Building a case for efficient network deployment

How to connect more customers within a given funding allocation

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Today's speakers

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CEO  
Render Networks

Dan Flemming  
Co-Founder  
Render Networks
Fiber investment is the future of 5G & rural broadband

Network data consumption is predicted to grow at an annualized rate of 35% to 2025

150b USD of fiber needed in response to economic opportunity and foundational rural broadband coverage*

5G service to major metro areas will require 1.4m miles of fiber, that’s not including small markets or rural communities

Investment in network infrastructure will need to increase up to 60% by 2025

USDA & FCC Rural Digital Opportunity Fund $20.3B investment over 10 years to support rural broadband deployment

*Deloitte: The need for deep fiber
It’s more important than ever to deliver networks efficiently

- Increasing Competition
- Limited window of opportunity
- Unprecedented Govt support
The scale of today’s networks has increased significantly.

A 100,000 premise rollout will require over 80,000 tasks and 720,000 transactions.
The ‘unknown unknowns’ of network deployment

Feasibility decisions made on traditional approach assumptions

Structural disconnect between network design and construction

How to best utilize technology at each project stage.

Underestimating the data management challenge and downstream impact to project durations & cost.
Identifying design & construction efficiencies

PLAN

FEASIBILITY/FUNDING

NETWORK PLAN

DESIGN

DESKTOP DESIGN

FIELD VALIDATION

FINAL DESIGN

CONSTRUCT

CONSTRUCTION MANAGEMENT

NETWORK OPERATIONS

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The goal in the first three years was to cover 50% of the 30,000 members. This will been achieved in less than 18 months.
Craighed Electric results with Digital Network Construction

- **55%** ahead of deployment schedule
- **84%** faster OSP deployment than planned
- **75%** saving in forecast resource spend
Let’s examine cost & efficiency impacts

### Digital Network Construction Financial Impact

<table>
<thead>
<tr>
<th>Category</th>
<th>Savings</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Design Savings</td>
<td>-28%</td>
<td>-$1,200,000</td>
</tr>
<tr>
<td>Project Management Savings</td>
<td>-33%</td>
<td>-$3,220,000</td>
</tr>
<tr>
<td>Contractor &amp; Material Costs</td>
<td>-33%</td>
<td>-$6,400,000</td>
</tr>
</tbody>
</table>

#### Total Value Benefits

- **Total Value Benefits ($5)**: $12,820,000
- **Total Value Benefits (%)**: 13%

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### Project Budget

Enter the % for your project in grey boxes below, we have provided industry standards that can be used as a guide.

<table>
<thead>
<tr>
<th>Budget Category</th>
<th>Value</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Project Value</td>
<td>100,000,000</td>
<td></td>
</tr>
<tr>
<td>Network Design</td>
<td>6%</td>
<td>10%</td>
</tr>
<tr>
<td>Project Management</td>
<td>14%</td>
<td>15%</td>
</tr>
<tr>
<td>Contractor &amp; Material Costs</td>
<td>70%</td>
<td>15%</td>
</tr>
<tr>
<td>Contingency, Margin &amp; Allowances</td>
<td>10%</td>
<td>10%</td>
</tr>
</tbody>
</table>

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What are the efficiencies?

- Productivity
- Financial Savings
- Project Schedule Advancements
- Connect More Customers
How efficiencies are impacting the CECC project

Jeremiah Sloan
Manager Fiber Assets
Craighead Electric Cooperative, AR
Please submit your questions via the Chat window.
Calculate the potential savings of a digital approach

Want to learn more?
Access Render’s Digital Network
Construction value calculator:
Render