NANOMANUFACTURING AND U.S. COMPETITIVENESS: CHALLENGES AND OPPORTUNITIES

Testimony Before the Subcommittee on Research and Technology, Committee on Science, Space, and Technology, House of Representatives

TUESDAY, MAY 20, 2014

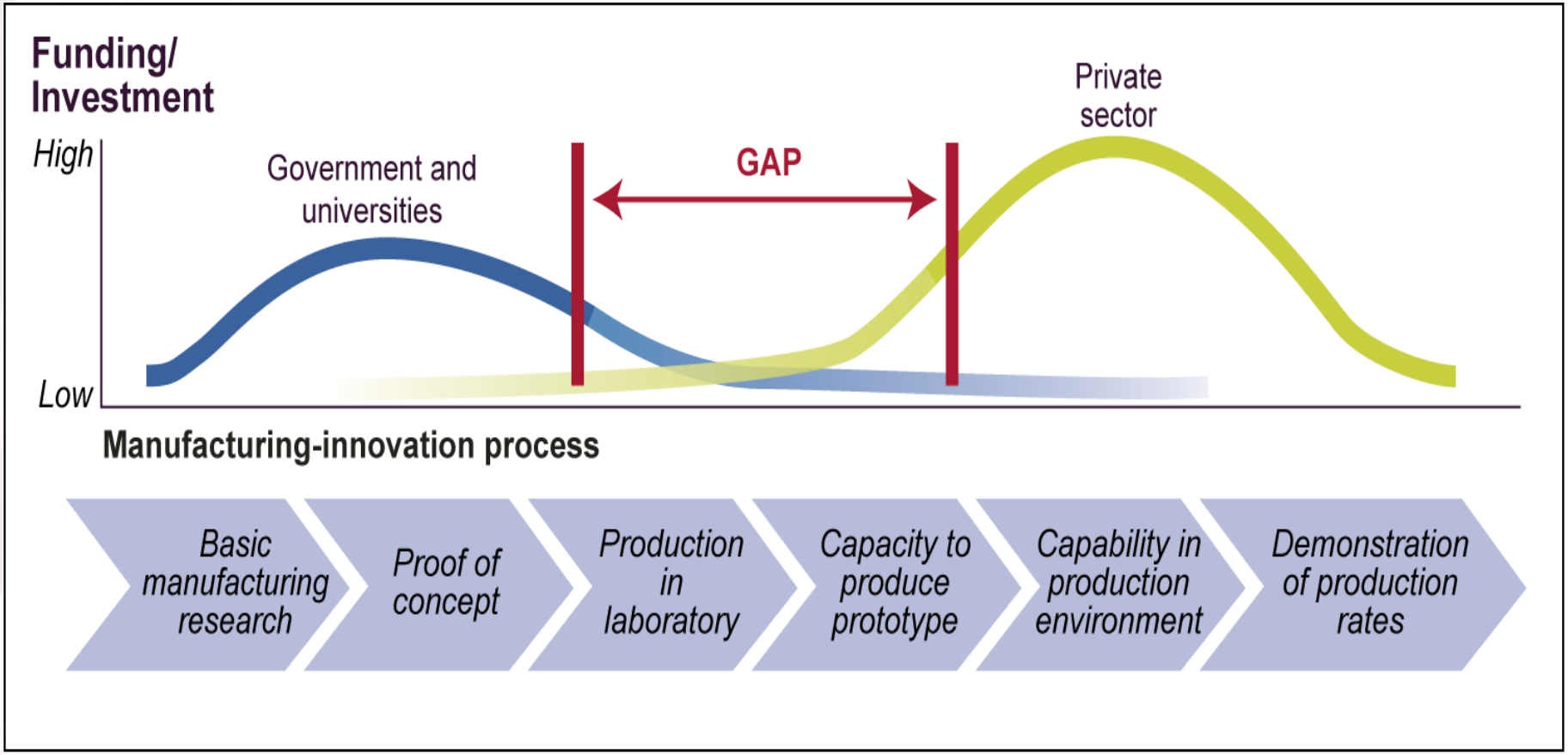
STATEMENT OF TIMOTHY M. PERSONS, CHIEF SCIENTIST
U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Diverse Value Chains Involving Nanoscale Materials, Components, or Devices, as of 2013—Looking Forward

Stage 1: Evolving nanoscale materials, components, or devices	Stage 2: Nano-enabled products or intermediates	Stage 3: Improved, nano-enhanced or new products
Nano-transistors	further improved semiconductor chips	ever-faster computers,[a] smaller smartphones
Copper nano-wires[b]	lithium-ion batteries	more powerful battery-powered vehicles
Carbon nanotubes	concrete additives that conduct electricity	road pavement with remote sensing
Protein nanoparticles	carriers of chemo-therapeutic drugs	chemotherapy targeted to cancer cells (only)

Source: Forum presentation (Persons 2013).

Missing Middle: Funding/Investment Gap in the U.S. Manufacturing-Innovation Process



Source: GAO, adapted from Executive Office of the President (2012, 21).