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Extraordinary

## Accelerate Fiber Rollout Using Digital Workflow Strategy

Reduce time-to-market of FTTP delivery by 45%

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# Lack of a single solution for Opportunity identification, Planning, Build, and Release (OPBR) affects time-to-market of Fiber-to-the-Premises (FTTP) rollout

There is a **big push by major countries across the globe, to deliver full-fiber broadband** to millions of premises in the next 5-8 years.

## Major challenges faced by fiber operators and service providers

Fiber operators and service providers are striving to meet the periodic targets for fiber rollout. However, they encounter numerous challenges across the OPBR workflow, which delays the fiber releases and increases the average cost per premises (CPP).



### **Multiple siloed systems affect the time-to-market**

Multiple siloed systems involved from opportunity planning to release management stages



### **Lack of visibility to measure the progress**

Multiple partners manage premise releases through different stages of implementation. There is a lack of visibility of premise serviceability to measure the progress



### **Limited automation**

As 50+ teams are involved in fiber releases, there is a lack of referential integrity between network plan and build



### **Increased CPP**

As time to build the fiber network takes more time, it increases the average CPP

Microsoft and several telecoms are part of a plan to wire rural America

**Source** – [Bloomberg](#)

As part of the Project Gigabit, UK Govt is targeting to cover 85% of UK homes to have gigabit broadband available by 2025

**Source** – [UK Govt](#)

US Government has promised 35% of Rural America to have high-speed internet over 8 Years

**Source** - [Forbes](#)

Multiple **siloed and disparate systems require multiple planning and build partners, which slows down the process of network** releases and results in more back-office work

# Challenges magnified due to **diversified FTTP** landscape which lacks an **integrated workflow** and results in delayed fiber releases



Fiber rollout lifecycle



## Business Challenges

Partner management, time to build, lifecycle timeframe, managing the costs, regulatory compliance, regional consideration, admin intensity, siloed processes /duplication of effort, ROI, truck-roll

1. Opportunity Phase	2. Plan Phase		3. Build Phase		4. Release Phase	Reporting and Monitoring	
Opportunity Identification (GIS Based)	Civil/Cable Planning Pack Management	BOM & SKU Management	Build Management	Wayleave Management	Prospect Management, Sales and Self Care channel	Supply Chain and Billing Reconciliation	Assurance & Monitoring
Master Address and Opportunity Management	Network Feasibility and Full Design		Street Work and Street Register Management	Field Engineering Survey System Internal External Custom	Network Inventories	Enterprise Data Reporting	

## Technical Challenges

People, security, business focus/priority, complexity on application landscape due to legacy network inventory systems, architectural complexity, technology evolution



To overcome the above challenges, **service providers need to shift from siloed network rollout to an OPBR unified workflow strategy**, which integrates the opportunity identification, planning, build and release management in an agile model. This will **enable service providers to release fiber across premises daily instead of monthly/quarterly basis**.

# End-to-end (E2E) unified digital workflow strategy for OPBR implementation

Integrate siloed application landscape and accelerate the time-to-market of FTTP releases

Understanding the key phases of OPBR strategy to achieve a faster network release

## Key phases

**1 – Opportunity** Phase where premises which needs to be made fiber, are mapped as an opportunity



**2 – Plan** Phase where logical networks are planned for the identified opportunity



**3 – Build** Phase where physical networks are built for the approved plan



**4 – Release** Phase where the built FTTP are audited and released for prospect management and sales to enable connection to the customers

## Recommendations to accelerate the time-to-market of FTTP releases in each phase

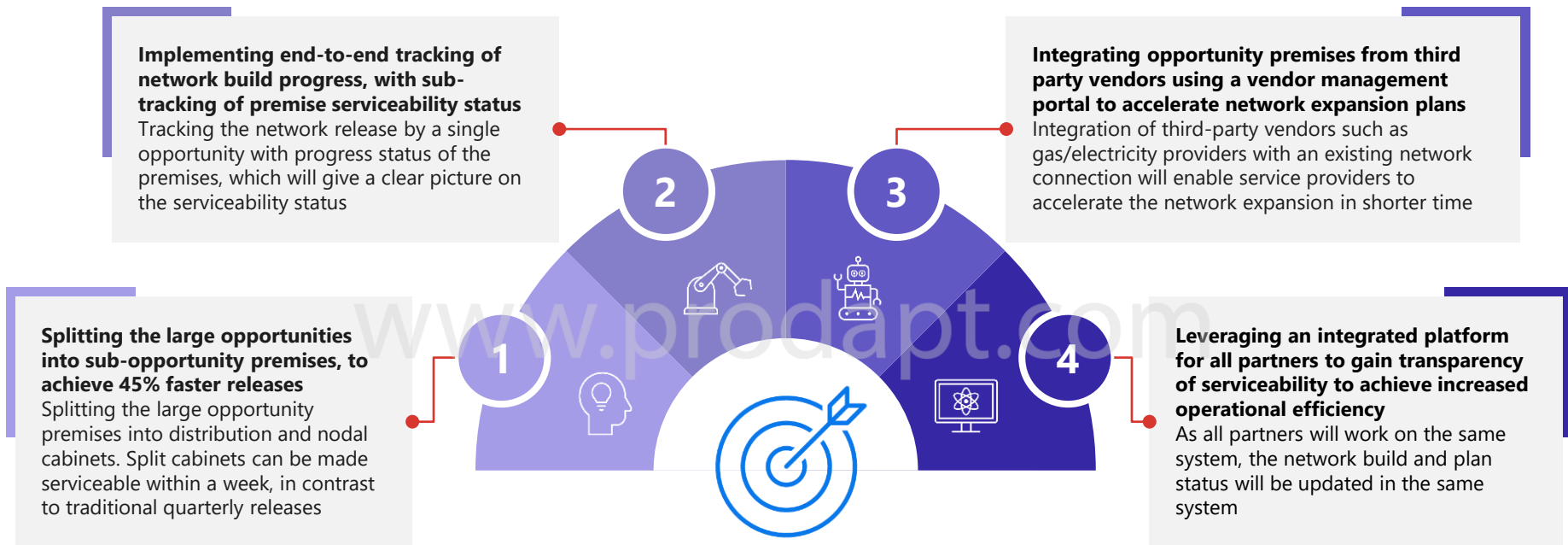
- **Create opportunities with GIS systems**, which will automatically flow into the downstream phases along with the premises details
- Use the options in downstream system to create/update the opportunities throughout the lifecycle of the FTTP
- Keep the GIS systems up-to-date with premises details, maps, and street-level details

- **Break down the opportunities and premises into sub-opportunities**. It can be further broken down to address groups that hold service nodes and sub-nodes for agile network planning
- Design the network either for single or multiple premises in the street as per the need and build it either in SOR (schedule of rates) or FPP (fixed price per premise)
- Integrate system with governance for plan approval and build process

- **Build the network with the same or different planning and build partners**. Necessary **logical separation of partners must be enabled to access the system**, which will conceal commercial facts between partners who work in parallel across all phases.
- Set the workflow to handle the tasks between internal and external engineering teams
- Leverage the supply chain and billing reconciliation integration, as partners tend to raise frequent purchase orders during the build process

- Onboard existing inflight FTTP opportunities from the 3rd party with a full design network plan
- Ensure that the field engineering and auditing is a part of the workflow, to automate the network release journey

# Implementing the key levers across the OPBR phases to accelerates the build cycle, while reducing the cost



With these key levers, service providers can achieve **45% faster premise releases** and **reduce the average cost per premises (CPP) by 35%**

# Splitting the large opportunities into sub-opportunity premises, to achieve 45% faster releases



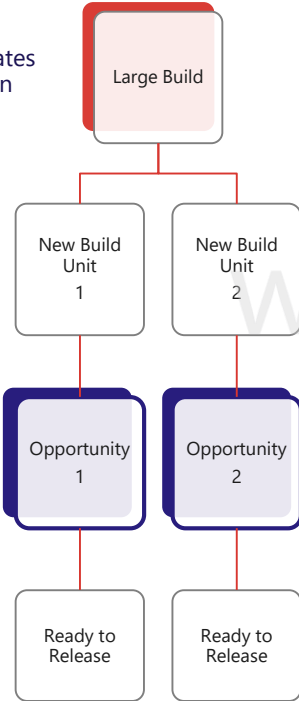
**Traditional approach:** Fiber rollout is achieved per quarter

Opportunity team identifies and creates new opportunity in siloed system

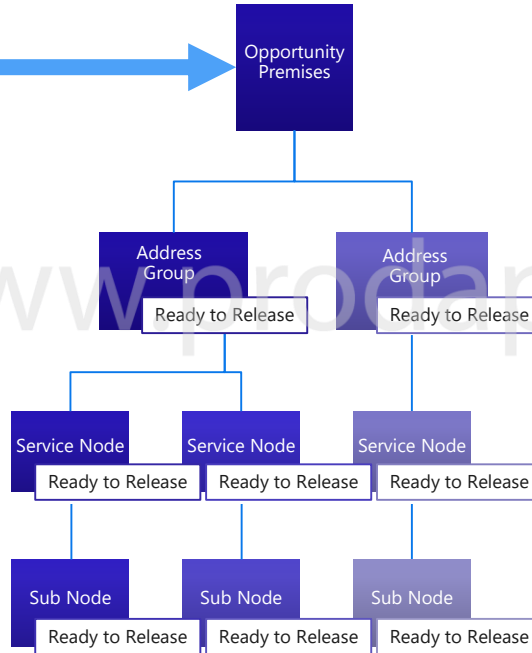
Build team creates a new build and maps the opportunity premises

Governance team audits the physical works and fiber details

Premise release is achieved on a quarterly basis



**Proposed approach:** Splitting the opportunity premises into distribution and nodal cabinets



**Premise release is achieved on weekly basis**

## Challenges in rolling out the fiber network using a traditional release process

- In a traditional approach, fiber network rollout is achieved quarterly due to the time taken to complete the full builds
- Even if some premises are built and are ready to be powered-on, **it needs to wait until the entire opportunity premise is completed**, thereby delaying the rollout
- **Multiple teams such as the opportunity planning team, build team, governance team, etc., must get involved** manually to create and manage the fiber and premises-related activities and publish the final release every quarter

## Recommendations

- **Split the large builds into address groups** and service/sub-nodes to accelerate rollouts
- Instead of **releasing by opportunity**, split the opportunity into subcategories called **address groups** to enable monthly release of the premises
- **Split the address groups into L3 service node and L4/L5 sub-node** to enable the release of premises every week

## Benefits

- Premises can be released on **monthly** and **weekly basis** instead of waiting for the quarterly release
- This results in **45%** faster premise releases when compared to the traditional process

# Implementing end-to-end tracking of network build progress, with sub-tracking of premise serviceability status

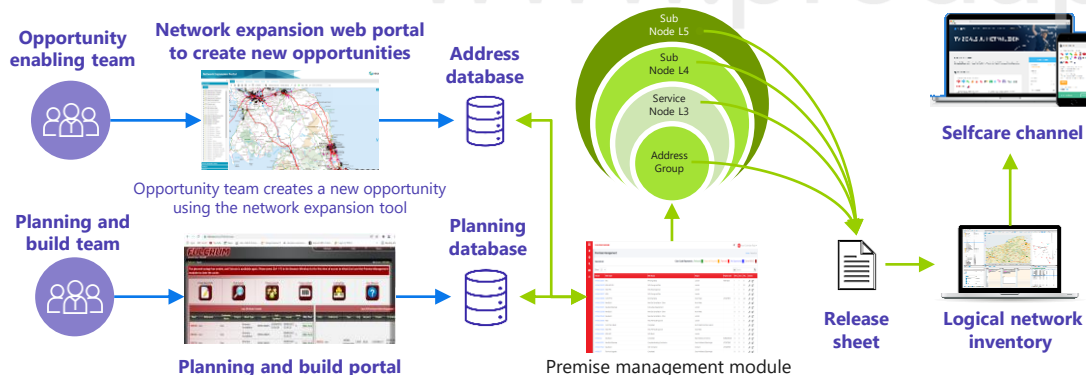
## Illustration of opportunity ID/premises tracked across the lifecycle of OPBR in service providers' web portal

### Traditional process for tracking the network build progress at opportunity level

#### Planning and build portal



### Proposed process for tracking the network build progress at opportunity level



## Challenges

- The traditional fiber network expansion process lacks end-to-end tracking of the premise, from the opportunity to release
- Manual intervention is required to manage a large number of premises, which is time-consuming and prone to human errors
- Reporting the serviceability status of the premises clearly is challenging and it can be achieved from the opportunity level only

## Recommendations

- **Implement a premise management module** to maintain premises related data in one place
- **Configure the system** to enable the user to track the status of the premises from the opportunity to release
- **Automate the release process**, to reduce the manual work
- Ensure that the system **generates the release sheet and sends them to the next module**, based on the status of the opportunity

## Benefits

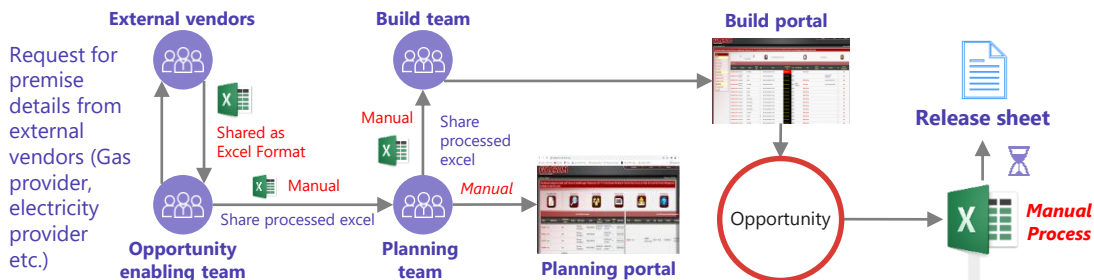
- Opportunity can be tracked and reported accurately
- Risks and issues of building an opportunity can be obtained

# Integrating opportunity premises from third party vendors using a vendor management portal to accelerate network expansion plans

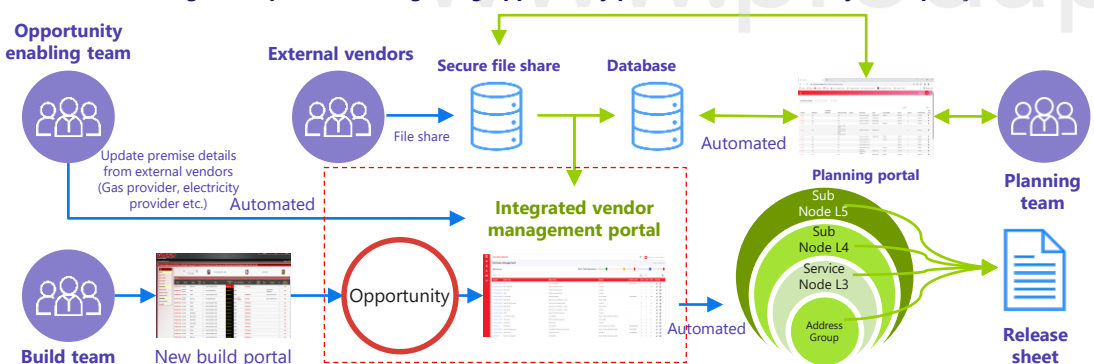


## Traditional system for integrating external premises maintained by external vendors

Multiple siloed systems with need for manual intervention



## Vendor management portal for integrating opportunity premises maintained by third-party vendors



## Challenges

- Incorporating the existing fiber premises is challenging, as third-party vendors (E.g., gas/electricity providers) maintain it
- Lack of system availability to maintain premise details
- Need for manual intervention results in human error and delayed processes

## Recommendations

- **Create a new API to integrate the new premises** from external vendors. Avoid using Excel-based approach, as it delays the execution of the process
- **Create a new system to maintain all the log** and audit data, to avoid manual errors during processing of the premise data
- **Provide access for third party vendors** to drop the premise-related data into the secure share path
- Leverage the new system to **access the shared file and process the data**, which can be managed by the planning team and the build team

## Benefits

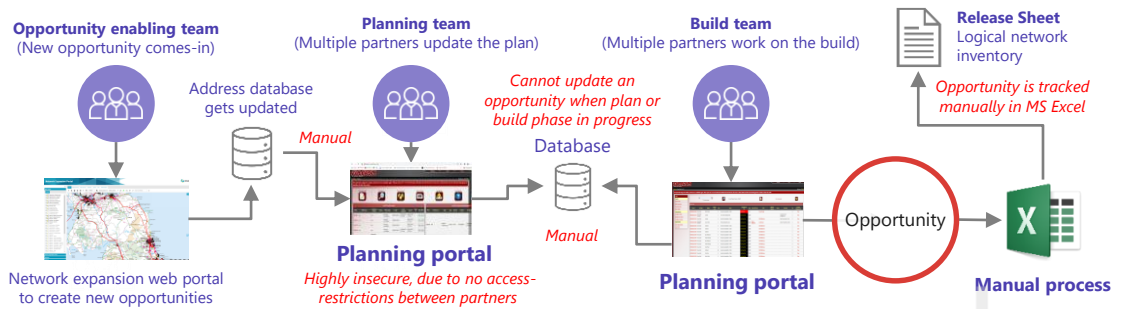
- Manual effort is reduced for various teams
- Implementing the system accelerates the fiber rollout rate by 45%



# Leveraging an integrated platform for all partners to gain transparency of serviceability to achieve increased operational efficiency



## Traditional process – Multiple partners work on siloed systems with numerous manual interventions



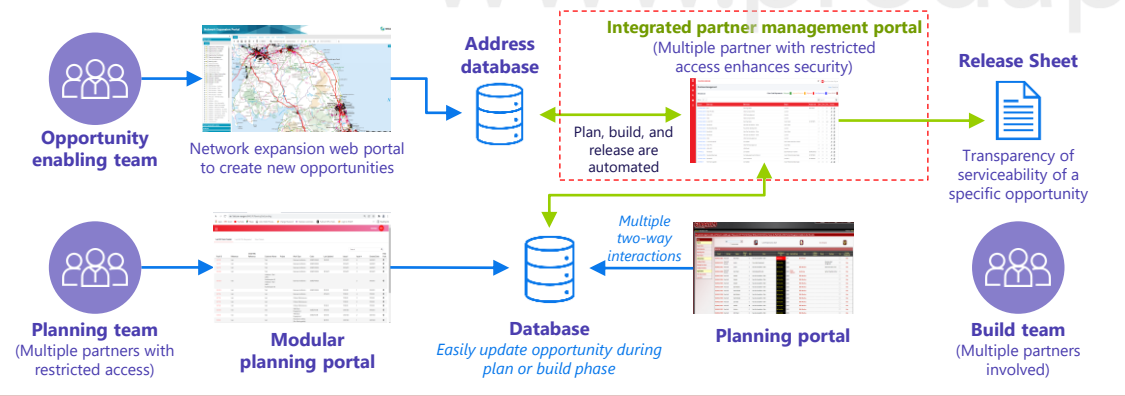
## Challenges

- Due to the involvement of multiple partners, there is **no central system to track the entire process** from opportunity to release
- The traditional process involves **Excel-based release sheets**, which is time-consuming and prone to human errors as multiple partners work on the same document
- **Critical information cannot be restricted/protected** and are visible to all partners, leading to data security risks and confidentiality issues
- Current systems can be built only with T&M type, which is costly

## Recommendations

- **Implement an integrated platform for all partners** to gain transparency of serviceability
- **Introduce a new access role**, where the progress can be checked and tracked from opportunity to release
- Restrict the external partners and vendors from accessing the critical data. **Provide access only to the required details**, thereby protecting the integrity and confidentiality of the process

## Proposed process - All partners work on the same system - Plan, build and release are automated



## Benefits

- Integrity and confidentiality
- Transparency of serviceability of a specific opportunity
- Reporting accuracy
- Reduced maintenance cost

# Benefits achieved by a leading fiber network operator in the UK after implementing the OPBR-based E2E digital workflow strategy

Implementing the **4 key enablers** as discussed in this insight, resulted in the following benefits.

↑ **45%**  
Faster time-to-market of fiber rollouts to premises

↓ **35%**  
Reduction in the average cost per premises (CPP)

↓ **50-70%**  
Reduction of overall manual efforts in the E2E fiber rollout workflow

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# THANK YOU!

