

# **Go Rural – Community Coverage**

**Affordable connectivity for rural villages  
the Village Connection approach**

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# Rural coverage is still an unlocked potential

- Close to 3 billion people are living in rural areas
- In Africa about 70% and in Asia 60% of the population live in villages\*
- Characteristics of a rural subscriber
  - Income less than USD 3 per day
  - Irregular income, money is not saved
  - Brand-conscious
- Operator challenges in rural markets
  - Covering large low density areas with traditional methods may be too costly
  - Power availability and maintenance
  - Backhauling costs
  - Cost of subscriber management

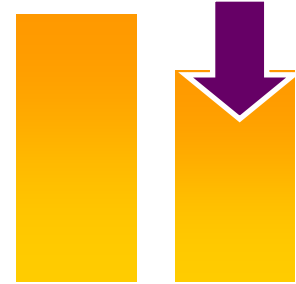


\* "Urban and Rural Areas 2003", Population Division, UN.

# Key Requirements of a Village Connection Solution

- Based on GSM technology & handsets
  - Global economies of scale
  - Standard interconnect rules
  - One global solution, not just a quick package
- Local switching for community access
  - Reduce transmission costs
  - Standard Mobile calls billing outside the village
- Cost-effective IP transport
  - Reduced bandwidth, hence cost
  - Enables Local operation of village network
- Low power Base station
  - Enables alternative energy options (e.g. solar)

Reduced Total  
Cost of Ownership

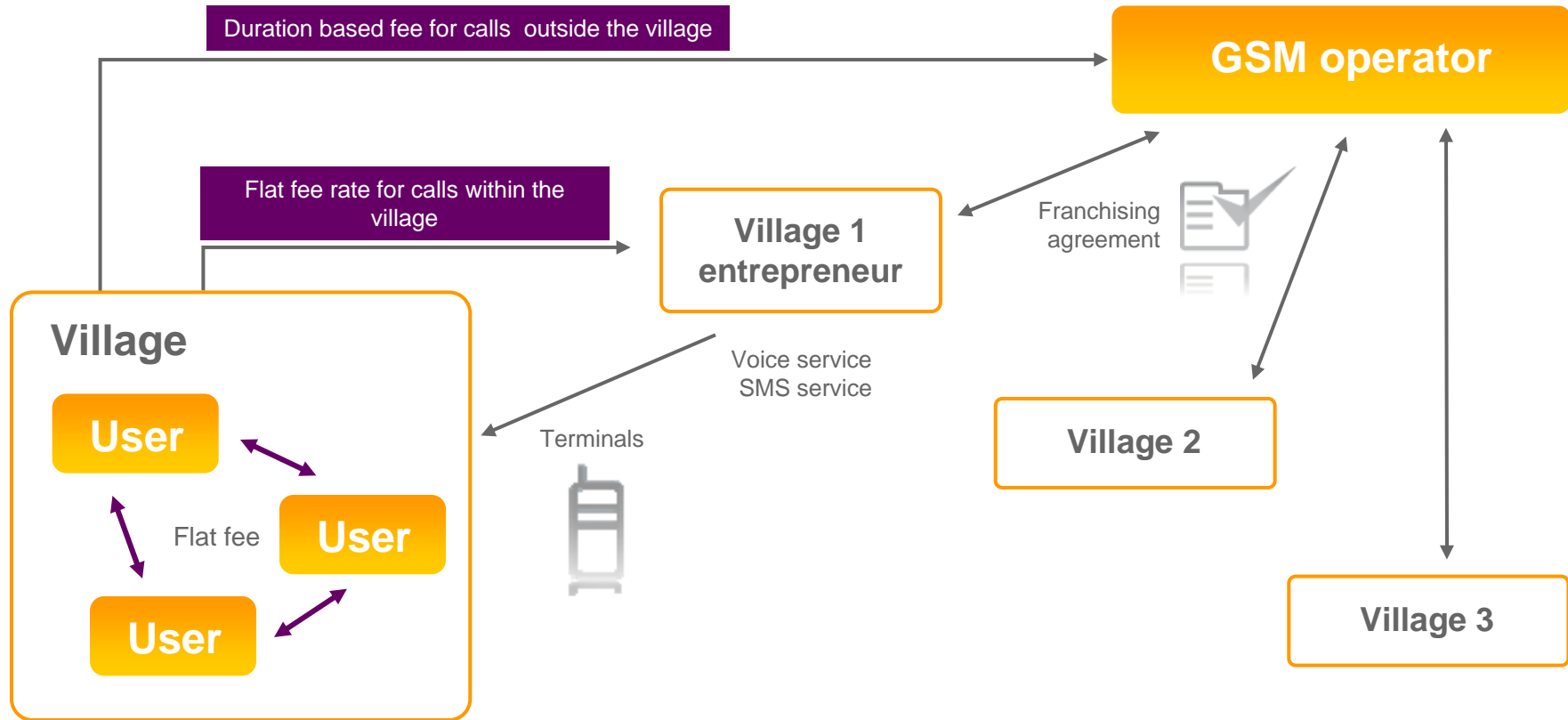


# Community model benefits all

- Operator
  - Capture the rural market potential
  - Savings in OPEX and CAPEX enables the profitable business case in rural villages
  - Larger footprint, larger subscriber base
- Entrepreneur
  - Possibility to become a business owner
  - Entrepreneur contributes to the village community
- Villager
  - Voice/SMS connectivity
  - Privacy and 24/7 connectivity to the world from their home
  - Improved economic efficiency and well-being



# Community business model



Model is designed to be self-sustaining, but financial input maybe needed for the village entrepreneur (bank-loan, microfinance-loan)

# Proposed share of responsibility

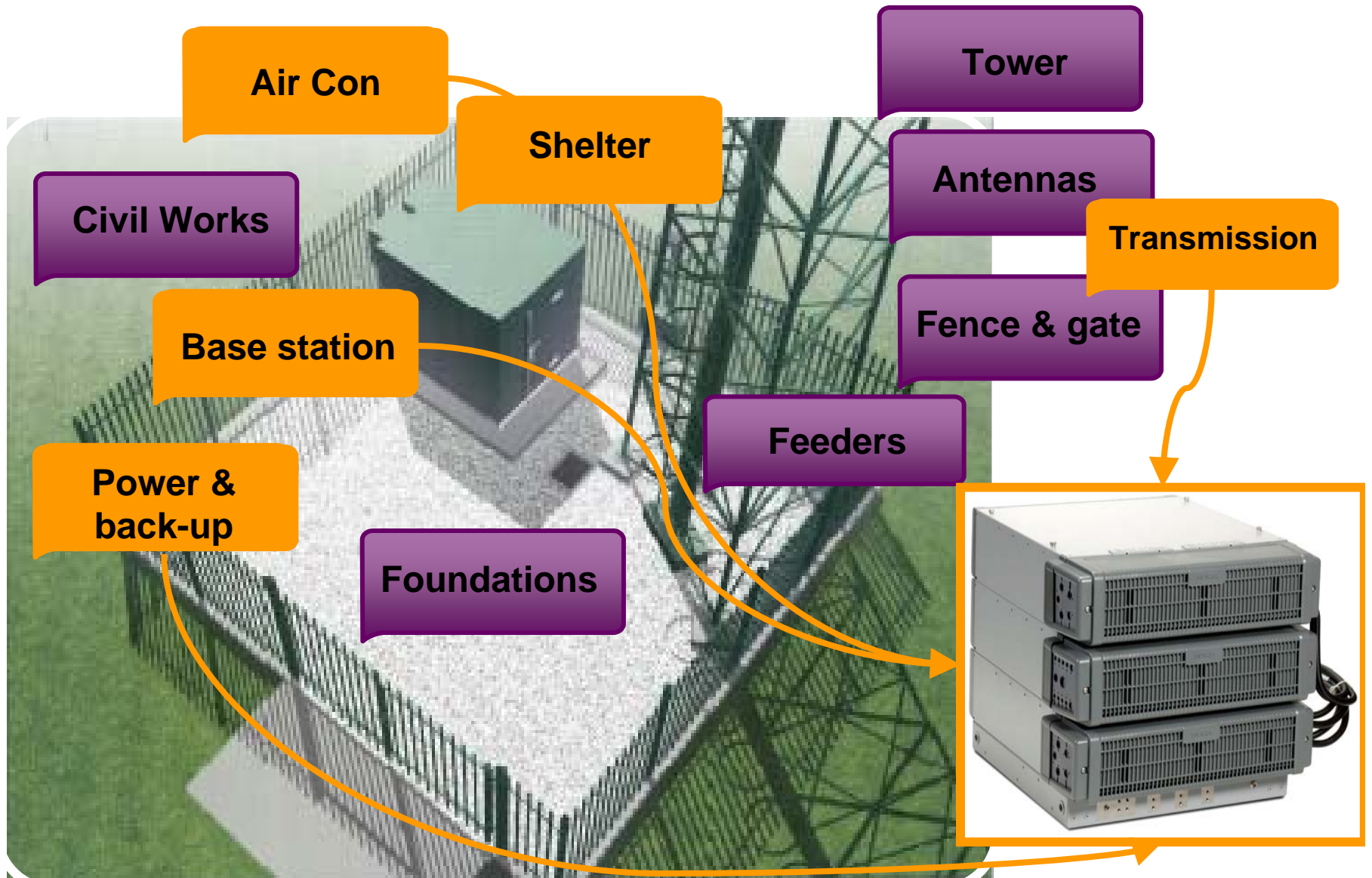
## Village Entrepreneur

- Customer care for village subscribers
  - Subscriber acquisition
  - Subscriber provisioning
  - SIM card distribution
  - Sale/lease of terminals
  - Customer care
- O&M
  - Operational responsibility within the village
  - Maintenance of the village-based equipment

## GSM Operator

- Branding
- Supplier relationship
- Village technical support
- Initial training for the entrepreneur

# Re-defining a Mobile Site:



# Village Connection Site - slash the costs

All you need for providing GSM Network for the village:



Chair

PC

Power system

Base Station



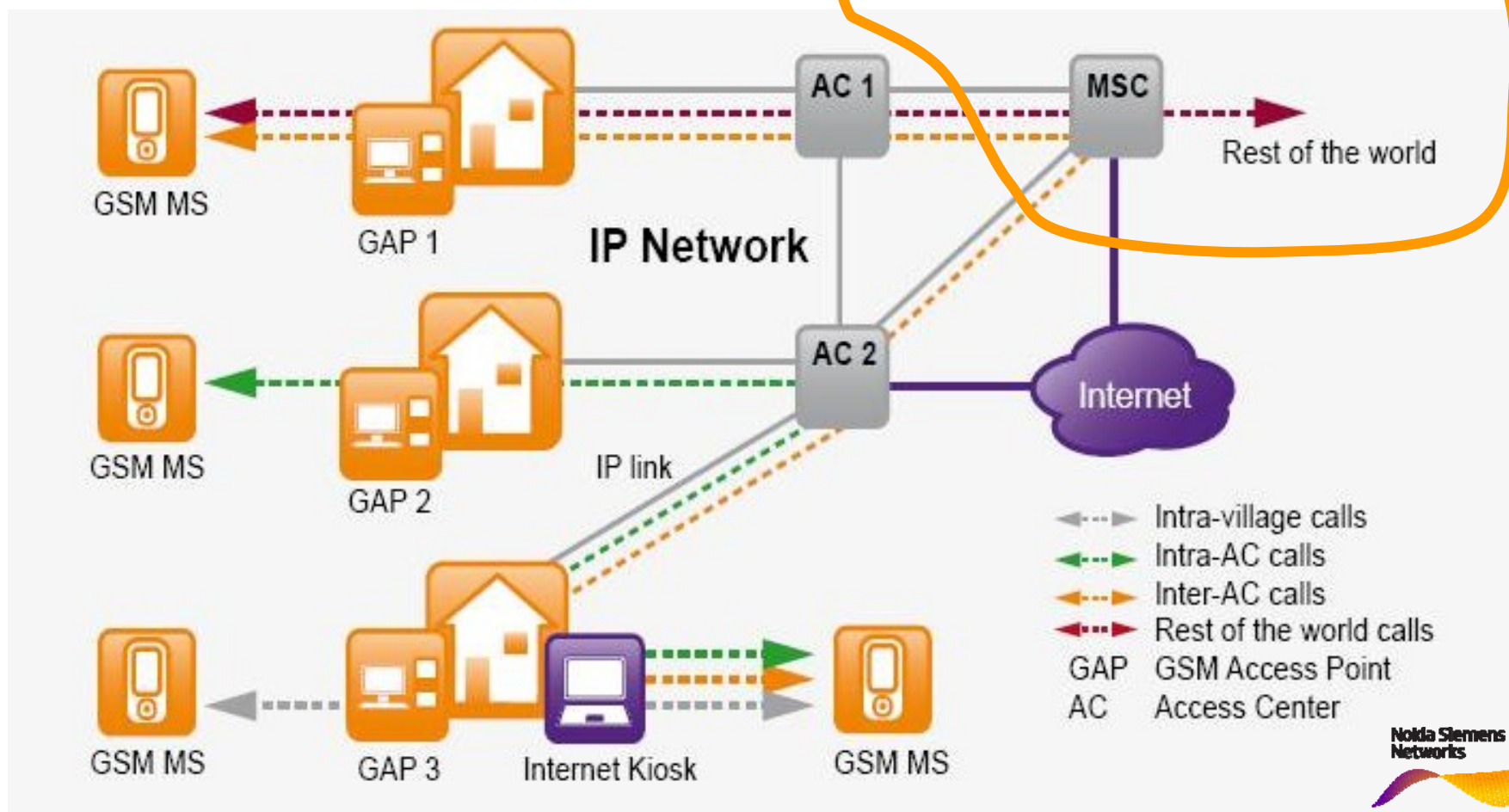
Antenna & Transmission

Light Civil Works



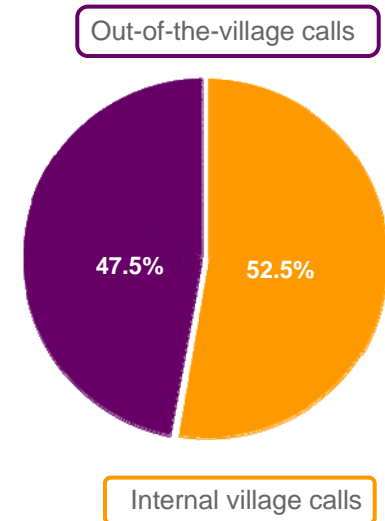
# IP is the Key enabler for Village Connection

- Local calls & Autonomous operation
- Programs such as **RICS** are vital to create these links
- Connected back to a core network – Operator or region wide?



# Pilots successful in India

- Village Connection solution has been deployed and tested in India since 2005
- Finding a village entrepreneur was easily arranged
- With initial training hosts operate village networks smoothly
- Village subscribers generate a lot of traffic:
  - In one pilot case 400 calls/day were made by 40 users\*:
- Lots of positive interest and attention amongst village residents and from neighboring villagers



\* calls were free of charge within the village for pilot purposes

# Next Steps for the Pacific – the Ministerial Challenge

- Support community trials for local community call & SMS
  - Joint ITU/Nokia Siemens Networks Partnership & other initiatives
  - Come try the pilot demonstration here today – Phones & Village connection
- Enable Regional Service provider(s) – A Pacific Vision
  - Service provided across the Pacific to create the drive.
  - With/on behalf of operator or as an alternative.
- Enable the regulatory environment.
  - Consider as a solution for Universal Service Obligation (USO) areas & funding.
  - GSM Licenses need to be made available for USO Services
  - Support a regional service approach
- IP enable the backhaul network
  - Tie in the rollout with extending programs such as RICS

# Summary

- Nokia Siemens Networks Village Connection approach leads the way towards affordable rural coverage
- A new community-based business model is enabled by
  - Local call completion and switching
  - Local or regional subscriber provisioning
  - Local or regional customer care and subscriber acquisition
- Village Connection enabled low power sites
  - Solar & wind now an option with the current generation of equipment
  - Autonomous sites with alternative power options
- Add innovative business models to drive the uptake

**Nokia Siemens Networks Village Connection enables rural village coverage:  
Let's make it happen!**



**Nokia Siemens  
Networks**

The logo graphic consists of a wavy, ribbon-like shape. The left portion is purple and tapers to a point, while the right portion is yellow and flares out. The entire shape is composed of numerous thin, parallel lines that create a textured, woven appearance.