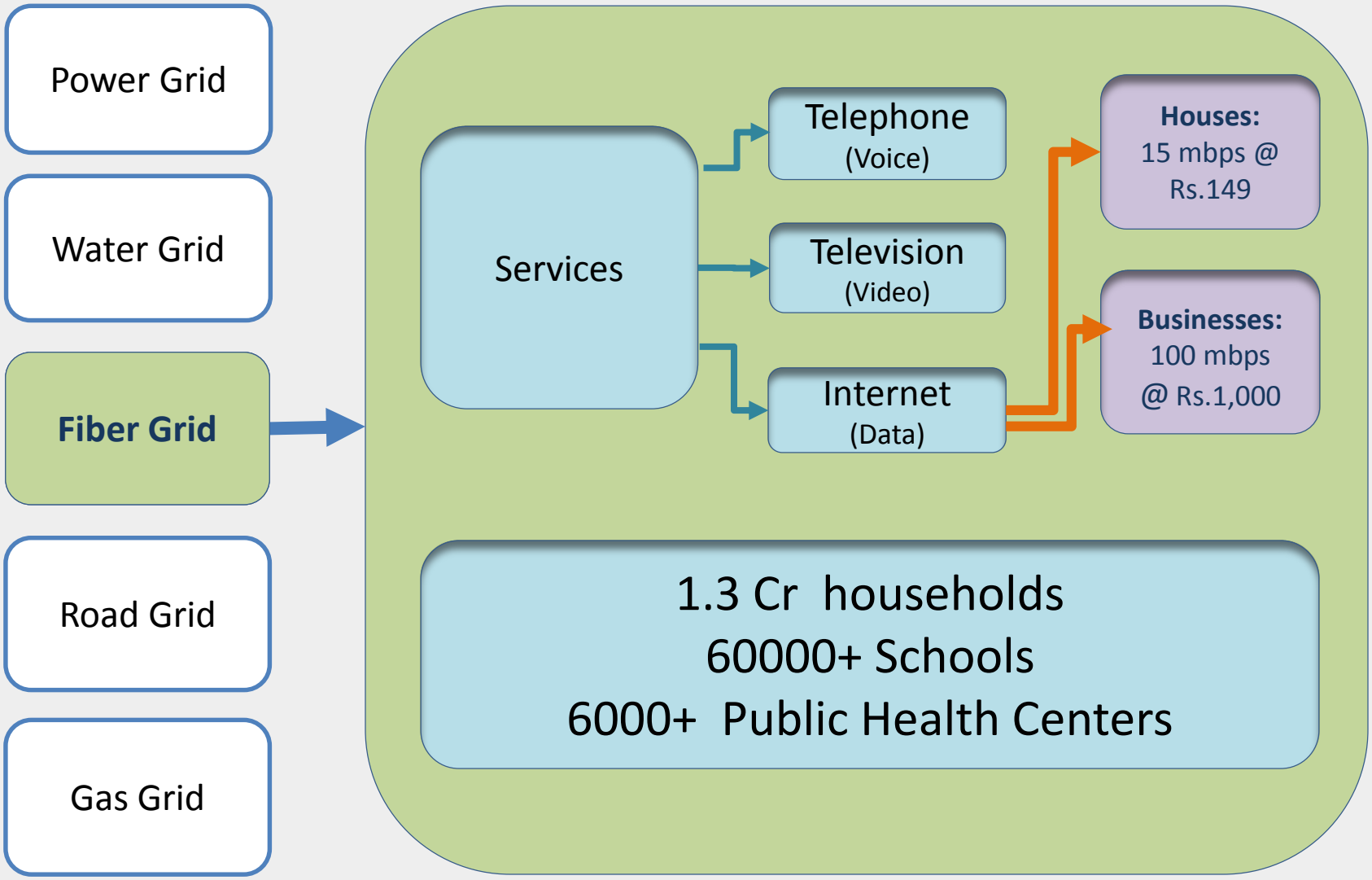
AP fiber

APSFL
Andhra Pradesh State FiberNet Ltd.

A Presentation on AP FiberGrid

THE THOUGHT


Power Grid
Water Grid
Fiber Grid
Road Grid
Gas Grid
Services
Telephone
(Voice)
Television
(Video)
Internet
(Data)
Houses:
15 mbps @
Rs.149
Businesses:
100 mbps
@ Rs.1,000
1.3 Cr households
60000+ Schools
6000+ Public Health Centers

THE PLAN

61000 KMS of Underground cable in association with NOFN using USO funds

Estimates: Total Rs 4700 Crs (Rs 3800 Crs from Central + Rs 900 Crs from State)

Time Frame: 2 - 3 years of execution.

Network Model: 65 % Ring and 35% Tree Topology

Under pursuance with Central Govt.

WHAT IS ACHIEVABLE IN 9 MONTHS?

Fiber Grid - Dual Phase Approach

Phase I
Self funded Aerial Fiber on utility poles
(@ 330 crores project)

Phase II
Underground in association with Bharatnet

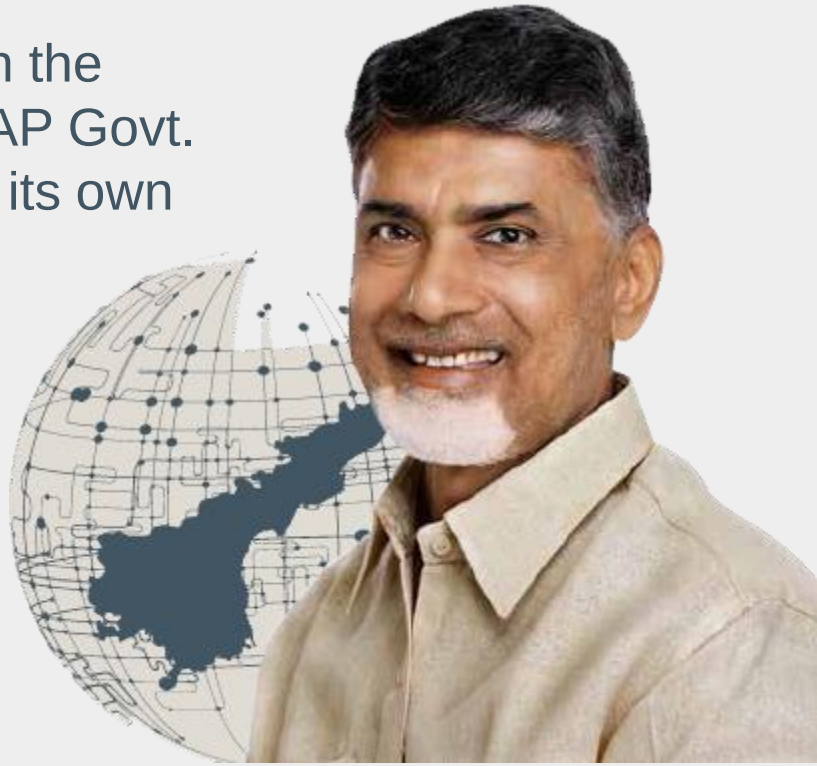
AVERAGE INTERNET CONNECTION SPEEDS

S #	Country Name	Speed (in Mbps)
1	S. Korea	26.7
2	Sweden	19.1
3	Norway	18.8
4	Netherlands	17.0
5	Japan	17.4
	Global	5.6
	India	2.8 (Global Rank 114)

Source: Akamai, Q4 2015

WHY FIBER GRID?

- Big Challenge before the policy makers - How to penetrate broadband into rural India?
- Unless this is addressed, ambitious projects like Digital India, e-Governance etc. to benefit common man may remain distant dream.
- In view of huge costs/timelines involved in the BharatNet program of the Govt. of India, AP Govt. pioneered aerial route of Optical Fiber on its own to realize the dream of Digital AP
- Thus born the AP Fiber Grid out of the Vision of **Sri N. Chadrababu Naidu**, Hon'ble Chief Minister.



WHAT IS FIBER GRID?

- One of the 5 Grids identified to accelerate growth in AP
- Sets up a high speed Aerial Optical Fiber Cable (23,000 Kms) network infrastructure across the 13 Districts in the State, leveraging the electrical utility assets.
- Aims to provide at least 15 Mbps broadband connections to households and at least 100 Mbps to offices on demand at highly affordable price (Basic package at Rs. 149 for triple play services)
- Enables provision of a host of other services such as IPTV, Telephone, Videos on Demand, Content & Cloud Services etc.
- Last Mile Services will be delivered through local players – LCO/MSOs through 2445 Point Of Presence, Controlled at Network Operations Center

FIBERGRID IN NUMBERS

- No. of electrical poles **3.75 Lacs**
- Reach with in 5 kms radius
  - **1.1 Cr households,**
  - **50,000+ Schools**
  - **5000+ Public Health Centers**
  - **10,000+ Telecom Towers**
  - **10,000+ Govt. Offices**
  - **Network Capacity 1.3 TB**

Clamps	: **4,68,920**
Splicings	: **11,725+**
Fiber Cable in Kms	: **22,000+**
POPs	: **2,449+**
Total No. of Man Days	: **1,87,568+**

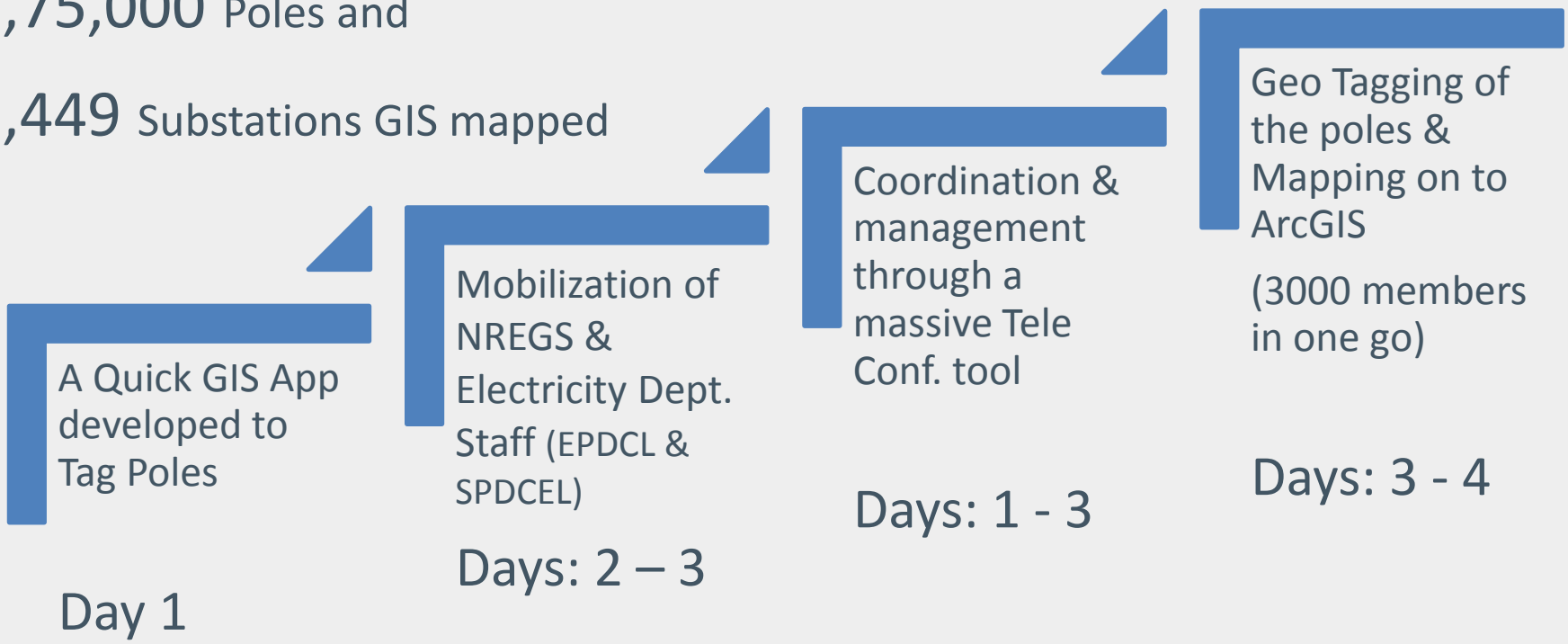
THE RAPID ROUTE PLAN

NREGS – 2000 Members

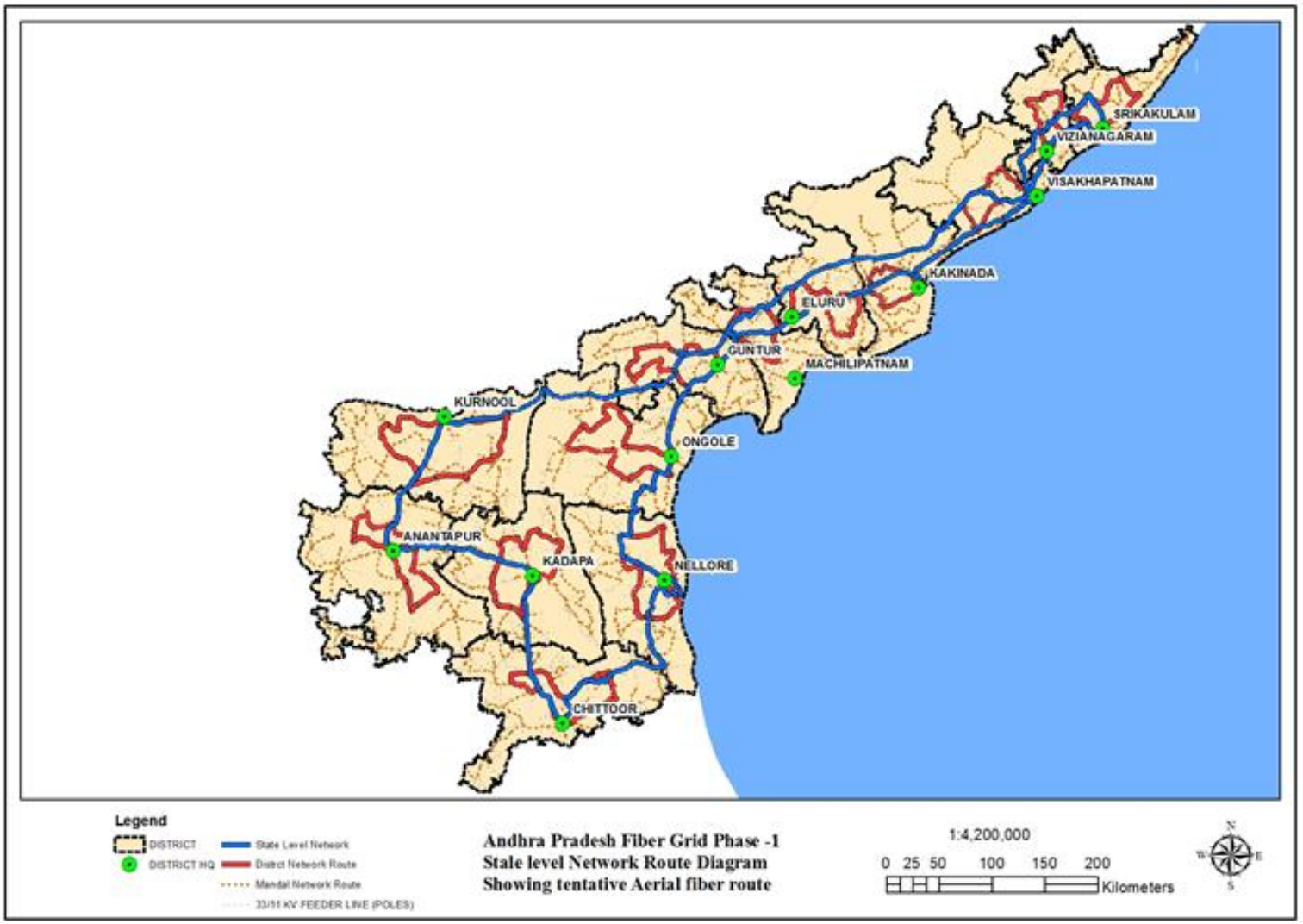
Electrical Utility Companies: (SPDCL/EPDCL) – 2500 members

3,75,000 Poles and

2,449 Substations GIS mapped

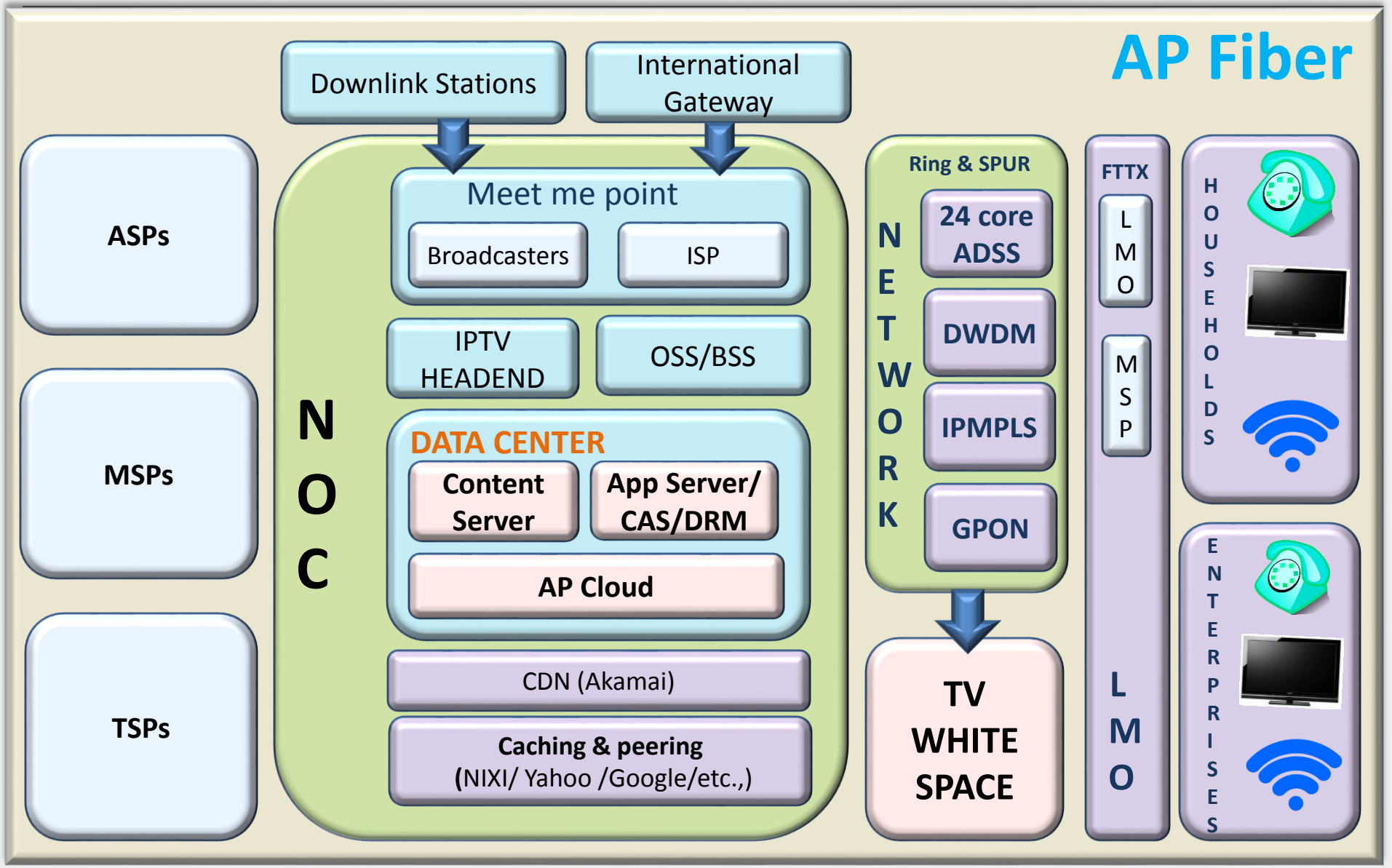


AP FIBER - STATE LEVEL NETWORK ROUTE DIAGRAM



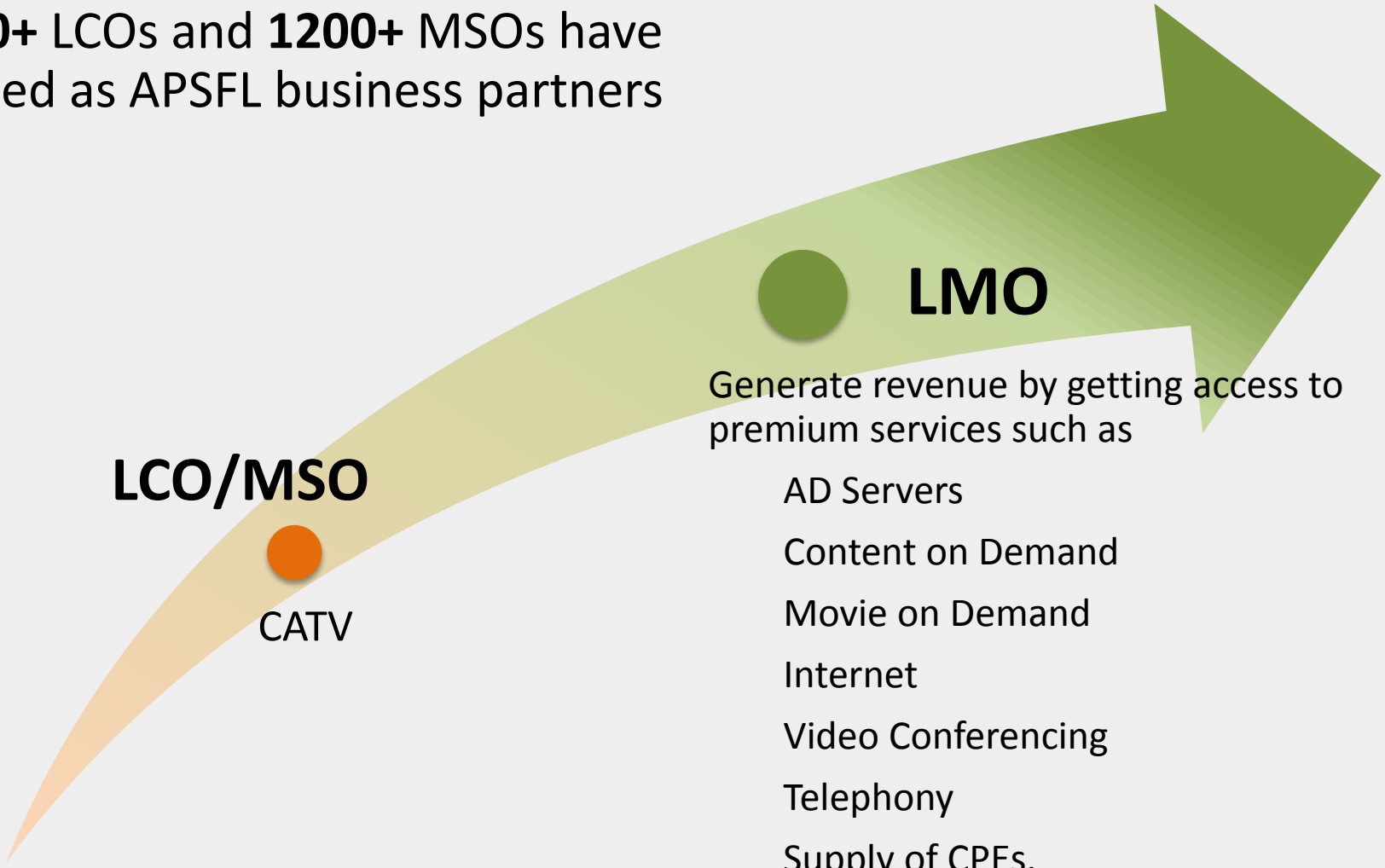
Andhra Pradesh Fiber Grid Phase - 1 State level Network Route Diagram Showing tentative Aerial fiber route

AP FIBER - BIG PICTURE



THE TRANSITION – LCO/MSO to LMO

12000+ LCOs and **1200+** MSOs have enrolled as APSFL business partners



FIBER GRID DESIGN & WORKS - 1

- GIS Mapping of 3.75 Lakh electrical poles & around 2500 substations done in one week time at **zero-cost**
- Taking into the account density of habitations/population, optimal route design has been done
- 55% ring topology achieved through State level, District level, Zonal level and Mandal level rings
- Works commenced in November, 2015 at an estimated cost of Rs. 333 Crs with a target timeframe of 9 months

FIBER GRID DESIGN & WORKS - 2

- 23,000 Kms of Fiber Cable pulled in the last 8 months
- The state-of the-art Network Operations Center as Visakhapatnam has been completed in a record 3 month’s time at a cost of Rs. 40 Crs
- APSFL obtained the following licenses from the Govt. of India
  - Internet Service Provider – Class B
  - National Long Distance (NLD)
  - Unified Access Service License

FIBER GRID POTENTIAL & INITIATIVES

- Smart Electrical Metering
- AP Data Center / Cloud
- AP Surveillance Cloud
- Digital School & e-Learning
- Digital Clinic /e-Health Care
- AP Towers
- Driving customized content in Education, Health & Agriculture sectors by separate SPVs

FIBERGRID
CPE BOXES – SMART METERS

- Fibergrid can integrate substations / offices of DISCOMs and TRANSCO
- CPE Boxes can enable fiber connectivity to electrical meters in households in an exclusive, managed network; can turn them into smart meters
- 9 types of CPEs – GPON & IPTV boxes are designed for Fibergrid. Estimated cost Rs. 4000+ for triple play
- Allocating funds for the Customer Premises Equipments(CPE) boxes to be deployed at households/offices can bring down cost to the consumer and accelerate Smart Grid Projects.

SIGNIFICANCE OF AP FIBERGRID

- The largest greenfield optical fiber network infrastructure being taken up by any State Govt. agency at present
- Role out of Interactive IPTV services on a big scale
- APSFL – 1St TELCO in State Government sector
- 12,000+ MSOs/LCOs enrolled so far on their own to be business partners with Fibergrid
- Sets up a high speed communication backbone which is made easily accessible to common man. Can deepen penetration of broadband in rural areas.
- This infra can be leveraged to drive a host of innovative digital services / applications to target groups
- Other State Governments studying the aerial fiber model of AP

Thank You