

CONACYT-SENER-Hydrocarbon Industry Fund

Jaime Jiménez Viacobo, Engineer
Assistant Director, Business Schools
and Technological Cooperation

With support from
Rafael Ramos Palmeros, Engineer
Fund Secretary,
Petróleos Mexicanos

Contents

- Hydrocarbon Industry Driving Forces
- Hydrocarbon Industry Fund
- Specific Fund Requirements
- New Fund Framework

GLOBAL TECHNOLOGICAL DRIVING FORCES IN THE OIL INDUSTRY

In General:

- Mature fields
- Heavy crude oils
- Handling water
- Sour gas
- Deep water and ultra deep water
- Improved seismic images

NOT EXHAUSTIVE

By Geographic Region:

Canada

- Heavy crude oils

Gulf of Mexico

- Exploration / Development.
- Subsalt images.

Venezuela

- Heavy crude oils

South America

- Optimizing existing gas discoveries.

North Sea

- HPHT Complexes.

West Africa

- Deepwater production.
- Ultra deep water.
- Innovations with respect to LNG.
- Satellite development.

Caspian Sea

- Development.
- Gas.
- Elimination of H₂S

Middle East

- Optimizing mature fields.
- Sour gas.
- Carbonates.

Russia

- Attending to huge gas fields.

Australia

- Attending to huge gas fields.

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The objective of the **CONACYT-Secretariat of Energy (SENER)-Hydrocarbon Industry Fund** is:

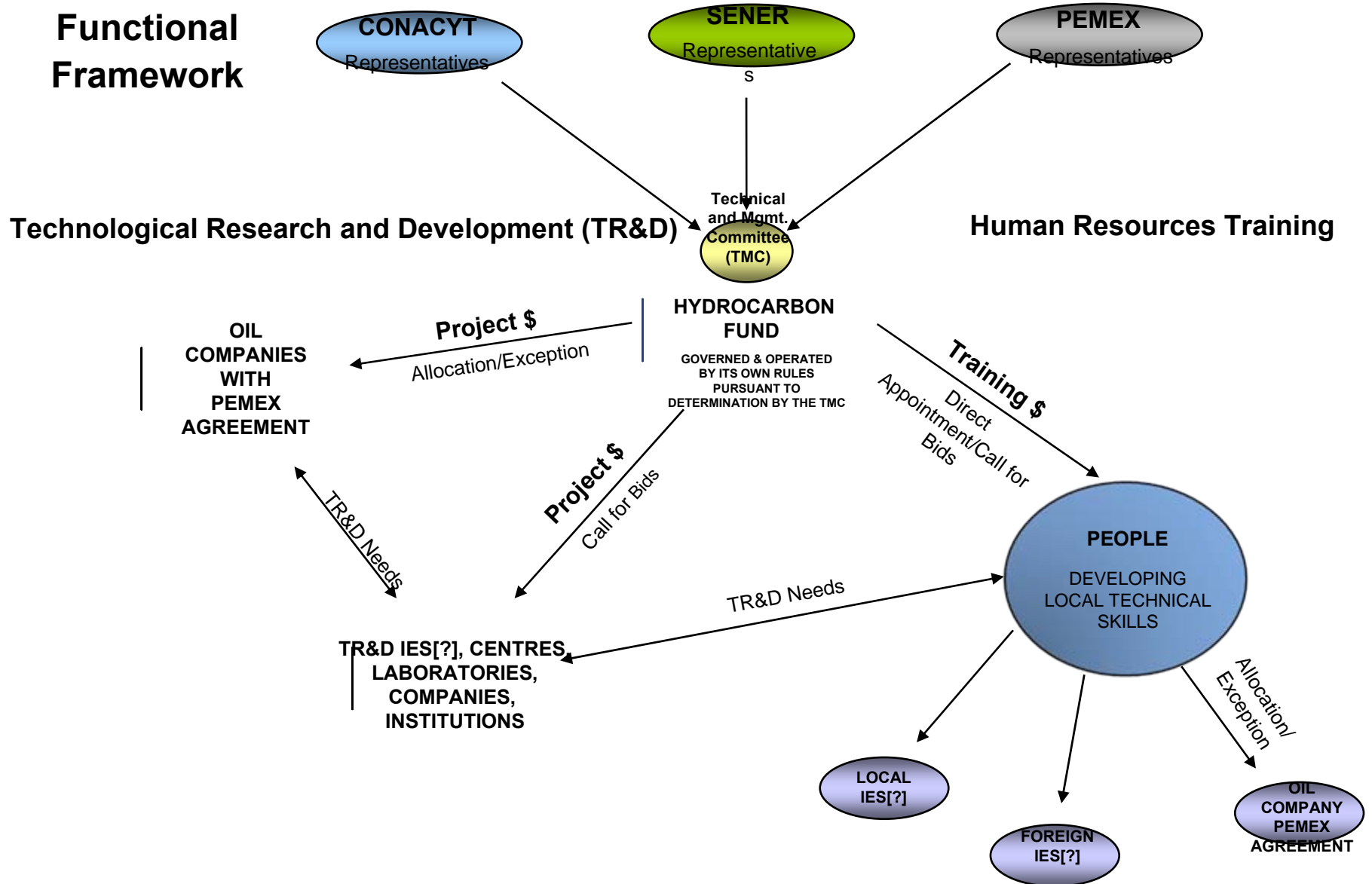
a) Applied technology and scientific research, both for **exploiting, exploring and refining** hydrocarbons, as well as producing **basic petrochemicals**.

b) Technological development, assimilation, innovation and adoption in the areas set out in the previous paragraph.

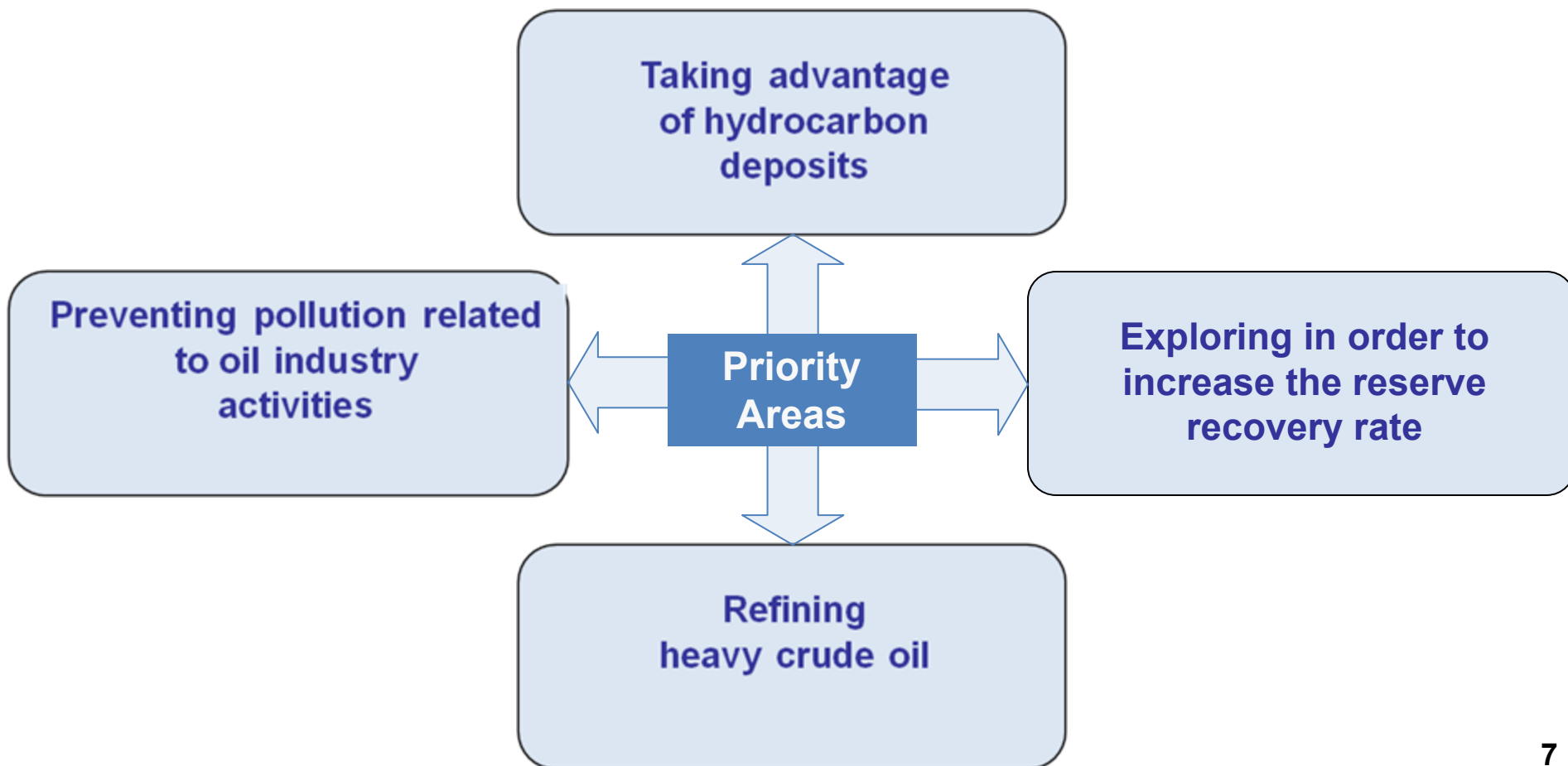
- In addition, the Fund considers **support to create specialized human resources** in the oil industry in order to **complement the technological development, assimilation, innovation and adoption** that will be the driving force behind such Fund.

CONACYT-SECRETARIAT OF ENERGY-HYDROCARBON INDUSTRY FUND

Functional Framework



- To fulfill its objective, the Hydrocarbon Fund will channel financial resources that allow it to carry out the applied technology and scientific research projects in the aforementioned areas, making the following areas a **priority** :

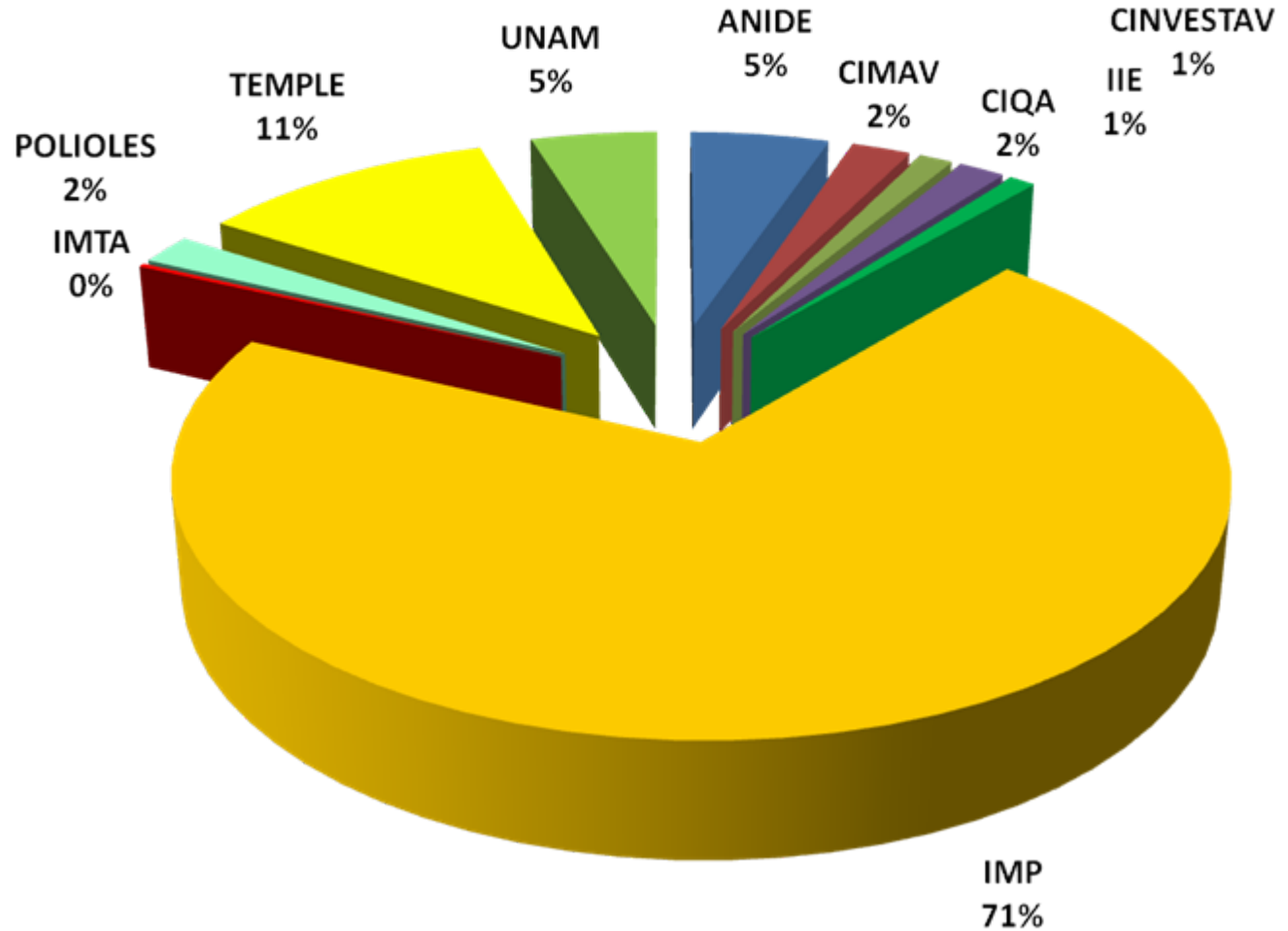


CONACYT-SENER-HYDROCARBON FUND OUTCOMES AMOUNTS AUTHORIZED – LEADING INSTITUTIONS

SENER

CALLS
2009-01
2009-02
2009-03
2010-01
2010-02

**LEADING INSTITUTIONS
% AUTHORIZED AMOUNT**



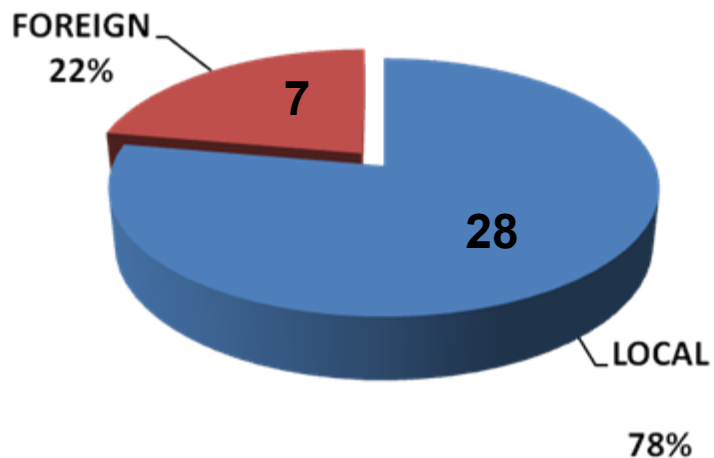
AMOUNT AUTHORIZED
USD

ANIDE	9,000,000
CIMAV	4,000,000
CINVESTAV	2,200,000
CIQA	3,000,000
IIE	1,800,000
IMP	124,000,000
IMTA	420,000
POLIOLES	3,500,000
TEMPLE	20,000,000
UNAM	7,000,000
Total	\$175,000,000

CONACYT-SENER-HYDROCARBON FUND NATIONAL AND INTERNATIONAL INSTITUTIONS

NATIONAL		
ANIDE	INAOE	UNIVERSIDAD DEL PAPALOAPAN
BUAP	ININ	UNIVERSIDAD VERACRUZANA
CIDEI	ITCM	U.A.TAMAULIPAS
CIMAV	ITESM	U.GUANAJUATO
CIQA	ITCH	U.ISTMO
I.P.N	U.N.A.M	U.A.C.MEXICO
CICESE	U.A.M	U.A.CAMPECHE.
CICY	U.A.S.L.P	U.A.CARMEN
COMIMSA	U.A.C.JUAREZ	
IIE	U.A.BAJA CALIFORNIA	

INTERNATIONAL
DOWELL SCHLUMBERGER DE MEXICO, S.A. DE C.V.
INSTITUT DE RECHERCHERS SUR LA CATALYSE ET L'ENVIRONNEMENT DE LYON
UNIVERSITY OF TEXAS AT SAN ANTONIO, US.
GEO & CHEMICAL RESEARCH AND ENGINEERING, INC
UNIVERSITY OF MANCHESTER
UNIVERSIDAD DE ZARAGOZA



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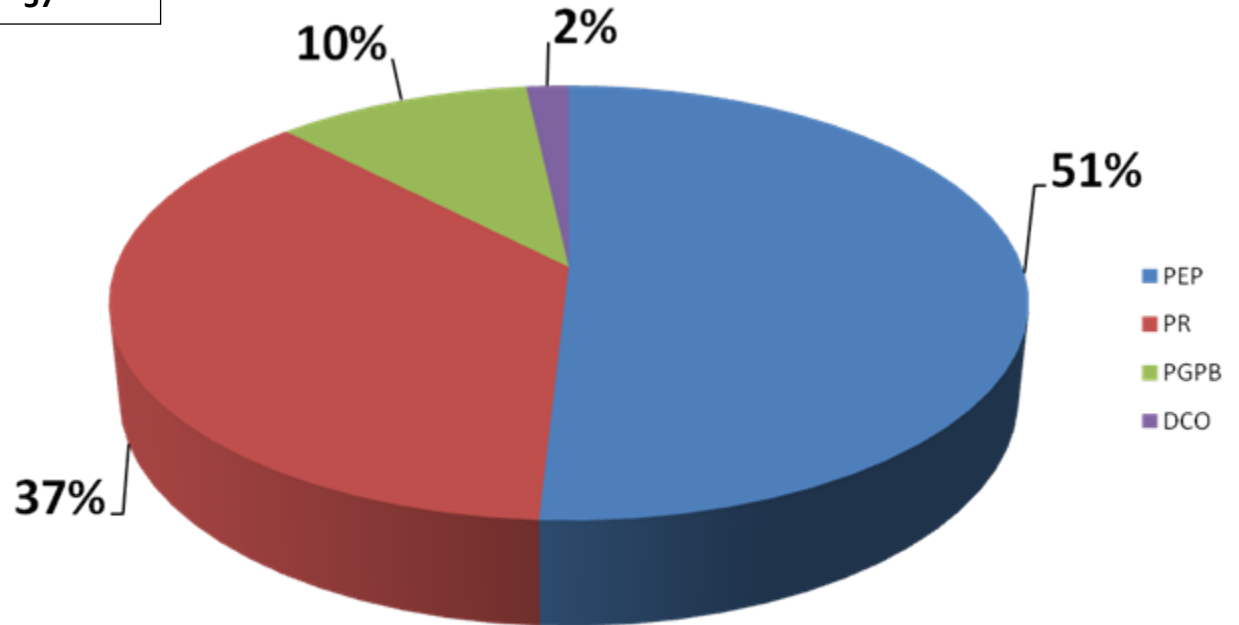
SECRETARÍA DE ENERGÍA

CONACYT - SENER - Hydrocarbon Industry Fund



Calls	Subsidiary Organization	Specific Requirements
2009-01	PEP	29
2009-02	PR	21
2009-03		
2010-01	PGPB	6
2010-02		
2010-03	DCO	1
2011-01	Total	57

Specific Requirement by Subsidiary Organization





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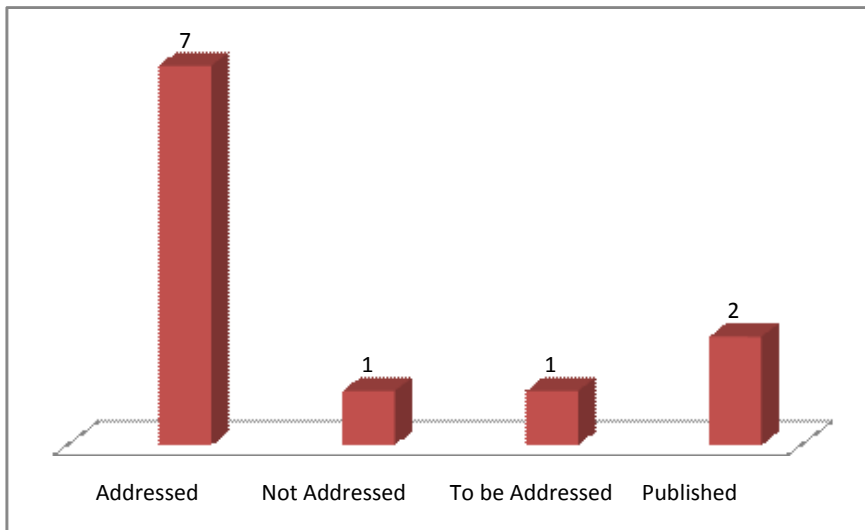


SECRETARÍA DE ENERGÍA

Specific Requirements Aimed at Heavy Crude Oils



Requirement	Specific Requirement Title	Addressed	Not Addressed	To be Addressed	Published	Project	Institution		Amount Approved
							Leader	Participants	
D9/CH2009-03	Improving heavy oil flow inside the borehole and in transport on surface.	✓				130363	IMP	UNIVERSIDAD DE GUANAJUATO UNIVERSIDAD AUTÓNOMA DE SAN LUIS POTOSÍ INSTITUTO TECNOLÓGICO DE CIUDAD MADERO	55,961,330.00
D1/CH2009-03	Dewatering and desalinating crude oil.		X						
D3/CH2010-03	Determining experimental correlations for characterizing heavy crude oils.			✓		160015	UNAM	DOWELL SCHLUMBERGER DE MEXICO, S.A. DE C.V. GRUPO SSC SA DE CV	86,054,963.00
D1/CH2011-01	Improving the quality of heavy and extra-heavy oil, on offshore production platforms and taking advantage of products generated in that process.				✓				
D2/CH2011-01	Improving heavy and extra-heavy oil flow, On offshore production platforms				✓				



5 Requirements Aimed at Heavy Crude Oils



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SECRETARÍA DE ENERGÍA

Specific Requirements Aimed at Recovery



Requirement	Specific Requirement Title	Addressed	Not Addressed	To be Addressed	Published	Project	Institution		Amount Approved
							Leader	Participants	
D1 a/CH2009-01	Injecting air into the deposit as an improved recovery system	✓				119942	IMP	. UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO . CENTRO DE INVESTIGACIÓN EN MATEMÁTICAS, AC	45,734,161.00
						120173	ANIDE	. GEO & CHEMICAL RESEARCH AND ENGINEERING, INC	18,901,505.00
D1 b/CH2009-01	Water alternating gas (WAG) injection as an improved recovery system	✓				116606	IMP	. UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO . CENTRO DE INVESTIGACIÓN EN MATEMÁTICAS, AC	45,136,682.00
D12/CH2010-01	Control water in the deposit	✓				143686	IMP	. UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO	99,096,408.00
D6/CH2010-02	Data mining applications when exploring Petroleum deposits	✓				146515	IMP	. CENTRO DE INVESTIGACION EN MATEMATICAS AC . CENTRO DE INVESTIGACION DE ESTUDIOS AVANZADOS DEL I.P.N. . INSTITUTO DE INVESTIGACIONES ELECTRICAS . INSTITUTO NACIONAL DE ASTROFISICA OPTICA ELECTRONICA . INSTITUTO POLITECNICO NACIONAL	46,754,520.00
D9/CH2010-02	RM processes in fractured carbonate deposits with high salinity and temperature based on the design, development and escalation of ad hoc chemical products	✓				146735	IMP	. INSTITUTO POLITECNICO NACIONAL . UNIVERSIDAD AUTONOMA DE LA CIUDAD DE MEXICO . UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO	82,665,927.00
D10/CH2010-02	Developing technology to generate steam at the bottom of the borehole	✓				147061	IMP	. INSTITUTO POLITECNICO NACIONAL	119,019,904.00

6 Requirements Aimed at Recovery

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TECHNOLOGICAL PLATFORM: IMPROVED RECOVERY

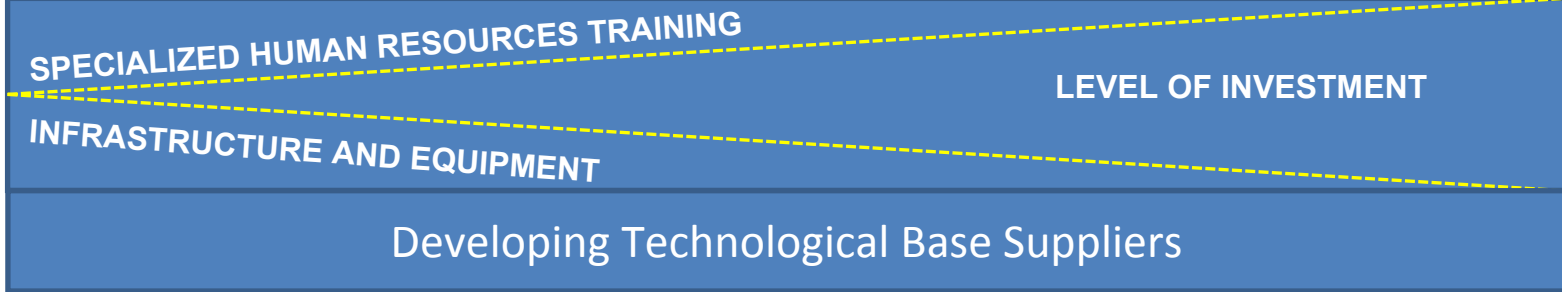
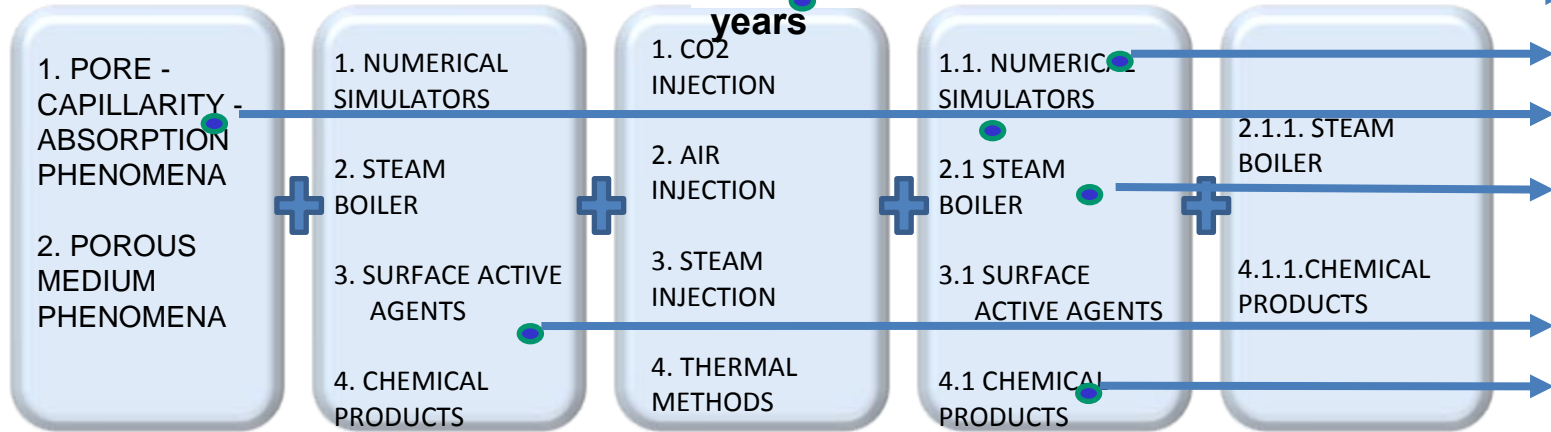
Framework Example

GOAL: CLEAR, TIMELY, MEASURABLE, HIGH IMPACT

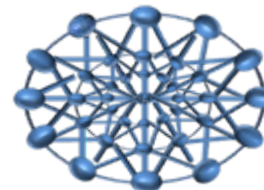
TECHNOLOGICAL TESTING, TRANSFERENCE AND ASSIMILATION



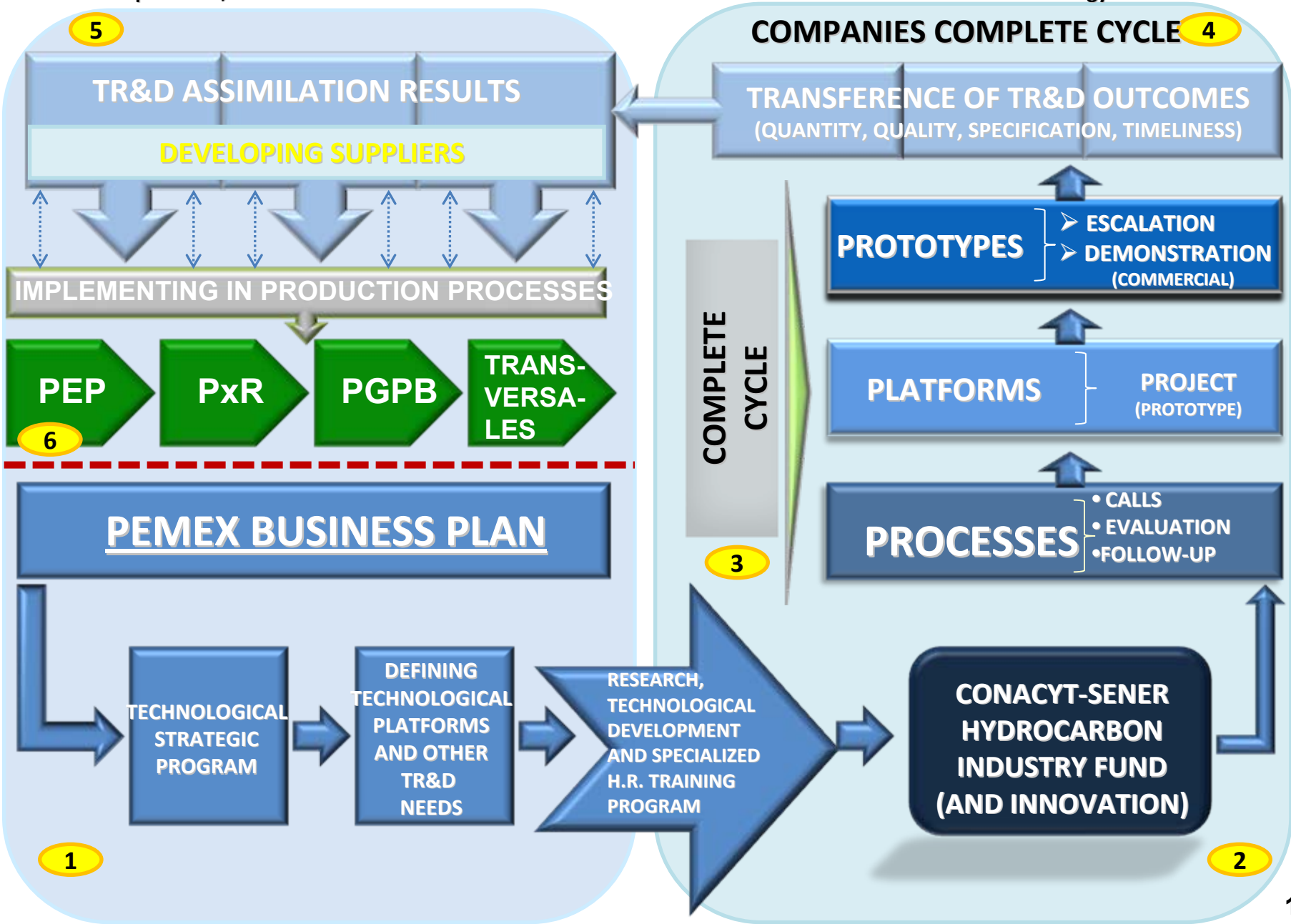
≥ 5 years

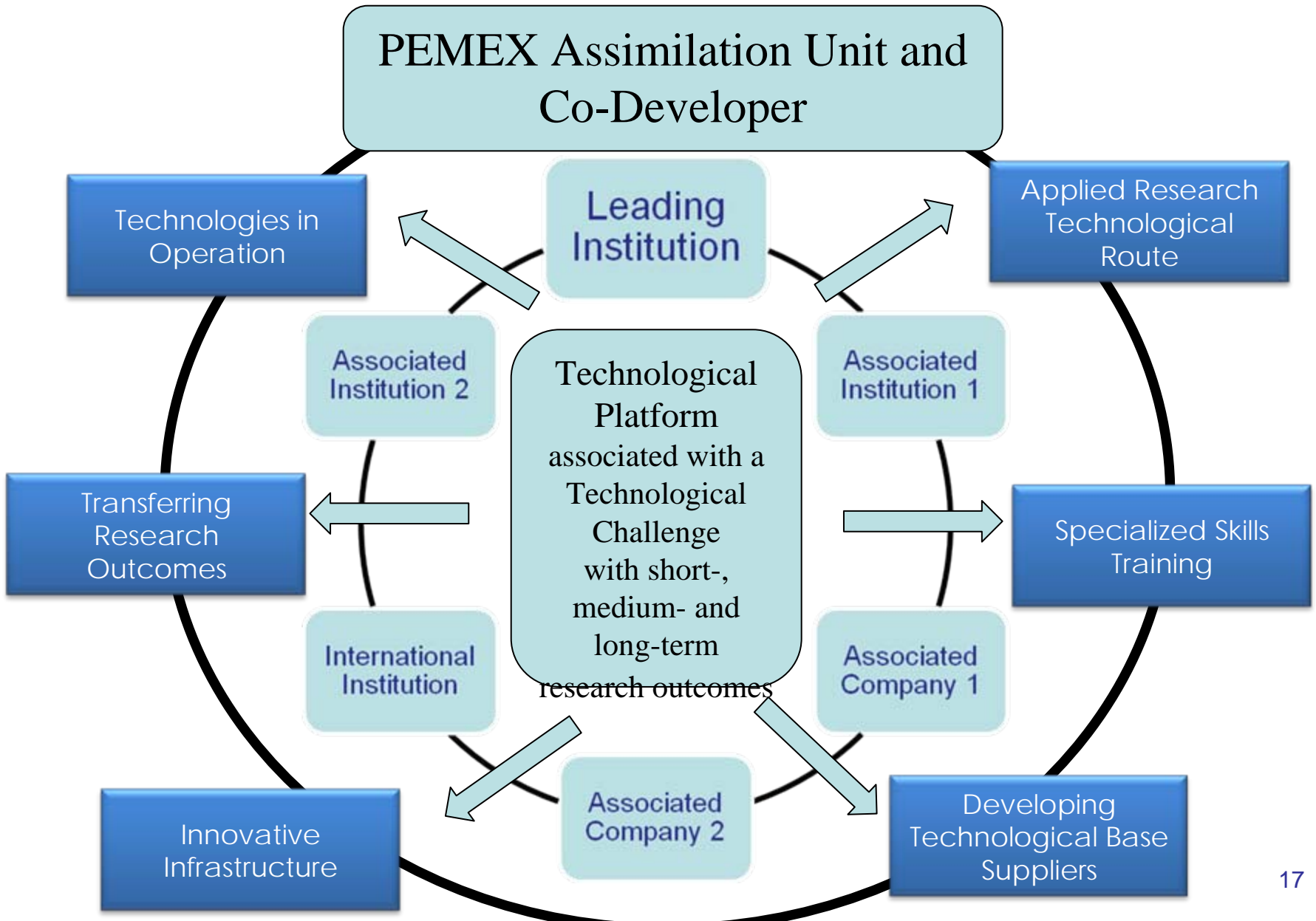


Research Groups



Thematic Research Networks







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SECRETARÍA
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Thank you!