Deliverable

5.8

Business & Exploitation Plan

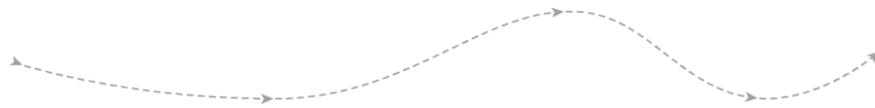| Author(s)	Alex Esteban
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1. Introduction

1.1 Purpose of the document

This document comprises the Business and Exploitation Plan of the COMPASS (710543) project. It details the project outcomes, a SWOT analysis to describe the weaknesses and strengths, opportunities and threats of these resources and the different exploitation approaches envisioned to ensure the sustainability of the generated results.

The document first defines the project outcomes that have been generated with a main focus on the Responsible Innovation (RI) Self-check tool for industry, and the Roadmaps tailored to the three key innovative sectors of Cybersecurity, Nanotechnology and Healthcare. The Self-check tool allows Small and medium-sized enterprises (SMEs) to track their capabilities, performance, strengths and weaknesses in relation to RI. The roadmaps allow the integration of RI in R&D&I processes and outcomes, whereas.

Other outcomes from the project include a co-creation method kit for the development of sectorial roadmaps, bottom-up case studies to demonstrate how RI can be successfully applied in industry and specific publications on the project results.

In addition, the SWOT analysis conducted allows identifying areas of strengths and opportunities, as well as areas where further development and attention is required.

Finally, the document details a series of approaches to exploit the results generated in the framework of the project and a timeline for implementation. These approaches comprise the inclusion of the experiences and outcomes in the teaching programmes of the academic partners of the consortium, the generation of publications that show the results and their fit in RI initiatives applied to industry, collaborations with other projects focused on RI and the integration of elements from COMPASS (710543) in other online platforms.

The strategy developed in the document outlines the key approaches to maintain the sustainability of the generated resources to ensure that a broad community of industry stakeholders benefit from their engagement in RI actions.

1.2 About the project

The COMPASS (710543) project is one of the 89 identified EU-funded projects focusing on the

idea of "Responsible Research and Innovation" (RRI) (D.1.4). The project investigates whether RRI can improve research, development and innovation in industry. Possible improvements are being investigated both in terms of processes and in terms of positive outcomes for industry and society.

The main objectives of the project have been divided in three overarching goals: 1) providing evidence for better uptake of RRI in industrial R&D&I; (2) Fostering cross-sector, multi-stakeholder collaboration in key innovation fields for improved RI processes and outcomes; and 3) Promoting responsible sustainable R&D&I governance.

The ultimate goals of COMPASS (710543) comprise the demonstration of the feasibility and benefits of RI in these high innovative fields, ensure the relevance of RI for SMEs and enhance their participation in EU R&D&I, and contribute to build awareness among SMEs and stakeholders for better uptake of the RI approach.

2. Project outcomes

The main outcome of the COMPASS project (710543) is the Responsible Innovation Compass (https://innovation-compass.eu/).. This platform is the main virtual access point to COMPASS (710543) and its tools and resources, including a self-check tool for small and medium-sized enterprises (SMEs), a co-creation method kit for the development of roadmaps, as well as additional targeted evidence and training focusing on benefits, incentives and business models for Responsible Innovation in the industrial context (D3.3).

2.1 RI Self-check tool

This tool is available online and questionnaire-based (https://innovation-compass.eu/self-check/). It enables SMEs to assess their strengths and areas of improvement and benchmark these against peers. Specifically, it aims to help SMEs to understand RI and its key elements, to find where their individual strengths and weaknesses are with regard to RI implementation, and to help them prioritise which aspects of RI are critical to improve on in each case. D3.1 describes the tool in all detail.

This tool has been pilot-tested in three main target groups: European SMEs, Business Support Organisations (BSOs) and RI sectorial experts.

The self-check tool helps you to determine to what extent your company practices already align with responsible innovation principles, what you can do to make your company's innovation processes and outcomes even more responsible, and how you compare to other companies.

It is a learning instrument that guides a company through the most important responsible innovation practices, and helps you identify company strengths and areas of opportunity. Each question asks about a particular company practice and gives you good practice examples as answer options.

2.2 Sectorial Roadmaps

The COMPASS project (710543) has developed in situ labs where SMEs from the three innovative sectors of Cybersecurity, Nanotechnology and Healthcare have been able to explore RI jointly with the stakeholders relevant to their innovation field. These labs have allowed the co-creation of a clear vision of RRI in each innovation field and the creation of strategic roadmaps, focused on three important essentials: context-appropriateness, shared responsibility, and impact-orientation (D2.2-D2.4).

The sectorial roadmaps generated (https://innovation-compass.eu/roadmaps/) have been pilot-tested and assessed by a selection of SMES, who either took part in their co-creation in the RI labs or showed particular interest in the responsible development of a particular technology, product or service. Participating SMEs have benefited from participating by receiving free consultancy on integrating state-of-the-art RI in their business.

The final roadmaps have been tailored for SMEs. They point out sector-specific milestones and action points for companies to focus on in their pursuit of responsible innovation. The roadmaps show the key stages of the development process and which responsible innovation aspects should be considered at these points.

2.3 Responsible Innovation Method Kit

As a result of the development of the RI laboratories and the pilot-testing of the different sectorial

route maps, a kit of RI methods has been generated. This method kit (https://innovation-compass.eu/compass-crash-course/) isintended to provide BSOs and SMEs with the methodologies and tools that may be necessary to create customized work plans.

This kit presents a generic introduction to what RI is and resources to additional information, the methodology for co-creating roadmaps towards RI, tips on the facilitation of the methodology, and annexes with all the material they will need to run their own RI Labs.

The method used by the partners of the project to implement the RI-Labs and the suggested methodology to support Business Support Organisations (BSOs) and SMES in designing roadmaps is shown in D2.1 and D2.5.

This kit is for the use of BSOs or others keen to support companies in designing Roadmaps towards RI. Yet, companies wishing to set up an internal lab can of course use the same methodology and adjust it according to their realities.

2.4 Bottom-up Case Studies

As part of the different actions carried out to receive additional input on RI from a wider range of stakeholders, a bottom-up call for case studies relevant to private industry was launched (https://innovation-compass.eu/cases/).

All the cases have a broad geographical spread across Europe since they came from Spain, the UK, Germany, Denmark and Italy (D1-3).

The following good practice cases are described next:

AppNanoparticles- BioGAS+
BioGAS+ is the first ready to use additive based on safe and sustainable-engineered iron nanoparticles directed to the optimization of anaerobic digestion processes. Their goals fall into the Sustainable and safe use of new technologies.
The final aim of this company, of this project, and of all these efforts, is education in all its forms: proper education is the only way we know to become more intelligent, and the only way towards sustainable progress.

The RehabAngel®
This is an evidence based adjustable incline device which has a flat and 5 degree inverting wedged surface, which gives greater control and safety for patients requiring lower limb exercises. This project highlights the benefits of stakeholder collaboration (societal engagement)

and more importantly the benefits of informal science education to the economy, given the considerable knowledge transfer from the university to the SME, which commercialized the Rehab Angel.

GlucoTel™ - BodyTel™

This is a sensor for telemedical blood glucose monitoring and diabetes management and it is used for automatic, continuous documentation of all blood glucose levels.

The project follows several aspects of RRI in its activities. First, the company engages stakeholders such as patients and caregivers to improve the treatment of diabetes, which contributes to higher quality of life for patients. Second, it complies with legal requirements through ISO certifications. And third, it follows an (partly) open access approach when it comes to its interface technology through the Continua certification.

Organic Solar Cell Development for Clean Sustainable Energy

Organic solar is a periodic ultrathin gold nanowire, which provides an alternative nanostructure for indium thin oxide in organic solar cell devices. Sustainable and safe use of new technologies. It stands as a new technology approach; it is innovative and at the same time, it leverages socially desirable mechanisms and is a sustainable energy solution. The production of this technology optimizes environmental and social aspects in parallel to other strategic business priorities and manage financial, environmental, and social aspects across all strategic priorities, sustainability is understood as a driver of the long-term success of its business.

On my own … at work" app

This app supports trainees with Down Syndrome and other intellectual disabilities during their traineeship in the hospitality industry to make them more independent of their tutors. This app fits the social justice/inclusion criterion

The app allows trainees and workers with ID to become more independent and to integrate better into the organisations they work in. The app supports them in realising their access to work and it is free. For that reason, it includes RRI criteria such as inclusion, education, open access rights.

2.5 Academic publications

The results generated in the project are being published through academic publications of highest quality. These publications include a book publication in the Springer Briefs series on Research and Innovation Governance and at least one peer-reviewed paper about each of the innovation fields. In this regard, other multiple publications have been generated encompassing different topics (See the complete list of publications in 4.2).

2.6 Relationship with deliverables

The main outcomes of COMPASS (710543) include: 1) RI Self-check tool for industry; 2) Sectorial Roadmaps; 3) Co-creation method kit for the development of sectorial roadmaps; 4) Bottom-up case studies; 5) Academic publications. These outcomes are encompassed in the deliverables showed in the table below:

Deliverable (number)	Deliverable name	Summary
D1.3	Case study descriptions	Report that presents five case studies to demonstrate how Responsible Research and Innovation (RRI) can work in industry.
D2.1	Responsible Innovation Lab Methods Report	Report that presents the method to be used by the partners of the project for the implementation of the RI-Labs of the COMPASS project (710543).
D2.2	Responsible Innovation Lab Report & Roadmap (Cybersecurity)	Report that describes the specific changes to the roadmap co-creation methodology and an analysis of the labs focused on cybersecurity.
D2.3	Responsible Innovation Lab Report & Roadmap (Nanotechnology)	Report that describes the application of the methodology and an analysis of the findings used throughout the roadmap creation process focuses on the Nanotechnology sector.
D2.4	Responsible Innovation Lab Report & Roadmap (Healthcare)	Report that shows the methodology and provides a short analysis of the key factors in the roadmap development for the Healthcare sector.
D2.5	Responsible Innovation Method Kit	Report that describes the suggested methodology to support BSOs and SMEs in designing roadmaps towards RI.
D3.1	Responsible Innovation Self-Check Tool	Report that describes the RI Self-Check Tool and its main characteristics and the different target groups.
D3.2	Responsible Innovation Compass Technical Specifications	It comprises the technical specifications of the Responsible Innovation Compass.
D3.3	Responsible Innovation	Report that describes the components that

	Compass	are part of the web portal developed for the COMPASS project (710543).
D4.4	User feedback & Implementation Report on the Responsible Innovation Roadmaps	Document that shows all the collected feedback on the piloting of the sectorial roadmaps.
D5.4	Book "Benefits & Incentives for mainstreaming Responsible Innovation in industry"	Book that provides successful case studies for the implementation of RI in businesses.
D5.5/5.6/5.7	Academic papers on the Implementation of RI	Academic papers originated from the activities carried out in the framework of the COMPASS project (710543).

3. Exploitation approaches

COMPASS (710543) has placed emphasis on producing modular resources (Self-Check Tool, Roadmaps, Method Kit, Case Studies and Academic Publications) that will be perpetuated as an integrated package or standalone products after the end of the project. To achieve those goals we have developed specific exploitation approaches to ensure the relevance, uptake, impact and sustainability of the project results. For that reason, the academic partners of the consortium have generated various publications and commit to including teaching cases in their teaching activities. The consortium will also strive to share the developed resources with other relevant RRI projects and companies and include them within their relevant platforms.

3.1 Teaching

The Institute for Managing Sustainability has, inspired by the COMPASS project (710543), implemented a Bachelor's course on responsible innovation. It has been running for four semesters (summer 2017, winter 2017/18, summer 2018, winter 2018/19) and will be continued. Including the current semester, about 120 bachelor students in the WU's business and economics program have taken the course. The course is an elective and worth 4ECTS. Course contents build on the RRI literature and COMPASS output (good practice cases, D1.4). Members of the WU COMPASS team have participated in course discussions as external experts.

In addition, contents from the project outputs have been incorporated in the PhD course "Sustainable Innovation" organized by the organized by the Faculty of Industrial Engineering and Management at the University of Gävle, Sweden, in May 2017: Sixteen PhD students with management and/or technical background attended the course. The course contents included

an introduction to responsible innovation (using RRI literature and COMPASS good practice cases), an overview over European RRI projects (using COMPASS Deliverable 1.4), group work on selected RRI projects (analysis and discussion of output), and the development of RRI guidelines for students' PhD theses, their institutes/teams and their universities/companies.

Partners from DMU have run several guest workshops at the French Institute for Research in Computer Science and Automation (Inria) in Paris for cyber security masters students (around 20 students per workshop) where they have had the opportunity to pilot the roadmap co-creation method toolkit. Inria is the French research institute for digital sciences and promotes scientific excellence and technology transfer to maximise its impact. The institution works with many companies and has assisted in the creation of over 160 start-ups. It strives to meet the challenges of the digital transformation of science, society and the economy.

UCLAN, another academic partner in the project, plans to use the Self-check tool, especially the sections relevant to idea generation and research and to development and testing, to support the creation of research and development projects of undergraduate and post-graduate students of Computing and Computing-related degrees (e.g. Cybersecurity, Data Analytics etc.). This is going to be particularly useful in the postgraduate projects. The specific audience would include about 50-60 students per year.

3.2 Collaborations with other projects, companies and platforms

The following collaborations will be incorporating resources generated by the activities developed in COMPASS (710543):

Applied Nanoparticles (AppNp) is one the awarded participants at the Good Practice Cases call that presented an innovative solution with a robust RRI dimension. The team will contribute to the sustainability of the results from COMPASS (710543) by carrying out several actions. The company will disseminate their inspiring case through their participation in conferences and sectorial meetings. For the upcoming NanoSpain2019 Fair they will exhibit their awarded Good Practice Case and the alignment of their internal policies with the principles of RI. Additionally, they will adapt the COMPASS Self-Check tool and the Nanotechnology Roadmap to be used for the "RRI from the Lab" Course they teach to PhD students in the framework of the H2020 ITN PANDORA (671881) and ENDONANO (812661) projects. The course includes RRI sessions where participants can review their research work based on self-evaluation so that they reflect on their research work and can identify specific improvements. During this self-evaluation process, they contemplate aspects "inside the lab", "around the lab" and "out there"

where the COMPASS self-check tool will be adapted and integrated. These face-to-face sessions are foreseen for April 2020.

B Lab Europe (https://bcorporation.net/about-b-lab), a current partner of the COMPASS project (710543), is a non-profit that serves a global movement of people using business as a force for good. B Lab's initiatives include B Corp Certification, administration of the B Impact Management programs and software, and advocacy for governance structures like the benefit corporation. Certified B Corporations are businesses that meet the highest standards of verified social and environmental performance, public transparency, and legal accountability to balance profit and purpose. B Corps are accelerating a global culture shift to redefine success in business and build a more inclusive and sustainable economy. The *B Impact Assessment* (BIA) (https://bimpactassessment.net/) is an evaluation that guides businesses through a series of questions to help them learn what it takes to build a better business for their workers, the community and the environment. It allows the comparison with thousands of other companies to see how a business is positioned and the creation of a customized improvement plan. The COMPASS RI Self-Check Tool will not be entirely incorporated into the BIA, although a mapping exercise will be performed to identify possible overlaps and incorporate new content from the tool into the BIA.

EBN, a partner of the COMPASS project (710543), is a network of around 150 quality-certified EU|BICs (business and innovation centres) and 70 other organisations that support the development and growth of innovative entrepreneurs, start-ups and SMEs. This community also includes a community of professionals whose day-to-day work helps these businesses to grow in the most effective, efficient and sustainable way. EBN plans three specific actions that will contribute to the sustainability of the resources generated in the framework of the project. First of all, EBN commits to continuing distributing the final version of COMPASS tools to the EBN's Social Impact Special Interest Group. EBN's Interest Groups seek to address the growing demand of EBN members to get actively involved through sector (vertical dimension) and thematic (transversal crosscutting dimension) dynamics. Second, EBN will develop a toolkit for its members that will include relevant outcomes from EU projects. This toolbox will present the tools from COMPASS (710543) and free webinars and free webinars will be organised focusing on the use of the tools on demand. In the same line, ad-hoc workshops (either to individual members or to groups during EBN main events) we will be also organised upon request. Finally, EBN has recently submitted a proposal under SwafS14 and COMPASS tools might be used to train territorial players on how to embed RI processes and practices into business strategies for the co-creation of new innovative solutions

ORBIT - Observatory for Responsible Research and Innovation (https://www.orbit-rri.org/) in ICT is a new entity, hosted by De Montfort and Oxford Universities, to provide information and

services to the ICT research and development communities to support them in undertaking their work responsibly. It is a community resource allowing the exchange of information, networking and reflection on ICT research. Some of the services provided by ORBIT are open access online journal, a self-assessment tool for RRI in ICT, case studies and training courses for academic and commercial audiences. The partners from ORBIT will incorporate the roadmap co-creation method kit from COMPASS (710543) to run workshops with industry.

RRING – Responsible Research and Innovation Networking Globally (http://www.rring.eu/) (788503) aims to bring RRI into the linked up global world to promote mutual learning and collaboration in RRI. This will be achieved by the formation of the global RRING community network and by the development and mobilisation of a global Open Access RRI knowledge base. RRING will align RRI to the Sustainable Development Goals (SDGs) as a global common denominator. The RRING project acknowledges that each region of the world is advancing its own agenda on RRI. Therefore, RRING will not be producing a Global RRI framework or strategy that is meant to be enforced in a top-down manner. Rather, increased coherence and convergence will be achieved via a bottom-up approach, learning from best practices in RRI globally and from linkages, via the new RRING community, to develop the RRI linked-up world. The project must develop a survey to identify how companies and research organizations around the world are envisioning and implementing RRI. For that reason, the partners from RRING will learn from the COMPASS RI Self-Assessment tool and may incorporate specific sections in order to design such survey.

RRI Tools (https://www.rri-tools.eu/) is a flagship project funded by the European Commission under the 7th Framework Program (FP7). RRI Tools was set up in order to empower all actors in the European R&I system to contribute their share to the Responsible Research and Innovation initiative. The final outcome of the project was the development of an interactive digital platform – the RRI Toolkit – containing a wealth of resources to help stakeholders across Europe put Responsible Research and Innovation into practice. Being a participatory Toolkit, it is now open to the community, so every actor can showcase their own practices and resources, and get inspired by those of others. Although the project ended in December 2016, the project´s coordinator - "la Caixa" Foundation - has complied with the commitment to keep the RRI Toolkit and it´s dissemination channels active from January 2017 until nowadays. The platform has a loyal community of users that continuously visits and

uses it as a proficient and trustworthy repository. In social media, RRI Tools channels bring together a considerable number of followers and community of action, being the most followed project in the RRI field. Main resources developed by COMPASS (710543) – the RI self-check tool for industry, the sectorial roadmaps, the co-creation method kit for the development of sectorial roadmaps and the bottom-up case studies will be included in the RRI Toolkit database and showcased in the industry sub-home. Resources will be promoted among the RRI community through the RRI Tools dissemination channels.

WU, the coordination partner of the COMPASS project (710543), partnered in a proposal in the Horizon 2020 Science with and for Society programme in April 2019. This application incorporates the use of the COMPASS self-check tool as basis for a certification scheme for SMEs. In addition, WU will use a selection of self-check tool questions to survey European companies that perform research and development in biotechnology to perform a first analysis of empirical evidence about Responsible Innovation practices in business. The research is on-going at the time this deliverable is being developed. The research approach will be presented at the upcoming ISPIM Innovation Conference (https://www.ispim-innovation-conference.com/) (Florence, Italy, June 16-19, 2019). Moreover, WU will present purpose and functionalities of the self-check tool in a webinar-style seminar at the upcoming "Virtual Summit" on Responsible Innovation for Smart Homes & Smart Health organised by the Horizon 2020 project LIVING INNOVATION (https://www.living-innovation.net/) (787991) on June 11-12, 2019.