Project Summary

An Analysis of Public Safety Call Answering and Event Processing Times

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Background: A public safety answering/access point (PSAP) refers to the call center where emergency calls for the police, fire department or EMS are received from mobile or landline callers/subscribers. For about 10 years, NFPA 1221: Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems (now combined into NFPA 1225 (2022 edition): Standards for Emergency Services Communications) has had performance standards (NFPA 1221, 2019 edition, section 7.4) for the time it takes to answer an emergency call and the time it takes to interrogate the caller and notify the appropriate responders. NFPA 1225 (second draft of 2022 edition) requires two time-standards for dispatch: (1) answer requests for emergency assistance within 10 seconds 90% of the time. (2) Process the request for emergency assistance within 60 seconds 90% of the time. These time requirements are not based on statistical data and there is no research that suggests that these times fit the physical limitations of a communication center. Authority having jurisdictions (AHJ) question the validity of these time requirements, and many are not accepting the standard because of this one section.

Research Goal: The overall goal of this project is to collect, analyze and summarize the call answer and processing time interval data in response to the fire and EMS events (excluding law enforcement event data) from a wide spectrum of Public Safety Answering Points (PSAP) dispatch centers (i.e., large, small, urban, rural etc.) in the United States. A statistically significant data collection shall be accomplished by developing and implementing a data collection questionnaire to all PSAPs.

Project Tasks:

Task 1: Literature Review.

1.1) Summarize the existing requirements of time standards for operations in NFPA 1225 for public safety emergency service communication centers.

1.2) Conduct a literature review to identify any prior research that studied public safety call answer and event processing time data that could provide any substantiation to the current requirements. The review of literature should include prior published research articles, conference proceedings and technical reports. This should also include review and analysis of monthly performance data that may be available from Public Safety Agencies.

1.3) Review and summarize the industry recognized dispatch/call processing times, characteristics of a dispatch center, identify the benchmarks used by a dispatch center and inform if it is aligned to a standard, or internal policy.

Task 2: Develop Survey Questionnaire.

2.1) Develop a questionnaire in consultation with the project technical panel to circulate to PSAPs in the United States. The questionnaire should focus on capturing data around the time intervals for receiving calls, interrogating the caller, and notifying the appropriate responder. This data is typically captured by 9-1-1 and computer-aided dispatch (CAD) systems. The questionnaire should also seek information on the limitations of the call centers while responding. The example of limitations may

include staffing, technology etc. The anticipated outcome of this questionnaire is a dataset of call answer and call processing times average aggregated over a period of 12 months. Personal or organizational identification information shall not be collected through this questionnaire and the data analysis and reporting shall also be conducted in a generic manner.

2.2) Review the questionnaire with the project technical panel for feedback and finalize it using an appropriate online surveying platform.

Task 3: Implement Questionnaire. Implement the questionnaire by circulating to a statistically significant number of PSAPs throughout the United States (i.e., up to 6,000 PSAPs in the US). Project Contractor will be required to follow up with PSAPs to acquire statistically significant sample size of responses.

Task 4: Statistical Analysis: Conduct a statistical analysis of the call answer and event processing time-data collected from the PSAPs and summarize the average call answer and event processing times along with providing inferences from the data collected. Summarize any other observations from the statistical analysis relevant to the data collected and along with any short comings of the data collected.

Task 5: Final Report: Develop a final report compiling all the above project tasks along with summary observations. Review the draft final report with the project panel for their feedback and finalize the report.

Implementation: This research program will be conducted under the auspices of the Research Foundation in accordance with Foundation Policies and will be guided by a Project Technical Panel who will provide input to the project, recommend contractor selection, review periodic reports of progress and research results, and review the final project report.

Schedule: This research project is scheduled to be completed within 6 months of project initiation.

Intellectual Property: The Research Foundation will retain rights to the project report which will be published on the Foundation website.