TECHNALYSIS ®

Engineering Software and Services

Business

 complement enhance client engineering capabilities in product design and manufacturing process development

Products and Services

- problem solving: product design and process development
- licensed software
- custom software development

Expertise

- fluid dynamics and heat transfer
- noise, vibration, stress and electromagnetics
- material processing: glass, ceramics, plastics, metals, chemicals, food and pharmaceuticals

Application Areas

Product Design

- engine components
- cooling systems
- fuel systems
- brakes and clutches
- turbines and compressors
- torque converters
- pumps and valves
- fans and blowers
- HVAC
- electric motors and generators
- emission control
- household appliances
- medical devices
- computer printers
- power tools

Process Development

- casting (sand, die casting, lostfoam)
- injection and compression molding
- forming, filling, cooling, molding and extrusion (plastic, metal, glass)
- filtration and chromatography
- mixing
- agitation
- fermentation and reaction
- drying
- filling and packaging
- clean room and barrier design
- heating, cooling and transport problems
- powder flows
- flow in magnetic fields
- plastic coating
- glass processing

Software Products

PASSAGE ® Software

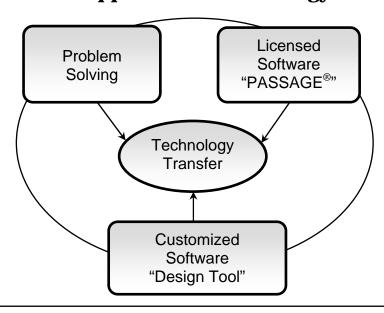
A collection of finite element programs for flow and heat transfer analysis of complex products and processes.

- **FLOW** flow and heat transfer analysis
- **DEM** flow of small particles in electrical and magnetic fields
- **SYSFLOW** analysis of system flow networks
- **PowerCAST** analysis of filling and solidification of materials
- **COMPRESSION** mold flow and heat transfer analyses of fiber-reinforced, compression molded parts
- **FreezeDrying** primary and secondary freeze-drying modeling using coupled mass and heat transfer analyses

dieCAS® Software

A comprehensive software for die casting: analysis of filling, solidification, die and cavity distortion; die design.

Service Approach - A Technology Path



The Technalysis® Advantage

Short Term

- Support design function in identifying and resolving performance issues
- Understand the effect of design parameters on performance before building and testing
- Reduce the time and cost of development

Long Term

- Technology transfer via custom software for use as a design tool to model customer products and processes
- Provide engineering capabilities to maintain customer leadership in core technologies through a long term partnership