H. R. 1

To amend the National Quantum Initiative Act to establish a public-private partnership for near-term quantum application development and acceleration, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Mr. OBERNOLTE introduced the following bill; which was referred to the Committee on ______________________

A BILL

To amend the National Quantum Initiative Act to establish a public-private partnership for near-term quantum application development and acceleration, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “Quantum Sandbox for Near-Term Applications Act of 2023”.

SEC. 2. FINDINGS.

Congress finds as follows:
(1) The National Quantum Initiative and its ongoing activities explore and promote Quantum Information Science.

(2) Continual innovation by the quantum industry of the United States is critically important.

(3) Quantum and quantum-hybrid applications have the ability to provide innovative solutions for near-term use cases across a variety of public and private sector challenges.

(4) Many quantum computers are available via the cloud and through a dedicated near-term quantum application acceleration program that is inclusive of the wide variety of quantum computing technologies will break down barriers to access quantum computing hardware systems.

(5) Business and consumers of the United States will be able to see benefits of the innovation through a program focusing on near-term use of the technology.

(6) Quantum information science is a foundational technology that is transforming the economy of the 21st century.

(7) Robust leadership in quantum research and near-term development will have a great impact on the economic security of the United States.
Unrivaled excellence in workforce development is key in developing next generation leaders in quantum applications.

**SEC. 3. PUBLIC-PRIVATE PARTNERSHIP FOR QUANTUM APPLICATION DEVELOPMENT ACCELERATION.**

(a) IN GENERAL.—Title IV of the National Quantum Initiative Act (15 U.S.C. 8851 et seq.) is amended by adding at the end the following:

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"SEC. 405. PUBLIC-PRIVATE PARTNERSHIP FOR QUANTUM APPLICATION DEVELOPMENT ACCELERATION.

"(a) DEFINITIONS.—In this section:

"(1) QUANTUM APPLICATIONS.—The term ‘quantum applications’ means algorithms and applications which use quantum mechanics through quantum processing units. These applications include quantum computing, quantum communication, quantum sensing, and quantum-hybrid applications which are applications that use both quantum computing and classical computing hardware systems.

"(2) QUANTUM SANDBOX.—The term ‘quantum sandbox’ means a program—

"(A) for innovation and development of applications using quantum information sciences with a focus on near-term use cases; and
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“(B) that can be used to develop and test demonstrations, proofs of concepts, and pilot applications.

“(3) NEAR-TERM USE CASE.—The term ‘near-term use case’ means an application that can be developed and deployed in less than 24 months.

“(b) ESTABLISHMENT OF QUANTUM SANDBOX REQUIRED.—The Secretary of Commerce, in coordination with the Director of the National Institute of Standards and Technology, shall establish a quantum sandbox through the establishment of a public-private partnership focused on quantum computing application development acceleration for quantum, quantum communication, quantum sensing, and quantum-hybrid computing near-term use cases.

“(c) ENGAGEMENT.—As part of the Program and in carrying out subsection (b), the Secretary shall, acting through the Director of the National Institute of Standards and Technology, engage with the Quantum Economic Development Consortium, the National Laboratories (as defined in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801)), federally funded research and development centers, and other members of the United States quantum computing and quantum information ecosystem.”.
(b) CLERICAL AMENDMENT.—The table of contents of the National Quantum Initiative Act (15 U.S.C. 8801 et seq.) is amended by adding after the item relating to section 404 the following new item:

"Sec. 405. Public-private partnership for quantum application development acceleration."