

## York Telecom Network (YTN) – The Possibilities Presentation to Broadband Advisory Taskforce

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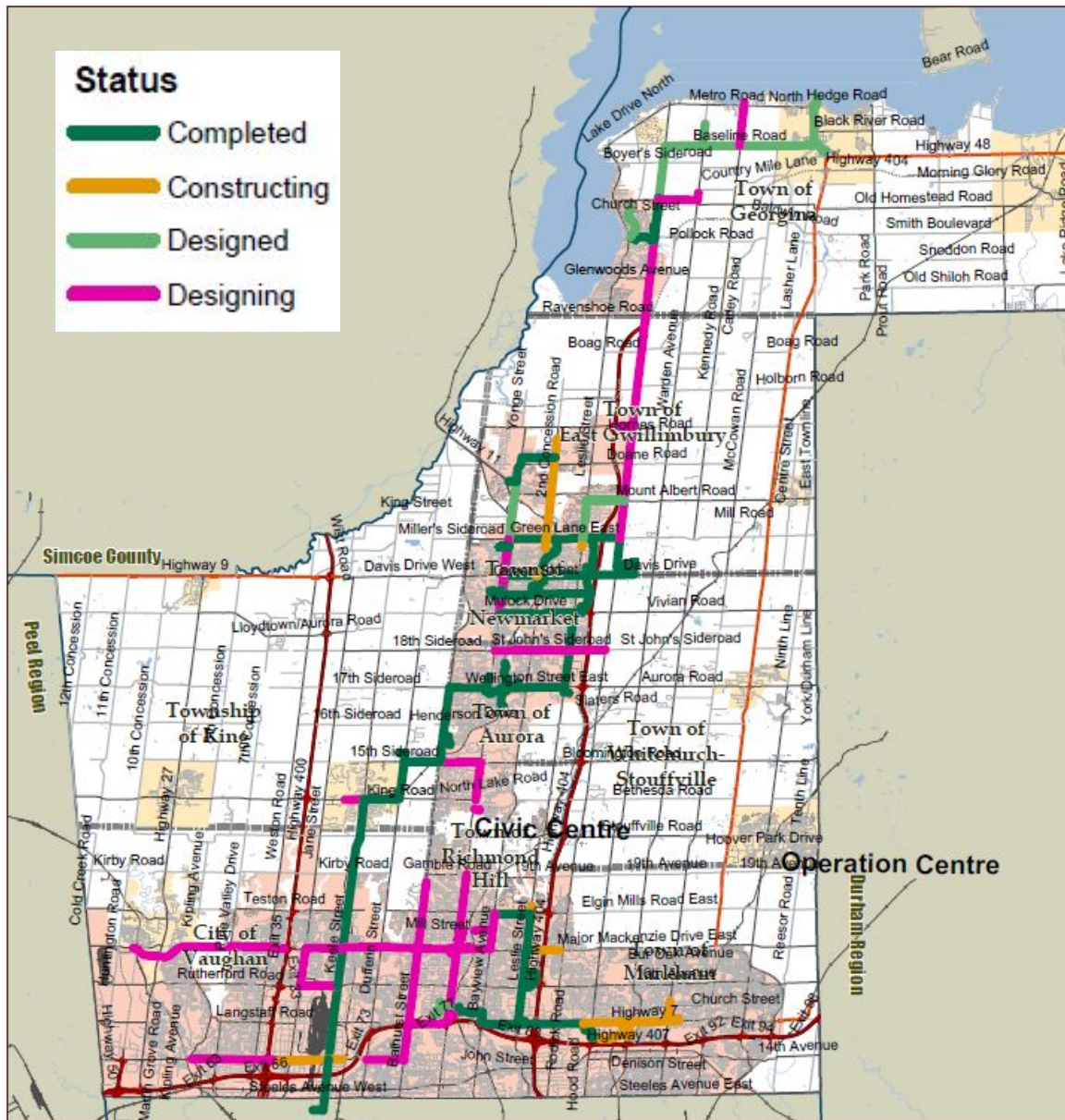
February 3, 2016



1. Story of YTN – Recap
2. Spectrum of Services – Broadband Network
3. Case Studies – What others are doing
4. Positioning YTN
5. Next Steps



# 1. Story of YTN - Recap



- End of 2015 YTN has 150.6 km of fibre optic cable
- Current builds (i.e. projects in progress or planned) will increase total length to approximately 236 km of fibre optic cable

# 1. Story of YTN - Recap

YTN review began in 2014 due to:

- Increasing interest from potential subscribers
- Cost and risks of an expanded YTN
- Questions related to governance

## YTN Review

### Phase 1:

YTN Assessment Report

Stakeholder Consultations

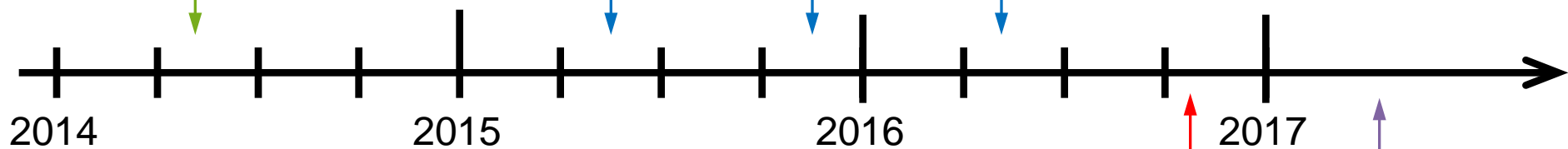
Business / Governance  
Model Review

### Phase 2:

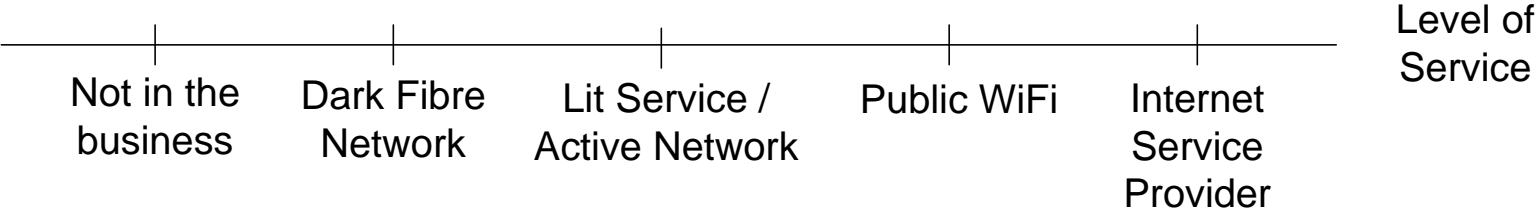
- Business Plan Development

### Phase 3:

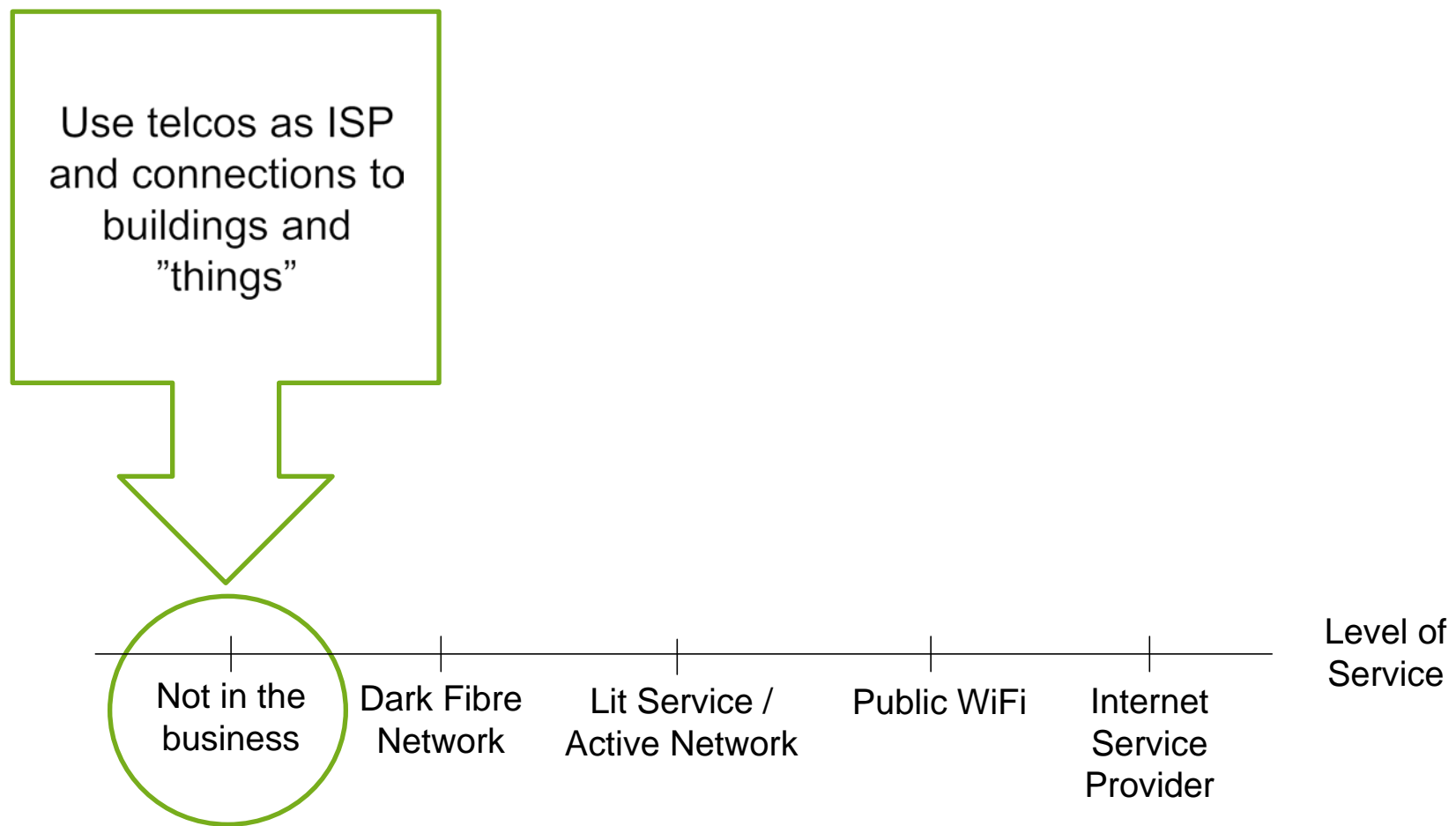
- Implementation?



# 2. Spectrum of Services

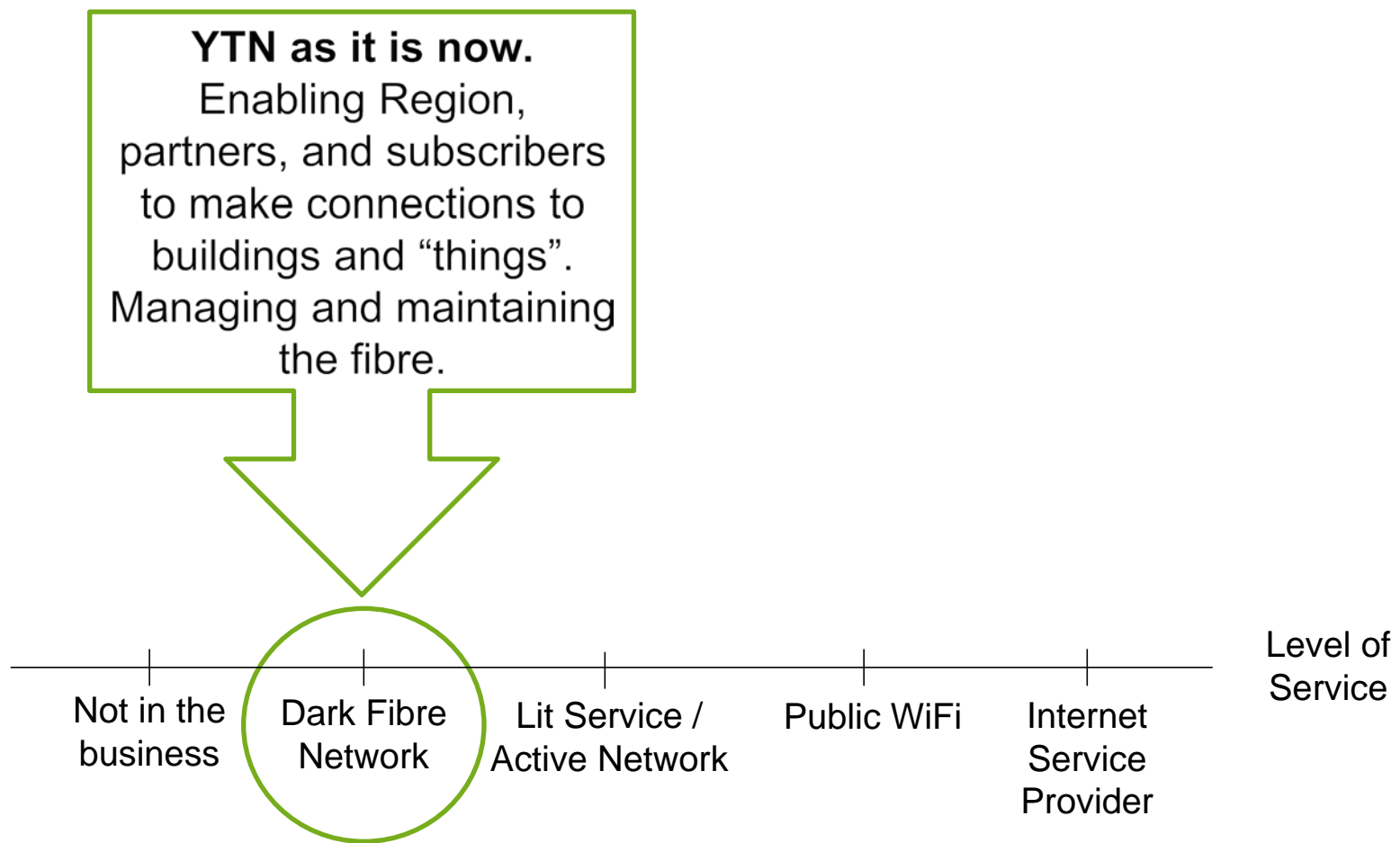


## 2. Spectrum of Services

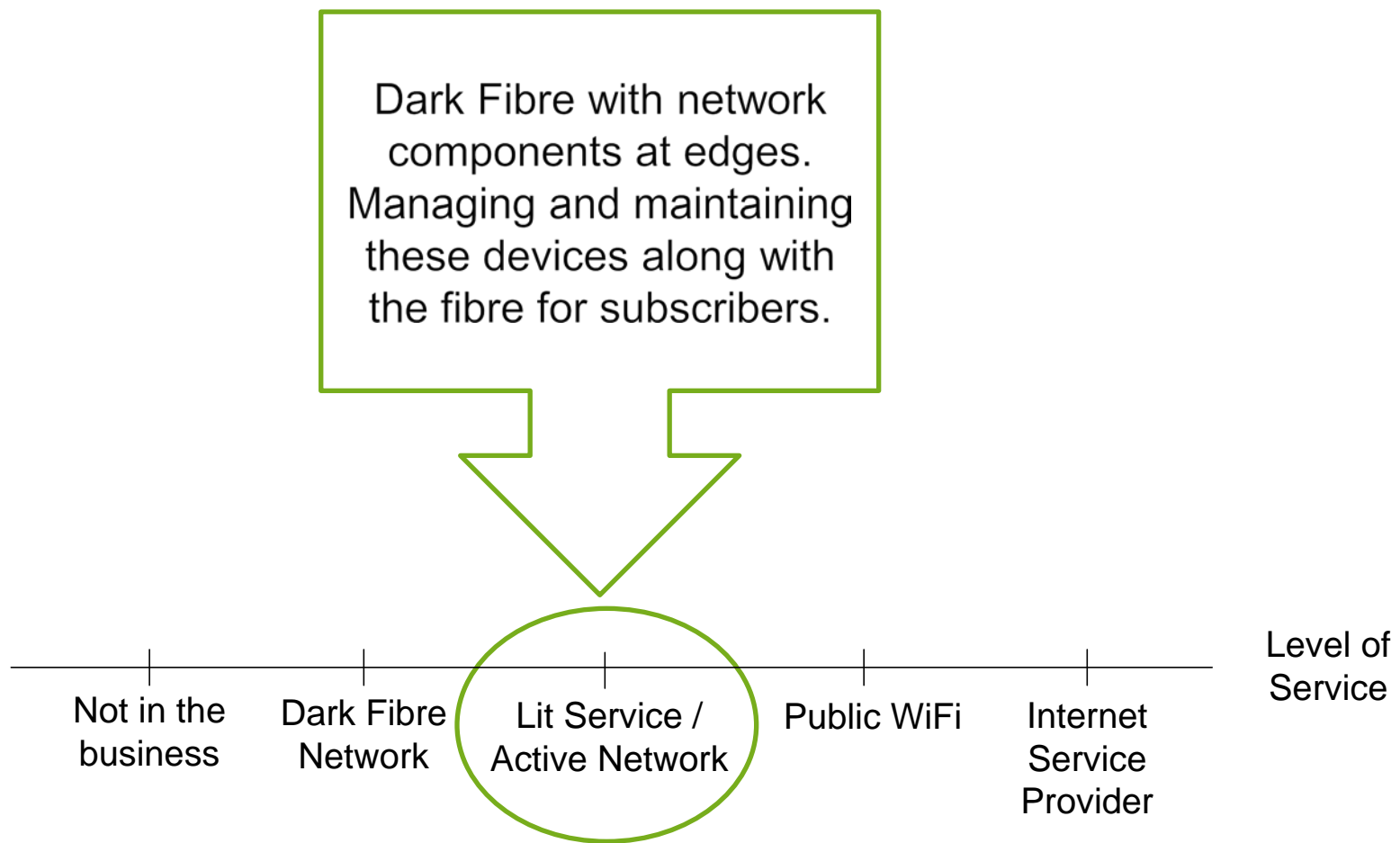




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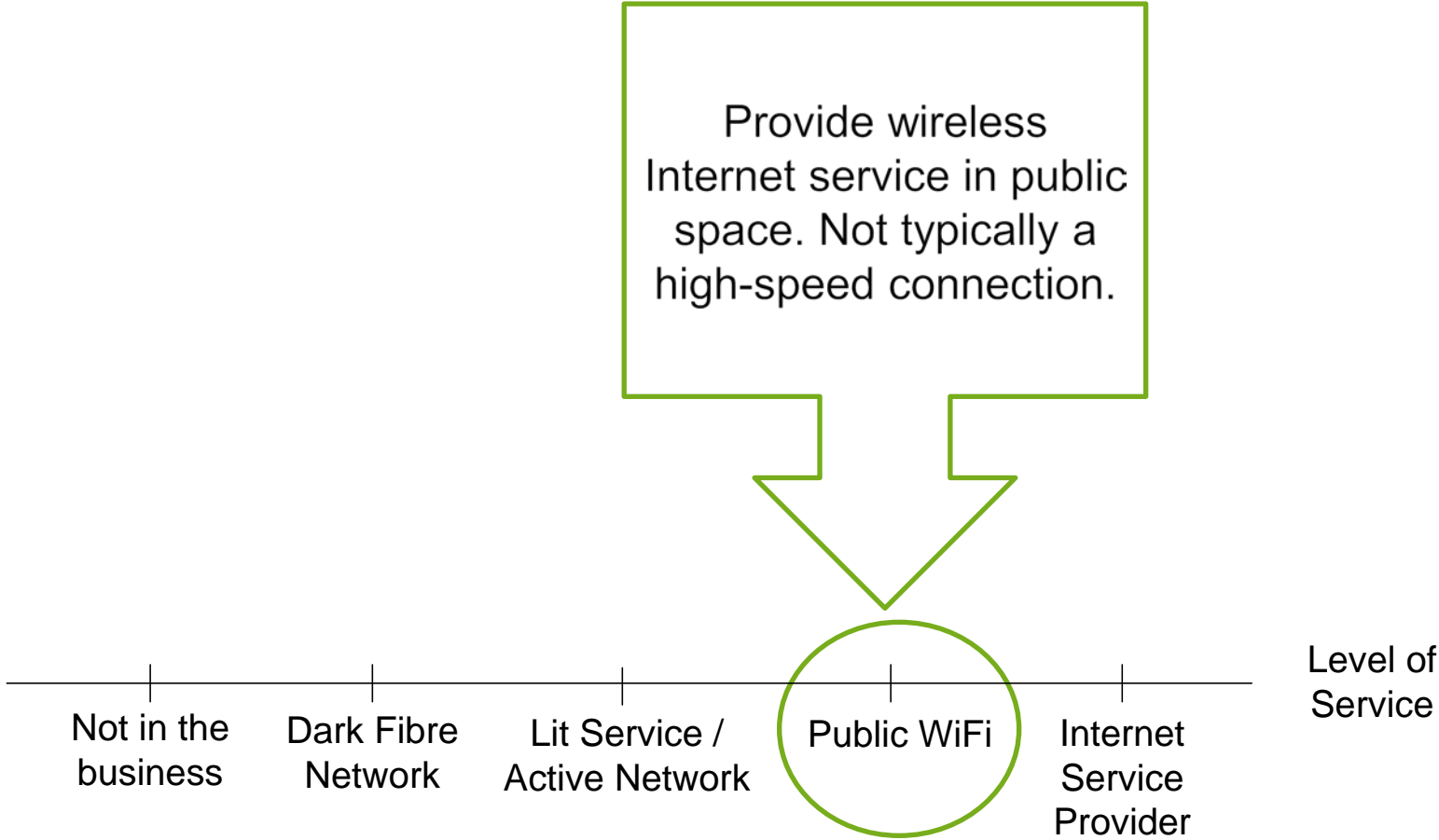


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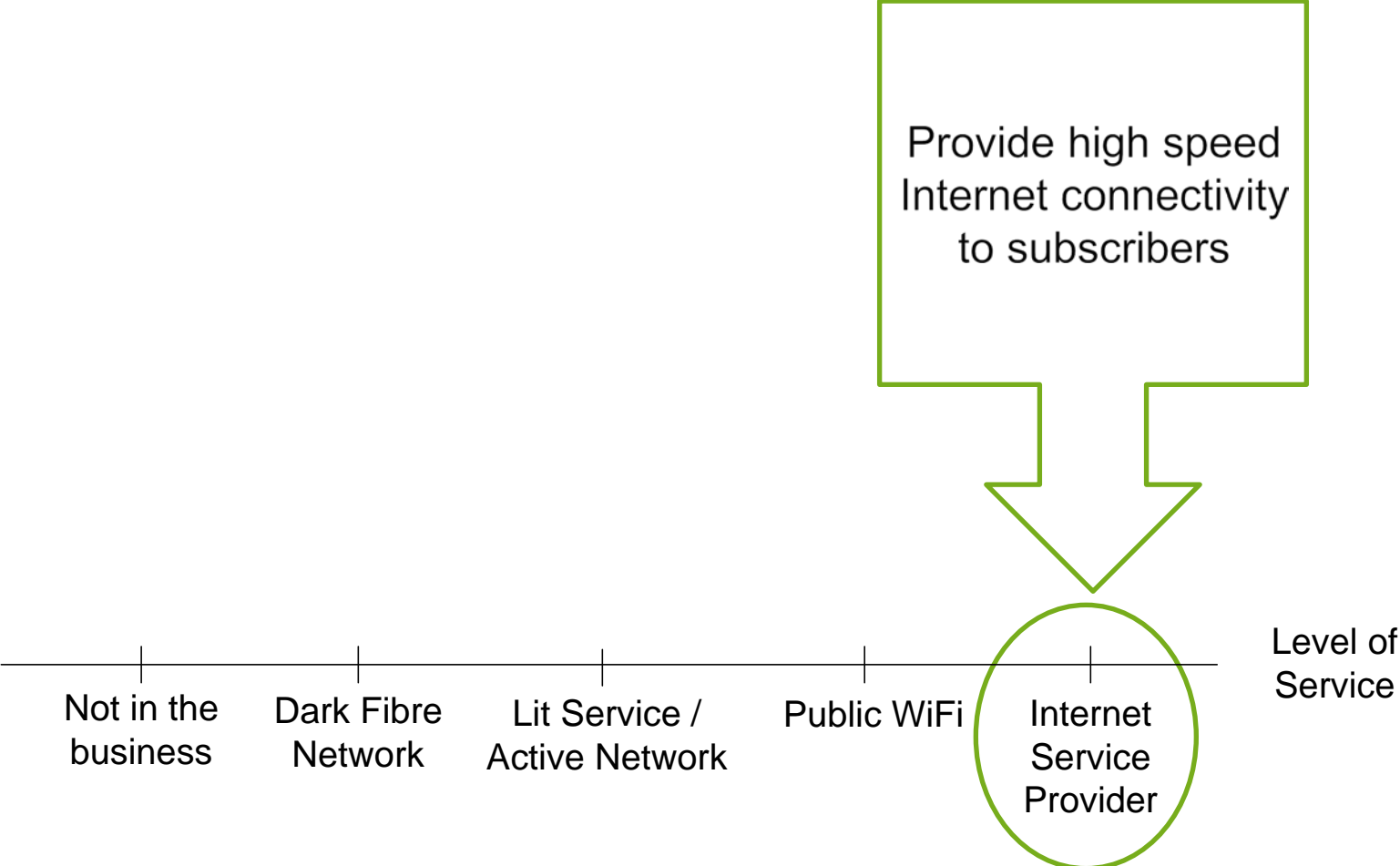




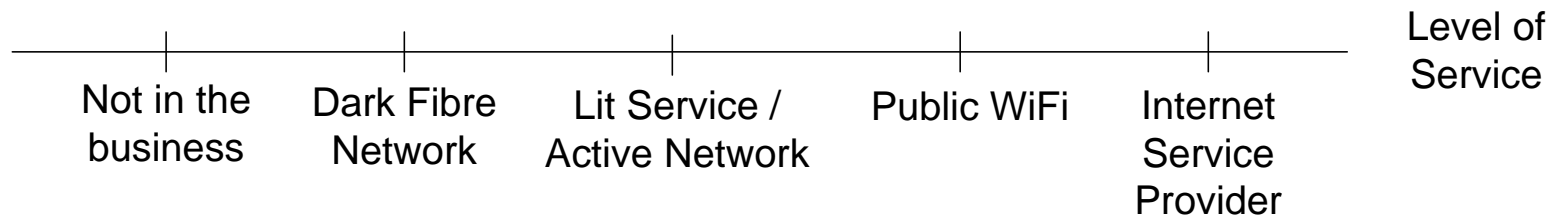
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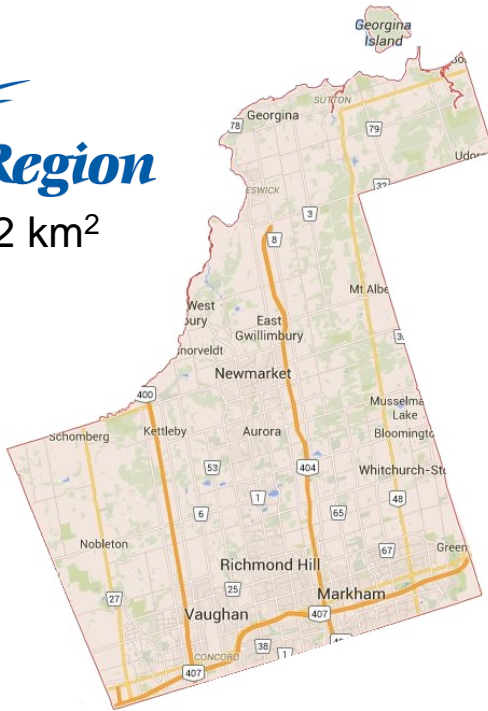
**YTN is a dark fibre network**



# 3. Case Studies



1,762 km<sup>2</sup>



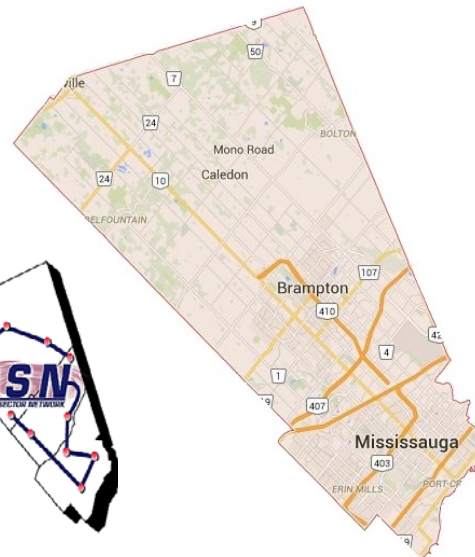
Waterloo Region, ON  
1,369km<sup>2</sup>



Coquitlam, BC  
122 km<sup>2</sup>



Stratford, ON  
22 km<sup>2</sup>



Peel Region  
1,247 km<sup>2</sup>



Chattanooga, TN  
1,492 km<sup>2</sup>



## Rhizome – Stratford, ON



What is it?	<ul style="list-style-type: none"> <li>• Commercial and residential ISP services over fibre and Wi-Fi (fibre deployed by the City)</li> <li>• Citywide wireless network uses wireless mesh technology developed to connect users and smart electricity meters</li> </ul>
Created	Launched in 2011 (as an ISP service to public)
Size of Network	70km of fibre plus a number of WiFi access points
Governance Model	<ul style="list-style-type: none"> <li>• Rhizome Networks is a subsidiary of the City</li> <li>• Festival Hydro Services Inc. (“FHSI”) is operating as Rhizome Networks</li> <li>• Festival Hydro is wholly owned by the City of Stratford</li> </ul>
Invested	City invested \$1.2M up to 2009
Benefit to Community	Attracts businesses (e.g. Autonomous vehicle initiatives) and cultivate economic development (e.g. free Wi-Fi in downtown, Auto Industry Revamp + Stratford Festival)



## WREPNet – Waterloo Region, ON

<p>What is it?</p>	<ul style="list-style-type: none"> <li>• Region driven initiative – Alliance of school boards, local governments, public libraries and the community college</li> <li>• Each partner’s staff and clients have access to the network as defined by the partner</li> </ul>
<p>Created</p>	<p>Launched in 2000</p>
<p>Size of Network</p>	<p>Approx. 585 km connects 327 sites in Waterloo Region</p>
<p>Governance Model</p>	<ul style="list-style-type: none"> <li>• Partners include Waterloo Region District School Board, Region of Waterloo, City of Waterloo &amp; Cambridge, Waterloo Public Library etc.</li> <li>• Network governed by Committees with representation from all partners</li> <li>• Each partner shares development, operating and maintenance cost of network</li> </ul>
<p>Invested</p>	<p>\$9M from Waterloo Region</p>
<p>Benefit to Community</p>	<p>Economic growth &amp; development while reducing costs of broadband connectivity for partners &amp; providing advanced services to citizens</p>



## Public Sector Network (PSN) – Peel Region, ON

What is it?	<ul style="list-style-type: none"> <li>• PSN is a formal partnership created to provide a shared fibre network with the 3 area municipalities</li> <li>• Any Public Sector Agency operating in Peel Region can have access to PSN</li> <li>• Dark fibre network</li> </ul>
Created	Launched in 1999
Size of Network	Approx. 693km (96 Count) connecting 580 partner and 18 subscriber facilities
Governance Model	<ul style="list-style-type: none"> <li>• Ownership is limited to Region of Peel, City of Brampton, City of Mississauga, Town of Caledon</li> <li>• Each partner responsible for implementing fibre network within their municipal boundaries</li> <li>• Subscribers are responsible for all revenues</li> </ul>
Invested	\$17M up to 2013
Benefit to Community	Administrative efficiency & ability to share data amongst partners and subscribers at minimal cost





## QNet – Coquitlam, BC

What is it?	<ul style="list-style-type: none"> <li>• QNet leases unused capacity in the City’s carrier-grade fibre optic cable network to local businesses and telecommunications companies</li> <li>• More than 2,500 businesses and 20,000 homes in residential high-rises have access to competitive telecom services through QNet</li> </ul>
Created	Launched in 2008
Size of Network	60km of fibre
Governance Model	<ul style="list-style-type: none"> <li>• Wholly owned subsidiary of Coquitlam City Council</li> <li>• Economically dependent on City of Coquitlam</li> <li>• Governed by a board of directors</li> <li>• Registered as a non-dominate telecom carrier required to file annual reports with the CRTC</li> </ul>
Invested	\$5.1M by City via a 20 year loan for startup costs
Benefit to Community	Promote job creation, attract & retain businesses & residents & create competitive environment



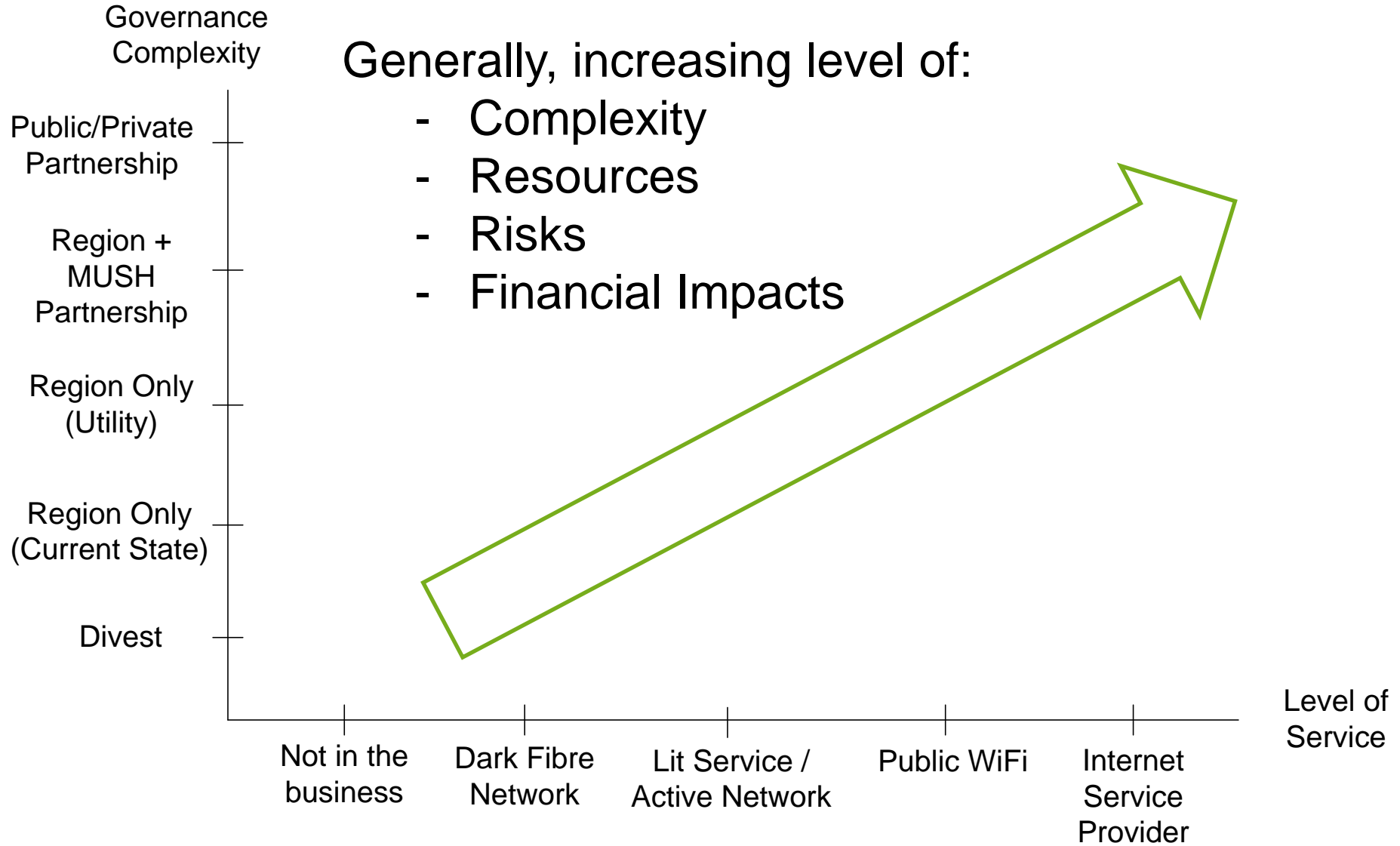
## EPB – Chattanooga, TN

What is it?	<ul style="list-style-type: none"> <li>• EPB acts as an ISP to residents and businesses (also provides phone and TV)</li> <li>• Started laying fibre backbone as part of smart grid in the Region</li> </ul>
Created	Entered Telecom business in 1999, launched FTTH service in 2009
Size of Network	12,900km of fibre network, connecting all smart meters in Region
Governance Model	<ul style="list-style-type: none"> <li>• EPB is a nonprofit agency owned by the City of Chattanooga</li> <li>• EPB provides electricity and communication services</li> <li>• Governed by board members appointed by City of Chattanooga</li> </ul>
Invested	\$330M to set up fibre network
Benefit to Community	Generate new jobs, improve services to power customers provide accessible, affordable high speed fibre optic Internet and revenue generation for community

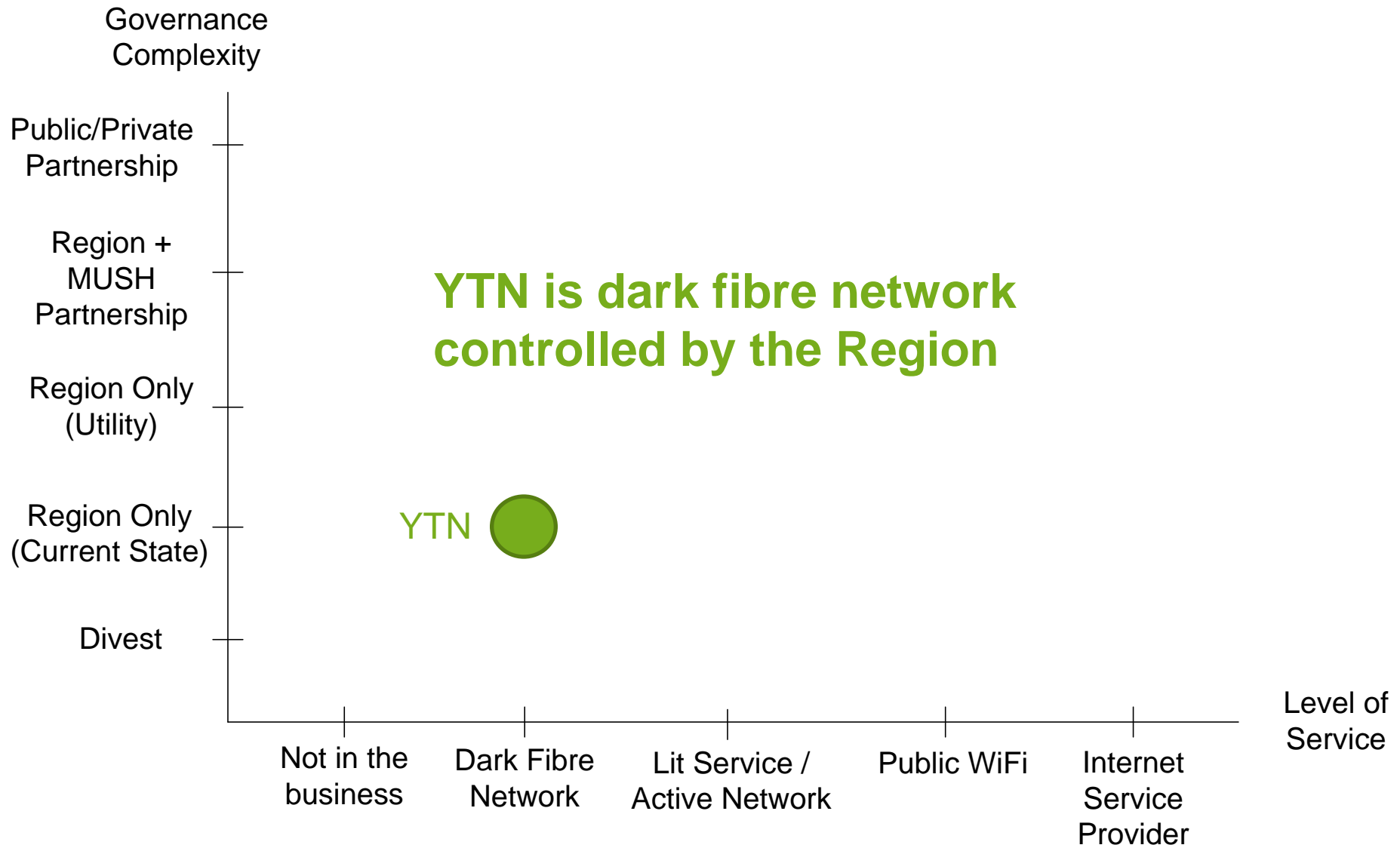
## Associated Governance Models and What Are They?

Divest	Public-Public			Public-Private
Sell to Private Entity & Leaseback	Region Only (current state)	Region Only (act as a utility)	Region + MUSH	Public-Private Joint Venture
<p>Sale to private entity or consortium</p> <p>Pricing to Region becomes fully commercial (may be negotiated as part of sale)</p> <p>Risks transferred to private owner</p>	<p>Region-owned non-profit</p> <p>Region maintains control</p> <p>Region fully bears risks</p>	<p>Region-owned, but run like a utility company targeting a rate of return</p> <p>Region maintains control</p> <p>Region fully bears risks</p>	<p>Similar to Region only, but with joint local municipal ownership/partnership</p> <p>More complex governance</p> <p>Risk is shared across partners</p>	<p>Joint ownership with private sector</p> <p>Identify potential government funding sources</p> <p>Need to divide ownership and risks between partners</p>

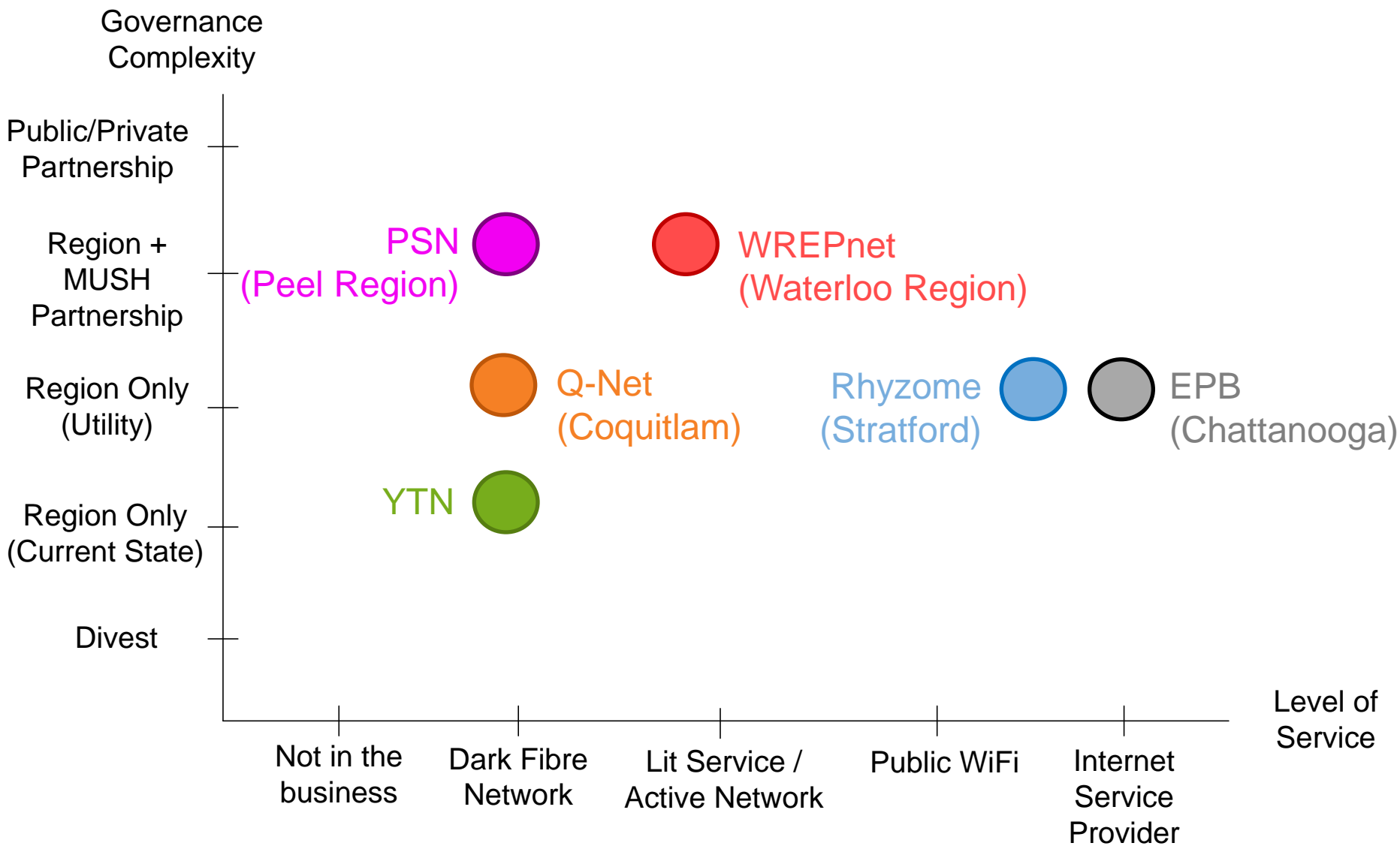
# 4. Positioning YTN – Spectrum of Services vs. Governance Model



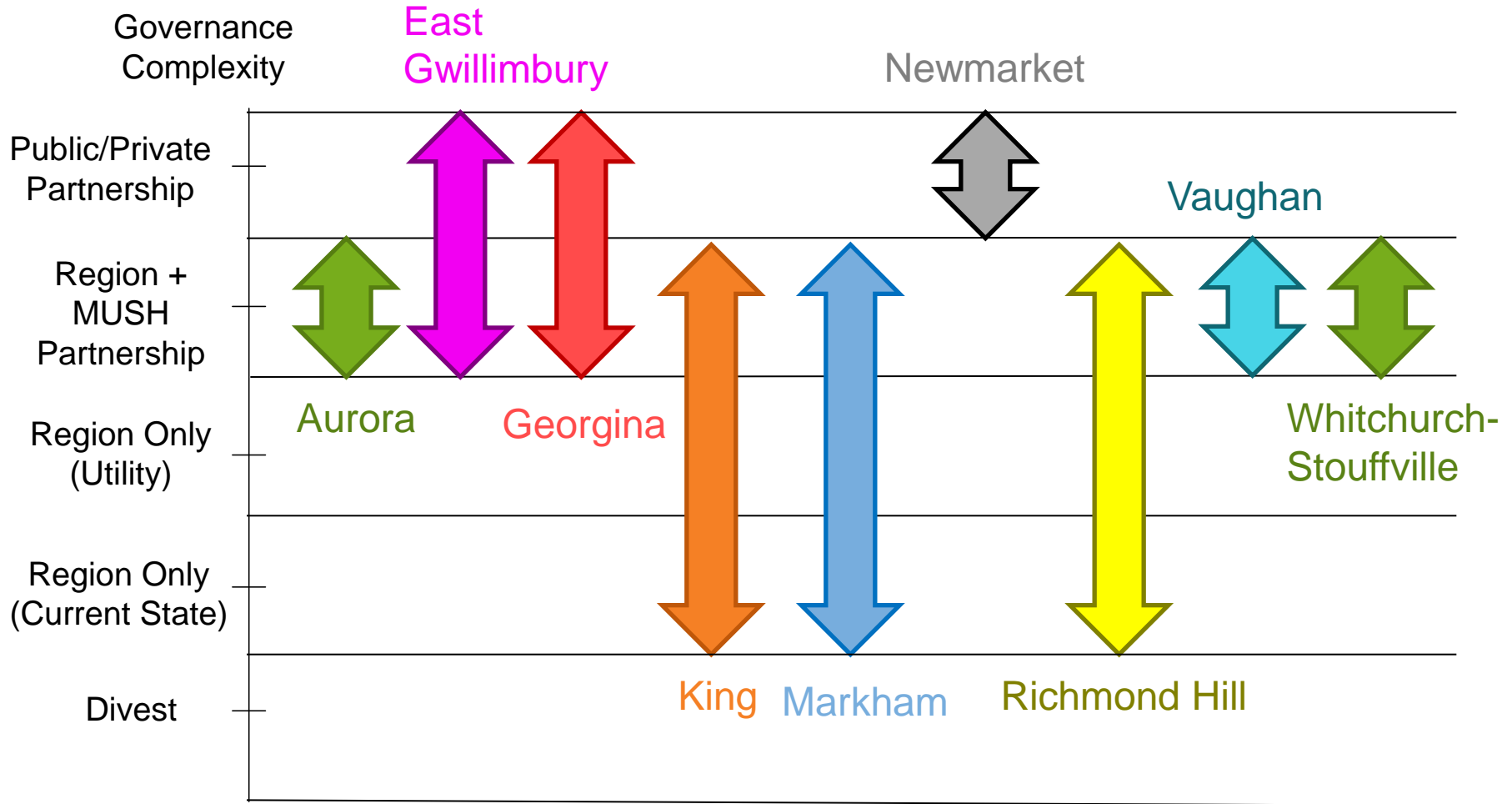
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# 4. Positioning YTN – Spectrum of Services vs. Governance Model



# Municipal preferences of governance...

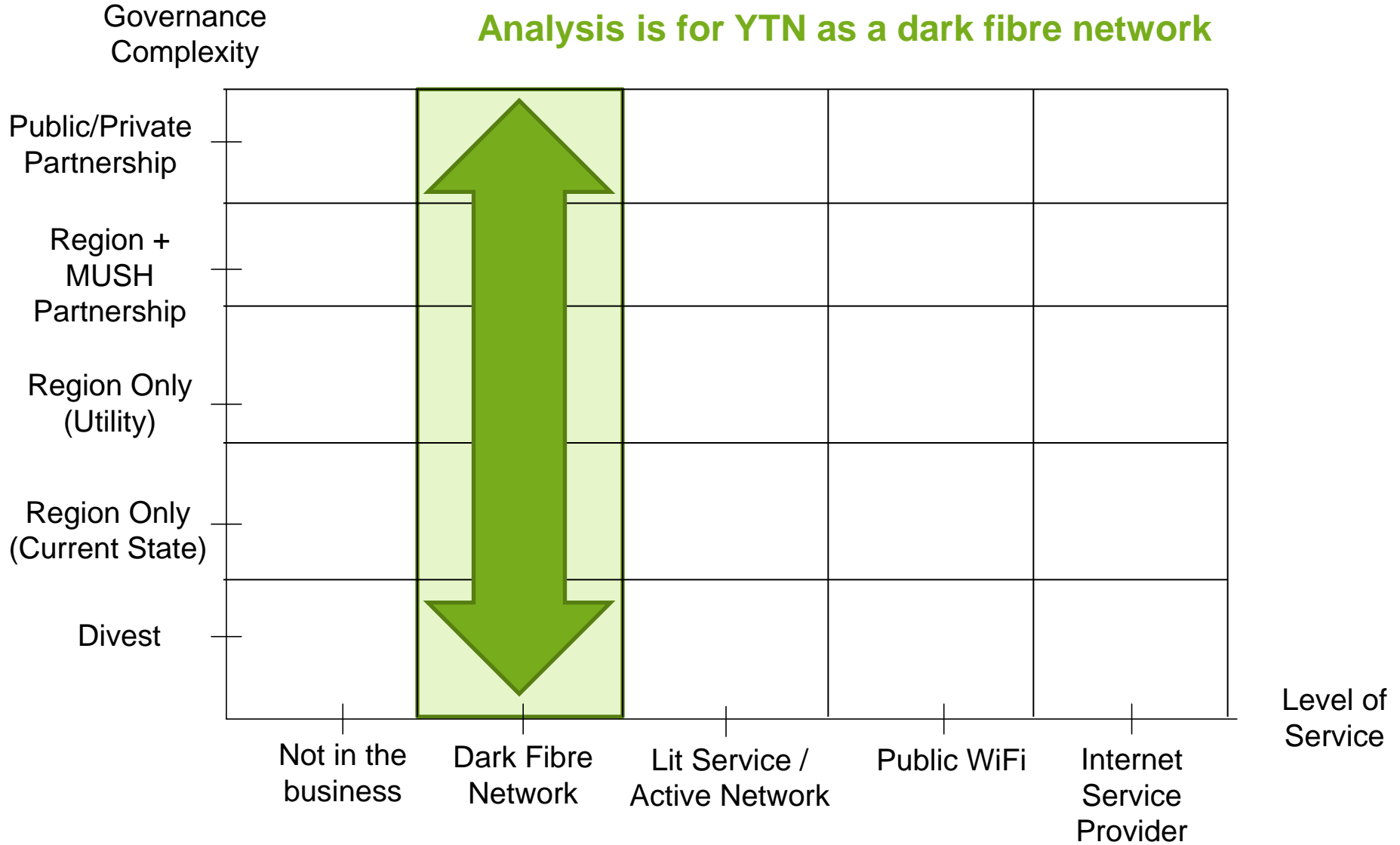


Eight of the Nine Local Municipalities expressed a preference for the Region + MUSH Partnership option



# 5. Positioning YTN – Assumptions

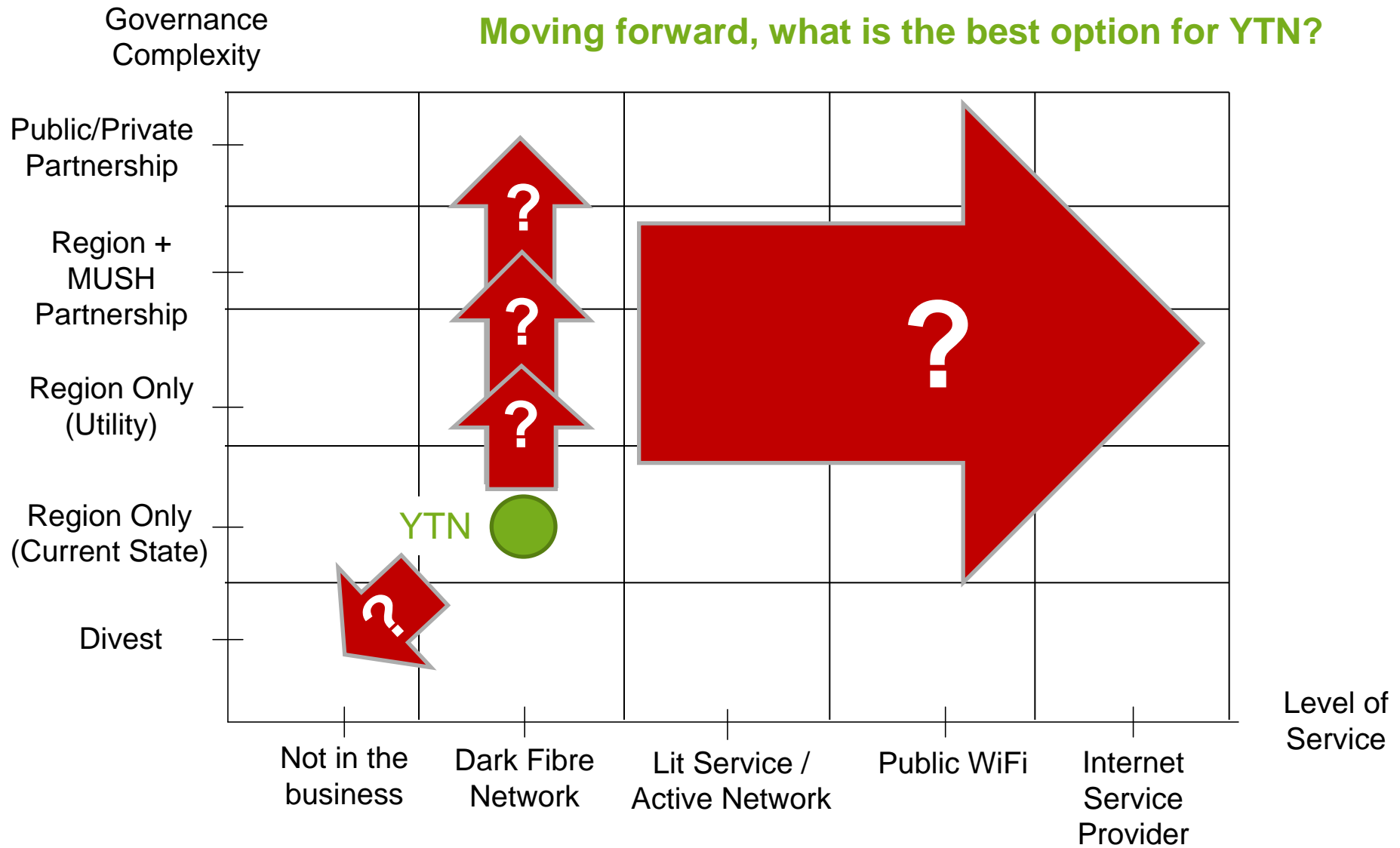
Analysis is for YTN as a dark fibre network



Level of Service

# 5. Positioning YTN – Decisions

Moving forward, what is the best option for YTN?



- Remaining Analysis:
  - Governance review
  - Financial analysis
- Staff to report back in April

# DISCUSSION

