



ITLPro Solutions

Innovative Technology Leaders



Industrial Products



Development Services



Solutions

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Introduction

- A Specialists, Engineering Innovations. A niche global and growing company in the Engineering R&D and Product Development space.
- ITLPro Solutions helps customers do business better by leveraging our industry-wide experience, deep technology expertise, comprehensive portfolio of Products and Development Services & Solution offerings.
- ITLPro Solutions connects the people and ideas of the world together, returns the world by our dynamic and innovative spirit.



Innovative Technology Leaders

Portfolio

Product Development

ITLPro Solutions' offer comprehensive portfolio of product development including Automation, Controlling, Instrumentation and Communication for Energy Utilities, Oil & Gas Utilities, Machineries, Chemical Industry, Transportation sector, Automotive sector, Precision equipment, Medical field, Food processing and Agriculture equipment, Special purpose equipment etc.

Services

A wide range of Development Services for all the Industries including Product development, Software development, Web development services, Database development services, Embedded development, Mechanical development services, Communication products or module development services, Prototype development services, Feature enhancement and obsolescence services, Functional and Regulatory Testing Services, Test jigs developments, Process Automation services, Technical manual writing services, Process manual services, Engineering documentation and conversion like CAD/schematics/software conversion from one to another, Benchmarking services, Reverse engineering services, Maintenance support services -24x7, Technical training services etc.

Solutions

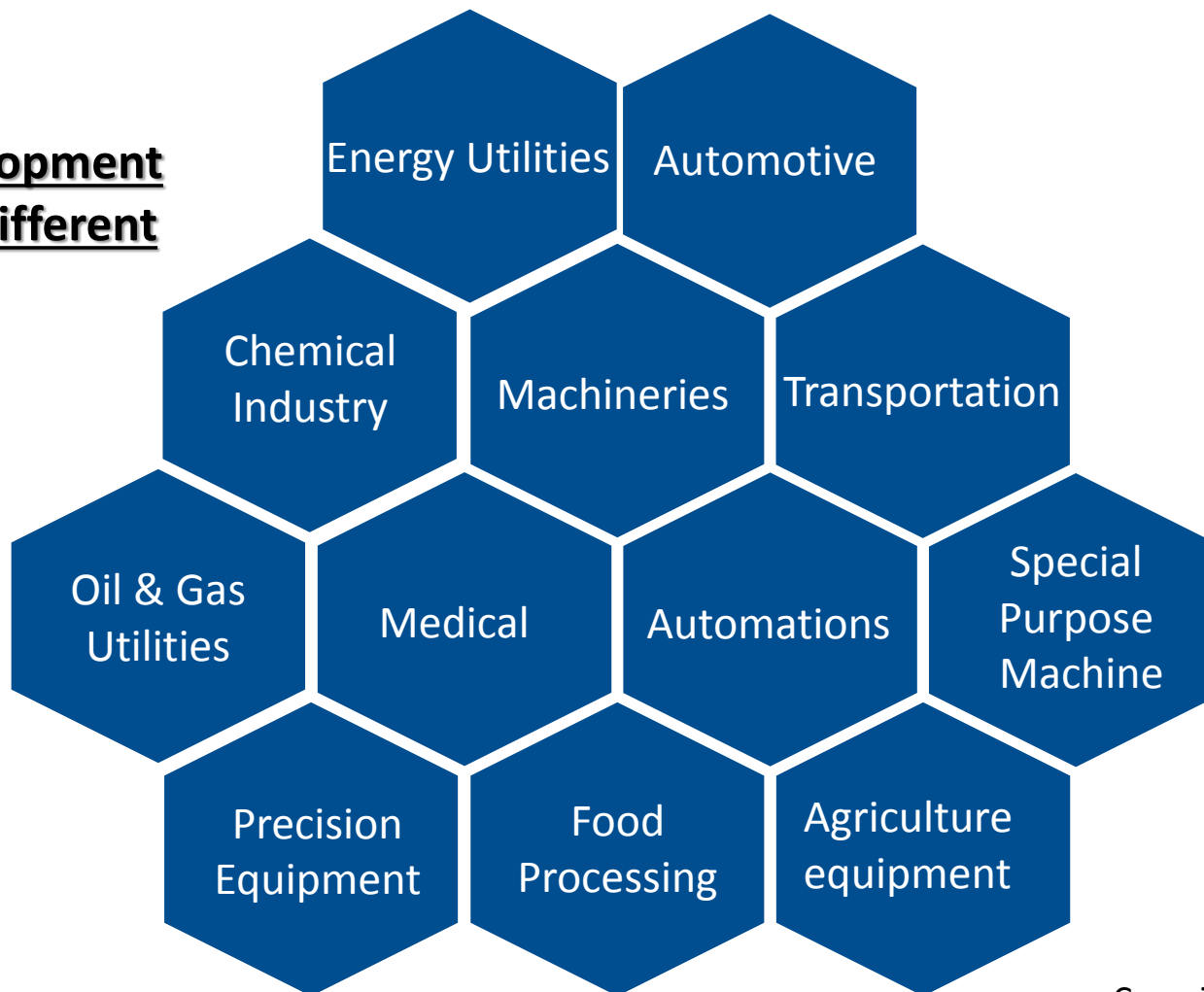
ITLPro Solutions' offer Smart and Innovative Solutions to the Industries by recognizing challenges and helping to solve with comprehensive knowledge & rich industrial experience & the latest trends in Automation. The solutions leverages ITLPro Solutions' own products and services and other branded products to integrate standardized systems and components into the custom solutions. Depending on the requirements, these can be integrated either directly or with slight modifications as they are tried-and-tested products which are cost-effective and easy to integrate.



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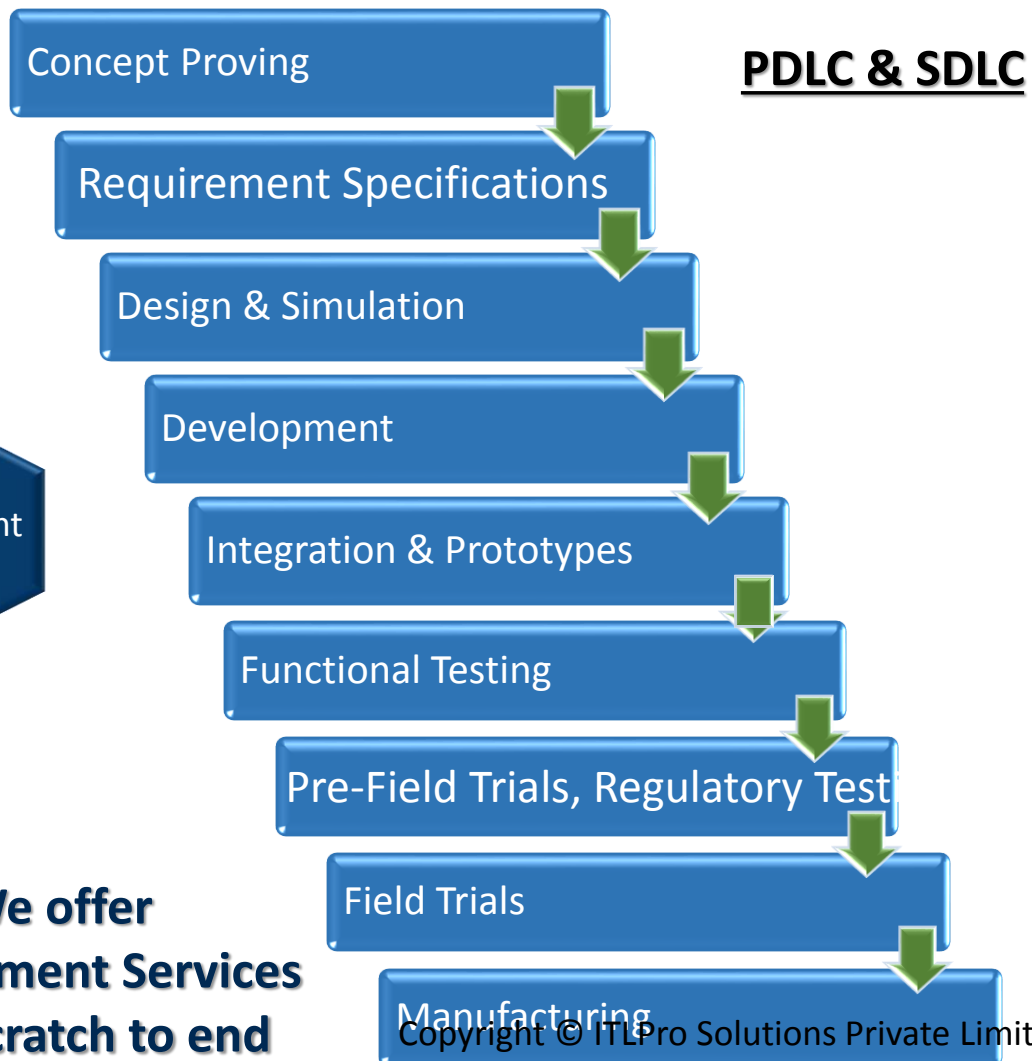
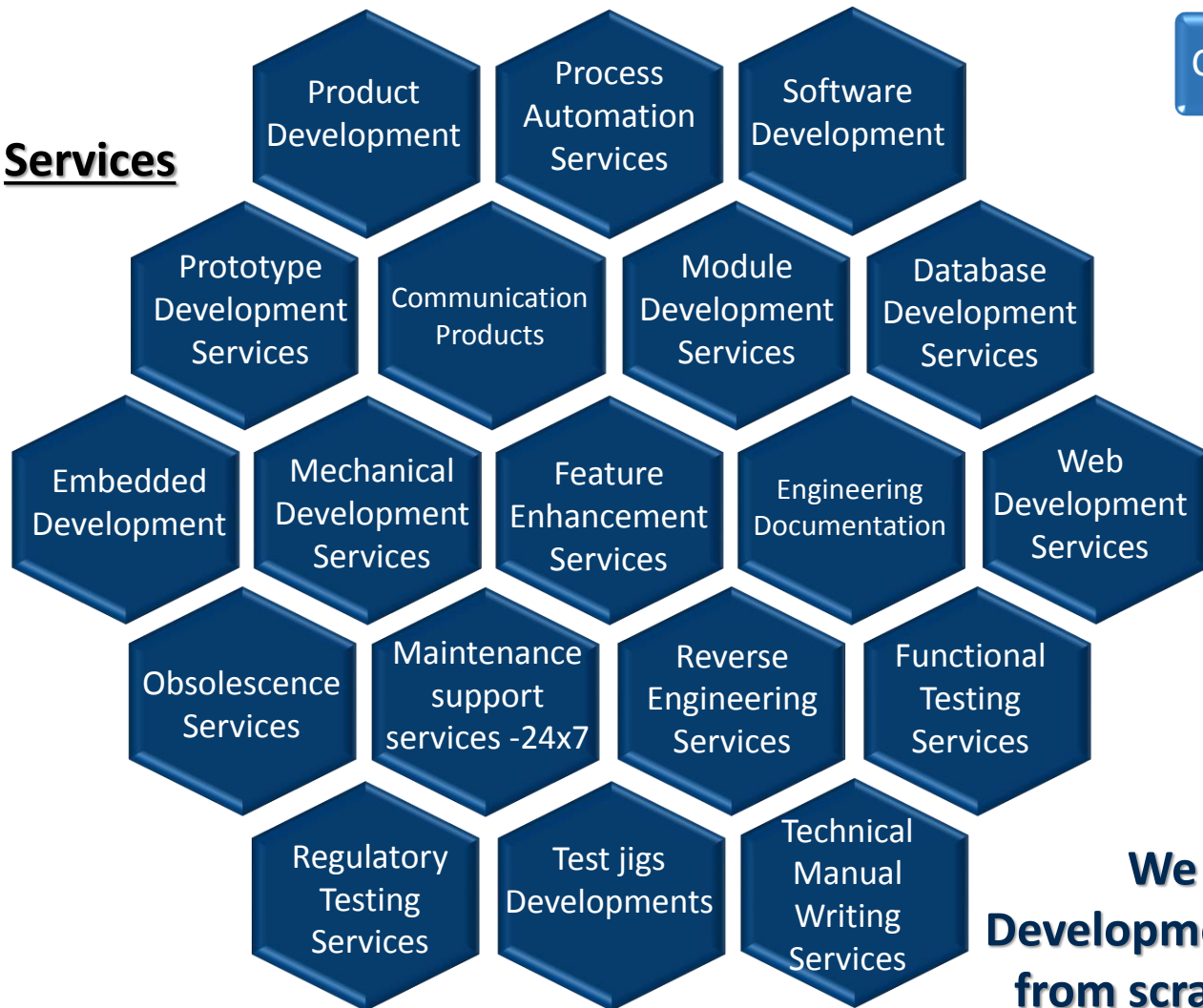
Portfolio – Products Development

**Product Development
available for different
Industries:**



Portfolio - Services

Services



**We offer
Development Services
from scratch to end**

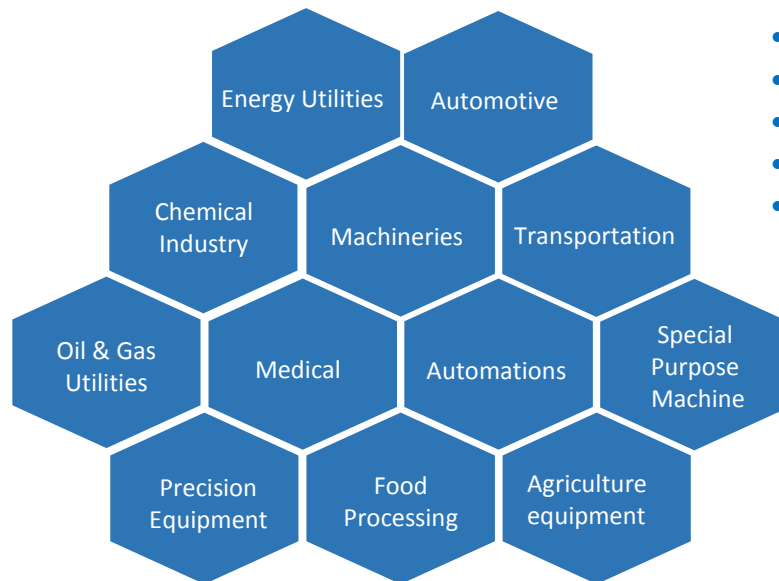


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Product & Engineering Solutions

- Field Devices, Instruments •
- Intelligent Components - PLCs, RTUS, Controllers •
- SCADA, HMI, DCS •
- Building Automation, Plant Automation •
- Control and Electronics •

- Access Management •
- File Systems & OS - CIFS, NFS, SAMBA •
- IPC, Kernel programing •
- Hardware Platforms, Boards, Controllers, Drives •
- Network Appliances, Routers, Switches •
- Network/Resource management •

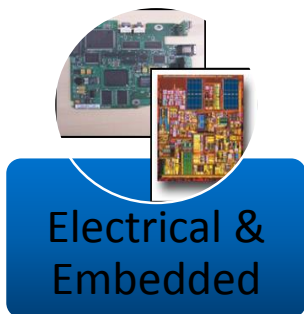


- Body Electronics
- Onboard Network - LIN, CAN, MOST, 802.11
- Telematics and Navigation systems
- Automated Guided Vehicles
- Production house Automation, Automated Gauging Systems

- Monitoring Equipment - Multi-parameter Patient Monitors
- Hospital Management
- Support for Surgical Instruments

**We offer Development Services
from scratch to end**

- Handheld Devices
- Mobile & Wireless
- Internet of Things



Team of having rich experience in above technical streams are ready to support you.



Innovative Technology Leaders

Embedded System Design Practice & Services

**Proven design methodology & development processes,
Industry standard EDA tools, Design for safety, Concurrent
HW+FW+SW+MECH development flow**

Modeling & Simulation,
Performance analysis,
Design exploration

Architectural Design & Analysis

- Benchmarking
- Concept Proving
- Modeling & Simulation
- Performance Analysis
- Design Exploration

High performance, Low
power, Digital, Analog,
Mixed-signal,
Schematics, Layout,
Signal integrity, DFT,
DFM, Thermal analysis,
Enclosure, Prototyping,
Transfer to production

PCB

- Conceptual design
- PCB design
- PCB layout
- DFM/DFT
- Release to fab
- HW-SW integration

Hardwired control &
data processing
algorithms, DSP,
Interface logic, IP
design &
integration, SoC design

ASIC/FPGA

- Microarchitecture
- SoC design
- FPGA implementation
- ASIC implementation
- Functional verification

BSP and Drivers
design, OS/RTOS
porting, Testware,
Embedded
applications, GUI

FW & SW

- Board FW
- Embedded SW
- Application Software
- Test programs
- Diagnostics
- FW, SW & HW integration & release

System functional verification, Test automation, Test fixtures,
Reliability testing, Compliance testing, System Validation,
Manufacturing Process establishment & support,
Sourcing support for production*

Validation

- HW
- ASIC
- FW/SW
- System
- Compliance
- Reliability

Infrastructure

- Certification Labs
- Fab & Assembly
- CM
- Procurement
- IT
- EDA tools

Solutions

- Solutions
- System architecture
- Modeling
- Analysis

End-to-End Product Development

Usability Engineering, Validation & Compliance

Product Localization, Product Life Cycle Management

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- Electronic control, Flow control, Motion control, Automation, Process Controllers, Sensors, IoT
- Motors, Pumps, Sensors, Power supplies
- Data processing, Image processing, DSP, DSC, GUI
- Communication (wired & wireless)
- Compliance: CE & UL Certification



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System Verification & Validation

Behavioral modeling & simulation

ASIC/FPGA verification, Functional simulation & emulation HW-SW and system V&V

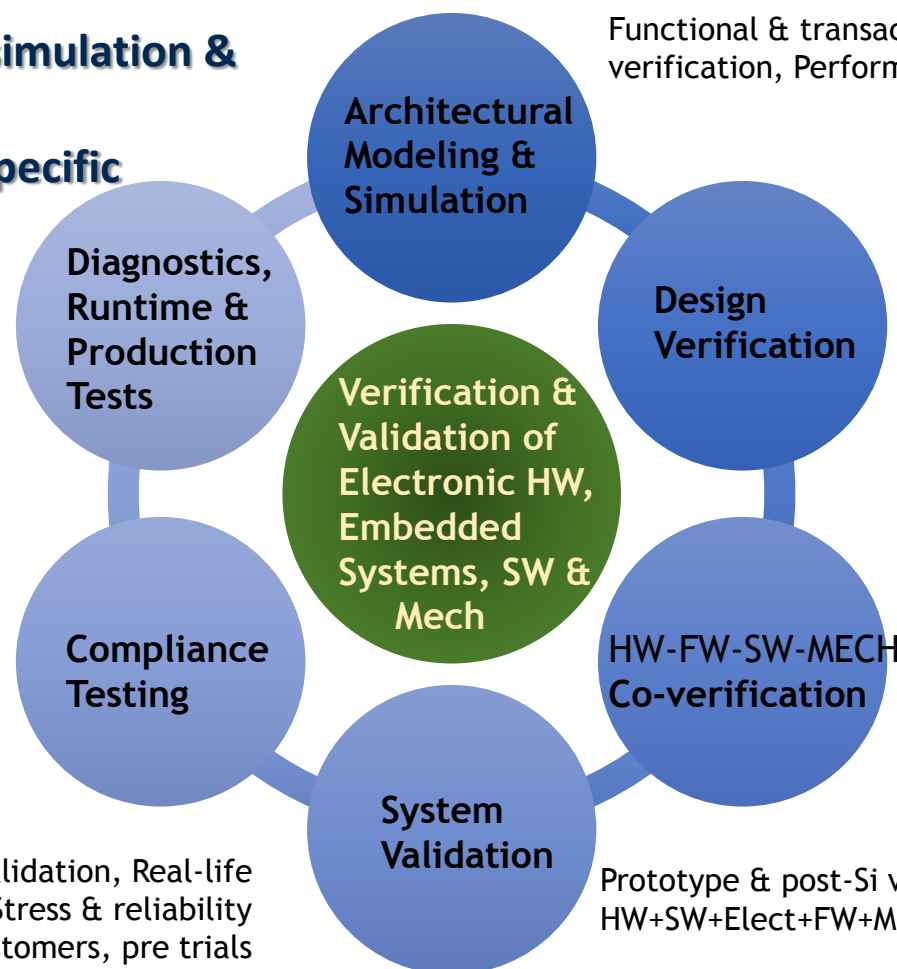
Compliance to safety and domain specific standards (AUTO, INA, MEL, CE)

Certification & compliance testing

Diagnostic SW & HW design & validation, Runtime tests design & validation, Production tests & test fixture design & validation

Environmental testing, EMI/EMC testing, Vibration & shock testing, Safety compliance testing, Protocol compliance & interoperability testing, CE & UL certification

Complete functional validation, Real-life applications testing, Stress & reliability testing, Alpha customers, pre trials



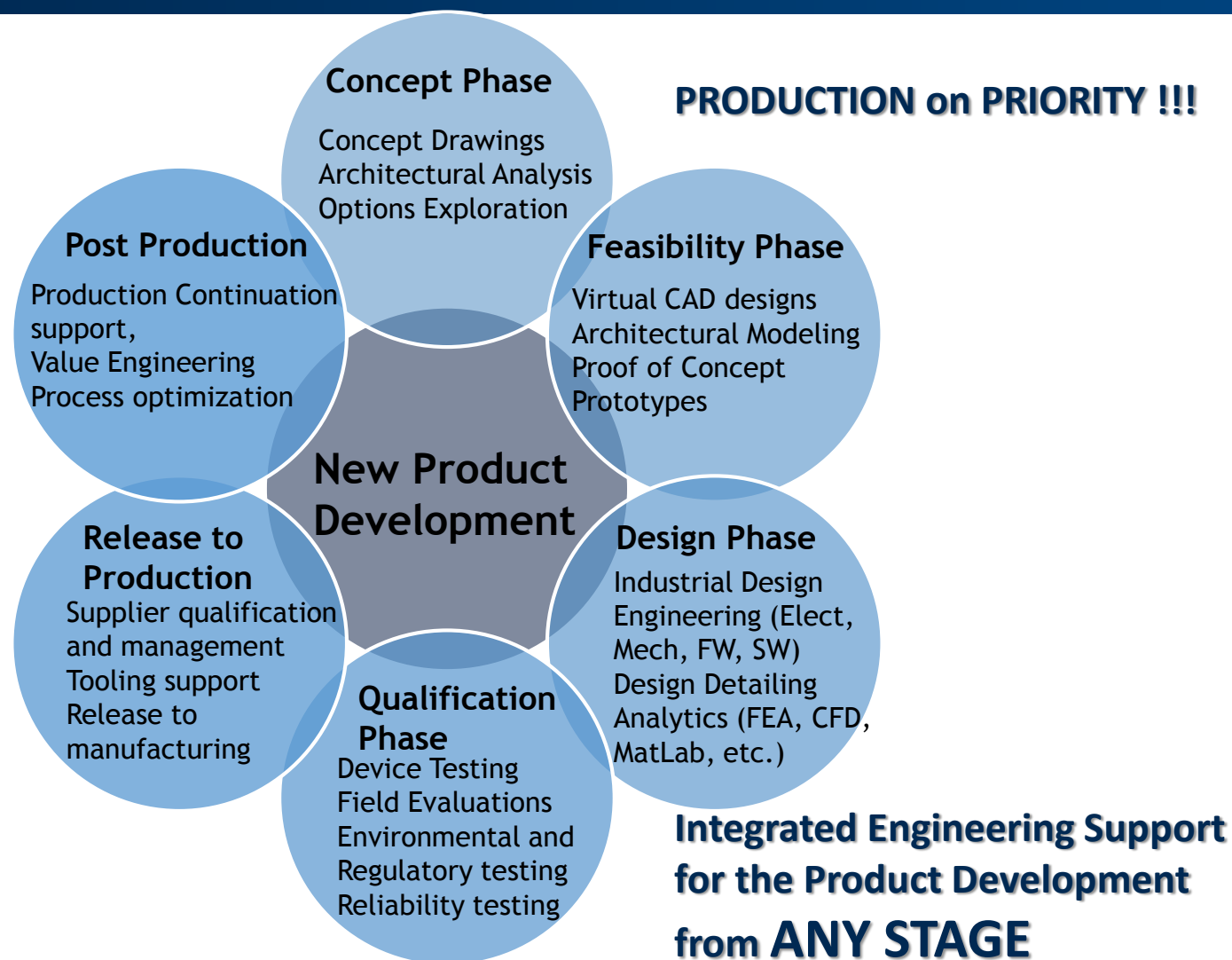
Functional & transaction models, Algorithm verification, Performance analysis

Functional simulation, Coverage-driven verification, Block/chip/system level, Functional emulation, Test automation, Verification IP, Timing verification, Mixed-signal, simulation, Non-functional verification, Total coverage and Methodology to find the bug faster

HW-SW co-simulation, HW emulation, HW & SW development, tools & test fixtures, Getting "SW ready" HW design, Shortening the HW-SW integration Mechanical design integrated verification

Prototype & post-Si validation, System integration & testing, HW+SW+Elect+FW+Mech Complete functional validation

New Product Development



Product Life Cycle Support

- ☐ Cost Reduction Issues
 - Component Replacement/consolidation
 - Enclosure Redesign
 - Lower cost Product/Operating/Testing/Production
- ☐ Obsolescence Issues
 - BOM End-of-Life analysis
 - Electrical and/or Mechanical Redesign
 - Verification/Validation
- ☐ Loss of Supply Chain
- ☐ Compliance Issues
 - Regulatory requirements
 - Environmental requirements
 - Certification testing
- ☐ Feature Enhancements
 - HW, FW, SW, Mechanical redesign
 - Integration testing, System Testing
 - Regionalization/Localization
- ☐ Service Issues/Performance Improvement
- ☐ Compatibility Issue
 - Product line - add backward compatibility and Third Party compatibility
- ☐ Reverse Engineering
- ☐ Redesign Compatibility Issues
 - HW, FW, SW compatibility
 - Compliance testing and validation



Embedded Systems – Design Expertise

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- ❑ **Embedded Systems:** Design of embedded system solutions for Data Acquisition, Data Processing, Sensors, Communication, Control Motor and Drives, Precision Motion System, Automation and other applications, including SW, FW and HW design, development, test & transfer to production
- ❑ **General Purpose Processors/Cores:** ARM Cortex M4 & A8, ARM7/9/11, SPARC, PowerPC, Intel IA and Atom, PIC, 8051, Microblaze, TI Microcontrollers and Digital Signal Controllers etc 8/16/32bit Microcontroller and DSC.
- ❑ **FPGA:** Xilinx/Altera/Lattice ASIC, FPGA, CPLD, PLDs etc.
- ❑ **DSP Processors/Cores:** ADI and TI families
- ❑ **Custom Processing Elements (Design and/or Integration):** Arithmetic, Transforms, Filters, Signal Generation, Signal Encoding / Decoding, Compression, Error Correction, Correlators, Modulation, Encryption, Video & Image Processing, Speech & Audio Processing, Data Acquisition
- ❑ **Custom Control Logic:** Timer, Schedulers, Controllers, Arbiters & Complex Logic
- ❑ **Interfaces:** SPI, I2C, I2S, USB, PCIe, SDIO, FiberChannel, CAN, LIN, ProfiBus, LON, PowerLON, UART, TCP/IP, MODBUS RTU
- ❑ **RTOS:** Embedded Linux, VxWorks, SQN, QNX, FreeRTOS, RTLinux, QT, Timesys/Montavista Linux, etc.
- ❑ **Applications:** Development of monitoring, control and data processing applications (in C/C++) with performance/size/cost optimization
- ❑ **Communication:** TCP/IP, UDP and other protocols; Ethernet (10/100/1G/10G), WiFi (802.11), Bluetooth and ZigBee (802.15), RFID, NFC, Wired and Wireless Networks, Power Line Communication, etc.
- ❑ **FW, HW, SW, MECH Co-development:** Optimized co-development and integration methodology
- ❑ **V&V:** Design verification and validation by simulation, emulation and prototyping

**Integrated Engineering Support
for the Product Development
from ANY STAGE**



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Portfolio - Solutions

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Some Automation Solutions are :

Industrial Automation Solutions

NI based Automation Solutions

PC based Automation Solutions

PLC based Automation Solutions

Embedded Controller based
Automation Solutions

Hospital Management Solutions

Patient monitoring &
Records Management

Lab Equipment, Records

Nurse Calling System

Hospital Administration,
Networking, Scheduling etc.

Home & Office Automation Solutions

Video Monitoring & Alarm System

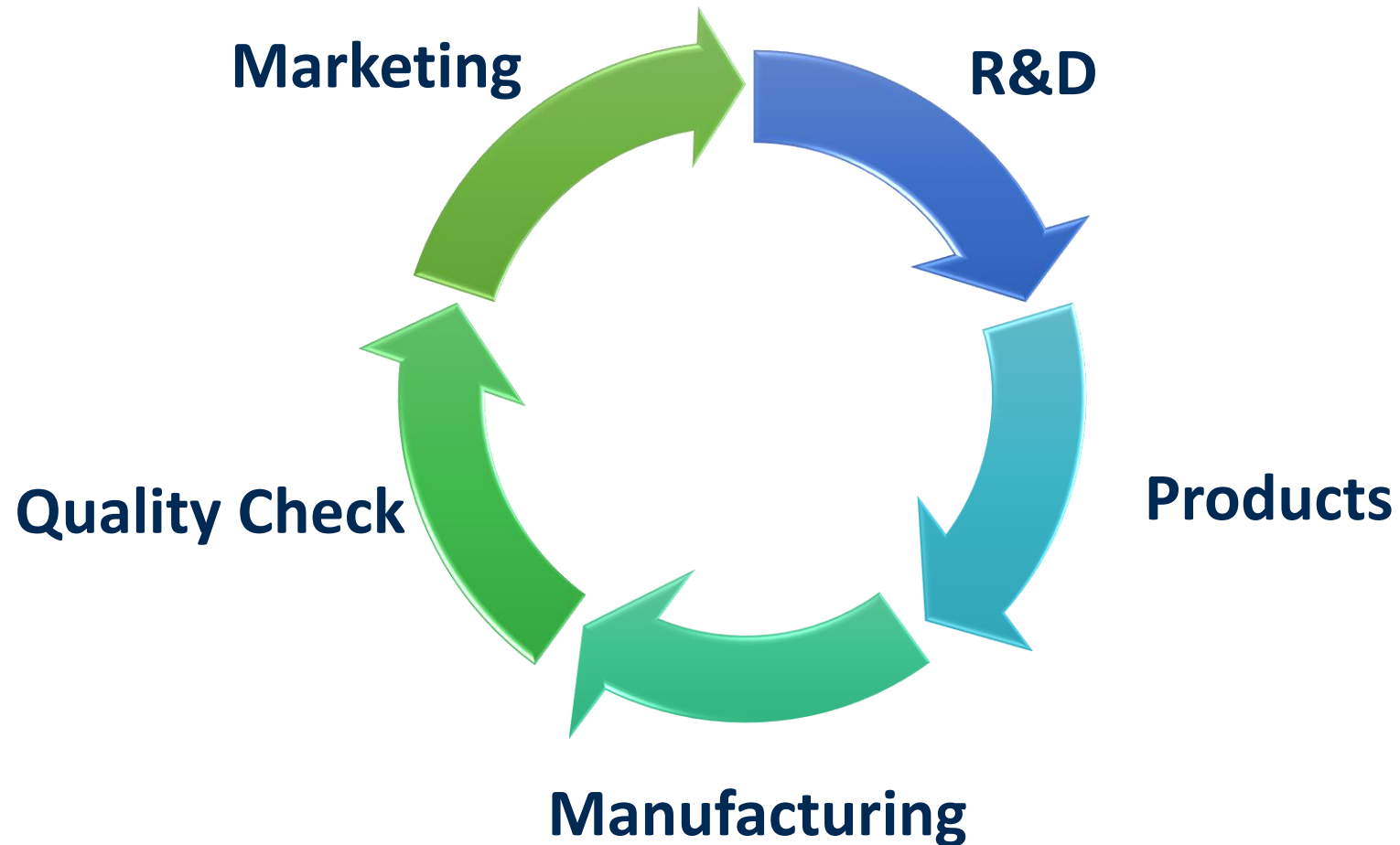
Appliance Control & Security System

Access Control System

Remotely Control using Mobile
App or Secure web login

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Process





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Why Choose Us?

- Focused on providing transformational solutions and services using Product Engineering and IT.
- We have domain expertise and our knowledge of both Process and Technology. We hire for and train for these qualities and our customers place high value on this knowledge and experience.
- Intelligent and Innovative Solutions is priority to us. We provide both Solutions and Services.
- We continually adapt our organization to ensure the efficient fulfillment of customers' requirements and constantly optimize our processes and structures.



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Contact Us

For more info, please contact us freely.

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Q & A



Thank You