



Helping Decision Science Professionals Reach New Heights

Building Decision Bench Strength

DAAG Session 5

Friday April 10, 2015 9:00 – 10:30 a.m.

The objective of this session is to understand how different companies build their internal decision analysis “armies”

- Session chairs
 - Ellen Coopersmith (Decision Frameworks)
 - Charles Persinger (Lilly) – Tyler Ludlow co-chair in Charles absence
- Panel session agenda
 - Introduction of the panel (5 min)
 - Three questions, one slide per panel member (25 min/question)
 - **Organizational model** – how are you set up to provide service?
 - **DA/DQ resource profile** – what type of people do you recruit?
 - **Skill development** – how do you develop your DA/DQ resources?
 - Insights / open discussion - commonalities, differences? (10 min)
 - Closing – conversation topic for break (0 min)

We are fortunate to have five uniquely qualified panelists from diverse DA/DQ backgrounds

- **Jim Driscoll (Intel)** – is the Director of the Decision Quality Program Office at Intel Corporation. A 15 year veteran of Intel, Jim and his team of DA's serve as the internal owners and lead practitioners of Decision Quality at Intel, where they partner with senior executives and their staff to tackle the company's most vexing, strategic decisions.
- **Bruce Judd (SDG)** - A decision consultant and educator since 1971. Founded Applied Decision Analysis ('76), the DA Group at Lawrence Livermore Nat. Lab ('84), SDG's Executive Education practice in 1987, and taught 20 years at Stanford and Northwestern business schools.
- **Greg Parnell (IDI)** - Research Professor and Director, M.S. in Operations Management at the University of Arkansas and consultant with IDI. Co-editor of Decision Making for Systems Engineering and Management, 2nd Ed. (2011) and co-author of the Handbook of Decision Analysis (2013).
- **Christa Roemkens (Chevron)** - 24 years in and around the oil industry; 9 of those years have been with Chevron and 7 of those formally in the Decision Analysis space. Currently lead the DA practice for Chevron's Downstream & Chemicals business.
- **Rodger Thomson (Pfizer)** - Currently Senior Director / Team Leader for Pfizer's Portfolio and Decision Analysis group, where he has been practicing DA for the last 13 years. Prior to that, he spent 2 years at Amgen's DA group, and prior to that, 20 years at Atlantic Richfield Oil Company doing Decision Analysis and strategic planning.

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Question 1 – Organizational Model

**WHAT IS YOUR ORGANIZATIONAL MODEL
FOR PROVIDING DA CAPABILITIES FOR
YOUR ORGANIZATION/CLIENTS?**

DQ at Intel: Organizational Model

- Achieving Decision Quality at Intel is the job of the DQ Program Office (DQO)
 - In 2012 Jim was the only person in the company working on DQ
 - Today, we have full-time team of experienced practitioners
 - Our Mission: *“Change the culture of decision-making at Intel”*
- Awareness & Cultural Change
 - Decisions: we support dozens of complex decisions each year and our work spans all major groups
 - Training: over 1K employees have attended our intro. course
 - Coaching: hundreds of interactions on problems big and small
 - Community events: help us connect w/ like-minded individuals
 - Certification: we are piloting our 1st wave of candidates this year

SDG Organizational Model

SDG is a strategy consulting firm, headquartered in Palo Alto, CA. We have approximately 100 FTEs distributed among headquarters and major offices in Beirut, Düsseldorf, Hong Kong, and in India. All of our consultants share a common onboarding and training curriculum, 3-5 years of mentoring on SDG consulting projects, and all offices share a common set of professional development practices.

Our corporate strategy practice began in the 1960s at SRI. Our clients are major players in high-tech, financial services, chemicals, transportation, consumer products, telecommunications, pharmaceuticals, energy, and R&D. We are committed to building our clients' capabilities in two ways:

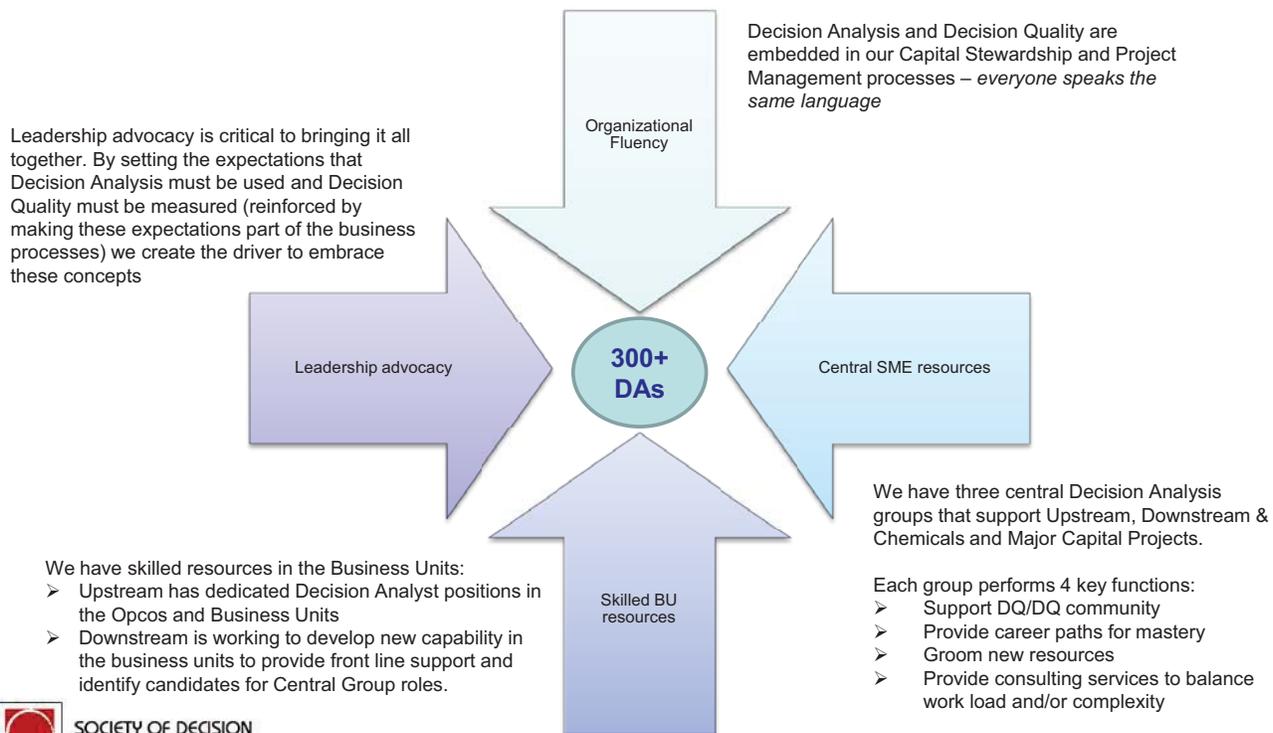
- Working side-by-side with them on consulting projects
- Teaching a variety of topics in the classroom (on-site, online, at SDG, and at Stanford) and following this with “action learning” on projects.

IDI Organizational Model

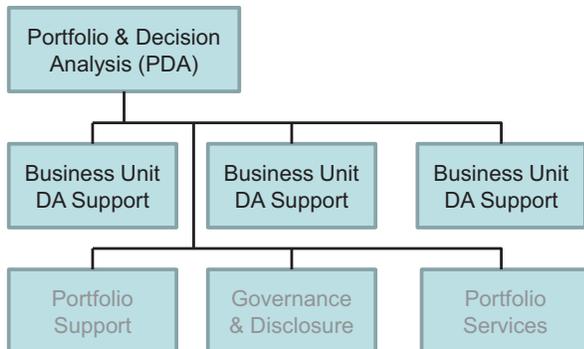
- Founded by decision analysts
- Clients are government and commercial
 - Mostly military, intelligence, and homeland security
 - Focus on prescriptive analytics (decisions)
 - Build decision support system prototypes
 - Focus on very difficult problems
- Flat organization
 - 40 analysts
 - 28 full time
 - Part time mostly professors
- President
 - Two Executive VPs and six Market Managers



Chevron Integrated Capability Model



Pfizer Decision Support Organizational Model



- The Pfizer Decision support group is a centralized organization, but is aligned to the company's Business Unit (BU) structure
- Aligning to BU structure allows Team Leaders to build relationships with BU leadership
 - Members within each DA support unit are tasked with maintaining relationships within each Therapeutic Area within each BU
 - Also hold various DA seminars periodically
- The Portfolio & Decision Analysis (PDA) group practices DA mainly through our dialog decision process at key drug development stage gate points
 - Institutionalized in Pfizer culture
 - Participates in Ad Hoc strategy support
 - Runs Life Cycle strategy and annual prioritization processes as well

Question 2 – Profile of DA/DQ Resources

WHO DO YOU HIRE AND WHAT DO YOU LOOK FOR AND WHY?

DQ at Intel: Resource Profile

- We are organically building a world-class team of decision professionals
 - 100% of DQO's new hires are existing Intel Finance employees
 - MBA's w/ 5-10 yrs at Intel and little/no practical DA experience
- What I look for in my staff:
 - "Front Office" skills: strong team and customer orientation
 - Eloquence, empathy, creativity, humility, intellectual curiosity
 - A growth mindset. A trusting nature.
- What I avoid when hiring:
 - The lone-wolf, the glory-hound, and the quant. People who have never failed. People who have aced every test. People who say "that's not my job."

SDG Profile of DA/DQ Resources

We hire primarily from the outside, although a significant number of our senior people returned to SDG after stints in industry or start-ups. Most new-hires are MS, MBA, and Ph.D. graduates from leading universities, with strong analytic skills, incisiveness, and personality traits that fit SDG's close-knit culture and lasting connection to our clients. We look for initiative, tenacity, creativity, ability to work well in teams, and strong communication skills. Domain knowledge is a plus, but it is not required of new-hires.

Over the course of our 30-year history, SDG has consistently enjoyed one of the lowest turnover rates in the consulting industry. Many people find their work at SDG so gratifying, and our work environment and culture so nourishing, that they choose to make a career at SDG.

IDI Profile of DA/DQ Resources

- Hire
 - Analytic skills and/or domain expertise
 - Operations research, decision science, engineering, mathematics, environmental science, cyber/information assurance
 - Interns from VA/MD universities
- 26 decision analysts (out of 40)
- Part time professors (decision and risk analysts)
 - Robin Dillon-Merrill, Georgetown University
 - Barry Ezell, Old Dominion University
 - Seth Guikema, Johns Hopkins University
 - Laura McLay, University of Wisconsin
 - Natalie M. Scala, Towson University
 - Greg Parnell, University of Arkansas
 - Terry Bresnick, University of Arkansas



Chevron - *There are three dimensions of competency that go into selecting suitable candidates for DA roles. We have had the greatest success bringing in experienced practitioners from the business and teaching them DA. Occasionally we bring in someone with DA experience and teach them the business.*

Ability to Influence	Active listening Make thinking visible Establish trust Live integrity Nurturing relationships	Understanding their point of view Navigating difficulties Connecting people Empowering decision makers	Support project teams Bring clarity Show patience Be respectful Look like help	Lead from within
DA Knowledge	Framing Stakeholder management Boundaries Vision of success Facilitation Communication	Deterministic analysis SME interviews Assessing uncertainties Value Drivers Decision Criteria	Probabilistic analysis Decision Trees Monte Carlo Probability & Statistics Excel skills	Identify and quantify decision drivers
Domain knowledge	Energy Industry Geopolitics Business Finance Economics Information Technology	Supply Chain optimization Math & Modeling Engineering Science Law Corporate policy	Shipping HES Contracting Project Management Cultural Differences Advocacy	See the Big Picture



Hiring and Building DA Talent at Pfizer

Skills, experience and expertise we look for:

- DA Experience
 - Portfolio Experience
 - Analytical Experience
 - Leadership / Relationships
 - Industry Knowledge
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- Look for candidates who can embrace Pfizer's Ownership culture
 - New hires into Pfizer's PDA group vary widely. "Typical" new hire has a technical undergrad with an MBA, although there many exceptions
 - DA skills are a plus, but most new hires are on the basis of talent; DA can be taught
 - Members from a wide variety of backgrounds: consulting, banking, other pharma, etc.
 - PDA experience tends to build a well-rounded experience set and PDA members are often hired to other positions in the company
 - Looking for people to be strong objective, strategic players at Pfizer
 - Do have long term, senior members of PDA

Question 3 – Skill Development

HOW DO YOU DEVELOP & MAINTAIN YOUR DA/DQ "ARMY'S" SKILLS?

DQ at Intel: Development & Training

- How my staff acquires DQ skills:
 1. Formal classroom instruction
 2. Observation of skilled practitioners in action
 3. **First-hand experience with feedback from an expert coach**
 4. Rinse and repeat step #3 until these skills become 2nd nature
- We expose our DA's to a wide range of related topics
 - Stanford curriculum on Decision Quality as well as portfolio, scenario planning, and design thinking
 - Improvisation, project/meeting management, and advanced facilitation/conflict management techniques
 - Core decision and strategy related literature, etc.
- It takes 12-18 months of full time learning and practice with a coach before an employee on my team becomes minimally useful

SDG Skill Development

Training Model

- All consultants start with 2 weeks of intensive classroom training in our Decision Consulting Workshop. Over their first 2-3 years, all consultants also take our advanced courses in decision analysis, modeling, facilitative leadership, 7 Habits, problem structuring. Some go on to take team leadership and a selection from our 15-course curriculum at Stanford. This is concurrent with intensive mentoring and coaching on SDG's consulting projects.

Specialization

- All of our consultants share a common base of training, and they are all expected to be able to serve on projects in any industry and in any location around the globe. Some choose to remain generalists after the first few years; others specialize in industries as they become partners. We have both generalist and specialist partners.

Duration

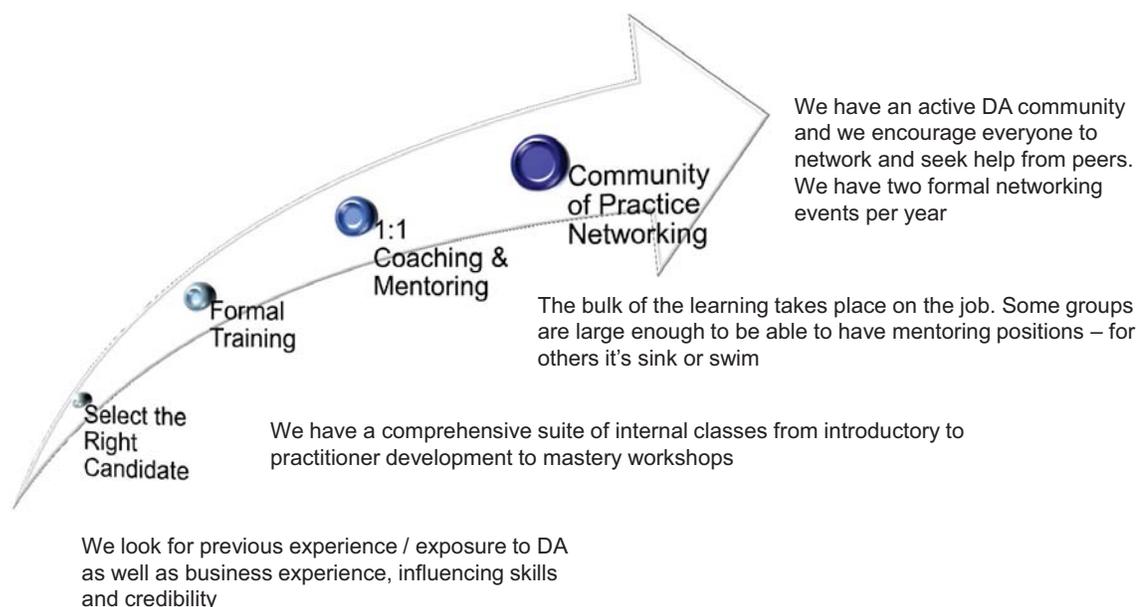
- Our staff members are taught to contribute to projects from "Day 1." Here are our levels and typical times at each level (these depend on your level when hired):

• Assoc. Consultant	1-2 yrs.	Senior Consultant	2-4 yrs.
• Consultant	1-3 yrs.	Sr. Engagement Manager	2-6+ yrs.

IDI Skill Development

- Hire with significant analytic skills
- Hire after we acquire contract
- Mentor on projects
 - Analytic skills
 - Consulting skills
- Attend our short courses
- Technical interchanges
- Yahoo Basecamp > Watercooler

Chevron - Developing DA Talent is Intensive and Time Consuming



Developing DA talent at Pfizer

Prior to Hire



Typically:

- Technical undergrad
- MBA
- Not necessary to have DA experience
- Various backgrounds
 - Consulting
 - Banking
 - Pharma
 - Oil

Post Hire



Development:

- Decision Analysis Training
 - PDA “Boot Camp”
 - Strategic Decisions Group Decision Consulting Workshop
- Mentoring by senior PDA members
- PDA members have their experience cultured primarily through work experience
 - Early partnering up with dialog decision processes, later executing them on their own
- As a general rule, PDA members are generalists, although some may be more specialized in certain areas (i.e. multi-attribute analysis)
- Other opportunities for learning are also made available (strategy, secondments)

Advancement



PDA Leadership



PDA Sr. individual contributors



Other Pfizer positions

- Strategy
- Treasury
- Operations
- Marketing
- Commercial Development
- Business Development

23



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Clarity & Insight for Decisive Action

Closing Discussion & Insights

WHAT ARE KEY SIMILARITIES AND DIFFERENCES FROM OUR PANELISTS?



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24