

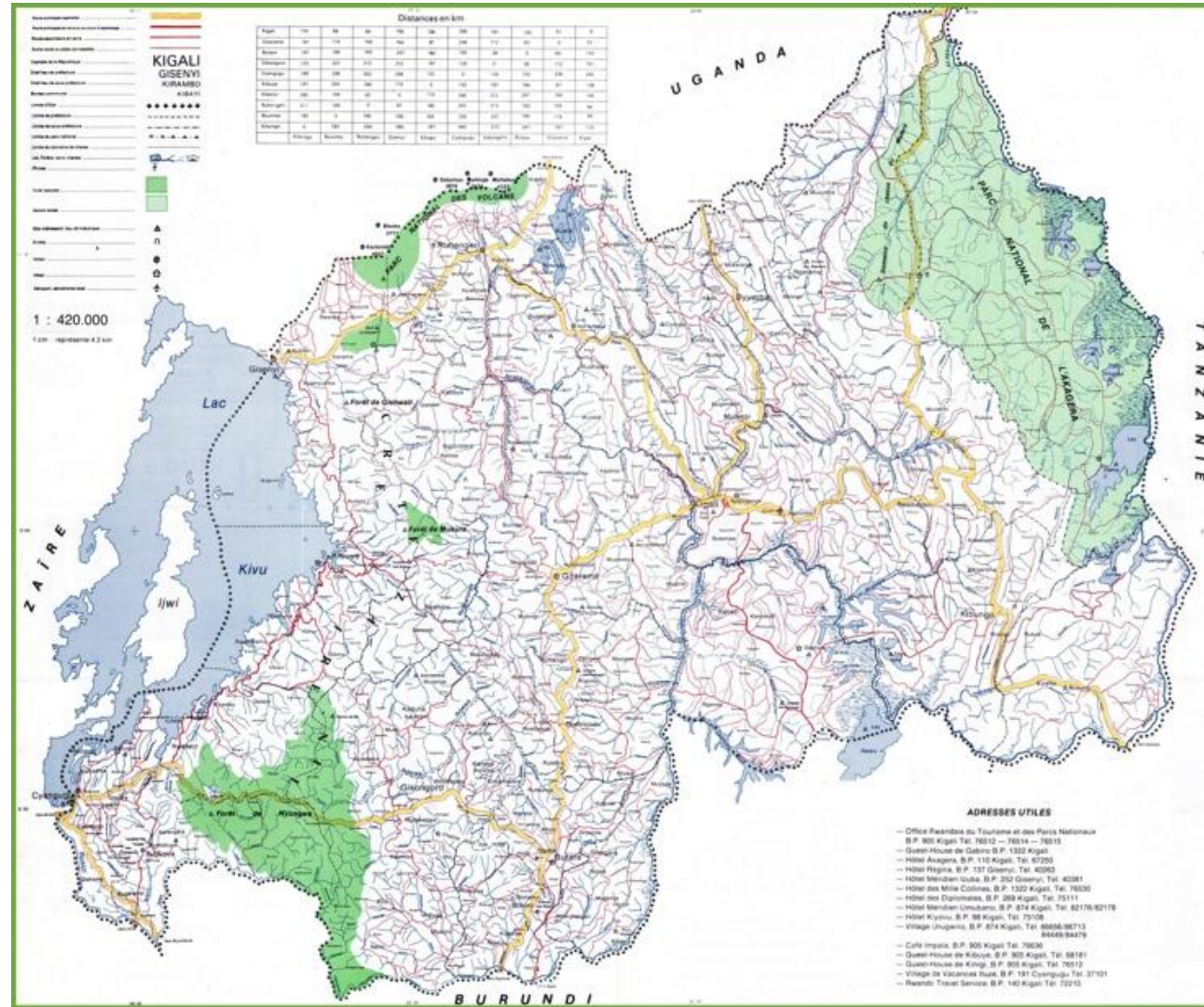
Rwanda Sustainable Infrastructure Roundtable (GGGI – ISCA)

Rwanda diagnosis for Infrastructure Sustainability



What is Infrastructure Sustainability?

What are some common issues that face infrastructure projects in Rwanda?



What are some of the solutions to these issues?

What have we heard? What do we do about what we have heard

Context of Rwanda's state of Infrastructure



PROGRESS REPORT OF THE 7YGP (2010-2017) – Infrastructure: 18 total interventions

- 50% on track;
- 39% on watch; and
- 11% off-track

Specific issues/areas responsible for sub-optimal performance

- Roads: (Rehabilitate and construct new tarmac roads), 352.9 Km of feeder roads rehabilitated
- Airports: Extension and renovation (extension of RUBAVU and KAMEMBE and renovate (Kigali International Airport);
- Other areas/issues: Energy

The National Strategy for Transformation (NST – 2018/24):

“Developing Modern Infrastructure and Livelihoods is one of 5 Rwanda’s Vision 2050 broad priorities. Relevance to SDGs

Areas/Issues identified significantly relate to/addressed through Infrastructure sustainability

Infrastructure Sustainability



Infrastructure Sustainability

- infrastructure that is planned, designed, constructed and operated to optimise environmental, social and economic outcomes over the long term.
- ISCA enables sustainability outcomes in infrastructure through:
 - Rating scheme: Rating of infrastructure projects and assets
 - Training and capacity building and facilitating knowledge sharing

Rwanda's current state of Infrastructure



What are the key infrastructure assets and what are the sustainability issues?

- **Transport:**
 - Airport - Expropriation, community engagement,
 - Long term weather predictions – How does it impact the design of airport?
 - Stakeholder analysis for airport project?
 - Cement – Reducing CO2 emissions; Recycle aggregates; Environmental Responsibility;
 - Roads – Impact on ecology
 - EIA – Challenges in implementation. Ex: Staffing issues to monitor & evaluate
 - Feasibility studies – Who is responsible to validate? Kigali – Gatuna Road repaired in 2-3 days. What are the studies & materials used?
 - Roads not just mobility but a way to manage floods. Cross-ministerial management. Regulations play a key role
 - Sustainability through localization
- **Utilities:**
- **Public Realm/ Open Space:**
- **Common issues**
 - Education – Catch them young
 - Curriculum – Green buildings, low-carbon materials – Natural pozzolana,
 - Recycling – mindset challenges. Ex: Agro. panel,

Rwanda's current state of Infrastructure

What are the key infrastructure assets and what are the sustainability issues?



- Transport(Cont'):
 - Design of roads - Holistic approach towards measuring sustainability
 - Road-Nearby infrastructures must considered: eg. Run-off water from nearby roofs cause flood and destroy roads
 - High maintenance requirement
 - Mitigation measures
 - Standard issues
 - Dumping site issues
 - Thinking out of the box on how our roads can sustainably be constructed
 - Need of ownership from all involved parties of the project(District-Contractor-community-Central Government..)
 - We need to invest more in research(Culture, People's way of living;..)- Insufficient data issues(Data should be available)
 - Perfect design requirement to ease Construction and maintenance
- Utilities:
- Public Realm/ Open Space:
- Common issues(Cont')
 - How can we make infrastructure sustainability affordable? Ex: Trying to make infrastructure sustainable may make it unaffordable
 - RSSB project – Affordability an issue, units unoccupied
 - Strong Project management
 - Monitoring the contracted company compliance to sustainability approach
 - Lack of climate data (To be accessible to the Public)

Rwanda's current state of Infrastructure

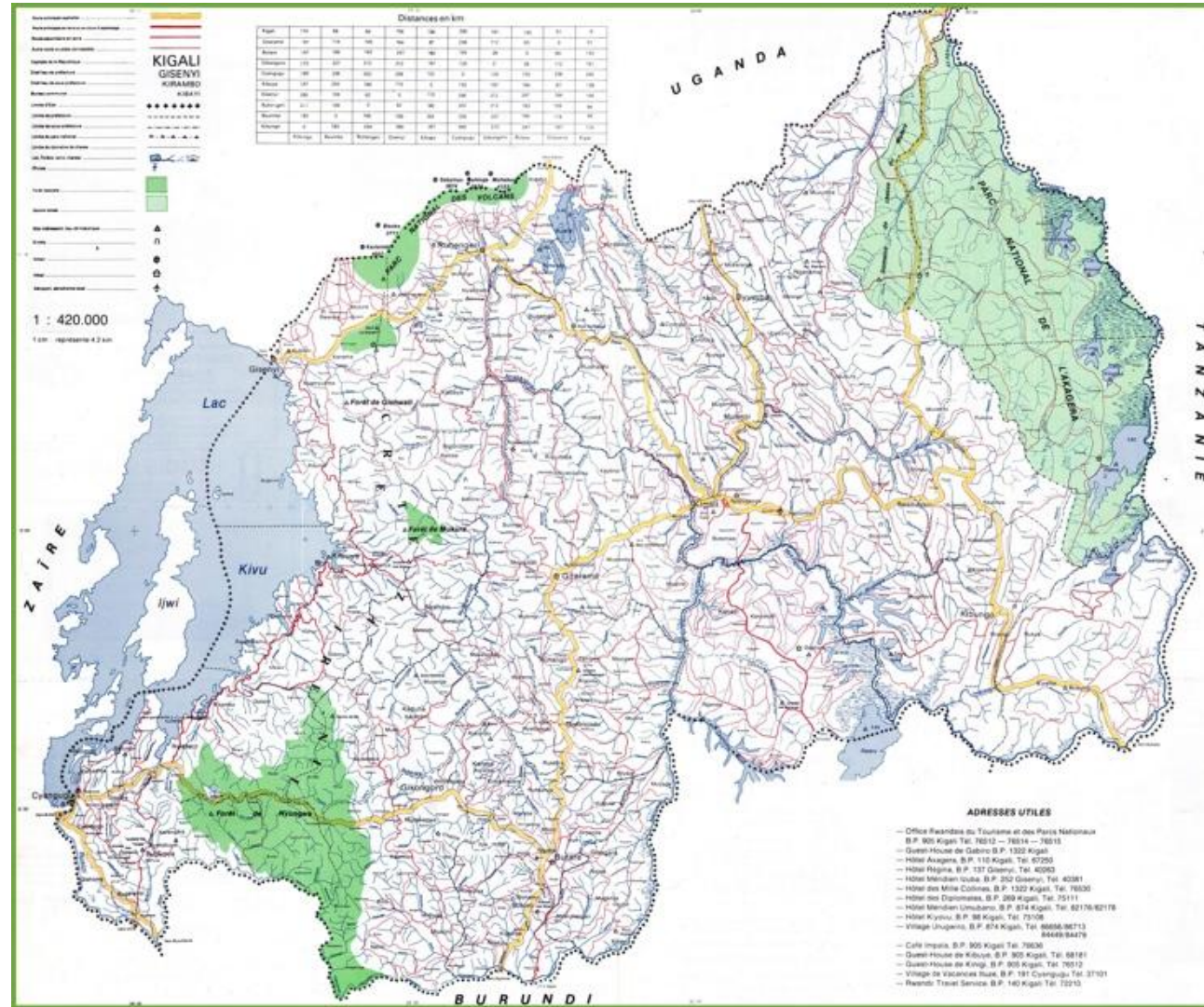


Identifying issues /discussing aspects of the projects that were sub optimal.

- Roads upgrade project, how much of the cut material is reused on the project?
- How was energy managed on the project,
- Was there consideration of offsetting of emissions during construction?
- What about ecological habitat, and replanting efforts?
- Was there any undisturbed land taken during the project?
- Did the project have any negative impacts on adjacent and local businesses and residents, in terms of noise, air quality, vibration, light?
- How did the project manage it's waste? Was it simply all sent to landfill?
- How did the project manage water discharges?
- How is erosion/flooding managed during operation?
- Based on experience, what cases have demonstrated the need to rehabilitate infrastructure prematurely?
- How are projects costed? savings determined on Initial investments or over the life time of project?

What is Infrastructure Sustainability?

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Infrastructure: Current IS Practices

The National Strategy for Transformation (NST) states:

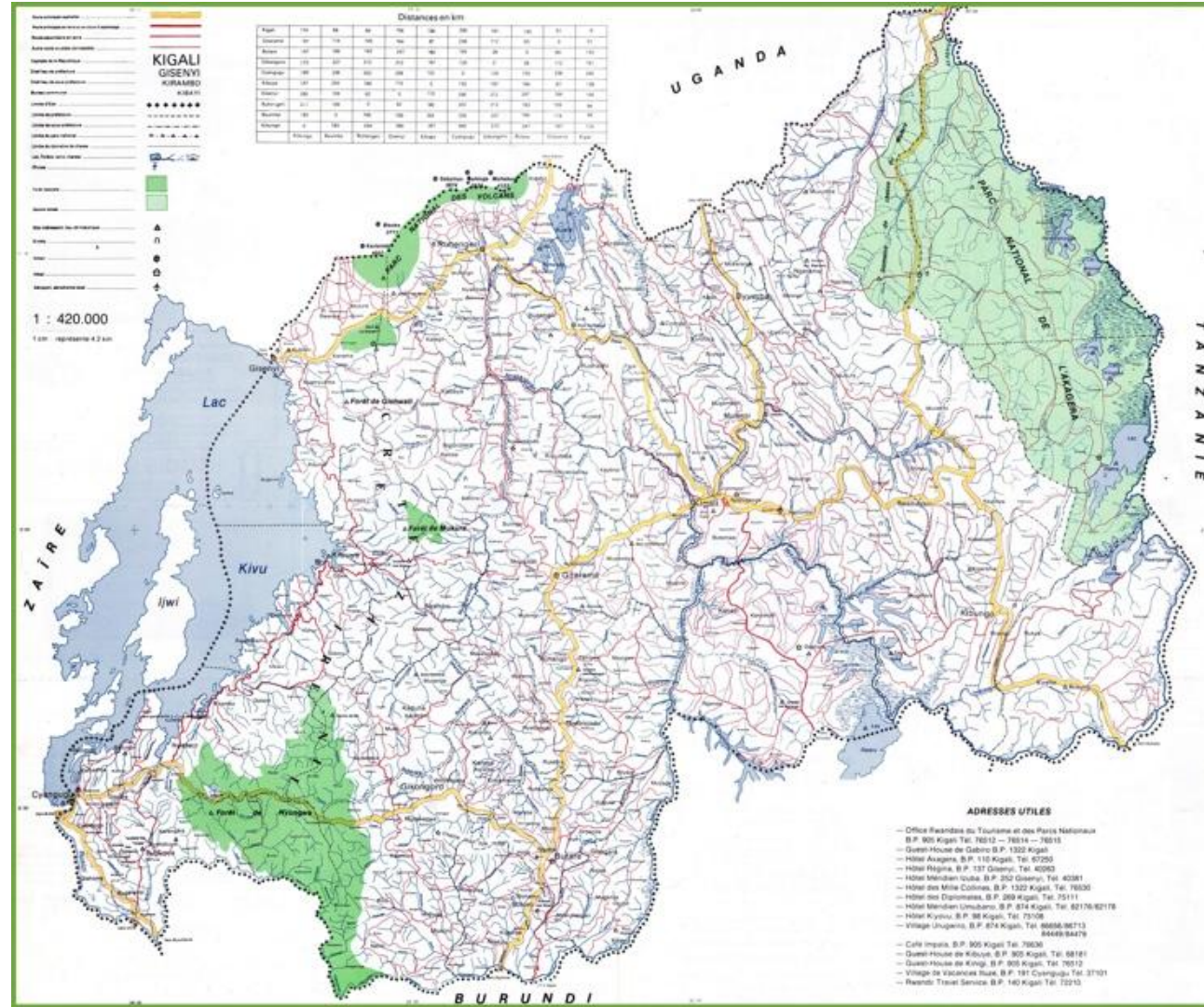
“Developing Modern Infrastructure and Livelihoods is one of 5 Rwanda’s Vision 2050 broad priorities.

What is currently in place in Rwanda that seeks to address issues in slides 3, 4 and 5?

- Do the UN SDGs inform infrastructure policy in Rwanda?
- What legislation is in place that protects the destruction of native habitat?
- What legislations govern how project waste should be managed?
- What are contractors doing to cut their emissions during construction?
- Are they rewarded for this?
- Is there a reward system (by GoR /asset owners) to projects for using less water to construct an asset?
- Are projects being designed in order to reduce the use of materials and energy during the operation of the asset?
- Are there restrictions around how contractors interact with local and adjacent residents/businesses, in terms of air noise, vibration, light?

What is Infrastructure Sustainability?

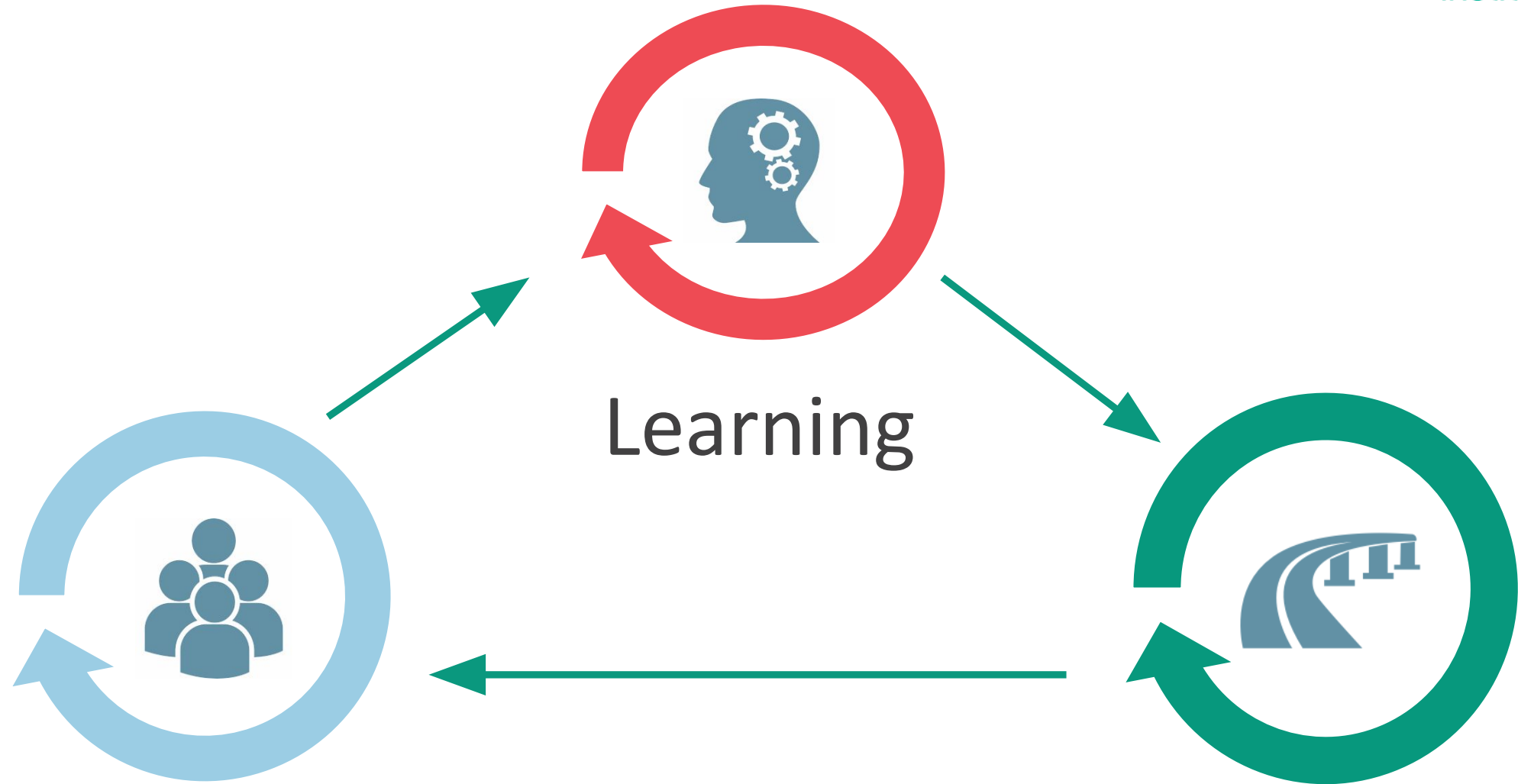
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A Suggested Approach



¹¹Community

Pilots

A Suggested Approach

**1. Infrastructure
Sustainability Training for
Professionals (IST4P)**



Learning

**2. 2 day training
course, technical
focus**

**3. Build knowledge and
capacity of scheme**

**5. Proxy case manager,
assessor**

**4. Key project delivery
personnel**

A Suggested Approach

1. What type of asset?

**2. What is its
delivery status?**



Pilots

**3. Benchmark through
partial pilot**

5. Review performance

**4. Gain experience
through full pilot**

A Suggested Approach

**1. Infrastructure
Sustainability Accredited
Professionals (ISAPs)**

**2. Global network
of Assessors**



Community

3. Proxy case manager

5. Strategic Review Group

**4. Rwandan 3rd Party
Verifiers**

Infrastructure Sustainability: Planning for the future



IS can reduce construction and maintenance costs, improve operation costs, and generate financial gains.

Based on current understanding,

- where do we go from here?
- What are the key strategic plans for your institution and where do you see IS playing a role?
- What do you see as your personal/institutional role in influencing IS in your work/beyond your immediate area of work?

General:

- Developing an action plan to operationalize the suggested approach?

Thank You

