Federal Aviation Administration

Overview of the FAA's FTI Network Engineering Environment

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1.0 Purpose

This paper provides an overview of the FAA's network engineering function and describes the extensive interaction between the FAA and the FTI Service Provider in this area.

2.0 Background

The FAA's FTI network engineering team is responsible for coordinating with FAA customers, both NAS and non-NAS, to assess their telecommunications requirements, identify alternatives and ensure that proposed architectural solutions will properly integrate into the FTI infrastructure. Active engagement with the FTI network engineering team is a requirement for FAA programs to support their investment and implementation planning. The FTI network engineering team collaborates with FAA programs to understand their architecture, business case and implementation strategies and finalize telecommunications requirements in order to ensure successful investment decisions. Beyond the design, implementation and operation of FTI services at required performance levels, the FTI Service Provider plays an integral role in assisting the FTI network engineering team with new program integration assessments, particularly when service needs require establishment of new service class attributes or variations to the existing concept of operation.

3.0 Description of Current Environment

The FAA applies rigorous management and oversight over the design, provisioning, implementation and operation of FTI services. The FAA's FTI network engineering team is the entry point for customers that require enterprise wide communications services such as telecommunications, enterprise messaging and other infrastructure services (e.g., security gateways, domain naming services, etc.). The team relies on a cooperative and collaborative partnership with the FTI Service Provider to ensure that FTI services are properly designed to meet the performance requirements. The team also oversees the service validation before a new service offering is implemented. As depicted in Figure 1 below, this partnership initiates with the specification/delineation of requirements and the subsequent provisioning of an approved infrastructure and associated service offerings. This partnership continues throughout the contract period of performance to account for new and modified service needs, emerging FAA programs and new enterprise wide capabilities.

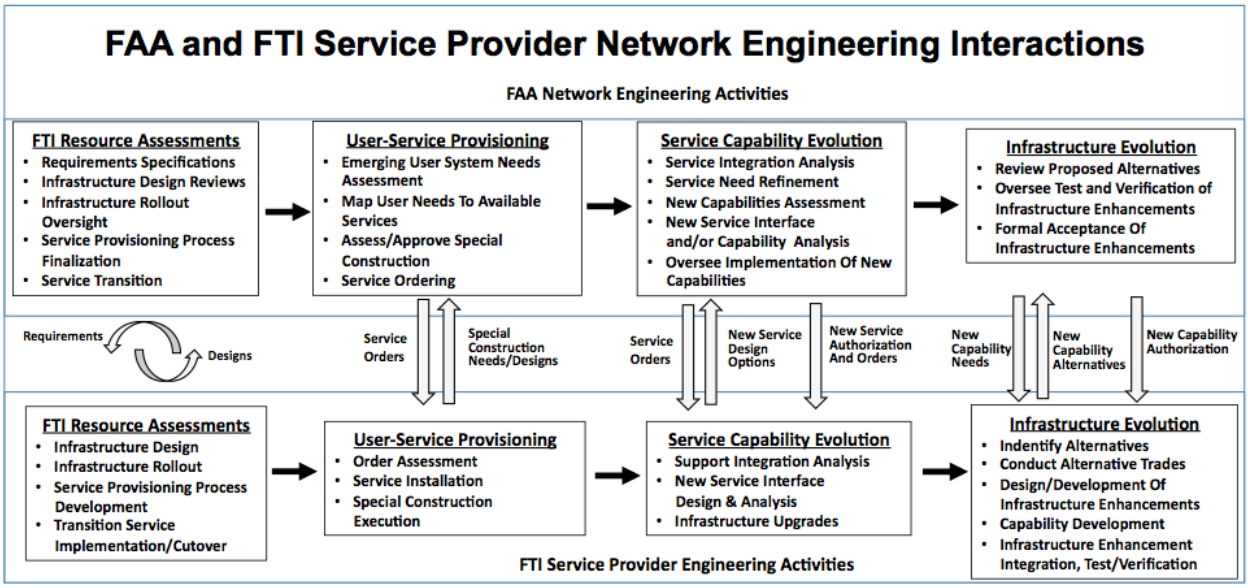

Figure 1: FTI Network Engineering Interactions

The FTI Service Provider often participates with the FAA network engineering team in meetings with telecommunication service users and is responsible for developing solution alternatives to meet program requirements. This active participation also extends to assisting the team with a wide range of technical priorities associated with network planning and engineering such as:

- Assessing interface and system interoperability requirements
- Analyzing the need for new service offerings or modifications to existing service offerings
- Planning new facility establishment, facility relocation and facility consolidation
- Conducting network capacity analysis
- Conducting technology evolution analysis and associated transition strategies
- Conducting assessments, evaluation and validation of security architectures associated threats and vulnerabilities

4.0 FAA Critical Challenges

FAA customers have come to rely on the capabilities provided by the FAA's network engineering team and the FTI Service Provider described above. These capabilities are resource-intensive and are projected to increase as FAA adopts more complex technologies (e.g., SDN, Cloud, etc.).

5.0 Questions

1. Do you offer network engineering services like the capabilities describe above? If so, provide a detailed description of the individual engineering services including the interactions between you and the customer.

2. What network engineering services are available to customers either as separately priced service offerings or bundled into the price of your telecomm and other enterprise wide service offerings? Please indicate whether separate pricing or bundled pricing is more common for particular engineering services and the associated trade-offs (i.e., pros and cons) of the possible pricing approaches.

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