IMPLEMENTATION OF A SMART SPECIALIZATION STRATEGY IN SMALL REGIONS: THE EXPERIENCE OF NAVARRA (2008-2013)

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General Director – MODERNA Foundation
NAVARRA, regional overview

- 48th EU Region by income per capita
- Objective 1 region: Competitiveness and Employment, according to Cohesion Policy 2007-2013
### Economic Indicators

#### Population density by NUTS 2 regions

**Inhabitants per km²**

Based on a comparison with: Comunidad Foral de Navarra

Source: Eurostat

![Map of Europe showing population density by NUTS 2 regions. The color coding indicates regions with lower, equal, or higher population density compared to Navarra.](image)

<table>
<thead>
<tr>
<th>Data of Navarra:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Surface:</strong> 10.391 km²</td>
<td></td>
</tr>
<tr>
<td><strong>Population:</strong> 638.948 inhabs (2012)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population Density (inhabs/km²)</strong></td>
<td><strong>2012</strong></td>
</tr>
<tr>
<td>European Union (UE28)</td>
<td>116,3</td>
</tr>
<tr>
<td>Spain</td>
<td>93,2</td>
</tr>
<tr>
<td>Navarra</td>
<td>61,8</td>
</tr>
</tbody>
</table>

Source: Eurostat 2010

<table>
<thead>
<tr>
<th>Source: Eurostat 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Top Regions (Max-Min)</strong></td>
</tr>
<tr>
<td>Inner London (UK)</td>
</tr>
<tr>
<td>Rég. Bruxelles (BE)</td>
</tr>
<tr>
<td>Ciudad Aut. Melilla (ES)</td>
</tr>
<tr>
<td>...</td>
</tr>
<tr>
<td>Övre Norrland (SW)</td>
</tr>
<tr>
<td>Ísland</td>
</tr>
<tr>
<td>Guyane (FR)</td>
</tr>
</tbody>
</table>
### Economic Indicators

**Regional gross domestic product (PPS per inhabitant) by NUTS 2 regions 2011**

Based on a comparison with: Comunidad Foral de Navarra

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>GDP (PPS) per Inhab. (Euros)</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Union (UE28)</td>
<td>25.100</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>22.700</td>
<td></td>
</tr>
<tr>
<td>Navarra</td>
<td>31.100</td>
<td></td>
</tr>
</tbody>
</table>

#### Additional Data

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>GDP (PPS) per Inhab. (%UE28)</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Union (UE28)</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>90.4%</td>
<td></td>
</tr>
<tr>
<td>Navarra</td>
<td>121.5%</td>
<td></td>
</tr>
</tbody>
</table>

#### Comparison with other regions

<table>
<thead>
<tr>
<th>Region</th>
<th>Rank</th>
<th>Relative to Navarra</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner London (UK)</td>
<td>1</td>
<td>320%</td>
</tr>
<tr>
<td>Luxembourg (LU)</td>
<td>2</td>
<td>266%</td>
</tr>
<tr>
<td>Bruxelles-Cap. (BE)</td>
<td>3</td>
<td>221%</td>
</tr>
<tr>
<td>Navarra (ES)</td>
<td>47</td>
<td>121%</td>
</tr>
<tr>
<td>Zeeland (NL)</td>
<td>49</td>
<td>123%</td>
</tr>
</tbody>
</table>

**Lower Than Navarra**

**Navarra**

**Higher Than Navarra**

Source: Eurostat
### Economic Indicators

<table>
<thead>
<tr>
<th>GDP per Branches (2011)</th>
<th>Agriculture</th>
<th>Industry</th>
<th>Construction</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Union (UE27)</td>
<td>1.7%</td>
<td>19.5%</td>
<td>6.3%</td>
<td>72.5%</td>
</tr>
<tr>
<td>Spain</td>
<td>2.6%</td>
<td>16.9%</td>
<td>11.5%</td>
<td>68.9%</td>
</tr>
<tr>
<td><strong>Navarra</strong></td>
<td><strong>2.9%</strong></td>
<td><strong>28.6%</strong></td>
<td><strong>9.2%</strong></td>
<td><strong>59.2%</strong></td>
</tr>
</tbody>
</table>

- **Transport and Automotive Manufacturing**: 4.9%
- **Electric, electronic and optical equipment**: 4.1%
- **Metallurgical industry**: 4.0%
- **Agrofood industry**: 3.7%
- **Machinery**: 3.0%
- ...: ...

*Source: Eurostat 2011 and INE 2011*
High investment in R+D and innovation 2012 (2.03%)

- People engaged in R+D activities tripled in 11 years (from 2.063 to 5.221)
- 2/3 of R+D is private
What is MODERNA?

1° DIAGNOSIS December 2008
   Citizens and social-economics agents. International Consultancy

2° STRATEGY PROPOSAL March 2009
   Committee of 33 experts

3° APPROVAL OF THE STRATEGY April 2009
   Steering Committee: Government of Navarra, Political, Social an Educational Actors

4° DESIGN OF THE ACTION PLAN December 2009
   Professional Bodies, Business Associations and Directors Government of Navarra

5° APPROVAL OF THE ACTION PLAN October 2010
   Steering Committee and Navarra’s Parliament (76%)
Participation in the Plan (inclusive)

+ More than 5,000 people have been involved in designing MODERNA

- 500 entrepreneurs
  Survey of environment quality
- Surveys to 1,500 people
- 110 opinions about the model
- 400 ideas provided by website
- 33 interviews in the USA and EU to find out about the best strategic regional models
- 37 feedbacks to the Diagnosis
- 100,000 visits web
- 1,578 opiniones what is lack / what is exceed
- 25 international universities groups
- 275 agents
  Action Plan design

More than 5,000 people have been involved in designing MODERNA.
What Objectives is MODERNA proposing for the future?

**GDP PER CAPITA**

To position Navarra amongst the 20 leading European regions in GDP per capita and with a fair distribution of wealth.

To achieve this, each MODERNA cluster is firmly committed to increased productivity, employment and international competitiveness, through technological improvements, the development of human capital and ventures into new, high productivity sectors.

**HUMAN DEVELOPMENT**

To position Navarra amongst the 10 leading European regions in the Human Development Index (HDI).

High quality health care and an excellent education system are two key strengths of Navarra. In order to maintain and enhance these areas, the MODERNA plan is to channel the generation of wealth towards quality of life and to promote human development from all the clusters and, specifically, from the sectoral commitments to Education, Talent and Human Capital and the Health Care Services.

**ENVIRONMENTAL SUSTAINABILITY**

To position Navarra amongst the 20 leading European regions in sustainability.

All the MODERNA clusters are constantly focussed on the sustainability of the economy and the conservation of the environment for the future generations in Navarra. Furthermore, efforts are concentrated on inherently eco-friendly sectors and activities (renewable energies, sustainable vehicles, agro-food industries, sustainable construction, environment and waste, and sustainable tourism).
<table>
<thead>
<tr>
<th>CHALLENGES</th>
<th>CONCEPT</th>
<th>TODAY</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUCATION</td>
<td>EDUCATION LEVEL OF EDUCATIONAL ACHIEVEMENT (PISA points)</td>
<td>502</td>
<td>550</td>
</tr>
<tr>
<td></td>
<td>LEVEL OF ENGLISH (young people aged 18 with B2 level)</td>
<td>7%</td>
<td>90%</td>
</tr>
<tr>
<td></td>
<td>LEVEL OF HIGHER EDUCATION (% university graduates)</td>
<td>36%</td>
<td>55%</td>
</tr>
<tr>
<td>INNOVATION</td>
<td>INVESTMENT IN R&amp;D (% over GDP)</td>
<td>1.92%</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>TOTAL PATENTS (applications/year)</td>
<td>172</td>
<td>844</td>
</tr>
<tr>
<td></td>
<td>REGIONAL INDEX FOR INNOVATION (Europe regions posit)</td>
<td>76</td>
<td>35</td>
</tr>
<tr>
<td>GLOBALISATION</td>
<td>EXPORTS (millions of euros)</td>
<td>5,450</td>
<td>10,000</td>
</tr>
<tr>
<td></td>
<td>EXPORTING COMPANIES (Nr)</td>
<td>711</td>
<td>2,000</td>
</tr>
<tr>
<td></td>
<td>INTERNATIONAL COMPANIES (Nr)</td>
<td>133</td>
<td>200</td>
</tr>
<tr>
<td>ECONOMY</td>
<td>EMPLOYMENT (people in work)</td>
<td>284,000</td>
<td>365,000</td>
</tr>
<tr>
<td></td>
<td>PRODUCTIVITY (euros per worker)</td>
<td>61,000</td>
<td>85,000</td>
</tr>
<tr>
<td></td>
<td>COMPANY SIZE (% companies &gt; 50 workers)</td>
<td>1,30%</td>
<td>2,5%</td>
</tr>
<tr>
<td></td>
<td>NUMBER OF NEW COMPANIES (Nr/year)</td>
<td>943</td>
<td>1,600</td>
</tr>
</tbody>
</table>
THE TREE

Transversal factors of Competitiveness

Strategic Business Sectors

Eco-Friendly Economics

Health Care Economics

Talent Economics

Quality of Life

Environment and Waste

Renewable Energies

Sustainable Tourism

Business Services

Education and Knowledge Generation

Mechatronics

Sustainable Construction

Agro-Food Industries

Sustainable Vehicles

Medical Equipment

Bio-Medicine

Health Care Services

ENTREPRENEURSHIP

INTERNATIONALIZATION

R&D&I

INFRASTRUCTURES

PUBLIC ADMINISTRATION

ENVIRONMENT OF COLLABORATION

EDUCATION, TALENT & HUMAN CAPITAL
The Strategic Commitments adopted by MODERNA

- **Health care economics**: Navarre, the throbbing of progress
  - Basic clusters: Reinvent and make more efficient
    - Health Services
  - Strategic clusters: Strengthen to become world leaders
    - Sustainable Construction
    - Sustainable Vehicles
  - Clusters which are part of the future lines of action: Many options, to sow for the future
    - Renewable Energies
    - Agro-food Industries
    - Medical Appliances
    - Sustainable Tourism
    - Biomedicine
    - Environment and Waste
    - Service to Persons
    - Mechatronics
- **Eco-friendly economics**: Navarre breathing life into development
  - New opportunities: Future trends to be developed
  - Leverage clusters: Link to the priority clusters
  - Design and Creativity
  - Safety
  - Business Services
  - Education
- **Talent economics**: Navarre, a world of talent
MODERNA Plan, the plan of PLANS

Plan Emprendimiento

IV Plan Tecnológico de Navarra 2013-2017

Plan Administración Electrónica

ENTREPRENEURSHIP

R&D&I

PUBLIC ADMINISTRATION

INTERNATIONALIZATION

INFRASTRUCTURES

ENVIRONMENT OF COLLABORATION

EDUCATION, TALENT & HUMAN CAPITAL

Acciones del depto Educación para desarrollar el talento
Map of the Biomedical sector

Thanks to a tight networked activity, the Biomedical industrial and academia institutions in Navarra collaborate in each phase in the development of pharmaceutical products, from the bench to the bedside.

### DRUG DEVELOPMENT PROCESS

<table>
<thead>
<tr>
<th>Step</th>
<th>Research Centers and Universities</th>
<th>Product development</th>
<th>Companies</th>
<th>Support services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target identification &amp; validation</td>
<td>CIMA</td>
<td>CINFA</td>
<td>PFIiopharmaceuticals</td>
<td>IDIFARMA</td>
</tr>
<tr>
<td>Lead identification &amp; validation</td>
<td>ILEA</td>
<td>DNA BIDECN</td>
<td>BIONANOPLUS</td>
<td></td>
</tr>
</tbody>
</table>
## Sharing Facilities

More than 80 Sharing Facilities and Equipment (including laboratories, Biobanks, research equipment such as chromatographs, spectrometers, radioactivity facilities...)

<table>
<thead>
<tr>
<th>Tipo</th>
<th>Denominación</th>
<th>Palabras Clave</th>
<th>Descripción</th>
<th>Características / Capacidad</th>
<th>Uso y Aplicaciones</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equipo</strong></td>
<td>ACTA EXPLORER</td>
<td>FPLC, separación, purificación, calibración, PMAC, AEO, HO, manipulación de la columna, evaluación del compuesto, flujo de 500-4000 ml/minuto.</td>
<td>Equipos de cromatografía separan y purifican, produciendo un sistema de protección antiviruses para el personal. Fluor le permite el trabajo de transferencia y manipulación de los compuestos, incluyendo la manipulación de la muestra.</td>
<td>Fluor: flujo de 50-1000 ml/minuto, Presión: 0-15 MPa.</td>
<td>Se utiliza para manipular y manejar antiviruses para el personal. Fluor para la transferencia y manipulación de los compuestos, incluyendo la manipulación de la muestra.</td>
</tr>
<tr>
<td><strong>Checo</strong></td>
<td>ACTAPilot</td>
<td>FPLC, separación, purificación, calibración, PMAC, AEO, HO, manipulación de la columna, evaluación del compuesto, flujo de 400-4000 ml/minuto.</td>
<td>Equipos de cromatografía separan y purifican, produciendo un sistema de protección antiviruses para el personal. Fluor le permite el trabajo de transferencia y manipulación de los compuestos, incluyendo la manipulación de la muestra.</td>
<td>Fluor: flujo de 50-1000 ml/minuto, Presión: 0-15 MPa.</td>
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</tr>
<tr>
<td><strong>Equipo</strong></td>
<td>ACTA READY</td>
<td>FPLC, separación, purificación, calibración, PMAC, AEO, HO, manipulación de la columna, evaluación del compuesto, flujo de 50-4000 ml/minuto.</td>
<td>Equipos de cromatografía separan y purifican, produciendo un sistema de protección antiviruses para el personal. Fluor le permite el trabajo de transferencia y manipulación de los compuestos, incluyendo la manipulación de la muestra.</td>
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</tr>
<tr>
<td><strong>Servicio</strong></td>
<td>Animeria</td>
<td>Animalaria, tratamientos, experimentación con animales.</td>
<td>Capacidad para el manejo, cría, manejo y mantención de animales en diferentes condiciones.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ORGANIZATIONAL STRUCTURE – MODERNA Foundation

Constitution of the Foundation

PROMOTING INSTITUTIONS
Government of Navarra, main political parties, universities, unions and employer’s confederation

MODERNA FOUNDATION

Institutional and Strategic Sphere

President of the Government of Navarra

BOARD OF THE FOUNDATION

Public and Institutional Field (15 members)

Business and Professional Field (15 members, rotational character)

PERMANENT COMMITTEE

Management of the Foundation

GENERAL DIRECTOR

COORDINATION TEAM

Advisory Committee
What does Fundación MODERNA offer?

1) Strategic focus on the long term challenges

2) An Stable System of Cooperation between Public and Private Economic Actors

3) Business Friendly Government
   • One-Stop Company Services
   • High level of autonomy

4) Cluster-organized economy:
   • Think Tank actions to design a “tailor made” business environment
   • Cooperative projects in benefit of the whole cluster
   • Guarantee specialized Human Resources

5) Special Finance Toolkit for MODERNA Projects
Financial Support for Business

**Entrepreneur MODERNA grant:**
Managed by CEIN.
-76 grants

**BEI-MODERNA credit line:**
250 M€ from the European Investment Bank for the advantaged financing of “MODERNA Businesses”

**MODERNA co-investment found:**
Mechanisms of co-investment involving public and private investors. Objective: attraction of external funding.

**MODERNA Investors forum:**
10 forums: 250 analyzed projects; 46 projects presented to the Forum; 150 participants. 10 reached agreements. Total financing amount: 1.7M€

**MODERNA bank guarantee for business financing:**
Public complement for funding projects
Thank you for your attention

Further information:
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info@modernanavarra.com