

Regional 9-1-1 Consolidation Project

Updates to the Operations Committee

- 1) Working Group Updates**
- 2) Project Manager Update**

May 23, 2019

Final Version with Decisions and Notes

Regional 9-1-1 Consolidation Project

Working Group Updates

Working Group Leads

May 23, 2019

Data Collection Working Group



Membership

Lead: Chief Rich Carani (Libertyville)

Members:

Barrington	LCSO
CenCom	Lake County ETSB
Countryside FPD	Vernon Hills
Gurnee	MCP (Consultant)

Focus

- Compile and normalize PSAP and agency data
- Provide a single source for data ("Data Book")

Actions

Past:

- April 2, 2019 Data Book provided to Policy Committee

Future:

- Prepare follow-on survey (2018 data, fill gaps, etc.)

Recommendations (*Decision*)

- None at this time

G.I.S. Working Group

(Next Generation 9-1-1 Geographic Information Systems)



Membership

Lead: Mr. Steven Winnecke (Lake County ETSB)

Members:

CenCom	North Chicago
Gurnee	Vernon Hills
Greater Round Lake FPD	Waukegan
Lake County ETSB	QuadCom
Lake County (GIS)	MCP (Consultant)
LCSO	

Focus

- NG9-1-1 readiness and standardized PSAP, ESN, dispatch, CAD, MSAG, and jurisdictional maps across the County
- Plan / roadmap to be NG9-1-1 compliant by July 2020
- Approved policies, agreements and SOPs to build and maintain standardized public safety GIS products

Actions

Past:

- Established access to existing server to share files
- Dual Addressing in Unincorporated Lake County:
 - Policy Committee approved and forward letter to the Lake County Board requesting a remedy
 - May 2 informational presentation to F & A Cmte

Future:

- Dual Addressing Ordinance to County Board (Jun/Jul)
- MOU formalizing data sharing and coordination

Recommendations (*Decision*)

- None at this time

Regional 9-1-1 Consolidation Project

Project Manager Update

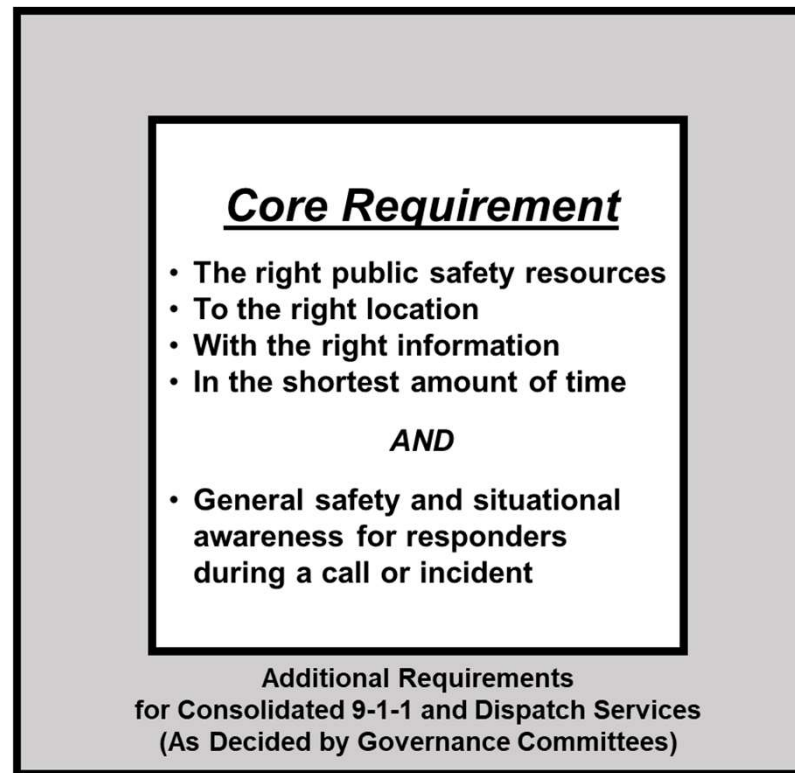
**Jim Hawkins
Project Manager**

May 23, 2019

Project Purpose



Build an implementation plan to consolidate regional 9-1-1 services in order to provide the highest quality 9-1-1 service and lasting value for the residents of participating communities



Overview



Goal: Approve concepts for detailed planning

Agenda

- **Current Environment**
- **Analysis Summary**
- **Concept Decisions**
- **“Enabler” Update**
- **Project Report Card / Milestones**

Current Environment

Consolidation Partners



9-1-1 Consolidation Partners (21 public safety entities) represent:

- 8 Primary PSAPs (answer 9-1-1 calls), 1 Secondary PSAP (dispatch only)
 - 1 independent agency (CenCom)
 - 7 PSAPs part of LE agencies
 - 1 PSAP part of F/EMS agency
 - 8 Law Enforcement dispatch agencies
 - 8 Fire / EMS dispatch agencies
-
- 26 municipalities
 - 12 fire protection districts,
 - 1 county (Lake County)
-
- 28 Law Enforcement agencies
 - 20 Fire / EMS agencies
 - 8 “Other” agencies
-
- 7 ETSBs (≈ \$6.5 million in 9-1-1 surcharge funds)

Current Environment

Operations



- **9-1-1 Consolidation Partners service a population of:**
 - ≈ 590,000 (Primary PSAP / 9-1-1 Call Answering)
 - ≈ 560,000 (Law Enforcement Dispatch)
 - ≈ 580,000 (Fire / EMS Dispatch)
- **Dispatching resources**
 - Operate 17 LE dispatch frequencies / talk groups with 18 LE dispatchers
 - Operate 10 F/EMS dispatch frequencies / talk groups with 9 F/EMS dispatchers

PSAP	LE "Freq"	LE Dispatchers	LE Agencies	F/EMS "Freq"	F/EMS Dispatchers	F/EMS Agencies	Other Agencies	Municipalities	FPDs	Notes
CenCom	3.5	3	7	2	1	4	--	7	2	Share one LE "freq" / Included MABAS in F/EMS agencies
FoxComm	1.5	1	4	1	1	3	1	4	3	Share one LE "freq" / Other: Fox Lake PW
Gurnee	2	2	3	2	2	4	--	2	3	Additional: 1 Call Taker / includes Zion Park District Police in LE
LCSO	4	5	8	--	--	--	6	0	0	1 talk group for patrol units with a primary and secondary dispatcher. 3 additional talk groups for LCSO Marine Units, Forest Preserve Police, ISPERN, etc
Lake Zurich	1	1	6	1	1	2	--	6	2	
Mundelein	2	2	3	2	2	3	1	3	0	Includes Winthrop Harbor and North Chicago / Other; Mundelein PW
Vernon Hills	2	2	3	--	--	--	--	3	0	
Countryside FPD	--	--	--	1	1	3	--	0	2	
Waukegan	1	2	1	1	1	1	--	1	0	
Total	17	18	35	10	9	20	8	26	12	
			28 if count LCSO as					27 with the County		
"Freq" = Talk Group or a Frequency										

Current Environment

9-1-1 Consolidation Partner Totals (Averages for 2016 & 2017)



- **Total calls at Partner PSAPs \approx 1,330,000**
- **Total 9-1-1 calls (\approx 260,000)**
 - \approx 45,900 (17.5%) wire line 9-1-1 calls
 - \approx 202,100 (77.2%) wireless 9-1-1 calls
 - \approx 8,800 (3.4%) VoIP 9-1-1 calls
 - \approx 4,900 (1.9%) abandoned 9-1-1 calls
- **Total 10 digit calls (\approx 1,070,000)**
 - \approx 779,000 (72.6%) inbound 10-digit calls
 - \approx 293,400 (27.4%) outbound 10-digit calls
- **Total computer aided dispatch (CAD) incidents (\approx 953,000)**
 - \approx 67,000 (7%) Fire / EMS Incidents
 - \approx 847,900 (89%) Law Enforcement Incidents
 - \approx 38,300 (4%) Other

Current Environment

PSAP Operations Summary 2017



	Totals	CenCom	FoxComm	Gurnee	LCSO	Lake Zurich	*Mundelein	Vernon Hills	Waukegan	*N. Chicago
PSAP / 9-1-1	590,935	81,500	63,982	90,000	52,149	81,000	31,394	71,181	87,729	32,000
LE Dispatch	561,857	81,379	32,848	54,719	136,876	50,833	31,394	54,079	87,729	32,000
Fire / EMS Dispatch	583,399	91,363	85,000	111,168	0	81,000	31,394	63,745	87,729	32,000
Total Annual 9-1-1- Call Volume	261,675	30,760	14,750	22,720	65,921	19,243	7,458	24,482	62,701	13,640
Wireline (Including VoIP) 9-1-1 Call Percentage	20%	30%	28%	23%	12%	27%	19%	33%	15%	10%
Wireless (Cell) 9-1-1 Call Percentage	78%	62%	72%	68%	88%	73%	81%	67%	85%	84%
9-1-1 Call Volume by Percentage of Partner Total	100%	12%	6%	9%	25%	7%	3%	9%	24%	5%
Total Annual Non 9-1-1 Call Volume	1,084,322	187,416	98,006	126,133	115,767	73,516	38,615	122,279	275,086	47,504
Ten Digit Inbound Call Percentage	73%	77%	71%	71%	69%	70%	70%	70%	75%	76%
Ten Digit Outbound Call Percentage	27%	23%	29%	29%	32%	30%	30%	30%	25%	24%
Non 9-1-1 Call Volume by Percentage of Partner Total	100%	17%	9%	12%	11%	7%	4%	11%	25%	4%
Total Annual Incident Volume	969,044	135,046	126,416	93,067	197,727	144,934	42,048	94,926	84,574	50,306
Fire / EMS Incident Volume Percentage	7%	8%	9%	14%	0%	6%	8%	10%	13%	6%
Law Incident Volume Percentage	89%	69%	88%	85%	100%	94%	92%	90%	87%	94%
Incident (CAD) Volume by Percentage of Partner Total	100%	14%	13%	10%	20%	15%	4%	10%	9%	5%

Current Environment

PSAP Operations Summary 2016

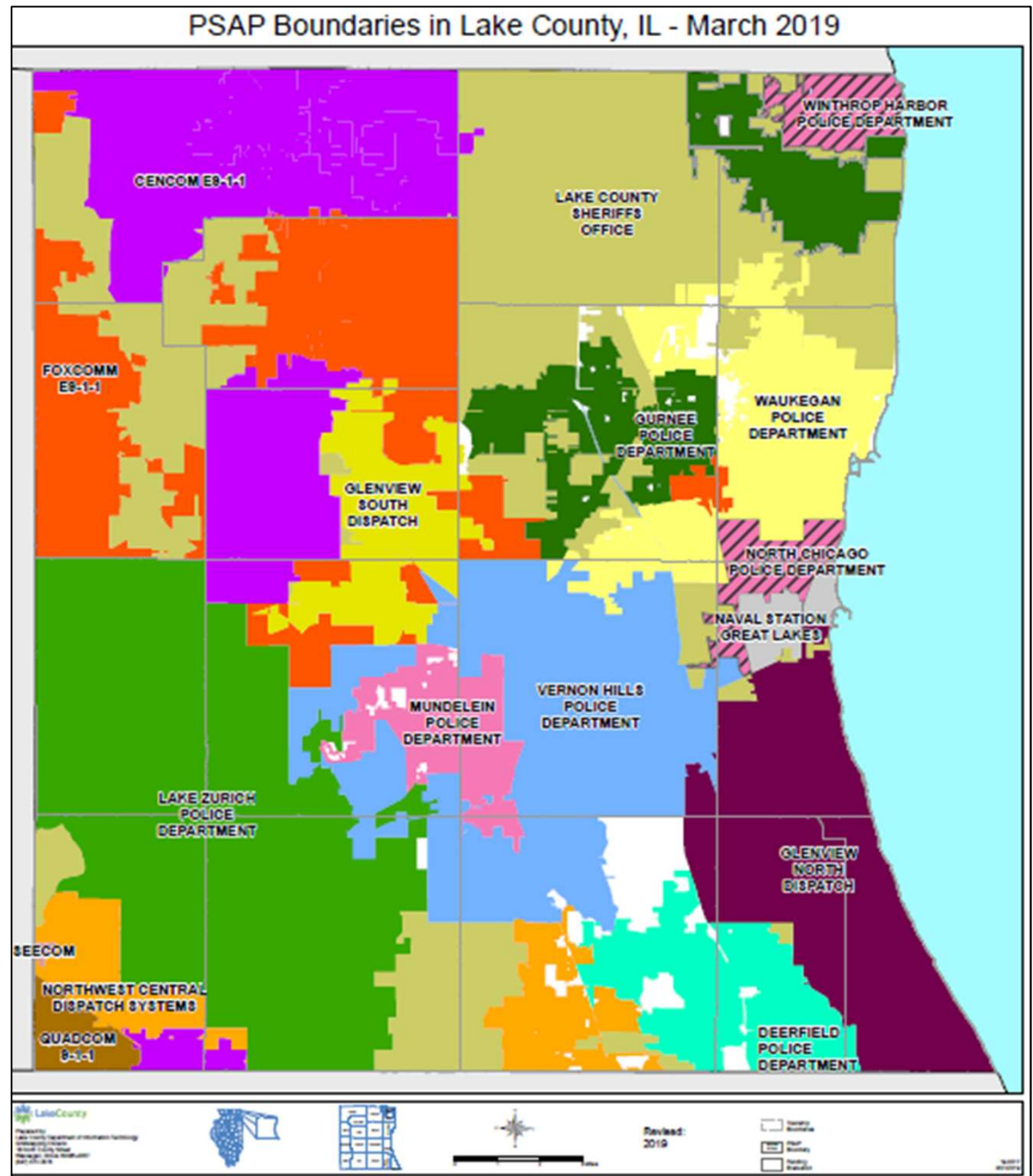


	Totals	CenCom	FoxComm	Gurnee	LCSO	Lake Zurich	*Mundelein	Vernon Hills	Waukegan	*N. Chicago
PSAP / 9-1-1	590,935	81,500	63,982	90,000	52,149	81,000	31,394	71,181	87,729	32,000
LE Dispatch	561,857	81,379	32,848	54,719	136,876	50,833	31,394	54,079	87,729	32,000
Fire / EMS Dispatch	583,399	91,363	85,000	111,168	0	81,000	31,394	63,745	87,729	32,000
Total Annual 9-1-1- Call Volume	262,035	32,447	14,478	17,900	65,377	14,447	8,153	23,875	70,501	14,857
Wireline (Including VoIP) 9-1-1 Call Percentage	22%	31%	28%	48%	12%	27%	23%	34%	16%	12%
Wireless (Cell) 9-1-1 Call Percentage	76%	62%	72%	46%	88%	73%	77%	66%	84%	80%
9-1-1 Call Volume by Percentage of Partner Total	100%	12%	6%	7%	25%	6%	3%	9%	27%	6%
Total Annual Non 9-1-1 Call Volume	1,060,749	197,130	101,255	81,112	127,287	58,417	41,233	120,027	281,664	52,624
Ten Digit Inbound Call Percentage	72%	77%	70%	69%	69%	70%	70%	70%	74%	77%
Ten Digit Outbound Call Percentage	28%	23%	30%	31%	32%	30%	30%	30%	26%	23%
Non 9-1-1 Call Volume by Percentage of Partner Total	100%	19%	10%	8%	12%	6%	4%	11%	27%	5%
Total Annual Incident Volume	937,698	137,066	113,085	74,779	210,383	143,606	47,117	88,088	85,067	38,507
Fire / EMS Incident Volume Percentage	7%	8%	9%	10%	0%	6%	7%	10%	13%	7%
Law Incident Volume Percentage	89%	67%	87%	89%	100%	94%	93%	90%	87%	93%
Incident (CAD) Volume by Percentage of Partner Total	100%	15%	12%	8%	22%	15%	5%	9%	9%	4%

Current Environment

PSAP Boundaries

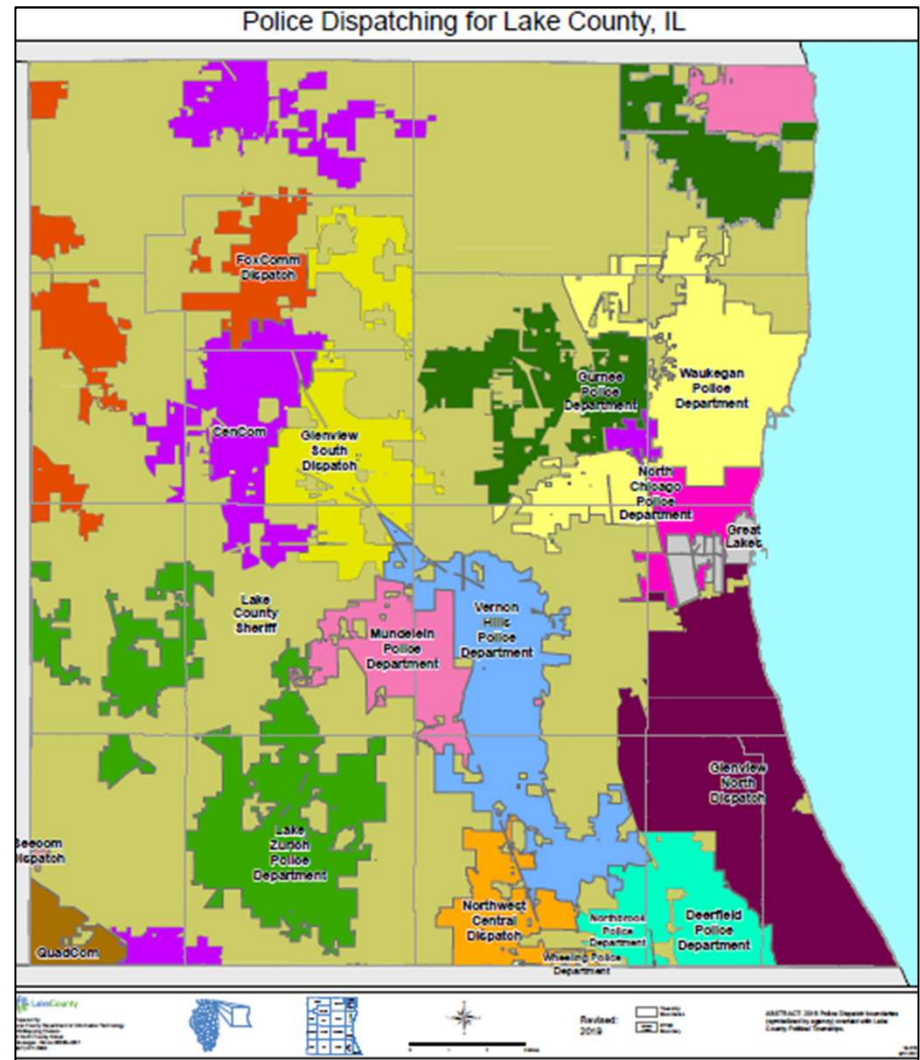
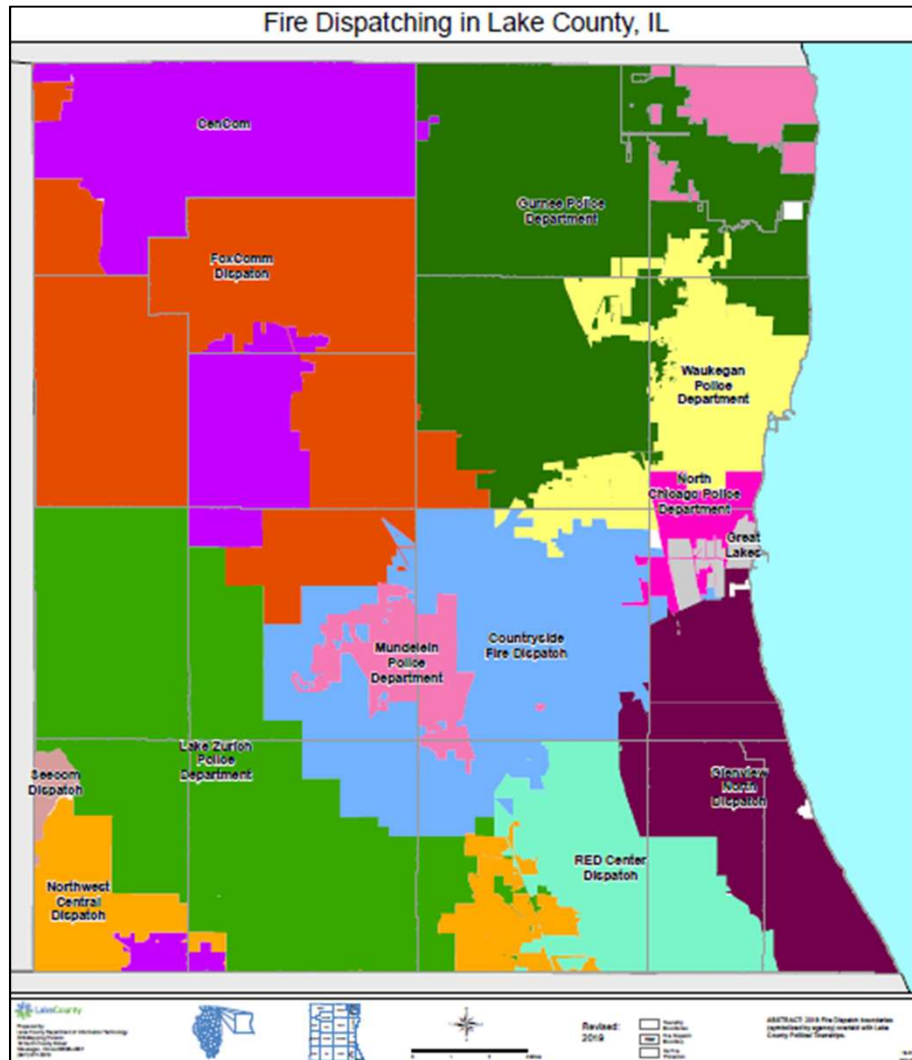
- More than 15 Primary PSAPs
 - Answer 9-1-1 calls
- Wireline 9-1-1 calls follow boundaries to the right
- Cellular (voice or text message) and VoIP 9-1-1 calls may not follow established boundaries
 - A cellular 9-1-1 call may go to the closest available cell tower
 - Text message to 9-1-1 is very limited in Lake County
 - A VoIP 9-1-1 call may show the physical location of the internet server and not the caller's actual location
- NG 9-1-1 will improve cell phone location information



Current Environment

Dispatch Boundaries

**Regional
9-1-1
Consolidation**



Current Environment

Operations – Additional Duties



- Operate a detention facility: 7 of 9
- Monitor or virtually support a detention facility: 7 of 9
- Initiate and manage emergency public information systems: 8 of 9
- Monitor and manage FIRE alarms (alarm boards): 7 of 9
- Monitor and manage SECURITY alarms (alarm boards): 6 of 9
- Lobby window IN-PERSON support: 4 of 9
- Lobby window VIRTUAL support via intercom or video system: 6 of 9
- Answer supported public safety agency NON-EMERGENCY telephone lines: 8 of 9
- Answer NON-PUBLIC SAFETY entities business telephone lines: 8 of 9

	Parent Agency	CenCom E9-1-1	Fox Lake PD	Gurnee PD	Lake County Sheriff	Lake Zurich PD	Mundelein PD	Vernon Hills PD	Waukegan PD	North Chicago PD
	PSAP	CenCom E9-1-1	FoxComm E9-1-1	Gurnee 9-1-1	LCSO Emerg. 9-1-1	Lake Zurich 9-1-1	*Mundelein 9-1-1	Vernon Hills 9-1-1	Waukegan 9-1-1	*N. Chicago 9-1-1
Additional Duties Performed by Telecommunicators										
Duties	Totals	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Operate a detention facility. (Detention is on-site, operation of doors and sally port, physical monitoring of prisoners, jail matron duties, order prisoner meals, etc.)	7 of 9	Yes	Yes	Yes	No	Yes	Yes	yes	Yes	No
Monitor or virtually support a detention facility. (Remote operation of doors and sally port, video/audio monitoring of detention facility, log prisoner checks in CAD, etc.)	7 of 9	Yes	Yes	Yes	No	Yes	Yes	yes	Yes	No
Initiate and manage emergency public information systems (reverse 9-1-1, mass warning sirens, etc.)	8 of 9	Yes	Yes	Yes	No	Yes	Yes	yes	Yes	Yes
Monitor and manage FIRE alarms (alarm boards) for supported agencies.	7 of 9	Yes	No	Yes	No	Yes	Yes	yes	Yes	Yes
Monitor and manage SECURITY alarms (alarm boards) for supported agencies.	6 of 9	Yes	No	No	No	Yes	Yes	yes	Yes	Yes
Lobby window IN-PERSON support (Receive payment of bonds, parking tickets, bills, answer questions.)	4 of 9	No	No	Yes	No	Yes	Yes	yes	No	No
Lobby window VIRTUAL support via intercom, telephone, or video system.	6 of 9	Yes	Yes	Yes	No	Yes	No	yes	No	Yes
Answer supported public safety agency NON-EMERGENCY business telephone lines.	8 of 9	Yes	Yes	Yes	Yes	Yes	No	yes	Yes	Yes
Answer NON-PUBLIC SAFETY entities (public works, etc.) business telephone lines.	8 of 9	Yes	Yes	Yes	Yes	Yes	No	yes	Yes	Yes
Other additional duties not listed (specify in notes)	8 of 9	YES	Yes	No	Yes	Yes	Yes	yes	Yes	Yes

Current Environment

Facilities



- 8 physical partner PSAP locations
- Buildings built between 1948 and 2003
- All shared use locations
- 1 PSAP in a leased space
- All lack one or more accepted comm. center resiliency measures

PSAP	Total (Ft ²)	Comm Center (Ft ²)	Current <i>Full</i> TC Positions	Max Number of <i>Possible</i> TC Positions
CenCom	2500	1440	8	10
Fox Lake	1940	1452	8	12
Gurnee	2850	1038	6	9
LCSO	2500	1020	9	9
Lake Zurich	2650	2425	4	8
Mundelein	2075	900	7	7
Vernon Hills / CFPD	2640	1300	6	8
Waukegan	1700	829	4	6
Total	18855	10404	52	69

3 partial TC positions also available

Current Environment

Personnel and Staffing



- **Total: 155 full time employees (9 partner PSAPs)**
 - Direct Management: 12
 - Other / Support: 7
 - Telecommunicators (9 partner PSAPs)
 - Total TCs: 136 (full time) / \approx 11 (part time)
 - At any time, between 23 and 36 telecommunicators working
 - Salary range: \$43,800 to \$78,600
 - Training period ranges from 3 to 9 months (PSAP dependent)

PSAP	PSAP Full Time Staff	Direct Managers ("Unplugged")	TC Supervisors	Full Time TCs	Part Time TCs	Other Direct Support	Current TC Shift Length (Hrs)	TCs on shift (Max)	TCs on shift (Min)	Overtime Hrs (CY2018)	Overtime Hrs (CY2017)	Overtime Hrs (CY2016)	Collective Bargaining Organization (if applicable)	Average Time to Train a Newly Hired TC
CenCom E9-1-1	22	2	4	16	-	-	12	5	4	3,302.0	4,258.8	3,586.7	Metropolitan Alliance of Police (MAP) #591	6 - 8 months
FoxComm E9-1-1	11	1	-	10	-	-	12	3	2	1,929.7	1,470.3	2,038.8	Illinois FOP (Telecommunicators)	4 months total (around 500 hours of total training time)
Gurnee 9-1-1	20	1	2	17	-	-	12	4	3	5,900.0	7,685.0	1,344.0	ICOPS	8-9 months
Lake County Sheriff 9-1-1	28	1	6	21	-	-	8.5	7	3				ICOPS	
Lake Zurich 9-1-1	14	2	-	12	-	-	8	3	2	2,426.5	1,308.0	965.5	FOP	Minimum of 12 weeks / 3 months
Mundelein 9-1-1 <i>Does not include Winthrop Harbor and North Chicago</i>	11	1	-	9	1	1	8	3	2	2,968.0	2,337.0	1,777.0	N/A	20 weeks - 800 hours
Vernon Hills 9-1-1	16	2	-	14	3	-	12	4	3	2,459.3	3,038.2	2,624.1	Illinois FOP Labor Council	6 months / 960 staff hours
Countryside FPD	7	1	-	6	4	-	12	2	1	844.0	1,003.0	Not Available	N/A	80 - 120 hrs, dependent upon experience
Waukegan 9-1-1	26	1	3	16	3	6	8.5	5	3.5				SEIU	
Totals	155	12	15	121	11	7	--	36.0	23.5	19829.4	21100.2	12336.0		

Current Environment

Technology



- **Computer aided dispatch (CAD)**
 - Various vendors / various software versions
 - CAD-to-CAD solution (FATPOT) available (upgrade in process)
 - Most PSAPs provide / support mobile capability for LE & F/EMS
- **Call handling equipment (CHE)**
 - Various vendors / no standard
- **Radios**
 - Various consoles / no standard
 - Various STARCOM, VHF, UHF networks in use

Current Environment Finance



- Total estimated FY18 partner PSAP expenses ≈ \$22.2 million
- Finance Working Group used various methods to estimate and “normalize” expenses to get to an estimate for “true costs”
 - Standard lease and utility cost by ft²
 - Normalized some expenses by number of full time employees
 - Normalized some expenses by averaging expense to similar sized PSAPs
 - Annualized large capital expenses over a 5 year period (greater than \$15k / FYs 2015 - 2019)
- Working Group will continue to refine the estimate

Green Italics indicates an estimate

	Total Cost Estimate	Total Cost Estimate	Total Cost Estimate	Total Cost Estimate	Total Cost Estimate	Total Cost Estimate	Total Cost Estimate	Total Cost Estimate	Totals
Agency	CenCom	Fox Lake PD	Gurnee PD	LC Sheriff	Lake Zurich PD	Mundelein PD	Vernon Hills PD*	Waukegan PD	
Center Physical Size (Total ft ²)	2,500	1,940	2,850	2,500	2,650	2,075	2,640	1,700	18,855
Authorized Dedicated Full Time Employees	22	11	20	28	14	11	23	26	155
Estimate for Total Expenditures (Additional 10%)	\$ 2,546,310	\$ 1,385,423	\$ 3,258,307	\$ 3,909,487	\$ 1,998,228	\$ 2,194,540	\$ 4,082,369	\$ 2,891,556	\$22,266,218
Expenditures	\$ 2,546,310	\$ 1,259,475	\$ 3,258,307	\$ 3,554,079	\$ 1,816,571	\$ 1,995,036	\$ 2,915,978	\$ 2,628,687	
Personnel Costs	\$ 1,932,953	\$ 1,026,428	\$ 2,330,455	\$ 3,227,955	\$ 1,574,849	\$ 1,666,642	\$ 2,042,173	\$ 1,855,555	
Facility Costs	\$ 110,415	\$ 83,724	\$ 75,142	\$ 80,585	\$ 81,842	\$ 70,481	\$ 89,860	\$ 54,575	
Network Costs	\$ 44,725	\$ 17,671	\$ 52,275	\$ 45,000	\$ 21,924	\$ 30,000	\$ 45,086	\$ 210,000	
Training & Memberships	\$ 21,680	\$ 16,498	\$ 11,228	\$ 21,000	\$ 9,474	\$ 2,330	\$ 13,000	\$ 11,220	
Maintenance Service Agreements	\$ 98,797	\$ 66,979	\$ 263,770	\$ 131,235	\$ 91,436	\$ 135,535	\$ 269,774	\$ 366,972	
Professional Services	\$ 20,161	\$ 22,175	\$ 45,343	\$ 15,000	\$ 15,000	\$ 59,296	\$ 269,000	\$ 10,365	
911 Capital Expenses >\$15k Annualized	\$ 18,992	\$ 11,000	\$ 100,059	\$ 33,304	\$ 20,931	\$ 30,752	\$ 47,600	\$ 26,000	
Other Expenses	\$ 250,081	\$ 15,000	\$ 150,000	\$ -	\$ 1,115	\$ -	\$ 139,485	\$ -	
911 Capital Expenses (FY15-17 and/or FY19) >\$15k Annualized	\$ 48,507	\$ -	\$ 230,034	\$ -	\$ -	\$ -	\$ -	\$ 94,000	

*Vernon Hills estimate includes an additional 30% to take into account Countryside FPD expenses

Overview



Goal: Approve concepts for detailed planning

Agenda

- **Current Environment**
- **Analysis Summary**
- **Concept Decisions**
- **“Enabler” Update**
- **Project Report Card / Milestones**

Analysis: # of Telecommunicators



- **Consultant and Working Group (combined Ops. Procedures and Staffing) each did independent analysis and estimates for consolidated TC staffing**
 - **Consultant: Estimate based on call volume (with assumptions)**
 - **Working Group: Estimate based on comparison to existing centers and recommended best practices**
- **Assumptions**
 - **All current partners participate in consolidation**
 - **Horizontal dispatch model**
 - **Three 8-hour shifts**
 - **Dedicated / “unplugged” supervisors**
- **Estimates**
 - **# of TCs working at any one time: 18 to 26 (Currently 23 to 36)**
 - **Total # of TCs: Between 73 and 110 (Currently 136)**
 - **# of positions for new, large comm center (if proposed / approved): 26 positions**
 - **Estimates will continue to be refined**

Analysis: Facilities



- Facilities Working Group developed scenarios and options for a consolidated environment
- Limitation: Must include a back-up capability
- Assumption: Technology / systems at each site are identical

		Site 1		Site 2		Site 3		Site 4		Site 5		Site 6			
		Capacity		Capacity		Capacity		Capacity		Capacity		Capacity			
Scenario		Normal Operational	Operation + Backup	Normal Operational	Operation + Backup	Normal Operational	Operation + Backup	Normal Operational	Operation + Backup	Normal Operational	Operation + Backup	Normal Operational	Operation + Backup	Checksum	Build %
A	2 Large	50%	100%	50%	100%	---	---	---	---	---	---	---	---	100%	200%
B	Equal Quad	25%	40%	25%	40%	25%	40%	25%	40%	---	---	---	---	100%	160%
C	Equal Triplet	34%	50%	34%	50%	34%	50%	---	---	---	---	---	---	101%	150%
D	1 Large & 2 Satellite	50%	75%	25%	50%	25%	50%	---	---	---	---	---	---	100%	175%
E	1 Large & 3 Satellite	50%	67%	17%	33%	17%	33%	17%	33%	---	---	---	---	100%	167%
F	1 Large & 4 Satellite	50%	63%	13%	25%	13%	25%	13%	25%	13%	25%	---	---	100%	163%
G	1 Large & 5 Satellite	50%	60%	10%	20%	10%	20%	10%	20%	10%	20%	10%	20%	100%	160%
H	2 Large & 4 Satellite	30%	60%	30%	60%	10%	10%	10%	10%	10%	10%	10%	10%	100%	160%
I	2 Large & 3 Satellite	35%	70%	35%	70%	10%	10%	10%	10%	10%	10%	---	---	100%	170%

Analysis: Facilities

Assumptions:

- 26 total positions required
- 165 Ft² for each TC position
- Double comm center area for total area that includes operational, TC support, mechanical, and technology areas

Estimates:

- 17% of Total Call Capacity (TCs: 5 / 825 ft² | Tot: 1650 ft²)
- 25% of Total Call Capacity (TCs: 7 / 1155 ft² | Tot: 2310 ft²)
- 34% of Total Call Capacity (TCs: 9 / 1485 ft² | Tot: 2970 ft²)
- 50% of Total Call Capacity (TCs: 13 / 2145 ft² | Tot: 4290 ft²)
- 100% of Total Call Capacity (TCs: 26 / 4290 ft² | Tot: 8580 ft²)

		Site 1		Site 2		Site 3		Site 4		Site 5		Site 6			
Tot. Seats	26	Capacity		Capacity		Capacity		Capacity		Capacity		Capacity			
Scenario		Normal Operational	Operation + Backup	Normal Operational	Operation + Backup	Normal Operational	Operation + Backup	Normal Operational	Operation + Backup	Normal Operational	Operation + Backup	Normal Operational	Operation + Backup	Checksum	Build %
A	2 Large	13.0	26.0	13.0	26.0	---	---	---	---	---	---	---	---	26.0	52.0
B	Equal Quad	6.5	10.4	6.5	10.4	6.5	10.4	6.5	10.4	---	---	---	---	26.0	41.6
C	Equal Triplet	8.7	13.0	8.7	13.0	8.7	13.0	---	---	---	---	---	---	26.1	39.0
D	1 Large & 2 Satellite	13.0	19.5	6.5	13.0	6.5	13.0	---	---	---	---	---	---	26.0	45.5
E	1 Large & 3 Satellite	13.0	17.4	4.3	8.7	4.3	8.7	4.3	8.7	8.7	---	---	---	26.0	43.4
F	1 Large & 4 Satellite	13.0	16.5	3.3	6.5	3.3	6.5	3.3	6.5	6.5	3.3	6.5	---	26.0	42.5
G	1 Large & 5 Satellite	13.0	15.6	2.6	5.2	2.6	5.2	2.6	5.2	5.2	2.6	5.2	2.6	26.0	41.6
H	2 Large & 4 Satellite	7.8	15.6	7.8	15.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	26.0	41.6
I	2 Large & 3 Satellite	9.1	18.2	9.1	18.2	2.6	2.6	2.6	2.6	2.6	2.6	2.6	---	26.0	44.2

26 required positions applied to Facilities Working Group scenarios

Analysis: Facilities

Proposed Consolidated Facilities



Future Facility Summary				
Partners	Existing Additional TC Positions in PSAP?	Area in Current Center / Building to Expand PSAP?	Land Immediately Adjacent to PSAP to Build an Expansion to the PSAP?	Land or Building Available to Build a New, Stand Alone PSAP?
CenCom E9-1-1	YES	YES	YES	NO
FoxComm E9-1-1	YES	YES	YES	NO
Gurnee 9-1-1	YES	YES	YES	NO
LCSO 9-1-1	NO	NO	NO	NO
Lake Zurich 9-1-1	YES	YES	YES	NO
Mundelein 9-1-1	NO	YES	NO	NO
Vernon Hills	NO	YES	NO	NO
Waukegan	NO	NO	NO	NO
Lake County	--	--	--	YES
Lincolnshire (Village)	--	--	--	YES
Mundelein (Village)	--	--	--	YES
Wauconda (Village)	--	--	--	YES

Facility Comparison

Next Step: Review of Proposed PSAP Buildings and/or Property



Name of proposed building and/or property	[name]
Building owner	[name]
Property owner	[name]
Existing building?	Y / N
Proposed shared use of building?	Y / N
Owner willing to lease all or part of the building?	Y / N
Total available ft ²	XX,XXX ft ²
Room to Meet 17% of Total Call Capacity (TCs: 5 / 825 ft² Tot: 1650 ft²)	Y / N
Room to Meet 25% of Total Call Capacity (TCs: 7 / 1155 ft² Tot: 2310 ft²)	Y / N
Room to Meet 34% of Total Call Capacity (TCs: 9 / 1485 ft² Tot: 2970 ft²)	Y / N
Room to Meet 50% of Total Call Capacity (TCs: 13 / 2145 ft² Tot: 4290 ft²)	Y / N
Room to Meet 100% of Total Call Capacity (TCs: 26 / 4290 ft² Tot: 8580 ft²)	Y / N
Power - Generator - Back-up power?	Y / N
Power - Grounding - Single point?	Y / N
HVAC - Both temperature and humidity controlled?	Y / N
Radio Comms - Tower on site?	Y / N
Hazards - Lowest floor above 100 year flood plan?	Y / N
Hazards - Lowest floor above 500 year flood plan?	Y / N
Hazards - Proposed comm center floor above or below grade?	[above / below]
Hazards - Name and distance to 3 closest man-made or natural hazards.	1. 2. 3.
Distance to closest existing PSAP	[miles]
Note: Using 26 total positions and 165 Ft² for each TC position and a factor of 2 to estimate total ft² required for operational, TC support, mechanical, and technology areas, NOT administrative offices, restrooms, conference rooms, etc.	

Overview



Goal: Approve concepts for detailed planning

Agenda

- **Current Environment**
- **Analysis Summary**
- **Concept Decisions**
- **“Enabler” Update**
- **Project Report Card / Milestones**

General Concept

Benefits and Keys to Success



- **Expected benefits (from the IGA)**
 - Reduced call transferring
 - Staffing improvements / enhanced coverage for 24/7 operations
 - More consistent and effective service delivery
 - Greater opportunities for inter-agency response and backup
 - Better data sharing between agencies and responders in the field
 - Enhanced interoperability / ability to share information across jurisdictions
 - Operational savings
 - Reductions in future capital investment
 - Elimination of duplicate technology and maintenance agreements
- **Keys to success**
 - Focus on providing the highest quality 9-1-1 service and lasting value
 - Transparency and dialogue during planning and consolidation process
 - Agree to, and work towards, a “coordinated consolidation” instead of a “competitive consolidation”

Requested Decisions

- 1. 5 or 10 year planning horizon**
- 2. Approve assumptions**
- 3. Governance concept**
- 4. Facilities concept**
- 5. Operational focus concept**
- 6. Technology concept**

Decision 1: Planning Horizon



Option 1

Write detailed implementation plan with a 10-year planning horizon and with clearly defined yearly milestones

Pros	Cons
<ul style="list-style-type: none">• Time to build a comprehensive plan• With milestones, provides a roadmap and clear “on ramps” for new partners• Timeline can cover large capital plans and investments	<ul style="list-style-type: none">• Timeframe too long - plan will be out of date after 5 years• Loss of momentum over time• Easier to delay action until late in the plan
<u>Next Step:</u> Write a 10-year plan with clear milestones	

Decision 1: Planning Horizon



Option 2

Write detailed implementation plan with a 5-year planning horizon and with clearly defined yearly milestones

Pros	Cons
<ul style="list-style-type: none">• More aggressive approach to consolidation - decisions required sooner• With milestones, provides a roadmap and clear “on ramps” for new partners	<ul style="list-style-type: none">• May not cover full length of large capital plans and investments• May need to start planning process for new / updated plan in 3 to 4 years
<u>Next Step:</u> Write a 5-year plan with clear milestones	

Decision 1: Planning Horizon



Option 1

Write detailed implementation plan with a 10-year planning horizon and with clearly defined yearly milestones

Option 2

Write detailed implementation plan with a 5-year planning horizon and with clearly defined yearly milestones

Option 3

Approved, BUT will need to be re-evaluated often throughout the planning process

Hybrid plan – Detailed 5 year plan with clearly defined yearly milestones and a strategic overview for years 6 through 10 of the plan

Decision 2: Assumptions



"Tabled" to provide more time for review

Decision:

Approve assumptions for further planning
[Y / N]

- Option(s) will be available to remove detention operations from Lake County PSAPs (remedy to the "Detention Dilemma")
- "Unified" ETSB funds will be available to purchase standardized 9-1-1 technology for Lake County PSAPs
- Lake County LE community selects a new, shared RMS in coordination with consortium enterprise CAD selection
- Lake County Board approves remedy to dual addressing in unincorporated sections of the County
- Partner LE agencies support STARCOM as the standard LE radio system
- State does not provide new 9-1-1 or ETSB mandates in the next 3 years (2022)

Decision 3: Governance

Option 1

IGA establishes an independent, public safety agency with a representative governance structure that operates and maintains a joint / consolidated public safety communications system (Primary PSAP (answering 9-1-1 calls) and dispatch for LE & Fire / EMS) for mutual benefit of members

[Details on following slides]

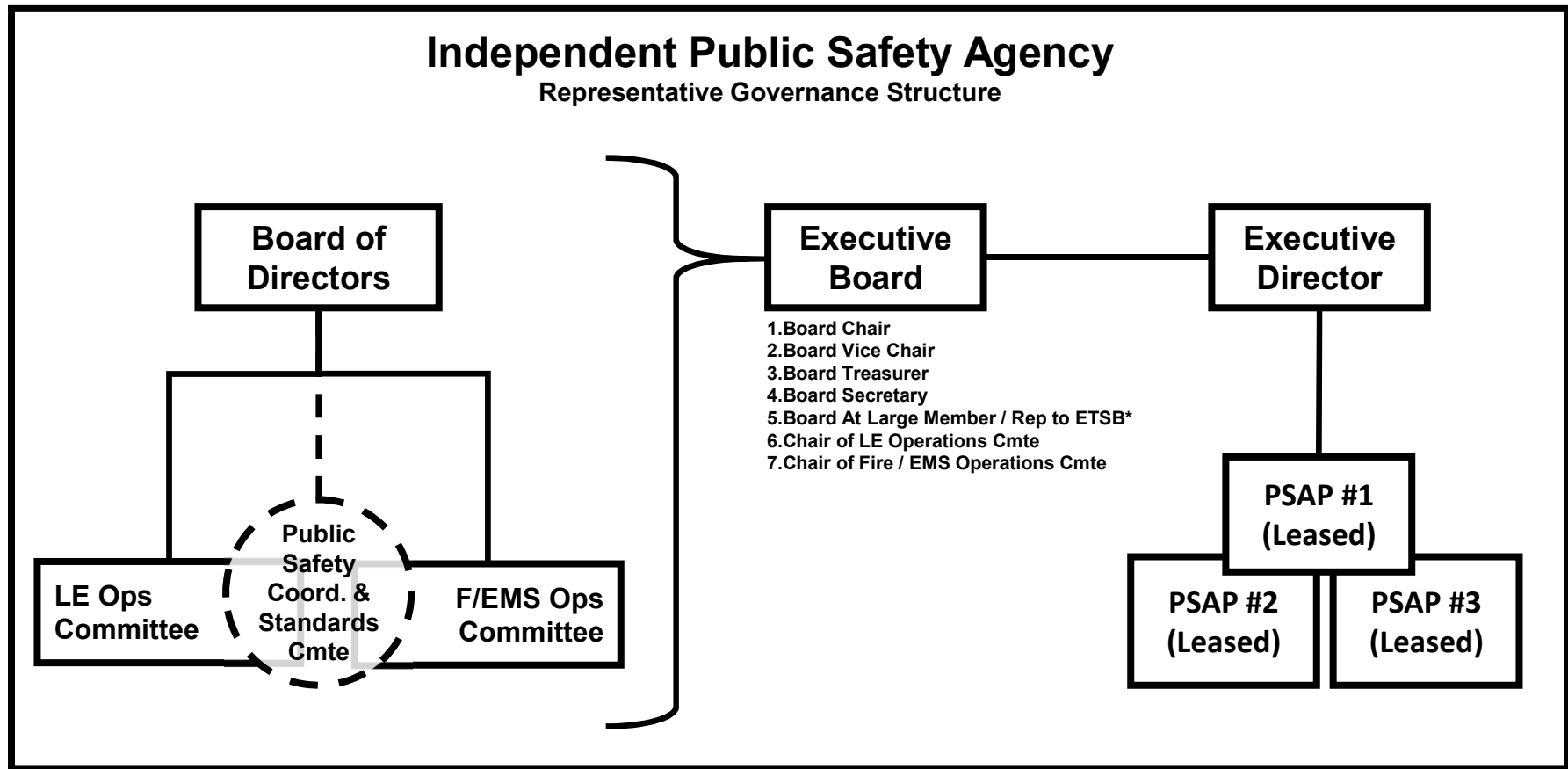
Governance Concept (Proposed)

What to Govern?



- **Independent, stand-alone public safety agency that establishes, operates, and maintains a joint public safety communications system for the mutual benefit of members**
 - “Association of units of local government”
 - “Public agency”
 - “Voluntarily established”
- **Membership open to all cities, villages, fire protection districts, and other units of government that:**
 - Provide public safety services
 - Located wholly or partly in Lake County, Illinois
 - Permitted to contract and associate with other units of local government
- **Agency name to be determined (example, “Shared Public Safety Communications Agency of Lake County”)**

Governance Concept (Proposed) Structure



Governance Concept (Proposed) Structure



- **Board of Directors**

- Each full member can appoint one representative (and alternate) to the Board
- Reps from participating Municipalities, Fire Protection Districts, County
 - City / Village Administrators
 - FPD Trustees
- Elect: Chair, Vice-Chair, Treasurer, Secretary, At Large / Representative to the ETSB*

- **Law Enforcement Operations Committee**

- Membership: Police Chiefs, Senior Sheriff Rep.
- Elect: Chair and Vice Chair

- **Fire / EMS Operations Committee**

- Membership: Fire Chiefs
- Elect: Chair and Vice Chair

- **Public Safety Coord. & Standards Committee**

- Membership: LE Ops Committee leadership, Fire / EMS Committee leadership, Executive Director, PSAP training and standards representatives, other public safety representatives (as required)
- Appoint: PSAP Exec. Dir. is Chair

- **Finance and/or Support Services Advisory Committee(s) (Optional)**

- Appoint: Lead(s)

- **Executive Director**

- Hired by Board of Directors
- Attends all board and committee meetings
- Day to day operations of the agency

- **Executive Committee (7)**

- Allow for expeditious conduct of operations
- Timely policy direction to Exec. Dir.
- **Voting Members**
 1. Board Chair
 2. Board Vice Chair
 3. Board Treasurer
 4. Board Secretary
 5. Board At Large Member / Rep to ETSB*
 6. Chair of LE Operations Committee
 7. Chair of Fire / EMS Operations Committee
(Could expand over time)
- **Non-voting Members**
 - Executive Director
 - Finance and Support Services Leads

* Requires further research

Decision 3: Governance

Option 1

IGA establishes an independent, public safety agency with a representative governance structure that operates and maintains a joint / consolidated public safety communications system (Primary PSAP (answering 9-1-1 calls) and dispatch for LE & Fire / EMS) for mutual benefit of members

Pros	Cons
<ul style="list-style-type: none"> • Each member has representation • Opportunity for widespread standardization (procedures, tech., service, etc.) • Opportunity for efficient use of limited funds and resources • Opportunity to decrease competitive environment – standard pricing • Option to provide contract services 	<ul style="list-style-type: none"> • Loss of direct control for individual members • Some consortium members may experience an increase in the cost for service
<p><u>Next Steps:</u> (1) Write IGA for review and approval (2) Engage State 9-1-1 Authority and legal expert for guidance</p>	

Decision 3: Governance

Option 2

- Contract with a municipality / county or existing agency who will build or expand a communication center to provide primary PSAP (answering 9-1-1 calls) and dispatch for LE & Fire / EMS services for consortium members

Pros	Cons
<ul style="list-style-type: none"> • Single entity accepts capital costs • Can simplify the process by contracting services 	<ul style="list-style-type: none"> • Loss of direct control for individual members • May not have representation for decisions affecting operations • Increase the competitive environment – agencies may frequently “shop around” and hop between contract PSAPs
<p><u>Next Steps:</u> (1) Government entity or agency notify the group of intent to build or expand capability (2) Engage State 9-1-1 Authority and legal expert for guidance</p>	

Decision 3: Governance

Option 3

- No change – remain 8 separate, independent PSAPs

Pros	Cons
<ul style="list-style-type: none"> • No change to current operations • Current PSAPs maintain direct control of operations and staff • Opportunity remains to “virtually consolidate” 	<ul style="list-style-type: none"> • Maintain a competitive environment – agencies may frequently “shop around” and hop between contract PSAPs • May not improve call transfer issues • Minimal opportunity for monetary savings • No requirement to work together
<u>Next Steps:</u> (1) Continue with “virtual consolidation” concepts	

Decision 3: Governance

“Tabled” to provide more time for review

Option 1

Recommended by Governance W.G.

IGA establishes an independent, public safety agency with a representative governance structure that operates and maintains a joint / consolidated public safety communications system (Primary PSAP (answering 9-1-1 calls) and dispatch for LE & Fire / EMS) for mutual benefit of members

Option 2

Contract with a municipality / county or existing agency who will build or expand a communication center to provide primary PSAP (answering 9-1-1 calls) and dispatch for LE & Fire / EMS services for consortium members

Option 3

No change – remain 8 separate, independent PSAPs

Decision 4: Operational Focus



4a - Who should call 9-1-1

4b - Consolidated PSAP requirements

4c - Staff operational requirements

Decision 4a: Operational Focus

Regional
9-1-1
Consolidation

“Tabled” to provide more time for review

Decision:

Ops Procedures W.G. recommends approval

Approve statement and incorporate into current operations

[Y / N]

Who should call 9-1-1?

9-1-1 is for Emergencies Only

An emergency is any serious situation where a law enforcement officer, fire fighter, or emergency medical help is needed right away. If unsure of whether a situation is an emergency, call 9-1-1. The 9-1-1 call taker will determine if emergency assistance is needed and will route resources to the correct location.

(Based on NENA's 9-1-1 Tips Page: <https://www.nena.org/page/911TipsGuidelines>)

Decision 4b: Operational Focus



“Tabled” to provide more time for review

Monitor Fire Alarms (Public & Private Buildings)	Initiate Emergency Warning Sirens	Emergency Medical Dispatch (EMD)	After Hours Administrative Public Safety Calls
Monitor Security Alarms (Public Buildings)	<div style="border: 2px solid black; padding: 10px;"> <p align="center"><u>Core Requirement</u></p> <ul style="list-style-type: none"> • The right public safety resources • To the right location • With the right information • In the shortest amount of time <p align="center">AND</p> <ul style="list-style-type: none"> • General safety and situational awareness for responders during a call or incident <p align="center"><i>9-1-1 Call Taking & LE and Fire / EMS Dispatch</i></p> </div>		Intelligence Support
After Hours Lobby Phone, Cameras & Remote Lock			LE Background Checks
<u>Passive</u> Monitoring of Cameras			<div style="border: 1px dashed black; border-radius: 50%; padding: 10px; text-align: center;"> Coordinate Towing </div>
“Crisis Intervention” (Mental Health)			<div style="border: 1px dashed black; border-radius: 50%; padding: 10px; text-align: center;"> Coordinate “Board Up” </div>
	“Smart 9-1-1” Capability		
<p align="center">Additional Requirements for Consolidated 9-1-1 and Dispatch Services (Possibly at an Additional Cost)</p>			

Decision:

Approve requirements for consolidated PSAP(s)

[Y / N]

Ops Procedures W.G. recommends approval

Services Not Provided

	RMS
Lobby Window Services	Entries
	Operate Detention Facility
LE Remote Room & Building Access	
	Admin. Functions
Actively Monitor Jail Cameras	Dispatch Non-Public Safety Agencies
Municipality’s “Operator”	

Decision 4c: Operational Focus

Regional
9-1-1
Consolidation

“Tabled” to provide more time for review

Decision:

Ops Procedures W.G. recommends approval

Approve planning for application of best practices [Y / N]

Best Practices

- **Goal: Horizontal dispatch**
 - **Call Taker**
 - **LE Dispatcher**
 - **F/EMS Dispatcher**
- **Goal: Focus on efficiency, move to less total talk groups**
- **Goal: Dispatcher responsible for only one talk group**
- **Goal: Unplugged supervisors**
- **Goal: Dedicated specialty positions during peak hours**
 - **LEADS**
 - **Fire Alarm Board**

Decision 5: Facilities

Option 1

- Transition to 2 to 5 leased facilities (under a single governance structure) providing dynamic mutual support including short-term and long-term back up
 - Back-up facilities are operating centers (“warm” back-up)
 - Short-term and long-term “back-up” facilities physically located in Lake County
 - Primary and back-up facilities have the same equipment

[Details on following slides]

Facility Concepts (Options)

Proposed 2 to 5 Leased Consolidated Facilities



- **“Four Equals”**
 - 4 (leased) facilities each covering 25% of call / CAD volume
- **“Three Equals”**
 - 3 (leased) facilities each covering 34% of call / CAD volume
- **“Two Facility”**
 - 2 (leased) facilities each covering 50% of call / CAD volume
- **“Two Satellites”**
 - 3 (leased) facilities total
 - 1 large facility covering 50% of call / CAD Volume
 - 2 facilities each covering 25% of call / CAD volume
- **“Three Satellites”**
 - 4 (leased) facilities total
 - 1 large facility covering 49% of call / CAD volume
 - 3 facilities each covering 17% of call / CAD volume
- **“Four Satellites”**
 - 5 (leased) facilities total
 - 1 large facility covering 50% of call / CAD volume
 - 4 facilities each covering 12.5% of call / CAD volume

Decision 5: Facilities

Option 1

- Transition to 2 to 5 leased facilities (under a single governance structure) providing dynamic mutual support including short-term and long-term back up
 - Back-up facilities are operating centers (“warm” back-up)
 - Short-term and long-term “back-up” facilities physically located in Lake County
 - Primary and back-up facilities have the same equipment

Pros	Cons
<ul style="list-style-type: none"> • Decreases current number of physical centers • No large capital building expense • Self supporting back-up plan • Opportunity for efficient use of limited funds and resources • Can use staff at any facility 	<ul style="list-style-type: none"> • Landlord could end lease – causing an unplanned move • Limited number of leasable facilities to meet the majority of requirements • Requires investment in single CAD for the 2 to 5 PSAPs • Multiple facilities increases costs
<u>Next Steps:</u> (1) Detailed analysis of existing and proposed PSAPs (2) Start discussing lease specifics (3) Write facility plan into IGA	

Decision 5: Facilities

Option 2

- Transition to 1 large leased consolidated PSAP facility (under a single governance structure) with back-up coverage provided by an external PSAP / agency

Pros	Cons
<ul style="list-style-type: none"> • Decreases current number of physical centers • No large capital building expense • Opportunity for efficient use of limited funds and resources 	<ul style="list-style-type: none"> • Require IGA with outside entity to cover back-up requirement (may not have same equipment) • Landlord could end lease – forcing an unplanned move • Limited number of leasable facilities to meet requirement • Expensive to replicate resources at back-up site; back-up site equipment likely not be used / tested on a recurring basis
<u>Next Steps:</u> (1) Detailed analysis of existing and proposed PSAPs (2) Start discussing lease specifics (3) Write facility plan into IGA	

Decision 5: Facilities

Option 3

- Lease 6 to 8 of the current physical PSAPs to the single governance entity for distributed, consolidated operations

Pros	Cons
<ul style="list-style-type: none"> • No large capital building expense 	<ul style="list-style-type: none"> • Increased costs due to number of facilities • Would require more staff and equipment • Difficult to transition to horizontal dispatch model • Oversight of multiple facilities a challenge
<u>Next Steps:</u> (1) Detailed analysis of existing and proposed PSAPs (2) Start discussing lease specifics (3) Write facility plan into IGA	

Decision 5: Facilities

“Tabled” to provide more time for review

Option 1

Recommended by Facilities W.G.

Transition to 2 to 5 leased facilities (under a single governance structure) providing dynamic mutual support including short-term and long-term back up

Option 2

Transition to 1 large leased consolidated PSAP facility (under a single governance structure)

Option 3

Lease 6 to 8 of the current physical PSAPs to the single governance entity for distributed, consolidated operations

Decision 6: Technology

Option 1

- Expand consortium (Tech Working Group) mission to include coordinating / leading efforts to move toward a shared, scalable, enterprise public safety data base(s)
 - Shared / 100% compatible CAD, RMS, and JMS
 - Single consortium-wide CAD by 2025
 - Single, shared GIS database

Pros	Cons
<ul style="list-style-type: none"> • Great opportunity to address multiple public safety concerns, across multiple agencies • Key step to “virtual consolidation” • Provide “on ramps” for new partners and expansion of shared services • Multi-agency consortium can quickly expand to meet expanded mission 	<ul style="list-style-type: none"> • Increased complexity • Increased cost for consultant to write and support a comprehensive RFP • Possibly extend decision timeline • ETSBs may have concerns expanding mission
<p><u>Next Steps:</u> (1) Decide on funding for consultant drafting RFP (2) Write and release RFP for consultant to draft CAD, RMS, JMS RFP (3) Define RFP review teams and timeline</p>	

Decision 6: Technology

Option 2

- Approve goal of all participating PSAPs being on the same / standard CAD system by 2025 (Technology Working Group recommends hiring consultant to support RFP for CAD)

Pros	Cons
<ul style="list-style-type: none"> • Key step to “virtual consolidation” • Provide “on ramps” for new partners • Less complex than addressing CAD, RMS, and JMS together 	<ul style="list-style-type: none"> • CAD only – limits opportunity for sharing information
<u>Next Steps:</u> (1) Decide on funding for consultant drafting RFP for CAD (2) Write and release RFP for consultant to draft CAD RFP (3) Define RFP review teams and timeline	

Decision 6: Technology

“Tabled” to provide more time for review

Option 1

Expand consortium (Tech Working Group) mission to include coordinating / leading efforts to move toward a shared, scalable, enterprise public safety data base(s)

- Shared / 100% compatible CAD, RMS, and JMS
- Single consortium-wide CAD by 2025
- Single, shared GIS database

Option 2

Approve goal of all participating PSAPs will be on the same / standard CAD system by 2025

Overview



Goal: Approve concepts for detailed planning

Agenda

- **Current Environment**
- **Analysis Summary**
- **Concept Decisions**
- **“Enabler” Update**
- **Project Report Card / Milestones**

Actions on “Enablers”

External Issues Affecting 9-1-1 Consolidation



- **Next Gen 9-1-1 Compliance:** Request Lake County remedy dual addressing in unincorporated areas (public safety & NG 9-1-1 issue)
 - **Action:** Letter from Regional 9-1-1 Consolidation to Lake County requesting a remedy to dual addressing delivered to County Board (Apr. 22)
 - **Action:** Joint 9-1-1 and GIS informational presentation on dual addressing favorably received by County Finance and Administrative Committee (May 2)
 - **Action:** GIS Working Group Lead growing working group membership
- **Detention:** 9-1-1 consolidation requires an actionable option / plan to remove detention tasks from PSAP operations
 - **Action:** Law Enforcement group made up of Consolidation Partners held first meeting to explore options to meet county-wide detention needs (Mar. 21)
 - **Action:** LE review of CAD RFI focused on a shared, enterprise RMS (and JMS)

Actions on “Enablers”

External Issues Affecting 9-1-1 Consolidation



- **“Unifying” ETSBs**: Establish a team of ETSB representatives to develop a common, coordinated vision for “unified” use of 9-1-1 surcharge funds
 - **Action**: Initial meeting on Apr. 22 to discuss “unifying” – agree to meet again
- **Standard Technology**: Shared / consolidated public safety technology and data base(s) - CAD, mobile, records (LE & Fire/EMS), and jail
 - **Action**: Tech W.G. (CAD) and new RMS / JMS Team reviewing RFI responses
 - **Action**: Developing pathway to a single RFP for a scalable, shared, enterprise CAD, mobile, records management, and jail management system
 - Window of opportunity for Lake County LE community and LCSO to partner in selecting a new, shared RMS in coordination with CAD selection

Overview



Goal: Approve concepts for detailed planning

Agenda

- **Current Environment**
- **Analysis Summary**
- **Concept Decisions**
- **“Enabler” Update**
- **Project Report Card / Milestones**














Planning: Month 5 - 8

(Feb. 19 – May. 19)






Goal: Concept of operation approved

Status

-  Update data, capabilities, and assumptions
-   Update timeline and milestones
-  Update working group actions and required output
-  Define outcomes and requirements for:
 - Facilities, Tech, Personnel, Finances, Operating Procedures, Governance
-   Address options for “additional” duties currently performed by dispatch centers
-  Build multiple concepts of operation for committee review
-   Evaluate and compare each concept of operation
 - Outputs / Outcomes, Value, Risk
-  Operations and Policy Committees approve single concept of operation
-  Update agency participant list
-  Update and execute the information plan

Status

	Completed
	In Progress (Trend)
	Problem / Not Started

Milestones & Events



May 9: Working Group Meetings

May 16: Working Group Meetings

May 23 - Ops Committee Meeting (1:00 pm)

Concept Decision

Jun. 6 - Policy Committee Meeting (2:00 pm)

Jun. 13: Working Group Meetings

Jun. 20: Working Group Meetings

Jun. 27 - Ops Committee Meeting (1:00 pm)

Concept Decision

Jul. 3 - Policy Committee Meeting (2:00 pm)

Jul. 11: Working Group Meetings

Jul. 18: Working Group Meetings

Jul. 25 - Ops Committee Meeting (1:00 pm)

Planning Update

Aug. 1 - Policy Committee Meeting (2:00 pm)

Questions