Sample Executive Summary from a Cisco Service-Oriented Network Workshop Service Engagement

This document is an example of a white paper executive summary from a Cisco® Service-Oriented Network Architecture (SONA) Workshop Service engagement for a diversified financial services company providing banking, insurance, wealth management, investments, and consumer finance. The complete 64-page white paper covers application-oriented networking proof of concepts, networking infrastructure services recommendations, and infrastructure design and management recommendations for an architectural approach.

The Cisco SONA Workshop Service engagement and white paper were delivered to this customer in April 2007. Each Cisco SONA Workshop Service engagement – and the resulting solutions white paper – is customized to perform an in-depth study of the real-world problems faced by the customer and to explore Cisco solutions of near-term value in addressing those challenges. Although we have found that many customers are dealing with similar challenges – ranging from service-oriented architecture (SOA) adoption through lean data center consolidation – each Cisco SONA Workshop Service engagement is customized to address the unique challenges of each customer.

Executive Summary

The main problem this customer asked Cisco to address was how the Cisco SONA framework could support their SOA implementation that was already underway, and enhance their rapid international expansion and other near-term business challenges. The intent of the Cisco SONA Workshop Service engagement was threefold:

1. To provide [Customer] with a clearer understanding of Cisco's SONA framework, technologies, and solutions.
2. To provide Cisco with a clearer understanding of [Customer]'s business challenges and IT objectives.
3. To collaboratively expose near-term opportunities and solutions to enhance or accelerate [Customer]'s IT strategy in support of its business strategy.

The Cisco SONA Workshop Service engagement identified recommendations for enhancing and facilitating [Customer]'s service-oriented architecture (SOA) strategy and ideas for several proof-of-concept (PoC) initiatives to demonstrate the feasibility and value of the recommendations. This document summarizes the ideas and recommendations developed during the Cisco SONA Workshop Service engagement, and describes how Cisco can help [Customer] better achieve their near-term business objectives.

Understanding [Customer]'s Strategy and Objectives

One Cisco SONA Workshop Service objective is to build a clearer understanding of [Customer]'s business challenges and IT objectives. This major international financial services institution's current strategic focus is planning for international expansion, and rapidly adapting changing business models in the face of increasing competition. [Customer] has consistently been first to introduce innovative solutions and advanced online delivery through an international network of

branches, subsidiaries, and representative offices located in the main international and regional financial centers.

Information technology (IT) has historically played a major role in supporting [Customer] business vision and innovation, with early and aggressive technology adoption underpinning the firm's strong execution through a period of explosive growth and global expansion. Examples of [Customer]'s technology leadership include:

- Internet banking
- A world-class call center (soon to be upgraded to an IP call center)
- A data warehouse with customer intelligence that provides the foundation for customer relationship management (CRM) delivered to branches and the call center to cross-sell, up-sell, and improve customer retention
- A private microwave network to branches with 99.99% availability
- A satellite backup
- A full-fledged disaster recovery capability

Continuing IT's role as a powerful enabler of the [Customer]'s business strategy, the IT organization began an ambitious IT transformation program. The strategic core of this transformation effort is a migration to SOA as the foundation for [Customer]'s applications. The objectives of the SOA strategy are:

- To provide a more flexible services architecture that can be rapidly and easily adapted through recomposition to address the evolving needs of the [Customer]'s business units
- To support [Customer]'s plans for international expansion
- To provide a more agile infrastructure that can rapidly adapt changing business models in the face of increasing competition

[Customer]'s SOA will provide it with an application architecture and infrastructure platform to operate on a larger scale in a more open and global competitive environment and to keep in step with the evolution of banking practices and converging technologies. [Customer] is investing heavily to develop its infrastructure and human resources.

[Customer]'s SOA transformation plan is well underway and represents a continuing, significant investment of planning and resources in architecture and infrastructure, much of the latter having been developed with assistance from Cisco. [Customer]'s approach to developing its SOA is well conceived and well planned and its approach has yielded some impressive early successes. [Customer]'s level of SOA maturity and competence is well above that of many other enterprise customers we have encountered. Accordingly, while [Customer] is keenly interested in technologies and techniques that can accelerate its schedule or reduce cost and risk associated with the existing strategy and architecture, it is justifiably reluctant to revisit or rework its architectural approach and strategy, or to jeopardize the existing infrastructure and operations. Introduction of any new technology and capabilities must be nondisruptive to current project plans, timelines, and business objectives while delivering net new value. This guidance was incorporated into both the conduct of the workshop and the recommendations contained in this report.

The Cisco SONA Workshop Service Engagement

In April 2007, [Customer] and Cisco collaborated in a Cisco SONA Workshop Service engagement to identify areas of potential benefit to [Customer]'s near-term business challenges. The discussion focused on the challenges associated with [Customer]'s SOA transformation and rapid international

expansion. Particular emphasis was given to how Cisco's application networking services and infrastructure technologies could be of near-term value within the context of [Customer]'s challenges without causing significant disruption to [Customer]'s current plans. [Customer] shared an overview of the [Customer]'s IT SOA strategy designed to address the business agility and flexibility challenges affecting current operations. The team used this understanding of [Customer]'s business challenges to explore areas where SONA could support [Customer]'s SOA transformation strategy, and the impact of those recommendations on the business applications and infrastructure.

The maturity of [Customer]'s SOA transformation efforts already underway allowed us to focus the workshop on detailed engineering discussions and ideas for how specific SONA services and infrastructure technologies can deliver value to [Customer]. The specific SONA services and technologies identified as having the greatest value to [Customer] included applications-oriented networking (AON) and a variety of integrated network services based on Cisco's foundational network systems. With these as focus, the workshop dialog covered a wide range of strategic issues and tactical approaches, with the following questions illustrative of the topics covered:

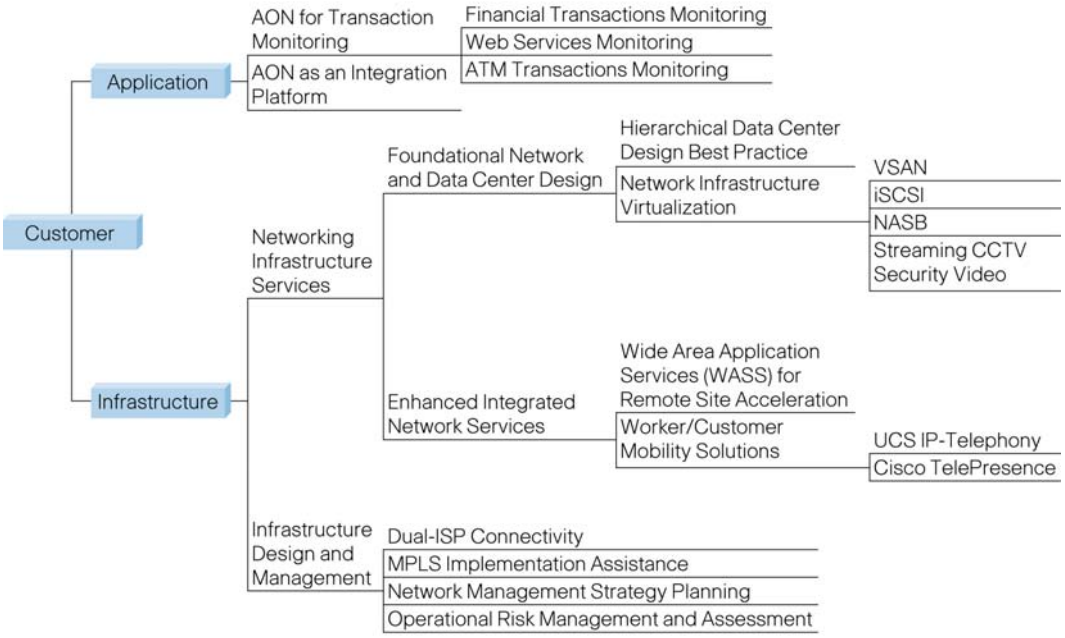
- What is the Cisco SONA framework, and how is this enterprise approach different from point technology solutions?
- How does the Cisco SONA framework apply to [Customer]? What services are relevant, and how can their advantages be introduced without disrupting existing operations?
- What infrastructure changes would be appropriate to support these services?
- How can we apply solutions that take advantage of both network and applications engineering expertise?
- What are the business and operational impacts and benefits of these recommendations?

To maximize the team's efficacy, we separated into two working groups, each of which consisted of [Customer] and Cisco contributors. One workgroup focused on detailing how applications-oriented infrastructure services could enhance [Customer]'s existing SOA framework, while the other identified infrastructure enhancements that would be of lasting value yet provide near-term benefit to [Customer]. Our teams reconvened to bring together and prioritize these ideas, and to outline, where appropriate, associated proof-of-concept (PoC) demonstrations to validate the benefits of the Cisco SONA Workshop Service recommendations. The recommendations and PoCs are presented below as applications-oriented services within the [Customer] SOA environment and as more general enhancement opportunities within the underlying [Customer] network infrastructure.

Recommendations and Proofs of Concept

The recommendations and PoCs fall into two main groups: those involving application networking services supportive of [Customer]'s SOA strategy and its applications, and those pertaining to the network infrastructure. The application networking recommendations are focused on the use of applications-oriented networking (AON). These comprise four PoCs: three PoCs having to with AON for transaction monitoring and one involving AON as an integration platform.

Figure 1. Overview of the Recommendations and PoCs



The infrastructure recommendations and PoCs divide into two main groups: networking infrastructure services and infrastructure design and management recommendations. The first group further breaks down into foundational network and data center design recommendations and enhanced integrated network services recommendations. The foundational design recommendations include major recommendations that Cisco believes will result in more robust, scalable, and manageable network architecture, one that will provide a solid foundation for [Customer]'s SOA strategy and beyond.

Each of the recommendations and PoCs was ranked during the Cisco SONA Workshop Service engagement using a simple high/low scale that captures the team's qualification of how disruptive to the business or to [Customer]'s IT strategy the recommendation would be if implemented (Table 1).

Table 1. Disruption Rankings

Ranking	Definition
Low	Can be implemented or accomplished with little or no change to the current architecture or strategy.
High	Will require significant change to current architecture or strategy.

A second ranking, using a high/medium/low scale, captures the team's qualification of the value the recommendation would deliver if implemented (Table 2). Using these rankings, a recommendation that is low in disruption and high on value is a potentially highly attractive choice to implement.

Table 2. Value/Impact Rankings

Ranking	Definition
High	Will deliver new capabilities or business value in addition to or complementary to existing architecture or strategy. New capabilities that are achievable in the short term with minimal disruption have highest priority.
Medium	Delivers some capability or business value, with potential for more value over the longer term.
Low	Little value or no new capabilities.

The rankings are not meant to provide an absolute ranking but to guide relative prioritization of each recommendation or PoC, leaving open the possibility of pursuing multiple PoCs of differing impact at the same time.

Application-Oriented Recommendations

Table 3 summarizes recommendations for new application oriented infrastructure services using AON. The first three involve using AON to monitor 3 types of transactions that are not currently being monitored in [Customer]'s environment. The results of the monitoring could be reported on a dashboard or similar reporting interface or logged to a log file for subsequent analysis. The fourth recommendation concerns using AON to provide integration services by having AON respond to Simple Object Access Protocol (SOAP) requests explicitly.

Table 3. Application-Oriented Infrastructure Recommendations and PoCs

Recommendation	Disruption	Value
Use AON for nonintrusive monitoring of financial transactions. Develop a PoC to demonstrate feasibility.	LOW	HIGH
Use AON for nonintrusive monitoring of Web services. Develop a PoC to demonstrate feasibility.	LOW	LOW
Use AON for monitoring ATM transactions. Develop a PoC to demonstrate feasibility.	HIGH	HIGH
Use AON to provide integration services sending SOAP requests to AON to perform needed integration services.	LOW	MEDIUM

These monitoring capabilities will provide [Customer] greater insight into the operation and performance of its SOA environment and improve governance of its services with almost zero impact on business transactions. Using an appropriate AON operating mode, this can be accomplished without risk to business operations. The fourth recommendation around integration services will be decoupled from business applications, thus providing needed flexibility for managing services provided to [Customer]'s channels.

Foundational Network and Data Center Design Recommendations

Table 4 summarizes two key recommendations for improving [Customer]'s overall network infrastructure based on designs validated by Cisco and best practices. Implementing these recommendations will provide a sound infrastructure foundation for the continuing development of [Customer]'s SOA strategy and will make for lower total cost of ownership resulting from best practice design principles.

Table 4. Foundational Network and Data Center Design Recommendations

Recommendation	Disruption	Value
Design and implement a "hierarchical data center" design using a distribution layer to address risks of [Customer]'s "collapsed core" design.	LOW to design, HIGH to implement	HIGH
Network infrastructure virtualization: Design and implement services including storage area network (SAN) virtualization, iSCSI, network-accelerated serverless backups (NASB), and streaming closed circuit television (CCTV) security video	MEDIUM	LOW to HIGH

[Customer]'s current "collapsed core" design defeats the fast switching advantages of its current core switches. The best practice design we recommend recaptures the benefits of the existing switching investment and provides a network that is easier to grow, understand and troubleshoot, thereby leading to a lower cost of ownership overall, among other benefits.

Network infrastructure virtualization draws upon a core precept of the SONA framework: reusing lower-level interoperable services to support multiple high-level business functions. In the case of Cisco's recommendations for [Customer], our recommended infrastructure virtualization

enhancements will enable enhanced capabilities in storage services, mobility and security, and management services. These upgrades to [Customer]'s network systems switching infrastructure provide a more robust and scalable environment in support of [Customer]'s growth and expansion.

Enhanced Integrated Network Services Recommendations

Table 5 summarizes recommendations for using services from the integrated network services and collaboration layers of the SONA framework.

Table 5. Enhanced Integrated Network Services Recommendations

Recommendation	Disruption	Value
Implement Cisco Wide Area Application Services (WAAS) over satellite links to improve application performance at international branches. Perform the research necessary to confirm the advantages of WAAS over satellite and develop a PoC if confirmed.	MEDIUM	MEDIUM
Investigate user and customer mobility and communications solutions for leveraging and virtualizing customer services and expertise. For example, develop a PoC using Cisco Telepresence to deliver "high-touch," high-value customer services to enable branch and international expansion.	LOW	HIGH

Cisco believes that deploying our WAAS solution over [Customer]'s satellite links to its international branches can improve the performance issues resulting from satellite delay or inherent in the application architecture. [Customer] should investigate this approach; if the investigation confirms the recommendation, [Customer] should consider a PoC leading to possible full-scale implementation.

Mobility, collaboration, and unified communications services have significant potential to improve and expand customer service particularly in view of [Customer]'s ambitious expansion strategy. For example, mobility solutions can enable relocation of personnel, while deployment of rich communications services based on Cisco Telepresence can extend high-value services to remote locations, thus taking advantage of the expertise of [Customer]'s banking specialists.

Infrastructure Design and Management Recommendations

Table 6 summarizes additional assistance, as identified during the Cisco SONA Workshop Service engagement, that Cisco can provide in support of some of [Customer]'s current design, management, and best practices initiatives.

Table 6. Infrastructure Design and Management Assistance

Recommendation	Disruption	Value
Cisco support for [Customer]'s Multiprotocol Label Switching (MPLS) implementation using industry best practices to help ensure that the implementation will deliver as expected with minimal risk.	LOW	HIGH
Define a network management strategy, develop a management strategy and plan.	LOW	HIGH
Design and implement a "dual ISP architecture."	LOW to design, HIGH to implement	HIGH
Conduct an operational risk management assessment (ORMA) to identify gaps and deviations from best practices with regard to operational processes and procedures.	LOW	HIGH

[Customer] is moving to a self-managed MPLS network to support connectivity among its places in the network. Cisco can provide assistance to the low-level design of [Customer]'s MPLS deployment using industry best practices to help ensure that the design will meet its objectives with minimal risk.

[Customer] has yet to define an overall network management strategy for how various tools should be integrated to support management of the network and services infrastructure. Such an initiative would evaluate [Customer]'s current situation, identify strengths, weaknesses, and gaps, and produce a network management roadmap and plan. Cisco Info Center is a SONA-ready solution that provides a high-performance, distributed, and integrated client-server system for alarm and event management from diverse sources, including many different vendor products and standard management platforms. Cisco Info Center is a tool that can support [Customer]'s network management strategy, including the MPLS.

[Customer] is moving to an "active-active" dual-ISP Internet connectivity design that will provide risk mitigation and business continuity should one ISP have a service disruption. Cisco can provide additional value by bringing our corporate expertise to review and assist with the network design and in minimizing the business disruption of implementing the designed solution.

An operational risk management assessment (ORMA) is a comprehensive evaluation of technology, people, processes, and tools in connection with the network infrastructure. The purpose of this assessment would be to assist [Customer] in identifying gaps and shortfalls in its operational processes as compared to industry best practices.

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