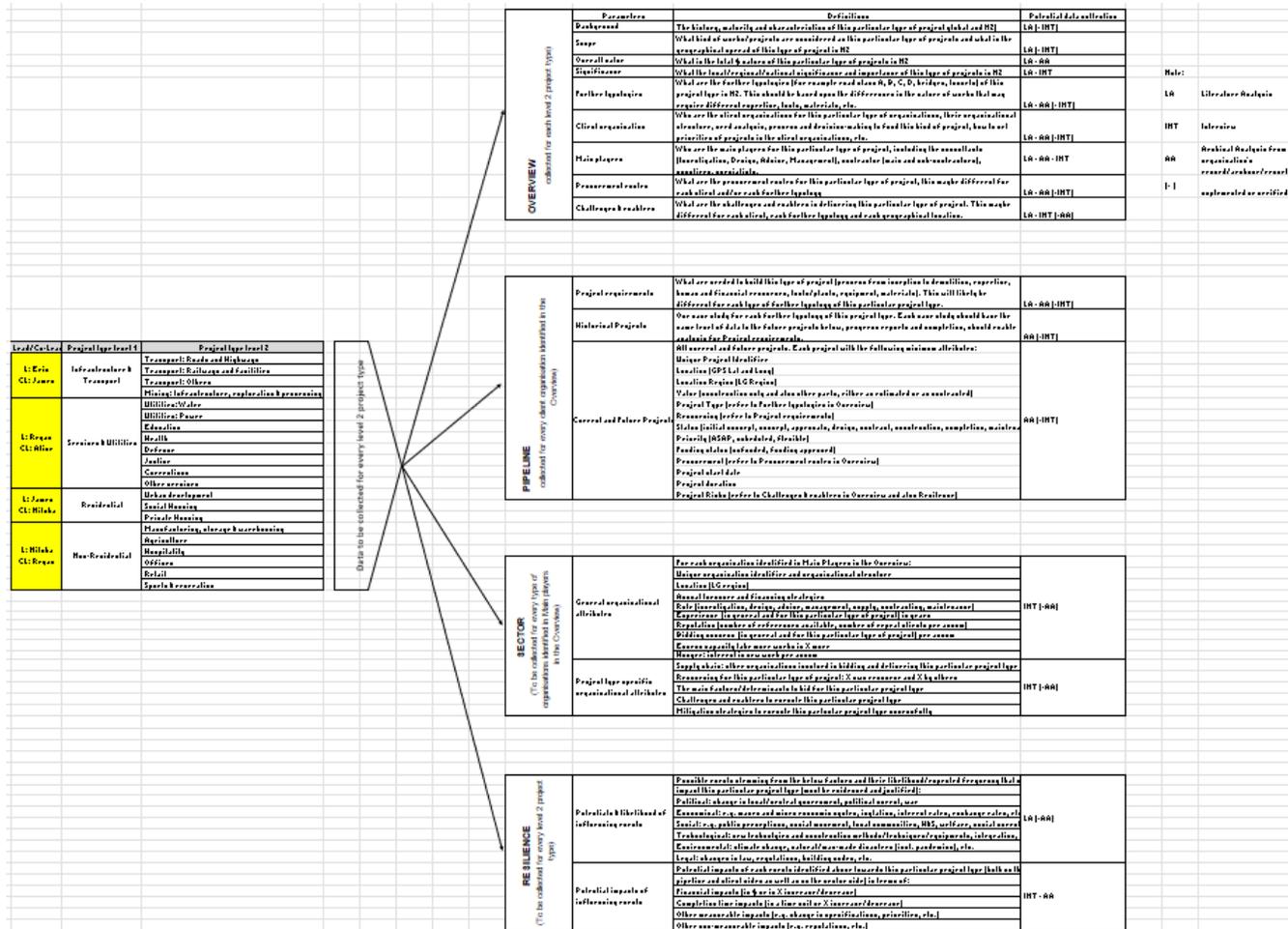


The overall diagram



Leaders and Project types

| Lead/Co-Lead | Project type level 1 | Project type level 2 |
|------------------------|----------------------------|--|
| L: Eric CL: James | Infrastructure & Transport | Transport: Roads and Highways |
| | | Transport: Railways and facilities |
| | | Transport: Others |
| | | Mining: Infrastructure, exploration & processing |
| L: Regan CL: Alice | Services & Utilities | Utilities: Water |
| | | Utilities: Power |
| | | Education |
| | | Health |
| | | Defence |
| | | Justice |
| | | Corrections |
| | | Other services |
| L: James CL: Niluka | Residential | Urban development |
| | | Social Housing |
| | | Private Housing |
| L: Niluka CL: Regan | Non-Residential | Manufacturing, storage & warehousing |
| | | Agriculture |
| | | Hospitality |
| | | Offices |
| | | Retail |
| | | Sports & recreation |

Data to be collected for every level 2 project type

Overview

| OVERVIEW (To be collected for each level 2 project type) | Parameters | Definitions | Potential data collection | | |
|---|-----------------------|--|---------------------------|-------|--|
| | Background | The history, maturity and characteristics of this particular type of project global and NZ) | LA (+ INT) | | |
| | Scope | What kind of works/projects are considered as this particular type of projects and what is the geographical spread of this type of project in NZ | LA (+ INT) | | |
| | Overall value | What is the total \$ values of this particular type of projects in NZ | LA + AA | | |
| | Significance | What the local/regional/national significance and importance of this type of projects in NZ | LA + INT | Note: | |
| | Further typologies | What are the further typologies (for example road class A, B, C, D, bridges, tunnels) of this project type in NZ. This should be based upon the differences in the nature of works that may require different expertise, tools, materials, etc. | LA + AA (+ INT) | LA | Literature Analysis |
| | Client organisation | Who are the client organisations for this particular type of organisations, their organisational structure, need analysis, process and decision-making to fund this kind of project, how to set priorities of projects in the client organisations, etc. | LA + AA (+INT) | INT | Interview |
| | Main players | Who are the main players for this particular type of project, including the consultants (Investigation, Design, Advice, Management), contractor (main and sub-contractors), suppliers, specialists. | LA + AA + INT | AA | Archival Analysis from organisation's record/archove/reports |
| | Procurement routes | What are the procurement routes for this particular type of project, this maybe different for each client and/or each further typology | LA + AA (+INT) | (+) | supplemented or verified |
| | Challenges & enablers | What are the challenges and enablers in delivering this particular type of project. This maybe different for each client, each further typology and each geographical location. | LA + INT (+AA) | | |

Pipeline

| | | | |
|---|-----------------------------|---|----------------|
| <p style="writing-mode: vertical-rl; transform: rotate(180deg);">PIPELINE (To be collected for every client organisation identified in the Overview)</p>  | Project requirements | What are needed to build this type of project (process from inception to demolition, expertise, human and financial resources, tools/plants, equipment, materials). This will likely be different for each type of further typology of this particular project type. | LA + AA (+INT) |
| | Historical Projects | One case study for each further typology of this project type. Each case study should have the same level of data to the future projects below, progress reports and completion, should enable analysis for Project requirements. | AA (+INT) |
| | Current and Future Projects | <p>All current and future projects. Each project with the following minimum attributes:</p> <ul style="list-style-type: none"> Unique Project Identifier Location (GPS Lat and Long) Location Region (LG Region) Value (construction only and also other parts, either as estimated or as contracted) Project Type (refer to Further typologies in Overview) Resourcing (refer to Project requirements) Status (initial concept, concept, approvals, design, contract, construction, completion, maintenance). Priority (ASAP, scheduled, flexible) Funding status (unfunded, funding approved) Procurement (refer to Procurement routes in Overview) Project start date Project duration Project Risks (refer to Challenges & enablers in Overview and also Resilience) | AA (+INT) |

Sector

| | | | |
|--|--|---|------------------|
| <p>SECTOR (To be collected for every type of organisations identified in Main players in the Overview)</p> | <p>General organisational attributes</p> | For each organisation identified in Main Players in the Overview: | <p>INT (+AA)</p> |
| | | Unique organisation identifier and organisational structure | |
| | | Location (LG region) | |
| | | Annual turnover and financing strategies | |
| | | Role (investigation, design, advice, management, supply, contracting, maintenance) | |
| | | Experience (in general and for this particular type of project) in years | |
| | | Reputation (number of references available, number of repeat clients per annum) | |
| | | Bidding success (in general and for this particular type of project) per annum | |
| | | Excess capacity take more works in % more | |
| | Hunger: interest in new work per annum | | |
| | <p>Project type specific organisational attributes</p> | Supply chain: other organisations involved in bidding and delivering this particular project type | <p>INT (+AA)</p> |
| | | Resourcing for this particular type of project: % own resource and % by others | |
| | | The main factors/determinants to bid for this particular project type | |
| | | Challenges and enablers to execute this particular project type | |
| Mitigation strategies to execute this particular project type successfully | | | |

Resilience

| | | | |
|---|--|---|----------|
| RESILIENCE (To be collected for every level 2 project type) | Potentials & likelihood of influencing events | Possible events stemming from the below factors and their likelihood/expected frequency that may impact this particular project type (must be evidenced and justified): | LA (+AA) |
| | | Political: change in local/central government, political unrest, war | |
| | | Economical: e.g. macro and micro economic cycles, inflation, interest rates, exchange rates, etc. | |
| | | Social: e.g. public perceptions, social movement, local communities, H&S, welfare, social unrest, etc. | |
| | | Technological: new technologies and construction methods/techniques/equipments, integration, etc. | |
| | | Environmental: climate change, natural/man-made disasters (incl. pandemics), etc. | |
| | Potential impacts of influencing events | Legal: changes in law, regulations, building codes, etc. | INT + AA |
| | | Potential impacts of each events identified above towards this particular project type (both on the pipeline and client sides as well as on the sector side) in terms of: | |
| | | Financial impacts (in \$ or in % increase/decrease) | |
| | | Completion time impacts (in a time unit or % increase/decrease) | |
| | Other measurable impacts (e.g. change in specifications, priorities, etc.) | | |
| | Other non-measurable impacts (e.g. reputations, etc.) | | |