



Smart i4.0 Transformation Alliance

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Background

In conjunction with the inaugural Industry Transformation Asia -Pacific, a Hannover Messe event, ASTech formed a new strategic alliance, Smart i4.0 Transformation Alliance (SiTA) with 14 members made up of local and international companies on 16th Oct' 18 with the support from Enterprise Singapore (ESG) and Singapore Precision Engineering and Technology Association (SPETA). It has now grown to 21 companies.

Vision

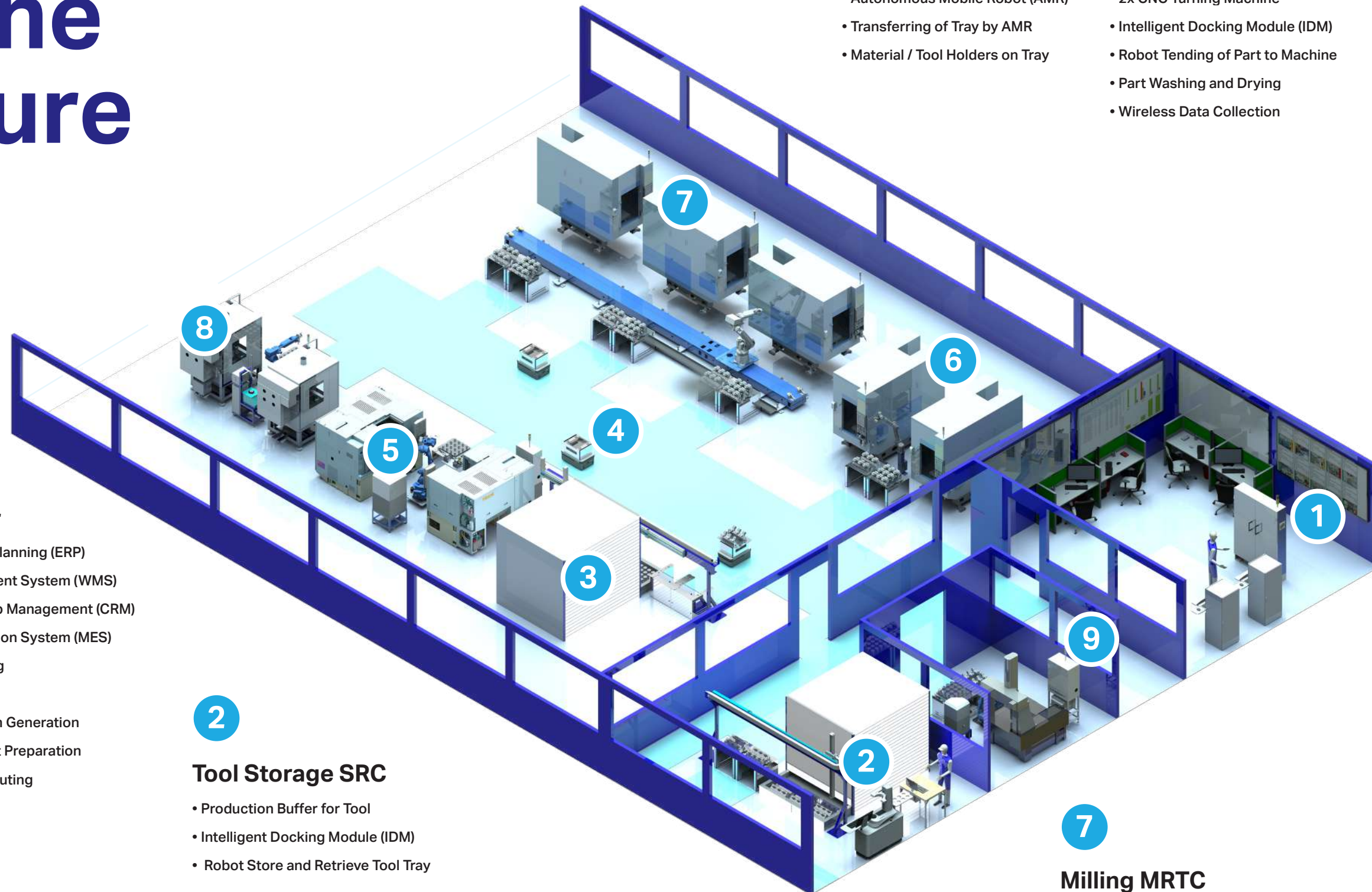
To become a World Leading Alliance for one-stop i4.0 integrated solutions in discrete metalmaking sector which encompasses hardware and software technology, best-practices and deployment.

Mission

- To create a complete eco-system for Industrial 4.0 transformation in Precision Engineering manufacturing companies.
- To promote the adoption of Industrial 4.0 to optimize manufacturing processes and increase productivity to facilitate the process of transforming conventional factory to SMART FACTORY.

Transforming today for tomorrow

Factory of the Future



1

Control Tower

- Enterprise Resource Planning (ERP)
- Warehouse Management System (WMS)
- Customer Relationship Management (CRM)
- Manufacturing Execution System (MES)
- Work order Scheduling
- 3D Model Generation
- NC Code and Tool Path Generation
- Tool and Resource List Preparation
- Cloud and Edge Computing
- SMART MANAGER

3

Material Storage SRC

- Production Buffer for Material
- Intelligent Docking Module (IDM)
- Robot Store and Retrieve Tool Tray
- Storage Capacity Management

2

Tool Storage SRC

- Production Buffer for Tool
- Intelligent Docking Module (IDM)
- Robot Store and Retrieve Tool Tray
- Storage Capacity Management
- Tool Presseting

4

AMR

- Autonomous Mobile Robot (AMR)
- Transferring of Tray by AMR
- Material / Tool Holders on Tray

5

Turning TRC

- 2x CNC Turning Machine
- Intelligent Docking Module (IDM)
- Robot Tending of Part to Machine
- Part Washing and Drying
- Wireless Data Collection

6

Milling MRC

- 2 x CNC Milling Machine
- Intelligent Docking Module (IDM)
- Robot Tending of Part to Machine
- Part on Zero Clamp
- Measurement probe for tool compensation and Tool breakage check

1

8

Deburring DRC

- Robot Deburring
- Auto Quick-change of Deburring Tools
- Wireless Data Collection

9

Quality Control CRC

- Auto CMM and Manual Inspection
- Intelligent Docking Module (IDM)
- Robot Tending of Part to CMM
- Inspection Path and Program Generation
- Quality Inspection Report
- Tool Wear Compensation

7

Milling MRTC

- Multiple CNC Milling Machine Line
- Intelligent Docking Module (IDM)
- Robot run-on-Track for Machine Tending
- Part on Zero Clamp
- Measurement probe for tool compensation & tool breakage check

2

SiTA Alliance Members

Singapore and International Partners

ASTech

ASTech is an automation system provider, turnkey solution design house & industry 4.0 Integrators specializing in CNC automation integrated with secondary processes such as deburring, polishing, cleaning and other related processes. **ASTech is SiTA Alliance Champion.**
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