



## Delivering optimized product realization solutions





## Talking to the right Innovative partners can significantly impact your market.

The integrated design and manufacturing services of both IDNEO and SMTC are powerful resources combining the skills and technologies of strategically located design and manufacturing facilities – under a single innovative umbrella. The synergy of our organizations provides the convenience and flexibility for your local and global product design and manufacturing requirements. IDNEO specializes in design engineering, research and development of new products, and has a collective of more than 200 engineers with extensive experience in a wide range of sectors. SMTC is the ideal fit for OEMs who require the flexibility of a strategic manufacturing partner who can meet the needs of their unique product engineering, customized supply chain management, and go-to market strategy requirements.

## Being part of our ‘Innovators Advance’ program puts you firmly in the driver seat for success.

Turning ideas from concept into mass production with IDNEO and SMTC, the ‘Innovators Advance’ program is exclusively dedicated to partnering with leading edge companies. We help innovators turn their product ideas into reality by leading the advancement of **concept & design, product development & compliance, quick turn prototyping, rapid manufacturing and supply chain strategies** to launch new products and technologies into the market. Our ‘Innovators Advance’ program is an accelerated business model that enables IDNEO and SMTC to meet the unique design and development needs of every customer, while providing the security and confidence of a global manufacturing partner. We provide the complete product realization solution to help customers reach their full market potential.



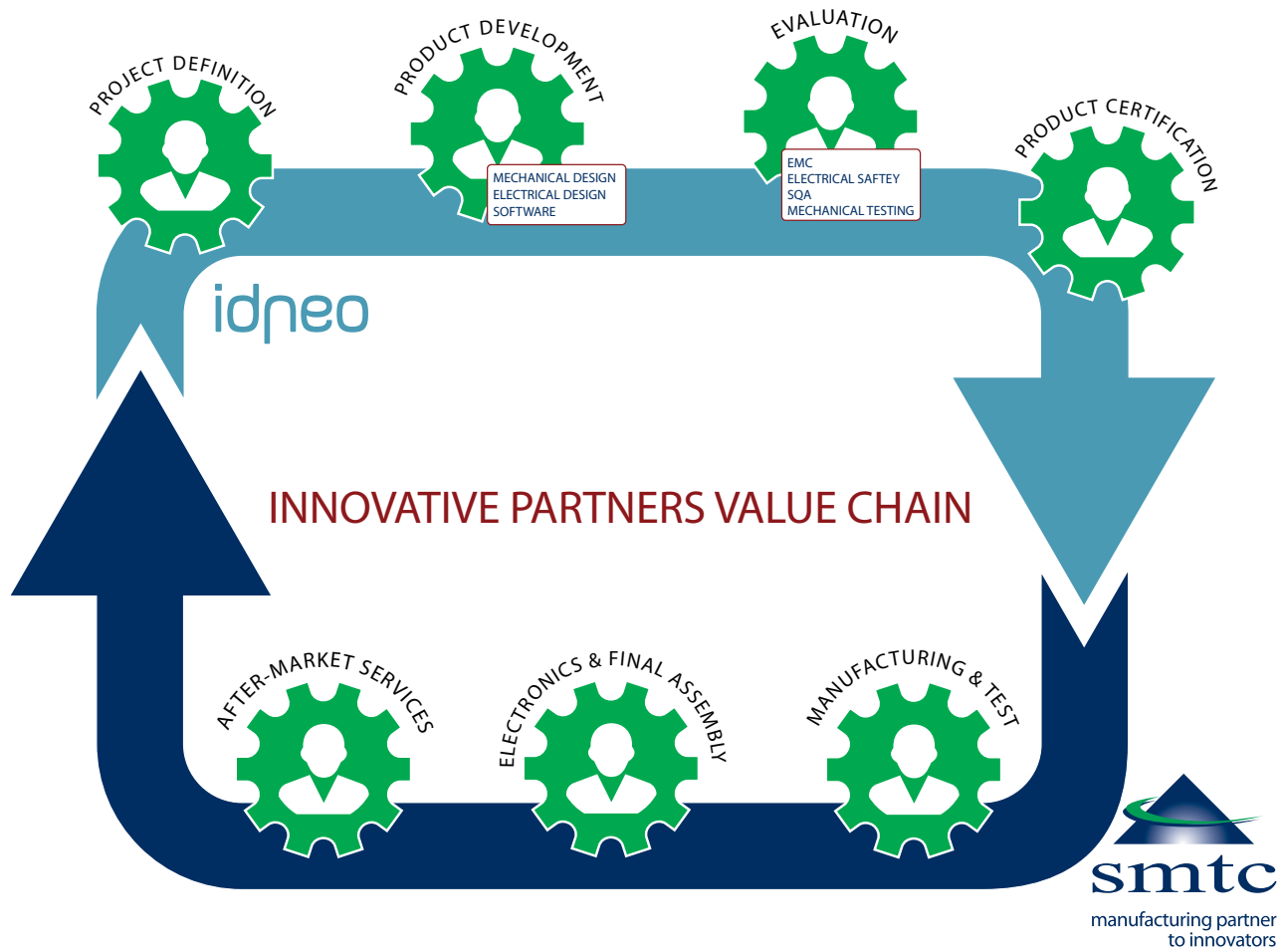


## Business Areas of Expertise

With more than 25 years of experience working in partnership with industry-leading OEM's world-wide, SMTC and IDNEO have both been pioneers in concept & design, product development & compliance and surface mount technology. IDNEO has extensive knowledge in many different technologies, acquired through years of product research and development for different sectors. Working closely together, both IDNEO and SMTC offer the entire life cycle of electronic product services through to the growth, maturity and end-of-life phases.

Working together our companies specialize in the following key sectors and/or areas:

- **Industrial & Commercial**
- **Communications & Instrumentation**
- **Consumer & High Tech Electronics**
- **Computing & Networking**
- **Medical / Life Science**
- **Power & Energy**



## Turning innovation dreams into reality

Developing products successfully requires finding a balance between many factors. IDNEO is aware that quality, cost and time are key factors for the success of any development that it participates in. IDNEO has a collective of 200 engineers with extensive experience, who are committed to the most innovative product design and development.

IDNEO's knowledge covers a wide range of specialties, including the design and engineering of embedded software, mechanical 3D product and packaging solutions, analog and digital hardware, power circuits, and researching EMC solutions (Electro-Magnetic Compatibility). IDNEO also specializes in RF Digital transmission (DVB), incorporating terrestrial, satellite and in display technologies.

Innovation is the central axis of IDNEO's product development processes. By means of planning and management structure with monitoring and control, IDNEO provides value and experience to customers, ultimately creating the latest generation of products and integrated turnkey solutions.

IDNEO offers the complete product development cycle and works closely with SMTC to provide specific services including innovation, cost reduction, and engineering / manufacturing support to global customers in multiple markets.

## global reach



## Controlling demand across global locations

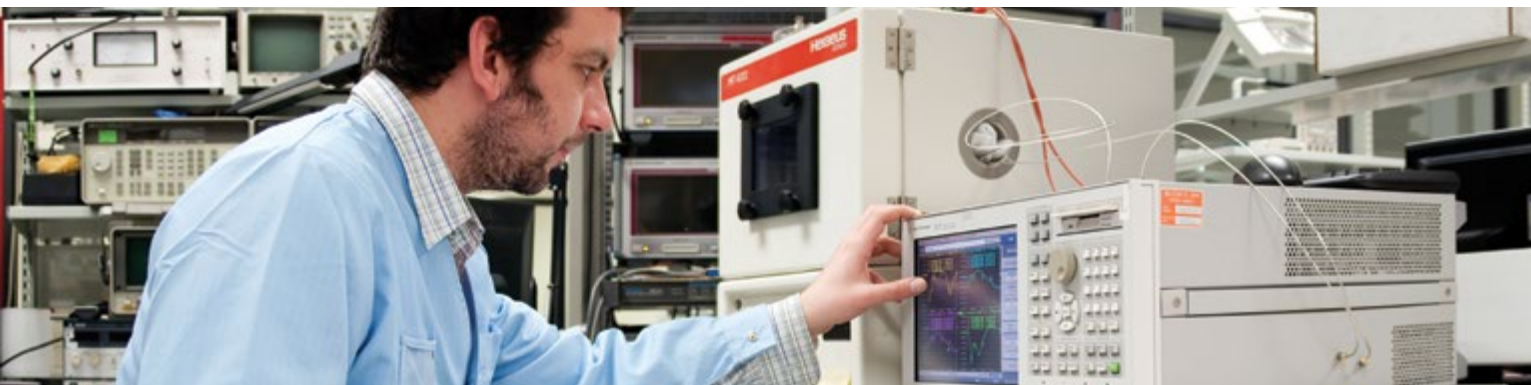
IDNEO's high-tech facilities are located in Barcelona, Spain, and San Jose, California, where turnkey projects are developed based on a strong commitment to innovation and technology (including certification). SMTC's global electronic manufacturing facilities are strategically located across a broad footprint in Canada, USA, Mexico, and China. These facilities offer both regional and global solutions for Full Product Design, Prototype Development, New Product Introduction and Low Volume - High Mix production. Our Low Cost facilities focus on high volume production and serve as a seamless transition of product migration for full production ramp-up.

## A Fast Response with Flexible Solutions

All SMTC facilities adhere to the "Copy Exact" methodology, whereby every SMTC facility employs the same systems and follows the same standardized processes. The methodologies incorporated at SMTC's U.S. facilities are also replicated at SMTC Mexico and China. "Copy Exact" allows for a seamless and timely transition of production between facilities helping customers reach their cost and volume targets faster.

In addition, all SMTC facilities are certified to ISO 9001:2008 and have capabilities to provide RoHS Compliant products. Our U.S., and Mexico facilities have achieved ISO-13485:2003 certification for our Medical customers. Our San Jose facility has FDA Licensing to manufacture Class 1 & 2 medical devices, and has a Class 10,000 Clean Room for Assembly.





## Delivering product realization solutions through our 'Innovators Advance' processes

IDNEO and SMTC help customers minimize their component count, reduce costs and improve quality. IDNEO's design & engineering team optimizes product design for maximum performance, higher yields, and faster time-to-market. SMTC's New Product Introduction team is focused on the timely transition of customer builds into production. Our integrated and proven NPI process ensures a controlled and quality product launch into production by engaging the following methods.

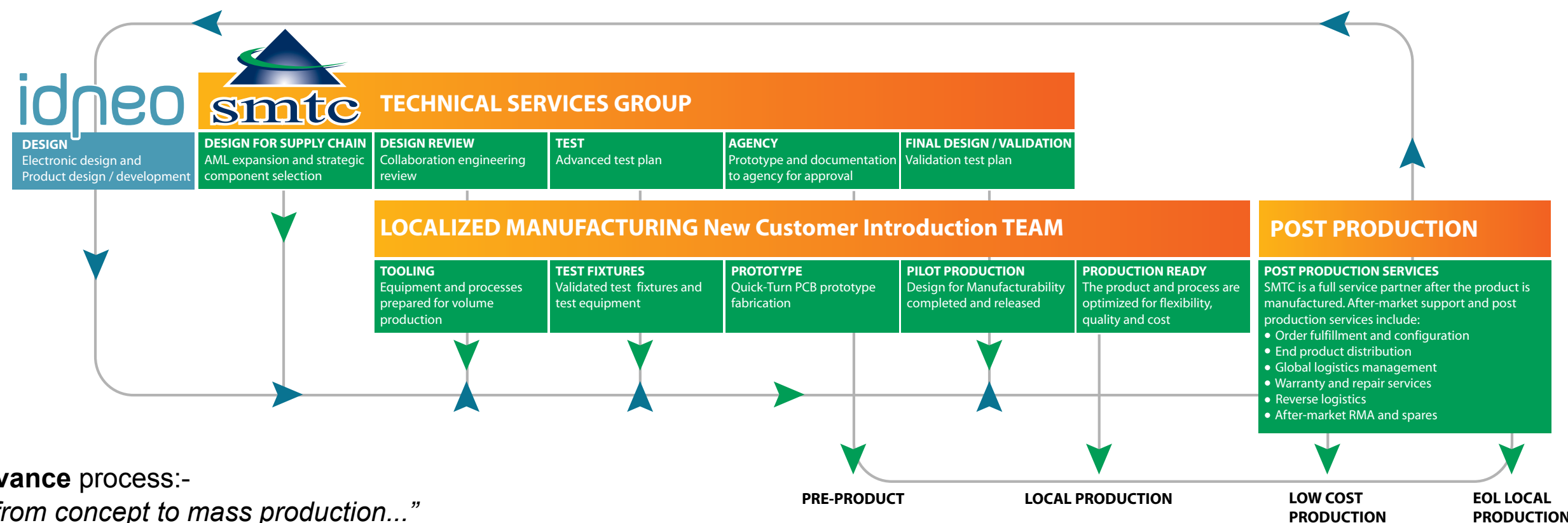
- **Early design engagement and reviews during the initial Design phase:** SMTC's partnership with IDNEO offers years of experience in design and manufacturing and provides the optimal end-to-end solution to ensure quality prototypes and the minimization of design errors for a smooth transition into production.
- **Technical services engagement at both Design and NPI stages:** IDNEO and SMTC provide dedicated support throughout the lifecycle of the product, with a key focus on continuous improvement of existing programs and identifies, prioritizes, and address opportunities for cost savings and performance improvement.

### Complete Product Life-Cycle for Electronic Engineering Services:

- Product Development
- Mechanical / Electrical Design
- Design Review
- Software Development
- Component Engineering
- Manufacturing Engineering
- Front-End Engineering
- PCB Design, Layout and Schematic Capture Services
- Design analog and digital hardware
- Design of power circuits
- EMC solutions
- RF Digital Transmission (DVB)
- Patents and Certifications

### New Product Introduction Services and Tools:

- Assembly systems
- Pick and place
- Automated thru-hole
- Inspection and test systems
- Flying head probe
- 5-DX
- Environmental stress screening
- Development services
- Functional test development
- ICT development
- NCI/NPI services DFM/DFT
- Mechanical tooling design
- Advanced Functional & Assembly Testing



### Innovators Advance process:-

*“ turning ideas from concept to mass production...”*



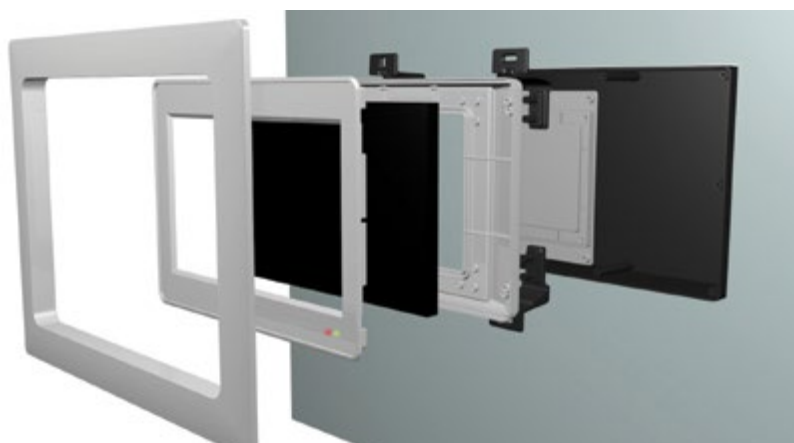
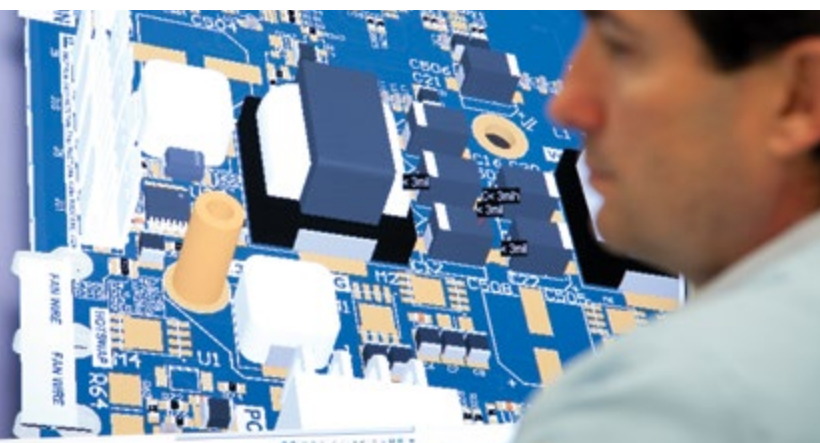
## Product Development

Innovation is the central axis of the product process development in IDNEO. By means of planning, management structure, monitoring and control, IDNEO provides value and experience to customers allowing the creation of latest generation products and integrated turnkey solutions.

## Software Development

IDNEO's software Design and Engineering department has wide experience in software and firmware development for turnkey solutions, offering the best integrated solution for your business. The design process covers from the requirements management (DOORS...), the design of the system and its architecture (UML...) going all through the development up to validation.

- Embedded Firmware (wireless systems, control modules, USB devices, motor control, USB devices low-power consumption systems...)
- Mobile Systems (products based on operating system ;Android, Linux, iOS... for flexible systems, graphics capability, touch screen, ...)
- Project management and development with local teams or “offshoring”
- PC Software (customized solutions for PC application; control consoles, web server, database...)
- GUI Design and development
- Control and process automation. PLC and HMI selection and programming
- Software Quality Assurance (SQA) according to the proper methodology and standards (CMMI, SPICE, EN50155, EN50128, EN29000,...) and/or Agile Projects Management (SCRUM, ...)



## Electrical Development

The special skills in electrical design include:

- Design and architecture of systems with embedded micro-processors
- Video and audio processing
- Design of analog and digital circuits, power circuits (power supply), high frequency digital circuits (memories, USB, Ethernet...)
- Design of RF solutions, DVB tuners (terrestrial, cable and satellite)
- Research into EMC solutions by means of pre-evaluation.
- CAD design for multi-layer solutions and prototyping during the design phase.
- Wide experience in display technologies either in selection, evaluation and monitoring or product manufacturing
- Component engineering (toughness test, structural quality analysis, audit and monitoring parts certification...)

## Mechanical Development

The main functions of the mechanical design team are:

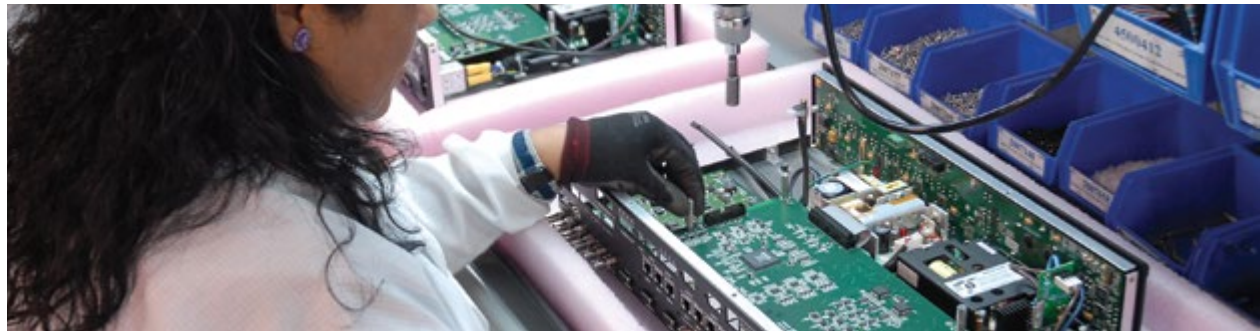
- Concept design and creativity (through market studies, interviews with users, shadowing, ergonomic and usability analysis, etc.)
- Mechanical product design using different CAD/CAE platforms and format conversion.
- Analysis and structural simulation of parts to optimize geometries and materials.
- Cosmetic design support to style definition from concept phase to the clear finish.
- Design of packaging and final product and parts validation, covering from initial concept to logistics optimization.
- General support for industrialization and processes from management of tools & dies and validation tests for the introduction to production line. IDNEO assures the design's productive feasibility by reducing the development and launch phase.
- Graphic design for printed parts and info-graphics (such as packaging, manuals or promotional materials)

## Project Management

IDNEO guarantees a solid management system whose internal methodology adapts to customer needs and markets in which it operates (ANPQP, ISO TS16949, SPICE/CMM-I,..)

- Total coverage projects up to industrialization
- Leadership of a multidisciplinary team focused on achieving predefined objectives
- Experience in managing local and global projects





## Electronics Manufacturing Services

### Value Engineering

The partnership between SMTC's technical services group and IDNEO's design team provides value by addressing **DFx** early in the design cycle, which results in a seamless and optimized manufacturing process. An early collaborative design engagement can also provide value by determining opportunities for cost and performance improvements, thereby minimizing any potential issues and the number of respins. The existing production/manufacturing process employed by your organization can utilize SMTC's value engineering services by uncovering valuable opportunities in reducing costs, whether it's related to new components and layout applications, new technologies, or functional enhancements. Key focus areas include:

- Design reviews which can uncover valuable opportunities to reduce costs related to new component and layout applications, new technologies, or functional enhancements.
- Design for Supply Chain (**DFSC**) and Design for Fabrication (**DFP**) which focus on the materials element of the total cost.
- Design for Manufacturability (**DFM**), Design for Assembly (**DFA**) and Design for Test (**DFT**) which targets the labor portion of the total cost
- Pre and Post (**DFM**) manufacturing reviews which identify initial issues in supporting prototype development and ramp to volume, while also driving continuous improvement.

### Delivering Advanced Capabilities

SMTC offers advanced capabilities including dedicated prototype lines, additional SMT capacity, advanced engineering processes for PoP (Package-on-Package), state of the art testing technology, and high volume manufacturing processes for technologies such as PoP and flex circuit boards.

SMTC's Technical Services Group provides Advanced Process and Test development including Test plans, ICT and functional test development, and tactical development for AOI, 5DX, Flying Probe, and ICT. Our expert engineers develop process flows, control plans, equipment setup and parameters to minimize opportunity for errors and provide high quality, reliable production.

### Complete End - To - End Solutions

SMTC's electronics manufacturing facilities specialize in delivering fully integrated and customized contract manufacturing services to both original equipment manufacturers and emerging technology companies within the industrial, medical, computing and communication market segments. Offerings include production, systems integration and testing, and value engineering services, developed over 25 years of EMS operations and experience. Our services extend over the entire electronic product life cycle, from the development and introduction of new products through the growth, maturity and end-of-life phases. Our facilities utilize state of the art equipment to facilitate maximum yield and stay ahead of semiconductor packaging technologies.



## Full Integration of Production through Flexible and Lean Manufacturing

With SMTC, your product is manufactured in a Lean process environment where we utilize a highly flexible approach, not a one-size-fits-all model. We develop scalable solutions that have the flexibility and agility to meet your needs. SMTC is exclusively focused on low-mid volume, low-high complexity programs ranging from printed circuit board assemblies to finished electromechanical products. Our unique business model provides a dedicated team to drive your program's success, while saving you time and money. At SMTC, we operate within a continuous improvement culture that always places our customers at the center of our operations.

### **Manufacturing project management**

At SMTC, product development stages are integrated with the manufacturing processes to create an efficient New Product Introduction (NPI) program, which in turn ensures flexible and customized solutions.

### **Tailored Global Supply Chain**

SMTC maintains both North American and Asian procurement teams to take advantage of eastern and western strengths in the global supply chain. Our software systems are engineered to quickly evaluate demand changes such that customers are instantly able to make informed decisions when market conditions change and speed is of the essence. To further optimize speed and flexibility, our in-plant stores accelerate cycle times and reduced inventory overhead, resulting in more efficient communication across the electronics supply chain.

### **Printed circuit board assembly (PCBA)**

SMTC offers a wide range of assembly services from PCB manufacturing to Hole and Surface Mount Technology.

### **System Integration & Test**

SMTC provides a full integration of electronic products and designs all production processes to ensure the highest quality standards for each product are met.

### **Product validation and manufacturing equipment**

Drawing on extensive knowledge and experience, SMTC provides product validation solutions according to each customer's specifications.

### **Product and PCB reliability laboratory**

SMTC provides consulting services for product durability improvement and the assembly process, ensuring the quality and reliability of the final assembly, as well as the establishment of preventive measures for detection of failures.

### **Warranty and Repair Services**

SMTC provides both return and warranty services. We can adapt to any level of extended service which is required by our customers. Our solid track record in providing integrated after-market services helps our customers to achieve the lowest landed TCOO and identify opportunities to minimize returns for improving the next generation of products.



## **SMTC Corporation**

SMTC Corporation  
Corporate Headquarters,  
635 Hood Road,  
Markham, Ontario,  
Canada, L3R 4N6

Tel: (905) 479-1810

E-Mail: [contact.us@smtc.com](mailto:contact.us@smtc.com)  
Web Site: [www.smtc.com](http://www.smtc.com)