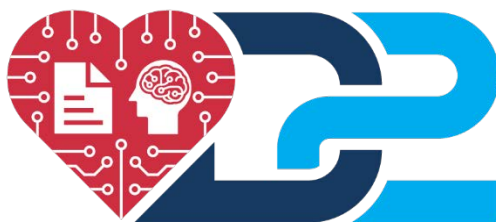


DARPA Documentation and Decision Support Sprint



Qualification Guide

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Defense Advanced Research Projects Agency

Biological Technologies Office

675 North Randolph Street

Arlington, VA 22203-2114

D2Sprint@darpa.mil

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2 Introduction

The goal of the Documentation and Decision support Sprint (D2) is to catalyze advancements in combat medicine through targeted prize incentives, specifically seeking autonomous solutions that enable hands-free DD Form 1380 documentation and Tactical Combat Casualty Care (TCCC)-aligned decision support.

The D2 will establish the current State of the Art (SOA) for autonomous TCCC documentation and decision support tools, assessing gaps in existing datasets of TCCC, and mature assessment metrics leading into larger research efforts to develop more mature and applicable documentation and decision support tools for the Warfighter. The Sprint will be structured into two distinct lanes:

- **Lane 1—Documentation:** Participants will develop algorithms to autonomously and accurately populate a digital DD Form 1380 (TCCC Card) using passively collected data (e.g., audio, video, accelerometry).
- **Lane 2—Decision Support:** Participants will create algorithms to provide accurate, real-time clinical decision support to medics based on established Committee on Tactical Combat Casualty Care (CoTCCC) Guidelines and Joint Trauma System Clinical Practice Guidelines (JTS CPGs).

This document describes the Team Qualification guidelines and submission instructions for the DARPA Documentation and Decision Support Sprint (D2). Prospective D2 competitors must demonstrate appropriate performance capabilities to be eligible to participate in the D2.

All teams are required to complete Team Qualification to officially participate in the D2 as a competitor. Teams wishing to qualify are required to submit team narratives and accompanying references and resources as outlined in the sections below. All qualification materials must be submitted via the Qualification Portal.

This document is subject to change and may be superseded by later versions. The latest official versions of all documents will be posted to the D2 Website. Significant revisions from past versions in this document are indicated by blue text. Teams are encouraged to closely review the entire document.

3 Human Subjects Research (HSR)

For D2, teams must be included in the Independent Validation and Verification (IV&V) team's Institutional Review Board (IRB) protocol to access training data provided by the IV&V team. Teams are prohibited from the collection or use of any other human subject data as part of their involvement in the D2 because DARPA HSR supervision is not feasible for teams not under DARPA contract. Teams should carefully consider this limitation and should take this into account in their technical approach, leveraging other strategies as appropriate (*e.g.*, simulations, non-human subjects data).

Definition of Human Subjects Research (HSR)

The term “human subject” can be applied to research efforts that meet EITHER of the following criteria:

A living individual about whom an investigator (whether professional or student) conducting research:

- Obtains information or biospecimens through intervention or interaction with the individual, and uses, studies, or analyzes the information or biospecimens; or
- Obtains, uses, studies, analyzes, or generates identifiable private information, personally identifiable information, or identifiable biospecimens.

Human Subjects Research involves:

- Activities that include both a systematic investigation designed to develop or contribute to generalizable knowledge and involve a living individual about whom an investigator conducting research obtains information or biospecimens through intervention or interaction with the individual, or identifiable private information, or biospecimens.

4 Team Qualification

There is a two-part process to qualification. First, teams must submit a Narrative Description of their technical approach to the portal. DARPA will use the description to evaluate the team's overall approach and potentially inform additional follow-up questions and/or tasks. Teams selected from Part 1 will receive a Part 2 Qualification Task involving non-HSR data.

Qualification submissions will be reviewed on a rolling basis. Teams can expect an update on their qualification status within 10 business days of completing a submission to Part 1 or Part 2 of the qualification. Teams are encouraged to submit their materials well in advance of the qualification deadlines. DARPA may request additional information or a teleconference with a team to discuss their submitted materials. Teams that successfully pass part 1 of the qualification will be given access to the training dataset necessary for part 2. At the end of the qualification period, DARPA will finalize the selection of up to a maximum of 20 qualified teams. Final

selection will be determined by the technical merit of the approach from Part 1 and objective performance evaluation metrics from the Part 2 Qualification Task.

4.1 Part 1: Narrative Description

The narrative description must include the following sections:

- **Team Information**
 - Team Name
 - Team Organization
 - Team Point-of-Contact (name, email, phone number, address)
 - Team Roster, list of all team members, their affiliations and email. If foreign nationals are members of the team, please specify here.
- **Technical Approach** (500 words max per subsection)
 - **Experience**
 - Note any relevant experience in algorithm development, human subjects research, working with the government
 - **Workflow for handling large volumes of video data and incomplete data**
 - Describe your methods for annotating video data
 - Describe your methods for handling incomplete datasets
 - **Algorithm development**
 - Describe your proposed high-level software architecture
 - Describe any existing software that will be used to develop algorithms
 - **Algorithm training methods**
 - Discuss your intended training methods and what if any additional (non-HSR) data you intend to use
 - **Transition and commercialization plans**
 - Outline your planned transition and/or commercialization strategies post-Sprint

For each element of the Technical Approach, DARPA will assess whether the plan is consistent with the rules and can successfully compete in D2.

- **Supplemental Information:** DARPA encourages submissions that also include additional evidence of ability in this domain. Teams may choose to upload a PDF of additional information regarding their capabilities.
- **Data Handling Agreement and Safeguarding**

To participate in this sprint, performers must adhere to the following limited-use principles for the DARPA-provided dataset (classified as Non-Attributed Technical Sensor Data; contains no Personal Health Information or real casualties):
- **Permissible Use & Downloading:** You are authorized to download the DARPA-provided dataset to your own systems solely for local development and training of automated medical documentation and decision support algorithms. You must not

share, copy, or distribute this data to unauthorized third parties or use it outside this research scope.

- **No Re-Identification:** Do not attempt to deduce, infer, or uncover the real-world identities of any individual persons in the DARPA-provided dataset.
- **No Facial Recognition:** Do not run the DARPA-provided dataset against any facial recognition, social media, or reverse-image search engines.
- **Algorithmic Isolation:** Use facial data strictly as an anonymous physiological sensor input. Do not train, tune, or use models for identity verification, profiling, or biometric surveillance.
- **Enforcement:** Any violation of these terms will result in immediate disqualification from the sprint, forfeiture of associated funding, and potential contractual or legal action.

4.2 Part 2: Qualification Task

In this qualification task, submitted algorithms will be required to detect injuries from images of simulated casualties (non-HSR data). Teams will receive a training dataset consisting of high-resolution photos of medical manikins displaying various traumatic injuries. Submitted algorithms will be required to process a set of images similar to the training data to locate and classify the injury state of upper and lower extremities. Accurate performance relies on correctly identifying the injury class and injury location relative to the casualty's actual anatomical left or right side, rather than the camera's perspective.

4.2.1 Qualification Task Injury Classes

The following injury classes will be used in this task:

- *No injury:* No visible injury; the limb is intact and healthy.
- *Wound:* Visible trauma present (e.g., severe lacerations, burns, shrapnel wounds, compound fractures) but the limb is still anatomically attached.
- *Amputation:* The limb is completely severed.
- *Not Testable:* Limbs are not visible in the image.

Teams must submit their finalized algorithm packaged within a Docker container. This container will be executed in an isolated computer against a held-back validation set of photos. The submission output will be a JavaScript Object Notation (JSON) file containing each limb and injury state for each casualty photo. Further details on the specifics of submission can be found in the Qualification Task Interface Control Document (ICD).

4.2.2 Qualification Task Evaluation Metrics

Teams will be evaluated on how accurately their models classify the injury status at each of four body sites: the left and right lower and upper extremities. Overall accuracy will be defined as follows:

$$\text{Overall Accuracy} = \frac{\text{correct class-at-site predictions}}{\text{all class-at-site predictions}}$$

Alongside accuracy, DARPA will consider additional machine learning performance metrics to provide a more comprehensive evaluation of team approaches and model performance.

5 Qualification Schedule



Figure 1: Sprint Timeline. Dates for Event Qualification windows and Events.

Milestone	Date
Qualification window opens	September 9, 2026
Part 1 submission deadline	November 4, 2026
Part 2 submission deadline	December 1, 2026
Finalized selection of up to 20 Sprint teams	December 10, 2026

Table 1: Qualification Milestones and Dates

Qualification submissions will be reviewed on a rolling basis and must be submitted no later than the listed deadlines to be eligible to participate in the events. DARPA will review submissions on a rolling basis. Teams can expect an update on their qualification status within 10 business days of completing a submission to Part 1 or Part 2 of the qualification. Teams are encouraged to submit their materials well in advance of the qualification deadlines. DARPA may request additional information or a teleconference with a team to discuss their submitted materials. Teams that successfully pass part 1 of the qualification will be given access to the part 2 qualification materials; Qualification Task ICD, and qualification training dataset. The Sprint dataset will be available to teams who fully qualify starting September 18.

Teams should be aware that it may take up to 1 month to process all relevant Institutional Review Board (IRB) documents prior to releasing sprint training data

5.1 Qualification Checklist

- ☐ STEP 1: Submit your online Narrative Description (part 1)
- ☐ STEP 2: Respond to any feedback/inquiries from the D2 team
- ☐ STEP 3: Complete the Qualification Task (part 2)
- ☐ STEP 4: Wait to receive final notification from DARPA on your qualification status