



ASEA

AGENCIA DE SEGURIDAD,
ENERGÍA Y AMBIENTE

Regulatory Reforms in Mexico
Energy Production and Environmental Protection

A Technical Regulator for a New Market Frame



JAMES A. BAKER III
INSTITUTE FOR
PUBLIC POLICY
RICE UNIVERSITY



UNIVERSITY of HOUSTON
LAW CENTER

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CONTENT

- Legal Framework
- Strategic Design
- Regulatory Policy
- Gradual Implementation

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Constitutional mandate, general structure

LEGAL FRAMEWORK

A Constitutional Mandate to regulate O&G

Energy Bill: 2103


- 9 new Laws, 25 new rulings
- 3 amendments to the Constitution






Amendment to the Federal Constitution



ASEA Federal Act: 2014

- To consolidate a sustainable hydrocarbons model in the long term
 - To separate oil resources management from industrial, operational and environmental safety
- 
- Federal agency of the Ministry for Environment & Natural Resources, which regulates and controls hydrocarbons activities in the field of operational safety and environmental protection

New general regulation structure for oil & gas

Resource management		Safety and Environment
 SECRETARÍA DE ENERGÍA		 SECRETARÍA DE MEDIO AMBIENTE Y RECURSOS NATURALES
 Comisión Nacional de Hidrocarburos	 COMISION REGULADORA DE ENERGIA	 ASEA AGENCIA DE SEGURIDAD, ENERGÍA Y AMBIENTE
<i>Gas & Upstream</i>	<i>Gas, Mid & Downstream</i>	<i>The entire value chain</i>

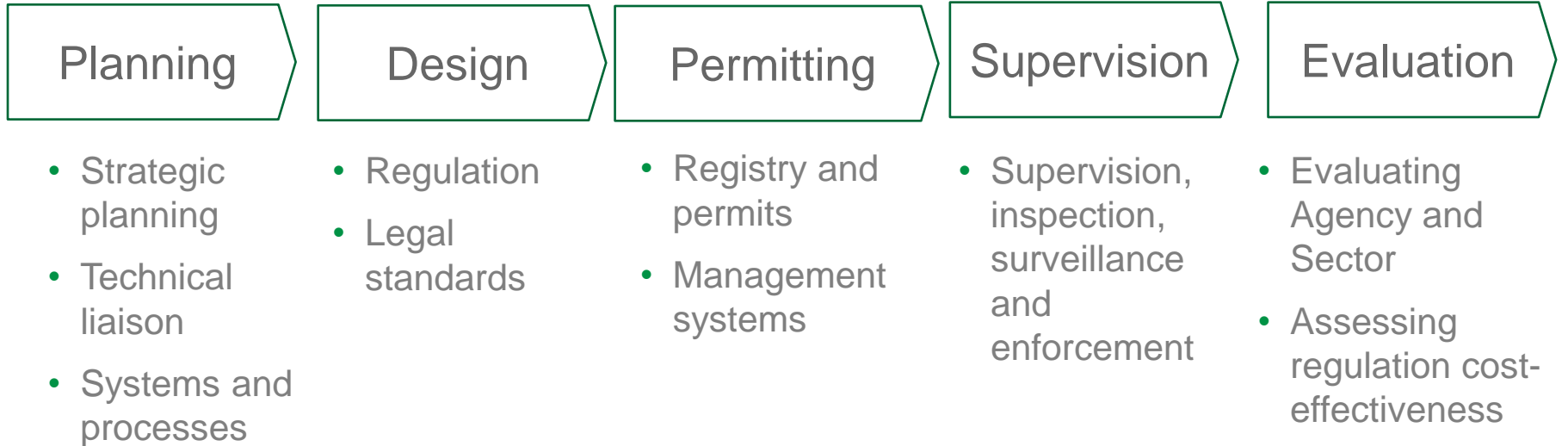
Federal Regulators

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Mandate, scope, mission and structure

STRATEGIC DESIGN

What ASEA does ?



Operational and Industrial Safety & Environmental Protection

Exploration & Production

Industrial Processes

Commercialization

Storage & Distribution

How ASEA does it?

Mission

To guarantee individuals' safety and environmental integrity with legal, procedural and cost-effectiveness certainty in the hydrocarbons sector.

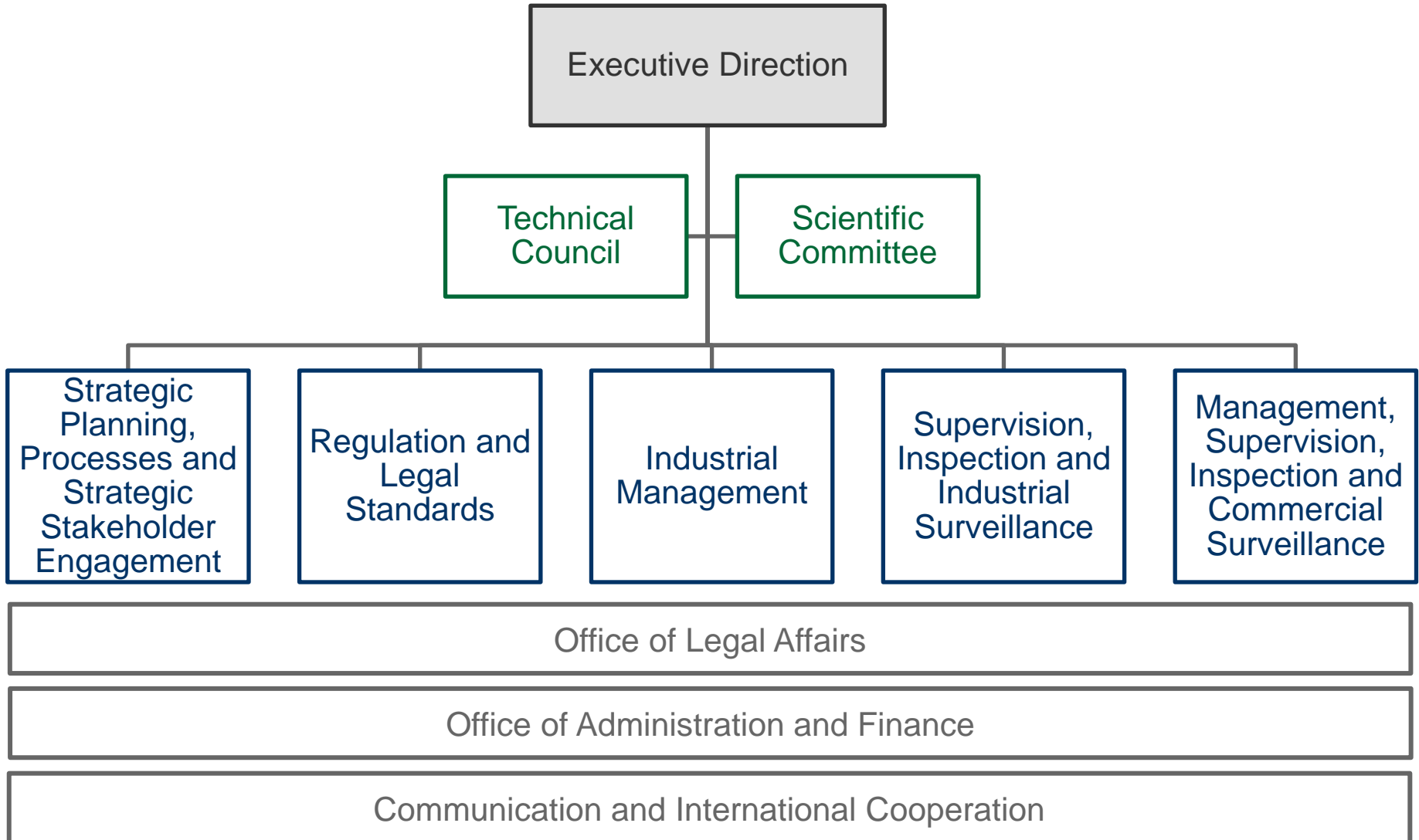
Vision

Being the Agency that takes the Mexican hydrocarbons sector to be the cleanest and safest worldwide.

Values

- **Professionalism:** we work with ethics, knowledge and experience
- **Transparency:** what we do is public and accesible
- **Impartiality:** we make decisions based upon objective criteria
- **Opportuneness:** we act timely and right

ASEA's Structure

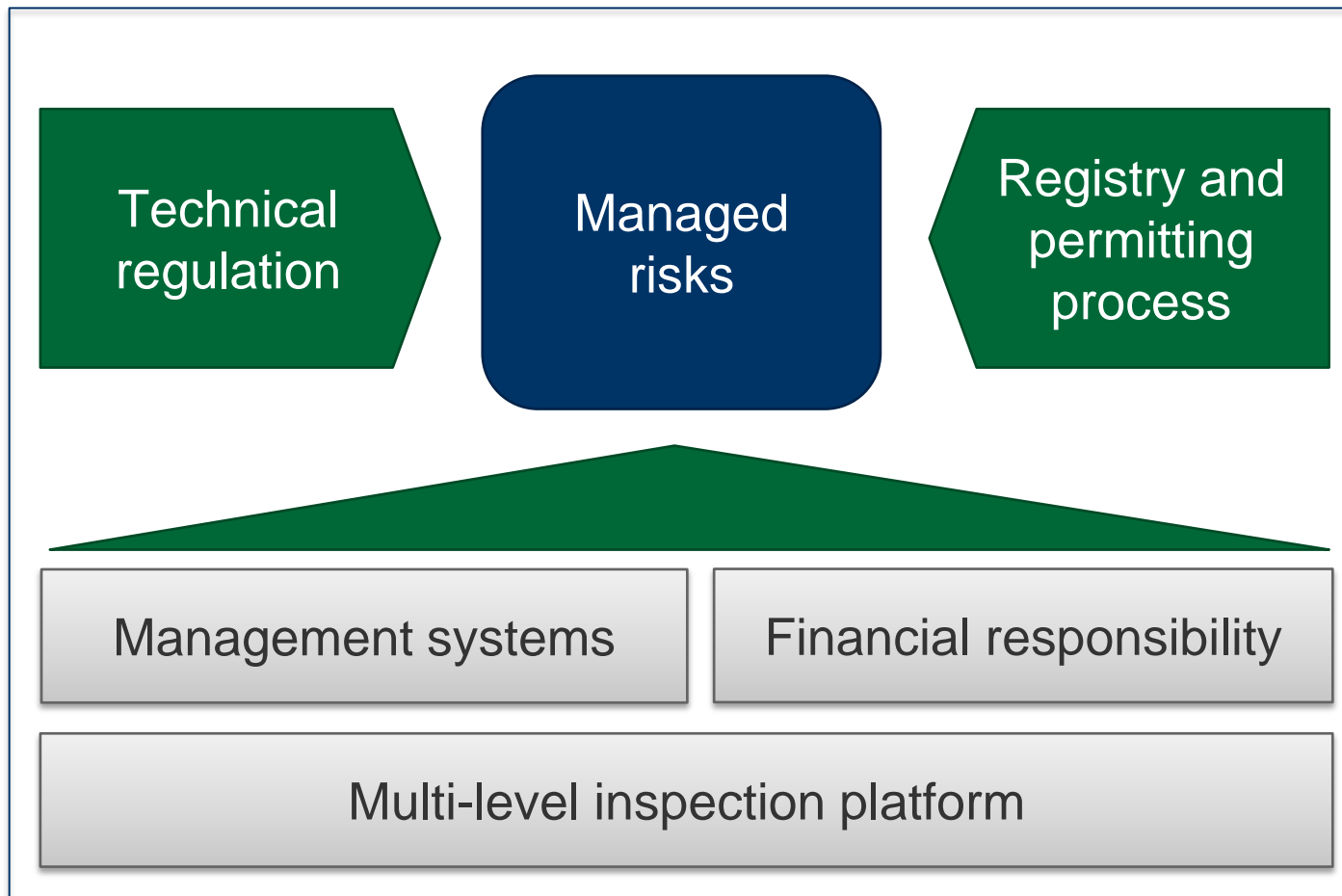


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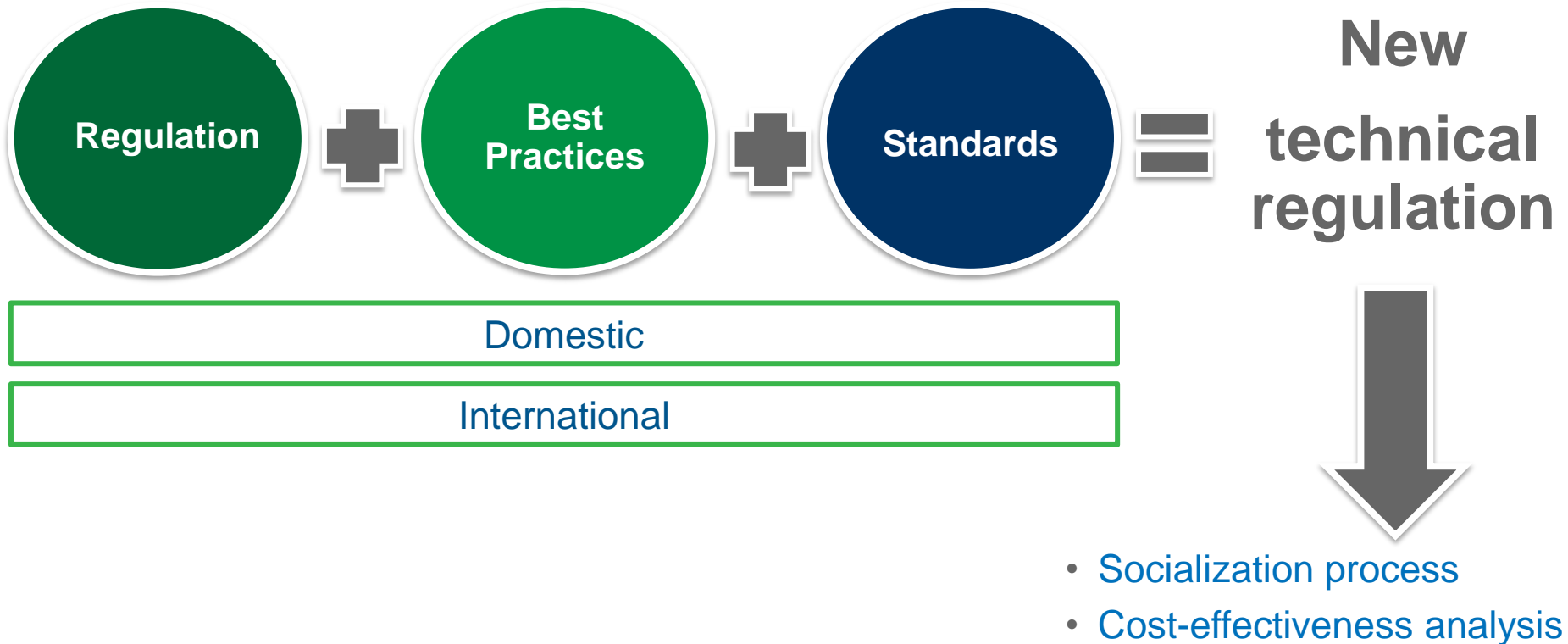
Approach, model and coordination

REGULATORY POLICY

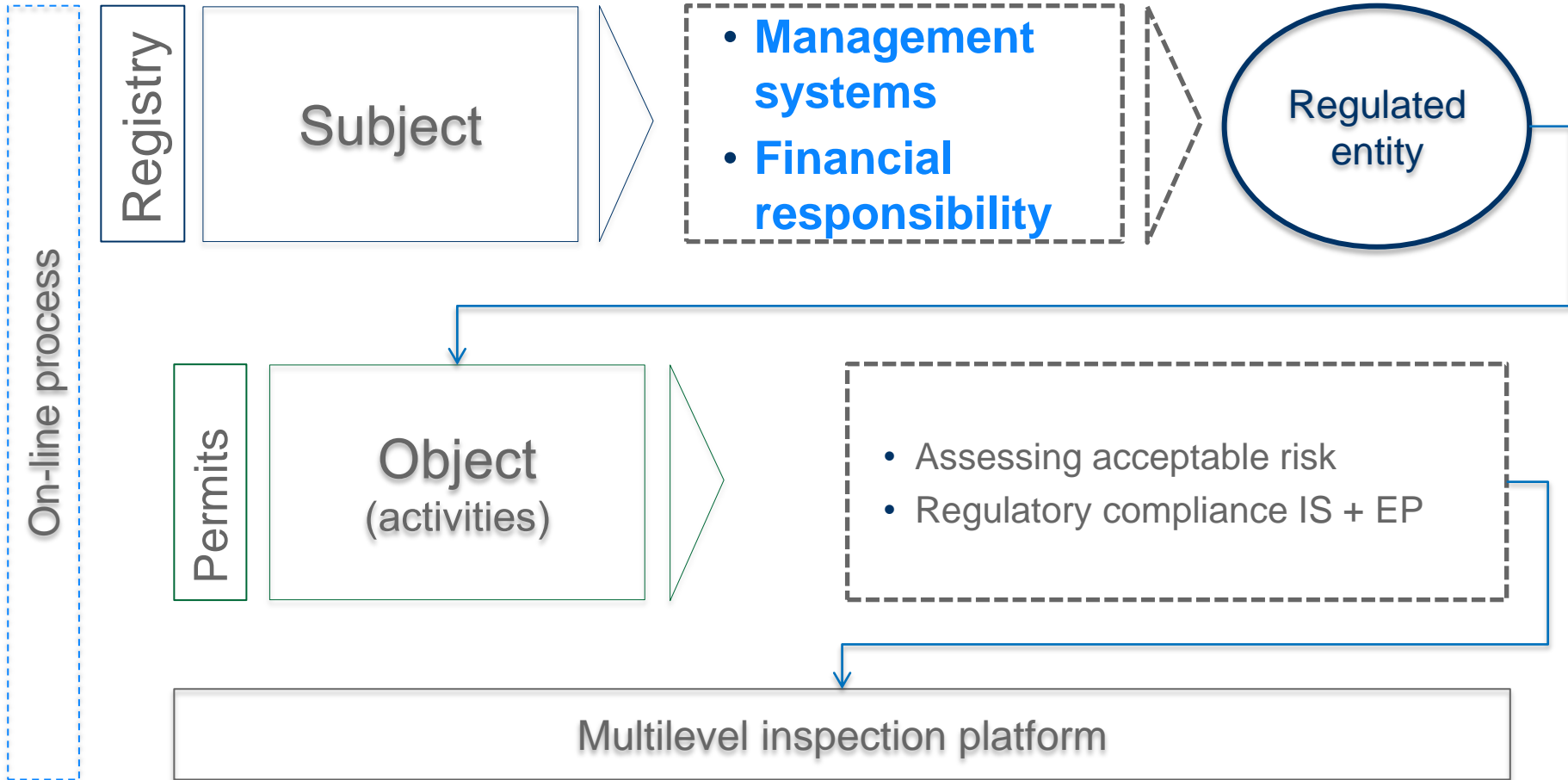
General risk management model



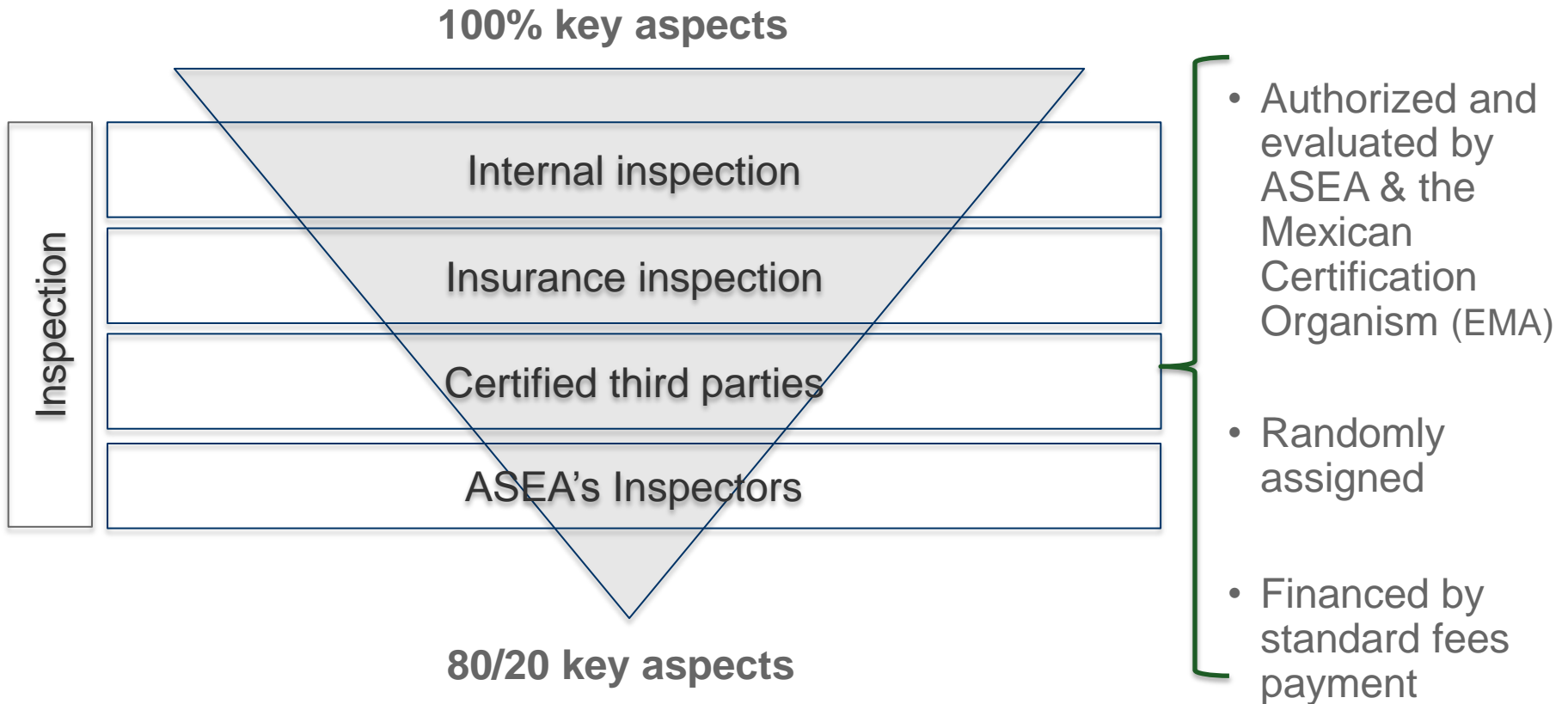
Goal-oriented regulation



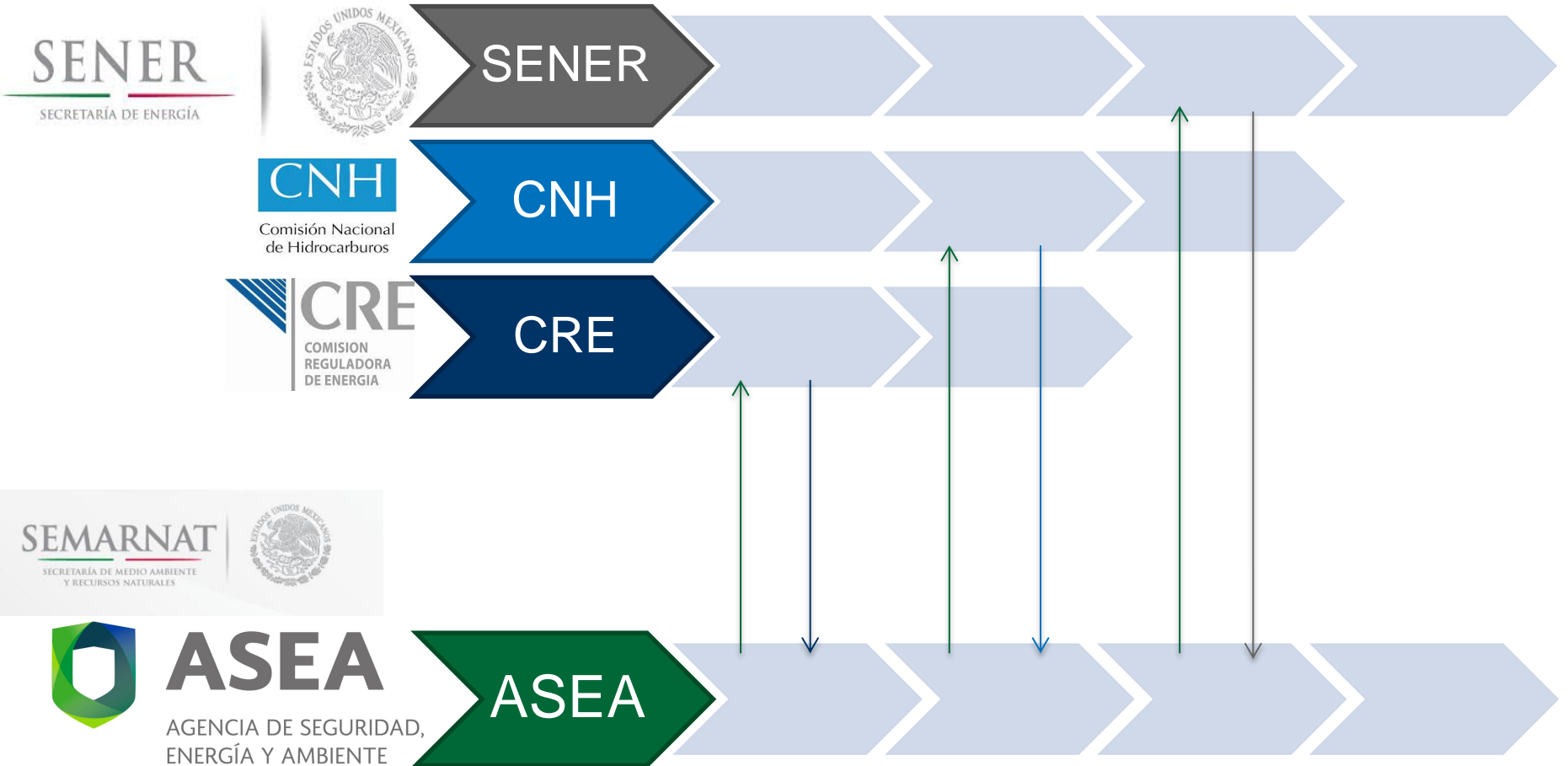
Registry and permitting process



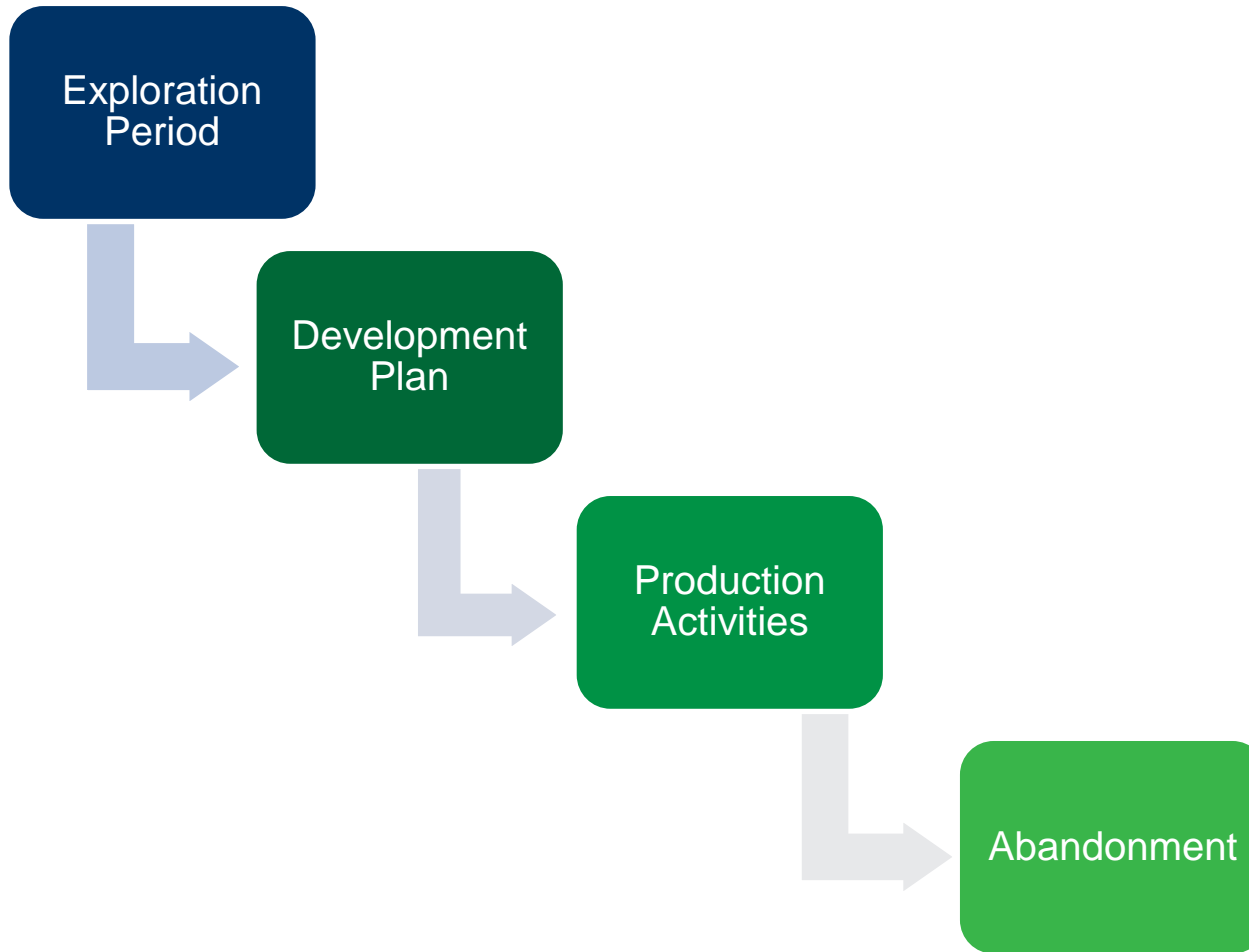
Multi-level inspection platform



Coordinated processes



Round One contract model: managing risk along the project life cycle



- Phase-specific Risk Management Programs that stem from....
- ...the Environmental and Safety Systems to manage Risks
- Coupled with financial responsibility provisions
- Amendments at any stage require Risk Assessment and Risk Management Programs revision
- Initial mandatory financial provisions to manage abandonment.

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Transition, continuous improvement and round one

GRADUAL IMPLEMENTATION

Initial and future collaboration

TRANSITION BASED ON COLLABORATION

Transitory Regime

- The energy reform restructured institutional bodies and competencies on the hydrocarbons sector.
- Transitory articles define deadlines and manners to transfer files and resources between offices.

Permanent Regime

- Government bodies will maintain close collaboration and joint endeavors.
- Collaboration systems and processes between ASEA and public administration from the beginning of operations.
- Permanent collaboration mechanisms.



FINAL REMARKS

- **Clear constitutional mandate:** to regulate and supervise the entire value chain of the hydrocarbons industry **countrywide**
- **Institutional Architecture:** a blank sheet of paper to write down a process and systems-based operation
- **Cutting edge regulatory and permitting policy:** focused on risk management; based upon goals; inspired from best practices and operated through integral processes
- **Incentive aligned inspection platform:** nobody wants an accident, third parties are under random supervision and are subject to be revoked, ASEA's body of inspectors are well trained, well paid

SEMARNAT

SECRETARÍA DE
MEDIO AMBIENTE
Y RECURSOS NATURALES



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Safety management on specific operations

OPERATING THEMES

Processes safety system

Components:

- Employer and employee obligations
- Information systems
- Risk analysis and management
- Operational procedures
- Training
- Contractors' safety
- Pre-starting safety inspections
- Mechanical integrity
- Dangerous work
- Managing change
- Accidents investigation
- Emergency response plans
- Audits

NOM-028-STPS
2004

Objective :

Prevention of incidents and accidents such as:

- Leaks and spills.
- Explosions.
- Fires.

Avoid affectation:

- Employers.
- Community members.
- Client providers.
- Environment.

International reference:

OSHA 29CFR1910.119 Process Safety Management.
API-750-1990 Management of Process Hazards

Key aspects: fracking

Key aspect	Regulation criteria
Water use	Subject to CONAGUA's available criteria
Returning water (flowback) management	Treating 100% flowback
Well's integrity	Coating and special cementation on depths > 30 meters after the last found watershed
Compounds information	100% known by ASEA
Fluid storage	Tanks, steel dams or lined dams
Disposal wells injection	Safe distance from geological failures

Key aspects: deep waters

Key aspect	Regulation criteria
BOP's availability	Continuous monitoring of critical components' health
Riser operation under adverse conditions	Oportune unhooking procedures
Well's integrity	Robust design of processes and engineering methodology
Competencies	Highly skilled personnel
Hermeticism of well valves	Immediate testing and maintenance

Key aspects: liquids transportation by pipelines

Key aspect	Regulation criteria
Section valves system	Longitudinal sections in function of pressure exerted by a column of liquid ($pgh > 10 \text{ KG/cm}^2$)
Infrastructure for in-line-inspection (ILI)	Inspection through instrumented pigs or guided soundwaves
Submarine pipelines	Protection against water currents (monobloc) Additional mechanical protection on tidal zones

Key aspects: industrial processes

Key aspect	Regulation criteria
Emergency stop systems	Implemented safety systems (valves, measuring and control elements) in process plants, direct fire heaters and turbomachinery
Fire prevention systems	On-line fire and gas detection systems
Major leaks	Isolation valves for large inventories in larger containers