

Transform your business,
transcend expectations with our
technologically advanced solutions.

Professional Services

NTT America Professional Services



Agenda



PROFESSIONAL
SERVICES

1. Introduction
2. Professional Services Overview & Capabilities
3. Use case examples - Recent success stories
4. Process
5. Q&A

Unsurpassed Global Capabilities

GLOBAL

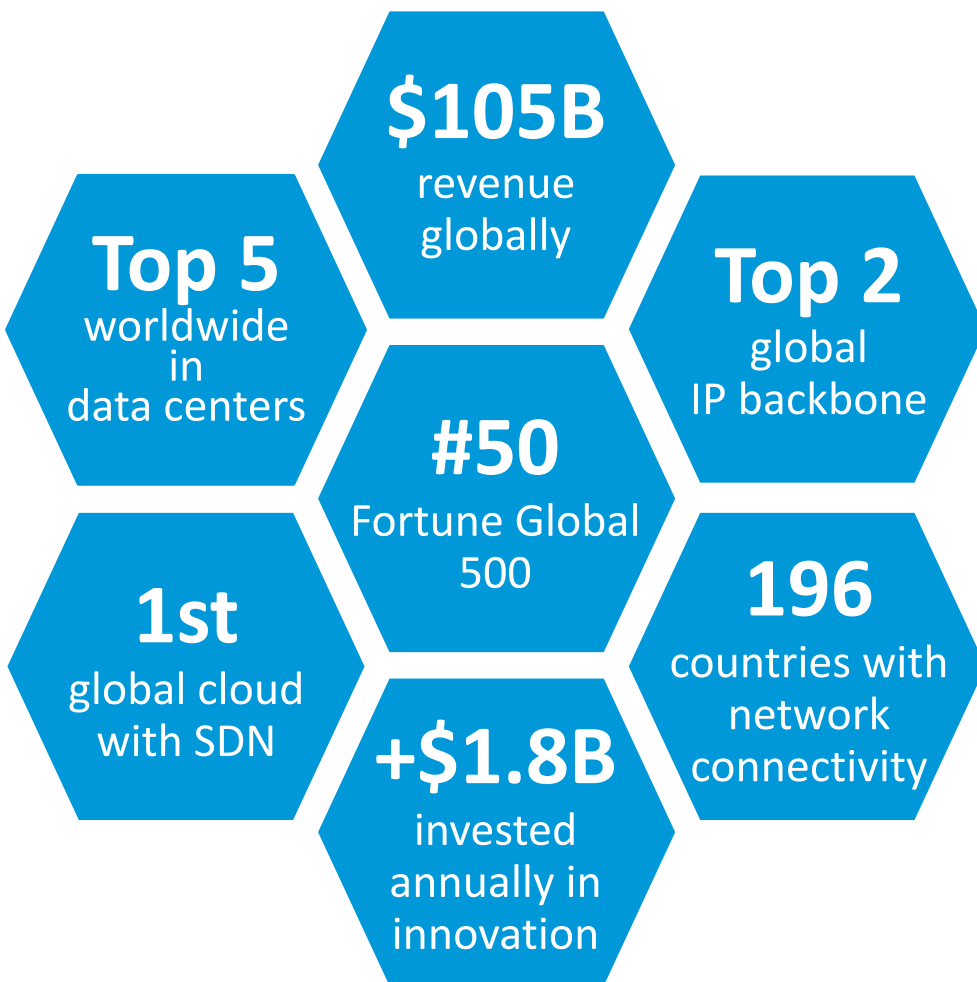


87 Countries
244 Data Centers
241,000 People

AMERICAS



15 Countries
10 Data Centers
19,000 People



EMEA

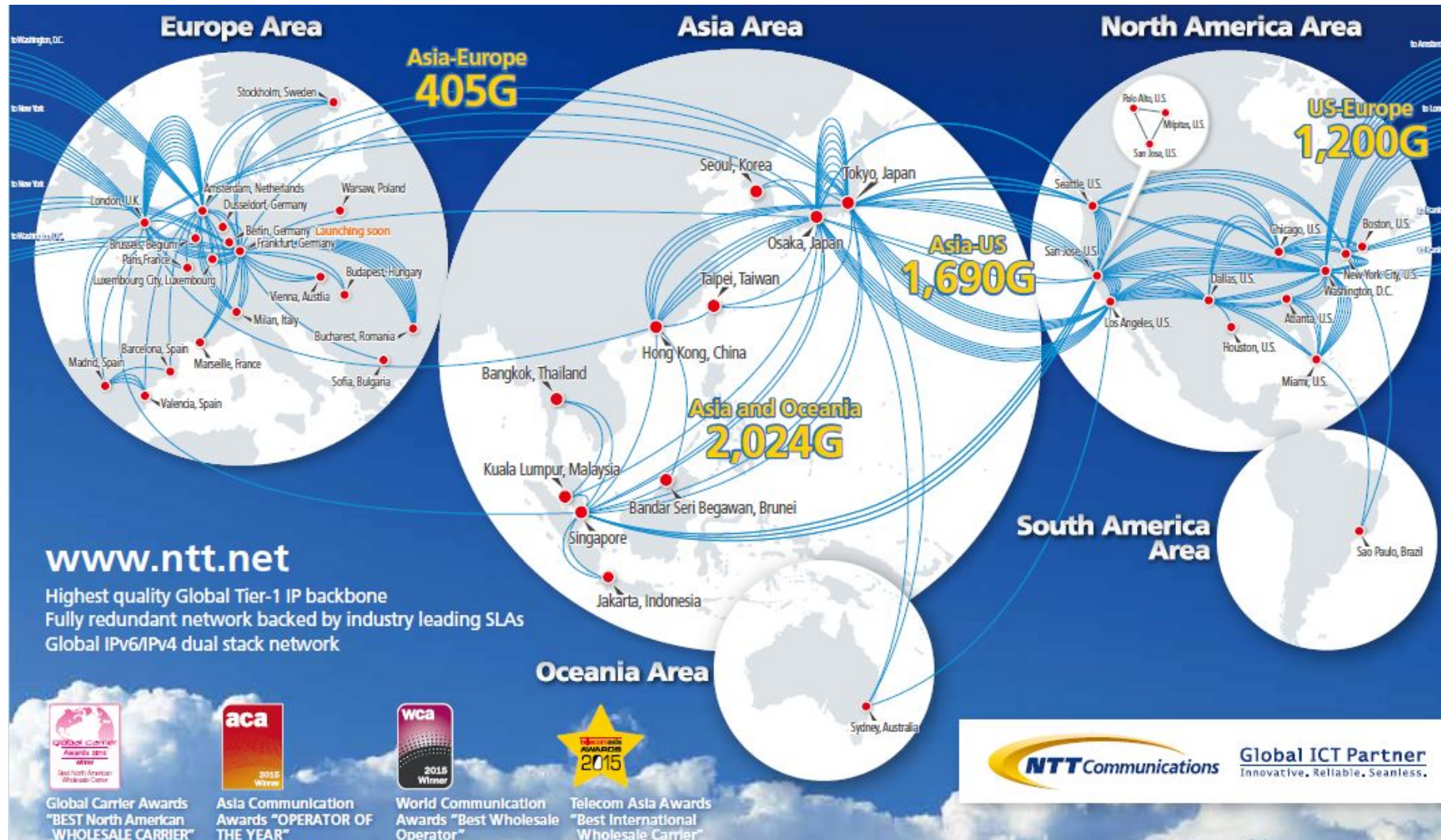


53 Countries
32 Data Centers
35,000 People

APAC



19 Countries
202 Data Centers
187,000 People



- NTT runs one of the world's top ranked Tier 1 IP backbones
- Best NOC service in the Industry (Engineer Available 24/7)
- Global single AS number enables stable network operation.
- Layer 2 Virtual Private Network solution
- DDos Protection Service

CLOUD

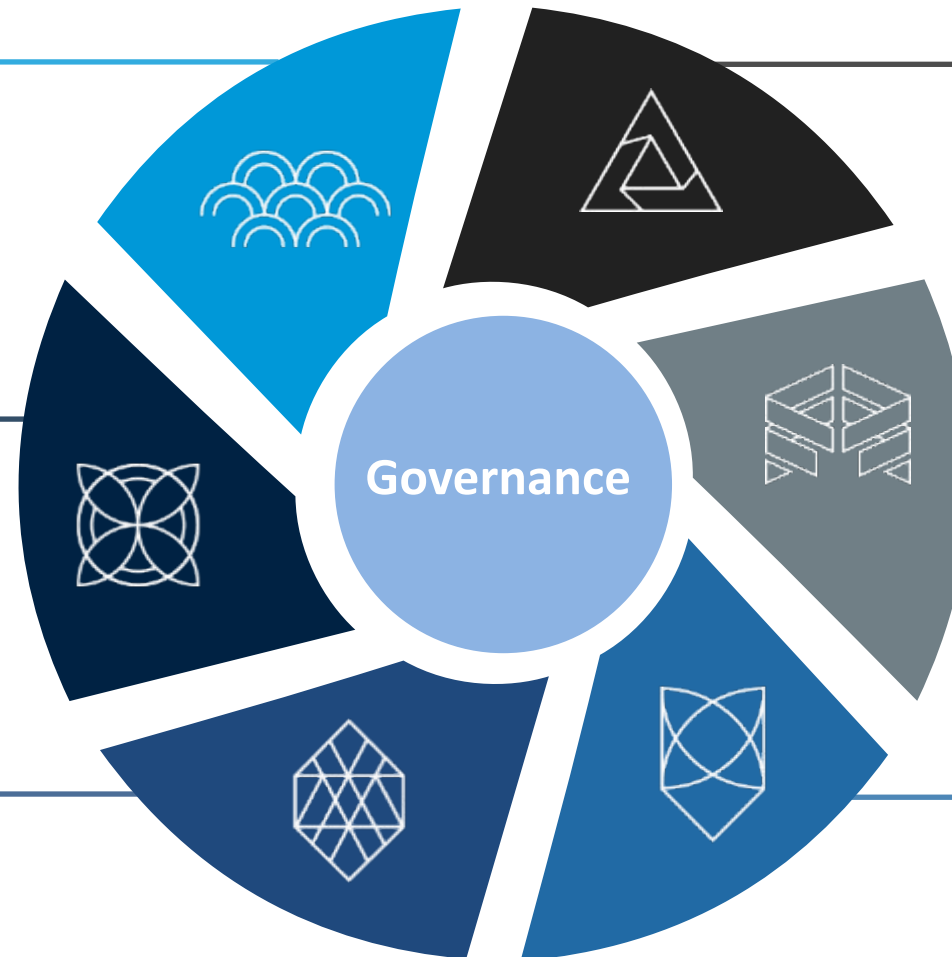
- Private Cloud
- Public Cloud
- Hybrid Cloud

NETWORK

- Enterprise-class global MPLS, leased line, and IP network
- Advanced network services
- Software-defined networks
- Tier-1 global IP backbone

DATA CENTER

- Smart Hands
- State of-the-art, highly secure, and scalable global data centers
- Built to world-class quality and environmental standards
- Interconnected by our global fiber optic network



PROFESSIONAL SERVICES

- Network assessment
- Application assessment
- Cloud strategy and readiness
- Cloud migration
- Data center transformation and migration

MANAGED SERVICES

- Public cloud management
- Managed hosting
- Remote Infrastructure Management
- Application management

SECURITY

- Cyber resilient infrastructure
- Managed security
- Global threat intelligence
- Compliance

Discovery



IT assessment
Asset detection
Inventory
Requirements

Strategy



Architecture and design
Capacity utilization
Multi-cloud planning
Financial modelling

Transform



Migration planning and scheduling
Deployment of new infrastructure
Facilitate transition

Amplify



IT help desk
Staff augmentation
Consulting
Outsourcing



Cloud

Virtualization

- VMWare
- VMWare NSX
- KVM
- OpenVM
- Xen
- ESXi
- Hyper-V
- Docker

Private Cloud

- CloudStack
- OpenStack
- Azure stack

Public Cloud

- AWS
- Azure
- ECL

Enterprise Cloud

- IBM solutions



Network

Switching/Routing

- Wireless Site Survey
- Direct Connect
- WAN
- LAN
- Wireless Controllers
- WAP
- Broadsoft class 5
- Sonus class 4/5
- Comware
- HPOS
- Cisco (GNS3, Catalyst, Nexus, IOS)
- Juniper
- Brocade
- MDS

Circuits

- UNO
- MPLS



Infrastructure

Compute Hardware

- Cisco UCS
- Dell
- HP
- Fujitsu
- Oracle
- White box

Storage Platforms

- Nimble
- IBM
- EMC

Backup/replication

- NetApp
- HA
- VEEAM
- Zerto

Monitoring and Operations

- OP5
- Nagios
- WhatsUp Gold
- NetBrain
- SolarWinds
- RISC Networks
- Cloudscape
- IBM (Tivoli, Netcool)
- GMOOne
- IPsoft



Windows

Web and Base Services

- VMWare Horizon
- Out-of-Band
- Active Directory
- IIS
- ASP
- CAD
- Map Tool
- WMI

Collaboration

- SharePoint
- Exchange
- Office 365

Remote Access or VDI

- Citrix XenApp Server
- Citrix Virtual
- Radius

Line of Business

- Command Line



Linux

Web and app services

- SNMP
- Django
- Apache
- PHP
- LAMP Stack
- Tomcat
- DHCP
- DNS

Distributions

- Red Hat Variants
- Debian Variants
- SUSE Variants

Line of Business



Database

- DB Replication
- MySQL
- Postgres
- MongoDB
- MSSQL
- IBM DB2



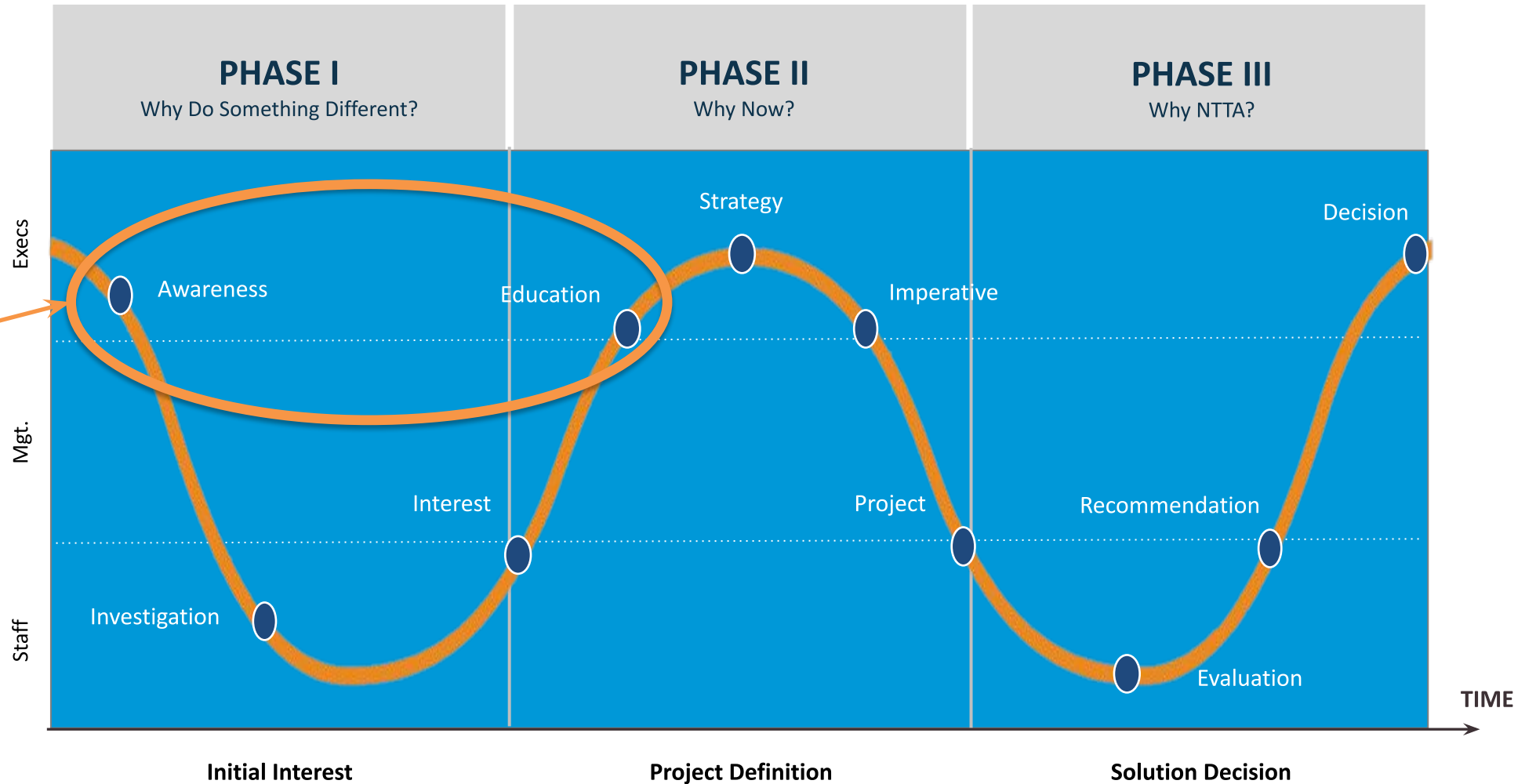
Other

- Scrum Master
- ITIL
- ERP: TOGAF
- PMP

Professional Services Engagement Example



PROFESSIONAL
SERVICES



Discovery



The Discovery process provides your business with visibility into the current IT infrastructure by collecting inventory, capacity, utilization, and trending data.

What does a Discovery engagement involve?

- **Assessment**
 - Types of assessment include IT infrastructure, data center, application cloud readiness, and network
 - IT Life Cycle Management
- **Capacity and utilization**
 - Identify current usage for environments
- **Trending and forecasting**
 - Predict the rate of change and future growth
- **Validation**
 - Verify and improve existing CMDB data
- **Requirements Gather**
 - Define requirements and pain points
 - Provide a framework to organize and enhance collected data

Discovery



Company	Agricultural equipment manufacturer
Environment	On-premise server room
Equipment	Bare metal servers and virtual machines
Scenario	HQ move across the US
Need	IT systems migration plan
Solution	NTTA Assessment and Migration Plan

Assessment	Plan	Result
IT inventory	Hybrid Cloud Solution	100% virtualization
Capacity/Trending	Network expansion	85% VMs move to cloud/SaaS
SME Requirements	Modernize Infrastructure	CapEx to OpEx conversion
EOL Identification	Failover and DR Options	\$1M+ reduction in IT budget

Strategy



Demand for IT is increasing, while budgets are decreasing. Satisfying the business's needs for IT requires a comprehensive strategy if an organization is to move forward.

Common strategic IT activities

- **Multi-cloud readiness and planning**
 - Assess feasibility and readiness for cloud services
- **Hybrid infrastructure**
 - Determine optimal architecture (old vs. new) and location (on-premise vs. outsourced)
- **Business continuity and disaster recovery planning**
 - Is your company prepared for a catastrophic event?
- **Financial modelling**
 - Assisting in forecasting, budgeting, executive buy-in, etc.
- **Bi-modal, Agile IT**
 - How quickly can you deploy new services and updates?

Strategy



Company	Energy automation company
Environment	6 data centers and multiple offices
Equipment	Bare metal servers and virtual machines
Scenario	Consolidate from 6 servers to 2
Need	Capacity management and migration assistance
Solution	NTTA Assessment and Migration Plan

Assessment	Plan	Result
ROI calculations	Datacenter consolidation	\$4M+ reduction in IT budget
Capacity/Trending	Network re-architecture	Standard platforms
Thought leadership	Modernize Infrastructure	

Recent Update: \$900k/year PS retainer

Transform



Stakeholder expectations of IT are growing, but with decreasing budgets and increasing globalization, IT organizations must do more with less. The IT Transformation service helps identify technologies critical for business success, improve decision-making accuracy, set appropriate transformation goals, develop IT capabilities, and meet business objectives.

Efficiently execute on your IT vision

- **Lift and Shift**
 - When there may not be a feature or functionality benefit in different technology
- **Consolidation**
 - Reduce IT assets by using more efficient technologies
- **Optimization**
 - Reduce cost of delivering IT solutions and leverage IT assets to provide business value
- **Migration**
 - Key consideration for any system implementation, upgrade, or consolidation
 - Cloud, Datacenter, & Internal IT Infrastructure

Transform



Why NTT Communications?

- Ability to install large scale environments in very short timeframe
- Extensive experience in day-to-day maintenance of a variety of hardware and software platforms
- Excellent understanding of business needs in different regions of the world

Customer benefits

- Regionally close data center identified, designed, procured, installed, and completed
- Professionally realized full system engineering and installation with quick results
- Managed infrastructure and OS operations enabling customer to focus on core business development

Successful transformation takes focus, experience, and expertise

Amplify



Flexibility is the key to taking advantage of rapidly changing markets. Amplifying your IT capabilities by adding staff, skills, and resources will let you respond quickly to support new business initiatives.

Amplify your objectives by bridging business gaps and expanding your offerings

- **Solutions**
 - Consulting, project outsourcing, staff augmentation, managed services
- **Roles**
 - Project Management
 - Development
 - Engineering
 - System Administration
 - IT help desk
 - Customer Service
 - Security
 - Telecommunications

Amplify



Benefits of amplification

- Scalability
- Redundancy
- Increased range of expertise
- Oversight
- Temporary or permanent solution
- Seamless
- Escalation management
- Process management
- Workforce management
- Vendor relations

Large global pharmaceutical company use case

Business Requirements

Network security engineer to assist IT, including consultation and operational services for network security, validation, optimization, and compliance.

Results

- **Expertise:** Network Security engineer provided
- **Flexibility:** One year term for in-house project
- **Efficiency:** FTE approval and resources for internal skill development not necessary

Recent PS Key Project Areas



PROFESSIONAL
SERVICES

1. Transformation:

- Customer's infrastructure changes DC migrations, cloud migrations, network modernization
- Often leads to Managed Services and other opportunities
- Steps include: discovery process & assessment to understand their current state, future state design, project management requirements, and engineering delivery framework

2. Mergers, Acquisitions, & Divestitures - IT Separation & IT Integrations:

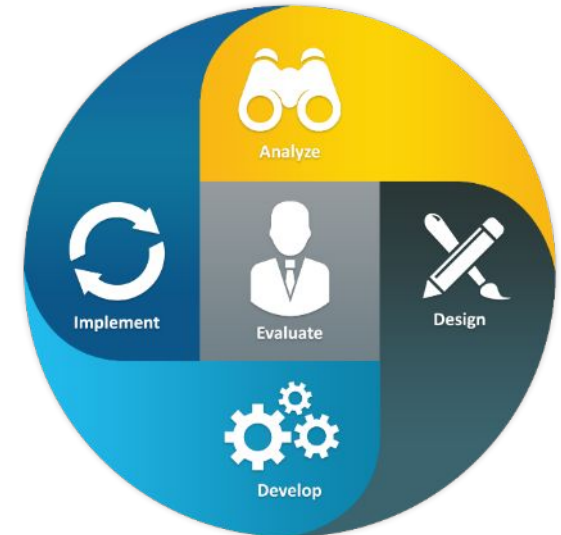
- Discovery and assessment
- What needs to be considered when a company is going through a separation?
- How does a company maintain the IT user experience in the midst of the chaos that occurs during a merger acquisition or divestiture?

3. IT Strategic Project Management Operations:

- Vendors that are outsourcing often have multiple partners
- Value can be destroyed due to poorly executed delivery of services and projects
- We assist customers in discovering, assessing, and executing value capture plans

4. Amplify/Resource Shortfall:

- Short term/long term project expertise to deliver on our customer's goals
- Source experts who then act as resident consultants, using offshore, near shore, and on-shore models





COMPLIANCE



SPEED TO MARKET



CONSOLIDATION



SERVICE CATALOG OF ITaaS

Customer Challenge:

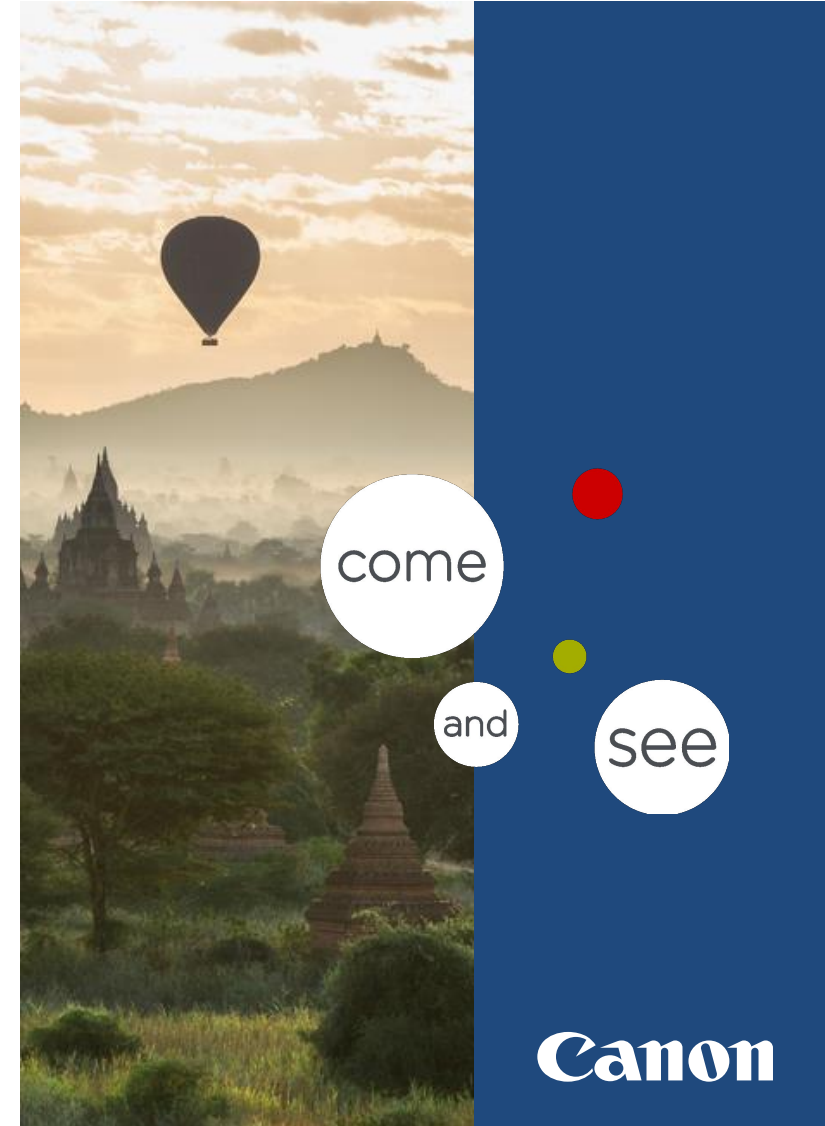
- Deliver a new model for IT that would achieve efficiency, effectiveness, and agility goals of the Digital Teams
- Without compromising the company's high standards for security and business continuity.

NTT's Solution:

- Pay-as-you-go flexibility for Managed Services and NTT Cloud
- A consistent IT service catalog with geographic redundancy
- Deploy scalable cloud services in minutes and deliver on Canon goal of IT as a service.

Results:

- Approval and deployment time for new digital projects reduced from 6 weeks to 3 days
- Removed risk of Shadow IT through consolidation and visibility of cloud resources within NTT Cloud Management Platform
- Dynamically adjust cloud services to meet demand and only pay for resources used.
- Globally integrated services in geographically dispersed data centers deliver the highest levels of resilience.
- Delivering IT as a service gives flexibility and agility that helps drive sales and business development.



BattleCard - Front



Why NTT Communications Professional Services?

Our dedicated experts are available to help you contain operational costs, reduce the risk of infrastructure modernization, achieve scalability, and accelerate time-to-market.



Infrastructure modernization

Infrastructure modernization includes cloud to cloud, P2V, physical hardware upgrade, and optimization.



Integration and automation

We will help you streamline operations by automating routine and often manual tasks and processes



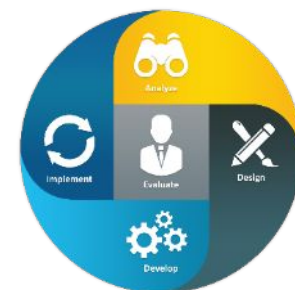
Data Center migration

As every migration is unique, we will work with your team and assist in migrating your data from one data center to another



Cloud migration

We will help you move to just about any cloud environment including VMware, CloudStack, AWS, Biz Hosting Enterprise Cloud, etc.



Elevator Pitch

As the world leader in data centers and networks, we are at the forefront of transitioning businesses to the cloud. Unlike the hands-off approach of traditional out-of-the-box solutions, our vendor-agnostic Professional Services experts consult with your team to develop a customized cloud infrastructure solution that uniquely fits your business needs.

NTT Communication Professional Services will reduce the risk of modernizing and transforming your infrastructure and help you achieve operational scalability, availability, security, and compliance. With our help, you can renew your focus on core competencies and accelerate digital transformation

Discovery Questions

- Do you have the visibility into your IT infrastructure to make precise decisions?
- Is the complexity of your IT infrastructure preventing adoption of a cloud technologies?
- Are your interested in strategies for turning IT infrastructure CAPEX to OPEX?
- How will you adapt to increasing demands placed on the IT group?
- Is Shadow IT becoming a problem?

Target Customers

- All companies: sell Infrastructure Modernization, Cloud Migration, Data Center Migration
- Companies with operations in other countries, especially but not limited to Asia
- Aging IT infrastructures and complex, sprawling infrastructures from M&A activity
- Cannot take advantage of new opportunities because constrained by IT skills gap

BattleCard - Back



Recognizing Customer Pain Points

- Our IT infrastructure costs are too high.
- We want to migrate to the Cloud but our complex IT infrastructure is slowing progress.
- "Our IT group does not have visibility into cloud technologies adopted by business users."
- We need a strategy for consolidating IT infrastructure and service providers."
- "We can't keep up with the expectations of business users for the latest technologies."

Value Proposition

Information technology (IT) is now a critical agent of business change. Technologies like Big Data, IoT, Machine Learning/AI, and mobile are at the center of digital transformation strategies adopted by many companies.

Getting the most from these technologies requires a flexible, scalable, robust, and cost effective IT infrastructure. Our Professional Services experts deliver customized offerings that modernize traditional infrastructures, migrate and consolidate data centers, and move workloads to the cloud.

Overcoming Objectives

Objection	Response
"I've never heard of NTT Communications."	We're part of a \$95 billion company used by 85% of global Fortune 100 companies, with 240,000 employees around the globe.
"Our legacy infrastructure is so complex it cant be consolidated or migrated to a better platform."	Our discovery service will give you an inventory of everything in your legacy infrastructure and we will work with you to plan, design, and migrate to a platform that will be more adaptable, more efficient, and easier to manage.
"We've already got a cloud service provider and we're working on our migration plan."	Our Professional Service team is cloud-agnostic. That means we can help with planning, design, and migration projects and work with whatever vendors and service providers you already have.



Our Key Differentiators

- Professional Services engineers focused on data center transformation
- Cloud-agnostic experts dedicated to finding solutions that meet your unique needs
- 20+ years experience managing tens of thousands of servers in data centers, worldwide
- Unique ADDIE approach (Analyze, Design, Develop, Implement, Evaluate)

Why We Win

- NTT Communications is part of the NTT Group, one of the world's largest IT companies with \$95 billion in annual revenue
- Our Professional Services team has over 20 years experience working on complex global IT infrastructure migration projects
- Each client works with a dedicate engagement manager who provides a single interface for all NTT global capabilities

Process



PROFESSIONAL
SERVICES

Sales discovers
opportunity



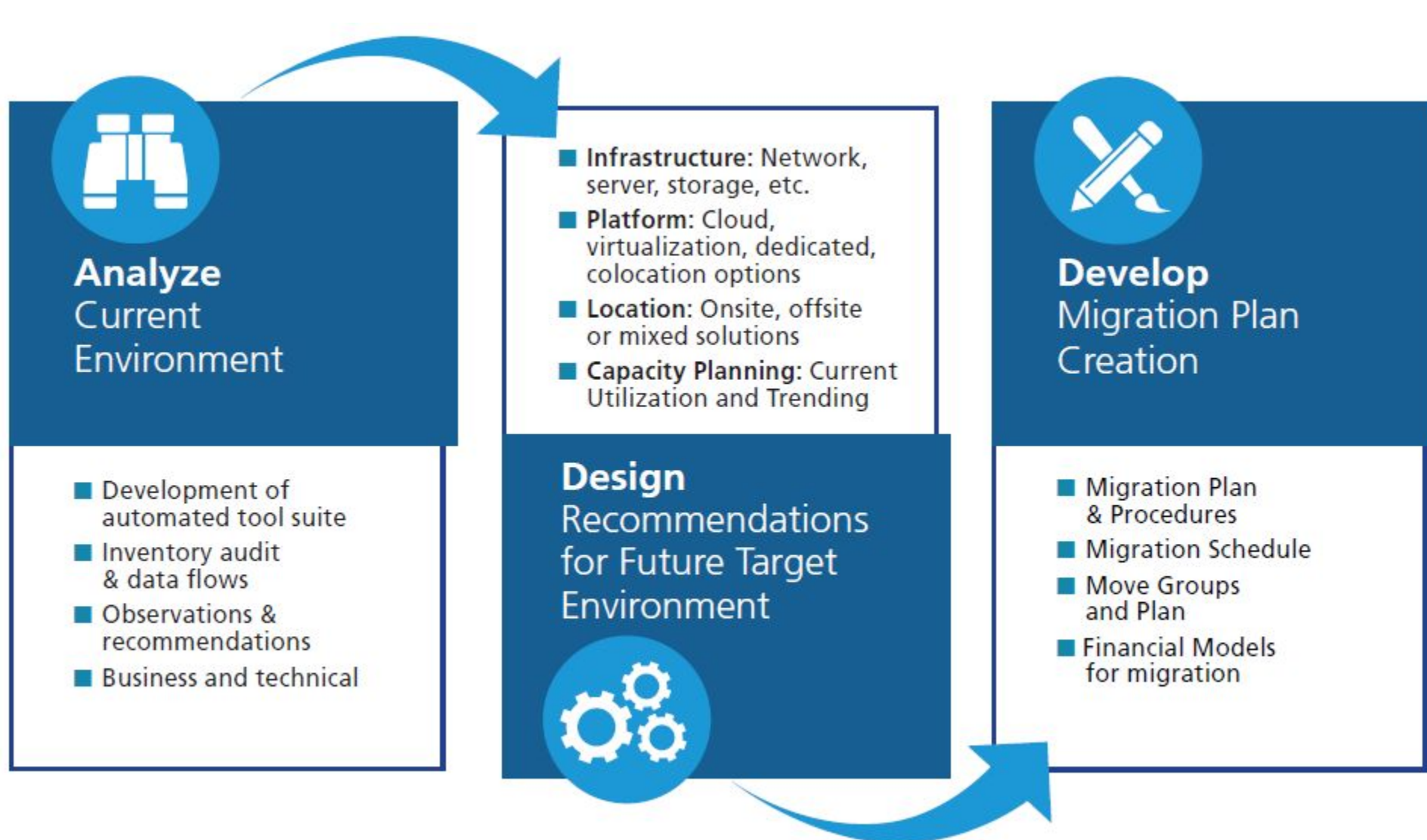
Email:
s.fong@ntta.com



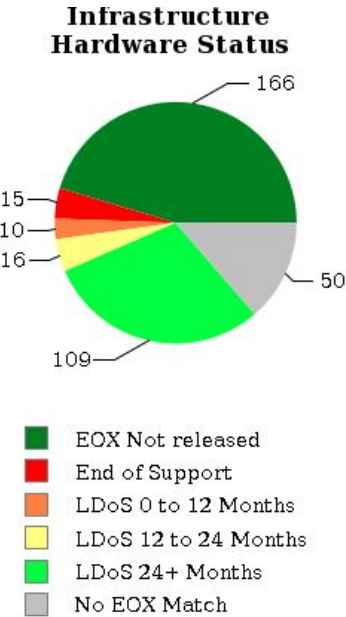
Work together
with NTT to win
business



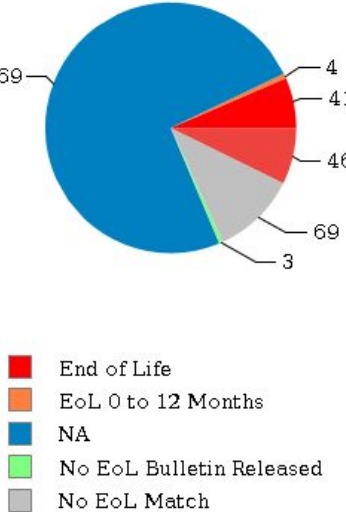
Additional PS Resources



Hardware EOL Planning

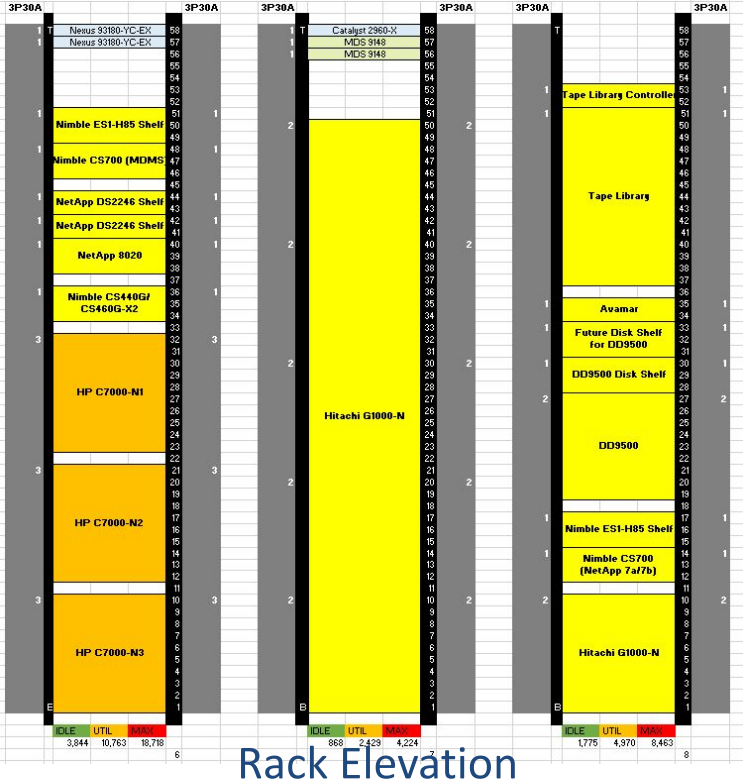


Server Hardware Status



Other common deliverables:

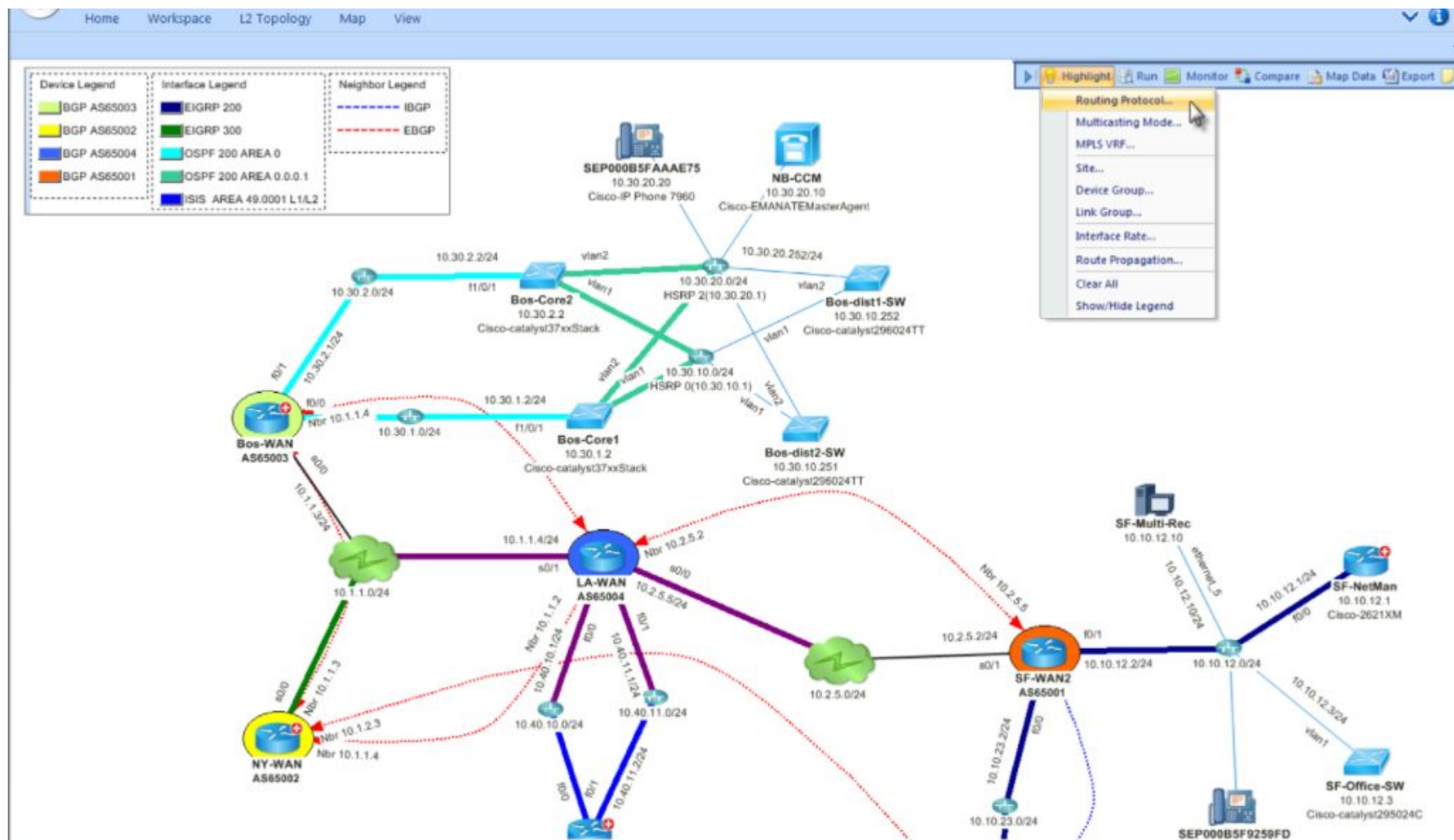
- List of devices (not shown here)
- EOL Planning
- Rack elevation mapping
- Roadmap of items that should be tackled (recommendations)



Roadmap Direction/Heatmap

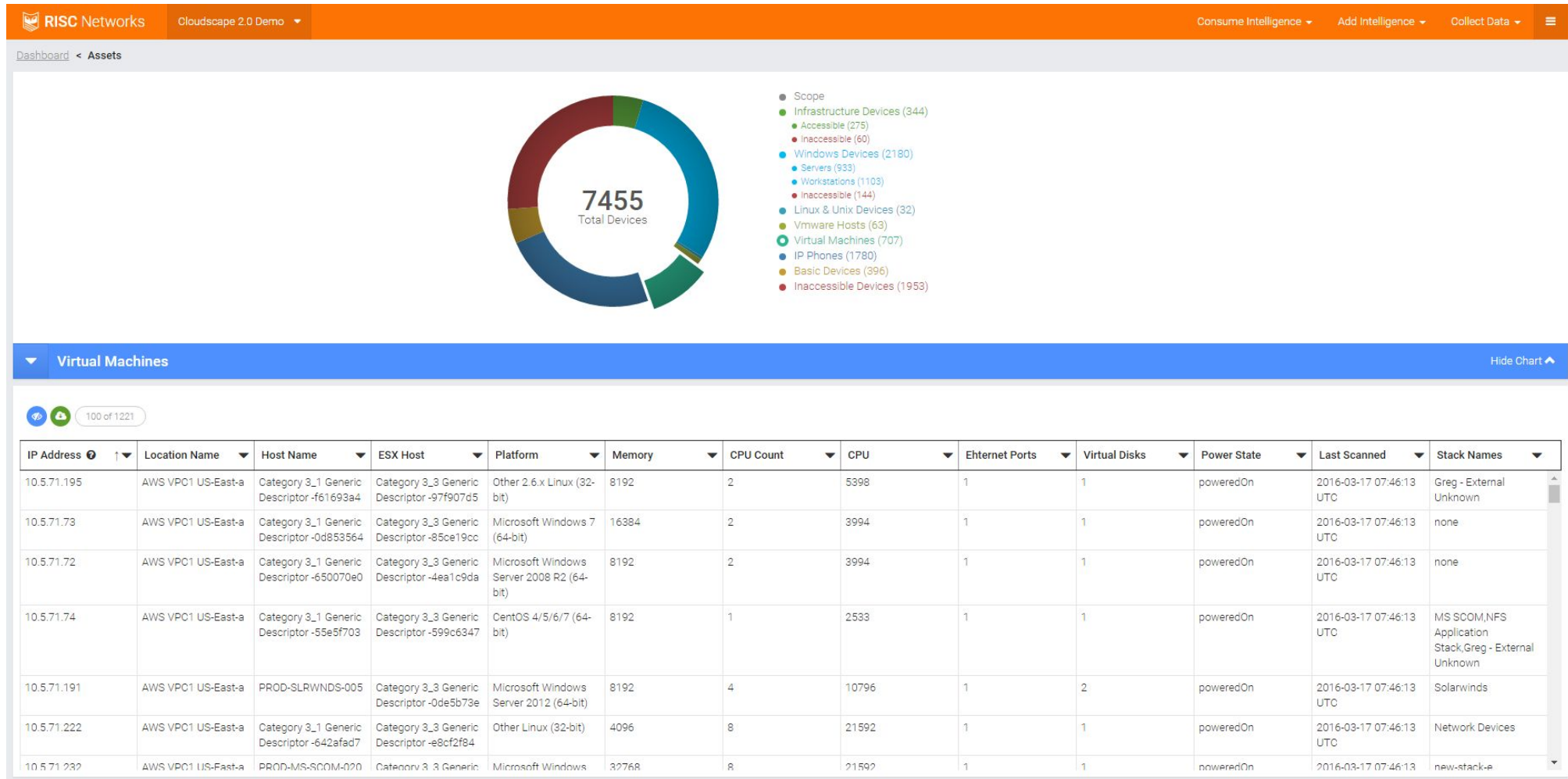
	RATING 1 low 5 high	Impact 1 high impact 5 low impact
Physical Security	4	1 5
Access Control	4	2 6
Environmental Control	2	3 5
Electrical Control	5	3 8
Change Management	1	1 2
Incident Management	2	1 3
Warm Hands Process	1	2 3
DR and BC	1	1 2
Racking Etiquette	1	3 4
Cabling Hygiene	2	4 6
Labeling Accuracy	5	4 9
Power Redundancy	5	1 6
Certified compliant	1	3 4
Growth Space planning	1	5 6
Space utilization	1	5 6
Risky practices or Red Flags	5	1 6
Storage room practices	4	5 9
Network Redundancy	5	1 6
Network Future Proof	1	3 4
Staging area	2	5 7

Sample Network Topography – part of network assessment





Automated Asset Detection and Grouping



Dependency Mapping and Flow Data

