Albani, A., Aveiro, D., Babkin, E., Barjis, J., Caetano, A., Huysmans, P., Iijima, J., Kervel, S.J.H. Van, Mulder, H., M.O., Land, T., Proper, H.A., Sanz, J., Terlouw, L., Tribolet, J., Verelst, J., Winter, R.: The discipline of enterprise engineering. *International Journal of Organisational Design and Engineering*. 3, 86 (2013). <https://doi.org/10.1504/IJODE.2013.053669>.
3. Proper, E., Greefhost, D.: Architecture principles - The cornerstone of Enterprise Architecture. © Springer-Verlag Berlin Heidelberg 2011, Berlin (2011). <https://doi.org/10.1007/978-3-642-20279-7>.
4. Tribolet, J., Sousa, P., Caetano, A.: The Role of Enterprise Governance and Cartography Enterprise Engineering. *Enterprise Modelling and Information Systems Architectures Journal (EMISA)*. 9(1), 38–49 (2014).
5. ISO: ISO 21500:2012 - Guidance on Project Management. (2012).
6. ISO: ISO 21503:2017 - Project, programme and portfolio management — Guidance on programme management. Presented at the (2017).
7. ISO: ISO 21504:2015 - Project, programme and portfolio management — Guidance on portfolio management. (2015).
8. ISO: ISO 21505:2017 - Project, programme and portfolio management — Guidance on Governance. (2017).
9. Steen, J., DeFillippi, R., Sydow, J., Pryke, S., Michelfelder, I.: Projects and Networks: Understanding Resource Flows and Governance of Temporary Organizations with Quantitative and Qualitative Research Methods. *Project Management Journal*. 49, 3–17 (2018). <https://doi.org/10.1177/875697281804900201>.
10. PMI: Governance of Portfolios, Programs, and Projects: A Practice Guide. Project Management Institute (2016).
11. Cambridge: Online Cambridge Dictionary, <https://dictionary.cambridge.org/dictionary/english/project>, last accessed 2019/02/09.
12. Koskela, L., Howell, G.: The Underlying Theory of Project Management Is Obsolete. In: *Frontiers of Project Management Research and Applications*. pp. 22–34. Project Management Institute, Seattle, Washington (2002). <https://doi.org/10.1109/EMR.2008.4534317>.

13. Winter, M., Smith, C., Morris, P., Cicmil, S.: Directions for future research in project management: The main findings of a UK government-funded research network. 24, 638–649 (2006). <https://doi.org/10.1016/j.ijproman.2006.08.009>.
14. Winter, M., Smith, C.: Rethinking Project Management - Final Report - EPSRC Network 2004-2006: 1–7 (2006).
15. Maylor, H.: Special Issue on rethinking project management (EPSRC network 2004 – 2006). *International Journal of Project Management*. 24, 635–637 (2006). <https://doi.org/10.1016/j.ijproman.2006.09.013>.
16. Svejvig, P., Andersen, P.: Rethinking project management: A structured literature review with a critical look at the brave new world. *International Journal of Project Management*. 33, 278–290 (2015). <https://doi.org/https://doi.org/10.1016/j.ijproman.2014.06.004>.
17. Packendorff, J.: Inquiring Into the Temporary Organization: New Directions for Project Management Research. *Scandinavian Journal Management*. 11, 319–333 (1995).
18. Englund, R.L., Graham, R.J.: From Experience: Linking Projects to Strategy. *Journal of Product Innovation Management*. 16, 52–64 (1999). <https://doi.org/10.1111/1540-5885.1610052>.
19. Cordeiro, G., Vasconcelos, A., Fragoso, B.: Project, Program, Portfolio Governance Model Reference Architecture in the Classic Approach to Project Management. In: *Proceedings of the 22nd International Conference on Enterprise Information Systems*. pp. 619–630. SCITEPRESS - Science and Technology Publications (2020). <https://doi.org/10.5220/0009155706190630>.
20. PMI: ANSI/PMI 08-004-2008 - Organizational Project Management Maturity Model (OPM3). (2008).
21. Riis, E., Hellström, M.M., Wikström, K.: Governance of Projects: Generating value by linking projects with their permanent organisation. *International Journal of Project Management*. 37, 652–667 (2019). <https://doi.org/10.1016/j.ijproman.2019.01.005>.
22. Musawir, A. ul, Abd-Karim, S.B., Mohd Danuri, M.S.: Project Governance: Enabling Organizational Strategy. In: *10th ASEAN Postgraduate Seminar, 2016* (2016).
23. Kurek, E.: *The value of Enterprise Architecture on IT projects*, (2018).
24. PMI: *Pulse of Profession 2018*. (2018).
25. PMI: *Pulse of Profession 2017*. (2017).
26. Derakhshan, R., Turner, R., Mancini, M.: Project governance and stakeholders : a literature review. *International Journal of Project Management*. 37, 98–116 (2019). <https://doi.org/10.1016/j.ijproman.2018.10.007>.
27. Hoogervorst, J.A.P.: *Enterprise Governance and Enterprise Engineering*. (2009). <https://doi.org/10.1007/978-3-540-92671-9>.
28. Fragoso, B., Vasconcelos, A., Borbinha, J.: On the Roles of Project, Program and Portfolio Governance. In: Shishkov, B. (ed.) *Business Modeling and Software Design*. pp. 221–228. Springer International Publishing, Cham (2019).

29. European Commission, D.: Open PM2: Project Management Methodology. European Commission, DIGIT Centre of Excellence in Project Management (CoEPM²), Luxembourg (2016). <https://doi.org/10.1201/b15518-3>.
30. The Open Group: ArchiMate 3.2 Specification. The Open Group (2022).
31. Teplitz, C.J.: Making Optimal Use of the Matrix Organization. In: Cleland, D.I. (ed.) Field Guide to Project Management. pp. 201–211. International Thomson Publishing Company, New York (1998).
32. Turner, J.R.: The Handbook of Project-Based Management. McGraw-Hill, Berkshire (1999).
33. Kerzner, H.: Project Management - A Systems Approach to Planning, Scheduling, and Controlling. John Wiley & Sons, Inc., New York (1998).