NIST Center for Neutron Research

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NCNR by the NUMBERS

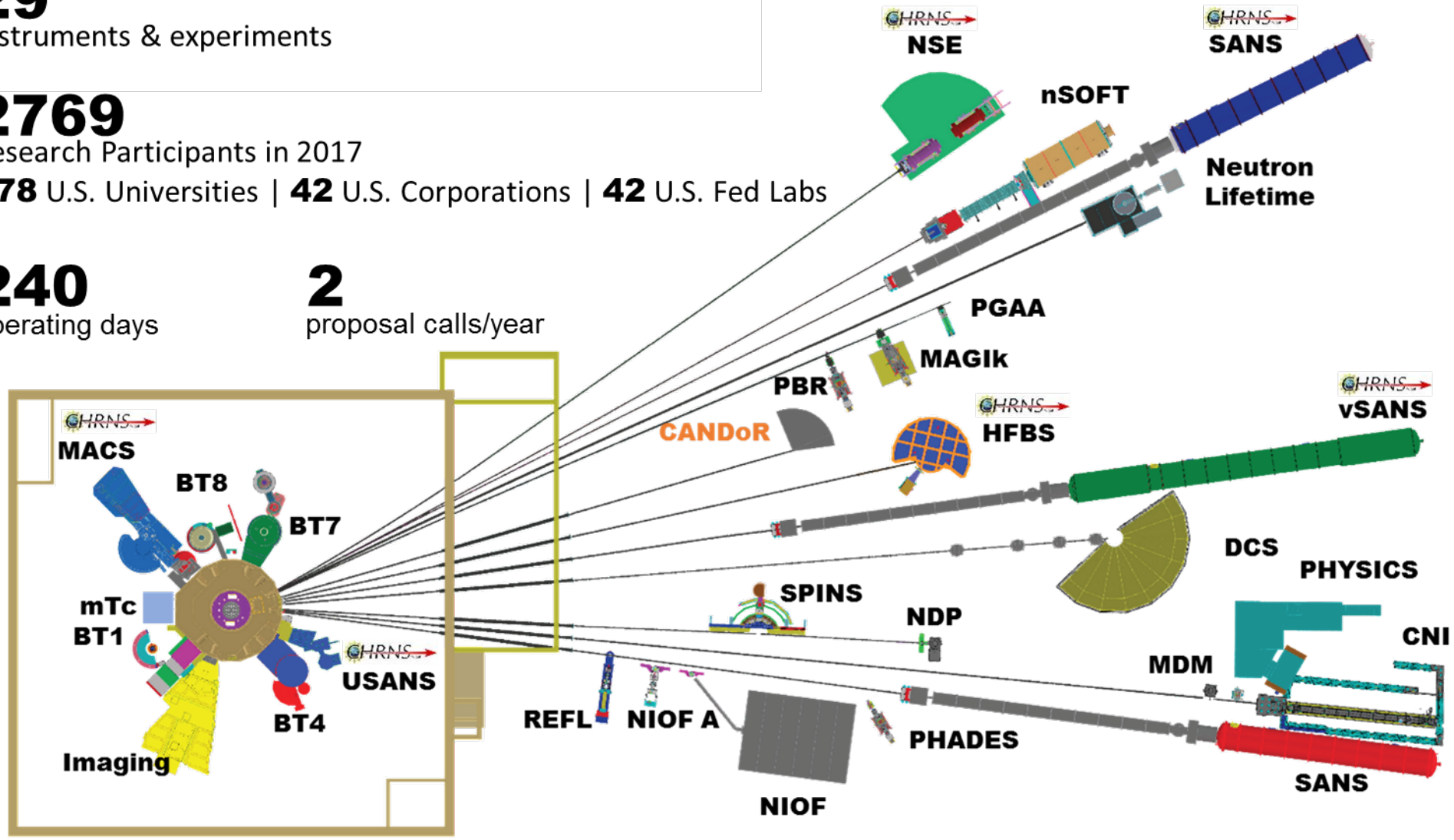
29 experimental beam instruments/experiments

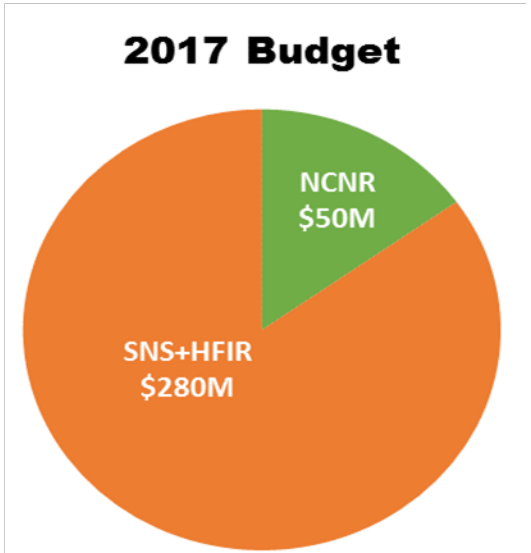
29
instruments & experiments

2769
Research Participants in 2017
178 U.S. Universities | **42** U.S. Corporations | **42** U.S. Fed Labs

240
operating days

2
proposal calls/year

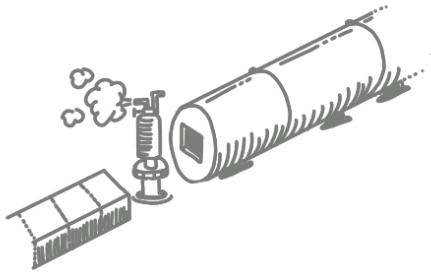




NIST Neutron Strategy

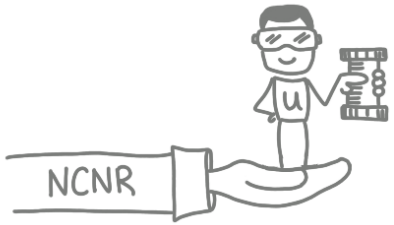
HOW CAN NCNR BEST PROVIDE NEUTRON MEASUREMENT CAPABILITIES TO THE U.S. SCIENTIFIC COMUNITY?

BUILD & OPERATE WORLD-CLASS NEUTRON SCATTERING INSTRUMENTS

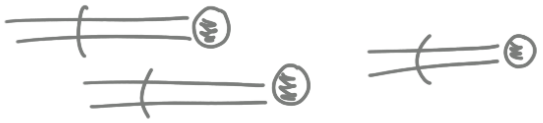


PROVIDE ACCESS TO INDUSTRY THAT MEETS THEIR NEEDS

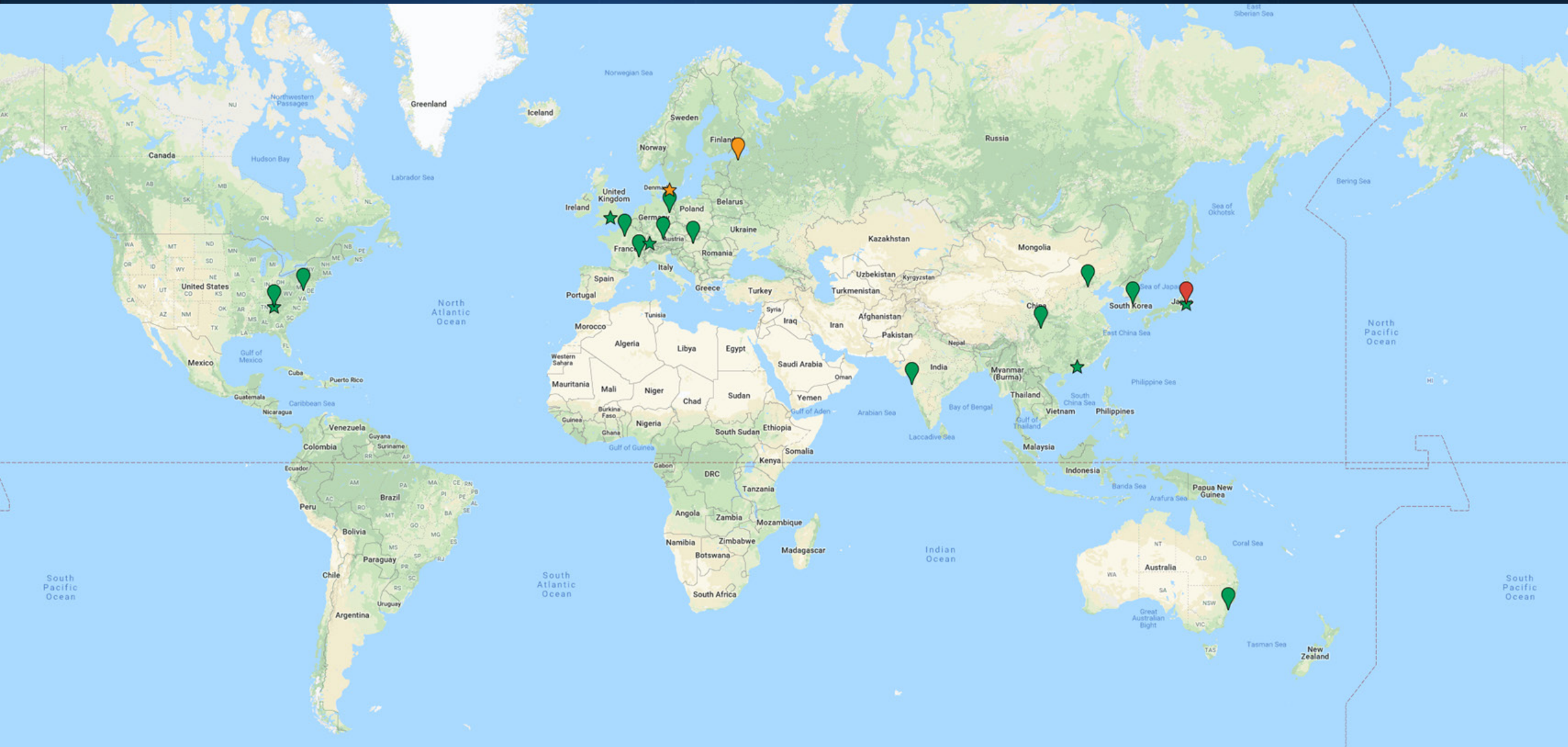
PROVIDE UNCOMPROMISING SERVICE TO OUR USERS



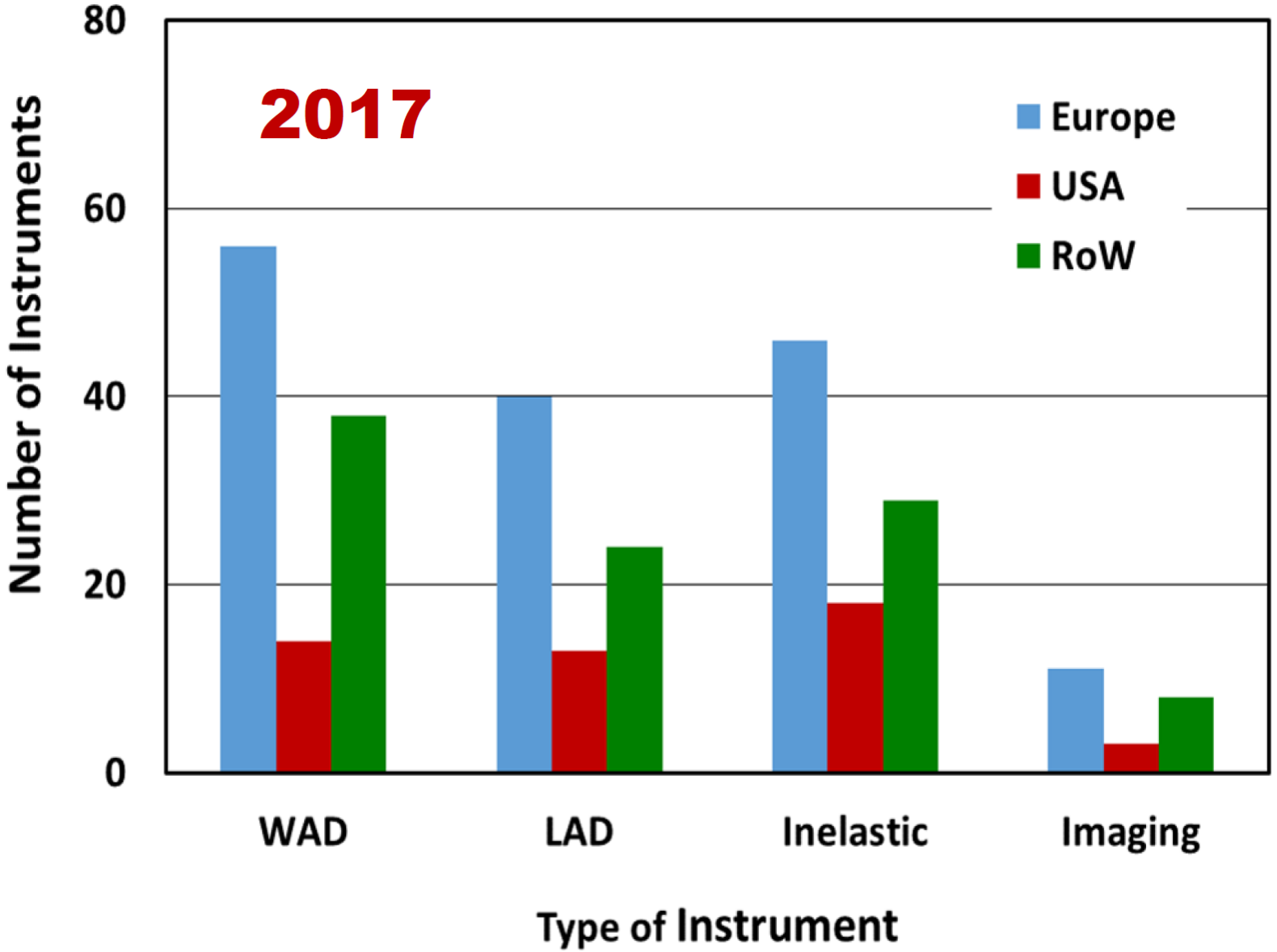
PROVIDE NEUTRONS INTO THE FUTURE



INTERNATIONAL CONTEXT



INTERNATIONAL CONTEXT



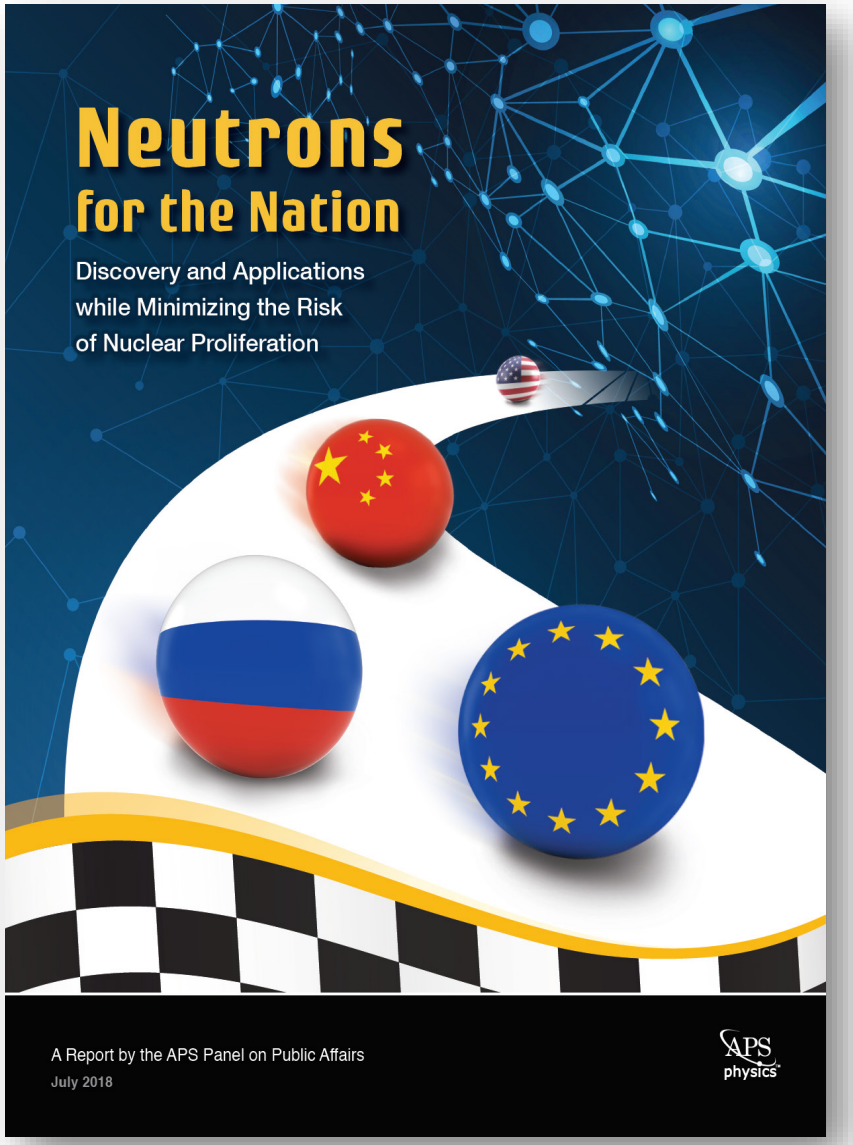
Neutron scattering and imaging instruments at major facilities fed by a reactor ≥10 MW or a spallation source

280 neutron scattering instruments world-wide

140 in Europe

45 in the USA

2018 Wells Report (APS-POPA)
RECOMMENDATIONS



The United States should sharply increase its investments in neutron instrumentation development and deployment to partially compensate for the country's dramatic decrease in neutron R&D capacity and capability in recent decades; to offset any loss of capability arising from the elimination of HEU fuel from research reactors; and to complement continuing investments in complementary tools such as light sources and high-performance computing.

The United States should initiate an effort to competitively design and build a new generation of LEU-fueled high-performance research reactors that would satisfy all needs presently met by current HEU-fueled U.S. high-performance research reactors and provide new capabilities.