## Orkestra – BASQUE INSTITUTE OF COMPETITIVENESS

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1 ORKESTRA – BASQUE INSTITUTE OF COMPETITIVENESS

Orkestra-Basque Institute of Competitiveness looks to promote the competitiveness of the Basque Country through action-oriented research to improve the wellbeing of its citizens. Orkestra is a:

- Specialist in regional competitiveness.
- Generator of applied knowledge aimed at decision making.
- International agent, node of the Basque Country in the world.

Agent of change through research

The Institute's activities are carried out within the framework of its differential value, which lies in doing transformative research (see Figure 1).

This working culture allows the Institute to:

- Work on real problems.
- Apply scientific knowledge and approaches.
- Work and co-create with Stakeholders.
- Generate practical knowledge for decision makers.

Impacts in 2019

Orkestra has developed 41 research projects carried out in partnership with 28 institutions and firms.

Its activity has generated changes in policies, discourses and decision making.

It has been an active agent of change in the society through the organisation of 8 events, more than 120 impacts in media, 16 blogs, 6 published newsletters and more than 32 thousand documents downloaded from its webpage.

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Footnote:

**Academic**

- **16 scientific articles, 24 books/reports** and **8 book chapters** have been published in diverse formats.
- New capacities have been developed through the direction of **15 doctoral theses.**
- There has been a total of **23 scientific presentations** as well as the participation in **23 events as invited experts.**

**International projection**

- The international presence is evident in the participation in **10 European projects** and in the relationship with international institutions (European Commission, OECD, Unido, ILO, OAS, ...).
- **The Basque model of competitiveness** has been projected by participating in 26 international forums and welcoming 10 international visitors who have carried out research at Orkestra.
2 PROJECTS

The Institute's activities are carried out within the framework of its strategic value, which is to act as a link between research excellence and its application in improving competitiveness, in collaboration with public administrations, firms and civil society. This process is promoted at Orkestra through the so-called Transformative Research Labs (see Figure 2). These labs are fluid spaces based on critical areas of the Basque Country's competitiveness that facilitate connections, collaborative work and promote transformative research processes.

Figure 2. Transformative Research Labs

Orkestra provides the society with knowledge, ideas and a drive for transformation. It works to transfer specialised knowledge to the agents of competitiveness and to generate capacities for development and wellbeing. To this end, it promotes research projects in the knowledge areas and influence of the Research Labs. Likewise, Orkestra carries out training activities that enable the transfer, comparison and application of the knowledge generated through the different research projects. The projects developed in 2019 are described below.

2.1 Wellbeing

The Wellbeing Lab conceptualises and measures key aspects related to people's wellbeing and accompanies the firm, the government and other agents in the territory, which influence and serve as an instrument for improvement.

During 2019 work has been carried out on the following 5 projects:

<table>
<thead>
<tr>
<th>Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complejidad demográfica y social: nuevos modelos de colaboración y empleabilidad</td>
</tr>
<tr>
<td>El impacto social de la Universidad de Deusto. Una mirada desde la innovación y el emprendimiento</td>
</tr>
<tr>
<td>Evaluación de políticas sociales Etorkizuna Eraikiz</td>
</tr>
<tr>
<td>Measuring what matters to EU Citizens: Social Progress in the European Regions</td>
</tr>
<tr>
<td>Valor compartido para el desarrollo de Bizkaia</td>
</tr>
</tbody>
</table>
2.2 Digital Economy

The digital revolution, in addition to being an accelerator of social transformation, has a direct impact on firms and the productive fabric. The Digital Economy Lab identifies and generates knowledge about the challenges faced by the Basque Country with regards to the correct development of the digital transformation in companies in particular, and in society in general.

During 2019 work has been carried out on the following 3 projects:

<table>
<thead>
<tr>
<th>Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESI Euskadi</td>
</tr>
<tr>
<td>Mercados y plataformas digitales</td>
</tr>
<tr>
<td>Transformando la pyme en digital</td>
</tr>
</tbody>
</table>

2.3 Enterprise

The Enterprise Lab studies business strategies and behaviours to understand and respond to the challenges faced by companies of different sizes and characteristics with respect to their competitiveness. It researches and works together with companies and other actors in the system to analyse these challenges and improve their solutions.

During 2019 work has been carried out on the following 7 projects:

<table>
<thead>
<tr>
<th>Projects</th>
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</thead>
<tbody>
<tr>
<td>As-Fabrik</td>
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<tr>
<td>Crecer +</td>
</tr>
<tr>
<td>Enraizando Araba</td>
</tr>
<tr>
<td>Estudio de eco-innovación entre empresas industriales vascas</td>
</tr>
<tr>
<td>Hacia un nuevo modelo de gestión empresarial que impulse el empleo sostenible y de calidad</td>
</tr>
<tr>
<td>Observatorio económico financiero de la empresa vasca</td>
</tr>
<tr>
<td>Segmentar – servitizar – escalar</td>
</tr>
</tbody>
</table>

2.4 Energy

The Energy Lab generates knowledge on energy challenges and their implications for the Basque Country and globally. It promotes this work with a constructive critical vision and contributes to energy debates with the aim of providing knowledge for decision-making by public and private actors. It is currently working on two challenges: the energy transition and its implications; and sustainable mobility.

During 2019 work has been carried out on the following 11 projects:

<table>
<thead>
<tr>
<th>Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Análisis de las microrredes en distintas partes del mundo</td>
</tr>
<tr>
<td>Estimación de las emisiones asociadas al flujo de materiales de la economía de la CAPV</td>
</tr>
</tbody>
</table>
2.5 Public Policy and Institutions

The Public Policies and Institutions Lab focuses on the system of actors and governance relations that underline the collective strategies promoted to achieve sustainable territorial competitiveness. It carries out research and works together with other actors in the system to analyse and improve institutions, governance and public policies.

During 2019 work has been carried out on the following 15 projects:

<table>
<thead>
<tr>
<th>Projects</th>
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</thead>
<tbody>
<tr>
<td>Bateratzen 2018-2019-2020</td>
</tr>
<tr>
<td>Basque Trade: creación de metodologías para la internacionalización</td>
</tr>
<tr>
<td>Bilbao Next Lab</td>
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<tr>
<td>Clusters 3</td>
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<tr>
<td>COHES3ION</td>
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<tr>
<td>Competitiv’eko</td>
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<tr>
<td>Competitiveness Observatory</td>
</tr>
<tr>
<td>Diagnóstico de Competitividad</td>
</tr>
<tr>
<td>Etorkizuna Eraikiz: Gobernanza &amp; Laborategia</td>
</tr>
<tr>
<td>Fortalecimiento de factores de competitividad para el desarrollo equilibrado en Bizkaia</td>
</tr>
<tr>
<td>FP como impulsor de estrategia RIS3: Navarra, Castilla la Mancha &amp; La Rioja</td>
</tr>
<tr>
<td>Hezkuntza Industria (HEZ-IN)</td>
</tr>
<tr>
<td>Manumix</td>
</tr>
<tr>
<td>Observatorio FP - FP DUAL en España</td>
</tr>
<tr>
<td>RIS3 vivo Euskadi</td>
</tr>
</tbody>
</table>

2.6 Training Projects

The training projects seek to promote collaboration with the University of Deusto and provide value to the Institute's stakeholders by sharing and socialising the knowledge generated.

During 2019, training activities were especially focused on the programmes of the University of Deusto, mainly linked to Deusto Business School and Deusto International Research School (DIRS). In addition to teaching in different degrees promoted by the university, the institute has collaborated in the following programmes: PhD programmes, MUCI, MUIB, and MEDEA.
Likewise, other programmes have been taught at IESDE School of Management (Mexico), Louvain School of Management (Belgium), University of British Columbia (Canada), University of the Basque Country, University of Adger (Norway), Mondragón University, Universidad de Castilla la Mancha, and Fundación Universitaria Sanitas - Keralty, among others.

Finally, Orkestra promotes customised training programmes on competitiveness that enable the Basque Country's competitiveness model to be enhanced (such as for example, study visits).
3 SCIENTIFIC REPORT

Orkestra, through its projects, generates scientific knowledge on the critical factors of competitiveness that affect the Basque Country in areas of Public Policy, Enterprise, Wellbeing or sectors such as Energy or the Digital Economy.

Orkestra is on the frontier of knowledge; it generates knowledge about the determinants of territorial competitiveness; it contrasts them in academia and seeks to accompany the training of new researchers.

3.1 Publications

Publications during 2019 include 16 scientific articles published in journals, 24 books/reports and 8 book chapters.

3.1.1 Scientific articles published in journals


### 3.1.2 Books / reports


  


  


3.1.3 Book chapters


### 3.2 Academic communications

During 2019 the Institute’s research team presented 23 papers at academic conferences:

<table>
<thead>
<tr>
<th>Date</th>
<th>Author/ Authors</th>
<th>Title</th>
<th>Conference</th>
</tr>
</thead>
<tbody>
<tr>
<td>15/04/2019</td>
<td>Madeline Smith, James Wilson, Emily Wise</td>
<td>A re-cap of the cluster programme framework of effects</td>
<td>TCI Cluster Evaluation Working Group Workshop, Malmo, Sweden</td>
</tr>
<tr>
<td>13/05/2019</td>
<td>Ibon Gil de San Vicente, Bart Kamp</td>
<td>Dealing with financial implications of advanced services: Recurring to alternative financial entities</td>
<td>The Spring Servitization Conference 2019 (SSC 2019). Prize for the best paper in its category, Linköping, Sweden</td>
</tr>
<tr>
<td>14/05/2019</td>
<td>James Wilson</td>
<td>Cluster Evaluation: Key to Unlocking Learning and Improvement</td>
<td>EU Cluster Conference, Bucharest, Romania</td>
</tr>
<tr>
<td>15/05/2019</td>
<td>Ram Kamath, Frans Hermans, Aitziber Elola</td>
<td>From Bioclusters to the Bioeconomy: Lessons from the sustainability transition of the pulp and paper cluster in the Basque Country</td>
<td>Rethinking Clusters. II International Workshop on Cluster Research, Padua, Italy</td>
</tr>
<tr>
<td>04/06/2019</td>
<td>Klaus North, Nekane Aramburu, Oswaldo Lorenz, Agustín Zubillaga</td>
<td>Digital maturity and growth of SMEs: a survey of firms in the Basque Country (Spain)</td>
<td>IFKAD 2019 Conference Matera, Italy</td>
</tr>
<tr>
<td>Date</td>
<td>Author/ Authors</td>
<td>Title</td>
<td>Conference</td>
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</tr>
<tr>
<td>21/06/2019</td>
<td>Arantza Zubiaurre, Eduardo Sisti, Jabier Retegi</td>
<td>Homegrown MNEs and cluster evolution: explorations from the Basque machine-tool case</td>
<td>Workshop Multinational enterprises in regional clusters - A promising nexus? Bremen, Germany</td>
</tr>
<tr>
<td>11/07/2019</td>
<td>Ainhoa Arrona, James Karlsen, Miren Larrea</td>
<td>Policy learning in regions: a shared endeavor for policy makers and researchers</td>
<td>EU Regional and innovation policies and peripheral regions. Final Conference, Santiago de Compostela</td>
</tr>
<tr>
<td>08/10/2019</td>
<td>Bart Kamp</td>
<td>Cluster dynamics as a mediating force for Industry 4.0's potential to backshore manufacturing activities</td>
<td>TCI 2019, Antwerp, Belgium</td>
</tr>
<tr>
<td>14/11/2019</td>
<td>James Wilson, Madeline Smith, Emily Wise</td>
<td>Taking it to the next level: Understanding system level results in clusters – the case of Vinnväx</td>
<td>Regional Studies Association Winter Conference, London, United Kingdom</td>
</tr>
<tr>
<td>21/11/2019</td>
<td>Francisco Carrillo-Carrillo, Henar Alcalde-Heras</td>
<td>The role of T-KiBS on the innovation performance of manufacturing firms: The case of Mexico</td>
<td>8th International Conference on Business Servitization, Donostia-San Sebastián</td>
</tr>
<tr>
<td>21/11/2019</td>
<td>Bart Kamp, Ibon Gil de San Vicente</td>
<td>Alternative financial entities as allies for advanced services implementation: lessons from B2B cases</td>
<td>8th International Conference on Business Servitization, Donostia-San Sebastián</td>
</tr>
<tr>
<td>21/11/2019</td>
<td>Bart Kamp</td>
<td>Applying a Transaction Cost Economics perspective to assess the commercial chances of machine tool builders to supply advanced services among their industrial clients</td>
<td>8th International Conference on Business Servitization, Donostia-San Sebastián</td>
</tr>
<tr>
<td>Date</td>
<td>Author/ Authors</td>
<td>Title</td>
<td>Conference</td>
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<tr>
<td>21/11/2019</td>
<td>Bart Kamp, Jabier Retegui</td>
<td>The relevance of servitization for ecoinnovation activities among manufacturing firms</td>
<td>8th International Conference on Business Servitization, Donostia-San Sebastián</td>
</tr>
<tr>
<td>21/11/2019</td>
<td>Macarena Larrea Basterra, Maider Bilbao Ozamiz</td>
<td>New business models in the electricity sector in the framework of the energy transition towards a low carbon economy</td>
<td>8th International Conference on Business Servitization, Donostia-San Sebastián</td>
</tr>
<tr>
<td>21/11/2019</td>
<td>Eduardo Sisti, Miren Estensoro, Miren Larrea</td>
<td>Servitization in manufacturing SMEs: exploring its links with Industry 4.0 implementation drivers</td>
<td>8th International Conference on Business Servitization, Donostia-San Sebastián</td>
</tr>
<tr>
<td>21/11/2019</td>
<td>Eduardo Sisti, Arantza Zubiaurre, Bart Kamp</td>
<td>Comparative assessment of the links between KIBS and manufacturing sectors in two Spanish regions: Cataluña and Basque Country</td>
<td>8th International Conference on Business Servitization, Donostia-San Sebastián</td>
</tr>
<tr>
<td>28/11/2019</td>
<td>Mari Jose Aranguren, Patricia Canto, James Wilson</td>
<td>Transformative academic institutions: A model for understanding and measuring their regional impacts</td>
<td>Investigating the Societal Impact of Research ECOOM Days, Brussels, Belgium</td>
</tr>
<tr>
<td>12/12/2019</td>
<td>Jaime Menéndez, Jorge Fernández</td>
<td>La red eléctrica inteligente como columna vertebral de la transición energética: nuevos agentes y servicio, elementos, inversiones y regulación</td>
<td>Congreso de Smart Grids, Madrid</td>
</tr>
</tbody>
</table>

### 3.3 Doctoral Theses

#### 3.3.1 Tutoring of doctoral theses

- **Albizu, Mikel**: Researcher at Orkestra. Thesis codirected by Susana Franco and Miren Estensoro. Title: Factores que impulsan el empleo desde el ámbito local.
- **Amunarriz, Gerardo**: Thesis directed by Henar Alcalde. Title: Foundation of the categories for organizational innovation processes to change the care model of a long term care environment.
- **Artetxe, Txaber**: Thesis directed by Aitziber Elola. Title: Clusters as drivers of firm internationalization.
- **Carrillo, Francisco**: Thesis directed by Henar Alcalde. Title: Assessment of modes of innovation: A Mexican regional experience.
- **Gil de San Vicente, Ibon**: Deputy General Director at Orkestra. Thesis directed by Henar Alcalde. Title: Assessment and solutions regarding financial constraints in the wake of advanced industrial servitization practices.
3.3.2 Tutoring of defended doctoral theses

- On 11<sup>th</sup> March Ainhoa Arrona defended her thesis titled “Research and multi-actor collaboration in territorial development policymaking. Insights for an increasingly complex policy field in an increasingly complex policy world”, whose director was the Research Director at Orkestra, James Wilson.
- On 13<sup>th</sup> September Patricia Canto defended her thesis titled “Research Institutes as Change Agents in Territorial Development. An Analytical Framework on Responsible Research Communication”, whose director was Miren Larrea, Senior Researcher at Orkestra.

In addition to the tutoring of the above theses, Orkestra's research staff have participated in different thesis tribunals in collaboration with other universities.
4 A SHARED PROJECT

4.1 A project made up of people

Orkestra has a **team of people** with specialised and advanced technical knowledge related to Orkestra's knowledge and transversal lines. They are professionals with **values such as commitment to the transformation of the territory, institutional loyalty, the contribution of critical vision and flexibility to direct their activity towards the challenges of competitiveness.**

The people who made up Orkestra as of the 31st December 2019 are: Mikel Albizu Echevarría, María del Henar Alcalde Heras (PhD), Roberto Álvaro Hermana (PhD), Mari Jose Aranguren Querejeta (PhD), Ainhoa Arrona Etxaniz (PhD), Amaia Azpiazu Anduaga, Aitziber Barrio Barañano, Megan Leanne Briggs, Martha Patricia Canto Farachala (PhD), Mariana Carnelli Garbarino, Idoia Egaña Uranga, Aitziber Elola Ceberio (PhD), Miren Estensoro García (PhD), Jorge Fernández Gómez (PhD), Susana Franco Rodríguez (PhD), Juan Pablo Gamboa Navarro (PhD), Ibon Gil de San Vicente Izaga, Bartholomeus Petrus Kamp (PhD), Ainhoa Lafuente Alonso, Lorea Larrabeiti Araukua, Miren Larrea Aranguren (PhD), Macarena Larrea Basterra (PhD), Usue Lorenz Erice, Edurne Magro Montero (PhD), Jaime Menéndez Sánchez, Noel Martín Muñiz Rodríguez (PhD), Asier Murciego Alonso, Mikel Navarro Arancegui (PhD), Mercedes Oleaga Páramo, Elsa Patús Echezarreta, Carla Peletier Espiga, Maite Reizabal Arregui, Eduardo Sisti (PhD), Etorne Ugalde, Carme Vallverdu Vergé, Raquel Vázquez Salazar, James Ralph Wilson (PhD), Agustín Zubillaga Rego (PhD), and Amaia Zumeaga Hurtado.

The collaborating staff and associated researchers who support different lines of research at the Institute are: Nagore Ardanza, Pablo Costamagna (PhD), James Karlsen (PhD), Juan Carlos Malet, Kevin Morgan (PhD), Francisco Olarte (PhD), and Jabier Retegui (PhD).

The following people also collaborated actively with Orkestra in 2019: Maider Bilbao, Francisco Carrillo, Ana Carolina Iga, Martin Jacobs, Javier Porrua, and Angélica María Rodríguez García.
4.2 Partners

Since its creation, the Institute has been a success example of public-private cooperation. It has the support of public and private entities that provide stability to the project. Thus, the following public administrations, companies and institutions actively participate in Orkestra and collaborate in a fundamental way in its development:

These entities, in addition to participating in Orkestra’s governing bodies, promote areas of research and specific projects together with the Institute.

4.3 Other collaborations

Orkestra is a project that aims to work with relevant stakeholders for the economic development of the Basque Country and to generate international networks. In this way, Orkestra carries out projects with various entities, other than the Collaborating Entities, which facilitate the deployment of activities and projects. During 2019, projects were carried out with the following entities:

- Basque Government – Dpt. of Employment
- Basque Trade
- Bidasoa Activa
- Bilbao City Council
- European Commission
- European Union-FEDER
- European Union -UIA
- Fundación Bankia
- Fundación BBK
- Fundación La Caixa
- Gobierno de Castilla la Mancha
- Gobierno de la Rioja
- Ihobe
- Instituto Vasco de Finanzas
- University of Deusto
Internationally, the Institute has established collaborations with 40 universities and research institutes, including the Institute for Strategy and Competitiveness at Harvard University, the University of British Columbia (UBC) and Johns Hopkins University, among others. It also participates in 10 international networks, such as the Association of Universities at the Service of the Society of Jesus in Latin America (Ausjal), Action Research+ and The Competitiveness Institute (TCI). It also collaborates with international institutions such as the Inter-American Development Bank (IDB), the Organisation for Economic Cooperation and Development (OECD) and the International Labour Organization (ILO).