

Analyze Aids and Impediments



Info-Tech Research Group, Inc. is a global leader in providing IT research and advice. Info-Tech's products and services combine actionable insight and relevant advice with ready-to-use tools and templates that cover the full spectrum of IT concerns.
© 1997-2015 Info-Tech Research Group Inc.

INFO~TECH
RESEARCH GROUP



Summary

The purpose of analyzing aids and impediments was to:

- Conduct a tactical analysis of the groups ability to achieve the stated vision through a SWOT analysis
- Examine the macro environmental challenges surrounding execution of the vision through the use of a PESTLE analysis

Outcomes

Each workshop session:

- Executed and discussed a SWOT analysis
- Executed and discussed a PESTLE analysis

Exercises used for analysis of the Vision and Use-Cases

PESTLE

Political	Examine political factors such as taxes, environmental regulations, and zoning restrictions.	Examine economic factors such as interest rates, inflation rate, exchange rates, the financial and stock markets, and the job market.	Economic
Social	Examine social factors such as gender, race, age, income, disabilities, educational attainment, employment status, and religion.	Examine technological factors such as servers, computers, networks, software, database technologies, wireless capabilities, and availability of Software as a Service.	Technological
Legal	Examine legal factors such as trade laws, labor laws, environmental laws, and privacy laws.	Examine environmental factors such as green initiatives, ethical issues, weather patterns, and pollution.	Environmental

Day 1 Morning Session - PESTLE Exercise

Political	<ul style="list-style-type: none"> • Leverage League of Oregon cities to monitor telecom issues • Establish regional coordination monitoring leadership • Political leadership support necessary • Take historical messaging into growth of regional technology messaging • Leverage Metro TV to capture history establish messaging • New city manager / restructuring of departmental organization 	<ul style="list-style-type: none"> • Requires specialized labor to install • Spurs economic multiple (adds value, allows expanded activity) • Up front costs for construction / installation • Foreign trade issues (tariffs) • Demands on fiber and supportive tech • Shift to knowledge base economy • Regional economy • Connectivity as a need for business • Issue of copper theft 	Economic
Social	<ul style="list-style-type: none"> • Use social outreach groups for communication • Reach out to school districts for job training / validation of value of broadband • Leverage LCOG services for community outreach • Capture Lane livability ideas stakeholders • Change conversation from present use to potential use • Outreach to communities of all kinds • Use Universities to expand outreach • Change conversations on broadband as a luxury to broadband as a common good 	<ul style="list-style-type: none"> • 5G expansion • Tech relatively plug and play • People don't want to pay for it • Construction of fiber is complex • Public awareness - desirable • Bottleneck in manufacturing fiber production • Close to future proof • On the job training to run / splice fiber lines • Current tech is sufficient – on the market • Fiber offers a lot of options - asset 	Technological
Legal	<ul style="list-style-type: none"> • Threat of national and state restrictions on public activities • Getting beyond legal silos focused on short term local perspectives 	<ul style="list-style-type: none"> • Fiber is environmentally friendly – one and done • Fiber is not a rare earth mineral - synthetic • Maintenance – copper = high, fiber = lower • Can reduce transportation load • Fiber can be buried • Fiber can piggyback existing infrastructure (ease to put in place) 	Environmental

Day 1 Afternoon Session - PESTLE Exercise

Political	<ul style="list-style-type: none"> Elected interest <ul style="list-style-type: none"> Funding and support removal /increase Policy changes Collaboration <ul style="list-style-type: none"> Inter-governmental relations vs degrade / disband Quality of life <ul style="list-style-type: none"> Access / Cost / Equity / Flexibility Basic services available Marketing and business opportunities 	<ul style="list-style-type: none"> Proven economic benefits – momentum and interest are on the rise Technology costs are dropping No current sustainable funding source Cost of labor for installations is expensive There are economic benefits to fiber related end uses (telehealth) Talent attraction quality of life Competition drives costs down 	Economic
Social	<ul style="list-style-type: none"> Broad socio-economic range Differing levels of availability / access Local training of workforce available Rural areas need services but also more funding Young demographic (University) could drive demand 	<ul style="list-style-type: none"> Pricing for EQ going down Accelerated 5G deployments / need for high speed mobile Higher capacity per fiber increases last mile speed GPON / DWDM make expansion faster / cheaper Decreased “cost of entry” for fiber increases competition Remote tech support allows companies to serve larger areas Future technologies demand more bandwidth (IOT/5G/etc.) Micro-trenching drastically reduces install costs Increased storage demands = increased bandwidth demand Oregon is a data center hub (PDX, Hillsboro) Wireless last mile quick to deploy but limited speed 	Technological
Legal	<ul style="list-style-type: none"> Expedited FCC / 5G small cell regulations Patchwork of laws (net neutrality, privacy) Huawei restrictions Anti-trust laws can prevent coordination 	<ul style="list-style-type: none"> Reduced carbon footprint (telecommuting, telepresence) Perceived threat of technology to humans Infrastructure recoverability in a significant natural disaster Unintended consequences Access to resources not before available due to remote locations Options for alternate distribution of population New medium for transportation 	Environmental

Day 2 Morning Session - PESTLE Exercise

Political	<ul style="list-style-type: none"> • Leadership towards rewriting telecom act more local government protection • Potential state realignment to advance telecom projects • Coordinated program to manage development • Ongoing issue of acquiring funds • Figure out how to get money for dig once opportunity • Create consistent staffing to stabilize programs • Developing intergovernmental team to support telecom • Eugene allocated funds aligned with telecom development • Every change in leadership a potential risk to support 	<ul style="list-style-type: none"> • Cost of construction to the demarcation point • What is revenue model for fiber supplier (public utility?) • Identify funding sources for initial construction 	Economic
Social	<ul style="list-style-type: none"> • Tailor market messages to target groups (young / old) • Lack of knowledge about value of telecom • Resistance to wireless / 5G technology • Articulate benefits on 3 levels community, family, personal • Education campaign success by transparency and interactivity • Everybody wants internet 	<ul style="list-style-type: none"> • Identify technical build out to get ubiquitous services to the premise • Identify technical build out to align appropriate last mile (fiber, wireless, mix?) • Figure out who owns conduit and fiber 	Technological
Legal	<ul style="list-style-type: none"> • Need to develop more consistency / coherence in planning for “dig once “ • Lack of clarity on current dig once policies • Ongoing need for cities to protect their legal rights • Currently no clear legal impediment to local actions on telecom • Negotiations with Century Link on IRU 	<ul style="list-style-type: none"> • Mitigate damage to soil as trenching occurs • Educate general public about wireless facts • Work to understand potential negative impacts of wireless • Visual impacts are very small 	Environmental

Day 2 Afternoon Session - PESTLE Exercise

Political	<ul style="list-style-type: none"> • Growing demand for open access and open data – need for greater security • Improving intergovernmental relationships • Broadband is growing in awareness for local and state elected officials • Support for more rural access, but not a lot of will to fund • People want more privacy and sense that they're losing that ability • Expected services have unfunded costs 	<ul style="list-style-type: none"> • Telecom has become an essential service • Wide diversity of economic sectors need telecom • Price of telecom constantly changing • ROI for private ISP create a barrier for rural development • Home business development tied to good telecom • Public sector good at building infra, private good at services • Federal grant programs available for rural areas • Instability of economic climate causes planning problems • Eventual recession could undermine momentum of program • Talent recruitment a problem, education cant keep up • Tech makes possible diversity of employment opportunities 	Economic
Social	<ul style="list-style-type: none"> • Until rural broadband develops, the rural urban divide will remain of grow • Younger generation is developing expectations of instant access • Broadband adoption doesn't break down by age or gender • Equality of access does not address equity issues • Broadband can be an equalizer • Low income families cannot afford access • Diversity of community not always reflected in decisions • Demographic that doesn't feel the need for broadband is aging out 	<ul style="list-style-type: none"> • Examination of external risks of malicious attacks • Tech consumer education (value, safety, etc) • Agreement on network topology deployed across areas • Open access scaling • Future proofing bandwidth • Redundant routes and documentation • Monitoring of traffic for malicious activity? • Right sizing equipment based on cost, use, capacity etc. 	Technological
Legal	<ul style="list-style-type: none"> • FCC regulation changes pre-empting local control and decision making authority • Obligations and implications for infrastructure ownership, risks, uses, fees, access • FCC regulation changes are enabling private investment in small cell and 5G • Grants – burdensome regulation and obligations associated with federal grant conditions • Private public agreements are complex and challenging from a legal perspective 	<ul style="list-style-type: none"> • More equipment means more electricity, lower fiber power draw may compensate • Impact of construction (boring, spoils, etc.) • Environmental benefit of fiber vs copper or wireless –lifespan, RF, etc. • More studies needed on wireless effects • More access to cloud services allowing innovation, remote processing, disaster recovery, etc. • Disaster issues with deployment methodology (ice for overhead, earthquakes for underground, etc. 	Environmental