

Business Model Overview: Discussion of Imagery Cost Sharing

USDA Imagery Planning and Coordination Meeting

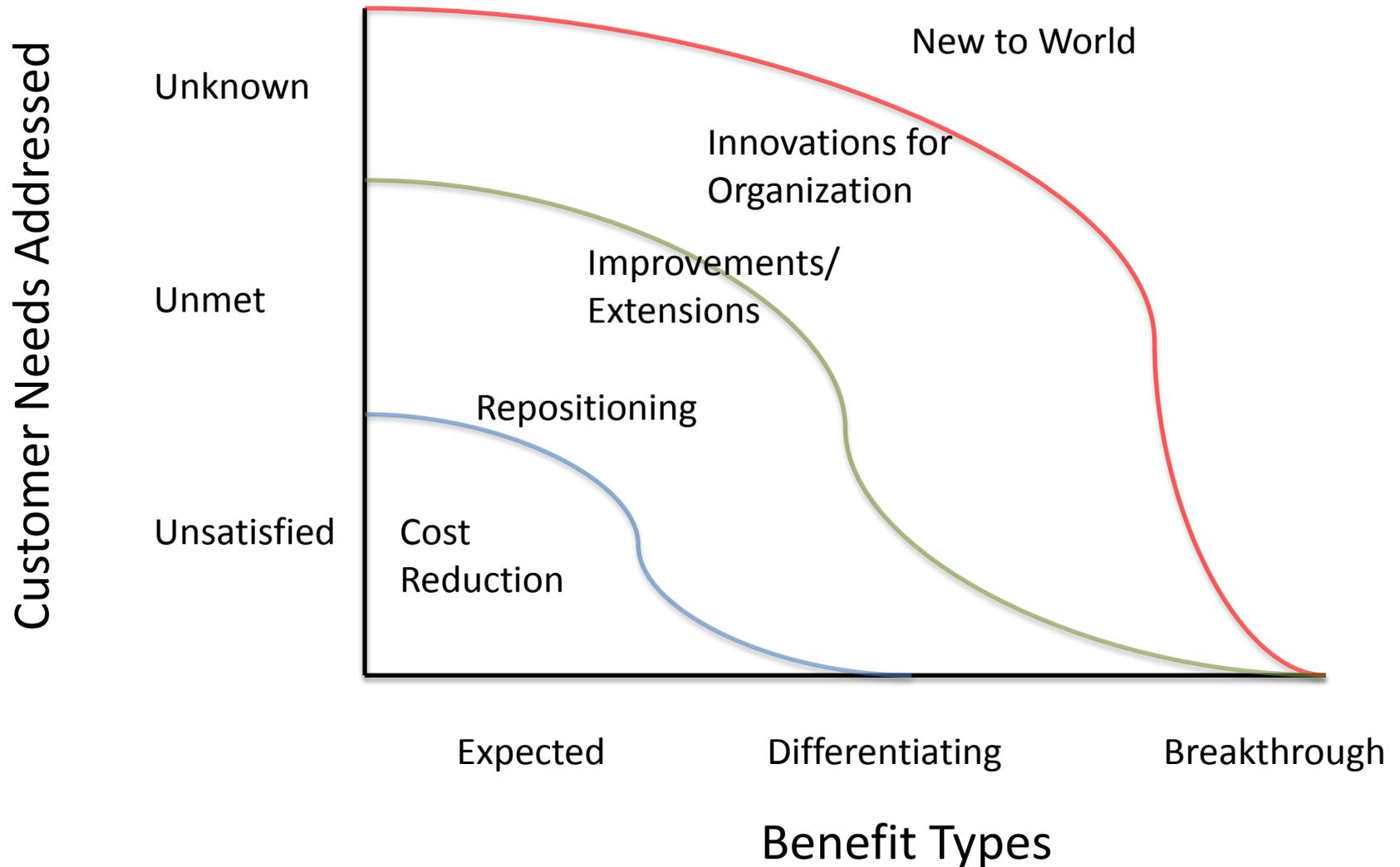
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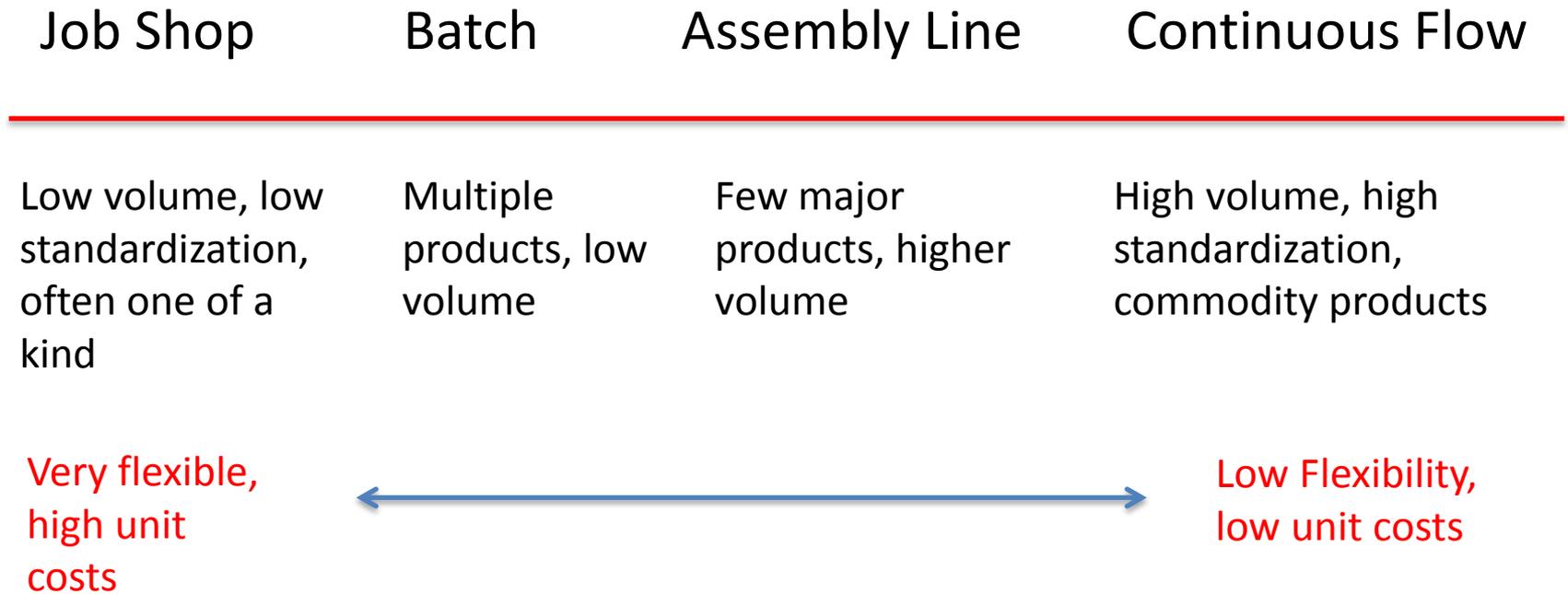
Office of Chief Information Officer

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Imagery Product/Service Brand Extension



Production/Service Design and Development: Identifying Customer Value Proposition



NITC Application Hosting Services

Service Package Items:

- Management of the user license for the time the application is needed
- Hosting of the application on a NITC server environment
- On demand download of the application from a NITC server environment
- Remote access administration
- Tier 1 Service Desk support
- Secure facility, hardware, and system software
- Personnel support for problem resolution
- Performance monitoring
- Web site analysis (upon request)
- Diagnose and correct problems for all extensions to environments that NITC develops and maintains
- Professional services for integration of web based user interface to agency applications can be optionally provided
- Application Integration Options are available through the use of eAuthentication, Common Employee Database, Google Search Appliance, and AgLearn

Service Cost Saving Practices:

- Share licensed applications across agencies to leverage the cost of the license across many users.
- Engage NITC early in the scoping phase of a new project to identify volume, geography, security requirements, etc.
- Forecast response time and load expectations to balance platform requirements
- Provide at least 90 days of notice for growth or retraction in processor requirements.

Service Level Metrics:

Measure	Target SLA
System Monitoring	24x7
Incident Response	24x7
System Availability	99.99% (not including planned downtime)

NITC Data Storage Hosting Services

Service Package Items:

- Enterprise-class virtualized disk storage controllers
 - High scalability
 - High performance
 - High availability
 - Robust data replication and migration features
 - Three virtualized disk storage options
- Redundant SAN architecture
 - Dual-fabric architecture
 - Enterprise-class directors and switches
- Highly-available NAS infrastructure
 - Utilizes same virtualized disk architecture
 - Supports both NFS and CIFS file sharing
 - Robust data snapshot/replication technology
- Security of mission-critical data provided through management of access rights
- Periodic technology refresh
- Fully secured data access and inheritable controls
- Proper disposal of failed data components
- Disaster recovery support for replicated data
- Dynamic load balancing path management software
- Recommended Backup/Archive services are also available

Cost Saving Practices:

- Utilize disk storage tiers appropriately
- Utilize provided path management software or native Operating System capabilities
- Utilize NAS solutions for highly available file sharing
- Proactively inform NITC of disk storage requirements

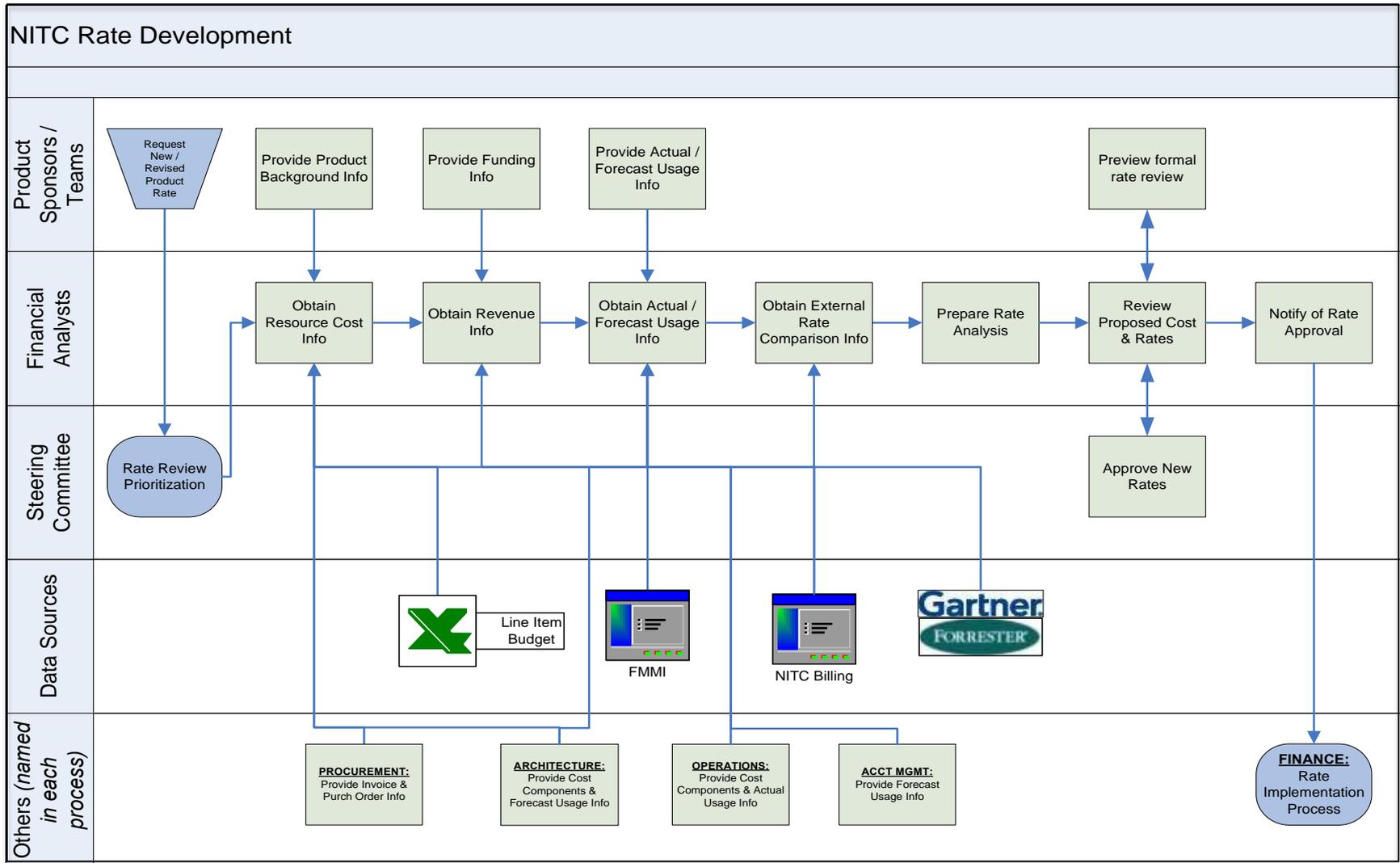
Methods:

- Collocation customers must maintain operating system, HBA driver, HBA Firmware, and Path Management Software interoperability
- Collocation customers must support periodic maintenance activities by verifying path availability before, during, and after maintenance procedures
- Only Tier-1 and Tier-2 disk can be remotely replicated

Disk Storage Options:

Option	Performance	SAN	NA S	Application Type
Tier 1	Best	X	X	Performance Sensitive
Tier 2	Good	X	X	Typical Applications
Tier 3	Fair	X	X	Backup/Archive

NITC Rate Development Process



Imagery Chargeback Structure Options: Traditional Cloud Managed Hosting Service

- Direct Plus: attributable costs for products/services charged with % of indirect costs shared among all
- Fixed or User Costs: costs divided by number of consumers of product/services
- Tiered Subscription: various cost levels of utility by services/service bundles
- Metered Usage: costs by service increments based on utility computing demand

Product/Service Delivery Pricing Model: Unit-based “Pay-as-you-go” Example

- **Unit-Based Pricing With a Fixed Price for a Predetermined Baseline of Service:** *A fixed price* for infrastructure services is a set monthly fee based on a predetermined amount of service coupled with *unit-based* pricing to take into account volume variations for the IT services, such as service units or transactions impacted by output or consumption. This pricing model is used in all areas of infrastructure and includes: the number of millions of instructions per second (MIPS) or server count in a data center; the number of calls to, or users per, help desk; the number of data lines or devices within the network; and the number of desktops and laptops in the desktop support area; number of data lines or devices within the network; and the number of desktops and laptops in the desktop support area.

Product/Service Delivery Pricing Model: Time/Material “Skill Access” Example

- **Time and Material:** In this model, the price is based on labor, materials and other costs incurred, such as travel expenses. The organization may opt to pay the SP on a time and material basis at pre-negotiated labor rates (such as hourly, daily or monthly) for the needed unique skills. This model is effective for staff augmentation contracts with help desks when there is a planned temporary volume spike or for desktop support when the organization's volume does not warrant a monthly charge.

Product/Service Delivery Pricing Model: Incentive-based “Business Alignment” Example

- **Incentive-Based:** The price is based on the service plus a bonus for achieving performance goals. Infrastructure services can become stagnant and lack innovation, thus the use of incentive-based pricing to reduce costs and drive unique innovation for the organization is paramount. Incentives can be used to drive quicker consolidation of servers, increase server virtualization, and increase help desk automation and the use of self-help. This model can be used with all other pricing models. It is most effective when the organization can clearly define requirements and success criteria that can be measured and audited to warrant an incentive payment.

Imagery Business Model: Alternative Delivery Arrangements

Delivery Model	Unit	Price Structure	Notes
Subscription	Imagery (product)	Per Quarter Quad; local	NAIP
Membership	Imagery (product)	Per Quarter Quad; entire data set	NAIP
Utility	Spatial Data/GIS App (product/services)	Per Use	SaaS
Customer Tier Support	Exchange (services)	Per Exchange	CRM
Product Tier Support	Complexity (product/services)	Per cycle	Product Mgt Lifecycle
Device Tier Support	Device (service)	Per User	Mobile
Platform Tier Support	Portal	Per Use	PaaS
Others???	?	?	?

Offering Performance Measurements

- User satisfaction - measured by doing regular and planned surveys
- End-to-end process performance - e.g., service request fulfillment time, change request fulfillment time, and incident reported turnaround time
- IT service value metrics linked to business and customer outcomes - e.g., constituent use, productivity, better response, etc.
- End-to-end service levels and overall customer/user experience - e.g., the user's experience interacting with IT and how service levels affected users performance
- Risk metrics - transaction cost, recovery
- Agility metrics - capacity management

Clarifying Factors:

Describing Development/Production Mission Needs

- Business cycles; continuity across collections
- Congressional language; appropriation funding cycles
- Spatial data preparation
- Geoprocessing workflows; assembly
- Product/Service testing; quality controls
- Lifecycle consumption patterns; behaviors
- Archival requirements: government, consumers, legal, etc.
- Capacity management; demand management
- Network analysis
- Subject Matter Expertise intervention
- Surge demands resulting from mandates, social media, mashups, interagency programs, National Geospatial Platform

COE Operational Management:

Notional View of Deployment Roles/Responsibilities

Components	EGMO	EAS	USDA Agencies
Enterprise Services	Common Requirements, JAD, Process Design, Customer Relations, Innovation Framework	Service Registry, MDM, ITIL, Change/ Configuration Management, Mobility, Help Desk	Requirements Collection/Validation, Imagery Services, Product Management, Innovation R&D, RAD
Segment Architecture	Performance Layer, Business Layer, Reference Model, Data Layer	Service Certification, Security Layer, Technical Layer, Data Layer	Service Component Layer, Data Layer
Solution Provisioning	Business Model, Procurement Strategy	Cloud PaaS/IaaS, COOP, Green Computing, Legacy Migration, Performance Management	Procurement Task Order
Portfolio Management	Strategic Planning, Joint Ventures, MOUs	ELA, Performance Measures, Metrics	Asset Management
Governance	Governance Capacity Development, Communications	Vendor Management, SPL, SLA	Operations Metrics

GIS Enterprise Solutions Platform Approach: Notional Responsibilities and Methods

Owner	Functional Goal	Method	Performance Outcomes
Agency	Organize Information Resources to Satisfy Requirements and Extend Product Value	Enterprise Content Management (ECM)	Efficient and Effective Content Collection/Publication
EGMO	Increase Geospatial Community Capability to Solve Public Problems	Customer Relationship Management (CRM); Information Technology Infrastructure Library (ITIL)	Improved Consumer Collaboration/Experience
Agency	Manage the Lifecycle Value of Data Assets	Digital Asset Management (DAM)	Value-added Search/ Storage/ Archival
EAS	Sustain Deployment and Delivery of Stable Service Solutions	Information Technology Systems Management (ITSM)	Predictable, Rigorous Demand/ Capacity/ Security Management
EGMO/EAS	Identify, Test, and Validate Emerging Geospatial Solutions	Rapid Pattern Recognition (RPR)	Organic Innovation Competency

Enterprise Spatial Mapping Service: ArcGIS Online Portal Deployment

ESMS Portal Customer Segments

Who?	What?	Why?	When?
Senior Leadership	Map views	Evidence-base decision-making, Mission relevancy	Phase 1
Program Analysts	Map views, Analysis, Platform	Place-based policy development and programming deployment	Phase 2
Research	Analysis, Models	Good science	Phase 1
Oversight	Analysis, Product Certification	Audit review	Phase 4
Citizens	Map views	Self-Service, Advocacy	Phase 3
Technologists	Platform, MDM	Spatial data lifecycle management	Phase 1



DRAFT Example for Discussion:

Cloud Geospatial Managed Services OCIO Costs*

Description	Year 1 Pricing	Year 2 Pricing	Year 3 Pricing
Spatial Products Metadata and Standards Assessment: <ul style="list-style-type: none"> Evaluate agency data layers, web services, files, etc. for compliance with enterprise data sharing exchange quality requirements Certification and registration of agency spatial products 	\$8,000-12,000	\$8,000-12,000	\$8,000-12,000
Preparation, deployment and testing of the ArcGIS Portal and Map Services: <ul style="list-style-type: none"> Initial setup and configuration of hosting environment, specified software and data content Deployment and testing 	\$12,500	n/a	n/a
Managed Services for the ArcGIS Portal and Map Services: <ul style="list-style-type: none"> Hosting environment to support up to 16,000 map requests per hour and up to 50 standard map and feature services 24/7 hosting environment monitoring and support 	\$6,700 per month	\$7,000 per month	\$7,400 per month
Total	\$100,900	\$92,000	\$96,800

* Per ArcGIS Portal instance in Amazon

Example Hosting Service Tiers

	BASE-LITE	BASE	SIGNATURE	ULTIMATE
Unlimited 24x7 Remote Help Desk Support	8x5 (4 hours included per month)	✓	✓	✓
Included On-Site Hours	8 per Month	8 per Month	16 per Month	32 per Month
Anti-Spam/ Anti-Virus	✓	✓	✓	✓
Proactive Monitoring	8x5	8x5	24x7	24x7
Emergency Server/Network Support	8x5, 2 hour response	8x5, 2 hour response	24x7, 2 hour response	24x7, 2 hour response
Managed Firewall/VPN	8x5, 2 hour response	8x5, 2 hour response	24x7, 2 hour response	24x7, 2 hour response
Included Emergency Support Incidents	1 per Month	1 per Month	3 per Month	Unlimited
Patch Management	✓	✓	✓	✓
Remote Data Backup	Optional	Optional	✓	✓
Quarterly Business Review	N/A	N/A	✓	✓
Hosted Exchange Email	Optional	Optional	Optional	Optional
Managed Content Security	Optional	Optional	Optional	Optional