



جمعية إدارة المشاريع - فرع الخليج العربي - ١٩٩٦ م
Building professionalism in project management. ©

أرامكو السعودية
Saudi Aramco



Saudi Aramco Value Practices Journey

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***PMI-AGC 11th International
Conference***

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Agenda

- Background and History
- Implementation process
- Results
- What's next

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Saudi Aramco Capital Program

- 150 active projects
- Infrastructure to refinery
- Several multi-billion dollar projects underway
- 1000 people in projects and support activities

Value Practices Journey

1993 - 1997

1998 - 2001

2002 - 2005

2006 – Pres

Total Quality
Management

**Organization
structure**

- Part-time steering committee

Focus

- Awareness and informal use of off-the-shelf Value Practices

Strategies

- Conduct Awareness campaign
- Assign Department Champions

Portfolio

- 24 CII concepts

Value Practices Journey

1993 - 1997

1998 - 2001

2002 - 2005

2006 – Pres



Total Quality
Management

Internal
Benchmarking

Organization structure

- VE Group
- Best Practices Team

Focus

- Formal use of customized Value Practices

Strategies

- Provide central resource of Subject Matter Experts
- Customize practices to Saudi Aramco

Portfolio

- Value Engineering + 24 CII concepts

Value Practices Journey

1993 - 1997

1998 - 2001

2002 - 2005

2006 – Pres



Total Quality Management

Internal Benchmarking

IPA 2000 System Benchmarking

Organization structure

- Project Performance Optimization Division

Focus

- Individual projects

Strategies

- Work closely with project teams to plan and facilitate Value Practice implementation

Portfolio

- Value Engineering + 7 CII concepts + Lessons learned

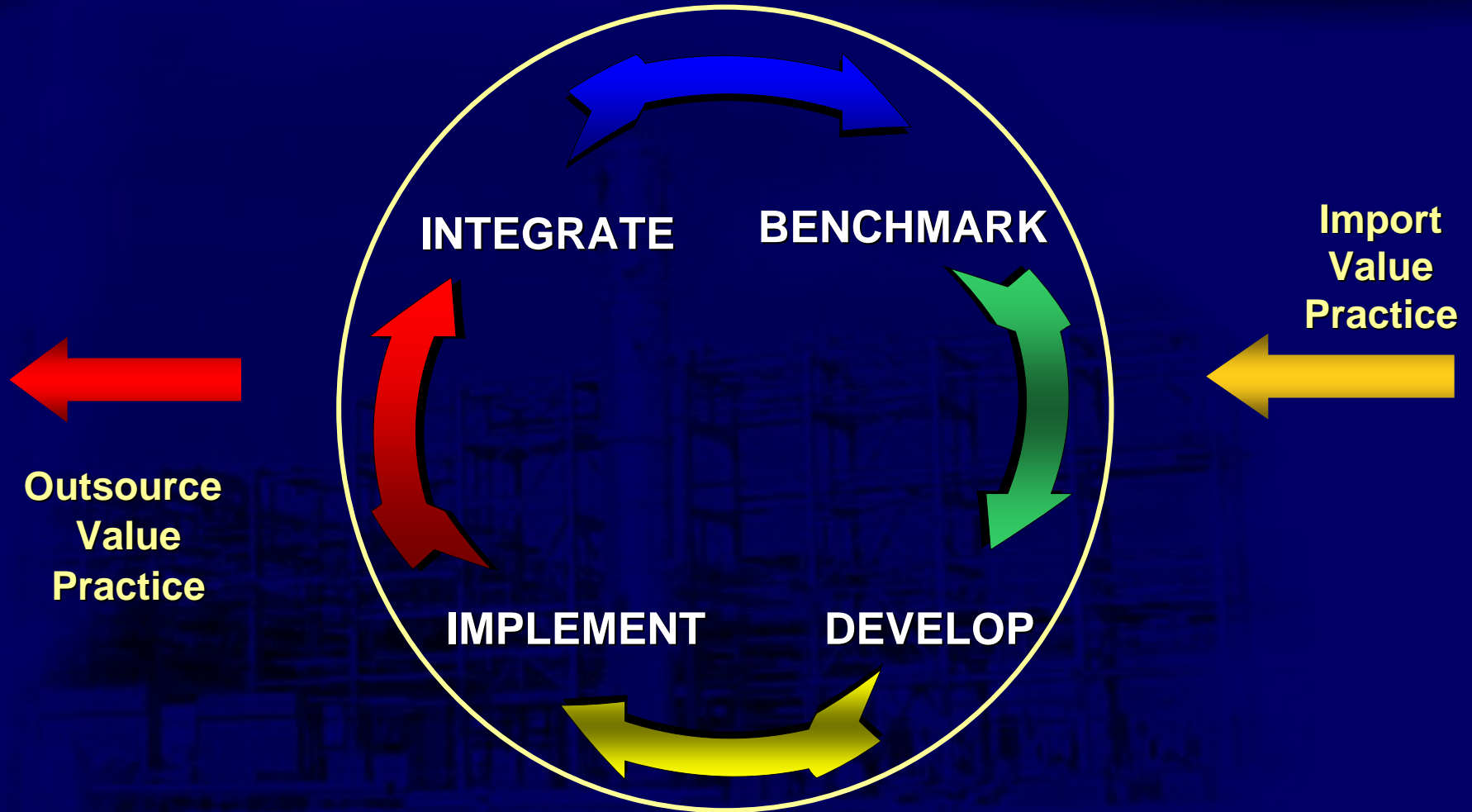
Value Practices Journey



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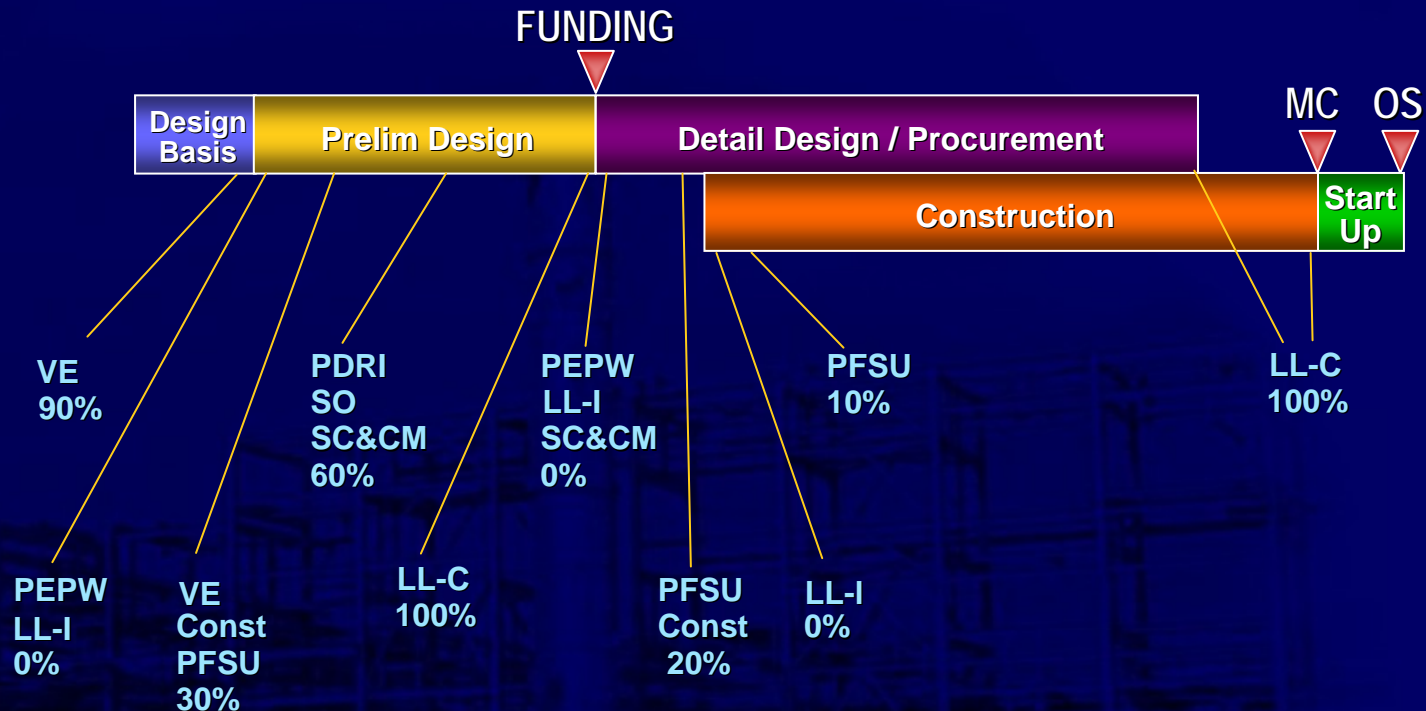
Value Practice Implementation Cycle



Planning for Value Practice Implementation

- Review capital program yearly to identify project starts
- Select applicable Value Practices and timing
- Implement Value Practices sessions

Current Value Practice Timing



Const	Constructability	PFSU	Planning For Start-Up
LL-I	Implement Lessons Learned	SC&CM	Scope Control & Change Mgt
LL-C	Collect New Lessons Learned	SO	Schedule Optimization
PDR	Project Definition Rating Index	VE	Value Engineering
PEP	Proj Execution Png Workshop		

Value Engineering Process



- Project Research
- Team Selection
- Site Visit

- 3-5 Day Workshop
- SAVE International Job Plan

- Management Presentation
- Continuous Follow-up

Lessons Learned

Lessons Learned Knowledge Base

Capitalizing on success while avoiding past mistakes to build a better, safer tomorrow

Discipline

- Civil/Structural
- Mechanical
- Piping
- Electrical
- Instrumentation
- Communications
- Material Procurement
- Safety
- Cost Engineering
- Planning & Scheduling
- Contracting
- Admin/General

Project Phase

Best Practice

Quality Management

- Project Proposal
- Detailed Design
- Procurement
- Construction
- Precommissioning/Start-up
- Project Execution Planning
- Scope Definition & Control
- Schedule Optimization
- Constructability
- Start-up Planning
- Contracting Improvement
- Value Engineering
- Quality Assurance/QA
- Inspection/QC

Project Type

- Process Facilities
- Pipelines/Bulk Plants
- Civil / Infrastructure
- Plant Improvements
- Communications/DCS
- Site Development
- Corrosion Control
- Offshore Facilities
- Power Generation/Distr
- Marine Equipment

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Results

Value Practice Workshops

Value Practice	'01	'02	'03	'04	'05	'06	Total
Proj. Exec. Plann. Worksh. (PEPW)	1	4	17	7	9	12	50
Proj. Definition Rating Index (PDRI)	23	40	35	44	32	26	200
Schedule Optimization	28	41	19	18	23	0	129
Scope Control & Change Mgt.	1	7	16	35	30	23	112
Constructability	28	51	34	27	36	27	203
Planning for Startup	1	17	20	18	22	19	97
Lessons Learned	1	29	58	29	34	23	174
Value Engineering	32	26	36	34	38	21	187
Total Workshops	115	215	235	212	224	151	1152

Results

Training

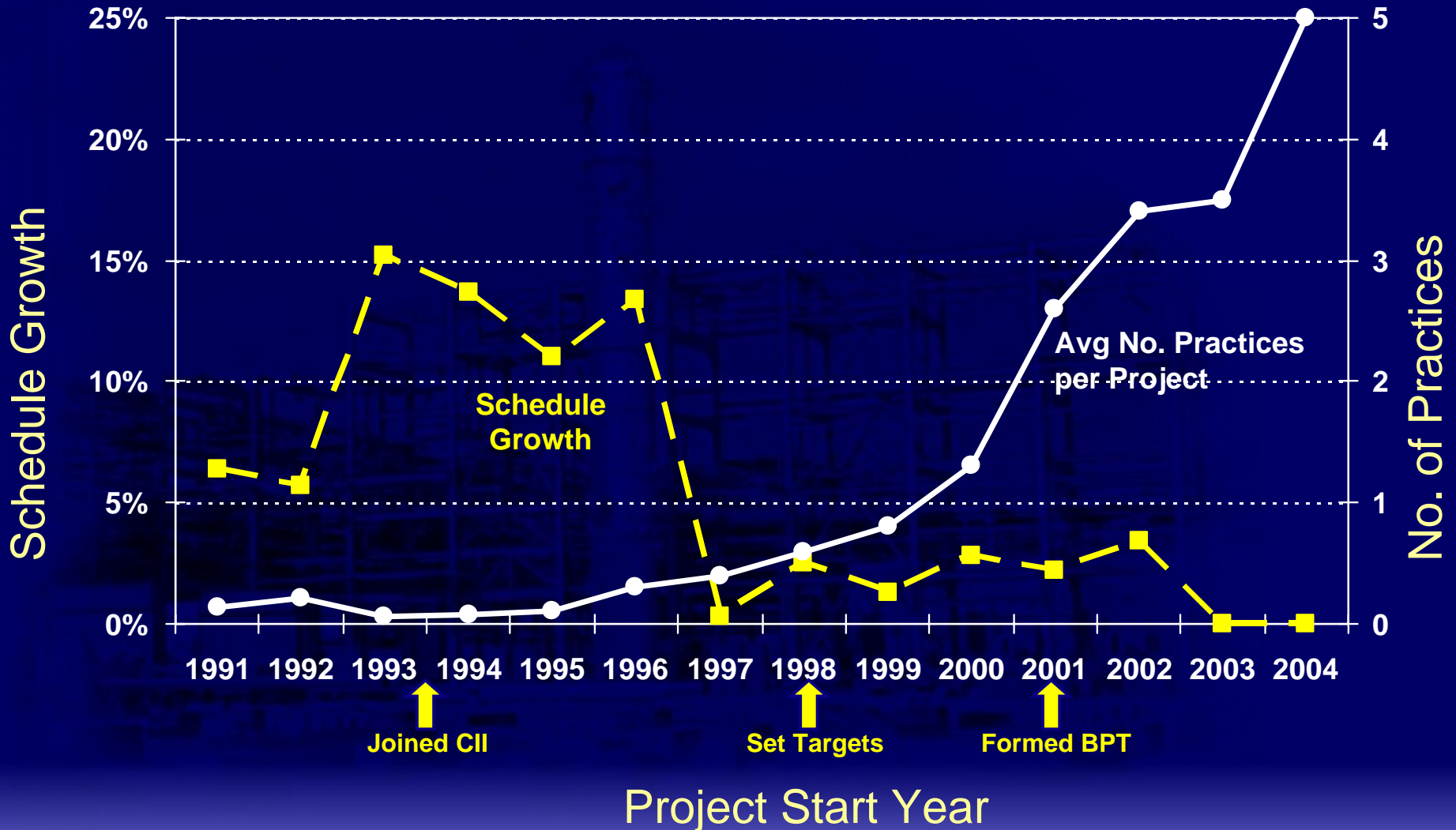
Course	Classes/ Year	Target Audience
Best Practices	4	PMT
Value Engineering (MOD I)	5	VE Team Members
Advanced VE (MOD II)	2	VE Team Leaders
Value Engineering Seminar	1	Management
AVS Certification	1	VE Team Leaders

Schedule Growth vs. Number of Value Practices

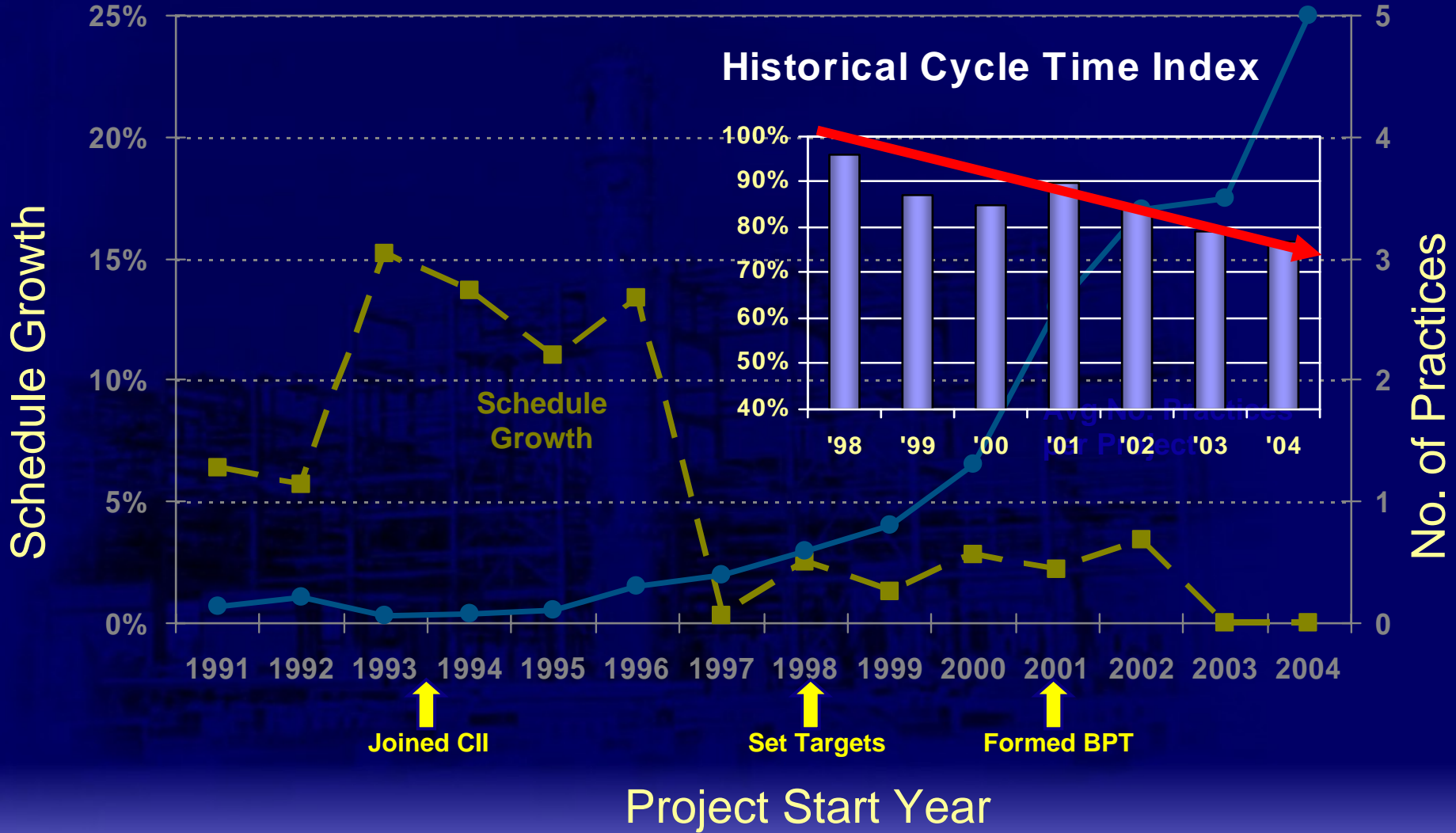
Limited use
of Value Practices

Low informal use
of Value Practices

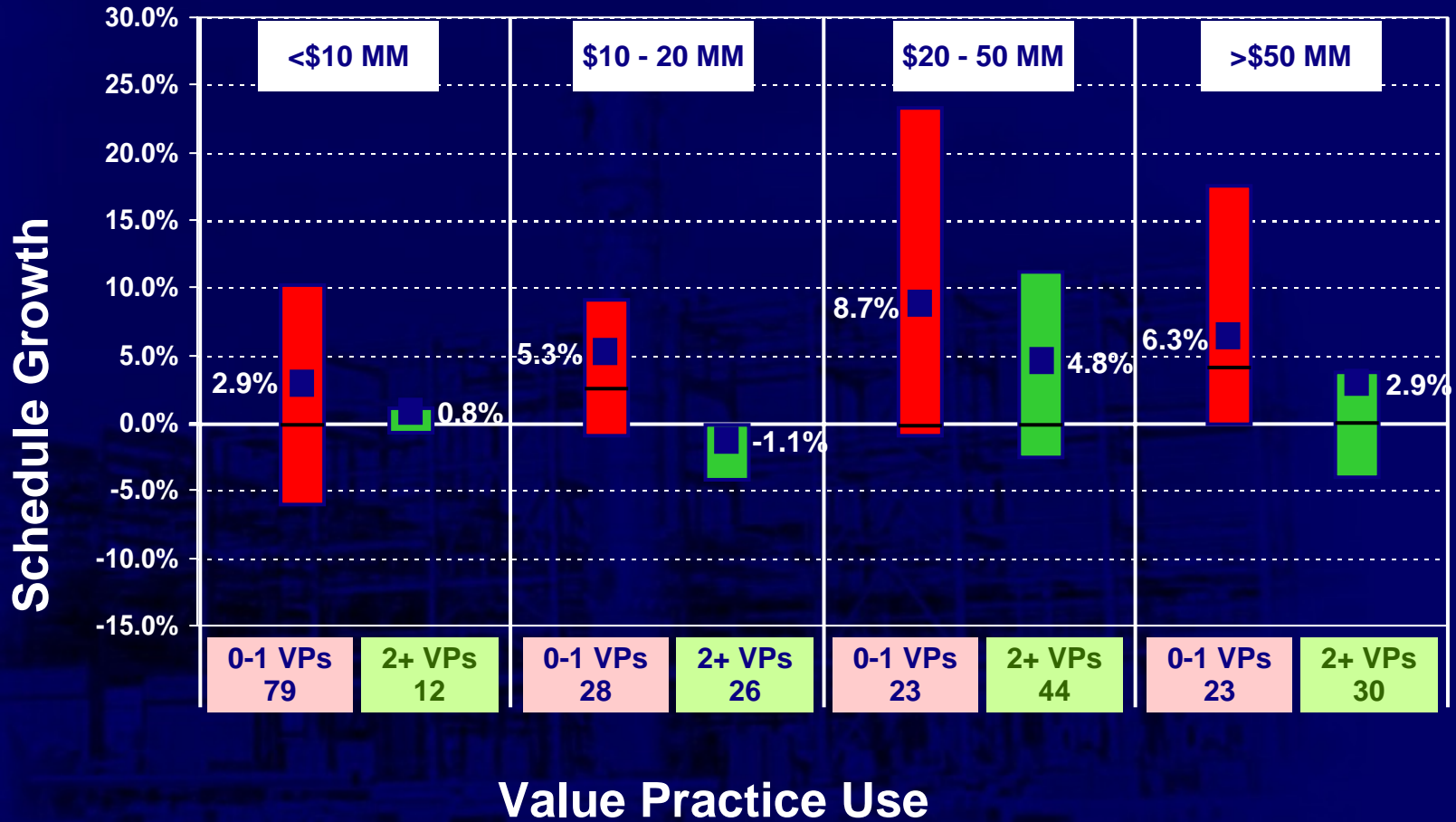
Increasing formal use of
Value Practices



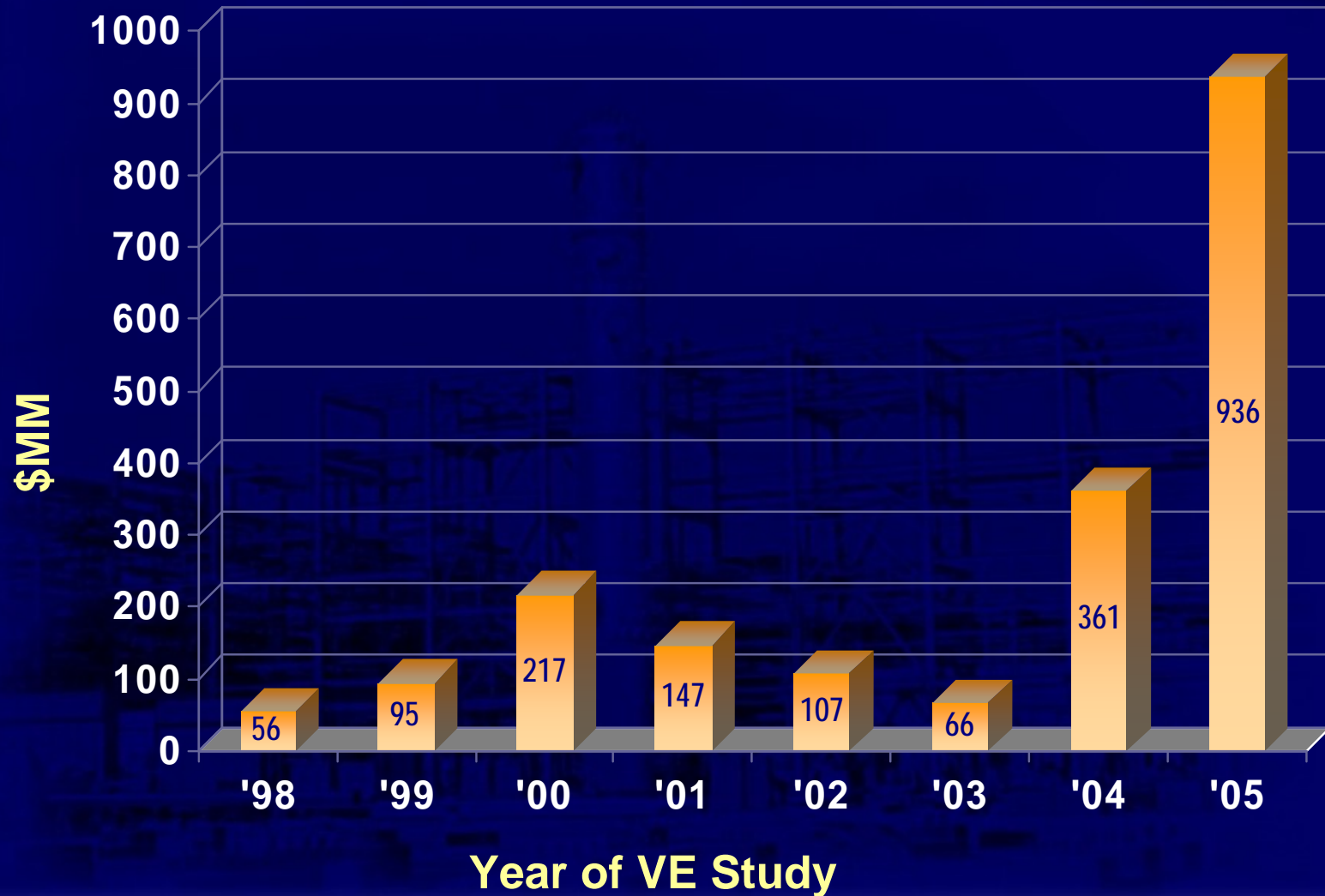
Schedule Growth vs. Number of Value Practices



Schedule Growth vs. Value Practice Use



Value Engineering Cost Avoidance



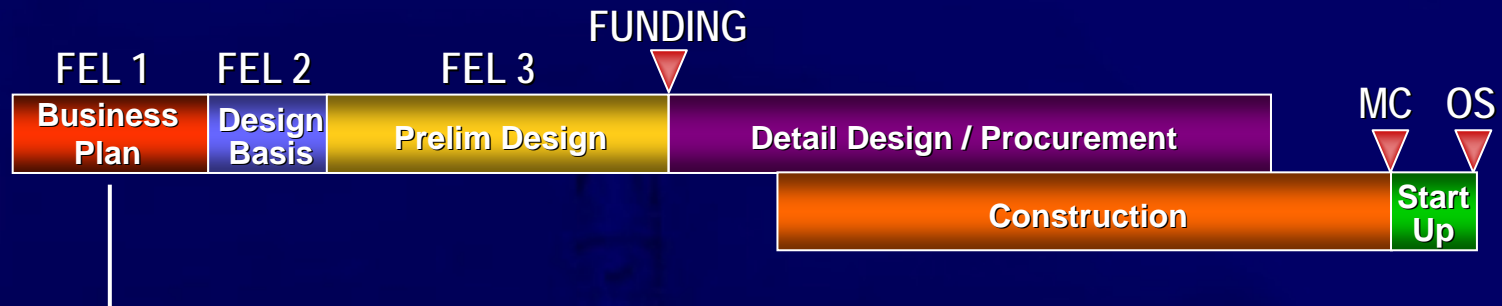
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Path Forward

- Expand focus from *project optimization* to *Capital Program optimization*
- Move from providing services to managing services
- Continue outsourcing efforts
- Support achievement of Best in Class Capital Program performance

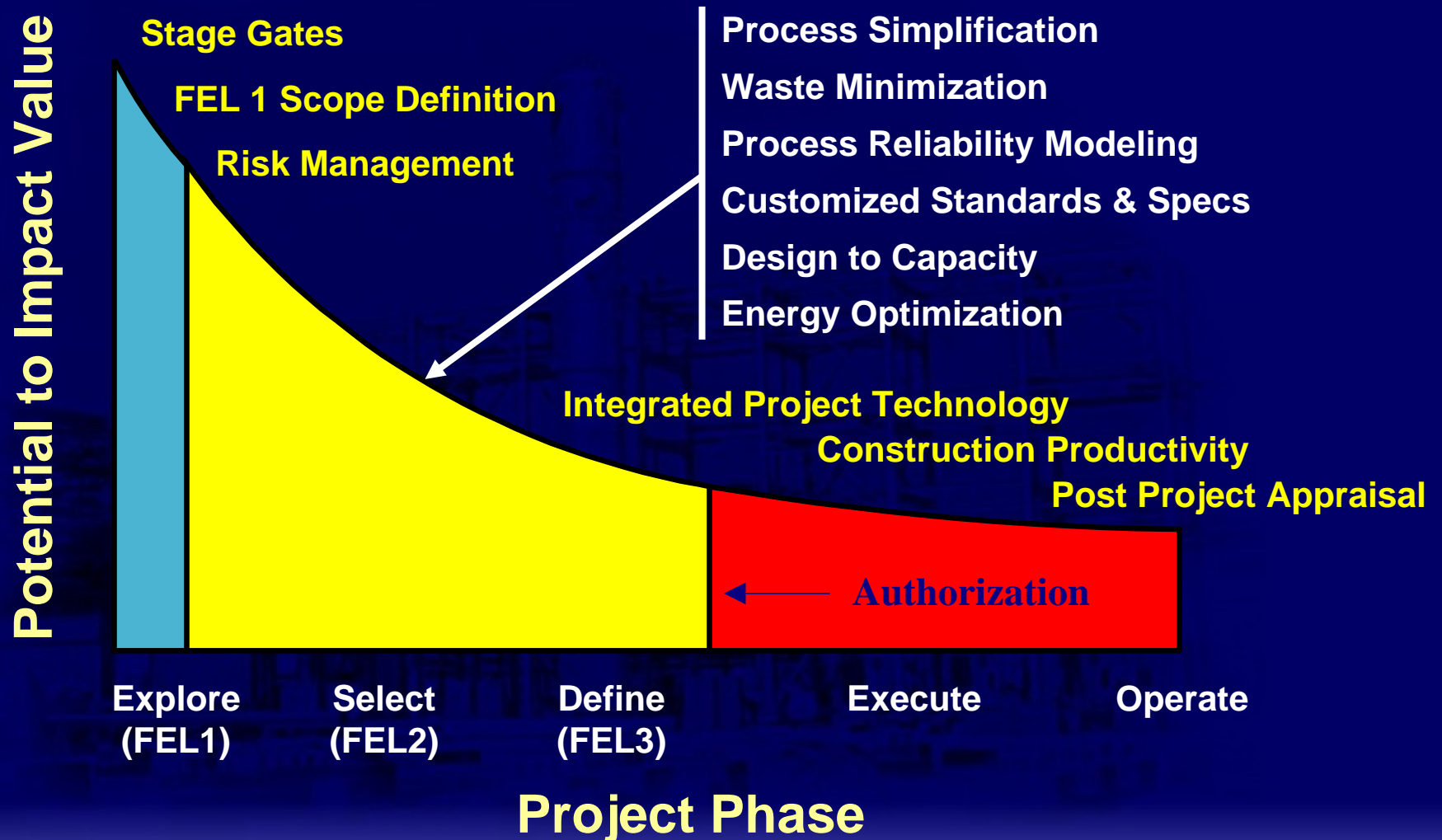
Increase Focus on Capital Planning



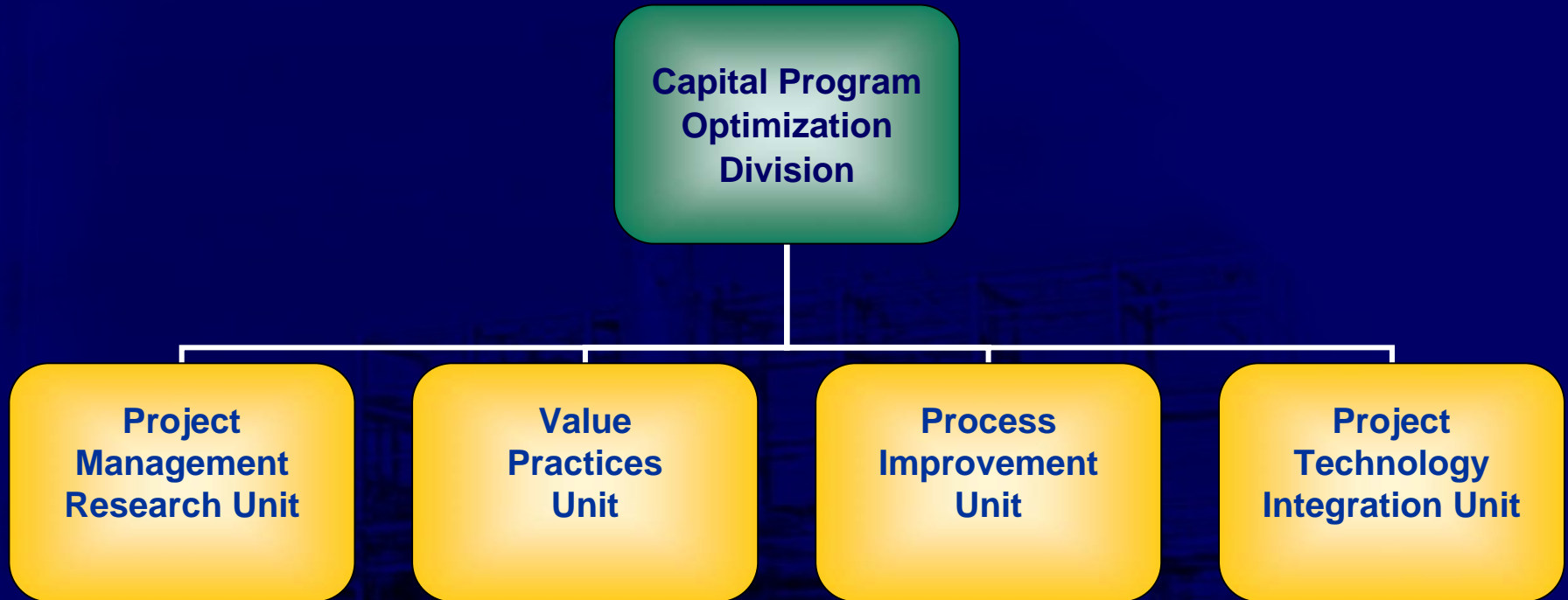
Capital Planning

- Stage gates
- FEL 1 scope definition
- Post project appraisals
- Other initiatives

Saudi Aramco Initiatives and IPA Value Practices



New Organizational Structure



Take-away Message

- Assign full time resources dedicated to implementing Value Practices
- Customize Value Practices to suit your organization
- Ensure formal, structured implementation method
- Establish implementation cycle to import new practices as existing practices mature
- Involve your design and construction contractors to ensure incorporation of Value Practices into their processes
- Focus on overall capital program system, not just individual projects

Thank you



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