



ASM Technologies Limited

HANDS ON



R & D SERVICES



**PRODUCT
ENGINEERING**



**SUSTENANCE
ENGINEERING**



PROTOTYPING



SCM



MANUFACTURING



COMPANY PROFILE



Public listed company - BSE Ltd
(Bombay Stock Exchange)ID:
ASMTEC Code: 526433

Global Presence: India, USA,
Singapore, UK, Canada & Mexico



Some Facts – Product Development

100+
Co-created
Products

1000+
Product
Releases

200000+
Parts
Engineered

100000+
Test Cases
Automated

INDUSTRIES





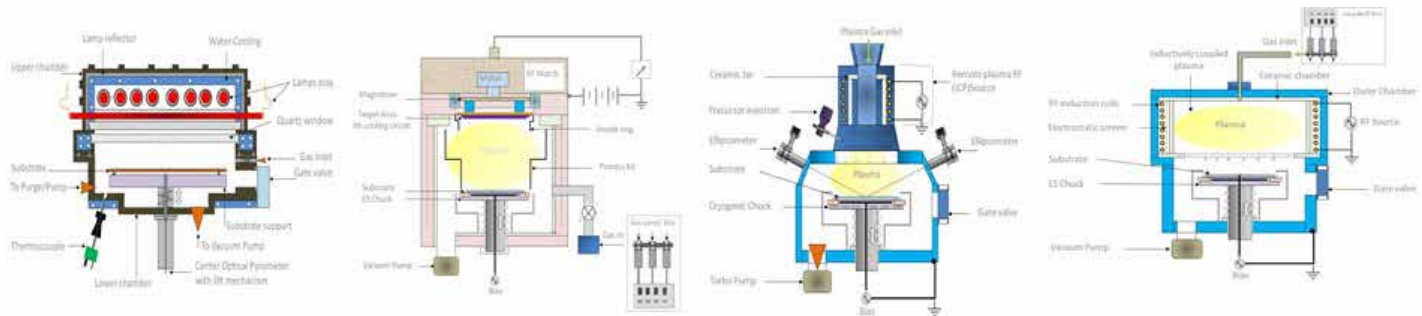
TECHNOLOGY

- Wafer Metallization, Packaging
- Digital Transformation (Dx)
- Electric Vehicle (EV)
- ADAS (Advanced Driver Assistance System)
- Autonomous Vehicle
- Robotics

SERVICES SPECTRUM

- Engineering Service
- Product Life Cycle
- Corporate Learning
- Sustenance Life Cycle

WAFER METALLIZATION, PACKAGING

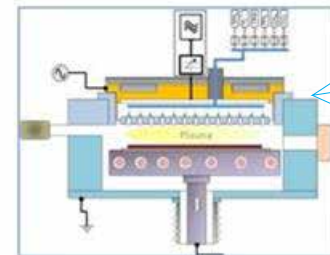
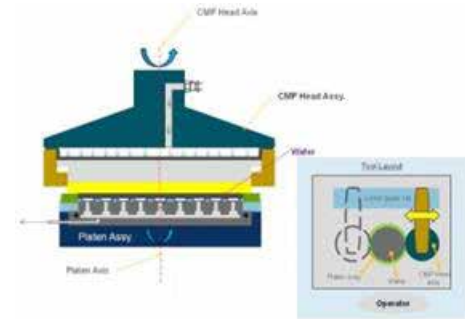


ASM has over 2000+ Person years of experience in serving reputed Semiconductor 'Front-End' and 'Back-End' process equipment manufacturing companies. ASM has the expertise and understanding of design & development of System and Sub Systems of: PVD, CVD, RTP, Etch, CMP and related Inspection/ process tools for Wafer Metallization and Packaging.

WAFER METALLIZATION, PACKAGING

ASM's Engineering Services across Customer's spectrum of tools:

- Design and Development from concept to realization
- Continuous Improvement projects and Co-Creation
- Application Software Development and Support
- Industrial IoT
- Virtual Reality (VR)
- Sustenance Engineering
- Operations support
- 24/7 Infrastructure/ Network Management and support

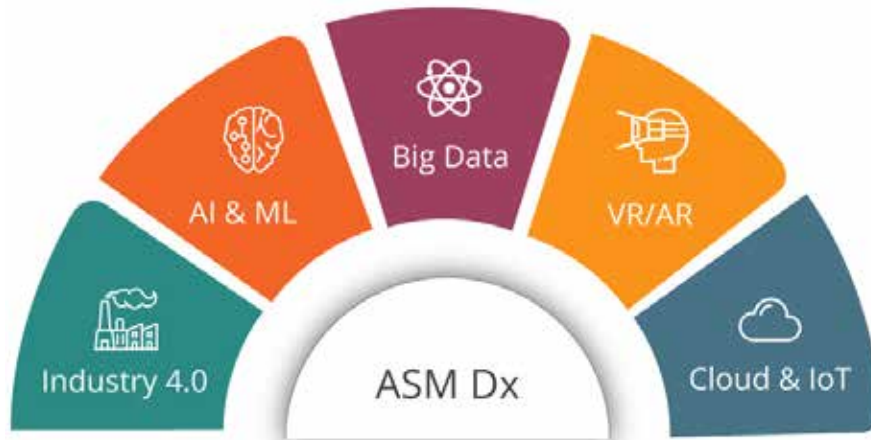


DIGITAL TRANSFORMATION (Dx)

Digitization can expand the reach of Companies, enhance management choices and speed up the development of new products and services. In the meantime, the unreasonably fast selection of innovations can upset traditional plans of action. Organizations need to painstakingly tread the way towards digital transformation with a solid system to tackle its qualities and moderate its difficulties.

ASM's Offerings:

- Industry 4.0
- AI & ML
- Big Data
- VR / AR
- Cloud & IoT



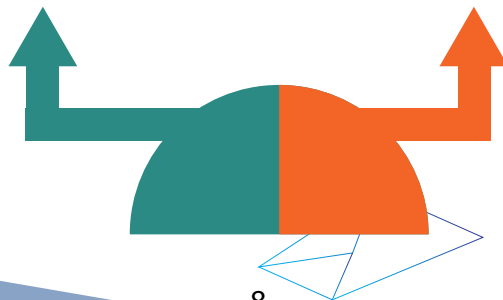
DIGITAL TRANSFORMATION (Dx)

INDUSTRY 4.0 / SMART MANUFACTURING

- Architecture Design
- Sensors design/ selection
- Creating multiple data points
- Real time data acquisition
- Data correlation and predictive analysis
- AI & ML
- Decision Support System

AI/ML

- Development of Machine Learning driven rules engine to predict the failure and take corrective actions on IoT devices
- Machine learning on Big Data & Analytics to predict the trend
- Machine learning on the smart devices(IoT) for predictive analytics
- Machine learning of data to analyze the trend and generate meaningful insights



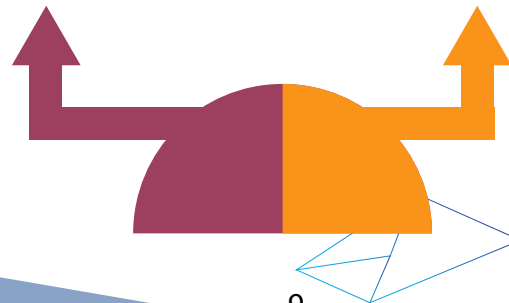
DIGITAL TRANSFORMATION (Dx)

Big Data

- Building data operations platform and making it scalable and repeatable
- Monitor, adapt, and securely move data and also share data between corporations
- Generate reports and analytics on the data, and export data into visualization tools
- Integrate and monitor customer support with APIs

VR/AR/MR

- Content Development
- Storyboard and Visual Storyboard Development
- 3D Graphics and Animations
- Virtual world/ environment modeling and development
- Virtual lab for collaborative R&D
- Enhanced learning experience through 360° virtual interaction



DIGITAL TRANSFORMATION (Dx)

Cyber and Cloud Security

- Automated Work Load visibility and Protection (Software Vulnerability Management)
- Configuration Management / Compliance Monitoring
- Identity and Access Management
- File Integrity Monitoring
- Log based intrusion detection

Networking IP Services

- Threat Protection & Analytics
- OpenStack and KVM qualification
- Response Policy Zone (RPZ)
- Networking Protocol Expertise (DNS, DHCP, RADIUS, BGP, OSPF, MPLS)
- Security Ecosystem (Outbound)



ELECTRIC VEHICLE (EV)

As a part of the green initiative and also to be a part of this exciting, and exponentially growing sector, ASM has made its presence in the Electric Vehicle sector. ASM provides engineering services to its partnering companies and have also partnered in the development of Electric Vehicle with Driver Assistance System.

ASM Engineers are involved in:

- Light Weight Platform for more range – Chassis, Wish Bone, Roll hoop and related sub systems
- Powertrain Assembly Packaging – Electric Motor, Battery with chargers, Charging port, BMS and Inverter
- Components selection and sourcing for Electric Powertrain –
 - *Electric Motor*
 - *Battery – Li Ion/ Li Pro/ Pouch Cells/ Cylindrical Cells*
 - *Inverter and Charger*
 - *Cable harness*
- Motor Control and Main Control Module development
- Battery mounting systems, Enclosures and Packaging
- Swappable Battery mechanism



ADAS (ADVANCED DRIVER ASSISTANCE SYSTEM)

ADAS (Advanced Driver Assistance System) are systems to help drivers while driving. ADAS systems are developed to adopt, automate and enhance vehicle system to Increase Car features and Safety.

FEATURES

- Collision Avoidance
- Lane Departure Warning
- Alerts: Pedestrian, Driver- Visual / Voice-Over and Signboard identification
- Vehicle parameters, Data Analytics and Reports
- 360-degree view, Protection and Insurance

SUPPORT

- Supply ADAS solution kit
- System packaging and integration
- App development for Driver Assistance System
- Hardware, Firmware/BSP/Board bring-up and testing



AUTONOMOUS VEHICLE

FEATURES

- Level-3 Autonomous
- Autonomous system with 4 senses
- Safety and Secure driving
- Easily configurable
- Secured Cloud and Cyber Data

SUPPORT

- Supply Autonomous solution kit with chassis
- System packaging and integration
- Supply and integrate Electronics/ Hardware kit
- Vehicle Testing



ROBOTICS

Each developing Industry, be it Auto, Aero, Semiconductor or Medical, it expects Robots to achieve places where human reach is restricted. They assist the Industry with increasing productivity, in case of repetitive jobs, work in outrageous Conditions/Environments and furthermore in places where Artificial Intelligence is required.

ASM offer services through robotics solutions for:

SEMICONDUCTOR

- Wafer transfer systems
- Pick and place/ Foup transfer systems
- Micron-level motion systems design
- Robot spec. creation and selection
- Design and development of customized:
 - *Robot arm and related mechanism*
 - *End Effector assembly*

CAPITAL EQUIPMENT/ HI-TECH

- Components/ item transfer mechanisms
- Add-on/ modular fixture/ peripheral equipment design
- Robot accessories selection - Grippers, tools, weld guns, etc.

- Robot Teaching
- Automation
- Layout design
- PLC Control Panel design
- Robot system packaging design
- Prototyping and Manufacturing
- Controller and related Hardware / Firmware development

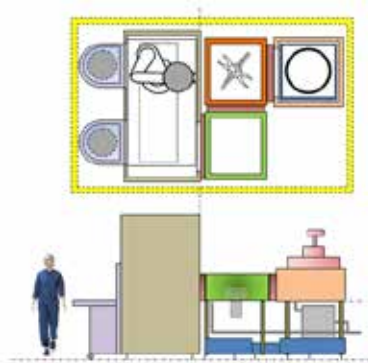


ROBOTICS

Experience – Robots and industries:

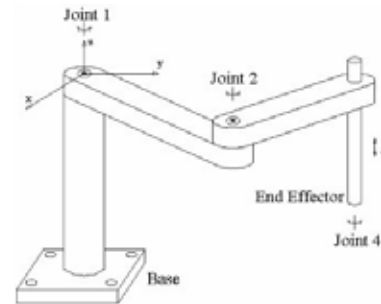
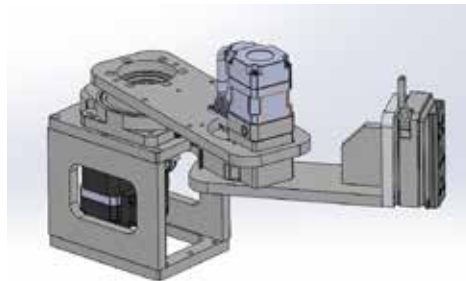
Semiconductor

- SCARA Robots
- Vacuum Robots
- Atmospheric Robots



Non-Semi/ Industrial Robots

- SCARA
- Delta
- Cartesian coordinate



ENGINEERING SERVICES

System Design House

- Product System Level Design
- Manufacturing Engineering Support
- Value Engineering

Embedded Systems

- Hardware design
- Software design

Prototyping, Testing and Pilot Production

- Manufacturing Support services
- Control Panel – AC Box, Enclosures
- PCB Fabrication & Assembly
- Pilot Production

Manufacturing Engineering

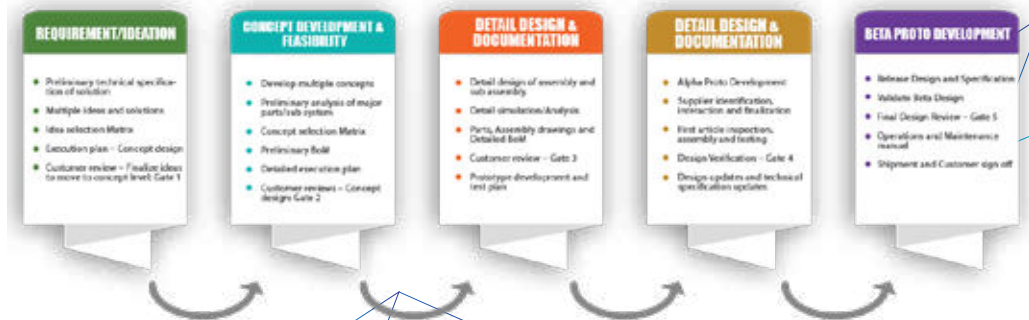
- Cost Reduction Analysis, Design Optimization Solutions and Implementation
- Tools, Jigs & Fixtures design and development
- Tolerance Stack-up Analysis
- DfX Analysis – DFM, DFA, DFS and DFE
- Manufacturing Process Documents
- Cable & Harness detailing



PRODUCT LIFE CYCLE

To maintain a competitive edge in today's ever changing and evolving technologies, companies need to adopt solutions that will enhance quality, improve efficiency and reliability. ASM's offerings for Product Lifecycle Management are:

- Adhering to PLC process followed by our clients
- Enterprise Innovation management
- Digital Dashboard and report generation
- Knowledge Management
- End user support
- 24/7 help desk





CORPORATE LEARNING, CLOUD BASED DIGITAL LEARNING PROGRAM

ASM is an Open edX partner, Open edX is an e-learning platform used by leading Enterprises.

Our Offering for edX

- Customization and theming of platform to meet customers need
- Deployment of Open edX on Cloud Platforms
- Industry specific course content development
- Content migration and integration
- Content Management System (CMS) assistance
- Studio services



SUSTENANCE LIFE CYCLE

ASM has expertise in sustenance engineering and Obsolescence Management (OBS) of 200k+ BoM size

Our activities include:

- Sustenance Engineering
- ECO Management
- Obsolescence Management
- Technical Publication



Identification



Impact Analysis



Corrective Action



Change Release

Obsolescence Management Process

| | | | | |
|----------------------|----------------------------------|-----------------------|--------------------------|---------------------------------|
| 200000 + BoM Size | 40000 + Total Service Request | 10000 + Total ECRs | 30000 + Tech. Reviews | 110000 + Parts Re-engineered |
|----------------------|----------------------------------|-----------------------|--------------------------|---------------------------------|



ASM Technologies Limited

INDIA | USA | SINGAPORE | UK | CANADA | MEXICO

HEADQUARTERS

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