Kapiti Criticality
Doing first things first

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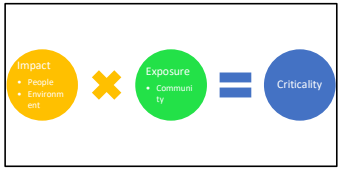
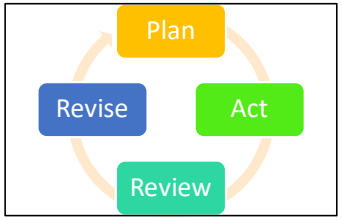
Kāpiti Coast
DISTRICT COUNCIL
Me Huri Whakamuri, Ka Titiro Whakamua

Overview

- What's critical
- The framework
- Doing first things first
- Kiezen – Continuous improvement





What’s Critical

People and environment

Serviced by infrastructure

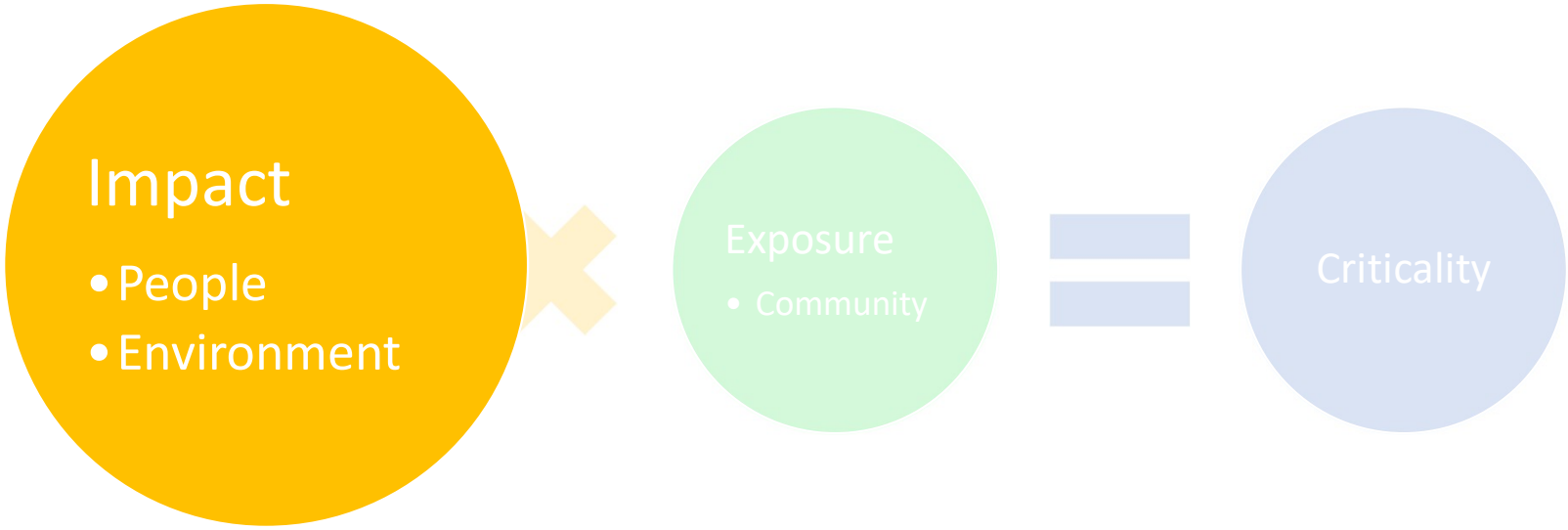
Delivered by assets function

Impacted by asset failure

Criticality

CRITICALITY = IMPACT on a person or receiving environment x no people EXPOSED

Impacts



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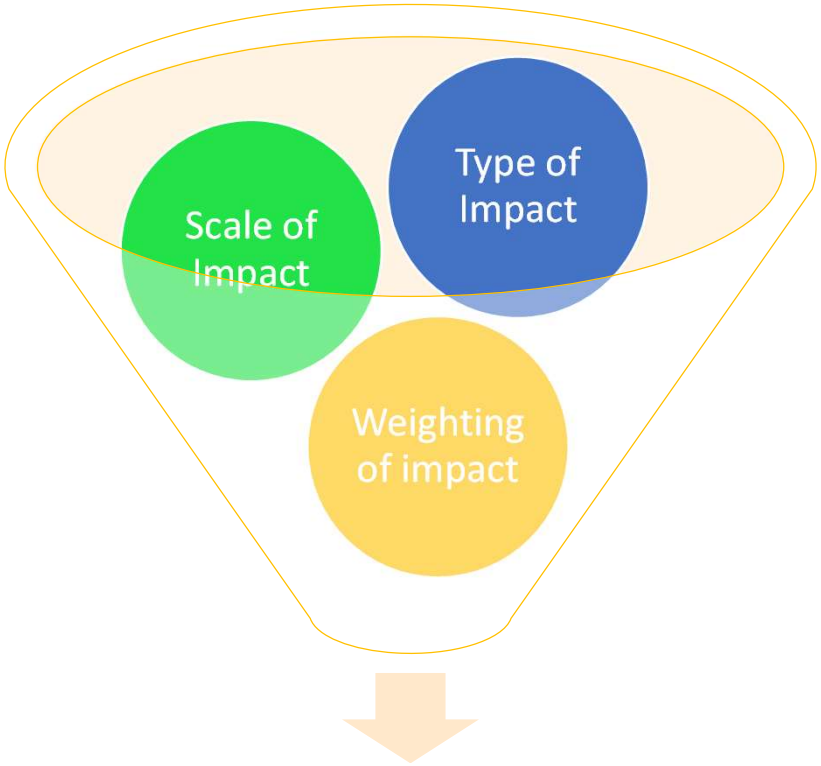
Impact Scoring



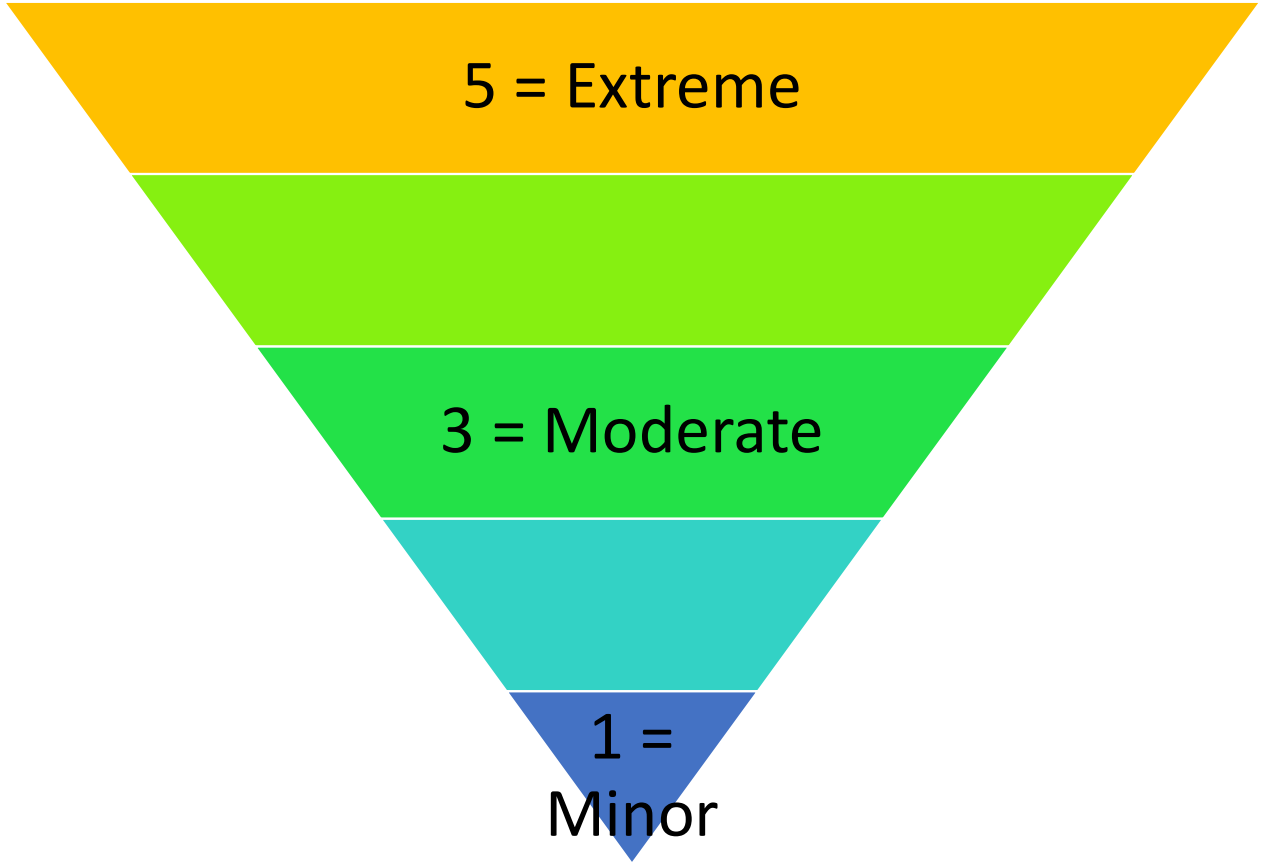
Impact score

Impact types

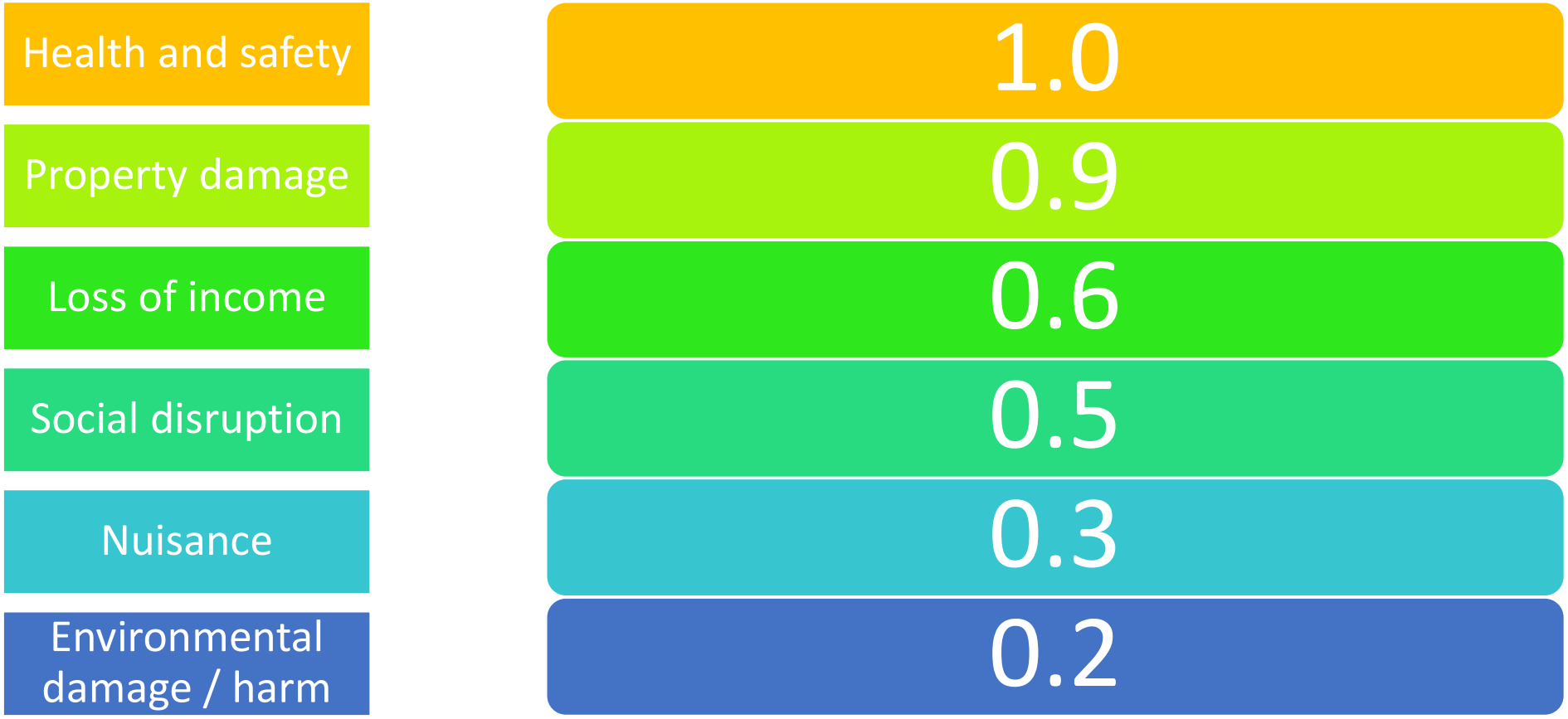
- Health and safety
- Property damage
- Loss of income
- Social disruption
- Nuisance
- Environmental damage or harm

Impact Scale

- Health and safety
- Property damage
- Loss of income
- Social disruption
- Nuisance
- Environmental damage or harm



Impact Weighting



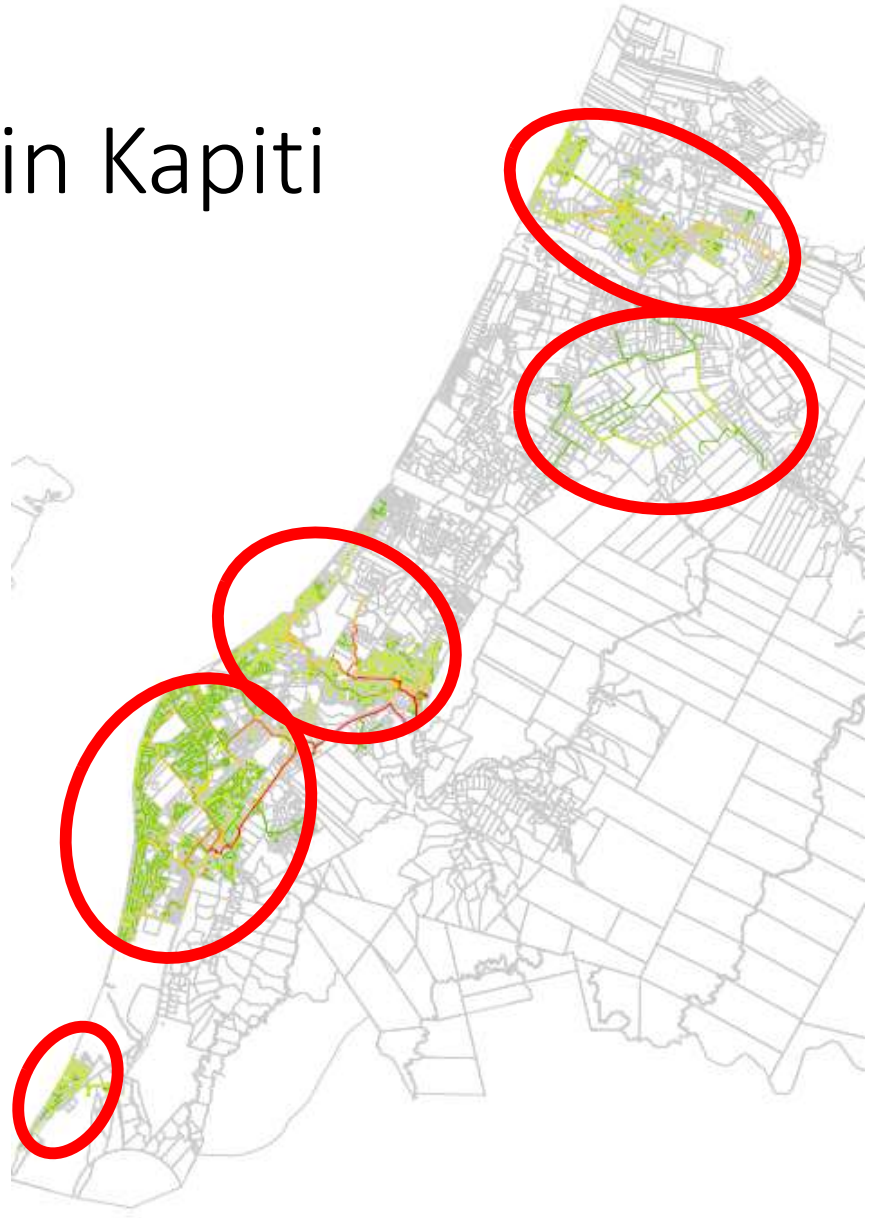
Impact Weighting

Exposure

CRITICALITY = IMPACT on a person or receiving environment x no people EXPOSED

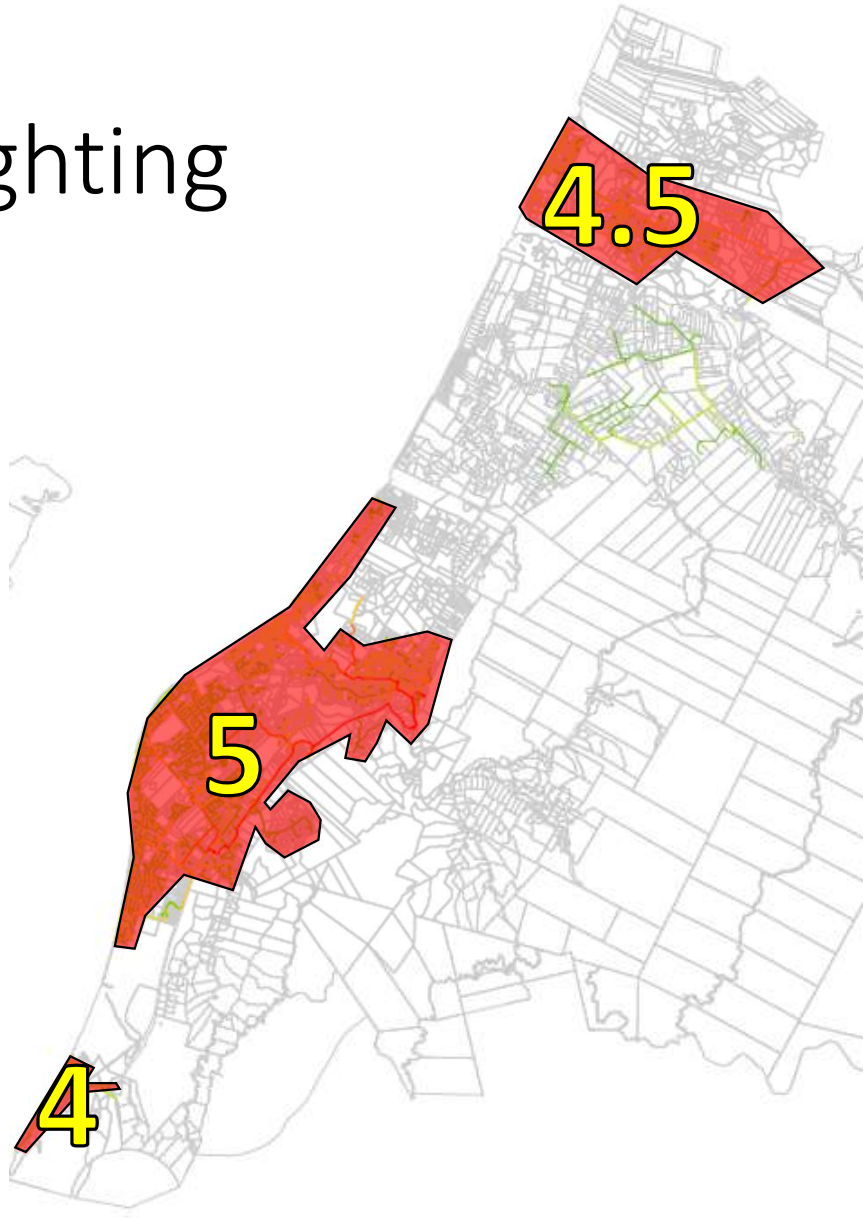
Water networks in Kapiti

- Otaki
- Hautere / Te Horo
- Waikanae
- Paraparaumu / Raumati
- Paekakariki



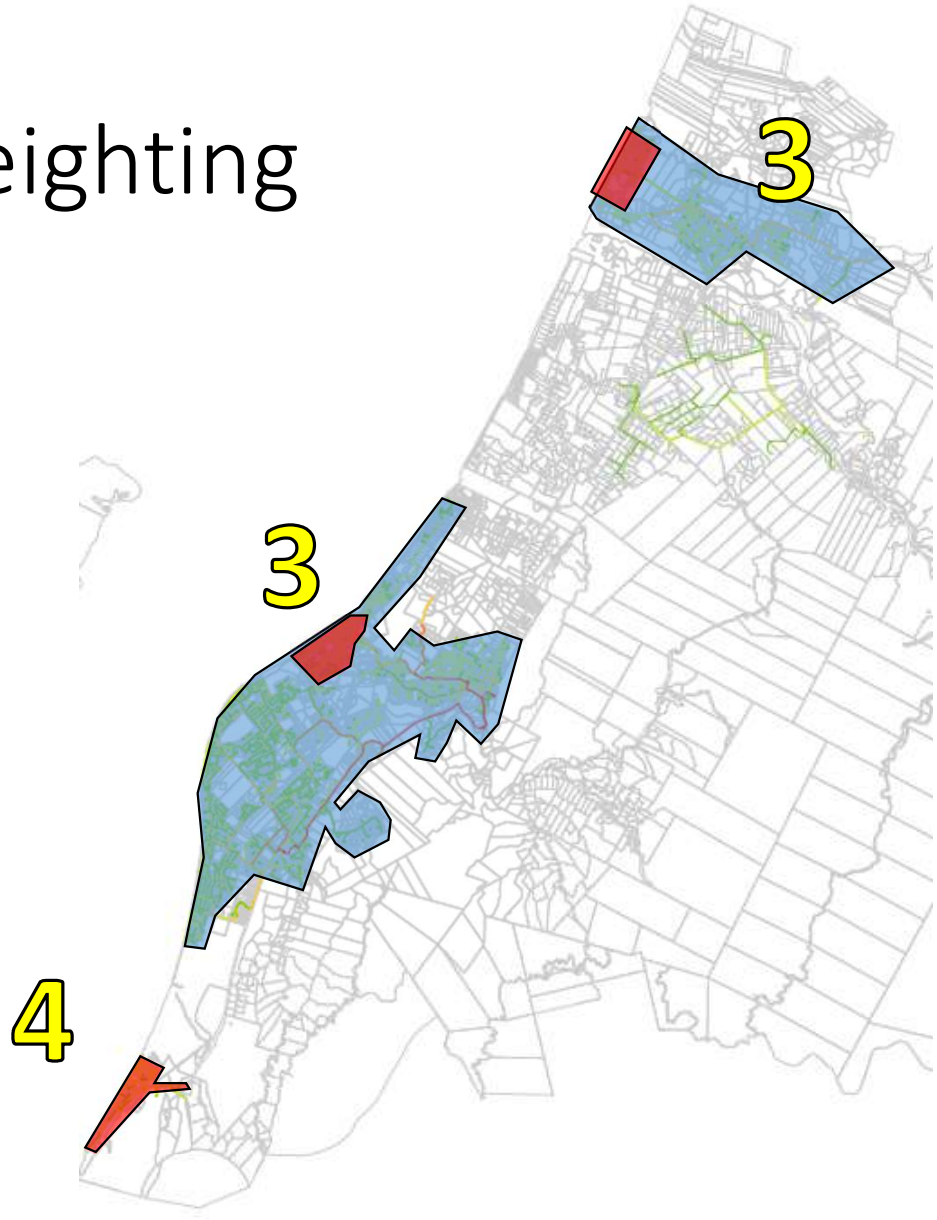
Exposure Weighting

- Otaki
- Waikanae / Paraparaumu / Raumati
- Paekakariki



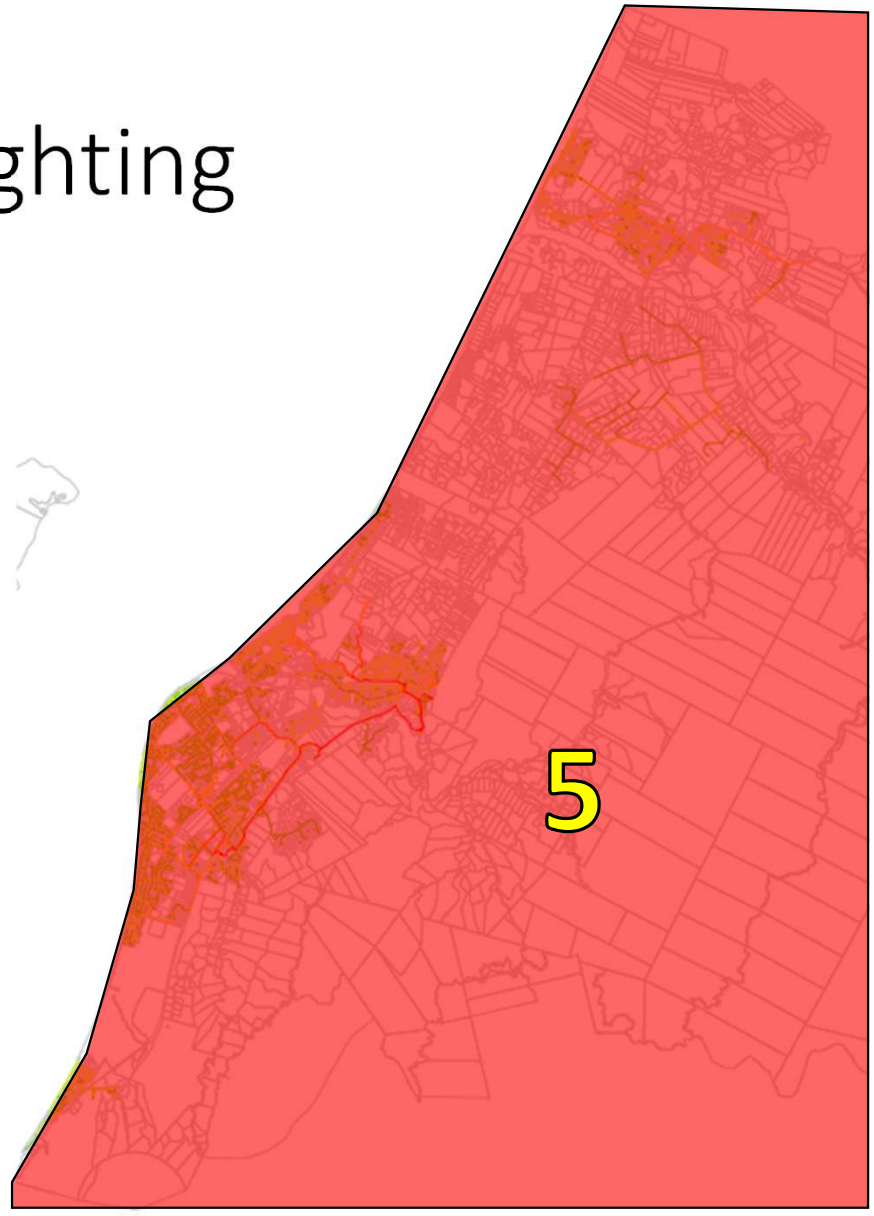
Exposure Weighting

- Otaki Beach
- Waikanae Beach
- Paekakariki

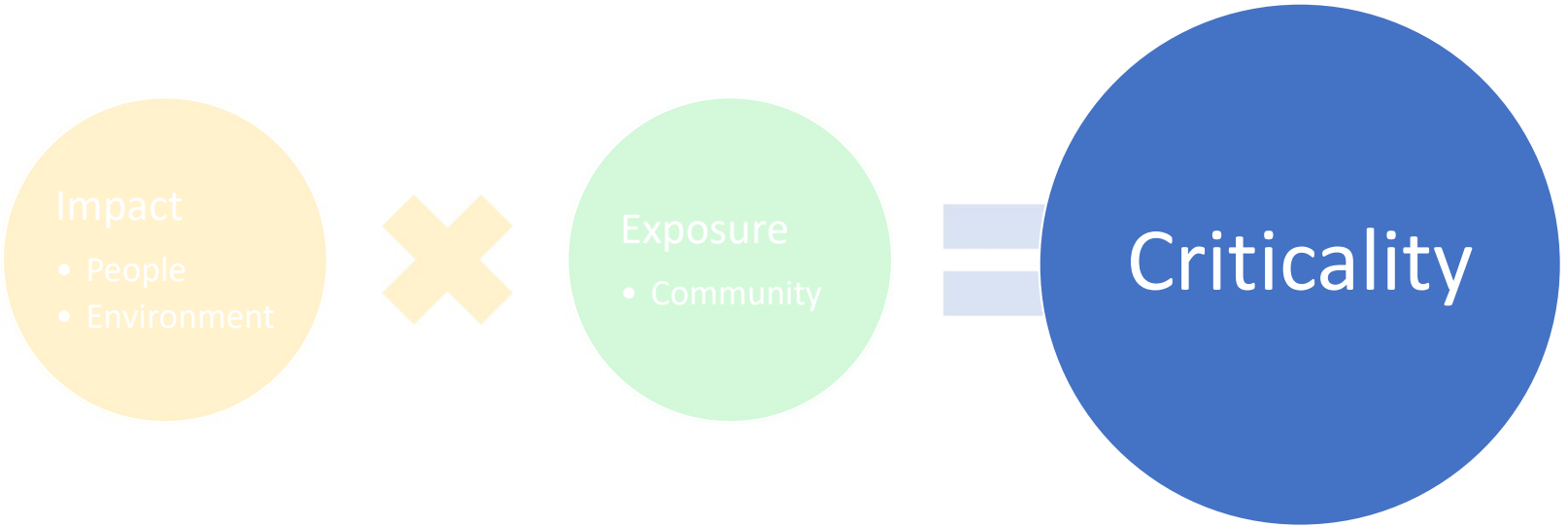


Exposure Weighting

- District wide



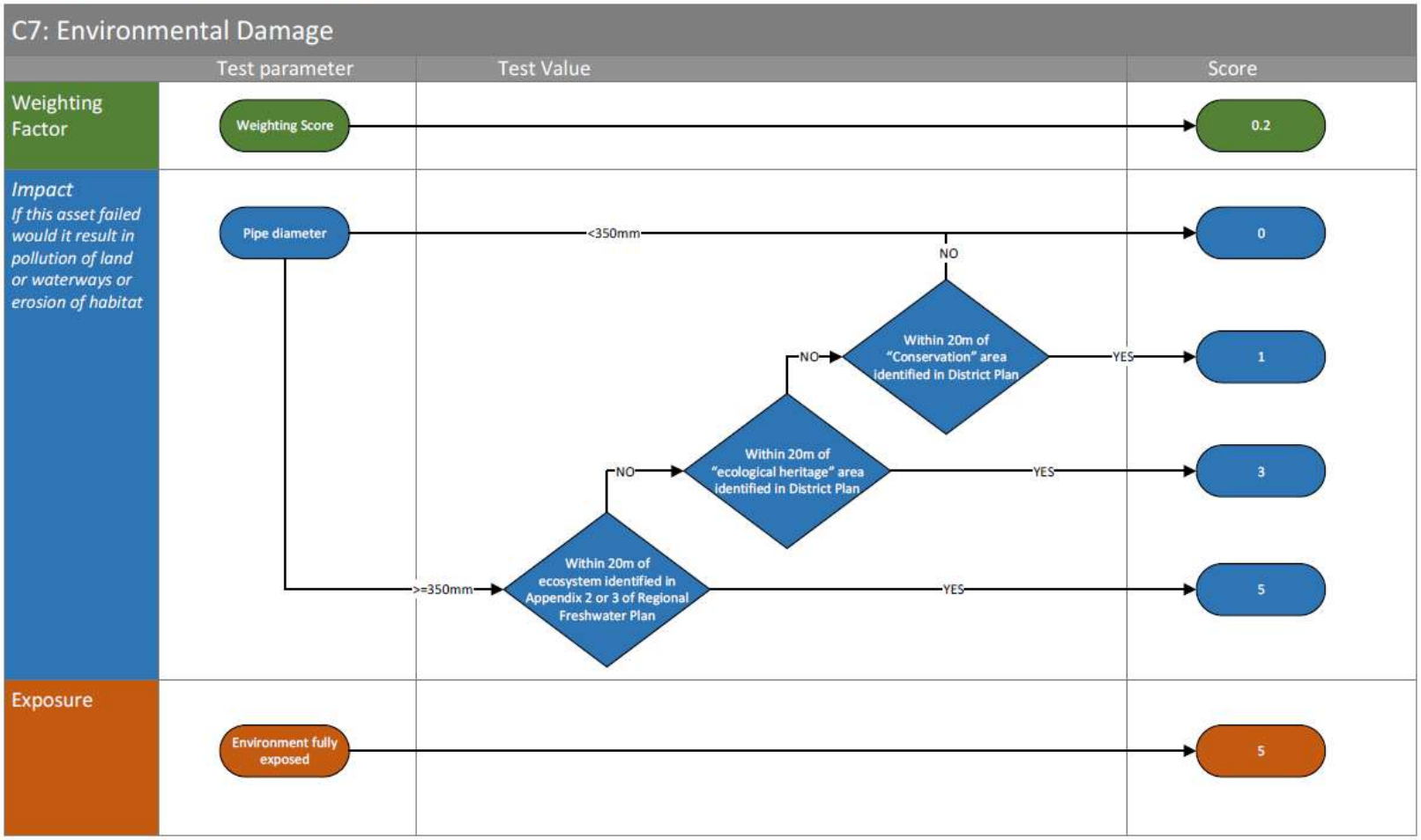
Calculating criticality



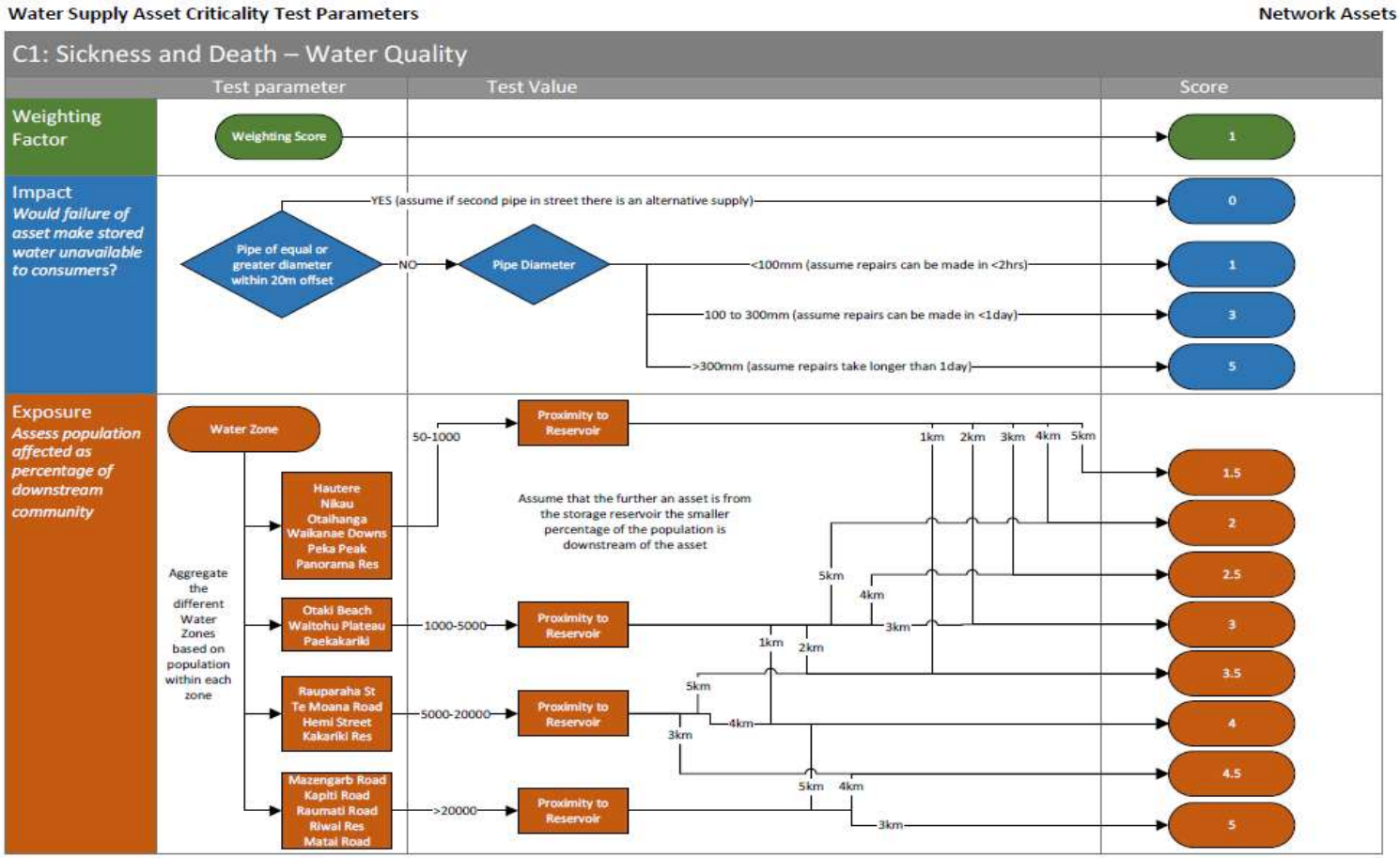
CRITICALITY = IMPACT on a person or receiving environment x no people EXPOSED

Calculating Criticality

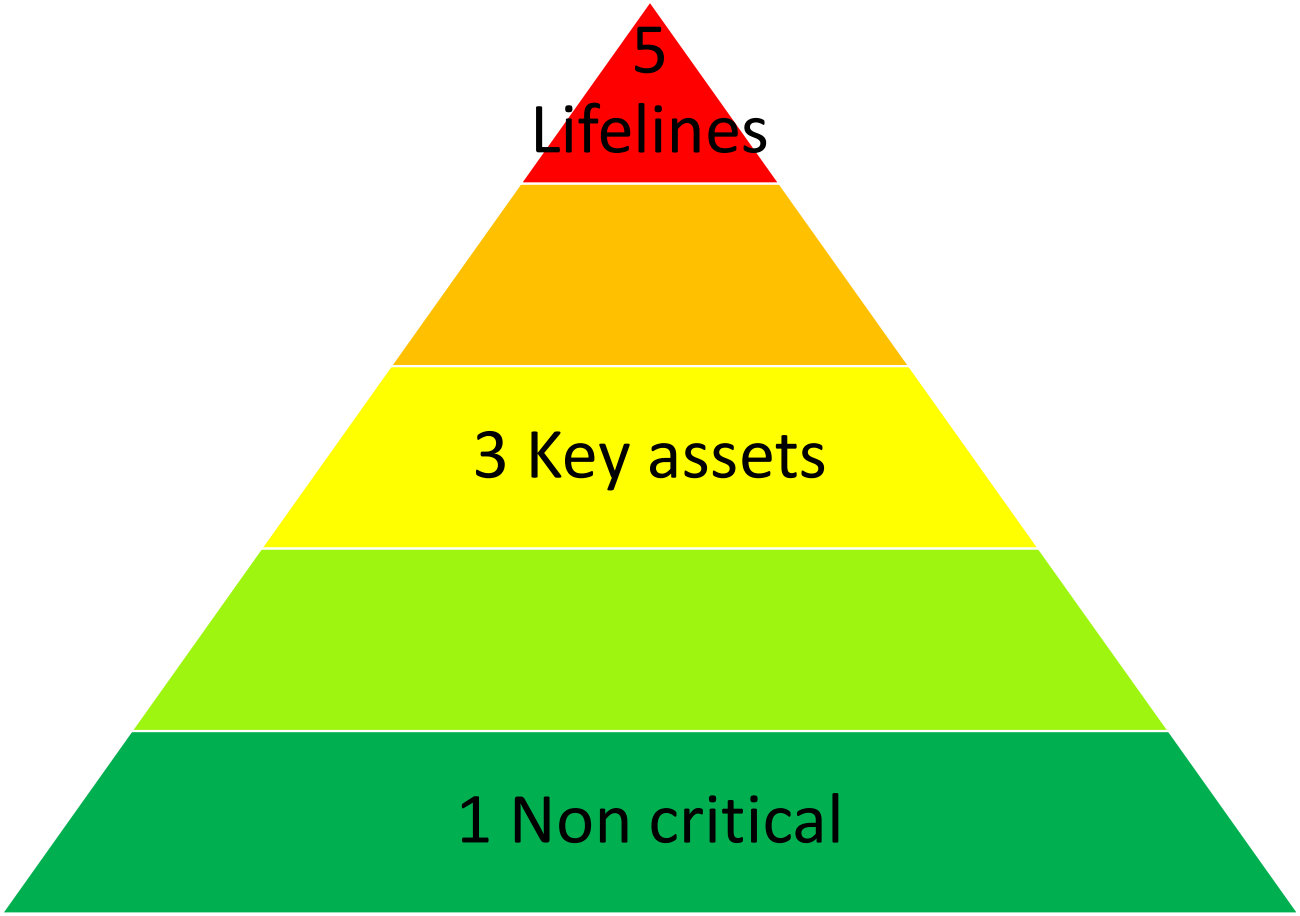
Water Supply Asset Criticality Test Parameters **Network Assets**

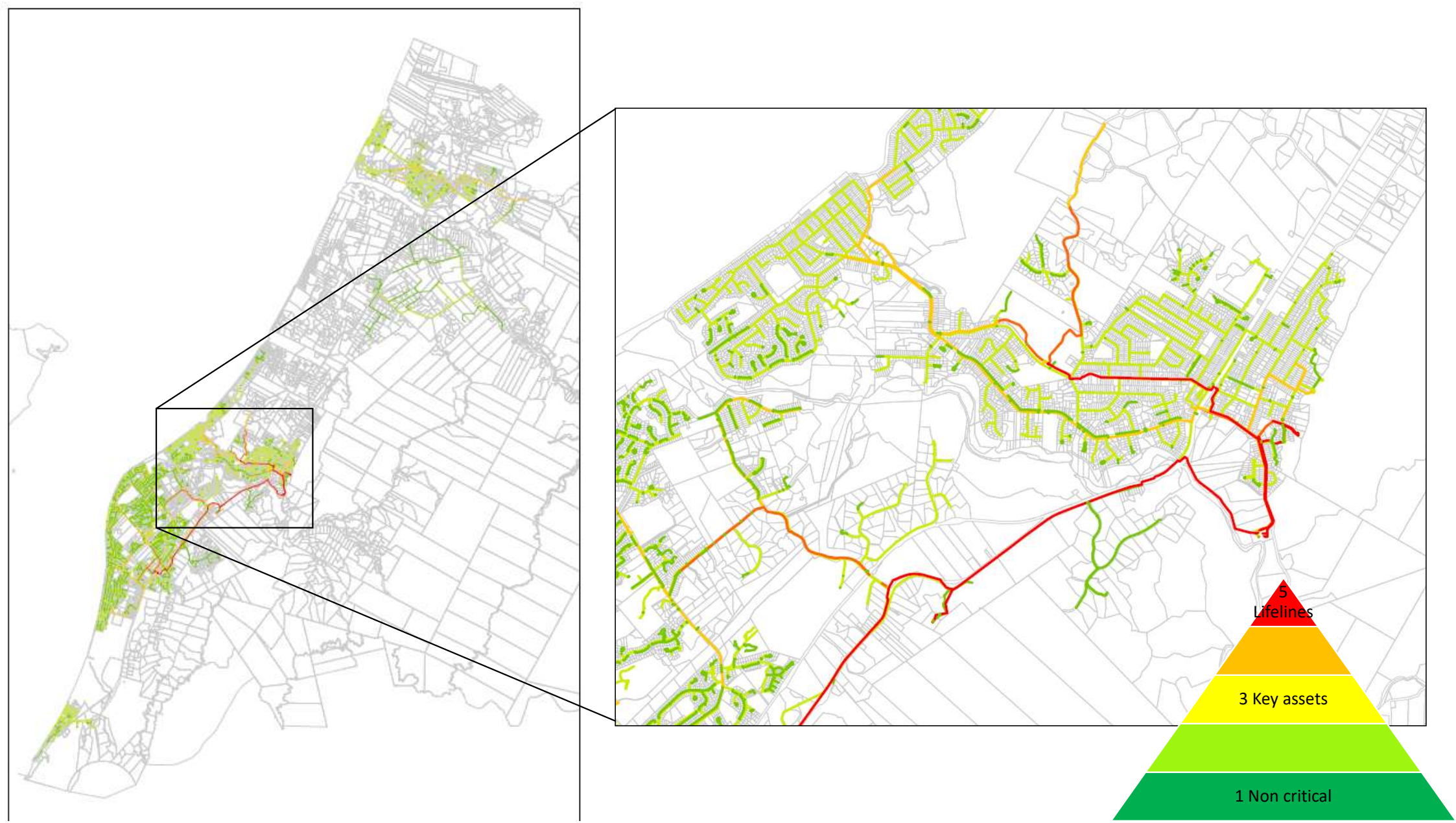


Calculating Criticality



Critical Assets

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Lifelines
3 Key assets
1 Non critical

Using Criticality

Criticality Based Strategies

Strategy	Lifeline	Key Assets	Non Critical
Performance data	Comprehensively understood	Well understood	Recorded as identified
Condition data	Comprehensively understood	Asset group representative	From information available
Renewals	Advanced	Planned	Just in time
Monitoring and Inspections	Reliability based regimes	Scheduled routine	Routine and reactive
Maintenance	Preventative regimes	Preventative routines	As required reactive

Kiezen – Benefits

- It’s driven by service to people and the environment
- Targets efficient and effective use of resources
  - Studies, Inspections and Surveys
  - Maintenance
  - Renewals
  - Upgrades

- Consistent and systematic process
  - Documented
  - Repeatable
  - Transparent
  - Auditable

Kiezen – Lessons learnt

- Involve stakeholders early
  - depth of experience and skills
  - facilitated workshops worked well
- Keep it simple
  - Focus on the purpose and outcomes
  - Start with basic measures
- It doesn’t take much to get started
  - Documenting
  - Applying
  - Refining

Kiezen – Next steps

- Review initial results
  - Sanity check
  - Sensitivity checks
- Apply asset planning strategies
- Review and refine operational strategies.
- Comparison with other frameworks
- Embed criticality in AM process and automation with Asset Management Systems

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