

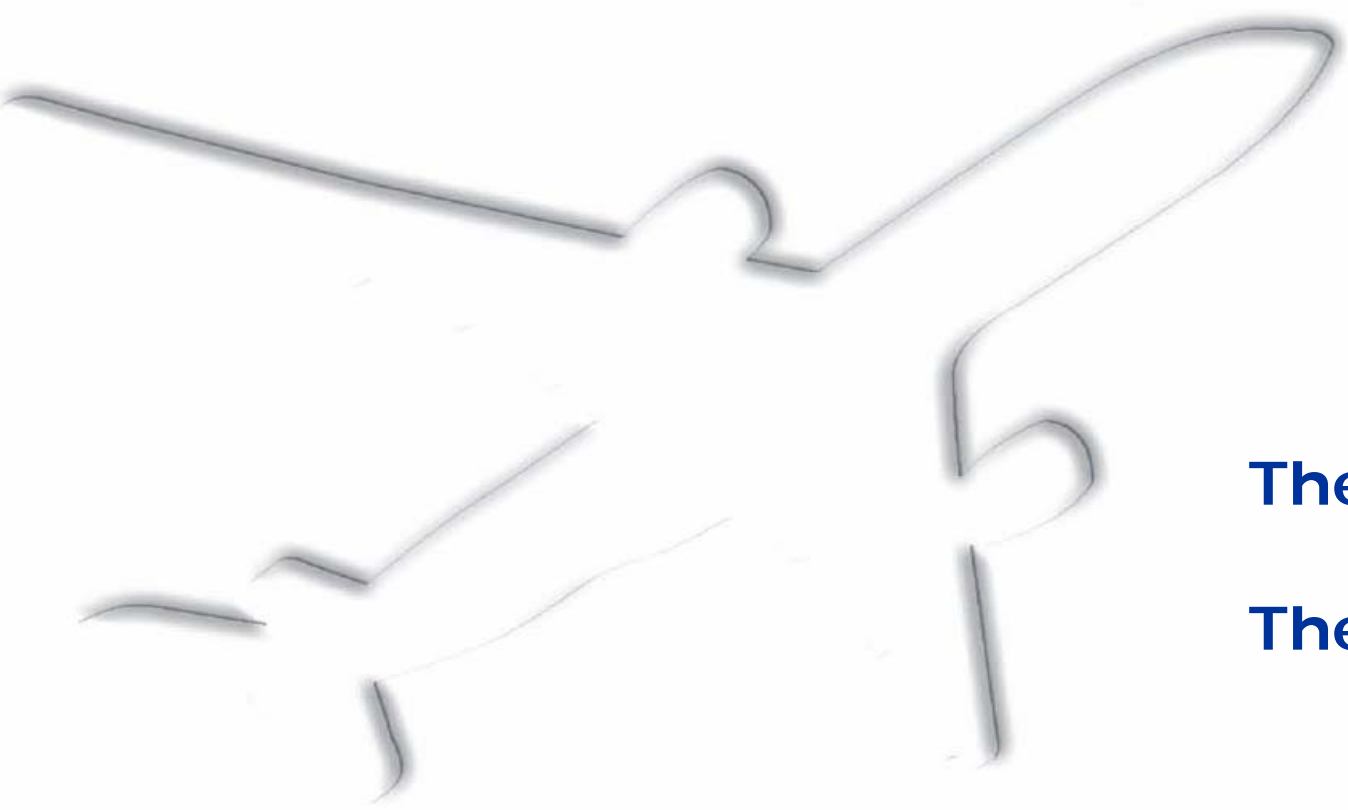


hegan 
basque aerospace cluster

History and Drivers

Dec.2016

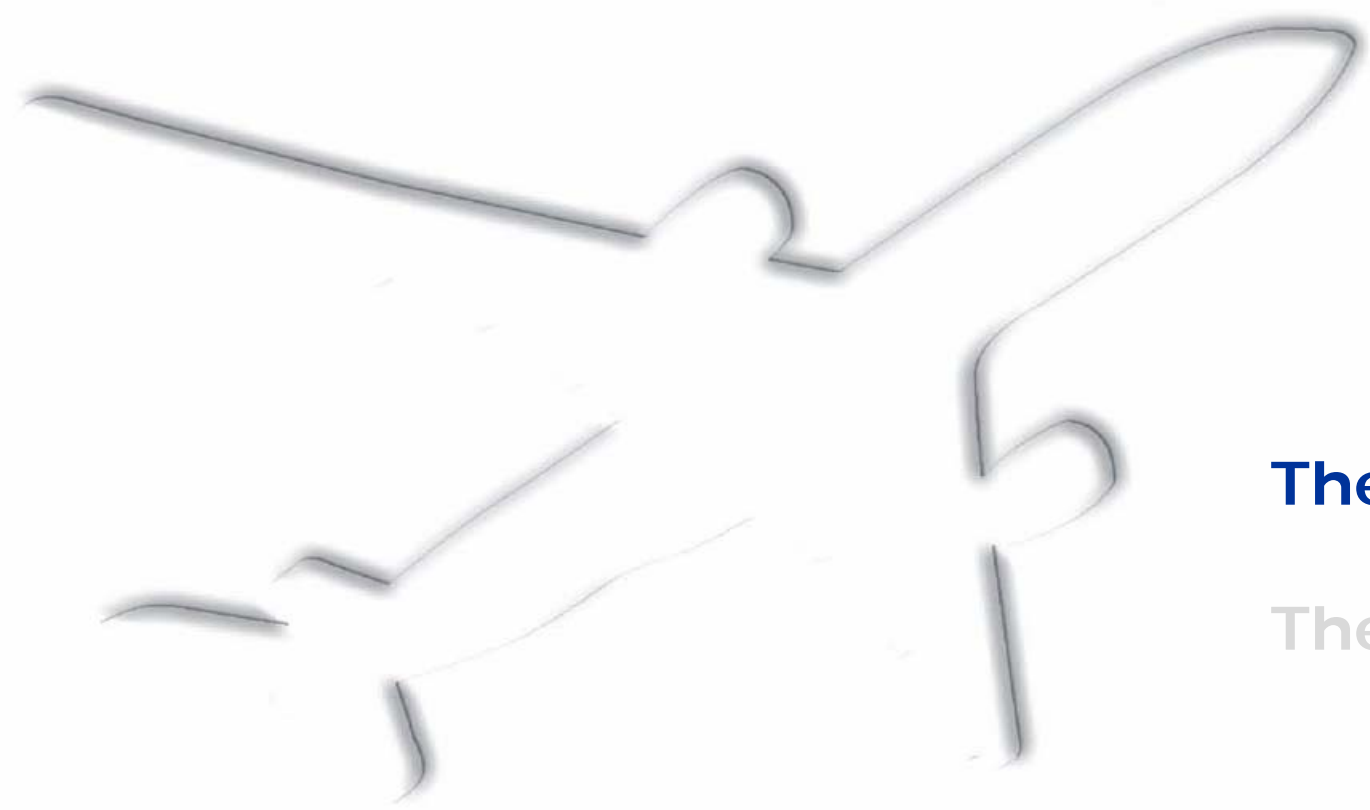




The Aerospace Cluster

The Cluster-Association





The Aerospace Cluster

The Cluster-Association





... made up by 52 Members who...

TOTAL HEGAN MEMBERS DIMENSION: IN 2015

Members aggregate **turnover** and **employment**

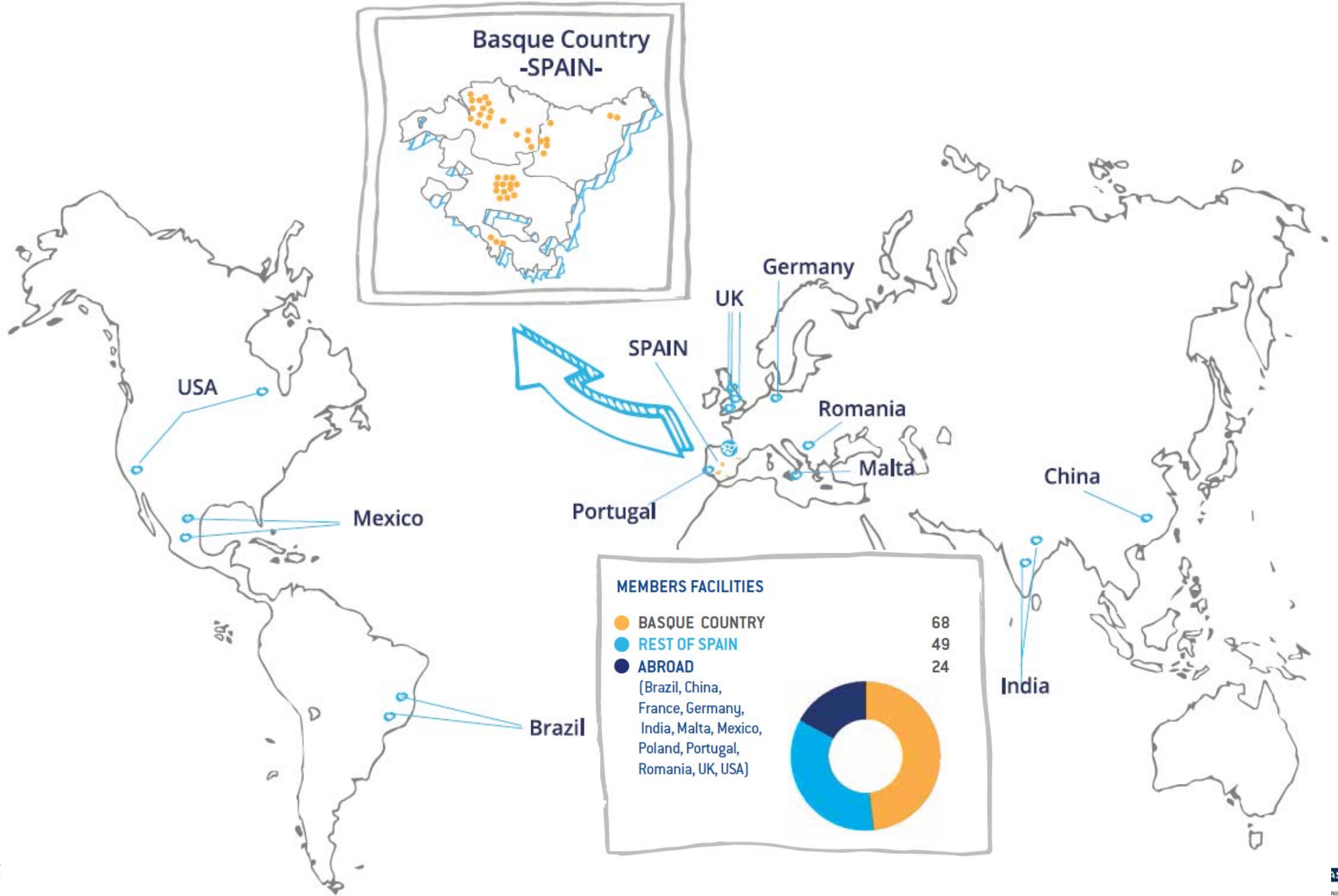
1,935 million € and **12,440 people**

(directly generated in all of their worldwide facilities)

2015 Geographical breakdown	Turnover (M€)	△ 2014	Employment	△ 2014
Basque Country	897	2.7%	4,225	-1.2%
Rest of Spain	861	23.5%	6,409	1.9%
Rest of the World	177	-3.6%	1,806	-8.8%
TOTAL	1,935	10.3%	12,440	-0.8%

2015	M€	% over Sales	Average % over Sales since 1993
MEMBERS R&D INVESTMENT	163	8.4%	15.5%
MEMBERS EXPORTS	1,226	63.4%	69.7%

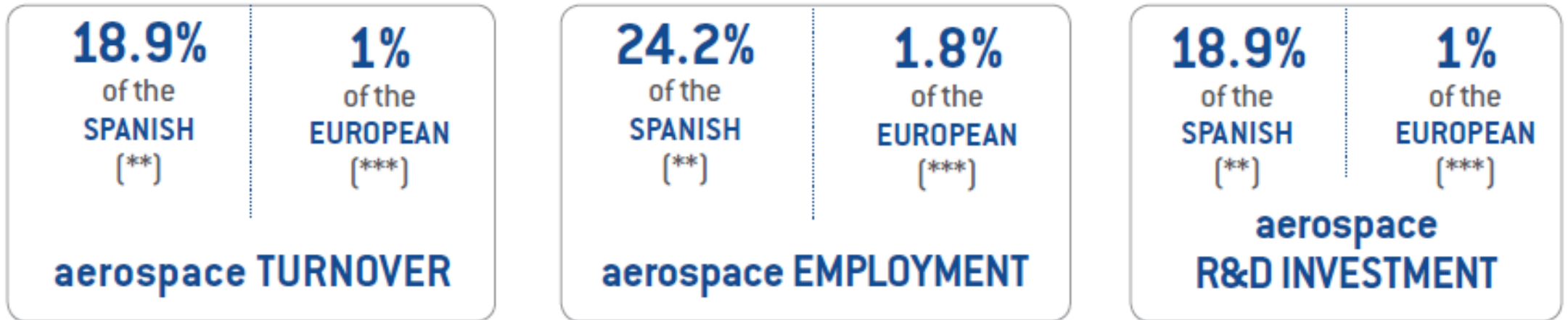
... at all of their facilities worldwide...



HEGAN MEMBERS DIMENSION: facilities in Basque Country



HEGAN MEMBERS DIMENSION: facilities in Spain



2014 Comparison: (*) EUSTAT 2014 (est.), (**) TEDAE 2014, (***) ASD 2014

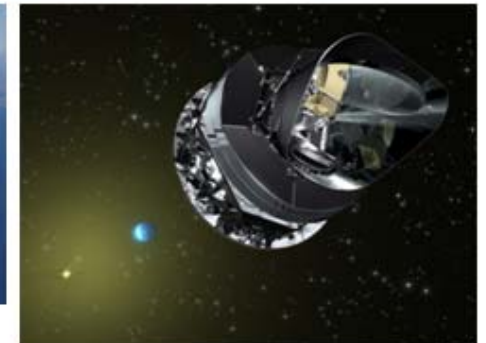
- AIRBUS **A350XWB** – Risk Partners: **AERNNOVA, ACITURRI, ALESTIS**
- AIRBUS **A380** – Risk Partners: **AERNNOVA, ACITURRI, ALESTIS, NOVALTI**
- AIRBUS **A400M** – Risk Partners: **ACITURRI, ALESTIS**
- BOEING **747-8I /F**: **AERNNOVA**
- BOMBARDIER **CSeries** – Risk Partner : **AERNNOVA**
- DASSAULT **Falcon 7X** – Risk Partners: **ACITURRI, ALESTIS**
- EMBRAER **ERJ 135/145** – Risk Partner : **AERNNOVA**
- EMBRAER **170/190** – Risk Partner: **AERNNOVA**
- EMBRAER **Legacy / Phenom** – Risk Partner: **ALESTIS**
- SIKORSKY **S92** – Risk Partner : **AERNNOVA**



- EPI **TP400** – Consortium Member: **ITP**
- EUROJET **EJ200** – Consortium Member: **ITP**
- MTRI **MTR390E** – Consortium Member: **ITP**
- PRATT & WHITNEY **GTF** – Risk Partner: **ITP**
- ROLLS ROYCE **Trent 500/900** – Risk Partner: **ITP**
- ROLLS ROYCE **Trent XWB** – Risk Partners: **ACITURRI, ITP**
- TURBOMECA (**all range**) – Exclusive transversal agreement for special gears: **DMP**



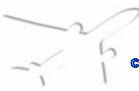
AIRBUS A320/330MRTT/400M, BOEING 747-8/LCF, BOMBARDIER CRJ700/900, CFM International CFM56, EADS-CASA C295, ESA, EUROFIGHTER TYPHOON, EUROCOPTER EC135, ROLLS-ROYCE Trent 700 / V2500 / BR725 / T56, MARTIN BAKER, MESSIER DOWTY, NASA...



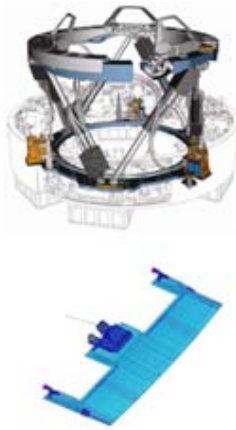
...with these Main Capabilities:

Design and Manufacturing of big equipped aerostructures (Sections, Wings, Stabilizers...)

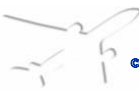
Design and Manufacturing of complete Engine Subsystems (LPTs)



- Conceptual Design
- Detail Engineering
- Integration and Assemblies
- Components
- Tooling and Production Systems
- Machining and Casting
- Treatments and Sheet Metal
- Composites
- Testing and Certification
- MRO
- Production Solutions...



...for Aerostructures, Engines, Systems & Equipment and Space



Quality: 100% EN9100 (since 2005) and NADCAP (since 2007) **Certified**

R&D: Experience at all levels (International, National and Local RD Programmes)

Strengths:

- **Multiclient – Multiproduct**
- **Complete Product Cycle :**



A strategic site in Europe...



- Atlantic Europe
-  Atlantic Arc
-  Atlantic Europe
-  Rest of Europe

Regla

Linea Ruta Pro

Medir la distancia entre dos puntos en el suelo

Longitud del mapa: 1.000,58 Kilómetros

Distancia en el suelo: 1.000,60

Dirección: 31,88 grados

Navegación con ratón

Guardar Borrar

Luques

Mis sitios

Tour de lugares destacados
 Asegúrate de que la capa de edificios 3D está activada.

Lugares temporales

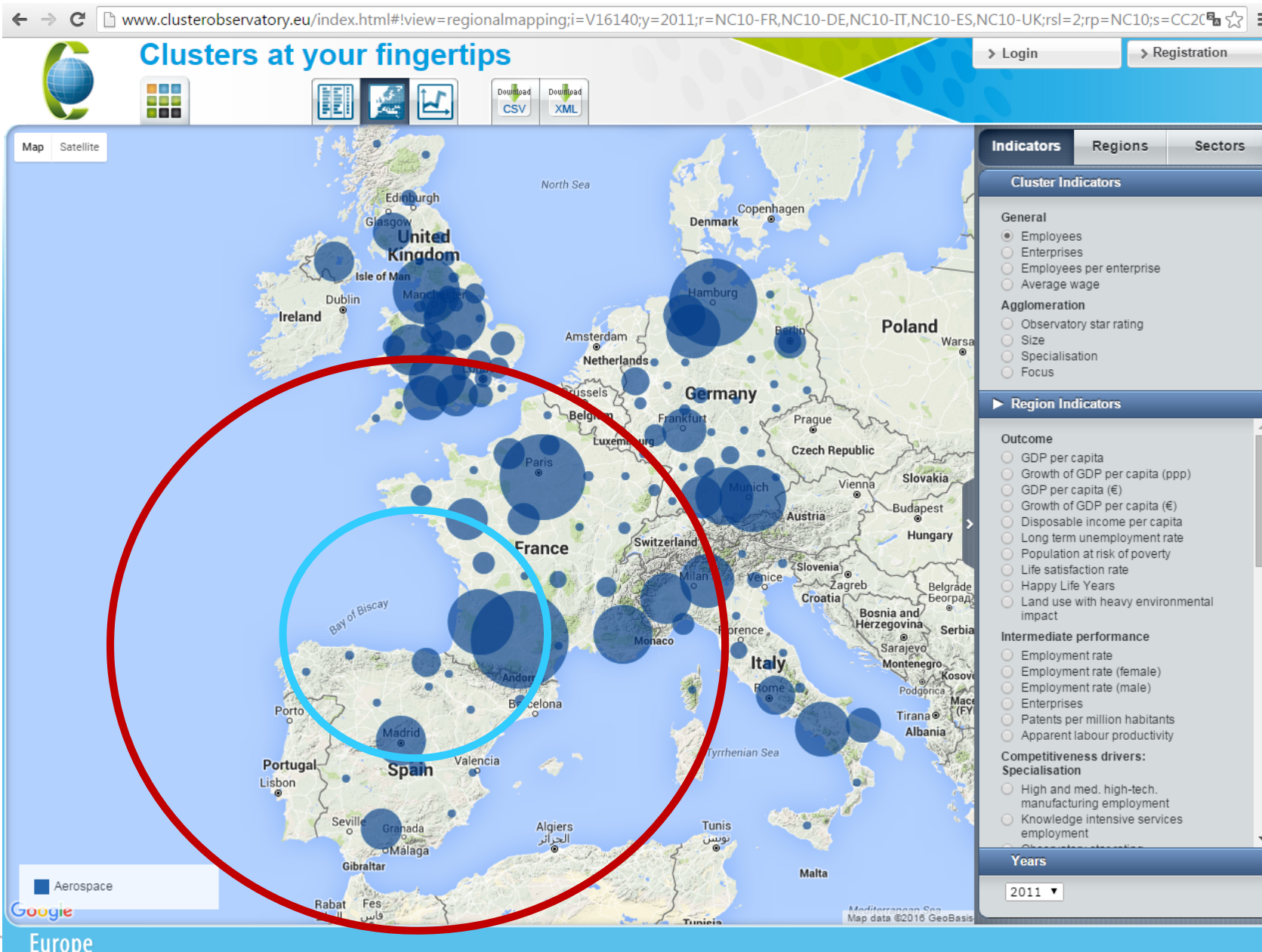
Capas

Galería de Earth >>

- Base de datos principal
- Fronteras y etiquetas
- Lugares
- Fotografías
- Carreteras
- Edificios 3D
- Océanos
- Tiempo
- Galería
- Concienciación global
- Más

40°41'09.82" N 15°51'14.25" E elev. 712 m alt. ojo 26





500 Kms radius:

- Aquitaine-Midi Pyrénées (*)
- Madrid Region & Northern Spain

1,000 Kms radius:

- Spain (**)
- France (***)
- Portugal
- Belgium
- UK

(*) Aerospace Valley

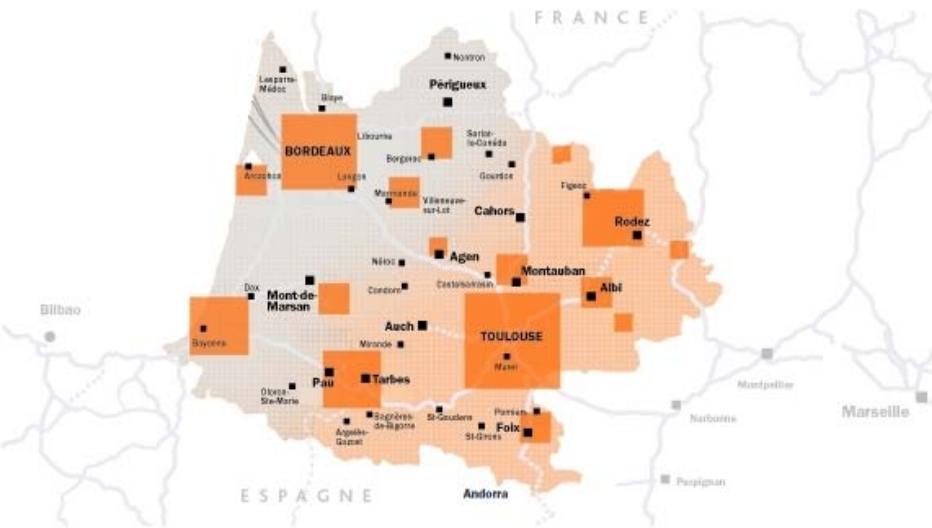
Midi-Pyrenees & Aquitaine regions builds up Europe's leading pool of jobs in the field of aeronautics, space and embedded systems:
130,000 industrial jobs
1,600 facilities
1/3 of France's workforce in aeronautics, and over 50% in the space sector
8,500 researchers
2 of France's 3 prestigious aeronautics and space engineering schools

(**) Spain

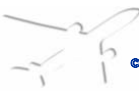
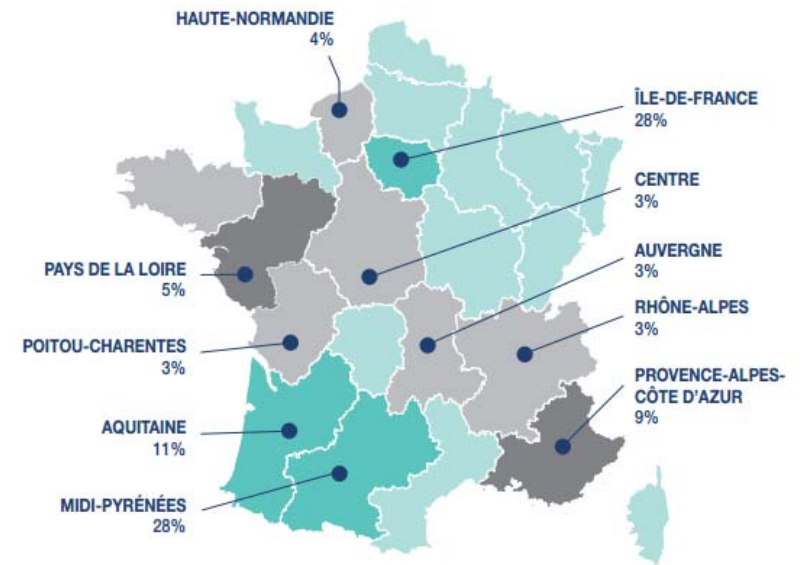
Spain ranks the 5th Aerospace industry in Europe and it is represented by The Spanish Association of Defense, Aeronautics and Space Technology Companies, TEDAE. This non-profit association was created in order to represent and promote its Members. In 2012, TEDAE directly employed more than 50,000 people and had a turnover of EUR 9 billion, 68% of which was allocated to export and 10% to R&D&i .

(***) France

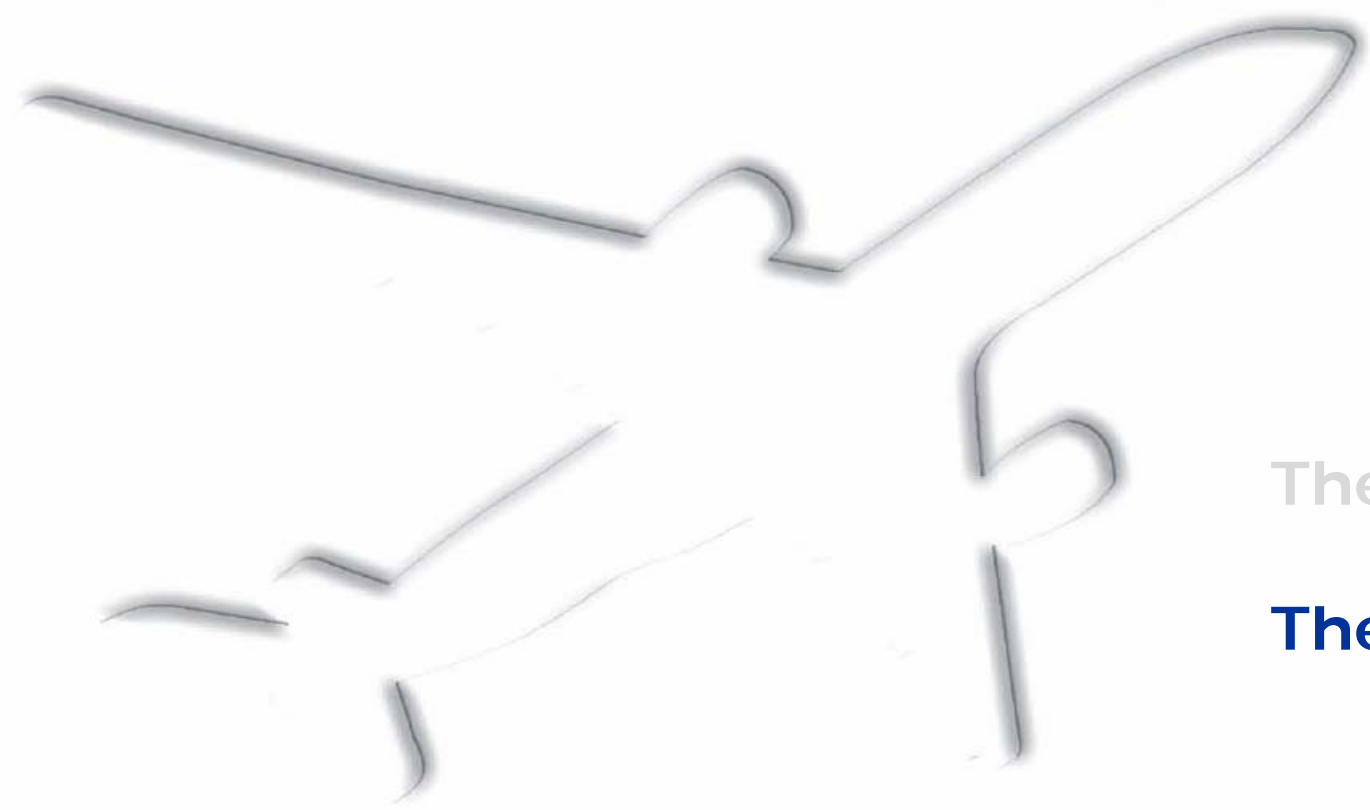
France is the European leader in Aerospace. In 2013 their sales rose to €47.9 bn (by 9% on a comparable basis) with exports inputting €30.4 bn (an 11.4% increase) equating to 79% of consolidated sales.



Gifas workforce in aerospace, defence and security. Breakdown by regions



- 1. Entrepreneurs** committed, generous and open-minded
- 2. Constant cooperation enterprises-institutions:** public support at risk, shared vision
- 3. Strategic** choice of market segments, partners and projects selection, and seeking long term relationships
- 4. Technology** and **Quality** Generation and investment



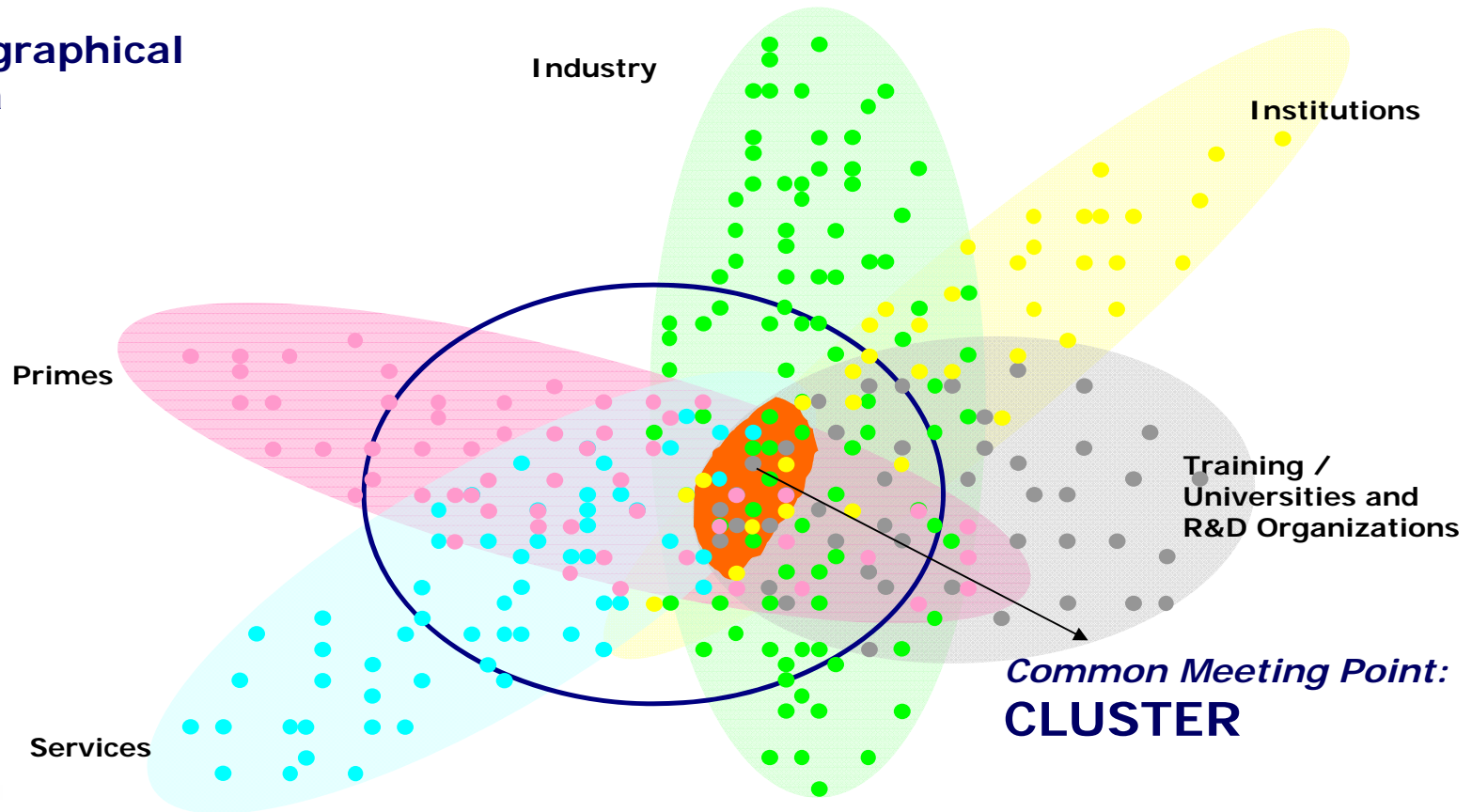
The Aerospace Cluster

The Cluster-Association



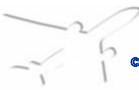
"Cluster is a group of interconnected companies and associated institutions, linked by activities, products, markets and common interests and complementary geographically close". **M.Porter.**

Geographical Area



The Basque System of Clusters is studied at **HARVARD BUSINESS SCHOOL**

HEGAN was the first Regional Aerospace Cluster founded in Spain in 1997



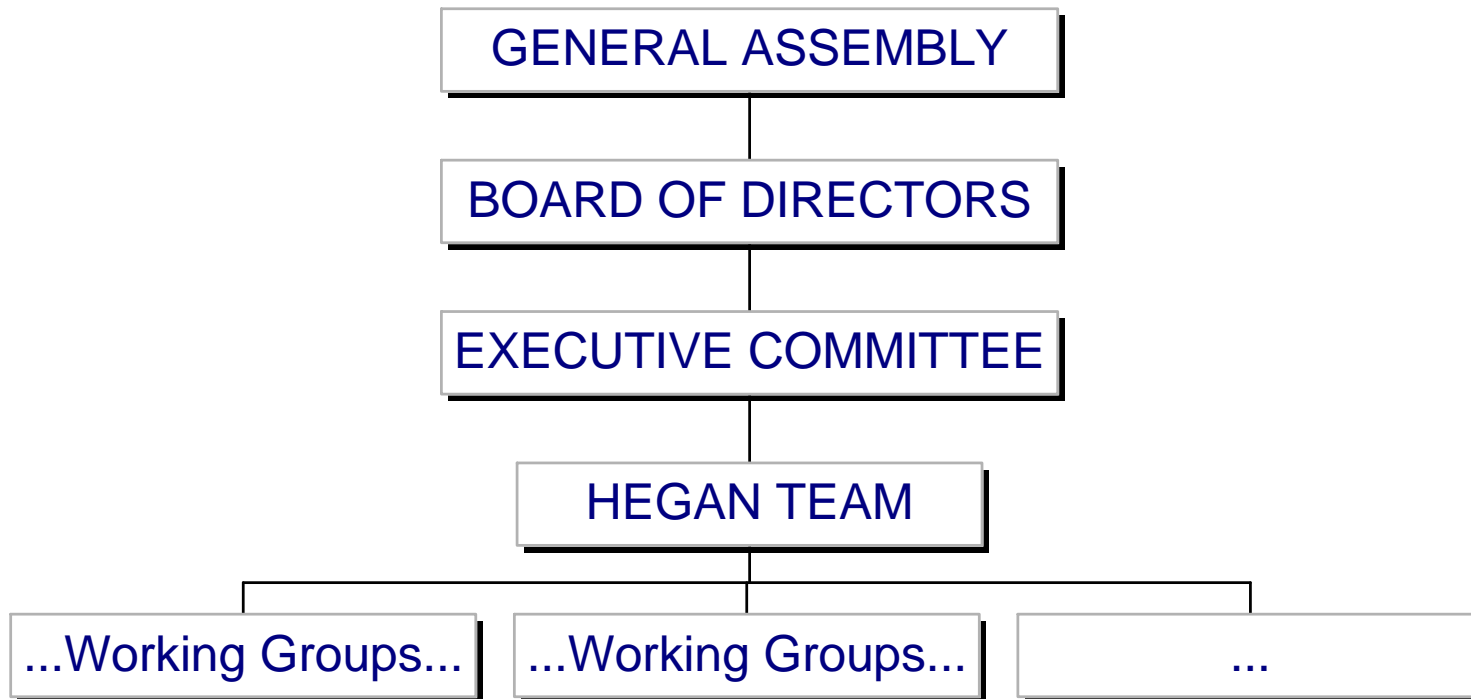
Mission:

HEGAN is a non-profit association **which groups together** the aerospace companies located in the Basque Country, whose aim is to **strength, promote and stimulate the aerospace sector.**

Vision:

Our vision is to become an international reference as a **cluster association** that provides **answers through cooperation** to the strategic challenges of the aerospace sector.

+ trust = + collaboration = + value



In the Committees and WGs participate representatives of:

- the Member **Companies**
- the Basque Government
- the Research and Training infrastructure

The flexible working groups are generated in accordance of **Members current needs** and of the **Strategic challenges** arisen in the Strategic Plan 2013-2016

❑ 1966

SENER starts working in the space sector: ESA projects

❑ 1983

SENER starts working in the aeronautical sector: EJ200

❑ 1988-1992

ITP and **GAMESA** (today **AERNNOVA**) and some aeronautical SMEs are founded

❑ 1992

The Basque Government commissioned **MONITOR** (Michael Porter) and **SENER** an study about the competitiveness of the Aeronautics Industry of the Basque Country

❑ 1993

The Technology Committee of the Aeronautics Cluster is created by **AERNNOVA**, **ITP**, **SENER**, Technology Centres, the **UPV** (Basque Country University), and the Industry Department of the Basque Country

❑ 1997

The Aeronautics Cluster of the Basque Country –**HEGAN**– and the **CTA** (Aeronautical Technologies Centre) are created with **AERNNOVA**, **ITP** and **SENER** as founder companies.

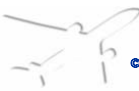
❑ 1998-2016

45 **Business Groups** and **SMEs**, 3 **R&D Entities** and 4 **Universities** have become members of the association



1. **Reinforce** the value chain
 2. Improve our **positioning** in the market
 3. **Representation & Communication**
 4. Give **Context** to take strategic decisions
 5. Generate, retain and attract **Talent**
 6. Specific **Training**
- ... always Generating collaboration culture

Identified as the sectorial challenges for which HEGAN could add value to its Members






“I do what you cannot do and you do what I cannot do. **Together** we can do **great things**”

Mother Teresa of Calcutta



Eskerrik asko!
¡Muchas gracias!
Thanks a lot!

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