# Providing Solutions to the Toughest National Security Challenges



**X-Theoretical Design (XTD)** is a national resource for deterrence of existing or emerging threats. We are experts in the physics of nuclear weapons, capable of designing nuclear explosives for the US stockpile and assessing all other global nuclear threats. We use the most advanced scientific, theoretical, numerical, and experimental tools and methods to understand nuclear weapons design, performance, and safety.

XTD welcomes scientists from diverse backgrounds and fields, including physics, engineering, math, and chemistry. We prioritize learning, value scholarship, and challenge assumptions.



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# Primary Physics

XTD-PRI designs primaries for nuclear weapons, assesses their performance and reliability, and provides intellectual leadership toward improved predictive understanding of primary physics and certification.

# Safety & Surety

XTD-SS develops and applies multi-dimensional numerical techniques to assess the safety and surety of nuclear weapons and to help address global security challenges.

# Integrated Design and Assessment

XTD-IDA designs nuclear weapons systems, assesses their performance and reliability, and provides intellectual leadership toward improved predictive understanding of all aspects of nuclear weapons physics and performance.

# Nuclear Threat Assessment

XTD-NTA applies expertise to the analysis of global nuclear weapons issues and the assessment of emerging threats.

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