



TSUBAME4.0 Supercomputer

Operation starts in April 2024

System Overview

Compute Node Racks
 HPE Cray XD665
 Direct Liquid Cooling + Rear Door Cooling (20°C)

Network
 InfiniBand NDR200, 4 ports / node
 Full-bisection Fat Tree

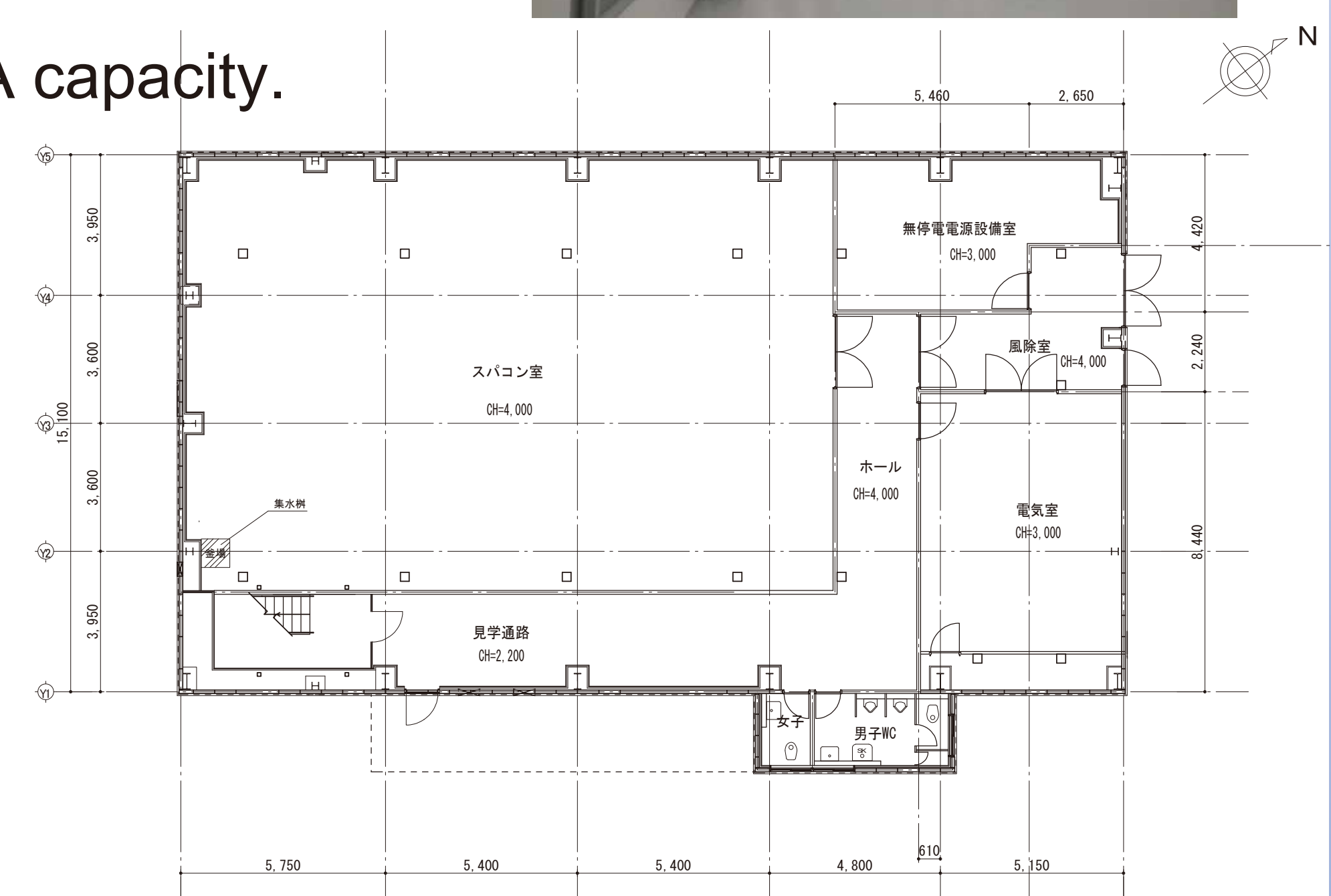
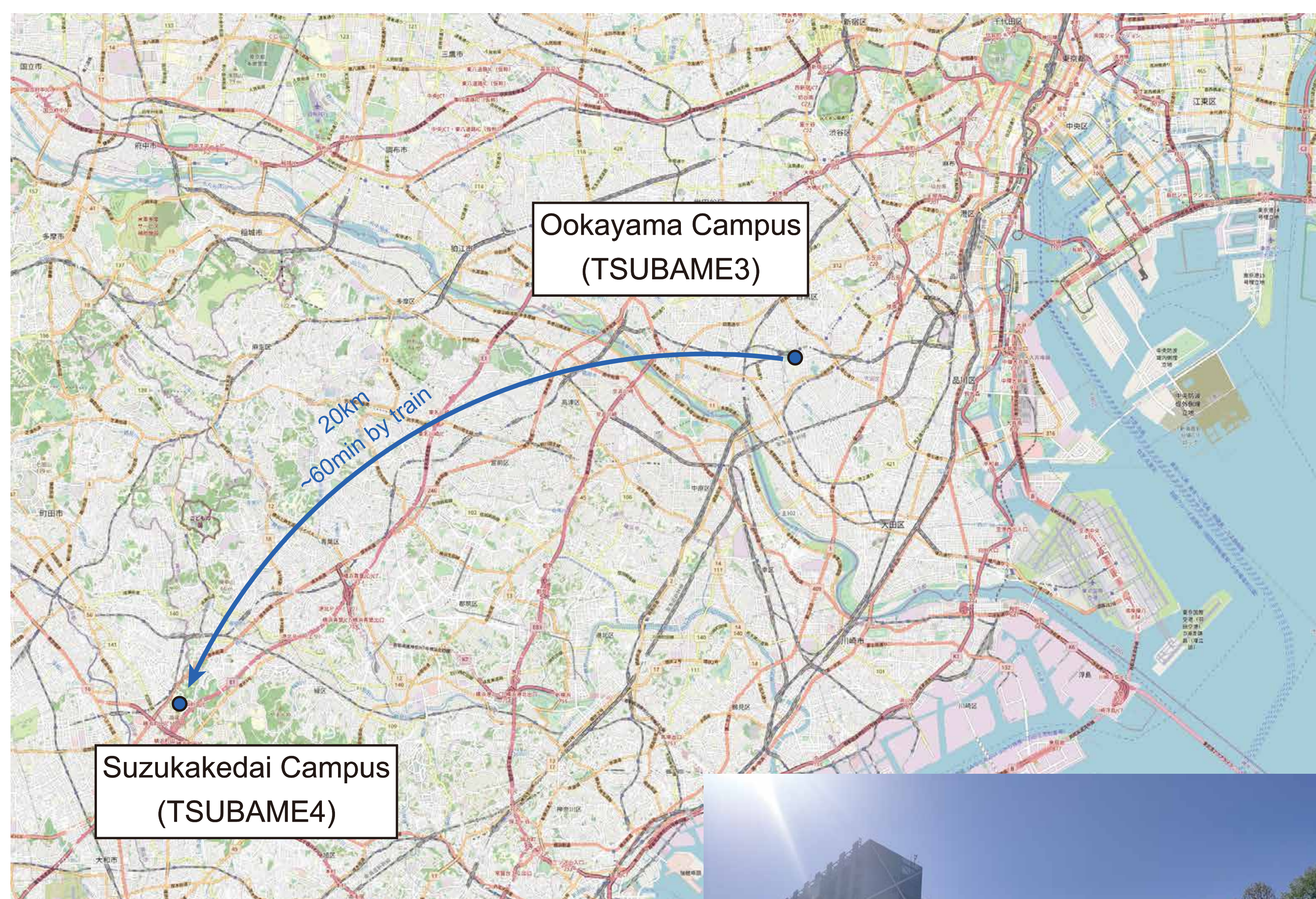
Storage
 HPE ClusterStor E1000
 HDD 44.2PB, 280GB/s
 SSD 327TB, 325GB/s

System Total: 240 Compute Nodes
 Peak Performance: 66.841PFlops(FP64), 952.441PFlops(FP16)
 Memory: 180.0TiB, 221.184TB/s
 Node Local SSD: 460.8TB, Read 1,632GB/s Write, 648GB/s

Location and Data Center Facilities

Unlike past TSUBAME series, TSUBAME4.0 will be located at Suzukakedai campus, another campus of Tokyo Tech. In order to accommodate heavy water-cooled supercomputers, we renovated a building exclusively for supercomputers.

The new supercomputer room is 200m² wide, 30kN/m² load capacity, and 4m ceiling height. The power is supplied by 3-phase 415V voltage, with 2000kVA capacity.



All components of TSUBAME4.0 are cooled by a single cooling source, 8 chillers, whose cooling capacity is 200kW each to generate 20°C water in 30°C environment. Processors in compute nodes are directly cooled. Other components and storage, management nodes are indirectly cooled by rear door.

