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THE CONTRIBUTION OF THE EUSKADI 2030 SCIENCE, TECHNOLOGY AND INNOVATION PLAN TO THE SDGs

EXECUTIVE SUMMARY

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Executive summary

Sustainability has become a priority for most government agendas internationally. Innovation plays a key role in the transition toward sustainable development. As a result, the European Commission is helping regions embrace this perspective of innovation for sustainability through the reorientation of Smart Specialisation Strategies (S3) and their alignment with the Sustainable Development Goals (SDGs).

Along these lines, one of the main new features of the Basque Country Science, Technology and Innovation Plan 2030 (PCTI 2030) with respect to the previous plan is the specification of five Social Challenges aligned with the SDGs as part of the 2030 Vision.

Social challenge	SDG
ENERGY AND CLIMATE CHANGE	7. Affordable and clean energy
	13. Climate action
	11. Sustainable cities and communities
HEALTH	3. Health and wellbeing
EMPLOYMENT	8. Decent work and economic growth
DIGITAL TRANSFORMATION	9. Industry, innovation and infrastructure
GENDER EQUALITY	5. Gender equality

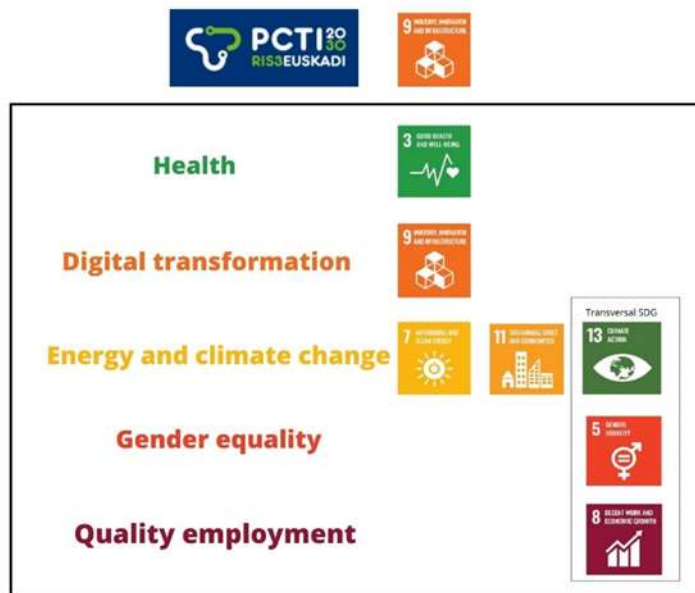
This report proposes a new methodological approach to measure the contribution of the Science, Technology, and Innovation Plan (STIP) 2030 to the Sustainable Development Goals (SDGs). Using the developed methodology, the report evaluates the plan's current contribution to the SDGs, which are organised around social challenges.

Proposed methodological framework

The literature review enables us to distinguish between two types of SDGs:

- Those related to systems for providing essential goods and services, such as health; clean and affordable energy; sustainable cities and communities; and industry, innovation, and infrastructure.
- Those that guide the direction of R&D and innovation and act as cross-sectional elements, including gender equality, decent work and economic growth, and climate action.

Furthermore, the developed framework places greater emphasis on SDG 9 (industry, innovation and infrastructure), as it broadly covers the goals and objectives related to innovation.



There are two principal methodological approaches for assessing the contribution of R&D&I to the SDGs:

1. Linking smart specialisation areas to specific SDGs,
2. Developing a scorecard of standardised R&D&I indicators based on international statistics and correlating them with the SDGs.

We have opted to prioritise the second approach using R&D&I indicators because it enables an analysis of the contribution of science, technology, and innovation to the SDGs—not limited solely to the domains associated with S3—and allows for comparative analysis with other regions. Therefore, we have selected indicators for both R&D&I investment and efforts (input) as well as outputs to measure the contribution of the STIP 2030 to each social challenge and SDG, while considering a number of limitations:

- The complexity of assigning indicators to SDGs when they often apply to multiple goals because of their inherent interconnectedness.
- The absence of a one-to-one correspondence between the social challenges addressed by the STIP 2030 and the SDGs.
- The scarcity of specific references to R&D&I within the UN SDGs' framework of goals and indicators.
- The difficulty of mapping scientific disciplines (a parameter by which some potential indicators are broken down) to the SDGs.

Key findings

Overall, the **contribution of R&D&I to the SDGs** is positive in terms of both input and output measures. However, there are areas that require improvement, such as patent performance per million inhabitants, business investments in innovation, and the proportion of women in STEM fields.

Regarding the social challenges outlined in the STIP 2030, a positive impact is evident across all domains. The contribution is **particularly notable in the area of energy and climate change**, which demonstrates combined strengths across the most pertinent indicators.

- *Health social challenge:* Output indicators are prominent in this domain. Noteworthy are the positive trends in business R&D spending (although it is less than the spending dedicated to other social challenges), scientific output as measured by publications within this field, and health-related patents.
- *Digital transformation social challenge:* The Basque Country exhibits strengths in business R&D investment and the returns from European funding programs. However, the performance in obtaining patents in this domain represents an area for improvement.
- *Energy and climate change social challenge:* The findings indicate substantial investment in R&D and strong output measures, particularly regarding specialisation compared to Europe in both scientific publications and green patents, as well as active participation in the Horizon Europe programme. Notable successes and progress are primarily concentrated in the energy sector.
- *Gender equality social challenge:* Strengths include the positive trend in the representation of women among R&D personnel, gender parity achieved in the university system, and a proportion of women in STEM subjects that exceeds the European average. However, a gender gap persists in both the representation within R&D personnel and STEM participation, as well as in female leadership of European projects.
- *Quality employment social challenge:* The report highlights the evolution and positioning of the Basque Country in knowledge-intensive employment as a significant contribution to SDG 8, which focuses on economic growth and quality employment. However, the areas identified for improvement include high and medium-tech product exports and trademark applications.

Given that this study is experimental and represents an initial effort to measure the contribution to the SDGs, it also sheds light on the applied methodology:

- There is a **need to enhance the measurement of contributions in certain areas**, and it is essential to investigate strategies for collecting such data over the medium to long term. For instance, regarding public funding applications for R&D&I, we can work towards a more comprehensive measurement system as we improve the collection of information about the specific social challenges or SDGs that these funds address.
- The study focuses on measuring the social challenges addressed by the STIP 2030. However, the plan also highlights talent as a critical element, emerging as a vital challenge for the region's future competitiveness. Thus, subsequent iterations of this assessment could consider **talent as a sixth social challenge** addressed by the STIP 2030, allowing for an exploration of its contribution to SDG 4 Quality Education, given its direct links to talent training and development.

- Finally, it is noteworthy that stakeholders within the Basque Science, Technology, and Innovation Network are progressing in designing methodologies to measure their contributions to the SDGs. This effort is both positive and complementary to the methodological groundwork laid by this study. Moving forward, it will be crucial to **develop shared measurement standards** to enable more cohesive data integration in the future.



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