

WHY QUBIT COST CANNOT BE TOMORROWS PROBLEM

FACTORING

SHOR 2048-FACTORIZING Application: Cryptanalysis	70,000 LOGICAL QUBITS
Total cost, \$1000/qubit	\$70 Billion
Total cost, \$100/qubit	\$7 Billion
Total cost, \$10/qubit	\$700 Million
Total cost, \$1/qubit	\$70 Million

QUANTUM SIMULATION

Nitrogen Fixation Application: Agriculture/Fertilizer	200,000 Logical Qubits
Total cost, \$1000/qubit	\$200 Billion
Total cost, \$100/qubit	\$20 Billion
Total cost, \$10/qubit	\$2 Billion
Total cost, \$1/qubit	\$200 Million