

SHANNON MARTIN

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CAREER PROFILE

Innovative Senior Engineering & Business Leader delivering technical oversight and financial analysis for large-scale projects, including budgets up to \$14bn. Proven ability to leverage deep technical expertise within business development to win & retain customers, achieve strategic business objectives and forecast problems before they develop. Adept at process design, project management, and developing cost-efficient solutions. Committed to mentoring teams and managing stakeholder expectations to forge strong partnerships.

KEY SKILLS

- **Project Management & Leadership:** Team Leadership to achieve business goals through empowered accountability, Creation of a clear plan from the integration of large detailed data from cross-functional sources, Operations support & training, Capital Project Management
- **Technical & Process Engineering:** Development of systems and tools that forecast future problems and reveal strategic pressure points, Process Modeling to create HMBs, PFDs from ASPEN, Equipment sizing and process design, Process optimization and operational troubleshooting, Engineering package review for conceptual design, FEED, detailed design, Theoretical knowledge & operational experience with refrigeration systems, distillation columns, adsorption beds, rotating machinery, heat exchangers, reactors, chillers, vaporizers, tanks and trailer loading
- **Analytical, Financial & Software Proficiency:** Techno-economic analysis for capital projects, Energy modeling, Financial analysis, Building energy modeling tools, Analytical capabilities, Microsoft Office Suite

PROFESSIONAL EXPERIENCE

Oberon Fuels

Apr 2023 - Jun 2024

Lead Site Integration Engineer

- Developed an in-house logistics plan and scheduling tool, achieving a cost savings of \$250K while providing technical and process analysis support.
- Managed project oversight for FEED and Feasibility Study for a \$200 million biomass to synthetic fuels project, ensuring adherence to engineering and financial standards.
- Coordinated EPC and stakeholder management efforts with rigorous reviews of technical deliverables to support overall project objectives.

Heliogen Inc.

Sep 2020 - Apr 2023

Customer Application Management Leader

- Led techno-economic analysis for solar projects valued between \$20M and \$60M, delivering detailed technical and financial assessments for project development.
- Cultivated strong customer relationships to deliver customized technology solutions and achieve business goals in line with best practices.
- Identified and targeted new market segments for Concentrated Solar Power (CSP) technology, supporting both technical and financial aspects of project development.

Sasol Ltd.

Mar 2014 - Jan 2020

Principal Engineer/Commissioning Eng/Business Analyst

- Managed technical track and business track governance deliverables for CAPEX projects up to \$16M, delivering detailed engineering and financial analyses.
- Led a team of 7 engineers to develop an in-bound supply chain tool to forecast and track integrated resources for a \$13bn project, mentoring staff and ensuring process adherence.
- Directed a site-wide initiative to foster cross-functional learning among 150 employees, reinforcing leadership and professional development.
- Achieved \$3M in cost savings by building predictive tools to anticipate utility usage and highlight strategic focus areas in the EPC construction schedule.
- Developed commissioning budgets and procedures for Sasol's world-scale 1.5 million tpa Ethylene Cracker project, integrating detailed technical and financial analysis.
- Formulated a production roadmap and contributed to the development of Owner's and OPEX costs for the \$14bn USGTL project, ensuring comprehensive project scope management.

Gas Engineering LLC
Chief Technical Consultant

Jul 2014 - Sep 2017

- Designed and implemented a comprehensive training curriculum for the Egyptian Air Force on operations for a cryogenic air separation facility, showcasing technical mentoring.
- Performed techno-economic analysis for the strategic renovation of a moth-balled air separation plant, aligning with detailed process and financial modeling requirements.
- Conducted process design, simulations, and troubleshooting for industrial gas facilities internationally by leveraging specialized technical competence.

Cosmodyne LLC (now Nikkiso)
Senior Process/Project Engineer

Sep 2008 - Feb 2014

- Managed capital projects ranging from \$3M to \$6M for air separation plants and nitrogen liquefiers, incorporating project management and technical oversight.
- Supervised interns and new hires while reviewing technical deliverables to ensure adherence to engineering best practices and product quality standards.
- Reviewed P&ID designs and performed HAZID/OP analysis along with P&ID walk-throughs, delivering detailed engineering assessments.
- Provided technical input for proposal development and collaborated with third-party vendors to ensure compliance with requested specifications.
- Conducted critical equipment and instrument sizing calculations to support engineering decision-making and detailed project development.

Praxair Inc. (now Linde)
Process Engineer IV

Jul 2003 - Sep 2008

- Initiated \$360K in productivity and cost reduction improvements through focused argon recovery, process optimization, and leak detection, delivering strategic technical analysis.
- Developed and implemented an algebraic predictive modeling tool to optimize efficiency across 30 operating plants, showcasing advanced analytical capabilities.
- Completed a comprehensive leadership development program that enhanced management, root cause analysis, and process optimization skills.
- Conducted process optimization and operational troubleshooting for 14 production facilities, ensuring compliance with company policies and safety requirements.
- Monitored and ensured adherence to company procedures, providing on-site oversight and risk analysis to support operational excellence.

EDUCATION

UNIVERSITY OF THE PEOPLE
M.B.A. -

2022 - 2025

- **GPA: 3.8**

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
B.S., Chemical Engineering

1996 - 2000

- **GPA: 3.7**

LANGUAGES

- English (Fluent)
- Spanish (Fluent)
- French (Basic)