3D X-DRAM is an industry game-changer. It is based on floating body cell (FBC) technology, so data is stored as electric charges without capacitors. An innovative structure similar to 3D NAND flash makes 3D X-DRAM easier to manufacture and less expensive to scale than emerging 3D DRAM alternatives. 3D X-DRAM using multiple-level 3D arrays, so 8x higher capacities can be achieved using the same number of layers (230) used for 3D NAND.

Adopting 3D X-DRAM architecture allows memory manufacturers to leverage their current technologies, nodes and processes to increase the density and capacity of main memory used in information technology (IT) systems and consumer products. This results in:

- **Higher performance** for cloud and business systems (e.g., servers)
- **Smaller form factors** for consumer devices (e.g., smartphones)
- **More capabilities** for edge computing devices (e.g., routers)