A study of project governance frameworks for large infrastructure projects with reflection on road transport projects

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In the last ten years the construction industry in Croatia has been characterised by large infrastructure construction projects. The focus of the current research is on large infrastructure project overruns and their causes, with the purpose of finding an effective way of dealing with them. During the last six years there has been a high intensity of motorway construction which is characterised by its fast-paced dynamics and adapting legal and institutional conditions. The paper presents preliminary research findings on road transport construction projects in Croatia and governance framework analysis as a basis for future research on project management governance. Project governance is analysed in more detail for the purpose of determining its relationship with other forms of governance in order to differentiate them. There are several frameworks for project governance already in use with positive results. A case from the UK and one from Norway will be analysed with the purpose of identifying their relationships with project governance principles. Each infrastructure project construction model is based on the transport policy of an individual state. The purpose of this paper is to provide a basic starting point for developing a governance framework tailored to one specific country.

Keywords
infrastructure projects, governance, project governance, governance framework

INTRODUCTION

In the last ten years, the construction industry in Croatia has been marked by large infrastructure construction projects, a major portion of which are highway construction projects, characterised by their fast-paced dynamics and adapting legal and institutional conditions. Although these highway construction projects are considered to be successful in the wider community due to the high quality of the highways, they are suffering from a widely known major public infrastructure project illness – time and cost overruns.

To address the problem of project overruns, researchers in large project management have moved their focus from execution phases and best practices towards front-end phases and project governance frameworks, having realised that even well-managed projects have ended in failure in the eyes of society, the investors and other stakeholders. (Klakegg, Williams et al. 2007) (Miller and Lessard 2000) Project governance is recognised as a critical factor for success in project delivery. (Garland 2009)

Megaprojects are qualitatively more complex and risky, and therefore require governance regimes that are different from those of more routine and less risky endeavours. (Miller and Hobbs 2005) High levels of uncertainty, complexity, long duration and a large number of stakeholders are the main characteristics of large infrastructure megaprojects, as well as their impact on the community, the economy, technological development and the environment. (Li Zhai 2009)

A key requirement for project governance is to define how resources and risks are to be allocated among stakeholders (Klakegg, Williams et al. 2007) as well as to define control measures for meeting set goals, which is constrained and defined by legal and regulatory mechanisms with the aim of ensuring better utilisation of public funds.

Croatian governance is currently in a critical state with respect to large project delivery due to the effects of the global crisis; in order to ensure the success of any major investment, a new approach to project governance is absolutely necessary.

All of these are reasons for this in-depth study of infrastructure projects and their governance frameworks.

Background and methodology

This paper aims to discuss findings from preliminary research carried out on large infrastructure project governance frameworks. Based on literature, research and analysis, various types of governance and their main elements and characteristics will be identified. Project governance will be analysed in more detail, and how it relates to other forms of governance will be determined. There are several frameworks for project governance already in use with positive results. A case from the UK and one from Norway will be analysed with the purpose of identifying their relationships with project governance principles.

Each infrastructure project construction model is based on the transport policy of an individual state. Croatian transport policy was carried over from the transport policy of the former Yugoslavia, which was not acceptable for Croatia after gaining its independence. There was neither a strategic nor a legal framework for the realisation of infrastructure projects. With the end of the war favourable conditions were created for implementing an independent transport policy which is the basis for the framework for transport infrastructure projects. These frameworks had to be supported by institutions, and aligned with laws and regulations to ensure rapid construction which was considered to be a strategic goal. The aim of this paper is to use the results of analysis to determine elements of governance for current road transport infrastructure projects after a long period of intensive road construction.

Understanding governance - corporate, programme and project governance

The term *governance* is not always used in the same way in English and there is no adequate translation in Croatian. Mostly, it is used as a modern term for political administration, but it is also defined as a decision-making, control and planning system. Its meaning has exceeded political and public boundaries. Definitions of governance indicate a wide meaning of governance both in the public and corporate sphere, and descriptions vary considerably, but they have several elements in common: rules, structure, enabling activity/change and reaching goals. (Klakegg 2009)

Wikipedia defines types of governance which have very different meanings. In contrast to the traditional meaning, *global governance* is used for the regulation of dependent relationships in the absence of protective political authority. The best example of this is in the international system or relationships between independent states. *Participatory governance* focuses on deepening democratic engagement through the participation of citizens in the processes of governance with the state.

However, to understand the role of governance in “projectised” business; we need to understand what corporate, programme and project governance are, and how they interact.

Corporate governance consists of the set of processes, customs, policies, laws and institutions affecting the way people direct, administer or control a corporation. It also includes the relationships among the many players involved (the stakeholders) and the corporate goals. (Wikipedia 2010)

The existence of an efficient corporate governance system helps to ensure the security of a market economy resulting in lower capital cost and more efficient utilisation of resources. The corporate governance framework depends on the legal, regulatory, and institutional environment, but business ethics and corporate awareness of the environmental and societal interests of the communities in which a company operates can also have an impact on its reputation and its long-term success. In 1999, the OECD established principles of good corporate governance to assist countries in the assessment and improvement of legal, institutional and regulatory frameworks for corporative gover-

nance and to provide guidelines and propositions for investors, corporations and other parties for participation in the process of development of good corporate governance. The OECD defines corporate governance as involving a set of relationships between all stakeholders - a company's management, its board, its shareholders and other stakeholders, and provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. (OECD 2004)
Applied to the public sphere, the OECD also provides a definition of public governance: '*"Governance" refers to the formal and informal arrangements that determine how public decisions are made and how public actions are carried out, from the perspective of maintaining a country's constitutional values in the face of changing problems, actors and environments.*' (OECD 2005)
Summarising these definitions, we can now determine what corporate governance consists of and why. (Figure 1) Even though Börzel, Guttenbrunner and Seper distinguish between governance as structure and governance as process (Klakegg 2009) this representation shows that governance is both – structure and process.

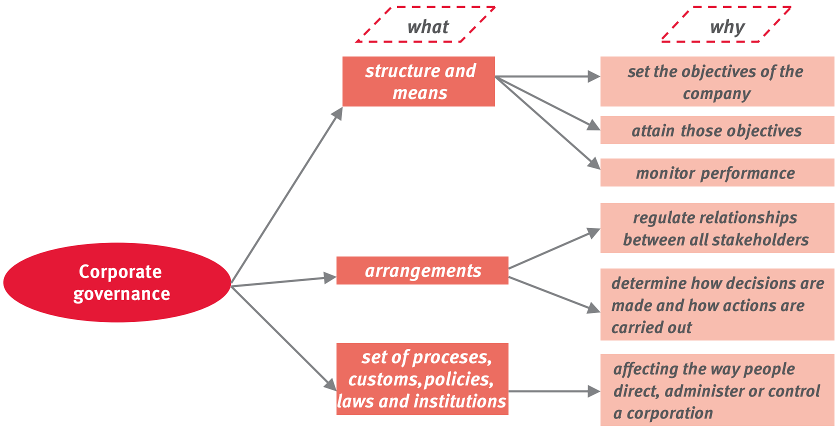

Figure 1. **Graphical portrayal of elements of corporate governance**

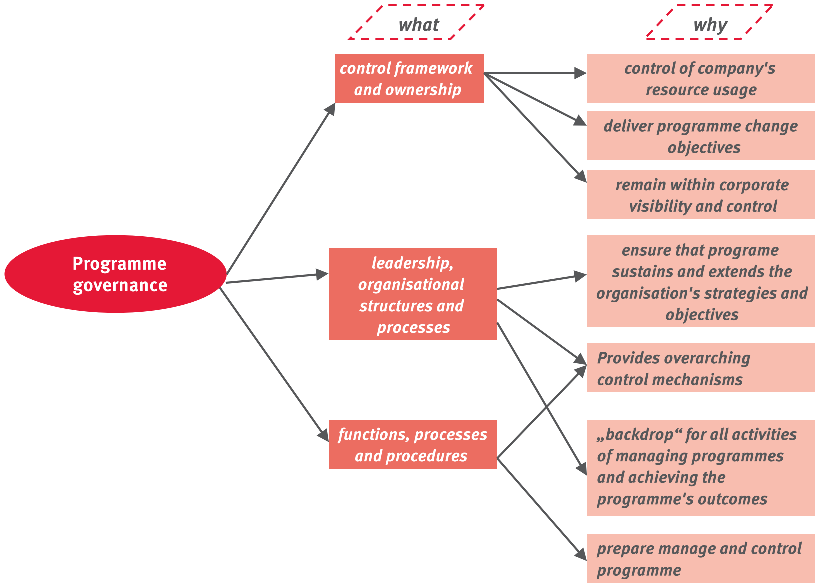

Figure 2. **Graphical portrayal of elements of programme governance**

Governance in terms of programme management comprises functions, processes and procedures defining how to prepare, manage and control the programme. (Reiss, Anthony et al. 2006) *Managing Successful Programmes* also defines governance as a control framework through which a programme delivers its change objectives and remains within corporate visibility and control. (OGC 2007) Since programmes utilise funds and other resources which belong to the organisation, processes and activities which provide control are generally referred to as programme governance. Therefore, the role of programme governance is to ensure that the resources of the organisation are utilised in line with other activities. The main elements of programme governance are leadership and organisational structure, processes which ensure that a programme supports and develops its strategy and organisational goals. They form an overall control mechanism and the backdrop for all management activities. (Reiss, Anthony et al. 2006)

Through the application of the OECD definition of governance to projects, we will arrive at an understanding of project governance – it provides a structure which helps define the objectives of the project, the means of attaining those objectives and the means of monitoring performance. Garland defines project governance as a framework for decision making; the process of making decisions, the established framework, models or structure for their enablement. (Garland 2009) The main focus of effective project governance is the elimination of project failure by doing projects right and doing them right time after time. (Weaver 2007) Project governance must therefore encompass project selection with regard to a company's strategy, project and project quality management system.

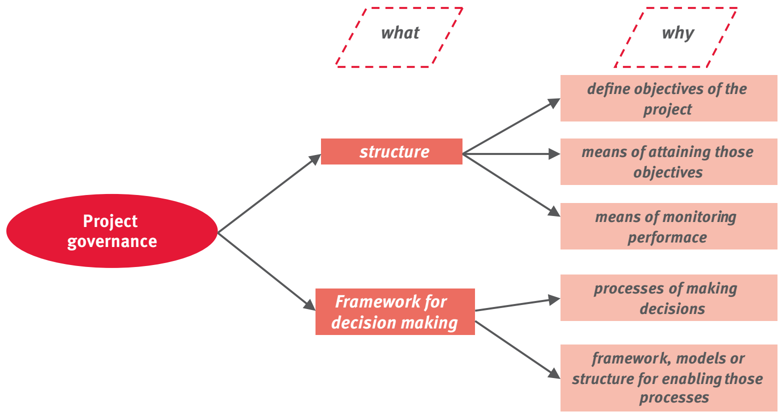

Figure 3. **Graphical portrayal of elements of project governance**

Analysis of approaches to project governance

APM defines ((APM) 2004) *governance of project management as a subset of the activities involved with corporate governance* which can be applied to programmes as well. I prefer the interpretation that this is the arena in which corporate governance and project management meet and integrate. This point of view requires looking into the interaction of corporate, programme and project governance. In analysing the previous discussion and considering APM's definition of project governance, it can be concluded that programme and project governance are specific parts of corporate governance but at the same time integral parts of programme and project management *(*Figure 4*).* It is evident that incorporating programme and/or project management into an organisation without governance will result in a gap that most organisations are facing. It is also clear that there are areas where project and programme governance overlap and these relate to overlapping areas of project and programme management in the organisation. Programme governance is the responsibility of the senior managing director (or equivalent) and the senior executive management of the organisation, and is part of corporate governance.

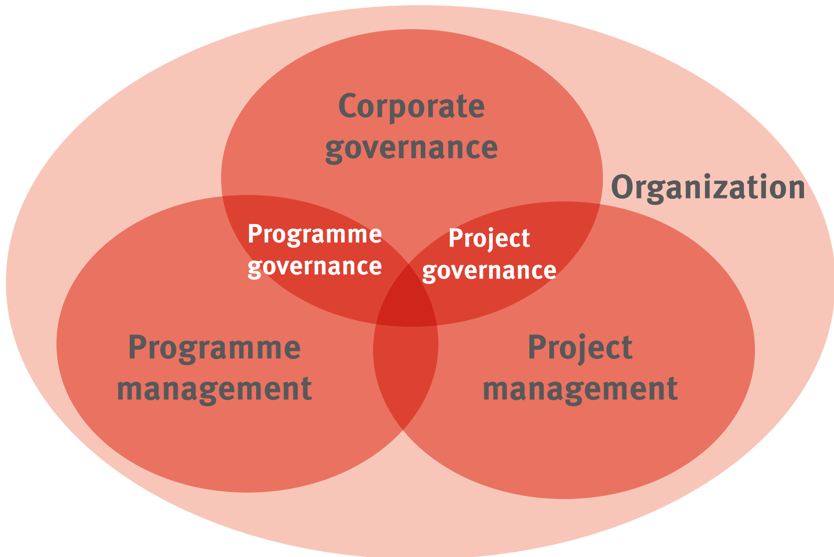

Figure 4. **Arena where corporate governance, programme and project management meet**

Based on the causes and symptoms of ineffective project governance, Garland (Garland 2009) formulated principles of effective project governance. He identified 4 groups of causes and symptoms of ineffective project governance and 4 principles of effective governance. (Table 1) The main purpose of project governance is to meet the needs of project decision making for which an organisation's structure is not designed. It is very interesting that he identified how the risk averse culture of large organisations tends to create a joint or consensus decision-making environment. This is entirely opposite to the first and most important factor of project governance – accountability. One critical point is project initiation, when the transfer from organisational structure to project governance is made. A project has not been initiated if accountability for the project's success has not been established, which will cause slow progress or probable failure.

APM's approach ((APM) 2004) sets out 11 principles (Table 2) and 4 main components of governance of project management ("GoPM"):

2. *Portfolio direction* – ensures that all projects are identified within one portfolio which is evaluated and directed according to the goals and constraints of an organisation
3. *Project sponsorship* – project sponsorship is an effective link between an organisation's senior executive body and the management of the project. This role has decision-making, directional and representational accountabilities.
4. *Project management effectiveness and efficiency* – ensures that the

Causes of ineffective project governance	
1.	Confusion regarding the objectives of project governance
2.	Risk aversion
3.	Issues relating to organisational structure
4.	Stakeholder and ownership issues
Principles of effective project governance	
1.	Ensure a single point of accountability for the success of the project
2.	Service delivery ownership determines project ownership
3.	Ensure separation of stakeholder management and decision-making activities
4.	Ensure separation of project governance and organisational governance structures

Table 1. **Garland's causes of ineffective and principles of effective project governance**

teams responsible for projects are capable of achieving the objectives that are defined at project approval points (skills and experience of project leaders, the resources available to them and the tools and processes they are able to deploy). Ensures effective delegation that allows decisions to be made at a level that is consistent with the organisation's system for internal control.

5. *Disclosure and reporting* - the content of project reports will provide timely, relevant and reliable information that supports the organisation's decision-making processes, without fostering a culture of micro-management.

The four components of project management governance support the eleven principles by asking four sets of questions whose purpose is to assess the GoPM and to help to decide what actions should be taken to support the set of principles.

We can see that these two approaches do not have the same point of view, but both address the same issues. As concluded above, project governance is both process and structure, and these two approaches support this conclusion. APM's approach addresses project governance as process with a focus on overall quality of project delivery within the organisation, and Garland's approach addresses project governance as structure for decision-making with a focus on responsibility and accountability.

If we try to fit types of governance into an organisation, a question arises. If we have corporate, programme and project governance, is portfolio governance missing? Let us take a closer look at APM's first component, *portfolio directing,* and analyse its purpose. What the detailed questions are addressing are actually elements of portfolio management: alignment with key business objectives, financial management processes, quality of portfolio management, differentiation of project and non project activities, risks associated with the project portfolio, consistency with the organisation's capacity, the organisation's engagement with project suppliers, the organisation's engagement with its customers and sources of finance for sustainable portfolio, acceptability of the impact of implementing the project portfolio. Can this be incorporated within project governance? Can someone responsible for project governance be accountable for the portfolio? The answer is no, and therefore it is necessary to separate portfolio management from project governance and place portfolio governance within corporate governance (see Figure 5). There are common areas of different types of governance that need to be defined when governance is developed, and they are highly dependent on a company's business and organisational nature.

	Principles
1	The board has overall responsibility for governance of project management.
2	The roles, responsibilities and performance criteria for the governance of project management are clearly defined.
3	Disciplined governance arrangements, supported by appropriate methods and controls, are applied throughout the project life cycle.
4	A coherent and supportive relationship is demonstrated between the overall business strategy and the project portfolio.
5	All projects have an approved plan containing authorisation points at which the business case is reviewed and approved. Decisions made at authorisation points are recorded and communicated.
6	Members of delegated authorisation bodies have sufficient representation, competence, authority and resources to enable them to make appropriate decisions.
7	The project business case is supported by relevant and realistic information that provides a reliable basis for making authorisation decisions.
8	The board or its delegated agents decide when independent scrutiny of projects and project management systems is required, and implement such scrutiny accordingly.
9	There are clearly defined criteria for reporting project status and for the escalation of risks and issues to the levels required by the organisation.
10	The organisation fosters a culture of improvement and of frank internal disclosure of project information.
11	Project stakeholders are engaged at a level that is commensurate with their importance to the organisation and in a manner that fosters trust.

Table 2. **APM's Principles of Governance of Project Management**

Components	Main focus of the questions
I Portfolio direction	alignment with its key business objectives, p&p's financial management processes, quality of portfolio management, differentiation of project and non project activities, risks associated with the project portfolio, consistency with the organisation's capacity, organisation's engagement with project suppliers, organisation's engagement with its customers and sources of finance for sustainable portfolio, acceptability of impact of implementing project portfolio
II Project sponsorship	availability and competency of sponsors, regular meetings with project managers and awareness of the project status, responsibility for project - directions and decisions, resourcing, closing project, independent advice on project assessment, accountability and ownership of business case, accountability for the realisation of benefits, representation of the project throughout the organisation, key project stakeholder's interests and project success
III Project management effectiveness and efficiency	critical success criteria and its usage, appropriateness of PM processes and tools, treatment and capacity of project manager, roles and responsibilities GoPM, capability of service departments and suppliers to provide key resources, issue, change and risk management practices, delegation of authority balancing efficiency and control, contingency estimation and control according to delegated powers
IV Disclosure and reporting	information of project forecasts, progress, significant project-related risks and their management, threshold criteria used to escalate significant issues, risks and opportunities, measures for both key success drivers and key success indicators, distinguish between project forecasts based on targets, commitments and expected outcomes, independent verification of reported project and portfolio information, reflection of project portfolio status in communications with key stakeholders, business culture encourages open and honest reporting, assurance of quality of information, support of whistleblowers, minimum necessary reporting requirements

Table 3. **Main components of governance of project management**

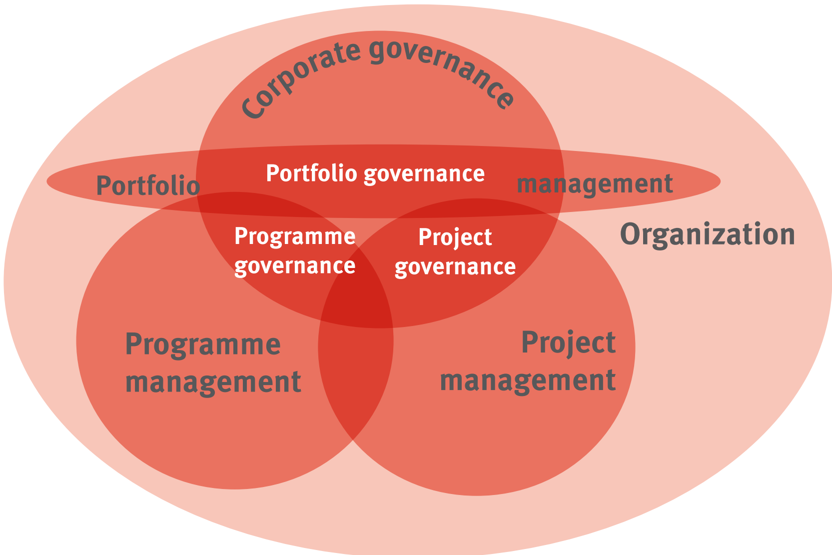

Figure 5. **Portfolio governance as a separate part of corporate governance**

For complete project governance, Garland's and APM's principles must combine with the exclusion of portfolio direction.

In conclusion, as far as project governance is concerned, cross-mapping has been done to identify principles related to the process and structure of project governance. At the same time, correlation with a project governance component is noted by entering a related number. Mapping has been done for portfolio direction as well, even though it is not considered part of project governance (Table 3). Instead of simple elimination, altering Principle no.8 to fit project governance will contribute more to project governance and fill the gap at the same time instead of making a gap. It is enough to request that "*A coherent and supportive relationship is demonstrated between the overall business strategy and project*" without referring to the project portfolio, because it does not constrain the organisation as to how to realise its business strategy.

Principle	Structure	Process
1 Ensure a single point of accountability for the success of the project	II	
2 Service delivery ownership determines project ownership	II	
3 Ensure separation of stakeholder management and decision-making activities	II	II
4 Ensure separation of project governance and organisational governance structures	II	
5 The board has overall responsibility for governance of project management.	II	
6 The roles, responsibilities and performance criteria for the governance of project management are clearly defined.	II	
7 Disciplined governance arrangements, supported by appropriate methods and controls, are applied throughout the project life cycle.		III
8 A coherent and supportive relationship is demonstrated between the overall business strategy and the project portfolio.	I	I
9 All projects have an approved plan containing authorisation points at which the business case is reviewed and approved. Decisions made at authorisation points are recorded and communicated.		III
10 Members of delegated authorisation bodies have sufficient representation, competence, authority and resources to enable them to make appropriate decisions.	II	II
11 The project business case is supported by relevant and realistic information that provides a reliable basis for making authorisation decisions.	II	II
12 The board or its delegated agents decide when independent scrutiny of projects and project management systems is required, and implement such scrutiny accordingly.	II	III
13 There are clearly defined criteria for reporting project status and for the escalation of risks and issues to the levels required by the organisation.	III	II, IV
14 The organisation fosters a culture of improvement and of frank internal disclosure of project information.		IV
15 Project stakeholders are engaged at a level that is commensurate with their importance to the organisation and in a manner that fosters trust.	II	

Table 3. **Mapping principles with components and elements**

Governance frameworks for large projects – the current state-of-the-art

The results of different research on large infrastructure projects revealed evidence of their failure either from a social perspective or from the perspective of investors or other stakeholders. (Flyvbjerg, Bruzelius et al. 2003), (Miller and Hobbs 2005). As a response, the last decade has been marked by research and practice moving its focus to the front-end phase and at the same time striving to develop new models for delivering large infrastructure projects. ((Klakegg, Williams et al. 2007), (Miller and Lessard 2000), (Winch 2001), (Miller and Hobbs 2005), (Priemus and Flyvbjerg 2007), (Flyvbjerg, Bruzelius et al. 2003)). The start-up phase in the development of a project is long, complex, critical, time-sensitive, iterative and often expensive (up to 33% of the total budget). (Miller and Hobbs 2005) Large projects involve a large number of stakeholders with significant social, business and political influence. A major problem in large projects that Flyvbjerg emphasises in his work is accountability for a project, for project outcomes, results and benefits. It becomes very clear that best practices in project phases are not enough. Considerable efforts have been made by the Office of Government Commerce in the UK and by the Norwegian government to develop frameworks for the governance of large projects. Both countries began this development after the expression of political will to improve projects, to make them more successful and consequently save public funds. Analyses undertaken by both countries produced similar results:

- high levels of uncertainty caused by the repeated failure of large projects and market changes,
- shortfall of public investment project success,
- strong individual contributions to focus on the importance of public investment projects,
- support at high political levels to take measures relating to the above-mentioned problems,

and came up with solutions based on similar grounds – a governance framework focused on control and improvement of project quality. The basic concept for both models is the improvement of the quality of decision making by having project quality controlled at major decision points by external experts.

The Norwegian model was accordingly named– *Quality-at-entry regime* – which puts the front-end phases of a project in focus. Every project with a budget of more than 80,000 Euro (classified as major projects) must go through independent assessment and review at two critical points before actual project commencement:

(QA1) Quality assurance of the choice of concept

(QA2) Quality assurance of the basis for control and management.

The purpose of the QA1 is early choice of concept and investment decision on project pre-planning and QA2 is "Go" decision, decision on project financing and includes cost estimates and uncertainty analysis for the chosen project option. Table 4 presents a summary of the content of QA assessments.

In the UK effort has been made to develop both best practices for project management (PRINCE2, MSP, MoR, ITIL) and a governance framework based on the OGC Gateway Review Process. It consisted of 6 gates, 5 of them at project level during its lifecycle and 1 gate at a strategic level several times during the project's lifecycle. (Table 5)

How do these frameworks fit with project governance as concluded in the last paragraph? Actually, they are a means of ensuring and attaining all of those principles. These frameworks are in fact the link between the two identified aspects of project governance, structure and process. They set rules for developing the project, setting quality and standards for projects. Information prepared for and received by reviewers provides a means for making decisions on project continuation. The structure and how the

Stage	Subject of assessment	Assessment feedback
QA1	Needs analysis Overall strategy document Overall requirements specification Analysis of alternatives	Uncertainties likely to affect the project Anticipated socio-economic benefits versus costs Anticipated relevance, efficiency of implementation and sustainability Ranking of alternatives
QA2	Management strategy Success factors Uncertainty	The cost frame, including necessary contingency to ensure the budget is realistic How the project should be managed to ensure the cost frame will hold

Table 4. **Content of QA assessments**

Critical Stage or Gate	Type of Review	Areas assessed include:
Gate 0 Strategic management	**programme-only review that investigates the direction and planned outcomes of the programme, together with the progress of its constituent projects. It is repeated over the life of the programme at key decision points.**	**1: Policy and business context 2: Business case and stakeholders 3: Management of intended outcomes 4: Risk management 5: Review of current outcomes 6: Readiness for next phase – delivery of outcomes**
Gate 1 Business Justification	Focuses on the robustness of the business case with respect to the proposed approach and supporting analysis. • clarity and practicality of proposal and strategic fit • risks and critical success factors.	1: Policy and business context 2: Business case and stakeholders 3: Risk management 4: Readiness for next phase – delivery strategy
Gate 2 Procurement Strategy	**Focuses on the project's preparedness to invite proposals or tenders. Areas: • exploration of procurement options • feasibility of project plan.**	**1: Assessment of delivery approach 2: Business case and stakeholders 3: Risk management 4: Review of current phase 5: Readiness for next phase – investment decision**
Gate 3 Investment Decision	Focuses on whether the supplier selection assessment meets the business needs and contract delivery controls exist. Areas: • implementation of procurement plan • sustainability of recommended procurement and contracting arrangements.	1: Assessment of proposed solution 2: Business case and stakeholders 3: Risk management 4: Review of current phase 5: Readiness for next phase – Readiness for service
Gate 4 Readiness for Service	**Focuses on assessing organisational readiness for delivery and ongoing management. Areas: • achievability of implementation plans • planning and implementation of risk management strategies.**	**1: Business case and stakeholders 2: Risk management 3: Review of current phase 4: Readiness for next phase 5: Operations review and benefits realisation**
Gate 5 Benefits Realisation	Focuses on measuring the project's success to date in achieving its objectives and potential remedial actions. Areas: • whether anticipated benefits are being delivered • ongoing contract development and management.	1: Review of operating phase 2: Business Case and benefits management 3: Plans for ongoing improvements in value for money 4: Plans for ongoing improvements in performance and innovation 5: Review of organisational learning and maturity targets 6: Readiness for the future – Plans for future service provision Annex: Reviewing PFI projects as part of OGC Gateway Review 5

Table 5. **Content of the OGC Gateway Review Process**

review process is integrated into an organisation are highly dependent on the institutional, legal, regulatory and government conditions of the specific country.

Analysis of the Croatian framework

During the first decade of Croatia's independence, the construction of roads was slow because of the war and adverse circumstances. However, some studies were carried out and all major strategic documents were approved by Croatia's parliament focusing on the major development projects and that initiated development of a governance framework for road transport projects.

The transportation development strategy of Croatia was the first long-term development document for the transportation system after the establishment of an independent and sovereign Croatian state. Its purpose was to address the problem of the lack of a long-term transport policy and became the basis for medium-term plans (in line with Croatian standards, they are four-year construction and maintenance plans). The aim of the government's initiative to create these documents was to identify national priorities for the allocation of financial resources according to the plan of action.

The legal framework for project governance is determined by the Public Roads Law, in accordance with which a medium-term (4-year) plan, called the Public Roads Construction and Maintenance Programme, is the document upon which decision for a four-year period will be based.

Selection of routes for 4-year plans, as a result of Croatia's challenging geography, was conducted based on the following parameters related to the state's territorial profile: the length and position of its borders with neighbouring countries; the position of pan-European traffic corridors within Croatia, the position in relation to other European road networks, the position of regional and development centres, relief features, the importance of environmental protection – mainly strategic parameters.

Programme/portfolio consolidation is performed under financial and temporal constraints, of course. A key characteristic of this framework is that road projects are shaped within programme/portfolio plans made for the whole country. The responsibility for roads and highways was shared by two organisations, but the first phase of the project lifecycle still takes place within one portfolio.

rangements in accordance with the medium-term plan. Its board acts as project owners, but there is no formal decision-making procedure regarding projects.

Looking more closely at the decision-making and management processes, the framework has a strong anchoring in its design and execution phase developed by the agency based on a strong construction management tradition. All processes are developed based on regulatory procedures for construction and public laws. There are cases where a project manager is appointed only for the execution phase, and front-end phases are managed within a permanent func-

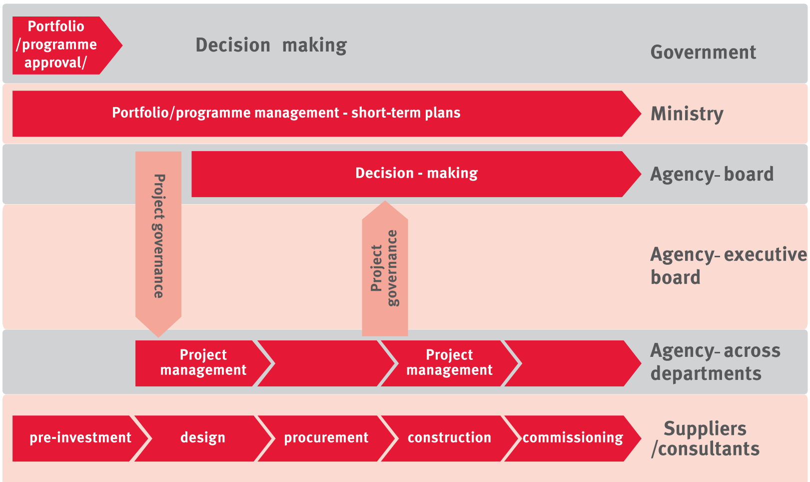

Figure 6. **Current framework for Croatian road transport projects**

Implementation of strategic documents is institutionally set up through the Ministry of Transport which answers to the Government of the Republic of Croatia for coordination. Through the work of the Ministry, the development and the execution of plans is monitored and controlled.

Once a medium-term plan is approved by the Government, governance for the whole project is undertaken by the responsible agency. It is the agency's responsibility to make the governance and management arrangements in accordance with the medium-term plan.

tional part of the organisation. However, some elements of project governance can be found as portrayed in Figure 6.

Decision making

To assess the Croatian case of project governance of road transport projects, the principle mapping table from the previous section will be used. The assessment will be done using the following indicators – N/E (non existing), S/P (some proof - informal), S/E (strong evidence)

Principle	Structure	Process
1 Ensure single point of accountability for the success of the project	S/P	
2 Service delivery ownership determines project ownership	S/P	
3 Ensure separation of stakeholder management and decision-making activities	N/E	N/E
4 Ensure separation of project governance and organisational governance structures	S/P	
5 The board has overall responsibility for governance of project management.	S/E	
6 The roles, responsibilities and performance criteria for the governance of project management are clearly defined.	N/E	
7 Disciplined governance arrangements, supported by appropriate methods and controls, are applied throughout the project life cycle.		N/E
8 A coherent and supportive relationship is demonstrated between the overall business strategy and the project.	S/P	S/P
9 All projects have an approved plan containing authorisation points at which the business case is reviewed and approved. Decisions made at authorisation points are recorded and communicated.		N/E
10 Members of delegated authorisation bodies have sufficient representation, competence, authority and resources to enable them to make appropriate decisions.	S/P	S/P
11 The project business case is supported by relevant and realistic information that provides a reliable basis for making authorisation decisions.	N/E	N/E
12 The board or its delegated agents decide when independent scrutiny of projects and project management systems is required, and implement such scrutiny accordingly.	S/P	S/P
13 There are clearly defined criteria for reporting project status and for the escalation of risks and issues to the levels required by the organisation.	N/E	N/E
14 The organisation fosters a culture of improvement and of frank internal disclosure of project information.		S/P
15 Project stakeholders are engaged at a level that is commensurate with their importance to the organisation and in a manner that fosters trust.	N/E	

Table 3. **Mapping principles with components and elements**

CONCLUSION

Based on this assessment of project governance for Croatian road transport projects using principles established in the central part of the paper, the conclusion can be drawn that there is insufficient evidence that the Croatian framework for road transport projects fulfils conditions so as to be considered a project governance framework. Therefore, there is a need to develop one, in order to improve the success rate of large infrastructure projects, particularly when there is some evidence of elements from which to start. If we compare what organisational levels are included within current governance frameworks, we can see that the current Croatian situation is very similar to the Norwegian situation before the introduction of the Quality-at-entry regime. (Table 6) Comparing existing Croatian practice and QA scheme as process, it can be concluded that it fits into the Croatian framework better than OGC and can be used as a starting point for developing a Croatian project governance framework for large transport projects.

This research will be continued and extended to other large infrastructure projects whose governance framework can differ from road transport projects due to different legal, institutional, organisational and financial conditions; with the purpose of creating a common governance framework. There is also a need for detailed analysis of the current specific organisation, management processes and causes of project success/failure to determine an appropriate approach.

Table 6. **Integration of governance framework (adapted from (Klakegg, Williams et al. 2007))**

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