EXCELERON COMMUNICATIONS

USF Rural Connectivity Programs

RURAL COVERAGE ROLLOUTS, END TO END

Bringing mobile coverage to thousands of rural villages

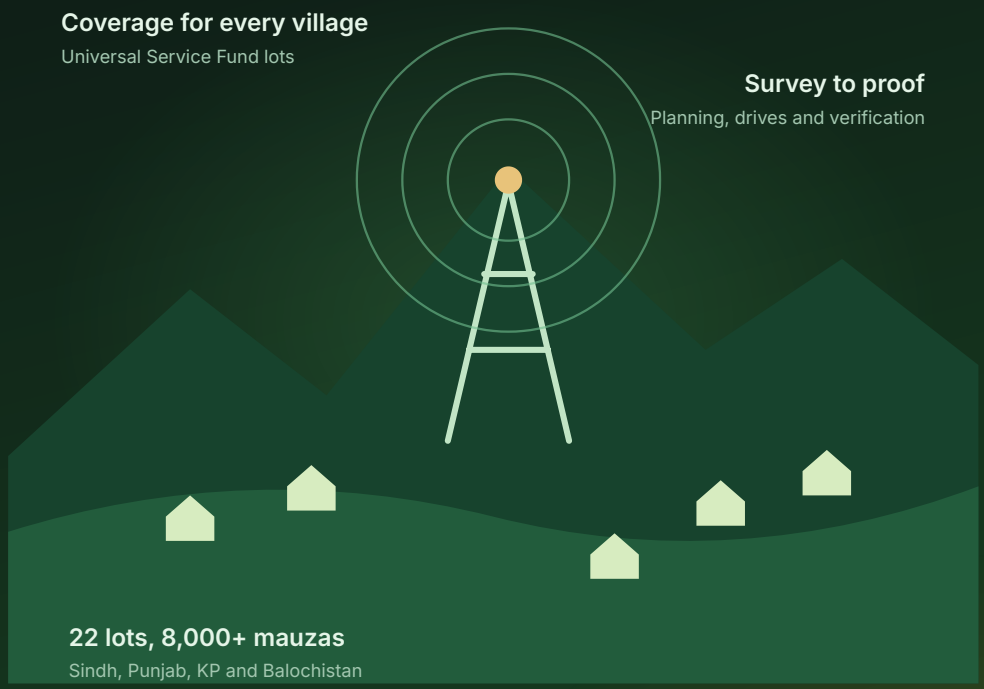
End-to-end delivery of Universal Service Fund rural programmes in Pakistan: surveys, radio planning, drive tests and verification across 8,000+ mauzas.

USF LOTS
22

MAUZAS COVERED
8,000+

SITES FOR NOKIA-TELENOR
520

DISTRICTS AND HIGHWAYS
20+



Mauza information reports

Village-level records of location, population access and coverage need.

Technical site surveys

Survey of candidate sites before the build begins.

Radio network planning

Coverage design and optimisation for each lot.

OPERATIONAL CONTEXT

A clearer way to work

End-to-end delivery of Universal Service Fund rural programmes in Pakistan: surveys, radio planning, drive tests and verification across 8,000+ mauzas.

01

Remote, scattered villages

Each mauza must be surveyed and proven covered, often far from roads and cities.

02

Strict programme rules

USF contracts require documented coverage for every village in the lot.

03

Hard terrain

Deserts, mountains and long highways make planning and testing slow.

THE CHANGE IN DAILY OPERATIONS

Before	With USF
– Villages without mobile service	✓ Planned coverage for every mauza
– Coverage claims hard to prove	✓ Drive evidence village by village
– Surveys done ad hoc	✓ Documented site surveys
– Long drives without a plan	✓ Lot-wide drive campaigns
– Lot status unclear	✓ Clear lot completion reports

AN OPERATIONAL SCENARIO

Prove coverage for every village in a lot

A USF lot commits an operator to cover a list of mauzas, some far from any road, and each one must be shown to be covered.

22	8,000+	End to end	2
Lots delivered	Mauzas covered	Survey to proof	Vendor programmes

CAPABILITIES 1

The capabilities that do the work

Explore the core functions of USF Rural Connectivity Programs and the operational tasks they support.

01

Mauza information reports

Village-level records of location, population access and coverage need.

02

Technical site surveys

Survey of candidate sites before the build begins.

03

Radio network planning

Coverage design and optimisation for each lot.

04

Pre and post drive tests

Coverage and KPI drives across the whole lot, mauza by mauza.

05

Single site verification

Each new site checked before it counts toward the lot.

06

RF audits

Installation and antenna checks on rural sites.

DESIGNED AROUND THE USERS

Operators Winning and completing USF lots.

Network vendors Planning and testing for USF builds.

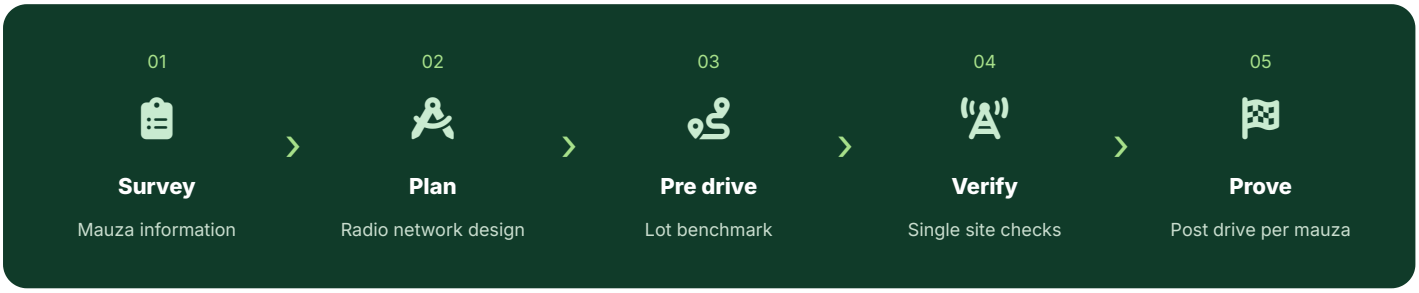
Programme managers Lot-by-lot progress evidence.

Regulators and funds Coverage evidence for each village.

WORKFLOW

From the first step to the outcome

A connected sequence makes the handoffs and responsibilities easier to follow.



01

Survey

Teams visit each mauza and record what the programme needs to cover.

02

Plan

Radio planners design the sites that will reach those villages.

03

Benchmark

Pre drives record coverage before the new sites go live.

04

Verify

Every site is checked once it is on air.

05

Prove

Post drives and reports show the coverage for each mauza in the lot.

A PRACTICAL WALKTHROUGH

Prove coverage for every village in a lot

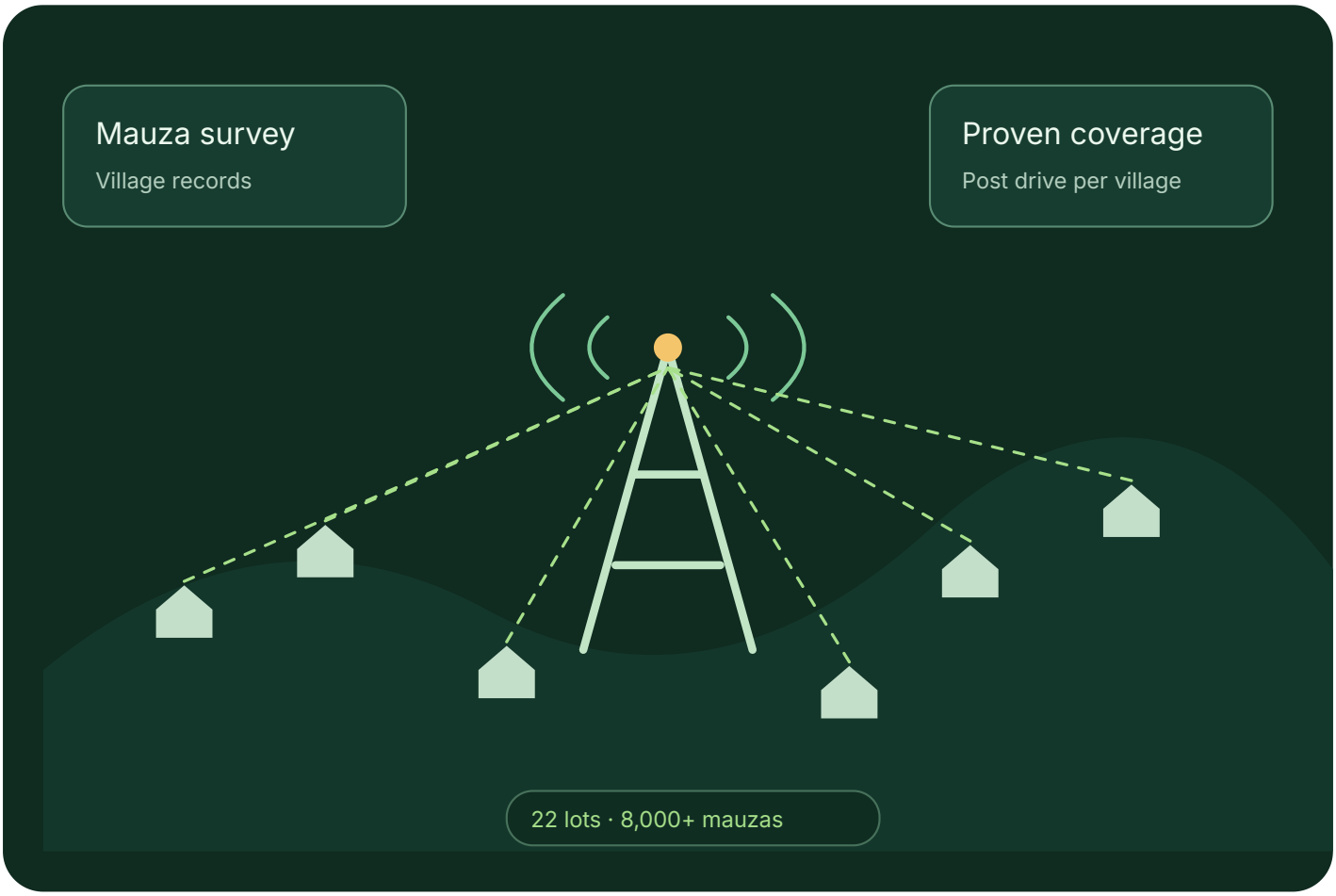
A USF lot commits an operator to cover a list of mauzas, some far from any road, and each one must be shown to be covered.

Review the mauza list, the survey and planning approach, and how pre and post drives will document coverage for each village.

ARCHITECTURE & HANDOFFS

From a list of villages to proven coverage

A USF lot starts as a list of mauzas and ends with coverage evidence for each one.



Conceptual product flow · USF Rural Connectivity Programs

01

Survey each mauza and the candidate sites.

02

Plan the radio network and verify each new site.

03

Prove coverage with post drives, village by village.

DISCUSS YOUR ENVIRONMENT

Confirm the source systems, responsibilities and integration boundaries during the walkthrough. The diagram explains the product concept; the deployment scope is agreed for your environment.

TRACK RECORD

Work we have delivered

Named programmes where Exceleron Communications has delivered usf rural connectivity programs.

01 Nokia–Telenor USF programme: 14 lots, 520 sites and 7,300+ mauzas, delivered end to end.

02 ZTE–Jazz USF programme: 8 lots and 600+ mauzas, with drive tests, site verification and RF audits.

22	8,000+	520	20+
USF lots	Mauzas covered	Sites for Nokia–Telenor	Districts and highways

TECHNOLOGY 1

Understand the connected pieces

Formats, protocols and tools in the product scope, with plain-language explanations for technical and business readers.

Mauza

A revenue village in Pakistan, the unit that rural coverage programmes are measured in.

USF

Universal Service Fund: Pakistan's programme that funds mobile coverage in unserved areas.

Radio network planning

Designing where sites go and how they are configured to cover an area.

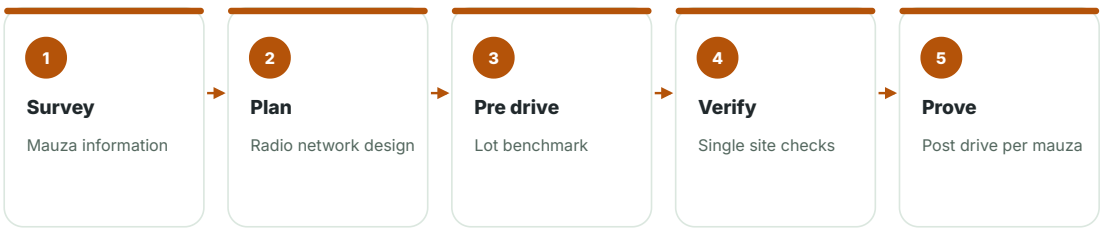
Single site verification

Checking a new or changed site for coverage, KPIs and installation before acceptance.

LTE

4G mobile network technology.

THE USF OPERATING FLOW



INTEGRATION PLANNING

Agree the source systems, supported versions, data ownership and access requirements during discovery. Validate the relevant interfaces against your environment before production rollout.

SPECIFICATIONS 1

The scope in detail

Use these product details as the starting point for a technical discussion.

Area	Product scope
Nokia–Telenor	14 lots, 520 sites, 7,300+ mauzas: Dadu, Hyderabad, Tharparkar, Sanghar, Muzaffargarh, Chagai, Sahiwal, Chitral, Swat, Swabi, Buner, Jhang and the Lot-2 and Lot-3 highways
ZTE–Jazz	8 lots, 600+ mauzas: Rahim Yar Khan, DG Khan, Ghotki, Multan, Shikarpur, Kambar-Shahdadkot and Naushahro Feroze
Deliverables	Mauza information reports, radio network planning and optimisation, technical site surveys, pre and post drive tests, single site verification and RF audits

ASSURANCE & NEXT STEPS

Prepare for a successful rollout

Match the product scope to your people, systems and operating requirements.

PRODUCT ASSURANCE

- **Coverage evidence for each mauza**
- **Pre and post drive tests per lot**
- **Single site verification**
- **Experience across Sindh, Punjab, KP and Balochistan**

PLAN THE ENGAGEMENT

01

Discover

Review your current process, source systems, users and constraints. Identify the operational problem the first phase should solve.

02

Demonstrate

Review the mauza list, the survey and planning approach, and how pre and post drives will document coverage for each village.

03

Validate

Agree the applicable product scope, access controls, integration checks and acceptance criteria. Confirm deployment and support responsibilities.

04

Handover

Plan user guidance, operational ownership and support contacts. Confirm the reporting cadence and review process for the agreed scope.

START A CONVERSATION

Explore USF with our team.

Bring your operational scenario. We will walk through the relevant workflow and discuss a suitable scope.

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