

CISM

CENTRE FOR INTEGRATIVE SEMICONDUCTOR MATERIALS

The Concept

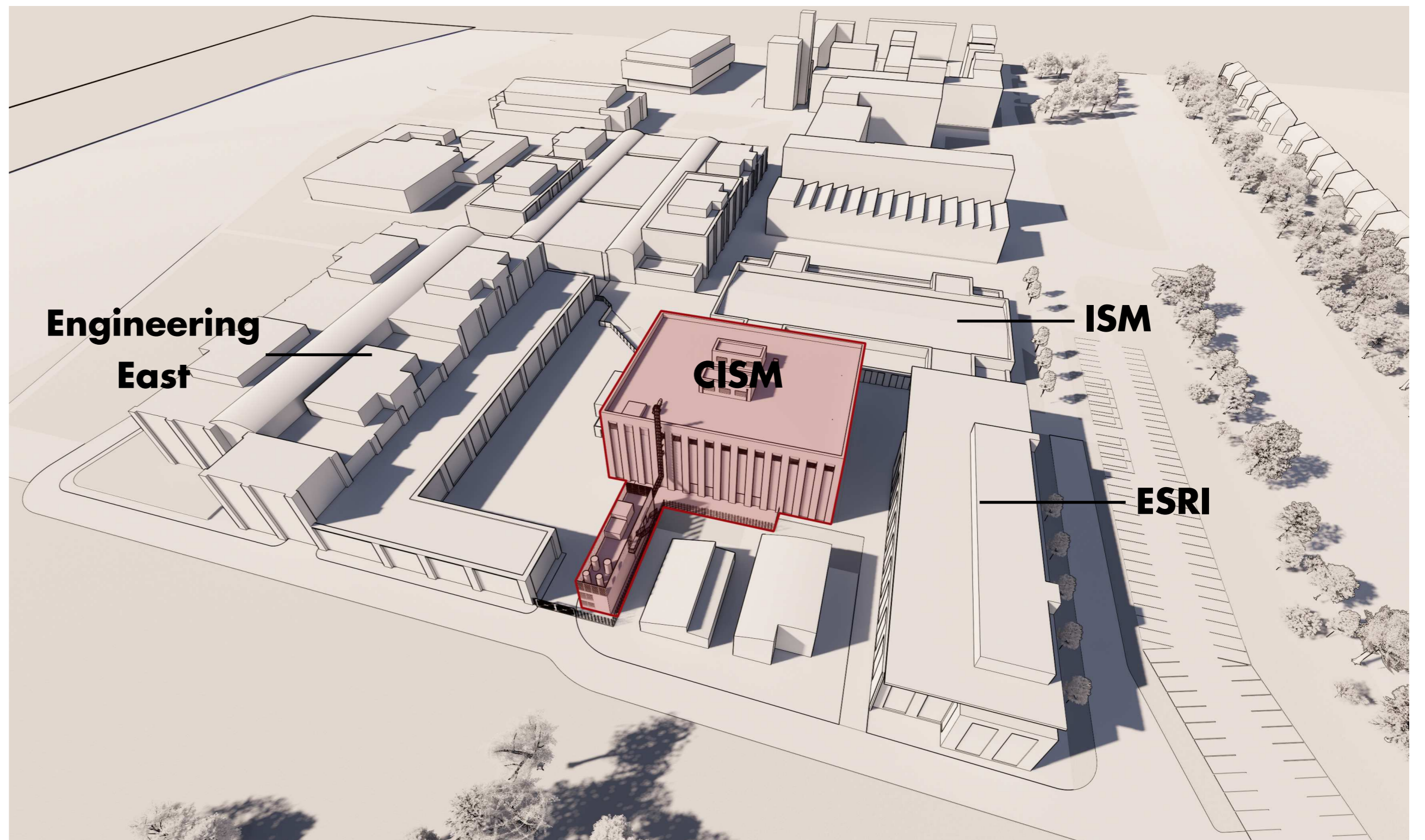
Bringing together semiconductor and advanced materials platforms and processes to deliver new technologies and products. Helping to create the skills and talent to keep our industry at the leading edge.

Providing a range of services from blue-sky research to applied R&TD, prototyping and process development, specialist services, incubation, engagement, training and access to the UK and EU innovation grants portfolio.

Manufacturing meets research and development

CISM – will deliver a bespoke, integrated facility for semiconductor research and technology development on Swansea University's new Bay Campus containing:

- Manufacturing grade, ISO-qualified clean rooms for process development
- Backend materials integration and packaging capability
- Advanced NNG research laboratories
- II/III-VI MOCVD growth facility
- Customer Bays for SME incubation
- Access to advanced characterisation and analysis [microscopy, surface analysis, chemical, optical, electrical]
- Access to state-of-the-art materials and device-level theory and simulation



Proposed building location.



Proposed CISM main entrance.



The Partnership

CISM is not just a building, it is a multi-sectoral, multi-disciplinary cooperative concept characterised by a network of partnerships and growing out of the TRL spanning ecosystem already developing in South Wales. The main CISM partners are SU, IQE, SPTS and NWF. A further nine partners have recently joined. We are continuing to gather more support and if you are interested please get in touch.

This concept has been developed in

partnership with our main partners over the last 12 months via our CISM Programme Board, who meet on a monthly basis to progress concepts and the overall programme. characterisation and analysis [microscopy, surface analysis, chemical, optical, electrical]

Access to state-of-the-art materials and device-level theory and simulation

The Building

The proposed Centre for Integrative Semiconductor Materials (CISM) building will be located at the heart of Swansea University Bay Campus within the existing engineering quarter. This location will allow for collaboration and shared facilities with the existing surrounding engineering buildings.

The proposed building will be three stories covering 4320sqm of clean room, research and office facilities. The mass has been

developed to be appropriately scaled to the surrounding buildings and aligned to the existing campus development master plan within an existing development site. The building will use sustainable, energy efficient building techniques and renewable energy technology including solar PV and heat recovery. We aim to achieve a minimum assessment of BREEAM 'Excellent'. Concept designs of the facility, along with building massing can be found below.

The CISM Design Sub-committee is made up of representatives from our main industry partners, Swansea University including our Estates team and architects and technical advisors.