PURDUE UNIVERSITY

BOARD APPROVED
August 8, 2025
Cindy Ream
Corporate Secretary

To: Board of Trustees, Purdue University

From: Chris Ruhl, EVP, CFO and Treasurer
Dan DeLaurentis, Executive Vice President for Research

Cc: Mung Chiang, President

Re: Ratification of Membership/Cost Sharing Commitment in excess of $2 million and Equipment Purchases in Excess of $2 million

Date: August 1, 2025

Attachment: SMART USA Funding - Sources and Uses for BOT Final

Background. In November 2024, the U.S. Department of Commerce awarded a $285 million Manufacturing USA Institute to the Semiconductor Research Corporation to lead the Semiconductor Manufacturing for Advanced Research with Twins (SMART) USA Institute. This is a CHIPS Manufacturing USA Institute focused on Digital Twins. This initiative is in response to a National Institutes of Standards and Technology (NIST) funding opportunity with the goal of enhancing semiconductor manufacturing and R&D through the integration of physical assets and computational capabilities.

The SMART USA Institute consortium spans over 30 states and includes more than 150 partners from industry, academia, and national labs. Purdue serves as the Lead Academic SMART USA Digital Twin Center. Mung Chaing is the inaugural chair of the consortium's Strategic Governing Council. The institute will focus on developing digital twins for semiconductor manufacturing, advanced packaging, and training the next generation of the semiconductor workforce.

Request. The Office of Research seeks Board of Trustees approval to fund the SMART USA Consortium Membership agreement with the Semiconductor Research Corporation Manufacturing Consortium Corporation (SRCMCC), pursuant to Article VII, Section 1(e) of the Bylaws. Purdue's financial responsibility under the membership agreement includes a base Tier 1 membership of $50,000 a year for 5 years and a supplemental membership component of up to $4,950,000 per year for 5 years based on member-led and institute-led projects funded over the life of the award. This makes the overall Purdue commitment a total not to exceed $25,000,000 over a five-year period, and the University has already executed the necessary membership agreement.

The membership fees are required to be allocated based on projects approved by SRCMCC and will require the release and allocation of membership fees based upon approved projects. The base and supplemental membership fees are cost sharing to secure the

release of federal funding under the U.S. Department of Commerce Manufacturing USA Institute award on a minimum 2 for 1 basis ($25,000,000 from Purdue for $12,500,000 of federal funds = $37,500,000 total). Purdue expects a guaranteed yield of close to a 1 to 1 ($25,00,000 for $24,500,000 of federal funds = $49,500,000 total) return based on commitments to date of SMART USA awards.

As the lead of both member-led and institute led project Purdue will receive total funding well in excess of $49,500,000 with the responsibility for the overall project and the award of subcontracts to partner institutions. This will include industry membership funding being allocated to Purdue or to other partner institutions. It is this total expenditure amount that counts for both the Higher Education Research & Development (HERD) Survey and AAU metrics.

The Office of Research also seeks Board of Trustees approval to purchase equipment up to but not to exceed $30,000,000 with the funds awarded from institute-led and member-led projects over the course of the SMART USA Institute membership term. Much of this equipment will exceed a purchase price of $2,000,000 and Board of Trustee approval is required pursuant to Article VII, Section 1(e) of the Bylaws. Specific equipment and facility upgrades will be proposed to the Semiconductor Research Corporation and approved by NIST/U.S. Department of Commerce through specific proposal calls and opportunities. The equipment will be used to build semiconductor digital twin, packaging and computational capacity/capabilities in Birck Nanotechnology and in Purdue's research computing facilities. The equipment may include but is not limited to advanced packaging equipment, data collection architecture, characterization equipment, computational upgrades, and the installation upgrades required to get the equipment calibrated and operational.

Most of the equipment will be purchased in the first two years of the proposed project. This will require the flexibility to release the base and supplemental components of the membership fee/cost sharing timed with the SMART USA Institute projects in order to unlock the federal/consortium funding.

In light of the fact that the membership agreement has been executed and delivered, we respectfully request that the above approvals take the form of a ratification by the Board of actions previously taken in this regard.