



ONAKEÍ:IO
TECHNOLOGY AND TERRITORY

EDITION
2026

SAMPLE EXCERPT

ENGAGEMENT REPORT — CONNECTIVITY

Connectivity Readiness Assessment

What your community has today, what each facility actually needs, and what it should do next — stated against evidence.

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|----------------------------|-------------------------------|----------------------------------|--------------------------------|
| 01 How to read this report | 02 Site and service inventory | 03 Requirements by facility | 04 Current service performance |
| 05 Choosing a transport | 06 Questions to ask providers | 07 Roadmap and funding readiness | — Five figures, listed inside |

PREPARED FOR

[Client organization]
Community and council

PREPARED BY

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DOCUMENT

Representative excerpts
Full report runs 40–60 pp.

LANGUAGES

EN / FR
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This document reproduces representative sections of a full Connectivity Readiness Assessment. The tables and figures use illustrative data from a composite community; the structure, method and standard of evidence are those of a real engagement.

01	How to read this report	What the assessment covers, and the standard of evidence it holds itself to.
02	Site and service inventory	Every service the organization pays for, what it receives, and when the contract ends.
03	Requirements by facility	What each building needs, derived from what happens inside it.
04	Current service performance	What was delivered, against what was promised.
05	Choosing a transport	The decision method, and how each technology compares.
06	Questions to ask providers	Written to be asked verbatim and answered in writing.
07	Roadmap and funding readiness	Sequenced by consequence, with the funding dependencies identified.

Figures

Fig. 2.1	Monthly cost per megabit, by site and technology
Fig. 2.2	Contract expiry against the eighteen-month negotiating window
Fig. 3.1	Required capacity plotted against required availability
Fig. 5.1	Decision method for selecting a transport at each site
Fig. 7.1	Eighteen-month sequence, with funding dependencies

How the full report differs

A complete review runs approximately 40 to 60 pages, and adds the per-item technical annexes, the supporting correspondence, and the working spreadsheets your team keeps and maintains afterwards.

SECTION 1 How to read this report

This assessment documents the connectivity your organization has today, states what each facility actually requires, and sets out the options available to close the gap.

It is written to be used. The inventory and requirement tables are the working record your team maintains after the engagement ends, and the same tables support funding applications and provider negotiations without being rebuilt.

The report makes no assumption that a particular technology is correct. Fibre, fixed wireless, radio and satellite each carry a different profile of cost, capacity, latency and deployment time, and most communities are best served by a combination. The purpose of the assessment is to make that decision defensible.

The standard of evidence

- Findings are stated against evidence, not impression.
- Every recommendation carries an estimated cost range and a time to deploy.
- Where information was unavailable, the report says so rather than estimating.
- Every recommendation can be traced back through the decision method in Section 5.

WHAT THIS REPORT IS NOT

It is not a procurement document and not a quotation. Costs are planning ranges. It does not name a preferred provider, and Onakeio takes no commission, referral fee or reseller margin from any vendor named in it.

Scope of this sample

This document contains representative excerpts. A full engagement report runs approximately 40 to 60 pages.

SECTION 2 Site and service inventory

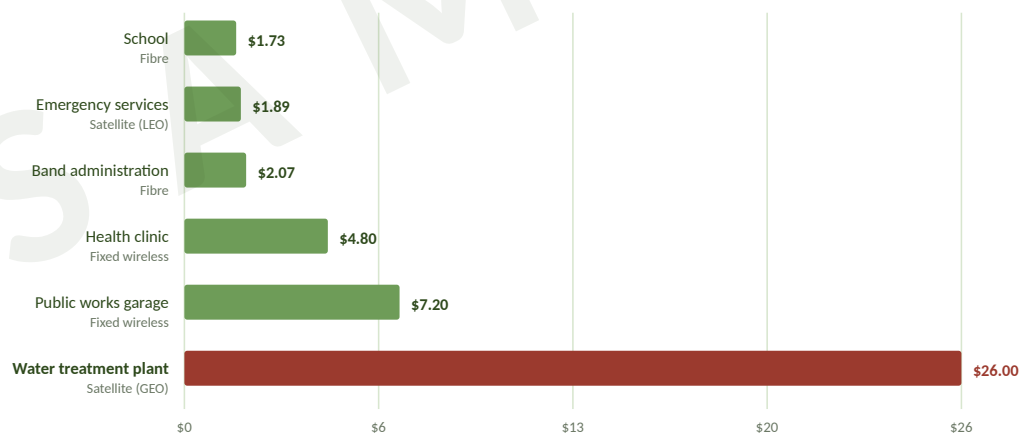
Every site the organization pays for, what it receives, what it costs, and when the contract ends.

Most organizations have never held this in a single table. Assembling it commonly identifies duplicate services and contracts that renew on unfavourable terms.

Site	Service type	Downstream	Monthly	Term ends
Band administration office	Fibre	150 Mbps	\$310	2026-08
Health clinic	Fixed wireless	50 Mbps	\$240	2026-03
School	Fibre	300 Mbps	\$520	2027-01
Water treatment plant	Satellite (GEO)	15 Mbps	\$390	month-to-month
Public works garage	Fixed wireless	25 Mbps	\$180	2026-05
Emergency services	Satellite (LEO)	100 Mbps	\$189	month-to-month

FIGURE 2.1

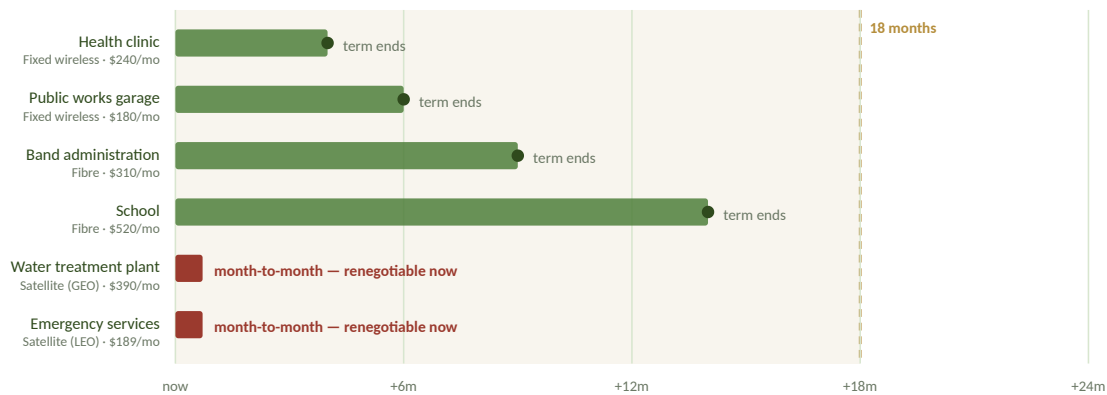
Monthly cost per Mbps of contracted downstream



The water treatment plant pays 15 times the per-megabit rate of the best-served site on this network.

Cost per megabit by site. The water treatment plant carries the lowest capacity and the highest unit cost on the network. Two observations follow from the inventory table alone, before any testing is done.

FIGURE 2.2



Four of six contracts reach their end inside the shaded window. Approaching providers as one account, once, is worth more than six separate renewals.

Contract expiry against the negotiating window. Four of six agreements reach their term inside eighteen months. Consolidating them to a common renewal date converts six weak positions into one strong one.

FINDING 2.1

Two services are running month-to-month at above-market rates, and four contracts expire within eighteen months of each other. The organization is currently negotiating six times, in six separate conversations, from six weak positions. Aligning the renewal dates is administrative work with no capital cost and the largest single effect on price available in this assessment.

What the inventory is used for afterwards

- **Negotiation.** A provider quoting for one site quotes differently when the whole account is on the table and the renewal dates are known.
- **Funding applications.** Federal and provincial connectivity programs ask for current service, current cost and current shortfall. This table answers all three.
- **Continuity.** When a band manager or IT contractor changes, the record of what is installed, what it costs and when it renews does not leave with them.

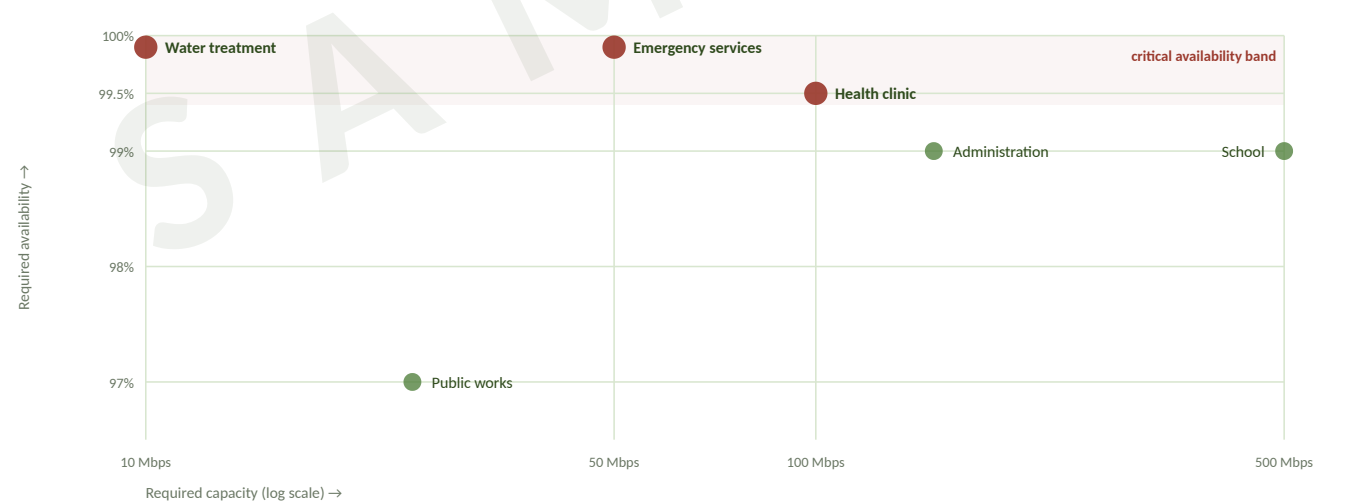
SECTION 3 Requirements by facility

What each facility needs is a function of what happens inside it, not of what it currently receives.

A health clinic transmitting diagnostic images and a maintenance garage running email do not belong in the same service tier. Treating them identically is the most common source of both overspending and under-service.

Facility	Driver	Capacity	Availability	Priority
Health clinic	Telehealth, imaging	100 Mbps	99.5%	CRITICAL
Water treatment	SCADA telemetry, alarms	10 Mbps	99.9%	CRITICAL
Emergency services	Dispatch, interoperability	50 Mbps	99.9%	CRITICAL
School	Learning platforms	500 Mbps	99.0%	HIGH
Administration	Business systems	150 Mbps	99.0%	HIGH
Public works	Email, scheduling	25 Mbps	97.0%	STANDARD

FIGURE 3.1



The water treatment plant sits at the far left of the capacity axis and the very top of the availability axis. It is the cheapest site to serve and the most expensive to serve badly.

Capacity and availability are separate purchases. Bandwidth and reliability are independent requirements, and conflating them leads communities to buy the wrong service for their most essential systems.

The finding this produces

The water treatment plant requires the least capacity of any critical site and the highest availability, and is currently served by the technology least able to provide it. That single mismatch drives the first item in the roadmap.

SECTION 4 Current service performance

Provider service-level commitments describe what was promised. This section records what was delivered.

Findings are drawn from the outage log maintained during the assessment period and from throughput testing at each site.

Site	Outages	Longest	Availability	Meets need
Band administration office	3	4h 10m	99.4%	Yes
Health clinic	11	2 days	97.1%	No
School	2	1h 05m	99.7%	Yes
Water treatment plant	9	18h 40m	98.2%	No
Public works garage	6	6h 30m	99.0%	Yes
Emergency services	4	3h 15m	99.3%	No

FINDING 4.1

Three critical facilities fall materially short of their availability requirement. The health clinic recorded a two-day outage during the period, and the water treatment plant lost telemetry on nine occasions. These findings, not price, should drive the sequencing of any improvement plan.

How the measurement was taken

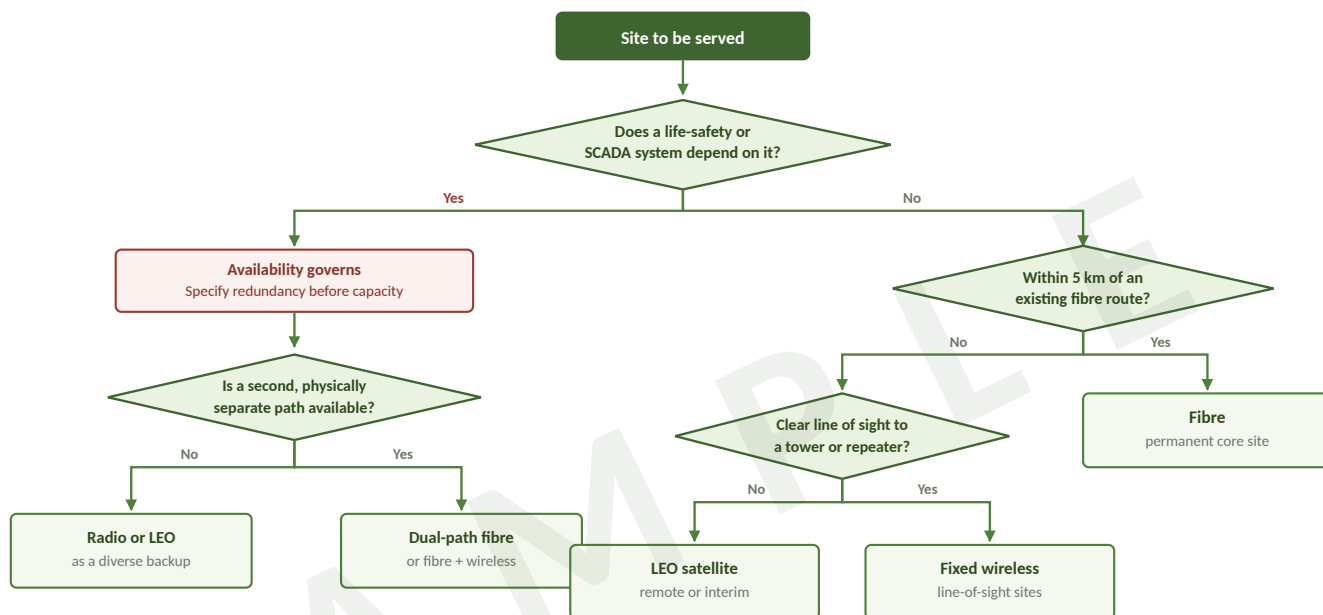
- Availability is calculated against the observation window, not against a provider's own reporting period, which commonly excludes scheduled maintenance.
- Throughput was tested at the demarcation point and again at the working edge of the network, because the difference between the two is frequently the actual problem.
- Outages shorter than sixty seconds are logged but excluded from the availability figure, and are reported separately where they affect telemetry.

SECTION 5 Choosing a transport

This section sets out the method before it sets out the options, because the method is what makes a recommendation defensible.

It is written in plain language for council and administration. It does not recommend a single technology: that recommendation appears against the requirements established in Section 3.

FIGURE 5.1



Every branch ends in a documented reason. A recommendation that cannot be traced back through this tree does not appear in the report.

How a transport is selected for each site. Criticality is resolved before cost, and availability before capacity. The same tree is applied to every site in the assessment, which is what makes the results comparable across facilities.

Why the method is published

A recommendation a community cannot audit is a recommendation it cannot defend to its council, its members or a funder. The tree above is reproduced in the toolkit so the same reasoning can be reapplied whenever a site, a price or a technology changes.

How the technologies compare

What each option does well, and badly, in the conditions this assessment found.

Option	Capacity	Latency	Deploy time	Best suited to
Fibre	Very high	Very low	12–36 months	Permanent core sites
Fixed wireless	Moderate	Low	2–6 months	Sites within line of sight
Radio (VHF/UHF)	Low	Low	1–4 months	Voice, telemetry, safety
Satellite (LEO)	High	Moderate	Days	Remote and interim service
Satellite (GEO)	Moderate	High	Weeks	Backup and low-priority sites

- Fibre carries the highest capital cost and the longest lead time, and is the only option that does not degrade with weather or congestion.
- Low-earth-orbit satellite has changed the economics of remote service, but capacity is shared and contended, and the published figure is a peak rather than a commitment.
- Radio remains the most reliable option for telemetry and emergency voice, and is frequently retained alongside a broadband service rather than replaced by it.
- Geostationary satellite is rarely the right primary service for a critical site: its latency is a poor fit for SCADA acknowledgement windows and interactive voice.

APPLIED TO THIS NETWORK

Running the six assessed sites through the method produces a mixed result rather than a single technology: fibre at the two core sites already served by it, fixed wireless at the garage, and a diverse radio path added at the water treatment plant, where availability rather than capacity is the binding requirement.

SECTION 6 Questions to ask providers

The questions below are drawn from the full toolkit. They are written to be asked verbatim, and the answers recorded in writing.

Providers answer these questions readily when asked directly, and rarely volunteer the information otherwise.

Capacity and commitment

- Is the quoted capacity dedicated or contended? If contended, what is the contention ratio at peak?
- What availability is committed in the contract, how is it measured, and what is the remedy when it is not met?

Restoration and support

- What is the committed time to restore service, and does it differ between business hours and nights, weekends and holidays?
- Where is the nearest field technician based, and what is the travel time to this community in winter conditions?

Ownership and exit

- What equipment is owned by the community at the end of the term, and what must be returned?
- What are the terms of renewal, and what notice is required to avoid automatic extension?
- Are installation costs recoverable under a funding program, and will the provider supply the documentation required?

How to use this section

Record every answer in writing and attach it to the inventory. Answers given verbally during a sales conversation do not survive a change of account manager.

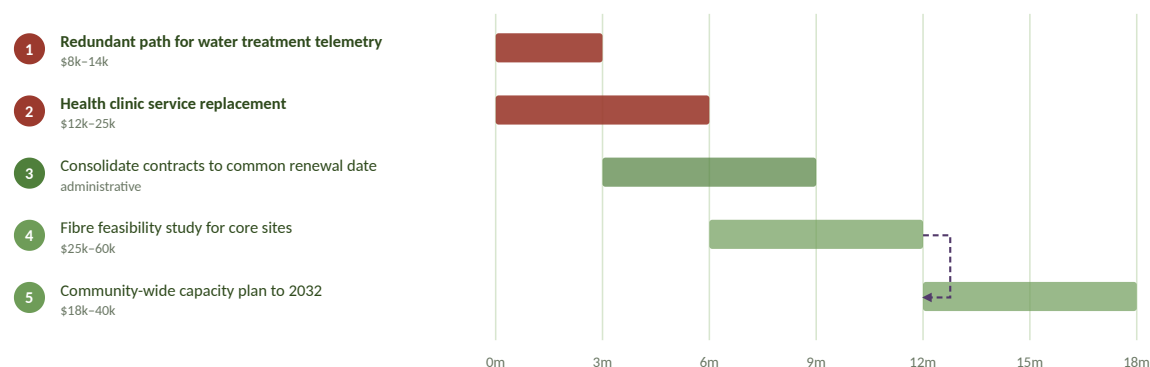
SECTION 7 Roadmap and funding readiness

Findings are sequenced by consequence, not by cost.

Sites where the current service fails a critical requirement are addressed first, and work that must precede a funding application is identified separately so that deadlines are not missed.

Priority	Action	Horizon	Indicative cost
1	Redundant path for water treatment telemetry	0–3 months	\$8k–14k
2	Health clinic service replacement	0–6 months	\$12k–25k
3	Consolidate contracts to common renewal date	3–9 months	administrative
4	Fibre feasibility study for core sites	6–12 months	\$25k–60k
5	Community-wide capacity plan to 2032	12–18 months	\$18k–40k

FIGURE 7.1



Items 1 and 2 answer documented failures against critical requirements and proceed regardless of funding. Items 4 and 5 are the documentation most federal and provincial programs ask for at application.

Eighteen-month sequence. The dotted line marks a dependency: the feasibility study must complete before the capacity plan can be written, and both are prerequisites for most program applications.

- Costs are indicative ranges for planning only and are not quotations.
- Items 1 and 2 address documented failures against critical requirements and should proceed regardless of funding outcomes.
- Items 4 and 5 are the documentation most federal and provincial connectivity programs require at application, and are the reason the sequence starts now rather than at the next intake deadline.

What happens after this report

The inventory, requirement and performance tables are delivered as editable working documents. They are yours: the point of the engagement is that your team can maintain the record without us, and can rerun the decision method in Section 5 the next time a site or a contract changes.

About this sample

Onakeio Systems Inc. is a 100% Indigenous-owned IT and operational technology practice based in Kanesatake, Québec, working with First Nations, government and critical infrastructure operators across Canada, in English and French. To discuss an engagement for your community, write to info@onakeio.ca.