

ARTHUR L. EDGE III

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GLOBAL TECHNICAL OPERATIONS | COMMERCIAL MANUFACTURING | SUPPLY CHAIN

Global Technical Operations, Commercial Manufacturing & Supply Chain leader with 15+ years of experience leading product lifecycle management, manufacturing strategy, technology transfer, commercialization, and global supply chain across biologics, vaccines, viral vectors, antibody-drug conjugates (ADCs), and complex therapeutic platforms. Translated late-stage development into commercial execution. Drove manufacturing readiness, CMC strategy, launch planning, and cross-functional governance. Trusted partner to Commercial, R&D, Regulatory, Quality, Finance, and Manufacturing leaders, delivering supply continuity, operational resilience, and strategic growth for multi-billion-dollar portfolios. Recognized for building scalable operating models, developing high-performing teams, and aligning diverse organizations to deliver patient-critical outcomes.

KEY EXPERTISE

Product Lifecycle Management • Commercial Manufacturing • Commercial Launch Readiness
Integrated Business Planning (IBP/S&OP) • Manufacturing Network Strategy • Capacity & Scenario Planning
Strategy Deployment • Operational Excellence (Lean / Six Sigma) • Business Continuity
Portfolio & Investment Planning • Digital Supply Chain Transformation • AI-Enabled Decision Making
Alliance Management & Joint Steering Committee Leadership • External Manufacturing & Supplier Governance

PROFESSIONAL EXPERIENCE

ASTRAZENECA | Gaithersburg, MD

Global biopharmaceutical company pushing the boundaries of science to deliver life-changing medicines.

Senior Director, Global Supply Chain & Strategy, Respiratory & Immunology

Nov 2024 – Present

Senior Director, Global Supply Chain & Strategy, Oncology

Nov 2022 – Mar 2025

Reporting to Vice President, Therapy Area, Global Supply; led global product strategy, commercialization, and supply execution for \$8B+ Oncology and Respiratory & Immunology portfolios. Directed Global Supply Teams; **50+ leaders across 20+ functions** spanning Commercial, Supply, Technical, Quality, Regulatory, Finance, Procurement, and Manufacturing.

Portfolio Strategy & Brand Leadership

- Represented Global Operations on executive governance, Global Product Teams, and Franchise Leadership Teams, influencing strategic investments, commercialization, capacity, and supply chain enterprise trade-off decisions.
- Directed end-to-end clinical and commercial supply strategy for **IMFINZI®** and **IMJUDO® (Immuno-Oncology)**, enabling \$5B+ in revenue (17% YoY growth) across 97 markets through product lifecycle management (LCM) and commercialization of new indications, protecting \$1B in incremental revenue following loss of exclusivity.
- Launched global supply for **SAPHNELO® (Immunology)** across 70 markets, supporting \$1B+ in annual revenue (20% YoY growth). Secured executive endorsement for optimized global supply network, increasing gross margin by 15%+ and enabling international expansion amid competitive pricing pressures.
- Directed global supply for **FASENRA® (Respiratory)** across 84 markets, helping drive \$2.2B in revenue (15% YoY growth) through leadership within Global Product Team; enabled #1 biologic brand position (46% market share), delivery of 1M+ units annually, treatment of 160K+ asthma patients, and company's first-in-category launch in China.
- **Global Operations Lead for 10+ oncology ADC pipeline assets**, shaped commercial launch readiness, manufacturing network design, make-vs-buy decisions, and long-range capacity planning to support future lifecycle expansion; securing senior executive endorsement of \$1.5B manufacturing investment in Singapore.

Enterprise Strategy & Operating Model

- Architected and executed 10-year and 3-year manufacturing capacity roadmaps, establishing long-range capital investment priorities to enable **300% volume growth** while sustaining 85% gross margins and uninterrupted supply.
- Led enterprise supply chain re-architecture for two China-origin products, directing cross-enterprise due diligence and securing executive approval to eliminate **U.S. Biosecure Act exposure and prevent estimated \$130M tax burden**.
- Piloted hypercare and issue management team response model following major global supply disruptions, coordinating Manufacturing, Quality, Distribution, Commercial, and Supply Chain organizations across 15 markets to restore supply continuity and **avoid \$95M in business impact**.
- Redesigned supply and distribution network (14 lanes, 10 nodes), **optimizing \$650M in global inventory**, reducing lead times 47%, delivering \$5M in logistics savings, and reducing carbon footprint by 98%.
- Defined Resilient Supply Chain Roadmap through 2030. Led cross-industry benchmarking and established framework for **Supply Chain Center of Excellence**, contributing to rise from #22 to #5 in Gartner's Supply Chain Top 25.

Director, Global Technical Operations, Products & New Technology

Jul 2020 – Nov 2022

Reported to Executive Director; held end-to-end accountability for technical and manufacturing strategy, product lifecycle management, and clinical-to-commercial execution across Oncology, Respiratory, Immunology, Infectious Disease, and Neuroscience portfolios. Directed matrix organization of **120+ professionals across seven global product teams**.

Product Commercialization & Technical Leadership

- Served as **Global CMC (Chemistry, Manufacturing & Controls) Lead** for biologics portfolio, directing BLA strategy, product lifecycle management, site readiness, and commercial launch execution. Business Process Owner for Operations engagement with R&D through New Product Introduction (NPI) Gateway Business Process.
- Built organizational capability** across 10+ product platform teams, establishing standardized business process for make-vs-buy manufacturing site selection, cost analysis, technical platform development for new modalities, and launch readiness, reducing **development-to-launch cycle time by 50%**.
- Led early operations strategy and cost analysis for **first inhaled biologic, Sunakimint (Respiratory)** with >\$4B peak-revenue potential, partnering with Commercial, Regulatory, Finance, and R&D to shape long-term manufacturing network design including API spray drying, capsule filling, blister packing, device and secondary packaging.
- Accelerated commercialization strategy for **Rilvestomig (Oncology)** PD-1/TIGIT bispecific, partnering across R&D, Network Strategy, Procurement, and Finance to evaluate platform, site selection, capacity, timeline, and COGM scenarios, securing executive governance endorsement and budget for **Candidate to Ph2b / Ph3 progression**.
- Managed complex partnerships on steering teams with Amgen for **TEZSPIRE® (Respiratory)** and Horizon Therapeutics for **UPLIZNA® (Neuroscience)**, ensuring on-time launch, regulatory compliance, and market expansion; navigated 50/50 profit-share alliance and supported Business Development with **due diligence for \$776M product divestiture**.
- Served on **Global Digital & Data Core Team**. Transformed cross-supplier analytics capability during pandemic by integrating process data across external manufacturing network, accelerating FDA filing and achieving first-to-market approval for COVID-19 antibody therapy **EVUSHELD™ (Infectious Disease)**, enabling **\$2.19B in first-year revenue**.

GLAXOSMITHKLINE (GSK) | Rockville, MD

Global science-led healthcare company developing innovative Pharmaceutical, Vaccine, and Consumer Healthcare products.

Senior Technology Manager, Manufacturing Science & Technology

Dec 2016 – Jul 2020

Reported to Global Technical Director; served as Product Owner for commercial manufacturing of oncology and immunology biologics across two GMP facilities (~500-person site), leading risk, change, and knowledge management.

Manufacturing Operations & Commercialization

- Owned manufacturing campaign execution and performance management for **BLENREP (multiple myeloma)** and **BENLYSTA® (Lupus)**, leading a 50+ member cross-functional Bulk Drug Substance team across Production, Quality, and Engineering; reduced deviations by 15% while achieving 93% batch success.
- Drove **AI/ML-enabled digital transformation** of quality operations, preventing \$15M in manufacturing losses by predicting incoming raw material variability and cell growth performance.
- Appointed to site **Extended Leadership Team (ELT)**, co-owning site strategy. Member of Raw Material Board, Change Control Review Board, Quality by Design (QbD) and Control Strategy Community of Practice.
- Managed 4 engineers and led operations readiness** and tech transfer for **first commercial launch** in new \$139M, 2 x 10,000-L facility, defining process requirements and executing manufacturing and automation shakedown to transition site from construction to GMP production. Delivered 40+ readiness KPIs on time.
- Elevated employee engagement, founded **Career Growth Network ERG**, and established local university partnerships to strengthen leadership development and talent pipelines, boosting site **pulse scores from 74% to 77%**.

EMERGENT BIOSOLUTIONS | Gaithersburg, MD

Global specialty biopharmaceutical CDMO developing medical countermeasures against biological health threats.

Senior Process Engineer, Biodefense Division

May 2015 – Dec 2016

Reported to Director of Operations; supported U.S. government biodefense programs (Ebola, Zika, anthrax, tuberculosis, ricin toxin), delivering manufacturing capabilities for vaccines and biologics within high-containment GMP environment.

Clinical Product Development

- Led tech **transfer and manufacturing scale-up** across viral vector (MVA), bacterial (*E. coli*), and mammalian platforms, advancing manufacturing readiness for multiple rapid-response programs, including three Ebola antibody candidates.
- Overhauled global tech transfer procedures and innovation intake model, establishing **company-wide standard** for site-level maturity gap assessments and improving tech transfer efficiency across facilities to support Center for Innovation in Advanced Development and Manufacturing (CIADM) government designation.

- Spearheaded **capital investments exceeding \$500K** to expand process development laboratories, strengthen manufacturing capabilities, and increase site flexibility supporting biologics development and future program growth.
- Advised product development teams on manufacturability, process risk, and scale-up strategy using Failure Mode and Effects Analysis (FMEA) and small-scale manufacturing models, improving manufacturing readiness and reducing technical risk across multiple vaccine platforms for the National Institute of Allergy and Infectious Diseases (NIAID).

DSM-FIRMENICH | Columbia, MD

Global science-based leader and innovator spanning Nutrition, Health, and Beauty.

Bioprocess Engineer, Biotechnology, Research & Development

Dec 2009 – May 2015

Reported to Senior Manager, Biotechnology R&D; drove upstream and downstream process development, technology scale-up, and manufacturing feasibility across Human Health, Animal Health, and Industrial Biotechnology portfolios.

- **Led process scale-up and manufacturing feasibility** assessments for emerging biotechnology platforms. Developed omega-rich nutritional oils commercialized through Abbott Nutrition and The Coca-Cola Company.
- Oversaw pilot-to-commercial scale-up of novel extraction process, **improving yield from 50% to 90%** across 28 production runs; eliminated process variability through Lean Six Sigma, generating \$450K in annual savings.
- Headed development workstreams for **\$10M strategic biofuels partnership** with BP. Collaborated across fermentation, cell physiology, and molecular engineering teams to deliver renewable diesel for **2012 London Olympic BMW fleet**.
- Secured \$150K to drive DSM Sinochem Pharmaceuticals business assessment advancing circular economy initiatives. Prioritized waste stream valorization options by strategic fit, tech maturity, and implementation readiness.

BOARD LEADERSHIP

University of Michigan – Chemical Engineering Advisory Board

2026 – Present

- Appointed to advise department leadership on curriculum strategy, workforce development, and industry engagement.

National Society of Black Engineers – National Professionals Chair

2021 – 2024

- Board Chair, partnering with CEO and Board of Directors to define and implement 5-year Game Change 2025 strategy. Held fiduciary accountability for **~\$18M organizational P&L supporting 40+ staff, 700+ chapters, and 24K+ members globally**; strengthened governance contributing to NSBE surpassing \$20M annual revenue milestone.

National Society of Black Engineers – Director, Healthcare Innovation

2019 – 2021

- Built **10+ industry-academia partnerships**, engaging 1,200+ professionals. Launched workforce development initiatives with the White House, National Institute for Innovation in Manufacturing of Biopharmaceuticals (NIIMBL), and the Alliance for Regenerative Medicine (ARM); received Technical Ambassador Award.

Montgomery County Public Schools – Chair, Engineering & Biomedical

2016 – 2023

- Led strategic redesign and modernization of five-course Project Lead the Way (PLTW) curriculum, overseeing \$200K annual budget and 5,000+ student enrollment. Advised Assistant Superintendent on workforce readiness, contributing to MCPS achieving the **nation's #1 PLTW Advanced Engineering ranking**.

EDUCATION

Kellogg School of Management, Northwestern University – Executive MBA (Class of 2028)

Johns Hopkins University – Master of Engineering, Chemical and Biomolecular Engineering

University of Michigan – Bachelor of Engineering, Chemical Engineering

EXECUTIVE DEVELOPMENT & INDUSTRY LEADERSHIP

EXECUTIVE DEVELOPMENT

- Management Accelerator Program – McKinsey & Company (2024)
- Reuters NEXT Leadership Summit (2025)
- Illuminate™ Communication Strategy & Change Management – Duarte (2022)

INDUSTRY LEADERSHIP

- Speaker – Leading Supply Chain Sustainability, Pharma Supply Chain & Logistics Innovation Programme (2023)
- Speaker – Building a Culture of Innovation in Manufacturing, Pharma Manufacturing & Outsourcing Summit (2023)
- Committee Member – DISCOVER Supply Chain Summit, Pfizer (2024)
- Leader – Big Data Workshop, National Institute for Innovation in Manufacturing of Biopharmaceuticals (2019)
- Gartner Supply Chain Symposium/Xpo (2024)

PROFESSIONAL CERTIFICATIONS

- Project Management Essentials, DSM (2014)
- Lean Six Sigma Green Belt, DSM/Paloma Consulting (2012)