Natural gas data collection in Mexico

October 2010

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- Background

- Data collection

- Data validation

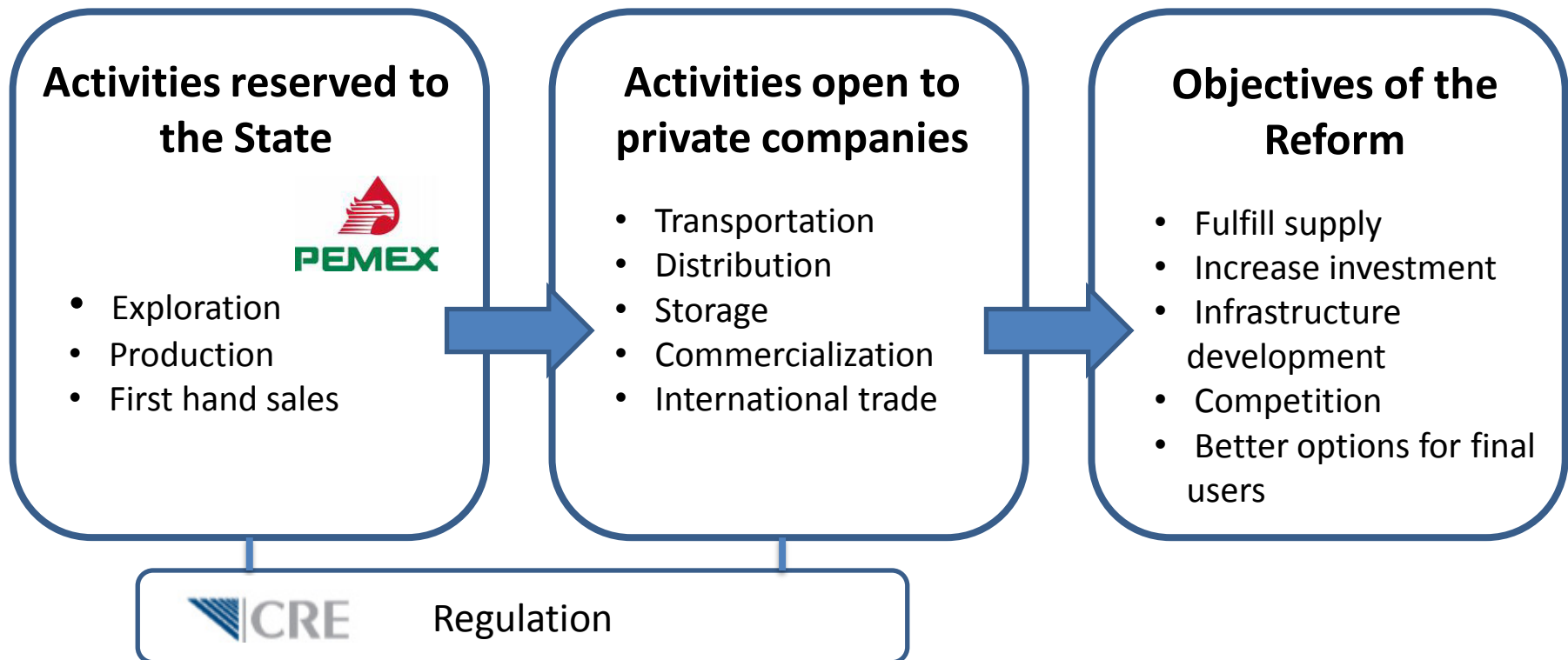- Data estimation

- Challenges

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Background

- In 1995, with the idea of securing natural gas supply and looking for competitiveness within the industry, an important reform took place:

1995 Natural Gas Reform

Activities reserved to the State

PEMEX

- Exploration
- Production
- First hand sales

Activities open to private companies

- Transportation
- Distribution
- Storage
- Commercialization
- International trade

Objectives of the Reform

- Fulfill supply
- Increase investment
- Infrastructure development
- Competition
- Better options for final users

CRE Regulation

Background

Private participation

Energía Costa Azul

Ductos Privados de Transporte

Ductos Privados de Transporte en Construcción

Altamira

Manzanillo

Permisos Vigentes de Distribución

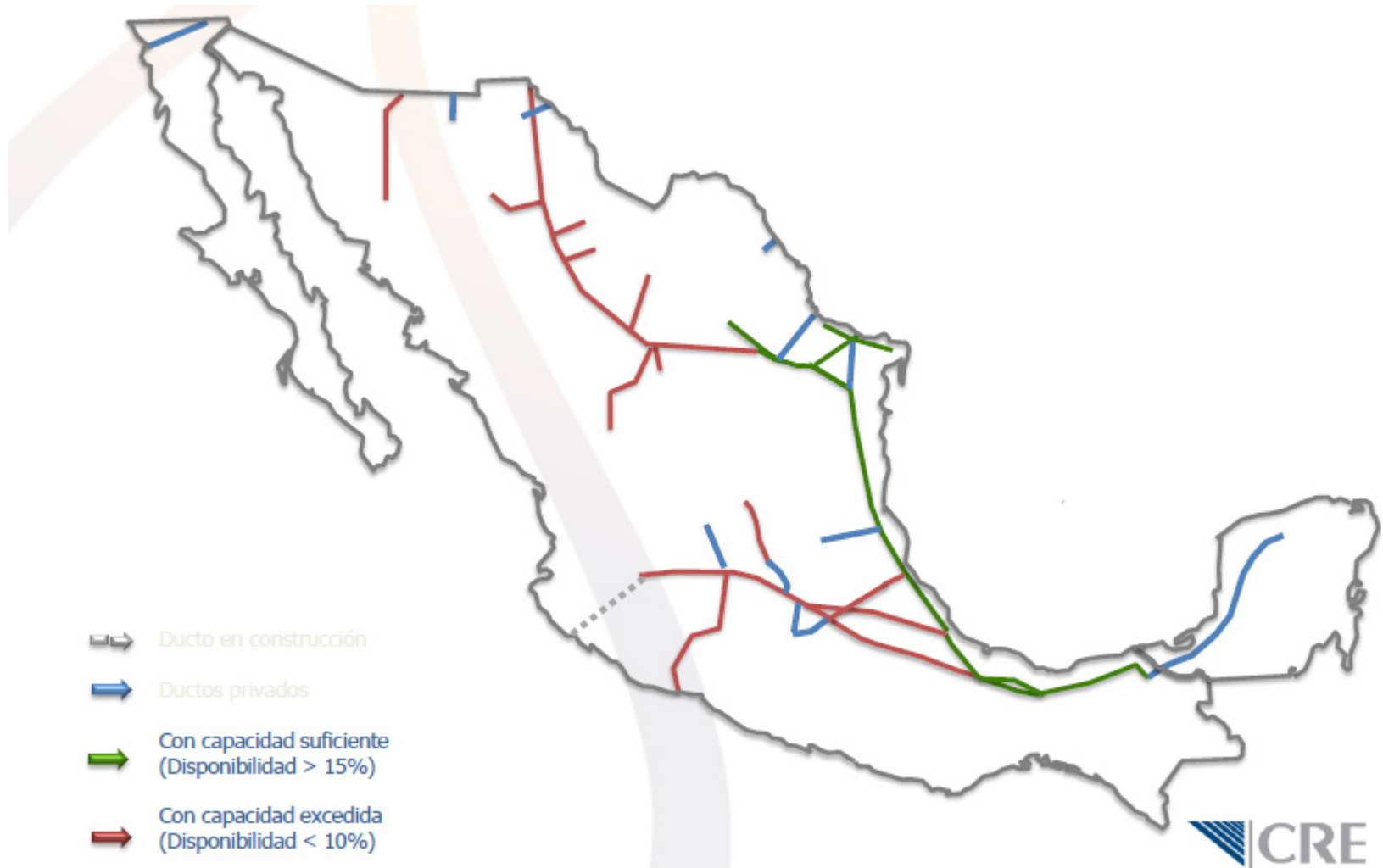|	Zona Geográfica	Empresa Corporativa
1	Mexicali, Baja California	Sempra Energy
2	Piedras Negras, Coahuila	Accionistas varios
3	Ciudad Juárez, Chihuahua	Grupo Imperial
4	Saltillo, Coahuila	Gas Natural México
5	Hermosillo, Sonora	Kínder Morgan
6	Toluca, Estado de México	Gas Natural México
7	Monterrey, Nuevo León	Grupo Diavaz
8	Monterrey, Nuevo León	Gas Natural México
9	Nuevo Laredo, Tamaulipas	Gas Natural México
10	Chihuahua, Chihuahua	Sempra Energy
11	Tampico y Altamira, Tamaulipas	GDF - Suez
12	Reynosa y Matamoros, Tamaulipas	GDF - Suez
13	Distrito Federal	Gas Natural México
14	Estado de México	GDF - Suez
15	Querétaro, Querétaro	GDF - Suez
16	Celaya, Salamanca, Irapuato, Silao y León, Guanajuato	Gas Natural México
17	Torreón, Coahuila y Gómez Palacio, Durango	Sempra Energy
18	Cananea, Sonora	Grupo Diavaz
19	Aguascalientes y San Luis Potosí	Gas Natural México
20	Puebla y Tlaxcala	GDF - Suez
21	Guadalajara, Jalisco	GDF - Suez

Background

Some issues that still need to be solved:

- Pemex continues with a very high participation in activities which were opened to privates.

- Transport infrastructure responds to particular needs, given the lack of planning within the Sistema Nacional de Gasoductos.

- There hasn´t been a geographical growth regarding distribution, given the uncertainty and risk associated to such investments.
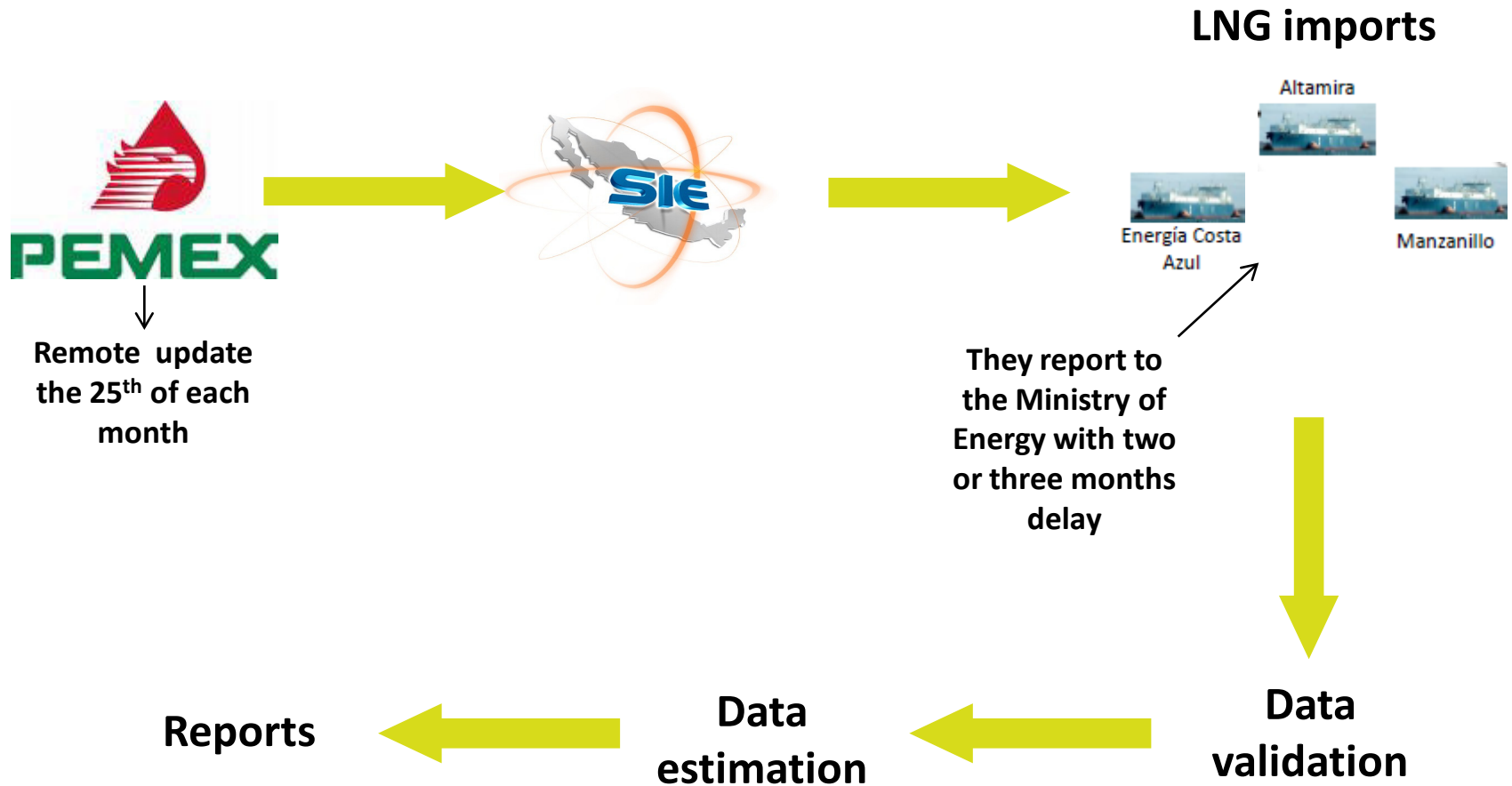
- Final users still lack supply options.

Background

Total existing pipelines in 2010

Ducto en construcción

Ductos privados

Con capacidad suficiente
(Disponibilidad > 15%)

Con capacidad excedida
(Disponibilidad < 10%)

CRE

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Data collection

LNG imports

Altamira

Energía Costa
Azul

Manzanillo

PEMEX

SIE

Remote update the 25th of each month

They report to the Ministry of Energy with two or three months delay

Reports

Data estimation

Data validation

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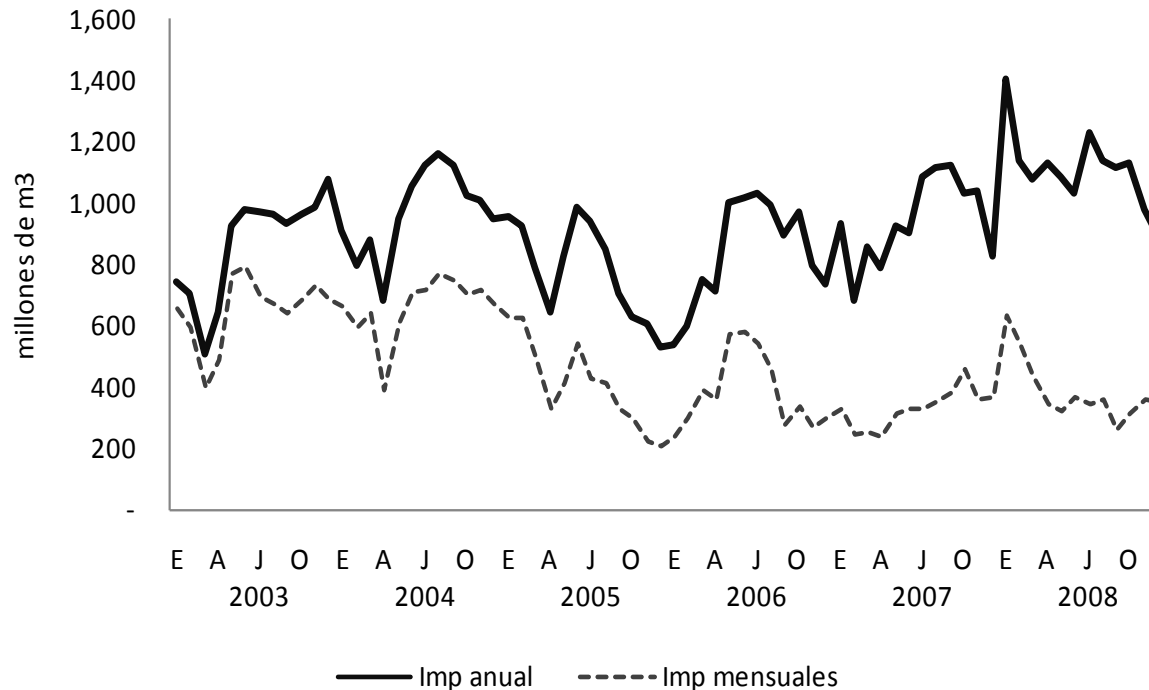
- Data estimation

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Data validation

- Once data is processed, we validate data to guarantee its quality, completeness, integrity and arithmetic congruence:

  - Annual variations (<|10%|)

  - Go to the original source when there are important variations

  - Graph data

  - Ask for monthly revisions

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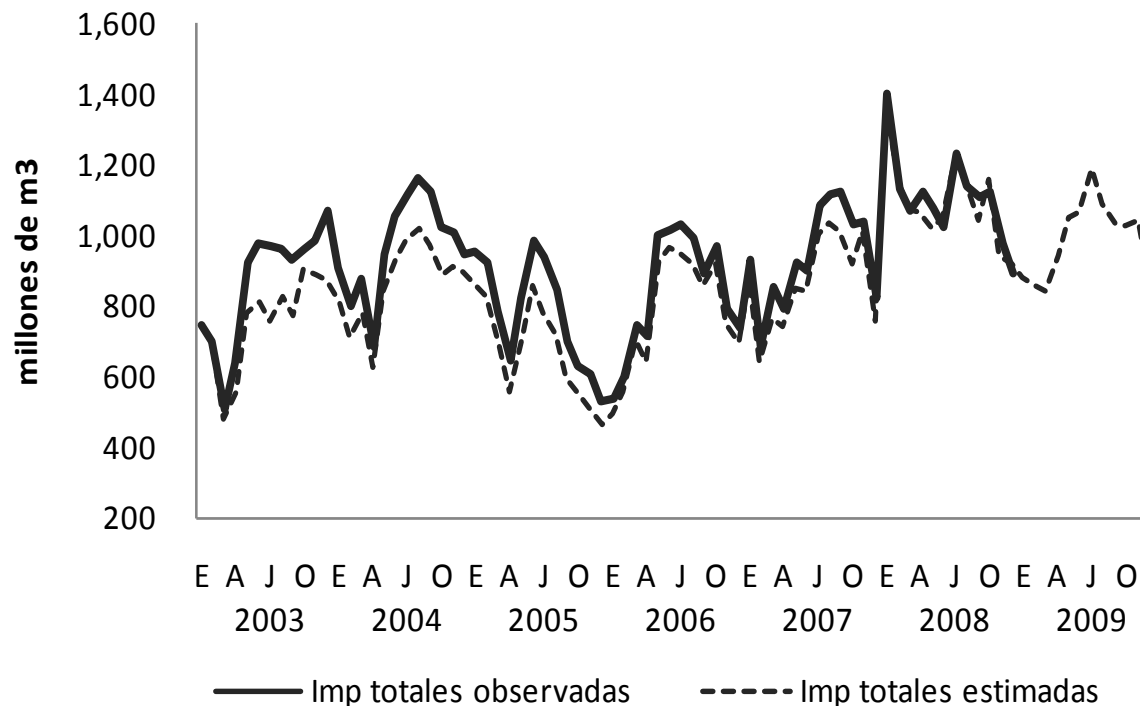
- Data validation

- Data estimation

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Data estimation

- Monthly missing data:
  - Private imports, other than LNG

Monthly vs. annual natural gas imports

Data estimation

Observed vs. estimated total natural gas imports

Modelo de regresión lineal en primeras diferencias

Variable	Coeficientes	Std. Error	t-stat	Prob.
D(IMPDOE,1)	0.683	0.084	8.085	0.000
D(IMPGNL,1)	1.041	0.069	15.152	0.000
D(IMPMOS,1)	0.286	0.114	2.519	0.014

R^2 ajustada = 0.914
$Q'(24)$ = 32.697

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Challenges

- Market liberalization represents a bigger challenge when collecting energy statistics:
  - Mexico needs to improve monthly natural gas data coverage from private imports
  - Even though there is a good cooperation with LNG regasification companies, we need to strengthen it in order to improve timeliness in their reports

- Data coverage:
  - It is important to know in more detail how natural gas is being consumed

Challenges

- Improve data quality, accuracy, completeness and timeliness of collected data:
  - Find better mechanisms and techniques to validate data quality
  - Cross check data from different sources to guarantee congruence

- Look for mechanisms to handle data confidentially issues

- Look for appropriate channels to design and improve data collection and compilation instruments:
  - Direct dialogue with other institutions, private companies, etc.

Challenges

- It is very important to have trained and well prepared human resources

- Look for continuity:
  - Manuals
  - Systematization

- Publish the information that is being generated

- Direct dialogue with decision makers to stress the importance of having information and using it to elaborate public policies

- Analyze best practices and the path taken by other countries.

Thank you!

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