



Best Value Basics I

Isaac Kashiwagi

Best Value Expert and Educator

Creation of Best Value

- Created in 1991
- 23 year development at ASU
- Based on Information Measurement Theory (IMT)
- Identified as a procurement system
- Explanation modified to address project and risk management issues

Dutch Implementation



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

Results

- Program results: 15 projects finished (expectation was 10)
- Delivery time of projects accelerated by 25%
- Transaction costs and time reduced by 50-60% 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
- Now being used on complex projects and organizational issues



The Best Value Approach

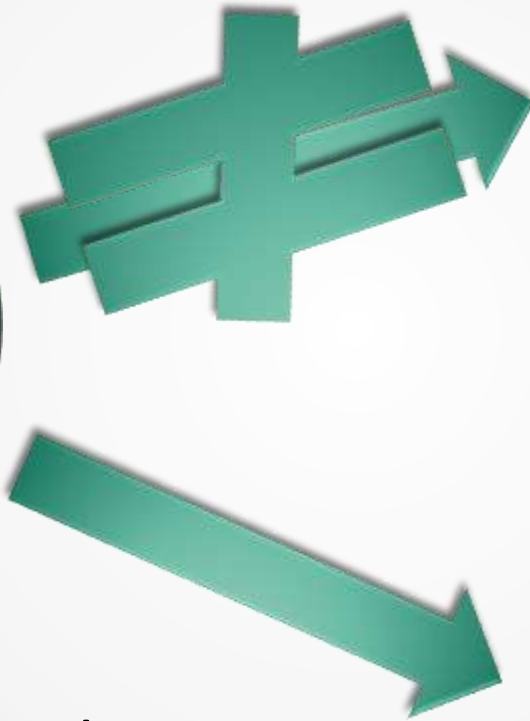
- An approach to business and life.
- Application of common sense and logic.
- Observation of reality and natural laws.
- Working efficiently and effectively.

Increase or decrease?

- Communications
- Management Direction and Control
- Thinking
- Trust
- Relationships
- Decision Making

What increases cost and risk

- Complexity
- Thinking
- Trust
- Relationships
- MDC
- Decision Making
- Communication
- No planning / short term planning (“Blind”)



+20lbs

- Delicious
- Easy and convenient
- High in calories + sugar
- Low in nutrients

People Are a Part of Reality



1976 (38)



MDC

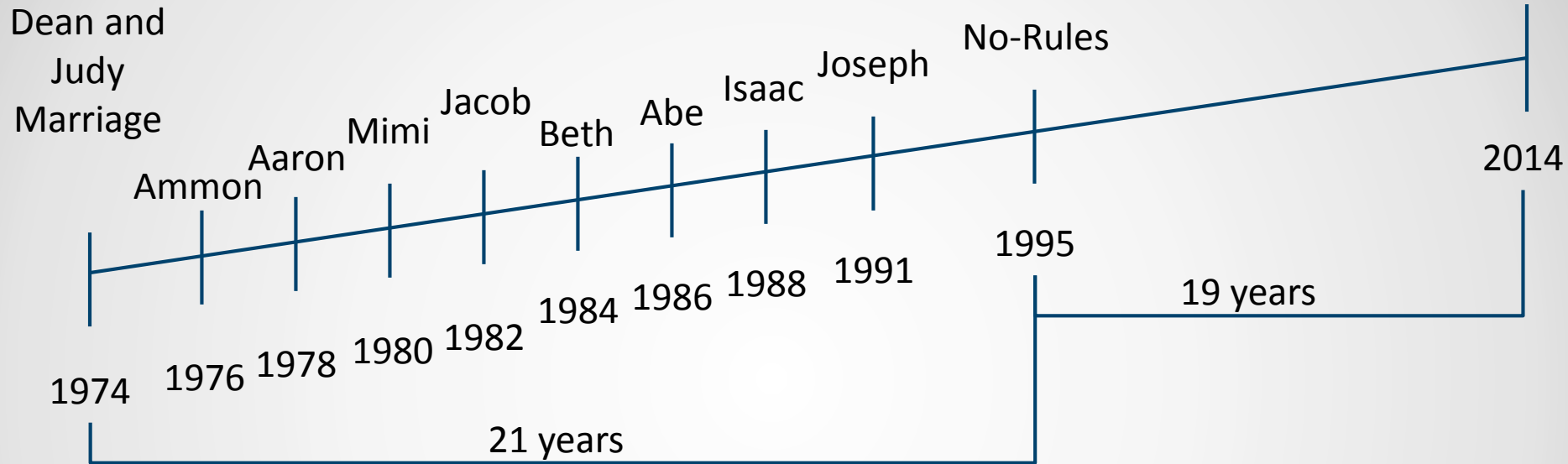


Reactive

1992(22)



Kashiwagi Family Management Paradigm Change



Phase 1: "Rules"

Phase 2: "No-Rules"

Age at the time of "No Rules" Paradigm Change

19 yrs.

17 yrs.

15 yrs.

13 yrs.

11 yrs.

9 yrs.

7 yrs.

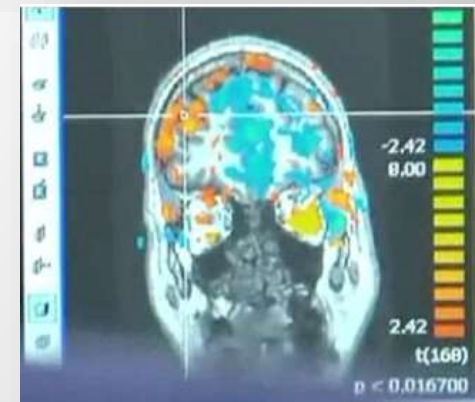
4 yrs.



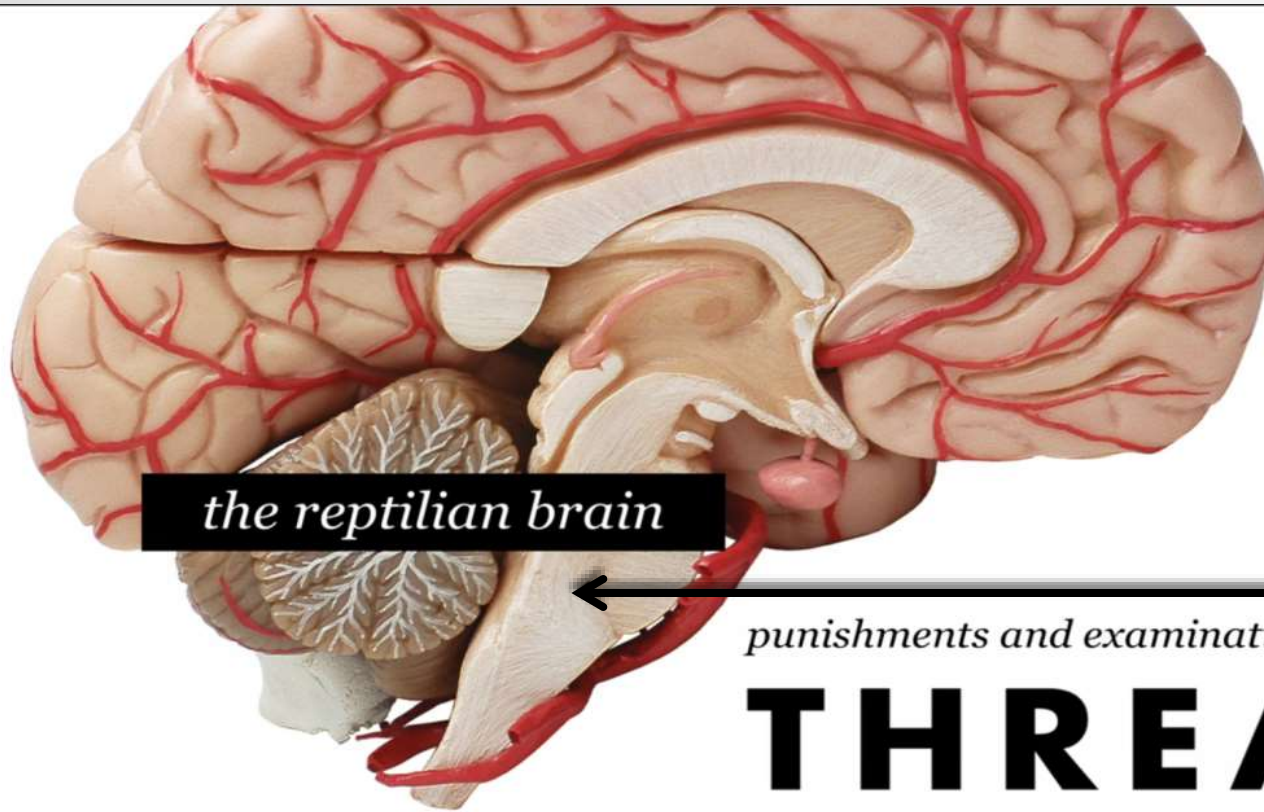


Scott Flansburg: The value of relaxing the mind

- Scott Flansburg's brain computes faster than a calculator.
- Doctor's ran tests
 - Scanned normal brain while computing [control].
 - Scanned Scott's brain while computing.
- Results identified Scott's brain:
 - Less active but more efficient than control
 - Used non-traditional areas of the brain for computing.



Sugata Mitra: The harm in making others think



the reptilian brain

punishments and examinations are seen as

THREATS

Human Decision Making is Flawed!

Test Group	Test Scores (Lower # is better)
Perfect Score	0
Computer	109
Students	189
Professionals	223
Randomly Generated Answers	310
Worst Case Score	650

- Computer is **twice** as efficient as professionals
- Students are **18%** more efficient than professionals

Solution: Transparency

Simple [Transparent]

- No thinking
- No Trust
- No Relationships
- Utilize expertise
- No Decision Making
- Decreased Communication
- Planning
- Accountability
- Use metrics

Complex

- Thinking
- Trust
- Relationships
- MDC
- Decision Making
- Increased Communication
- No planning
- No accountability
- No metrics

Experts

- Experts make it simple
- Experts minimize risk by creating transparency
- Experts decrease cost and increase profit by making things efficient

Industry Structure

Performance	High	<p><u>III. Negotiated-Bid</u></p> <ul style="list-style-type: none"> Minimized competition Long term Relationship based Vendor selected based on performance 	<p><u>II. Value Based</u></p> <ul style="list-style-type: none"> Buyer selects based on price and performance Vendor uses schedule, risk management, and quality control to track deviations Buyer practices quality assurance <p style="text-align: center;">Utilize Expertise</p>	
	Low	<p><u>IV. Unstable Market</u></p>	<p><u>I. Price Based</u></p> <ul style="list-style-type: none"> Designers and engineers do not know Procurement system uses Management, direction, and control No transparency <p style="text-align: center;">Manage, Direct and Control [MDC]</p>	
		Low	Perceived Competition	High

System Created to Assist People to See



System Created to Increase Value and Performance



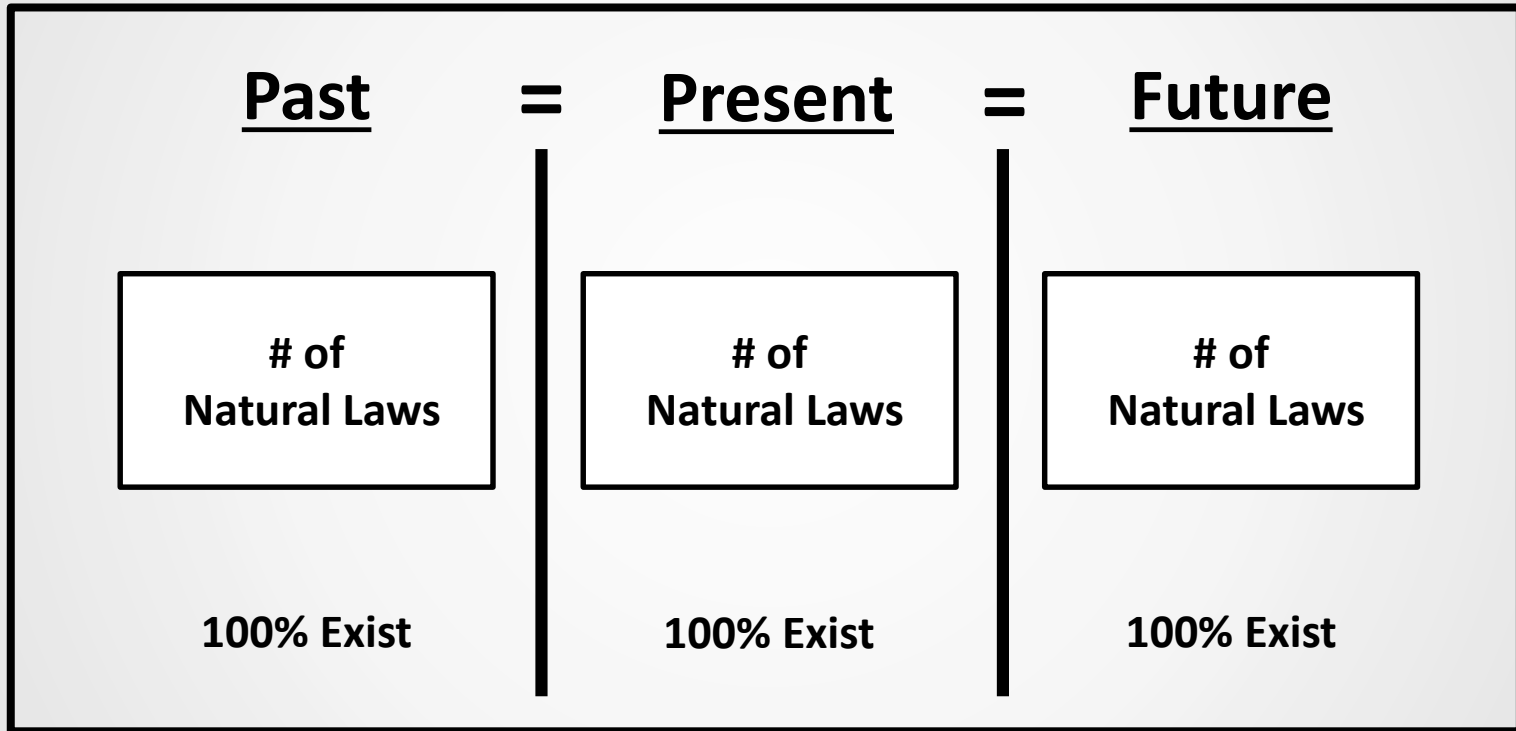
Create BV Structure to Minimize Risk





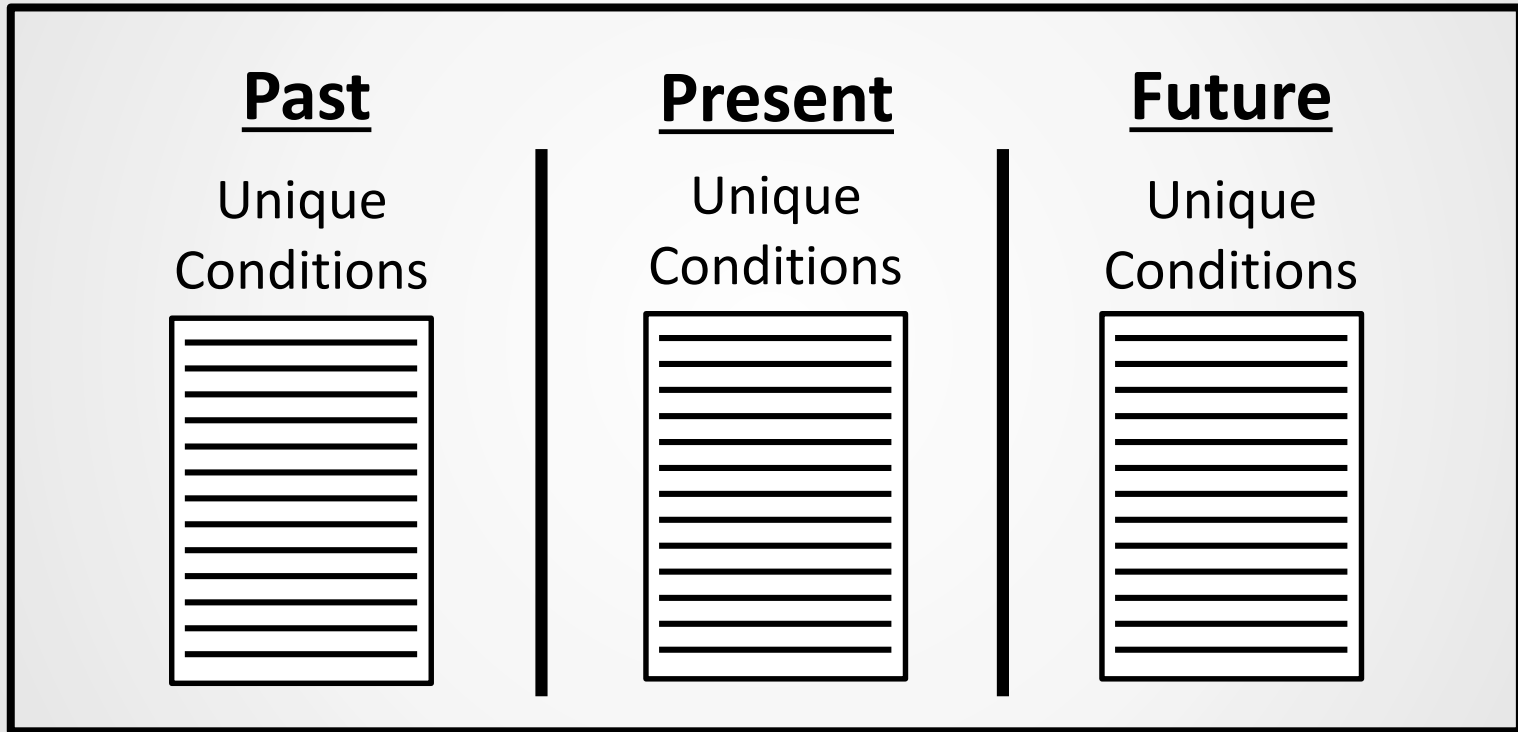
Information Measurement Theory [IMT]

Natural Laws



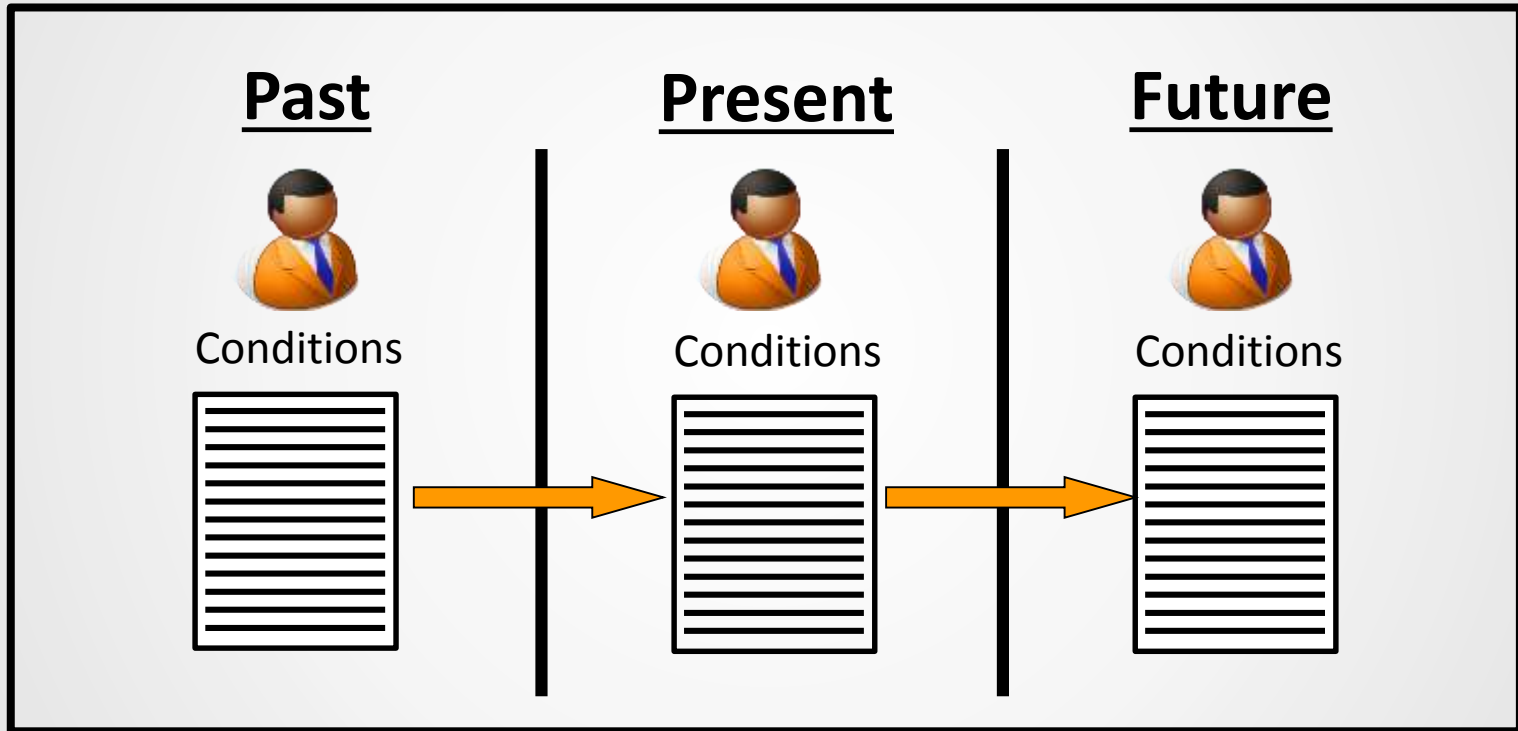
Natural Laws are discovered and not created

Conditions Always Exist



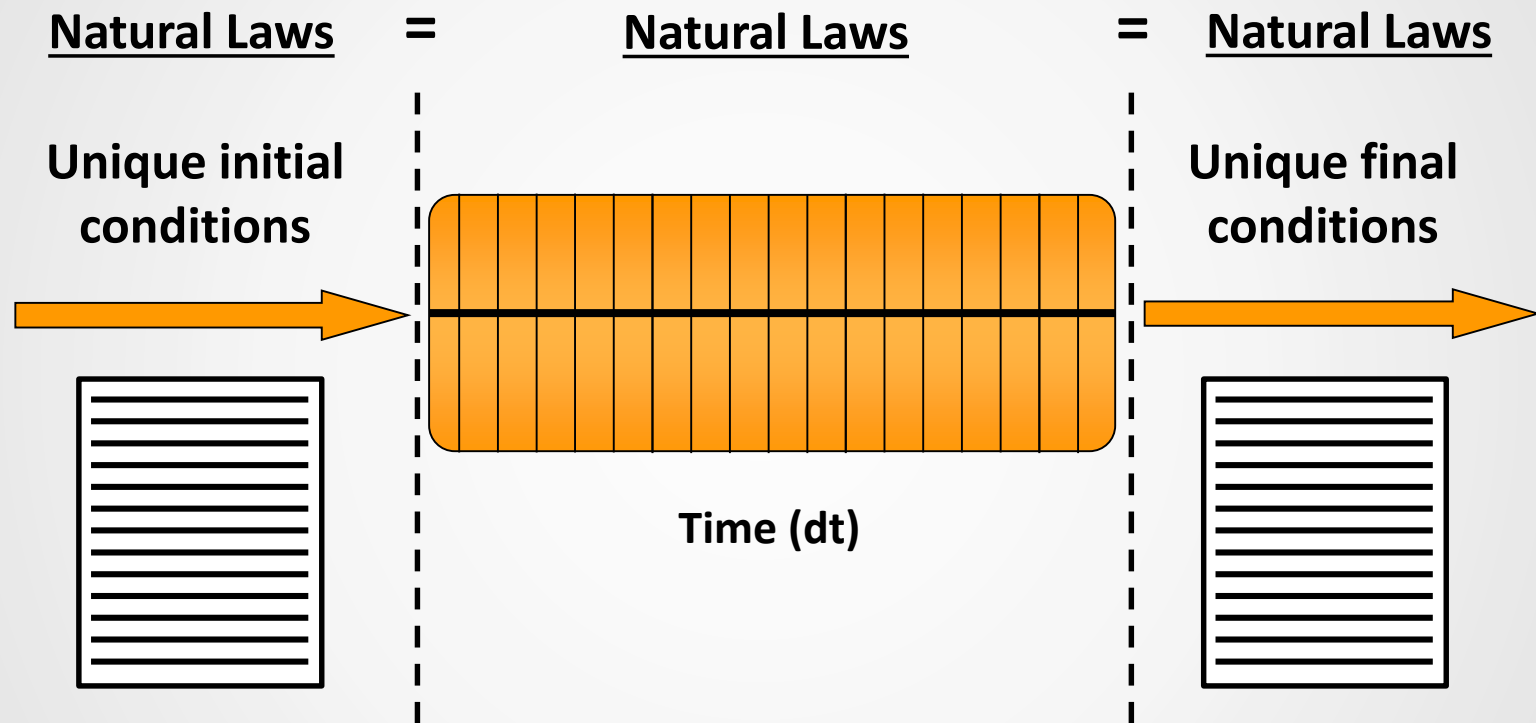
Conditions are unique and change according to natural laws

Unique Conditions are Related



Conditions are unique and change according to natural laws

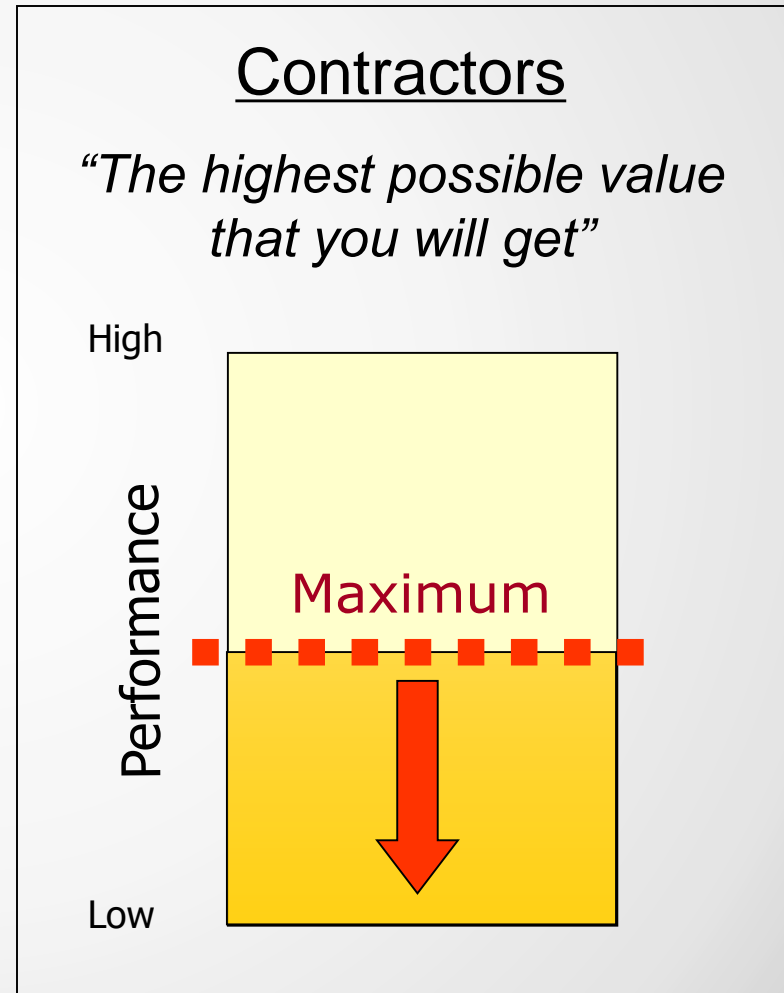
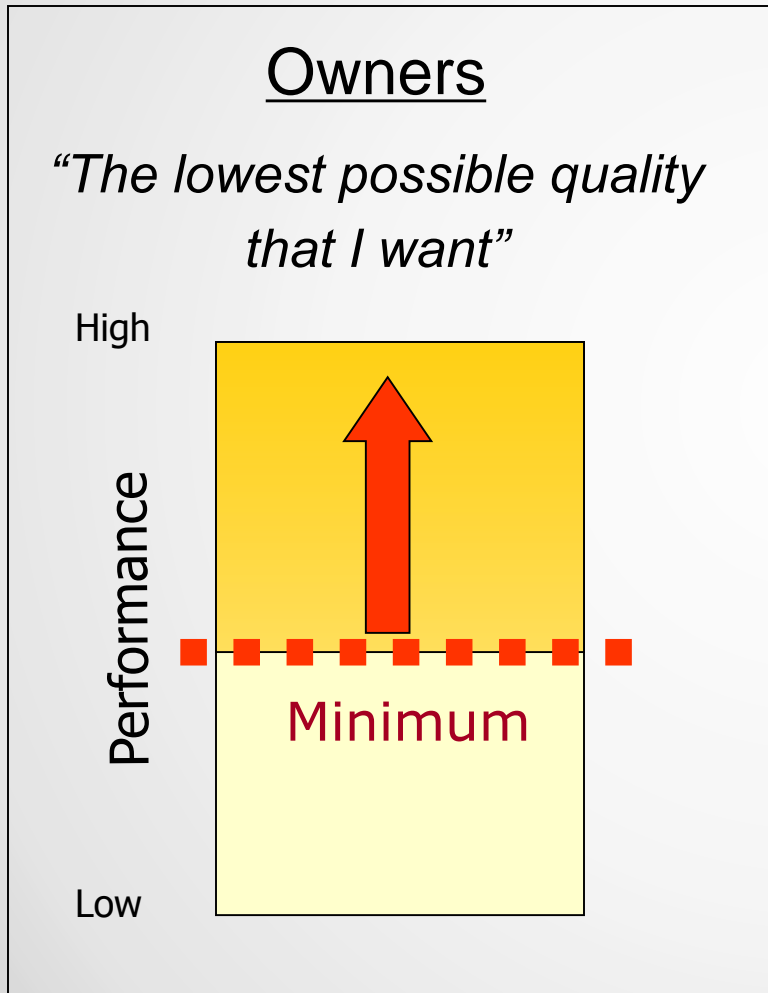
Event [by Observation]



Industry Structure

Performance	High	<p><u>III. Negotiated-Bid</u></p> <ul style="list-style-type: none"> Minimized competition Long term Relationship based Vendor selected based on performance 	<p><u>II. Value Based</u></p> <ul style="list-style-type: none"> Buyer selects based on price and performance Vendor uses schedule, risk management, and quality control to track deviations Buyer practices quality assurance <p style="text-align: center;">Utilize Expertise</p>	
	Low	<p><u>IV. Unstable Market</u></p>	<p><u>I. Price Based</u></p> <ul style="list-style-type: none"> Designers and engineers do not know Procurement system uses Management, direction, and control No transparency <p style="text-align: center;">Manage, Direct and Control [MDC]</p>	
		Low	Perceived Competition	High

MDC Systems result in adversarial environment and reactive behavior



Performance Based Studies Research Group [ASU]

- Established by Dr. Dean Kashiwagi
- Research achievements
 - 20+ Years of Research
 - \$15.8M Research Funding Generated
 - 112+ Clients [Public and Private]
 - 44 Arizona State University Licenses
 - 384+ Papers Published



Best Value Leadership Research

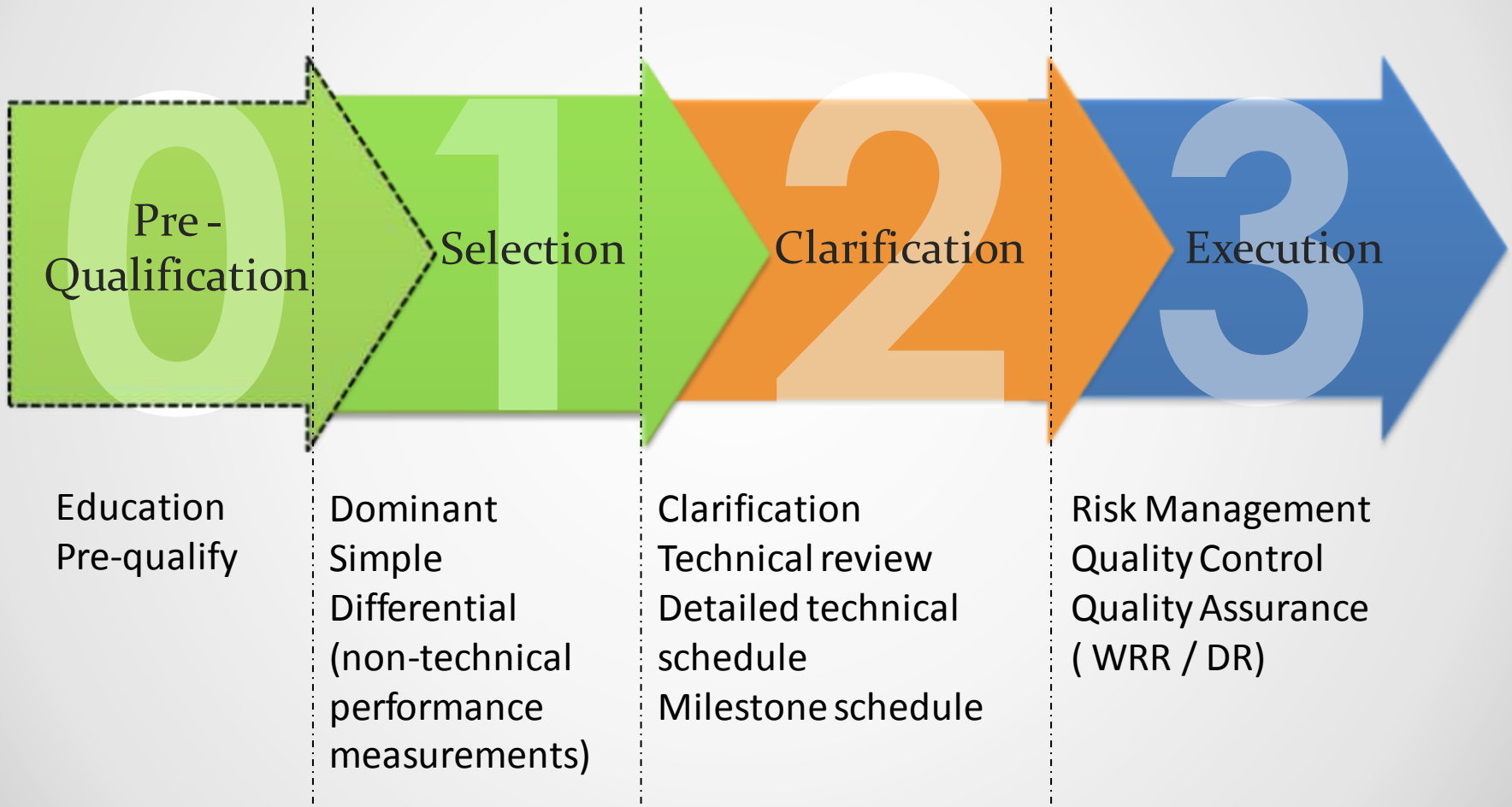
#1 Worldwide

Construction Projects	1,622
Construction Projects (\$)	\$4B
Non-Construction Projects	95
Non-Construction Projects (\$)	\$2B
Projects on Budget	96.7%
Projects on Time	93.5%
Largest Awarded Client	ASU
Total \$ Award to Date at ASU	\$1.7B
Testing in Number of States	31
Testing in Number of Countries	6



Best Value PIPS Process

Four Phases of PIPS



Selection Criteria & Weights

- Level of Expertise 30%
- Risk and Risk Mitigation 20%
- Value Added 10%

- Price 10%

- Interview 30%

Project Submittals

- Level of Expertise, Risk Assessment, Value Added
 - Two pages
 - Claims and verifiable performance metrics

Traditional Performance

- Vendor “A” will provide an **experienced** project manager, who has delivered **many large** IT projects with **complex** systems. In past projects he has received very **high** client satisfaction with **incredible** performance.
- He has **20 years** of experience, is certified in project management, and has participated in over **30 projects**.

Expert Performance Metrics

Vendor "A" will provide a PM who is:

Experienced with Large Projects

- # of projects: 20
- Largest project budget: \$1.5 Million
- Average project budget: \$500K

High Performing

- Average Customer Satisfaction: 9.8
- Average Cost deviation: 2.5%
- Average Schedule deviation: 0%

Experience with Complex Projects

- Average # of interfacing software packages: 4
- Average # of transactions per month: 10,000
- Average # of departments/users: 10 departments / 100 users

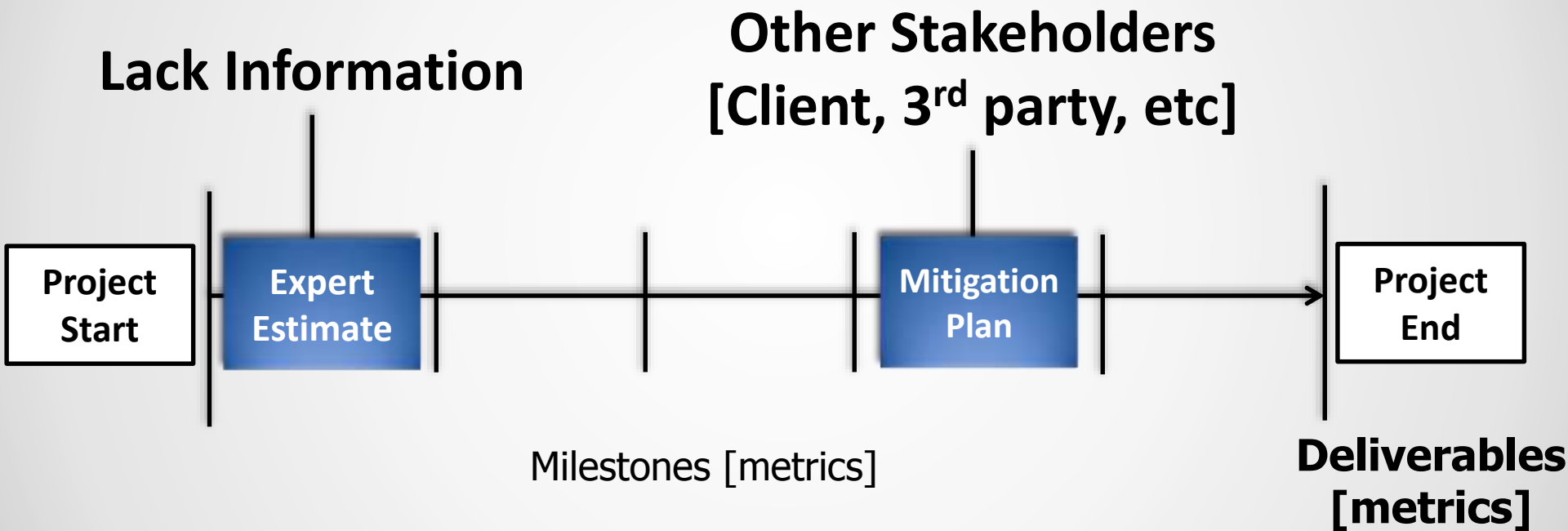
Match performance and Client Requirement

Requirement	Client Requirement
# of Projects	1
Type	ERP
Average budget	\$ 2.5 M
# of employees serviced	1,000
Transactions / month	10,000
Existing interfacing software	3
# of departments	6

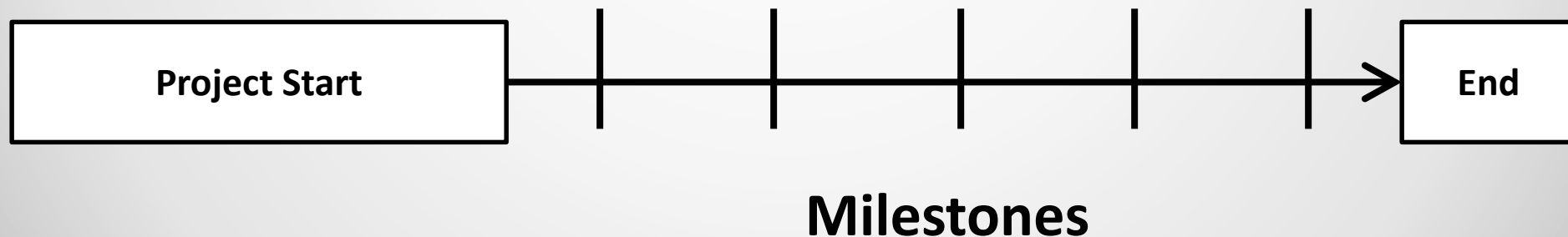
Match performance and Client Requirement

Requirement	Client Requirement	Vendor's Project Performance
# of Projects	1	2
Type	ERP	ERP
Average budget	\$ 2.5 M	\$ 3.0 M
# of employees serviced	1,000	800
Transactions / month	10,000	12,000
Existing interfacing software	3	5
# of departments	6	5

Simple Expert Plan [Performance and Risk]



Performance Metrics



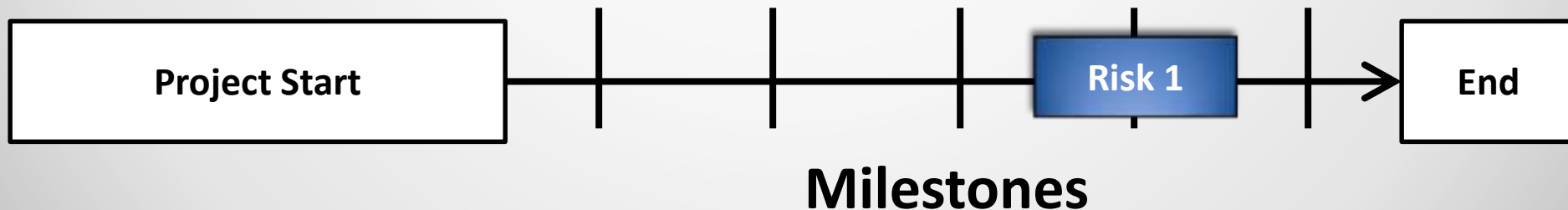
Mitigating Risk [Lack of Info]

Risk 1: # of transactions each department requires is unknown.
Vendor budgeted **5,000** per month due to past clients.

Mitigation:

- Vendor will implement system on **may 2nd** and will be capable to measure transactions per month **June 1st**.
- By **July 5th**, vendor will confirm # of transactions required.

Impact: If transactions exceed **7,000** transactions per month an additional **\$3,000** will be required.



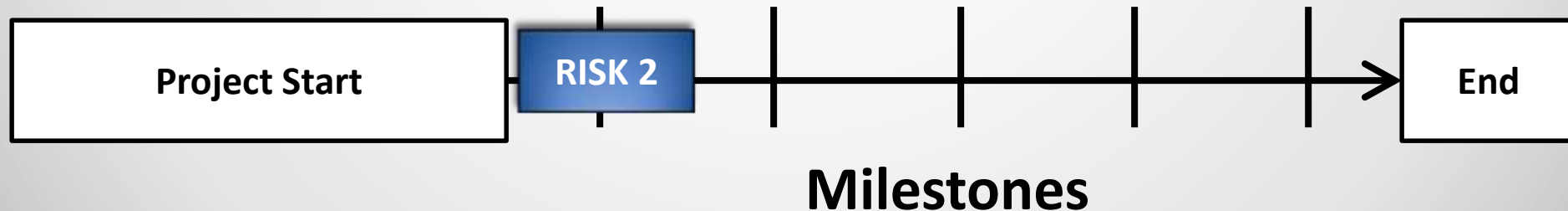
Mitigating Risk [other stakeholder]

Risk 2: Client Department “A” will need to have their key personnel trained on the new system by **May 21st**

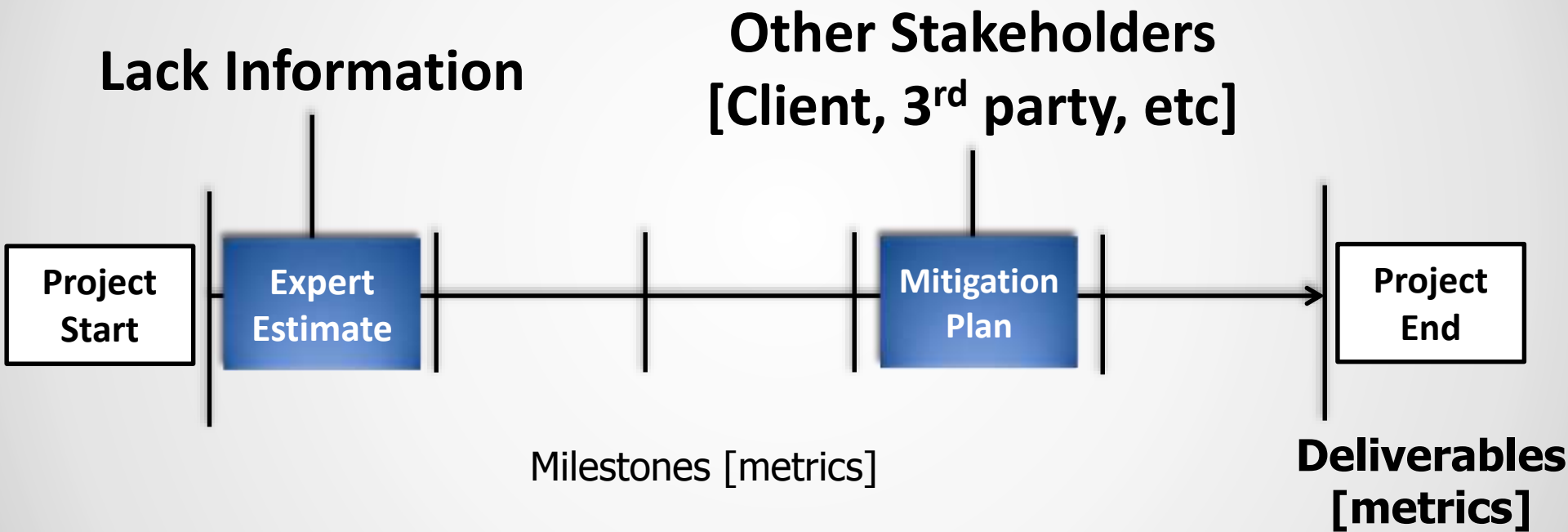
Mitigation:

- Estimated that **10** of the key personnel will need to be trained. Training requires a **3 day** commitment. Vendor will provide flexible training between **May 1st - 21st**.

Impact: Each day past **May 21** that all key personnel are not trained will impact schedule **1 day** and cost **\$5,000**.



Simple Expert Plan





Case Study: Arizona Department of Environmental Quality [ADEQ]

Del E. Webb
School of Construction



ADEQ Process Improvement

[Creation of Short List of Professional Vendors]

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	

Overall Professional Vendor Program Performance

No.	Criteria	Traditional	Best Value
1	Total # of projects	35	60
2	Total cost of projects	\$5.5M	\$5.8M
3	% of projects SOW completed in FY	50%	97%
4	# of ADEQ PMs to manage projects	7	5
5	Customer satisfaction	6.9/10	9/10

*Data was adjusted due to project de-scoping (24 projects, \$1.2M (17.32%), 355 days (10.14%))

- ADEQ PMs **increased work capacity by 140%** [5 PMs do work of 7]
- Contractors performed **94% more work in 33% less time** [did 12 months of work in 8 months and finished 47% more work].
- ADEQ **customer satisfaction increased by 30%**

Project Performance [Traditional vs. BV]

ADEQ PM Criteria	Pinal County	Yuma
Total Cost of Projects	\$400K	\$138K
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 Support Vendors	50%	TBD

“The Best Value Approach”



Isaackashiwagi@ksm-inc.com
Website: KSM-inc.com
Youtube: KSM Leadership

2016 BV Conference
United States, Tempe, AZ
Jan 19-22 2016

