

An introduction to
POSC

Petrotechnical Open Standards Consortium

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Boundaryless Information Flow:

Open Standards & Certification

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Humanity's Top Ten Problems for next 50 years

1. ENERGY
2. WATER
3. FOOD
4. ENVIRONMENT
5. POVERTY
6. TERRORISM & WAR
7. DISEASE
8. EDUCATION
9. DEMOCRACY
10. POPULATION



2003
2050

6.3
8-10

Billion People
Billion People

Some industry drivers

Globalization / Geopolitics

Mergers & acquisitions

Data explosion

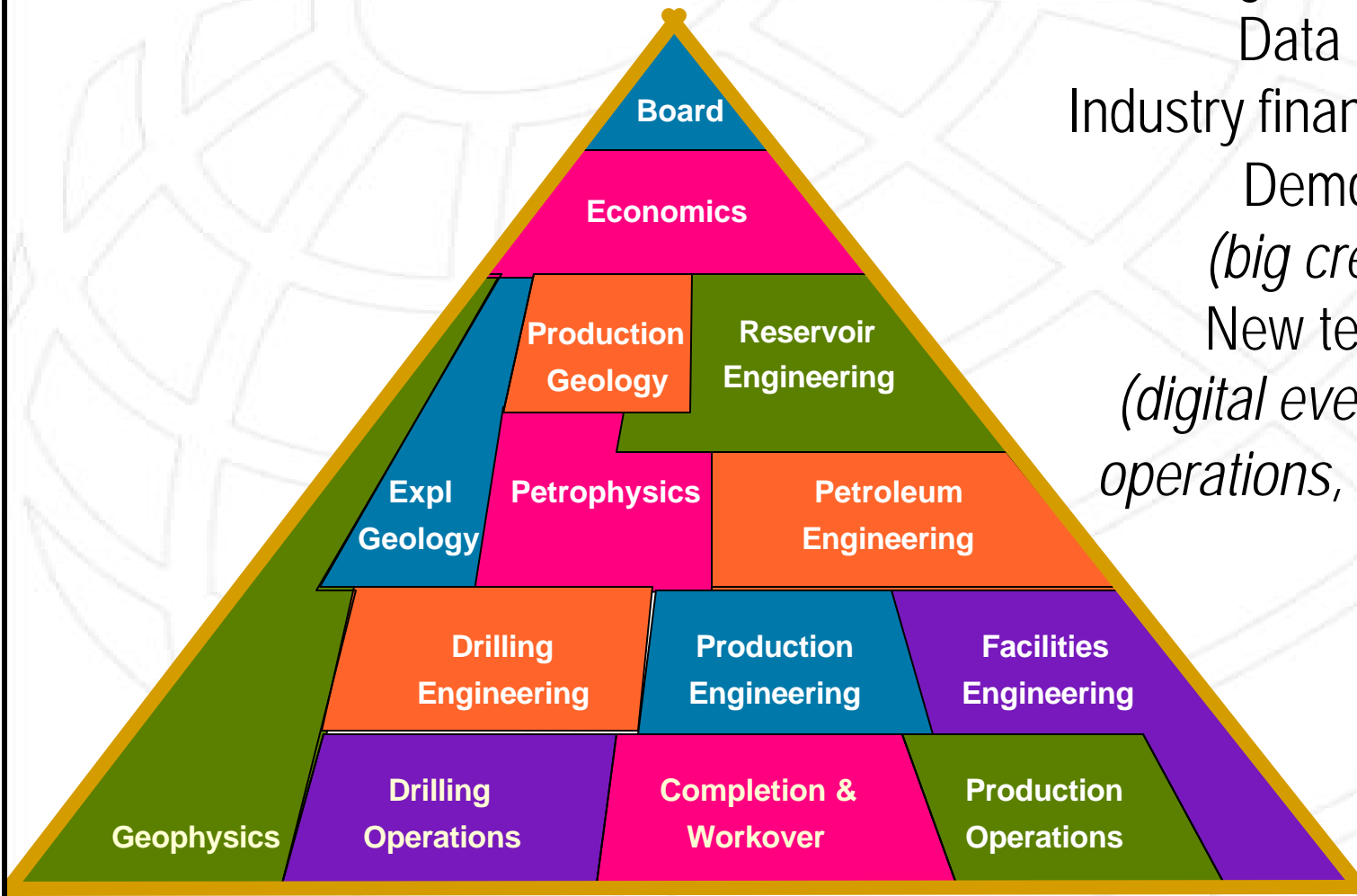
Industry financial performance

Demographics

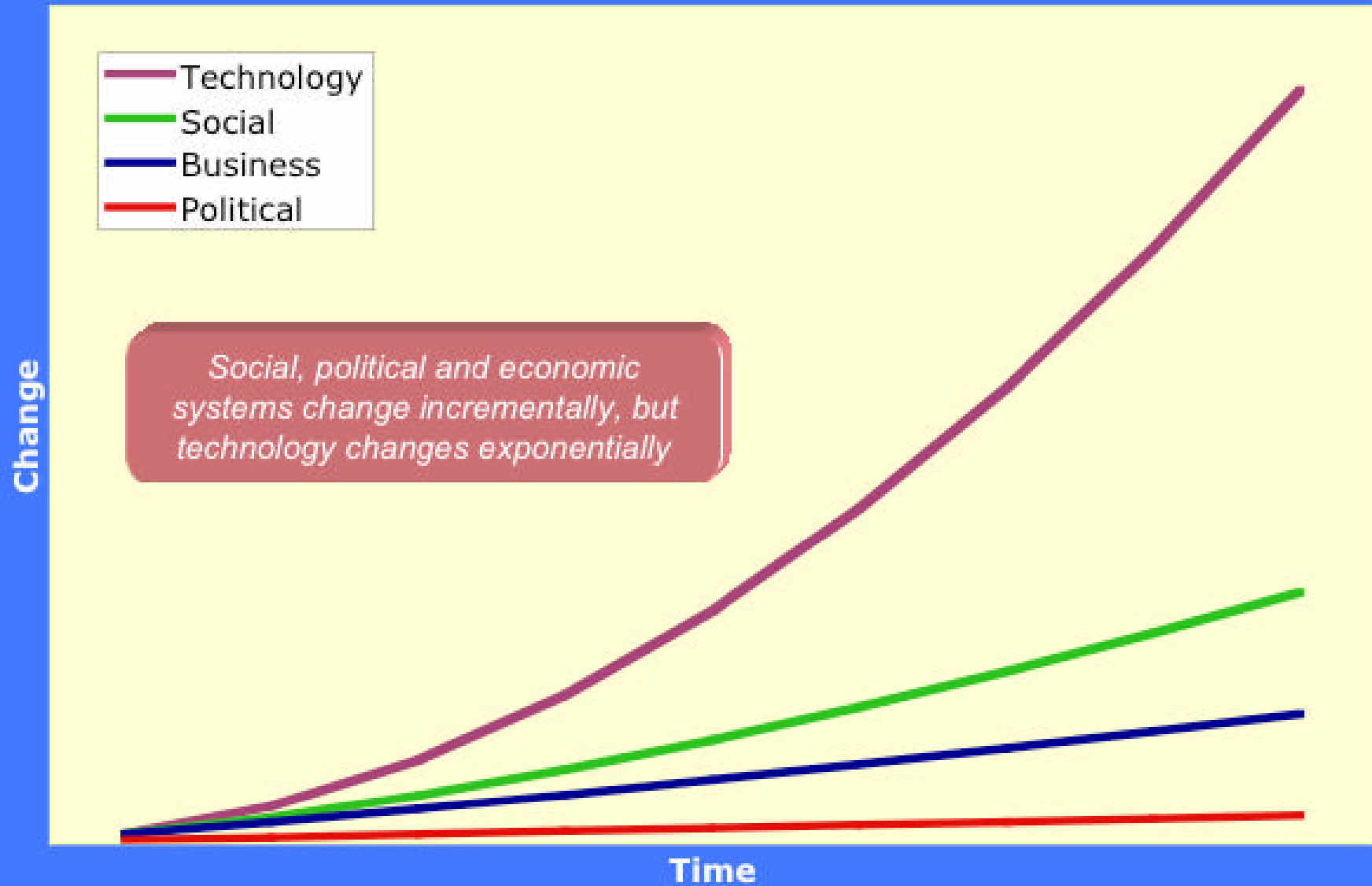
(big crew change)

New technologies

(digital everything, remote operations, visualization...)

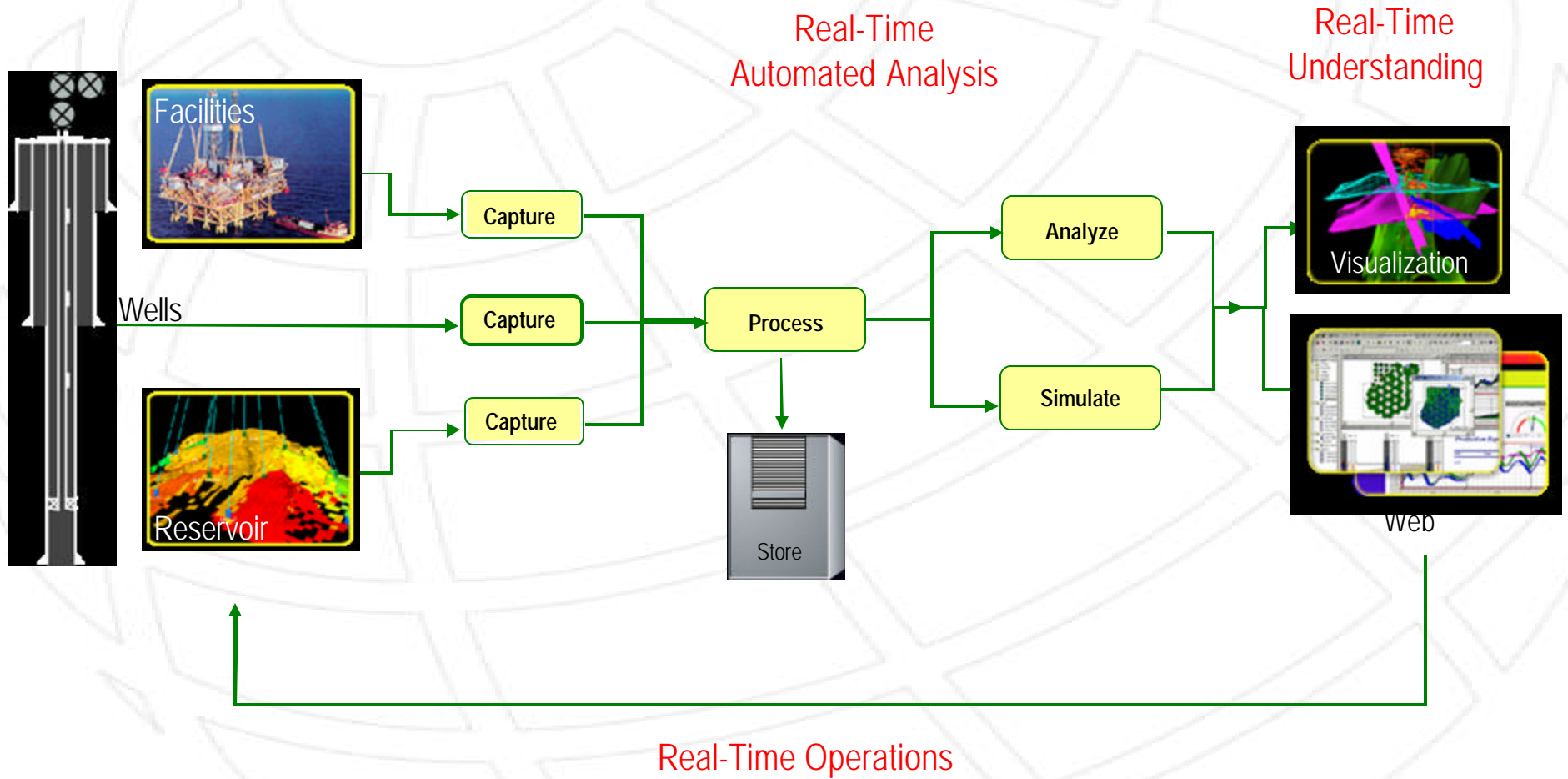


Law of Disruption



The Smart Field

Real-Time Operations



CERA DOFF: Industry benefits

Enhanced recovery: 125 billion BOE

Lower operating costs: \$4-8 billion/year/company

Increased production rates: increase utilization 2-6%

Lower facilities cost: 5-10% (3-5 years)

Decreased drilling costs 5-15%

But

Benefits are not independent, and they require

Integration of higher quality data

Significant change in organizations and work processes

Total asset awareness

Acting on awareness

Increased use of full asset awareness

MINUTES OF MEETING TO DISCUSS
"PETROCHEMICAL OPEN COMPUTING ENVIRONMENT"
ON 14TH NOVEMBER, 1989

ATTENDEES:

SHELL
OPEN SOFTWARE FOUNDATION
BP EXPLORATION (EXE)
BP EXPLORATION (EXH)
CHEVRON
EXXON
TEXACO
COGNISEIS
GEOQUEST
LANDMARK
SCHLUMBERGER
SIERRA GEOPHYSICS
WESTERN GEOPHYSICAL
ZYCOR

AGENDA

8:00 AM	Assembly, Continental Breakfast	
8:30	Introduction	John Higgins
8:45	Open Software Foundation	Gary Oden
9:45	BREAK	
10:00	BP Exploration	Glenn Breed
10:15	Chevron	Hinds Agnew
10:30	Exxon	Neal Jordon
10:45	Shell	John Higgins
11:00	Texaco	Pete Johnson
11:15	LUNCH	
12:15 PM	CogniSeis	Pat Poe
12:30	GeoQuest	Rex Ross
12:45	Landmark	Jon Bayless
1:00	Schlumberger	Howard Neal
1:15	Sierra Geophysics	Murray Laidley
1:30	Western Geophysical	Juan Vallhonrat
1:45	Zycor	Jim Downing
2:00	BREAK	
	Discussion Topics	
2:15	Organization and Mission	
2:30	Membership	
2:45	"Request for technology" Process	
3:00	Funding	
3:15	Staffing (begin with industry-loaned staff)	
3:30	Next Steps Planning	
3:45	Next Meeting	
4:00	Adjourn	

A short history

Founders BP, Chevron, Elf, Mobil, Texaco 1990

Epicentre published 1993, most recent update 2001 (v3.0)

POSC/Caesar joint work 1995

Interoperability specifications 1996

Organizational change: Sponsor to Membership organization 1998

XML activities 1999 [MMS eReporting]

Web Services pilot 2001

XML schema / modules 2002

SIGs reborn 2002

DSS SIG / E&P Catalogue 2002

WITSML to POSC 2003

xFields 2003

Some facts

Not-for-profit consortium

Location: Houston, London

Members: 60+

International membership

Oil

Anadarko, BP, ChevronTexaco, CNPC, ExxonMobil,
Hydro, ONGC, Pioneer, Shell, ...

Service / Software

Halliburton, Paradigm Geo., Schlumberger, ...

Government / Regulatory

US DOE, US DOI, UK DTI, Norwegian NPD, ...

Mission

In the beginning ...

Through an open process, develop and deploy an Exploration and Production industry Software Integration Platform and supporting data structure standards.

`poce/mission/grb/9/26/89`

Today

Improving E&P business *performance* by leveraging *Internet technology* in the *integration* of oil and gas business processes

Purposes

To be the *facilitative* consortium to *lead* the petrotechnical industry toward *open information standards*

To be the *custodian* of such industry standards, whether developed within the consortium or externally

To *facilitate* the higher degree of *integration* required by the upstream collaborative marketplace and emerging digital technologies

To *develop* open petrotechnical standards that support the *business efficiency* of the exploration and production industry

Primary Activities / Deliverables

Maintenance / evolution of POSC technologies

(*Epicentre et al*)

SIG Facilitation

XML frameworks / guidelines

XML exchange standards

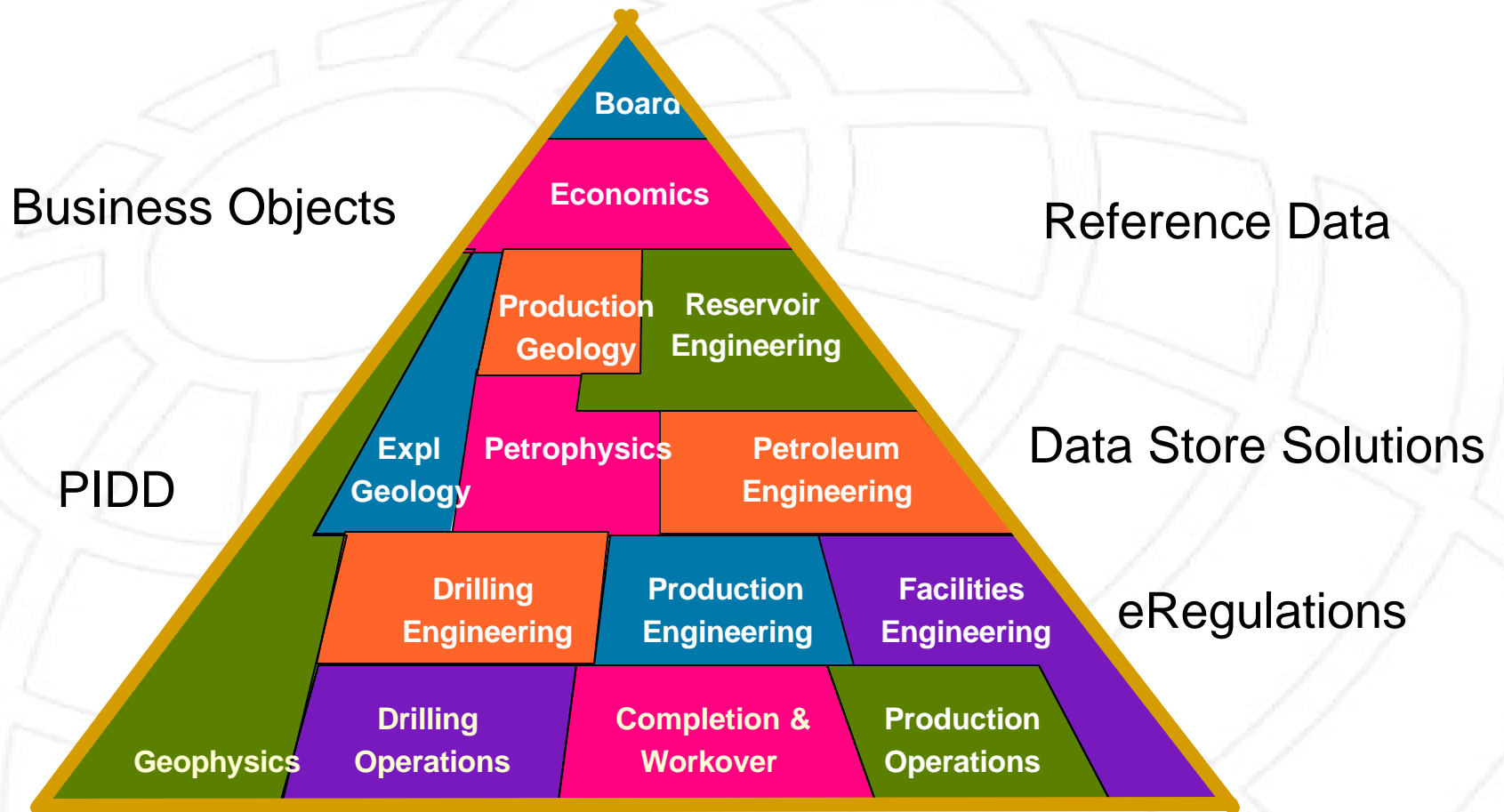
E&P Catalogue standards

Consulting on POSC & related technologies

Custodian of industry standards

People networks via meetings / conferences

Liaison with other bodies (e.g., API/PIDX, ISO, The Open Group,
OGC, WS-I ...)



eBusiness *and* XML



E&P Catalogue Standards

XML exchange standards

XML Guidelines

xFields



An oil company perspective

Standards save money!

uniform hardware, applications, data save \$100 Million/year

Standards lead to better science, which increases value

Use standards to address interface issues

It's better to get common than to be best

Industry standards provide cost effective bridge to the digital
oil field

The Smart Field

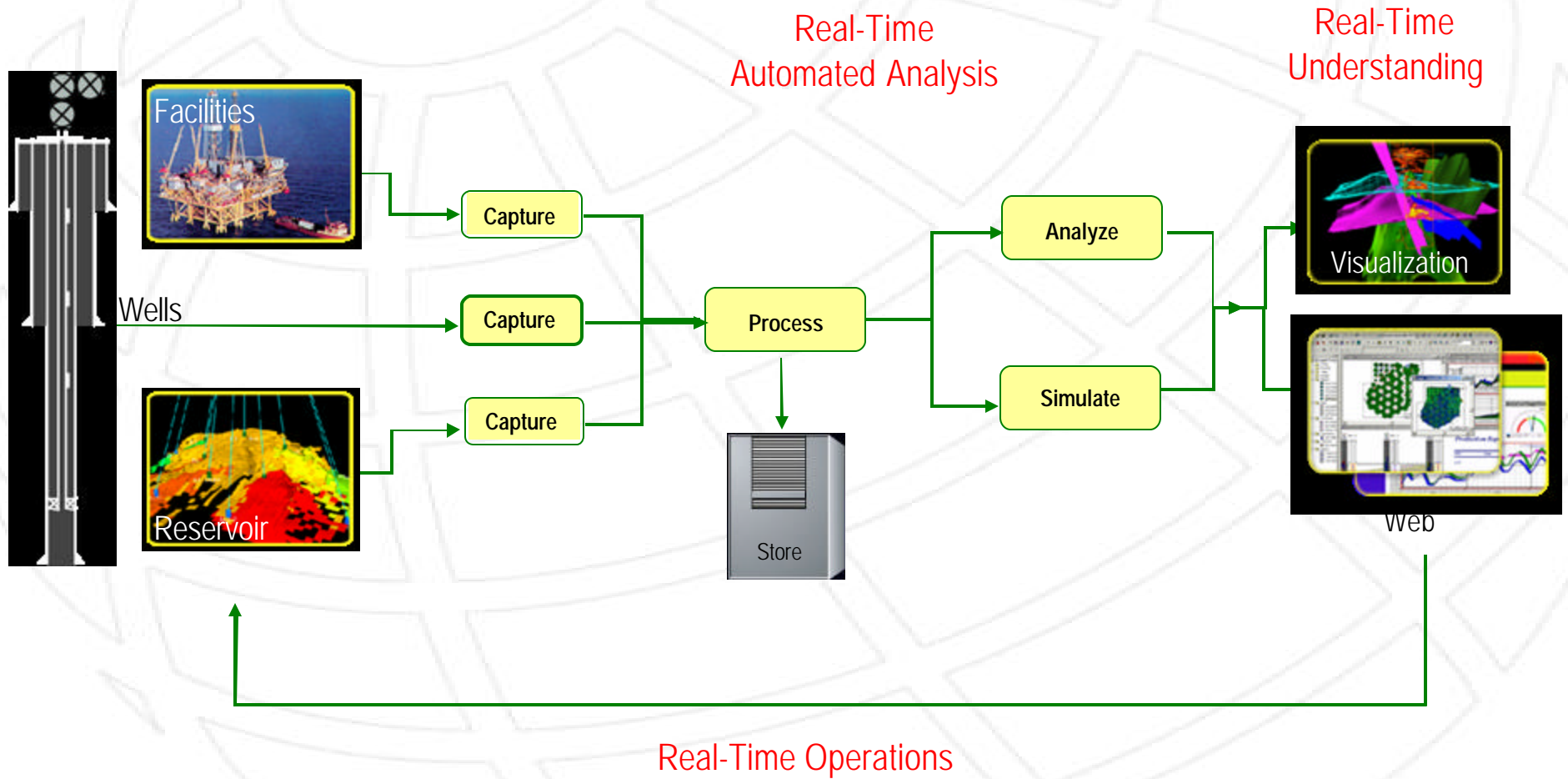
measure-model-control ... measure-model-decide-execute

... throughout the asset lifecycle



The Smart Field

Real-Time Operations





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