

**BroadbandCommunities**  
BUILDING A FIBER-CONNECTED WORLD **MAGAZINE**

---

## Render

How to be ‘shovel ready’  
for 2021 broadband  
funding and grants





# Today's speakers

---



**Sam Pratt**  
**CEO**  
Render Networks



**Lori Sherwood**  
**Director, Commercial & Market Development**  
Render Networks



# We are well-positioned to share best-practice

Our experience spans global network architectures and delivery models and has shaped a best-in-class digital platform and approach



Boulder CO, USA

>15 projects across 8 US states and counting



Melbourne, Australia

20+ years APAC Telco deployment expertise

Strong foundational projects, including National Broadband Network (nbn) connecting 8m households and businesses



US Footprint

50+ years Telco deployment expertise

Unprecedented demand for fiber broadband in the USA has accelerated the need for more efficient construction outcomes for:

- ISPs
- MNOs
- ILEC/CLECs
- Rural Cooperatives
- Network Planners & Engineers

# Funding is no longer a primary constraint



## Federal grants, loans or funding sources

There are annual high-cost support programs in addition to specialized auctions (RDOF, CAF II) that represent billions of dollars in annual funding for broadband networks.



## State Grants

Over 20 states have created grant programs of tens to hundreds of millions of dollars to fund last-mile projects to reach unserved and underserved communities in their states.



## Private Equity & investment

Is available and most viable for large-scale projects. PPPs also can access investment to particularly where the municipality also provides a backstop for the funding.



## Publicly Funded (i.e. City, County)

Bond funding is the most traditional funding option for municipalities - particularly for those cities that own a municipal electric system.



## Self funded via debt or existing equity

This is generally complemented with additional external sources of capital.

**Hybrid: Combination of public and private (eligible matching fund)**



# Funding and application outlook

## + Funding and grant programs are becoming extremely competitive

Prioritized to eligible service areas and the following criteria:

- Service to the highest number of households
- Areas that are the most rural
- Networks meeting min. download and upload speeds

## + Compressed application and delivery timelines

in favor of deployment commencement

## + Delivery milestones need to be adhered to

the right partnerships and delivery approaches are critical to avoid penalties

## + Network quality and low latency

## + Cost of services:

Affordability and accessibility is a key consideration



### Take-away:

## Readiness is key to success

Anyone seeking funding in 2021 needs to be 100% prepared before the application window opens.

# Typical grant application requirements

Funding program requirements vary, however most applications at will require:

Defined project scope  
and budget

Partner and contractor  
identification

Company financials

Comprehensive project  
plan and schedule

### **Eligibility assessment**

Letters of support  
Statement of need  
Other funding awarded in the  
project area

Due diligence process



## Considerations for funding and delivery success

---

- 1. Planning and budget considerations**
- 2. Determining the best-fit delivery approach and partners**
- 3. Tools to plan and deliver networks more efficiently**



# 1. Planning | Creating a “shovel ready” project plan

There are three phases to a “shovel ready” grant project plan that should be built into any application:

Pre-Build Plan	Build-out Plan	Post Build Operations
 <b>Budget</b>  <b>Environmental Approvals</b>  <b>Tackling items with long lead times</b> <ul style="list-style-type: none"><li>✓ Pole attachment agreements</li><li>✓ Materials (Buy American)</li><li>✓ Permitting</li><li>✓ Procurement</li></ul>	 <b>Schedule and timelines</b>  <b>Quality Inspection</b>  <b>Progress Reporting</b>  <b>Contingencies</b>	 <b>Reporting</b>  <b>Operational Sustainability And monetization</b>



# 1. Planning | Begin with the end in mind

---

## Consider a build strategy and tools with flexibility built-in

- ✓ Redirect resources optimally without commercial restrictions
- ✓ Respond to internal and external delivery factors, including material and resource shortfalls
- ✓ Dynamically shift according to changing strategic priorities

## Solve for the structural disconnect between design and construction

- ✓ Network design is the key deliverable to define project scope and budget accurately
- ✓ Bottom-up, data-driven approach to network deployment
- ✓ Investing in a high-quality, digital design

## Bring forward downstream requirements

- ✓ Map downstream system requirements to As-built data collection by field crews
- ✓ Systematic, consistent and accurate data collection



## 2. Delivery | Mitigating risk and planning for contingencies

Forget linear timelines  
and plan to work in  
parallel on all elements  
of the build

Pay attention to  
contractor cost,  
retention and  
performance

Capture your post-  
award reporting as you  
go along rather than try  
to capture everything  
after the fact



## 2. Delivery | Determining the right deployment model

---

### Contractor Selection

- ✓ What do you need them to deliver for you?
- ✓ What are you asking your contractors to do?
- ✓ Do they have the right buying power, crews, track record?
- ✓ What is their bonding capacity?

### Project Management

- ✓ Will you be building an internal PMO or outsourcing?
- ✓ What are your budgeted costs for PM?

### Tools

- ✓ How are leveraging digital tools to more efficiently plan, design, construct and operate the network?

### Procurement

can make or break a project depending on the number of procurements that are required and the time it takes to contract for each vendor.



## 2. Delivery | Meet delivery milestone build-out requirements

# 1.

### Trusted delivery partners

Proven contractors and technology vendors to ensure an efficient build and to 'get it right the first time'

# 2.

### Delivery confidence

Build predictability, flexibility and overall confidence that the network rollout will meet time, cost and quality expectations.

Prepare for accelerated delivery.

# 3.

### Early identification of at-risk delivery

Real-time progress visibility enables:

- + early identification of performance issues to avoid post-award penalties
- + better build decisions.

# 4.

### Customer prioritization and completion tracking

Define a build strategy based on optimal build sequence by priority customers and zones

Prepare for accelerated delivery.

### 3. Technology | Eliminate traditional inefficiencies



#### Remove manual, paper-based processes

Eliminate physical construction prints and manual intervention with an entirely paperless network delivery

Maximize user **productivity and accelerate speed-to-market** and customer connections



#### Optimize workforce scheduling

Field teams need to be as productive and efficient as possible

**Daily task optimization and automation** = *new levels of field productivity*

Field teams are delivered tasks that are ready to commence, **based on an optimal build sequence**



#### Progressive QA, change & As-built data processes

Traditional QA, change management and redlining processes are highly manual and undertaken at project completion

Integrate **end-to-end construction requirement into a parallel workflow** delivering real-time construction updates to downstream systems.



#### Permit management

Permitting can be a barrier to deployment and cause unnecessary delays

Utilize technology to **efficiently identify permitting dependencies** and build these into a **sequenced construction workflow**



### 3. Technology | Make smarter, faster build decisions

A single, geospatial view of progress for all stakeholders equals increased control and visibility

- ✓ Monitor deployment progress in real-time against census block or priority zone objectives
- ✓ Optimize performance issues, at-risk delivery, and resource utilization
- ✓ Maintain a single 'truth' for faster time-to-market, customer connections and operations handover



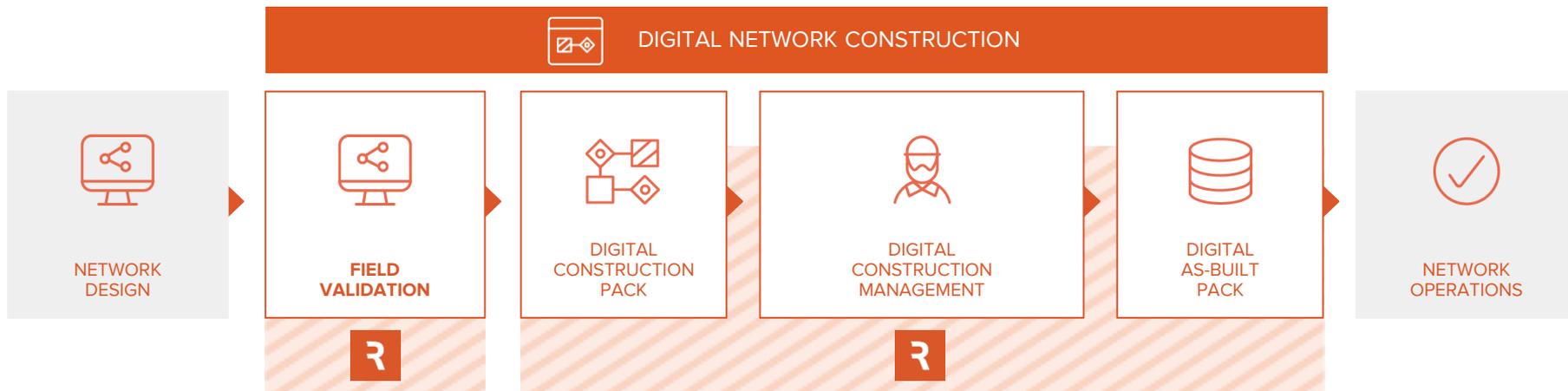


## Considerations for funding and delivery success

---

- 1. Planning and budget considerations**
- 2. Determining the best-fit delivery approach and partners**
- 3. Tools to plan and deliver networks more efficiently**

# Digital Network Construction | Overview



## DESIGN

Convert network designs into sequenced tasks for field crews,

## CONSTRUCTION

build faster without manual, paper-based processes

## HANDOVER

with accurate asset data at completion.

DATA-DRIVEN | GEOSPATIAL | ASSET-BASED | AUTOMATED | OPTIMIZED



# Craighead Electric Cooperative



Entirely paperless network delivery to cover 50% of the 30,000 members in three years has been achieved in less than 18 months. Efficiency drivers identified:

- Streamlined scope management and digital work orders delivering live construction updates
- Access to real-time geospatial progress views enables informed decisions without construction delays
- Progressive As-built data and delivery to network operations to connect members faster

## Jonesboro, AR

30,000 homes and businesses

\$110m | 5,000 miles fiber

55%

ahead of schedule with reduced CAPEX

84%

faster OSP deployment vs planned

75%

saving in admin & field supervisory spend

# City Utilities of Springfield, Fiber Expansion



**City Utilities of Springfield  
(CU), MO**

113,000 homes and  
businesses

\$120m | 1,000 miles fiber

CU and TBG Network Services are pioneering an innovative Utility Lease Model, where utilities invest in fiber infrastructure while leasing fiber capacity to top-tier ISP, CenturyLink.

Render is enabling delivery of fiber expansion faster and at a reduced cost. Construction teams can view production in real-time, including delivery of As-built data delivery including QA as the construction is completed.

Six months in, best-practice digital approaches have been ramped quickly with field productivity gains significant construction and administration efficiencies.

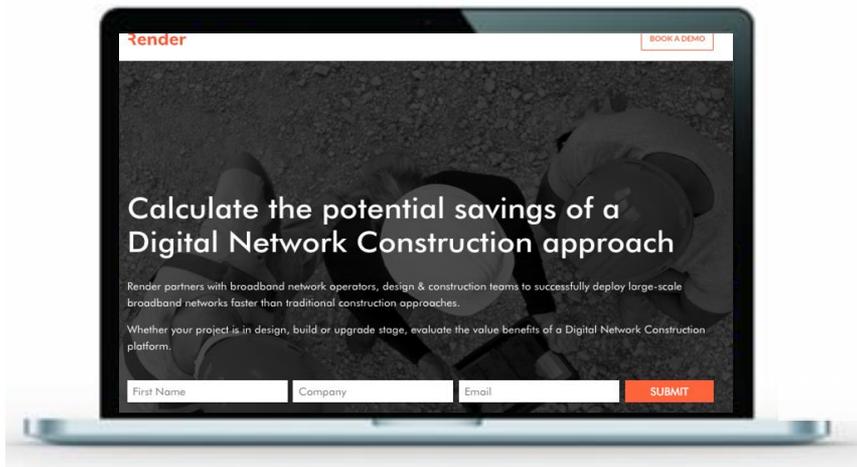
*“Render introduces valuable operational efficiencies that will complement our overall technology strategy. The Render platform introduces an innovative approach that addresses logistical complexities typically associated with projects of this scale.”*

**Thomas Reiman, President, TBG Network Services**

Please submit your questions via the Chat window.



# We're here to help



## Request our project calculator template

for preparing your design and construction scope and understanding potential savings of a digital deployment approach.

### Get in touch:

[lori.sherwood@rendernetworks.com](mailto:lori.sherwood@rendernetworks.com)

or click the meeting link we have shared in the Chat window to schedule a 15-min call.

Also, please take a moment to fill out our feedback survey:

<https://go.rendernetworks.com/webinarfeedback>

# Render