## The Migration from Product Focus to Service Focus in High Tech Equipment

- "Servicization" is not emerging in the high tech industry segments I've engaged with. (excludes network equipment)
- Once the tool exits Warranty, Customers conduct as much self maintenance as possible
  - In semiconductor equipment, service and operation training credits are still part of the equipment sale.
    - Customers expect to do most simple maintenance themselves, and train to near equivalent of certified field engineers.
- Only where the equipment complexity or the cost of the components make self maintenance cost prohibitive, are contract penetration an opportunity. (Fear based Service)
- "Servicization" is driven as much by customer maturity, as by industry maturity and Semiconductor companies have been evolving and migrating.

## **Potential Migration Inhibitors**

- Sales to Asia comprise 60% to 80% of all equipment sales.
  - Equipment service is almost expected.
  - <2% of equipment is under contract in Korea.</p>
- Equipment depreciation on the other hand is 41%, of the cost of producing a wafer, while maintenance and parts comprise less than 25%.
  - An hour of labor, and a piece of quartz are tangible and can be easily benchmark for cost.
    - Always excluding the cost of training and development.
- The value of vendor supplied service labor isn't always demonstrated in break/fix opportunities.
  - The variety of failure modes, availability of service enabling tools, and varieties of configurations within a product line make it possible that a CSE may not see the same failure twice in a year.
- The value of ready to serve labor and parts is not recognized by the customer, nor adequately marketed by the manufacturer.

## **Opportunities**

- Semi Equipment manufacturers do recognize the value of a revenue stream from parts and labor as an insulator to the equipment demand cycles.
- Equipment customers that have matured do see that equipment operation and maintenance are not in their core competency.
  - Intel does utilize service contracts and parts management agreements for many of the newer equipment fabs.
  - Other mature manufacturers have taken it to the next level.. they no longer own equipment shifting the manufacture to wafer foundries.
- Wafer foundries in Taiwan, Singapore and China may make the transition to recognize equipment service as too expensive to resource themselves.
- It would require efforts for the WFE manufacturers to differentiate their service and delivery capabilities, and move to market that value.