Stated simply, a vacuum is a space where the pressure is lower than the atmospheric pressure. A vacuum has interesting properties: for example, materials’ lower boiling points in a vacuum mean they are more likely to evaporate and gas molecules can travel in a straight line in a space. ULVAC has developed various application technologies that exploit the properties of a vacuum in its quest to realize the remarkable potential inherent in vacuum technology.

For example, using vacuum technology, it is possible to create ultrathin films with micron- to nanometer-order thickness. Since such thin films cannot be produced by physically stretching materials, advanced vacuum deposition technology is required for depositing layers of atoms or molecules of materials in a vacuum.

Led by IoT, 5G, and AI, a tremendous wave of technological innovation has brought about the advent of the smart society. Vacuum deposition is destined to fulfill a vital role in the fundamental technologies underpinning the smart society.