



ON TARGET

Technology Development

*on time, on budget, on top ...
on target*



Company Overview and Value Offerings

In a Nutshell

- On Target Technology Development (OTTD) is an agile, emerging, veteran-owned small business specializing in:
 - Systems and software engineering
 - Analog and digital circuit design
 - Embedded power controls
 - Modeling and simulation
- Our target applications and industries:
 - Aerospace & defense real-time embedded systems
 - Power, motor, and actuator control systems
 - Diagnostics, prognostics, and built-in test
 - Model-based development, simulation, and testing

ON TARGET *provides systems engineering services to create power and embedded control systems applications in mission-critical domains using lean development processes.*

Primary Domains / Technologies

- Systems Engineering
 - Redundant, fault-tolerant systems
 - Modeling & performance eval
 - Test planning and platforms
- Hardware Engineering
 - Power and control electronics
 - DSP, PowerPC platforms
 - FPGA, VHDL logic design
 - Circuit simulation
- Software Engineering
 - Model-based design
 - Device drivers, CLAW, BIT
 - RTOS, OpenGL, ARINC-653
- Engineering leadership
 - Market/business/technical
 - New product development
 - Technology roadmapping
 - Remote teams, partnerships

- Embedded systems
- Aerospace controls
- Automotive controls
- Radar/Communication
- Electromechanical
- Robotics & motor control
- Performance Simulation
- Power management and control

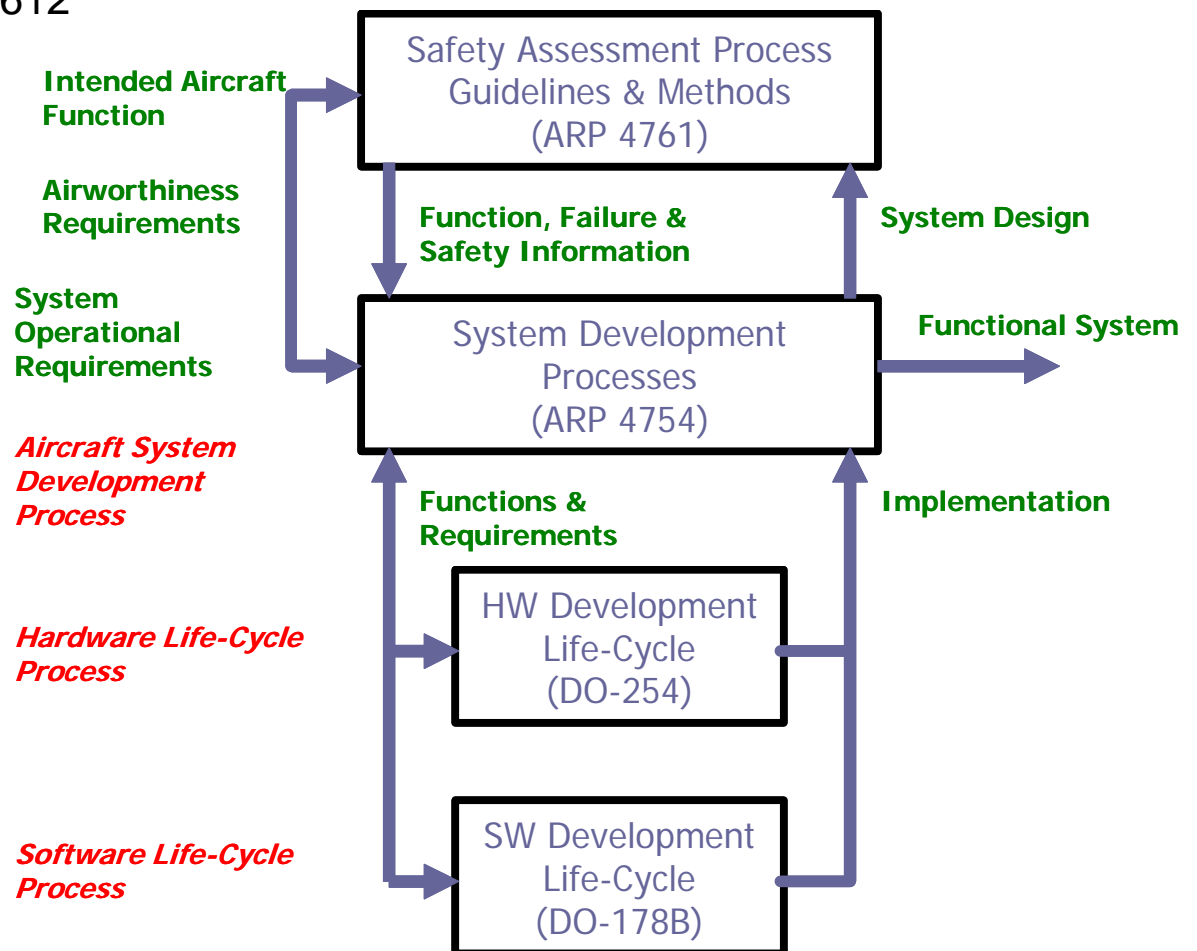


Our Development Processes

- On Target processes integrated with customer processes and industry standards
- ARP 4761, ARP 4754, DO-178B, DO-254
- MIL-STD-498, MIL-HDBK-29612
- SAE J1939, J1701, J1587
- IEEE 12207, EIA-731
- IEC 60601, 61508
- MISRA C
- CMMI

Solid understanding and awareness of development impact

Robust development and reliable performance



Robust, Custom Circuit Design

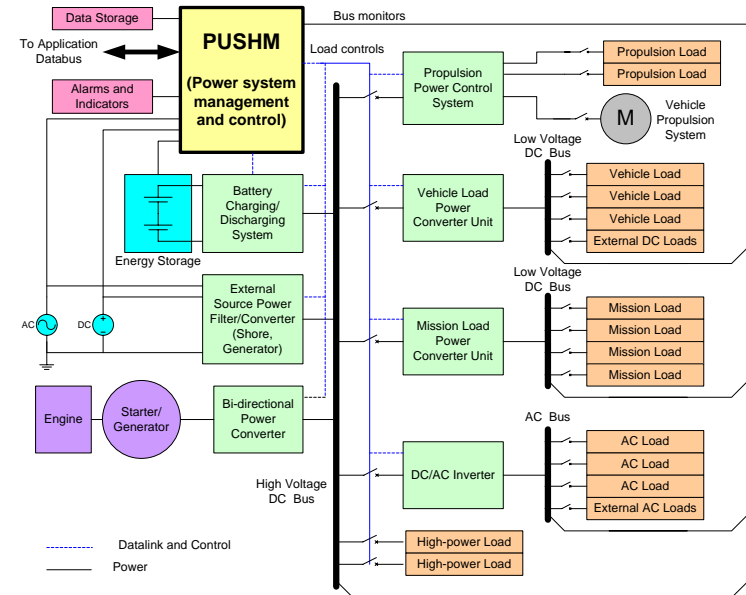
- Electrical and electronics design and analysis
- Schematic capture, simulation, parts selection
- Circuit card layout and routing
- Hardware integration and test
- Prototyping and manufacturing
- Microprocessor, microcontroller, FPGA-based architectures
- Interface and communication system design
- Small-signal analog design and signal conditioning
- High-accuracy A/D, D/A and industry-specific interfaces
- Embedded control software

Power Electronics Development

- Power system design for platform integrators
 - Airbus
 - Boeing
 - Northrop Grumman

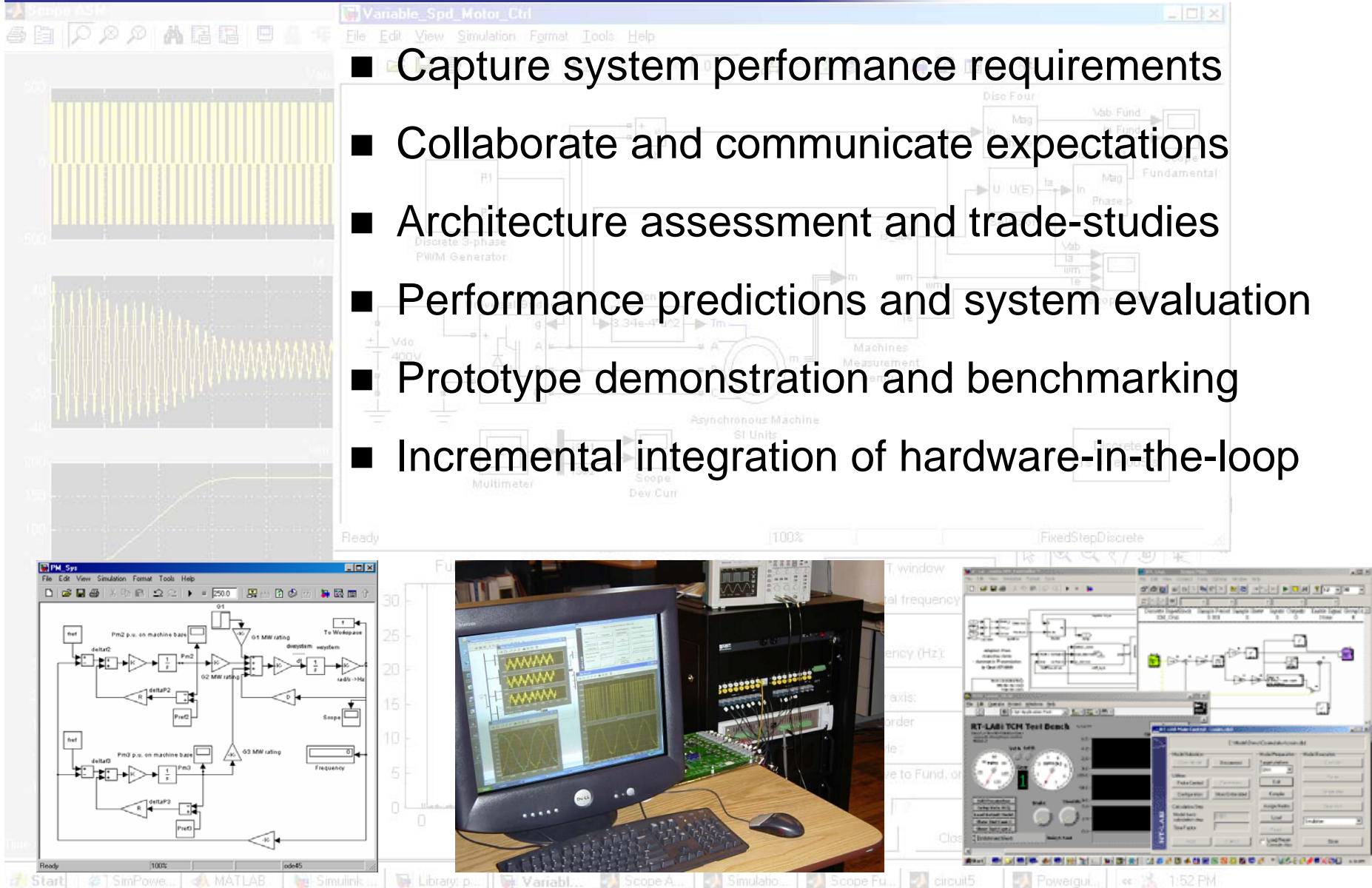
- Power stage equipment and models
 - EBHA system
 - A400M winch and crane
 - Cargo handling system
 - UAV actuator control
 - HEV propulsion system
 - Fuel control system
 - Generator controls
 - Vehicle power management system

- On Target products
 - Power, Usage and System Health Manager (PUSHM)
 - Quad-channel actuator control system
 - Redundant, robust Motor Control Electronics



Model-Based Development

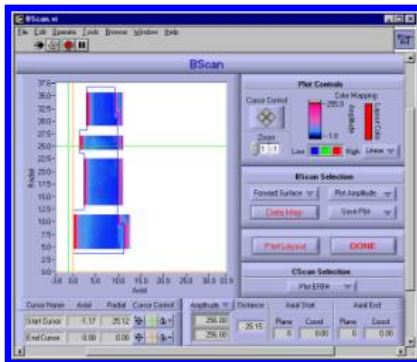
- Capture system performance requirements
- Collaborate and communicate expectations
- Architecture assessment and trade-studies
- Performance predictions and system evaluation
- Prototype demonstration and benchmarking
- Incremental integration of hardware-in-the-loop



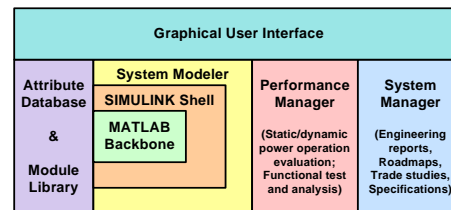
Automated Test Equipment Solutions



- Fully automated and manual test platforms with debug and test reporting utilities
- COTS HW with tailored interfaces
- Easy to use, user-friendly GUI with LabView backend
- Designed flexibility for future maintainability and expansion
- Integrated models and plant simulators
- Text-based command scripting language
- Self test capabilities
- Real-time signal I/O and databus control/monitor
- Web-access features:
 - Report generation
 - Real-time monitoring
 - Remote control
 - Data sockets
 - Test scripting
 - Customer interaction



Prototype Integration System Manager (PRISM)



Web-Based Collaboration Portal



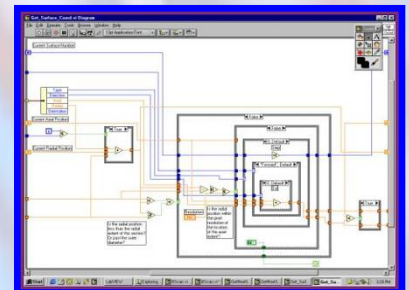
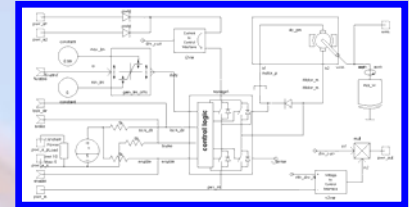
On Target Training

- Tool training
 - Saber
 - MS Project
 - Matlab/Simulink
- Engineering topics
 - DSP Fundamentals
 - FPGA Development
 - Embedded Software Design
 - Fault-Tolerant Systems
 - Embedded System Debugging
 - Software Quality and Testing
 - C++ Programming
- Professional Topics
 - Quickfire Project Management
 - Adaptive Product Management
 - Project Management Bootcamp
 - Operations Management
 - PMP Preparation
 - Managing Technology Development Programs
 - Critical Thinking and Decision-Making
- Tailored Training to customer needs

A History of Success

Our team has met the challenge...

- **Actuator Control System** – Quad-channel, DSP and FPGA architecture, synchronized, fault-tolerant digital controller with 1394, CCDL, sensor and power drive interfaces
- **Multi-axis motor control** – FPGA-based space-vector modulated triple-axis
- **Health and Utility Management System** – Power Usage and System Health Manager with diagnostics, prognostics, load-shedding, and interlock control.
- **Hybrid Electric Drive Systems** – Army R&D, Prototyping/Launch
- **Power Distribution Systems** – Secondary Power Distribution System for Embraer and Dornier aircraft
- **Technical Business Pursuit** – Defense program RFP support
- **Mobile Power Systems** – Pulsed-power mobile hybrid electric system for high-power radar and communication applications
- **Rotorcraft Flight Systems** – Flight dynamics simulation, control law development and system performance evaluation
- **Communication Systems** – Aircraft data interface and communication system modeling and performance evaluation
- **System Instrumentation** – Sensor-based applications
- **Aircraft Power Systems** – Global diagnostic solutions
- **Electromechanical** – Air tanker refueling boom system control
- **Training & Simulation** – Airbus power system modeling, F-16 maintenance trainer



Partnerships and Affiliations

- Partnerships with complementary technology providers – Synopsys, RT-LAB, VisSim, Mathworks
- Certified Hyperion development partner
- Value-added reseller, engineering consulting and service provider for Opal-RT and Visual Solutions
- IEEE leadership – Power Electronics Society, Computer Society, Aerospace and Electronic Systems, Engineering Management Society, NY Section leadership
- Software Engineering Institute (SEI) – Active member
- Society of Automotive/Aerospace Engineers (SAE) – Active member
- Project Management Institute (PMI) – Active Leadership

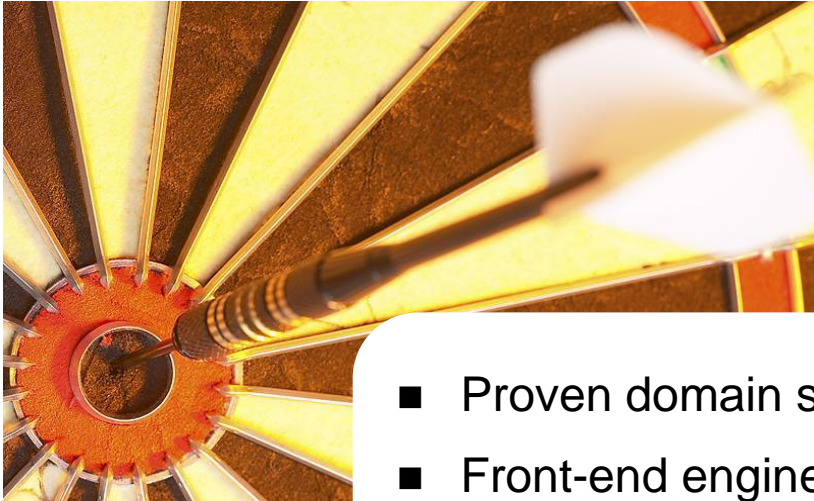


On Target Value Proposition

- Systems, hardware and software engineering services.
- Help innovating companies define and develop component technologies, then test and integrate full products and systems.
- Cross-disciplined expertise from a wide-range of applications offers proven design practices and innovative views to our client's problems.
- Clients tell us that we are far more efficient than staffing firms. Our goal is project completion – not “more hours”.
- Our specialty is project-based engineering – Through effective resource and project management, On Target has proven to be on time and on budget.



Summary



*An agile, dependable source for
life-cycle systems engineering.*

- Proven domain success and broad engineering experience
- Front-end engineering reduces development time and costs
- Adaptive processes support change throughout the life-cycle
- Expertise in the definition, development, integration, and test of safety-critical systems to efficiently achieve FAA certification
- Commercial and military embedded systems experience across multiple vehicle platforms, systems and industries
- Experts in technical project management and distributed development
- Extended roadmap of development tools, processes, and verification systems to manage projects with less risk

For more information...



On Time
On Budget
On Top
ON TARGET

- **Systems and software engineering**
- **Project management and planning**
- **Technology partnering**
- **Test and integration solutions**

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