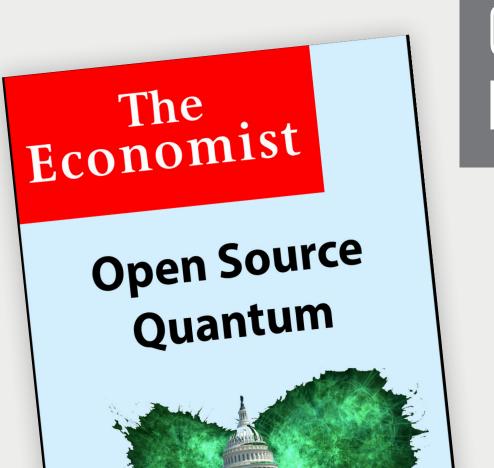
## QUANTUM LEAP

THE YEAR IS 2025 This is a world in which a few large governments attempt to control the proliferation of quantum computing technology and apply it to the objectives of national power. The nonproliferation effort ultimately fails, leaving in its wake reshuffled geopolitical alliances and new centers of power, as powerful quantum technologies fall into the hands of city consortia and deviant criminal networks.







**IN THE US:** A dramatic reversal of fortune between government and technology firms leads to a reassertion of the central role of the state in the digital "commanding heights." Can the US maintain a first-mover advantage and use quantum to reassert definitive American hegemony?

IN EUROPE: The emergence of non-state quantum players (licit and illicit) would provide long-desired opportunities to catch up. Can "European values" somehow be yoked to this revolutionary technology? Can Europe attract the most important scientists through a human values proposition?

IN ASIA: Geopolitical re-alignments around quantum might finally shake loose the encrusted order, but to China's advantage or disadvantage? And would the focus on quantum as a tool for national military power divert resources and attention from economic growth?



**AND:** Do African countries left with conventional computing simply fall a generation behind? Might an independent Afro-futurist movement congeal and bargain for greater access to quantum technologies?

## THE NEW CYBERSECURITY AGENDA

- First-mover advantages put an even greater premium on speed-to-deployment over security, which will push security into the background (again) in an entirely new computing architecture.
- ✓ New human capital: protect and retain engineers who can build quantum hardware and software.
- ✓ Keep tech close to the chest: share with friends—and deny to everybody else.

## THIS WORLD IS CREDIBLE BECAUSE ...

- No law of nature says the private sector has to maintain its lead and freedom to develop and deploy a transformative technology.
- Quantum could be transformative in the same way the microprocessor was (and states and militaries led in that domain for at least a decade).
- Could some governments at present already be out ahead of the private sector in quantum?