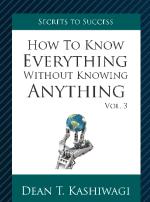
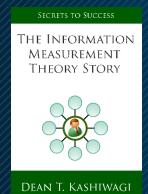
Dr. Jacob Kashiwagi

Dr. Jacob Kashiwagi utilizes the Best Value Approach (BVA) on his projects. He worked alongside his father, Dr. Dean Kashiwagi, to co-develop the Best Value Approach through a global research effort. Their groundbreaking model is the most licensed technology out of Arizona State University in the past 20 years (63 licenses) and has been tested on over 2,000 projects valued over \$6.6 billion, 98% satisfaction rating, and savings of 5-50% on all project costs. For complete case studies visit www.pbsrg.com

















Dr. Jacob's Project Timeline

ENTERGY, ARIZONA STATE UNIVERSITY

STATE OF **OKLAHOMA**

CENTURYLINK, BOISE STATE, IDAHO **TRANSPORTATION** DEPARTMENT, **BRUNSFIELD**

ARIZONA DEPARTMENT OF ENVIORNMENTAL QUALITY, THE **GORDIAN GROUP**

SAUDI ARABIA, STATE OF UTAH, KAMEHAMEHA SCHOOLS

INSULATED ROOFING **CONTRACTORS**

2005



























MEDCOM; STATE OF MINNESOTA. **NEOGARD**

SCHERING PLOUGH, STATE OF MISSOURI

STATE OF ALASKA

CONSUMER FINANCIAL **PROTECTION** BUREAU, ROCHESTER **PUBLIC SCHOOLS**

JOC CONTRACTOR PROGRAM. **ARAMARK**

ON SEMI, SANTA CLARA VALLEY WATER DISTRICT



Dr. Jacob Co-Created the "Best Value Approach"

- BVA is an approach to procurement/project management
- Increases value/performance by identification and utilization of expertise [not cutting costs]
- Identification of experts is semi-automated based on information
- Experts deliver projects on time/budget for the lowest cost and highest quality
- Transparency is utilized to mitigate risk, litigation, and protests

Why Should Professionals Use the BVA?

- Speed up Procurement by 50%
- Eliminating Protests to 0
- Improve Productivity by 10x
- Lowers Cost by 5-50%
- Uses a Performance Tracking System
- Shows Value to the C-Suite

BVA Proof of Concept [1994-2020]



- \$18M Research Funding
- **2,000** tests delivering **\$6.6B** of services
- 98% customer satisfaction
- **9** countries, **32** states
- Minimized **5 50%** project cost
- Increase quality, customer satisfaction and vendor profit
- **64** Licenses, **Most licensed technology** developed at ASU [most innovative university for 4 straight years -only university to be named].
- PBSRG results have been audited by four different parties
 [State of Hawaii, Twente University, Twente Netherlands,
 Western States Contracting Association (WSCA), US Army Corps
 of Engineers Western Legal Office]











CoAA Construction Owners
Association of America
2007 Gold Award
Design and Construction

For More Information: PBSRG.com

BVA International Presence



BVA Principles

- Shortens the supply chain [takes nonvalue added components out]
- Identifies and utilizes expertise to create an information-based environment that minimizes the need to make decisions
- BVA structure forces expert vendors to create transparency
- Uses a structure of reporting that allows the owner to easily utilize vendor's expertise
- Reduces cost by up to 30% without forcing vendors to "cut costs" and quality
- Creates information workers [do the project and risk management of ten traditional managers]



Sample Case Studies

This is a sample of case studies conducted under the leadership and vision of Dr. Jacob. This is not meant to be an exhaustive list.





US Army Medical Command Case Study







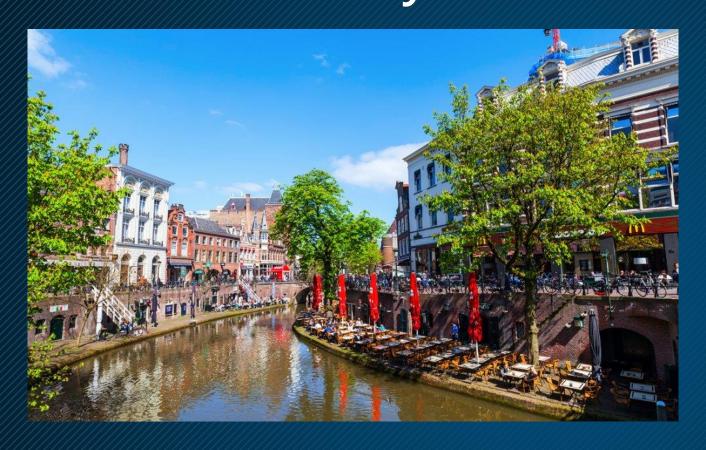
Final Performance [5 Years]

Before report:

- Did not have a way to track projects.
- Unaware how much cost or time deviation was occurring.
- Thought the vendors were "cheating" them.
- Could not quantify problem was coming from.

General Overview	MEDCOM
Total Number of Projects	619
Total Awarded Cost (\$M)	\$973.94
% Over Awarded Budget	5.50%
Client	4.13%
Designer	0.60%
Contractor	0.00%
Unforeseen	1.31%
% Delayed	41.13%
Client	30.84%
Designer	0.25%
Contractor	1.48%
Unforeseen	8.57%

Dutch Government Case Study





1st Government Test in Netherlands \$1B Infrastructure Delivery

- Infrastructure repair critically needed
 [drivers spend 1-2 hours on road going
 and coming].
- Procurement and execution takes too long
 [12 years].
- Over-management of vendors.
- 16 projects, 6 awards, \$1B test of best value PIPS.
- Goal is to finish 10 projects in 3 years.





Program Results:

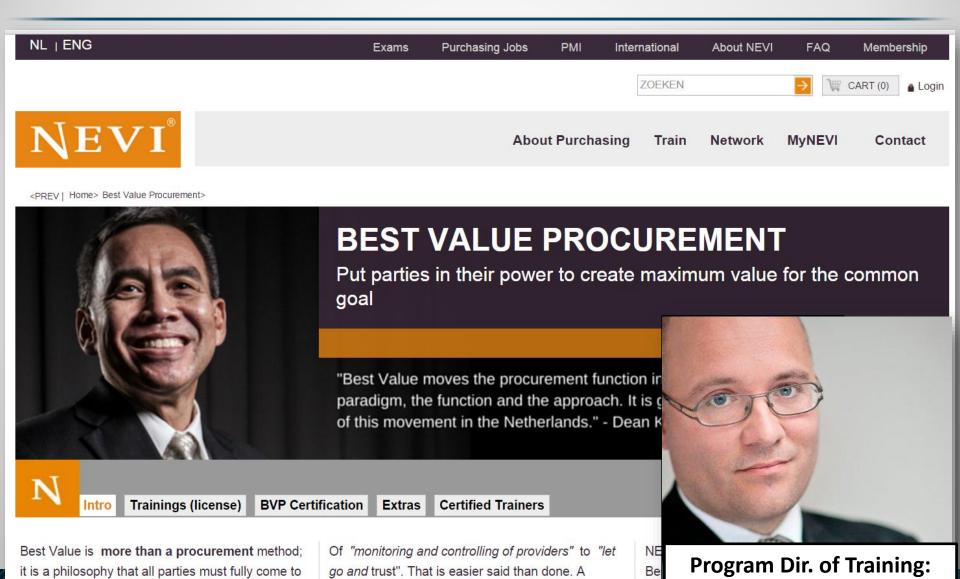
Procurement and project management application

- 15 projects finished (goal was 10).
- 25% faster delivery time of projects.
- 50–60% reduced transaction costs and time for both vendors and client.
- 95% of deviations were caused by Rijkswaterstaat or external [not vendor caused].
- NEVI, Dutch Professional Procurement Group [third largest in the world] adopts Best Value PIPS approach.





NEVI now understands that the BVA is a Mainstream Approach, but the Weakness is PM/RM



paradigm shift is necessary and will only succeed if

Jeroen van de Rijt

be in their power to create the most value for the





Arizona State University





Final Performance Results

- 13 Projects procured and run using Best Value
- **\$1.7 B** Total value of projects
 - 100% Overall customer satisfaction with Best Value
 - **79%** Reduction in Client Management
- \$2.75 M Requirements on Dining Services contract Annual Savings on IT Networking Project

Arizona Department of Environmental Quality Case Study





ADEQ Overview

- 16th largest State environmental regulatory agency.
- Goals:
 - Increase efficiency of environmental engineering programs.
 - Enable vendors to do more work per year.
 - Create documentation that shows improvement of environmental engineering programs.
- Tested in largest department on IDIQ contract



Demographics	2015 - 2017
Total Budget	\$20.5M
# of projects	195
Client Satisfaction	8.7
# of PMs / managers	8/2
# of vendors	10
# of sites	60+
Performance	
% Overbudget	2.9%
% due to owner	3.4%
% due to vendor	-0.8%
% due to unforeseen	1.7%
% due to other	-1.4%
% Delay	2.5%
% due to owner	1.8%
% due to vendor	-1.3%
% due to unforeseen	1.5%
% due to other	0.6%

Process [creating a list of experts] Become Simpler and Less Expensive

Criteria	% Diff	Traditional	Best Value
Required time to evaluate proposals	- 95%	286 hrs.	13 hrs.
Avg. Customer Satisfaction of process (1-10)	63%	5	9
ADEQ Administration Cost	- 96%	\$ 98,520.00	\$ 3,840.00
ADEQ Admin. Cost Savings	\$ 94,680.00		

Traditional vs. BVA: Single Project Test

ADEQ PM Criteria	Pinal County (Traditional)	Yuma (Best Value)
Total Cost of Projects	\$400K	\$138K
Overall Client Satisfaction	6/10	10/10
Project Duration (days)	730	352
% Total Schedule Deviation	150%	23%
% Schedule Deviation Due to ADEQ	-	23%
% Schedule Deviation Due to Vendor	-	0%
% Cost deviation	300%	0.5%*
% of Milestone Deliverables Requiring ADEQ Revisions	100%	0%
% of ADEQ Time Required to Complete Vendor Milestones	50%	15%

^{*}Deviation caused by unforeseen risk (EPA implementing new requirements)

Final Main Test Results

- 100% of budget was spent [minimized risk of not receiving funding from governor's office].
- PMs received 36% more work.
- PMs work capacity increased by 71%.
- Customer satisfaction increased by 28%.

Performance Criteria	FY14 [Before BVA]	FY15	FY16	FY17
# of projects	69	60	88	47
Total budget	\$5.8M	\$5.6M	\$6.9M	\$7.9M
Total budget spent	50%	100%	100%	100%
# of PMs	9	7	7	7
PM work capacity (per PM)	\$644K	\$800K	\$986K	\$1.1M
Scope of Work Completion	50%	82%	99%	100%
Customer Satisfaction	6.9	8.3	9.0	8.8

State of Oklahoma Case Study

Office of Management and Enterprise Services



State of Oklahoma: BVA Projects



Oklahoma Best Value Project Information			
# of Best-Value Procurements	30		
Estimated Value of Best-Value Procurements	\$141.1M		
Protest Success Rate (# of protest won / # of protests)	3/3		
# of Different Services	13		
% Where Identified Best-Value was Lowest Cost	92%		
Project Performance			
# of Completed Projects	8		
Average Customer Satisfaction	9.5 (out of 10)		
Cost Savings	\$29M		
% On-time	100%		
% On-budget	100%		

Different Services Procured

- Commercial Off the Shelf (COTS) Tax Software (\$12M savings)
- Enhancement of Workforce Job Website
- Electronic Document Management for Construction Documents.
- Computer to Plate Printer (better system than specified)
- Statewide light bulb and lighting fixture contract (\$100K rebate)
- Emergency hazardous Waste Removal contract (no protest)
- Construction Commissioning Services
- State Mental Health Services (\$3M/year less)
- Performance Measurement of Federal Grants
- New Construction and Renovation
- Juvenile Center and Services (overcame protest) (cancelled)



BV Performance at ASU Century Link



ASU IT Networking

- 64,000 Students and 12,000 Faculty
- 4 Different Campuses
- Estimated Cost: \$12.9M
- Number of UTO/IT employees: 18 Full-time employees, 8 Students, 3 Contract technicians

CL Business Outcomes: Costs

Business Outcomes	Pre MSA	MSA (2010)	MSA (2013)
MSA Baseline	\$12.29M	\$10.81M	\$11.96M
Growth – Out of Scope	N/A	N/A	\$1.15M
Value Add	N/A	\$0.43M/yr	\$0.98M/yr *see appendix for details
Net MSA	\$12.29M	\$10.38M	\$9.83M

CL Business Outcomes: Reliability & Satisfaction

Business Outcomes	Pre MSA	MSA (2010)	MSA (2013)
# of Major Outages	N/K	37	11
% Uptime	99.802	99.989	99.998
Customer Satisfaction	3.6	3.71 (max 4.0)	3.81 (max 4.0)
% of Tickets within SLA	94%	97%	97%

Business Outcomes: Technology

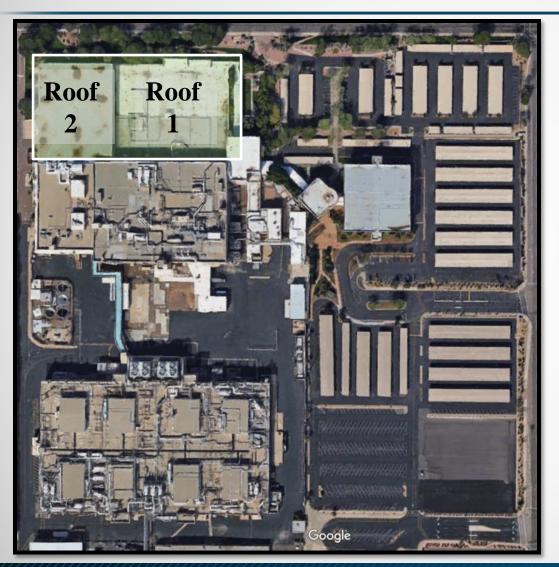
Business Outcomes	Pre MSA	MSA (2010)	MSA (2013)
% Network supported (Not at end-of-maintenance)	89%	99%	99%
% 1Gb- Wired Connections	57.0%	71.5%	96.0%
% Wireless(n)	9.0%	8.7%	92.6%
IT Spending Ratio	6/94 (New vs. Maintenance)	26/74 (New vs. Maintenance)	56/44 (New vs. Maintenance) Includes New Growth Includes Wireless-n



Roof Test in Phoenix, AZ



Overview



Issue:

- Roof 1 was leaking (executives inside).
- Roof 2 was due for warranty.

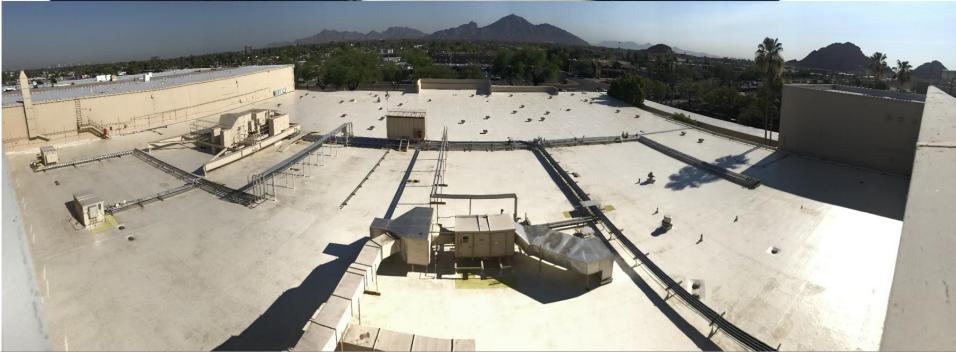
Total Budget: \$800K.

Timeline: January – July '17.

Risk: Monsoon Season [May-September].

Roof "1" Before & After





Final Roof "1" Project Results

- Finished 24% below budget
- Finished 2 weeks before Monsoon season
- 93% customer satisfaction with BVA Process
- 100% customer satisfaction with roof
- Zero leaks to date after monsoon season
- Saved client \$270K

How Can People Learn More?



- Purchase Books: http://ksm-inc.com/
- YouTube: <u>Dean Kashiwagi</u>
- More on Best Value: <u>PBSRG.com</u>
- LinkedIn: Kashiwagi Solution Model Inc.
- Come to our <u>Annual BV Conference</u>
- Contact: AlfredoRivera@ksm-inc.com



January 11-15th

Tempe, Arizona













