



Deliverable 3.2
Responsible
Innovation
Compass Web
Portal Technical
Specifications

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1. Introduction to the Responsible Innovation Compass web portal

This Deliverable D3.2. Responsible Innovation Compass Technical Specifications, for the project COMPASS (Grant Agreement No: 710543), describes the final outcomes of Task 3.2 Setting up the Responsible Innovation Compass web portal.

Task 3.2 of COMPASS (710543) designed the technical specifications of and implemented the main COMPASS web portal. The web portal served as a project website for the first two and a half years of the project duration and was then converted into a modular online platform that presents the results and tools delivered by all project activities – the Responsible Innovation Compass.

COMPASS (710543) project has been set up to develop tools and resources to support the development of responsible innovation in Small and Medium-sized Enterprises (SMEs)¹. The modular online platform, the Responsible Innovation Compass, provides guidance and orientation about responsible innovation, tailored towards the needs of innovative enterprises, in particular SMEs.

The Responsible Innovation Compass (www.innovation-compass.eu) is therefore the main virtual access point to COMPASS (710543) and its tools and resources, following a modular structure and offering the following modules:

- a) Responsible Innovation self-check
- b) Co-creation method kit
- c) Sectoral roadmaps
- d) Training materials and resources
- e) Project directory

The work carried out in Task 3.2 implemented the following Responsible Innovation Compass web portal components:

- a) Project presentation component: including basic project information, information about the project consortium and publicly available deliverables;
- b) Modular online platform components, including the results and tools delivered by all project activities;
- c) Content Management System for internal project management and knowledge sharing purposes, including the exchange of minutes, administrative documents, and project management documents.

The conceptualisation and technical specification of these components was carried out under the auspices of WU in collaboration with COMAPSS Consortium partners. The design, programming and development of static and interactive parts of the web portal was contracted to professional web design and development providers, as described in the Grant Agreement.

This deliverable will describe the technical specifications of static and interactive parts of the Responsible Innovation Compass modular platform. For a description of the content of the different modules of the Responsible Innovation Compass please see Deliverable D3.3

¹ The European Commission defines SMEs as companies with less than 250 employees and a turnover of less than EUR 50 Mio (European Commission 2003).

Responsible Innovation Compass. For a detailed description of the Responsible Innovation Compass Self-check tool please see D3.1 Responsible Innovation Self-Check. For a description of the Responsible Innovation Compass project presentation and Content Management System components please see Deliverable D 5.2. Dissemination Plan.

2. Technical specifications

The Responsible Innovation Compass web portal is designed an easily accessible one-stop-shop for SMEs to learn about responsible innovation and receive guidance on the implementation of responsible innovation practices. Both the static parts of the web portal as well as the interactive parts are programmed using the WordPress platform. WordPress has been chosen as a technical solution because of its lean content management infrastructure and availability of customizable technical features. WordPress also requires minimal maintenance and provides consistent security upgrades beyond the end of COMAPSS project, which ensures sustainability of project outcomes. The website www.innovation-compass.eu is hosted as Ad on-Domain on a web space (web hosting package Level 9).

The initial Responsible Innovation Compass web portal (www.innovation-compass.eu) was launched in October 2016. From then on, the development, editing and expansion of the web portal was consistently sustained throughout the project duration, to ensure that the web portal best responds and reacts to user feedback and evolving needs of the project. The interactive modular parts of the Responsible Innovation Compass were integrated and launched step by step in the last six months of the project.

This deliverable describes the technical specifications of static and interactive parts of the Responsible Innovation Compass modular platform:

- a) Responsible Innovation Self-Check (interactive)
- b) Method-kit for co-creation (static)
- c) Sectoral roadmaps and visions (static)
- d) Resources and training materials (static)
- e) EU Project directory (interactive)

Section 2.1 will describe the technical specifications of the static parts of the Responsible Innovation Compass. Sections 2.2 will describe the technical specifications of the interactive parts of the Responsible Innovation Compass.

2.1. Static web-pages

Static web pages offer information to the user that does not change based on users' actions. The static pages of the web-portal have been developed by the team at WU in close collaboration with the COMPASS (710543) consortium and in response to target audience needs identified throughout the project.

To ensure professional and high quality implementation of the Responsible Innovation Compass web portal, a qualified provider of web programming services was contracted for the overall design and programming of an individualised WordPress template. All static parts of the Responsible Innovation Compass are therefore all built using four building blocks offered by the tailored template:

1. Text with visual
2. Highlights block
3. Picture carousel
4. Text tabs

The following sections will present the technical specifications of the above building blocks in more detail.

2.1.1. Text with visuals

Text blocks with visuals offer an option to include larger amounts of text, usually an intro to the page or a module and match it with an embedded video or a picture visual (see Figure 1 and Figure 2).

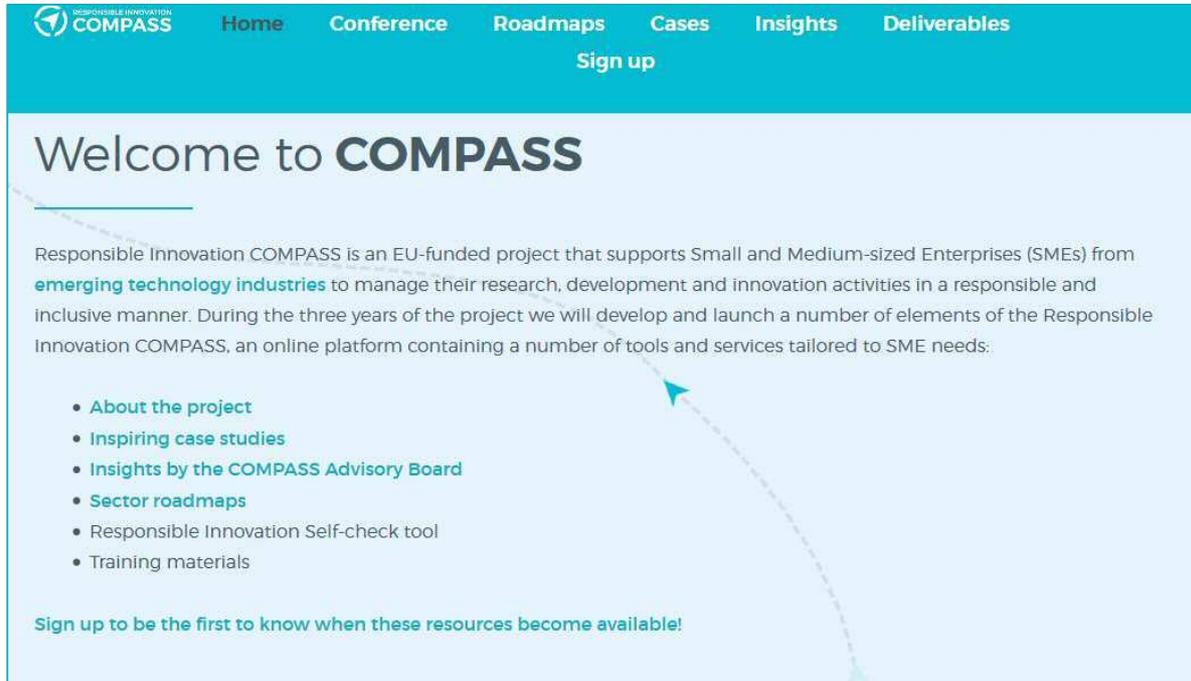


Figure 1: Text block without visual



Figure 2: Text block with visual (embedded video)

2.1.2. Highlights blocks

Highlights blocks are used to present specific resources from the same category next to each other. They offer a quick glance into the resource, a visual element as an attention catcher, and lead the user to a separate page with more information about that resource.

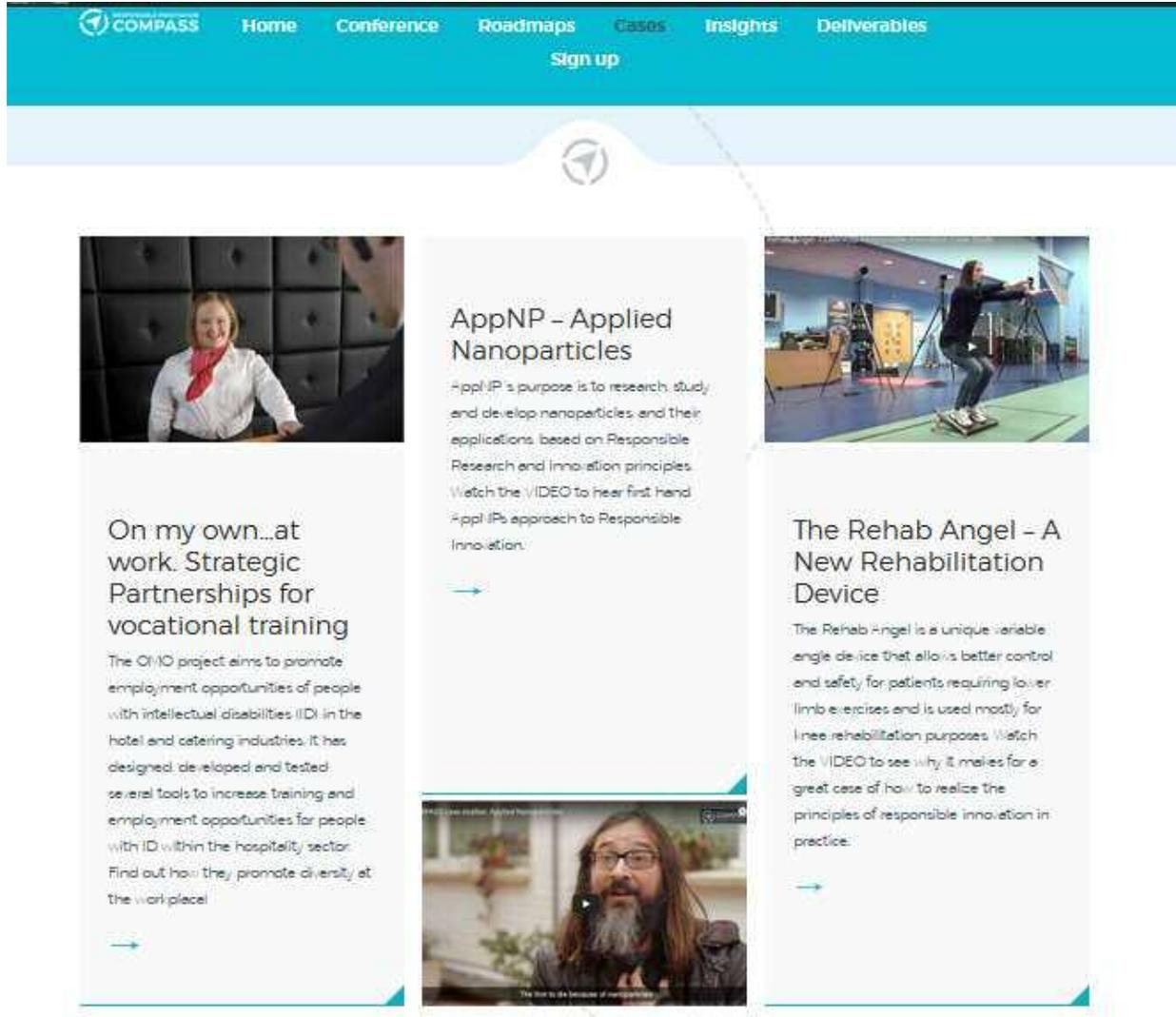


Figure 3: b COMPASS (710543) good practice cases page using the Highlights block

2.1.3. Picture carousel

Picture carousel blocks are utilised to show specific persons involved in the project or in a particular initiative. At any time, three randomly selected pictures are shown but the user can scroll and move the pictures sideways to reveal more pictures. The carousel shows different selection of featured pictures every time the user comes back to view it (randomized selection).

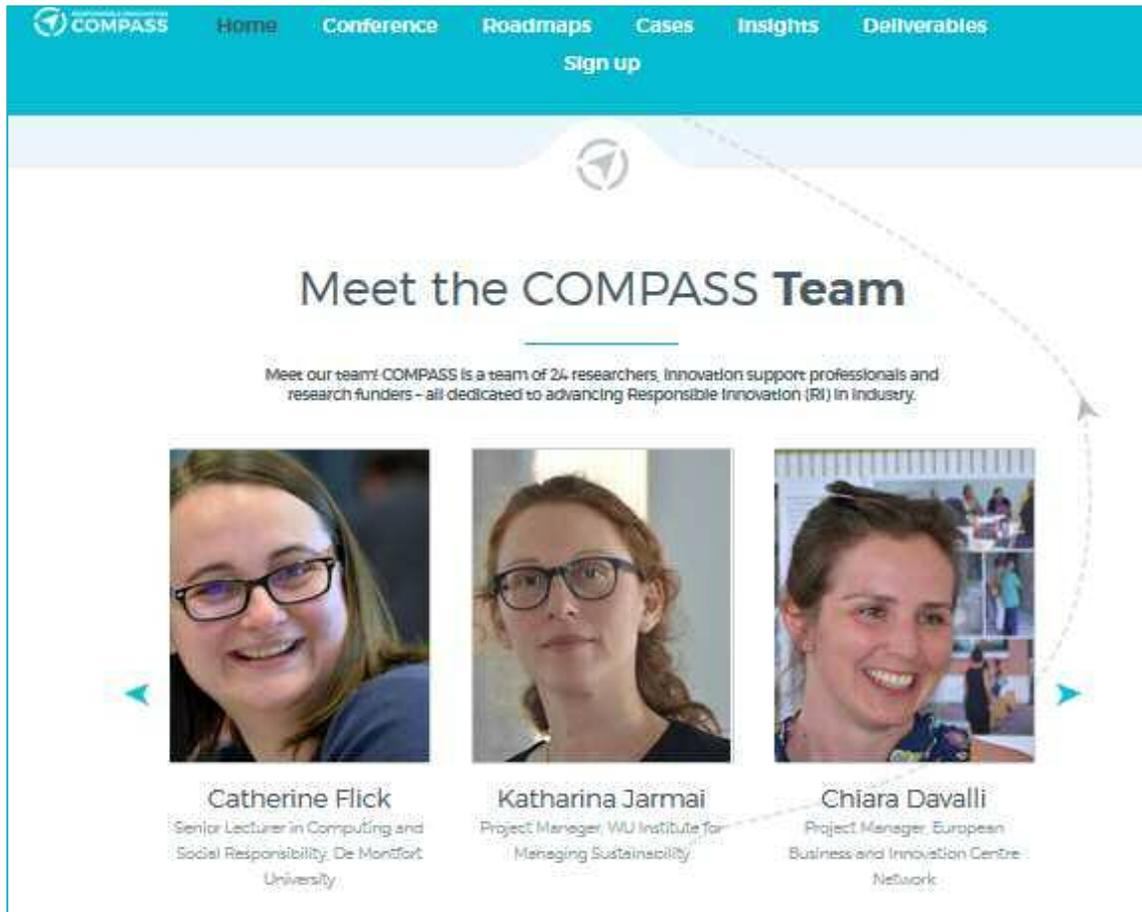


Figure 4: COMPASS (710543) team section using the Picture Carousel block

2.1.4. Clickable text tabs

Clickable text tabs are used for allowing the user to navigate through textual elements of the page by their theme. These show specific theme categories as tabs on the left of the screen and allow the user to click on them and access each of their individual content.



Figure 5: COMPASS (710543) Consortium information using the tabs block

2.2. Interactive modules

The interactive parts of the website are two specific modules of the Responsible Innovation Compass; namely the Responsible Innovation self-check tool and the project directory. The web design and development services for these interactive parts were contracted through a request for quotation procedure. The request for quotation specifications (RFQ) was developed by WU team in consultation with the Consortium and in accordance to D3.2 Responsible Innovation Compass technical specifications. The RFQ was sent to seven web design and development agencies:

1. Nine Lemon (website: <https://www.ninelemon.com/>)
2. Ckern (website: <http://www.ckern.at/>)
3. Labelart (website: <http://www.labelart.at/en>)
4. IXSOL (website: <https://www.ixsol.at/>)
5. markus stefan websolutions (website: <https://www.mstefan.com/>)
6. Byteq (website: <https://byteq.com/en/>).
7. Subsolutions (website: <https://www.subsolutions.at/>).

Three service providers (Labelart, IXSOL and Subsolutions) returned quotation offers and reference projects. After consulting with these three service providers to discuss their offers and implementation schedules, IXSOL was chosen as the web design and development service provider for the implementation of the interactive parts of the Responsible Innovation Compass web portal modules. IXSOL was chosen because it was the only offer that was able to deliver the services within the given timeframe and to the desired level of interactivity and design attractiveness judging from a reference project provided. Labelart's offer was declined

because of two reasons: 1) the reference project given was not in line with the desired interactivity level and desired design quality; 2) the proposed solution had to be programmed outside of WordPress and outside of the hosting services currently used for the project website, which in turn caused additional consistent expenses for maintenance after the project end. Substitutions offer was declined because they could not deliver all services within the requested timeline.

The Responsible Innovation self-check tool and the project directory were implemented as sub-pages of the Responsible Innovation Compass website and programmed specifically to suit the needs of these interactive elements; rather than using predetermined templates. This was crucial to ensure a seamless and attractive user experience.

The design of the interactive parts is in line with the overall design of the website and follows the project's visual guideline in terms of colour schemes and design elements. Sections 2.2.1 and 2.2.2 describe the technical specifications of the Responsible Innovation self-check tool and the Project Directory respectively.

2.2.1. Responsible Innovation self-check tool

The Responsible Innovation self-check tool (hereafter sometimes referred to as “the tool”) is an online self-assessment multiple choice questionnaire of 43 questions. The tool automatically generates results and benchmarks a user against other registered users based on a programmed points system.

The objective of the online self-assessment tool is to help SMEs learn about different elements of a responsible approach to innovation by going through the questionnaire, help them self-assess their company's governance and innovation management, and compare their results to other companies that have also taken the online self-assessment. Throughout the questionnaire, the user can bookmark specific questions. The results page provides the user with an overview of strengths and weaknesses as well as the list of bookmarked questions that can then be used for creating their own roadmap to responsible innovation. For a detailed description of the tool, please refer to Deliverable 3.1 Responsible Innovation Self-Check.

The implementation of a beta version of the online self-assessment tool was finalised in February 2019 and tested in an online open consultation². The final version was launched in March 2019. The following sections describe the technical specifications of the Responsible Innovation self-check tool.

Self-check tool functionalities

Overall, the tool is easy and light to use, contains little text at first glance, some visual elements in line with COMPASS (710543) corporate image and colour codes, and options to expand and collapse text elements.

The following functionalities were conceptualised, designed, developed and implemented:

- A. Registration
- B. User dashboard
- C. Multiple choice questionnaire with underlying points-system
- D. Results page with visual representation and benchmarking to other users
- E. Administration interface

² For the outcomes of self-check tool testing please see Deliverable D4.3 Review and Recommendations for Revision of the Responsible Innovation Self-Check.

- F. Database structure supporting points (B) to (E) above
- G. FAQ section serving as a user guide

Functionalities, design and technical specifications of the Responsible Innovation self-check tool are further elaborated below. The whole tool questionnaire contains 43 multiple choice questions structured by four sections represented in the four tiles on the dashboard. Each of these four sections has thematic sub-sections containing a set of questions. The sections and sub-sections of the questionnaire are illustrated in Figure 6.



Figure 6: self-check tool sections and sub-sections

Registration

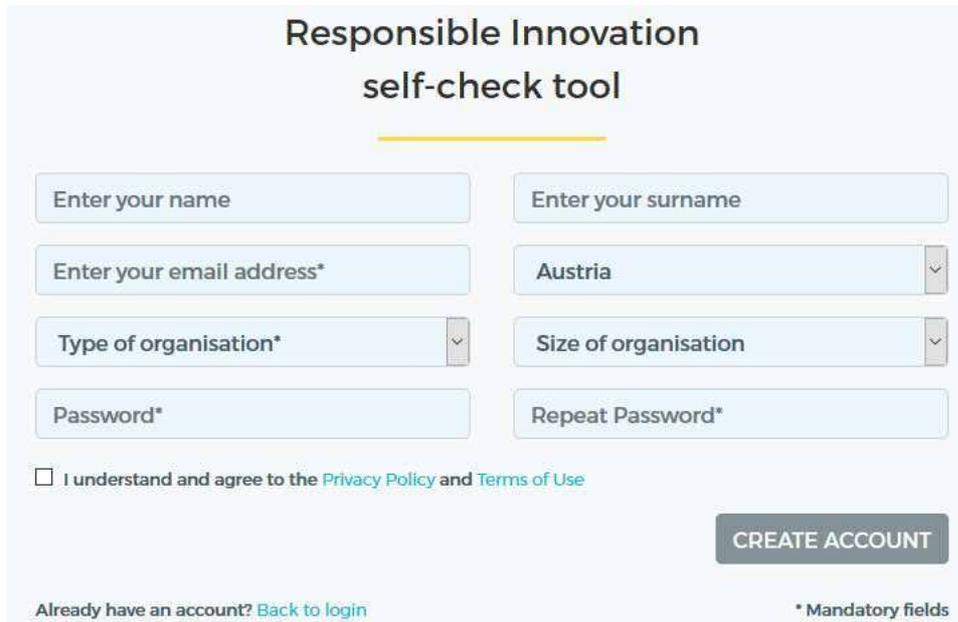
Access to the tool is limited to registered users. First-time users have to create an account by filling in a registration form. After registration they are provided with a user name and a password through which they can access and re-access the questionnaire and results at any time. One account per user is supported.

The user registrations can be administrated by website administrators on the administrator backend in a fully anonymized way. This registration is integrated into the back-end through a separate user's management system to allow for a distinction between the registered users of the website and the Responsible Innovation self-check tool users. The registration interface is fully GDPR compliant.

Upon registration, users will have to initially provide the following data:

1. Name – open comment box (optional)
2. Email address – open comment box (mandatory)
3. Country – drop down list (mandatory)
4. Type of organization – drop down list (mandatory)
5. Size of organization – drop down list (mandatory if “business” is selected under “type of organization”; otherwise optional)
6. Password – open comment box (mandatory)

7. Agreement to terms and conditions – tick-box with link to terms of use and privacy policy (mandatory)



**Responsible Innovation
self-check tool**

Enter your name Enter your surname

Enter your email address* Austria

Type of organisation* Size of organisation

Password* Repeat Password*

I understand and agree to the [Privacy Policy](#) and [Terms of Use](#)

CREATE ACCOUNT

Already have an account? [Back to login](#) * Mandatory fields

The user's registration data and their self-check tool answers data is linked. In order to complete their profile users (companies only) are asked to provide additional information for research purposes (however that is not required for registering to use the tool).

For research purposes, we would like to ask you another four questions about your company. This information will be used only for developing hypotheses about responsible innovation practices in full accordance with our [Privacy Policy](#), our [Terms of Reference](#) and general research ethics.

1. Which of the following best describes your role in your company? (Select all that apply.)
[multiple answers]
 - a. Involved in strategic decision-making (e.g. founder, CEO, management)
 - b. Involved in Corporate Social Responsibility (CSR), sustainability or social impact
 - c. Involved in conducting research or development
 - d. Other ([open comment box](#))
2. Which of the following best describes your company? [one answer]
 - a. The company is a start-up.
 - b. The company is a self-sustaining business that generates revenue.
 - c. The company is well-established in its industry with a well-known product and a stable customer base.
3. Which of the following statements are true for your company? (Select all that apply.)
[multiple answers]
 - a. We conduct research and development.
 - b. Our customers are the end users of our products/services (i.e. B2C).
 - c. Our customers are not the end users of our products/services (i.e. B2B).
 - d. We develop innovative technological solutions.
 - e. We are constantly looking for ways to develop innovative products/services or to significantly improve our products/services.
 - f. We work in contested areas or with contested technologies; such as e.g. Genetically Modified Organisms (GMOs) or Artificial Intelligence (AI).
4. What sector(s) does your company operate in? [free text]

Figure 7: Additional questions for research purposes

Users' registration data and their respective self-check questionnaire answers data is stored in a database and is downloadable for the administrators as an anonymized file for further analyses and research purposes.

User Dashboard

The dashboard is the landing page for the user after registration/log-in. It presents an overview of tool sections, user progress and links to frequently asked questions, user results and acts as a gateway to start or continue the questionnaire (Figure 8).

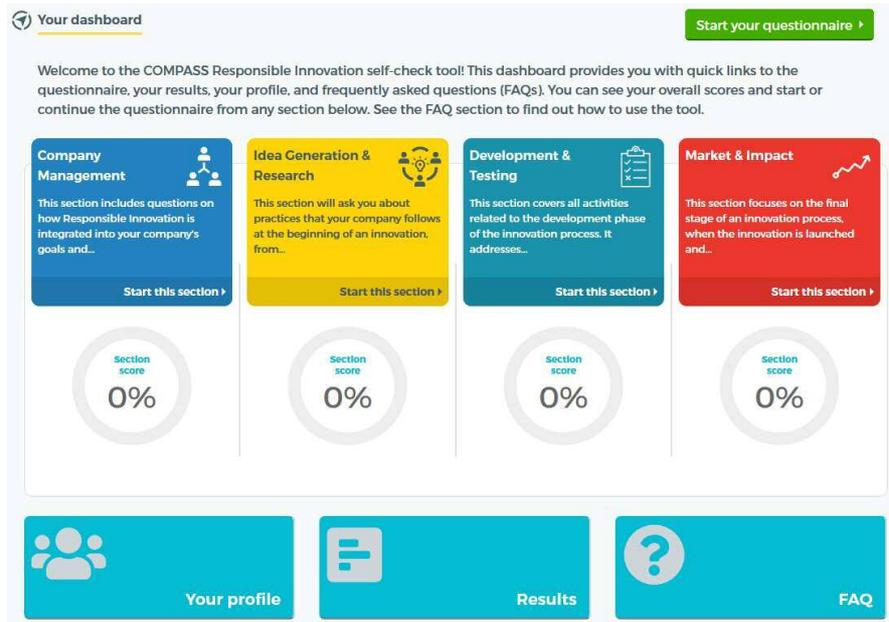


Figure 8: User dashboard

To support the modular approach of the self-check tool the user can enter the questionnaire from any of the four sections by which the questionnaire is structured. At all times, a user's answers in the questionnaire are automatically saved and the user can see their percentage of completed questions in each section and sub-section and percentage of scored points in each section and sub-section. These data are displayed numerically and visually.

Multiple choice questionnaire with points

Once the user clicks on any of the section titles on their dashboard, they access a page with an overview of the chosen section and clickable sub-sections as entries into the questionnaire (see Figure 9). On this page the user also can view information on their individual progress in a numerical and visual formats. The user can always go back to their dashboard and see how many questions remain unanswered in each sub-section or select a different entry point into the questionnaire.

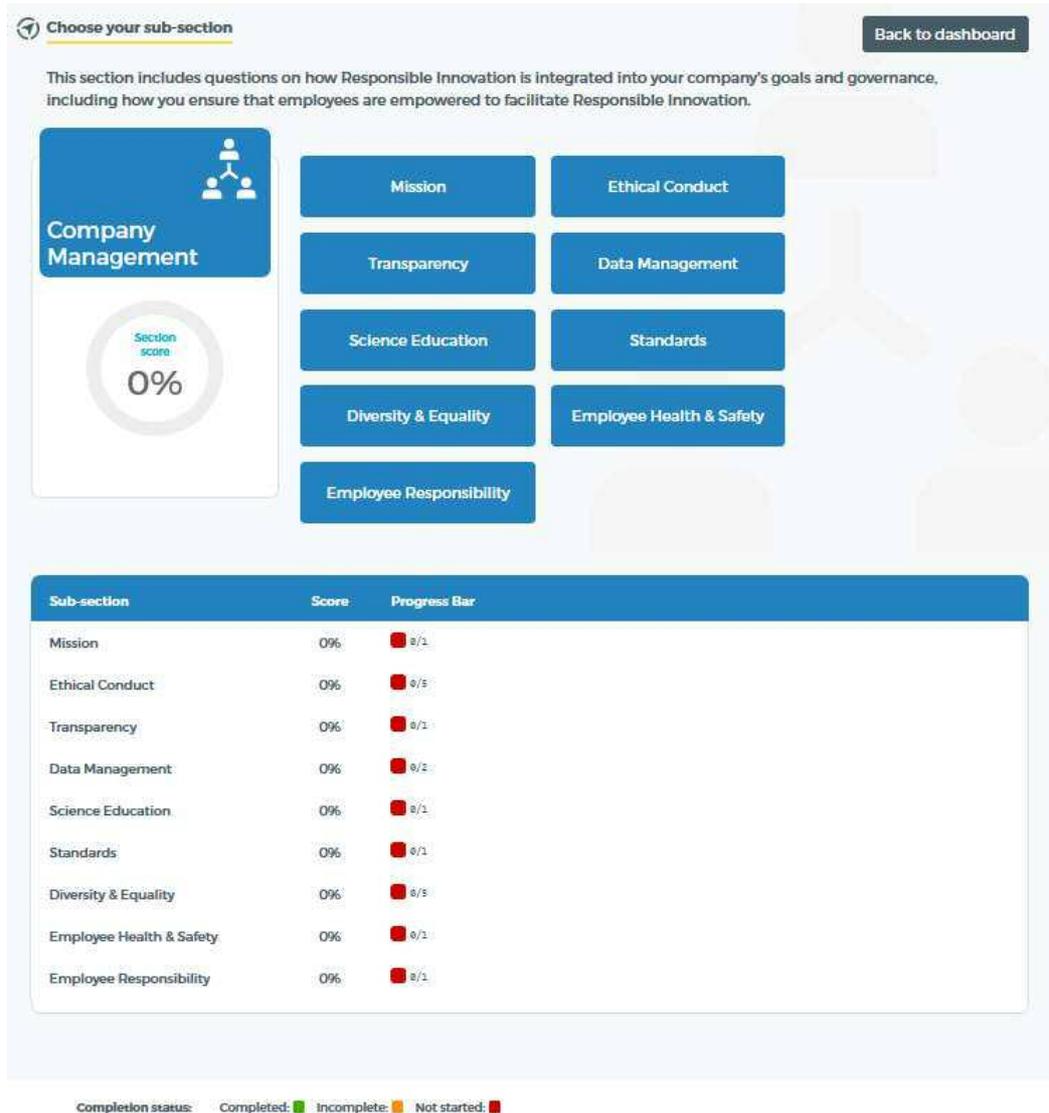
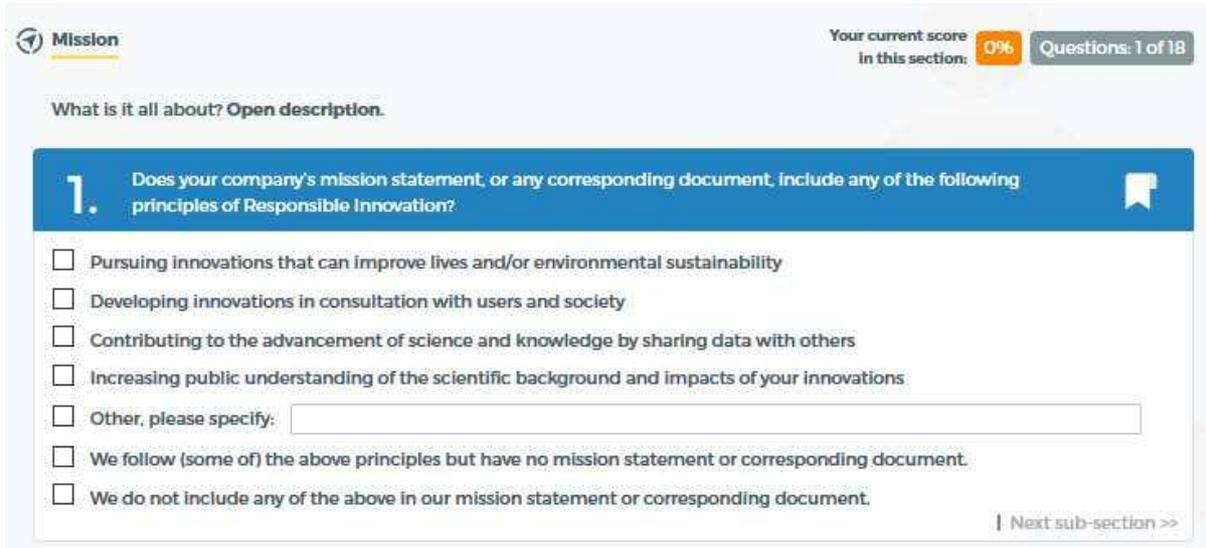


Figure 9: Overview of sub-section results

Once the user enters the sub-section they receive predetermined questions to be answered in that sub-section one by one. Questions have predetermined answer options allowing multiple choice or single choice. Answer options of “None of the above” and open comment box of “Other, please specify” are also provided. Answers in “Other, please specify” are logged along with other answers. All user answers are automatically saved and scored points aggregated. As the user answers questions, the real-time total percentage of points scored in that section are displayed.

With each question the user can also open a collapsible text that provides more information about that sub-section. Users can also bookmark any question by clicking on the bookmark icon at the right top corner of the question field. All bookmarked questions are assembled and available for download on the results page. See below an illustration (Figure 10) of how each of the question is displayed and available functions.



Mission Your current score in this section: **0%** Questions: 1 of 18

What is it all about? [Open description.](#)

1. Does your company's mission statement, or any corresponding document, include any of the following principles of Responsible Innovation?

- Pursuing innovations that can improve lives and/or environmental sustainability
- Developing innovations in consultation with users and society
- Contributing to the advancement of science and knowledge by sharing data with others
- Increasing public understanding of the scientific background and impacts of your innovations
- Other, please specify:
- We follow (some of) the above principles but have no mission statement or corresponding document.
- We do not include any of the above in our mission statement or corresponding document.

| [Next sub-section >>](#)

Figure 10: Example of a question and answer options

Results

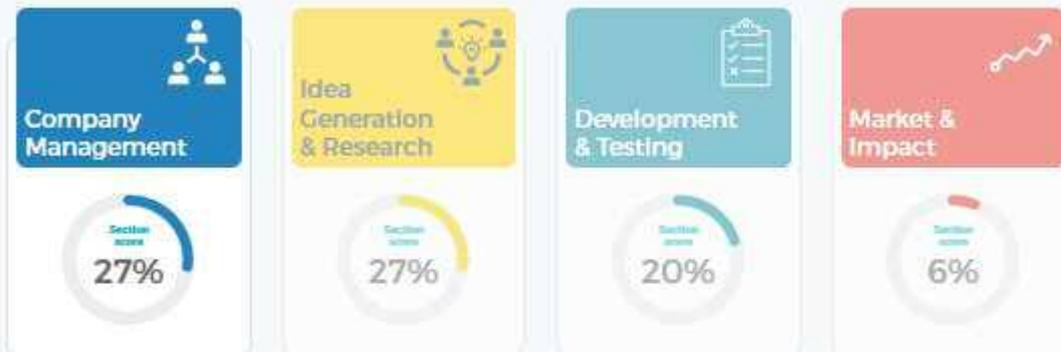
The overview of results by section and sub-section are available at the results page. At any point the user can see their real time results at the results page. The presentation of the results contains summary graphs, visual representation of user scores and benchmarks to other companies of the same size and all other companies in the database.

The results page compares user's scores to other users who have taken the questionnaire and thus provides automated benchmarking to the average points scored by users of the same company size and all companies in the database (see Figure 11). Only completed sections are benchmarked to avoid skewed results due to incomplete questionnaires.

On the results page users are able to save and download three summaries as PDFs (see Figure 11): 1) their results and benchmarking; 2) the whole questionnaire with their answers; 3) list of all the questions they bookmarked.

Your results

Here you can see your results in each section and sub-section of the questionnaire. You also have the possibility to see how you compare to peers in the benchmark. The benchmark will show you how your scores compare to companies of your size and all other companies in our database. Note that only completed sections can be benchmarked. You can also download your results, the full, completed questionnaire, and bookmarked questions. The bookmarked questions can be used as an input to co-create a tailored roadmap to responsible innovation using the COMPASS co-creation method-kit.



Company Management		Companies your size (1 - 9 / 0)	All companies (3)
Sub-section	Score		
Overall Rating	27%	0%	46%
Mission	17%	0%	39%
Ethical Conduct	25%	0%	20%
Transparency	43%	0%	43%
Data Management	24%	0%	35%
Science Education	20%	0%	73%
Standards	33%	0%	56%
Diversity & Equality	19%	0%	43%
Employee Health & Safety	13%	0%	79%
Employee Responsibility	44%	0%	37%



Download your results here:

- [Results including Benchmark](#)
- [Whole questionnaire](#)
- [Bookmarked questions](#)

Figure 11: Results page including benchmark and download options

FAQ/User guide

The FAQ section is accessible through the user dashboard and the top navigation of the tool and features a guide to the Responsible Innovation self-check tool in the form of collapsible and expandable questions and answers. This technical solution allows for a quick overview of available content and allows the user to select most relevant topics to read, and is also available without registration.

FAQ - Frequently asked questions

Here you will find answers to FAQs about the COMPASS Responsible Innovation self-check tool.

What is the purpose of the COMPASS self-check tool?	-
<p>The COMPASS Responsible Innovation self-check tool aims to help Small and Medium-Sized Enterprises (SMEs) in highly innovative sectors to learn how to effectively integrate Responsible Innovation practices (RI) into their company and innovation management. The tool will help SMEs to assess where their company stands, how they compare to peers, and what they can do to make their innovation practices more responsible. The COMPASS self-check tool is a learning instrument that guides a company through the most important RI practices in company and innovation management. Each question points out the importance of certain RI practices and the provides answer options in form of good practices. The tool automatically scores and benchmarks a user's results against other users' results.</p>	
How long does it take?	+
What is "Responsible Innovation"?	+
Who is the tool for?	+
Who in my company should answer the questionnaire?	+
How is the tool structured?	+
What type of questions can I expect?	+
What if we do a certain practice sometimes, but not always?	+
What do I get after completing the questionnaire?	+
How are the scores calculated?	+
How does the benchmarking work?	+
Can I communicate my score publicly?	+
What is the next step after completing the questionnaire?	+
Why should I bookmark questions?	+
Should I take the questionnaire more than once?	+
Why do I need to register to use the tool?	+
Are data/info treated anonymously?	+
What if I am uncomfortable to share my answers online?	+
Who developed the tool?	+
Where do the questions and answer options come from?	+

Didn't find the answer you were looking for in our FAQ? [Contact us](#)

Figure 12: FAQ section

2.2.2. EU project directory

The project directory is based on the analysis presented in Deliverable 1.4 Benchmark report & policy paper: “Integration of the RRI approach into collaborative R&D&I and SME participation in European funded collaborative research in healthcare, nanotechnology and ICT”. It is a searchable, categorised database of 130 projects and initiatives dealing with Responsible Research and Innovation (RRI) carried out in Europe between 2008 (when the first RRI projects were launched in the 7th European Framework Programme for Research and Innovation) and 2018 (when the final update of the database was conducted). The project directory aims to facilitate the search for RRI projects in Europe. It contains basic information on the projects as well as links.

The project directory is set up by using the Business Directory Plugin for WordPress, which makes it filterable according to predetermined criteria and searchable by free text. It allows the administrator to enter new items via the website back-end.

Project directory functionalities

The project directory allows searching for RRI projects by keyword or by category. The images are clickable and represent different dimensions of responsible innovation³. Projects that approach responsible innovation in a holistic manner can be found in the category “All RRI aspects”. Projects with an explicit focus on industry can be found in the category “Business-related”. By clicking “View All Listings” users can see the entire list of projects in alphabetical order.

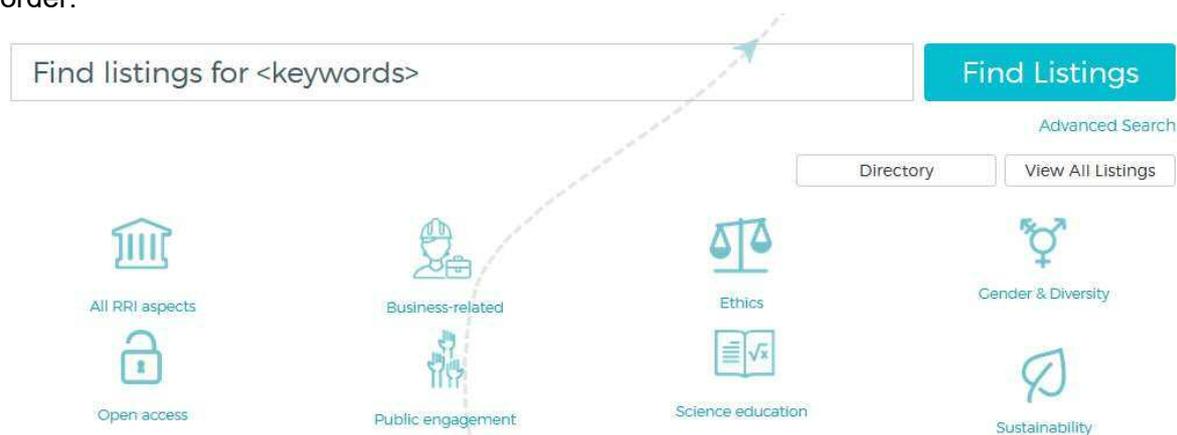


Figure 13: Project directory search options

The “Advanced Search” allows searching and filtering projects by acronym, project title, funding programme, and responsible innovation dimension (gender, open access, public engagement, ethics, science education, sustainability).

³ Thematic elements of RRI, as defined by the European Commission plus the additional aspect sustainability. For a detailed description of elements and how they were used in the analysis, please refer to Deliverable 1.4 Benchmark report & policy paper: “Integration of the RRI approach into collaborative R&D&I and SME participation in European funded collaborative research in healthcare, nanotechnology and ICT”.

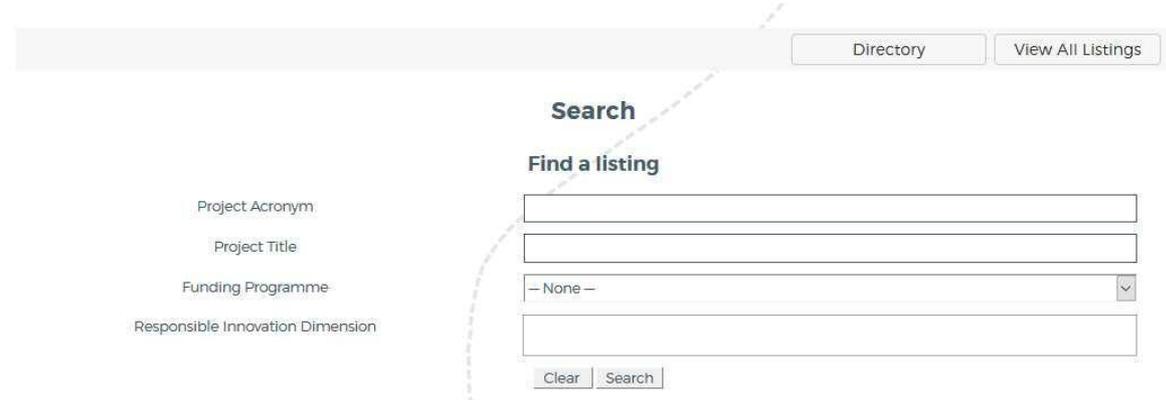


Figure 14: Advanced search options

Each entry includes the project acronym, full project title, funding programme, and web-link to the projects websites or CORDIS database, in case there is no project website (see Figure 15 for an example project entry).

COMPASS

Project Title:
Evidence and Opportunities for Responsible Innovation in SMEs

Funding Programme: Horizon 2020

Link: <http://www.innovation-compass.eu>

View

Figure 15: Project information

By clicking the “View” button the users receives additional information on the project (see example in Figure 16).

COMPASS

[← Return to Directory](#)

Project Acronym: COMPASS

Project Title:

Evidence and Opportunities for Responsible Innovation in SMEs

Funding Programme: Horizon 2020

Link: <http://www.innovation-compass.eu>

Responsible Innovation Dimension: All RRI aspects, Business-related, Public engagement, Sustainability

Description: "The challenge of the COMPASS project is to collect and deploy evidence on how RRI can be meaningfully integrated into extant innovation systems in European industry. COMPASS will pursue three overarching objectives: Providing evidence for better uptake of RRI in industrial R&D&I, fostering collaboration in three key innovation fields (healthcare, nanotechnology, ICT) and promoting responsible and sustainable R&D&I governance of highly innovative businesses. To achieve these objectives, COMPASS will build upon previous research and best practice cases on RRI, CSR and sustainable business models. It will involve industry, research and civil society in co-creation processes from very early on in order to ensure usefulness, feasibility and ownership of results among the target communities. The ultimate aim of the project will be to develop, pilot test and finalise an interactive online platform, the Responsible Innovation Compass. The platform will deploy RRI visions and roadmaps for the three innovation fields, a Responsible Innovation Self-Check Tool for SMEs as well as audio-visual training materials and tutorials, short thematic guides, additional resources and promotional materials. It will provide guidance and orientation tailored to the needs of innovative enterprises, particularly SMEs. COMPASS aims to substantially increase the evidence base for benefits of the inclusion of RRI into industrial R&D&I, through integrating findings of previous projects, systematically collating the extensive stock of knowledge dispersed across communities of practice, analysing empirical evidence on critical responsibility issues, success factors, and barriers for adoption of RRI in industry and pilot testing the added-value of all content of the project's Responsible Innovation Compass. COMPASS will further explore improved business governance by facilitating co-creation of visions and roadmaps for RRI by stakeholders from industry, research and civil society."

Figure 16: Additional project information

2.3. Administrator's backend

The Responsible Innovation Compass website has an administrator backend including a content management system facilitated by the WordPress admin interface. The back-end is accessible to administrators of the webpage with options to create, edit and delete all pages on the website, activate and deactivate functional plug-ins, and view visitor aggregated statistics. The Responsible Innovation self-check tool uses a different administrator backend, which editing self-check tool questionnaire questions and answer options, and downloading anonymised user generated data (in csv format) for aggregated analyses.