



TECH FORGE LTD

CAPABILITY STATEMENT

Overview

Tech Forge Ltd is an Auckland-based New Zealand company providing integrated 3D modelling, 3D printing, technology research, and business support services. The company delivers flexible, end-to-end solutions that span concept development through to physical production, supporting clients across a wide range of industries including construction, healthcare, automotive, and consumer applications. Tech Forge operates with a client-first approach, adapting services to suit each project—from simple production tasks through to full product development support.

Core Services

3D Modelling & Design

Development, refinement, and optimisation of 3D models for prototyping and production. Capability to work from concepts, sketches, or client-provided files, ensuring designs are suitable for intended use and manufacturing processes.

3D Printing (Prototype & Small Batch)

Production of 3D printed components ranging from one-off prototypes to small batch runs. Flexible print settings allow delivery of both functional and aesthetic outcomes, tailored to project requirements.

Prototyping & Product Development

Support across the full development lifecycle—from initial idea through to physical prototype. Includes integration of mechanical components, and where required, basic electronics and software considerations.

Technology Research & Development

Targeted research and investigation into emerging technologies and solutions. Outputs include structured findings, feasibility insights, and practical recommendations to support decision-making.

Business Support & Digital Solutions

Provision of services including website design, CRM setup, and digital system implementation. Engagement can include initial setup, iterative development, and ongoing support.



Design Review & Optimisation

Independent review of existing designs to improve functionality, structural performance, and manufacturability. Includes practical advice informed by real-world application and testing.

Advisory & Consultation

Flexible consultation services supporting early-stage concepts through to developed projects. Suitable for both experienced clients and those new to 3D printing and product development.

Key Differentiators

Integrated Offering

Combination of 3D modelling, printing, research, and business support within a single service, reducing the need for multiple providers.

End-to-End Capability

Ability to take a concept through research, design, prototyping, and production within one workflow.

Flexible Client Engagement

Services tailored to the client's level of experience—from guided support for first-time users to direct execution for prepared clients.

Real-Time Collaboration

Capability to model, initiate prints remotely, and provide live progress monitoring via webcam links, improving transparency and engagement.

Practical, Outcome-Focused Approach

Emphasis on delivering solutions that work for their intended purpose rather than over-engineering.

Transparent Delivery Model

Clear communication of capacity and timelines, with a focus on maintaining quality over volume.

Project Experience

Modular Housing (New Zealand)

Delivered scaled 3D models and prints for one of New Zealand's early modular home builders, supporting design visualisation and development.



In-Ground EV Charging Units

Produced scaled models based on workshop drawings, identifying a design issue (absence of handles) that was rectified prior to mass production.

Custom Prototypes & Components

Delivered a wide range of solutions from replacement parts to bespoke prototypes for hobbyists and commercial clients.

Technology & Tools

Primary tools include SketchUp, Blender, and Unreal Engine for modelling and visualisation.

Tech Forge also has experience using Autodesk software (including AutoCAD and 3ds Max), with the capability to utilise additional platforms where required through short-term licensing.

3D printing capability includes multiple FDM printers, supporting a range of resolutions (0.1 mm to 1 mm nozzle sizes) and scalable production.

Quality & Delivery Approach

- Focus on delivering fit-for-purpose outcomes aligned with client requirements
- Iterative refinement through collaboration and feedback
- Willingness to review and improve designs where performance issues arise, within agreed project scope
- Customised communication—from live progress feeds to milestone-based updates
- Clear and straightforward project completion and handover processes

Scalability

Tech Forge scales in response to demand through:

- Expansion of in-house 3D printing capacity
- Exploration of advanced printing methods (e.g. epoxy-based printing for fine-detail outputs)
- Potential adoption of conveyor-based printing for larger-scale production
- Access to external capability for design-for-manufacture and large-scale production

Extended Capability

Tech Forge has access to:

- In-house chartered engineering expertise



- International design-for-manufacture capability, enabling transition from prototype to mass production where required

This extended network supports projects requiring progression from small batch prototyping to high-volume manufacturing.

Client Approach

Tech Forge offers a structured but flexible engagement model:

- Initial Design Capture Brief to define requirements, application, and scope
- Adaptive delivery based on project type and client needs
- Support ranging from hands-on collaboration to independent delivery
- Strong emphasis on client satisfaction and functional outcomes
- Repeat business and referrals form a significant portion of ongoing work.

Community & Industry Engagement

Tech Forge actively contributes to the community through:

- STEM education initiatives, including school-based engagement

Online resource platforms, including:

- STEM learning content
- Community-focused resources and creative outputs
- Ongoing involvement in the Institution of Civil Engineers (New Zealand), contributing to communications and industry engagement

These activities reinforce a commitment to supporting future talent and community development.

Future Focus

- AI-driven workflow and design optimisation
- Reduction of material waste through improved infill strategies and recycling
- Continued development of scalable production solutions
- Expansion of integrated digital and product development services

Tech Forge delivers agile, client-focused solutions with a commitment to continuous improvement and sustainable innovation.