

## Additional Definitions of TRL Descriptive Terms

Source: Defense Acquisition Guidebook

| Term                              | Definition  |
|-----------------------------------|---|
| Breadboard                        | Integrated components that provide a representation of a system/subsystem and that can be used to determine concept feasibility and to develop technical data. Typically configured for laboratory use to demonstrate the technical principles of immediate interest. May resemble final system/subsystem in function only.                               |
| High Fidelity                     | Addresses form, fit and function. A high-fidelity laboratory environment would involve testing with equipment that can simulate and validate all system specifications within a laboratory setting.   |
| Low Fidelity                      | A representative of the component or system that has limited ability to provide anything but first-order information about the end product. Low-fidelity assessments are used to provide trend analysis.  |
| Model                             | A functional form of a system, generally reduced in scale, near or at operational specification. Models will be successfully hardened to allow demonstration of the technical and operational capabilities required of the final system.  |
| Operational Environment           | Environment that addresses all the operational requirements and specifications required of the final system to include platform/packaging.  |
| Prototype                         | A physical or virtual model used to evaluate the technical or manufacturing feasibility or military utility of a particular technology or process, concept, end item, or system.  |
| Relevant Environment              | Testing environment that simulates the key aspects of the operational environment.  |
| Simulated Operational Environment | Either (1) a real environment that can simulate all the operational requirements and specifications required of the final system or (2) a simulated environment that allows for testing of a virtual prototype. Used in either case to determine whether a developmental system meets the operational requirements and specification of the final system. |