

Minas Gerais *State Government*



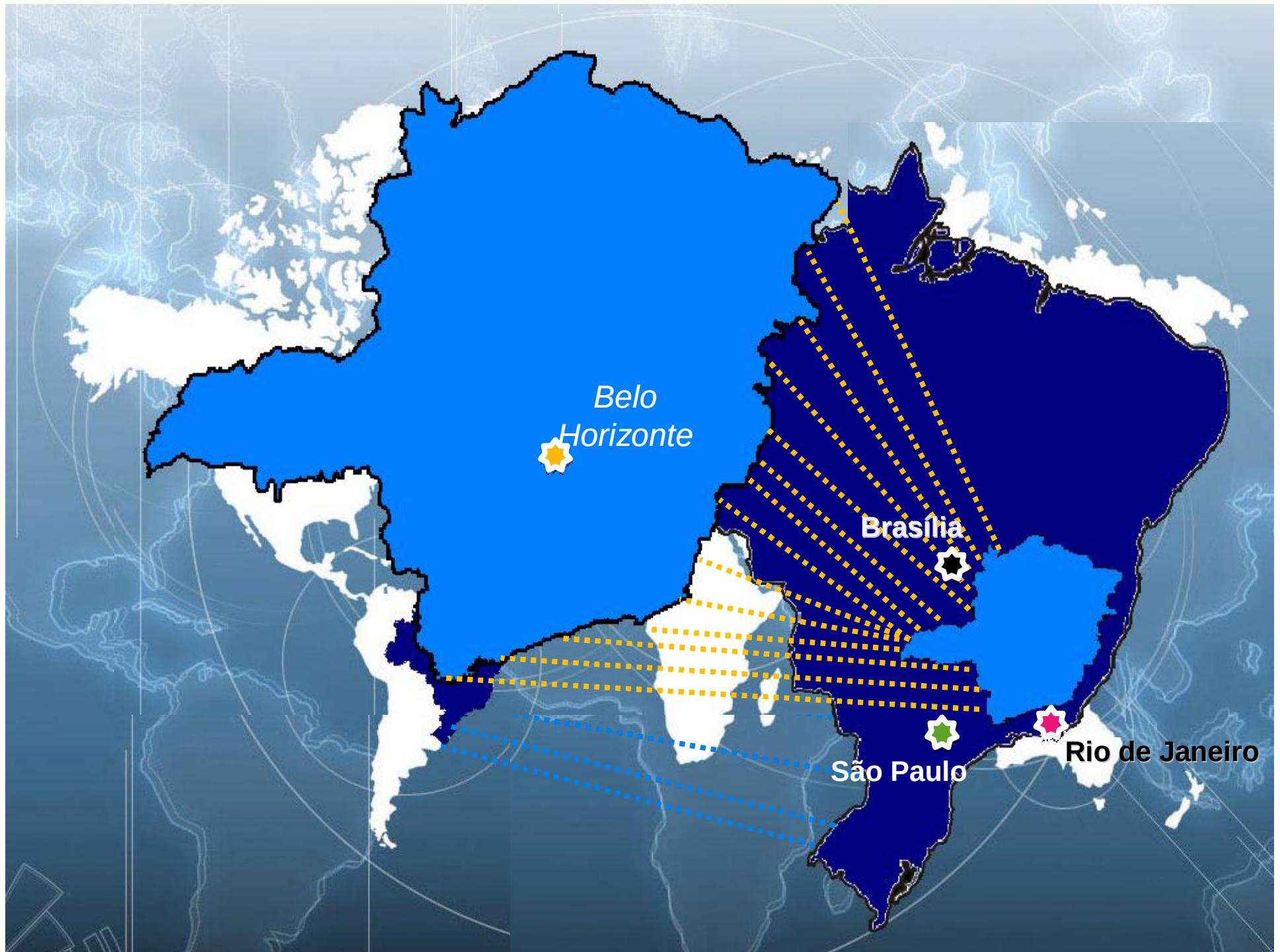
State Secretariat of Science, Technology and Higher Education

Dr. Alberto Duque Portugal
State Secretary

The National Academies
February 2010









MINAS GERAIS - Main figures



TERRITORY

- . 587,000 Km²
- . Larger than countries such as France, Sweden, and Spain

ECONOMY

- . In 2008, increase is estimated in 5,8% - (FJP)
- . GDP: US\$ 122 billion
- . Exports: 2008 - US\$ 24,4 bi – 2009 – US\$ 19,5 bi
- . Second largest industrial park of the country
- . A leader in Brazil for mining, metallurgy, coffee, dairy, biotechnology, engineering, management consultancy, etc.

SOCIAL

- . Population: around 20.0 million inhabitants
- . Children at school: 2,6 million
- . 18 thousand elementary schools

INFRA-STRUCTURE

- . 265.000 km of roads (23.000km paved)
- . 5,329 km of railways
- . 66 airports – 1 international and industrial
- . 18,5% of total energy generation in Brazil
- . Broad telecom network: 4,15M fixed lines and 8,8M mobile lines

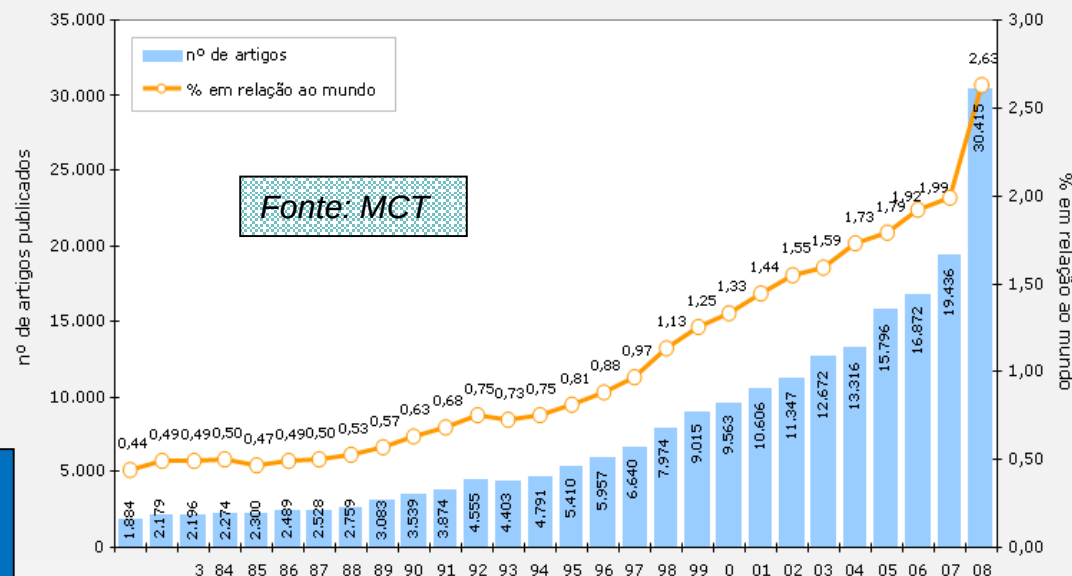


STATE SECRETARIAT OF SCIENCE, TECHNOLOGY AND HIGHER EDUCATION

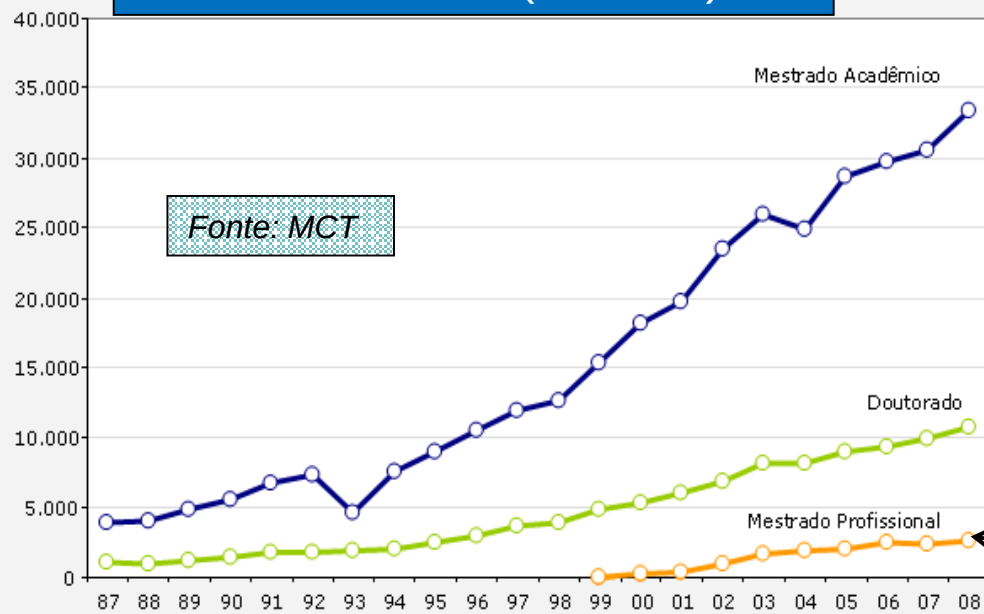
Minas Gerais State Government, Brazil

Number of brazilian articles published in Scientific Magazine from 1981-2008

The Scientific Production in Brazil represents 2,63% of world total



Master and PHD students from 1987 to 2008 (in Brazil)



33.360 Master degree

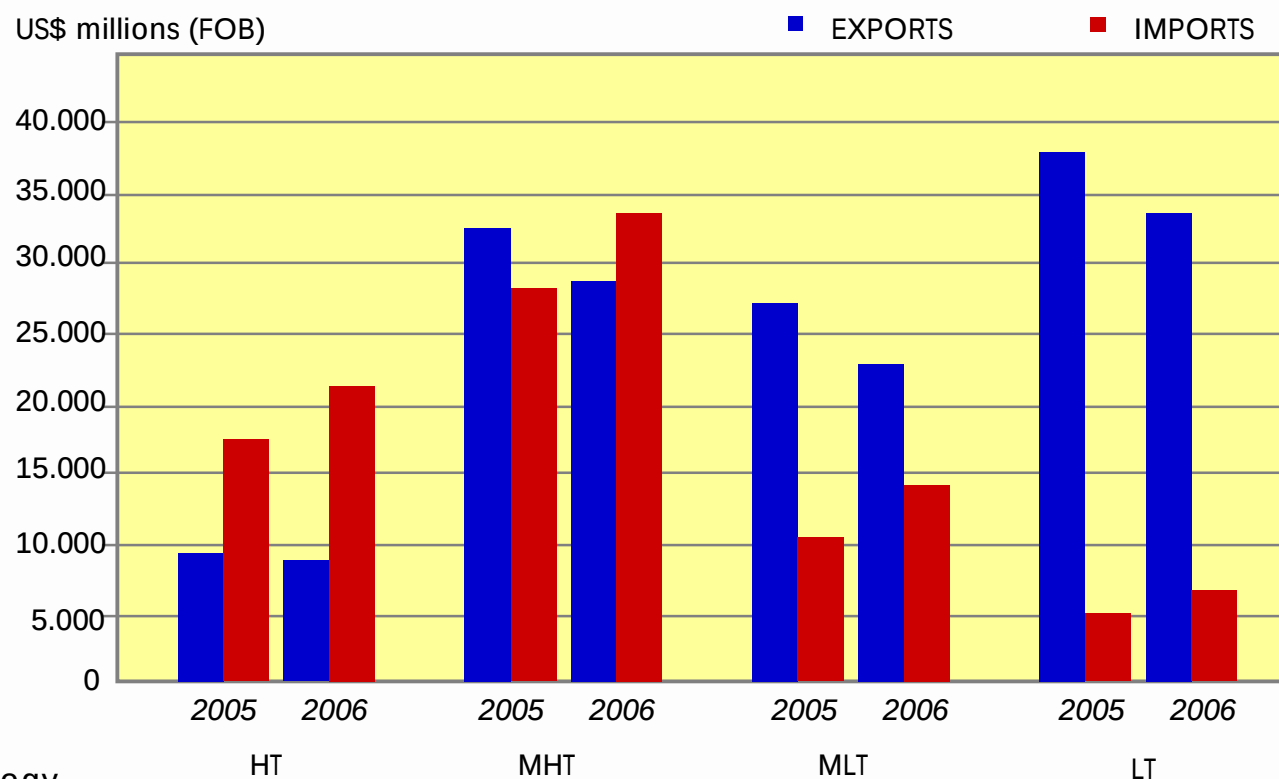
10.711 PHD

2.654 Professional Master Degree



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Technology Intensity in Foreign Trade in Brazil



HT: High Technology
MHT: Medium High Technology
MLT: Medium Low Technology
LT: Low Technology

SOURCE: (GOMES; LOURENÇO, 2007) - Funed Medicamentos: estudo da cadeia de valor – v. 2 – Base de Dados: MDIC/SECEX, 2007



Higher Education in Minas Gerais

	Nº	Nº OF STUDENTS REGISTERED (1 st Semester – parcial data)	
		Under Graduated	
		2007	2008
FEDERAL UNIVERSITY	11	73.821	76.809
STATE UNIVERSITY	4	13.703	14.513
TOTAL	15	87.524	91.322

Source: INEP. 2007/2008

	Nº	Nº OF STUDENTS (graduated – 2008)	
		Master	PhD
FEDERAL UNIVERSITY	11	2.767	904
STATE UNIVERSITY	4	83	0
TOTAL	15	2.850	904

Source: CAPES - 2008

	N.º
PRIVATE INSTITUTIONS	283

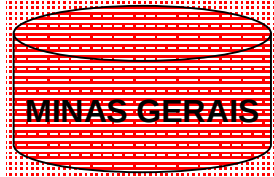
	Research groups	Research Lines	Nº of Researchers
Minas Gerais	2.135	8.509	15.842

Source: CNPq,
censo 2008.

R&D INVESTMENTS IN MINAS GERAIS

US\$ 1,3 BILLION / YEAR

Promote S, T, I & HE to reach Sustainable Development and the Improvement of Life Quality in Minas Gerais

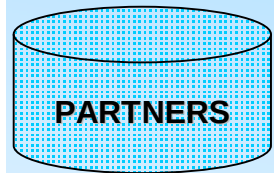
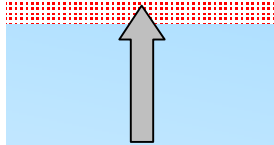


18 – Transform knowledge into business raising productivity and competitiveness, contributing to the development of the state

19 – Prepare Minas Gerais as a Leader in the knowledge economy

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15 – Apoiar a constituição e a consolidação de Centros de P,D&I

16 - Apoiar o desenvolvimento regional e setorial, por meio dos APLs, Pólos de Excelência e Pólos de Inovação.

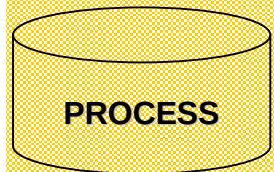
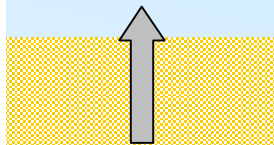
17 – Estimular empreendimentos de base tecnológica em áreas estratégicas portadoras de futuro

11 – Apoiar os programas e agentes de Tecnologia Industrial Básica (TIB)

12 - Fortalecer a capacidade de gestão e articulação para impulsionar o Sistema Estadual de CTI e ES

13 – Acelerar e valorizar o processo e a cultura da inovação

14 - Aprimorar a interação entre IESS, ICTs e setor produtivo atendendo às demandas do mercado



7 - Desenvolver ações para ampliar a oferta do Ensino Superior com qualidade

10 – Estabelecer diretrizes para a política de comunicação da SECTES e para a popularização de CT&I, integrando as entidades que compõem o sistema.

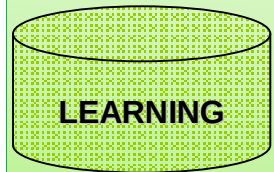
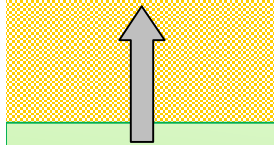
9 - Produzir análises prospectivas para induzir ações estratégicas e subsidiar políticas públicas nas áreas de CTI e ES

8 - Buscar ordenamento jurídico e regulatório compatível com as características e dinâmicas da área de CTI e ES.

4 - Fortalecer a pesquisa científica tecnológica, os Centros de Excelência e a retenção de talentos

5 – Estimular a criação e o fortalecimento de cursos de base tecnológica e profissionalizante

6 - Ampliar a oferta de Ensino Superior por meio do Ensino à Distância



PEOPLE

1 - Atuar com foco em competências estratégicas

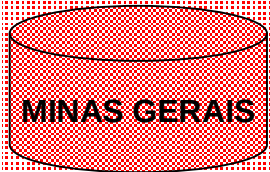
ORGANIZATION

2 - Consolidar o modelo de gestão da SECTES

INFORMATION

3 – Aprimorar a gestão da informação e do conhecimento

Promote S, T, I & HE to reach Sustainable Development and the Improvement of Life Quality in Minas Gerais



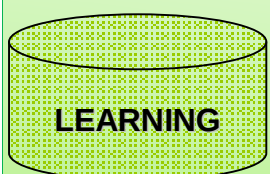
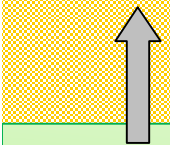
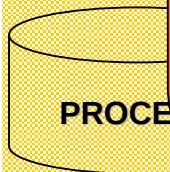
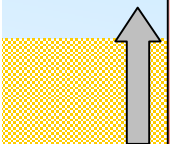
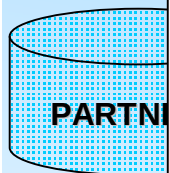
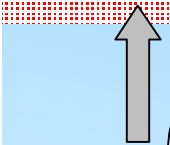
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Estimular investimentos de tecnologia em estratégias de futuro

Ar a interação CTs e setor entendendo às do mercado

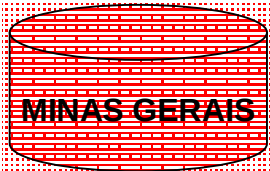
prospectivas estratégicas e cas nas áreas S

de Ensino do Ensino à stância

e a retenção de talentos

fortalecimento de cursos de base tecnológica e profissionalizante

Promote S, T, I & HE to reach Sustainable Development and the Improvement of Life Quality in Minas Gerais

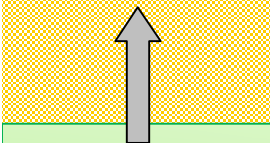
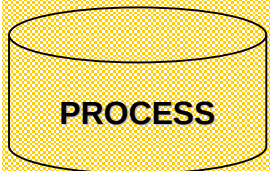
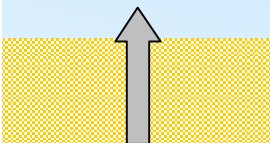
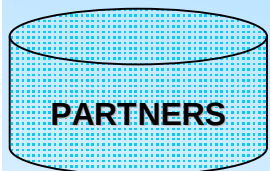
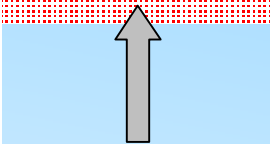


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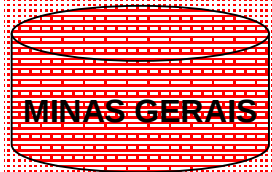
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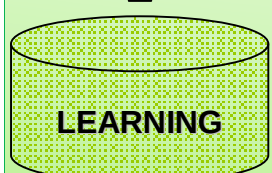
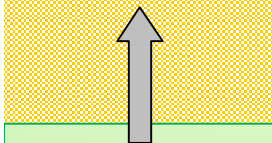
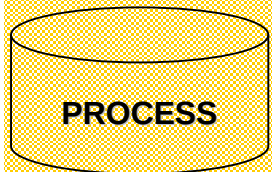
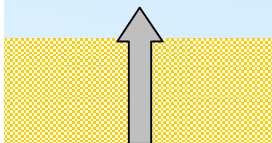
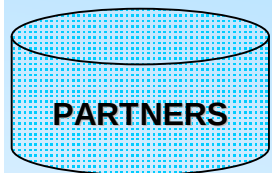
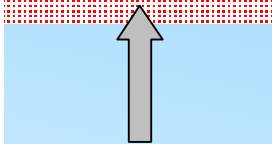


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PARTNERS

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Ensino
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LEARNING

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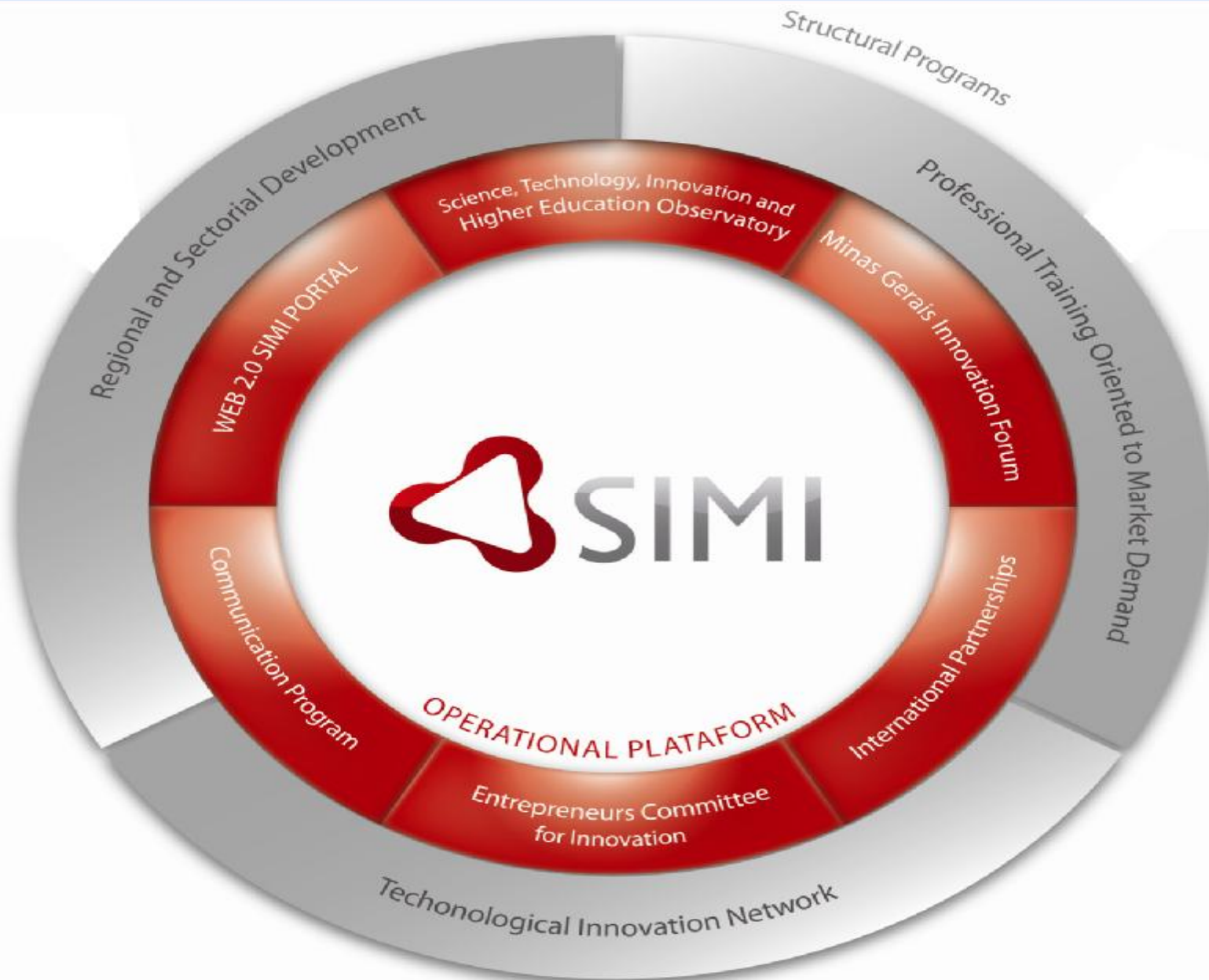
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STATE SECRETARIAT OF SCIENCE, TECHNOLOGY AND HIGHER EDUCATION
Minas Gerais State Government, Brazil





STATE SECRETARIAT OF SCIENCE, TECHNOLOGY AND HIGHER EDUCATION

Minas Gerais State Government, Brazil



Innovation Environment:

- Technological Parks
- Incubators
- Innovate in Minas Program
- R&D Centres
- Minas Gerais Innovation Law (FIT)
- Technological Industrial Park
- Inovatec



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Innovation in Business:

- PII: Innovation Incentive Program
- NIT: Technological Innovation Units
- TIB: Basic Industrial Technology
- Centre Minas Design (CMD)
- Innovation Meetings
- Coordinated Calls:
 - . Pappe
 - . Masters and Doctors inside Companies
 - . Venture Capital and Private Equity
 - . PRIME



Innovation in Business:

- **PII:** Innovation Incentive Program
- **NIT:** Technological Innovation Units
- **TIB:** Basic Industrial Technology
- **SIMI**
- **Centre Minas Design**
- **Cordinated calls:**
 - * PAPPE
 - * Masters and Doctors inside Companies
 - * Venture Capital and Private Equity
 - * PRIME

Innovation

- Technological Incubators
- Innovate in Minas
- R&D Centres
- Minas Gerais Innovation Line (FIT)
- Technological Industrial Park
- Inovatec



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Innovation in Society:

- **Entrepreneurship Culture: NAEs**
 - . Young Entrepreneurs Project
 - . Entrepreneurship Courses
 - . Entrepreneurs Support Units
 - . MG Entrepreneurship Program in Post Graduation
- **TEIA: Technology, Entrepreneurship and Innovation Applied**
- **C5: Centres in Cooperation and Knowledge Competence**

- Innovation
- R&D Centre
- Minas Gerais Institute
(FIET)
- Technological Industrial Park
- Inovatec

- Entrepreneurship
- Innovation Applied
- Centres in Cooperation and
Knowledge Competence



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Minas Gerais State Government, Brazil





Professional Training Oriented to Market Demand:

- CVTs and Telecentres

- Higher Education Institutes

- Inter
- Innov
- R&D Centres
- Minas Gerais In
(FIIT)
- Technological Industrial Park
- Inovatec

- Entrepreneur-
- Innovation Applied
- Projects in Cooperation and
- Knowledge Competence



STATE SECRETARIAT OF SCIENCE, TECHNOLOGY AND HIGHER EDUCATION

Minas Gerais State Government, Brazil





Regional and Sectorial Development:

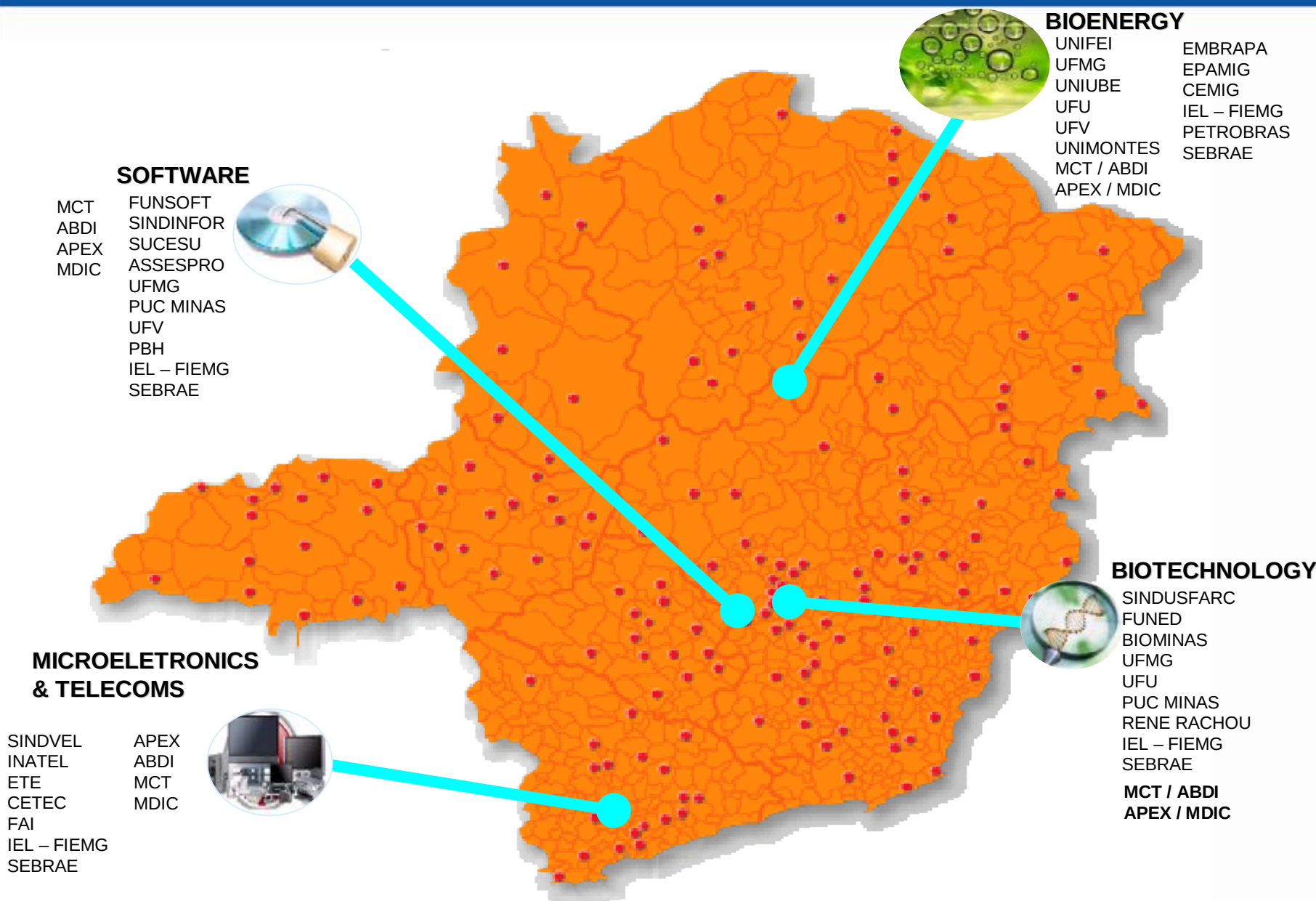
- Clusters
- Poles of Excellence
- Poles of Innovation

- Innovation
- R&D Centre
- Minas Gerais Institute
(FIIT)
- Technological Industrial Park
- Inovetec

- Entrepreneur
- Innovation Applied
- Centres in Cooperation and
- Knowledge Competence



Clusters





STATE SECRETARIAT OF SCIENCE, TECHNOLOGY AND HIGHER EDUCATION

Poles of Excellence Program

CATTLE GENETICS

UFLA
UFTM
UNIUBE
UFMG
UFV
UFU
ABCZ
ASBIA
EMBRAPA
FASU
FETAEMG
FAEMG
IMA
SEBRAE



HYDRIC RESOURCES

ANA
IGAM
UFMG
UFV
UFU
UFOP
CEMIG
HIDROEX
COPASA
EMBRAPA



MICROELETRONICS & TELECOMS

SINDVEL
INATEL
ETE
CETEC
FAI
IEL – FIEMG
SEBRAE
APEX
ABDI
MCT
MDIC



MINERAL-METALLURGY

UFOP
UFMG
UFSJ
PUC
CETEC
FIEMG



ENVIRONMENTAL MANAGEMENT

INHOTIM
UFMG
PUC MINAS
UFOP



FORESTRY

UFV
UFLA
UFVJM
FAEMG
SEBRAE
SIF
AMS
INTERSIND



DAIRY

EMBRAPA
EMATER
EPAMIG
FAEMG
SEBRAE
UFJF
CEFET
UFLA
UFV



COFFEE

EPAMIG
FAEMG
EAFM
PRÓ-CAFÉ
SEBRAE
UFLA
SINDCAFÉ
ABIC
CIC
CNC
EMBRAPA
EMATER

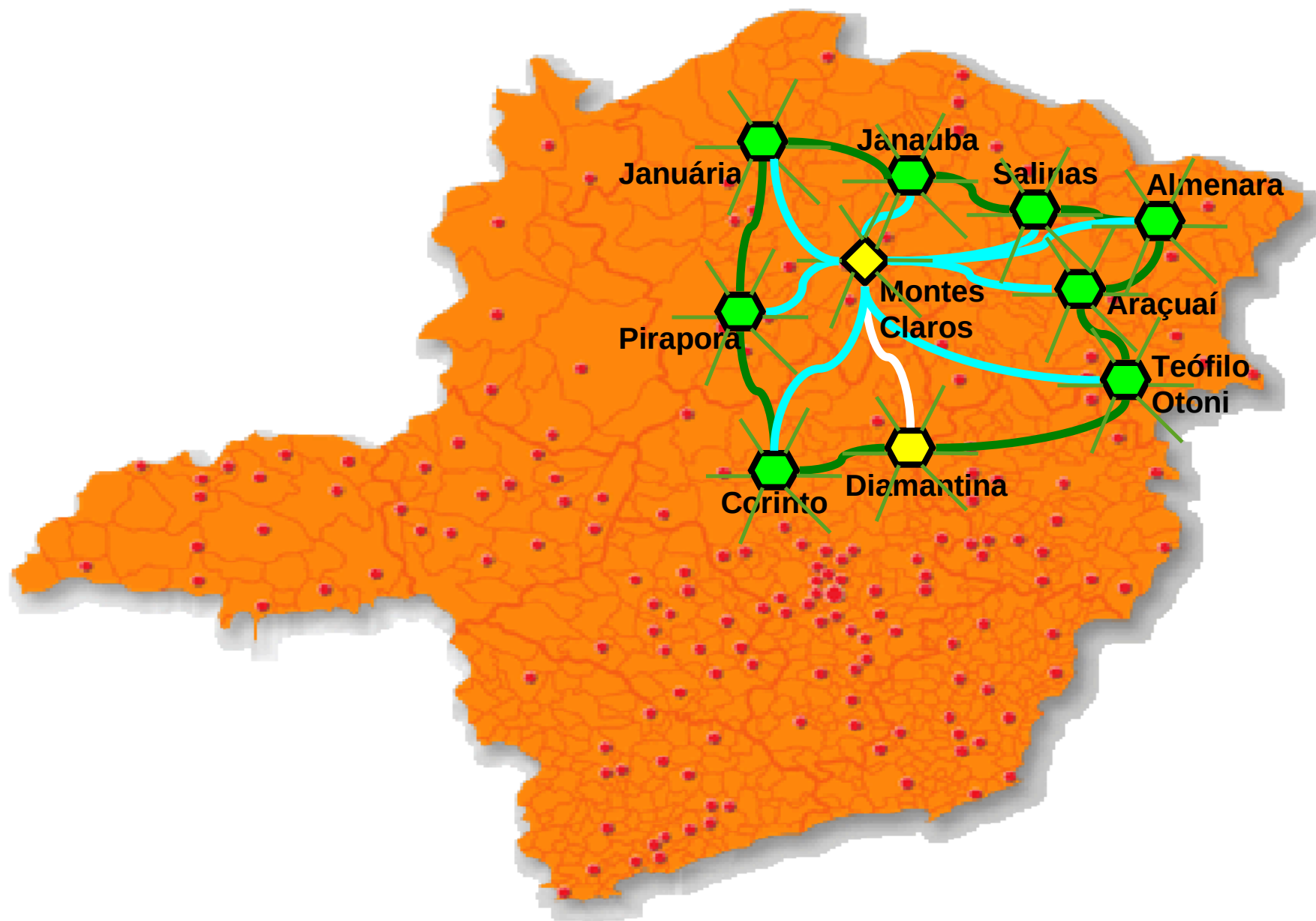


PATRIMONIAL
SILEMG
FETAEMG
ITAMBÉ
IEL-FIEMG



STATE SECRETARIAT OF SCIENCE, TECHNOLOGY AND HIGHER EDUCATION

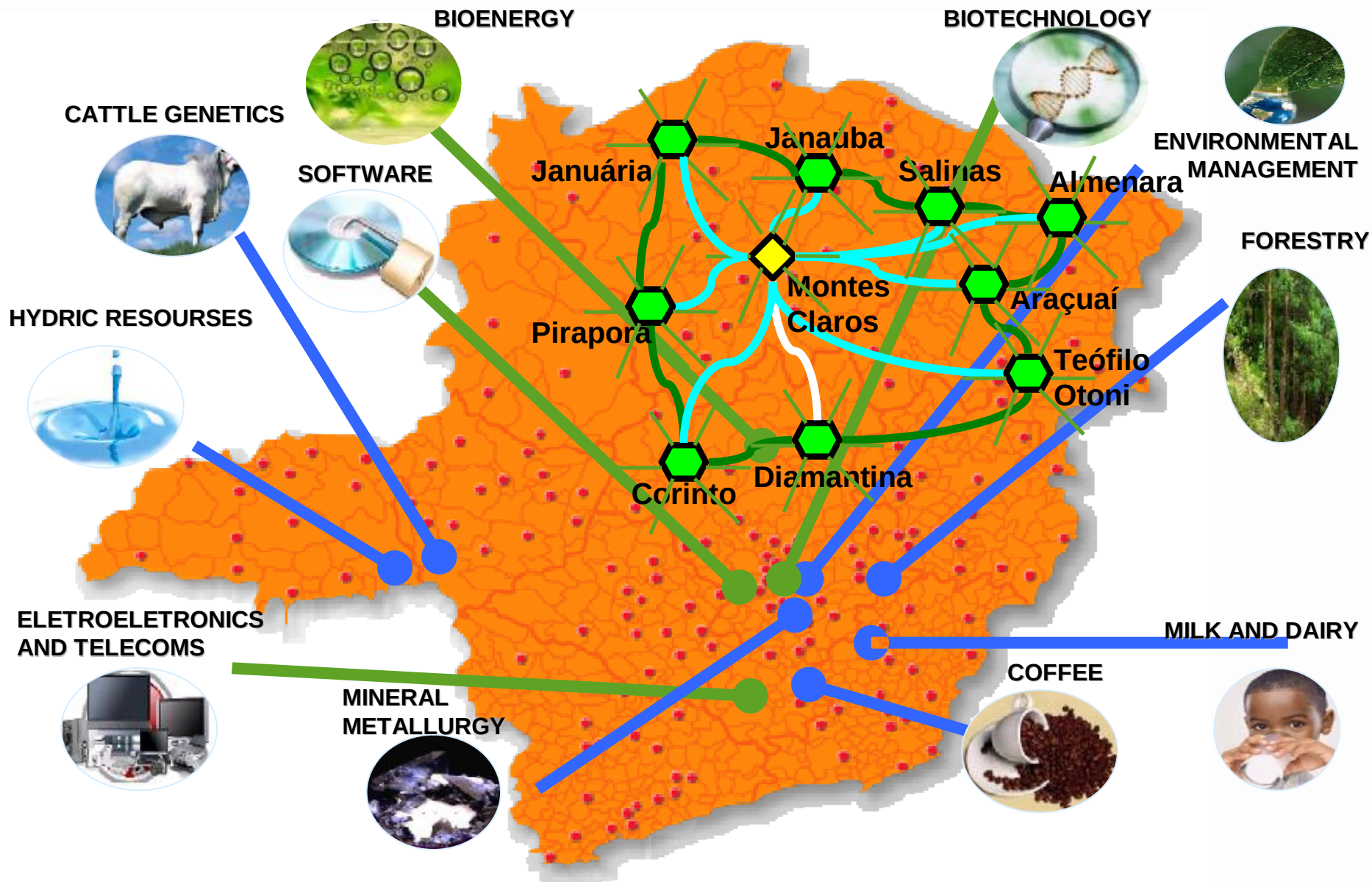
Poles of Innovation Program





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Poles and Clusters of Minas Gerais





STATE SECRETARIAT OF SCIENCE, TECHNOLOGY AND HIGHER EDUCATION

Minas Gerais State Government, Brazil





International Partnerships Underway

Piemonte, Italy

- § Energy
- § Mobility
- § Automotive Tech



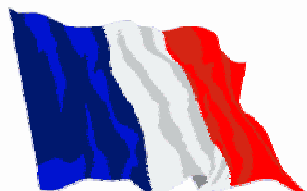
Saarland, Germany

- § Nanotechnology



Nord Pas de Calais, France

- § Environment management
- § Sustainable materials
- § Management of Clusters and Poles of Competitiveness



Brittany, France

- § Milk and Dairy
- § Technologies of WEB 2.0



Chile

- § Mining



Portugal

- § Recovery of degraded areas

Queensland, Australia

- § Mining
- § Water
- § Sustainable Management



USA

How can we cooperate?





Internationalization of Minas Gerais State Agency for Research and Development (FAPEMIG)

Promoting and supporting the development of international
partnership of FAPEMIG with funding agencies or
universities abroad

Results

Cooperation agreements between FAPEMIG and partner agencies /
universities for launching joint call and scholarships

Example of International Partnerships

§ Germany (DAAD and DFG)

§ Italy (Politecnico di Torino)



STATE SECRETARIAT OF SCIENCE, TECHNOLOGY AND HIGHER EDUCATION
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INOVATEC

Technology and Innovation Fair and Congress

The largest event for disclosure and encouragement of Brazilian technological Innovations

INOVATEC's goal is to promote **interaction, exchange of experience and technology transfer** among researchers, private companies, government agencies, educational institutions and R&D centers.



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INOVATEC

Technology and Innovation Fair and Congress

2008 - Italy



2009 - France (Year of France in Brazil)



2010 - United States





Some proposals of Cooperation between Minas Gerais -USA

üParticipation of government, R&D institutions and companies from US at INOVATEC 2010 - USA

üPromote the exchange of information in public tools for the development of innovation clusters

üFoster the cooperation in solar energy

ü.... to be discussed



Thank You Very Much !!

Alberto Duque Portugal

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