Chris Draper, Ph.D., P.E.

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Experienced leader integrating new technologies and processes into advanced products and established organizations. Career of leadership for organizations ranging from small non-profits to large corporations, academic institutions to the Federal government. Expert in directing adoption of unconventional technologies, institutionalizing corporate processes that foster innovation, managing organizational cultures to maximize company performance, and defining productive inter-organizational partnerships focused on increasing corporate value.

Leadership

2024 – Present **SafetAI** **San Francisco, CA**

Board Chair (Fractional)

Responsible for engaging with organizations implementing AI augmented systems as the Board Chair to create and run their AI Safety Overview Board, ensuring compliance and ethical practices; recruiting top industry professionals to serve on the Board, fostering diverse perspectives and expertise; and managing Board operations effectively, facilitating strategic decision-making and risk management.

- Developed and published training materials Safe AI Basics that reached #1 New Release: Business Infrastructure on Amazon.
- Developed training courses for non-technical decision-makers, policymakers, and analysts responsible for implementing AI augmented systems in legally sensitive environment.

2024 – Present **SunFox Energy** **Boston, MA**

Chief Operating Officer (Fractional)

Responsible for defining and implemented operational strategies for a solar installation company, focusing on risk minimization and core technology installation; directing supply chain management controls and financing strategies to ensure efficient operations; and overseeing the implementation of systems needed to operate a distributed sales force, driving company growth and success.

2023 – Present **Hu RACs** **Des Moines, IA**

Chief Executive Officer (Fractional)

Responsible for delivering environmental, social, and governance (ESG) compliance solutions, primarily for beyond carbon applications with specific expertise in liquid-like materials and feedstocks. Formed November 2023 in response to Environmental Protection Agency (EPA) requirements for third-party storage of Renewable Fuel Standard (RFS) data, Hu RAC has quickly grown to manage compliance data for over 2.5B pounds of renewable fuel feedstock and over 300 tons of beyond carbon voluntary offset credits.

2021 – 2023 **Third Coast Commodities** **Buchannan, MI**

Chief Technology Officer

Responsible for developing and maintaining the technology vision and leading implementation of trading, contracting, operations, and blockchain-based compliance resources across Third Coast Commodities (3CC) and its subsidiaries Evergreen Grease, Ag Energy Transport, and Stilwell Logistics. 3CC is a FOG management company that provides a basket of service that aggregates, transports, recycles, & upcycles co products and by products of the commercial cooking and animal protein world into renewable feedstock primarily for Renewable Diesel and sustainable aviation fuel industries. 3CC is first and foremost a SERVICE company with that maintains relationships with mom and pop restaurants right up to Fortune 500 Companies. Whether by truck or rail, 3CC feedstock is powering the 21st Century Transportation Revolution.

2021 – Present **City of Des Moines, Plan and Zoning Commission** **Des Moines, IA**

Commissioner

Oversees the preparation and administration of the comprehensive plan (PlanDSM Creating Our Tomorrow), zoning, long-range planning, site planning, land subdivisions, and public improvements as defined by codes; sets policy; and determines plan and zoning requirements. Iowa Code Section 414.6.

2013 – Present **Trokt (Meidh Technologies, Inc.)** **Des Moines, IA**

Managing Director

Responsible for product design, business development, and growth strategies. Trokt is a cloud-based platform that efficiently, accurately, and securely controls complex collaborations. From contract negotiation to collective bargaining, arbitration to mediation, issue tracking to grievance resolution, Trokt manages complex, multi-party collaborations in one easy to use platform so any participant can securely access and participate from anywhere at anytime using any device with all the relevant information directly at their fingertips.

- Oversaw the successful rollout of Trokt within organizations such as the National Mediation Board, National Railroad Adjustment Board, Veterans Administration of Western Tennessee, United States Rugby Player Association, Palm Beach County Classroom Teachers Association, and the Online Dispute Resolution Bowl.
- Overseeing expansion into the special education, human resources, and government relations verticals.

2011 – Present **Meidh Corporation** **Des Moines, IA**

Director (Formerly CEO)

Responsible for the performance and growth of Meidh Corporation, an engineering analysis firm that services clients across the United States. Meidh develops and installs human focused continual improvement processes designed to increase the value of corporate assets by reducing operational costs. My role included.

- Managing formation and client retention after an organizational split form Terrus Real Estate Group,
- Structuring the corporation, brother/sister corporations, and subsidiaries to ensure maximum flexibility and growth potential,
- Developing the inter-dependent product lines and roll-out strategies across Meidh's diverse disciplines,
- Identifying and enacted strategic partnerships with external corporations and non-profits.

Thought Leadership

2020 – Present **Indiana University** **Bloomington, IN**

Visiting Scholar, Ostrom Workshop

Assisting to coordinate the Blockchain Governance Initiative exploring effective governance models for ensuring data quality using distributed ledger technologies.

2020 – Present **National Center for Technology and Dispute Resolution** **Amherst, MA**

Fellow

Fellow contributing to the scholarship of the The National Center for Technology and Dispute Resolution (NCTDR), which supports and sustains the development of information technology applications, institutional resources, and theoretical and applied knowledge for better understanding and managing conflict. The Center believes that networked information technology can be uniquely leveraged to expand and improve conflict management resources and expertise. We are only at the beginning of understanding how individuals separated by great physical, cultural, or technological distances can utilize resources and expertise virtually. We conceive of the online environment as a "place" where increasingly powerful tools will be available for working to find solutions to many forms of offline/online conflict, whether they are public or private, whether they involve commercial transactions or other social relationships, and whether they are international or domestic.

2020 – 2022 **American Bar Association** **Washington, DC**

Co-Chairperson, Technology Committee

Responsible for facilitating and further relationships between practitioners, technologists, and policymakers to advance the adoption of equitable technologies within the field of dispute resolution.

2019 – 2022 **American Bar Association** **Washington, DC**

Chairperson, ODR Task Force, Working Group 1

Working to develop the standards guiding online dispute resolution system developers and the services provided to users.

Strategic Leadership

2020 – 2021 **IEP Equity** **Des Moines, IA**

Mediator

Responsible for developing the support materials, curriculum, and leading pre-dispute mediations at the request of parents during IEP meetings. IEP Equity provides mediation services to IEP teams during IEP consultations in an effort to avoid conflicts or Due Process. IEP Equity provides secure software and neutral mediation, bringing families together in creating an individualized education plan. My role included:

- Managing formation of IEP Equity as a spinout of Trokt,
- Structuring the corporation for its inclusion into the Iowa EdTech Accelerator,
- Creating internal processes to manage client and mediator operations.

2017 – 2021 **AIRMAP** **Santa Monica, CA**

Consultant for Risk Products

AIRMAP is the world's leading UTM for unmanned aircraft. AIRMAP connects airspace authorities with the drone ecosystem to unlock safe, efficient, and scalable drone operations. My role included.

- Developing the risk concepts and computational design for how to optimize impact risk from drone flights
- Oversaw development of the AIRMAP Risk Engine for calculating flight risks in real time
- Oversaw development of consequence maps for multiple jurisdictions that enabled capability planning

2017 **Drake University** **Des Moines, IA**

Adjunct Professor, Business School

Responsible for developing, delivering, and assessing content and engagement towards undergraduate learning of operations management. Responsible for all aspects of student performance across more than eighty upper classmen and high performing sophomores. My role included.

- Developing curriculum for a flipped classroom.
- Overseeing day-to-day classroom management.
- Verifying the level of understanding using self-directed and group facilitated investigation and discussion.

2007 – Present **Green Financial Exchange** **Des Moines, IA**

Director

Responsible for guiding business development at the first marketplace for green fuels and their raw materials. Responsibilities and successes included:

- Establishing systems and processes that allowed the GFEX to secure up to 5% of the waste vegetable oil trading market in its first two years,
- Developing and securing partnership arrangements that saw the GFEX facilitate transactions with a cumulative product value on the order of $500,000 per week, and
- Creating and selling a trading subsidiary to a major regional leader in the fats and oils trading industry.

2010 – 2017 **Iowa Youth Rugby Association** **Des Moines, IA**

Chairman, Board of Directors

Responsible for developing, implementing, and overseeing the strategy and tactics associated with growing all levels of youth rugby in the State of Iowa. My role included responsibility for:

- Creating and directing operation of the Iowa High School Rugby Association, a profitable high school rugby league that increased player participation from 26 players in 2010 to over 500 players in 2015,
- Overseeing the growth that enabled the first inner-city public high school in the nation to give merit-based Varsity Letters for boy's rugby (DM East) and establishment of the first public high school whose School Board voted to make rugby a Varsity sport (SE Warren),
- Facilitating the creation of the nation's first school-based girl's rugby league in Fall 2012 that became profitable in 2014, and
- Overseeing organizational and sustainability strategies for the organization.

2010 – 2017 **Modern Dickens Foundation** **Des Moines, IA**

Director

Responsible for building an Editorial Board and managing the operation of the Modern Dickens Project, a contest for undiscovered authors to write each chapter of a serial novel.

- Established the corporate structure and operational procedures required for facilitating creation of the Modern Dickens Project novel.
- Managed the publishing process for The Devil is Done Sinning, the 2011 Edition of the Modern Dickens Project.
- Brought the Modern Dickens Project to Simpson College where it has since published Defining Darrell and Woman, Regardless, and spun off other related ventures like the Little Dickens Project.

2013 – 2016 **Incubator in a Box** **Des Moines, IA**

Director

Responsible for creation and implementation of the Incubator in a Box venture accelerator platform. Incubator in a Box is the operational and technological backbone behind EMERGE, a public-private partnership between the Indianola Development Association, Simpson College, and the Indianola Municipal Utility which focuses on building multi-disciplined teams that will be capable of taking a technology through the commercialization process. My role included:

- Integrating academic programming with Incubator in a Box ventures to create unique experiential learning opportunities,
- Attracting or developing and overseeing over 57 ventures engaging over 500 students and community members in less than three years,
- Secured more than $2.5MM of investment for Incubator in a Box ventures and activities,
- Securing professional service relationships with external companies and Simpson College that produce both project-based and retainer revenue, and
- Overseeing negotiations associated with the first Incubator in a Box venture sale in Spring 2015.

2015 – 2016 **Iowa Innovation Corporation** **Des Moines, IA**

Board Member (Ex-Officio)

Responsible for representing the interests of Iowa private colleges and universities. The Iowa Innovation Corporation is the for-profit partner of the Iowa Economic Development Authority. This public-private partnership is designed to maximize the value of state programs by providing private sector support for organizations seeking and employing state funding. The nonprofit Iowa Innovation Corporation fosters research and development, supports the commercialization of ideas, and establishes funding to help Iowa companies grow and innovate.

- Member of the Business Development Committee.

2014 – 2016 **Snitch'n** **Indianola, IA**

Advisor

Responsible for identifying and delivering strategic teaming and partnership opportunities to advance from the single Snitch'n product to a scalable, sustainable startup business. Snitch'n is a novel app-based predictive policing tool that significantly reduces the cost of policing high crime density areas of a city or state.

- Designed app-based solution based on customer definition of the problem.
- Led Alpha development and exploratory meetings that led to adoption by the Fifth Judicial District.
- Responsible for developing and managing a business operations and growth strategy.
- Negotiated channel relationship worth over $1,500,000 in early stage investment.

2011 – 2012 **Des Moines Social Club** **Des Moines, IA**

President, Board of Directors

Responsible for creating the operational structures and assembling the development team that allows the Des Moines Social Club to successfully rehabilitate and repurpose the Des Moines Fire Station into a multipurpose arts venue.

- Oversaw organizational overhaul that resulted in the Des Moines Social Club ending FY2012 with a surplus for the first time in the organization's history.
- Led creation of building development team whose quality enabled a successful $3.6M capital campaign.
- Oversaw City and partner negotiations that led to redevelopment of the Des Moines Fire Station.

2006 – 2008 **Grogan, Foster, Lloyd and Company** **Des Moines, IA**

Director

Founding partner of one of the most widely recognized and trusted brokerages for midsized producers of biodiesel feedstock.

- Developed the initial corporate principles, objectives, and growth strategies which drove the organization to specialize in midsized biodiesel-related markets.
- Targeted and secured strategic alliances within the industry through joint marketing agreements which led to significant year-on-year growth within the waste vegetable oil industry.
- Managed the company's acquisition in December 2008.

2004 – 2006 **Glasgow University Engineering Society** **Glasgow, Scotland**

President

Responsible for reviving and leading the University's oldest Society as it developed and strengthened relationships between the engineering industry and the University's Engineering Faculty members.

- Responsible for introducing, coordinating, and managing the Glasgow University Engineering Society Dinner with Industry, an opportunity for students and industrialists to accumulate and disseminate information about professional opportunities within the engineering industry.
- Responsible for developing an active alumni-network through the Engineering Society that facilitated greater communication between current students, alumni, and the Faculty. The platform developed within the Engineering Society was adopted by the Engineering Faculty.
- Developed course plans and market analyses for business-focused taught MSc courses in engineering which were designed to develop into a joint MSc/MBA program. At the time of departure, the plans had been reviewed by the Dean of the Engineering Faculty for presentation to the University Council.

Technical Experience

2010 – 2011 **Terrus Real Estate Group** **Des Moines, IA**

Vice President, Sustainable Operations

Responsible for identifying, targeting, and implementing facility operations strategies designed to reduce energy costs and highlight efficiency improvements through mechanisms such as Energy Star and LEED.

- Managed the application through Certification for the first LEED Existing Building certification in the State of Iowa for Meredith Corporation
- Developed a statistically valid analysis demonstrating the value premium of LEED certification in competitive real estate markets.

2006 – 2010 **ACTA Inc.** **Houston, TX**

Principal Engineer

Responsible for analyzing the effects of natural and man-made phenomenon relevant to the aerospace and petrochemical industries as they pertain to public health and safety.

- Team Lead developing the Bivariate Learning Rate approach for predicting the probability of failure for a developing system without using the assumption of Bernoulli trials.
- Team Lead developing the ACTA Probabilistic Aircraft Vulnerability Model as a technique for assessing the vulnerability of commercial and business aircraft to debris generated from launch vehicle operations.
- Team Member developing methods for assessing trajectory uncertainty for piloted reusable launch vehicles.
- Team Member assessing the reentry risk posed by the ESA Jules Verne Automated Transfer Vehicle (ATV) spacecraft.

2001 – 2003 **Federal Aviation Administration** **Washington, D.C.**

Aerospace Engineer/Safety Inspector

Responsible for protecting the public from the inherently hazardous operations associated with commercial space transportation operations while promoting industry development and growth through the use of Federal regulations.

- Aerospace Engineer in the Licensing and Safety Division, Office of the Associate Administrator for Commercial Space Transportation (AST-200).
- Team leader for compliance monitoring at the Kodiak Launch Complex for the November 2001 Missile Defense Agency (MDA) launch from Kodiak, AK, lending guidance and support to Miltec Corporation contractors during the ensuing mishap investigation.
- Team member supporting the FAA/USAF missile standardization effort though the Common Standards Working Group subgroups for Flight Safety Analysis, Debris Analysis, Vehicle Failure Analysis, Training and Qualification standards, Suborbital Missile Analysis, Ground Safety, and Flight Termination System requirements.

2000 **Ford Motor Company/Visteon Corporation** **Plymouth, MI**

Advanced Technology Design Engineer Co-op

Responsible for conceiving, developing and preparing advanced technology concepts for sale to worldwide automobile manufacturers.

- Project Co-Lead developing an on-board vehicle diagnostic system. The system required a rapid, accurate dissemination of time-sensitive information to a wide range of users. The concept development required an economic analysis, extensive fault tree analysis work, and interfacing with corporate marketing. Filed a patent request.
- Lead researcher on automotive applications for Ranque-Hilsche vortex tubes. Filed a patent request.
- Project Co-Lead developing a compressor oil migration diagnostic system. Filed a patent request.

Education

2003 – 2006 **University of Glasgow** **Glasgow, Scotland**

Ph.D. Mechanical Engineering

Member of the University of Glasgow Space Systems Group responsible for developing and implementing risk-based, economic feasibility assessment methodologies and strategies using stochastic modeling techniques to evaluate the reliability, maintainability, and utility of on-orbit space-launch systems like the Motorized Momentum Exchange Tether (MMET) design concept.

- Research Lead developing a model MMET survivability within the orbital environment.
- Research Lead investigating the resulting debris composition and dispersion of glass impactors following hypervelocity impacts onto Twaron rope.
- Team Member of the AIAA Tether Technical Committee investigating system safety of tether-based on-orbit systems.
- Instructor in labs and tutorials on topics such as Mathematics, Dynamics, Materials, Thermodynamics, and Aerodynamics for students in their first, second, and third years of undergraduate study.

1997 – 2001 **University of California at Berkeley** **Berkeley, CA**

B.S. Mechanical Engineering

Member and Varsity Letterman since 1998 on 4 Division 1 National Championship teams, starting at Hooker in 2000 and 2001.

Professional Affiliations

Certified Mediator (IADR), Licensed Professional Engineer (P.E.) State of Iowa

Publications

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Draper, C.H., "Comments on Docket item FAA–2014–0418: Changing the Collective Risk Limits for Launches and Reentries and Clarifying the Risk Limit Used to Establish Hazard Areas for Ships and Aircraft," Simpson Working Paper No. 2014-16240100-002, 20 October 2014

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