D4.4

User feedback and implementation report on Responsible Innovation Roadmaps

RESPONSIBLE INNOVATION COMPASS

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Acronyms

BSO: Business Support Organizations
CISO: Chief Information Security Officer
DMU: De Montfort University
EBN: European BIC Network
RI: Responsible Innovation
RRI: Responsible Research and Innovation
SME: Small and Medium Enterprise
TTO: Technology Transfer Office
WU: Vienna University of Economics and Business (WU Vienna)

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1. Introduction

The Responsible Innovation COMPASS (710543) aims at guiding European high-tech SMEs in the definition and adoption of responsible innovation approaches that can benefit their business strategies and society as a whole. Three sectorial RI roadmaps, a diagnostics Self-Check Tool, a co-creation method kit for the development of sectorial roadmaps, as well as additional targeted evidence and resources focusing on benefits, incentives and business models for Responsible Research and Innovation (RRI) in the industrial context, have been developed with and for SMEs by COMPASS (710543) partners.

This document focusses on the feedback and recommendations received from European SMEs with regards to the RI Sectorial Roadmaps in nanotechnology, cybersecurity and biomedicine which were co-developed with 40 companies and civil society organisations in the framework of the RI Labs held in Belgium, Spain and UK.

On top of the inputs collected from RI Labs' participants through the COMPASS (710543) co-creation method (https://innovation-compass.eu/method-kit/), the roadmaps are also informed by desk-based research and interviews with RI and sectorial experts.

Based on general issues relevant across the three sectors and industry-specific aspects, COMPASS (710543) roadmaps have a time horizon of 2030 and 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 innovation process and which Responsible Innovation aspects should be considered at these points.

Six companies then had the opportunity to pilot roadmap actions and report on usability of the roadmaps themselves.

Table 1: COMPASS RI Roadmaps testing purposes

Pilot test and assessment of the sectorial Responsible Innovation Roadmaps aimed at **testing the feasibility and adaptability of the sectorial roadmaps with a selection of European SMEs** in the biomedicine, nanotechnology and cybersecurity sectors. **The overall objective was to assess the scalability of the sectorial roadmaps**; in other words: • Are the sectorial RI roadmaps compatible with SMEs' individual R&I strategy? [feasibility] • Are the sectorial RI roadmaps relevant to SMEs who didn't participate in the RI Labs? [adaptability] The final goal was to **assess if and how the sectorial roadmaps can be integrated in the individual R&I strategy of European SMEs.**

Partners used the feedback from the companies that participated in the so-called "COMPASS Consultancy and Mentoring Scheme" to finalise the sectorial roadmaps that have been released on RI COMPASS (710543) website at the end of March 2019:

- https://innovation-compass.eu/roadmaps/

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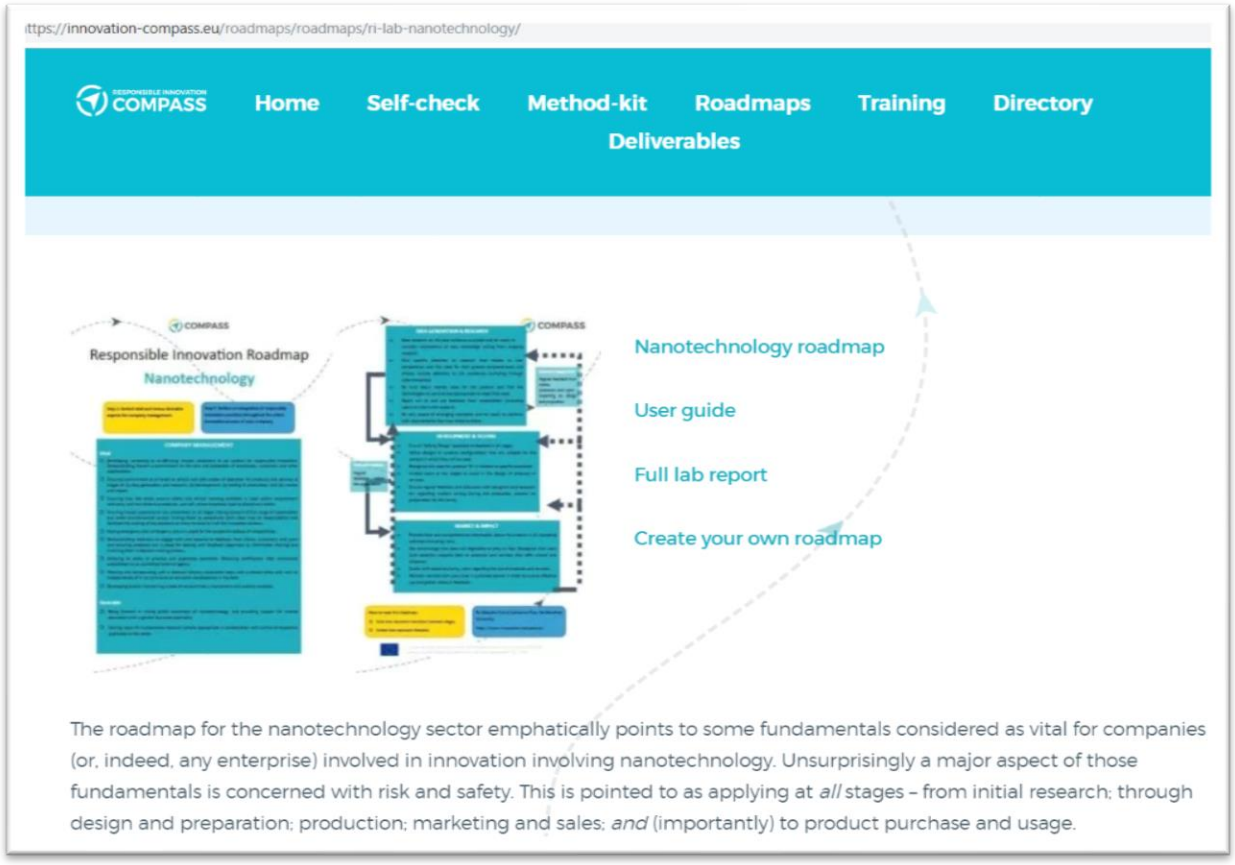

Figure 1: Sectorial RI Roadmaps on COMPASS website (nanotechnology)

The document builds on the testing notes on the roadmaps' structure and content, feasibility and adaptability collected between February and April 2019.

Collection of these inputs was carried out during online sessions; written notes are stored at EBN who have been carried out the above-mentioned interactions. Testing notes have been consolidated in the following summary document presenting procedures, outcomes and recommendations collected from different companies, while ensuring testers' privacy and anonymity. The report also includes feedback gathered from a few companies that participated in the Biomedicine RI Labs in 2018 and were re-contacted to check if they did implement any of the actions and dimensions discussed in that occasion.

Moreover, the document presents the feedback received in March 2019 from SMEs that attended COMPASS (710543) final conference. This last part of the piloting process was mainly aimed at assessing the online interface and user-experience, while we did not expect any change in terms of structure and content which were already consolidated.

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2. Sectorial RI Roadmaps testing methodology and process

2.1. Testing purpose

This last task of the COMPASS (710543) piloting scheme (see D4.1 for the full pilot strategy) aimed to assess if and how the sectorial roadmaps can be integrated in the individual R&I strategy of European SMEs.

The testing purposes can be summarised as follows:

- Assess compatibility of COMPASS (710543) sectorial RI roadmaps with SMEs' individual R&I strategy (**feasibility**);
- Assess relevance of COMPASS (710543) sectorial RI roadmaps for SMEs who didn't participate in the RI Labs (**adaptability**);
- Get a feedback on the **relevance and clarity** of the proposed roadmaps, and the consistency of their structure and comprehensiveness in terms of operationalising the concept of responsible innovation in the three target sectors.

2.2. Procedure

2.2.1. Selection of SMEs

Since April 2018, consortium partners started recruiting SMEs to let them participate in the so-called "COMPASS Consultancy and Mentoring Scheme", aimed at providing 6 to 12 European companies with dedicated introduction to COMPASS (710543) tools and methods to help them reconsider and review their business and innovation strategies according to the RI framework.

Partners decided to name this testing phase "COMPASS Consultancy and Mentoring Scheme" to make it more appealing for European SMEs, as the recruiting procedures proved to be quite challenging. Partners therefore agreed to offer some light mentoring support and a 1000€ fee in exchange of the time SMEs dedicated to assessing COMPASS (710543) roadmaps.

A Call for Expression of Interest was launched on April 30th to offer 12 European start-ups and SMEs in the biomedicine, nanotechnology and cybersecurity sectors the opportunity to join the "Consultancy and Mentoring Scheme" (https://docs.google.com/forms/d/e/1FAIpQLSddifC3PTZS0bC3wwBWiE5vepIynnLwBqCSP4U0DKbr-0Yybw/viewform). This initiative aimed at:

- Promoting Responsible Innovation among high-tech companies and motivating them to improve their business innovation strategy accordingly;
- Supporting European SMEs over a period of 6 months to discover where their specific company stands in terms of Responsible Innovation, and what they can implement to manage their research, development and innovation activities in a responsible and inclusive manner;
- Providing companies with networking and capacity building opportunities.

COMPASS (710543) call for Expression of Interest was open until September 21st, 2018.

A first cut-off date was set on May 14th, 2018 to let first comers attend the XXVII EBN Congress (held in Esch-sur-Alzette, Luxembourg, 6-8 June 2018) for free and get travel and accommodation costs covered so to let them attend the COMPASS (710543) co-creation methodology workshop organised in that occasion and meet with COMPASS (710543) team for a first in-person meeting.

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Despite three companies applied on time, only one took this opportunity and attended COMPASS (710543) workshop at EBN Congress, benefiting from the great networking opportunity and a dedicated 1:1 meeting with COMPASS (710543) staff.

Then, one more company did apply over summer.

All entries were reviewed by a committee made of 3 consortium partners' representatives: Margaret Mulligan for European BIC Network, Alex Esteban for La Caixa Foundation and Catherine Flick for De Montfort University. They were asked to check the motivation, the profile relevance and the RI expertise level of the applicants and score them accordingly.

Only one company raised some doubts among partners as not directly involved in one of the target sectors, but in the logistic one, but interested in the cybersecurity roadmap. Partners, due to the low number of applicants and to the strong motivation of the applicant, did finally decide to accept them in the scheme also to see if the roadmaps can be of interest to companies that don't fit 100% in one of the target sectors.

The call for EOI, at the end of September 2018, resulted in a first selection of 4 SMEs willing to join the "Consultancy and Mentoring Scheme":

Table 2: SMEs selected through COMPASS call for EOI

Company	Sector	Country	Participated in RI Labs	Completed the test
Company #1	Transports & Logistics	Netherlands	No	No
Company #2	Biomedicine	Spain	Yes	No
Company #3	Cybersecurity	UK	Yes	Yes
Company #4	Biomedicine	Norway	No	Yes

As the minimum target of 6 companies involved in the pilot was not achieved yet, and as the nanotechnology sector was not covered at all, partners started a focussed recruitment campaign through RI Labs' participants and EBN network. EEN sectorial groups (such as the nanotechnology one in Belgium), EU|BICs and incubators were asked to help in recruiting more SMEs.

This action brought to the involvement of 4 more companies which embarked in this piloting scheme between December 2018 and February 2019.

Table 3: SMEs recruited by COMPASS team

Company	Sector	Country	Participated in RI Labs	Completed the test
Company #5	Nanotechnology	Spain	No	Yes
Company #6	Cybersecurity	UK	Yes	Yes
Company #7	Nanotechnology	Austria	No	Yes
Company #8	Biomedicine/Health	France	No	Yes

As the final version of COMPASS (710543) sectorial RI Roadmaps was released at the end of October 2018, the "COMPASS Consultancy and Mentoring Scheme" was finalised in November 2018, started in December 2018 and continued till mid-April 2019.

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Moreover, some additional feedback on COMPASS (710543) Sectorial RI Roadmaps has been collected in 2 additional ways:

a. Contacting SMEs that participated in the RI Labs once the sectorial roadmaps were finalised and collecting their inputs on the final outcome and the eventual implementation of some of the actions outlined in the roadmaps; only a few companies that participated in the Spanish RI Lab (biomedicine) did provide feedback. Their inputs are presented in the chapter dedicated to the Biomedicine RI Roadmap.
b. Asking SMEs that joined COMPASS (710543) final conference to provide a quick feedback on the overall Responsible Innovation COMPASS (710543), including the sectorial roadmaps.

2.2.2. Testing scheme and opportunities for piloting SMEs

When invited to join "COMPASS Consultancy and Mentoring Scheme", selected SMEs were offered the following support measures and actions:

1. Assessing the company against Responsible Innovation good practices (company management and innovation process) with the Self-Check Tool.
2. Matching with a mentor/expert who has been working on the sectorial roadmap of tester's interest. Together with the mentor/expert the company go through the roadmap and discuss RI from a sectorial point of view.
3. Defining company's action plan towards more responsible approaches (innovation process and/or company management). Mentor and expert were available to review it giving feedback and advice.
4. Getting support to implement some of the elements of company's action plan.
5. Showcasing at final event in Brussels on March 26th.

Depending on their time availability and development stages, companies could choose how far did they want to go. This resulted in different paths followed by each tester, depending also on their previous knowledge and familiarity with the RI framework, their business maturity level, and the actual starting period of their pilot experience.

Still, three elements (out of the 5 mentioned above) were considered mandatory by COMPASS (710543) partners in order to consider companies' participation valid for roadmaps' piloting purposes:

- Participation in a first online meeting (bilateral) where each company was introduced to the overall COMPASS (710543) scheme and where the Self-Check Tool was tested and used as canvas to understand possible areas of improvement for the company. Only one meeting was held in person (at EBN Congress 2018).
  This phase was coordinated by EBN, supported in most cases by WU. During this meeting, COMPASS (710543) staff provided participants with inputs on how to progress towards some of the aspects highlighted by the company as "priority areas of intervention".
  Moreover, EBN provided companies with additional inputs on relevant available networking and funding opportunities whenever possible (e.g. explanation of INNOWWIDE call for grants for internationalisation activities of EU SMEs; introduction to possible partners and "good practices" – companies, EU funded initiatives, and BSOs; light financial support on top of the 1000€ fee to attend innovation related events – such as EBN Congress and COMPASS final conference).

- Participation in a second online meeting dedicated to the discussion of the relevant sectorial RI roadmap with EBN and DMU, the partner who developed the final version of

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the three full reports and sectorial roadmaps. During these sessions, RI Labs' coordinators were also invited to attend.
These sessions represented the main occasion for each piloting SME to share their comments about the final roadmaps and discuss their content and usability with COMPASS (710543) team. This phase of the piloting scheme provided very useful feedback for COMPASS project (710543) and at the same time allowed SMEs to share their ongoing RI related activities (planning or implementing ones) and get some advices and inputs from COMPASS (710543) mentors/experts.

- Exchange of final considerations on COMPASS Consultancy and Mentoring Scheme, therefore sharing with COMPASS (710543) partners main benefits the programme offered them and some reflections on how SMEs can embed RI in their company management and innovation processes.

Only six out of the eight companies that engaged in this piloting programme did complete it.

Two of them left the programme at the beginning of 2019 without testing the sectorial roadmaps due to other priorities: an SME in the transport & logistics sector was busy re-defining the whole business model and another one in the biomedicine sector was involved in very time and resource consuming investment rounds which were crucial for the sustainability of the business.

In both cases, SMEs recognised the importance of having participated in the very first step of the COMPASS (710543) Consultancy and Mentoring Scheme, as it allowed them to identify some strategic areas for improvement that proved to be useful both in the redefinition of the business model and in preparing the pitch-deck with investors.

While SMEs' comments and inputs about the COMPASS (710543) Self-Check Tool have been included in D4.3, the following report presents main feedback received about the three sectorial RI Roadmaps form the 6 companies that completed the testing (2 per sector).

Roadmaps were shared with piloting SMEs via email; at piloting stage, roadmaps were made available in the "Full Report" version:

- Nanotechnology: https://innovation-compass.eu/wp-content/uploads/2018/10/D2.3-Responsible-Innovation-Lab-Report-and-Roadmap-2-BE_FINAL.pdf
- Biomedicine: https://innovation-compass.eu/wp-content/uploads/2018/10/D2.4-Responsible-Innovation-Lab-Report-and-Roadmap-3-ES_FINAL.pdf
- Cybersecurity: https://innovation-compass.eu/wp-content/uploads/2018/10/D2.2-Responsible-Innovation-Lab-Report-and-Roadmap-1-UK_FINAL.pdf

Main guiding questions during the roadmaps' discussion with SMEs were:

Table 4: Guiding questions for interviews with SMEs

- Looking at the final version of the roadmap, do you think it is clear? Is it useful? How? - How did the roadmap co-creation process help you understand Responsible Innovation in your sector? - Was the roadmap co-creation process useful in reviewing your business processes? - Have you implemented any of the elements of the roadmap or improved any of your business processes accordingly? If yes, which ones? How? Why did you choose those ones? If not, why? - Are you planning to implement any of the roadmap's components within your company?

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If yes, which one? Do you have a clear idea on who do you need to involve, how and what are the resources and tools needed to implement it? Would you need any support on our side? If not, why? - Do you think the workshop method and the sector roadmaps will be useful for other companies? - How does the roadmap help understand RI in your sector? - What would be your advice to other companies who want to develop their own roadmaps?

Not all questions applied to all testers, as some of them didn't participate in the RI Labs, so couldn't express themselves in that regard.

In closing, the report presents main conclusions about COMPASS (710543) Sectorial RI Roadmaps' feasibility and adaptability (each chapter focussing on a specific sector) and includes an additional set of recommendations received from SMEs that participated in COMPASS (710543) final conference – Innovation Relaunched.

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3. COMPASS Nanotechnology RI Roadmap – SMEs feedback

The Nanotechnology RI Roadmap is the outcome of a series of co-creation workshops held in Belgium and interviews with senior staff of companies and industry-linked research projects engaged in innovation and research in areas involving nanotechnology.

The nanotechnology RI Lab (which was attended by 2 companies) helped in pointing to the variation in the nanotechnology sector and the potential for and the risks relating to nanotechnologies.

The roadmap for the nanotechnology sector emphatically points to some fundamentals considered as vital for companies (or, indeed, any enterprise) involved in innovation involving nanotechnology. A major aspect of those fundamentals is concerned with **risk and safety**. This is pointed to as applying at all stages – from initial research; through design and preparation; production; marketing and sales; and (importantly) to product purchase and usage.

A clear responsibility applies not only for people, animals and the environment but also company employees, contractors, customers and those who transport, deliver and apply nanotechnology products. It follows that the roadmap demands that companies should have and implement codes of practice (understood and practiced by all staff) that help to embed **the 'safe by design' ethos**. Associated with this is the necessity of a heightened readiness among companies to (a) respond to new knowledge about nanotechnologies; (b) work closely with relevant industry bodies; and (c) maintain links over a sustained period with customers and users.

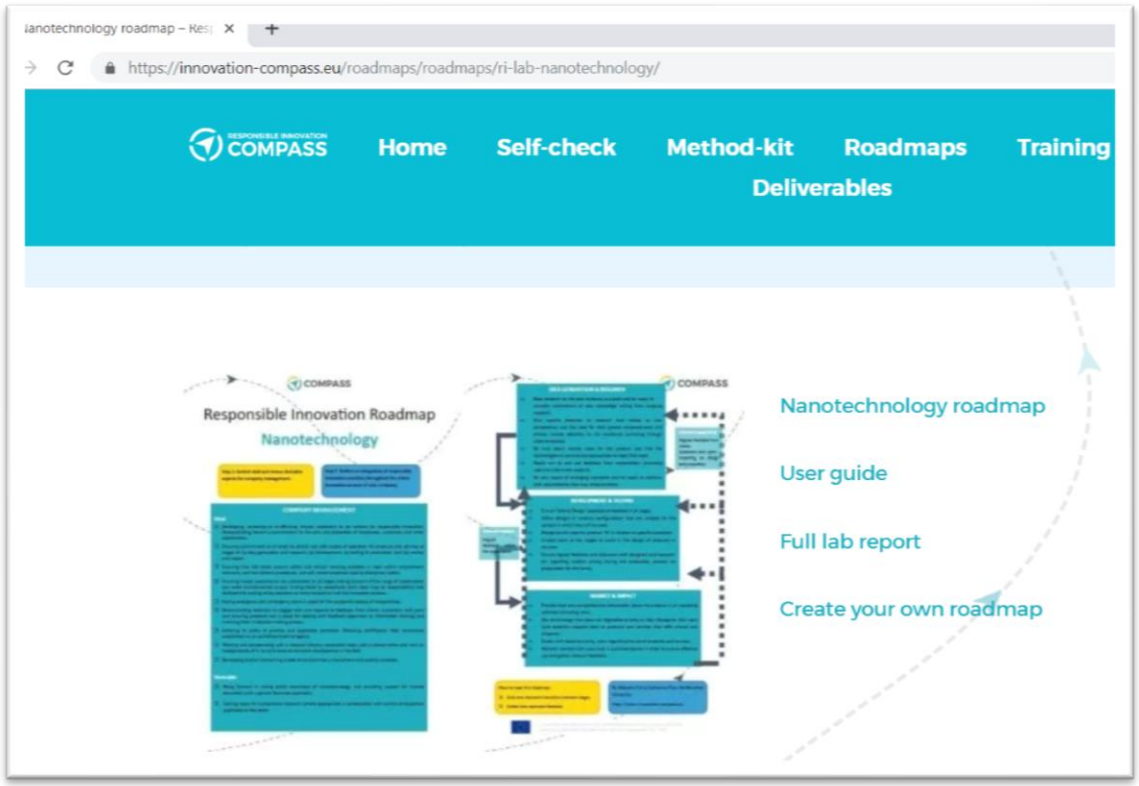

Figure 2: COMPASS RI Roadmap - Nanotechnology

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Two companies were involved in the piloting of the Nanotechnology RI Roadmap: a Spanish and an Austrian.

As previously explained, they both first tested the COMPASS (710543) Self-Check Tool and used that opportunity to introduce their company and explain COMPASS (710543) partners why they are interested in Responsible Innovation and to start a conversation about the dimensions of the RI framework they are most interested in, and therefore willing to consider for future developments/improvements of their business and innovation strategy.

Then, SMEs were provided with the full version of COMPASS Nanotechnology RI Roadmap and were given an appointment to discuss it with EBN and DMU.

The following paragraphs present main feedback and considerations the two SMEs shared with EBN about the sectorial roadmap in terms of clarity and relevance of the content, usability and adaptability of the tool.

3.1. COMPASS Nanotechnology RI Roadmap testing with a Spanish Company

The first company is one of the most experienced SMEs that participated in the COMPASS (710543) programme. It is a spin-off of the Catalan Institute of Nanotechnology (ICN2), the University Autonoma of Barcelona (UAB) and the Institut Català de Recerca i Estudis Avançats (ICREA). Among its co-founders are scientist from these institutions, international experts on RRI (Responsible Research and Innovation), and experts in e-communication and experts in business development and technology transfer. The main current objective is the commercial exploitation of the patent application "biogas production", in the U.S. and Europe, consisting of the use of iron oxide NP as additives to optimise the production of biogas.

The company was selected by COMPASS (710543) as one of the 5 industry cases on how implementing responsible innovation can kick-start innovation and contribute to competitiveness of SMEs in key innovation fields.

The discussion on COMPASS (710543) Nanotechnology RI Roadmap took place on January 18th, 2019 and involved two staff members of the company, EBN and DMU representatives.

3.1.1. SME comments and feedback

We report below main comments, observations and feedback received from this tester.

- The overall document is **simple, clear and adaptable**. It is a good starting point for SMEs in the nanotech sector to look at the RI framework.
- On the other side, the roadmap is maybe far too simple as it doesn't go deep describing the actions companies should undertake in order to make the overall RI framework operational. Particularly, **actions and measures SMEs should take in their labs are not presented**.
  COMPASS (710543) partners explained that the roadmap was thought to approach a wide spectrum of companies, therefore being less stringent and addressing RI at a more general level, still taking into account dynamics and problematics which are key for the sector. In addition to that, nanotechnology is not a sector, but a technology applied to different sectors, therefore making things even more complicated when developing a tool that has to apply to a wide range of SMEs.
- The most relevant aspect addressed by the roadmap for SMEs working with nanotechnologies is "**safety by design**" which should be part of the mission statement of all businesses in this sector.

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- The roadmap could push SMEs to go even beyond "safety by design" by suggesting a **"design for values"** approach which addresses all levels of the business and innovation processes. In this sense, SMEs should put fundamental values at the core of all actions (strategic and implementation ones) across the whole innovation value chain: safety, sustainability, inclusion, etc., just to mention a few.
- **Mitigation of uncertainty** is another key aspect of this sector, more than risk management (which instead is very much stressed in the roadmap). Nanotechnologies are characterised by a high degree of uncertainty, as there is still a lot of basic research going on and risks are not clear yet. Reflexivity is a key RI aspect SMEs should consider mitigating uncertainty.
- **Accountability** is also an important driver for SMEs in the sector. The legal basis of companies' R&I activities has to be clear and transparent (also to avoid legal problems).
- **Standards** are useful, but they mainly apply for larger and well-established companies who do technology production. This is less true for research institutes and small companies that do research: in this case standards are the minimum threshold. Standards' consolidation process takes longer than research and innovation processes, that's why SMEs should have as main objective not only to respect and apply existing standards, but to shape and push new ones. The continuous review of standards is key for uncertainty mitigation.
- How can SMEs go faster and more informally than standards so to quickly respond to uncertainty? It is important that SMEs **link up with "informal clusters of people"** that discuss these aspects, with whom to exchange opinions, latest developments and future trends. Usually universities and research centres are keener to share data and information as for SMEs the confidentiality issues arise quickly; it is therefore important for SMEs to cooperate with labs and universities.
- Safety is something SMEs must monitor constantly: they can limit uncertainty by the concept of "**provisionally safe**", meaning till we don't know how things can be done in a better and safer way. Standards are not enough in this sense, as they reflect an old knowledge, that is already out of business in a rapidly innovative and changing context.

COMPASS (710543) Nanotechnology RI Roadmap is therefore an interesting framework SMEs should look at, but it is not enough by itself to guide them through the actual implementation of RI principles discussed above. The roadmap could be used by experts to lead the process: a mentor or an advisor from the nanotech sector who can move from the general framework to concrete implementation guidelines. Responsible Innovation under Horizon 2020 is still very much addressing lawyers and managers, and not labs where innovation is actually taking place. The lack of clear and practical instructions for R&I profiles within companies is today the main gap to the actual implementation of RI in SMEs.

The company is currently evaluating using the COMPASS Nanotechnology RI Roadmap as the general company Nanotechnology Roadmap framework. From there, they will be developing specific actions and tools for each one. In this sense the final objective would be to take the COMPASS (710543) Roadmap as an Index to be developed.

As an example of what will be their approach, let's take the following COMPASS (710543) Nano-Roadmap statements:

- *"Ensure 'Safe by Design' approach embedded in all stages, taking account of the life-cycle of the nanomaterials used (and related issues for recovery and disposal)"*

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- *"At a minimum, ensure that the five principles of design for safer nanotechnology are followed (see Table 4)"*

As per today, their (proxy) vision is to develop, adapt and deepen these COMPASS (710543) Roadmap statements as follow:

"Ensure 'Safe by Design' ('SbD') approach embedded in all stages, taking account of the life-cycle of the nanomaterials used (and related issues for recovery and disposal)".

- *Framed within the overarching concept of "Design for Values" (DfV)*
- *For the concept of 'SbD':* NANoREG framework for the safety assessment of nanomaterials. doi:10.2760/245972
- *For the principles and implementation strategies: "*Nanosafety: Towards Safer Nanoparticles by Design". Author(s): Neus G. Bastús, Víctor Puntes. Journal Name: Current Medicinal Chemistry. Volume 25, Issue 35, 2018. DOI: 10.2174/0929867324666170413124915).

In this sense, the Roadmap will be the entry point of basal information from where anyone interested within the company (and outside) could deepen the analysis. The amount of information that can be entered within each entry point is countless, but they envisage to maintain it just with the fundamental funding stones.

They consider that developing the Roadmap in this way ("top-down and fundamentals") can also be considered as a complementary document from the Self-Check Tool (bottom-up and detailed information).

During the last exchange with EBN, they informed the consortium that they plan to test the Self-Check Tool as a check-list for helping young researchers to reflect on their research (and innovation) within their "RRI Course from the Lab". A check-list that will be meant not only as a "ticking exercise" but as a way of acknowledging what has been done and what is missing and to plan a way of filling the gaps found. A way of helping to develop a research (and innovation) project based on the principles of Care and Sustainability, and the gaps found would be filled in by the basic information that exist on the COMPASS (710543) Self-Check Tool and on the Sectorial RI Roadmap. The practical inclusion of such check-list is scheduled to start by September 2019.

3.2. COMPASS Nanotechnology RI Roadmap testing with an Austrian Company

The second tester is an Austrian company that got in touch with COMPASS (710543) after the EBN Tech Camp 2018 (which took place on November 22-23 in the Netherlands), as an intermediary organisation attending the event informed them about the initiative and the opportunity to join the piloting phase as they are interested in the RI framework but don't know it into many details. It is a young company leading in the invention, development and manufacture of the most advanced nanomaterials and devices. They translate these advanced technologies into value for the customers/users through their solution, service and consulting business worldwide.

The discussion on COMPASS Nanotechnology RI Roadmap took place on March 28th, 2019. It must be acknowledged that the company is quite new to Responsible Innovation and that they didn't participate in previous COMPASS (710543 activities, apart for a first phone call in

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February with EBN to set the ground of the overall scheme and get a first introduction to RI and the COMPASS (710543) Self-Check Tool.

3.2.1. SME comments and feedback

We report below main comments collected from the SME about the roadmap adaptability and usability. In this case it was interesting to see how a company that didn't participate in the RI Lab and with little RI experience approached the tool.

- The overall document is interesting, but far **too long and "difficult to read"** for a company. The report language makes things sounding more complex than what they are, therefore discouraging users to go through the full report.
- In this version (full report), the most important and practical element – the actual roadmap - is proposed at the very end of the document. **The roadmap should be moved at the beginning as it is the most important element**. The rest of the report can be proposed after it in case a company wants to deepen the knowledge on how RI applies to the nanotechnology sector.
- Speaking of **nanotechnology as a sector is misleading**. According to the tester, nanotechnology is nothing new but an "evolution" of chemistry. Many of the reflections proposed in the roadmap are not that new, as what has been already done in other branches of chemistry can be applied to nanotechnology too, in terms of safety and risk management.
- The "nanotechnology hype" is something SMEs need to take care of. It is an important "marketing theme" but this is not enough for companies to be credible and competitive on the market. In this regard the **COMPASS (710543) roadmap is very useful indicating actions and measures that can improve the transparency of a company**, therefore strengthening the relationship with stakeholders (and particularly with consumers).
- **The Nanotechnology RI Roadmap helps SMEs to differentiate themselves from competitors as it pushes SMEs to go beyond existing standards and regulations**. For example, the ISO 9001 could be improved to include clear and direct reference to Responsible Innovation

During the last exchange between EBN and the tester, the company insisted a lot on the last 2 points mentioned above. In their specific case, the Roadmap is now guiding the team under two aspects:

1. Improving the communication and the relationship with stakeholders > transparency. The very first step is the review of the language used on the company website (now going on).
2. Review internal processes and the relationship with stakeholders according to RI principles and write them down, so to improve SME's transparency and gain competitive advantage on the market.

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4. COMPASS Biomedicine RI Roadmap – SMEs feedback

The RI Biomedicine Roadmap is the outcome of a series of co-creation workshops with biotechnology companies in Spain and interviews with senior staff of healthcare technology companies in the United Kingdom, Austria, Cyprus, Spain, and Slovenia. All the companies involved were in the business of researching and designing technologies or services for people living with different health conditions.

The workshops and interviews guided participants to reflect on key ethical issues that relate to Responsible Innovation. These helped to contextualise and provided a good indication of current concerns. Issues of high relevance exploring the extent to which RI is being practiced in the industry and the barriers for its further development were identified. Also, the role of technologies and how both **'technology push'** (from some manufacturers and suppliers of healthcare technologies) and **'consumer pull'** factors (as more and more people seek to access health services with the aid of technologies) were influencing the sector were discussed.

The biomedicine roadmap points to some fundamentals considered as vital for companies involved in the sector, such as **taking greater account of user (patient) perspectives**. This relates to the ethical imperative of care and to recognise the need to afford greater choice for people in managing their health (and their access to technologies that help them do this). Such issues are noted as impacting on the designs of products (e.g. 'safe by design') and service configurations whereby users (patients) are empowered. It follows then, that the roadmap requires companies to have and implement appropriate **codes of practice** that help to embed an appropriate service ethos – and that related technologies are designed to support this.

Associated with all of these issues is the necessity of (a) a heightened readiness among companies to **respond to the changing demographic and public health agendas**; and (b) **maintaining links with users** (patients and/or healthcare professionals) so that they are sensitised to their needs and aspirations.

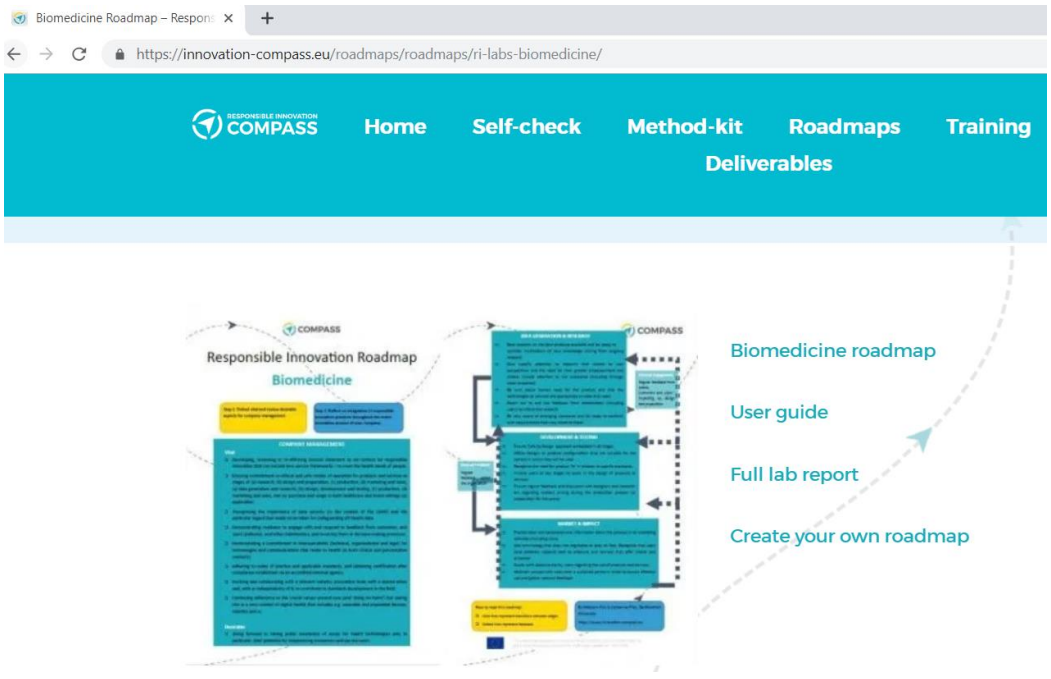

Figure 3: COMPASS RI Roadmap - Biomedicine

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Two companies were involved in the piloting of the Biomedicine RI Roadmap, a Norwegian and a French SME. These companies are active in the biomedicine and tele-medicine sectors and did not participated in previous activities of COMPASS project (710543).

They both first tested the COMPASS (710543) Self-Check Tool and used that opportunity to introduce their company, to explain why they are interested in Responsible Innovation and to start a conversation about the dimensions of the RI framework they are most interested in, and therefore willing to consider for future developments/improvements of their business and innovation strategy.

Then, SMEs were provided with the full version of COMPASS (710543) Biomedicine RI Roadmap and were given an appointment to discuss it with EBN and DMU.

The following paragraphs present main feedback and consideration the two SMEs shared with EBN about the sectorial roadmap in terms of clarity and relevance of the content, usability and adaptability of the tool.

4.1. COMPASS Biomedicine RI Roadmap testing with a Norwegian Company

The Norwegian company is a young spin-out from the University of Bergen (Norway) working to commercialize decade long research on protein structure and protein misfolding. Their lead development program is focusing on phenylketonuria (PKU), a rare genetic disorder caused by mutations in the enzyme phenylalanine hydroxylase that result in defective degradation and accumulation of the amino acid phenylalanine, which becomes toxic to the brain. They intend to leverage their unique drug discovery platform to target multiple rare disease caused by protein misfolding. The test was run with the Project Director, who's also business developer at the technology transfer office in Bergen (Bergen teknologioverføring AS), supporting commercialisation of research for more than ten research institutions in Bergen, Norway.

4.1.1. SME comments and feedback

The company attended an online meeting with EBN and DMU on March 18th, 2019. During the session the following comments were raised:

- It is one of the first time the tester has been addressed as SME to **operationalise the RI framework in a business context.** RI is often discussed in academic frameworks, and this opportunity is welcomed as an important improvement of the European R&I policy. Sustainable models and Responsible Innovation can indeed support SMEs gaining competitive advantage against other companies – especially if they liaise with wider regional innovation ecosystems to include academia and research in their development processes.
- The layout of the document reminds an Horizon 2020 deliverable. Once online how is it going to be presented and made available to SMEs? It would be recommendable to **extract the roadmap from the overall document and present it as the actual tool developed by COMPASS (710543) for SMEs**. It might be also useful to present it in a Power Point format which is easier to use during team meetings (portability).
- The full report is interesting. For a company that didn't participate in the RI Labs it is **important to read about the process and the discussions that brought to the definition of the COMPASS (710543) Biomedicine Roadmap**. The document is easy to go through and understandable.

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- As far as the actual roadmap is concerned, the lack of reference to a **possible timeline** should be addressed. Even if the time horizon is 2030, it would be good to have an indication about the timeline SMEs could follow.
- COMPASS (710543) roadmap is useful for SMEs as it points the direction they could follow if thy want to act responsibly. The proposed path is easy to understand and close to several dimensions/aspects SMEs in the sector have to consider anyway.

During the meeting, EBN discussed with the SME the aspects of the roadmap they consider addressing.

The Biomedicine Roadmap provided them with a framework to efficiently design business activities and address the fundamental missions of biotech companies towards society: providing patients with solutions to enhance quality of life. Advises were provided through the roadmap at the different stages of development of a biomedicine company (idea generation & research; development; testing and production; market & impact). As their company grows, these requirements will be carefully considered.

The company has decided to focus their efforts on user's interaction, as it represents their main priority at this stage of their business development (very early stage) so to set clear processes and tools for stakeholders' engagement and science education. Some sources and good practices were referred to them, mainly from the RRI Tools repository.

Moreover, as they are working on their financial sustainability, EBN introduced them to an investment readiness programme for SMEs in the healthcare sector, sponsored by EUREKA network and the European Commission (EBN is a partner).

4.2. COMPASS Biomedicine RI Roadmap testing with a French Company

A French SME entered the programme in March 2019 when the Spanish company (who took part both in the RI Lab and in the Self-Check Tool testing phases) informed the COMPASS (710543) team about its impossibility to continue the piloting. As this French company was informed about the project and its activities earlier on by EBN and they expressed clear interest in the overall initiative, when they were invited to join an "accelerated" testing scheme of COMPASS (710543) tools they accepted.

The start-up based in the South France is providing better access to healthcare and fighting with territorial and social isolation of elderly people through telemedicine. The test was run together with the President and Founder of the company. As they joined the test at later stage, EBN did first organise an introductory meeting (conference call) to present the overall programme and set the feasible targets and goals of the piloting scheme with the SME. To gain time, EBN provided the SME with both the link to the Self-Check Tool online and the Biomedicine Roadmap at the same time so that they could look at both tools in parallel. In this case, EBN shared with them the latest version of the roadmap as it is now available online (https://innovation-compass.eu/roadmaps/roadmaps/ri-labs-biomedicine/), so to get feedback on the user experience too.

This was a very interesting approach as allowed partners to observe how a SME totally extraneous to COMPASS (710543) programme could benefit from its full offer.

4.2.1. SME comments and feedback

The Self-Check Tool discussion helped both EBN and the SME to understand their "RI priorities" and to start defining possible actions to improve company's innovation processes.

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The discussion on the sectorial RI Roadmap held on April 19th, 2019 resulted in the following comments:

- The Biomedicine RI Roadmap is **easily accessible** through COMPASS (710543) website.
- It could probably be **re-named** "Health RI Roadmap" as it goes beyond biomedicine sector. This might discourage companies like theirs (telemedicine) to approach this tool, while it addresses a range of topics and issues that are relevant to a broader audience.
- The document presenting the roadmap is not reader-friendly, as the **layout is a bit confusing** (too many arrows – functional and ornamental ones).

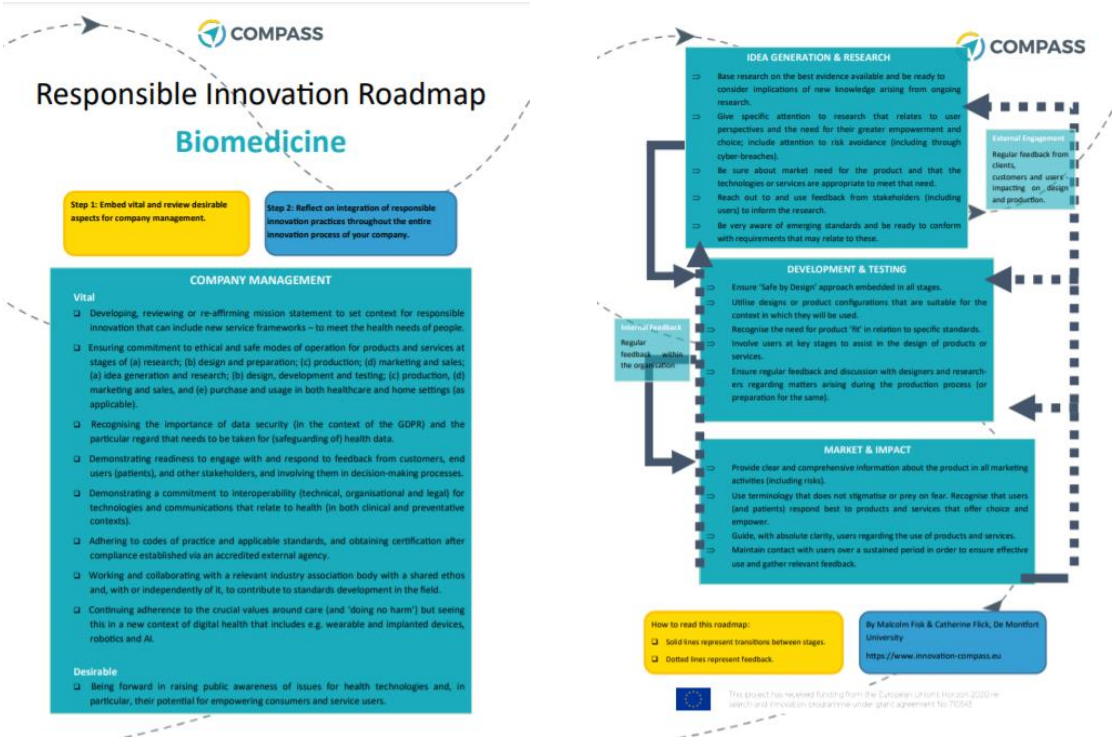

Figure 4: COMPASS Biomedicine RI Roadmap document

For instance, the "How to read the roadmap" box is at the end of the roadmap, therefore not very helpful (counterintuitive). The graphic layout of the roadmap is too heavy, but the content is lighter (far too lighter) than the full report.

- The content of the Roadmap speaks to entrepreneurs (language is clear and appropriate), but **it's probably more for those who are about to start a new business rather than established companies**. SMEs in the healthcare sector must have some of the elements presented in the roadmap by default, but in some cases, they might use it as a guideline to develop a new business line according to RI principles and dimensions.
- The full report is considered more interesting and relevant especially for established SMEs as it provides useful inputs about the future healthcare sector's trends (i.e. artificial intelligence and robotics).

Privacy by design is the driving value of this French company, and they found confirmation of the importance of it in both COMPASS (710543) Self-Check Tool and the Sectorial RI

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Roadmap. When they approached the Consultancy and Mentoring Scheme, they thought they had put RI at the heart of the company. Thanks to the questionnaire they were able to make a guided diagnosis and thanks to the biomedicine roadmap they got inputs on good RI practices and future trends, and finally, "*we are less responsible of what we thought"* (quote).

During the exchanges and e-meetings with EBN they recognised their strength in terms of ethics and data protection, but they recognised they underestimated environmental aspects. With the exception of energy consumption, they have not taken into account other aspects of environmental impact, such as: resources, emissions, waste production, etc. They are therefore going to reflect upon this development aspect as this could represent an element of distinction and competitive advantage in their market.

Moreover, even if in France the regulations concerning the protection of the rights of the individual are strict, thanks to COMPASS (710543) programme they reflected about the opportunity of going beyond standards and regulations, as a responsibly innovative company must go beyond mere compliance with the framework. It must lead the way and create other social paradigms.

4.3. COMPASS Biomedicine RI Roadmap testing with Spanish companies that participated in the RI Lab

As soon as the full document presenting the RI Lab procedures and the Biomedicine RI Roadmap was released, La Caixa Foundation got back to the companies that participated in the Spanish RI Lab to collect their feedback. Three companies got back to COMPASS partners answering the guiding questions presented in the second chapter of this report. We report them below:

- Looking at the final version of the roadmap, do you think it is clear? Is it useful? How?

  Company 1. *Yes, since the specifics of the roadmap in the implementation phase clearly shows how the aspects of the roadmap need to link together throughout the entire research, design, production, marketing, and after-sales stages of development.*

  Company 2. *Yes, the final version is very clear*.

  Company 3. *Globally it is useful, although there are some technical concepts that probably should be explained apart, like "Safe by design" or "prey on fear", which might not be understood by everybody. There is a need for strengthening the importance of Regulatory Bodies, which are not specifically mentioned, and which determine the fate of many products.*
  Overall it is useful because it is well structured and points black on white the essential point, which is the relation with the end-user

- How did the roadmap co-creation process help you understand Responsible Innovation in your sector?

  Company 1. *In understanding, prioritising and addressing the concerns of the 'most important stakeholders', including customers.*

  Company 2. *It helped me to apply new ways of working within the workplace.*

  Company 3. *Mainly on taking always into account the end-user at the time to take any decision.*

- Was the roadmap co-creation process useful in reviewing your business processes?

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Company 1. *Above all for ensuring regular feedback and discussion with designers and researchers regarding matters arising during the production process.*

Company 2. *N/A*

Company 3. *Yes, indeed, even to try to define the final consumer, thinking for instance the whole family instead than individuals at the time of designing the market strategy.*

- Have you implemented any of the elements of the roadmap or improved any of your business processes accordingly? If yes, which ones? How? Why did you choose those ones? If not, why?

Company 1. *At present, only for demonstrating readiness to engage with and respond to feedback from customers, end-users (patients), etc., and involving them in decision-making process where appropriate. This because we are quite used to it as we already address informal caregivers and their feedback is crucial.*

Company 2. *Yes, although the company is not at 100% oriented to clinical trials or do not do it from the offices. We have detected some elements that can help us improve the way of working.*

Company 3. *In several steps, like changing the format of the product taking into account the stigma of tuberculosis. We had to change the format from a food product to a food supplement and sell it in pharmacies instead of supermarkets in the first step to enter the market. This will be changed in another step. The other step has been to take into account the whole family instead of individuals and try to adjust the price structure.*

- Are you planning to implement any of the roadmap's components within your company? If yes, which one? Do you have a clear idea on who do you need to involve, how and what are the resources and tools needed to implement it? Would you need any support on our side? If not, why?

Company 1. *We believe in recognizing the benefits of networking to obtain expert knowledge that contributes to our innovation (and market understandings). For that, we will continue enlarging our network and participating in this kind of initiatives.*

Company 2. *The company is growing, and we are going to implement new ways of working so that everyone knows what they have to do and not waste time.*

Company 3. *We are studying a way to get a direct feedback from the costumers, although this appears to be complex because we have to keep anonymity and implement a GDPR policy. This might be difficult because TB is a very stigmatized disease.*

- Do you think the workshop method and the sector roadmaps will be useful for other companies?

Company 1. *Sure, this initiative was very needed. Any company should be required to obtain feedback from, consulting with and involving customers in the innovation process.*

Company 2. *Not yet.*

Company 3. *Yes, it is important as it allows to concentrate in a specific time-space framework and exchange ideas with people focused in different fields. It is a very rich experience.*

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- What would be your advice to other companies who want to develop their own roadmaps?

Company 1. *To also take into account this roadmap, since it was created from interviews with 18 senior staff in healthcare technology companies, and also from workshops, so the main conclusions and suggestions are highly useful and coherent.*

Company 2. *N/A*

Company 3. *The most important issue is to try to solve a need, to provide a service… but always taking into account the culture, the context, the socioeconomics of the final user. You cannot build a company with a product that "you think" the customer needs.*

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5. COMPASS Cybersecurity RI Roadmap – SMEs feedback

The Cybersecurity RI Roadmap is the outcome of a series of co-creation workshops with cybersecurity companies in the UK. Although all companies operated in the cybersecurity sector, different parts of the sector were represented: digital identity provision, traditional cybersecurity (protection, penetration testing, security, etc.), education provision, and cybersecurity infrastructure.

The labs helped to generate insights about the position of the cybersecurity sector and the challenges that it faces. It also showed that there exists an **acute sense of responsibility** (by virtue of their role in 'protection') among the participating companies, and a **clear ethical strand** to their work and their thinking.

The roadmap for the cybersecurity sector emphatically points to some company management aspects considered as vital for companies involved in the sector. Significant merit is attributed to having **codes of conduct**, accompanied by suitable management and governance systems that encourage the operation of ethical practices and can help to **limit or minimise damage** that can be caused by cyber-attacks, malevolent persons within the companies or simply human error. These same systems are recognised as contributing to robust frameworks for the maintenance of **data privacy** – by which the client and customer trust is supported.

It follows that the roadmap demands that companies should have and implement codes of practice (understood and practiced by all staff) that help to embed a 'tools for good' ethos. Associated with this is the necessity of a heightened readiness among the companies to (a) respond to, and preferably be ahead with, **knowledge about cybersecurity issues**; (b) **work closely with relevant industry** (and government) bodies; and (c) to maintain **good relationships with clients and customers** so they are well informed on cybersecurity issues and see themselves as 'allies' in the war against cyber-crime. The ethical imperatives around such matters are strong and resonate with elements of Responsible Innovation.

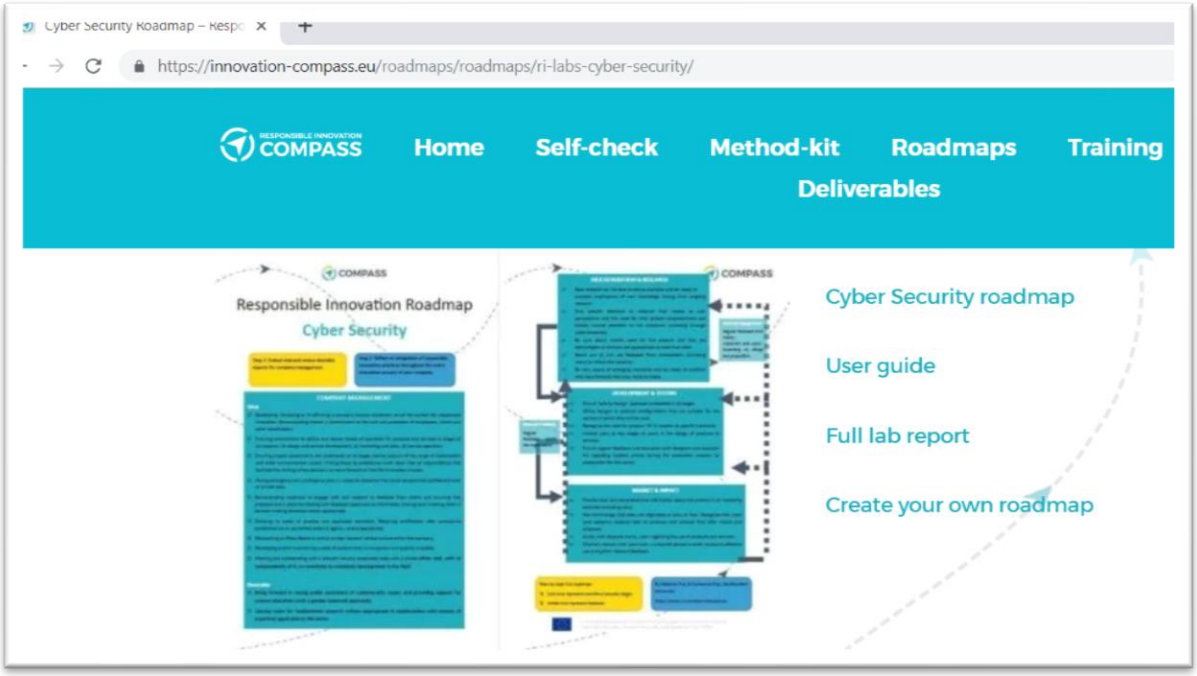

Figure 5: COMPASS RI Roadmap - Cybersecurity

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Two companies were involved in the piloting of the Cybersecurity RI Roadmap, both from the UK. They are quite different in terms of size, targets and mission; it was therefore interesting to see how they approached COMPASS (710543) Cybersecurity RI Roadmap.

Both companies benefitted from the full range of services and tools COMPASS (710543) has developed to help European high-tech SMEs embedding/improving RI in their business and innovation strategies.

These companies participated in the Cybersecurity RI Lab in the UK with DMU. As described in D2.2, in the cybersecurity case the RI Lab methodology was adapted to be run with individual companies (1:1 session between experts and company staff), instead of running it with a group of SMEs. On one side this allowed COMPASS (710543) team to get an in depth understanding of each company practice and to preserve their intellectual property, on the other side it was a more “insular process” with no discussion and comparison with peer companies on RI.

Moreover, both companies tested the COMPASS (710543) Self-Check Tool and used that opportunity to discuss other aspects of RI with EBN and WU.

Then, SMEs were provided with the full version of COMPASS Cybersecurity RI Roadmap and were given an appointment to discuss it with EBN and DMU. They were invited to discuss it together, so to give them the opportunity to exchange their own experience with COMPASS (710543) and RI in general, but due to last minute problems of one of the companies this was not possible. Two separate sessions took place in March and April 2019.

The following paragraphs present main feedback and consideration the two SMEs shared with EBN about the sectorial roadmap in terms of clarity and relevance of the content, usability and adaptability of the tool.

5.1. COMPASS Cybersecurity RI Roadmap testing with a small UK Company

The first company works to make cyber security implementation, assessment and certification as simple as possible, especially for small, non-technical organisations.

They are one of just five companies appointed as Accreditation Bodies for assessing and certifying against the Government's Cyber Essentials Scheme. The Scheme focuses on the five most important technical security controls. These controls were identified by the government as those that, if they had been in place, would have stopped the majority of the successful cyber-attacks over the last few years. The company which counted 8 employees at the beginning of the COMPASS programme almost doubled the number of employees in 1-year time and is trying to find the best way to grow and stay ethical in their innovation processes.

5.1.1. SME comments and feedback

EBN and DMU e-meet the SME founder on March 15th, 2019. During the session she raised the following comments:

- **The Cybersecurity Roadmap is very useful**. They could find embedded in the roadmap many aspects previously discussed during the RI Lab.
- The roadmap points the direction for SMEs, but it would be useful to find more details about the processes and actions needed to get there. Especially for micro and small companies, where processes are not so structured yet, it would be important to

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propose concrete action points and examples on how to implement roadmap's suggestions. The mentoring support was indeed very useful in this sense.

- As the full document is rich of information, it is recommended to **move the roadmap at the beginning of the document**, as when readers get to the end of it, they are overwhelmed.
- The **reflexivity dimension** of the roadmap is key, but the way it is represented (dashed arrows) is confusing.

During a last exchange with EBN, the company stated that COMPASS (710543) Cybersecurity RI Roadmap, together with the Self-Check Tool, have proved to be very useful for the company, as they used them to check company's progress against the RI framework.

From their point of view, the mentoring support was also very valuable (both during the RI Lab and the Consultancy and Mentoring Scheme) to understand different aspects of RI and prioritise them according to their specific business case.

As during the last 12 months the company underwent a significative growth (doubling the size of their market), the management focussed its work on the definition of the company mission and vision, and transparency towards its stakeholders.

They felt strongly that the development of ethical innovation was something they wanted to do and they did this in an informal way. The COMPASS (710543) RI Lab programme was very useful indeed as it raised questions with them which they had not thought about or considered before. It also highlighted their lack of structure and formal processes for the ethical innovation within the company.

The subsequent Self-Check tool clarified further the structures and processes they need within their company. However, the tester feels that if they had gone straight to the Self-Check Tool without any introduction first it might have been quite daunting for a small company. Having already had the discussions during the RI Lab workshop they were prepared for the structures and processes needed and could view the tool in context of the work they had already started after the RI Lab.

The COMPASS (710543) Self-Check Tool and Cybersecurity RI Roadmap were especially useful as they have since been going through the certification to ISO9000 and they could develop some processes in light of the understanding of the recommended formal structure for ethical innovation. They feel that much of the tool and roadmap are still not so relevant to them as a very small company, but it gives them a useful structure to use as they grow.

5.2. COMPASS Cybersecurity RI Roadmap testing with a medium UK Company

The second UK SME develops solutions that make it faster, simpler and safer to prove people identity, online and in person. Founded in 2014, the SME began a mission to become the world's trusted identity platform: a global identity platform and free consumer app that puts users' ID on their phone. It has more than 200 employees in Europe and is present both in India and North America - USA and Canada).

This company is one of the two COMPASS (710543) beneficiaries with the deepest knowledge on RI (together with the Spanish SME in the nanotechnology sector): since the beginning they are committed to doing things differently to other tech companies – like promising to never mine or sell customers' data; it is designed so that they couldn't even if they wanted to.

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5.2.1. SME feedback and comments

EBN and the company did discuss the Cybersecurity RI Roadmap on April 4th, 2019. The meeting was held with the Director of Regulatory & Policy, but she was reporting feedback and comments also from the company Chief Information Security Officer (CISO) and Security Lead. Below main comments:

- **The indications proposed in the Cybersecurity Roadmap appear to be sensible**, and the company broadly follow their approach, with a few caveats. The COMPASS (710543) guidelines about entering markets with unfriendly privacy and security terms are worth noting.
- They recommend one slight tweak in the roadmap wording as in these days it's not uncommon for 2 years to pass between breach and detection. The question could therefore be slightly amended from:
  - "Does your business have effective policies and practices in place to prevent and address a cyber breach?"

  to:
  - "Does your business have effective systems, policies and practices in place to prevent, detect and address a cyber breach?"
- The sections about **SMEs' code of conducts** is particularly interesting, as founding principles are key in a company as they drive behaviours within the company and outside. It is important that every single staff member of a company (senior to junior) is aware of and understands them deeply. The company has for example established 7 guiding principles that indicate the main goals and targets all employees need to keep in mind.
- The company has already gone through different scenarios and frameworks that deal with ethics and responsibility: ISO27001 programme, SOC2 (which is crucial for US and Canada), Responsible 100, the NSCS 10 Steps to Cyber Security and the emerging HITRUST framework. For SMEs in the cybersecurity sector is indeed important **to map the global framework, going beyond the European one**. This mapping exercise is never ending as new criteria and framework are constantly developed.
- I**t is important for a company to endorse frameworks like the Responsible Innovation** one or the others mentioned above: it has an **internal usefulness** to *get the house in order* and then an **external one**, understanding of what you comply to and can be accredited against. A good framework will do both.
- If the branding around the RRI framework is going to change in the next R&I Framework Programme of the European Commission, there needs to be investment in a smooth transition.

During the follow up and final exchange with EBN, the company confirmed that they are continually developing and improving their ethics framework - the mentoring scheme and the privileged access to the expertise of DMU during the RI Labs, the Self-Check Tool and the sector roadmap is proving a very useful aid in their internal review mechanism.

Since the beginning of the COMPASS (710543) programme, they have now developed an internal ethics group in additional to their external ethics group, they are rebuilding our website to have a more focussed transparency section, they have looked at what further transparency pledges (eg Biometrics Institute 7 principles) they can adopt. They are also looking at how they can share their knowledge and journey so far with others in the sector via meetups.

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6. Main conclusions

The COMPASS (710543) sectorial RI Roadmaps piloting scheme enabled project partners to check with the actual beneficiaries of the project (innovative companies) if the tools and the overall framework is relevant to European high-tech SMEs willing to embed Responsible Innovation approaches and dynamics in their business and innovation strategy.

According to the feedback received during the different stages of the piloting programme (all tasks and activities carried out under WP4), we can confirm the goodness and relevance of the overall approach. In particular, this last phase - dedicated to the testing of RI Roadmaps - validated the work done by COMPASS (710543) partners over 36 months of project activities.

As described above, partners proposed testers to go beyond the mere testing of the sectorial roadmaps by participating into a wider scheme which also included the use of COMPASS (710543) Self-Check Tool and some light mentoring support. The result is that all 6 companies who completed the Consultancy and Mentoring Scheme evaluated positively the Responsible Innovation COMPASS (710543) offer.

This was also confirmed by 5 companies (one from Spain, two from the UK, one from the Netherlands and one from Georgia) who benefitted from travel vouchers offered by EBN on behalf of project to attend the COMPASS (710543) final conference held in Brussels on March 26th, 2019.

Two of them participated in the Consultancy and Mentoring Scheme, while others are not even active in the three target sectors but are interested in the COMPASS (710543) approach as they want to adopt the RI framework in their business and innovation strategies.

They were asked to observe and assess the tools and methods presented in that occasion and provide a light feedback on their relevance and scalability – we here focus on the COMPASS (710543) co-creation method kit and the RI Roadmaps:

- COMPANY 1 (UK). The COMPASS co-creation method kit seems more useful to very small enterprises, as it allows some iteration between organisations. They are currently working with an organisation focusing on home safety, which can be applied to the elderly, those with disabilities and everyone living alone. This is a growth market and they have thought through some of the cowering aspects presented. They intend to continue using this tool and to develop joint activities. **The methodology should allow them focus on the sector better, defining their own roadmap and for them this is a useful approach, they shall try out in practice**.
- COMPANY 2 (UK). **They found the co-creation process useful for reviewing their business processes.** They were one of the companies picked to be a use case during the development of the tool. **They applied the tool to a particularly thorny ethical problem they were facing and have subsequently continued using the tool as a framework for decision making on a variety of issues.**
  In particular, the cybersecurity roadmap was very useful for considering how they identify possible unintended consequences in the development of new technologies. In addition, the roadmap has helped them develop practices which further embed the principles of RI within the company, such as the development of an ethics board.
- COMPANY 3 (Georgia). Having gone through the Self-Check Tool which helped them understanding how RI applies to different company processes, the company stated that the **co-creation method and the roadmaps can help them review company's principles and decision-making processes throughout all innovation phases**

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including production, testing and market entry. **The method can help strengthening their efforts to find solutions to challenges in cooperation with various stakeholders**.
As they also provide incubation services to SMEs in Georgia, they will also help businesses to maintain sustainable and profitable business taking into account environmental and social issues by using COMPASS (710543) tools and methods.

- COMPANY 4 (Spain). These are the reasons to be responsible according to this company: "*Being responsible provides a healthier working/living environment growing with time, it is a clear proof of your intellectual and technological superiority, you diminish legal, social and regulatory conflicts, you are more trustable, you will gain more faithful allies*". In this sense **the co-creation methodology is highly valuable, as it can help companies to work towards a significant integration with relevant stakeholders for co-development processes** – which is usually a declaration of intents rather than an actual practice, hard to implement.
- COMPANY 5 (Netherlands). COMPASS resources are considered useful to help SMEs refining their business and innovation strategy. **While the Self-Check Tool can help a company assessing the state of the art in terms of RI, the co-creation method kit and the roadmaps can help SMEs defining the next steps.** Still, for very small companies the proposed co-creation method doesn't make too much sense, unless used with external stakeholders.

The Responsible Innovation COMPASS (710543) is therefore considered a meaningful support for SMEs interested in the RI framework.

Even if developed and tested in 3 specific sectors, the overall framework is flexible enough and therefore adaptable to a wide range of European SMEs (different for their size, sectors of interest, maturity level).

As a "compass" is supposed to do, COMPASS (710543) roadmaps point the direction towards more responsible innovation approaches for European high-tech SMEs.

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