9-1-1Dispatch Consolidation -

Updated Business Case Report

Executive Summary

April 22, 2013

Introduction

The municipalities of Addison, Carrollton, Coppell and Farmers Branch each currently operate their own 9-1-1 emergency communications centers to serve their individual jurisdictions. Addison, Coppell and Farmers Branch do this as 'home rule' jurisdictions responsible for their own 9-1-1 fee collections, 9-1-1 technology and carrier service agreements, while Carrollton is a part of the Denco Area 9-1-1 District and receives their 9-1-1 services through Denco. Over the years these municipalities have participated in a number of collaborative public safety initiatives including routine Fire/EMS mutual and automatic aid among jurisdictions and the sharing of public safety communications infrastructure.

Recognizing the potential service level improvements and cost efficiencies that may result through consolidation of their emergency communications functions, these jurisdictions began examining consolidation alternatives in more detail in the latter portion of 2011. After conducting a Public Safety Communications Consolidation Analysis process, a threshold judgment was made that further exploration of consolidation was likely to be of mutual benefit, and this Business Case analysis process was initiated with iXP Corporation in early 2012. The purpose of this analysis process and Business Case Report was to establish a common understanding of the current operational configurations and costs for each of the individual jurisdictions and to identify the likely costs for the governance, operations, technology and facility elements of a consolidated emergency communications center organization. From this foundation, the jurisdictions will be able to make informed decisions about the individual and collective benefits that could be achieved through consolidation.

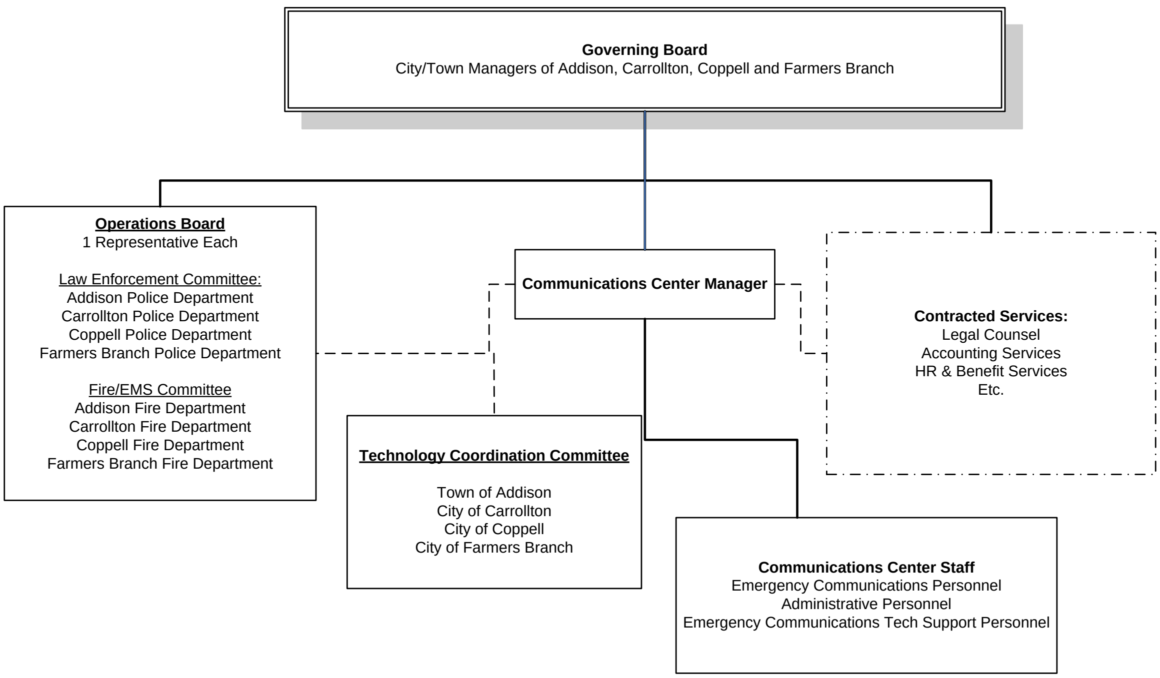
Subsequent to the completion of the Business Case Report in July 2012, the City of Carrollton retained continued services from iXP Corporation to determine if alternative service relationships could be established between a consolidated communications center and the Denco 9-1-1 organization. This work resulted in the confirmation that the relationships and costs outlined in the Business Case Report were the only strategy acceptable to Denco. Since this strategy was not acceptable to the three home rule jurisdictions, iXP was also tasked with assembling information on alternative 9-1-1 service strategies utilizing the North Central Texas Council of Governments (NCTCOG). While cost estimating work by the NCTCOG is still ongoing at the time of printing of this Updated Business Case Report, it is believed that the total costs of operations outlined in this report for a stand-alone facility define a maximum cost exposure for a consolidated communications center serving the four cities.

iXP Corporation was also tasked to work with CyrusOne to assist them in better understanding the needs and requirements for locating a consolidated communications center in their facility, with the goal of establishing a lower overall cost profile to make the hosted-facility model more economically acceptable. This work has resulted in CyrusOne significantly lowering their estimates for monthly recurring costs and these updated costs are reflected in this Updated Business Case Report.

The Updated Business Case Report continues to directly carry forward information that has not changed since the Business Case Report issued in July 1012 so that the document is useful as a reference without having to also refer to the previous report. Any sections that have been updated are noted as such in the text.

Governance

The business case report provided information on the types of governance and management structures that have been utilized successfully for consolidated communications center organizations. The most successful best practice involves creation of a new free-standing joint-powers organization that is essentially owned and operated by the participating jurisdictions, governed by a combination of executive and operational leadership similar to the following diagram.



Operations

The business case process also examined the current telephone call volumes and dispatch workloads at the four individual dispatch operations and examined the methods of operations that the four jurisdictions would want to support in a consolidated operation. This resulted in a range of staffing alternatives ranging from a total personnel count of 56 to a total personnel count of 61. The staffing model with 61 total personnel has been selected as the target model for purposes of conducting the business case cost analysis. This employee count compares favorably to the current count of 71 authorized positions across the four jurisdictions.

Technology

The business case process also provided a detailed analysis of the prospective one-time capital expenditures (CAPEX) needed to outfit a new consolidated organization as well as the annual operational costs for these systems over a 20-year period, which included cost assumptions for periodic technology refreshment. The one-time technology and initial facility start-up capital investment has been estimated at just over $5.2 million.

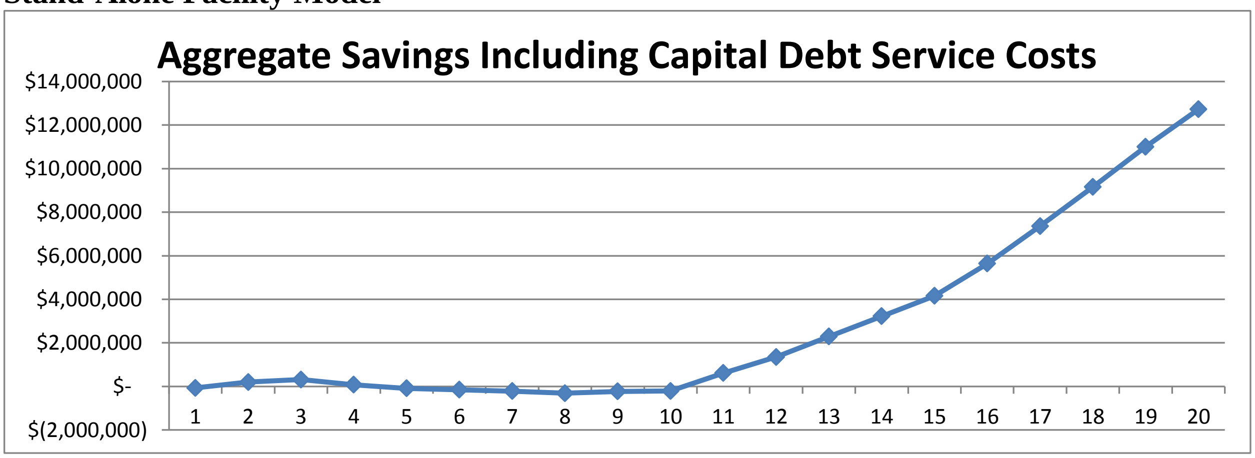
Facilities

The business case process also reviewed and updated the facility requirements for a consolidated organization and provided cost estimates for both a stand-alone purpose-built facility and an alternative to locate the consolidated communications center in hosted facility space operated by CyrusOne. Capital costs for the purpose-built facility are estimated at approximately $6.2 million (including land) and the process of acquiring property and planning, permitting and constructing a facility of this nature could require 18-24 months if everything moves along well. Costs to build-out the facility in the CyrusOne data center are estimated at $1.8 million and the process could likely be concluded in 6-8 months.

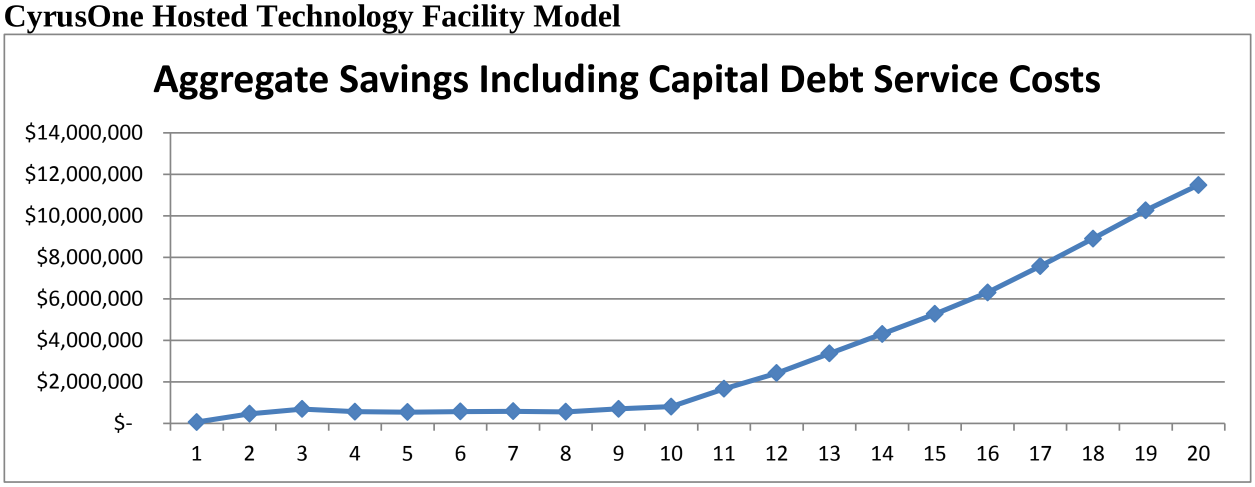
Business Case Financial Analysis

Finally, the business case process developed 20-year financial models for the two facility alternatives that combined the CAPEX estimates with the annual operating expense (OPEX) estimates for each facility configuration. This results in aggregate savings projections that are relatively comparable for the two facility alternatives.

Stand-Alone Facility Model



CyrusOne Hosted Technology Facility Model



The business case financial analysis also examined possible cost allocation models that could be used to divide the total CAPEX and OPEX costs for the consolidated organization across the participating jurisdictions. A consensus was reached that it probably makes the best sense to use the current proportionality among the existing communications center operational costs as the allocation metric for the first two years of operation. Then, at approximately 18 months of operation the actual workloads and operational experiences of the consolidated operation could be used to adjust the allocation formula if needed. The current proportionality among the four jurisdictions' communications center operations are as follows:

Addison – 19%
Carrollton – 36%
Coppell – 21%
Farmers Branch – 24%

Using this allocation methodology, the costs that would be apportioned to each jurisdiction are shown in the tables below for each of the facility alternatives. In the stand-alone facility model, the total savings for each jurisdiction over the 20-year analysis would reach:

Addison – Approximately $3.5 million
Carrollton – Approximately $3.6 million
Coppell – Approximately $2.8 million
Farmers Branch – Approximately $2.8 million

Stand-Alone Facility Alternative

Alternative Cost Allocation Model Reflecting Current Cost Proportionality											
		Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Total OPEX and CAPEX Costs		$ 6,033,115	$ 6,367,663	$ 6,517,364	$ 6,811,408	$ 6,876,149	$ 7,012,241	$ 7,230,103	$ 7,487,345	$ 7,526,111	$ 7,757,427
Jurisdiction	**Cost Allocation based on Current Cost Proportionality**										
Addison	19%	$ 1,146,292	$ 1,209,856	$ 1,238,299	$ 1,294,167	$ 1,306,468	$ 1,332,326	$ 1,373,720	$ 1,422,595	$ 1,429,961	$ 1,473,911
Carrollton	36%	$ 2,171,921	$ 2,292,359	$ 2,346,251	$ 2,452,107	$ 2,475,414	$ 2,524,407	$ 2,602,837	$ 2,695,444	$ 2,709,400	$ 2,792,674
Coppell	21%	$ 1,266,954	$ 1,337,209	$ 1,368,647	$ 1,430,396	$ 1,443,991	$ 1,472,571	$ 1,518,322	$ 1,572,342	$ 1,580,483	$ 1,629,060
Farmers Branch	24%	$ 1,447,947	$ 1,528,239	$ 1,564,167	$ 1,634,738	$ 1,650,276	$ 1,682,938	$ 1,735,225	$ 1,796,963	$ 1,806,267	$ 1,861,782
		$ 6,033,115	$ 6,367,663	$ 6,517,364	$ 6,811,408	$ 6,876,149	$ 7,012,241	$ 7,230,103	$ 7,487,345	$ 7,526,111	$ 7,757,427
(Savings) or Increased Cost by Jurisdiction and Collectively											
Addison		$ (13,053)	$ (484,269)	$ 8,350	$ 27,320	$ 1,615	$ (11,673)	$ (60,599)	$ (3,253)	$ (38,662)	$ (38,771)
Carrollton		$ 50,722	$ 107,524	$ 35,871	$ 134,215	$ 87,985	$ 65,356	$ 70,015	$ 26,637	$ 22,329	$ 24,990
Coppell		$ 9,235	$ 41,759	$ 34,332	$ (3,948)	$ 28,417	$ 14,530	$ 16,539	$ 25,507	$ (72,757)	$ (11,978)
Farmers Branch		$ 25,689	$ 63,312	$ (194,707)	$ 80,597	$ 49,511	$ (5,850)	$ 36,973	$ 47,764	$ 4,592	$ 6,057
Collective Total Annual (Savings) or Increased Cost		$ 72,593	$ (271,674)	$ (116,153)	$ 238,184	$ 167,529	$ 62,363	$ 62,928	$ 96,654	$ (84,500)	$ (19,702)

Alternative Cost Allocation Model Reflecting Current Cost Proportionality												
		Year 11	**Year 12**	**Year 13**	**Year 14**	**Year 15**	**Year 16**	**Year 17**	**Year 18**	**Year 19**	**Year 20**	**Total**
Total OPEX and CAPEX Costs		$ 7,230,952	$ 7,561,202	$ 7,622,098	$ 7,874,808	$ 8,082,273	$ 7,808,370	$ 7,889,577	$ 8,117,819	$ 8,356,289	$ 8,734,686	$ 148,896,999
Jurisdiction	**Cost Allocation based on Current Cost Proportionality**											
Addison	19%	$ 1,373,881	$ 1,436,628	$ 1,448,199	$ 1,496,214	$ 1,535,632	$ 1,483,590	$ 1,499,020	$ 1,542,386	$ 1,587,695	$ 1,659,590	$ 28,290,430
Carrollton	36%	$ 2,603,143	$ 2,722,033	$ 2,743,955	$ 2,834,931	$ 2,909,618	$ 2,811,013	$ 2,840,248	$ 2,922,415	$ 3,008,264	$ 3,144,487	$ 53,602,920
Coppell	21%	$ 1,518,500	$ 1,587,852	$ 1,600,641	$ 1,653,710	$ 1,697,277	$ 1,639,758	$ 1,656,811	$ 1,704,742	$ 1,754,821	$ 1,834,284	$ 31,268,370
Farmers Branch	24%	$ 1,735,429	$ 1,814,688	$ 1,829,304	$ 1,889,954	$ 1,939,746	$ 1,874,009	$ 1,893,498	$ 1,948,276	$ 2,005,509	$ 2,096,325	$ 35,735,280
		$ 7,230,952	$ 7,561,202	$ 7,622,098	$ 7,874,808	$ 8,082,273	$ 7,808,370	$ 7,889,577	$ 8,117,819	$ 8,356,289	$ 8,734,686	$ 148,896,999
(Savings) or Increased Cost by Jurisdiction and Collectively												
Addison		$ (184,182)	$ (218,176)	$ (204,750)	$ (206,324)	$ (217,981)	$ (322,632)	$ (411,389)	$ (373,835)	$ (386,012)	$ (373,328)	$ (3,511,604)
Carrollton		$ (247,571)	$ (214,203)	$ (340,367)	$ (280,121)	$ (298,886)	$ (493,746)	$ (563,654)	$ (643,604)	$ (602,935)	$ (575,048)	$ (3,634,492)
Coppell		$ (171,769)	$ (153,125)	$ (192,566)	$ (253,293)	$ (205,136)	$ (319,728)	$ (361,459)	$ (374,076)	$ (446,362)	$ (371,134)	$ (2,767,011)
Farmers Branch		$ (215,969)	$ (154,051)	$ (198,498)	$ (198,681)	$ (211,549)	$ (341,824)	$ (388,810)	$ (402,501)	$ (415,791)	$ (397,615)	$ (2,811,352)
Collective Total Annual (Savings) or Increased Cost		$ (819,491)	$ (739,555)	$ (936,181)	$ (938,419)	$ (933,551)	$ (1,477,930)	$ (1,725,311)	$ (1,794,016)	$ (1,851,101)	$ (1,717,125)	$ (12,724,458)

For the CyrusOne hosted facility model, the total 20-year savings would be:

Addison – Approximately $3.3 million
Carrollton – Approximately $3.2 million
Coppell – Approximately $2.5 million
Farmers Branch – Approximately $2.5 million

CyrusOne Hosted Facility Alternative

Alternative Cost Allocation Model Reflecting Current Cost Proportionality											
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Total OPEX and CAPEX Costs		$ 5,899,756	$ 6,241,446	$ 6,400,229	$ 6,703,636	$ 6,729,306	$ 6,923,880	$ 7,152,002	$ 7,419,823	$ 7,469,496	$ 7,663,682
Jurisdiction	Cost Allocation based on Current Cost Proportionality										
Addison	19%	$ 1,120,954	$ 1,185,875	$ 1,216,043	$ 1,273,691	$ 1,278,568	$ 1,315,537	$ 1,358,880	$ 1,409,766	$ 1,419,204	$ 1,456,100
Carrollton	36%	$ 2,123,912	$ 2,246,921	$ 2,304,082	$ 2,413,309	$ 2,422,550	$ 2,492,597	$ 2,574,721	$ 2,671,136	$ 2,689,019	$ 2,758,925
Coppell	21%	$ 1,238,949	$ 1,310,704	$ 1,344,048	$ 1,407,764	$ 1,413,154	$ 1,454,015	$ 1,501,920	$ 1,558,163	$ 1,568,594	$ 1,609,373
Farmers Branch	24%	$ 1,415,941	$ 1,497,947	$ 1,536,055	$ 1,608,873	$ 1,615,034	$ 1,661,731	$ 1,716,480	$ 1,780,757	$ 1,792,679	$ 1,839,284
		$ 5,899,756	$ 6,241,446	$ 6,400,229	$ 6,703,636	$ 6,729,306	$ 6,923,880	$ 7,152,002	$ 7,419,823	$ 7,469,496	$ 7,663,682
(Savings) or Increased Cost by Jurisdiction and Collectively											
Addison		$ (38,391)	$ (508,251)	$ (13,906)	$ 6,843	$ (26,285)	$ (28,461)	$ (75,438)	$ (16,082)	$ (49,419)	$ (56,583)
Carrollton		$ 2,713	$ 62,086	$ (6,298)	$ 95,418	$ 35,122	$ 33,546	$ 41,898	$ 2,329	$ 1,947	$ (8,758)
Coppell		$ (18,770)	$ 15,253	$ 9,734	$ (26,580)	$ (2,419)	$ (4,026)	$ 138	$ 11,327	$ (84,647)	$ (31,665)
Farmers Branch		$ (6,318)	$ 33,020	$ (222,820)	$ 54,732	$ 14,268	$ (27,057)	$ 18,229	$ 31,558	$ (8,996)	$ (16,442)
Collective Total Annual (Savings) or Increased Cost		$ (60,766)	$ (397,892)	$ (233,289)	$ 130,413	$ 20,686	$ (25,999)	$ (15,173)	$ 29,132	$ (141,115)	$ (113,447)

Alternative Cost Allocation Model Reflecting Current Cost Proportionality											
		Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Total
Total OPEX and CAPEX Costs		$ 7,197,234	$ 7,539,439	$ 7,612,661	$ 7,878,079	$ 8,050,377	$ 8,250,639	$ 8,345,771	$ 8,588,368	$ 8,841,638	$ 9,235,292	$ 150,142,755
Jurisdiction	Cost Allocation based on Current Cost Proportionality											
Addison	19%	$ 1,367,475	$ 1,432,493	$ 1,446,406	$ 1,496,835	$ 1,529,572	$ 1,567,622	$ 1,585,697	$ 1,631,790	$ 1,679,911	$ 1,754,706	$ 28,527,123
Carrollton	36%	$ 2,591,004	$ 2,714,198	$ 2,740,558	$ 2,836,108	$ 2,898,136	$ 2,970,230	$ 3,004,478	$ 3,091,813	$ 3,182,990	$ 3,324,705	$ 54,051,392
Coppell	21%	$ 1,511,419	$ 1,583,282	$ 1,598,659	$ 1,654,397	$ 1,690,579	$ 1,732,634	$ 1,752,612	$ 1,803,557	$ 1,856,744	$ 1,939,411	$ 31,529,978
Farmers Branch	24%	$ 1,727,336	$ 1,809,465	$ 1,827,039	$ 1,890,739	$ 1,932,090	$ 1,980,153	$ 2,002,985	$ 2,061,208	$ 2,121,993	$ 2,216,470	$ 36,034,261
		$ 7,197,234	$ 7,539,439	$ 7,612,661	$ 7,878,079	$ 8,050,377	$ 8,250,639	$ 8,345,771	$ 8,588,368	$ 8,841,638	$ 9,235,292	$ 150,142,755
(Savings) or Increased Cost by Jurisdiction and Collectively												
Addison		$ (190,588)	$ (222,311)	$ (206,543)	$ (205,702)	$ (224,042)	$ (238,600)	$ (324,712)	$ (284,431)	$ (293,796)	$ (278,213)	$ (3,274,911)
Carrollton		$ (259,710)	$ (222,037)	$ (343,765)	$ (278,944)	$ (310,368)	$ (334,529)	$ (399,424)	$ (474,206)	$ (428,210)	$ (394,830)	$ (3,186,020)
Coppell		$ (178,850)	$ (157,695)	$ (194,548)	$ (252,606)	$ (211,834)	$ (226,851)	$ (265,658)	$ (275,261)	$ (344,439)	$ (266,007)	$ (2,505,402)
Farmers Branch		$ (224,061)	$ (159,274)	$ (200,763)	$ (197,896)	$ (219,204)	$ (235,680)	$ (279,323)	$ (289,569)	$ (299,308)	$ (277,470)	$ (2,512,370)
Collective Total Annual (Savings) or Increased Cost		$ (853,209)	$ (761,317)	$ (945,618)	$ (935,148)	$ (965,447)	$ (1,035,660)	$ (1,269,117)	$ (1,323,466)	$ (1,365,752)	$ (1,216,519)	$ (11,478,703)

Conclusion

Regardless of whether a stand-alone purpose-built facility is constructed or a leasehold improvement is made within the CyrusOne hosted facility, the consolidation of emergency communications functions for the four cities will result in approximately $12 million in total savings across the 20-year analysis. In addition to this cost savings, the depth of staffing and cross-jurisdictional operational awareness that would be possible in a consolidated operation will result in increased service levels from the communications center to all the agencies being served. The combination of operational service level enhancements with a positive overall business case is the most ideal setting to drive a consolidation initiative to a successful outcome.