



ACHIEVING PERFORMANCE IN MAJOR PUBLIC INFRASTRUCTURE PROJECTS: THE CASE OF ROAD WORKS IN SENEGAL

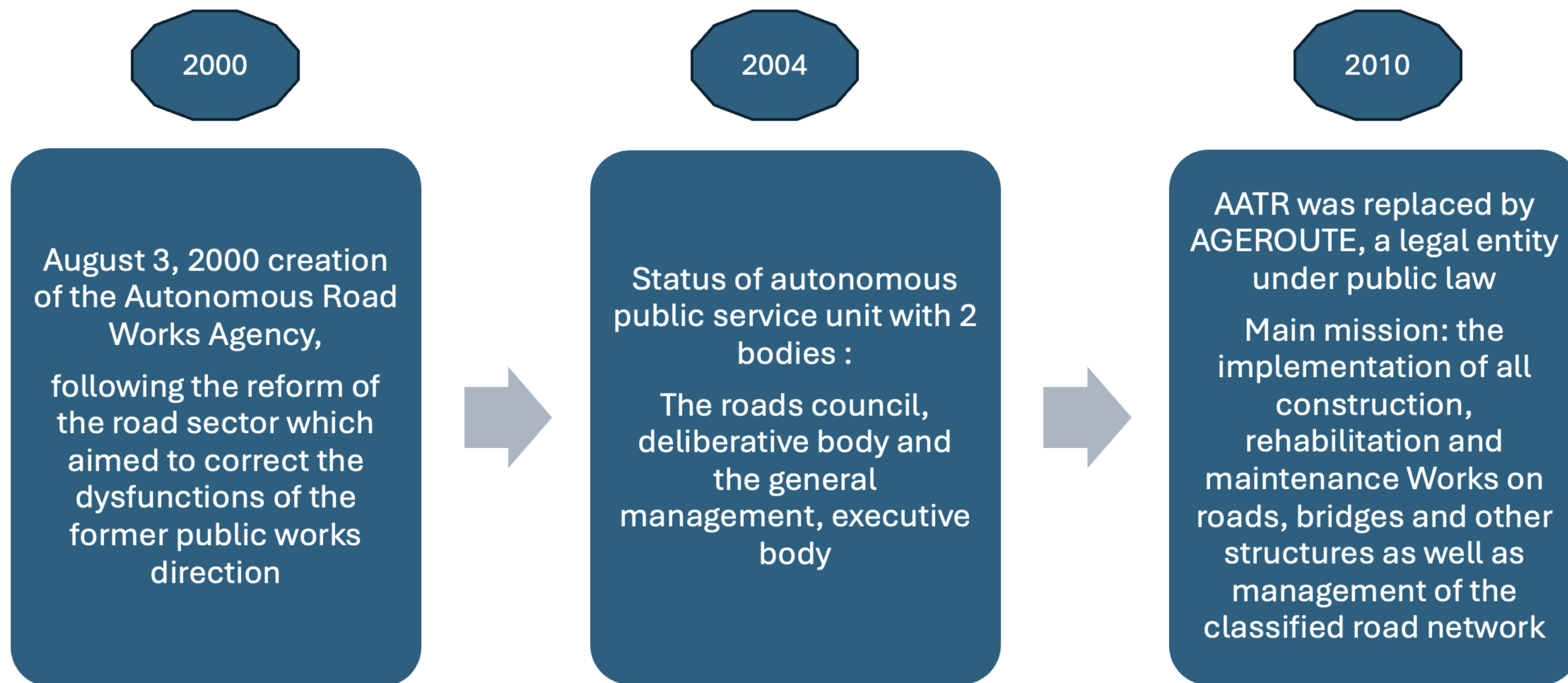
Dr. Mohamed LAYE

- DIRECTOR OF THE ROAD ASSET MAINTENANCE AND MANAGEMENT
- PIARC TC 1.3 French Speaking Secretary

AGEROUTE SENEGAL



1. PRESENTATION OF AGEROUTE SENEGAL: SOME KEY FIGURES (1/3)



1. PRESENTATION OF AGEROUTE SENEGAL: SOME KEY FIGURES (2/3)

Supervision

Technical supervision : Ministry in charge of Infrastructures

Financial supervision : Ministries in charge of Economy and Finance

Strategic Objectives

Six (06) Strategic Objectives in the Strategic development plan (2023-2027): 1. ensure proper preservation of the road and motorway network ; 2. strengthen subregional integration and urban mobility ; 3. open up production areas ; 4. improve the mobility of people and goods ; 5. increase and maintain highways ; 6. strengthen the AGEROUTE management and coordination system

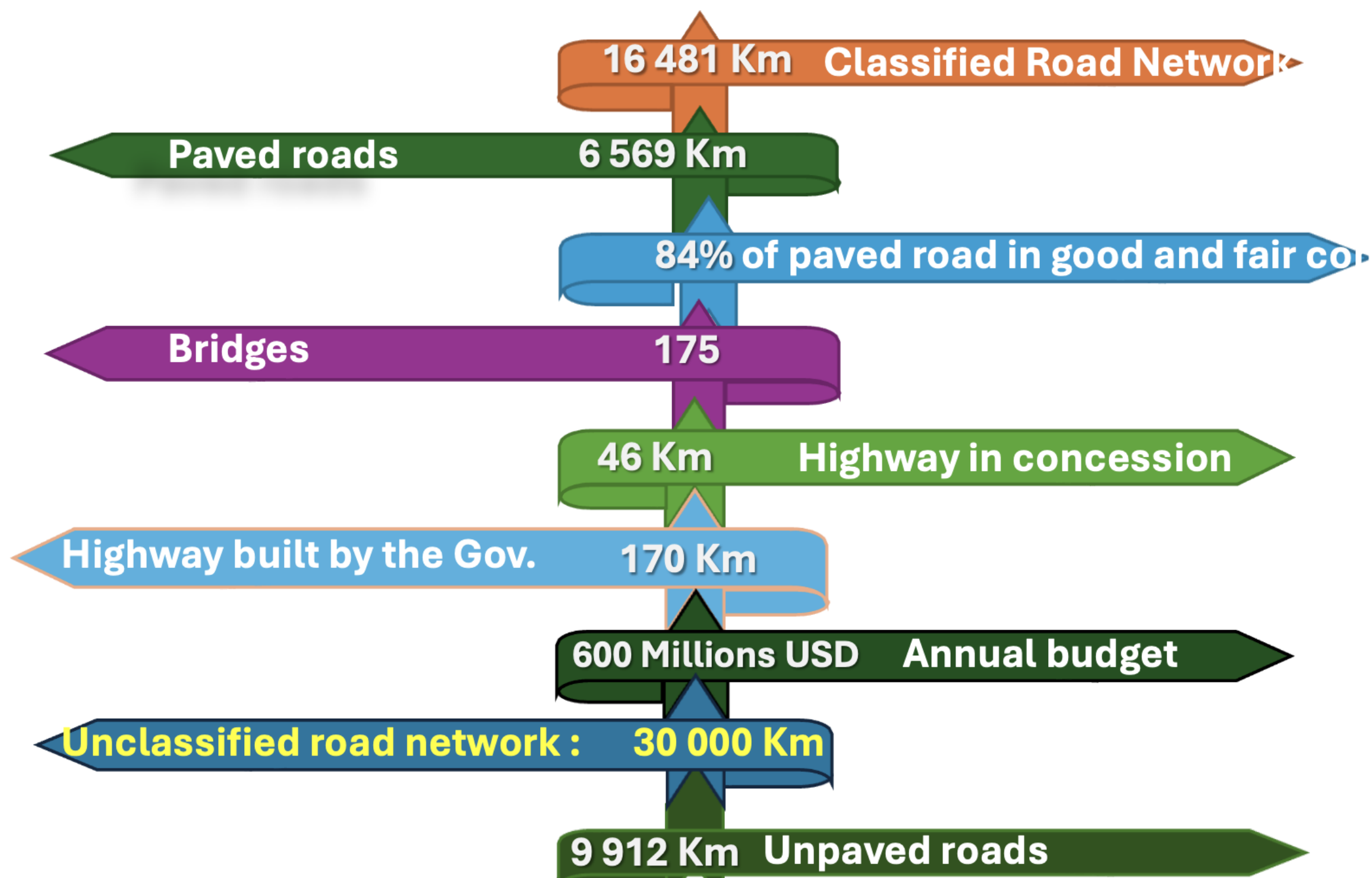
Other information

Workforce (2023) : 228 agents including 67% executives ; 30% woman.

Operation/Investment Ratio: 1.3%

Portfolio: 36 actives projects, Total length : 3,665 km, Budget : 3,6 billions USD.

1. PRESENTATION OF AGEROUTE SENEGAL: SOME KEY FIGURES (3/3)



PRESENTATION OF THE AUTHOR AND PLAN

PRESENTATION OF THE AUTHOR

- Training
 - 1997: Civil Design Engineer Diploma, Ecole Polytechnique de Thiès (Senegal)
 - 2018: MBA International Paris, IAE Paris Sorbonne-Paris Dauphine-CESAG
 - 2021: Executive Doctorate in Business Administration (E-DBA), Business Science Institute of Luxembourg & IAE Lyon School of Management
- Career
 - 1998-2016: Compagnie Sahelian Enterprises (CSE), Materials Engineer & Road Project Manager in Senegal and the West African sub-region
 - 2016 - to present : Agency for Works and Road Management (AGERROUTE) of the Ministry of Land Transport Infrastructure and Opening Up of Senegal, Project Implementation Unit Coordinator & Head of the Major Road Works Division

PLAN : 1. Introduction, 2. Conceptual framework, 3. Epistemology and Methodology, 4. Presentation of research results, 5. Managerial recommendations, 6. Conclusion

1. INTRODUCTION 1/2

PROBLEMATIC

- Public infrastructure: direct support for productive activities, circulation and development of human capital. (Hansen, 1965)
- Increase in infrastructure capital = increase in GDP (Ingram et al., 1994)
- Need to implement large projects to increase infrastructure capacity
- Complexity and uncertainties lead to lack of performance in the implementation of these large projects with unwanted results like schedule & cost overruns and quality defects

IMPORTANCE AND TOPICALITY OF THE SUBJECT

- SDG No 9 (United Nations 2030 Agenda): “establish quality, reliable, sustainable and resilient infrastructure, ..., at an affordable cost and in conditions of equity”
- 11% of Senegal's budget devoted to road infrastructure from 2010 to 2020

1. INTRODUCTION 2/2



THE GAP IN THE LITERATURE

- Main fields of literature :
Academic and Practitioner

- Project Management
- Strategic Management of Organizations

- The project manager, what about the other stakeholders?
- The local context: not sufficiently taken into account
- Golden Triangle (Scope-Schedule-Cost) towards Pentagon with two other criteria: (i) the satisfaction of users and local residents; (ii) safeguarding the project environment

RESEARCH QUESTION

How to achieve project performance within the framework of a broader stakeholder vision?

RESEARCH OBJECTIVES

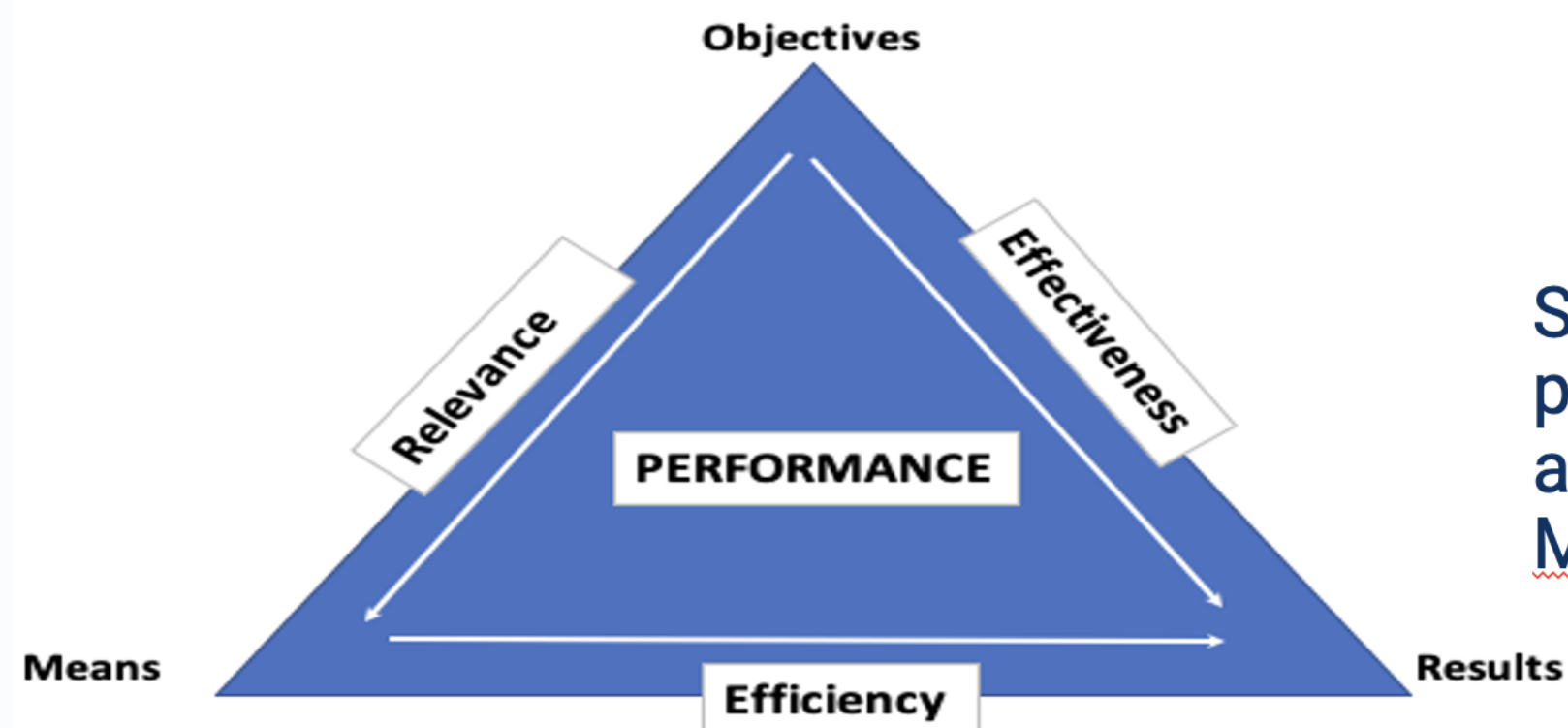
(i) Diagnose the status of implementation of road projects in Senegal; (ii) Determine and analyse the roles of the client, consultant, contractor, funder and other stakeholders in order to achieve performance.

2. CONCEPTUAL FRAME 1/2

ROAD PROJECT

unique set of activities carried out by stakeholders and coordinated by a project owner, with a view to carrying out a work conforming to the specified quality, as soon as possible, at the lowest cost while ensuring stakeholder satisfaction and safeguarding the project environment. Project cycle: identification, preparation, implementation, ex-post evaluation

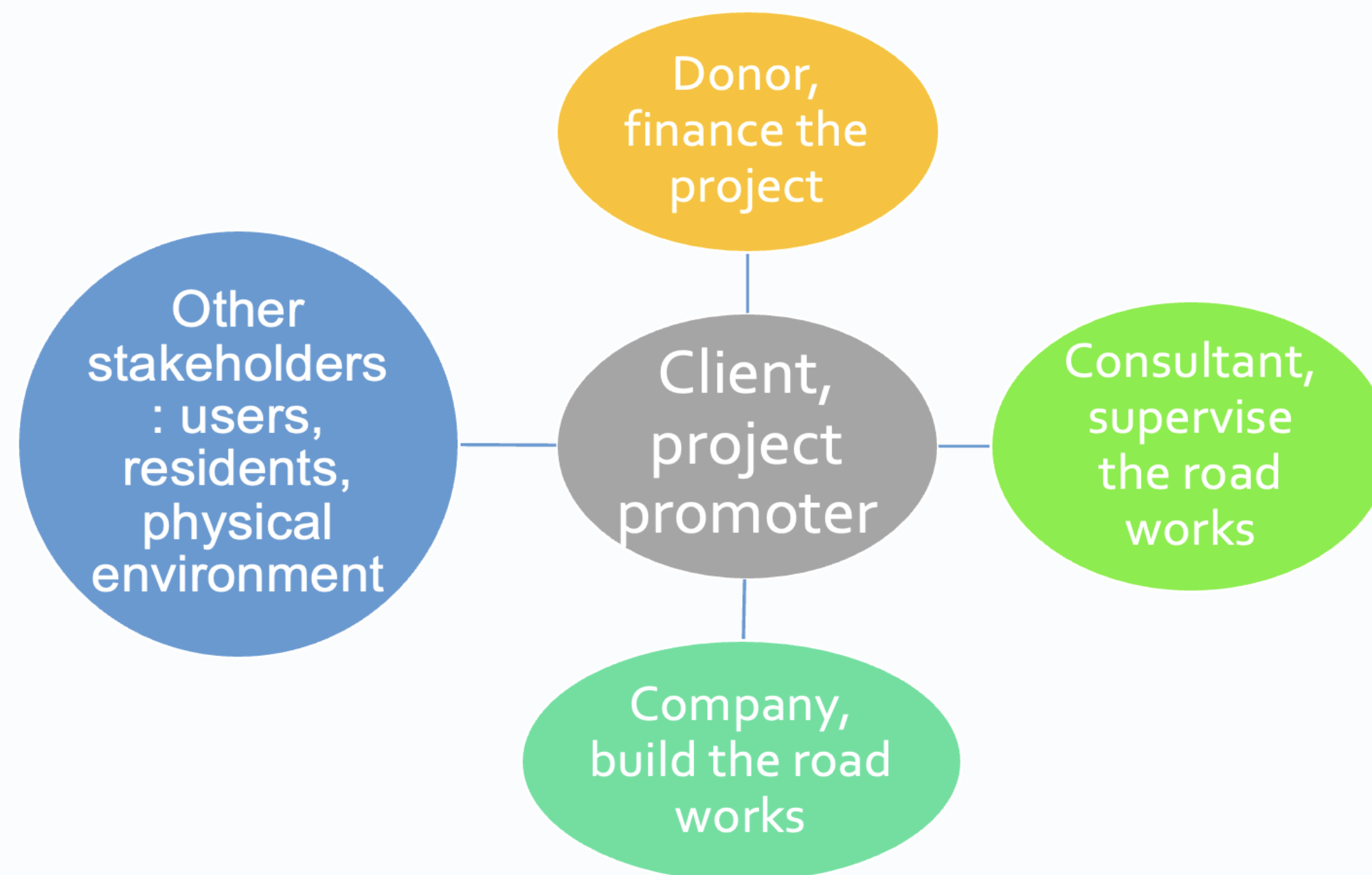
THE PERFORMANCE MODEL



Source : Gilbert's performance model adapted from Moscarola (2018)

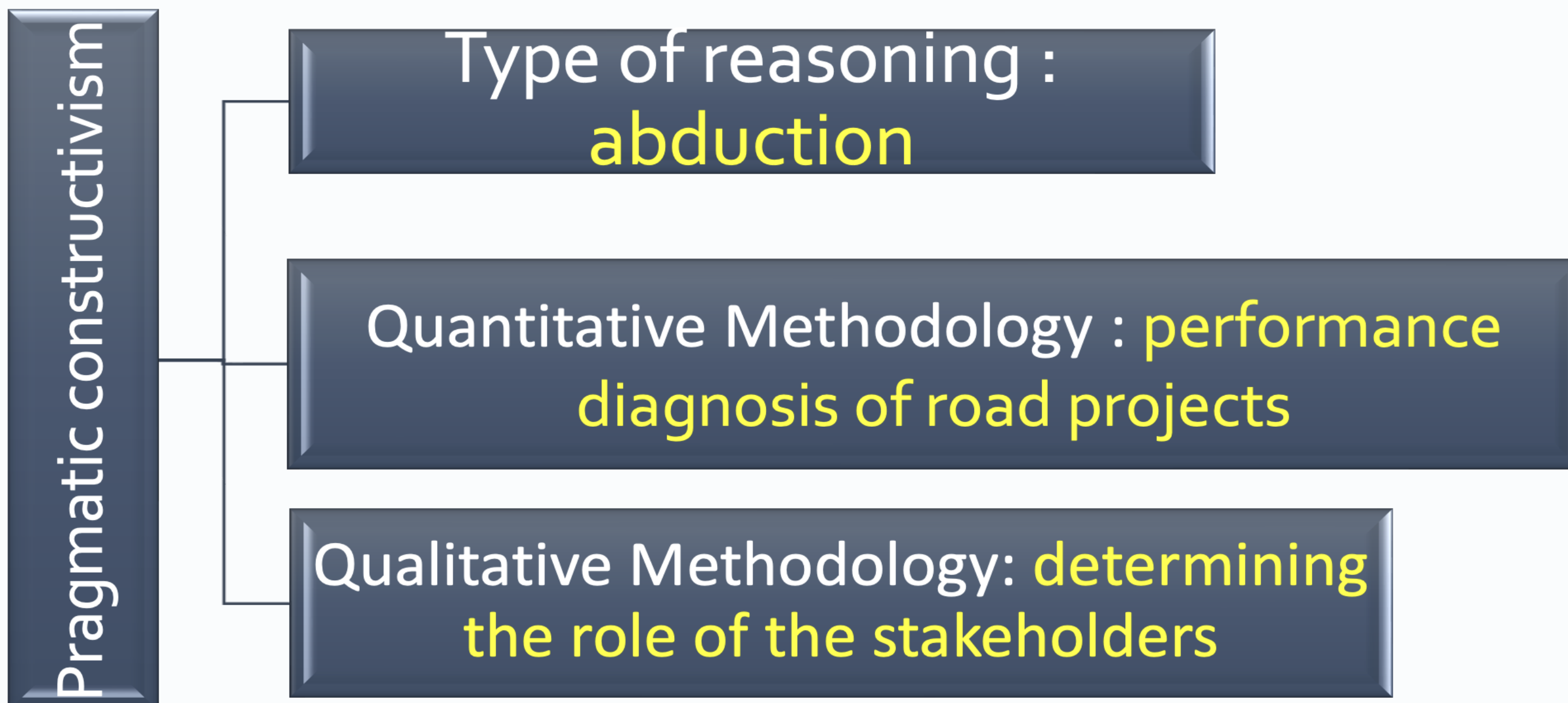
2. CONCEPTUAL FRAME 2/2

THE ROAD PROJECT' STAKEHOLDERS



3. EPISTEMOLOGY AND METHODOLOGY 1/2

THE RESEARCH EPISTEMOLOGY



3. EPISTEMOLOGY AND METHODOLOGY **2/2**

THE RESEARCH METHODOLOGY

1. Diagnosis of the performance of road projects: describing the problem (quantitative approach)

- Local context analysis with PESTEL
- Diagnosis of the results of the execution of 41 major road projects (AGERROUTE, 2007-2016)
- Data analysis with Dataviv by Sphinx

2. Empirical investigation: understanding the problem (qualitative approach)

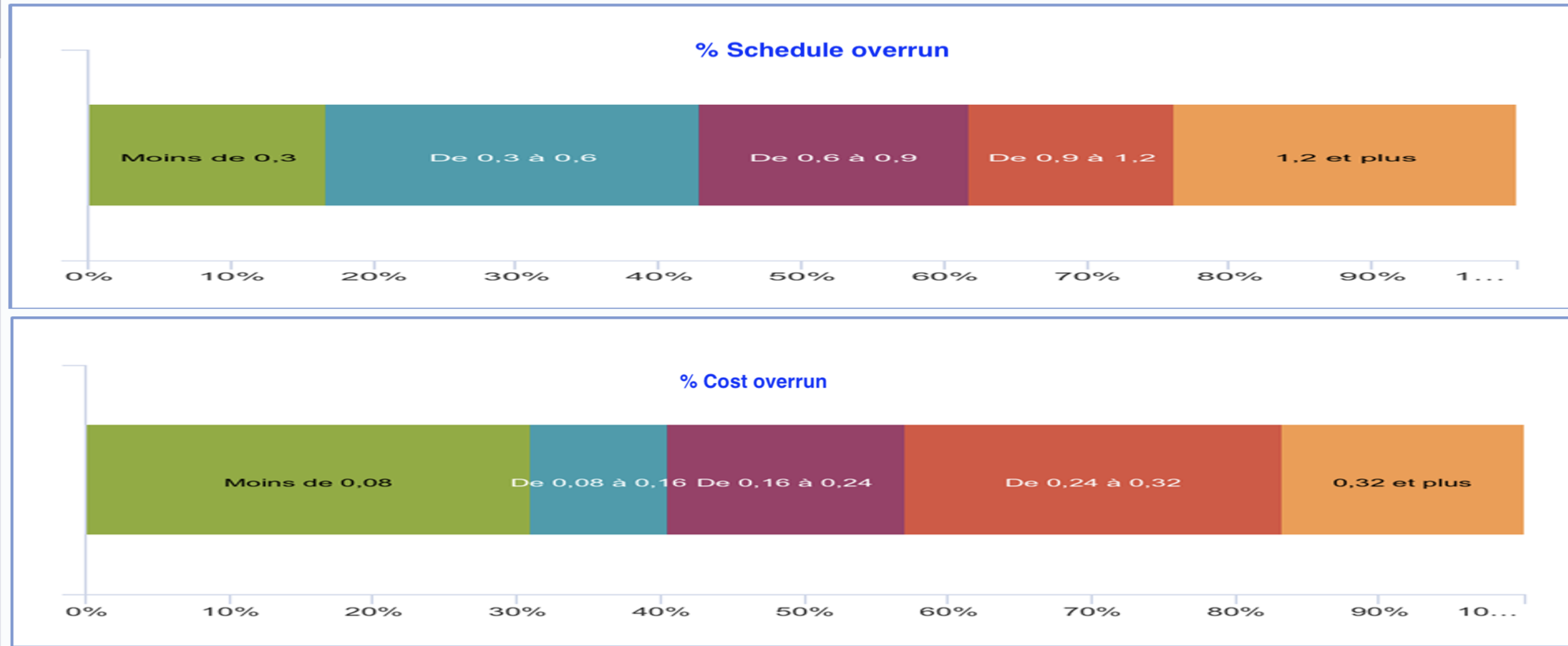
- 34 semi-structured interviews: April – December 2019; average duration: 66 mins
- With all stakeholders: project owner, funder, project manager, company, users & residents of the road

3. Development of managerial proposals: transforming the problematic situation

- Full transcription of interviews: textual data processed by content, lexical and semantic analyses
- Emergence of managerial themes relating to the roles of each of the stakeholders at each stage of the project cycle to achieve the performance of the road project.

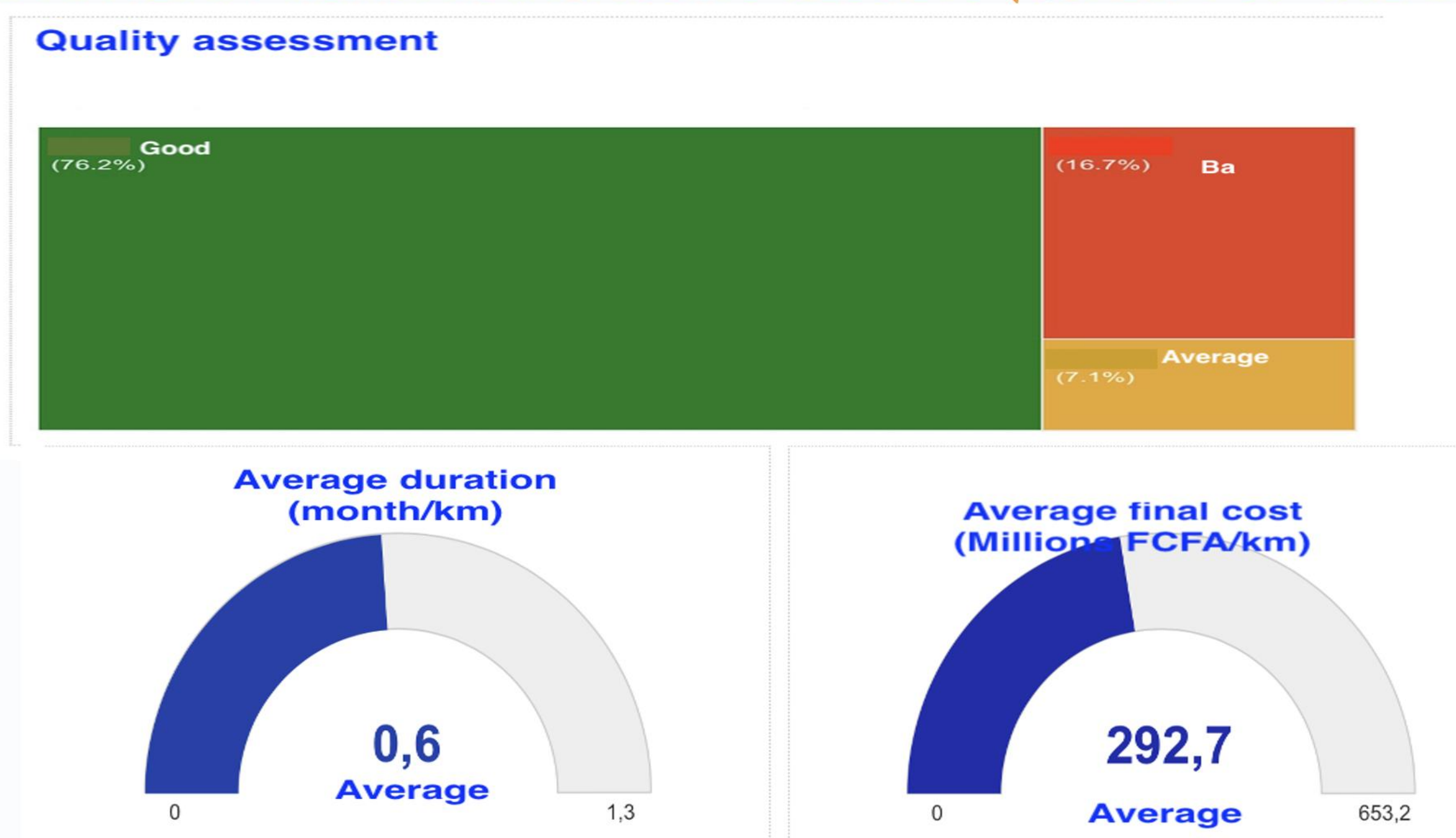
4. PRESENTATION OF THE RESEARCH RESULTS 1/3

QUANTITATIVE APPROACH: DIAGNOSTIC RESULTS (SCHEDULE & COST)



4. PRESENTATION OF THE RESEARCH RESULTS 2/3

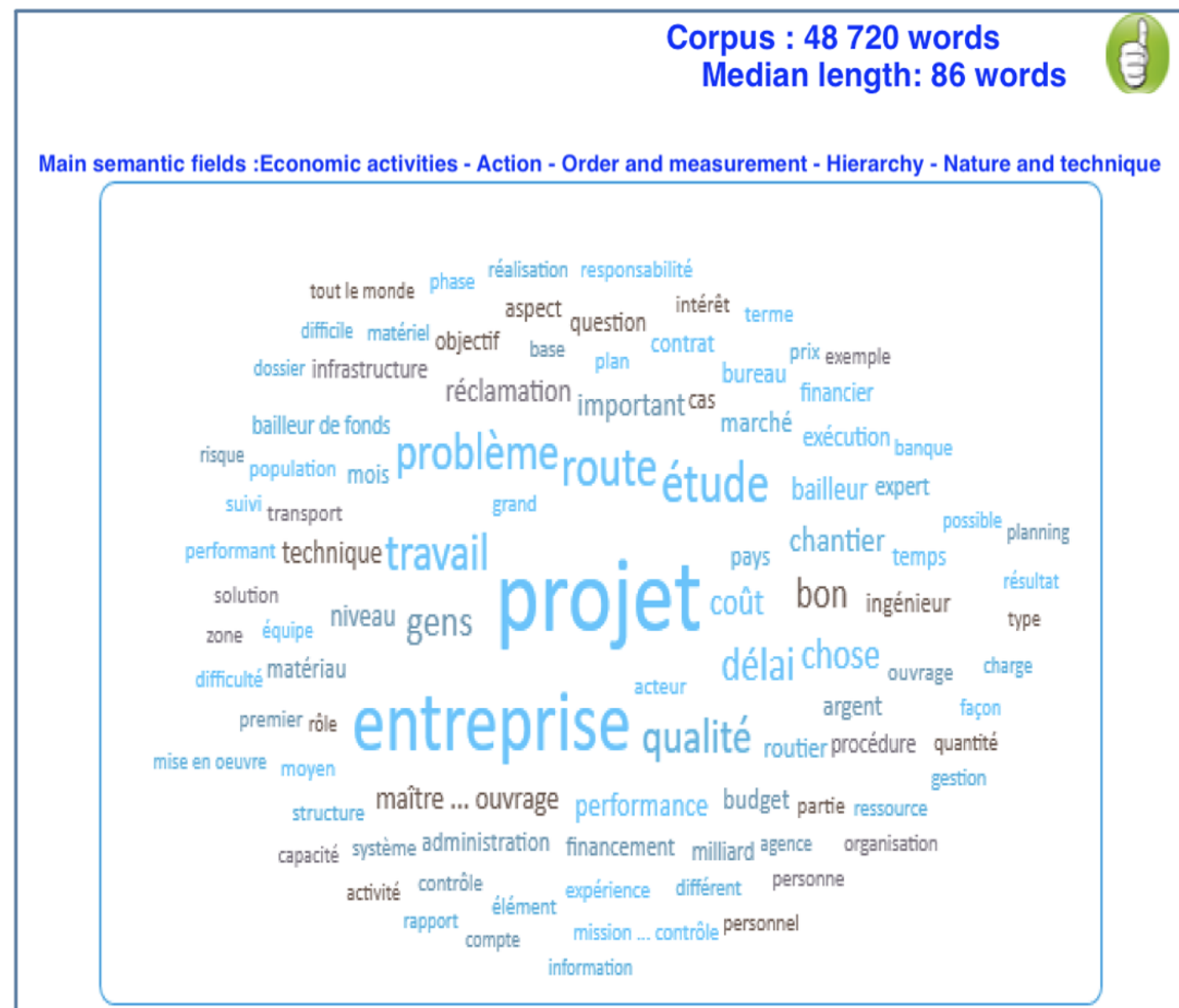
QUANTITATIVE APPROACH: DIAGNOSTIC RESULTS (QUALITY OF THE WORKS)



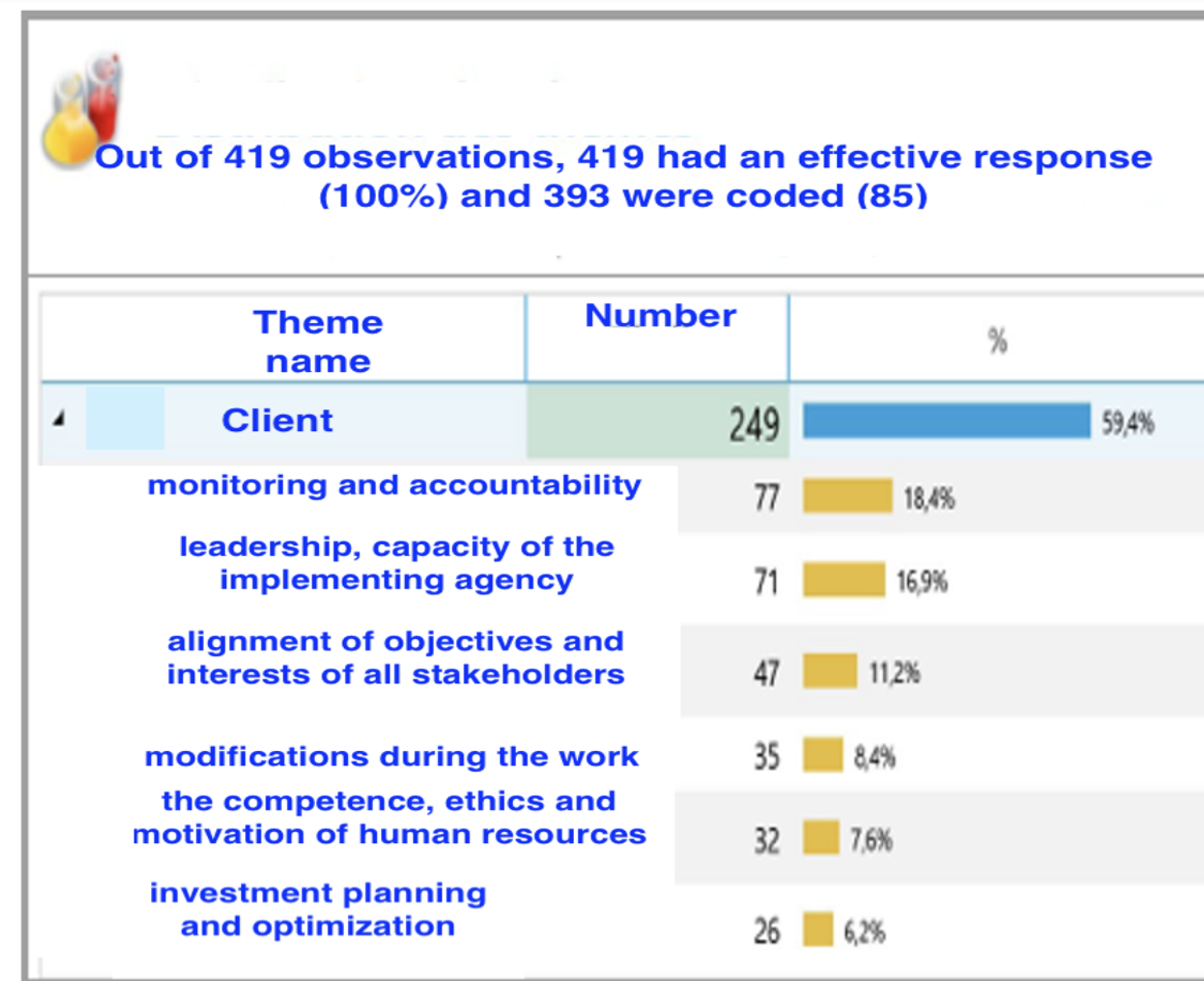
4. PRESENTATION OF THE RESEARCH RESULTS 3/3

QUALITATIVE APPROACH: LEXICAL AND SEMANTIC ANALYSES

Word cloud



Distribution of themes



5. MANGIERIAL RECOMMENDATIONS 1/4

AT THE PROJECT IDENTIFICATION STAGE FOR EACH STAKEHOLDER

Client

- Show leadership and have capacity
- Take into account the strategic alignment of objectives and interests of all stakeholders
- Select professional human resources to take into account strategic planning, investments optimisation, risks identification and management

Donor

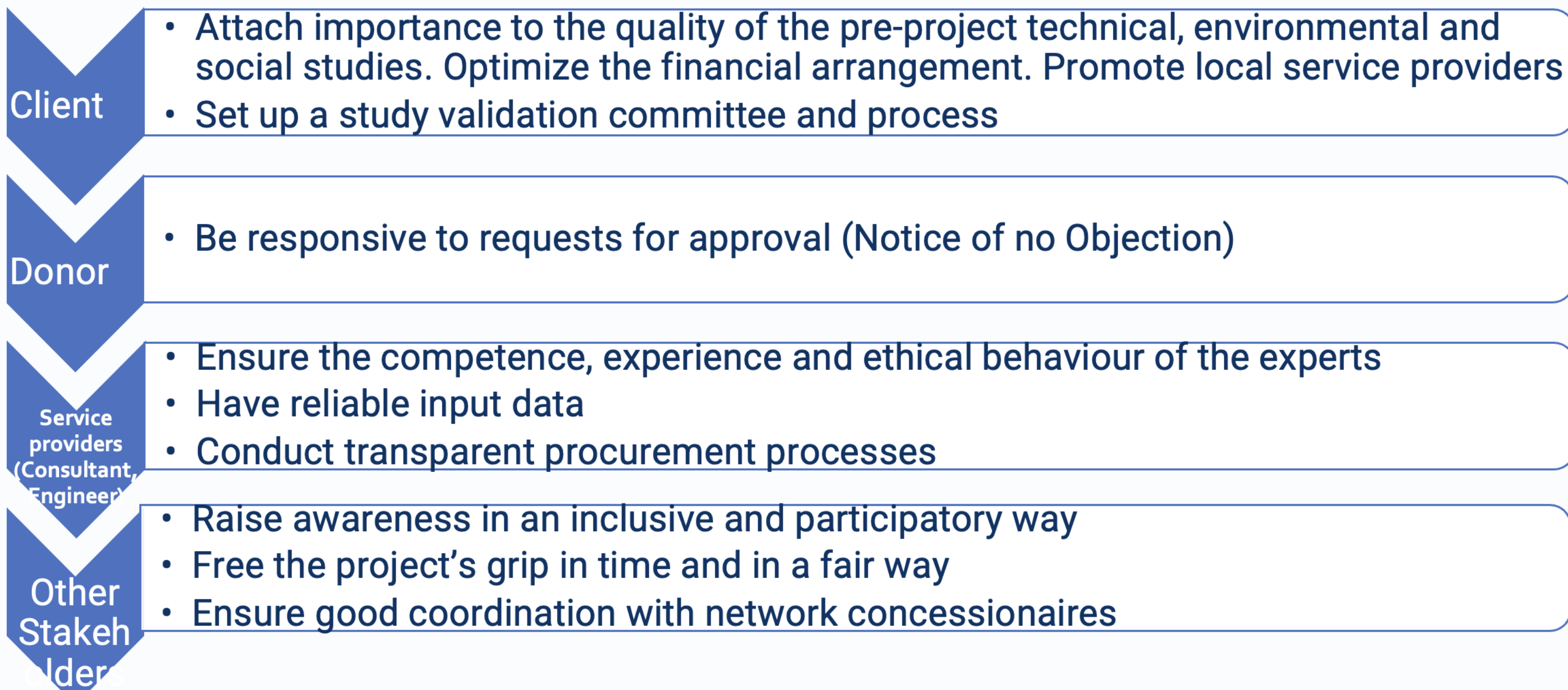
- Make funds available
- Identify and manage risks (socio-economic impacts)

Other
Stakehold
ers

Take into account the expression of the needs of other stakeholders (users , residents,...)

5. MANGIERIAL RECOMMENDATIONS **2/4**

AT THE PROJECT PREPARATION STAGE FOR EACH STAKEHOLDER



5. MANGIERIAL RECOMMENDATIONS 3/4

AT THE PROJECT EXECUTION STAGE FOR EACH STAKEHOLDER

Client	<ul style="list-style-type: none"> • Monitor and report • Avoid modifications during the work • Sanction non-performing providers
Donor	<ul style="list-style-type: none"> • Carry out regular supervisory tasks, technical and financial audits • Comply with the deadlines for processing and payment of invoices
Service providers	<ul style="list-style-type: none"> • Ensure competence, experience and integrity of the Engineer staff • Have a Quality Management System and apply it • Have a good organisation and the human resources required as well as the required equipment • Have technical and financial capacity
Other Stakeholders	<ul style="list-style-type: none"> • Take accompanying social measures and preserve the environment • Collaborate with organisations representing other stakeholders

5. MANGIERIAL RECOMMENDATIONS 4/4

AT THE PROJECT EX-POST EVALUATION STAGE FOR EACH STAKEHOLDER

Client

- Capitalise on best practices and on lessons learned
- Promote information sharing with other administrations

Donor

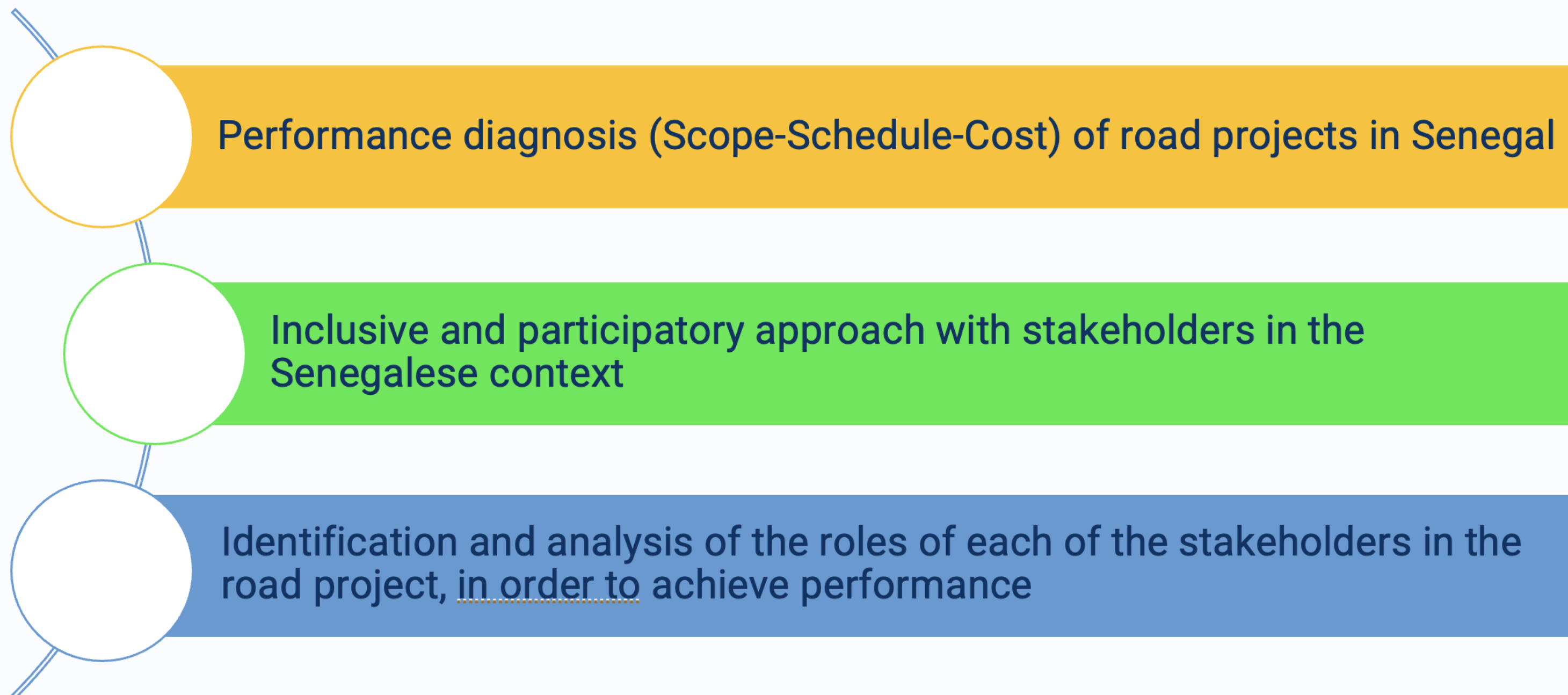
- Carry out technical and financial ex-post evaluation

Other
Stakeholders

- Liaise and raise awareness in an inclusive way
- Take into account the expression of the needs of other stakeholders

6. CONCLUSION 1/2

MAIN CONTRIBUTIONS OF THE RESEARCH



6. CONCLUSION 2/2

FUTURE RESEARCH BASED ON OUR THESIS





DR. MOHAMED LAYE

DIRECTOR OF THE ROAD ASSET MAINTENANCE AND MANAGEMENT
PIARC TC 1.3, FRENCH SPEAKING SECRETARY

Tel: +221 78 639 01 79

Email: mlaye@ageroute.sn

Website: www.ageroute.sn



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