

MARK WERWATH, PhD, PMP

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SENIOR ENGINEERING ENTREPRENEURSHIP EDUCATOR/ADMINISTRATOR

Leading student teams in analytically oriented projects with special emphasis on clean energy and sustainability projects. Teaching and administration experience at Northwestern University Entrepreneurship Center since 2012, teaching experience at Farley center since 2007. Taught grad and undergrad classes in energy and climate change entrepreneurship, coached student teams and startup teams across Chicagoland.

Comprehensive new product development background, including Program Management, New Product and technology Introduction, Development Engineering, Logistics, Strategic Planning, Process re-design, Risk Management, Budget and Expense Control, and establishment of Offshore Development Centers. Experienced in hardware, software, large scale systems and platform development. Focus for last 10 years in sustainability, climate change, carbon reducing programs by engaging with students in Nuvention Energy, a signature course focused on climate change related commercialization and technology strategies.

Highly skilled in PMBOK, Agile; Digital Six Sigma; Software Development Lifecycle (SDLC); SEI-CMM; and concurrent engineering methodologies. Very knowledgeable in clean energy technologies and advanced grid technologies

Educational administrator and educator with experience in pursuing/winning grants with NSF, Venturewell, and Boeing.

Currently advises startup teams and advises accelerator programs across Chicagoland:

Member of the Chain Reaction Innovation advisory group at Argonne National Labs mentoring teams and advising teams focused on energy related startups
Supporter of Campus 1871 initiative for Northwestern
Member of the mentor network for mHUB Accelerator in Chicago that focuses on hardware and manufacturing oriented startups
Advises student startups at Northwestern University, part of the Venturecat initiative and Advisor and judge for the Lee Kuan Yew Business plan competition at Singapore Management University-2020
Actively engaged with Venturewell OPEN conference as an invited speaker
Actively engaged with IEEE TEMS as a guest speaker on entrepreneurship topics
Coached more than a dozen teams that have progressed to various forms of external funding
Judged, facilitated and supported the Venturecat competitions at NU since inception

PROFESSIONAL PROFILE

- Ten years' experience teaching graduate and undergraduate level courses in Program Management, Project Management, Product Development, Energy Entrepreneurship, Negotiations, and Senior Design at Northwestern University and University of Chicago
- More than two decades experience leading and program managing New Product

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- Development programs in a high technology engineering environment
- Staff positions and consulting engagements in a variety of industries including telecommunications, aerospace, gaming, pharmaceutical development, medical practice and consumer technology

PROFESSIONAL EXPERIENCE

NORTHWESTERN UNIVERSITY MCCORMICK SCHOOL OF ENGINEERING-CLINICAL PROFESSOR INDUSTRIAL ENGINEERING AND MANAGEMENT SCIENCES

2012-current

DIRECTOR-MASTER OF ENGINEERING MANAGEMENT PROGRAM

CO DIRECTOR OF FARLEY CENTER FOR ENTREPRENEURSHIP AND INNOVATION

Managed a graduate academic program of 100+ students. Includes curriculum development, hiring of faculty, recruiting students and managing the administrative aspects of the program including a small staff of 4.

Co-directed an entrepreneurship program with over 700 students impacted every year, multiple grants, significant interaction with high net worth individuals and corporations and in obtaining gifts and corporate/NSF/Venturewell grants. Partnered with ISEN in the area of sustainability and with the deep learning lab for analytics. Partnered with Transportation center to deliver Nuvention Transportation. Partnered with Kellogg and the Garage to deliver a variety of programs including helping with Venturecat and strategic planning committee for entrepreneurship at Northwestern University. Partnered with INVO to develop a technology in the classroom initiative for Nuvention. Successfully partnered with Food, energy, water nexus research group to recruit technologies for the Nuvention classrooms.

Developed 5 new courses and helped re-design two other courses mostly at the grad level for Farley Center. Developed 2 new courses and redesign two others for MEM. Helped design the minors for both grad and undergrad levels for Farley center.

Key accomplishments: MEM

- Managed the transition of the program from a mostly local part time program to a mostly full-time (International) program
- Maintained a consistent return to the college, while returning 9% to the department and the standard percentage to the university
- Grew the total program generated revenue by 35% from 2014 through 2018
- Totally revamped the curriculum to include 3 new concentrations and new elective courses in product management and internet of things as well as analytics based entrepreneurship courses.
- Increased marketing spend 3X in 5 years while introducing scholarship funds to the program to attract the best and most diverse student base.
- Improved selectivity to equal MBA program levels
- Joined MEMPC consortium working with some of the best MEM programs in the country

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including MIT, Tufts, Duke, Dartmouth, Cornell and Purdue

Farley center signature courses and accomplishments:

Implemented a variety of administrative innovations and pursued a variety of grants with several successes including Boeing grant and Venturewell grants

Nuvention advanced materials (taught for 3 years), co taught with John Carlisle now Director of Chain Reaction Innovation

Nuvention clean tech energy (taught for 11+ years), significant results in the entrepreneurial ecosystem with several teams winning Rice and Clean energy Trust competitions. Several of my student teams applied or will be applying for the next cohort of CRI

Nuvention transportation and mobility (taught for 4 years)

Nuvention Analytics/Internet of things (taught for 4 years)

WMS GAMING, Chicago, IL

2005–2012

EXECUTIVE DIRECTOR-PROGRAM MANAGEMENT OFFICE

Lead, coach and manage a team of ten senior program managers and five program managers responsible for 250 active new product development programs

- Delivered a portfolio of programs worth \$300 million in annual sales
- Developed the processes needed to deliver the quality and features needed across all product lines
- Generated and managed a product cost-reduction program that resulted in a savings of over \$8 million with very little engineering effort expended
- Envisioned and launched a 50 employee offshore design center in India in under 90 days. That same operation has grown to over 200 employees today

MOTOROLA COMMUNICATIONS

2002- 2005

SENIOR DIRECTOR-BUSINESS OPERATIONS

Motorola Networks business, GSM Networks, Arlington Heights, IL

Managed a group of 16 senior product development program managers in three sites, UK, US and China

- Group successfully achieved TL-9000 compliance
- Implemented a full governance process for the entire division
- Transitioned significant product development work from premium centers to value centers in China
- Successfully managed the aggregate program budgets, valued in excess of \$200 million
- Responsible for integration of acquired startup businesses including PRINTRAK division.
- Successfully outsourced to India the next generation AFIS platform

SENIOR DIRECTOR-BUSINESS OPERATIONS

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Motorola PCS 3G Program Management, Libertyville, IL

- Built a team of 22 Program managers, project controls and process engineers
- Completed and passed ISO9001 process compliance audit
- Introduced several new processes including portfolio management processes, resource management processes, schedule integration processes, requirement management, change control and stage gate automation. Several of these processes were defined and implemented within 3G and were later used cross the sector

DIRECTOR-DIVISION PROGRAM MANAGEMENT OFFICE

Motorola, Integrated Solutions Division CGISS, Schaumburg, IL

- Managed and supervised a team of Project Managers, Process Engineers and Quality Managers in five sites nationwide.
- Improved on time performance for new product development, which increased margins and improved cash flow and revenues for the major businesses within ISD.
- Managed the outsourcing of major software development contracts and subcontracts with outside suppliers in order to satisfy specific customer contracts
- Managed the migration toward higher levels of software development methodologies as defined by the software engineering institute capability maturity model

MOTOROLA COMMUNICATIONS

1989 - 2001

DIRECTOR PRODUCT DEVELOPMENT PROGRAM MANAGEMENT-handsets

Motorola-PCS Program Management Office and Software development office, Schaumburg, IL

DIRECTOR-IDEN SYSTEMS-PROGRAM MANAGEMENT OFFICE-systems infrastructure

Motorola Land Mobile Products Sector, Schaumburg, IL

Responsible for integration of acquired startup businesses including Mobile Data International

MANAGER-SYSTEMS PROJECT MANAGEMENT -Trunked radio systems and E911 systems

Motorola Communications, Schaumburg, IL

SENIOR PROJECT MANAGER TRANSIT SYSTEMS

Motorola Mobile Data Division, Schaumburg, IL

NORTHROP DEFENSE SYSTEM DIVISION, Rolling Meadows, IL

1986 – 1989

PROGRAM MANAGER, ALQ-162 PROJECTS

- Responsible for \$46 million P&L statement. Total business manager for ALQ-162 support projects.
- Grew the ALQ-162 support business from \$20 Million to \$46 Million in 2 years.

ASSOCIATE PROGRAM MANAGER MARCONI/ZEUS

- Responsible for \$26 million P&L statement. This was a major turnaround project that improved the margin by nearly 20 points in an 18 month timeframe

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TEACHING BACKGROUND

CLINICAL ASSOCIATE PROFESSOR/FULL PROFESSOR

Co director of Farley Center, Director of MEM program

NORTHWESTERN UNIVERSITY

2012-PRESENT

taught courses in grad and undergrad levels. Full teaching load of 6 courses per year since 2012

SENIOR LECTURER/ADJUNCT-NORTHWESTERN UNIVERSITY

2000 to 2012

Masters in Engineering Management-Project Management

Masters in Product Development

Undergraduate IEMS-senior design-analytics projects with industrial clients

ADJUNCT INSTRUCTOR - UNIVERSITY OF CHICAGO-GRAHAM SCHOOL

2001 to 2018

Portfolio Management (part of advanced PM certificate program)

Negotiations and teamwork courses

EDUCATIONAL BACKGROUND

PhD Organizational Development

Benedictine University - Thesis: Antecedents to Organizational Innovation

Master of Engineering Management

Northwestern University Technological Institute, IEMS department

Bachelor of Science-Engineering

University of Illinois-Chicago - Major: Manufacturing (Mechanical) Engineering

PROFESSIONAL ASSOCIATIONS

- IEEE Engineering Management Society Board of Governors, 2004 to 2007
- Vice President-Educational committee, IEEE EMS Board of Governors- 2004 to 2007
- Vice President of Publications, IEEE TEMS, 2015-2018
- Member: IEEE-Engineering Management Society; Academy of Management; Project Management Institute-Certified PM Professional (PMP)