

Breakout Session 3: Opportunities in Quantum Science

Dr. Prem Kumar, DSO Program Manager

DSO Proposers Day

June 22, 2016





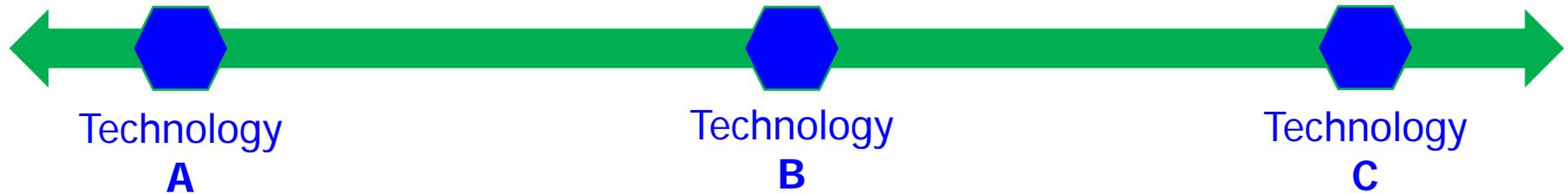
No Brownie Points for Quantum



CLASSICAL

QUANTUM /
CLASSICAL
BOUNDARY

QUANTUM



DARPA is interested in revolutionary ideas.
Regardless of where they lie on the quantum spectrum.



Make Fair Comparisons!



Option 1



A **Quantum Widget** that is **1000x** better than classical on a per-use basis.

Option 2



A **Classical Widget** with **1,000,000x** the rate of the quantum widget.

Option 2 is the correct choice.

But remember:

Quantum limits are fundamental →
The **best** applications should approach (or cross) the quantum/classical boundary.