



# RESEARCH FOUNDATION

RESEARCH FOR THE NFPA MISSION

## REQUEST FOR PROPOSALS FOR PROJECT CONTRACTOR

### An Analysis of Public Safety Call Answering and Event Processing Times

9 December 2021

**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 project is led by the Fire Protection Research Foundation and will be conducted in accordance with the "[Research Foundation Policies for the Conduct of Research Projects](#)". The project 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. At a minimum, three Panel meetings will be held: project kick-off, review of interim updates, and review of draft final report. The Foundation will provide documentation of all Panel meetings.

**Deliverables:** The project contractor is responsible for the following deliverables:

- (1) First interim update presentation to the project technical panel upon completing the literature review (task 1) and a draft of the survey (task 2)
- (2) Second interim update presentation to the project technical panel upon completing and conducting project tasks 3 & 4.
- (3) Third interim update presentation to the project technical panel upon completion of project task 5 and submission of draft final report.
- (4) Final report documenting the project tasks and summary observations.
- (5) Data collected as part of the project task 3.
- (6) The results from the study should be disseminated through at least two presentations such as to the NFPA Technical Committee, conference presentations (specific venues to be determined).

**Intellectual Property:** The Research Foundation will retain rights to all project deliverables including, the project report, which will be published on the Foundation website. The project deliverables may also include data collected over the course of the project.

**Schedule and Costs:** This is a fixed price project in the amount of \$25,000. All indirect and travel costs incurred are intended to be included within this fixed price. The Foundation does not have a limit on indirect costs, but the total proposal cannot exceed this fixed price. Proposals for this project shall include a breakdown of costs by task.

The proposed project schedule is provided in the table below. Suggested modifications to the proposed schedule can be provided with substantiation.

Tasks	Deliverable Timeline	Estimated Dates
Proposals due		14 January 2022
Selection of Contractor	3 weeks from proposals due	4 February 2022
1 <sup>st</sup> interim update: Upon completing/conducting Task 1 & Task 2	6 weeks from project initiation	18 March 2022
2 <sup>nd</sup> interim update: Upon completing/conducting Task 3 & 4	18 weeks from project initiation	10 June 2022
3 <sup>rd</sup> interim update: Upon completion of Task 5 and submitting draft final report	22 weeks from project initiation	8 July 2022
Final Report	26 weeks from project initiation	5 August 2022

**How to Respond:** Letter proposals shall be submitted electronically to Jacqueline Wilmot, Research Project Manager of the Foundation, at [jwilmot@nfpa.org](mailto:jwilmot@nfpa.org) no later than 5:00 PM Eastern time January 14<sup>th</sup>, 2021. For additional details see the “[Research Foundation Policies for the Conduct of Research Projects](#)”, the [Foundation Operating Principles](#), and “[Research Project Guidelines for Contractors](#)” on the Foundation website at: <https://www.nfpa.org/foundation>.

Each proposal shall include a description of the following weighted evaluation criteria: problem understanding (30 %), technical merit (include scope and approach) (30 %), prior relevant experience and personnel expertise (30%). An additional criterion, current level of active foundation engagement, will be considered as the remaining 10 % weighted evaluation criteria.

Please note, the body of the research proposal submittals shall not exceed **six** pages in length, including a short bio of the proposed personnel and not including the cover page. Any additional relevant information (e.g., Project participants’ CVs or resumes, letters of support, detailed description of past relevant experience, detailed description of RFP-Respondent’s organizational facilities, competencies, other capabilities, and references) not covered in the body of the proposal should be appended to the proposal, with a maximum combined page limit of **12** pages, including the body of the proposal and appendices.

Additionally, all bidders must submit a completed [disclosure statement](#) with the proposal (this does not count towards the page limit). This form can be downloaded [here](#).

**Note:** This project will proceed only on the basis of receipt of a proposal deemed acceptable to the Foundation and the project sponsor(s). Information on the Foundation’s policies for the conduct of research can be found on our [website](#). Services received are subject to our [standard contractual terms](#).