

MettleWorx

Engineering Services and Procurement Partner

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About MettleWorx

What MettleWorx offers?



A **true engineering partner** for customers and suppliers across product lifecycle phases



1-stop solution for international customers – relieving them from having to manage multiple suppliers in India/Asia



Broadcast capabilities of Indian suppliers to the global markets **creating a win-win situation** for both – high quality parts at competitive prices for customers and long-term business opportunities for suppliers

Our Services

Design Support

CAD modeling, CAE simulations, and design optimization for manufacturability

Prototyping & Validation

Rapid-turnaround parts for design validation, fitment trials, and pre-production testing

Production Sourcing

Reliable supply through certified partners with decades of experience and expertise

Quality & Compliance

Assurance through suppliers certified to global industry standards and certifications

Post-Launch Support

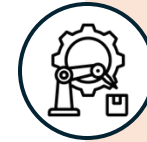
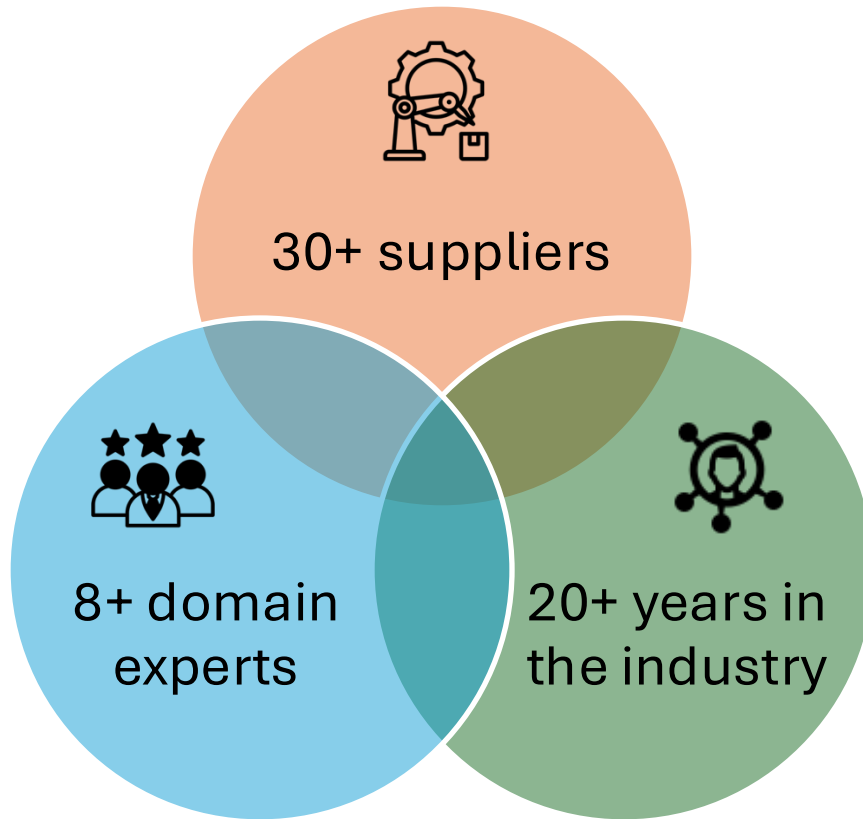
Ongoing part refinement, cost optimization, and supply continuity throughout the program lifecycle

Our services span the entire product lifecycle, include a portfolio of manufacturing processes such as machining, casting, forging, stamping, etc. and serve multiple industries such as automotive, defense, oil & gas and more...

[The name MettleWorx reflects our character, resilience and commitment to provide innovative yet practical engineered solutions to solve clients' challenges.](#)



3 key enablers | A robust network of suppliers and domain experts across industries helps us address critical problems



15+ suppliers certified to international standards with experience in casting, forging, stamping, machining, injection molding, reverse engineering and more...



Our expert network of industry professionals helps us solve design and manufacturing challenges throughout the product launch cycle



Founders' experience working with organizations in the US, EU and Asia, helps them empathize with clients' needs and identify the right solutions



Supplier network | Certified suppliers serving domestic and international clients through prototype and production phases

30+

SUPPLIERS ACROSS INDIA



100%

ISO
CERTIFIED

With suppliers holding industry specific certifications such as IATF, UL, ISO, etc.



8+

MANUFACTURING
PROCESSES

Includes stamping, casting, forging, machining, fabrication, wire harnessing, gear manufacturing, plastic and rubber molding



8+

INDUSTRIES
SERVED

Automotive – 4 wheelers, 2-wheeler, EVs and commercial vehicles, defense, aerospace, construction, oil and gas, food processing, agriculture, energy, home appliances



Expert network | Our experts are always reachable and support us hit the ground running on new projects

Why leverage experts?

- Bridges potential technical gaps, both in customers and suppliers' teams
- Helps leverage experience from similar projects with other customers and suppliers
 - Helps catch any design issues early
 - Ensures design for manufacturing
 - Pre- and post-production problem-solving support

Expert 1

- 15+ years of experience in developing forged components
- Expertise in global trade across multiple industries and products

Expert 2

- 30+ years of experience in developing drill taps for diverse applications
- Global trade experience within the machine tools portfolio

Expert 3

- Expertise in developing and manufacturing gears for automotive and industrial applications in both domestic and international markets
- Currently serves multiple Indian and German OEMs

Expert 4

- 30+ years in the procurement domain working with domestic and international suppliers of components made of metals and non-metals
- Expert in supplier vetting, product pricing and launch-readiness assessment

and many more...



About the Founders



Nitin Jadhav

- 15 years of experience with leading engineering, manufacturing and technology firms in the USA
- Held various technical, commercial and business roles at automotive OEM and tier-1 suppliers
- MSME (Michigan Tech); MBA (Uni. of Michigan)



Suhas Patil

- 11 years of experience as a mechanical engineer and strategic consultant
- Held R&D roles in engineering organizations, entrepreneurship in digital marketing, and data-driven consulting for small businesses
- MSME (Michigan Tech)

Key skills

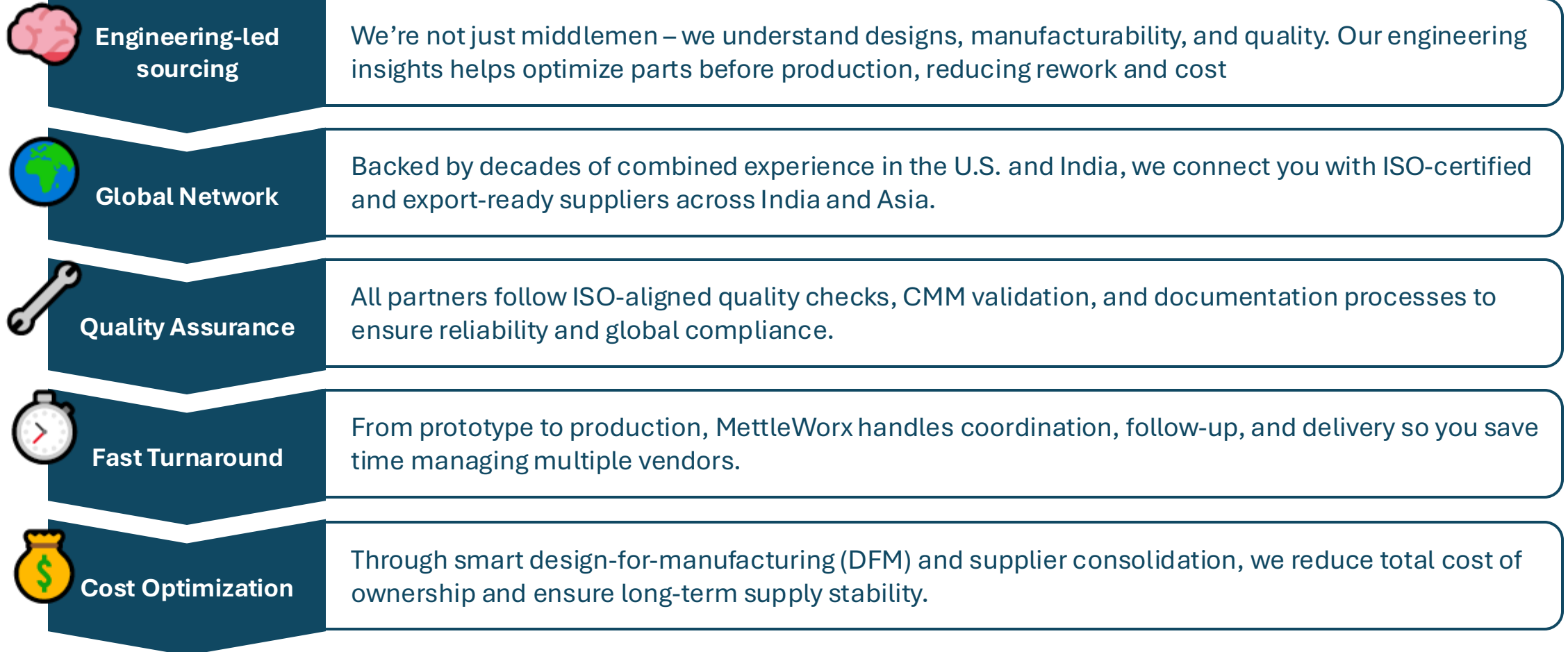
- Component design, DFM and CAE
- RFQ process management and strategic supplier nomination
- Product portfolio management - make vs buy analysis, mitigate component proliferation
- Global project management, technical partnerships for R&D
- Product bundling and pricing strategies

- DFMEA, root cause identification (RCA), and continuous improvement using six sigma tools
- Component design and product optimization for scalability
- Data analytics to support critical business decision-making
- Digital marketing
- Vendor & partner network management

The founders seek to leverage their knowledge of working with the US organizations and their network of suppliers in India to offer high quality engineering and manufacturing services to global customers



Why Partner with MettleWorx?



Supplier Portfolio

- *We partner with suppliers certified to the international standards and have extensive experience in working with both domestic and international clients*
- *Our suppliers are predominantly based in India with support from suppliers in Eastern Europe, Vietnam and Malaysia*



Supplier network | Certified suppliers serving domestic and international clients through prototype and production phases

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Machining Capabilities

Manufacturing capabilities

- Multi-axis machining
- Post-machining of cast, forged and stamped parts
- Computer Aided Manufacturing (CAM)
- Die and gauge design / manufacturing

Manufacturing Equipment

- Conventional machining – drilling, grinding, cutting, etc.
- CNCs, HMCs and VMCs
- Plating and paint booth

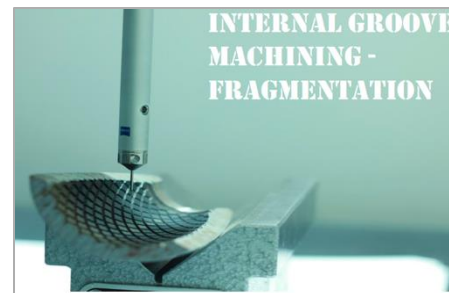
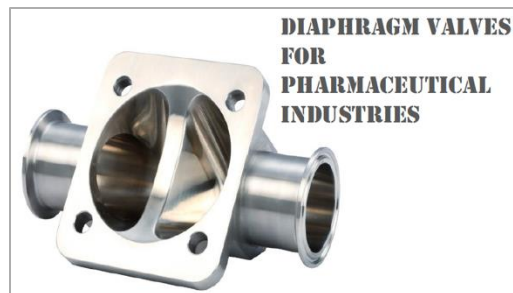
Inspection equipment

- Coordinate Measuring Machine (CMM)
- Vision Measurement Machine (VMM)
- Custom gauges

Materials machined

Steel, Aluminum, Stainless Steel, Brass, Copper, Inconel, Titanium, PTFE, Nylon, Polycarbonate

Example parts





Stamping Capabilities / Press parts

Capabilities

- High-volume and batch production
- Tool design and development
 - Progressive and transfer
 - Prototype tooling
- Simulation – AutoCAD, Delcam, Polyworks, UG-NX, Catia, IDEAs

Manufacturing and inspection equipment

- Presses across a wide range of tonnage – 30 ton to 1000 ton
- CNCs, HMCs and VMCs
- CED coating and plating
- CMM, surface profile tester, FARO arm

Part details

- Thickness range: 0.4 to 8 mm based on material
- Wide range of materials including steel, aluminum, copper, high strength materials

Example parts





Casting Capabilities – GDC and PDC

Capabilities

- Gravity and pressure die casting - aluminum
- 0.020 kgs to 30 kgs
- Mold flow analysis

Manufacturing equipment - GDC

- Horizontal gravity machines
- Melting and holding furnaces

Manufacturing equipment - PDC

- 130 – 720 MT machines

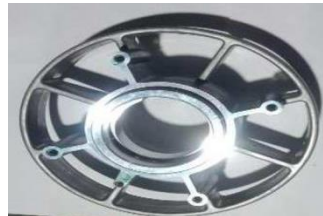
Other equipment

- Tumble and blast type shot blasting
- Vibro deburring and finishing machine
- Heat treatment, core making shop
- CNC/VMC machine shop
- 6-axis robot

Inspection equipment

- UTM, Spectro m/c for chemical analysis, profile projector, hardness tester, CMM, gas evaluation for molten metal

Example parts





Forging Capabilities

Capabilities

- Forging
- Metallurgical analysis
- Tool and Die development

Manufacturing equipment

- Multiple shearing and bandsaw machines
- Electrotherm 200, 300 KW
- Forging hammers: 0.5 - 2.5 MT
- Trimming presses: 100 - 200 MT
- Forging press: 1000 to 1600 MT
- Induction heating, trimming machines
- CNCs and VMCs

Inspection equipment

- Spark, Spectra and Magnaflux (ability for 100% Spectra inspection)
- Hardness tester, microscope analysis

Example parts





Plastic Injection Molding Capabilities

Capabilities

- Injection molding
- Insert molding, hot forming
- Ultrasonic welding
- Tool design using Creo, UG, DelCAM, Power Shape, AutoCAD

Manufacturing equipment

- 100 to 1000 MT injection molding machines
- 3 axis and 5 axis VMCs
- EDM and wire EDM cell
- Assembly cell (manual)

Inspection equipment

- 3D scanner
- Profile inspector, sharp point tester in addition to conventional gauges

Materials molded

Wide range of materials including Acetol, Nylon, HDPE, LDPE, Polycarbonate, Polyester, Polypropylene, Polystyrene, PVC, TPE

Example parts





Pipe Bending Capabilities

Capabilities

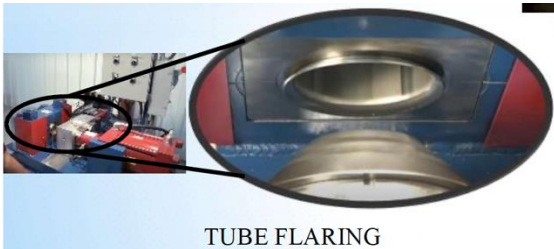
- Tube bending, flaring and squeezing
- Project welding, spot welding, CO2 welding – manual and robotic

Manufacturing equipment

- CNC pipe bending machines

Part details

- Pipe thicknesses up to 4 mm and brackets up to 16 mm thick

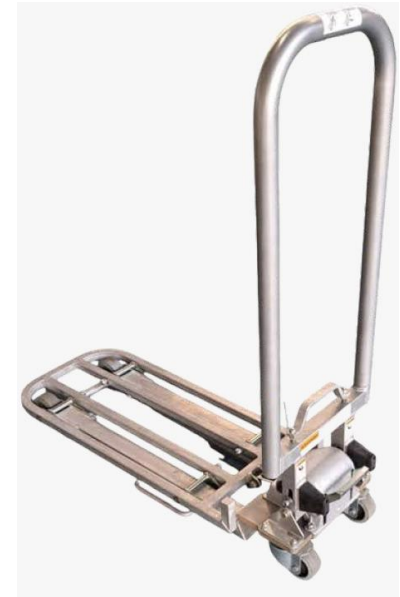


TUBE FLARING



TUBE SQUEEZING

Example parts





Heat Sink Capabilities

Capabilities

- Pressure die casting of aluminum and post-machining

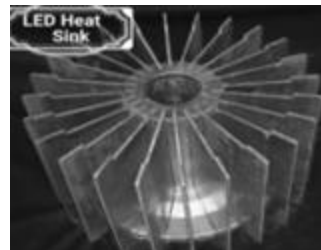
Manufacturing equipment

- PDC machines: 160 to 700 tons
- Melting furnaces
- Shot blasting – rotary and hanger
- Trimming press
- Machine shop – CNCs, VMCs, conventional machines, SPMs

Inspection equipment

- Density testing equipment
- CMM, surface roughness, hardness tester, microscope, UTM
- Spectroscope

Example parts





Wire Harness Capabilities

Capabilities

- Wire harnessing
- Electro-mechanical assemblies and box building
- Control units
- UPS assemblies

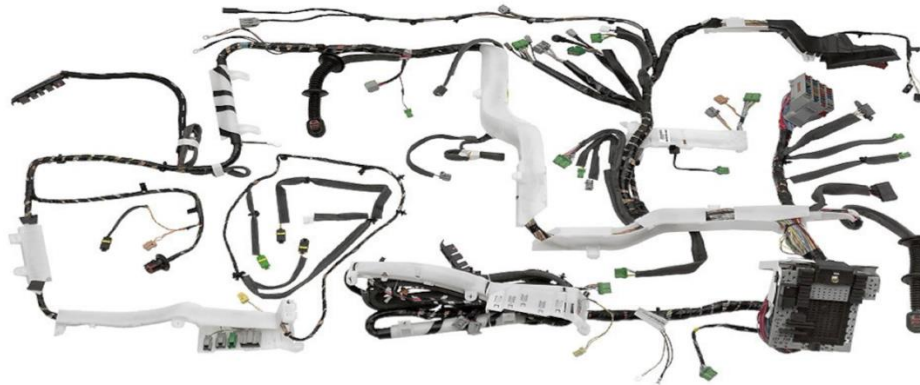
Manufacturing equipment

- Fully automatic sleeve cutting machine
- Cable tag/ ferrule printing machine
- Semi-automatic lug crimping machine
- Dowel crimping machine
- Heat gun

Inspection equipment

- Crimp cross-section analyzer
- Motorized pull tester
- Crimp Force Monitor (CFM)
- Cathode Ray Oscilloscope (CRO)
- Megger
- DC test kit
- Relay test kit
- Variac transformer

Example parts





Gear Manufacturing Capabilities

Manufacturing capabilities

- Gear hobbing, shaping, shaving, grinding

Manufacturing Equipment

- CNC gear hobbing: Pfauter PE-200, Gleason GH-125
- Gear shaping: Fellows 6A, Liebherr LC-350, Lorenz LS-154
- Gear grinder: Reishauer NZA
- Cylindrical grinders, automatic bandsaw

Inspection equipment

- Lead & Profile Tester: MAAG – PH60 and MAAG – PH40
- Height gauge, bore dial gauge, span micrometer

Materials machined

Ferrous, non-ferrous, plastics

Example parts





Comprehensive Industrial Sourcing for EPC Projects

From standard equipment to highly specific project requirements

- Welding machine and accessories
- Motor, Pumps and accessories
- Panel AC, Cooling Tower Fans
- Lubricants & Coolants
- Cutting tools – inserts, cutting wheels, grinding discs, etc.
- Fasteners
- Gaskets, filters and seals
- Welding rods and electrodes
- Measuring tools and equipment
- Maintenance and cleaning supplies – cleaning fluids, rags, brushes, etc.

Example parts



Thank you!

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