

MUSA



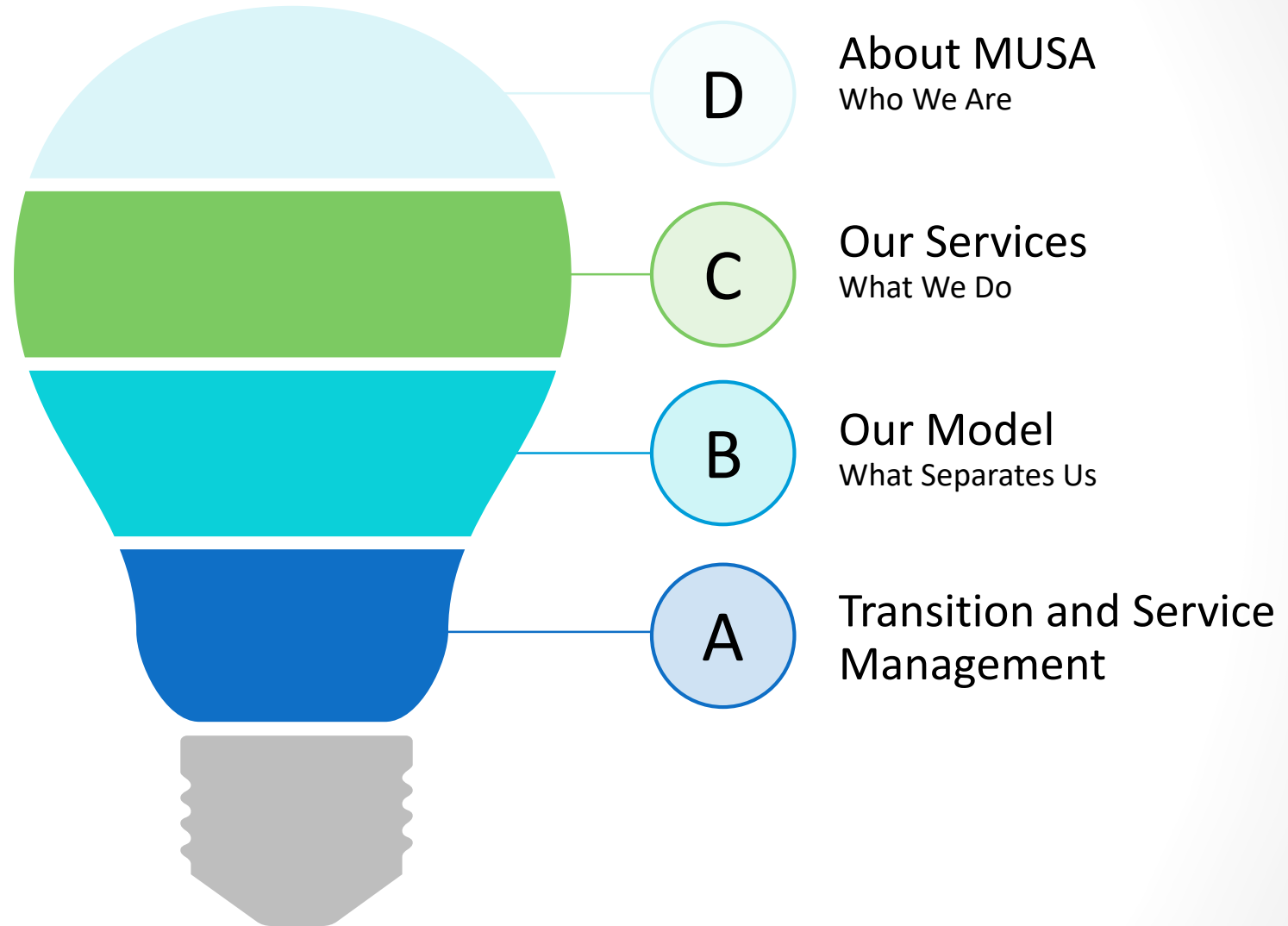
A LIFE SCIENCES IT COMPANY

Managed Services

MUSA



Agenda



About MUSA

- **Company Overview**

- Founded in 2007
- Company size currently 60
- Headquartered in Waltham, MA with an office in San Ramon, CA
- Service desk and field engineering presence in both Boston and Bay Area, CA
- Specializing in IT Support for Life Sciences Companies

About MUSA

- **Client Demographics**

- MUSA's clients are > 90% in the Life Science vertical
- Management of companies from 5 to 800+ users
- Most companies are 30 - 300 users
- Support of companies with and without on-site labs
- Companies from research through commercial
- Clients supported globally with majority in the United States

Our Life Science Expertise

Life Sciences Focus

- Certified Support for Veeva CRM & Vault
- Experienced in supporting life sciences companies' field staff, labs, and internal office based users
- Provides GxP operational & regulatory guidance for rapidly growing life sciences companies
- Adept with supporting life science growth patterns from startup through clinical trials and commercialization

MUSA Services Overview



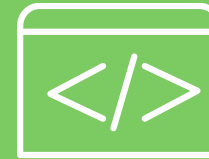
Service Desk

- Single point of contact for all IT support needs



Deskside + Labs

- In person support of end users on full time or recurring visit schedule



Infrastructure

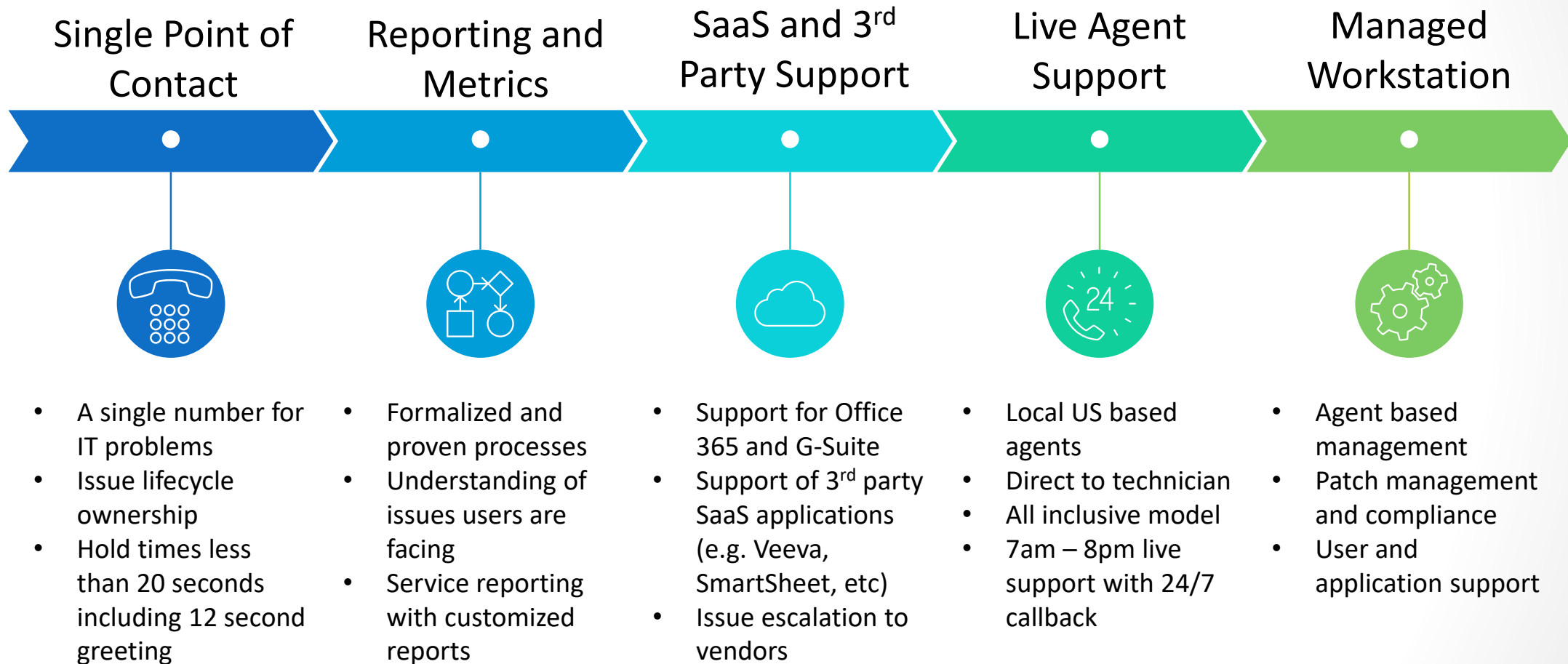
- Support of servers, networks, and storage with 24x7 monitoring and response



Depot Services

- Central inventory and asset management with systems delivered fully configured

MUSA Service Desk



MUSA Deskside + Labs

MUSA ON-SITE SUPPORT

01

Configurable Visits

Daily, weekly, or on your schedule.

02

Correctly Resourced

The right resources for what you need

03

Life Science Knowledgeable

Lab etiquette, GxP, IQ/OQ, CSV. We speak your language, and have for over a decade.

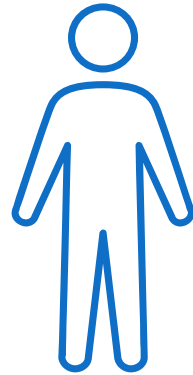
04

Trained and Ready

MUSA resources complete internal training before being field ready. Including ITIL, GxP, and HIPAA.

MUSA Deskside + Labs

MUSA ON-SITE SUPPORT



- Primary engineer dedicated to customer.
- Unless primary is unavailable, they will be the on-site resource



- Secondary engineer assigned as backup to customer.
- Periodic shadowing to stay current
- Rotates in when primary takes vacations or has extended outage

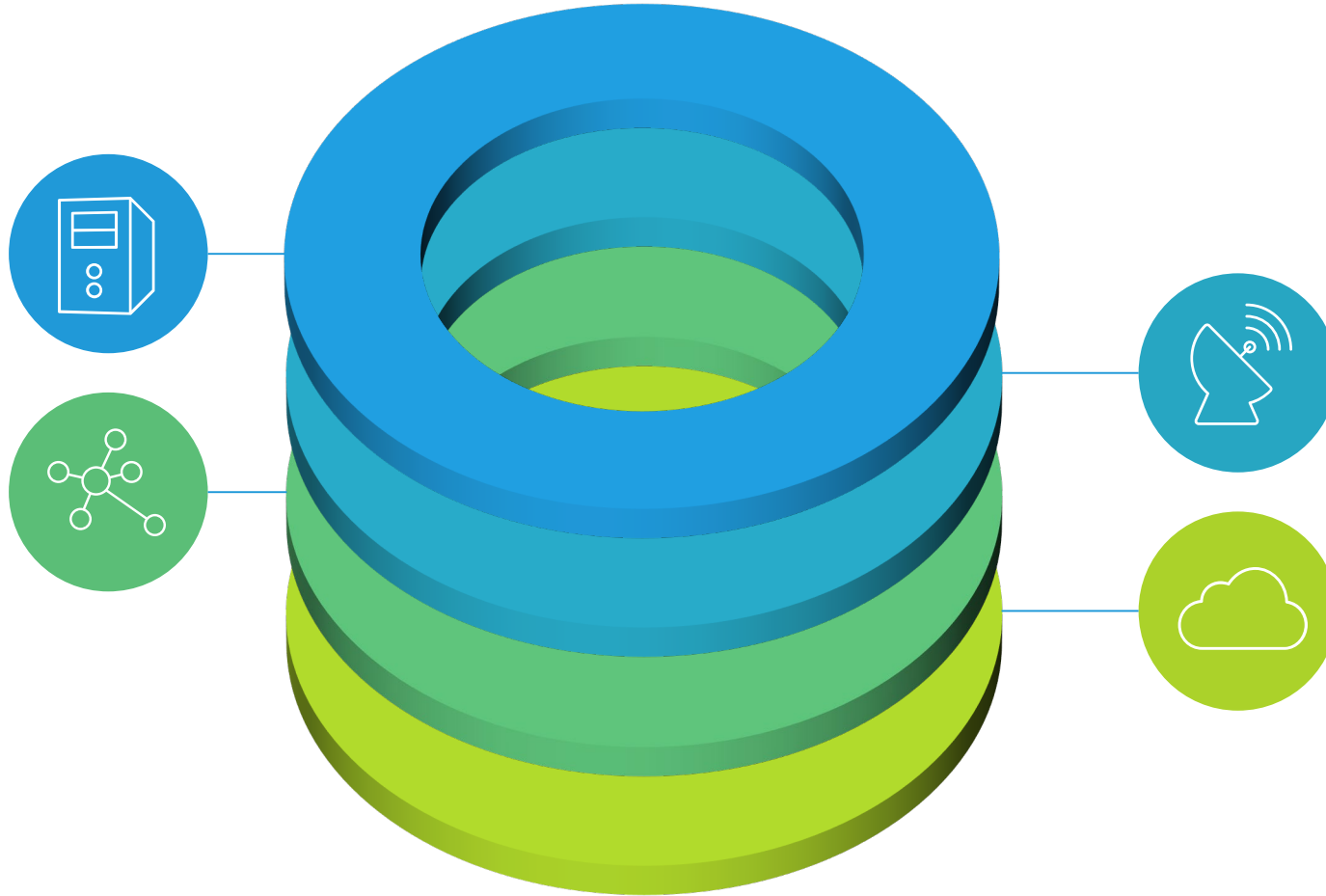
MUSA Infrastructure Support

Servers

- Patch Management
- Windows
- Linux
- Hypervisor

Networking

- Firewalls
- Switches
- Wireless



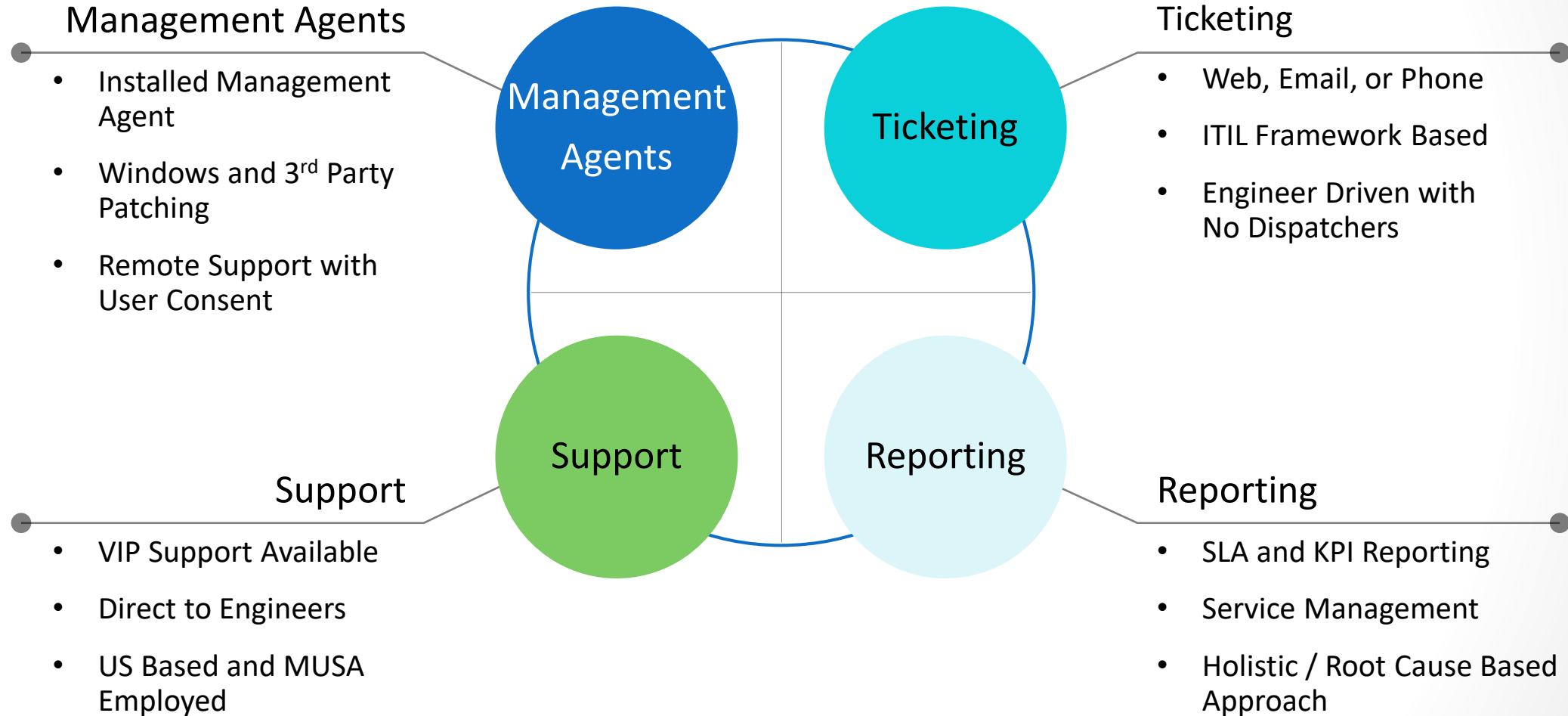
Monitoring

- 24x7 Response Included

Cloud

- Amazon
- Azure
- MUSA Hosted

MUSA Service Toolchain



MUSA Depot Services

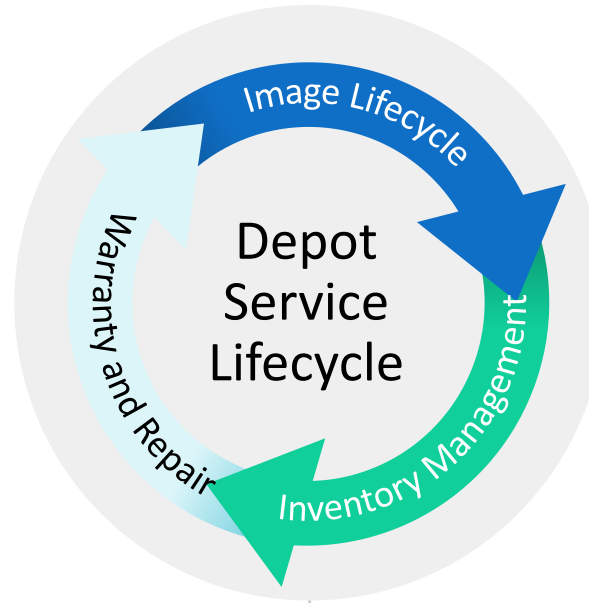


Image Lifecycle

- Image patching and updating
- Refresh of systems that are sent back to depot
- Application install and profile configuration before deployment

Inventory Management

- System aging report for inventory lifecycle planning
- Disposal and recycling of old systems
- Asset tagging and tracking

Warranty and Repair

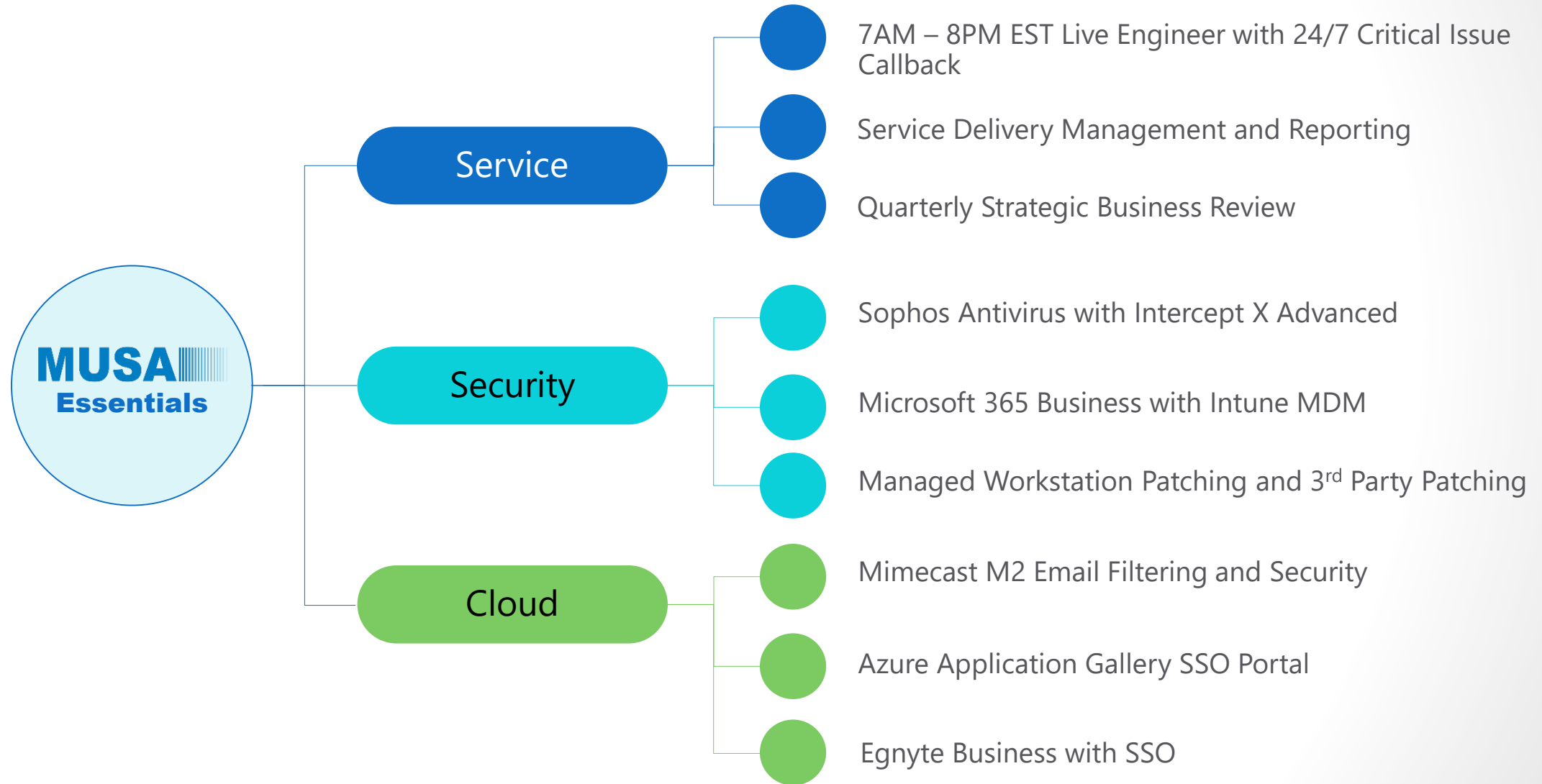
- Warranty status reports for in service hardware
- Repair of in warranty systems with vendor supplied parts
- RMA of defective parts to vendor

The **MUSA** Model

Our recommended foundational model and approach to service



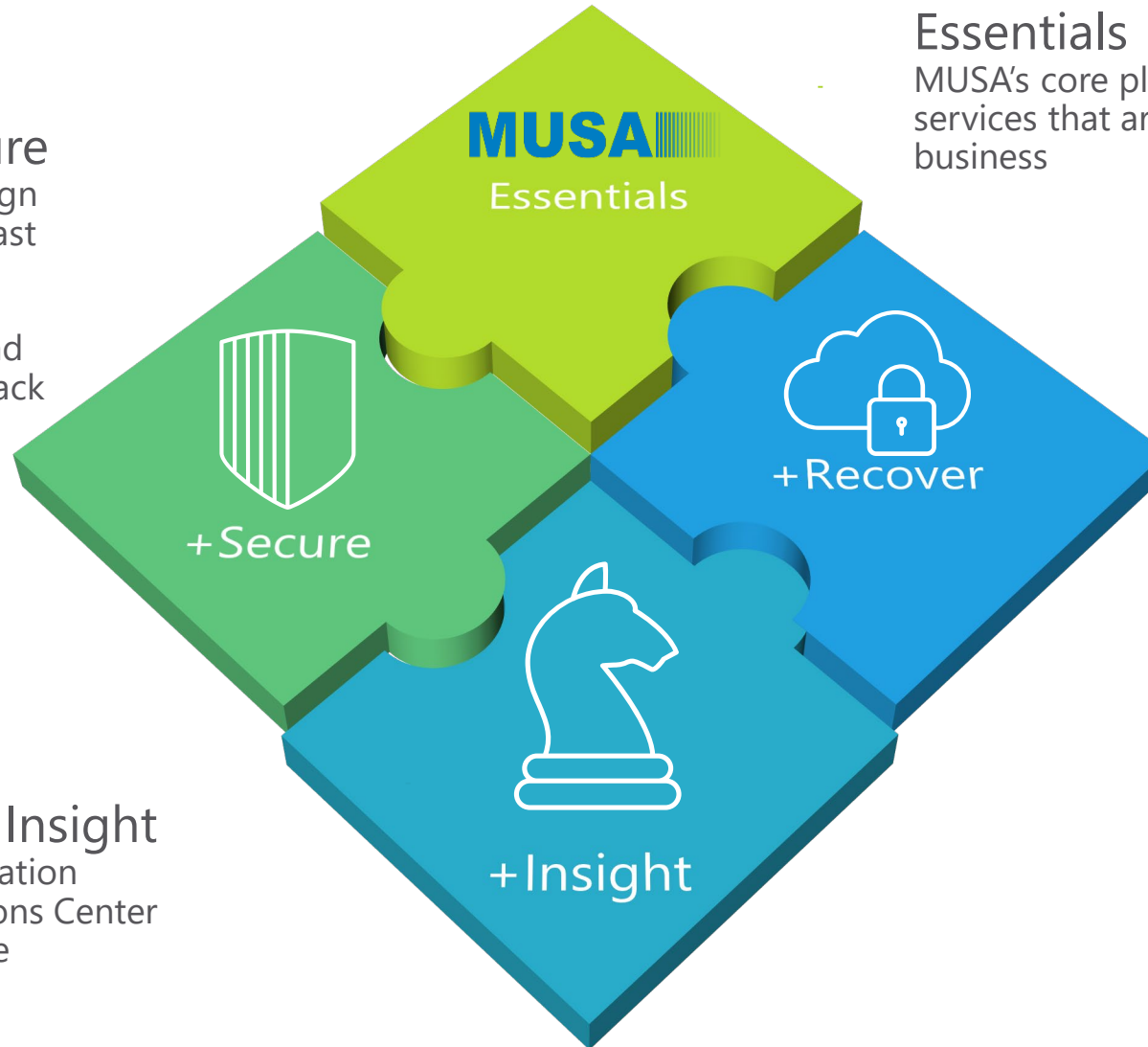
MUSA Essentials Platform



MUSA Platform Extensions

+Secure

- Spam and Phishing Campaign Simulation, User Training, Fast Remediation
- Advanced Next Generation Active EDR leveraging AI and featuring ransomware rollback



Essentials

MUSA's core platform offering the services that are essential to your business

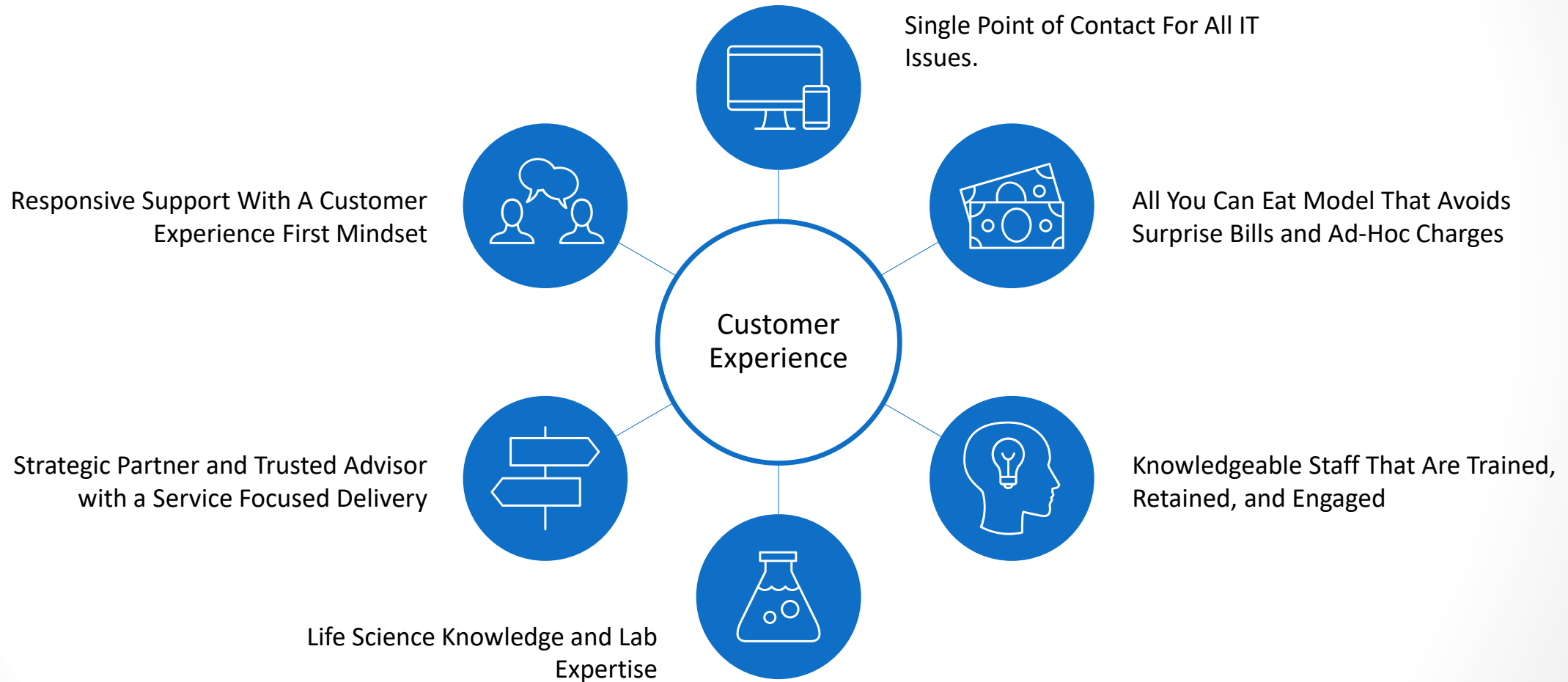
+Insight

- SIEM and Log Aggregation
- 24/7 Security Operations Center and Incident Response

+Recover

- Cloud First Server and Endpoint Backup
- Cloud Based Disaster Recovery

MUSA Approach to Service



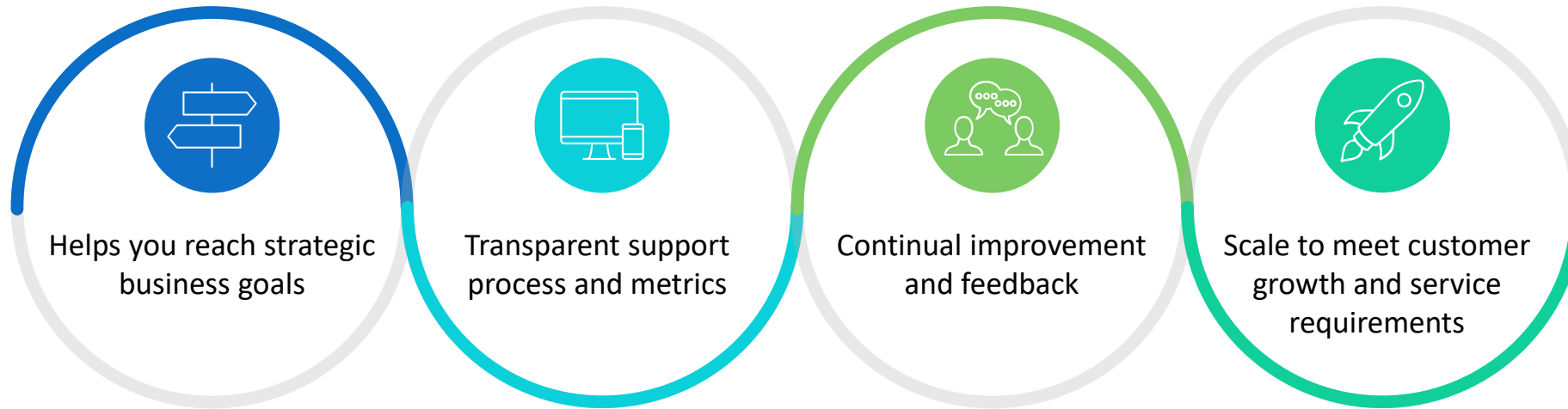
Service Management and Transition

MUSA's Approach to Service Delivery Management, Customer Onboarding, and
Service Initiation

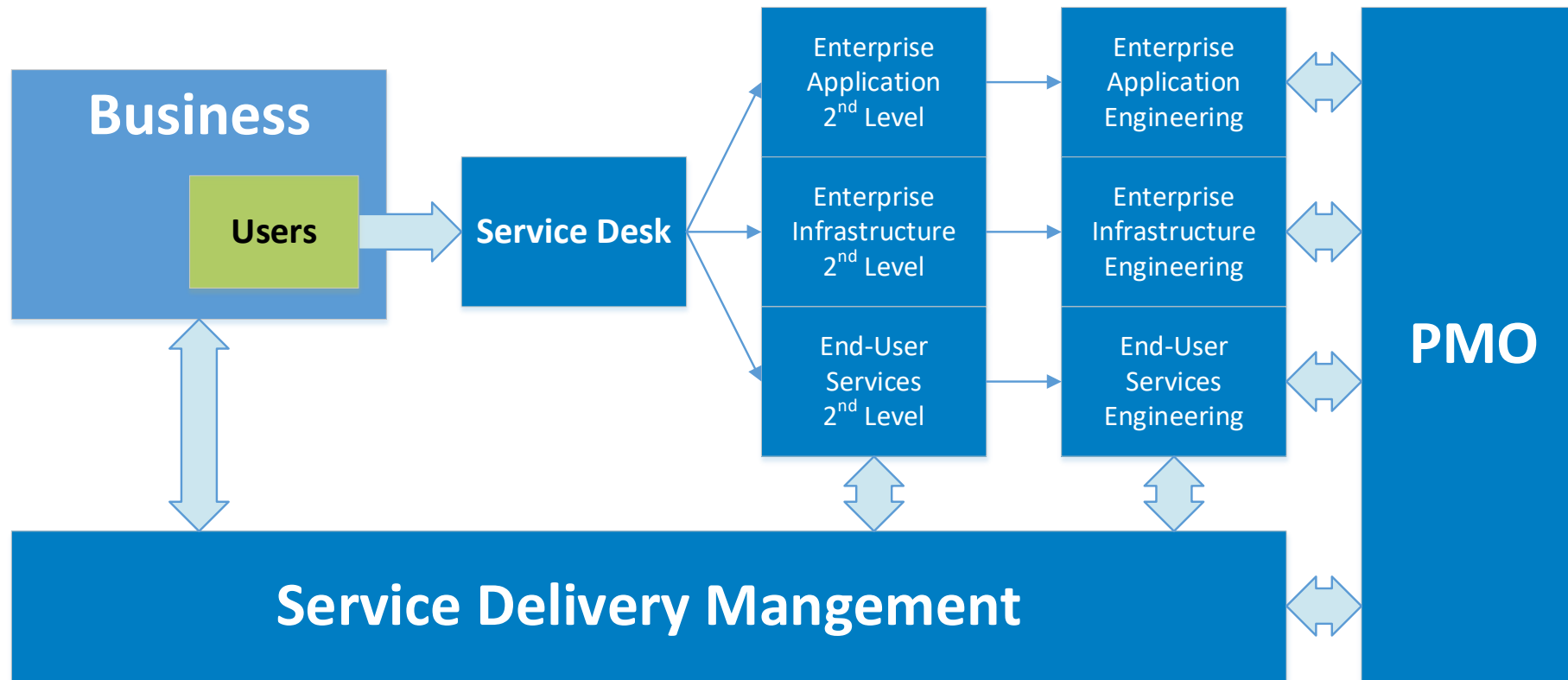


What Makes MUSA Different?

Governance and Service Delivery Every Company Benefits



MUSA Service Delivery Framework



MUSA's Delivery Framework is focused on customer experience and leverages the Service Desk as the central axis overseeing the service, ensuring it is in line with business expectations.

Service Delivery Meetings

- Service Review Meetings are a critical component in operational governance. They ensure:
 - Consistent and ongoing visibility into the activities of the delivery team or activities that may affect the delivery of services
 - A forum of open (and safe) dialogue to raise concerns or issues
- Client representatives, senior team members, and MUSA management will review:
 - Service specific issues or actions
 - Incidents of the past week
 - Upcoming changes
 - Root Cause Analysis
 - Projects and Enhancements
 - Improvement opportunities
- Formal minutes are taken and shared with the team

MUSA Transition and Service Towers

Servers and Storage

- Collect and review server and application process documents
- Perform server and storage health checks and risk assessment
- Plan and deploy agents and tools
- Configure and tune monitoring and notification

Network

- Review and document rack elevations and network diagrams
- Deploy and configure network monitoring and mapping tools
- Assess network equipment support and useful life status
- Audit administrative access and perimeter security

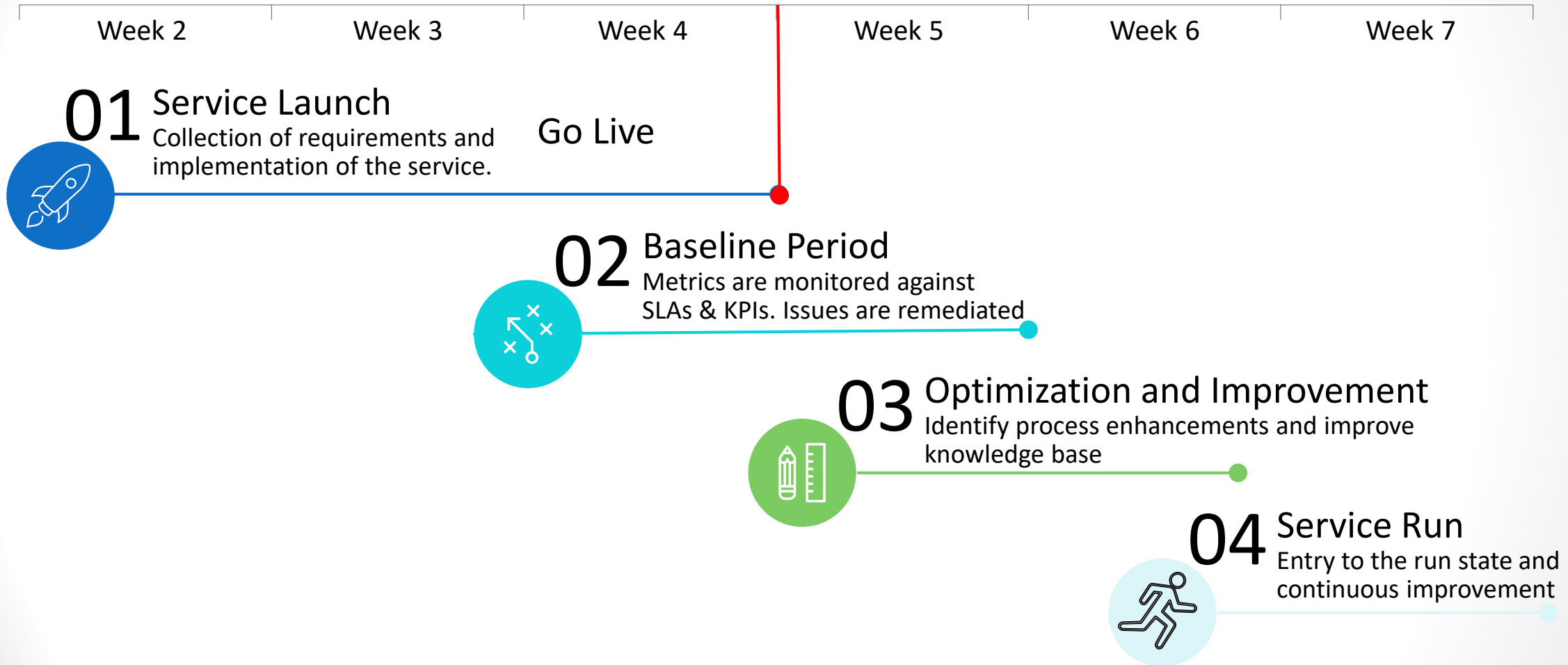
Deskside and Desktop

- Confirm installation of workstation agents pushed by server team
- Confirm antivirus installations and definitions
- Audit and confirm administrative access to workstations
- Identify and inventory end user assets

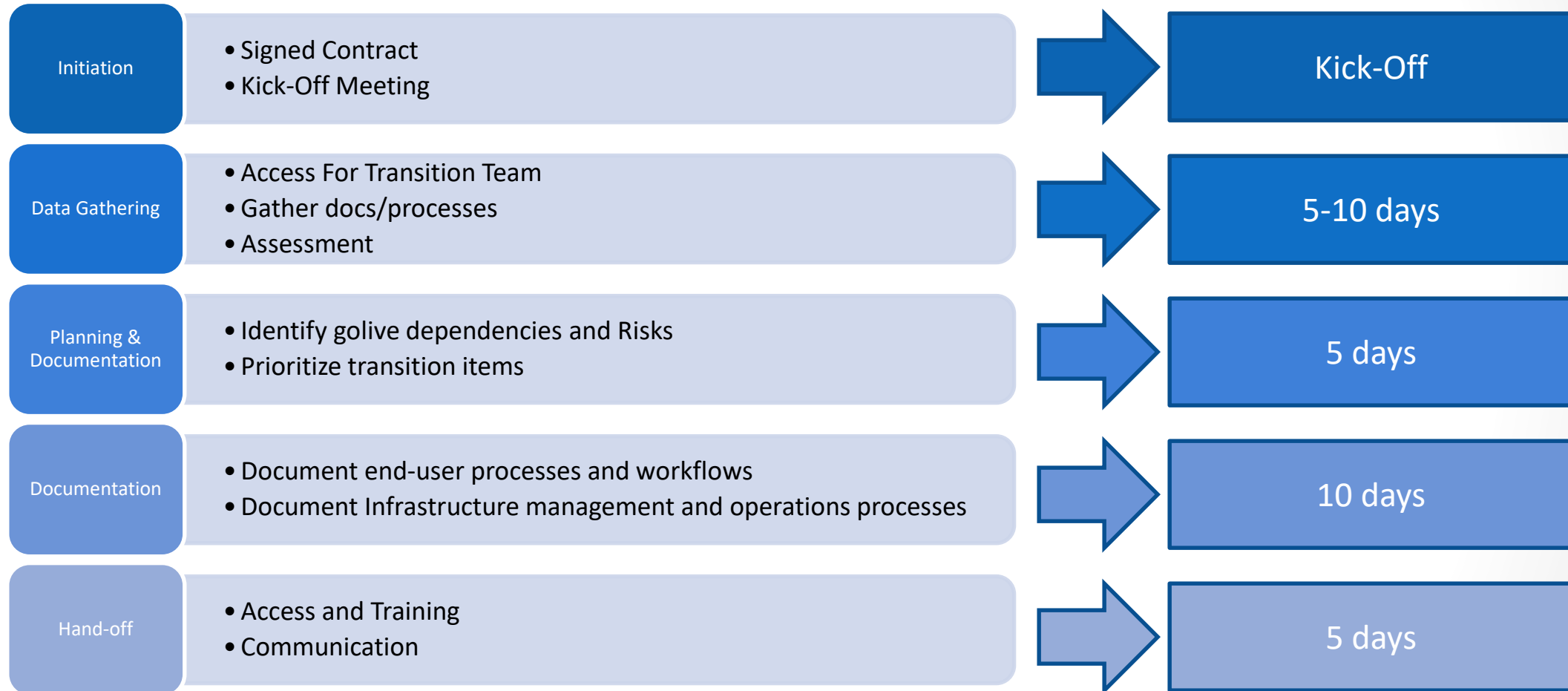
Service Desk

- Collect and review end user and application process documents
- Identify gaps and leverage MUSA standard process or work with client to remediate
- Verify onboard and offboard process and ensure approvers are documented

MUSA Implementation Timeline



MUSA Transition Plan - Estimates



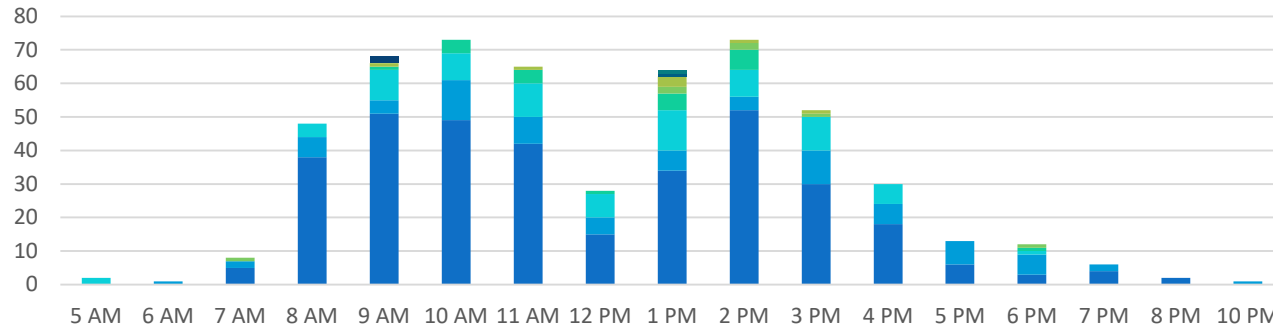
SLA Compliance – August 2018 Review

SLA Name	Sev	SLA	SLA Type	response target		Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
A1	Sev1	Emergency support - Infrastructure	Time to Respond	1 hour	24/7	100%	100%	100%	100%	100%	100%	100%	100%	100%
A2	Sev1	Emergency support - Infrastructure	Time to Resolve	1 hour	24/7	100%	100%	100%	100%	100%	100%	100%	100%	100%
A3	Sev2	Group impact support - Infrastructure	Time to Respond	2 hours	10/5	100%	100%	100%	100%	100%	100%	100%	100%	100%
A4	Sev2	Group impact support - Infrastructure	Time to Resolve	2 hours	10/5	100%	100%	100%	100%	100%	100%	100%	100%	100%
A5	Sev3	Individual incident - Infrastructure	Time to Respond	4 hours	10/5	100%	100%	100%	100%	100%	100%	100%	100%	100%
A6	Sev3	Individual incident - Infrastructure	Time to Resolve	4 hours	10/5	100%	100%	100%	100%	98.75%	100%	100%	100%	100%
B1	Sev1	Emergency support - End-users	Time to Respond	1 hour	24/7	100%	100%	100%	100%	100%	100%	100%	100%	100%
B2	Sev1	Emergency support - End-users	Time to Resolve	1 hour	24/7	100%	100%	100%	100%	100%	100%	100%	100%	100%
B3	Sev2	Group impact support - End-users	Time to Respond	2 hours	10/5	100%	100%	100%	100%	100%	100%	100%	100%	100%
B4	Sev2	Group impact support - End-users	Time to Resolve	2 hours	10/5	100%	100%	100%	0.00%	100%	100%	100%	100%	100%
B5	Sev3	Individual incident - End-users	Time to Respond	4 hours	10/5	100%	100%	100%	100%	100%	100%	100%	100%	100%
B6	Sev3	Individual incident - End-users	Time to Resolve	4 hours	10/5	100%	100%	100%	100%	100%	100%	100%	100%	100%

- All SLAs for the months of June to August (inclusive) were met.

ACD Metrics – Global Scrubbed

Vol by time of day



Sept call ratios	Answered	Abandoned	After-hours	Bounced	Escaped	
Client 1	80.80%	10.03%	6.30%	2.58%	0.29%	63.92%
Client 2	78.75%	10.00%	5.00%	6.25%		14.65%
Client 3	64.94%	24.68%	5.19%	3.90%	1.30%	14.10%
Client 4	40.91%	50.00%	9.09%			4.03%
Client 5	57.14%	28.57%	14.29%			1.28%
Client 6	71.43%	28.57%				1.28%
Client 7			100.00%			0.37%
Client 8		100.00%				0.18%
Client 9		100.00%				0.18%

Abandon rate (less after-hours calls)	<= 10 Seconds	<20 seconds	>=20 seconds	>60 seconds	Overall
Client 1	7%	9%	2%	1%	11%
Client 2	7%	19%	7%	1%	26%
Client 3	40%	55%	0%	0%	55%
Client 4	4%	4%	7%	5%	11%
Client 5	33%	33%	0%	0%	33%
Client 6	29%	29%	0%	0%	29%
Client 7	100%	100%	0%	0%	100%
Client 8	100%	100%	0%	0%	100%
Grand Total	9%	12%	3%	2%	15%

Abandons (less after-hours calls)	Client 1	Client 2	Client 3	Client 4	Client 5	Client 6	Client 7	Client 8	Grand Total
<= 10 Seconds	37%	20%	42%	20%	50%	50%	50%	50%	34%
<20 seconds	47%	56%	58%	20%	50%	50%	50%	50%	47%
>=20 seconds	10%	20%	0%	33%	0%	0%	0%	0%	12%
>60 seconds	6%	4%	0%	27%	0%	0%	0%	0%	7%

Monthly Service Reports

Vol By Priority By Team For Previous Month		
	PRIORITY 4 - LOW	PRIORITY 3 - MEDIUM
Service Desk	135	66
Deskside	70	13
Server T2 Ops	13	12
Database Ops	6	6
Network Ops	3	3
Tools	2	0

3 HOURS AGO

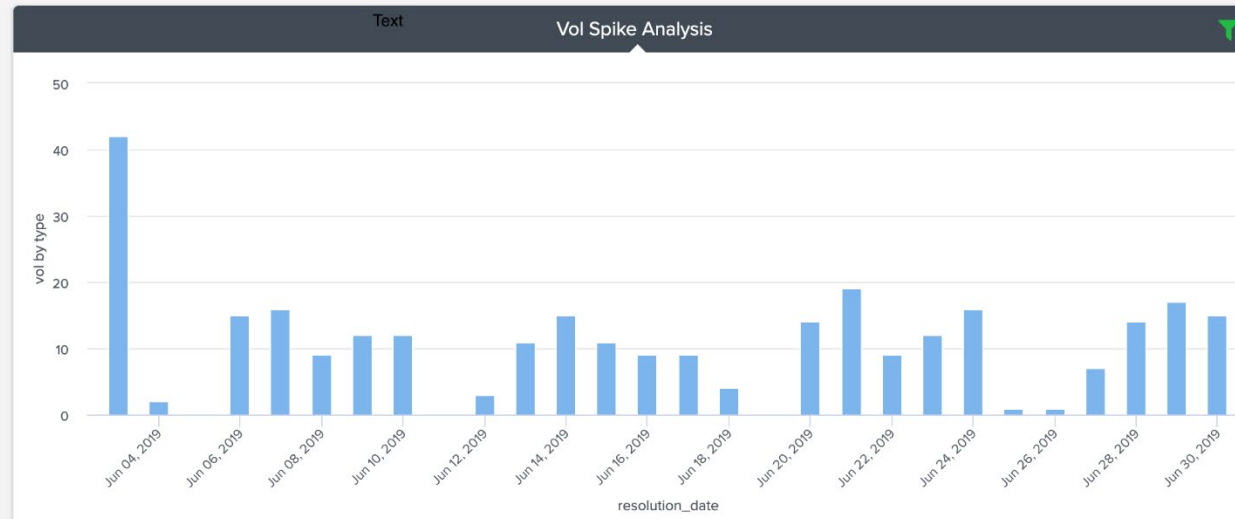
Time To Ack By Priority By Minute		
	PRIORITY 3 - MEDIUM	PRIORITY 4 - LOW
0	5	37
1	2	5
2	1	2
3	6	0
4	3	6
5	1	4
6	1	3

3 HOURS AGO

Time To Resolution By Priority By Hour		
	PRIORITY 3 - MEDIUM	PRIORITY 4 - LOW
0.00	0	14
0.03	1	0
0.05	1	1
0.07	0	1
0.08	0	1
0.10	0	1
0.12	0	1

3 HOURS AGO

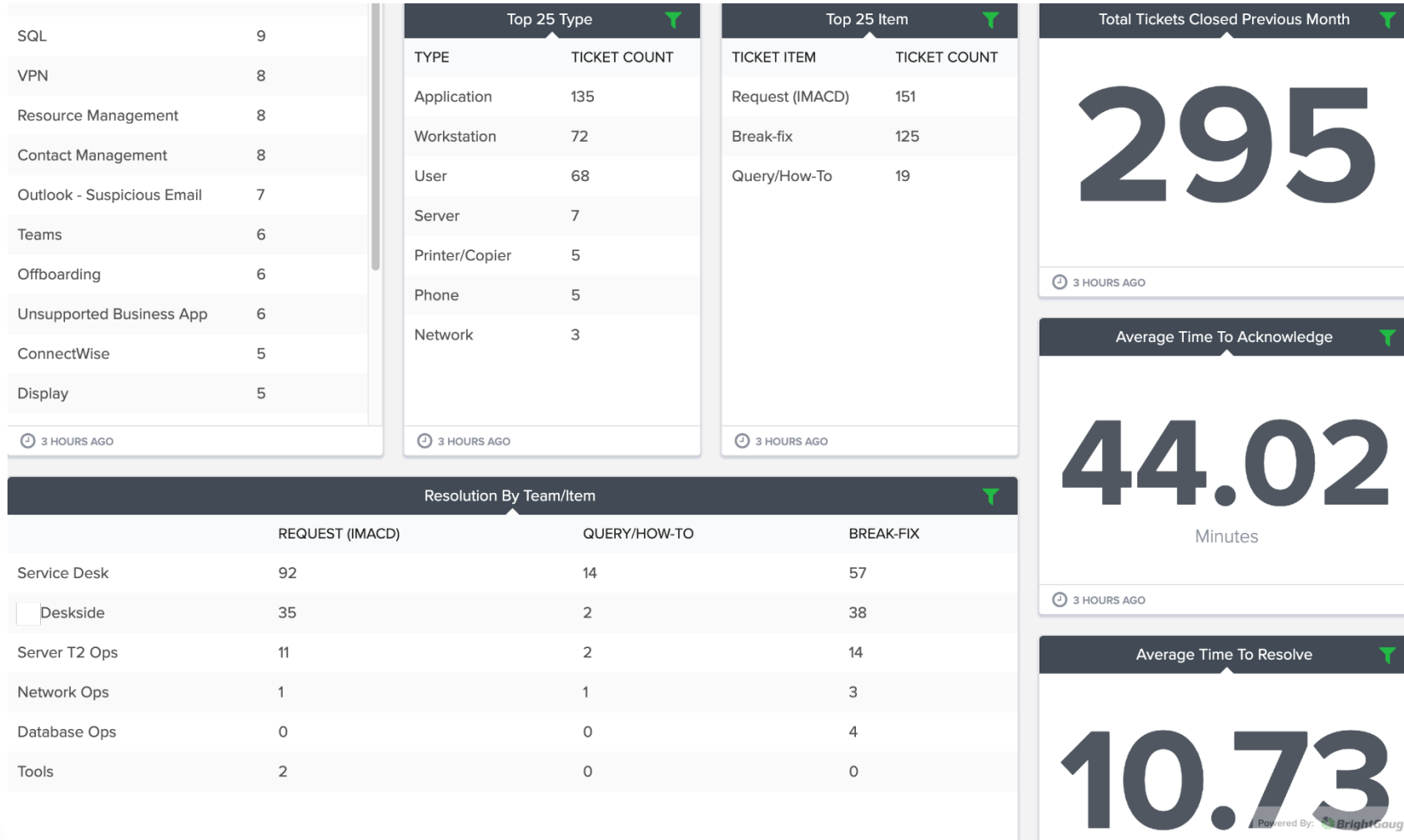
Top 25 Sub Type	
SUBTYPE	TICKET COUNT
OS - Windows 10	30
Peripheral	18
DL Management	18
Sophos	17
Office Online	14
Outlook	13
SharePoint	13
Onboarding	11



ACTUAL SCRUBBED



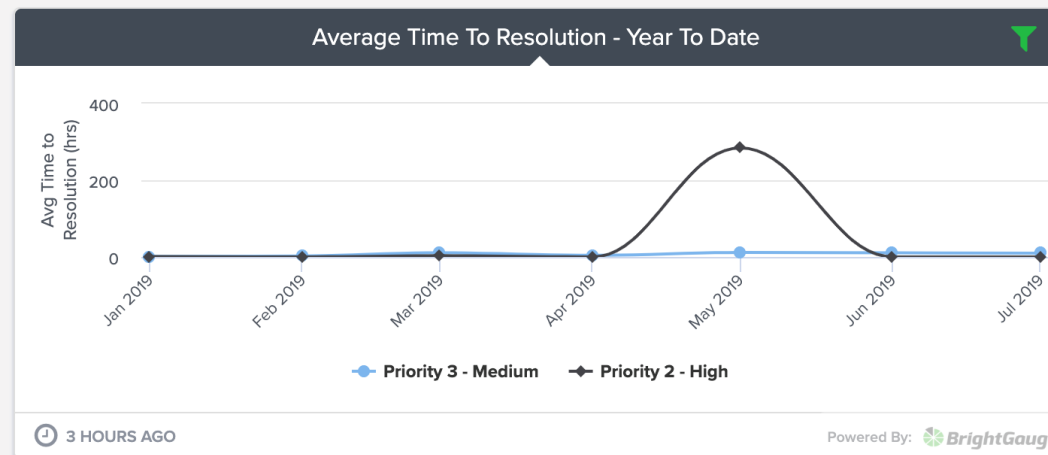
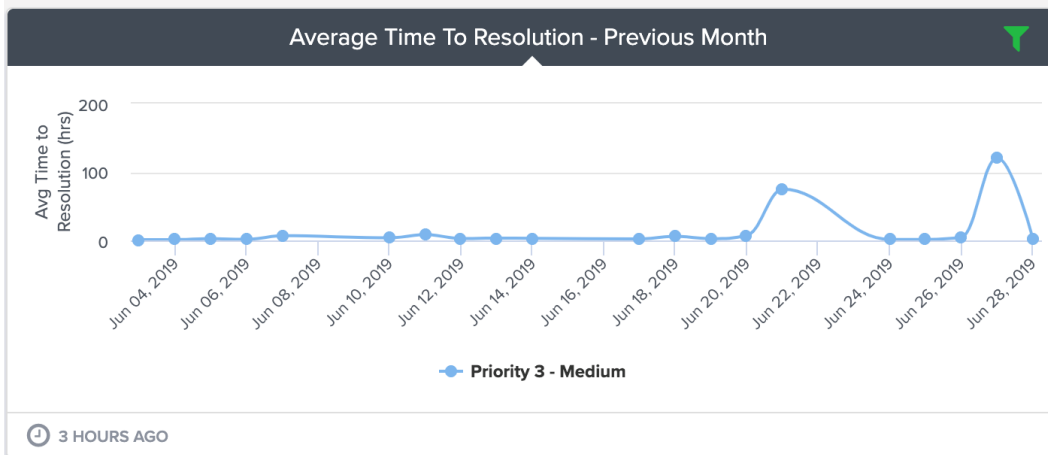
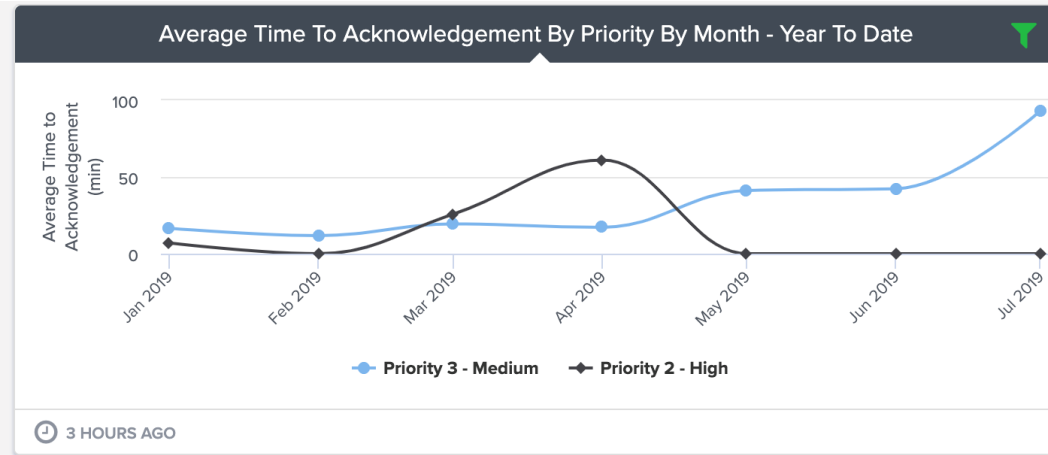
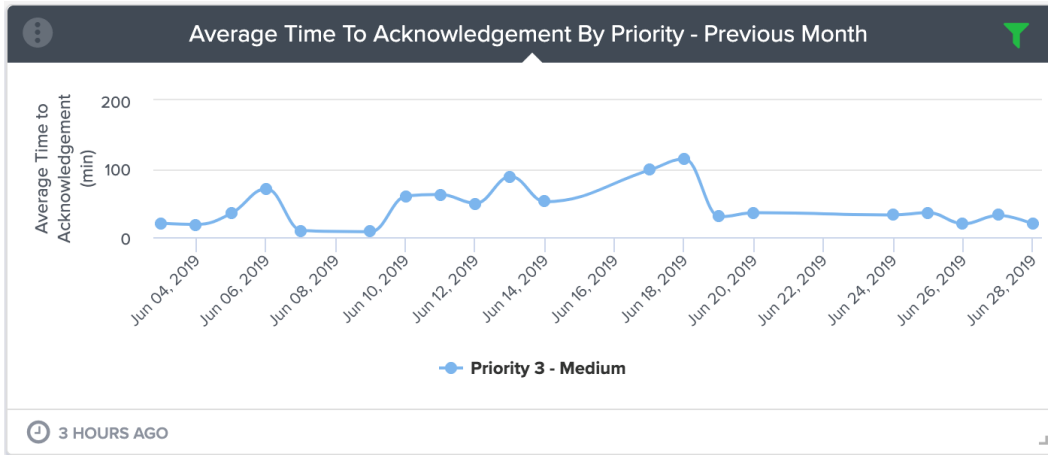
Monthly Service Reports



ACTUAL SCRUBBED

Monthly Service Reports

ACTUAL SCRUBBED



Thank you

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