WaTech Exec Committee 7-25
Strategy Review

WaTech

Washington Technology Solutions

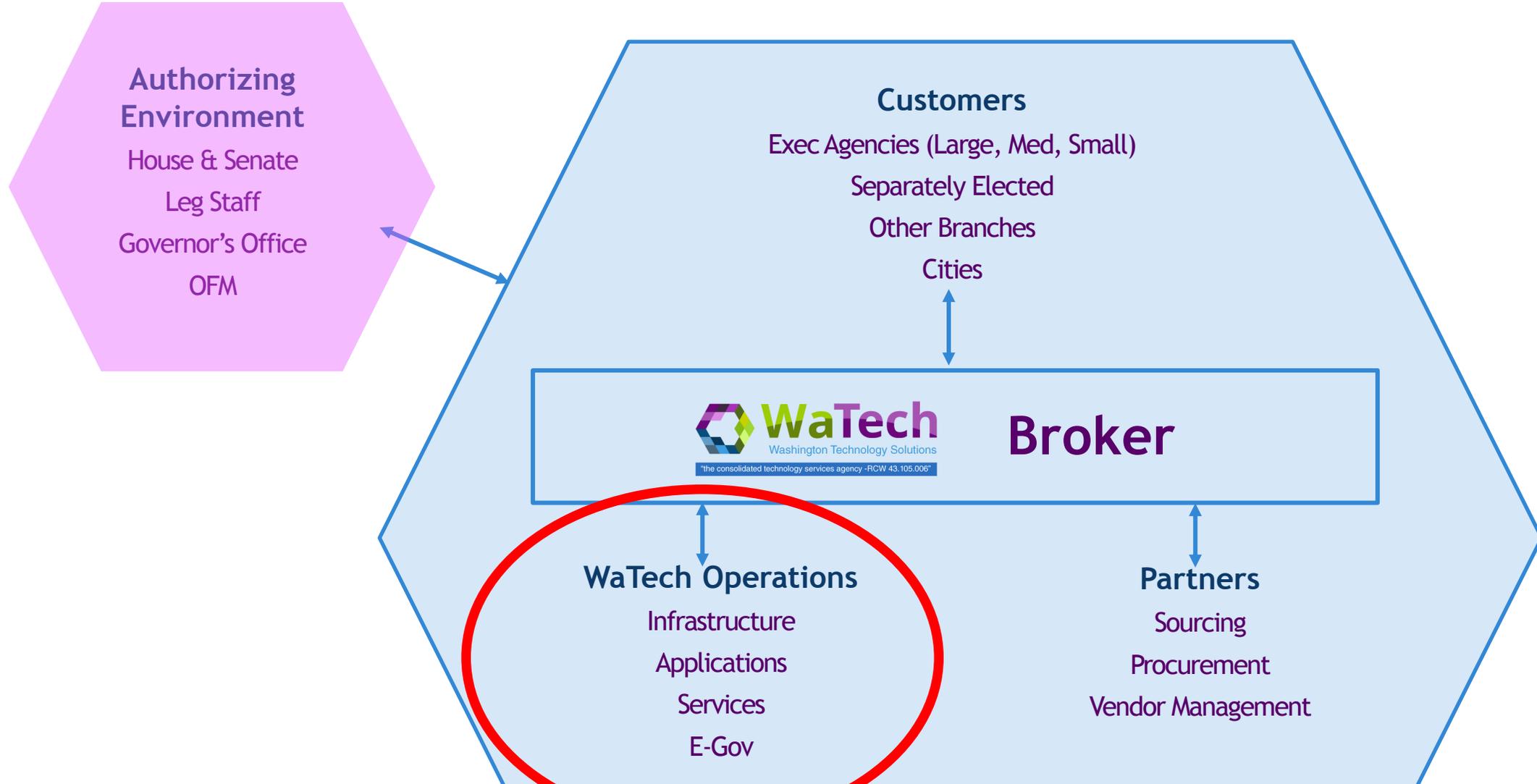"the consolidated technology services agency -RCW 43.105.006"

Agenda

Top Level Strategy Review
- Network Update
- Office 365 Update

Financial Update

Customer Survey Results

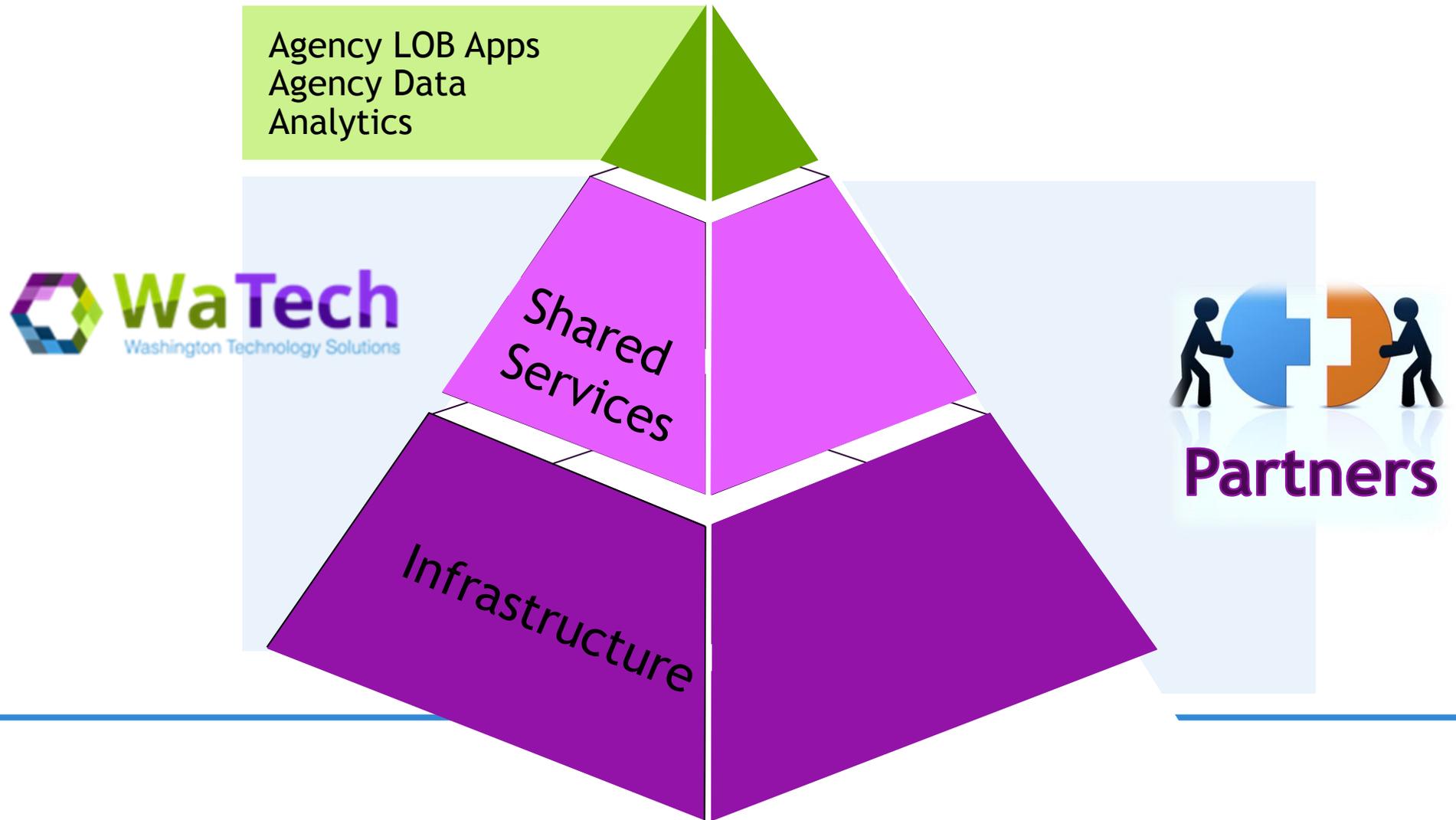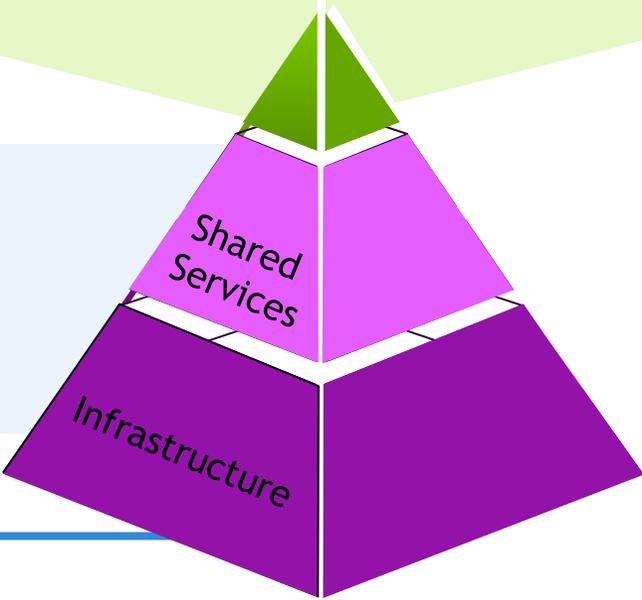Legislative Agenda Topics

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Relationship Map

Authorizing Environment

House & Senate

Leg Staff

Governor's Office

OFM

Customers

Exec Agencies (Large, Med, Small)

Separately Elected

Other Branches

Cities

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Broker

WaTech Operations

Infrastructure

Applications

Services

E-Gov

Partners

Sourcing

Procurement

Vendor Management

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WaTech "Org" Chart

Layers of IT

LoB Apps

Agency Data Analytics

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Partners

Enterprise Software, AFRS, HRMS, TEMS,

BI Reporting, SaaS,

Desktop OS, Servers OS, Interoperability Layers, Databases

Web Hosting Infrastructure, Security Functions

Servers, Desktop Hardware, WiFi, Cloud Infrastructure

Vault, Biz Continuity, Elastic Computing, PAAS

Network, Telecommunications, Routing, Network Security, Data Center

TeleCo Infrastructure, Physical Security

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Agency WaTech Demark

Agency LOB Apps
Agency Data
Analytics

Shared Services

Infrastructure

Partners

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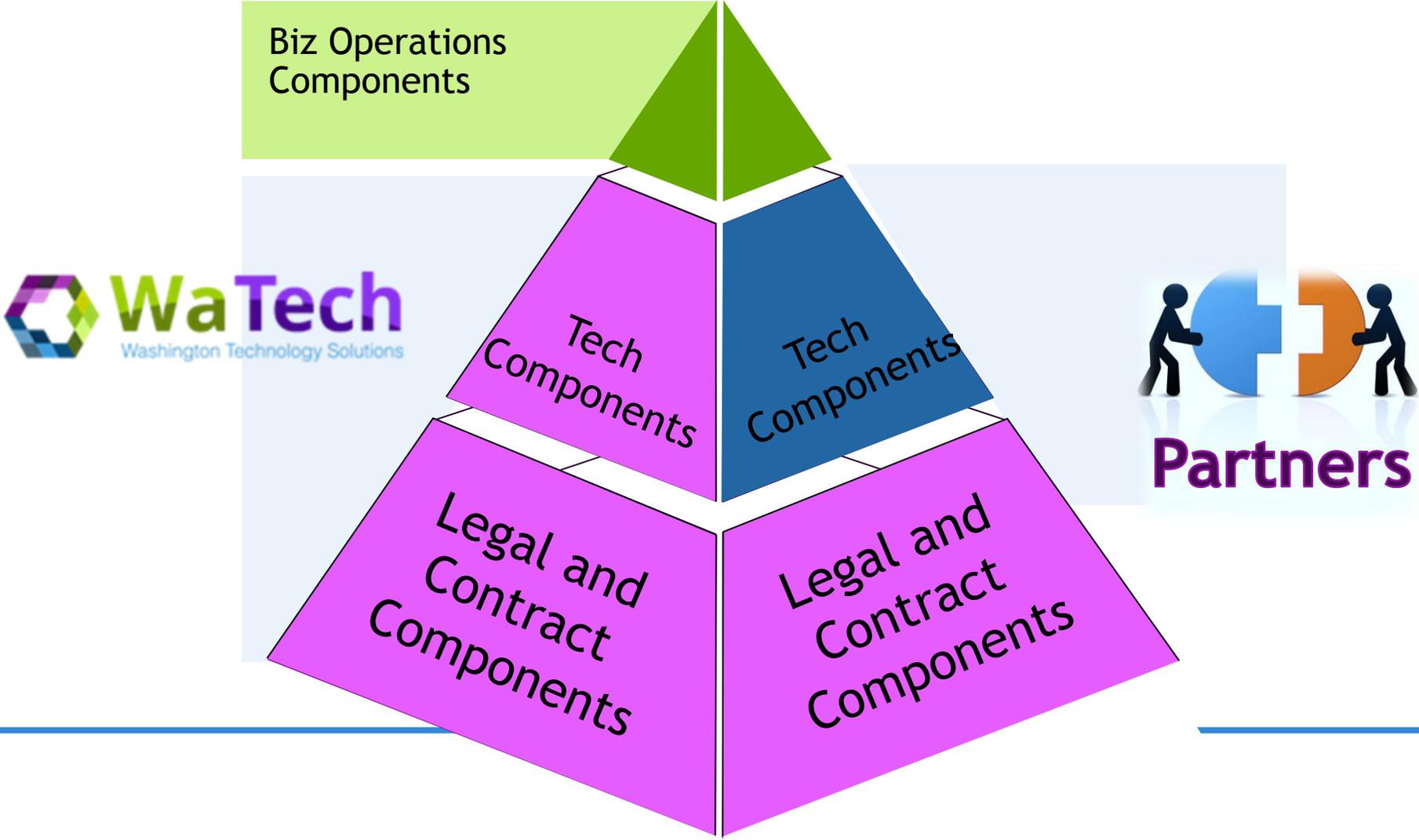"the consolidated technology services agency -RCW 43.105.006"
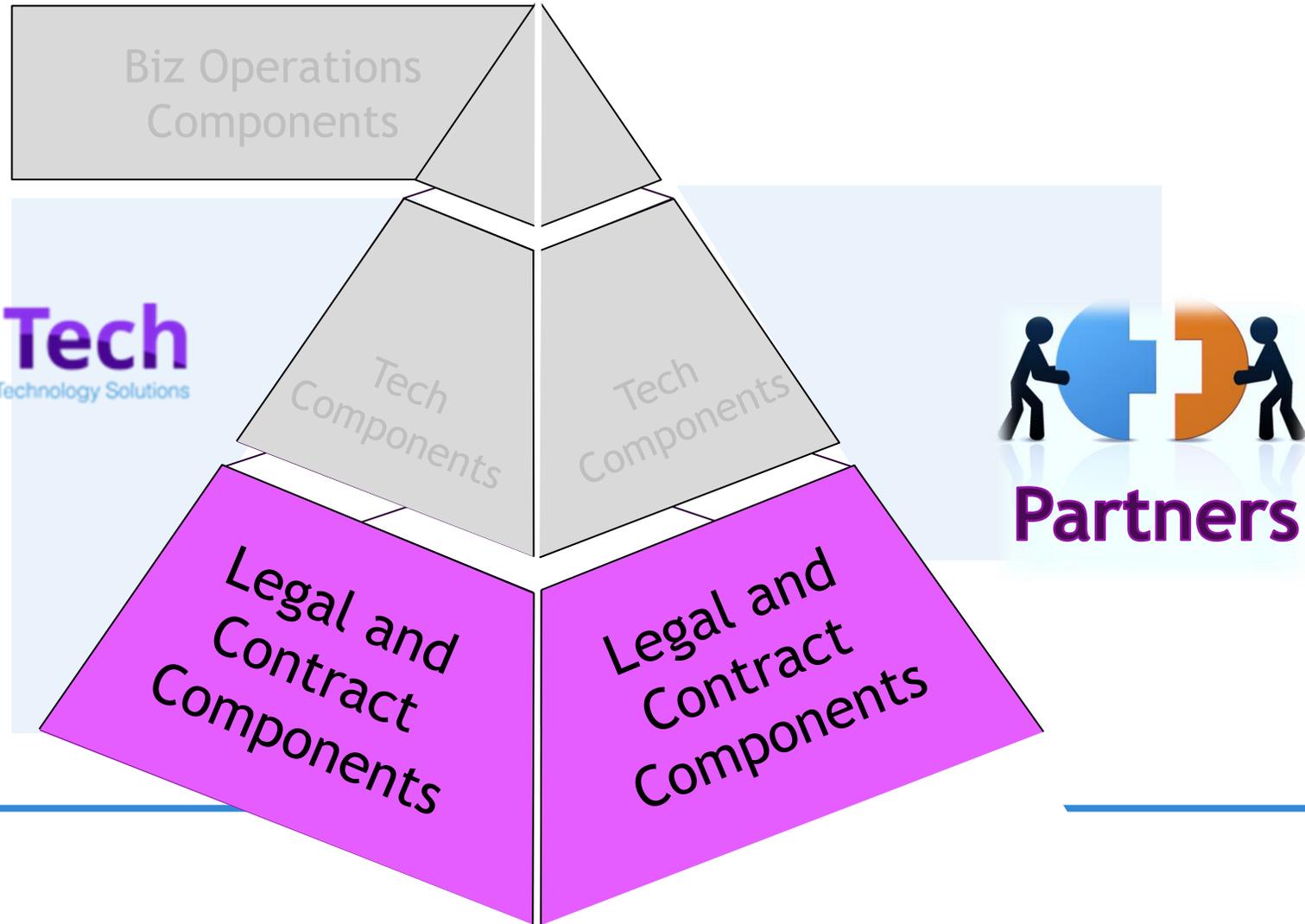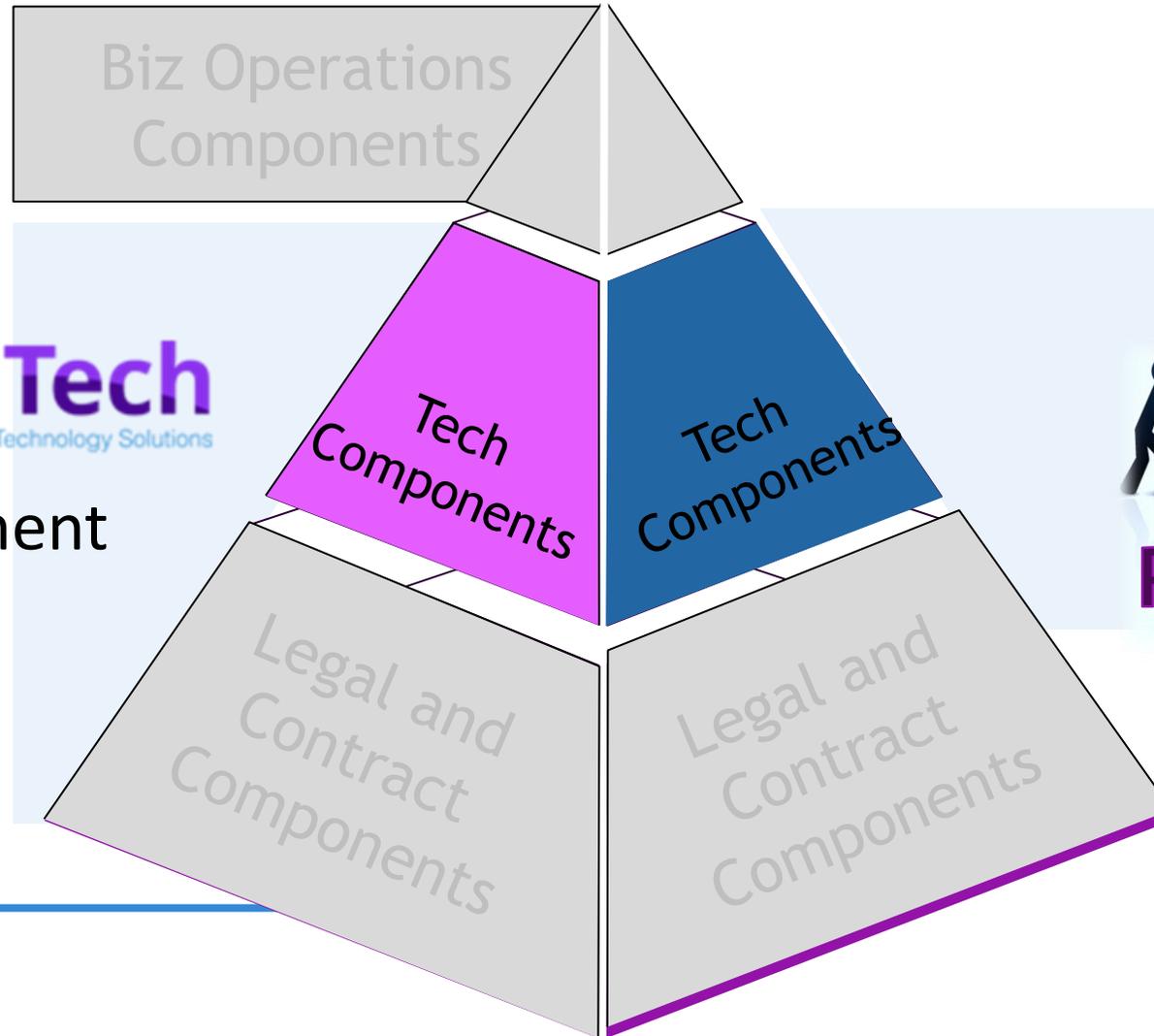
Enterprise View

Broker Model

Broker Model - Legal

- Procurement
- Contracting
- Contract Management
- License management and optimization
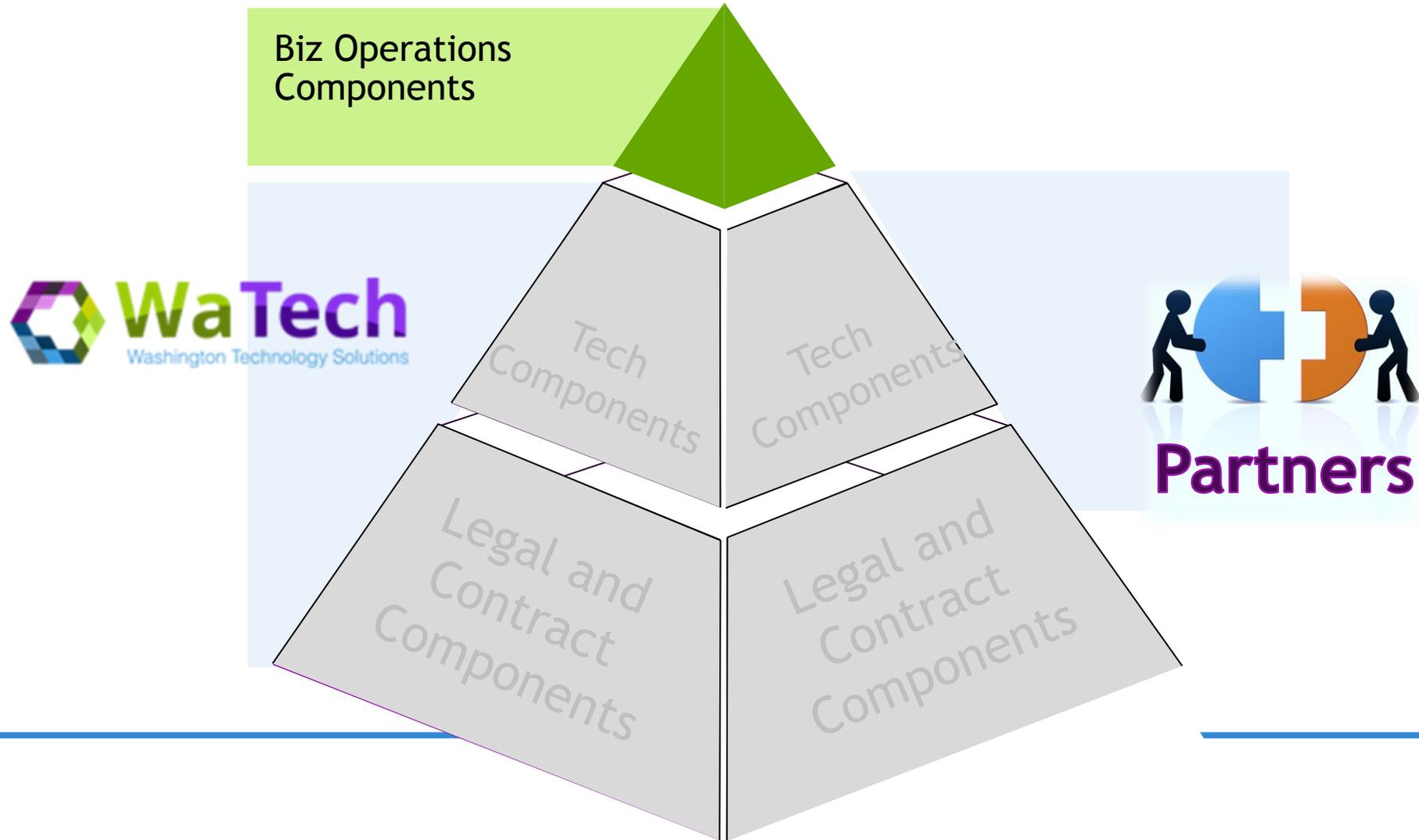- Partner relationship management

Broker Model - Technology

o Technology Development
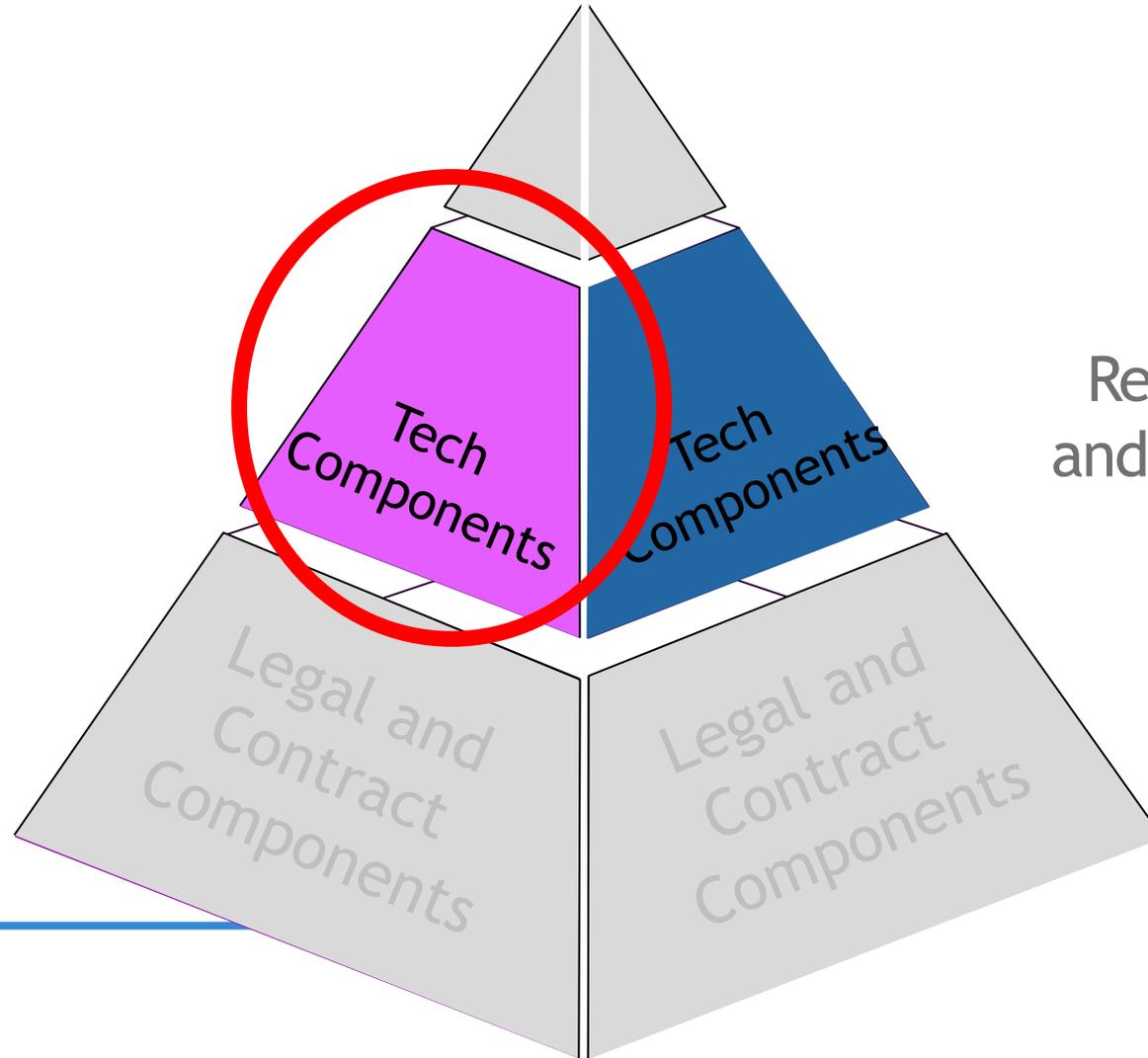o Implementation
o Technical Operations

Biz Operations Components

Tech Components

Tech Components

Legal and Contract Components

Legal and Contract Components

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Partners

Broker Model – Business Ops

Biz Operations Components

Tech Components

Tech Components

Legal and Contract Components

Legal and Contract Components

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Partners

- o OCM
- o Training
- o Reporting

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Technology Strategy

What Goes Here?

Tech Components

Tech Components

Legal and Contract Components

Legal and Contract Components

Respond to Market and Customer Needs

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Technology Strategy

What Investment Here?

Tech Components

Tech Components

Legal and Contract Components

Legal and Contract Components

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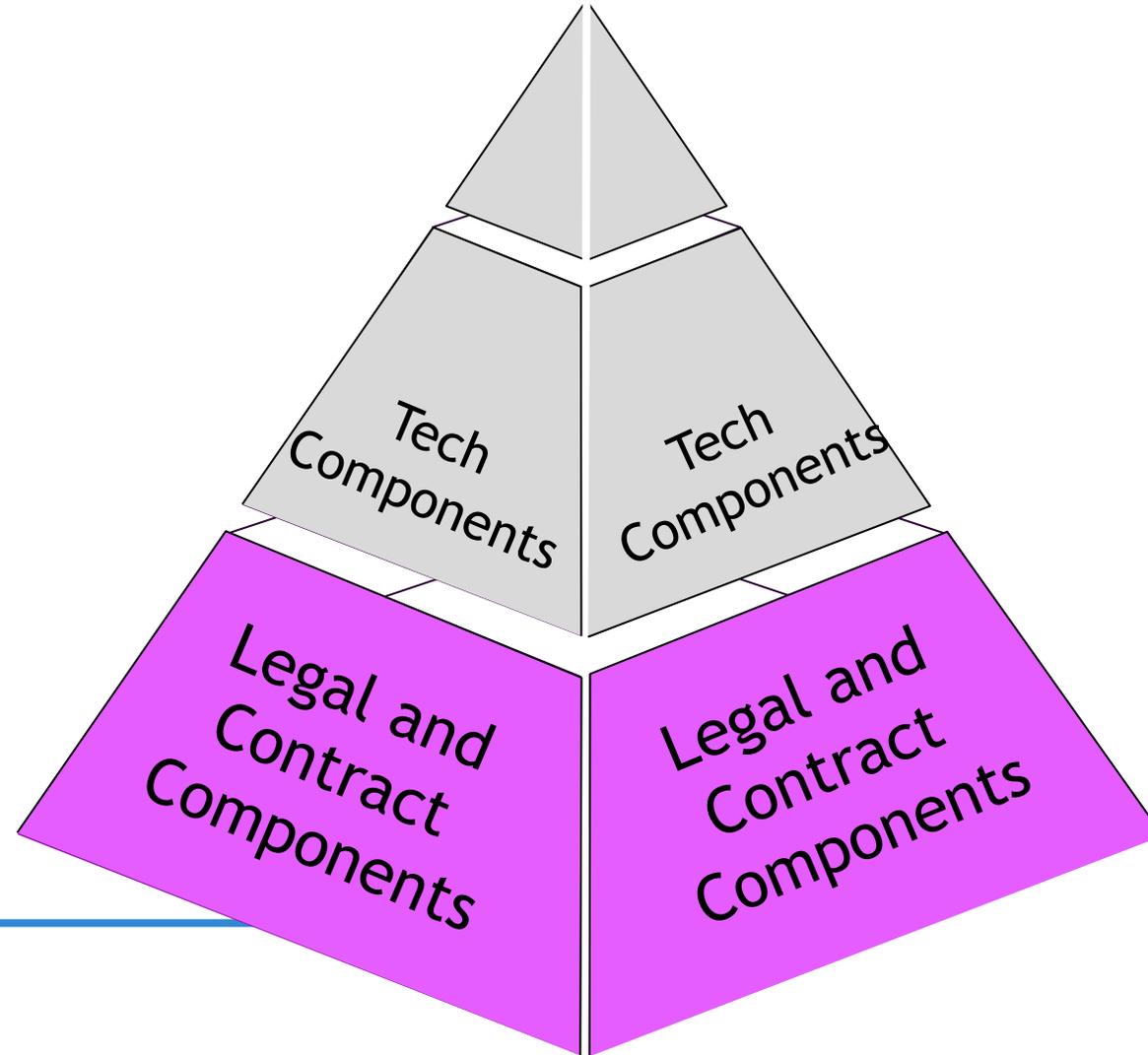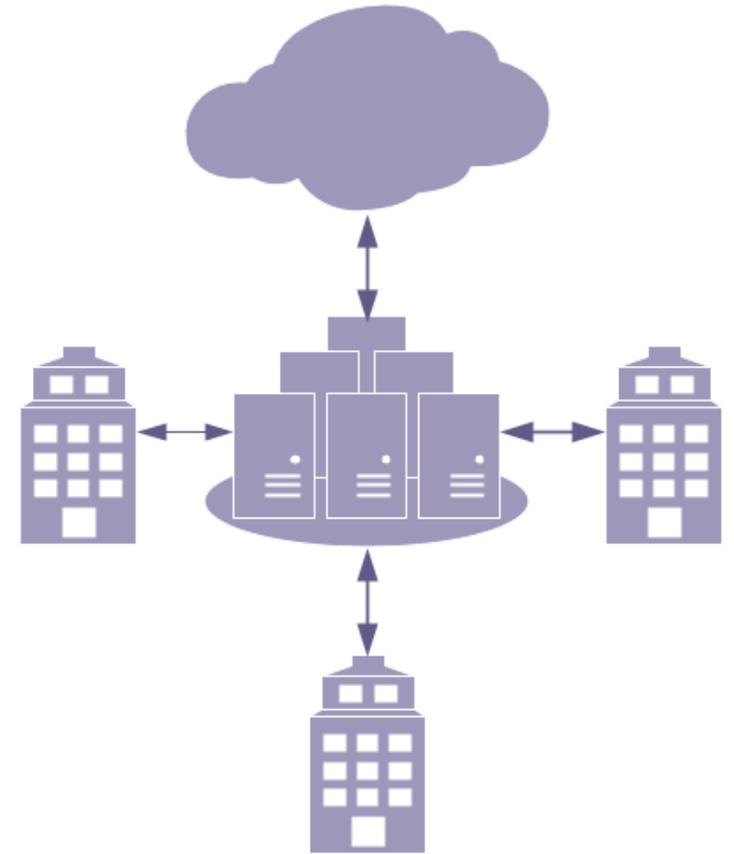
Core Technology Investments
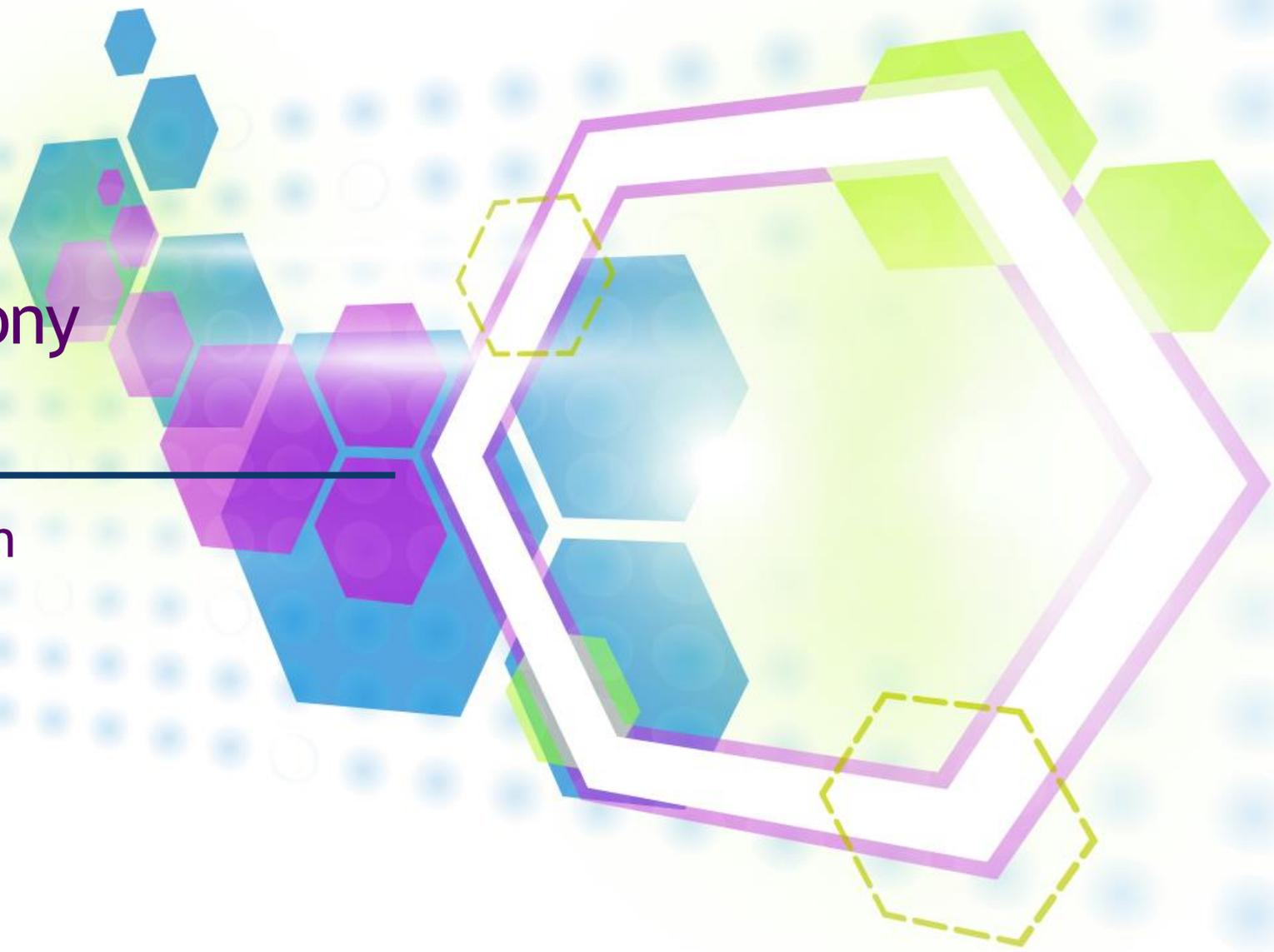
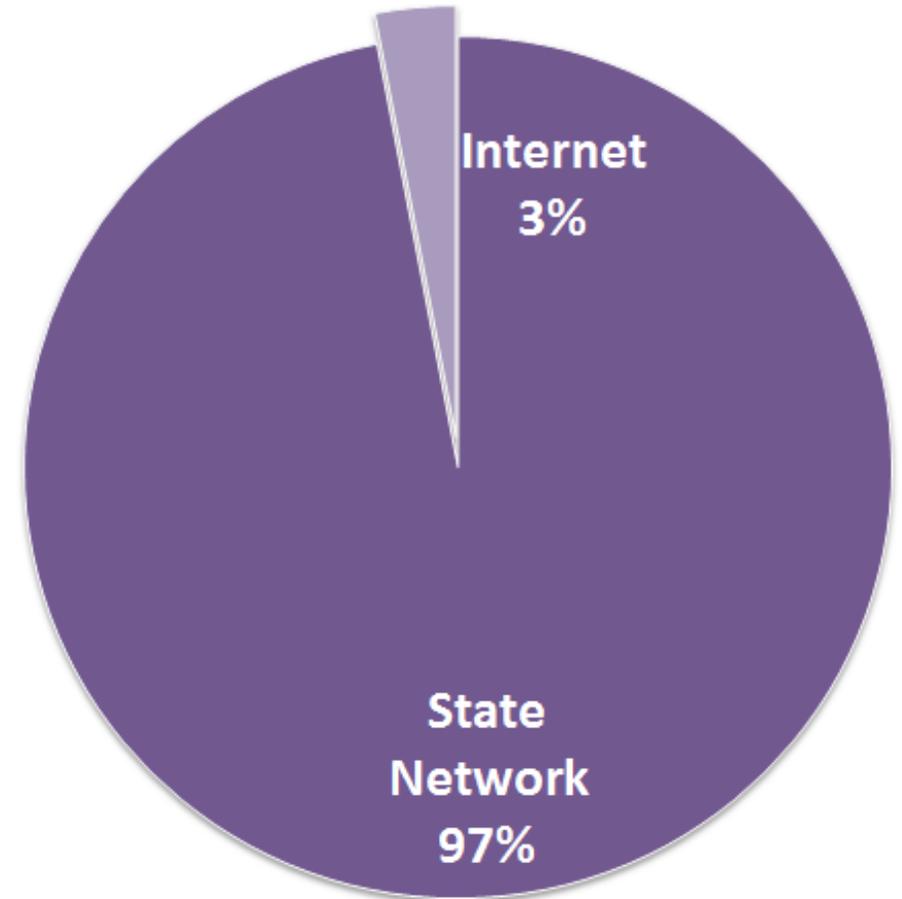# Network and Telephony Deep Dive

Enterprise Data Consumption

Network Analysis Overview

▸ Based on previous conversations, we asked two questions

▸ Are people using the network in the way that it is intended to be used?

▸ Is our Internet connection scaled and protected properly?

Data Consumption

▸ The bulk of data transmissions stays within the State's network

▸ 3 Petabytes of data per month, or approximately 100Tb per day

▸ The Internet connections account for 3% of the overall network traffic

Internet
3%

State
Network
97%

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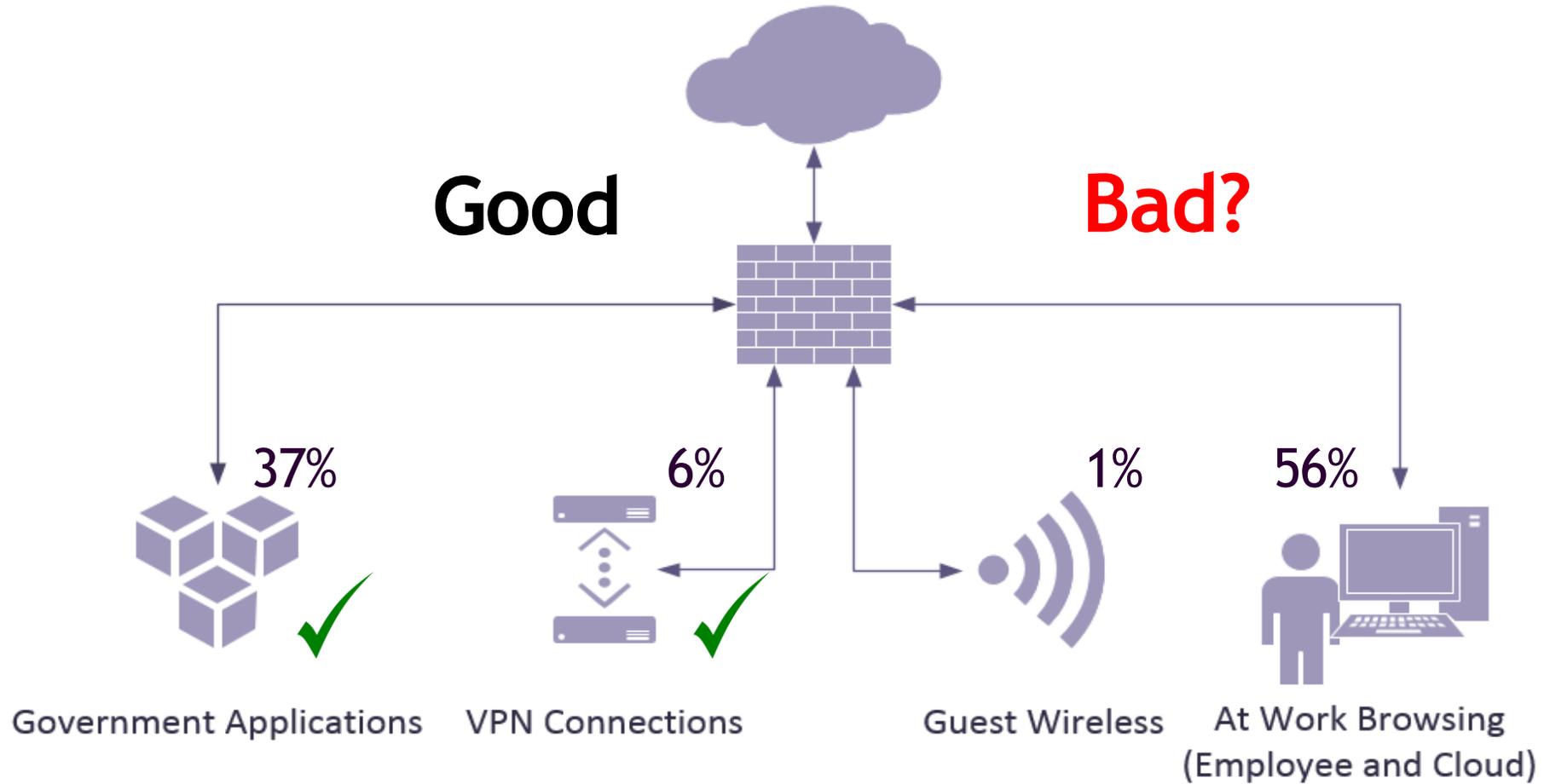"the consolidated technology services agency -RCW 43.105.006"

Overview

▸ Internet traffic poses the greatest security risk.

▸ What does the 3% of Internet traffic look like?

▸ "Good" use vs. "Bad" use

Data Consumption

Good

Bad?

37% Government Applications ✓

6% VPN Connections ✓

1% Guest Wireless

56% At Work Browsing (Employee and Cloud)

Data Consumption

▸ User generated traffic accounts for only 1.7% of the overall traffic

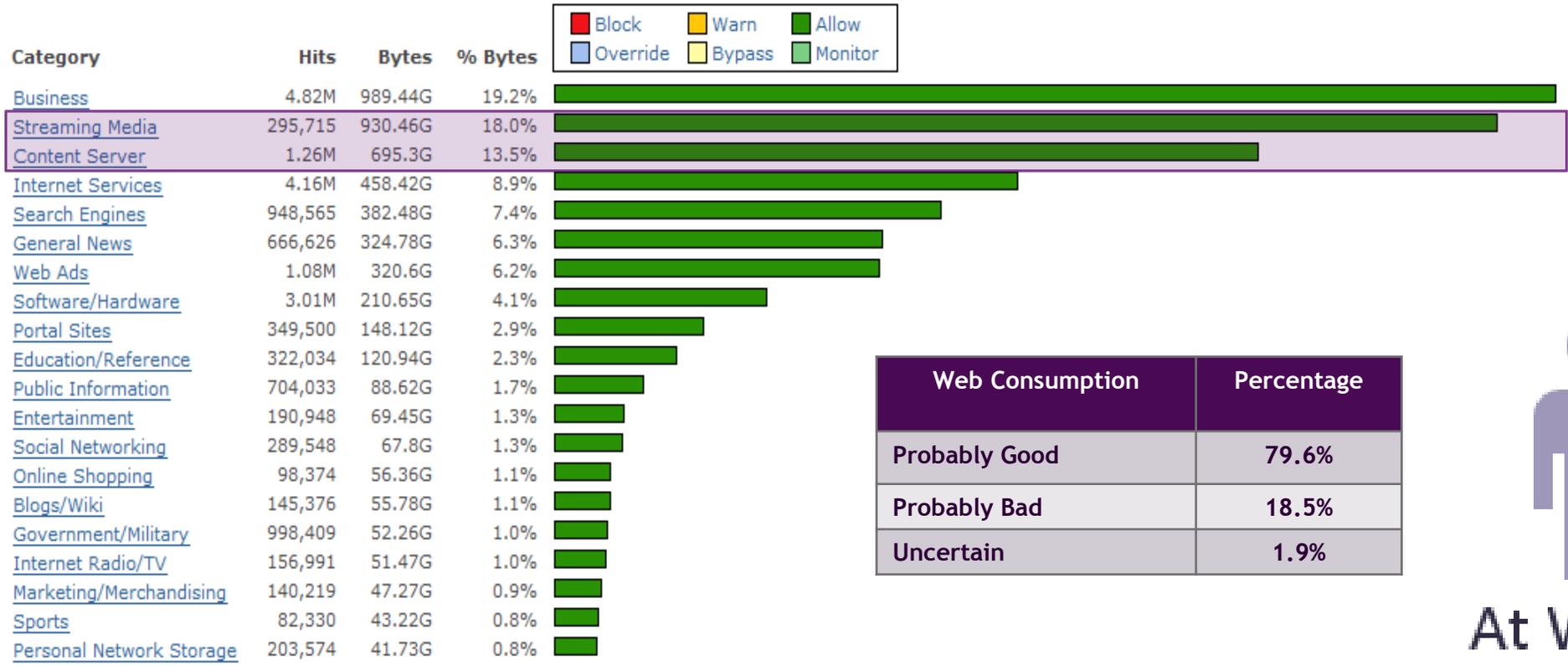▸ The trending of streaming services will need to be monitored for capacity impacts
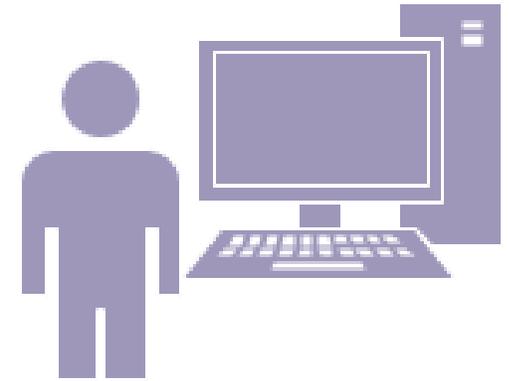
At Work Browsing

Guest Wireless

Data Consumption - At Work Browsing

Category	Hits	Bytes	% Bytes
Business	4.82M	989.44G	19.2%
Streaming Media	295,715	930.46G	18.0%
Content Server	1.26M	695.3G	13.5%
Internet Services	4.16M	458.42G	8.9%
Search Engines	948,565	382.48G	7.4%
General News	666,626	324.78G	6.3%
Web Ads	1.08M	320.6G	6.2%
Software/Hardware	3.01M	210.65G	4.1%
Portal Sites	349,500	148.12G	2.9%
Education/Reference	322,034	120.94G	2.3%
Public Information	704,033	88.62G	1.7%
Entertainment	190,948	69.45G	1.3%
Social Networking	289,548	67.8G	1.3%
Online Shopping	98,374	56.36G	1.1%
Blogs/Wiki	145,376	55.78G	1.1%
Government/Military	998,409	52.26G	1.0%
Internet Radio/TV	156,991	51.47G	1.0%
Marketing/Merchandising	140,219	47.27G	0.9%
Sports	82,330	43.22G	0.8%
Personal Network Storage	203,574	41.73G	0.8%

Legend: Block, Warn, Allow, Override, Bypass, Monitor

Web Consumption	Percentage
Probably Good	79.6%
Probably Bad	18.5%
Uncertain	1.9%

At Work Browsing

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Data Consumption – Guest Wireless

▸ Trending service has grown over 400% in past 12 months

▸ Not a significant percentage of Internet traffic during steady-state, but may burst to 30% of Internet traffic

Guest Wireless
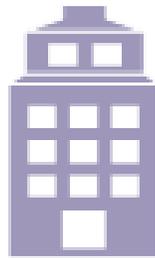
Data Consumption – Bursting Traffic

Options for when user-generated data consumption bursts

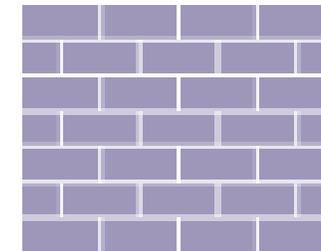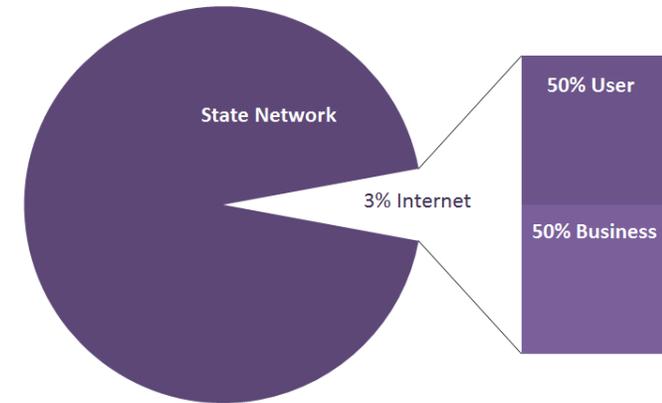|	Wired	Guest Wireless
Good Traffic	• Highway to the Cloud • Patch Service At Work Browsing	• Traffic Shaping
Bad Traffic	• Terms of Service • Policy Guest Wireless	• Terms of Service • Traffic Shaping

Business Problems

Burst

Systemic

Security

State Network

50% User

3% Internet

50% Business

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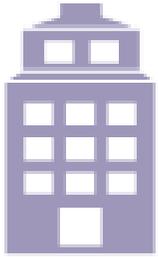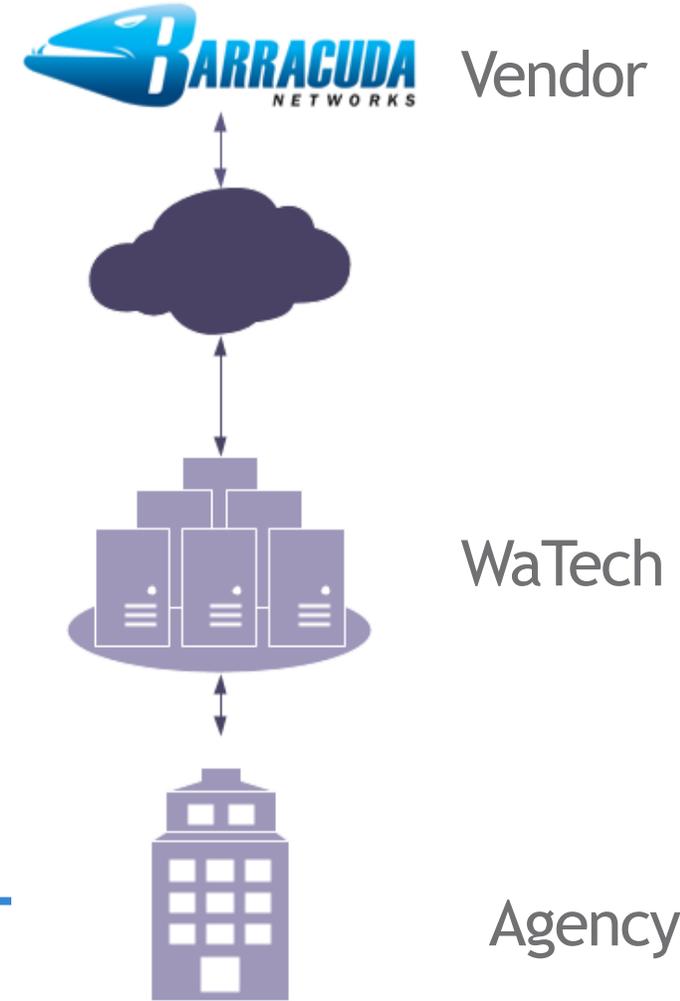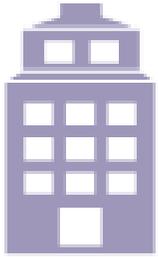"the consolidated technology services agency -RCW 43.105.006"

Backup Services

Systemic

- ‣ Primary path to the cloud = The Front Door

- ‣ Up to 3.5 Terabytes of data being generated daily from 10 customers

Vendor

WaTech

Agency

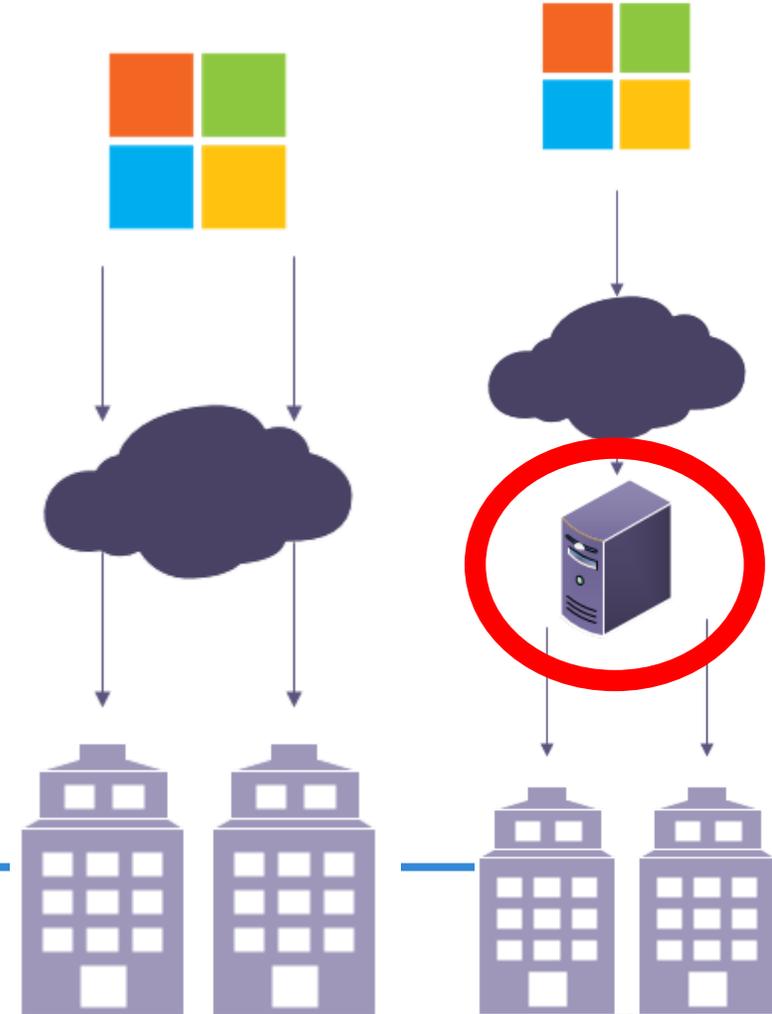# Patch Servers

Systemic

▸ Multiple connections to the Internet versus a single connection to a patch server

▸ Traffic reduction for commonly deployed applications

Defense in Depth

Firewalls (52M)

Intrusion Prevention (13M)

Denial of Services 3.9M

Zero Day (198)

Analysts
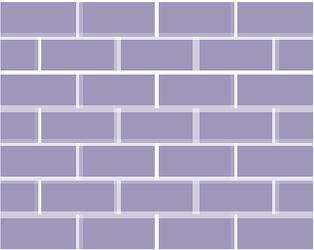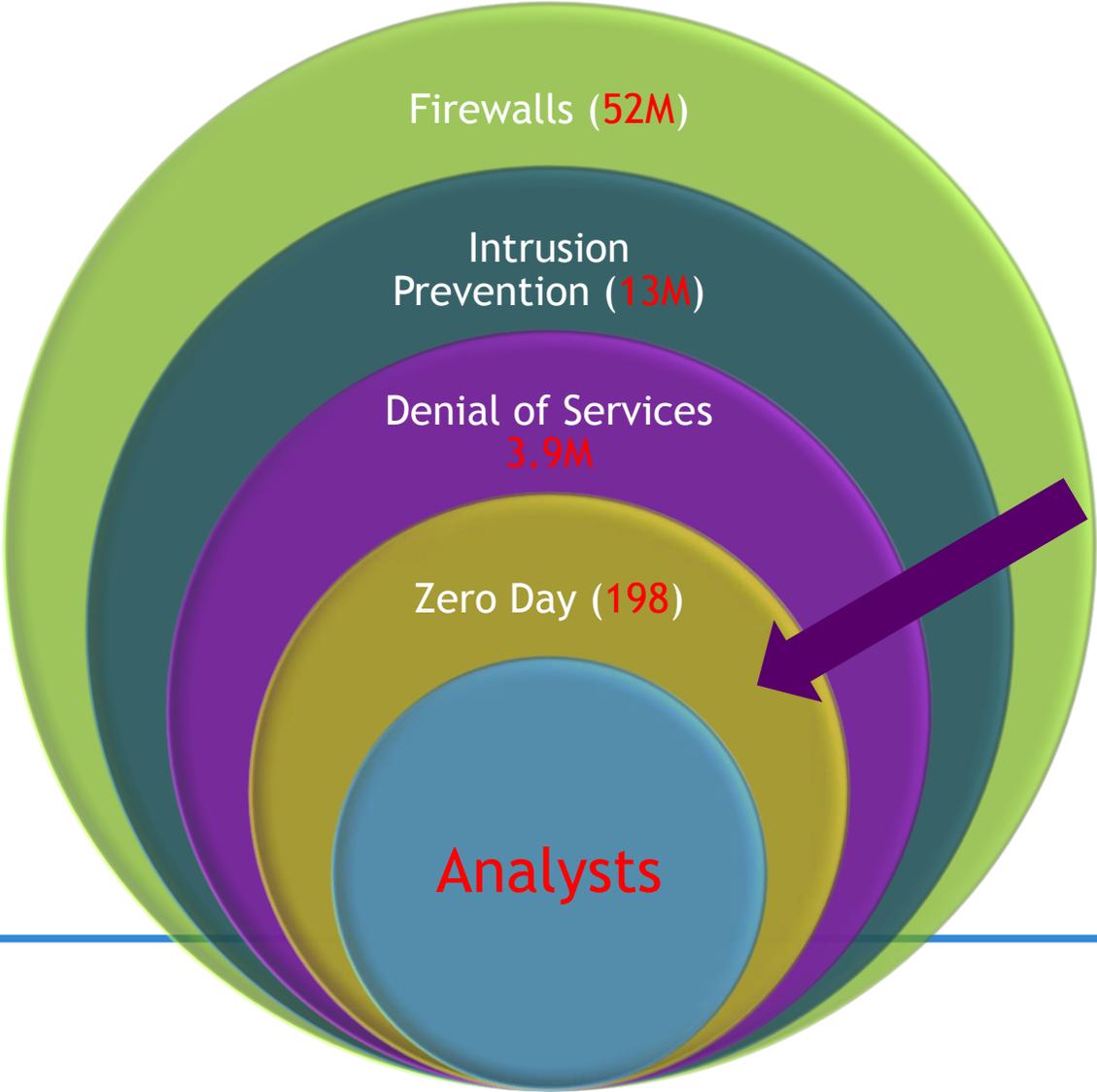
Security

Inspection occurs at line-speeds; more hardware as consumption increases

Business Problems

Issues

Burst	Systemic	Security
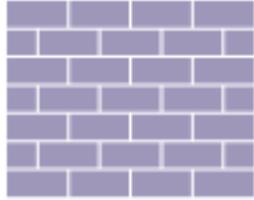
Solutions

Burst	Systemic	Security
• Load Balancing • Terms of Service • Policy	• Load Balancing • Highway to the Cloud • Patching Service • Limited Analytics	• Load Balancing • Security Decision Package

Questions – Burst Strategy

- Currently burst at 6Gb / second
  - Security infrastructure impaired at 4Gb / second
- Requires investment to scale security infrastructure
- Decision package for security investment is in draft
- The requested investment gets us to approximately 12-18 months of coverage
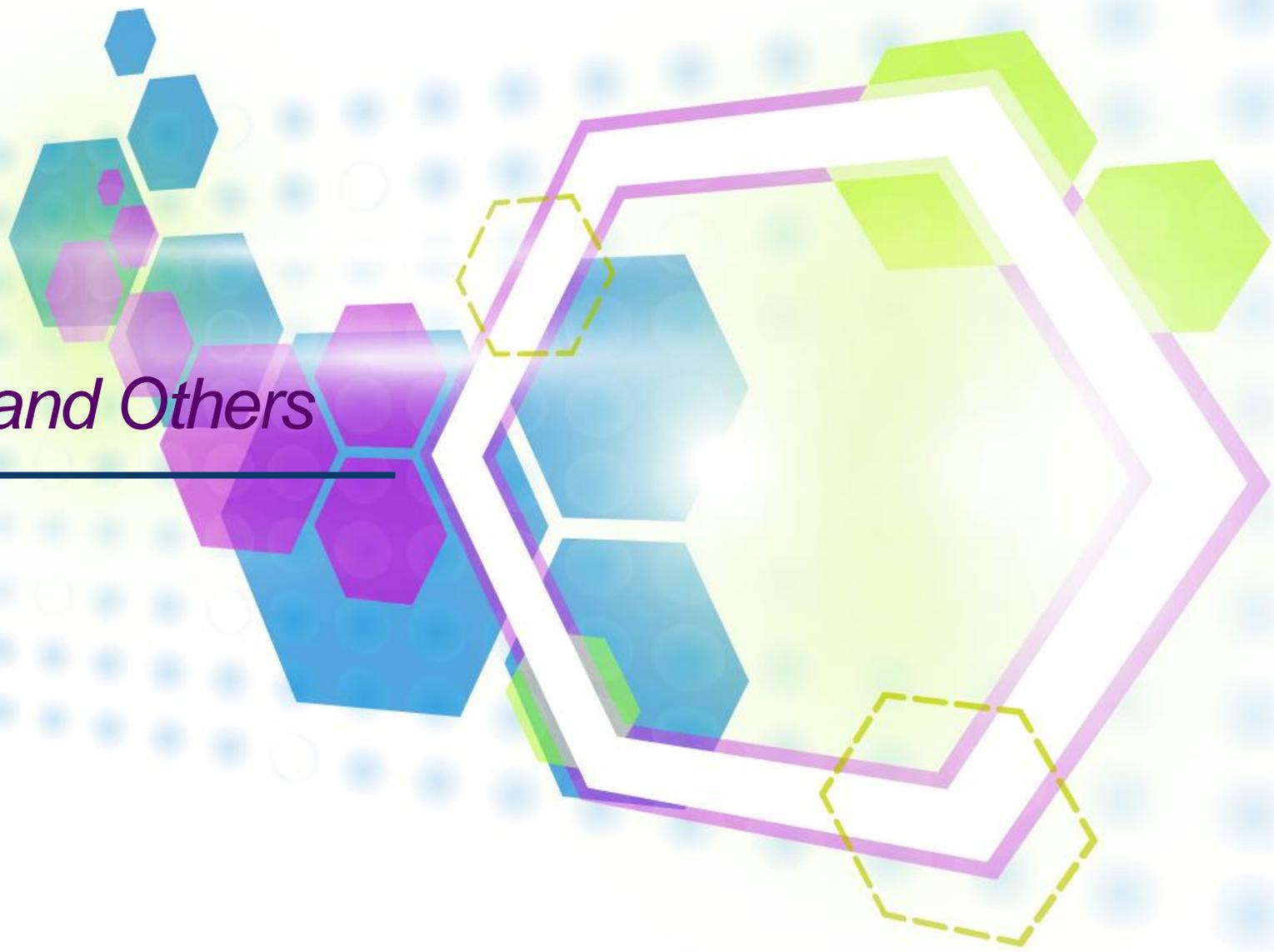
Enabling Office 365 and Others

Cloud Enablement Program

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Cloud Enablement Program
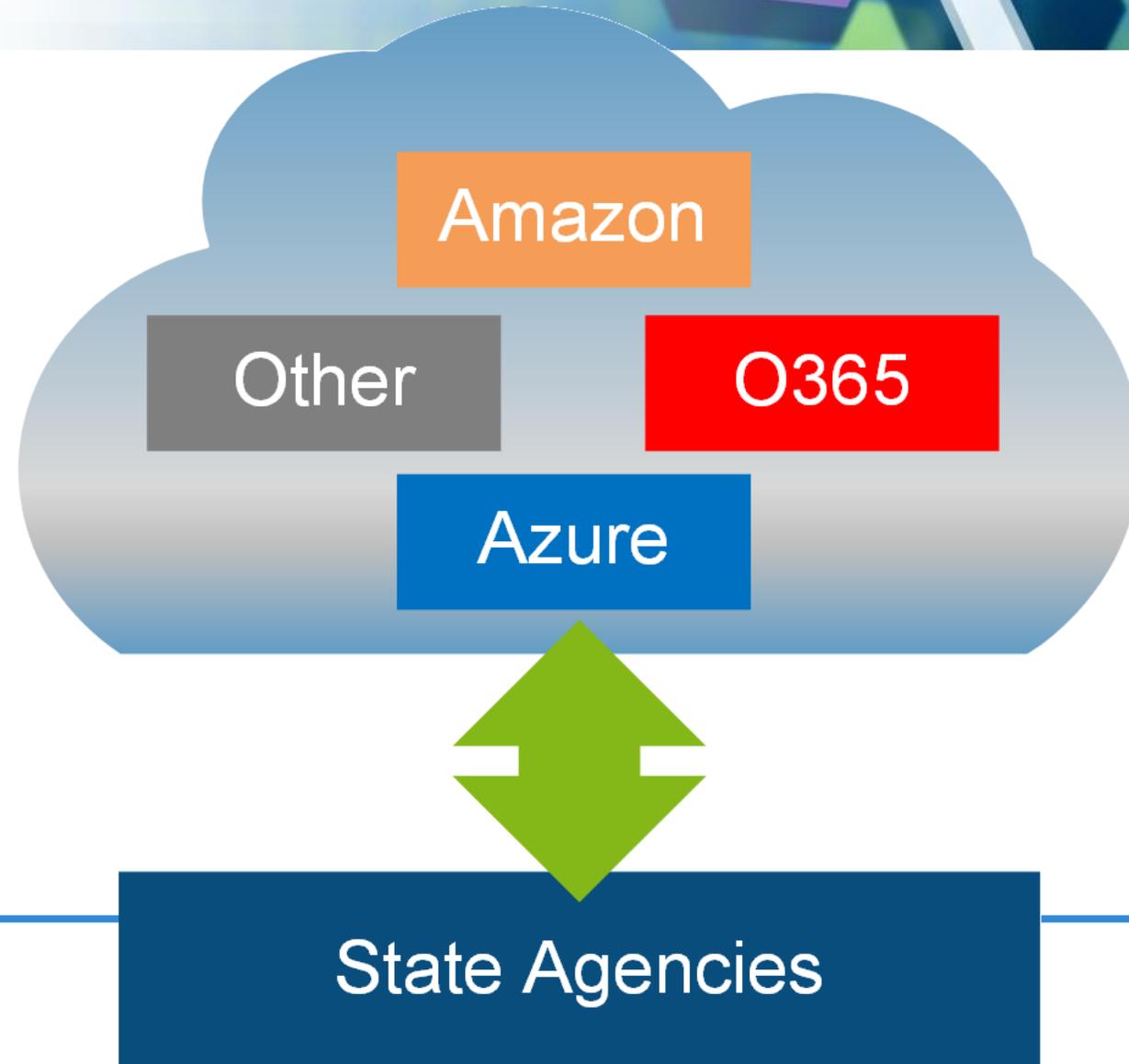
Office 365

Enterprise Productivity - Cloud Services
- SharePoint, OneDrive, Skype for Business
- Subscription licensing model
    (5 devices per person)

+ **+**

Desktop Productivity (Email, Word, Excel, PPT, others)

Project Initiation
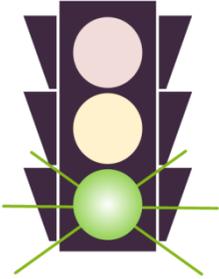
WaTech	Agencies
Hire Project Manager	Assess Business Requirements for Office 365
Organization and Governance	Assess Business Requirements for Other Cloud Services
Charter	Identify Lead for Cloud Enablement Project
Communication Plan	Participate in Stakeholder Committees
Formalize Project Teams	
Oversight & Quality Assurance	

What we are building

Estimated Costs

Cloud Services

Office 365

Agencies
- $ 360 Recurring cost O365/EMS licensing Per employee Per year

Desktop Productivity	Enterprise Productivity	Other Cloud Vendors

Identity Management

Cloud-enabling Infrastructure

WaTech
- $ 100,000 One-time
- $ 300,000 Recurring

WaTech
- $ 700,000 One-time
- $ 600,000 Recurring

Cloud Network Hub

WaTech
- $ 800,000 One-time
- $ 900,000 Recurring

WaTech
- Totals
  One-time $ 1,600,000
  Recurring $ 1,800,000
  First Year $ 3,400,000

Cloud-enabling Infrastructure

Identity Management

State Data Center   **Quincy Data Center**

State Agencies

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Swim Lanes

Licensing

Migration

OCM
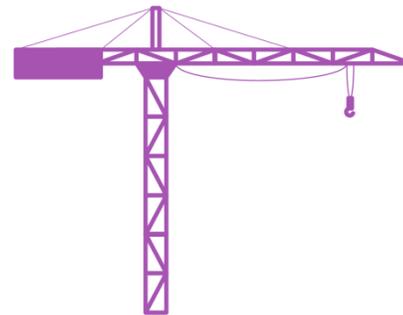
Technology

Project Initiation
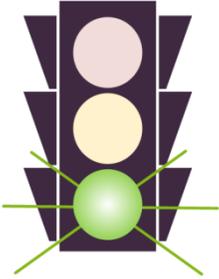
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Technology

One Time Costs

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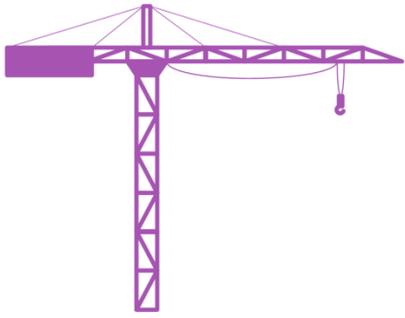
Agencies

- Build Cloud Network Hub
- Build Cloud-enabling Infrastructure
- Deploy Identity Management Service

Assess Network Capacity

Recurring Costs

- Cloud Network Hub
- Cloud-enabling Infrastructure
- Identity Management Service

Implement any needed network upgrades

Licensing

	WaTech Washington Technology Solutions	**Agencies**
One Time Costs	Evaluate Cloud Service Provider (CSP) Model	Purchase Enterprise Mobility Suite (EMS) licenses
Recurring Costs	Provide Cloud Service Provider (CSP) Support	Purchase Office 365 Licenses

Migration

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Agencies

One Time Costs

Estimate
Cost and Support
Requirements

Assess Data Security
Requirements

Recurring Costs

Manage Migration to
Shared Tenant

Assess Migration
Costs

Identify Workloads
to Migrate

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OCM

	WaTech Washington Technology Solutions	**Agencies**
One Time Costs	Establish an Enterprise Cloud Program	Train Staff for O365 Support Roles
	Implement Business Process changes	Implement Business Process changes
Recurring Costs	Training for Administrators	Training for users

Progress and Milestones

| Jan '16 | Jul '16 | Jan '17 | Jul '17 | Jan '18 |

Program Office – Office 365 Migration Planning and Governance

Design and Test Office 365 Tenant Configuration | **Design Office 365 Service** | **O365 Production**

We Are Here

Receive Funding

Exchange 2016 Planning | **Exchange 2016 Upgrade** | **Exchange to O365**

Identity Management Design & Test | **Identity Management Pilot** | **IAM Production Service**

Cloud Network Hub Design | **Prepare Procurements** | **Implement Cloud Network Hub**

Begin O365 Migration

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Known Issues

WaTech Financial Update
July 2016

The First Year and Plans for the Next Biennium

FY 2016 Financial Activity and Progress
A Promising Start

Transparency:

- ✓ Financial Architecture Reflects the Organization of the Agency
- ✓ Organization of the Agency Reflects Customer-Facing Services
- ✓ Accounting and Budget Information Fully Reflected in Enterprise Systems
- ✓ Developed Fiscal Strategy for Cost Recoverability

Accountability:

- ✓ FY 2016 bent the loss curve
- ✓ Submitted Rate Plan
- ✓ Announced Rate Reductions
- ✓ Refined Focus on Core Services

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Revenue Sources Reminder

MOUs	Fee 4 Service	Allocations
OFM	Email	12 fees
DES	Data center	Enterprise Services Fee
Smalls	Web hosting	Network
		Security
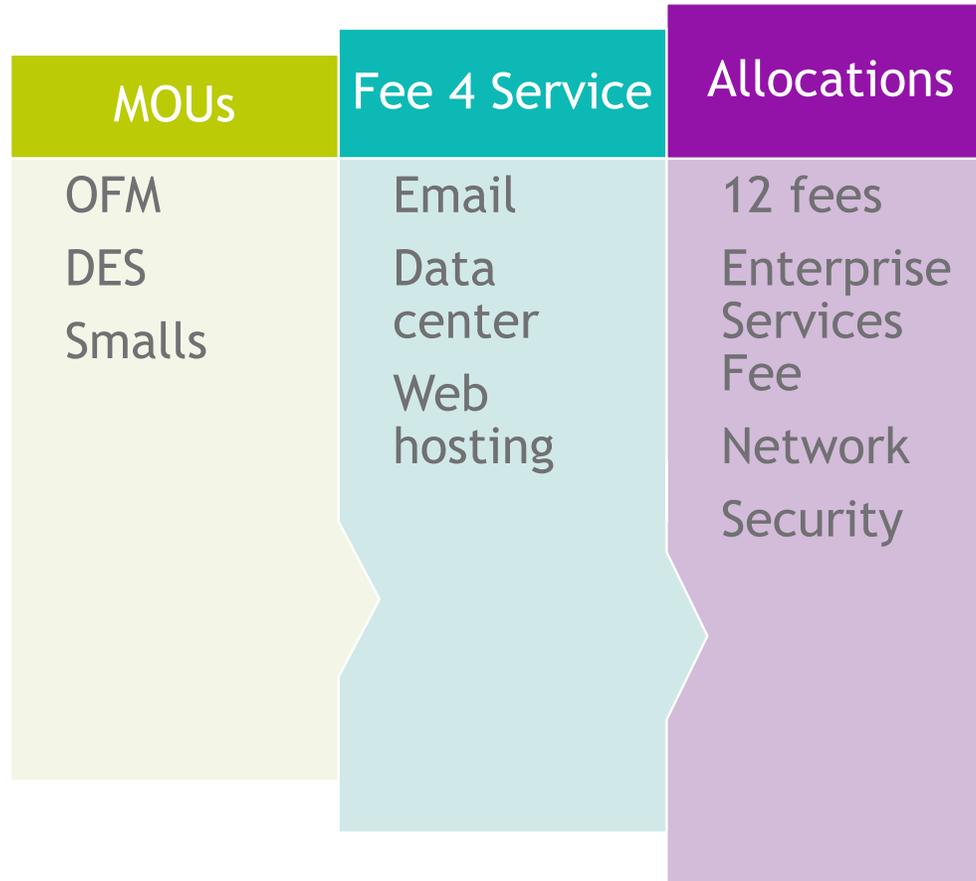
FY 2016 Spending as Anticipated
Good News for the Realignment

WaTech's First Year
Spending
$K

□ Variance ■ Actual Spend ■ Authorized Spend

$(959)
WaTech $174,975
$174,016

$(847)
CTS $121,174
$120,327

$(827)
ETS $49,448
$48,621

$715
OCIO $4,353
$5,068
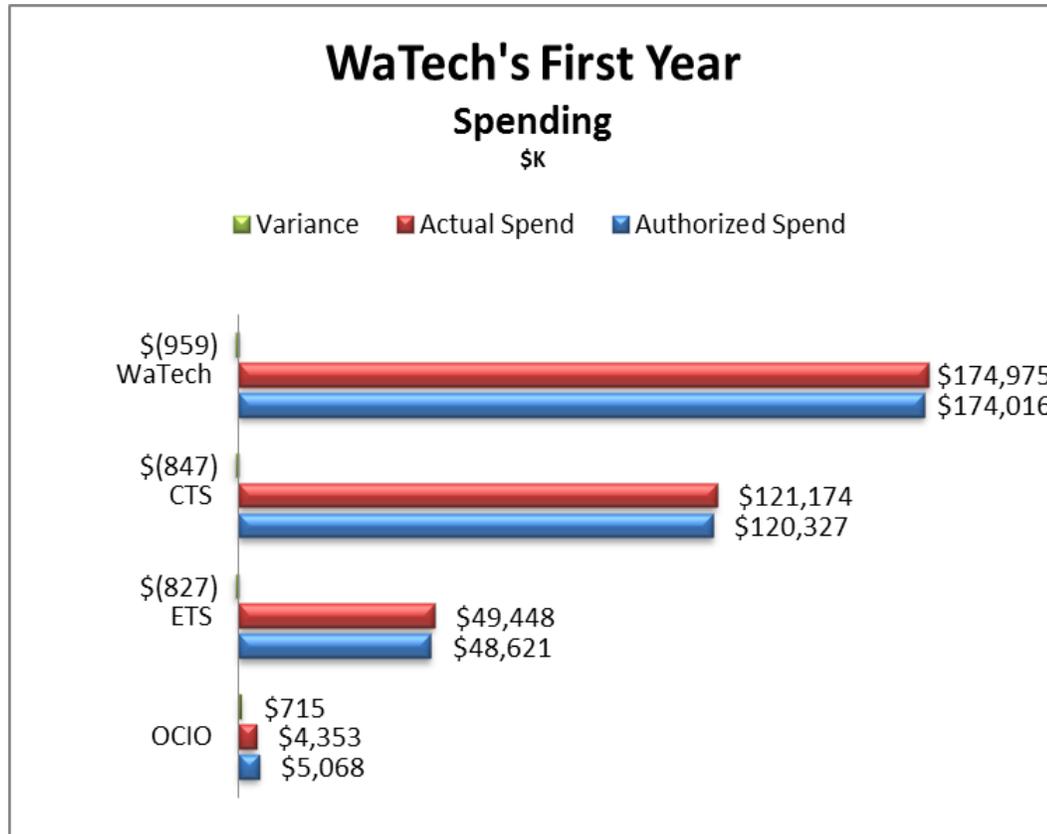
- Agency spending over authorized level less than 1% (0.55%)
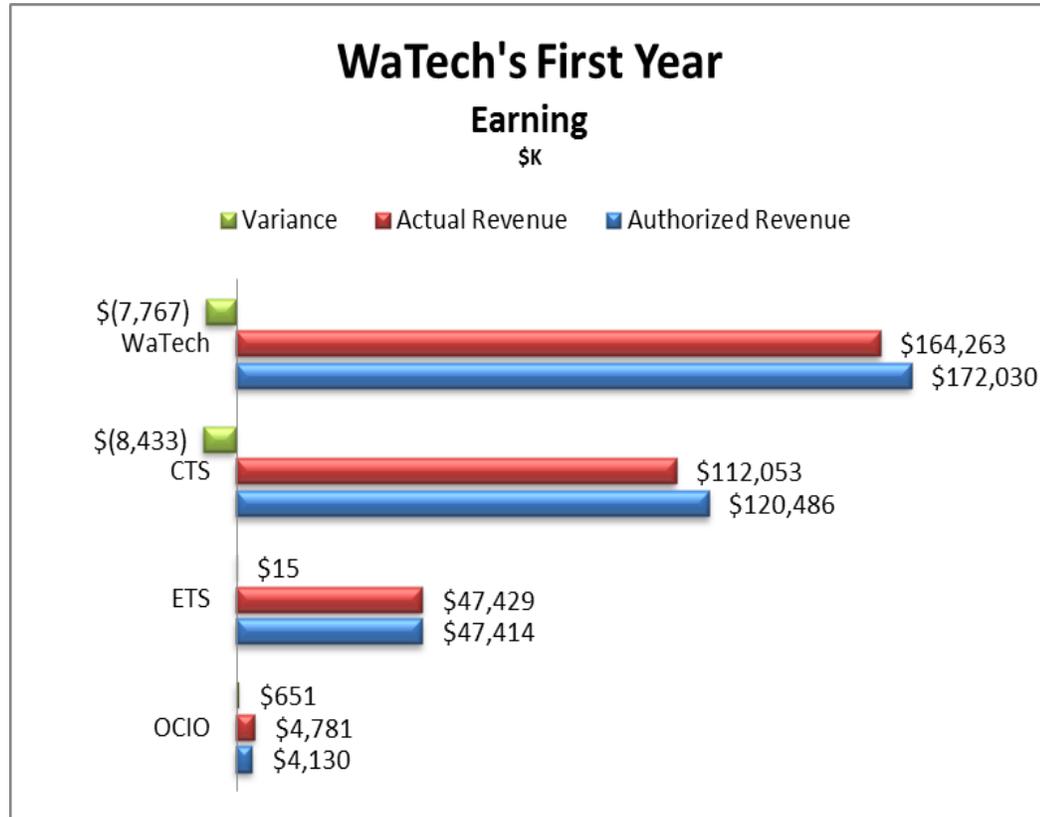
- Cross-agency costs steady
  - Salaries, rent, overhead

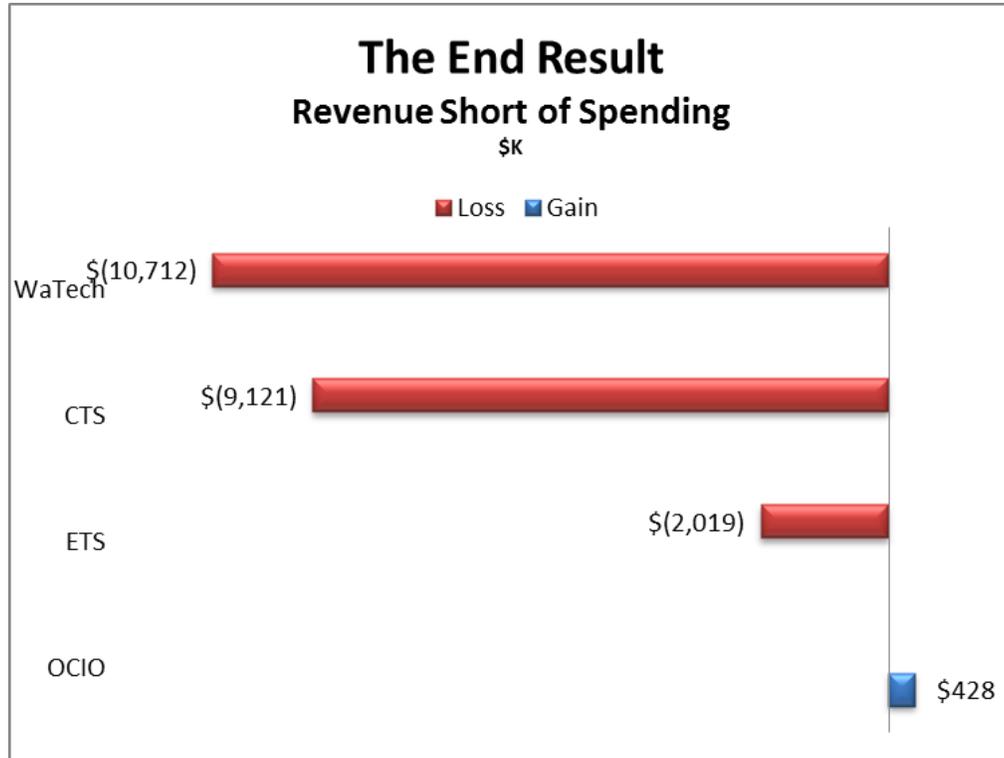- Aggregate view does not illustrate problem

FY 2016 Earning Not as Anticipated
Realignment Didn't Address Revenue

WaTech's First Year

Earning
$K

Legend:
- Variance (green)
- Actual Revenue (red)
- Authorized Revenue (blue)

WaTech: $(7,767) Variance; Actual Revenue $164,263; Authorized Revenue $172,030

CTS: $(8,433) Variance; Actual Revenue $112,053; Authorized Revenue $120,486

ETS: $15 Variance; Actual Revenue $47,429; Authorized Revenue $47,414

OCIO: $651 Variance; Actual Revenue $4,781; Authorized Revenue $4,130

- Shortfall concentrated in (FFS) Services:
  - Server Hosting
  - Storage
  - Data Center
- Issues with Allocation Revenue:
  - Security Allocation covered Disaster Recovery investments
  - Network's lower than expected revenue turned out not to be a problem
  - Enterprise Systems revenue not large enough to cover inherited expenses

Better than FY 2015

The End Result
Revenue Short of Spending
$K

■ Loss ■ Gain

WaTech $(10,712)

CTS $(9,121)

ETS $(2,019)

OCIO $428

- FY '15 CTS's operating loss $17.8m
- 16 WaTech's operating loss $10.7m
- Visibility post-OB2
- Manage revenue not just expenditure
- Revenue is hard to project
- Biggest success moves from FFS to Allocated

Reasons not Excuses

Revenue Challenges
Services with inadequate revenue

- JINDEX
- Dial.wa.gov
- NeoGov
- E-Learning
- Tenant Rent Relief
- FFS Service Rates that haven't moved in over five years.

Expenditure Challenges
Unanticipated or unfunded costs

- Olympia Fire Protection
- 3% and 1.8% Salary Adjustments
- Internal Facilities

- Strategic Investments without seed money

Goals for the 2017-19 Biennium
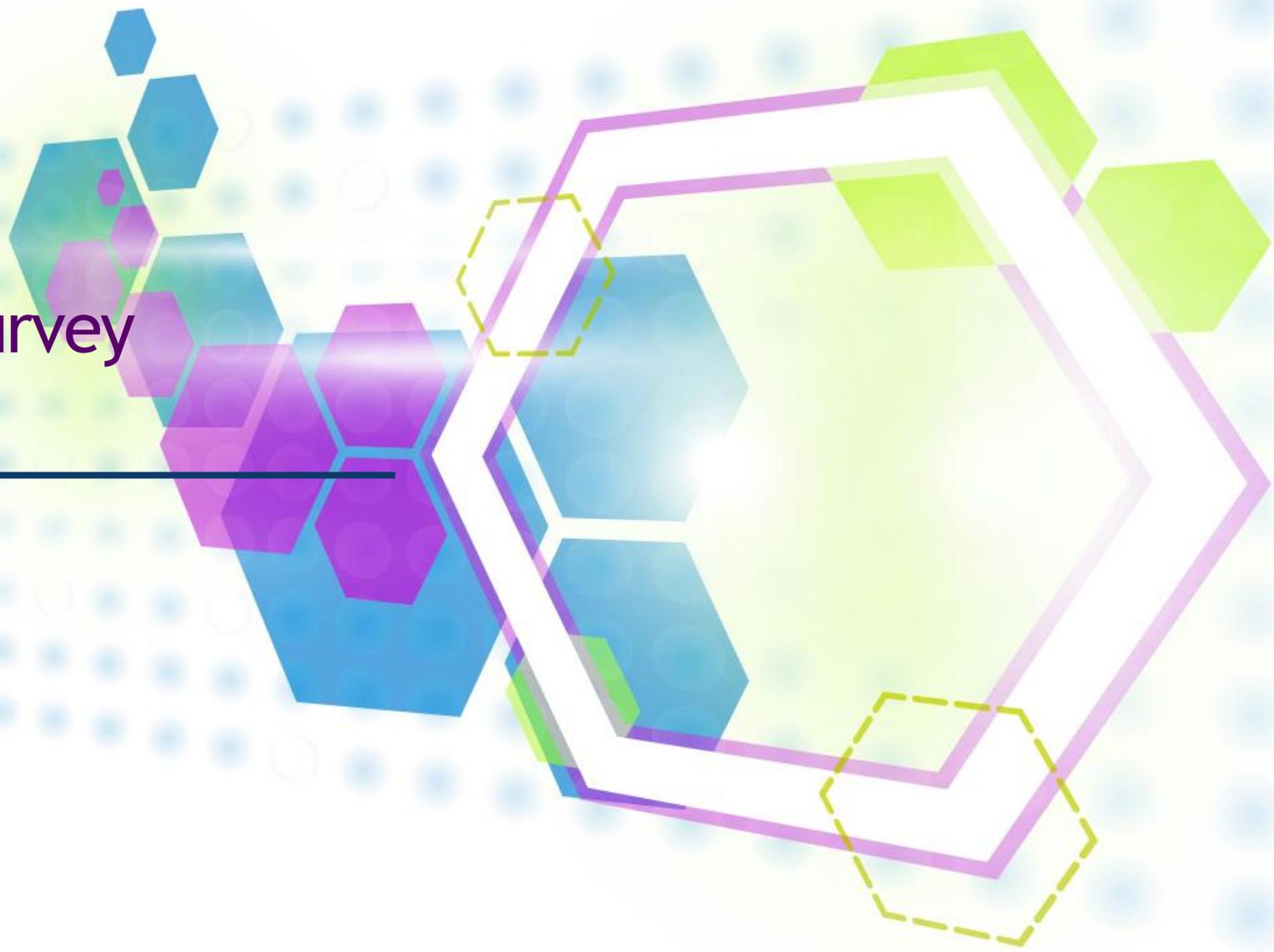## Strengthening the Basics

- Focus on Core Capabilities
- Funding/Financing Strategies Geared Toward:
  - Allocations for foundational, widely used, mature services
  - Reviewing rates and service packages
  - Assessing FFS's future financial viability and compatibility with core capabilities

Proposals for the 2017-19 Biennium

WaTech's Budget Request :

- Evolution of Cloud Access
- Continuing Network and Application Security
- Business Support for IT Investments
- Allocations for Mature, Enterprise Services
- State Data Center Utilization

To support customers' needs for transport, compute, storage whenever where ever in secure and resilient fashion.

WaTech Customer Survey Results June 2016

Executive Board Briefing
July 25, 2016

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Reprioritized to Take Action

- WaTech Website

- Customer Portal

- Publish O365 & Cloud Strategy Sheet

- Audit the 3 months of communications (Incident/Change)

- Additional level of monitoring tickets (measure/track)

- Meeting structure: CIO Forum, Quarterly Customer Meeting

3 Strategic Goals

TRANSFORM our Customers' Experiences

- Supply the technical foundation that enables agencies to focus on their highest value

- Become the supplier of choice for state agencies

- Be intentional with customer relationships

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Customer Survey

- Goal
  - Baseline understanding of customers experience
  - Underscore listening message
- Methodology
  - Targeted 75 customers, "buyers of our services"
  - 62 interviews were completed (83%)

Results

- Quantitative and qualitative baseline

- Letter grades: A, B, C, D, F

- Organized by small, medium, large agencies

- Executive summary + detailed report

Themes

- Success/Frustration

- Monopoly/Customer Service

- Communication

- Understanding Agencies

- Value

Recommendation Areas

- Marketing services
- Relationship
- Communication
- Expertise & structure
- Customer service
- Technology & innovation
- Value & pricing

Questions?