

A stylized graphic of a globe is positioned on the left side of the slide. It consists of several overlapping, light blue curved lines that form a partial circular shape, representing the Earth's latitude and longitude lines.

Opening remarks at the OGP Coating workshop

Moving to global standards
for the benefit of the oil and
gas industry –

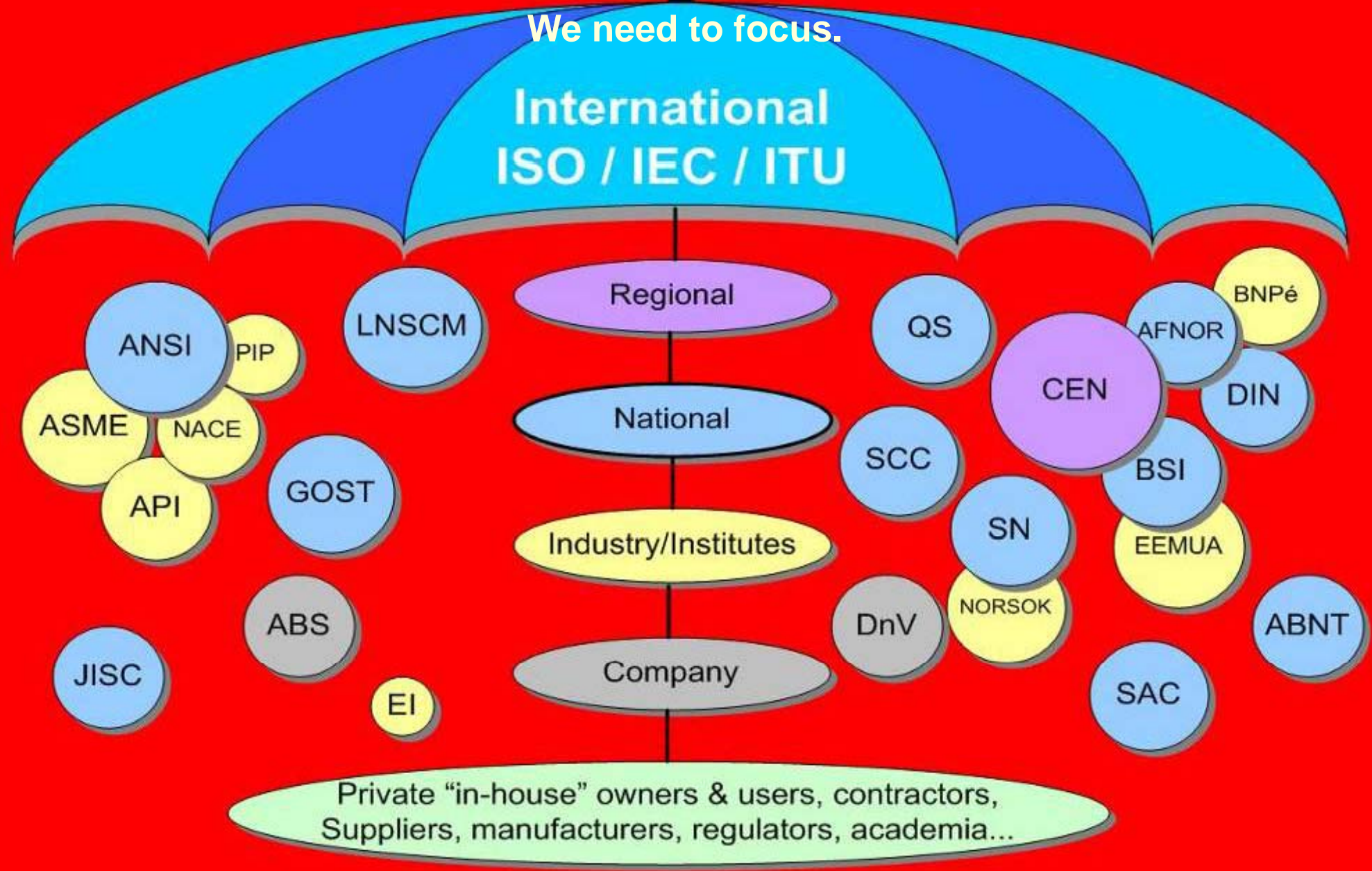
Introduction to OGP

London, 10-11 June 2008

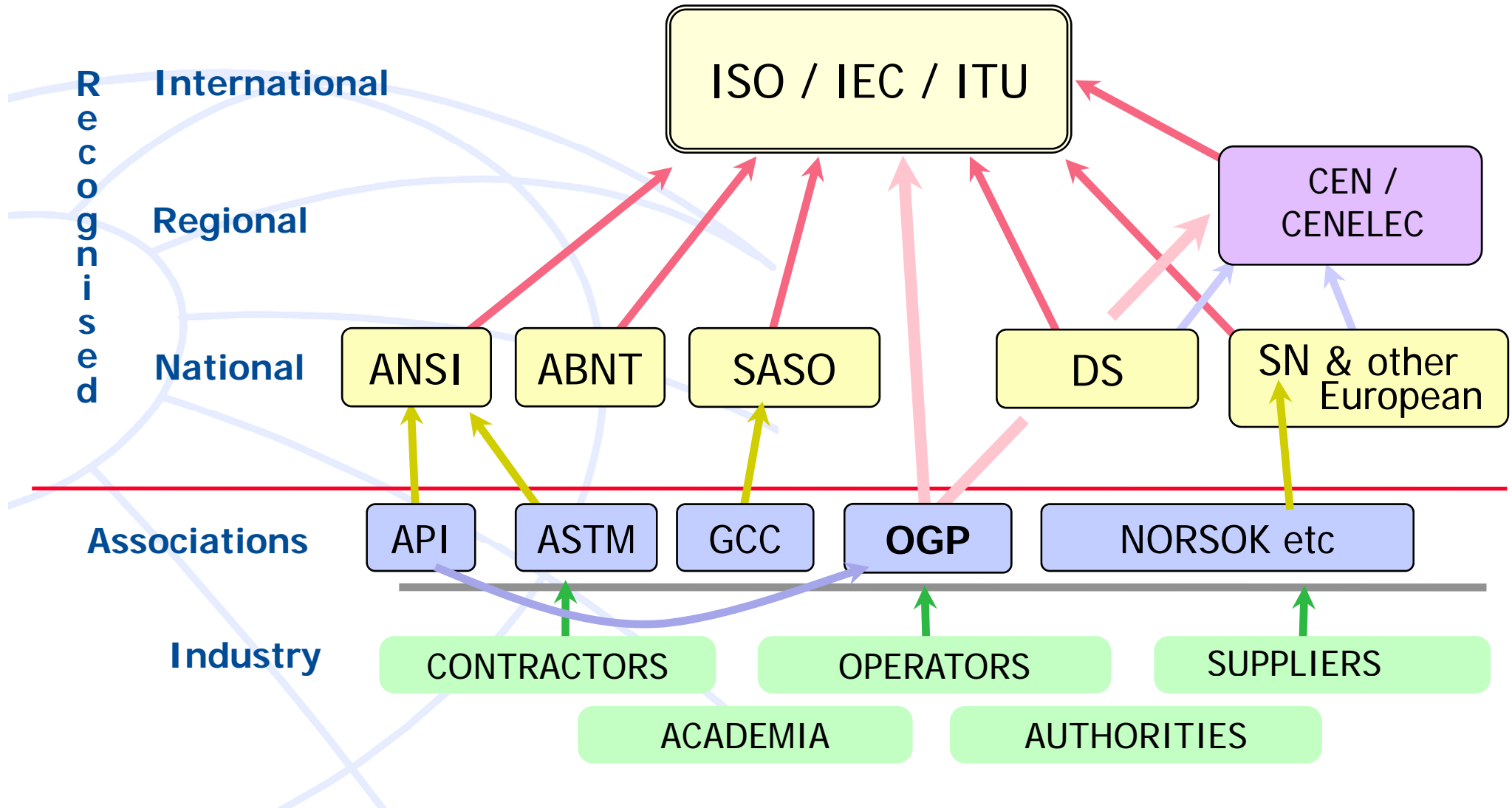
Alf Reidar Johansen,
OGP Standards Manager

There are 600.000+ standards out there for our use.

We need to focus.



Standardisation bodies – relationships



Oil & gas standards history



- Historically, the American organisations like API, ANSI, ASME, ASTM & AWS etc. developed the standards frequently used by the world wide upstream oil & gas industry.
- North Sea operating companies developed in the 80's lots of in-house and project related specifications to fit their needs not covered by the American standards.
- Growing EU interest for developing European upstream standards emerged mid 80's in view of EU's "new approach" to writing directives with general safety requirements to be supported by technical standards.
- **A change in developing oil & gas standards & specifications was required**

ISO initiative & OGP support



- OGP supported the ISO initiative in 1987 to reactivate ISO/TC67 to develop ISO standards for the upstream – the petroleum & natural gas industry.
- This created a global arena for standards development, open to all 157 ISO members and all oil & gas nations concerned.
- API were offered and accepted responsibility for the ISO/TC67 secretariat. Formally held by ANSI first few years.
- First meeting of ISO/TC67 in Paris 1989.
- A new era in the global upstream oil and gas industry standardisation had started.

Why make global ISO & IEC standards - 1?



- Create common global understanding.
- Facilitate global trade/availability of equipment.
- Reduce design work, retooling and inventory.
- Accelerate product development and delivery.
- Global competition will reduce cost*)
- ISO & IEC offer a global arena for standards work and global experts networking possibilities.
- Fair directives for the work.

*) IPA benchmark statistics report that using a coherent standards system saves projects 5% on Capex and 13% on schedule.



Why make global ISO & IEC standards - 2?



- Open meetings, voluntary participation.
- Transfer international experience.
- Maintain best practices and codification of knowledge for improved solutions that ensures HSE compliance.
- Voluntary use of ISO & IEC standards.
- Reduce need for company specifications.
- Can support national regulations and reduce text of national regulatory documents.

TC67 made **for** & made **by** the upstream industry
Therefore OGP takes an interest in standards

OGP position on standards

Report 381, April 2007



The OGP has been a catalyst for change in industry 's approach to standards and strongly supports the internationalisation of key standards used by the Petroleum, Petrochemical and Natural Gas Industries. OGP 's position on standards is:

- development and use of ISO and IEC standards should be promoted
- development of standards should be based on a consensus of need
- "users" should be represented on standards work groups
- duplication of effort should be avoided
- standards should be simple and fit for purpose
- International standards should be used without modification wherever possible
- company specifications should be minimised and written, where possible, as functional requirements.

The adoption of this approach is expected to minimise barriers to trade, enable more efficient worldwide operations, and improve the technical integrity of equipment, materials, and offshore structures used by the Petroleum and Natural Gas Industries.

Standards Committee membership

Members ¹	Company	Country	Other functions
Wilson Barbosa de Oliveira	Petrobras	Brazil	
Anatoly Baryshnikov	Eni	Italy	CEN/TC12 AH8 Chair
Gail Baxter	Marathon	USA	
Felicia Decusara	Petrom	Romania	
Alf Reidar Johansen	OGP		OGP Secretariat
Joachim G. Koenig	OMV	Austria	
Tom Kelleher	PetroCanada	Canada	
Alain Loppinet	CEN	France	CEN/TC12 Chair
Martin Maeso	Energy Institute	UK	
David Miller	API	USA	API Std. Program Dir.
Saif S Al-Naimi ⁴	Qatar Petroleum	Qatar	
Abdullah Humaid ⁵	Saudi Aramco	Saudi Arabia	
Manuel Paga Costellanos	RepsolYPF	Spain	
Terry Qin ²	CPSC	China	
Neil Reeve (Chair)	Shell	Netherlands	IFAN President
Daniel Rioche	Total	France	
Mirmohammad Rouzbeh	Petropars	Iran	
Alain Samne	ISO	Switzerland	Technical Group Mgr
Ross Smith	BP	UK	
Mike Swidzinski	ConocoPhillips	UK	
Richard Torgersen ³	ExxonMobil	USA	

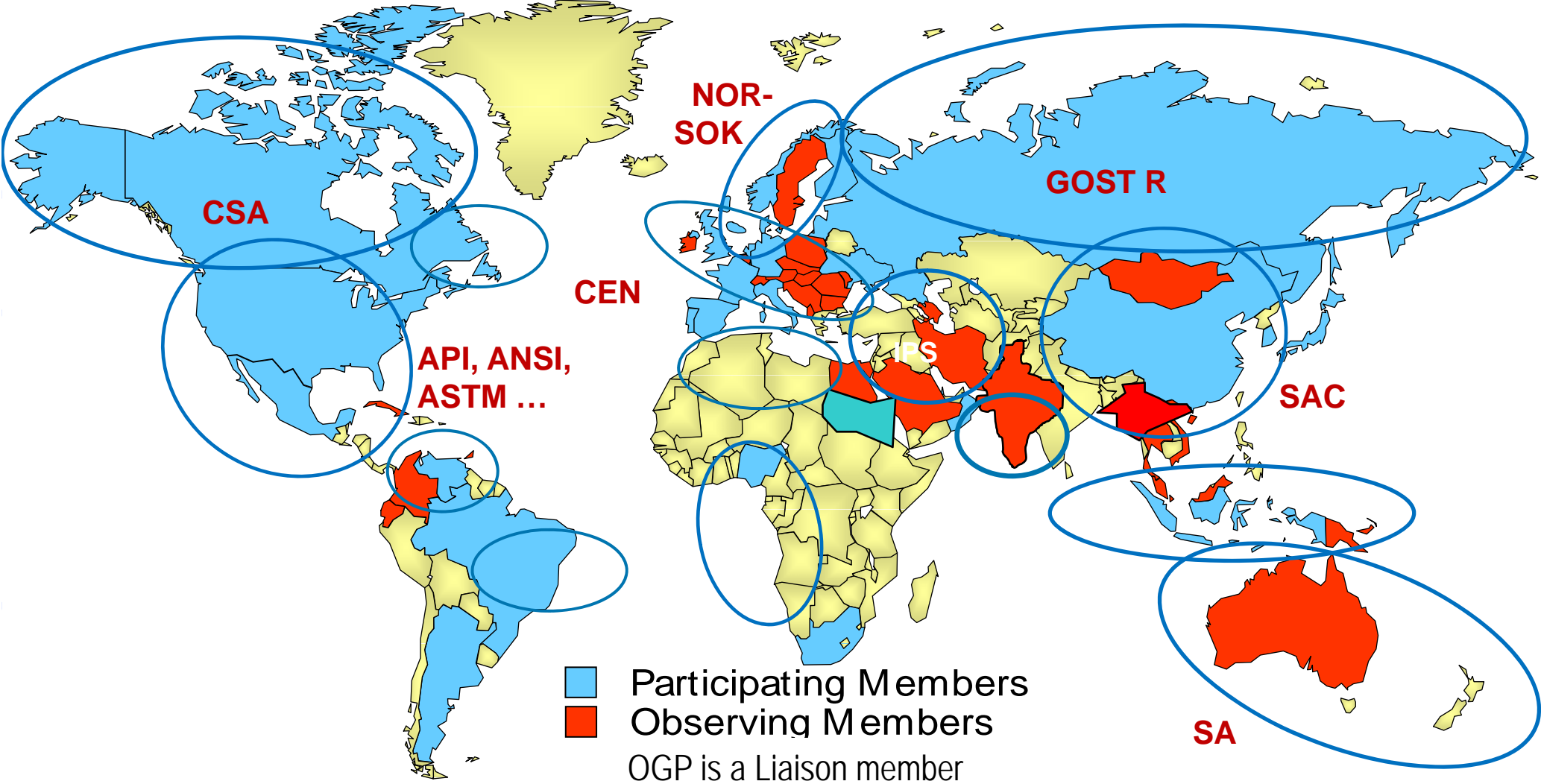
Notes: 1) Plus corresponding members from: BG, Chevron, Mærsk and Premier.
 Alternates: 2) Du Delin & Xiaohong Chen, CPSC 3) Nikolaus Gromes, EMI, Germany
 4) Muayyad Ajjawi 5) Fathi Abughaban

OGP Standards Committee Business Plan 2008



- Support development of 19 off ISO standards
- Progress development of OGP member identified stds
- Support work of Instrument & Materials groups
- Arrange international Coating standards workshop 10-11 June
- Produce 2008 Standards Bulletin
- Hold regional workshops in Beijing & Australia
- Better understanding of Regulators use of standards
- Benchmark OGP members work with & use of standards
- Editing of ISO draft standards.

The oil & gas industry is global
ISO/TC67 is one of the more important global committees



○ Important areas for the oil & gas industry

ISO Standards for use in the oil & gas industry

ISO Standards for use in the oil & gas industry

ISO 10418 Basic surface safety systems
ISO 10423 Wellhead & christmas tree equipment
ISO 13533 Drill-floor equipment (BOPs)
ISO 13534 Hoisting equipment - core/main
ISO 13535 Hoisting equipment - specifications
ISO 13626 Drilling and well-servicing structures
ISO 13702 Control & mitigation of fire & explosion
ISO 13703 Offshore piping systems
ISO 14234 Reliability/maintenance data
ISO 14682 GRP piping, Parts 1-4
ISO 14693 Drilling equipment

ISO 15156-1 Selection of cracking resistant materials for use in H₂S environments
ISO 15156-2 Cracking-resistant steels and cast irons for use in H₂S environments
ISO 15156-3 Cracking-resistant alloys for use in H₂S environments
ISO 15136 H₂SO₄ (Rev)
ISO 15544 Emergency response
ISO 15663 Life cycle costing, Parts 1-3
ISO 17776 Assessment of hazardous situations
ISO 20815 Production assurance and reliability mgmt (New)
ISO 23251 Pressure-relieving and depressuring systems (New)
ISO 25457 Flare details (New)
ISO/TS 27469 Methods of test for offshore fire damages (New)
ISO/TS 29100 Sector-specific quality management systems (Rev)

ISO 19900 Offshore structures - general requirements
ISO 19901-1 Meteocean design and operating considerations
ISO 19901-2 Seismic design
ISO 19901-4 Geotechnical and foundation design
ISO 19901-5 Weight control
ISO 19901-6 Marine operations (New)
ISO 19902 Fixed steel offshore structures (Rev of ISO 13814-2)
ISO 19903 Fixed concrete offshore structures
ISO 19904-1 Floating offshore structures

ISO 3977-5 Gas turbines - procurement
ISO 10431 Sucker rod pumps (New)
ISO 10434 Bolted bonnet steel gate valves
ISO 10437 Special-purpose steam turbines
ISO 10438 Lubrication, shaft-sealing and control-oil systems, Parts 1-4 (Rev)
ISO 10439 Centrifugal compressors
ISO 10440-1 Rotary-type positive-displacement process compressors (oil-free) (Rev)
ISO 10440-2 Rotary PD packaged air compressors
ISO 10441 Flexible couplings - special (Rev)
ISO 10442 Integrally geared air compressors
ISO 13631 Reciprocating gas compressors
ISO 13691 High-speed enclosed gear axles
ISO 13704 Calculation of basket tube thickness (Rev)
ISO 13705 Fixed heaters for general service

ISO 13706 Air-cooled heat exchangers
ISO 13707 Reciprocating compressors
ISO 13709 Centrifugal pumps (Rev)
ISO 13710 Reciprocating positive displacement pumps
ISO 14691 Flexible couplings - general
ISO 15547-1 Plate & frame type heat exchangers
ISO 15547-2 In steel aluminium plate-fin type heat exchangers
ISO 15649 Piping
ISO 15761 Steel valves DN 100 and smaller
ISO 16012 Small & tube heat exchangers (Rev)
ISO 17292 Mand ball valves
ISO 21049 Centrifugal and rotary pumps shaft sealing
ISO 23251 Pressure-relieving and depressuring systems
ISO/TS 24017 Composite repair of pipework
ISO 28300 Venting of storage tanks (New)

ISO 13624-1 Marine drilling riser systems (New)
TR 13624-2 Marine drilling riser systems analysis (New)
ISO 13625 Marine drilling riser couplings
ISO 19901-7 Stringer/coupling systems

ISO 13628-1 Subsea production systems
ISO 13628-2 Subsea flexible pipe systems
ISO 13628-3 Subsea TFL pumpdown systems
ISO 13628-4 Subsea wellhead and flow equipment
ISO 13628-5 Subsea control umbilicals (Rev)
ISO 13628-6 Subsea production controls

ISO 13628-7 Completion/wellbore riser system
ISO 13628-8 ROV interfaces
ISO 13628-9 BOT intervention systems
ISO 13628-10 Loaded flexible pipe
ISO 13628-11 Flexible pipe systems for subsea and marine applications (New)

ISO/TR 10400 Calculations for OCTG performance properties (Rev)
ISO 10405 Analysis of casing/tubing
ISO 10407-1 Drill stem design
ISO 10407-2 Inspection and classification of drill stem elements (New)
ISO 10414-1 Field testing of water-based fluids (Rev)
ISO 10414-2 Field testing of oil-based fluids (Rev)
ISO 10416 Drilling fluids - lab testing (Rev)
ISO 10417 Subsurface safety valve systems
ISO 10424-1 Rotary drill stem elements
ISO 10424-2 Threading and gauging of connections (New)
ISO 10426-1 Well cementing
ISO 10426-2 Testing of well cements

ISO 10426-3 Testing of deepwater well cement
ISO 10426-4 Preparation and testing of atmospheric foamed cement slurries
ISO 10426-5 Skidgrade and expansion of well cement
ISO 10426-6 Static gel strength of cement formulations (New)
ISO 10427-1 Blow spring casing centralizers
ISO 10427-2 Centralizer placement and step-collar testing
ISO 10427-3 Performance testing of cement float equipment
ISO 10432 Subsurface safety valves
ISO 11960 Casing and tubing
ISO 11961 Drill pipe (Rev)
ISO 13500 Drilling fluids
ISO 13501 Drilling fluids - processing systems evaluation

ISO 13503-1 Measurement of viscous properties of completion fluids
ISO 13503-2 Measurement of properties of proppants
ISO 13503-3 Testing of heavy brines
ISO 13503-4 Measurement of simulators & gravelpack fluid leakage
ISO 13503-5 Measurement of long term conductivity of proppants
ISO 13676 Thread compounds
ISO 13679 Connection testing
ISO 13680 OIL service valves for casing and tubing (Rev)
ISO 14310 Packers and bridge plugs
ISO 15136-1 Progressing cavity pump systems
ISO 15136-2 Progressing cavity pump systems - drive heads
ISO 15463 Field inspection of new casing, tubing and plain end drill pipe

ISO/TR 15464 Gauging and inspection of casing, tubing and line pipe threads (New)
ISO 15546 Aluminium alloy drill pipe (Rev)
ISO 16070 Lock mandrels and landing nipples
ISO 17070-1 Side-pocket mandrels
ISO 17070-2 Flow control devices for side-pocket mandrels (New)

ISO 3183 Steel pipe for pipeline transportation systems (Rev)
ISO 13623 Pipeline transportation systems (Rev)
ISO 13647 Pipeline welding
ISO 14313 Pipeline valves (Rev)
ISO 14723 Subsea pipeline valves
ISO 15504-1 Cathodic protection for onshore pipelines
ISO 15504-2 Cathodic protection for offshore pipelines
ISO 15500-1 Pipeline induction bends
ISO 15500-2 Pipeline fittings
ISO 15500-3 Pipeline flanges
ISO 16706 Pipeline reliability-based limit state design
ISO 21324 Test procedures for pipeline mechanical connectors
ISO 21804-1 External polyethylene coatings for pipelines (New)
ISO 21804-2 Fusion-bonded epoxy coatings (Rev)
ISO 21804-3 Field joint coatings for pipelines (New)



Standards in brown issued in 2007
 Standards in green are a priority for 2008 issue
 Many of these standards are adopted by API, CEN and other recognised standards bodies

ISO TC67 has published 138 standards.
 API has adopted abt. 60 of these as joint API/ISO standards.
 CEN has adopted abt. 115 of these as joint European EN ISO standards.
 Middle East, Kazakhstan China, India have also adopted many of these ISO standards.

Shared vision

OGP



Global
Standards
Used Locally
Worldwide