# Tama Technical Core Overview 2023

### A TAMADIC Company

## About TamaTC

- Tama Technical Core was Founded in July of 2017
- Wide variety of engineering skill-sets available for your projects:
  - Structures, Systems and Interiors Engineering Design & Analysis
  - Design and Deliver simple to complex Aircraft Production Tools and GSE
    - Experience designing tools with moving components and sensory/control systems
    - Develop and provide Test Equipment such as Hydraulic and Electrical functional check Carts
  - Experts in Factory Automation (F/A) and Robotics
  - Evaluate & Improve Manufacturing Process efficiencies
  - In-house Design and Analysis Support for your projects.... or
    - Provide contract engineers & technicians
    - Source direct hires
    - Temporary to permanent hire personnel
  - We support most Design and Analysis Software Platforms
  - Sourcing of Valuable Suppliers & Partners in U.S., Japan and China
  - A turn-Key solution provider with products & services delivered to your location
  - We have the financial backing available to finish your projects on time and within budget without compromising on Quality

### About TAMADIC (TamaTC Parent Company)

### Company Information

Established: 12 . Sep . 1959 Employees: 1,120 as of April, 2022 Sales: 120 million \$ US as of Mar 31, 2022

### Management System (Certified)

- ISO9001: 2015 (Quality)
- JIS Q9100: 2016 (Aerospace Quality, Similar to AS9100)
- ISO14001: 2015 (Environment)
- ISO/IEC27001: 2013 (Information& Security)
- ISO45001: 2018 (Safety & Health)

### New Office Building

Moved into own newly built facility in Nagoya, Japan in 2021

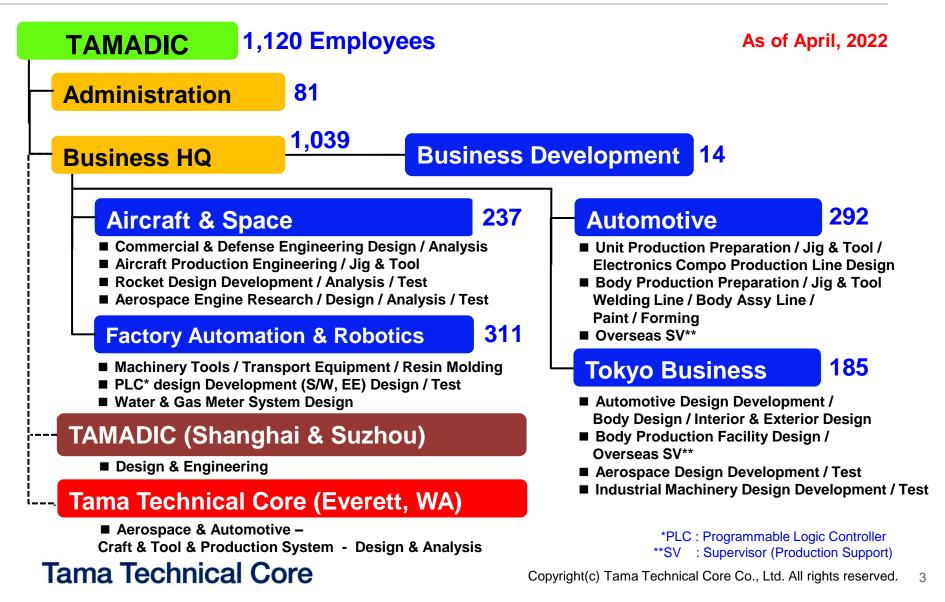
#### **Tama Technical Core**

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## **TAMADIC : Organization and Services**





# Aerospace

## Automotive

Factory Automation & Robotics

# Electronics

# Aerospace 1

#### Mechanical Design

Aircraft tooling and Production Equipment Design

- Assembly Jig Design
- GSE Design
- Aircraft Structural Design
- Aircraft Systems and Interiors Design
- MRO and Aircraft Repair Design
- Test Equipment Design



#### **Tama Technical Core**

#### Stress Analysis

Tooling and GSE Stress Analysis

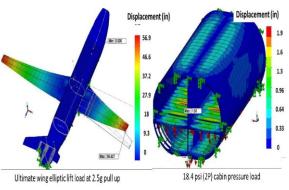
Aircraft Structures Stress Analysis

Interior components, seats and monument Stress Analysis

Fatigue and Damage Tolerance Assessments

Structural Repair Manual and Maintenance Manual Development or Revisions

#### Repair Assessments



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#### Control & Software

Aircraft & Guidance Equipment Related Design

Software Development

Test Equipment Software Development

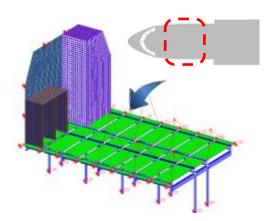
Flight Simulation System

Aircraft Wiring and Wire Harness Design

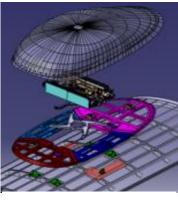




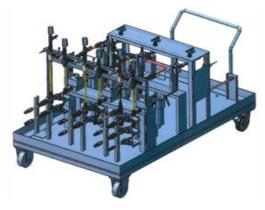




Floor Analysis Model
Tama Technical Core



MRO Projects WIFI Radome



Hydraulic Test Cart

# Aerospace 3 Space Craft

#### Mechanical Design

Space Equipment

Structural, Systems and Crew Furnishing Design & Analysis

Assembly Jig & Test Equipment Design

Development of Experimental Equipment for Zero Gravity Space

Vibration Test & Data Analysis

#### Production Technology

Spacecraft Production Equipment Design

Analysis and Testing of Rocket Strength, Vibration, Collision, and Aerodynamics

Rocket Launch Maintenance Support

Rocket Performance Test

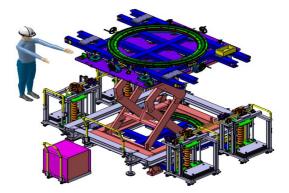
#### Control & Software

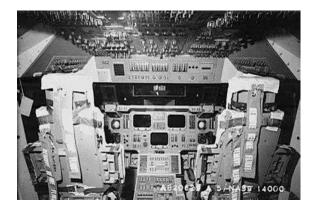
Spacecraft Guidance Equipment Design

- Software Development
- Test Equipment Software Development
- Flight Simulation System
- High Pressure Gas Equipment Automatic Monitoring Device

Rocket Flight Analysis







# Automotive 1





Production Technology

**Digital Production Technology** 

Layout Plan for

Body Welding

**Equipment Design** 

**Production Equipment** 

**Transport Simulation** 

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**Control & Software** 

**Unmanned Aerial Vehicle** 

Machine Tool Control

Transport Equipment

Software Development

**Control Panel Unit Design** 

Inverter Circuit Design

Automatic Driving

Support System

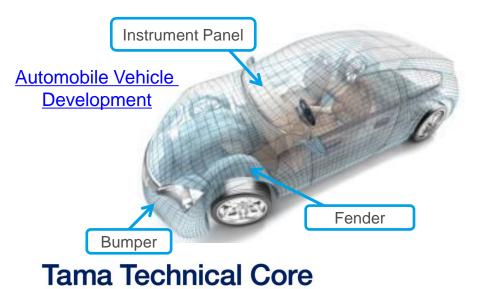
**Control Design** 

**Control Design** 

### Automotive 2



Automotive Unit Production Equipment





Automotive Body Production Equipment



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# Factory Automation & Robotics 1

#### Mechanical Design **Production Technology** Equipment Design for Machine Tool Design & Forklift Production Line **Development** Equipment Design for Semiconductor & Gas Meter and Water Meter LCD Transfer Equipment Design **Production Lines** Logistics Equipment Design Industrial Robot Design Product Design & Development of precision equipment Conveyance System Design Printed Circuit Board Mounting Machine **Design & Development** of Home Appliances & Office Equipment



#### **Tama Technical Core**





#### Control & Software

Automatic Guided Vehicle Design (AGV)

Clean Room Transfer Equipment Control Design

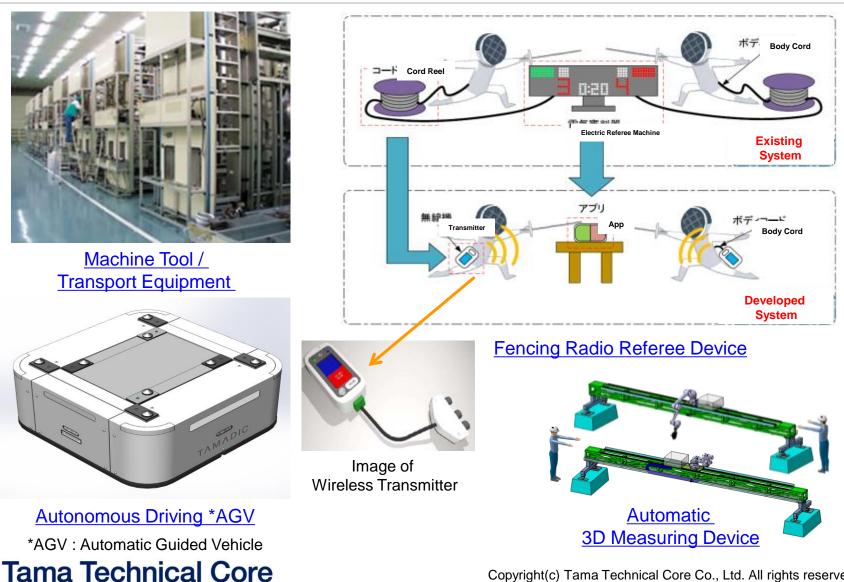
#### Logistics Equipment Sequence Control Design

- Semiconductor Wafer Automatic Transfer Device
- Production Equipment Control Design
- Industrial Robot Control Design



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# Factory Automation & Robotics 2



# Electronics 1

- Control Design, Circuit Design & Software Development
  - F/A Control Device Development
  - CPU Circuit Design for Controller
- Evaluation of Embedded Software for
- Control Devices
- Printer Circuit Board Design
- Design of Network Equipment Circuit for Control Device
- Development of Motion Controller Design of Electronic Circuit







# Electronics 2





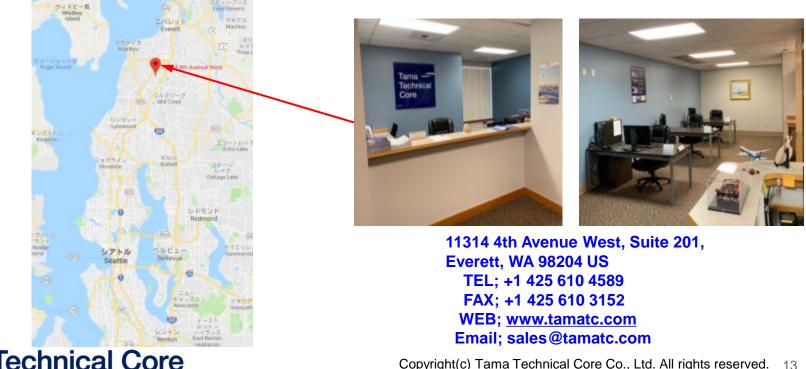
<u>\*PLC Design & Development</u>

\*PLC : Programmable Logic Controller

### Overseas Subsidiaries (US)

#### Tama Technical Core Co., Ltd.

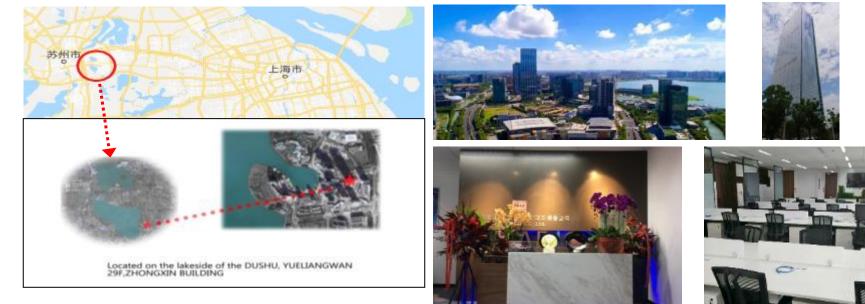
- Established in 2017 Everett WA.
- Providing Engineering Services in USA
  - -Commercial Aircraft, Automotive, Design & Analysis, Tools, Factory Automation
- Ensuring Value through Collaboration with TAMADIC and Local Partners  $\succ$



### **Overseas Subsidiaries (**China)

#### TAMDIC Shanghai & Suzhou

- Shanghai Subsidiary Established in 2014: Suzhou in 2018
- Providing Engineering Services in China
  - -Semiconductor Transfer Equipment, Logistics Equipment
  - -Machine Tools, Electronics Equipment,
  - -Automotive Production Facilities, etc.



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### Why partner with TamaTC ?

A rich history of engineering and manufacturing services and solutions inherited from TAMADIC Corporation, augmented with US based personnel and partner companies.

# Through TAMADIC we deliver the following advantages to our clients:

- 60+ years experience providing exceptional solutions to over 30 customers including some of the world's most recognized companies
- Strong financial backing and resources to fund and complete our projects
- Blended rates between US and Japan to achieve competitive results
- Japan's history and ongoing desire in the relentless pursuit of high quality
- Strong culture for compliance and safety
- Commitment to be honest, transparent, accountable and efficient
- Partners and friends for life ☺

## **Main Customers**

- Aichi Tokei Denki Co., Ltd
- AIRBUS Helicoptors Japan Co., Ltd.
- AISIN CORPORATION
- BROTHER INDUSTRIES, LTD.
- Chiyoda Corporation
- Churyo Engineering Co., Ltd.
- Daido Metal Co., Ltd.
- Daifuku Co., Ltd.
- DAIICHI JITSUGYO CO., LTD.
- DENSO CORPORATION
- DNP Engineering Co.,Ltd
- Envision AESC Japan Ltd.
- Fujita Corporation
- Hitachi Construction Machinery Co., Ltd.
- Honda Airways
- Hosei University
- IHI AEROSPACE Co., Ltd.
- IHI Corporation
- IHI Jet Service Co., Ltd.
- Japan Aerospace Exploration Agency
- Japan Air Self-Defense Force
- Joby Aviation
- Kajima Corporation

- KANADEN CORPORATION
- Kawasaki Heavy Industries, Ltd.
- KONICA MINOLTA, INC.

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- Kurita Water Industries, Ltd.
- Mazda Motor Corporation
- MHI Logitec Company Limited
- Mitsubishi Aircraft Corporation
- Mitsubishi Electric Corporation
- Mitsubishi Electric Engineering Co., Ltd.
- Mitsubishi Electric Software Corporation
- Mitsubishi Electric System & Service Co.,Ltd
- Mitsubishi Fuso Bus Manufacturing Co., 
   Ltd.
  - Mitsubishi Fuso Truck and Bus Corporation
- Mitsubishi Heavy Industries Aero Engines, Ltd.
- Mitsubishi Heavy Industries, Ltd.
- Mitsubishi Motors Corporation
- Murata Machinery, Ltd.
- NIPPON Shooter Ltd.
- NISSAN Automotive Technology Co.,Ltd.
- NISSAN Creative Services Co., Ltd.

- NISSAN Motor Co.,Ltd.
- Nissan Motorsports & Customizing Co., Ltd
- NISSAN Shatai Co., Ltd.
- NTN Corporation
- NTT DATA MHI Systems Corporation
- OKAYA & CO., LTD.
- Primearth EV Energy Co., Ltd.
- Sanko Computer Software Co.,Ltd.
- Shiroki Corporation
- Siemens K.K.
- Sumitomo Wiring Systems, Ltd.
  - TOKYO Boeki Techno-System Ltd.
- Toyoda Gosei Co., Ltd.
- TOYOTA Auto Body Co.,Ltd.
- Toyota Industries Corporation
- Toyota Motor Corporation
- Toyota Motor East Japan, Inc.
- Toyota Motor Kyushu, Inc.
- Toyota Tsusho Corporation
- Toyotsu Machinery Corporation
  - Tsuzuki Education Group
    - Woven Alpha