

SOCIETY OF DECISION PROFESSIONALS Clarity & Insight for Decisive Action

NEWSLETTER

Issue 13 June 2019

President's Message by Jim Driscoll



Dear Colleagues,

I hope this edition of our newsletter finds you well and in the midst of exciting and rewarding work. The end of this month will bring to a close my term as President of the SDP and mark the completion of three amazing years as a part of our leadership team. It has been an honor to serve you and our Board of Directors and I will certainly walk away from my post with fond memories of helping passionate people drive important change.

Before reflecting on the past year, I want to offer thanks to everyone who made my time at the helm such a pleasure. A sincere thanks to our members, especially those who volunteered on a committee, a council, a chapter or found some other way to contribute – I am grateful for your contributions. A heartfelt thank you as well to our board members for your energy, guidance and support over the years and a big THANK YOU to our Executive Director, Hilda Cherekdjian. Larry Neal once said, and I concur, that "Hilda is everywhere all the time." She is a skilled diplomat, a shrewd negotiator, a prudent advisor and a patient counselor all rolled into one. She made things happen and smoothed out the many wrinkles in my worst ideas and I'd have been lost without her.

As a member of our professional community, you should feel proud that more people attended an SDPpaid event in the past year than in any other year in our history. A large portion of the last year was dedicated to supporting a diverse line-up of events including our SDP-sponsored workshops in London, the first-ever Houston DQ Energy Summit, and our record-breaking 25th DAAG conference held in Denver this past March.

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At DAAG'19, we showcased the truly global impact of our profession by celebrating China Mobile as the latest recipient of the Raiffa-Howard Award. We also took time out to thank our amazing members through our annual Hero Awards and had a lot of fun (who can ever forget that dinner at the Adams Mystery Playhouse?).

When I joined the SDP's Board of Directors in 2016, we had a single chapter organization in Houston. Today, we have five active chapters (Houston, Calgary, Seattle, Vancouver, and San Francisco) with six more in the process of forming and/or under consideration.

In response to your investment of time and energy, the SDP is growing. Our membership has never been higher, having increased by more than 50% over my time on our leadership team. And although we still have far to go, this past year also marked another important step forward in pursuit of our long-term financial sustainability plan, an idea first progressed during Larry Neal's term and then advanced greatly during Ellen Coopersmith's time as President.

But perhaps most importantly for the future of our profession, we used this year to make stronger connections to like-minded professionals in the fields of Data Science and Artificial Intelligence. If AI is ever to deliver good decision-making at scale — and prevent the widespread havoc such technology may cause in the hands of unskilled decision-makers — it will need the expertise, knowledge, and advice of the decision professionals inside of SDP. We have a once-in-a-generation opportunity to lead the conversation on when and how best to apply these new capabilities and techniques in the pursuit of good decisions. All that is required is that we step up and seize it.

In closing, please join me in thanking our outgoing leaders for their service and in welcoming our newly elected officers and board members. To our incoming leaders: you are joining an important and evolving organization that is poised for further growth under Pat's capable leadership. I trust each of you will make the most of this opportunity and that our members and I will reap the benefits of your hard work — we are counting on you. By working together and supporting each other, I know you will make good decisions. Please let me be the first to wish you the best of all possible outcomes.

Sincerely, Jim Driscoll



Results of 2019 SDP Election

Congratulations go to the following newly elected SDP Officers and Board Members:

Newly-elected SDP Vice President / President-elect



Leslie Lippard is an Associate Director with Genentech's Research and Early Development Portfolio and Pipeline Planning Group.

Newly-elected SDP Secretary



Jennifer Harrington is a Senior Decision Specialist in the Center for Decision Leadership of Intel Corporation.

Newly-elected members of the SDP Board of Directors



Ashlee Burke is a Senior Decision Specialist in the Center for Decision Leadership of Intel Corporation.



Matt Gorman is a career management consultant with 25 years of experience serving clients in the pharmaceutical, biotech, food, chemical and agricultural industries.



Dan Hudson is the Chief Operating Officer and Chief Analytics Officer for the management consulting firm ReefPoint Group.



Brian Putt, now retired, was responsible for improving decision analysis organizational capability throughout Chevron Corporation, where he worked for 41 years.



Andrew Thrift is Manager, Business and Resource Planning, Base Metals for the mining company Teck Resources.

Continuing Board members are Candice Junge, Laura Keating, Eyas Raddad, and Jeremy Walker. Patrick Leach will begin his term as President and Troy Helm will continue to serve as Treasurer.



SDP Council Focus

Program Council:

The SDP Program Council is busy planning our Summer / Fall webinar lineup incorporating some of the best talks from DAAG 2019 and the Fall 2018 London conference plus new materials. The new Program Council Chair starting July 1 will be Carol Liffman.

Chapters and Outreach Council:

The SDP Chapters and Outreach Council continues to meet on a regular basis to share lessons learned and develop tools to support local chapters. The chapter bylaw standardization effort to make bylaws consistent between chapters has been completed. We now have Chapter efforts underway in a number of centers including the Bay area, Norway and Vancouver which build on the activities in Houston, Calgary and Seattle. We encourage at least one person from each chapter to participate in building this council into a positive support source to make these current and future local efforts successful, and we also welcome others who are interested in supporting chapters and outreach more generally or who have an interest in starting a chapter somewhere else. For more information or to join this council, please contact Jeremy Walker at

jeremywalker@decisionframeworks.com or Laura Keating at lmkeating@gmail.com.

Upcoming Events



SOCIETY OF DECISION PROFESSIONALS Clarity & Insight for Decisive Action

 Webinar: How Sure Are You? A Discussion With Prof. Steven Goodman On The Epistemology Of Clinical Research And DA Wednesday, June 19, 2019
 am PT | 11 am ET

DAAG 2020

March 31 – April 3, 2020 The Westin Oaks Houston at the Galleria 5011 Westheimer at Post Oak, Houston, TX 77056, US



Better Health through Better Decisions.

Save the Date!

SMDM 41st Annual Meeting:
Portland, OR
October 20 - 23, 2019

The meeting theme is *Many Views* on Value.

Meeting co-chairs: Karen Eden, PhD, Carmen Lewis, MD, MPH and Dan Matlock, MD

Do you know of upcoming professional events that might be of interest to other SDP members? If so, please email the SDP newsletter at newsletter@decisionprofessionals.com



Chapter News

Calgary Chapter

The fiscal year for SDP chapters will begin anew on July 1, and as such the SDP Calgary Chapter has decided on its executive for the upcoming year. As per the new chapter bylaws, we also formed a chapter board of eight members to advise the executive. Our board consists of:

President	Kent Burkholder	Decision Frameworks
Vice President	Jessica Galbraith	Cenovus Energy
Secretary	Wisam Zalzala	ConocoPhillips
Advisor	Laura Keating	Calgary Zoo
Advisor	John Jacques	Cenovus Energy
Advisor	Andy Lee	Chevron
Advisor	Josee Trembley	Suncor
Advisor	Kent Kostuk	Federated Co-operatives Ltd.

Many thanks to Laura Keating, our outgoing secretary, for all her hard work this past year and a half since the Calgary Chapter formed. She was instrumental in both starting up the chapter and guiding us with her insights gained as a board member, and chapter strategy committee member, of the SDP mothership. We welcome Wisam Zalzala, who will be stepping in to fill her shoes. Also, many thanks to our unofficial advisory committee over the last year and a half for their contributions, and continued contributions as many will continue to act on our now-official board going forward. Kent Burkholder and Jessica Galbraith will continue in their respective positions of President and Vice President for the upcoming fiscal year. We look forward to working with the new board!

Over the last year and a half, since the Calgary Chapter was formed, we have hosted nine meetings which included case studies, workshops & panel discussions. In January of 2019 we hosted our first social-only event, a New Year's celebration at The Local 522 in downtown Calgary. The event was well attended, and we received positive feedback and requests for more social events in the future. Our April meeting was a DAAG recap provided by chapter members who attended the 2019 DAAG conference in Denver and we are grateful to them for sharing their insights gained at the conference.

We will be taking a break over the summer months of July and August but will be kicking things off again in September. If you are interested in receiving information about future meetings & events, please sign up for the e-mail list on the SDP website under the Calgary Chapter page.

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Houston Chapter

On Friday, April 12th, the Houston Chapter held its first "DQ Energy Summit". The event was incredibly well attended, with approximately 150 participants from many different companies. The day started with an executive panel, followed by three moderated sessions covering the application of DA/DQ to conventional and unconventional oil and gas, as well as future energy. Dr. John Lienhard of the University of Houston (famous for his public radio broadcasts, "Engines of Our Ingenuity") provided a captivating lunch keynote. We would like to thank the participants, speakers, session moderators, sponsors, and event planners who all made the event such a success.

The Executive Committee of the Houston Chapter met on May 17th to plan meetings and socials for the second half of the year, as well as to begin the process of selecting new officers for the upcoming year.

Finally, we had a general meeting on June 6th at Worley's "Data Refinery". Brad Andrews, President of Digital at Worley, spoke about "Digital Transformation and its Impact on Organizational Decision Making". Thank you to our hosts at Worley for a great topic and chapter meeting!

To sign up for the Houston Chapter's email list for notifications on future events, please visit http://houston.decisionprofessionals.com/

San Francisco Chapter

The SDP-SF Chapter held a meeting in June where David Matheson, CEO of SmartOrg, gave a great presentation and led an extensive discussion on "Promising Growth". We discussed several case studies and had participants who attended both in person and remotely. Everyone had the opportunity to ask questions and contribute "face-to-face" using Zoom.

We would like to increase the participation for these meetings. If you are interested in being part of the SDP-SF Chapter or giving a presentation with discussion, please contact Brian Putt (Brian@ThePutts.com)





Spotlight on SDP Member Ricardo Mateus

In every issue of this newsletter, we turn the spotlight on a randomly-selected member of the SDP to learn more about that member's life as a decision professional.

The editors



Ricardo Mateus is an SDP member who lives and works in Lisbon, Portugal. Currently, he works for Lisbon's City Council, helping various units in the city government structure and model international competitive tendering procedures. He has made good use of his decision analytic skills in this position by building and disclosing in advance tender evaluation models, including all the criteria, scoring rules and weights expressing value trade-offs among multiple criteria.

Ricardo's path to his current position started 20 years ago when, as a student, he started working with Professor Carlos Bana e Costa who pioneered the MACBETH method, which elicits value preferences through pairwise qualitative judgments. Ricardo earned a Master of Science degree in Operations Research and has just recently finished his PhD in Engineering and Management.

He has devoted this last year to helping the city government design and implement an innovative social program to provide affordable housing within the city. The program promotes a partnership between the city government, who makes land available, and the private sector who builds the housing units and collects rents from tenants for 30 to 90 years, after which the housing is handed back free to the city. The key to success is to design a program so that it is attractive to all parties - municipality, private promoters, and medium-income households.

A highlight in his professional career that gave him much satisfaction was his work in helping the government of Portugal transpose the European Union Directives on public procurement into national law, demanding that all the evaluation criteria, their weights and scoring rules must be disclosed in advance to tenderers. [Mateus et al. (2010) Full disclosure of tender evaluation models: Background and application in Portuguese public procurement. Journal of Purchasing and Supply Management, 16(3): 206-215 https://doi.org/10.1016/j.pursup.2010.04.001]

His previous experience working in forestry management provided both a tough challenge and a warm satisfaction to Ricardo. The challenge was a technical one – how to make a clear decision in the face of diverse multiple objectives, such as profitability, risk, and sustainability. The satisfaction came from being able to create a methodology combining multiple objectives into a single value function using mathematical programming that provided the basis of his PhD thesis. [https://doi.org/10.13140/RG.2.2.15684.53121]

As a member of SDP, Ricardo has found value in attending webinars and hearing how decision analysis is applied in a wide variety of real-world situations. He does wish, however, that SDP was a bit less US-centric. For example, he has found it difficult to locate SDP Fellows outside of the US to support his application for certification.

Ask the Fellows





Dear SDP Fellows: "In the last issue we heard from our roving reporter on the ground about what DAAG had to offer. This issue, we'd like to learn from the Fellows: what were your key takeaways from DAAG?"

One of our Fellows focused in on four of the sessions, sharing the following notes:

DA for Venture Capital. Clint Korver.

Ulu Ventures does a two-day decision analysis of a project to decide whether to invest. We calculate PWMOIC probability-weighted multiple on invested capital, and look for 10x, which gets us the right volume of projects to invest in. We flesh out an influence diagram model and assess key uncertainties in collaboration with the entrepreneur.

In the conventional view, returns to investment are viewed as normal-ish, which means that mean and median are similar. This works okay in late-stage VC, where mean and median returns are 12% and 11%, respectively. But in early-stage VC where we work, the mean return is 22%, while the median return is 6%. This reflects a power law distribution, where most of the time you lose everything, but there's also a fat tail, and that's where you make your money. 3% of the deals make all the profit. One big success is enough to ensure that the entire fund is viewed as a success by the funding partner, thus ensuring funding next year. So while other seed capital firms make only a few bets, we make many small bets to maximize our probability of a big win that sustains us.

DA and Data Science (DS). John Mark Agosta, Dennis Buede.

What can DA teach DS?

Focus on optimizing a value function that represents what's important to the decision maker, not a computationally convenient loss function.

Ensure that you are addressing an actionable decision.

What should DA know about DS?

There are two basic approaches: human-supervised (with labels for the "truth"), and deep learning.

There are many online resources, online communities, open-source tools, GitHub. Judea Pearl is exploring how to find causality without a randomized trial. He uses Structural Equation Modeling, which is similar to belief nets, and has a causal focus.

Ethics of AI Decision Making. Cassie Kozyrkov, Clint Korver, Michael Norton.

If there is full transparency, responsibility for taking action sits with the actor. If AI cannot offer full disclosure, it is edging toward culpability. In addition to transparency, it would be constructive if AI tool makers would offer warranties, or third-party certifications, like the Underwriters Lab seal of approval; and add a tool in the AI toolset for user feedback (a button for "This offends me.").

Metalogs. Tom Keelin.

The metalog distributions are a new family of continuous probability distributions. Being quantile-parameterized, metalogs automatically mold themselves to assessed or empirical data in a very wide variety of shapes. Formulas are closed-form and easy to program.

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If you have a question for the SDP Fellows about good practice among decision professionals, please send it to us at SDP Newsletter: Ask The Fellows.



Another Fellow shared a broader overall view of his takeaways from DAAG, stating:

My biggest takeaway from DAAG 2019 is that while Big Data is a great source of information, it is a mistake to allow it to drive the decision process. Typically, a structured decision process includes 1) Gaining a clear understanding the situation/problem, 2) Gaining an equally clear understanding of what your objectives are, and where the tradeoffs are between competing objectives, 3) Thinking creatively about what alternative courses of action are available to you, 4) Characterizing the key uncertainties in a way that helps you to understand the ranges of possible outcomes associated with your alternatives, 5) Evaluating those alternatives against your objectives, 6) Choosing a strategy, and 7) Planning for a successful implementation, including contingency plans should things turn out differently from what is "expected" ("expected" meaning something close to the middle part of the range of possible outcomes).

Big Data helps primarily with steps 1 and 4 and can also be useful in steps 5 and 7. But it does nothing to inform your objectives (and making decisions should be rooted in your objectives and values), nor is Big Data typically useful when trying to come up with creative alternatives. Being clear about your objectives and creative about your options are arguably the two most important components of a good decision process.

Mind you, I'm not downplaying the impact Big Data is having on those parts of the process that it does impact. It is no exaggeration to say that Big Data has revolutionized our ability to understand problems and complicated situations, and to quantify the uncertainties surrounding them. But there is more to quality decision making than those two components.

SDP Fellows Eric Johnson and Patrick Leach provided the answer for this question.



A Word From SDP Sponsor CDA Foundation

In every issue of this newsletter, we include a message from one of the SDP sponsors, whose support contributes significantly to the on-going success of the Society.



The <u>Center for Disease Analysis Foundation</u> is a public health firm specializing in applying decision analysis techniques/tools to global public health problems, specifically focused on Hepatitis B & C. Every 20 seconds, someone dies of liver complications associated with hepatitis - more than HIV, tuberculosis or malaria. These deaths are unnecessary because the diagnostic & treatment tools exist today to eliminate hepatitis; yet hepatitis receives a fraction of the global funding. We developed a parametric disease burden model to help countries assess the impact of their national strategies. We have used the model in over 90 countries to support national strategies to eliminate hepatitis. The model coupled with an economic impact analysis shows the cost of doing nothing versus an elimination strategy. Our work has resulted in expansion of treatment from 500,000 in 2013 to 2.1 million in 2017 and that number continues to grow each year. We have been able to show that there is significant cost associated with inaction and that an elimination strategy will cost less over a 15-20 year period. The Bayesian approach allows us to focus on decisions rather than collecting more data and this has led to action in a number of countries including Egypt, Mongolia, Brazil, Australia, Spain, and Portugal.

Input data and assumptions were major barriers to decision making. In 2015, we created the <u>Polaris Observatory</u> where data is collected and reported for over 100 countries. Where funding is available, country data is updated quarterly and provided through our website. Polaris has become the gold standard for hepatitis epidemiology data and is used by international organizations to report the most up to date global burden estimates.

The price of the hepatitis drugs has been used as a rationale for not providing access. In 2017 we launched the <u>Global Procurement Fund</u>. The latter uses pooled procurement to negotiate prices on behalf of low and middle-income countries. It has already negotiated prices at a 90% discount over the current prices in high-income countries.

Lastly, in light of the enormous funding gap for hepatitis elimination, we are launching a catalytic financing pilot program in Uzbekistan in July 2018. The purpose of the pilot is to demonstrate that investment in hepatitis elimination provides an attractive financial opportunity for social investors, generates a positive ROI for the national government, and provides a scalable, sustainable funding mechanism even in low-income countries. The program will screen 250,000 people over 12 months and treat an estimated 21,500 infected patients.

Our goal is simple: use quality decision-making to make the elimination of hepatitis a reality by 2030.



Brain Teaser

Congratulations to Pat Leach

The correct answer to the brain teaser posed in the March issue is "Does John lie?" A full explanation of the solution can be found by <u>clicking here</u>. Pat Leach was the first to submit the correct answer.

THE JUNE BRAIN TEASER

Instructions: You can win "bragging rights" by being the first to submit the correct answer of this brain teaser to the newsletter editors (<u>SDP Newsletter: Brain Teaser</u>). We will announce the winner in the next issue.

Making 56

Write a mathematical expression that equals exactly 56 using only the five numbers 1, 1, 1, 2, and 3. Each of the numbers must be used exactly once. The numbers are not digits, so it is not permitted to combine 1 and 1 to make 11, for example.

Useful Links

The SDP Board has posted the Society's Bylaws and Policy and Procedure Manual, which can be found at: http://www.decisionprofessionals.com/about/governance

The SDP Knowledge Sharing Council maintains a Fellows Blog at: <a href="http://www.decisionprofessionals.com/?scrollTo=blog-news#blog-ne

A listing of courses in decision analysis available to SDP members is at: http://www.decisionprofessionals.com/courses/training-program

Join Us in Producing the SDP Newsletter

We, the editors, are actively looking for other SDP members to join us in producing this newsletter. If you are interested, please contact us. <u>Click here</u> to email the editors.

Emilia Silebi and Steve Tani SDP Newsletter Editors

