

**Global Energy Practice** 

# DIGITAL OIL FIELD INFOSYS POINT OF VIEW

**Finding Petroleum** 

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### THE INDUSTRY RECOGNIZES THE VALUE OF DIGITAL OIL FIELD INITIATIVES....





### DESPITE INITIAL SUCCESSES, THE OVERALL VALUE IS YET TO BE REALIZED ...

INITIATIVES DISPLAY CONSISTENT THEMES

- Successes are isolated
- Success are not easily repeatable
- Difficulties to get users buy-in
- Difficulties to achieve the business case

### Common Sources of Success and/or Failure





### ... AND PROGRAMS HAVE STARTED TO ADDRESS SOURCES OF FAILURE...

### ROADMAP

- Inadequate consideration of Local versus Global
- Lack of value based initiative prioritization
- Lack of vision

### **A P P R O A C H**

- Focuses on technology rather on workflows and people
- Misalignment of delivery approach and phases

### SOLUTION

- Lack of well defined architecture
- Lack of key capabilities
  Data Management,
  Visualization, workflow...
- Lack of standards
- Solution too complex

#### BUY-IN

- Inadequate users' involvement
- Lack of support and change management activities
- Inadequate management of stakeholder expectations



## Infosys®

### **EVENT BASED FRAMEWORK TO ENABLE DECISION MAKING**



### THE EVENT MATRIX

(Links Events - Business Processes – Value) To Accelerate the value based raodmap definition

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BUSINESS PROCESSES	INSTRUMENTATION QUALITY	INFORMATION ACCURACY	PRODUCTION OPTIMIZATION	RECOVERY RATE INCREASE	INTEGRITY
Well Test Automation		Well & Reservoir properties	Well Inflow performance (PI)	Gas or Water Breakthrough: GOR and WC	
Well Test Optimisation			Production stability		
Well & Network Simulation	Pressure & Temperatures	Well & Network Model Flow quantities	Well Inflow and Outflow performance		
Well & Network Optimization			Optimal targets & operational settings	Optimal injection settings (gas & water)	Well & Field potential Operational Constraints
VIRTUAL FLOW METERING	Pressures & Temperatures	Flow quantities Back allocation	Well inflow & outflow	Reservoir Pressure	Reservoir Pressure Well inflow & outflow
FLOW ASSURANCE		Well & Reservoir properties	Hydrates & deposits control		Corrosion limits Slug control
WELL SURVEILLANCE	Redundancy	All information	KPIs, Deviations		Integrity limits Sand monitoring

## THE INFOSYS "INTEGRATED SMART FIELD" RELIES ON THREE PILLARS...





(Common technical and functional features:: Data cleansing, Asset modeling, Analytics, automation, orchestration...)

(Existing Landscape: Historian, Simulators, ERPs, DB, ...)









**COLLABORATION CAPABILITIES** 

Align vision, value, objectives, existing capabilities, and approaches

- Reduce Unproductive Workload (from 80% to 20%)
- Increase information accuracy & reliability
- Automate Deviations / Shortfalls Detection

Enable collaboration, decision making and ultimately value realization



### HYDROCARBON MANAGEMENT CASE STUDY

EMBED REAL TIME FRAMEWORK INTO A END TO END BUSINESS SCENARIO







HCM



# Appendices

## INTEGRATED SMART FIELD Overview





## THE INFOSYS INTEGRATED SMART FIELD <sup>™</sup> DOES ADDRESS ALL DOF SUCCESS FACTORS

### Smart / Innovation

- Consistent Roadmap
- Value realization
- Alignment between objectives , capabilities and context
- Event driven approach
- Smart Workplace
- Smart collaboration
- Decision making (rather unproductive activities)
- Best use of available expertise
- Consistent management of change



### Integration

- of E&P value chain
- of Processes
- Within Existing Operations
- of Functions & Disciplines
- of data
- of applications
- within Current landscape
- Local Global
- Of the approach (People, processes and Solution)

### Field

- Primary target: Operations
- Adequate arbitration
- Consistent management of stakeholders and expectations
- Adequate governance

### IT RELIES ON THREE KEY PILLARS



THE INTEGRATED SMART FIELD (ISF<sup>™</sup>) FRAMEWORK





## THE INTEGRATED SMART FIELD TOOLKIT...TO ACCELERATE PROJECTS DELIVERY





## THE INTEGRATED SMART FIELD, PART OF THE INFOSYS FRAMEWORK FOR UPSTREAM



ISF<sup>™</sup> RELIES ON CORE CAPABILITIES PROVIDED BY THE INTEGRATED OPERATIONS, HSE ENGINEERING, DATA AND OFFERINGS TO ENABLE A UNIQ VALUE PROPOSITION FOR OUR CLIENTS

## YOUR CONTACT



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# Thank You