

TECHNOLOGY READINESS LEVELS

Level 1	Basic principles of concept are observed and reported. At this level scientific research begins to translated into applied research and development. Activities might include paper studies of a technology's basic properties.
Level 2	Technology concept and/or application formulated. At this level invention begins. Once the basic principles are observed, practical applications can be invented. Activities are limited to analytical studies.
Level 3	Analytical and experimental critical function and/or proof of concept. At this level active research and development is initiated. Activities might include components that are not yet integrated or representative.
Level 4	Component and/or validation in a laboratory environment. At this level basic technological components are integrated to establish that they will work together. Activities include integration of "ad hoc" hardware in the laboratory.
Level 5	Component and/or validation in a simulated environment. At this level the basic technological components are integrated for testing in a simulated environment. Activities include laboratory integration of components.
Level 6	System/subsystem model or prototype demonstration in a simulated environment. At this level a model or prototype is developed that represents a near desired configuration. Activities include testing in a simulated operational environment or laboratory.
Level 7	Prototype ready for demonstration in an appropriate operational environment. At this level the prototype should be at planned operational level and is ready for demonstration of an actual prototype in an operational environment. Activities include prototype field testing.
Level 8	Actual technology completed and qualified through tests and demonstrations. At this level the technology has been proven to work in its final form and under expected conditions. Activities include developmental testing and evaluation of whether it will meet operational requirements.
Level 9	Actual technology proven through successful deployment in an operational setting. At this level there is actual application of the technology in its final form and under real-life conditions, such as those encountered in operational test and evaluations. Activities include using the innovation under operational conditions.