

**DARPA-PA-25-07-04 Resilient
Frequently Asked Questions (FAQs)
As of 9/2/2026**

7Q: Is studying the behavior of concrete under [insert type of acceleration here] within the scope of the program?

7A: The Resilient program is agnostic to the type/mechanism/combinations of acceleration.

6Q: Is corrosion of steel in concrete in-scope?

6A: Yes, See FAQ #1.

5Q: Who is eligible to propose to the Resilient Program?

5A: All responsible sources capable of satisfying the Government's needs may submit a proposal that will be considered by DARPA. See Section 7 of DARPA-PA-25-07 Amendment 1 for information on who may be eligible to respond to this announcement.

4Q: Is DARPA expecting fully operational aging equipment as a deliverable?

4A: Yes, the development and demonstration of a fully operational piece of aging equipment, termed the "Material Accelerator," is a central requirement and a key deliverable of the program. Please see Table 1 on page 5 and Section "E. Schedule/Milestones" for more details.

3Q: Does data collection include data obtained from real structures experiencing the degradation of interest? Will DARPA provide standard datasets to validate the models that are developed?

3A: The validation strategy for the Resilient program is built upon using historical data from real structures and environments. However, DARPA will not provide a standard dataset at the beginning of the program. Instead, the Government will create a unified master database by aggregating historical data contributed by all selected performers. This shared dataset will be distributed back to all performers to serve as the common baseline for model validation (see "Federated Baseline Data Sharing Requirement," p. 6).

2Q: Does DARPA expect the scalability model to predict a structure's failure? How are we defining failure? What is the design of the structure?

2A: Yes, the model must predict failure. The solicitation defines failure in two ways:

When it fails (Time-to-failure): The model must predict the time to failure with increasing precision in each phase (see "Predictive Accuracy" in Table 1, p. 5).

How it fails (Mode of failure): The model must accurately replicate the physical degradation mechanisms observed in the real world (see "Morphological Accuracy" in Table 1, p. 5).

Furthermore, we define failure as a loss of serviceability (not just a reduction in serviceability). Depending on the structure this will mean different things. For example, for a structural element that would generally mean load carrying capacity is below design capacity.

The solicitation provides examples of target structures, an "intermediate-scale structural element (e.g., a 1-meter reinforced beam)" in Phase 1 and a "full-scale structure (e.g., a bridge pier or retaining wall)" in Phase 2 (Table 3, p. 6). The exact design parameters for modeling will be tied to the historical data in the program's federated database.

1Q: What degradation mechanisms is DARPA interested in? Are you interested in the degradation of concrete, steel, or the concrete/steel composite?

1A: The program is interested in the degradation of reinforced concrete structures as a composite system barring intrinsic material deficiencies such as known-ASR reactive materials; i.e. assuming a competent concrete mix is the baseline. The program's focus is on replicating the synergistic complexity of real-world degradation, not on studying a single material or mechanism in isolation. Please see examples of reinforced structural elements in Table 3 on page 6.

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