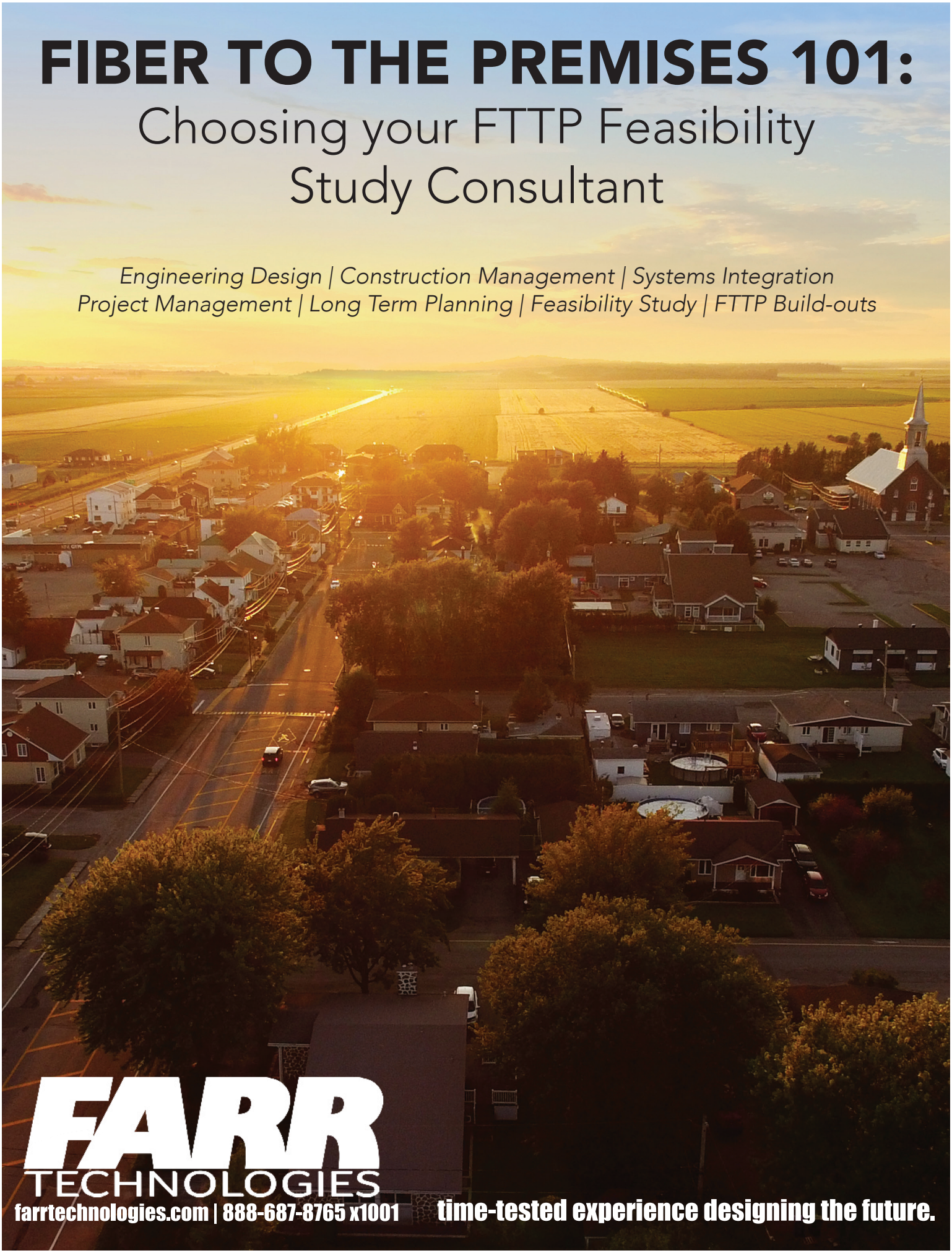
FIBER TO THE PREMISES 101:

Choosing your FTTP Feasibility Study Consultant

Engineering Design | Construction Management | Systems Integration
Project Management | Long Term Planning | Feasibility Study | FTTP Build-outs



FARR TECHNOLOGIES

farrtechnologies.com | 888-687-8765 x1001

time-tested experience designing the future.

FARR TECHNOLOGIES

time-tested experience designing the future.

Engineering Design | Construction Management | Systems Integration
Project Management | Long Term Planning | Feasibility Study | FTTP Build-outs

ABOUT FARR TECHNOLOGIES

FARR has been helping service providers add fiber-based internet services to their offering, and converting their copper-based systems to digital, fiber-based networks. The firm's experience in small to midsized communities, and working with member-owned firms focused on the bottom line, has made FARR a leader in engineering design, construction management, systems integration, project management, FTTP build-outs, and feasibility studies.

FEASIBILITY STUDY GUIDE

This guide has been written to help communities choose a consultant to investigate the feasibility of constructing and operating a fiber-to-the-premises (FTTP) project, and to encourage proper use of the completed study. A well-documented study can launch a successful project or avoid an unsuccessful one. A poorly prepared study or one improperly used by project leaders can mire your community in confusion and controversy.

TABLE OF CONTENTS

OTHER
RESOURCES

Fiber To The Premises 102:
How to Design your FTTP Project

Fiber To The Premises 103:
Construction of your FTTP Project

Fiber To The Premises 104:

Deployment of your FTTP Feasibility Study

Fiber To The Premises 105:
Ongoing Operational Assistance

WHAT IS A FEASIBILITY STUDY?

A feasibility study is a complex estimate including the cost of construction, financing costs, working capital needs, service offerings, service pricing, and an estimate of local market share for the services your FTTP project offers. Each of these estimates relies on assumptions and data from similar communities offering similar services. The various elements of the estimate are interrelated like a complex algebraic equation; changing one variable can change the entire outcome.

For example, if a private partner in an FTTP build provides internet protocol television services (IPTV), capital needs and borrowing costs are reduced, operating costs may be less, but margins will certainly be lower. Is the partner worth the trade-off?

Sound complicated? It is, but that's why your choice of a consultant is so important. The best consultant will help educate you and simplify concepts while helping your community make sound decisions.

Before working to understand how to use a feasibility study, let's first look at how a consultant creates a reliable study.

COST OF CONSTRUCTION

The estimates used for construction should reflect current market conditions and take into consideration the market conditions likely to exist one to three years in the future. During the time between completion of the study and potential construction of the utility, your community will examine many options concerning service offerings, potential public-private partnerships, financing, etc.

An accurate understanding of the construction market depends on the experience your consultant has working directly with contractors. Using broad national or regional averages for construction and operational costs are unreliable when making estimates for a particular community. For example, smaller, rural cities have very different construction costs than dense, urban areas. Average figures may also fail to include important costs like initial site surveys, subscriber conversion costs, and factors unique to a given community.

FINANCING
COSTS

Financing costs are related to many factors very difficult to estimate at the outset of the feasibility study. Access to capital for community projects requires the expertise of bond attorneys and others who work in bond placement firms. At the earliest stage of development, your feasibility study consultant may assume borrowing the entire construction costs and working capital, and to err on the side of caution, may use a higher rate of interest for debt service calculations than the current rate of interest.

While your feasibility study consultant should have a strong background working with financial projections, the more important skill is experience working with financing specialists. The eventual financing will be determined by the entity (existing utility, city, etc.) borrowing the funds, the arrangement between the existing entity and the new utility, the risk bond buyers associate with the project, etc.

WORKING
CAPITAL NEEDS

Your FTTP project may not be cash flow positive in the first year or more. The funds required to make payroll and keep the lights on as the new enterprise gets on its feet is the working capital you will need. The longer it takes to reach positive cash flow and begin servicing the debt from operations, the more working capital will be required.

SERVICE OFFERINGS
AND SERVICE PRICING

The services your new utility would offer and the prices you would charge require close attention to current local pricing and market conditions. For example, demand for landline phone service and cable television is rapidly shrinking. In most communities today, cable television subscribers decline by as much as 10% per year, and landline phones, once used by everyone are still now used by about 45% of households.

Should you offer those services? Should you offer those services but form a partnership with a firm already in business to provide those services to avoid investing capital in a shrinking market? Should your new utility concentrate on internet service and not offer phone or TV? What might the decision to drop phone service from your service offering do to your market share of business customers who typically pay higher rates for internet than residential users and who still rely on phone connections? Your consultant can help guide you through those decisions and many more.

YOUR MARKET SHARE

Municipal FTTP utilities generally have a very high market share for all the services they offer, but it takes time to build a reputation for great service at competitive prices. Municipal communications utilities that grew to be very successful didn't have a commanding share of their market in the first year of operation. It may require several years to achieve a share of the market large enough to breakeven.

The best predictor of your share of the market will come from similar municipals, in similarly sized communities, with similar competitors already offering services. Combining all those variables helps create an estimate of the number of subscribers you can expect in each segment of your service offering.

UNDERSTANDING AND REFINEMENT OF THE STUDY

That's what a feasibility study is; now let's look at how your community can use it.

The goal of the study is to chart a course toward a future with better opportunities for economic development and improved quality of life. Successfully reaching sound conclusions will require careful examination of the assumptions and estimates used in the study's preparation.

Accepting a feasibility study without careful review is a mistake. Your consultant should allow time to present their findings, delineate assumptions, and work with you to further refine your study before reaching conclusions. Reviewing major assumptions and identifying potential risks is a key step in the process.

DOCUMENTING ASSUMPTIONS

"It isn't what you don't know that hurts you; it's what you're absolutely sure of that just isn't true." Mark Twain

Your study is a complex, interwoven series of assumptions creating a predicted outcome. Using the study well involves carefully examining the assumptions and working through a variety of possible scenarios.

It is a good idea to document the assumptions at the outset and as you proceed, to carefully note changes made in those assumptions. An abbreviated list of assumptions for your project might look something like this:

CONSTRUCTION COSTS

X% of premises passed will want connected
Cost per connection is $X
Future cost per mile is $X
Redundant connections to A and B resulting in costs Y and X

FINANCING COSTS

100% borrowed funds
4% interest
20-year amortization

SERVICE OFFERINGS

Phone service through partner
Television through IPTV partner
Internet through a local connection utility

MOVING FORWARD

No feasibility study can tell your community whether it should construct, postpone, or shelve a project for the foreseeable future. Those decisions depend on the community's support for the project, its willingness to accept any risks, and factors only members of your community can determine.

A feasibility study is a framework for *your* decision making, not an answer received from a consultant. Used properly, the study and your subsequent testing of assumptions will document the quality of the process you use, and because perfect prediction is not humanly possible, the quality of your process will ultimately determine the wisdom of your decisions.

CONCLUSION

A feasibility study is a dauntingly complex process that can be a springboard to success, or a torpedo sinking your hopes for a better future for your community. The right consultant can make the process easier, and guide good decision-making. Understanding the process of creating your study and knowing in advance how to use it will help assure a good outcome. If you've already decided you will take an outside consultant's opinion as gospel truth, then perhaps any consultant will do. If you are looking for a firm that takes seriously their responsibility to be an able and honest partner in your journey, then we suggest using the following criteria:

Is your potential consultant –

- Currently active in the market designing FTTP construction projects and soliciting bids?
- Offering estimates of costs, services, prices, etc., based on real-world experience?
- A firm with hands-on experience through every step of the FTTP design and the actual construction process?
- Willing to work with you for months, or years, to further refine your study and test assumptions?

WHEN YOUR COMMUNITY'S FUTURE DEPENDS ON THE ACCURACY OF AN FTTP FEASIBILITY STUDY, RELY ON FARR'S **100 YEARS** OF COMBINED COMMUNICATIONS DESIGN AND CONSTRUCTION ENGINEERING EXPERIENCE.

Engineering Design | Construction Management | Systems Integration
Project Management | Long Term Planning | Feasibility Study | FTTP Build-outs

FARR TECHNOLOGIES

farrtechnologies.com | 888-687-8765 x1001 **time-tested experience designing the future.**