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To Whom It May Concern:

It is my pleasure to support the '*AZX: A Flexible Intermediate Representation for Quantum Software*' proposal for QuantERA and to serve on the advisory board to provide an experimental perspective on relevant strengths and weaknesses of proposed hardware systems to help guide this exciting software driven research effort.

Quantum information processing and computation offers an exciting new frontier in solving classically hard or even intractable problems, and a wide range of architectures have emerged as possible candidates for robust and scalable computing. A significant challenge associated with implementing quantum algorithms on these emerging technologies has been to perform optimized mapping to the strengths and weaknesses of the associated hardware, with software being written that is only able to translate protocols for a single system.

This project offers an important new direction in bridging the gap between high-level software describing quantum algorithms and the technical details of the implementation by creating a platform agnostic representation that can be exploited to optimize the proposed algorithms for the available quantum hardware. This greatly simplifies the development of future quantum algorithms and provides a route to developing open source that can be utilized on any hardware for testing and verification as well as unlocking the potential of these revolutionary new quantum technologies.

In summary, I fully support the QuantERA application and confirm my commitment to the project, which I believe to be of the highest quality and importance for the area of quantum information processing.

Yours sincerely



Jonathan Pritchard
EPSRC Quantum Technology Fellow