

# RUBEN BERNARDINO

PROGRAM / PROJECT MANAGER – SENIOR ENGINEER

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**Revenue Growth / Product Development / Process Improvement / AI / Sustainability / Cost Control / Multi-Site International / Renewable Energy / Environmental Modeling / Climate Mitigation / Resilience Strategies / QC / Clean & Enabling Technologies / Unmanned Aerial Systems (UAS) / Unmanned Ground Systems (UGV) / Autonomous Mobile Robots / Drone Thermography / Infrared Sensors (IR) / Sensor Technologies**

Directed projects from concept through implementation, delivering on-time, cost effective and technically compliant products for global leaders **GM, Ford, Fiat Chrysler** and **suppliers**. Gained comprehensive knowledge and experience regarding advanced technologies, customer functional objectives (Vehicle DNA), automotive vehicle systems engineering and manufacturing as well as low-volume production programs.

Provided consulting services for buildings and transportation developing educational systems in many cleantech disciplines. Leveraged previous studies and experience to address environmental issues, climate change mitigation and adaptation. Can contribute immediately by:

- ☐ **Managing project prioritization, portfolio balancing and resource allocation**
- ☐ **Resolving process issues to meet productivity, quality and deliverability goals**
- ☐ **Building, mentoring and leading highly skilled technical teams**
- ☐ **Finding new applications for emerging technologies**

**Bachelor of Science (B.S.)**, Aerospace Engineering, Minor in Mathematics, Embry-Riddle Aeronautical University.  
**Certificate of Completion, Drones for Agriculture: Prepare and Design Your Drone (UAV) Mission**, Wageningen University & Research

Have started realizing my vision of protecting and restoring the environment using Artificial Intelligence (AI) and unmanned systems through the Dronícola agricultural intelligence project.

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## Work History

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### Project Manager

Dronícola, December 2017 – Present

Proof of Concept (PoC) on precision agriculture project integrating unmanned aerial systems, advanced sensors and agricultural algorithms. Focus on crop data collection, health analysis and diagnosis

### Professional Advancement Sabbatical

September 2017 – November 2019

Addressed climate change mitigation and adaptation through enabling technologies: renewable energy, energy efficiency, energy storage, additive manufacturing, modeling of climate risk and climate policy, and unmanned systems. Enhanced proficiency in systemic frameworks including life-cycle thinking, industrial ecology, and circular economy. Strengthened knowledge of environmental and climate modeling tools and methods for advancing climate policy and impact/risk assessment.

### Design Release Engineer

General Motors, May 2015 - August 2017

Developed solution imperatives (cost, tooling, mass, performance, etc.) on time and within budget for air induction systems. Led the supply chain in the execution of air induction programs. Earned Employee Recognition Award for Outstanding Contributions to the Resolution of GMT 610 Air Induction Flow Uniformity.

- **Saved a launch in jeopardy.** The air induction system had failed the design requirements jeopardizing launch of the GMT 610 truck program. Selected to elite team to devise the ultimate solution Earned Team GM award. Enabled GM to avoid negative vehicle reviews and millions of dollars in lost sales.

- **Overcame a potentially lethal obstacle.** Physical space available was insufficient for an AIS capable of meeting performance requirements. Led the creation of a new design that met all performance and remaining engineering requirements. Saved launch, avoiding delay-related costs in millions.

#### **DNA Vehicle Integration Engineer**

Ford Motor Company, Nov 2014 - May 2015

Recruited to develop Ford and Lincoln DNA on advanced technologies including ambient lighting, remote entry, and Virtual Reality. Updated first level customer functional objectives (DNA). Aligned customer functional objectives with engineering requirements. Performed competitor vehicle and other marketing studies.

#### **Design Release and Cost Reduction Engineer**

Calsonic North America, Feb 2013 - Nov 2014

Created and implemented HVAC design-related technical cost reduction and profit improvement strategy for Nissan vehicles. Achieved cost reduction through parts count reduction, assembly/test simplification, resourcing and outsourcing, and component substitution.

#### **Systems Integration Responsible Sir Interior/HVAC/Engine System, Ram Vehicle Integration**

Fiat Chrysler Automobiles, Apr 2011 - Dec 2012

Developed Customer Functional Objectives (vehicle DNA) and validated all interior systems at the vehicle level.

- **Drove a stalled project to completion.** Engineering teams were at loggerheads as to who was responsible for developing a Light Emitting Diode (LED) light without which Ram vehicles would be less appealing. Mediated dispute, overcame resistance of FCA engineers and suppliers. Completed development on time helping to earn Consumers' Top-Rated Large Light-Duty award for handling, strength and overall style.

#### **Consultant and Co-Founder**

Renewable Energy Education Laboratory (REELAB), Jan 2009 - Feb 2012

Provided consulting services for buildings and transportation developing educational systems in many cleantech disciplines including energy efficiency for homes and buildings; residential solar, small wind, and hybrid systems; smart grid applications including Plugin Electric Vehicles, Electric Vehicle Supply Equipment (EVSE) and Vehicle-to-Grid.

- Led business development of emerging clean technology training for schools and corporations. Integrated business models leveraging partnership between educators, community leaders, industry, workforce development, and government agencies.
- Participated in the Get Ready Michigan and Plug-In Ready Michigan programs intended to develop an electric vehicle charging infrastructure in South East Michigan. Co-authored workforce training curriculum and raised public awareness on EV charging infrastructure. Collaborated with Next Energy, DTE, GM and the Michigan Power Service Commission (MSPC).
- As an advisor to Thermo Source, offered commercial-grade energy audits, turnkey energy service, energy consulting, energy-efficient product sourcing, custom. Designed energy cost reduction solutions for businesses and customized financial modeling/self-funding.
- As Consultant and Detroit Green Technology Examiner for Examiner.com, provided expert local analysis of clean technologies, trends, jobs and green economy in SE Michigan. Reviewed green technology breakthroughs in alternative fuels and vehicles, smart grid, renewable energy, and energy efficiency. Offered a systemic global view identifying the often-unsuspected link between today's challenges and opportunities.

#### **Total Value Manager - Climate Control Systems (Contract)**

Ford Motor Company, Apr 2007 - Aug 2008

Led Ford and suppliers in the development and implementation of a material cost reduction strategy. Contributed to a quadrupling of the annual engineering savings worth about \$500K. Fostered synergistic partnership among Climate Control Design Product Development, Manufacturing, Service, Purchasing, Finance, and Ford suppliers.

## **Systems Engineer and Design Release Engineer-Climate Control (HVAC) & Powertrain**

Delphi Automotive Systems, Feb 2002 - Dec 2005

Designed, developed, tested and controlled major automotive OEM engineering projects in air handling, refrigerant loop and control systems as well as engine, transmission, and fuel cell cooling systems. Upon completion, took a sabbatical and studied sustainability and clean technologies.

## **Development Engineer and Technical Marketing Manager/Sales Engineer**

ABC Group Inc., Aug 1998 - Dec 2001

Created prototypes and design solutions on-air induction, powertrain cooling, and climate control systems and components for GM, Ford, and Visteon.

**Earlier:** Program Manager - Argentina / Local Content Coordinator - Argentina & Venezuela, Daimler Chrysler (currently Fiat Chrysler Automobiles) (Contract at DGE Inc.), Feb 1996 - Aug 1998; Product Support Specialist, Electronic Data Systems (currently DXC Technology), March 1995 - Feb 1996.

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### **Keywords**

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Budget Control / Business Development / Change Management / Communications / Conflict Resolution  
Cost Reduction / Course Design / Course Development / Cross Functional Team Building / Cross-Functional Teams  
/ Customer Satisfaction / Interpersonal Communication / Leadership / Lean / Motivation / Problem Resolution /  
Process & Productivity Improvements / Value Analysis/Value Engineering (VA/VE) / Process Design / Process  
Reengineering / Product Launches / Program Management / Project Coordination / Project Engineering /  
Automotive Engineering / Prototype Engineering / Advanced Product Quality Planning (APQP)/ Production Part  
Approval Process (PPAP) / Design For Manufacturing and Assembly (DFMA) / Aerodynamic Design / Thermal  
Management / Energy Management / Engineering Analysis and Simulation / Manufacturing / GD&T / Design  
Verification Plan & Report (DVP&R) / Ford/Global Product Development System (FPDS)/(GPDS) / QS9000 /  
TS16949 / FMVSS / RED-X / Design For Six Sigma (DFSS) / V-up / Quality Function Deployment (QFD) / KPI / R&D /  
Re-engineering /Six Sigma / Continuous Improvement / Strategic Planning / Strategic Roadmaps /Strategic  
Technology Roadmaps / Supplier Relations / Supply Chain / Sustainability / System Development &  
Implementation / Systems Design & Engineering / Systems Integration / Whole System Design / Design  
Thinking/Team Building / Team Leadership / Technology / Testing / TQM / Sustainability / Energy Efficiency /  
Leadership in Energy and Environmental Design (LEED) / Life Cycle Assessment (LCA) / Life Cycle Thinking / Design  
Thinking / Circular Economy / Industry 4.0 / Additive Manufacturing / Vis-Mock-up, Alias Studio Tools,  
Unigraphics, Teamcenter/NX / Netfabb / MS Office / Outlook / Word / Excel / Power Point / Project / Access) /  
Pages / Visio / Publisher / Numbers / Keynote / Matlab / Python / R / SQL / Excel / Ricardo WAVE / B&K PULSE /  
Energy Policy Simulator, C-ROADS Pro/World Climate / SimCLIM / Representative Concentration Pathways (RCP) /  
Shared Socioeconomic Pathways (SSP) *Geographic Information Systems (GIS):* ArcGIS / Trans-Disciplinarity /  
Adaptability /Spanish / Cultural Intelligence