

Fostering innovation through strengthening institutional capacity: the role of the government in Nuevo Leon

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Agenda

1. Guiding question
2. Theoretical background
3. Methodology
4. Findings: Nuevo Leon Case Study
5. Concluding remarks

1. Guiding Questions

- How does institutional capacities foster innovation at subnational level?
 - What are the main components of the RIS of NL?
 - What is the government's role fostering innovation?
 - What kind of institutional capacities foster innovation in the RIS?

2. Theoretical background

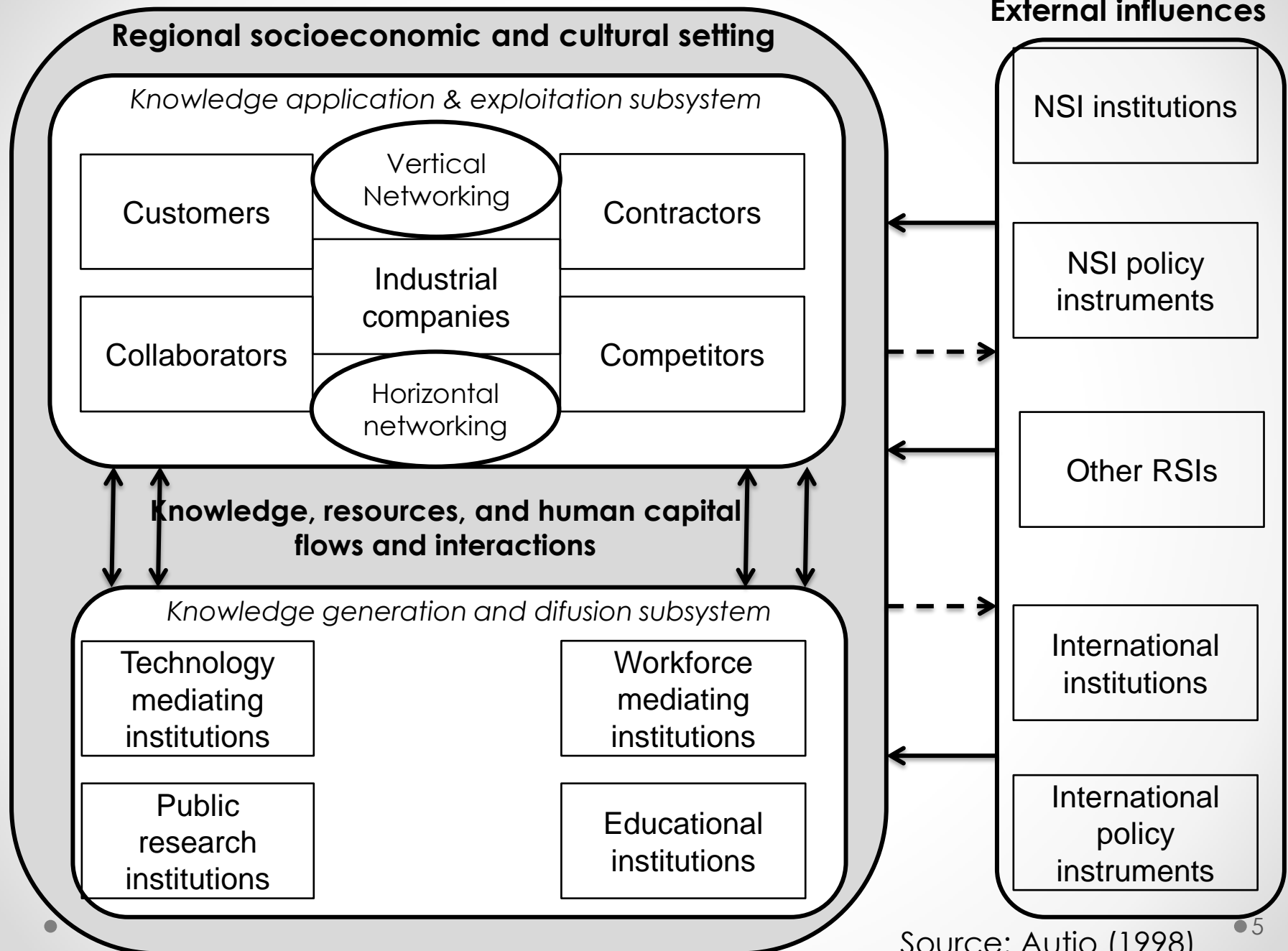
- Regional Innovation System Approach

political boundary; innovative activities takes place; urban conglomeration.

- Institutional Capacities

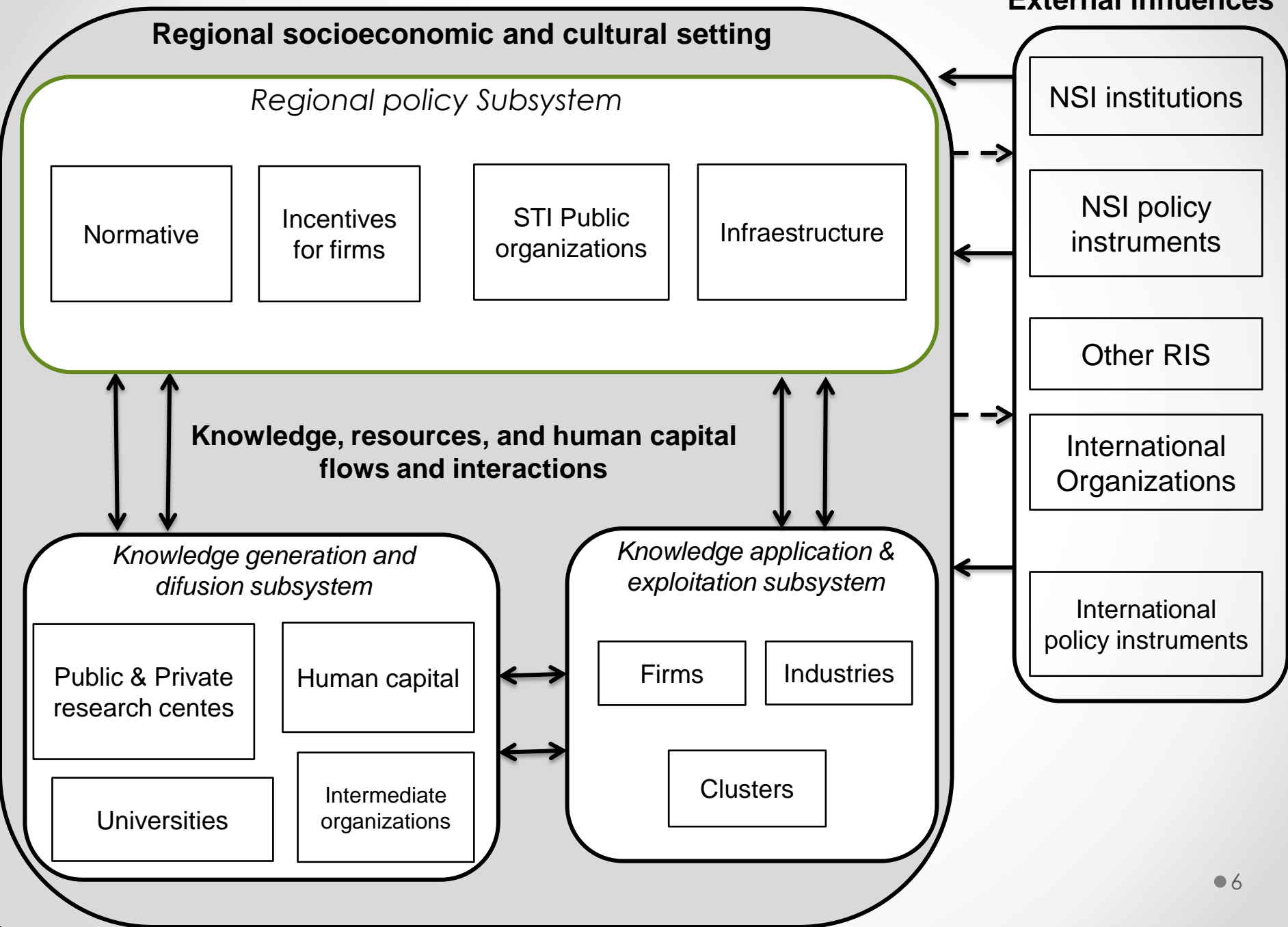
- Organizational level

Regional System Innovations



Source: Autio (1998)

RIS for subnational government

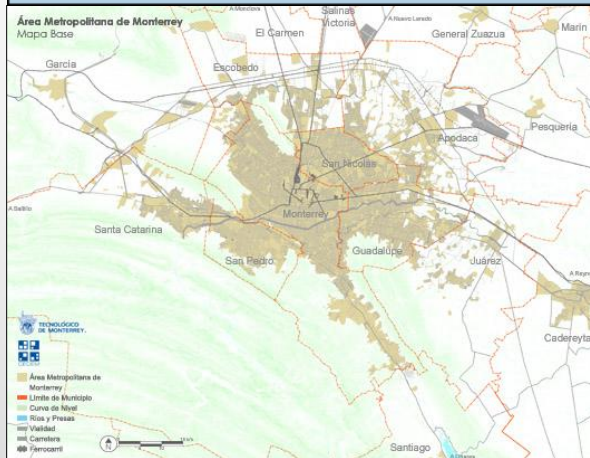


Capacidades Institucionales	Indicadores	Unidad de medida
a) Normativa	Legislación	Existencia de Leyes para CTI y sus Reglas de operación
	Protección a la propiedad intelectual/Industrial	Número de Centros de Patentamiento
	Consejos Ciudadanos de Innovación operando	Clústeres operando Organismos consultivos
b) Incentivos a las empresas	Apoyo público al desarrollo científico y tecnológico	Monto de fondos públicos se han destinado a las empresas en NL
	Estímulos a la investigación (básica y aplicada)	Monto (%de recursos vs presupuesto de CyT en el Estado)
	Impulso del desarrollo científico y tecnológico	Monto recursos destinados
	Promoción de recursos humanos especializados para la innovación	Número de Centros de Desarrollo Tecnológico Convenios con CONACYT para becas o becas gestionadas por parte del Estado (RRHH atraídos y retenidos formados)
	Capacidad para la creación de empresas de base tecnológica	Número de incubadoras (tecnología media, intermedia, avanzada)
c) Organismos públicos estatales intermedios	Capacidad para la difusión y aplicación de conocimientos científicos y tecnológicos	Existencia de oficinas de transferencia tecnológica
	Capacidad para proporcionar de Servicios de Apoyo	Asesoría legal, promoción
	Capacidad de Asistencia Técnica	Apoyos a los clústeres
	Capacidad para prestar servicios orientados a la comercialización	Licenciamiento
d) Infraestructura instalada para CTI	Infraestructura de apoyo a la innovación	Número parques industriales Número parques tecnológicos Número de Centros Públicos de Investigación Número de laboratorios
	Conectividad	% Usuarios de internet por # de habitantes (telefonía, computadoras)

3. Methodology

- Case Study: Monterrey, Mexico
 - Monterrey International City of Knowledge
 - 2003-2012
 - Monterrey Metropolitan Area (12 municipalities)
- Regional Innovation System Model:
 - Generation and diffusion of knowledge subsystem
 - Use and exploitation of Knowledge subsystem
 - Regional Policy subsystem

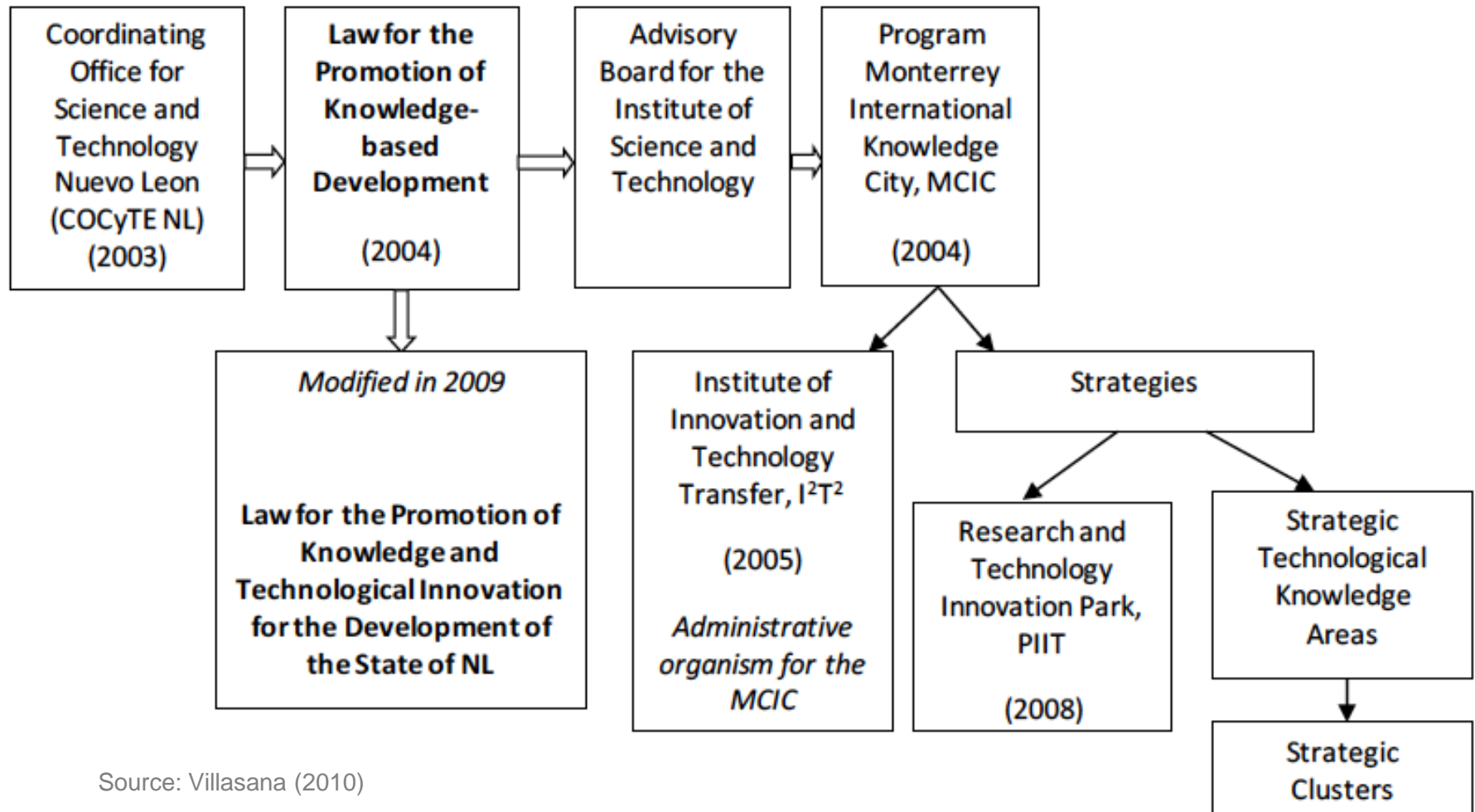
4. Findings: Nuevo Leon Case Study



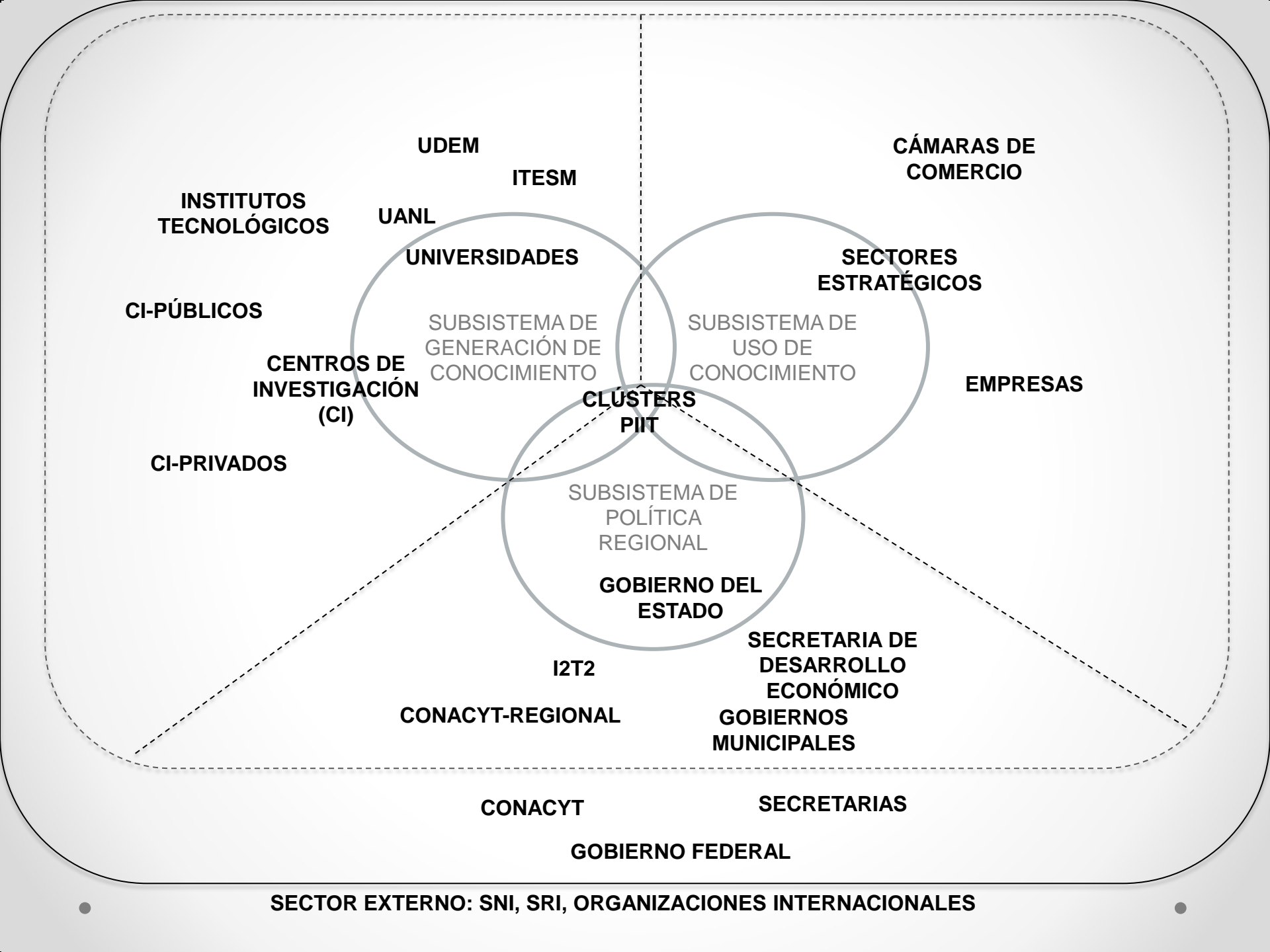
Source: CEDEM (2006)

- **Monterrey statistical area: 85% of the state population**
- **Average annual growth rate of 6% (based on manufacturing activities in products of heavy industry)**
- **7.3% of the national GDP.**
- **Economically active population: 60.2%**
- **Average state per capita income exceeds 84% of national average (OECD, 2006).**
- **Of northern states, NL has highest number of registered researchers. (Nationwide, it has 3.4% of total)**

Institutional Framework for promoting a regional innovation system in NL



Source: Villasana (2010)



RIS Nuevo León

IC (1): NORMATIVE CAPACITY

NUEVO LEON STATE GOVERNMENT

Legislative committee

1% for STI activities

Incentives

Development Program
Sectorial Programs

LICITD-NL

LFIE-NL

I2T2 - DevSec

Citizen Councils (Clusters)
Citizen Councils for the I2T2

LAW OF STI

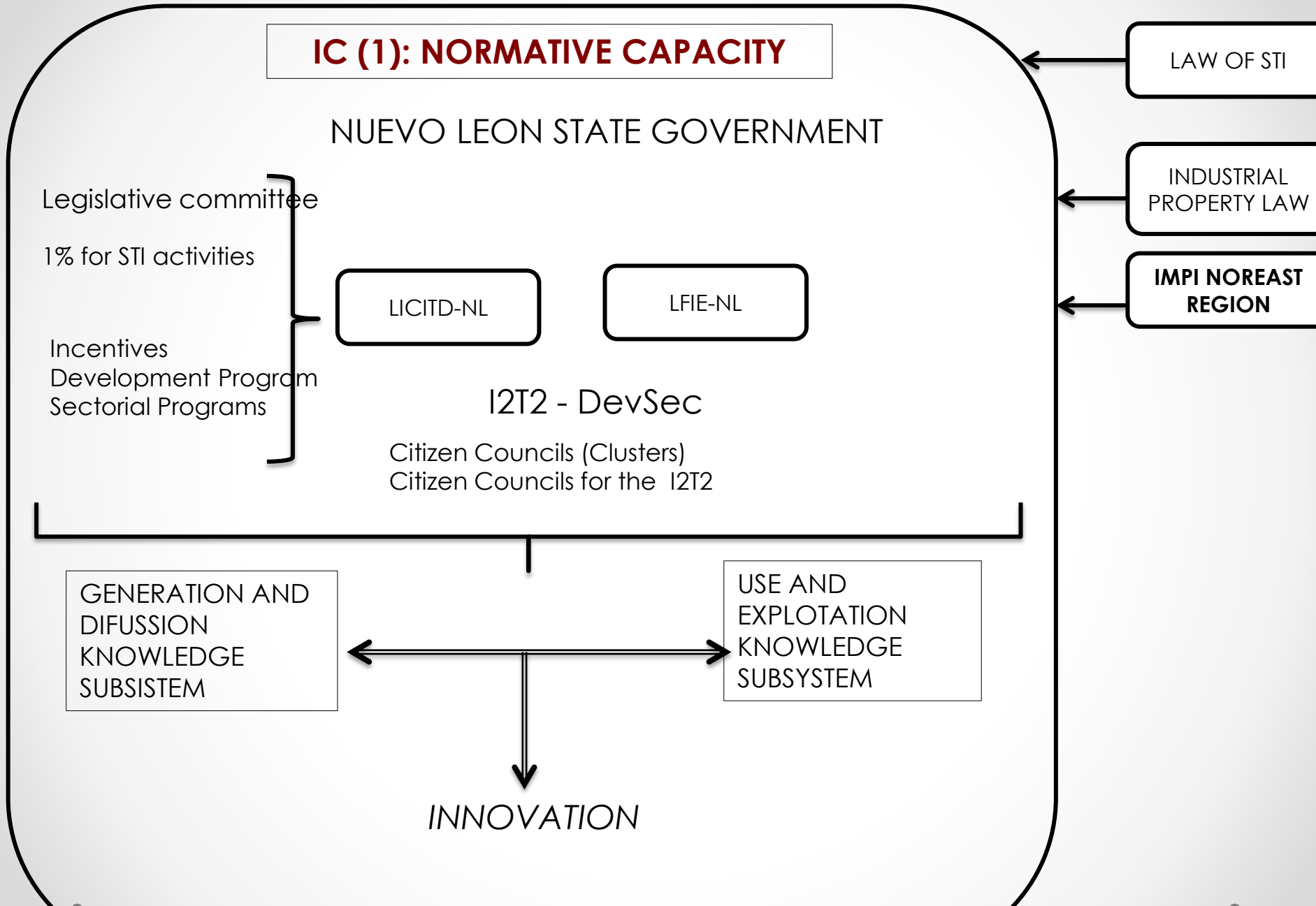
INDUSTRIAL
PROPERTY LAW

IMPI NOREAST
REGION

GENERATION AND
DIFUSSION
KNOWLEDGE
SUBSISTEM

USE AND
EXPLOTATION
KNOWLEDGE
SUBSYSTEM

INNOVATION



RIS Nuevo León

IC (2): CAPACITY TO GENERATE INCENTIVES

NUEVO LEON STATE GOVERNMENT

I2T2

SEDEC

FONLIN

UNIVERSITIES

PUBLIC
RESEARCH
CENTERS

FIRMS

PRIVATE
RESEARCH
CENTERS

LABORATORIES

CLUSTERS

GENERATION AND
DIFUSSION
KNOWLEDGE
SUBSISTEM

USE AND
EXPLOTATION
KNOWLEDGE
SUBSISTEM

INNOVATION

INTERNATIONAL
FUNDS

CONACYT

MIX FUNDS

PROGRAM TO
FOSTER
INNOVATION

SECTORAL
FUNDS

ECONOMY
SECRETARY:
PROGRAMS
FOR FIRMS

INDIRECT

DIRECT

RIS: Monterrey, Nuevo León

IC (3): CAPACITY FOR CREATION STI ORGANIZATIONS

NUEVO LEON STATE GOVERNMENT

SEDEC

12T2

TECHNOLOGICAL
INSTITUTES- NL

10 CLUSTERS

INTERNATIONAL
ORGANIZATIONS

CONACYT

REGIONAL
CONACYT

TECHNOLOGIC
AL INSTITUTES

RESEARCH
CENTERS

GENERATION AND
DIFUSSION
KNOWLEDGE
SUBSISTEM

USE AND
EXPLOTATION
KNOWLEDGE
SUBSISTEM

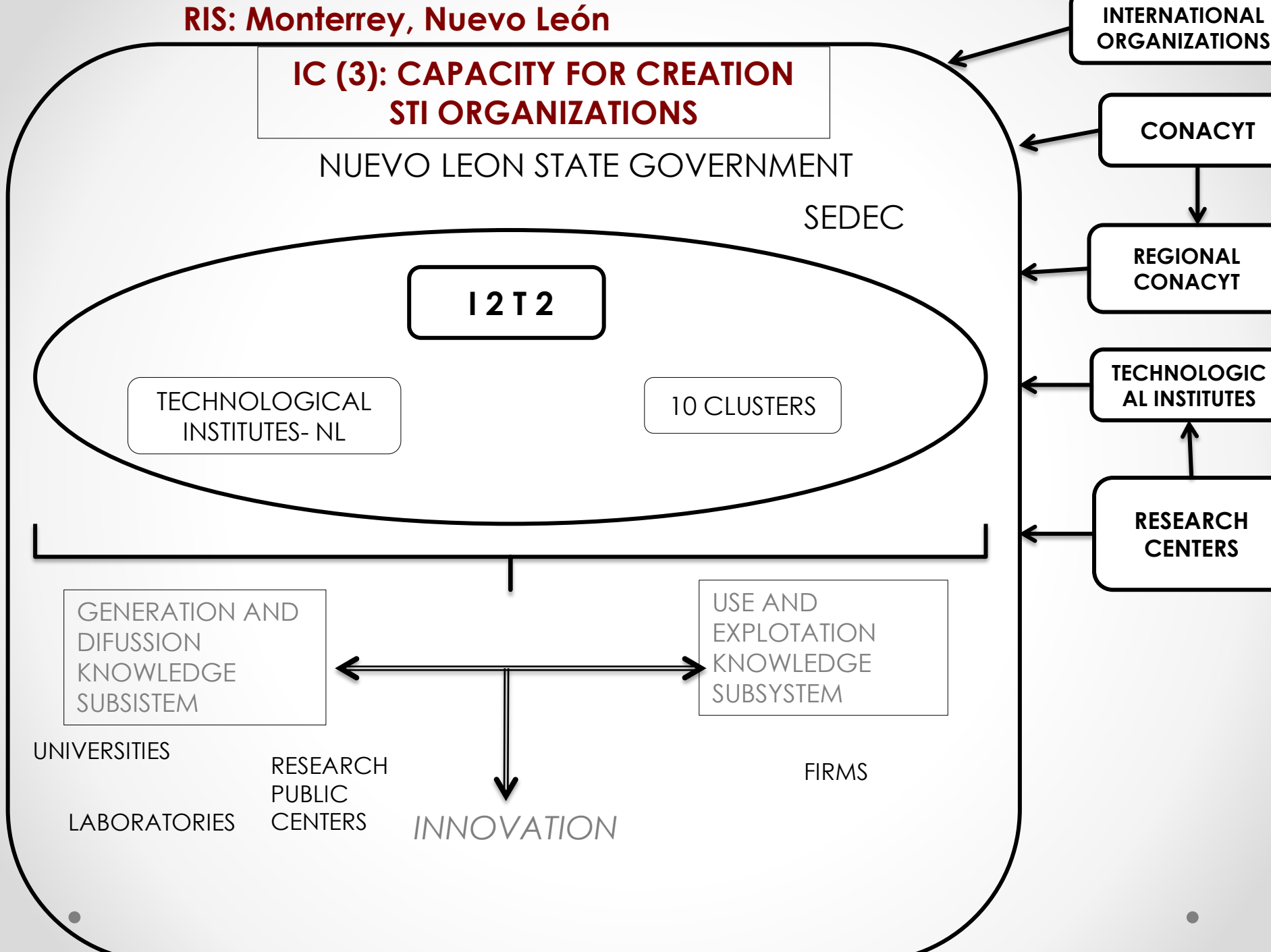
UNIVERSITIES

RESEARCH
PUBLIC
CENTERS

LABORATORIES

FIRMS

INNOVATION



RIS: Monterrey, Nuevo León

IC (4): CAPACITY TO SUPPORT INFRASTRUCTURE

NUEVO LEON STATE GOVERNMENT

I2T2

ECONOMIC
DEVELOPMENT
SECRETARY

FIDEICOMISOS

RITP (PIIT)

UNIVERSITIES

14 PUBLIC
RESEARCH
CENTERS

1 INCUBATORS

19 PRIVATE
RESEARCH
CENTER

LABORATORIES

10 CLUSTERS

STI HUMAN RESOURCES

INTERNATIONAL
FUNDS

CONACYT

MIX/SECTORAL
S
FUNDS

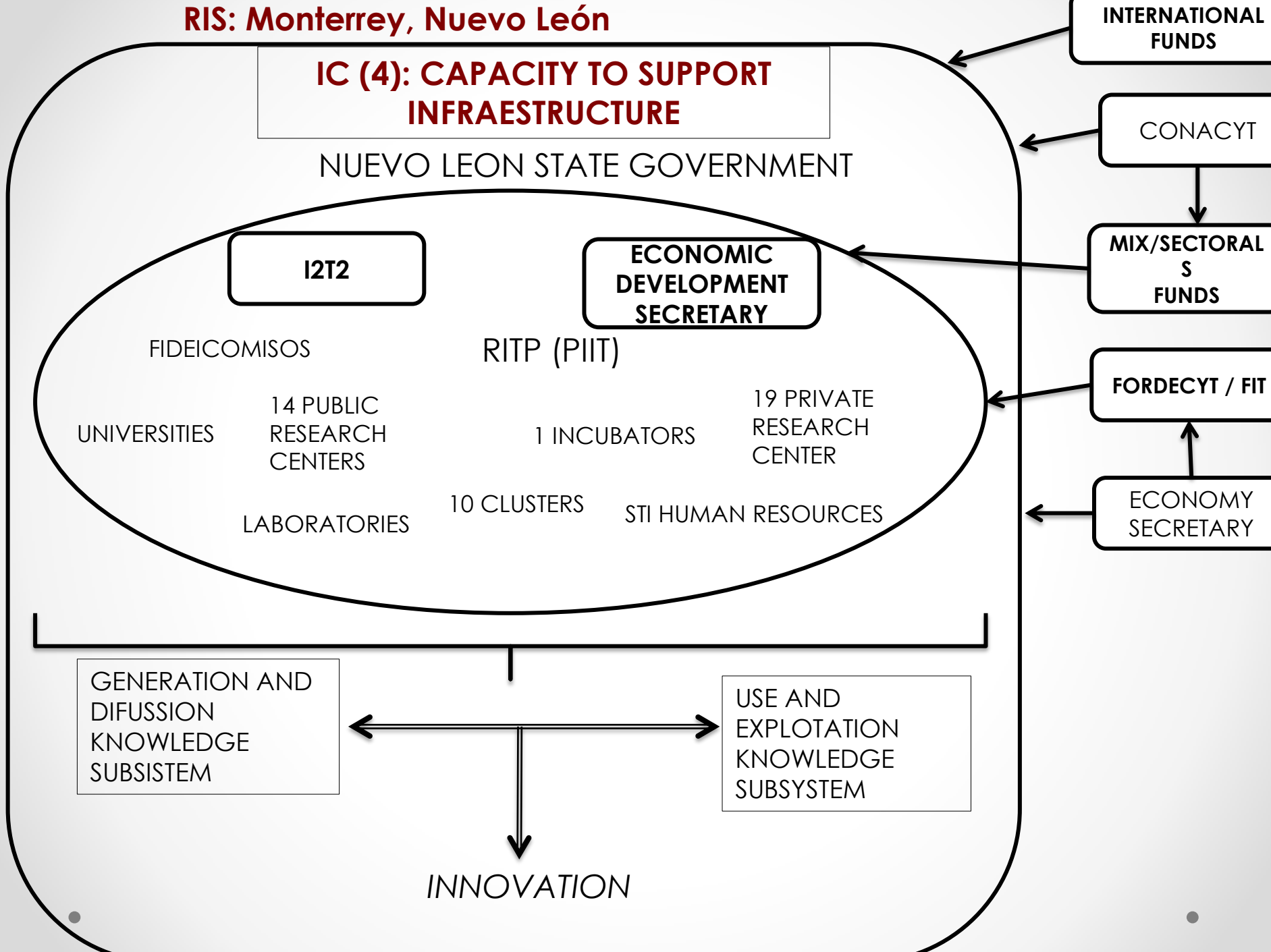
FORDECYT / FIT

ECONOMY
SECRETARY

GENERATION AND
DIFUSSION
KNOWLEDGE
SUBSISTEM

USE AND
EXPLOTATION
KNOWLEDGE
SUBSYSTEM

INNOVATION



5. Concluding remarks

- Monterrey is a case of an emergent regional innovation system in which the creation of institutions to support innovative capacity have added to the already existing cultural, institutional and organizational assets in the state.

5. Concluding remarks

- Components and functions
 - Conditions for the interaction of the RIS Nuevo Leon.
- Governmental State role
 - Internal structure
 - Relation with federal government
- Institutional capacities to foster innovation
 - What is/are the public problem(s) that the government of Nuevo Leon need to solve?

Thank you for your comments
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