

ALASKA DEPARTMENT OF ADMINISTRATION ENTERPRISE TECHNOLOGY SERVICES, ALASKA LAND MOBILE RADIO AND 5-YEAR STATEWIDE IT PLAN UPDATE

Presentation to

House Finance

Budget Subcommittee

February 17, 2015

Commissioner Sheldon Fisher, DOA

Director Cheri Lowenstein, DAS

Major Matt Leveque, DPS



OVERVIEW OF ALASKA LAND MOBILE RADIO (ALMR)

ALMR is a 24-7-365 communications system, providing public safety radio communications in Alaska

- Daily operations, DPS, DOT, municipalities, others
- Interoperable emergency use across multiple users and organizations
- Secure
- Compliance with FCC and other requirements, such as
 - Narrowbanding
 - Statute, security
 - Multi-frequency waiver



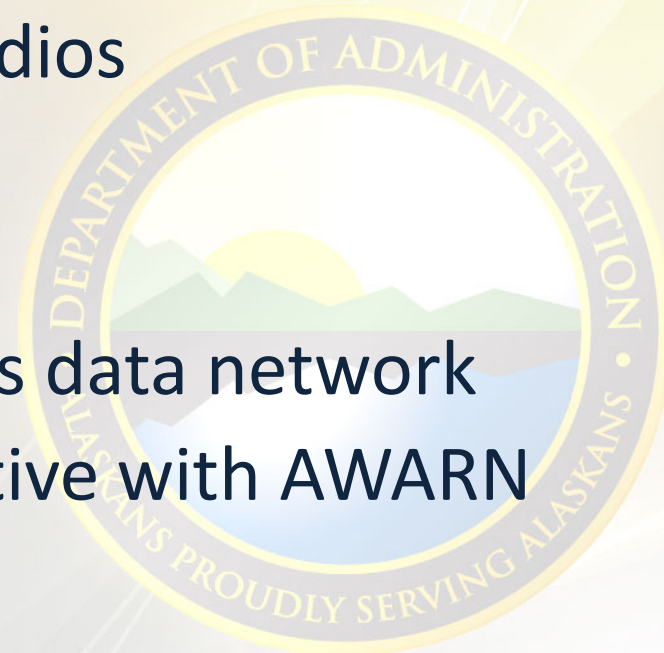
ALASKA LAND MOBILE RADIO (ALMR): WHAT IT IS AND IS NOT...

ALMR IS:

- VHF (very high frequency 30mhz – 300mhz)
- Line of sight, efficient over long distances
- Both daily and interoperable communications
- Not limited to proprietary radios

ALMR IS NOT:

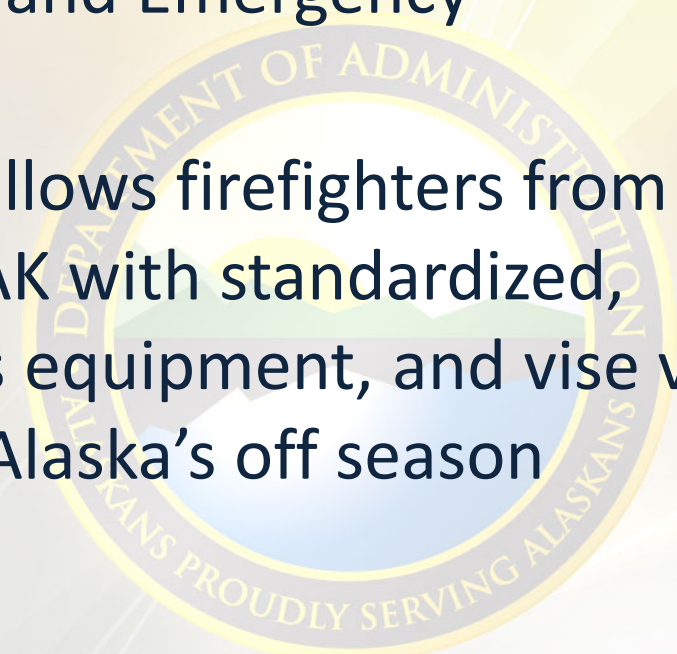
- Not intended to be a wireless data network
- 700 MHz, but is fully interactive with AWARDN
- Better building penetration



INTEROPERABLE IMPORTANCE

Interoperable:

- True incident command; coordinated multi-agency disaster response
- Ability to work with national agencies in times of disaster - Division of Homeland Security and Emergency Management
- **EXAMPLE:** Alaska fire season allows firefighters from lower 48 to help respond to fires in AK with standardized, interoperable communications equipment, and vice versa for responding to fires during Alaska's off season



WHO USES ALASKA LAND MOBILE RADIO?

Typical Users

- Anchorage Municipal Light and Power
- Fairbanks Fire Department
- Northstar Volunteer Fire Department
- Manley Volunteer Fire Department
- Providence Seward Medical & Care Center
- Mt. Sanford Tribal Consortium
- Central Peninsula Hospital
- Delta Rescue Squad (Delta Junction)
- Department of Public Safety (Alaska State Troopers)
- Department of Natural Resources (fire season)
- Department of Transportation
- US Bureau of Land Management



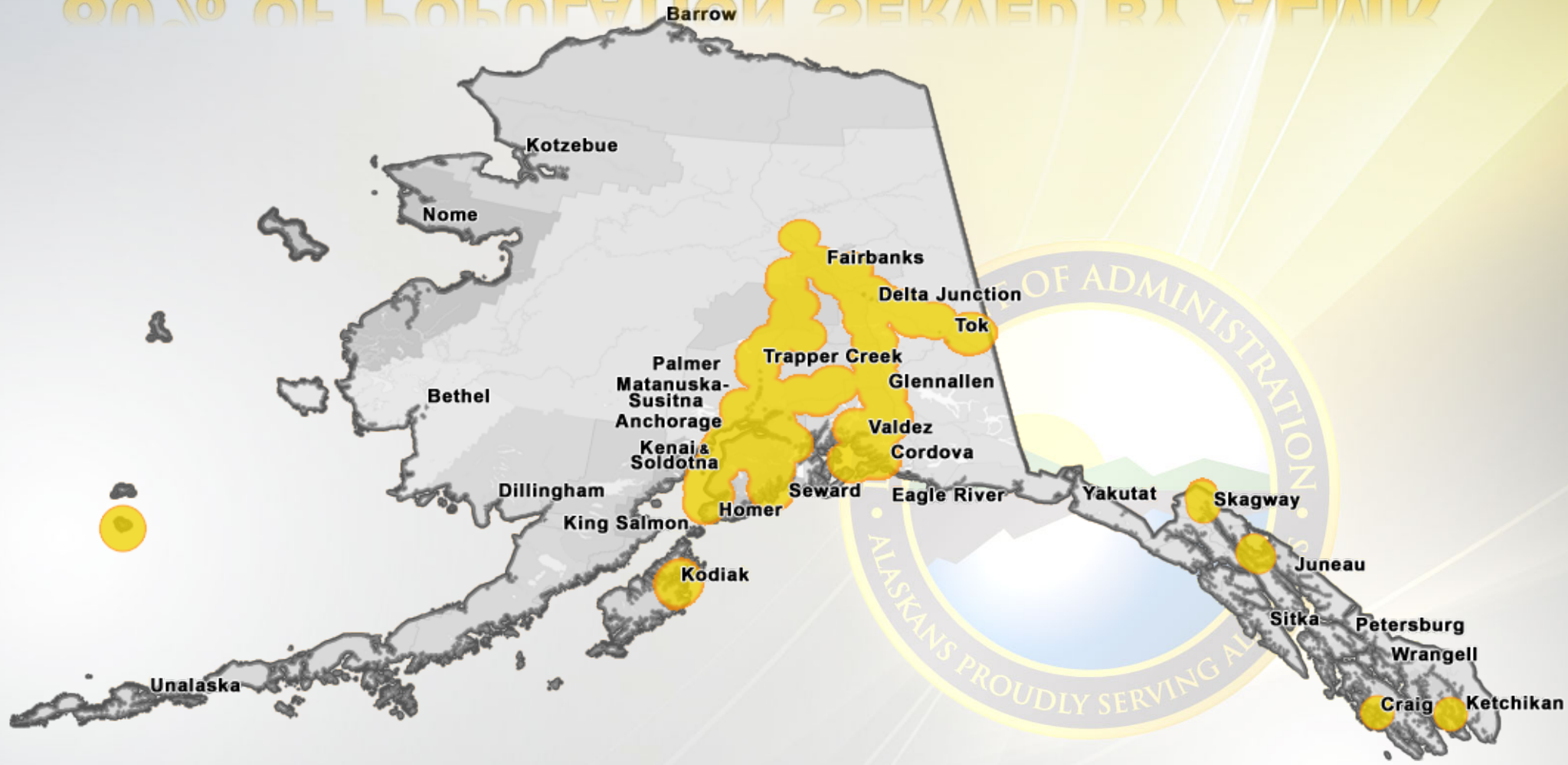
CORE TO PUBLIC SAFETY COMMUNICATIONS

- **122 public safety agencies currently use as core of their daily communications**
- Today's ALMR system connects more than 1.2 million calls monthly
- **23,000+ Public Safety Radios**
 - State of Alaska: 6,859
 - Department of Defense: 7,238
 - Federal Agencies: 906
 - Municipalities / NGOs: 8,270
- **82 ALMR Sites / 12 AWARN Sites**
 - Covers most of the Parks, Seward, Richardson, Glenn and Alaska Highways, as well as Juneau, Skagway and portions of Kodiak Island.



ALMR COVERAGE

80% OF POPULATION SERVED BY ALMR



ALTERNATIVES?

Cell Phones

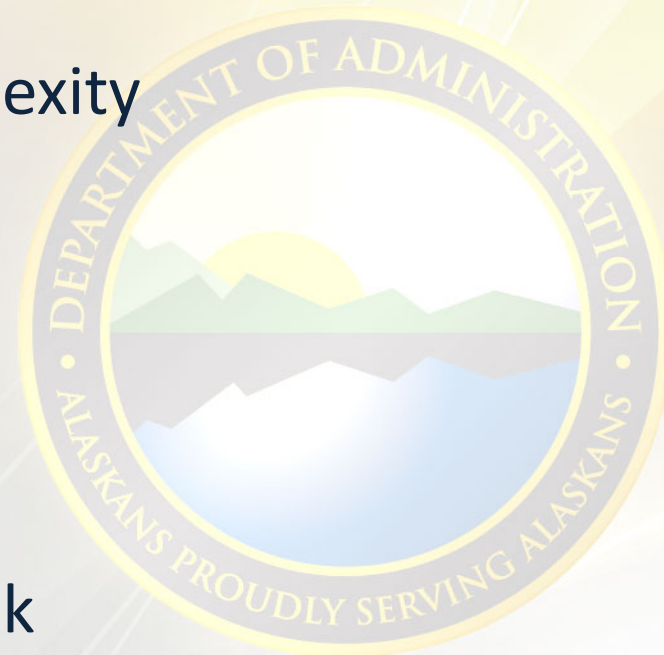
- No incident command capability, one-to-one only
- Congestion risk proven

Radio Systems

- Large capital re-investment
- Unnecessary duplication, complexity
- Loss of frequencies
- Loss of interoperability

Satellite

- Need more than one – several
- High initial cost, relative high risk



ALTERNATIVES: 2011 FEASIBILITY STUDY

- The Commissioner of Administration delivered the Alaska Land Mobile Radio (ALMR) Feasibility Study to the 27th Legislature in 2012.
- The report addresses anticipated operating and capital costs of sustaining the current system and the sources of funds that will be used to fund those costs.
- The report also considered alternatives to the ALMR network and projected their costs.
- **RESULT OF STUDY:** Feasibility study found that ALMR is the most cost effective communication for the State of Alaska daily operations with the essential capability of multi-agency, multi-jurisdictional disaster response (interoperability).

REQUIREMENTS OF AN ALTERNATIVE

Table 10: Requirements Compliance Matrix for Public Safety Communications

	Public Switched Telephone Network / GETS ³²	Cellular Nationwide Wireless Priority Service (WPS)	Public Safety LTE network	Commercial Satellite Phone Service	IEEE 802.16m Mobile Wireless Networks (WiMAN ³³)	High-frequency (HF) and Low-band VHF	Motorola iDEN System ³⁴	Existing ALMR
LMR backbone infrastructure								
Operating mode primarily for voice communications								
Dispatch capability								
Wide Area capability								
Communications across State, Federal, DOD and local jurisdictions								
Secure communications								
Compatibility with disparate radio systems, both digital and analog								
Interface capability to aviation, maritime, and legacy LMR systems								
High level of redundancy								
P25/TIA-102A standard compliant								

Compliance Color Index:

YES

NO

³² Government Emergency Telecommunications Service, <http://gets.ncs.gov/index.html>

³³ commercially known as WiMAX

³⁴ Used for Prudhoe Bay wide area communication (discontinued by manufacturer)

SOURCE: 2011 ALMR Feasibility Study

ALMR – FY 15 FUNDING AND FED RECEIPTS

- Non-DoD Feds \$84,000
- DoD (paid direct contractors) \$233,000
- DoD (paid direct to state) \$54,000
- On-Behalf Munis / NGOs \$500,000
- Maintenance and operations \$3,857,000

(M&O is SATS and ALMR funds)

FY 16 Governor Amended Budget - No new funding requests and proposed reductions of:

- (\$770,700) State of Alaska Telecommunications System (SATS)
- (\$375,800) Alaska Land Mobile Radio (ALMR)
- (\$340,000) Political Subdivisions (Poli-sub)

BUDGET QUESTION: FUTURE FUNDING

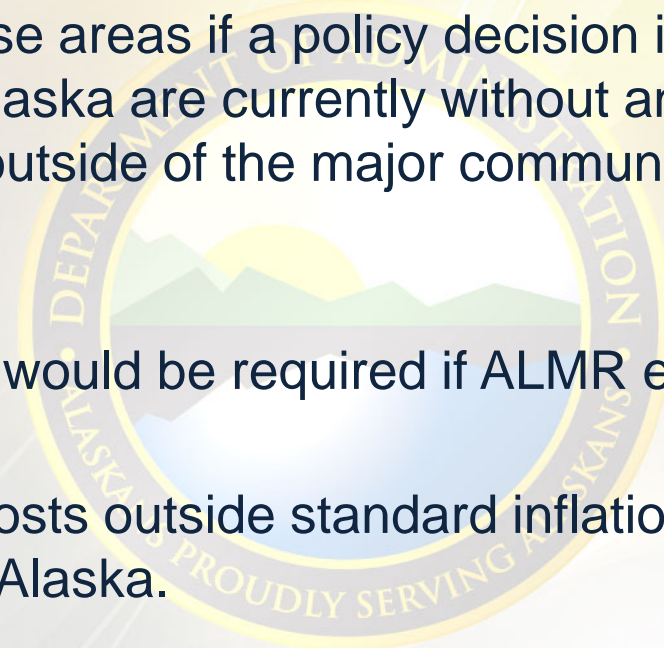
ALMR will require future requests for funding that may include:

CAPITAL COSTS

- System maintenance - required for major periodic upgrades to both equipment and the software system the operates the system – the same as for any SOA digital infrastructure from email to system security.
- Rural access - as terrestrial fiber backhaul expands into rural Alaska (e.g. the new GCI SW Terra Project across the Y-K Delta), capital costs could be required to extend the system into those areas if a policy decision is made to do so. Public safety officials in rural Alaska are currently without any interoperable form of communication outside of the major communities and villages.

OPERATING COSTS

- Short-term - possible state assistance would be required if ALMR experiences Federal agency funding cuts
- Long-term - there will be operational costs outside standard inflationary increases for any expansion into rural Alaska.



EXAMPLE: FUNNY RIVER FIRE

- Consumed an estimated 195,858 acres when finished
- Reported issues on ALMR busy signals during critical fire response



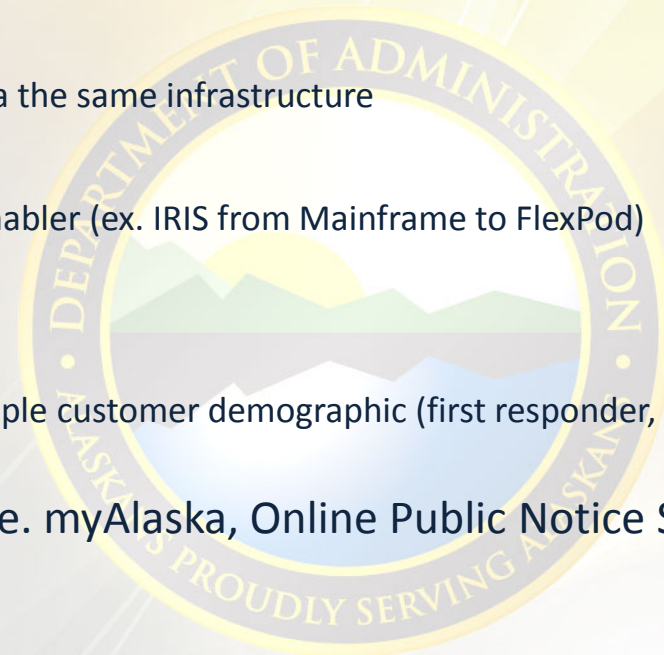
An audit of the ALMR usage was conducted for the **96 hour period** from May 23, 2014 to May 26, 2014 and covered the seven (7) ALMR sites closest to the fire suppression activities

- Firefighters battling the blaze using ALMR
- Evacuation of residents and involved the Alaska State Troopers (AST) further increased ALMR usage
- The seven sites “processed” 84, 945 “conversations” for a total of 213 hours of talk time
- A total of 765 “busies” were reported by the System amounting to a total of 63 minutes
- **“Busies” accounted for less than 1% of calls during busiest period of the Funny River Fire**

CENTRALIZED AND DECENTRALIZED IT SERVICES

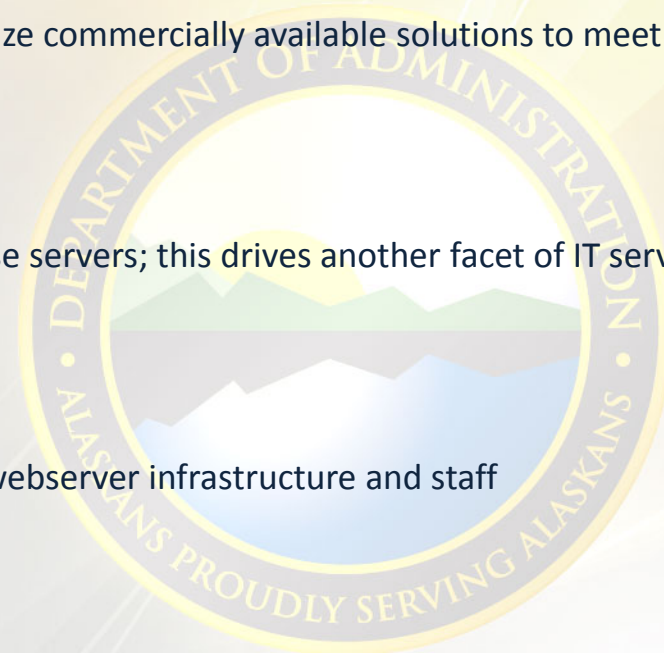
- ETS Provided Services

- Enterprise services are those for historical reasons are deemed to be core services needed by a majority of departments.
 - Mainframe Services
 - Grew out of necessity, agencies adopted solutions many years ago
 - Network, WAN, Internet
 - Optimized delivery ensures reliable core networking
 - Telephone/VoIP
 - Utilizes the enterprise network delivered via the same infrastructure
 - FlexPod/Cloud
 - Hosting services for agencies – migration enabler (ex. IRIS from Mainframe to FlexPod)
 - Videoconference
 - SATS/ALMR
 - Interoperable nature allows service to multiple customer demographic (first responder, police, fire, agencies)
 - Enterprise Application Development (i.e. myAlaska, Online Public Notice System)
 - State Security Office



CENTRALIZED AND DECENTRALIZED IT SERVICES

- Typical Agency Provided Services
 - **Agency services are those services delivered locally by agency IT staff.**
 - Desktop support / Onsite local help desks
 - Predominantly similar across agencies with exception of specialized business applications
 - Printers/Copiers
 - Application Development (i.e. AMHS reservations, IRIS interface, Workplace Alaska, LearnAK)
 - Agencies often develop in-house or customize commercially available solutions to meet specific agency business need.
 - Known also as Business Unit Services
 - Local Database Servers
 - Many in-house applications require database servers; this drives another facet of IT service delivery down to the business unit.
 - Opportunity for enterprise
 - Web services (design/development)
 - Each agency maintains their own website, webserver infrastructure and staff
 - Opportunity for enterprise
 - Agency Security Offices
 - Wifi, LAN, Networking
 - Agency wifi often not part of Enterprise Wireless



LEG INTENT – IT PLAN UPDATE

- IT Plan Focus

- Improved Efficiency

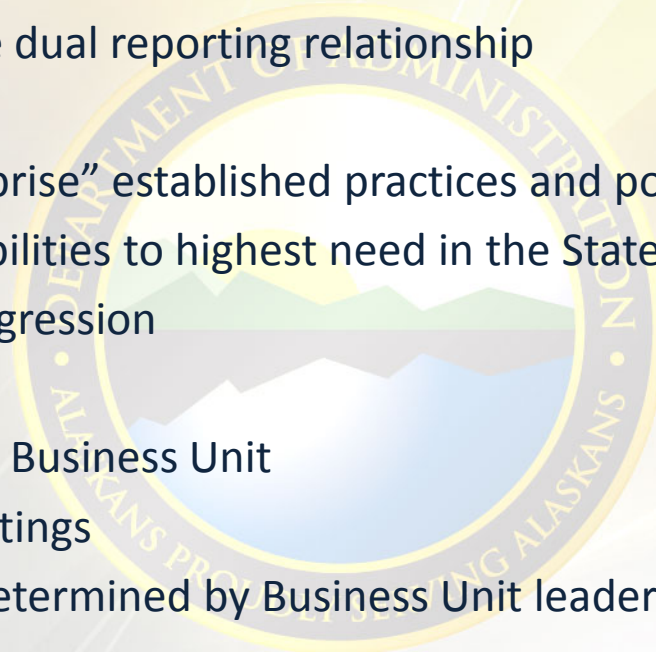
- Business Unit Services -- Keep critical knowledge base in the business unit to ensure service delivery is efficiently maintained.
 - Unique to specific business unit
 - Requirements of each business unit vary materially
 - Central to the mission of that business unit
 - Commodity Services -- Drive efficiencies in planning and implementation (no need to re-invent the wheel in each department), purchasing and service delivery.
 - Meets customer needs with minimal customization
 - » Single product definition or limited number of variants
 - Typically out-sourcing options will exist
 - » Results in a “buy vs. build” decision for the organization
 - Success measured by delivering product at the lowest possible price
 - Products and Services go through an evolution from Business Unit Services to Commodity Services
 - » Constant process of evaluation

LEG INTENT – IT PLAN UPDATE

- IT Plan Focus

- Required Governance Structure:

- Blend the need to drive efficiency with the need to meet business unit specific requirements
 - CIO Function
 - » Tasked with meeting Stakeholder needs at the lowest possible cost.
 - Proposed IT Organization will have dual reporting relationship
 - » Solid line to the CIO
 - Compliance with “enterprise” established practices and policies
 - Transfer individual capabilities to highest need in the State
 - Allows better career progression
 - » Dotted line to Business Unit
 - Physically located within Business Unit
 - Participates in Staff Meetings
 - Annual Review largely determined by Business Unit leaders



LEG INTENT – IT PLAN UPDATE

- IT Plan Focus

- Department Specific Examples

- Business Unit Specific Services

- Application Development (i.e. AMHS reservations, IRIS interface, Workplace Alaska, LearnAK)
 - Local Database Servers (Note this could be either a Business Unit Specific Service or a Commodity Service)
 - Web services (design/development)

- Commodity Service – currently performed by the Business Unit

- Desktop support
 - Printers/Copiers
 - Local Database Servers
 - » (Note this could be either a Business Unit Specific Service or a Commodity Service)
 - Web services (design/development)
 - » (Note this could be either a Business Unit Specific Service or a Commodity Service)
 - Wifi, Cable TV
 - Help Desk

- ETS Specific Examples

- Commodity Services: Mainframe Services

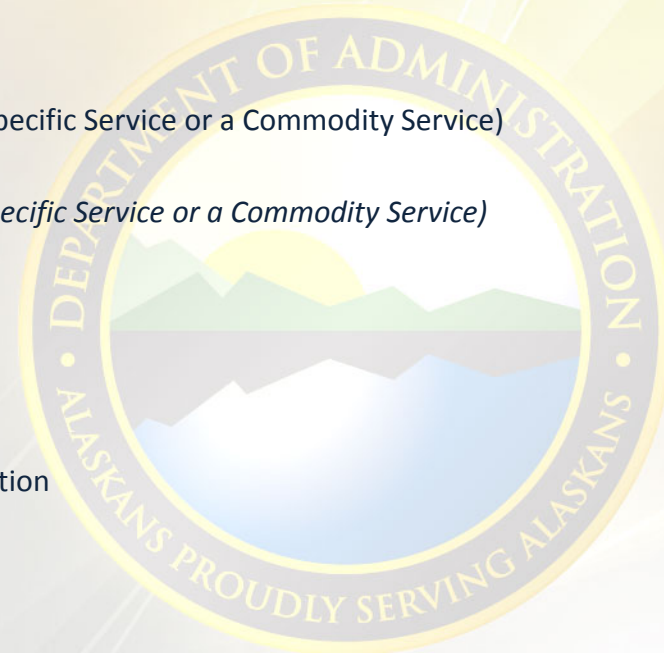
- Currently working on an RFP to outsource this function

- Commodity Services: Email

- Currently examining outsource this function

- Commodity Service: Data Center/Servers

- 180+ servers “closets” or isolated, small scale data centers in silos around the state.
 - Each of these locations require their own utilities (cooling and electric), hardware refresh on an annual cycle, disaster recovery, backup power, ongoing maintenance, and staffing.



Thank you!

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for more information about our department.

Questions?

