

The 13th webinar series of JICA India Tsunagaru Lab

Skilling and Making in India

March 10, 2023

Mamoru Mizoguchi

KIMURA FOUNDRY Co., Ltd.



Kimura Foundry Overview

KIMURA at a glance

Foundation year	1927
President	Kazutoshi Kimura
Employees	895 (as of October, 2022)
Sales in 2021	20 billion yen (150M USD/140M EUR)
Production capacity	60,000 metric tons (155,000,000 pounds) per year
Maximum dimensions	L:8,200 W:3,400 H:2,800mm (L:320 W:130 H:110 inch)
Maximum Weight	40 tons (88,000 pounds) for cast iron/2 tons for steel
Casting production sites	3 foundries in Japan 1 foundry in Indiana, US
Solutions	Full Mold Casting Process (or Lost Foam Process) Direct Molding Process (by 3D Sand Printer) KDW (Kimura Design Works)
Machining capability	13 vertical machines, 1 horizontal machine 2 turning machines and 4 5-axis machines in house



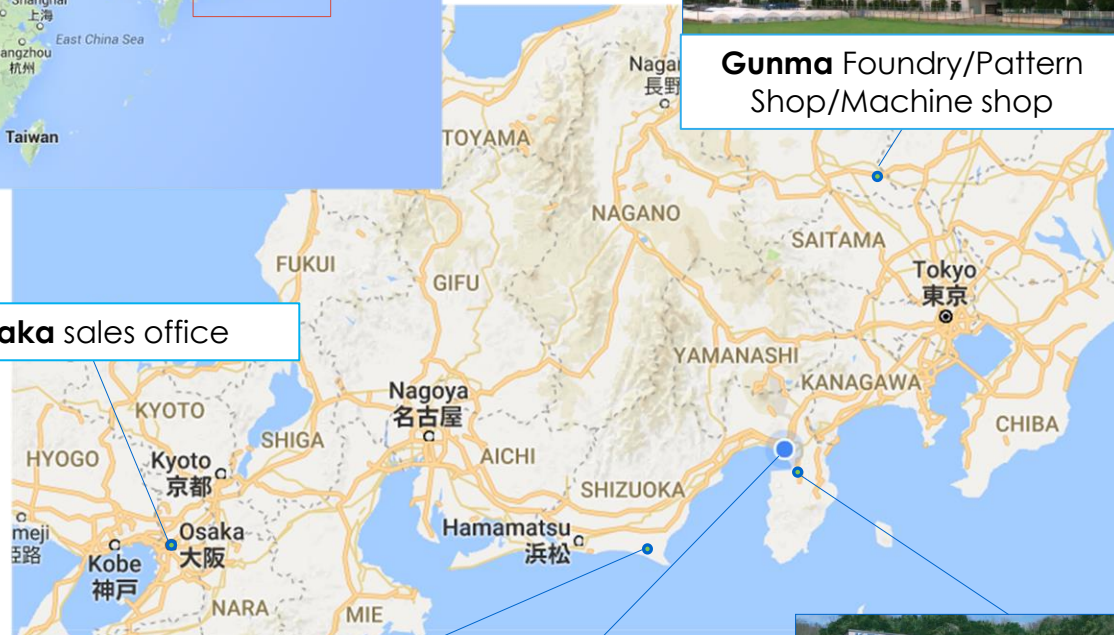
Location

Japan



Gunma Foundry/Pattern Shop/ Machine shop

Osaka sales office



Omaezaki Foundry/Pattern Shop/ Machine Shop

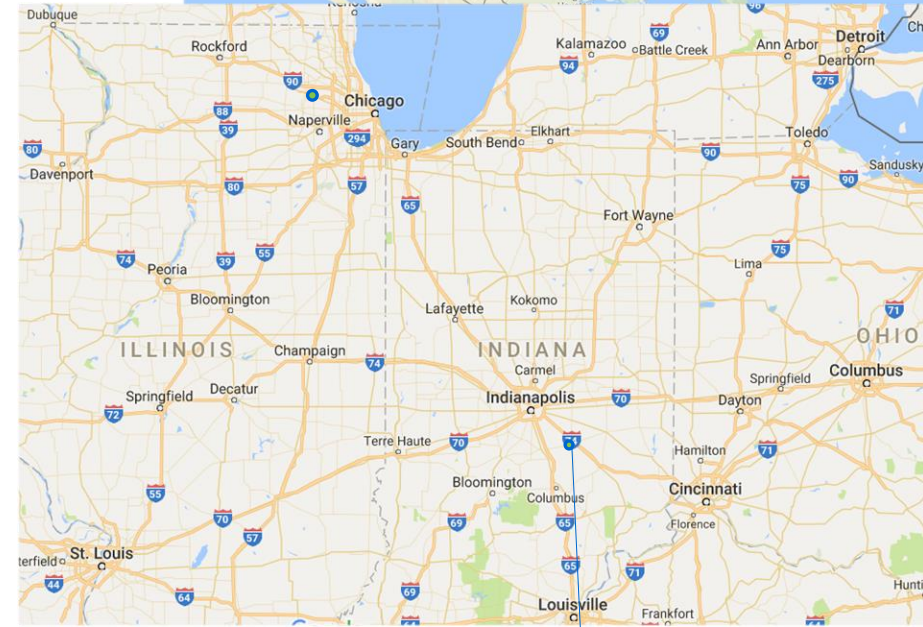


Head Quarter Sales/QA/R&D



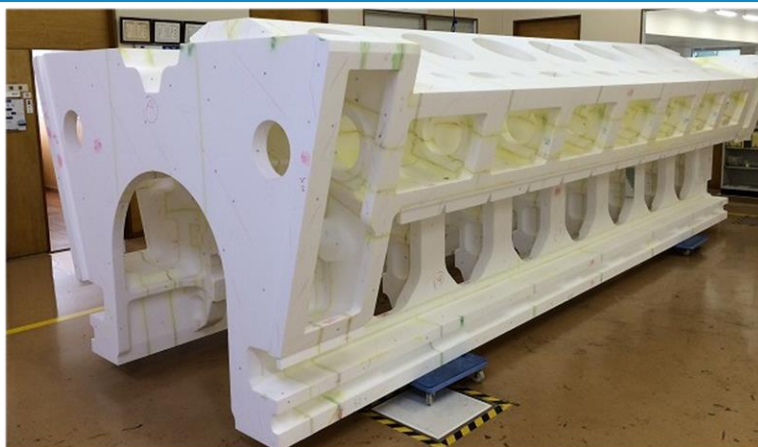
Izu Pattern Shop/ Advanced Process Technology Center

United States of America



Kimura Foundry America, Inc. Shelbyville, Indiana

Kimura's Full Mold Casting Process



Applicable Material Examples

[Gray Iron]

ASTM A48
ASTM A278

[Ductile Iron]

ASTM A395
ASTM A536
GGG70L
EN-JS2070
D6510
KSCD-00I (Original)

[Ni-resist cast iron]

ASTM A439 (D2)

[Cast Steel]

SC/SCH/SCPH

Market shares in Japan



Stamping die castings: 40%



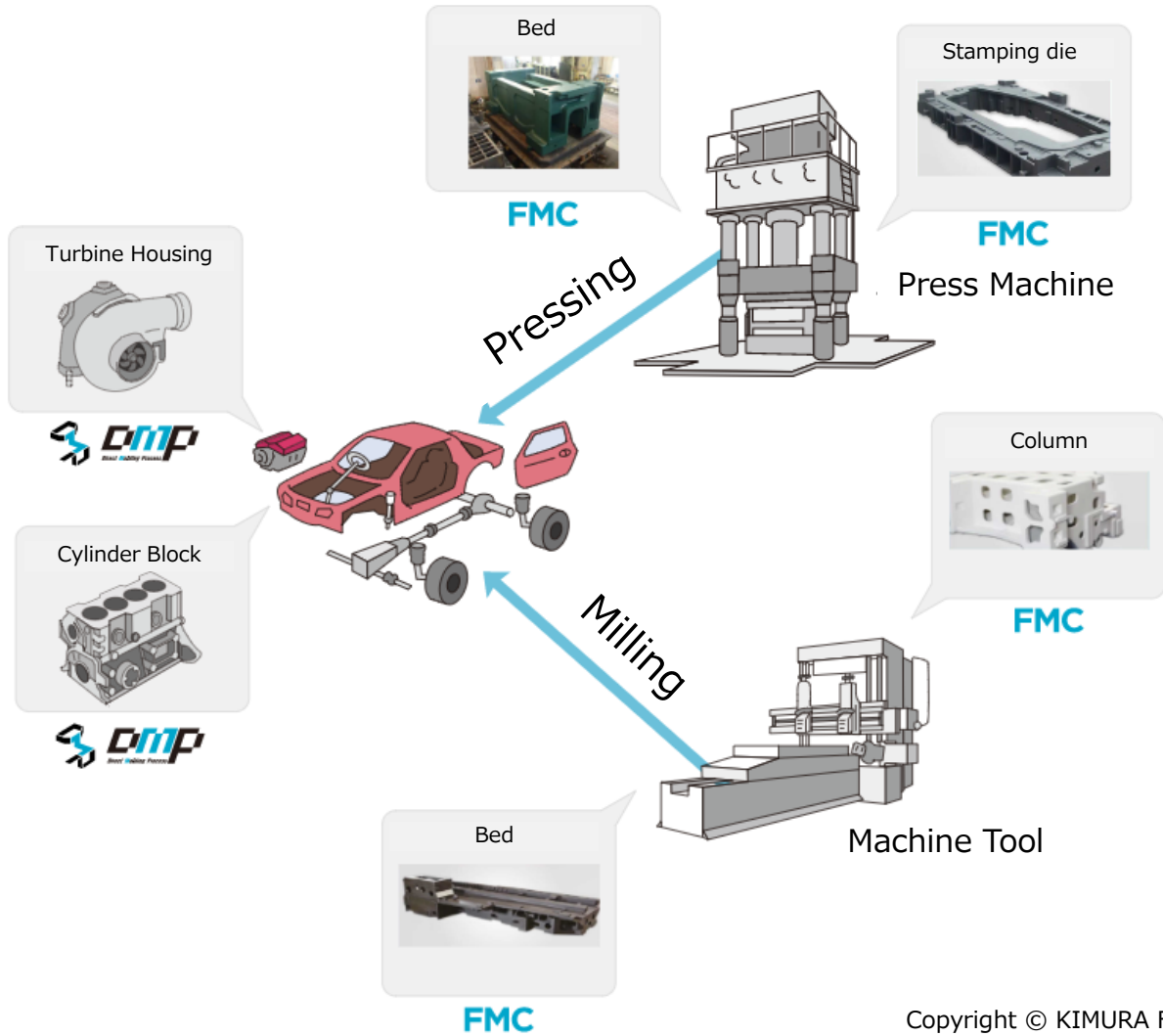
Machine tool castings: 20%



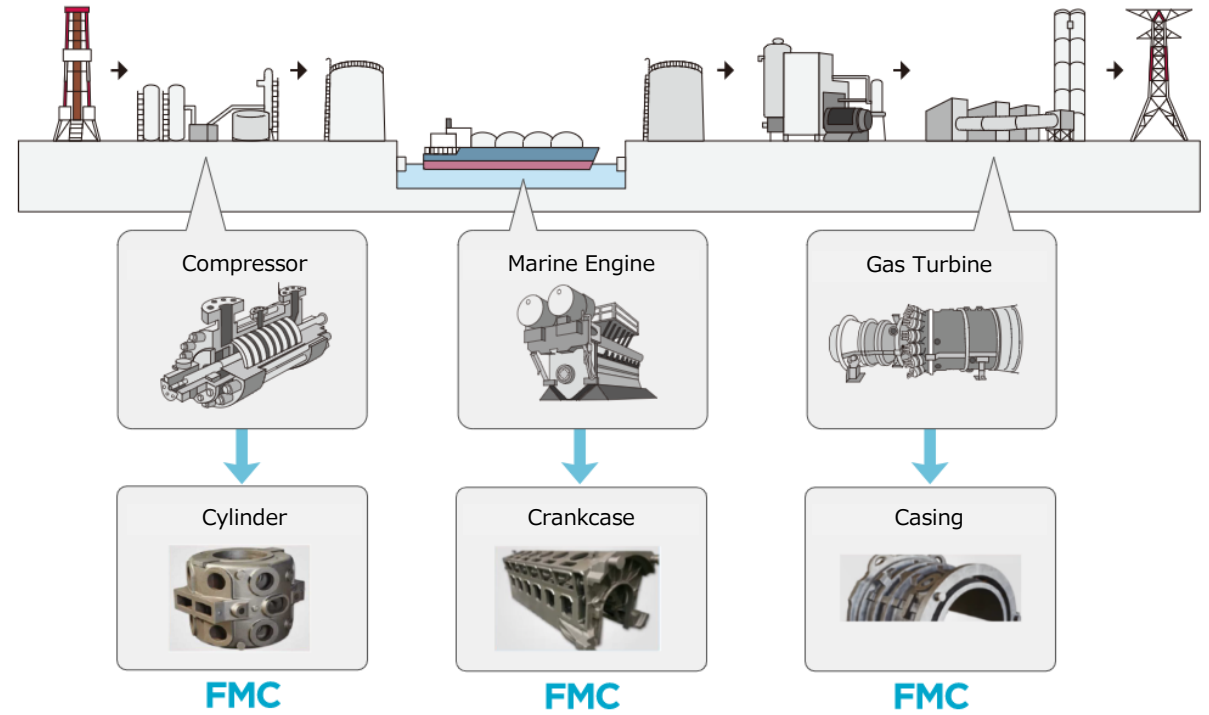
Engine block
6,200x1,820x2,400mm
34,000kg
EN-GJS-400-15

Applications

Automotive Manufacturing



Oil & Gas Stream



Business Portfolio

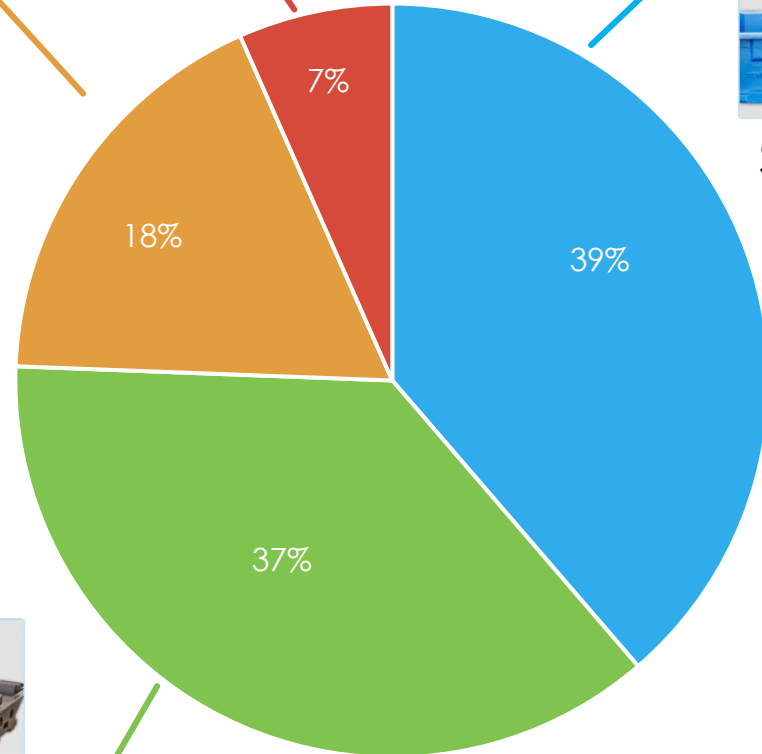


Rapid prototyping castings

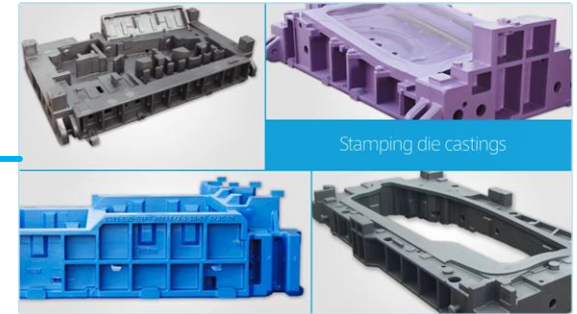
Industrial product castings



Machine tool castings

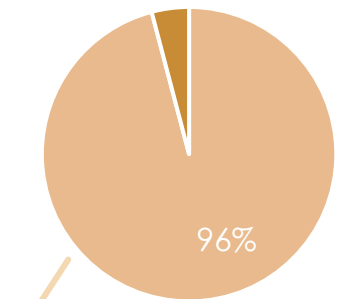


Sales in 2021



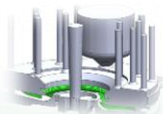
Stamping die castings

Sales by exporting



Domestic sales

Technology pivot on Full Mold Casting



Direct Molding Process

Utilization of sand 3D printers make castings more accurate, flexible and speedy.



DMP



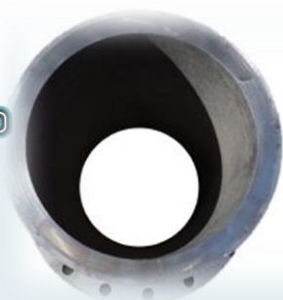
Kimura Design Works

Technology of milling polystyrene patterns and CAD/CAM capability suits entertainment industry.

KDW



Full Mold Casting Process



Abrasion Resistance Customized Pipes

Patented technology for demand of durable equipment

K-CLP

Reverse Engineering

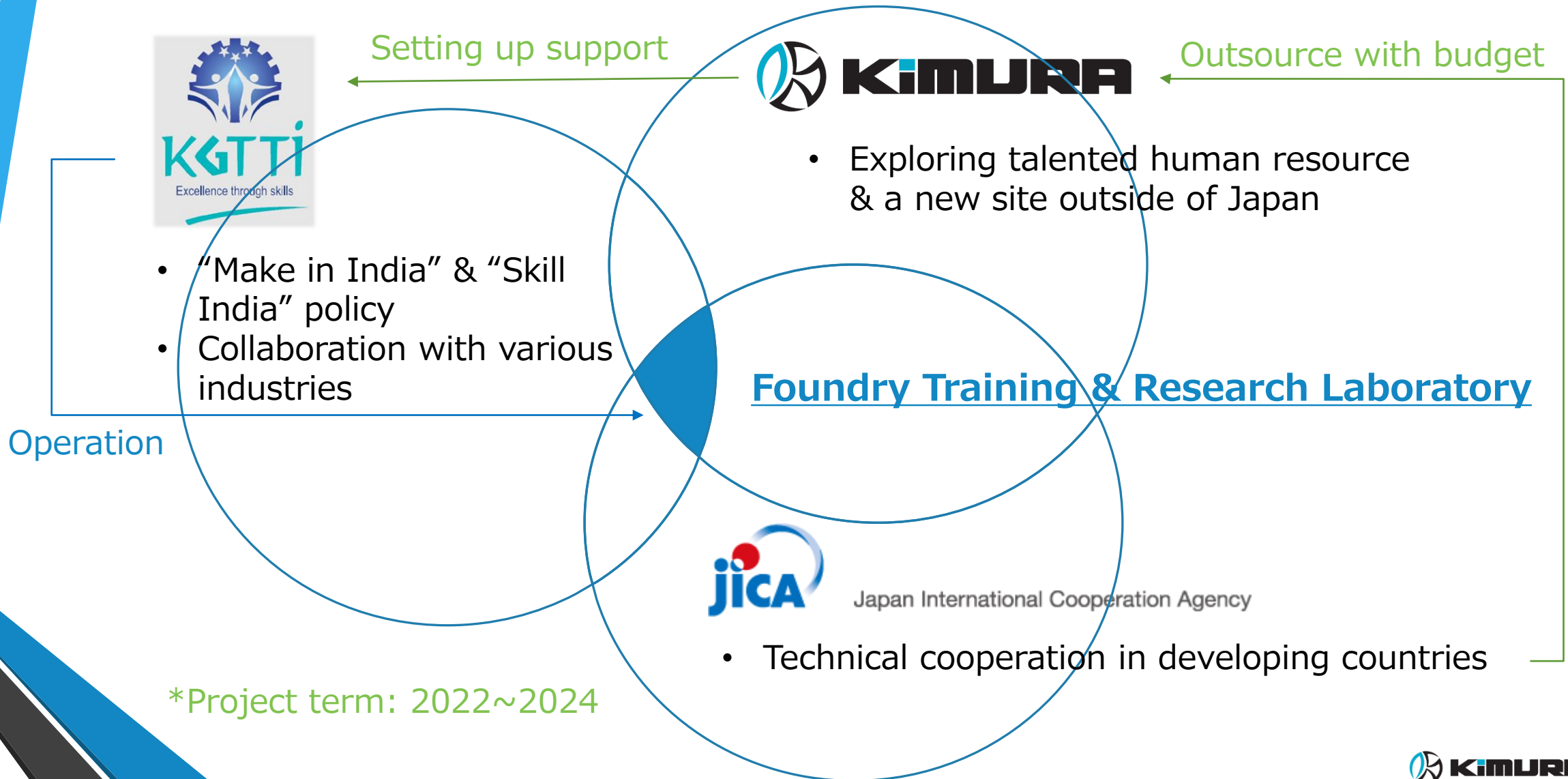


Reverse Engineering

Dimensional inspection capability now applied to record and duplicate seasoned parts.

Project on supporting to set up a Foundry Training & Research Laboratory in India

Background of Project & Laboratory



- “Make in India” & “Skill India” policy
- Collaboration with various industries



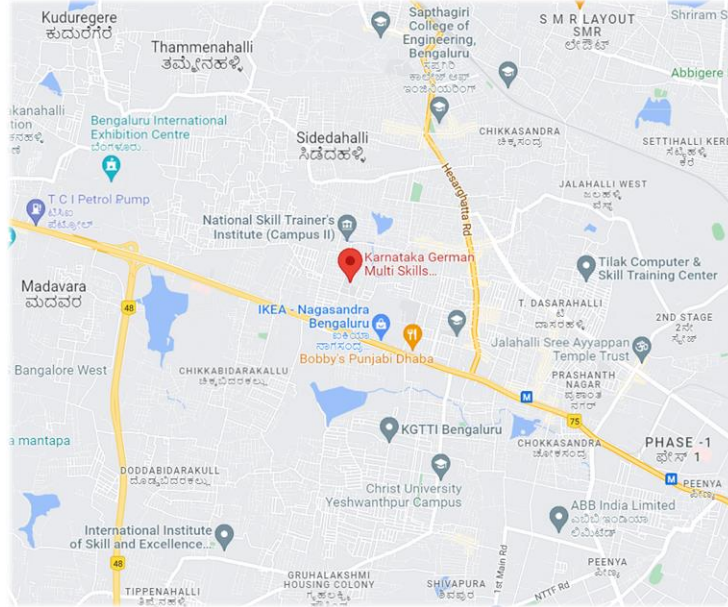
- Exploring talented human resource & a new site outside of Japan



- Technical cooperation in developing countries

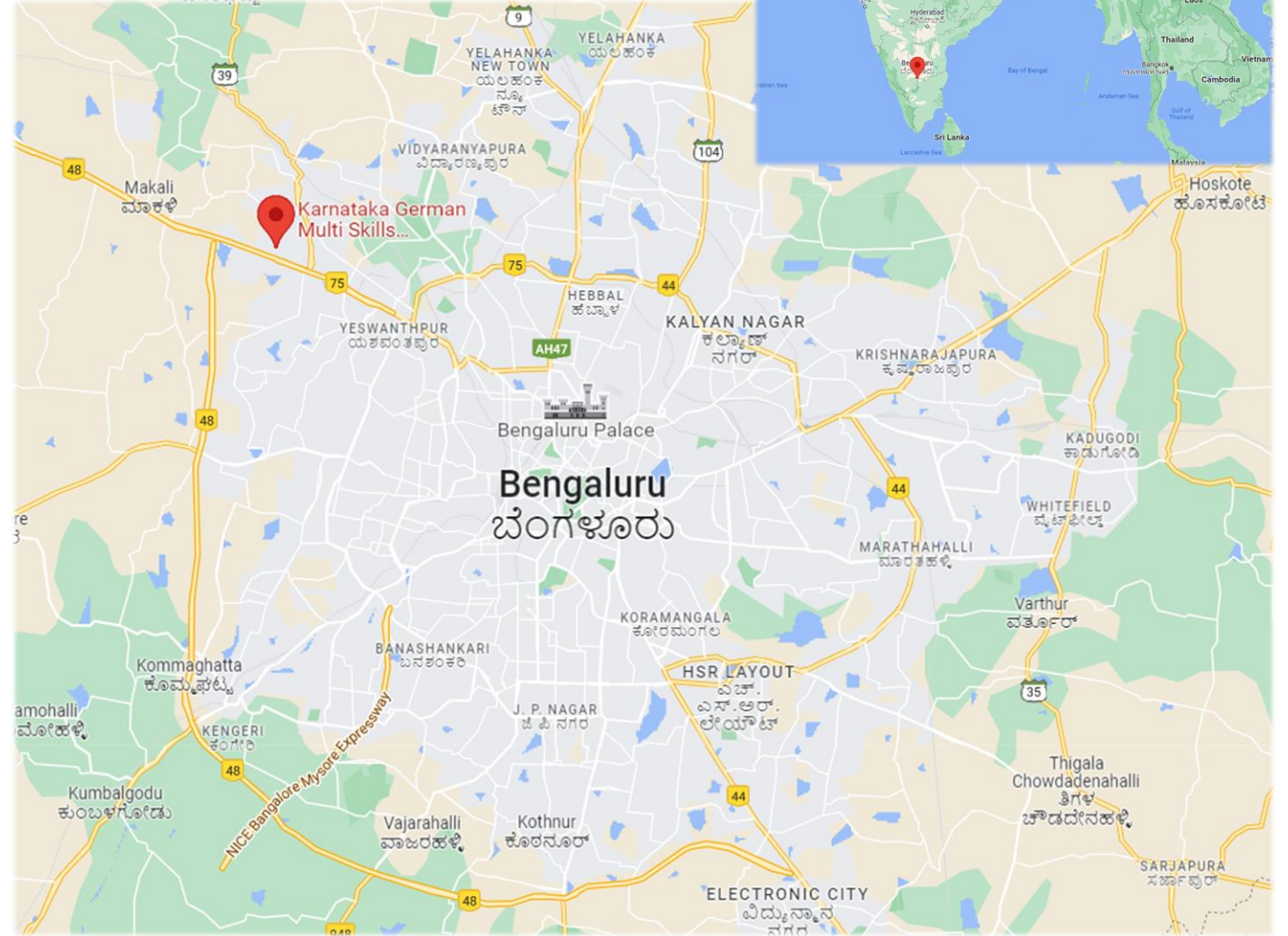
*Project term: 2022~2024

Location



Karnataka German Multi Skills Development Centres (KGTTI)

Manjunatha Nagar,
Bagalakunte, Bengaluru,
Karnataka 560073, India



Outline of KGTTI Bengaluru



- 11203 Trainees Trained
(by 2021/Yearly average 500 Trainees)
- 7 Skill Sectors
- 33 Training Courses

