

# U.S. UCAN

United States Unified Community Anchor Network

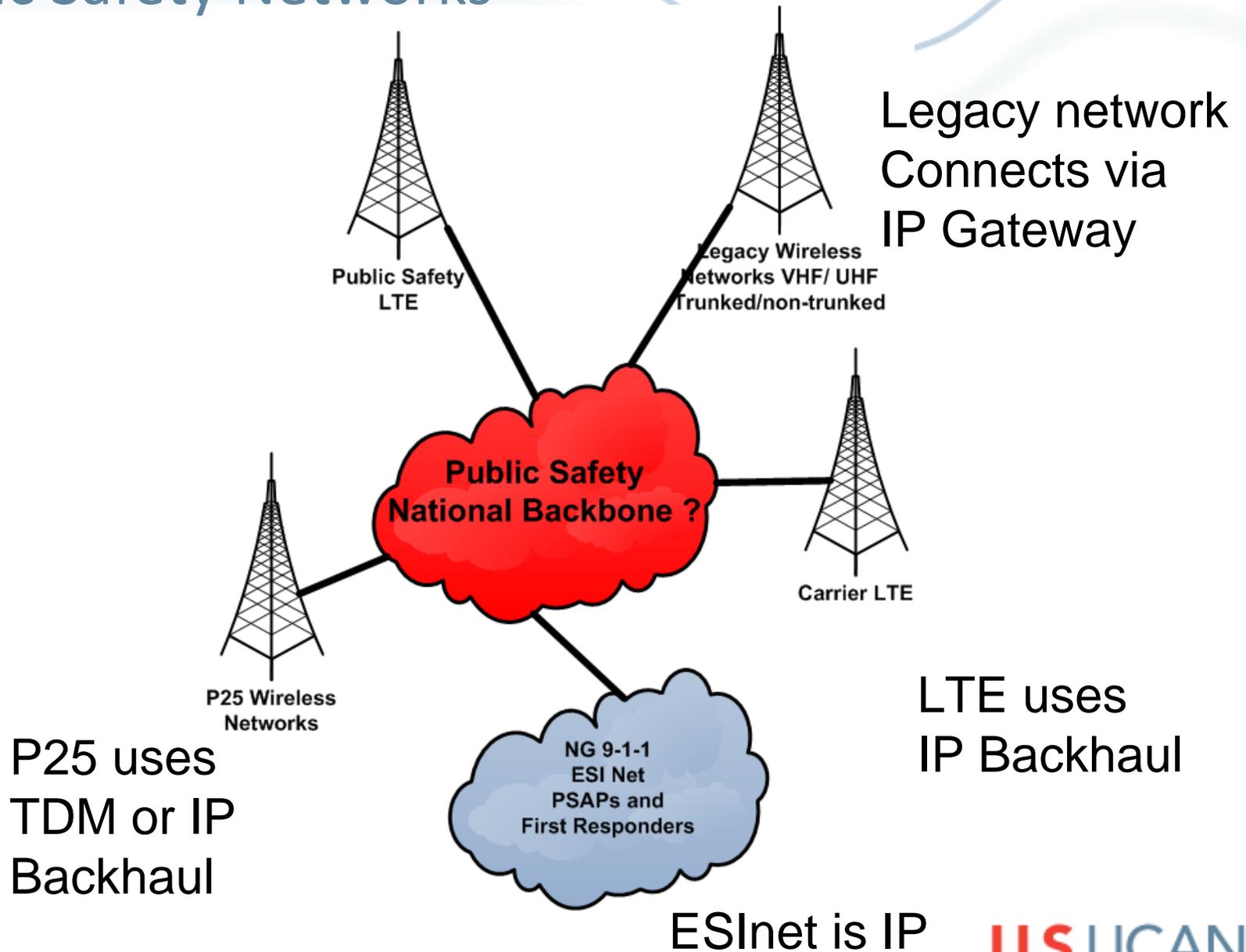
## Resource Sharing to Enhance Public Safety

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Internet2 US UCAN Public Safety

# Public Safety Requirements

- Local Autonomy – must be able to build local networks
- Regional and National Roaming
- Infrastructure
  - Towers
  - Co-location space
  - Backhaul
- Standards

# Public Safety Networks



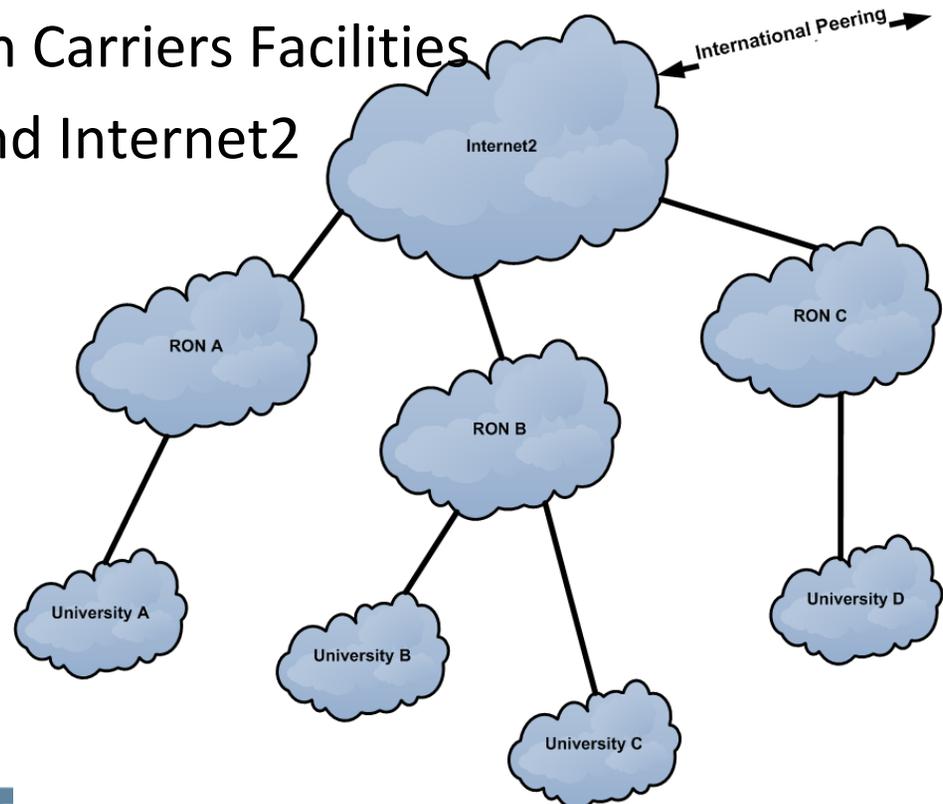
**U.S.**UCAN

# Issues

- Operational Expenses – Why is this a problem (this example is for two small counties in Texas)
  - Current P25 radio system
    - Minimum bandwidth per tower – T1 or 1.5 megabits/second
    - Number of towers required - seven (plus three consoles)
    - Operational expense per year -\$118,000
  - Proposed LTE network
    - Minimum bandwidth per tower – 200 megabits/second
    - Number of towers required seven (plus three consoles)
    - Operational expense per year \$460,000
- No authority above State Level –
- Two separate Public Safety networks each with very specific requirements
  - LTE Backbone
  - ESI net

# Higher Education Equivalence Internet2

- 1996 Internet2 created to resolve issues similar to those of Public Safety.
  - Special purpose network (support research, distance education, collaboration tools and other higher education specific requirements)
- Networks mostly running on Carriers Facilities
- All connected to Internet and Internet2
- Tiered Structure



# Internet2 Governance

- Funding
  - Universities pay for Connector Membership (Regional Optical Networks)
  - Universities also pay Internet2 membership which funds national backbone
  - International peering is funded by Internet2 and peering networks
  - International models are similar
- Governance
  - Regional Optical Networks
    - All Universities are voting members of RON
    - Elected Executive Board
  - Internet2
    - All Universities are voting members of Internet2
    - Elected Executive Board
- This model could easily be replicated for Public Safety

# US UCAN NTIA Grant

- Total Project \$96 million
- Internet2 Project
- Public Safety listed as Anchor Tenant
- Public Safety Opportunities
  - Connect NTIA LTE grant recipients
  - Establishment of NG 9-1-1 ESI net backbone

# Where to from here

- Proof of concept network that would establish Public Safety Backbone using US UCAN resources
- What we need to discover
  - Organizational model for network governance
  - Funding model
  - Underlying network options
    - Carrier provided
    - Private networks
- What are the private public partnership opportunities