

KAREN I. MATTHEWS, PhD MBA

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TRANSFORMATIONAL TECHNOLOGY, INNOVATION AND BUSINESS LEADER

Self-made executive and avid learner with 22 years of experience from one of the leading manufacturing brands in the world. Data driven entrepreneur passionate about moving concepts into commercialization. Championed corporate initiatives for 5G and IoT in R&D, commercial & manufacturing. Drove incremental \$1B sales growth in Consumer Electronics. Technology (PhD, Cornell), business (MBA, Cornell) and hands

on experience yielded successful track record of profitable new business development supporting strategic growth initiatives. Component and system design experience, including hardware and embedded software. Strong advocate for building cross-functional, corporate, government and academic collaborations, with extensive customer-facing, agile innovation and technology transfer experience.

COMPETENCIES

LEADERSHIP FUNCTION INDUSTRY R&D, Commercial and Manufacturing 5G Telecommunications
Agile innovation + Tech transfer Internet of Things (IoT) Consumer Electronics Big picture vision
+ Detail-oriented Industry 4.0 Life Sciences Strategic communicator + Influencer Business Case
Display Relationship creator + Manager Cost Modeling Environmental High-performance team
developer Value Proposition Semiconductor Devices Technology strategy developer Supply
Chain Photonics

PROFESSIONAL EXPERIENCE

CORNING INCORPORATED, NEW YORK, NY 1998 – PRESENT A \$12B multinational company specializing in glass & advanced optics for industrial & scientific markets.

TECHNOLOGY & MARKET DEVELOPMENT MANAGER – OPTICAL COMMUNICATIONS (2014 – PRESENT) Drove global internal and external stakeholder & business unit initiatives to identify problems, product concepts and key capabilities for new business development in 5G, Internet of Things (IoT), Industrial Internet of Things (IIoT), Smart Manufacturing, Industry 4.0, Digital Transformation, wireless, optical communications and edge computing. Identified new market trends and drove business cases.

- Led new product design driving 20% cost reduction and 25% coverage improvement
- Spearheaded incremental 5% increase in product line revenue through adjacencies
- Executed new product development enabling product launch with \$100M+ revenue potential

TECHNOLOGY & MARKET DEVELOPMENT MANAGER – TELECOMMUNICATIONS (2009 - 2014) Directed international programs focused on early stage product concepts and prototyping in data centers • Championed product development for an optical connector with \$125M+ revenue outlook • Accelerated innovative fiber design with a \$50M revenue potential

- Improved customer experience in data centers by reducing time to identify failures by 50%

TECHNOLOGY & MARKET DEVELOPMENT MANAGER – SPECIALTY MATERIALS (2007 - 2009) Drove incremental \$1B sales growth and spearheaded entry into new renewable energy sector

- Championed new global business creation in consumer electronics
- Developed cutting-edge energy efficiency technology leveraged for consumer electronics space • Streamlined the innovation process to shorten time to market

SR RESEARCH PACKAGING SCIENTIST – LIFE SCIENCES (2005 - 2007)

Delivered new product IP landscaping & competitive intelligence opening up a new product line • Generated increased revenue of 10% in Life Sciences sector

- Positioned company in a new pharmaceutical market

SR RESEARCH PACKAGING SCIENTIST – DISPLAY PRODUCTS (2003 - 2005)

Executed technology mapping, competitive analysis, market research and feasibility study that became guiding strategy for a new business in display technologies

- Opened up global \$100M market for new product lines
- Launched new products into North America and EMEA

SR RESEARCH PACKAGING SCIENTIST – TELECOMMUNICATIONS (2002 - 2003)

Championed cross-functional team on fast paced, government funded project

- Reduced system latency by introducing state-of-the-art high-speed receiver modules

SR. RESEARCH PACKAGING SCIENTIST – SEMICONDUCTOR DEVICES (1999 - 2002)

Drove design, development and build of novel semi-automated equipment resulting in a reduction of packaging cost by 5% and designed novel packaging and platform designs for semiconductor lasers

PACKAGING ENGINEER – PHOTONICS TECHNOLOGIES (1998 - 1999)

Expanded the business' packaging options for five product lines in photonics.

- Pioneered a new strategy that increased sales by 20%.
- Spearheaded a low-cost product line that reduced internal costs by 35%.

CAREER NOTES

DISTINGUISHED AND MOTIVATIONAL INVITED SPEAKER

Recognized international invited speaker addressing several areas

- Technology/Innovation (i.e., 5G, Internet of Things (IoT), Industrial Internet of Things (IIoT), smart manufacturing, Industry X.0, Digital Transformation and Digital Divide)
- Career Development & Leadership (including Agility, Resilience & Diversity, Equity and Inclusion) • Conferences include Mobile World Congress, OFC, Internet of Manufacturing & Frontiers in Optics

AWARDS/RECOGNITIONS

- Executive Board Member, Thought Leadership Chairperson and Research Group Member of Georgia Tech's Center for the Development & Application of Internet of Things Technologies (CDAIT) (2015-2019) which resulted in globally renowned IoT white papers
- Executive Board Member of The UpSkill Foundation, upskilling underrepresented groups in data science
- 5 patents; 4 Distinguished Contributor Awards; 100+ external publications/presentation; 55 internal publications

PROFESSIONAL AFFILIATIONS

Optical Society of America (OSA), Institute of Electrical and Electronics Engineers (IEEE), Society of Women Engineers (SWE), Women In Manufacturing (WiM), National Society of Black Engineers (NSBE), National Black Masters of Business Administration Association (NBMBA) and Black Women in Science and Engineering (BWISE)

EDUCATION

MBA, Entrepreneurship and Global Leadership, Cornell University, Ithaca, NY

PhD, Electrical Engineering, Cornell University, Ithaca NY

MEng, Electrical Engineering, Cornell University, Ithaca, NY

BS, Electrical Engineering, Morgan State University, Baltimore, MD