

Walter E. Davis, II

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PROFESSIONAL SUMMARY

Global Strategic Leader

- Oversee significant international programs, accountable for ~15% (\$4,000,000,000) in overall organizational annual revenue.
- Coordinated international cross-functional project teams from Europe, North America, and Asia.
- Negotiate supplier agreements to ensure appropriate service delivery, lowering costs on average by 15%, in some cases 70%.
- Evaluate business lines for profitability and support for strategic goals: Ensure fiscal stewardship of operating and capital expenditure budgets of \$600,000,000 per year.
- Champion commercially viable business opportunities in robust and challenging environments and ensure organizational compliance with all regulatory requirements.

Intellectual Property Commercialization Acumen

- Created financially successful commercialization projects via numerous patents:
 - Applicable to an entire 1,000,000,000 portfolio;
 - Facilitating \$36,000,000 in profit per year.
- Lowered costs and improved quality for units that earn \$80,000,000 in annual revenue.
- Improved product reliability and saved over \$2,000,000 by identifying and capitalizing on design and process improvement opportunities.

AI, Hardware & Software

- Real-world application of AI/ML and software automation to engineering and business workflows (analytics, reporting, requirements, and documentation).
- Production ERP, Data Analytics, and Financial software developed in Python, C++, and Rust.
- Hardware and software systems experience spanning embedded controls, sensors/connectivity, data pipelines, and application integration to enable intelligent products.

Regulatory and Compliance

- Certification and compliance leadership across UL, ETL, Intertek, and CSA programs; regulatory readiness and audit support.
- Working knowledge of HVAC standards and rating programs (ASHRAE, AHRI) and how to translate them into design requirements, test plans, and documentation packages.

Leadership

- Entrepreneurial experience delivering program/portfolio management and AI-enabled business solutions. (personal consulting/portfolio).

Corporate Strategy
Business Development
Revenue Creation
Strategic Partnerships
Enterprise Solutions
Solutions Architecture

Fiscal Stewardship
Cost Mitigation Expertise
Corporate Profitability
Profitability Ownership
Asset Management
Portfolio Management

Program Management
Project Management
Contract Negotiation
Risk Management
Regulatory Compliance
Operations Management

Supply Chain Management
Supplier Alignment
Client Relationships
Public Speaking
Talent Development/Retention
Intellectual Capital

PATENTS

- US10161650B2. “Multi-Stage Air Volume (MSAV) Retrofit Kit”
 - US20180149375A1. “Humidity Control with Microchannel Heat Exchanger Reheat Coil”
 - US11022331B2. “High-Pressure Restart using Microchannel Heat Exchanger Reheat Coil”
 - US10837679B2. “Part-Load Optimization for Tube & Fin and Microchannel Heat Exchanger”
 - USD837037S1. “Two-row Microchannel Heat Exchanger Coil Bracket”
 - US10563883B2. “Compressor Performance Envelope Protection Algorithm”
 - US10415856B2. “Two-Row Microchannel Heat Exchanger De-superheater”
 - US20230152013A1- Pending “Bi-flow Thermostatic Expansion Device for Roof Top Unit Application”
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WORK HISTORY

Director of Engineering

August 2024 – Present

Refrigeration Design Technologies, Dallas, TX

- Report directly to the company President and Vice President; full accountability for RDT engineering (strategy, delivery, hiring, and supplier execution) supporting a ~\$35M revenue refrigeration portfolio.
- Leading development of an R744 (CO₂) refrigeration platform, including preliminary thermodynamic design, controls strategy, component selection, supplier engagement, and prototype planning for low-GWP refrigeration applications.
- Lead cross-functional team of engineers, field techs, lab techs, and drafters across mechanical, electrical, firmware/software, test/validation, and compliance.
- Own product architecture, roadmap, and execution from concept through certification, launch, and field support.
- Directed, designed and released Low GWP compliant, A2L refrigeration portfolio meeting EPA/DOE requirements, UL / IEC 60335-2-89, CSA 22.2, and ETL/Intertek safety certifications.
- Ensure alignment with HVAC industry standards and rating programs (ASHRAE, AHRI); manage lab validation, performance mapping, and submissions.
- Designed and built the R&D lab and established scalable engineering processes: DVP&R, DFMEA, configuration management, release documentation, and field feedback loops.
- Managed international supply chain and supplier relationships; drove design-for-manufacturing and purchased-part cost reduction through supplier qualification and negotiations.
- Applied AI/ML and software automation to engineering workflows (requirements, design reviews, test analytics, reporting, field support);
- Cut cycle time from 4 days to 6 hours (16x faster, -94%) and improved decision quality.
- Reduced warranty costs from \$1.2M to <\$100K (~92% reduction) and delivered an estimated ~\$5M in value creation across manufacturing, warranty, and supplier cost-down.

Promoted to:

Senior Engineering Program Manager for Project Management Office

September 2021 – August 2024

Daikin Industries, Houston, TX

- Functioned in a director-level leadership capacity supporting Commercial and Residential product lines, including cross-functional engineering leadership, technical decision-making, program ownership, and coordination across product, compliance, and validation activities.
- Direct portfolio management strategies for projects worth over \$4,000,000,000:
 - Determine strategic alignment and financial viability of project opportunities;
 - Develop tailored programs and project deadlines for the commercial engineering department, ensuring achievement of project outcomes and cost considerations;
 - Create a culture of project success, contributing to Daikin’s leadership in the HVAC industry.

- Led Daikin's A2L transition for its most profitable product line. Variable Refrigerant Volume (VRV) to A2L Program: The program is internationally coordinated and worth ~15% of Daikin's total \$22,000,000,000 annual revenue.
- Successfully managed \$600,000,000 CapEx & OpEx budgets for over 37 completed major projects, overseeing all aspects of the project life cycle.
- Led cross-functional teams comprised of Directors, Managers, Engineers, Designers, Finance, Procurement, Sales Planning, Marketing, Manufacturing, Technicians, and Assembly Line Programs and Projects finished 100% within budget and by expected completion dates.
- Provide Subject Matter Expertise (SME), leadership and knowledge, professional development coaching classes, and evaluation of project performance, ensuring ROI of Daikin's \$23,000,000 in human-resource expenditures.
- Instituted a culture of project accountability, eliminating project delays: Prior delays spanned months to years.
- Communicate weekly project updates with senior stakeholders and the CEO, necessitating clear data presentation, strategic planning, and corporate communication.
- Mentor human-resource talent: Providing career development coaching.

Senior Mechanical Engineer

July 2020 – July 2023

New Product Development and Research

Daikin Industries, Houston, TX

- New Product Development and Research for HVAC Commercial roof-top units.
- Led A2L and 60335-2-40 transition for ~\$40,000,000 CAPEX commercial projects for rooftop HVAC units.
- Oversaw projects from the initial design phase to manufacturing production.
- Lead a team of four engineers in the successful completion of the first round of projects for a 7.5 to 12.5-ton heat pump.
- Strategized with the Marketing team to develop project scope, improving the success of product life cycles.
- Created a training program to improve the execution of HVAC Design principles.
- Designed and implemented training programs for various employee groups:
 - Trained engineers on product design and project management.
 - Trained manufacturing employees on building new products;
 - Trained field technicians on field installation kits and field retrofit kits;
- Developed strategic products to broaden Daikin's inventory, such as AC, Gas, and Heat Pumps: Managed, designed, and tested refrigeration systems for mega projects.

Promoted to:

Director of Engineering Application & Support

December 2019 – April 2020

First Company, Dallas, TX

- Created a new Application Engineering Department to support manufacturing quality, customer quality, and new product development initiatives and asked to create and lead the department after numerous commercialized project successes.
- Provided strategic leadership to Engineering, Manufacturing, Marketing, Sales, and Field Teams, ensuring effective problem resolutions and profitable project executions.
- Led project teams consisting of Engineers, Technicians, CAD designers, and Manufacturing staff, ensuring that performance exceeded ROI of ~\$3,000,000 in human resource costs.
- Delivered technical guidance for Engineering teams, facilitating consistent adherence to project schedules.
- Maintained all technical documentation, ensuring retention of organizational intellectual capital.

Senior Product Design Engineering Manager

June 2018 – December 2019

New Product Development and Research

First Company, Dallas, TX

- New Product Development and Research for HVAC residential package, hydronic and water source heat pumps.
- Drove expansion of First Company from a \$100,000,000 manufacturer to a \$1,000,000,000 HVAC manufacturing powerhouse via strategic foresight and excellent project deliverables.
- Key Project Successes:
 - Developed 150 new models for immediate sale.

- Created three (3) market segments for luxury condos.
- Designed and launched four new 16 EER Water Source Heat Pump (WSHP) product lines and 1.5-ton and 3.5-ton Vertical PTAC products, expanding the product line;
- Implemented a new quality copper brazing process that reduced manufacturing rework by ~50%;
- Functioned as Director of Hydronic Cooling and Heating products.
- Lead construction and development of a \$30,000,000 facility to support future R&D projects.
- Negotiated new supplier contracts, lowering the cost of goods by 15% to 70%.
- Became the SME for water source heat pump projects, water cooling units, and all other heat pumps within the company's portfolio: Contributed to the identification of monetization and process improvement opportunities.
- Recruited and hired Engineers and Lab Technicians, verifying their core competencies and organizational fit with First Company's ecosystem.

Mechanical Staff Engineer III
New Product Development and Research

February 2014 – June 2018

Lennox International, Dallas, TX

- New Product Development and Research for HVAC Commercial roof-top units.
- Developed numerous commercially viable HVAC innovations, contributing to over \$2,000,000,000 in sales.
- Invented significant improvement in HVAC units, securing a patented intellectual contribution and generating \$160,000,000 in sales with approximately 71% profit margin.
- Awarded seven patents pertaining to quality, control, material cost savings, and new market segments and submitted patent applications for two (2) more innovations.
- Engaged in prudent fiscal resource allocation: Designed and developed the MSAV Retrofit Kit in less than three months with a \$40,000 budget that produced \$36,000,000 in annual sales.
- Other Select Project Successes:
 - Lowered leak rate to <1 per week (prior rate was 150 per day);
 - Met or exceeded 100% of project deadlines;
 - Inaugurated a new sub-assembly line and trained field technicians, increasing Lennox's output capabilities.
- Trained employees on building new products, field installation kits, and field retrofit kits and facilitated new employee orientation. Communicated Lennox's culture, performance expectations, professional development opportunities, and employee engagement resources.
- Negotiated training and equipment contracts with suppliers to garner favorable pricing and service terms for Lennox.

Engineer and Architect
Thermal Fluid Systems Consulting

November 2013 – May 2015

DKRS, Nashville, TN

- Architectural, Mechanical, Electrical, Plumbing, and Fire Protection Engineering Consulting Firm
- Effectively managed a \$30,000,000 budget for the successful MEP design of Nashville Metro Schools.
- Led CAD team and owned all CAD responsibilities: Revamped CAD processes to increase designer efficiencies, lowering redundant activities and costs.
- Collaborated with building owners, Project Managers, and equipment suppliers to ensure mutual understanding of an agreement with project deliverables, expectations, and timelines.
- Contributed process and product knowledge to client contact and business development activities, ensuring client satisfaction and business retention.

Mechanical Engineer
KONE, Dallas, TX

May 2012 – February 2014

- Elevator Structural, Electrical, Architectural, and Mechanical Engineering Design.
- Designed application-specific elevators for architectural clientele, providing extensive process and product improvements, including lowering design costs by up to 90%.
- Created a new elevator design automation program that massively lowered the mathematical calculation, design, and document creation portion of projects from 14 days to four (4) hours.

- Trained India office on the new program, expanding Engineering Department capacity and opportunities to grow revenue.
- Oversaw migration of legacy software (ProE) to newer software (Inventor): Enabled use of automated elevator design program and simplified user learning curve.
- Successfully completed all projects within deadlines and within budget, contributing to KONE's profitability goals.

Mechanical Designer

January 2009 – February 2012

SSOE Group, Nashville, TN

- Architecture and Engineering Consulting Firm
 - Design custom application HVAC, Process Piping, Fire Protection, and Plumbing systems for industrial facilities, commercial buildings, and schools, ensuring 100% project completion within deadlines and budgeted expectations.
 - Coordinated Cross-Functional teams comprised of Architecture, Mechanical Engineering, Chemical Engineering, Structural Engineering, Electrical Engineering, and Civil Engineering to provide mechanical designs and demonstrate excellent team collaboration.
 - Fulfilled governmental requests for environmental studies towards lowering pollution levels, executing regulatory cooperation, and environmental stewardship.
 - Designed fire protection systems that reduced risk and support the safety of building occupants and the general public.
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EDUCATION

Master of Business Administration

Tennessee State University
Nashville, TN

B.S. in Mechanical Engineering and Manufacturing Engineering

Tennessee State University
Nashville, TN

CERTIFICATIONS

Program Management Professional Certification (PgMP)

Project Management Institute

Project Management Professional (PMP)

Project Management Institute

TECHNOLOGICAL COMPETENCIES

Project Management: PMP | PgMP | Agile | Waterfall | Scrum | MS Project | MS Planner | Office 365 | Web App | Monday | Jira | Asana | SmartSheets | Azure | SAP | Negotiation

Mechanical Engineering: Autodesk | Pro-E | SOLIDWORKS | HVAC Expertise | Refrigeration Design | Heat Exchanger Design | Gas Heater Design | Heat Transfer Design | Structural Design | Architectural Design | Design for Manufacturing | Failure Mode and Effects Analysis | CNC-based Model Shop Machinery | Psychrometric Room Design & Operation | Revit | Inventor | Fusion | CFD | Ansys L R&R | EvapCond

Compliance & Standards Engineering: AHRI | ASHRAE | EPA | NEC | DOE | ETL & Intertek | CSA | UL |

Computer Engineering: Python | Rust | C++ | Linux | RHEL | Servers | Linux, Windows & Mac Admin | MathCad | MATLAB | Mathematica | SAP | MS Visual Studio | Docker | Advanced MS Office Tools | JetBrains PyCharm | JetBrains DataSpell | API

Artificial Intelligence Engineering: Prompt Engineering | Generative Pre-trained Transformer | Very Large Language Models | Ollama | Convolutional Neural Networks | Machine Learning | Reinforcement Learning | Deep Learning

Electrical Engineering: Electro-mechanical Control Systems | PLC | PCB Design | Draw.IO

PROFESSIONAL ORGANIZATIONS

AHRI | ASHRAE | ASME | Project Management Institute