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A CDI Company

Business Case for Next Generation 9-1-1 Technology

Presented to the Oregon State Legislature

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ARCHITECTURE • ENGINEERING • COMMUNICATIONS TECHNOLOGY

AVIATION | CIVIL | CONSTRUCTION SERVICES | DATA SYSTEMS | ENVIRONMENTAL
FACILITIES ENGINEERING | GEOSPATIAL | NETWORKS | PUBLIC SAFETY | TRANSPORTATION

Business Case for Next Generation 9-1-1 Technology

- Business Case Purpose
- Background
- Problem/Opportunity
- Alternatives
- Consequences of Failure to Act



Project Scope Overview -Three Alternatives

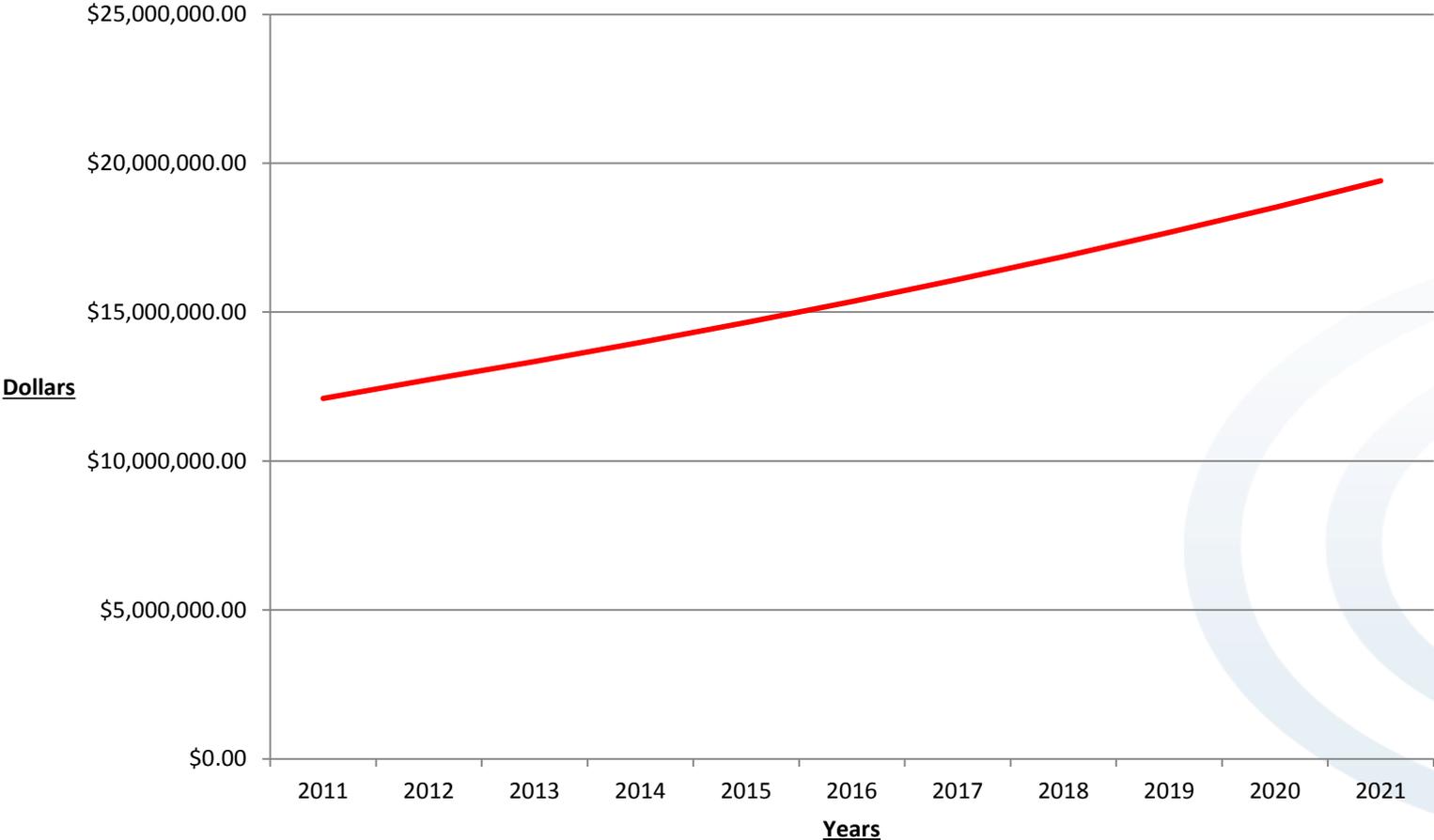
- Alternative One – Status Quo
 - **Not recommended**
- Alternative Two – NG9-1-1 implementation for 48 PSAPs prior to organic PSAP consolidation
 - **Recommended**
- Alternative Three - Mandated consolidation prior to NG9-1-1 implementation.
 - **Not recommended**

Alternative One – Status Quo

- Alternative One, Status Quo, is **not recommended**:
 - PSAP's are at the end-of-life technology with their 9-1-1 Network and 9-1-1 Call Taking equipment
 - Security
 - Substantial financial implications



Alternative One - Costs



Alternative Two - NG9-1-1 Implementation

- Alternative Two, NG9-1-1 Implementation, is **recommended**:
 - Would improve and provide a higher level of 9-1-1 service across the state for all citizens and visitors to Oregon.
 - NG9-1-1 will improve current system deficiencies when implemented.
 - NG9-1-1 planning and transition has and may continue to result in the organic consolidation of PSAPs across the State.
 - NG9-1-1 will provide the ability to re-route calls in the event of a major disaster.

Alternative Two - Costs

| | Year 1 | Year 2 | Year 3 | Annually Years 4 – 10 |
|--|--------------------|--------------------|--------------------|--------------------------|
| Call Access Services Non-recurring Costs | \$400,000 | \$400,000 | \$0 | \$0 |
| Call Access Services Recurring Costs | \$356,940 | \$530,940 | \$530,940 | \$530,940 |
| Core Connections Non-recurring Costs | \$500,000 | \$500,000 | \$500,000 | \$0 |
| Core Connections Recurring Costs | \$1,623,456 | \$2,349,984 | \$2,349,984 | \$2,349,984 |
| PSAP Connections Non-recurring Costs | \$0 | \$1,925,000 | \$0 | \$0 |
| PSAP Connections Recurring Costs | \$3,356,700 | \$4,276,284 | \$4,276,284 | \$4,276,284 |
| Total Non-Recurring Costs | \$900,000 | \$2,825,000 | \$500,000 | \$0 |
| Total Recurring Costs | \$5,337,096 | \$7,157,208 | \$7,157,208 | \$7,157,208 |
| TOTAL | \$6,237,096 | \$9,982,208 | \$7,657,208 | \$7,157,208 |

Alternative Three - Mandated Consolidation

- Alternative Three, Mandated Consolidation, is **not recommended**:
 - Currently, no authority exists within the current statutory framework to mandate statewide consolidation of 9-1-1 call taking.
 - Consolidating PSAPs would raise costs to the Emergency Communications account:
 - 9-1-1 Network costs would rise annually.
 - Equipment replacement cost would increase.
 - Money spent on consolidating PSAPs on the current system would reduce the funds available to transition to a NG9-1-1 system.
 - Mandated consolidation would result in an emergency communications system that is fractured, inefficient, and would increase costs for municipalities.

Alternative Three - Potential Costs

| | Year 1 |
|---|-------------------------------|
| <u>CAMA</u> Trunking (\$6,500 - \$10,000 monthly) | \$78,000 - \$120,000 |
| <u>CPE</u> | \$300,000 |
| <u>Current</u> Carrier Network Charges | Unknown |
| Total Non-recurring Costs | \$300,000 |
| Total Recurring Costs | \$78,000 - \$120,000 + |
| TOTAL | \$378,000 - \$420,000 |

Pricing does not include the cost to build out facilities if needed for any of the regional PSAPs or for a radio network or integration within a specific region – both of which could easily reach into the millions.

Alternative Three - Potential Building Costs

- The number of workstations below correlate to the recommended number of workstations in the Kimball *Consolidation Analysis and Next Generation 9-1-1 Implementation Study*.

| Number of Workstations | Square Footage / Workstations | Building Square Footage | Cost/ Square Foot | Total Estimate |
|------------------------|-------------------------------|-------------------------|-------------------|----------------|
| 5 | 1000 | 5,000 | \$350 | \$1,750,000 |
| 7 | 1,000 | 7,000 | \$350 | \$2,450,000 |
| 9 | 1,000 | 9,000 | \$350 | \$3,150,000 |
| 12 | 1,000 | 12,000 | \$350 | \$4,200,000 |

- The size of each regional facility is based on the number of workstations that each region would require based on 9-1-1- call volume.
- The estimated costs apply to the structure and building systems such as heating and air conditioning. Costs such as those associated with site procurement, professional services, furniture and the emergency communications system are not included.
- Construction costs will likely vary from region to region.

Alternatives Comparison - Costs

| | Alternative 1 Status Quo | Alternative 2 End-of-life Technology Replacement (NG9-1-1) | Alternative 3 Current PSAP Consolidation (Single Regional PSAP) |
|------|---|---|--|
| Cost | Year 1 - \$12.12 million Year 2 - \$ 12.67 million Year 3 - \$13.24 million Year 4 - \$13.83 million | Year 1 - \$6.24 million Year 2 - \$9.98 million Year 3 - \$7.66 million Year 4+ - \$7.16 million | Year 1 (Implementation) - \$378,000 - \$420,000 Facility costs may range from \$1.75 million to \$4.2 million depending on size and workstation needs |

L.R. Kimball Recommendations

| Goals | Alternative 1 | Alternative 2 | Alternative 3 |
|--|---------------|---------------|---------------|
| 1 Improve 9-1-1 service | No | Yes | No |
| 2 Provide long term stability as technologies emerge | No | Yes | No |
| 3 Meet public expectations | No | Yes | No |
| 4 Provide cost efficiencies | No | Yes | No |
| 5 Comply with OEM 9-1-1 five-year strategic plan | No | Yes | No |
| 6 Support Oregon's Safety Policy Vision | No | Yes | No |
| 7 Encourage data and resource sharing | Yes | Yes | Yes |
| 8 Support ORS 403.100 | Yes | Yes | Yes |

- Alternative Two meets all of the selection criteria as described in the Business Case Analysis.

Consequences of Failure to Act

- If no action is taken, Oregon will not have a 9-1-1 system with up-to-date technology.
- It will be more expensive to remain on the current frame relay network and the phone companies' analog circuits over the next ten years.
- Doing nothing and leaving the public safety of Oregon citizens to an antiquated analog system that is not compatible with modern communications technologies is not a viable option and becomes cost prohibitive.

Questions

