



DRIVING IMPROVED DECISION QUALITY

THE INTEGRATION OF D&RA AND PROJECT DEVELOPMENT/MANAGEMENT

CONOCO ASSET MANAGEMENT PROCESS



***DRIVING SUPERIOR ASSET
MANAGEMENT PERFORMANCE***

VISION



Interdependent business performance culture...

through integrated & disciplined

Upstream business processes...

*supported by
a Decision Quality framework...*

*that leads to
operational excellence AND enterprise growth.*

BUSINESS PROCESSES



- *Strategic Management Process*
- *Portfolio Management*
- *Long Range Planning & Budgeting*
- *Asset Management*
 - *Acquisition*
 - *Exploration & Appraisal*
 - *Project Development & Management*
 - *Operations*
 - *Disposition*
- *Sustainable Development*

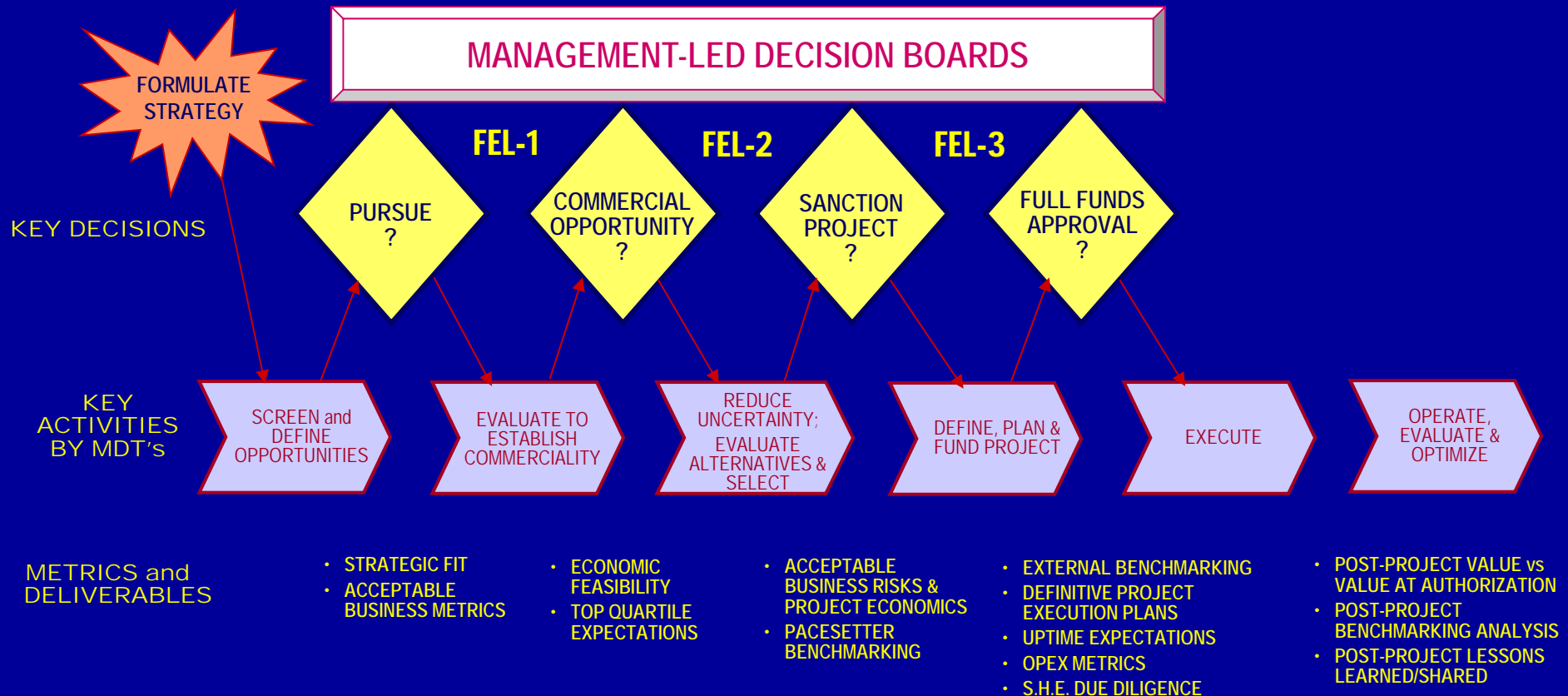
DECISION QUALITY FRAMEWORK



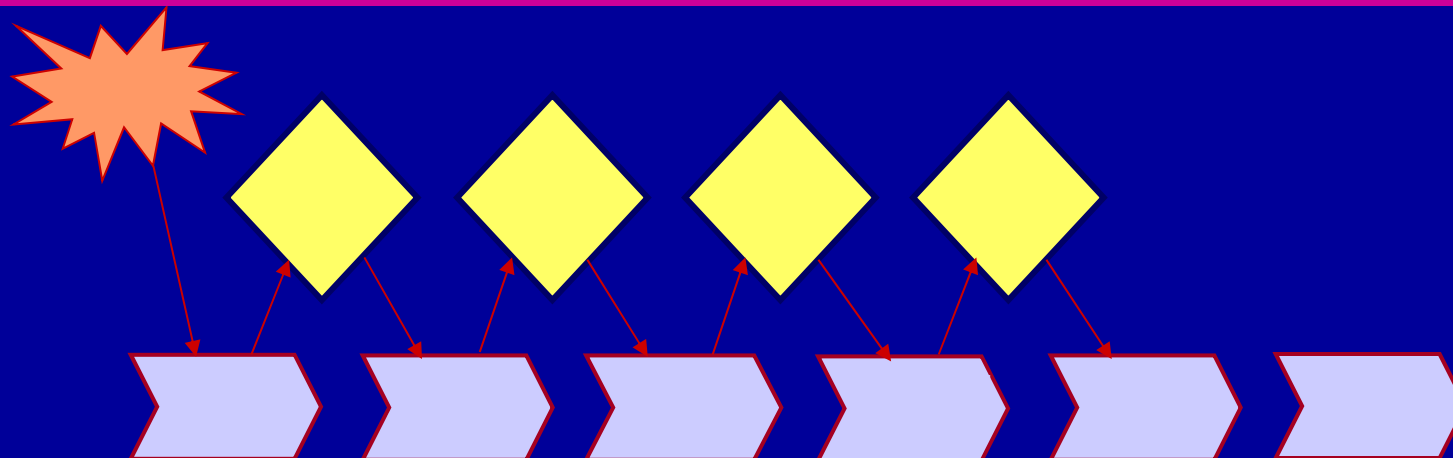
Integration of:

- *Decision & Risk Analysis*
- *Team Effectiveness & Leadership*
- *Project Planning & Management*
- *Gatekeeping*
- *Knowledge Leveraging*


CONOCO ASSET MANAGEMENT PROCESS



CAMP Tools



STRATEGIC GOAL ALIGNMENT	MANAGING UNCERTAINTY	BENCHMARKING
DECISION MAPPING	VALUE TRACKING	PROJECT EXECUTION PLANNING
PEER ASSISTS & REVIEWS	LESSONS LEARNED	VALUE IMPROVING PRACTICES
TEAM EFFECTIVENESS	PERFORMANCE STANDARDS	FELMAS

 PLANT "X" CONTROL SYSTEM UPGRADE DECISION MAP 4-May-00				
TIMING	15-Jun-00	15-Jul-00	15-Sep-00	15-Nov-00
DECISION CRITERIA	EMV (New Control System) > 0	<ul style="list-style-type: none"> STRATEGIC FIT LIFECYCLE EMV (New System) 	<ul style="list-style-type: none"> IRR > 20% PI > 1.4 Technical Alignment w/ other assets 	<ul style="list-style-type: none"> IRR > 20% PI > 1.4
DECISION MAKERS EXTERNAL				
DECISION MAKERS INTERNAL	Team	M. Pearce, M. Morgan, M. Honegman	M. Pearce, M. Morgan, M. Honegman	M. Pearce, M. Morgan, M. Honegman
DECISIONS	PRELIMINARY FEASIBILITY	IS A NEW CONTROL SYSTEM COMMERCIAL	SELECT SCOPE OF CONTROL SYSTEM	FULL FUNDS APPROVAL
ACCOUNTABILITY	Keith Ridgway	Keith Ridgway	Keith Ridgway	Keith Ridgway
DELIVERABLES FOR KEY DECISIONS	<ul style="list-style-type: none"> BASE CASE CONTROL SYSTEM <ul style="list-style-type: none"> Scope Number of IOs HONEYWELL PRELIM COST EST. RECOVERY IMPROVEMENT COARSE ECONOMIC ANALYSES NEXT PHASE PLAN / FOCUS 	<ul style="list-style-type: none"> BUSINESS OBJECTIVES DECISION MAP STRATEGIC REVIEW / IMPACT D&RA FRAMING <ul style="list-style-type: none"> Problem Definition Alternative Generation, e.g. <ul style="list-style-type: none"> Low Capex Solutions No Capex Solutions Partial Capex Solutions Develop Screening Criteria <ul style="list-style-type: none"> Identify Risks Quantify Risks and Uncertainty TEAM CHARTER BASE CASE SELECTION HONEYWELL COST ESTIMATE MILESTONE SCHEDULE ECONOMIC ANALYSES FEL-02 SCOPE OF WORK. FEL-02 COST & PLAN 	<ul style="list-style-type: none"> PROJECT OBJECTIVES UPDATED DECISION MAP UPDATED TEAM CHARTER AS BUILTS STANDARDIZATION CHECK - REVIEW <ul style="list-style-type: none"> PROGRESS OF OTHER ASSETS ALTERNATIVE GENERATION <ul style="list-style-type: none"> ID. ALTERNATIVES AND PHASING SCREENING REPORT <ul style="list-style-type: none"> Identify Screening Criteria BASIS FOR FEL-03 / PRELIM ENG COST ESTIMATES PRELIMINARY SCHEDULE ECONOMIC ANALYSES KEY RISKS AND MITIGATION PLANS PRELIM PROJECT EXECUTION PLAN CONTRACT STRATEGY DRAFT BID PACKAGE 2001 BUDGET ALLOCATION FEL-03 SCOPE OF WORK. 	<ul style="list-style-type: none"> UPDATED PROJECT OBJECTIVES UPDATED DECISION MAP UPDATED TEAM CHARTER FINALIZED AGREEMENTS <ul style="list-style-type: none"> Honeywell Contract (Preliminary) BoD FOR DETAILED ENGINEERING PROJECT EXECUTION PLAN COST ESTIMATE +/- 10% <ul style="list-style-type: none"> Honeywell INTEGRATED MASTER SCHEDULE BUSINESS PLAN <ul style="list-style-type: none"> Strategic Positioning / Goal Alignment Key Risks and Mitigation Plans D&RA Economic Analyses AFE REGULATORY CHECK
TEAM LEAD	Keith Ridgway			
RESOURCES	SB-2d, JS1-2d, KR-4d, ATR-25d, HL/SM-2d,	KR-40%, SB/QB-20d, JS-5d, HL-10%, SM-15%, DG-20%, JRB-10%, ATR-100%	KR-50%, SB/QB-60%, ATR-35%, HL/SM/DG-15%, JS-10d,	KR-50%, SB-20%, ATR-5%, HL/SM/DG-10%, JRB-20%, EIS/JS-10d.
CASH FOR THIS DECISION	\$21,000	\$42,600	\$50,000	\$35,000
KEY UNCERTAINTIES	SEE ATTACHMENT	SEE ATTACHMENT	SEE ATTACHMENT	SEE ATTACHMENT

CAMP and D&RA



- **NOT COMPETING PROCESSES**
- **SYNERGISTIC PROCESSES & TOOLS**
 - **MANY ARE THE SAME TOOLS!**
- **QUALITY & VALUE COMES FROM USING BOTH**

CAMP and D&RA



- **COMMON AREAS:**

- EFFECTIVE DECISION BOARDS
- DEFINING THE PROBLEM & UNDERSTANDING STRATEGY

- **SYNERGISTIC AREAS:**

D&RA FRAMING

IMPROVES

- STRATEGIC GOAL ALIGNMENT
- DECISION MAPPING

D&RA PROCESS

APPLIED TO

- REDUCING UNCERTAINTY
- EVAL./SELECTING ALTERNATIVES
- APPLYING V.I.P.'s

TEAM EFFECTIVENESS

IMPROVES

- D&RA FRAMING and ANALYSIS

EXECUTION PLANNING

ENABLES

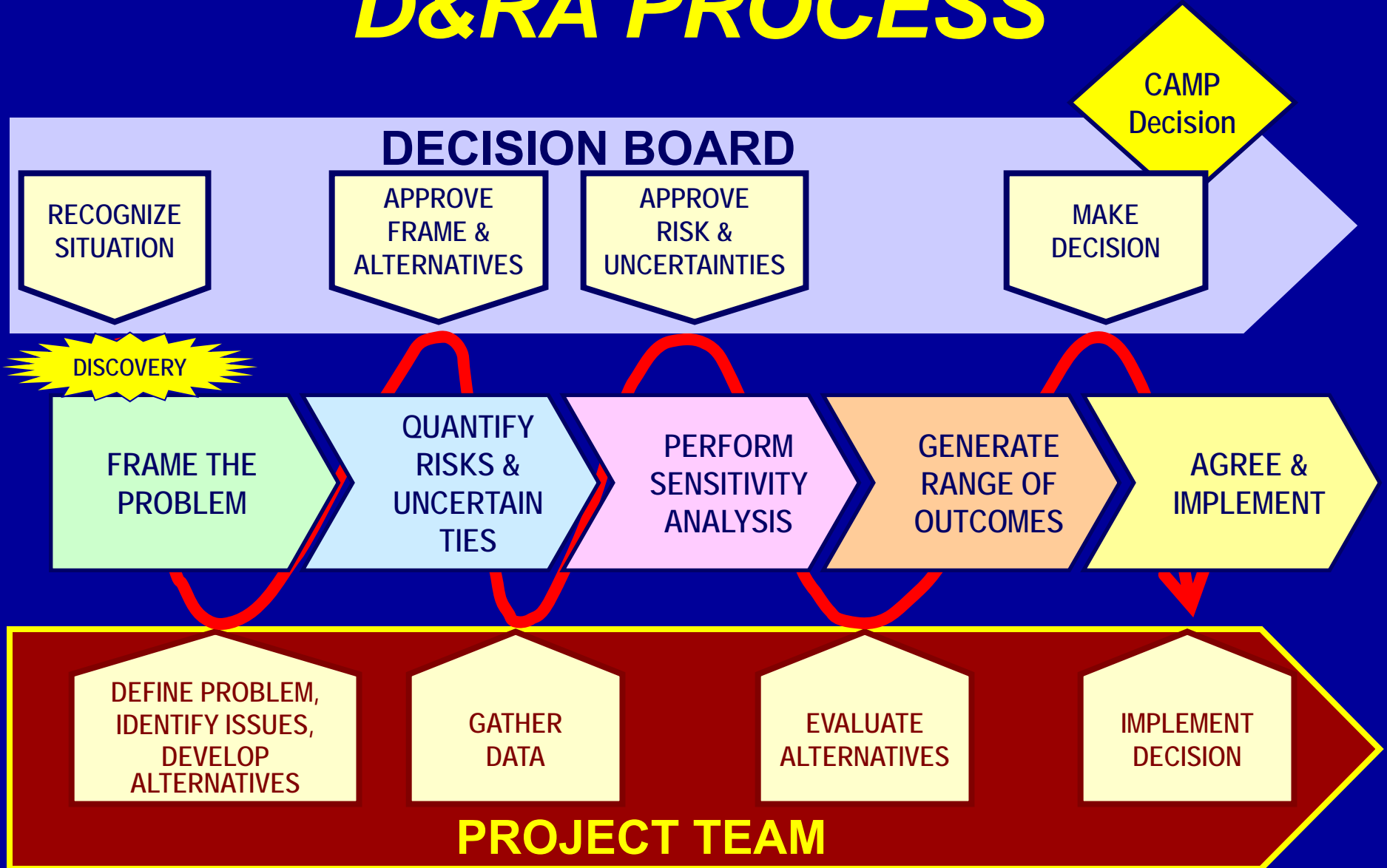
- DECISION IMPLEMENTATION

D&RA PROCESS

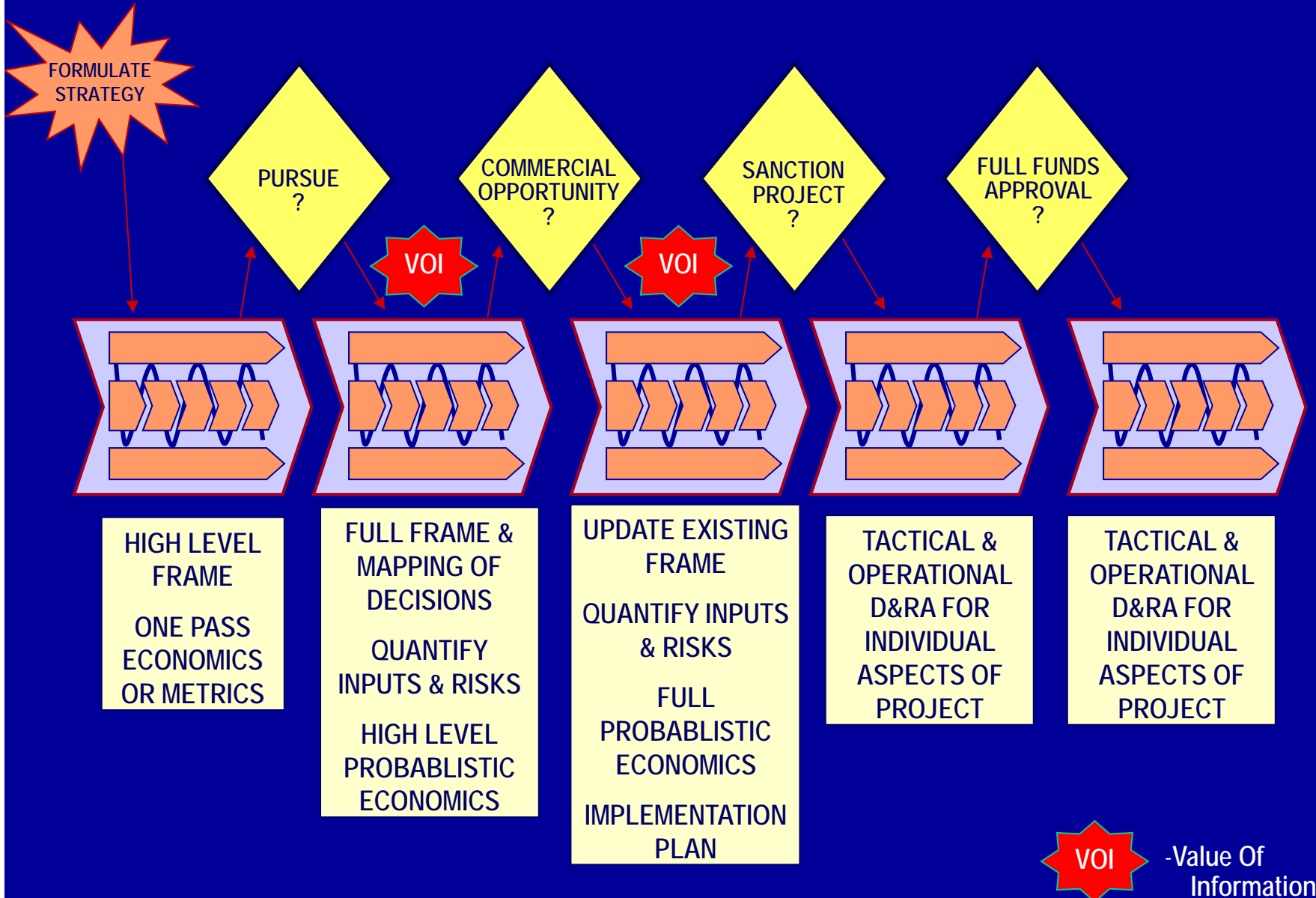
CAN HELP DETERMINE

- RIGHT AMOUNT OF FEL AT RIGHT TIME

D&RA PROCESS



CAMP & D&RA Integration



CAMP and D&RA Integration

MANAGEMENT-LED DECISION BOARDS

FEL-1 BUSINESS PLANNING

PURSUE
?

COMMERCIAL
OPPORTUNITY
?

EVALUATE TO ESTABLISH COMMERCIALITY

DISCOVER Y

- Problem Statement/Charter
- Objective Hierarchy
- Business/Competitor Analysis

FRAME THE PROBLEM

- Issue Raising
- Decision Hierarchy
- Strategy Table
- Influence Diagram
- Decision Tree

QUANTIFY RISKS & UNCERTAINTIES

- Gather Data
- Expert Interviews
- Peer Reviews

PERFORM SENSITIVITY ANALYSIS

- Tornado Diagrams

GENERATE RANGE OF OUTCOMES

- Decision Tree
- Cumulative Probability
- Value of Information
- Recommendation To Decision Board

AGREE & IMPLEMENT

- Agree & Capture Decision
- Implementation

TEAM
EFFECTIVENESS

DECISION
MAPPING

NEXT STAGE
PLANNING

STRATEGIC
GOAL
ALIGNMENT

PEER
ASSIST

PEER
REVIEW

LESSONS
LEARNED

SUSTAINABLE DEVELOPMENT



“Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

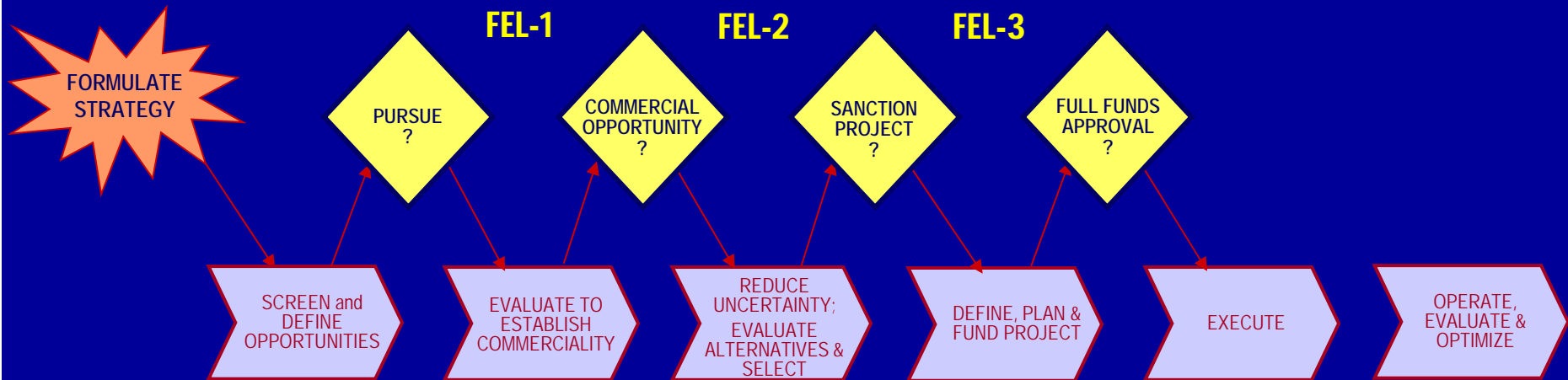
Satisfying not only financial obligations but also the needs & expectations of society.

- ✓ **Economic Growth & Financial Excellence**
- ✓ **Broad Ongoing Contributions To Society**
- ✓ **Environmental Stewardship/Protection**

WATCHING THE “TRIPLE BOTTOM LINE”

INTEGRATION OF SUSTAINABLE DEVELOPMENT

MANAGEMENT-LED DECISION BOARDS



CORPORATE

1

Identify Global, Market-Driven Business Direction & Opportunities:

"Which energy business should we be in?"

REGIONAL/BU (Strategic)

2

Identify Regional, Market Driven Business Direction & Opportunities:

"How do we shape our business in this region?"

REGIONAL/BU (Project)

3

Plan Regional Business Direction & Opportunities:

"Is opportunity feasible from all 3 SD dimensions?"

PROJECT

4

Identify & Select Most Sustainable Project Development Alternative:

"How do we ensure optimum SD solution?"

PROJECT

5

Expand The Chosen Alternative(s) To Select Most Sustainable Project Development Option:

"How do we ensure optimum SD solution within a previously selected alternative?"

OPERATIONS

6

Implement & Operate Project In Way That Is Most Sustainable:

"How do we operate in the most Sustainable way?"



back

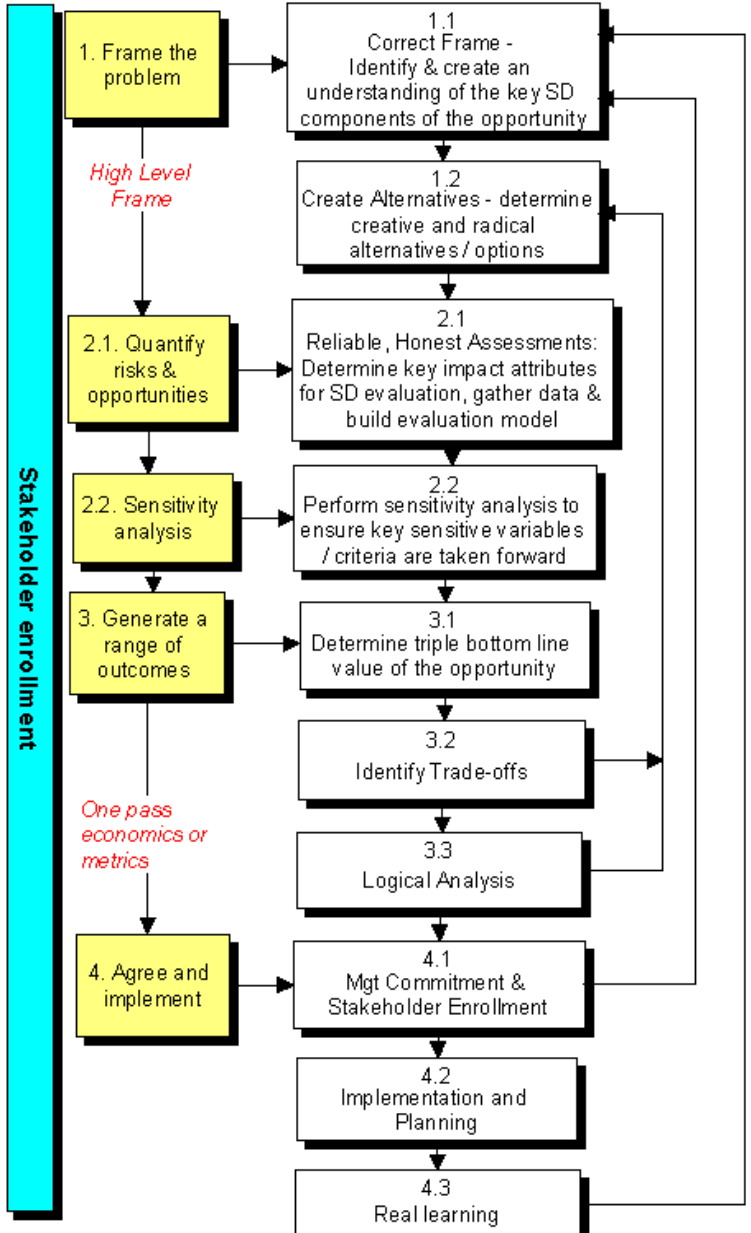
Integrated SD Decision Making Process
 L2-1&2: Identify Global and Regional Business Direction & Opportunities

Level 2	Revision no: 3 16 March 2001
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Equivalent stage in D&RA process

Stage in integrated SD Decision Making model



Optional Support Tools

- Decision Mapping
- Business assessment tools
- PAC
- Real Options analysis
- Scenario Planning
- FEL Tools
- 1.1 Issue Raising
- 1.1 Decision Hierarchy
- 1.1 / 2.1 SD Influence Diagram
- 1.2 Strategy table
- 1.2 "what if ..." questions / scenarios
- 1.2 Idea Juggler
- 2.1 Peer input / assists
- 2.1 Multidiscipline Panel
- 2.1 Expert Interviews
- 2.2 "Traditional sensitivity analysis"
- 2.1, 2.2 & 3.1 SD electronic Model
- 3.1 Standard economic analysis - EMV, NPV
- 3.1 Checklist with costs/benefits/impacts for taking fw. into value
- 3.2 Tornado diagrams (On Balance - weights window)
- 4.2 Forward Planning

The Multi Attribute Software is called On Balance by Krysalis Ltd (<http://www.krysalis.co.uk>). Contact is Colin Simmons at Tel +44 (0) 1628 636861 or Fax +44 (0) 1628 638390

INTEGRATED SD DECISION MAKING PROCESS

D&RA Process

Integrated SD Model

FRAME THE PROBLEM

1.1 Correct Frame:

Identify & create an understanding of the key SD components of the opportunity



1.2 Create Alternatives:

Determine creative & radical alternatives/options

QUANTIFY RISKS & OPPORTUNITIES

2.1 Reliable, Honest Assessments:

Determine key impact attributes for SD evaluation, gather data & build eval. model



2.2 Sensitivity Analysis:

Perform sensitivity analysis to ensure key sensitive variables & criteria are taken forward

SENSITIVITY ANALYSIS

GENERATE RANGE OF OUTCOMES

3.1 Value Determination:

Determine triple bottom line value of the opportunity



3.2 Identify Trade-off's



3.3 Logical Analysis

AGREE & IMPLEMENT

4.1 Management Commitment & Stakeholder Enrollment



4.2 Implementation & Planning



4.3 Real Learning

*SD Multi
Attribute
Analysis
Tool*