



State 9-1-1 Program Updates

APCO/NENA Quarterly Meeting – Hood River, OR

May 15, 2018

Program Focus Areas - Accomplishments & Goals

1

Program Process Improvement

(4/2017 – 2/2018)

- Staff Resource Management
(Team Task Identification, Metrics, Forecasting, Workload Requirements & Priority Setting)
- Workload Alignment with Agency Strategic Goals
- Legacy 9-1-1 Program & Process Improvement
 - CPE Life Cycle Management

Program Goals

- Increasing awareness and accountability through efficient and effective use of 9-1-1 program resources

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Stakeholder Engagement

- PSAP Advisory Committee
(Promote Importance of Committee Roles & Participation)
- PSAP Engagement
(Needs & Priorities Identification, NG9-1-1 Education DHS TA Grant Participation & Realignment)
- State Partner Agency Engagement – OSCIO, DOJ, DAS SPO
(Informed and Aware of Program Improvements & Needs)

Program Goals

- Increasing awareness and accountability through efficient and effective use of 9-1-1 program resources
- Increase partnership and effectiveness between the 9-1-1 Program and statewide PSAPs
- Promote benefits of enterprise investment and planning

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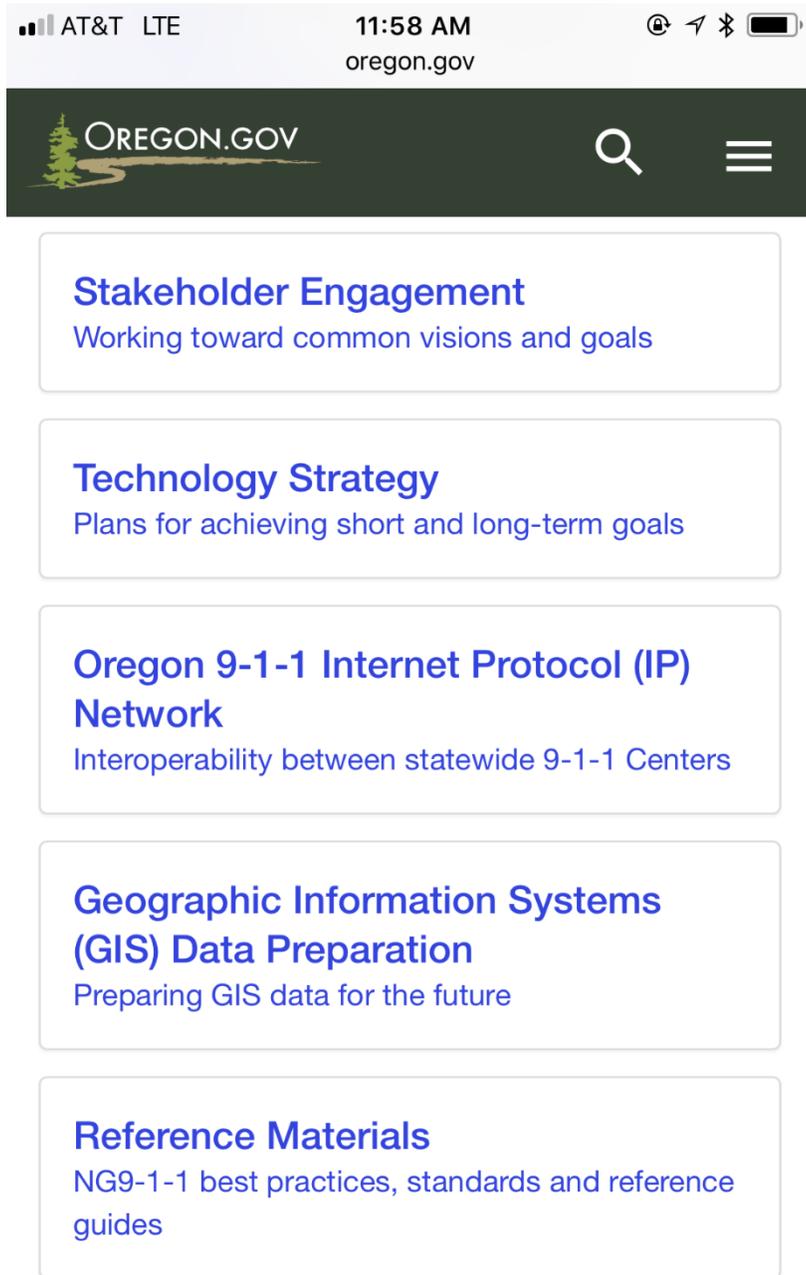
3

Technology Strategy

- NG9-1-1 Market Research
(National Organizations, Vendors, SMEs)
- State Interviews (9-1-1 Program Peers, Supporting Vendors)
- Transitional NG9-1-1 Tactical Planning
 - PSAP– Review/Input Opportunity

Program Goals

- Increasing awareness and accountability through efficient and effective use of 9-1-1 program resources
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- Promote benefits of enterprise investment and planning
- Development of a technology modernization roadmap for guiding future investment decision making that minimizes risk to existing services while avoiding costly rework



Updated Web Page

- More user and mobile device friendly
- Defined categories to better assist with locating information and documents
- Aligns with 9-1-1 Program Focus Areas
- Quarterly program presentations made available online!

“New”

Program Update/Reporting Structure

Updates align within major 9-1-1 Program focus areas improving overall communications and progress reporting:

- Program Process Improvement & *Activities*
- Stakeholder Engagement (*PSAP, State Partners, Vendor Community*)
- Technology Strategy (*Program, PSAP Priorities, NG9-1-1*)
- Funding Strategy – *More to come!*



Program Process Improvement Activities

CPE Lifecycle Management

- Continuing to collect and structure asset related information and data
- Performing cost analysis on CPE lifecycle

Additional updates to come later in the presentation!

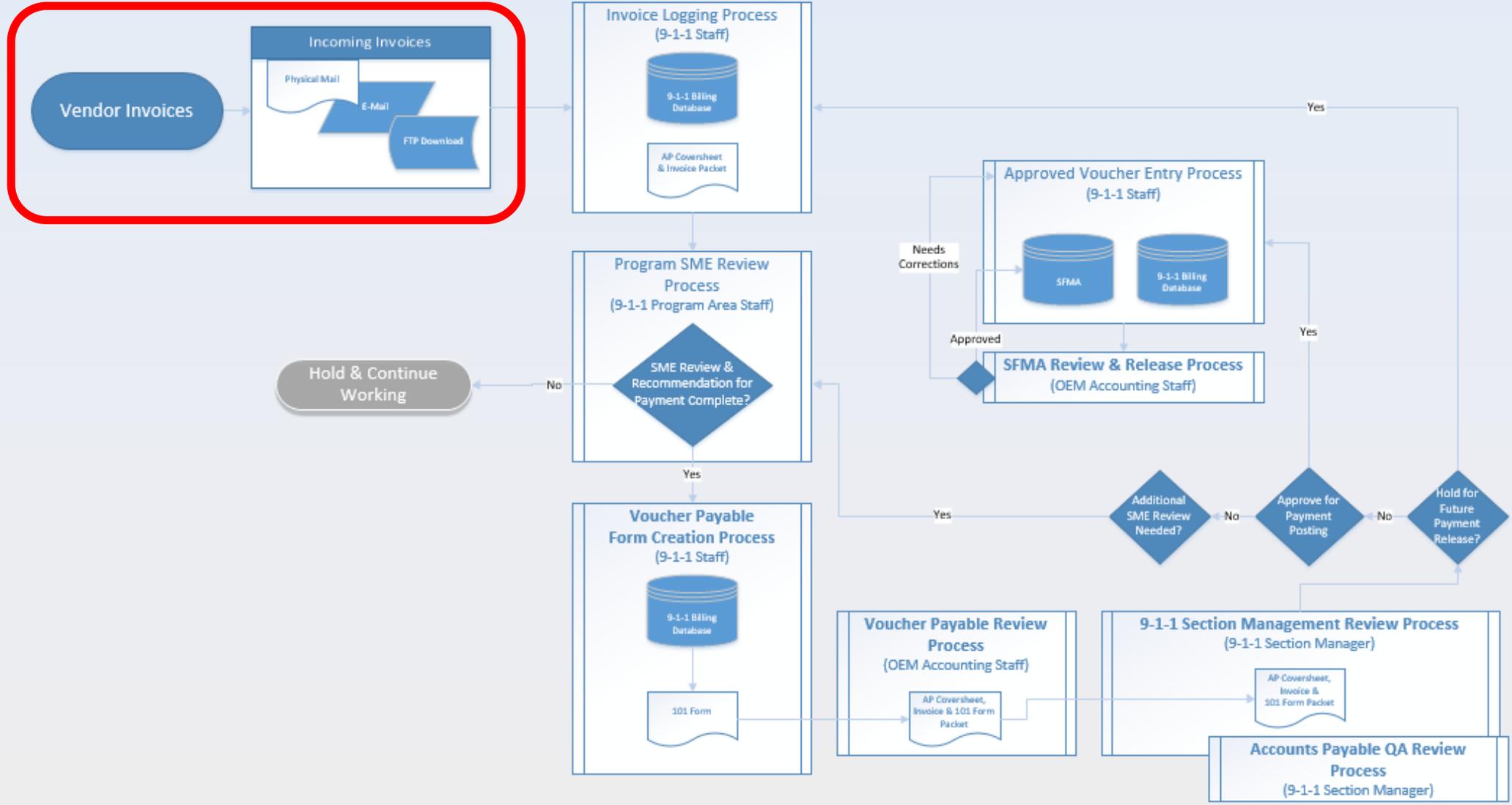
Accounts Payable Process Improvement

Challenges:

- Hundreds of invoices received via USPS, e-mail, manual FTP download
- Program staff at all levels receiving invoices
- Program staff handling the same invoice multiple times throughout process workflow
- Multiple inquiries being made to multiple program staff regarding the same reimbursements leading to delayed or incorrect payment status

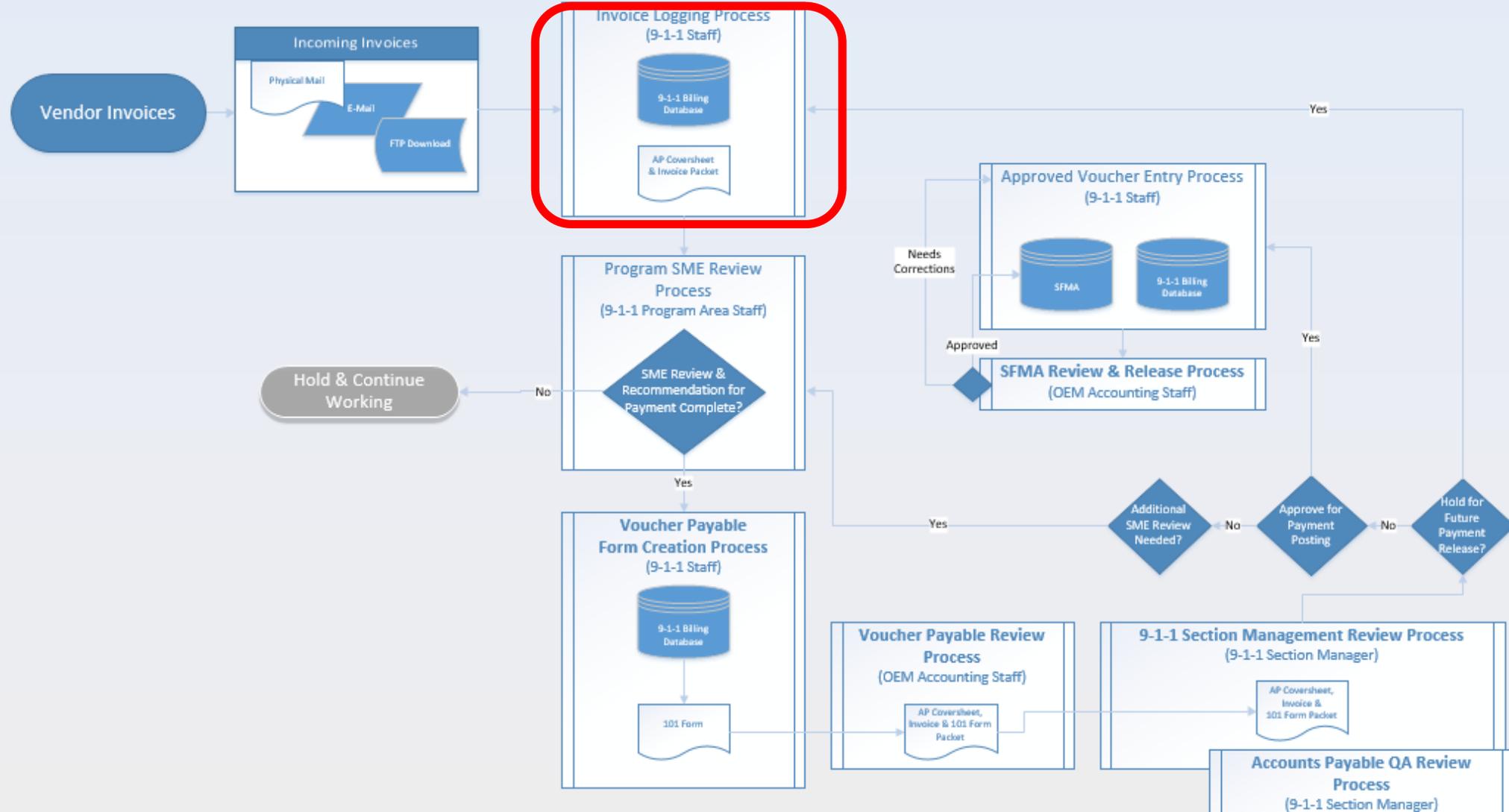
Invoice Submission & Inquiry

9-1-1 Accounts Payable (AP) Flowchart



9-1-1 Accounts Payable (AP) Flowchart

Invoice Logging/Tracking



Accounts Payable Process Improvement

Activities & Benefits:

- Implementation of a new centralized 911billing@state.or.us invoice submission and inquiry point – *Coming Soon!*
- Implementation of a new centralized library and tracking system for all received and in-process invoices
- More efficient internal review processes
- Fewer invoices changing hands between program staff
- **More accurate and timely payment status and processing**

(35%) Subaccount Budget Development

- Need greater detailed expenditure tracking by product or service type and category
- Need improved program expenditure forecasting capability
- Need better quality data to support expenditure transparency/updates
 - *More to come on this topic!*
- Provide better quality data to support more informed business decision making minimizing unplanned budgetary unknowns
- Support improved invoice processing time

Program Process Improvement Activities

Questions?



Stakeholder Engagement Activities

Activities

▶ PSAP Operational Issue & Need Identification



• NG9-1-1 Vision & Definition Work



▶ Priority Voting

Outcome: Prioritized Themes

Priority - Vote 2 Post-NG9-1-1 Training (Final Vote)	Vote #2 Totals	Vote 2 Description and/or Observations Between Priority
Improved Wireless Location Information	47	Maintained highest priority issue/need following votes 1 & 2. After NG9-1-1-1 training, vote count increased.
Security	35	After NG9-1-1 Training, security significantly moved up in priority from 9th priority to 2nd priority. Although NG9-1-1 is not a dependency, network/cyber security issues were seen as a priority issue or need.
Funding Accountability	28	Greater transparency on how 9-1-1 surcharges are allocated and spent. Concerns were expressed regarding the State 9-1-1 Program budget processes.
Funding Level	26	In conjunction with Funding Accountability, it was important to ensure adequate funding levels needed to support NG9-1-1 and other priority themes.
System Integration	17	It was important to ensure telecommunicator CPE applications and interfaces are well integrated within each PSAP.
Interoperability	17	PSAP to PSAP communication/integration was seen as important. This includes CAD standards and interfaces. Need to formalize radio standards. Secondary PSAP alignment to Primary PSAPs. Minor reduction in priority after vote 2 was observed.
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Impact of the Unknown	7	Moved down five places in priority after 2nd vote. Reduction in priority may have been a result of the NG9-1-1 training and Q&A discussions.
Improved Call Routing to Correct PSAP	6	Priority was closely maintained between vote 1 & 2.
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Future Considerations:

- Advisory Committee Engagement – Ownership of Statewide PSAP priorities?
- Activate sub-committee leadership, planning and implementation support?
- Should all planning and implementation support be procured?
- Can the PSAP community provide resource support to offset costs?
- PSAP resource constraints?
- Potential for surcharge rate increase to fund PSAP constraints?

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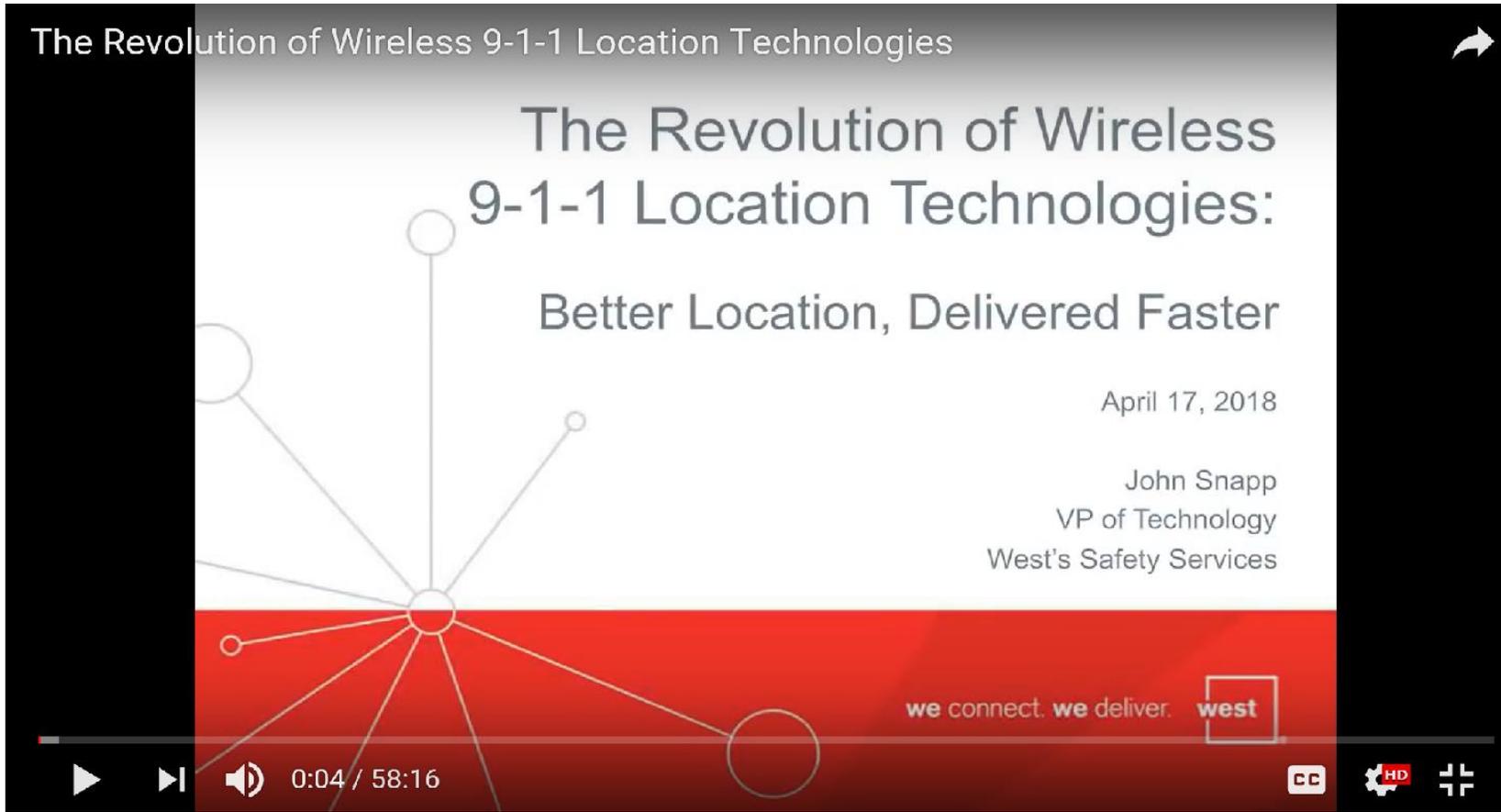
- **Improved Wireless Location Information**

Wireless Location Improvement

(Pilot Opportunity)

- LaaSer 911 in partnership with Uber offered Oregon pilot opportunity to experience improved wireless location services - (March/May)
- Uber committed to driver and rider safety looking to increase awareness and drive critical need for improved wireless caller location information
- Pilot to take place in partnership with Oregon urban PSAPs where Uber is most widely used
- Equipment and implementation support provided by LaaSer and Uber
- PSAPs although interested, unfortunately had to decline due to prior workload commitments

Improved Wireless Location Information



- **Location Technologies**
- **Google, Apple, LaaSer and RapidSOS**
- **Pilot Activities: WA and FL**
- **Performance Metrics**
- **Carrier Alignment Benefits**
- **ESInet Integration**
(Lower architecture complexity, cost benefit, higher security posture)

Next Steps – PSAP Priorities

See final report for additional information

- Provide Advisory Committee with post-workshop report for review and use moving forward - Complete
- *Develop action plan with new Advisory Committee Chair*

Stakeholder Engagement Activities

Questions?



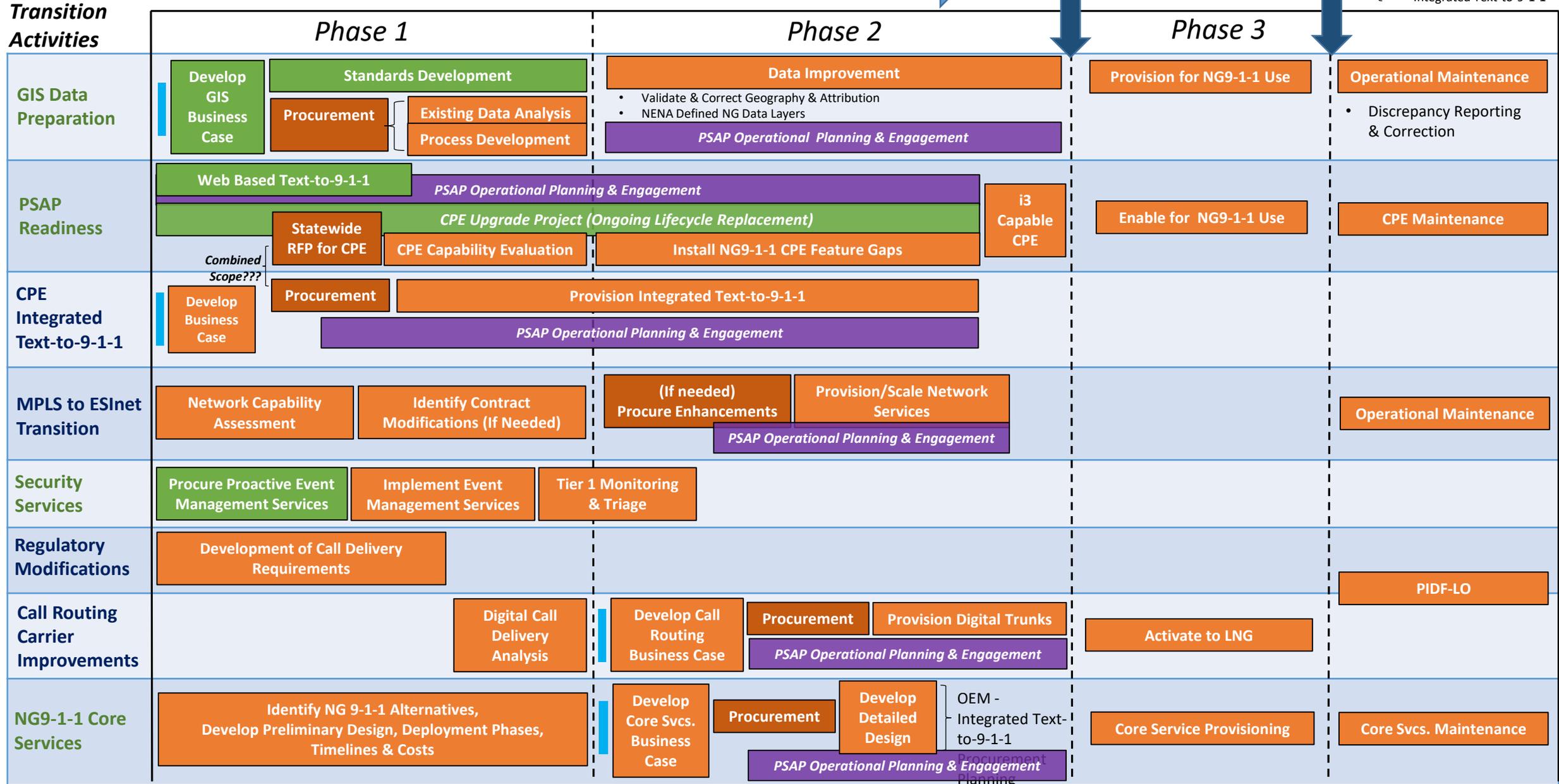
Technology Strategy Activities

Oregon Transitional NG9-1-1

Core Services Ready

NG Ready

- Functional ESInet
- Improved Call Routing
- Core Services Functional
- ALL PSAP CPE NG Ready
- Integrated Text-to-9-1-1



■ In Progress
 ■ Not Started
 ■ State CIO Stage Gate Initiation
 ■ PSAP Operational Planning & Engagement

Funds Expended on NG9-1-1 Deployments

States	Number of PSAPs ¹	Surcharge (per device)	9-1-1 Fees Collected (2016 annual in \$ millions) ¹	IP Network	NG9-1-1 Core Services ¹	Text-to-911 ¹	NG9-1-1 Expenditures (2016 annual in \$ millions) ¹
OR	43	\$0.75	\$42.8	✓		✓	\$1.8
AL	118	\$1.75	\$116.0	✓		✓	\$0.7
AZ	76	\$0.20	\$20.4	✓		✓	\$2.0
CA	390	\$0.75	\$79.6	✓		✓	\$5.3
IA	113	\$1.00	\$39.8	✓		✓	\$16.6
IN	91	\$1.00	\$86.9	✓		✓	\$15.0
MA	241	\$1.00	\$117.9	✓		✓	\$5.4
ME	26	\$0.45	\$8.5	✓		✓	\$5.0
SD	28	\$1.25	\$13.0	✓		✓	\$3.9
VT	6	USF	\$6.2	✓		✓	\$4.8
WA	54	\$0.95	\$95.2	✓		✓	\$21.0

1. Reference Data: FCC's 9th Annual Report to Congress, December 29, 2017 (2016 Reporting Data)

\$7.41

**AVERAGE
EXPENDITURES**

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- **Interoperability (#6)**

Oregon NG9-1-1 Technology Cost Estimate

	CURRENT (E9-1-1)	NG9-1-1 (based on market research)	TOTAL
ANNUAL COST	\$15,040,000	\$15,700,000	\$30,740,000
ANNUAL REVENUE (9-1-1 SUB-ACCOUNT)	\$15,200,000		\$15,200,000
DELTA NEEDED FOR NG			-\$15,540,000
EXISTING BALANCE (9-1-1 SUB-ACCOUNT)			\$5,000,000
<i>Year 1 investment need leveraging all available subaccount funds</i> 			-\$10,540,000

(Year 2 Forward)

\$10M - \$15M

Estimated Recurring

(NG9-1-1) Near Term Funding Outlook

- Many conversations taking place at the national level
- Grant opportunities (*NG9-1-1 Act of 2012 or 2017*) currently not a reality or available for application submission
- NG9-1-1 Act of 2012 would require a minimum investment of **\$800,000** (40%) to undertake one currently identified foundational NG9-1-1 activity

(NG9-1-1) Near Term Funding Outlook (Cont.)

- Legacy E9-1-1 services, CPE and demand for increased CPE support and functionality costs continue to grow at a rapid rate reducing near-term opportunities to fund NG9-1-1
 - *More to come later!*
- **35% subaccount distributions based on the current .75 revenue surcharge is insufficient to support funding NG9-1-1**
 - *More to come later!*

Technology Strategy Activities

Questions?

Summary of Program Focus Area Activities

- Program Process Improvement**
- Operational Tasks
 - Projects



OEM 9-1-1 Program											
Projects & Operational Assignments											
Feb-18											
2018											
STAFFING		STAFF CAPACITY				Assignment					
NAME	verified - 2/16/18	TOTAL ALLOCATION	ADMINISTRATIVE OVERHEAD Includes Business Support, Leg and Misc Admin Duties	AVAILABILITY	Strategic Priority/Alignment	Work Priority	PROJECT DEMAND	OPERATIONAL	PROJECT		
LAST, FIRST		100%	58%	0%	3	1	CPE Replacem				
					2	1	CPE Contract E				
					3	3	Public & 9-1-1				
					3	1	9-1-1 Jurisdic				
					3	2	PSAP Support				
					1	1	Hardware/Softw				
					1	1	Vendor Manag				
					3	1	Annual Report				
					3	1	Annual Report				
					3	1	PSAP Quarter				
					1	2	OEM Support				
					3	1	Conference Att				
					2	1	Resources				

THEME 1
Desc: Location
ALL PSAP | T
Vote 1: 29
Vote 2: 34

THEME 2
Desc: Security
ALL PSAP | T
Vote 1: 35
Vote 2: 35

THEME 3
Desc: Funding Accountability
ALL PSAP
Vote 1: 38
Vote 2: 38

THEME 4
Desc: Funding Level
ALL PSAP
Vote 1: 36
Vote 2: 36

THEME 5
Desc: System Integration
ALL PSAP | NG
Vote 1: 17
Vote 2: 17

THEME 6
Desc: Interoperability
ALL PSAP | NG
Vote 1: 17
Vote 2: 17

Stakeholder Engagement

- PSAP Needs & Priorities

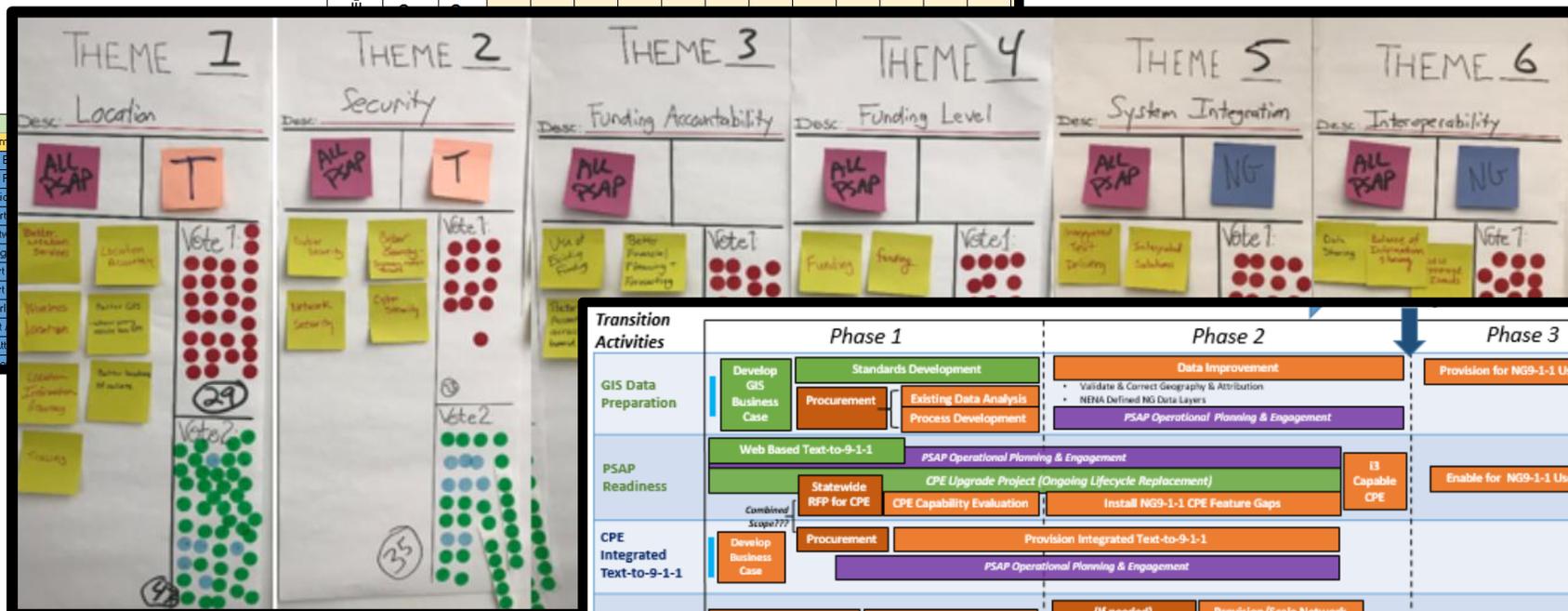
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AVAILABILITY					PROJECT				
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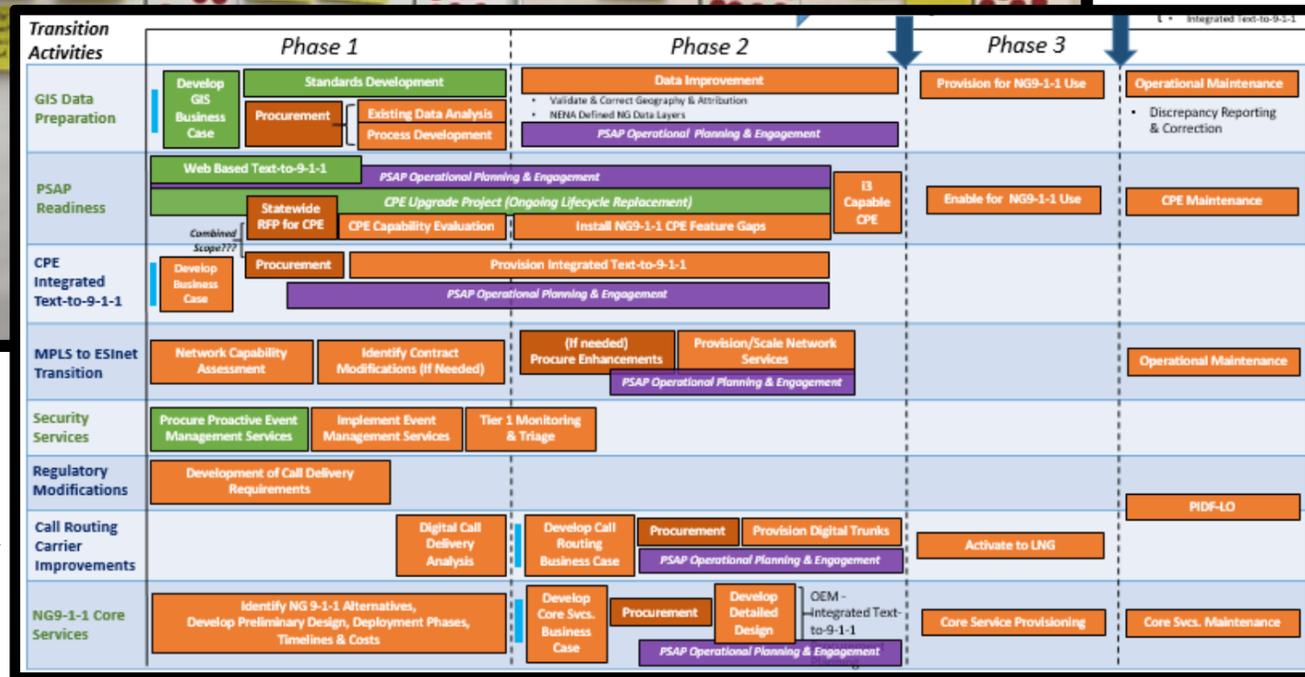
Stakeholder Engagement

- PSAP Needs & Priorities



Technology Strategy

Foundational Approach
NG9-1-1 Projects



Program Focus Areas, Activities & Accomplishments

(4/2017 – 5/2018)

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4

Funding Strategy

- Middle Class Tax Relief and Job Creation Act of 2012 - NG9-1-1 Grant Opportunity
- Next Generation 9-1-1 Act of 2017
- Oregon 9-1-1 Surcharge Increase (est. 2021-2022)
- Program Budget Development & Subaccount Expenditure Forecast
- Implement Standards, Policies and Cost Controls if Needed

Program Goals

- Increasing awareness and accountability through efficient and effective use of 9-1-1 program resources
- Increase partnership and effectiveness between the 9-1-1 Program and statewide PSAPs
- Promote benefits of enterprise investment and planning
- Development of a technology modernization roadmap for guiding future investment decision making that minimizes risk to existing services while avoiding costly rework
- **Ensure program funding is predictable, transparent and sustainable within all 9-1-1 Program service areas**

Outcome: Prioritized Themes



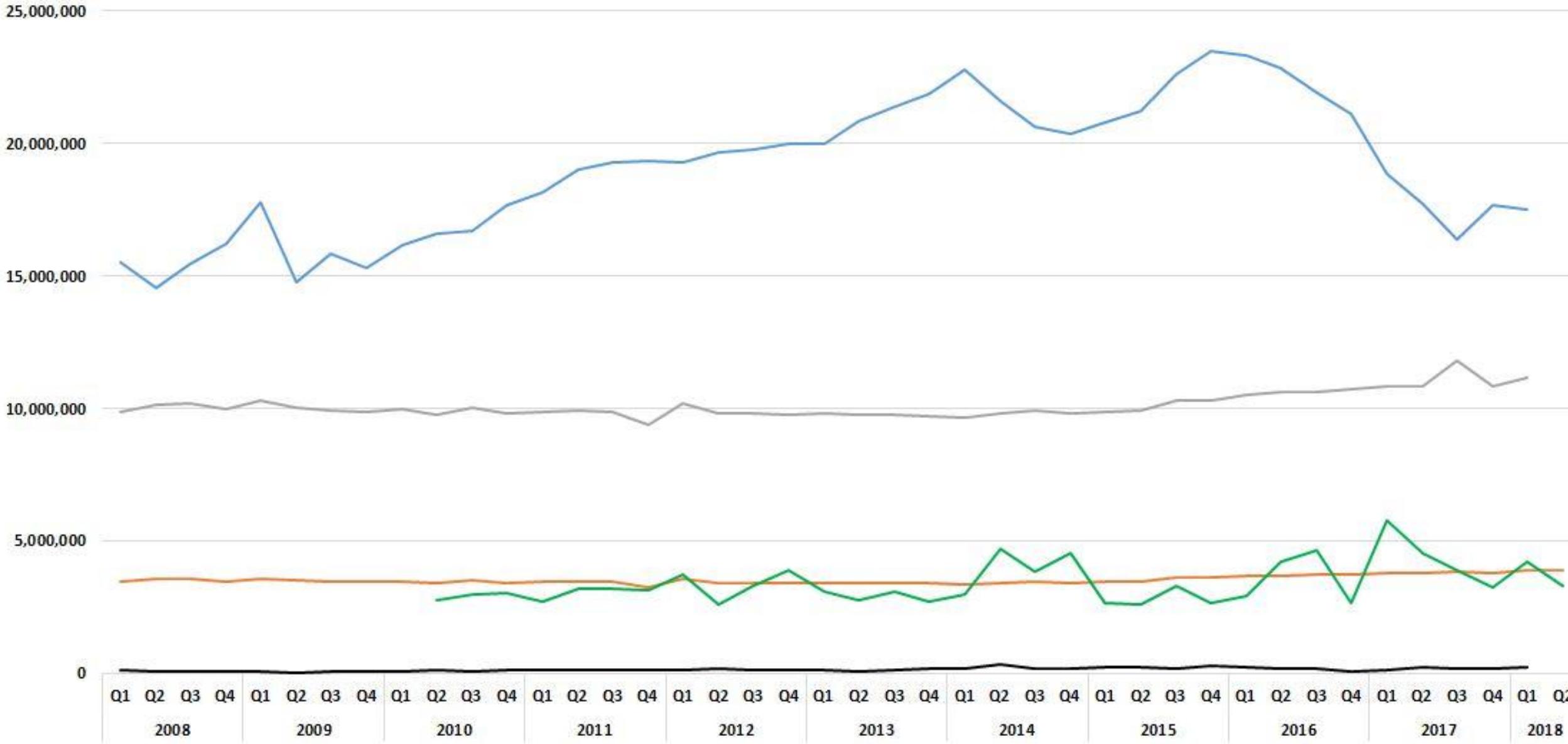
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- Funding Accountability:**
Greater transparency on how 9-1-1 surcharges are allocated and spent. Concerns expressed regarding State 9-1-1 Program budget process
- Funding Level:**
To ensure adequate funding levels needed to support NG9-1-1 and other priority themes



Funding Strategy Activities and Updates

— Sum of Qtrly ECA Cash Balance
 — Sum of Qtrly Sub-Acct Deposit Amount
 — Sum of Qtrly Surcharge Collected
— Sum of Program Expenditure Amount
 — Sum of Actual 4% Admin Expenditure Amount

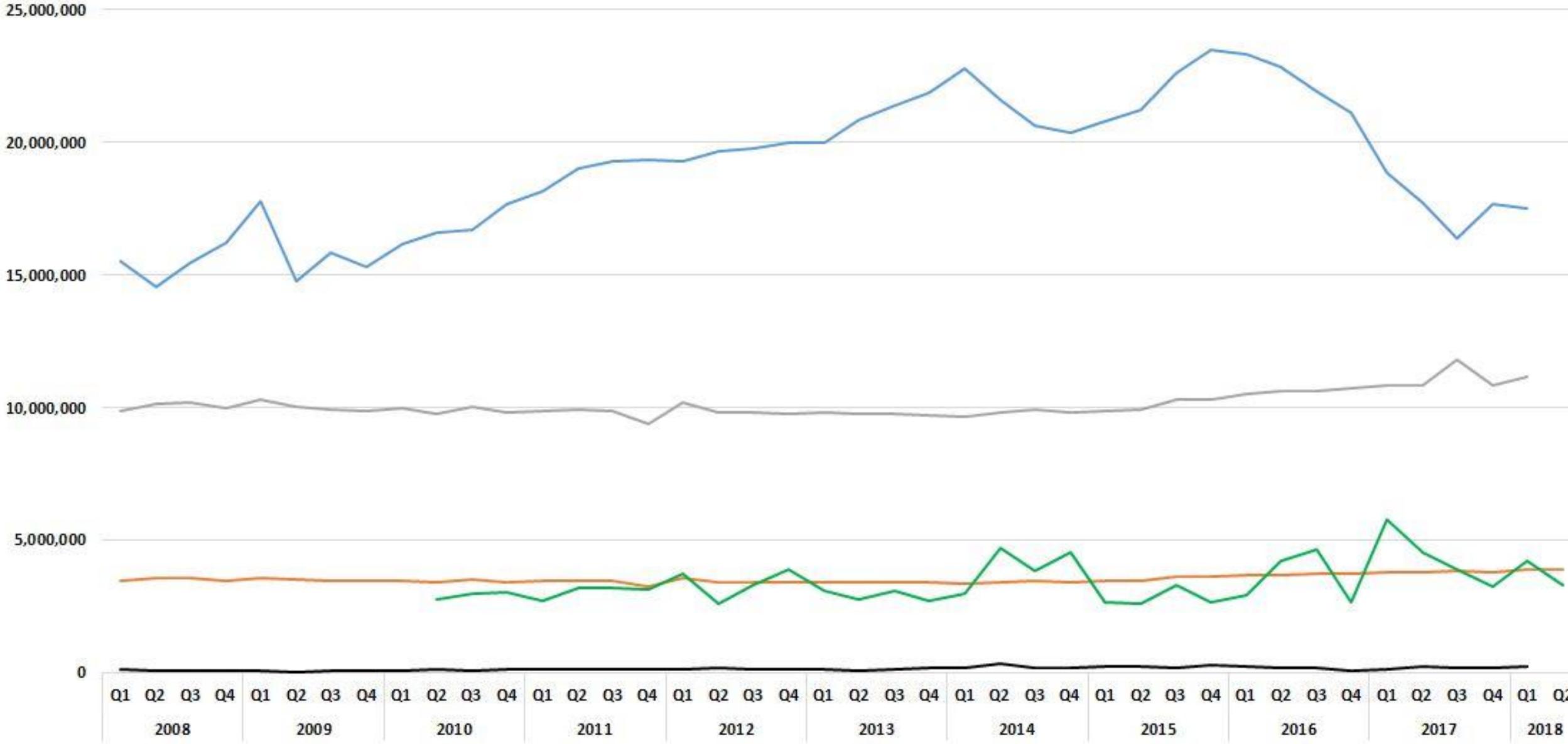


(4%) Administrative Account

- Statutory maximum QTR collection: **4%**
- Average collection prior six QTR: **3.38%**
- Average QTR expenditure (dollars) **\$610,843**

- Any reductions returned to PSAP within QTR distribution (60%)
- Every \$1 in reductions - divided 43 ways
- ORS restricts ability to redirect into subaccount for funding

— Sum of Qtrly ECA Cash Balance
 — Sum of Qtrly Sub-Acct Deposit Amount
 — Sum of Qtrly Surcharge Collected
— Sum of Program Expenditure Amount
 — Sum of Actual 4% Admin Expenditure Amount

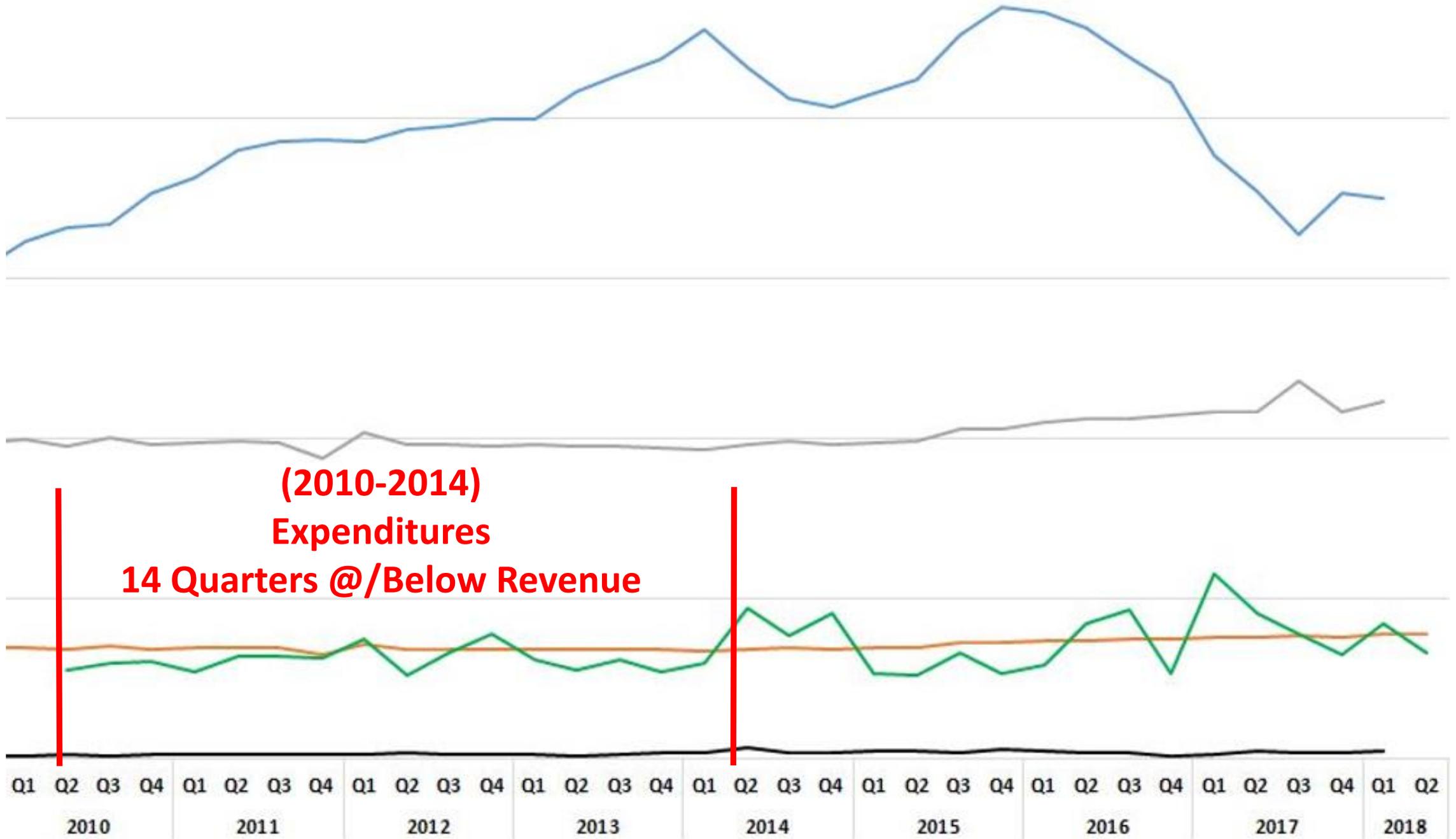


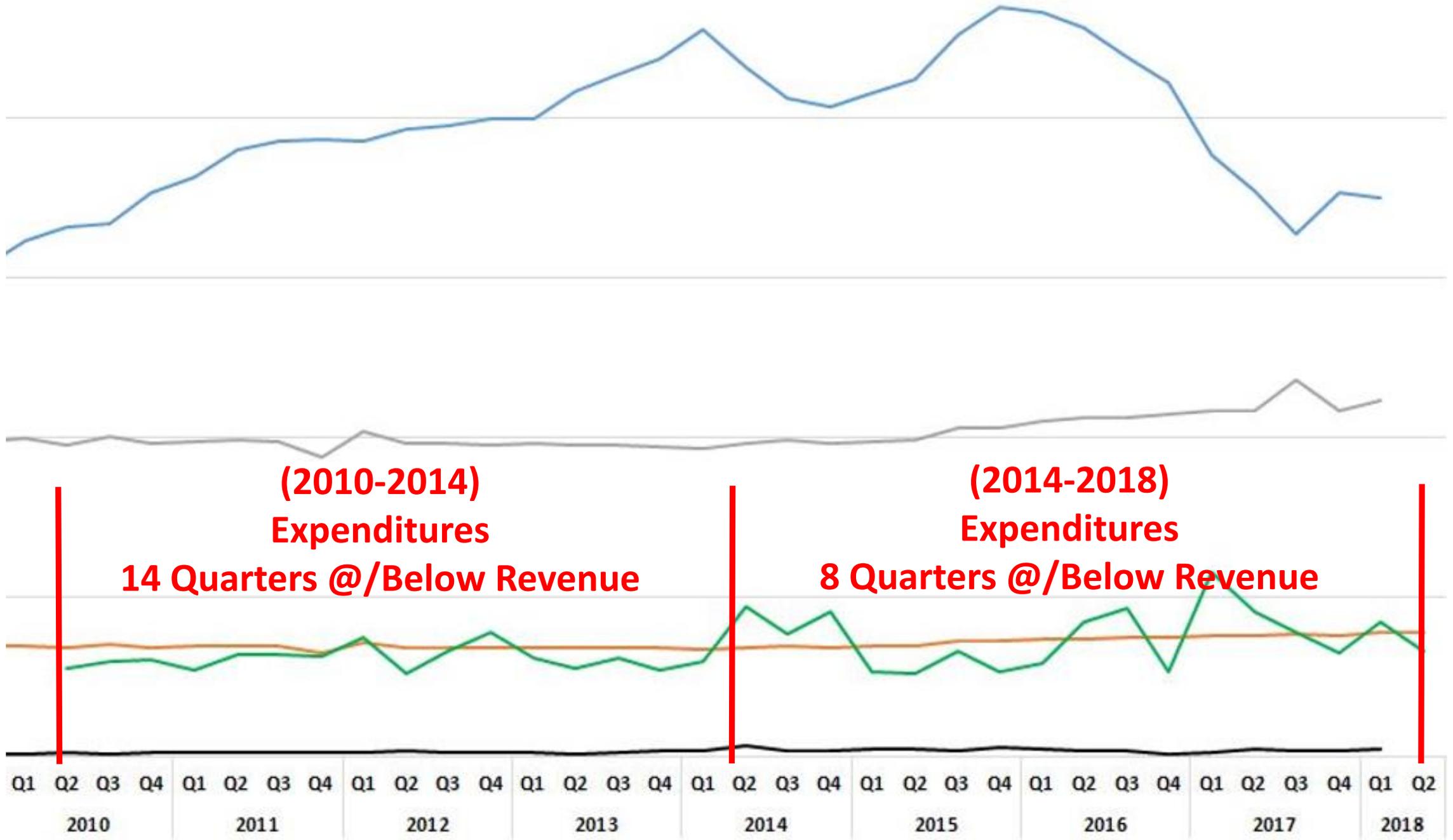
(08-16) Historical (35%) Subaccount Uses

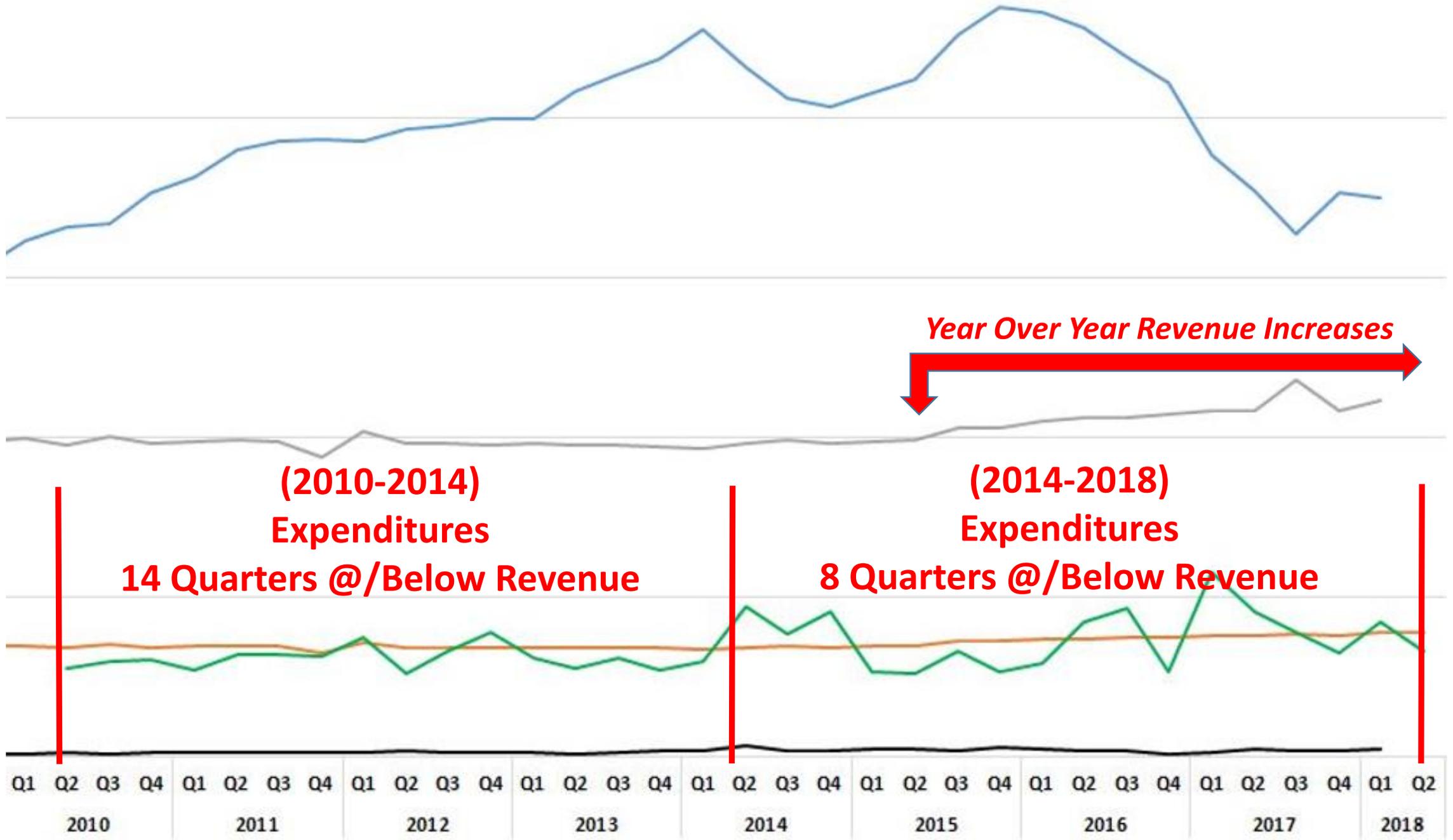
	Product/Service
1.	ALI & Selective Routing
2.	Network (Frame Relay)
3.	GIS/MSAG
4.	Phone Bills
5.	CPE, Software and Maintenance
6.	UPS

(2016-2018) Increased Demand on 35% Account

	Service Type	Percent of Total Account
1	ALI & Selective Routing	49.59%
2	Prior Investments (Outstanding Invoices)	12.87%
3	Network (New IP Network)	12.26%
4	GIS/MSAG	11.16%
5	Phone Bills - Voice Service	8.28%
6	CPE - One-Time and Maintenance	5.15%
7	Text - One-Time and Maintenance	0.39%
8	UPS Maintenance	0.30%







PSAP CPE Life Cycle Replacement Cost

(3 Year Normalization – Not Including Year 4/5 Maintenance on 5 year contracts)

Vendor A

+54.07%

Vendor B

+136.62%

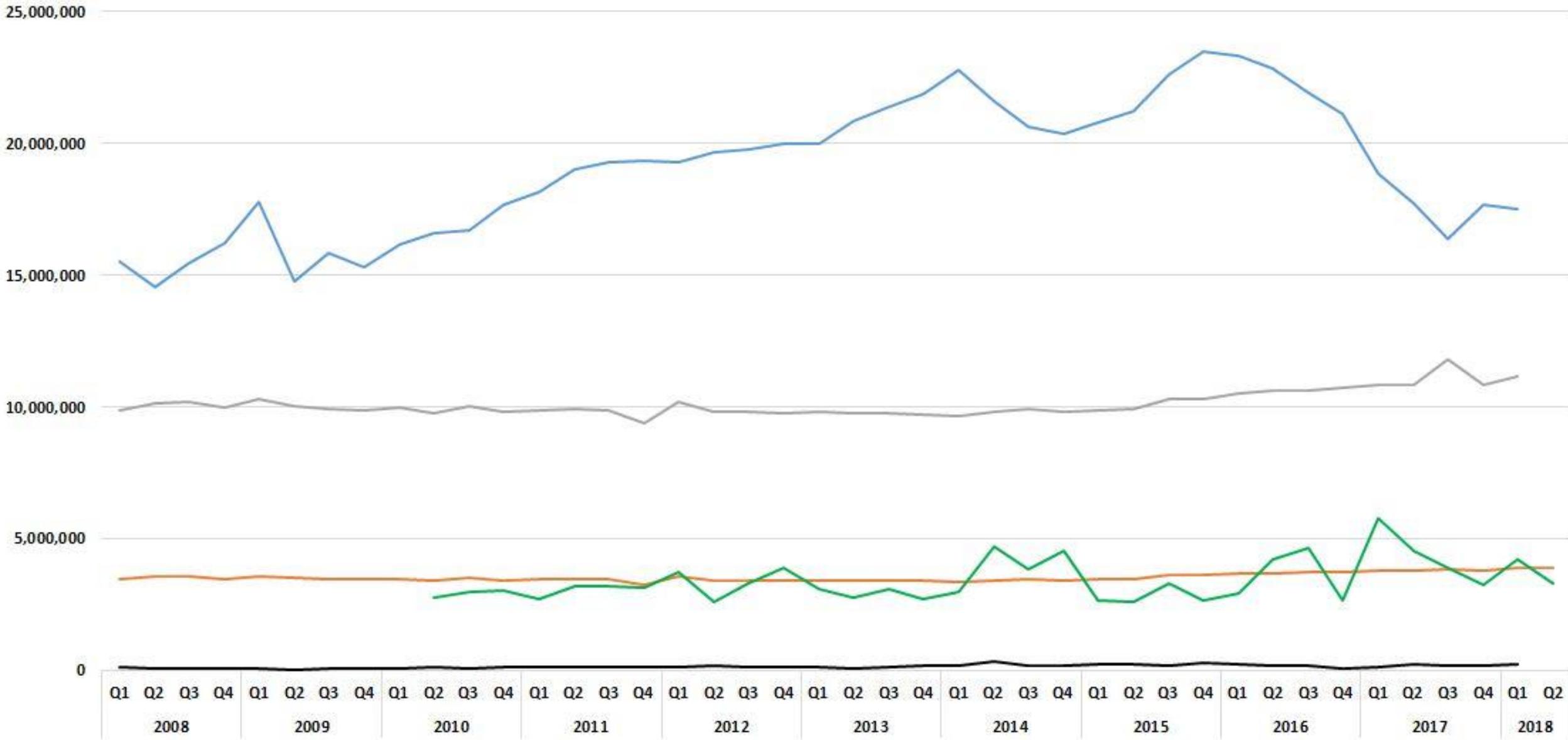
Vendor C

+59.04%

Average

+83.24

— Sum of Qtrly ECA Cash Balance
 — Sum of Qtrly Sub-Acct Deposit Amount
 — Sum of Qtrly Surcharge Collected
— Sum of Program Expenditure Amount
 — Sum of Actual 4% Admin Expenditure Amount



Necessary Fiscal Controls

1. Immediately implement temporary Administrative Rule effective May 1st to contain CPE lifecycle costs at no more than 10% above current Local Exchange Carriers or local utilities published pricing for all lifecycle replacements
2. Implement a standard minimum five year CPE lifecycle replacement schedule with consideration of adding a sixth year extension in the event cost projections exceed subaccount balance or if future 2022 surcharge revenue increase appears unattainable
3. Analyze all recurring and one-time expenditures ensuring subaccount quarterly revenue is not at risk of being exceeded at any point moving forward

Necessary Fiscal Controls (Cont.)

4. Avoid the use of creative budgetary exception process workarounds for minimizing initial lifecycle one-time costs without clearly understanding impacts to future recurring costs
5. Develop historical cost baseline for all CPE nearing end-of-life through 2022
6. Develop cost projections for all upcoming lifecycle upgrades through 2022
7. Leverage new budget forecasting tools to develop total subaccount cost projections through 2022
8. Complete 9-1-1 Program Manager recruitment
9. Recruit 9-1-1 Program Analyst position – July 2018 target

Temporary Administrative Rule *(Reference)*

(2) The Office reviews each submission for reimbursement or payment for appropriateness of the payment, including a review of the reasonableness of costs for goods and services provided. The Office shall reimburse or pay at a rate not to exceed 10% above the current pricing of Local Exchange Carriers or local utilities, as approved by the Oregon Public Utilities Commission, effective as of May 1, 2018.

(3) A 9-1-1 jurisdiction may submit a written request for reimbursement or payment for goods and services in excess of the reimbursement or pay rate described in section (2) of this rule. The Office may not reimburse or pay at the excess reimbursement or pay rate without first issuing a written authorization approving the goods and services eligible for the excess reimbursement or pay rate. The Office may consider requests by a 9-1-1 jurisdiction for approval of reimbursement or payment for goods and services in excess of the reimbursement or pay rate described in section (2) of this rule, if the 9-1-1 jurisdiction:

(a) Is unable to obtain and maintain satisfactory service levels from its current provider at the rates described in section (2) of this rule;

(b) Provides documentation satisfactory to the Office that the current provider has failed to maintain service levels described in the provider's contract with the 9-1-1 jurisdiction and the parties have been unable to resolve the dispute in accordance with the terms and conditions of the contract; and

(c) Certifies that the 9-1-1 jurisdiction has complied with all applicable federal, state and local laws, including, but not limited to, the Public Contracting Code.

Questions?