

# Project Description: Enhanced Security & Streamlined Development

## Introduction

The RAN Quotation Tool is a sophisticated solution designed to empower partners (external users) to create quotations for customers efficiently. It encompasses Radio Access Network (RAN) offerings, including services, maintenance/care services, and network management with its associated services and maintenance/care components. By replacing the previous method of sharing Excel files directly with end users, this tool enhances security, ensures data consistency, and delivers an intuitive user experience through a modern, integrated architecture.

## System Architecture

The tool leverages the Microsoft Power Platform and related technologies to provide a robust and scalable framework:

- **Frontend: PowerApps**
  - Offers a user-friendly interface for partners to create, review, and manage quotations seamlessly.
- **Backend: SharePoint and Excel**
  - **SharePoint:** Serves as a secure data storage solution, hosting user-submitted data in lists and storing the Excel logic file in a library.
  - **Excel:** Houses the business logic and data used to populate cascading dropdowns, designed for easy maintainability by the tool owner team.
- **Automation: Power Automate**
  - Facilitates seamless data translation between the PowerApps UI and Excel backend.
  - Utilizes Excel Office Scripts to read data for UI dropdowns and write user inputs back to Excel.
- **Analytics: Power BI**
  - Provides internal users with analytics capabilities to monitor and evaluate the tool's usage patterns and performance.

## Key Features

The RAN Quotation Tool is equipped with features that streamline the quotation process and enhance usability:

- **Automatic Data Synchronization**
  - Ensures that any additions or changes in the Excel logic file are instantly reflected in the PowerApps UI, keeping the interface up-to-date without manual intervention.
- **BoQ Review and Editing**
  - Allows users to review the Bill of Quantities (BoQ) prior to submission, ensuring accuracy and completeness.
  - Supports editing of existing BoQs to accommodate evolving customer or partner requirements.
- **Efficient Data Handling**
  - Stores user-submitted data securely in SharePoint lists.
  - Retrieves existing data from SharePoint for display and modification in the UI.
  - Dynamically populates cascading dropdown options from the Excel logic file stored in the SharePoint library.

## Benefits for External Users, Partners, and Value-Added Resellers

The RAN Quotation Tool delivers significant advantages to external users, partners, and value-added resellers, enhancing their efficiency, autonomy, and overall experience:

- **Rapid Quotation Generation:** Partners can generate detailed quotations in less than five minutes, significantly reducing turnaround time and accelerating decision-making processes.
- **Increased Autonomy:** The tool eliminates the need for partners to contact the organization for the creation of Bills of Quantities (BoQs), enabling independent management of standard requests.
- **Efficient Customization Handling:** Standard customizations are seamlessly handled within the tool, while only high-level customizations require direct organizational support, streamlining the process for all parties.
- **Integrated Support Portal:** A built-in support portal, accessible within the same PowerApp as a separate screen, allows users to raise bugs, request enhancements, and provide feedback directly, fostering collaboration and continuous improvement.
- **Always Up-to-Date:** Partners always have access to the latest prices and discounts automatically incorporated into the tool, removing the need to check with the organization for updated logic files.

## Security Measures

Security is a cornerstone of the RAN Quotation Tool, protecting both data and logic:

- **Logic Security**

- The business logic resides in Excel but is safeguarded by SharePoint's security model and the Power Platform, preventing exposure to end users.
- **Access Control**
  - Access is restricted to authorized users managed through a Microsoft Entra security group.
  - Even if the tool's URL is shared, unauthorized users cannot access it unless explicitly added to the security group.

## Improvements Over Previous System

The RAN Quotation Tool addresses multiple shortcomings of the earlier approach, where Excel logic files were shared directly with end users:

- **Security Enhancements**
  - Eliminates the risks associated with distributing sensitive Excel files, protecting both logic and data from unauthorized access.
- **Version Management**
  - Guarantees that users always interact with the latest Excel logic file, as the UI dynamically connects to the updated backend, resolving version control issues.
- **Ease of Maintenance**
  - Enables the tool owner team to update the logic file using their existing Excel skills, eliminating the need for advanced IT competencies.

## Conclusion

The RAN Quotation Tool revolutionizes the quotation process for RAN offerings by delivering enhanced security, streamlined development, and an optimized user experience. Through its integration of PowerApps, SharePoint, Excel, Power Automate, and Power BI, it provides a secure, efficient, and maintainable solution that meets current demands while laying the groundwork for future enhancements and analytics-driven insights. The inclusion of tailored benefits for external users, partners, and value-added resellers ensures that the tool not only improves internal workflows but also strengthens partnerships and accelerates business outcomes.