Create a Business Plan for a Rural Community Broadband Project

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Abstract

Business plans for rural broadband networks need to be sufficiently comprehensive to address all significant feasibility and budget considerations, yet also scale to the size, complexity and risk of the project. This article describes a solid framework for such a plan in non-technical terms.

The central purpose of any business plan is to identify an opportunity and demonstrate its potential viability. Above all, by requiring that planners systematically address early-stage feasibility issues specific to rural areas, sound business plans for these projects will provide a solid basis for securing financing and moving forward expeditously.

Along with community members, the audience for this document will consist of outside interests, including potential funding sources, prospective vendors and perhaps other collaborating communities.

The nine sections described herein for such a plan are: Community Profile, Stakeholder Analysis, Requirements Analysis, Business Model Analysis, Financial Model, Marketing and Communications Plan, Political and Regulatory Analysis, Best Practice Analysis, and Technical Analysis.

This article outlines each of these sections in turn and provides tips on developing them to produce a sound and persuasive plan.

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Systematic treatment of a rural community broadband project from nine perspectives in a sound business plan ('the Plan") will help minimize downstream financial risks. The nine perspectives should constitute the main sections of the Plan:

I. Community Profile

For broadband network infrastructure planning purposes, the more specific the information a community can provide to potential investors and other stakeholders about its number of households and population density the better. Accordingly, this Plan should include basic demographics information, such as population, number of households, median income and age distribution. Also include:

- Geographical description, including square miles, topography and the distance from the next largest community.
- Economic base, e.g., agriculture, tourism, wood products, light manufacturing.

II. Stakeholder Analysis

Stakeholders are groups both within and outside the community that would be affected by the broadband network. These represent both potential demand factors (needs and requirements), as well as potential supply factors (assets and capabilities). This section of the Plan analyzes the requirements, wishes and concerns of these groups as they might influence the feasibility of the network.

The information gathering that will necessarily precede the analysis should be suited to the size and complexity of the community and could consist of town hall-type meetings, surveys, focus groups, or interviews with key individuals.

Stakeholders for a given community could include any of the following groups, as suited to the size of the community and scale of the project:

- Local and State Government
- Residents
- Tourists and/or Business Travelers
- Foundations
- Financial Institutions

- Non-Profit Organizations
- Colleges
- School Districts
- Libraries
- Healthcare Facilities
- Utilities
- Telecommunications Equipment and Service Vendors
- Hotels/Motels/Resorts
- Other Local Businesses

III. Requirements Analysis

This section of the Plan should address the expected broadband needs of the various stakeholder groups. Specific needs areas typically include cost, bandwidth, service quality, and mobility, along with security considerations. This section is also the best place for a description of network services currently offered by local telephone, cellular, and cable providers, especially the extent to which these offerings meet or do not meet stakeholder needs.

One additional and potentially important requirements consideration should be specific applications that the network could be expected to support, either immediately or in the future. Examples: surveillance video, wireless Internet access zones for shopping or business districts, online data records access for police and fire, community video links, remote health patient monitoring, distance learning, or traffic monitoring and enforcement.

This section should also identify relevant requirements at a high level and then describe their relative priority.

IV. Business Model Analysis

Business models for community broadband networks represent ownership and operation arrangements. In particular, the emphasis of these models is on financial structure and designated responsibilities for ongoing administration and maintenance. This section is the place to consider alternative models and present a recommendation.

For community broadband networks, business model options typically involve variations of public-private partnerships, including

private consortium or cooperative wholesale arrangements, wherein communities help fund an initial build then assign ongoing operation and maintenance to private interests.

For communities that prefer more ongoing involvement in the network's administration and maintenance, a public utility business model could be suitable, especially in situations where existing community resources (typically incorporated within local government) can fund the initial build and can also support marketing, customer service, technical support and billing.

Finally, nonprofit business models are suitable when foundation, loan or grant money is available to fund the build and it is most appropriate to outsource operation, maintenance and most other responsibilities to private agents. Nonprofit models have many forms.

Grant programs that may cover rural broadband networks may be available. Examples at the federal level include HUD's Community Block Grant program (see www.hud.gov/offices/cpd/communitydevelopment/programs/index.cfm) and the USDA's Rural Economic Action Plan (REAP), now in a pilot stage (see www.ezec.gov/communit/reap.html).

V. Financial Model

This section of the Plan should present conservative income and expense expectations, carried forward over a five-year period. These expectations should follow from the description of a suitable financial model that has been developed according to clearly stated assumptions.

The assumptions themselves should derive from the preceding sections of the plan with respect to the size of the community, the potential stakeholders, the performance requirements and the recommended business model.

The description of the financial model does not need to follow a particular organizational structure, but should include the following subsections:

Assumptions: Business model selection, bandwidth to be delivered, categories of users, infrastructure elements, financial constraints, if any. Also, expected

uses for excesses of revenue over expenses and intended cash flow measure (net, free, discount, operating, etc.) for accounting purposes, as suited to business model.

Capital Expenditures: Using comparably-sized networks as a guide, expected initial outlay for equipment and installation, including servers, routers, switches and software; and rights-of-way. (See Section VIII.) Base upon expected number of users.

Pricing and Marketing Elements: Initial pricing and assumed take-up (adoption) rate over five years; promotion plans, if any. Also, trend support for projected growth.

Operating Expenses: Expected administration and management costs; property, plant & equipment leasing; personnel; outsourcing; maintenance and upgrade.

Expected Financial Results Over Five Years: Gross revenue, operating expenditures, income calculated as appropriate to business model; cash flow as appropriate to business model; expected cost savings, as applicable,

Other Performance Indicators: General statement of expected financial benefit to community; expected amounts and uses of excess cash; economic vitality as measured by benefits to local businesses and local business climate.

For any given Plan, the financial model, in terms of cash flow and measurement criteria, will vary, especially for nonprofits. Nevertheless the network will need to be judged according to an expected rate of return over time, one that should always incorporate both hard (quantifiable) and soft (qualitative) community benefits.

VI. Marketing and Communications Plan

The initial priority for a marketing and communications ("mar-comm") plan will be to develop communications materials and

distribute them to the stakeholder groups, as appropriate. These communications should focus on educating all concerned about the potential benefits of the network.

The overall goal for the program will be to encourage buy-in and make it easier to solicit support. In particular, the materials distributed as part of the mar-comm plan should address project scheduling issues, milestones, goals, and other descriptive information that will indicate that the project concept is sound and that it will be efficiently executed.

It will also be a good idea to indicate the tactical considerations associated with addressing the concerns of each stakeholder group, i.e., most suitable document formats, expected need for community meetings, plans to issue press releases, any intentions to engage local media in public relations efforts, etc.

VII. Political & Regulatory Analysis

This section of the Plan should state the political and regulatory considerations that may affect the realization of project benefits. In addition to listing these considerations, it will be important to state clearly the expected degree of difficulty they might present. Examples of such statements could include: "There appear to be no significant political or regulatory barriers to the project," or, "Specific regulatory and political considerations that will need to be addressed as the project proceeds include . . ."

One organizational scheme for this section of the Plan would first address federal level considerations as part of a national political and regulatory picture and then present any relevant issues on the state and local level. The choice of business model may have a significant effect on relevant regulatory considerations, so this analysis should precede and influence such organizational decisions.

VIII. Best Practice Analysis

By identifying and studying implementations of similar networks, it is possible to determine lessons learned and incorporate them into the Plan. For each identified implementation that is similar in size and scope, it will be helpful to describe the initiative according to six traits: Type of Application, Motivating Factors, Underlying

Assumptions, Implementation, Cost, and Challenges.

The level of detail of this section of the Plan will depend on individual circumstances, but since this information can be very significant, it may be advisable to provide an in-depth analysis of other development efforts. Specific development ideas could involve analyzing each identified project with respect to: actual versus budgeted cost, most valued applications, most cost efficient applications, relative success of different organizational models, pricing of offered services, and success in spurring economic development.

IX. Technical Analysis

A host of communications technologies are available for potential use in a community broadband network. It is critical that, at a minimum, the high level pros and cons of the major alternatives are identified in advance of approaching prospective vendors. In this way, the community will assume as much of a control position as possible in the early stages of project design.

Fortunately, information on available technologies is plentiful, and since the object at this stage is not to engineer the network at a low level, simple summaries of basic design options should meet the needs of the Plan at this stage.

One way to begin this analysis of potentially applicable communications technologies will be to address the proposed network in terms of how it will reach its users. This so-called “last-mile” could consist of fiber optic cabling all the way to individual homes, delivery through existing cable television or telephone line copper cabling, or wireless transmission through neighborhood distribution nodes.

Newer delivery modes include satellite reception via rooftop dishes and delivery over the unused portion of ordinary electrical lines. Regardless of how much the network will be wireless or wired, however, a delivery infrastructure will be necessary.

Once potentially feasible last-mile options have been presented, then it will be easier to identify and discuss the network infrastructure at the backbone level. Typically, fiber optic technology

plays a key role at this level, so considerations involving rights of way, backhaul links to network facilities and how the fiber optic cable will be laid are addressed at this point.

For the purposes of this Plan, however, wherever technologies appear to offer potential alternatives, it will be a good idea to present their basic attributes in a matrix that would list attributes such as maximum throughput, compatibility with existing facilities, relative security, expected lifetime, and maintenance intensity, along with any others relevant to specific circumstances.

This section of the Plan will also be a good place to describe how special considerations such as topographical features of the area or geographical distribution of users may affect the viability of potential communications technologies.

Accordingly, the placement of essential network elements will need initial consideration in the Plan. These elements include potential colocation sites for data exchanges, sites to house distributed switch and router hardware, locations for antennae and duct placement, and the potential need for towers.

This stage of planning the network is also not too early a time to send Requests For Information to potential technology providers, in which respondents are invited to address potentially significant technology issues posed by a particular network location. The results of this inquiry could then be incorporated into a formal Request For Proposal, in which the requirements of a network topology should be indicated in some detail.

As applicable, include the results of any pilot projects in this section, in order to help justify the viability of a particular technology, or to demonstrate the feasibility of a recommended course of action.

Since the primary purpose of the Plan is to provide a high level view of the project for descriptive purposes, it is not important to develop any of the above nine sections in definitive detail. It is important, however, to give each one full and careful consideration.

In this way, the business plan will fulfill its objectives of identifying the project and supporting a particular approach to its realization.

TELECOM DIRECTIONS GROUP

These guidelines are provided compliments of the Telecom Directions Group (TDG), for any rural community that is potentially interested in developing broadband services. TDG is a division of Telecom Directions, LLC.

Feel free to download the other documents in this series relating to developing a rural community broadband network: "Initial Action Steps" and "Readiness Checklist," via the Telecom Directions Group Page, at www.telecomdirections.com.

Developing a business plan is only one of several tasks involved in establishing a rural community broadband network. The Telecom Directions Group is available to provide project concept and articulation assistance to rural communities. Our customized services cover the entire range of project planning tasks, from developing a business plan using these guidelines, to developing and issuing requests for information and requests for proposals. These are fee-based services.

Since 1987, Telecom Directions has been an independent consultancy based in Seattle, Washington, and has no affiliation or remunerative relationship with any provider of telecommunications equipment or services.

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