



Consolidated SDP Workshops for DAAG 2019 March 5 – 6

Grand Hyatt Denver - 1750 Welton Street, Denver, Colorado

	March 5th SDP Day Room 1	March 5th SDP Day Room 2		March 6th SDP Day Room 1	March 6th SDP Day Room 2
7:00			7:00		
	Registration			Registration	
8:00			8:00		
9:00	Workshop 1 <i>Data Science for Decision Analysts</i> Alejandro Martinez and Isaac Faber	Workshop 2 <i>Why Can't you just Make a Decision?</i> Pat Leach	9:00	Workshop 5 <i>A Decision Analysis Approach to Venture Capital</i> Clint Korver	Workshop 6 <i>Take control of your project with Cost & Schedule Risk Analysis</i> Brian Putt, Jason Mewis & Bill Haskett
10:00			10:00		
11:00			11:00		
12:00	Lunch	Lunch	12:00	Lunch	Lunch
13:00			13:00		
14:00	Workshop 3 <i>You make the call: Applying Decision Quality to a High Stakes Decision In Professional Football</i> Jim Driscoll	Workshop 4 <i>Becoming an Effective Decision Leader with Decision Makers That Outrank You</i> Carl Spetzler & Jennifer Meyer	14:00	Workshop 7 <i>Using Decision Analysis to Drive Lean Innovation</i> David Matheson	Workshop 8 <i>Scenario Planning for 3 levels of Strategic Planning and Project Management</i> Ellen Coopersmith, Kent Burkholder & Jeremy Walker
15:00			15:00		
16:00			16:00		



Tuesday, March 5, 2019

Workshop 1 (8 am – 12 pm)

Title: ***Data Science for the Decision Professional***

Instructors: Alejandro Martinez and Isaac Faber

Workshop 2 (8 am – 12 pm)

Title: ***Why Can't You Just Make a Decision?***

Instructor: Patrick Leach

Workshop 3 (1pm – 5pm)

Title: ***You Make the Call: Applying Decision Quality to a High Stakes Decision in Professional Football***

Instructor: Jim Driscoll

Workshop 4 (1pm – 5pm)

Title: ***Becoming an Effective Decision Leader with Decision Makers that Outrank You***

Instructor: Carl Spetzler and Jennifer Meyer

Wednesday, March 6, 2019

Workshop 5 (8 am – 12 pm)

Title: ***A Decision Analysis Approach to Venture Capital***

Instructor: Clint Korver

Workshop 6 (8 am – 12 pm)

Title: ***Take Control of Your Project with a Cost and Schedule Risk Analysis***

Instructors: Brian Putt, Jason Mewis and Bill Haskett

Workshop 7 (1pm – 5 pm)

Title: ***Using Decision Analysis to drive Lean Innovation***

Instructor: David Matheson

Workshop 8 (1pm – 5pm)

Title: ***Scenario Planning for Three Levels of Strategy Development and Project Management***

Instructors: Ellen Coopersmith, Kent Burkholder, and Jeremy Walker

Workshop 1 (Tuesday, March 5, 2019 | 8 am – 12 pm)

Title: ***Data Science for the Decision Professional***

Instructors: Alejandro Martinez and Isaac Faber

Abstract:

The past few years has seen broad cross-industry adoption of data driven decision making. Concepts like big data, artificial intelligence, and data science have taken center stage. Business Intelligence companies like Tableau command multi-billion dollar valuations. How does this evolution fit into the life of a decision analyst? The data science process is similar to the decision analysis process in many ways. This workshop is designed for the decision analyst who wants to understand data science and learn how to incorporate it into their daily work. Participants will get an introductory understanding of the data science philosophy and how to integrate data focused techniques into decision models. Using popular tools like R and Python applications will focus on the hands-on creation of decision models informed with data science methods. Participants can expect to work from raw data and deploy a simple decision support dashboard. **No previous experience in Data Science is required. Please bring a laptop and register for a free profile at <https://www.matrixds.com>**

Instructors:

Alejandro Martinez, Co-Founder & CEO of MatrixDS



Alejandro is a Ph.D. Candidate at Stanford University and Professor Ron Howard's last doctoral student. His research focus is on approximation of multi-attribute utility functions with the use of thresholds and the implications that this approach has on the creation of better decision support automation. He is passionate about operationalizing decision making within organizations in a way that creates an "alive process". Before coming to Stanford, he was an Operations consultant and an Operations Manager for several manufacturing businesses in his native Venezuela. He has led large teams in delivering results in operations rich fields such as food and heavy metal manufacturing.

Isaac Faber, Co-Founder and Chief Data Scientist of MatrixDS



Isaac Faber is a Ph.D. Candidate at Stanford University in the Decision and Risk Analysis group, his research focus is applying machine learning techniques to warning systems in cyber security. Before coming to Stanford, he was the lead Data Scientist at Army Cyber Command where he worked closely with the intelligence agencies like the NSA. He was the architect of the largest operational Big Data System in the Department of Defense. Isaac also holds the academic rank of assistant professor at the United States Military Academy at West Point in the Systems Engineering Department. He has extensive experience in Data Science in several different fields including military operations, cyber security, financial engineering, and insurance underwriting.

Workshop 2: (Tuesday, March 5, 2019 | 8 am – 12 pm)

Title: ***Why Can't You Just Make a Decision?***

Instructor: Patrick Leach

Abstract:

People make decisions all the time without going through any sort of structured process or performing any analysis, and for the vast majority of decisions, this is fine. Business executives rise to positions of authority in large part because of an exceptional ability to make good decisions in difficult situations. Their intuition and instincts are better than most.

As things become more complex, however, it makes sense to supplement one's instincts with as rich an understanding of the situation as can be achieved, given the usual limitations on time and resources. Such insights can often be gleaned by thinking one's way through the problem in a structured manner, fully considering uncertainties and competing objectives, and thinking creatively about one's alternatives.

This workshop will cover:

- When to go with your instincts, and when to use a more structured approach
- Common pitfalls to avoid; psychological weaknesses that all humans have
- The value of considering multiple perspectives
- Tools that can help to overcome various pitfalls and provide clarity in complex times

The material covered will include concepts contained in the instructor's book, ***Why Can't You Just Give Me the Number?***, as well as other sources.

The target audience for this workshop is young professionals and experienced managers who are relatively new to decision science.

Instructor:

Pat Leach, Independent Strategy Consultant, Adjunct Professor, Colorado School of Mines



Patrick Leach has over thirty years of experience in industry and consulting. He joined Decision Strategies Inc. in 2004, and was CEO of the company from August of 2011 through July of 2016. He now works as an independent strategy consultant, and is an adjunct professor at the Colorado School of Mines.

Pat is the author of *Why Can't You Just Give Me the Number? - An executive's guide to using probabilistic thinking to manage risk and to make better decisions*, which is now out in its Second Edition. He is a Charter Fellow in the SDP and incoming President, and holds memberships in the SPE, the International Society of Sustainability Professionals, and INFORMS.

Workshop 3: (Tuesday, March 5, 2019 | 1 pm – 5 pm)

Title: ***You Make the Call: Applying Decision Quality to a High Stakes Decision in Professional Football***

Instructor: Jim Driscoll

Abstract:

Those who coach professional sports, be it football or otherwise, likely understand better than most the distinction between a good decision and a good outcome. These individuals are forced to make many decisions during a game, often in a matter of seconds, and the outcome of their decisions are immediately visible to all. If they make a risky decision and it succeeds, they are hailed as a genius. Conversely, failure often brings with it swift and unrelenting criticism. Given this harsh reality, it seems many coaches – and particularly the most successful ones – soon realize the only thing they can control is the process that precedes and underlies those split-second choices.

Following a brief overview of the six elements of Decision Quality (DQ) and how to use them to measure the quality of any decision, participants will practice applying what they learn via a fun and interactive football-based case study. Working in small teams with a facilitator, participants will adopt the perspective of a head coach facing a high-stakes game-winning decision.

While we aren't suggesting that pro-football coaches and their staff utilize DQ to guide them in their play-calling per se, participants in this workshop will undoubtedly see many parallels between the situation

presented in the case study and the high-stakes, pressure-filled decisions that confront executives in other domains on a daily basis.

The target market for this workshop includes:

- Decision-makers and other leaders who are interested in improving the state of decision-making in their respective organizations but who are unfamiliar with Decision Quality
- Those who wish to practice applying Decision Quality with colleagues in a safe, fun, and supportive learning environment
- Experienced Decision Professionals looking for new and innovative ways to introduce Decision Quality to others

Note: An in-depth understanding of the game of American Football is not required.

Instructor:

Jim Driscoll, SDP President



Jim Driscoll leads the Decision Quality Program Office at Intel. Since joining the company in 1999, Jim has held various roles of increasing responsibility; he embarked on his current full-time mission to improve decision-making at Intel in mid-2012. As head of Intel's DQ Program Office, Jim and his team act as the corporate-wide owners, teachers, and lead practitioners of DQ. They work with executives and their staff to tackle complex, strategic decisions across every facet of the company's operations. Over the years, Jim and his team have taught over 1500 Intel employees the basics of DQ, effective facilitation, and world-class Decision Analysis. For the past year, Jim has served on SDP's Board of Directors where he is an active member of the Strategy Sub-Committee. He has twice served on the Panel of Examiners for the Raiffa-Howard Award and has been an invited speaker at several Fortune 500 companies and universities including Stanford University's Center for Professional Development (SCPD) and the University of Washington, Foster School of Business. Jim holds a certificate in Strategic Decisions and Risk Management from SCPD. A life-long resident of Oregon, Jim lives in the beautiful Portland-metropolitan area with his wife and three young children.

Workshop 4: (Tuesday, March 5, 2019 | 1 pm – 5 pm)

Title: ***Becoming an Effective Decision Leader with Decision Makers that Outrank You***

Instructor: Carl Spetzler and Jennifer Meyer

Abstract:

This session focuses on effective facilitation of decision maker conversations. As leaders of strategic decision projects, we face many challenges in driving to Decision Quality with Decision Makers that usually outrank us. We have to build conflict management skills and facilitation techniques that can be deployed in the moment. We have to speak truth to power – but in a way that our truth can be heard. We have to overcome biases and deeply held beliefs. We have to redirect advocacy into productive generation of alternatives and finding the best among those alternatives. In this session we will learn best practices based on many decades of experience, success and lessons learned.

Instructor:

Carl S, Spetzler, CEO and Chairman, Strategic Decisions Group



Specializing in strategy development, business innovation, and strategic change management, Dr. Spetzler has developed creative business strategies for major financial institutions, capital-intensive companies, high-technology manufacturers, regulatory agencies, and public entities. Dr. Spetzler works with top management and boards of directors to improve the quality of decisions. He has led numerous senior executive seminars on strategic decision and risk management topics. He is a Life Trustee of the Illinois Institute of Technology and a director of the Decision Education Foundation. He is co-author of *Decision Quality: Value Creation from Better Business Decisions* (Wiley, 2016). He received the Ramsey Medal (2004) and the Pioneer Award (2018) -- the highest honors awarded by the Decision Analysis Society and the Society of Decision Professionals. He is past president and a fellow of the Society of Decision Professionals.

Jennifer Meyer, Strategic Decisions Group



Dr. Jennifer Meyer has more than 25 years of experience as a strategy consultant, helping clients in a variety of industries with strategy development, economic evaluation, and business portfolio modeling. Her expertise is in decision situations that require both technically complex analyses and organizationally complex alignment processes, particularly in the oil & gas sector. She is a senior engagement manager with Strategic Decisions Group. Dr. Meyer also teaches courses through the Strategic Decision and Risk Management certificate program at UT – Austin and develops customized materials and courses for clients to support their decision-related professional development needs. Dr. Meyer received a PhD and an MS in operations research from Stanford University and a BA in mathematics and physics from Drake University. She is a Fellow in the Society of Decision Professionals.

Workshop 5: (Wednesday, March 6, 2019 | 8 am – 12 pm)

Title: ***A Decision Analysis Approach to Venture Capital***

Instructor: Clint Korver

Abstract:

Venture Capitalists (VCs) could be poster children for cognitive biases. Most successful VCs conclude they “have the magic.” Forbes even celebrates the best performing VCs each year with their Midas List. However, few VCs test their gut feel driven decision making with data or frameworks. Fewer still distinguish between luck and skill in a decision context characterized by extreme uncertainty, few data points, and long timeframes. Clint argues many of the patterns VCs hold up as their special insights are just as likely to be cognitive biases reinforced by luck.

In this workshop, Clint will provide an overview of venture capital, the challenges with traditional VC decision making, and how Ulu’s Decision Analytic approach produces higher quality decisions and has led to industry leading performance for Ulu.

Clint will also describe Ulu’s approach to portfolio construction. In most asset classes, returns are normally distributed and portfolio construction is an exercise in risk reduction. In early stage venture capital, however, returns follow a power law distribution and portfolio construction becomes more important than just risk reduction. The vast majority of early stage VC investments return little to nothing and a small number of outliers drive all of industry’s profit. This asset level difference drives the need for a different portfolio construction toolset and mindset. Clint will present a framework for venture portfolio construction and show how Ulu is using this framework to increase the odds of strong fund performance.

Clint concludes with a consideration of the implications of decision analysis for the venture industry.

Instructor:

Clint Korver, Managing Director, Ulu Ventures



Clint is Managing Director and Co-founder of Ulu Ventures, a Silicon Valley venture capital firm. Over the last 11 years, Clint and his partner Miriam Rivera have invested in over 110 startups including Palantir, SoFi, Krux (acquired by Salesforce for \$1 Billion), and Blue River Technology (acquired by John Deere for \$300 million). An active supporter of entrepreneurship within the Stanford community, Clint taught entrepreneurship in the School of Engineering for four years; co-founded Stanford Angels & Entrepreneurs, an alumni group with over 1200 members, and currently mentors at StartX, Stanford's startup accelerator.

Clint earned a PhD in decision analysis from Stanford working with professor Ron Howard. He co-founded four Silicon Valley startups which provided tools to help individuals or organizations make better decisions. He co-authored a book on ethical decision-making entitled *Ethics for the Real World* (Harvard Business Press 2008) with professor Howard. He also designed Ulu's decision analytic approach to making venture investment decisions.

Clint is a Kauffman Fellow, and holds a PhD and an MS in Management Science and Engineering from Stanford, and a BA in mathematics from Grinnell College where he served as Chair of the Board of Trustees.

Workshop 6: (Wednesday, March 6, 2019 | 8 am – 12 pm)

Title: ***Take Control of Your Project with a Cost and Schedule Risk Analysis***

Instructor: Brian Putt, Jason Mewis and Bill Haskett

Abstract:

Projects are frequently over cost (budget) and/or behind schedule. Cost overruns are common in infrastructure, building, and technology projects. For IT projects, a 2004 industry study by the Standish Group found an average cost overrun of 43 percent; 71 percent of projects came in over budget, exceeded time estimates, and had estimated too narrow a scope; and total waste was estimated at \$55 billion per year in the US alone. [\[1\]](#) ([Wikipedia -- Cost Overruns](#))

Management can make better decision whether to do a project or how to do a project if they better understand the uncertainty in schedule and cost uncertainty. Deterministic assessments often have less than a 5-10% chance of being achieved (90% chance of being over cost and behind schedule).

During the 4-hour workshop we will:

- look at how decision quality principles can assist in better assessing cost and schedule using probabilistic analysis
- conduct an abbreviated training in calibrating Subject Matter Experts
- discuss what should be assessed by the SME and alternative for using that information
- demonstrate how a probabilistic model with multiple schedules and costs is used to generate distributions for schedule and costs that are integrated.
- Identify which tasks would have the largest impact on schedule.
- Show how to incorporate mitigations and compare to the original CSRA results or alternative mitigations.

Instructors:

Brian Putt, Retired Chevron



Brian worked 41 years with Chevron performing project analysis the final 25 years and has portfolio and planning experience in the petroleum industry. He holds a BA in Economics from Claremont McKenna College, BS in General Engineering from Stanford University, and a MS in Operations Research from Stanford University. While at Chevron he was instrumental in developing the DA practice which grew to 230 DA practitioners around the world.

Since retirement in 2016 through the non-profit Probability Management he has promoted the use of SIPmath for making decision under uncertainty. Applications include classical decision trees, value of information (VOI), cost & schedule risk analysis (CSRA), financial forecasting and portfolio analysis. He has conducted training sessions at the Naval Post Graduate School in Monterey, Stanford University and University of San Francisco. He maintains a [YouTube Channel](#) that includes a number of instructional videos on Excel and SIPmath applications. He is a member of INFORMS and SDP. He is currently active in Decision Education Foundation (DEF) and the Boy Scouts.

William (Bill) Haskett, Managing Director of Haskett Consulting International, LLC



As Managing Director of Haskett Consulting International, Bill is an advisor, coach, decision instructor, and project enabler for companies and governments globally. He is a long-time instructor of courses in project assessment, uncertainty management, business decision-making, and strategy development and implementation. With thirty-eight years in the extended Energy Industry, a sizeable portion of which he served as Chairman and Senior Principal for Energy Strategy at Decision Strategies. He has facilitated and advised on exploration and major capital projects on six continents. He has received both the SPE

International Award for Management and Information and the Decision Analysis Society Practice Award. Bill originates from Canada where he graduated from McMaster University (Geology) and the University of Calgary's Haskayne School of Business (MBA). Bill's first DAAG meeting was meeting number two back in the late '90s.

Jason Mewis, President, ENGCOMP



Decision experts believe that you know more than you think and that you need less information than you think. Using his expertise in facilitation, Jason can help extract the information you didn't know you had and use that information to quantify the unknown and increase confidence in decisions. He is the President of Engcomp (www.engcomp.ca), a multi-discipline industrial engineering firm he founded in 2004. Jason is an entrepreneur, an engineer and an analyst with

experience in engineering economics and project planning. He has been practicing in the area of uncertainty modelling for over 15 years and because of this experience he has been asked to present on related subjects at conferences all over Canada and the USA.

[Workshop 7 \(Wednesday, March 6, 2019 | 1 pm – 5 pm\)](#)

Title: ***Using Decision Analysis to drive Lean Innovation***

Instructor: David Matheson

Abstract:

Lean Innovation is built on accelerating learning by testing hypotheses quickly and iterating. On the surface, it seems at odds with the deliberative nature of DA. However, DA tools provide an ideal framework for prototyping strategic and economic issues, identifying which topics most need testing and focusing creative energy where it matters. The results can be dramatic, for example, HP used this approach to help start a

business that grew to \$500M. In this workshop, we will cover how familiar tools can be used effectively in this unfamiliar area.

Instructor:

David Matheson, President and CEO, SmartOrg



A co-founder of SmartOrg, David has helped senior management teams from some of the largest product manufacturing corporations in the world to improve their results from portfolio management, product development, innovation, R & D, capital investment and strategy. He is known for finding simple answers to some of the most complicated strategic business issues. He is an expert at measuring value and managing uncertainty. A gifted presenter, David routinely presents at [product innovation](#) and [portfolio management](#) conferences.

David is co-author of the bestselling book, [The Smart Organization: Creating Value through Strategic R & D](#) and has authored numerous articles on innovation, portfolio management and decision making. He is a Fellow with the Society of Decision Professionals. His Ph. D. is from Stanford University where he teaches [Strategic Portfolio Management at the Stanford Center for Professional Development](#) and is known for providing strategic guidance to up-and-coming innovators and decision analysis professionals.

Workshop 8: (Wednesday, March 6, 2019 | 1 pm – 5 pm)

Title: ***Scenario Planning for Three Levels of Strategy Development and Project Management***

Instructors: Ellen Coopersmith, Kent Burkholder, and Jeremy Walker

Abstract:

Some decision problems benefit greatly from the incorporation of scenario thinking into the framing of the opportunity. In this unique scenario workshop, three applications will be explored:

- Scenario thinking for business strategy
- Scenario thinking for new venture stakeholder management
- Scenario thinking for development of de-risking plans

The goal is to use scenario thinking to change the mental map of critical decision makers and project teams. This allows them to see different possible futures and with that insight, develop more robust strategy and project management plans to monitor and direct decision making proactively rather than reactively.

Via case-based exercises, this workshop will address how to develop scenarios with different tools and workflows for different scenario thinking applications. For business strategy, the workshop explores how to identify the critical business environment uncertainties and from them, develop different worlds, and winning strategies for the different worlds. For new venture stakeholder management, attendees identify the above ground risks that will either create or destroy value if unrecognized or attended to. From those, they develop different venture business environments and winning stakeholder management plans. “Oracle trees” are introduced to describe the range of possible risk and uncertainty scenarios a project faces and the impact that perfect knowledge would have on the main project decisions.

Take-aways from the Workshop

- Knowledge of three different approaches to scenario thinking for various levels of decisions in an organization
- Practical application of at least one of the approaches most relevant
- Practice framing decisions using scenario thinking
- Selecting the key uncertainties from which to base the scenarios
- Describing the different scenarios
- Developing strategies for future scenarios

- Testing the robustness of each strategy in the each world

Instructors:

Ellen M. Coopersmith, P.E., President, Decision Frameworks, L.P.



Ellen Coopersmith is an expert in decision quality and decision analysis implementation and its practical application in multiple industries. She consults, facilitates and trains organizations across the globe, utilizing her extensive experience in strategy development, scenario planning, decision framing, facilitation and value of information. An engineer by degree from The Colorado School of Mines, Ms. Coopersmith has specialized in decision analysis for last 25 years. As of 2018, she's trained over 7,000 professionals while assisting companies with both corporate and project level strategic decisions. Ms. Coopersmith is the president of Decision Frameworks, a decision quality enablement firm providing consulting, training and software around the globe. She was the 2017 – 2018 president of the Society of Decision Professionals, a published speaker on decision analysis, a Professional Engineer and SDP Fellow.

Kent Burkholder, P.E., Decision Frameworks, L.P.



Based in Calgary, AB, Kent Burkholder is a trained reservoir engineer and has spent the last twelve years specializing in Decision Analysis consultation, training and implementation. He is an adviser and consultant with broad experience in petroleum economics, decision and risk analysis, and problem framing and facilitation. Kent's extensive industry experience in the oil and gas sector allows him to provide high-level support to executives and business decision makers. He has worked for Petro-Canada, Merak and Schlumberger and is a member of APEGGA and SPE.

Jeremy Walker, Decision Frameworks, L.P



Jeremy Walker has been with Decision Frameworks since 2005. He is an advisor and consultant with a background in business strategy development, petroleum economics, portfolio management systems, and asset acquisition and divestitures. Prior to joining Decision Frameworks, Mr. Walker was the General Manager of IndigoPool, a Schlumberger company that specializes in integrated acquisition and divestiture solutions and targeted transaction support services to companies, as well as a partner at Merak responsible for sales and marketing.