



DELIVERABLE D.T2.2.3

PP05



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## 1 Regional Innovation Policy Context

Briefly describe:

- the regional innovation S3 priorities focused on SMEs and those that relate to sustainability, social accountability, social innovation and other priorities that may offer an opening to an evolution towards responsible innovation:
- the innovation maturity of the region (you may refer to the Regional Innovation Scoreboard);
- highlights about the regional innovation ecosystem, if they matter to responsible innovation.

The basis of the RI Roadmap of the German project region is the Regional Innovation Strategy for Smart Specialization of the Free State of Saxony (RIS3), which was developed in and introduced in 2013. Currently, an updated version of the strategy is available as draft. The draft is in the consultation process. In the following paragraphs, both strategies will be described.

### **Innovations Strategy of the Free State of Saxony**

In this chapter the main aims of the Saxon Innovation Strategy, which was approved by the Saxon Cabinet on 31<sup>st</sup> March 2020, will be described.

The overall objective of the innovation strategy is: More successful innovations for intelligent, ecologically sustainable and socially integrative growth. Sustainability forms the long-term orientation framework for the policy of the Saxon State Government. In the sustainability strategy of the Free State of Saxony (2018), we are expanding Carlowitz's concept of sustainability to include a modern understanding of sustainable development that takes into account the equal importance of the ecological, economic and social dimensions.

The state cannot prescribe innovations. However, it can create an optimal environment and turn the right screws in the innovation system, which have a positive influence on the success of innovation processes. The overriding goal is to create optimal framework conditions and to secure, use and expand innovation potential.

At some points Saxony would like to take a proactive role and provide concrete impulses that will significantly boost innovation activity in defined areas. The region would like to do this above all through the regions' intelligent specialisation. Here it is important to identify challenges early on and to start where the greatest economic and social added value can be expected.

In addition to specialisation, the stability of innovation systems also requires diversification in the geographical sense across all sectors and innovation paths.



Innovations are developed by people for people. It is therefore the task of innovation policy to ensure that skilled workers have the necessary skills and motivating framework conditions. They need an environment that attracts and retains bright minds, which honours courage, where performance counts and where creativity is not only permitted but also desired; a region in a spirit of change, with openness to new ideas and developments. A further task of the innovation policy is to accelerate innovations that mean concrete improvements for the people of Saxony.

The basis of every innovation is knowledge. Achieving and consolidating a knowledge edge remains the goal of our efforts. The scientific institutions (universities and non-university research institutions) have a special role to play here. They are responsible for the perception of our location in the world. It is Saxony's goal to continuously increase their excellence and thus enhance the supraregional charisma and attractiveness of the location for "bright minds" or innovative companies from Germany and abroad. Scientific institutions are both innovators and innovators' forges, as they engage in topics of high relevance, deliver new findings and validate their usability. In doing so, they serve both international and regional needs.

A strong alliance between business, science and society is an important lever and a prerequisite for the success of innovations. Saxony would like to intensify these collaborations, especially in the areas of intelligent specialization.

We only speak of an innovation when an idea finds its way to implementation. The risk with which they bring new ideas to market is borne by the companies alone. The goal is to pave the way for Saxon companies by supporting them with appropriate measures to overcome the obstacles.

The cross-cutting goals - increasing transparency and streamlining and optimizing processes - are reflected in each chapter of the strategy.

Global challenges and megatrends are an important signpost for future developments in markets and society. From the megatrends, so-called thematic future fields can be derived for Saxony. These are:

- Environment,
- Raw materials,
- Digitization,
- Energy,
- Mobility and
- Health

Individual future fields interact with each other. The topics of environment and digitisation have a cross-sectional character.



## **Innovation Maturity of the region and highlights about the regional innovation ecosystem**

### Innovative economy

Saxony is one of the most innovative regions in Europe - the so-called leader (Dresden region) or strong innovator (Leipzig and Chemnitz region) - and has many strategically significant strengths.

Nevertheless, there are also weaknesses that need to be addressed. The Free State has an excellent education system. The general education schools have been the winners of the nationwide Education Monitor for years in terms of their status quo and dynamics.

A further strength of Saxony is its engineering tradition. To this day, a strong STEM focus is characteristic of Saxon schools and universities. The Saxon universities have been recording a positive migration balance in relation to first-year students for many years. The proportion of students from other German states and from abroad is constantly increasing. The migration balance of young academics is nevertheless negative: Approximately one quarter and, in the STEM sector, even nearly one third of graduates leave the Free State.

Despite very good education, the lack of suitable personnel on the labour market is currently the biggest obstacle to innovation for Saxon companies. The Saxon labour market is facing challenges here from demographic and structural change. The relevant strengths and weaknesses can be found in detail in the strengths and weaknesses analysis of the skilled labour strategy of the Free State of Saxony.

Saxony has a very strong and diversified research landscape with excellent results (reputation, patents, networking). Nonetheless, in an international comparison it is difficult for us to bring innovations to the market. Throughout Germany, an above-average number of companies with product innovations are located in Saxony. Cutting less well Saxon companies for process innovations. Overall, the positive development of the rate in the Free State, in line with the nationwide trend.

In general, it can be said that innovation-related successes also increase with the size of the company. However, this is not the case in Saxony. Here the smaller companies in Saxony even show greater success. It is also significant that the large majority of Saxony's industries have an above-average proportion of companies with innovations compared with the rest of Germany. Moreover, in some Saxon sectors the direct earnings from innovations are also above the national German average. These include above all mechanical engineering and vehicle construction, engineering offices / R&D, but also electronics / electrical engineering or ICT.

One of the main weaknesses of Saxony as a location for innovation is the considerable regional disparities. These result from a strong concentration of innovation capacities on some few regions in Saxony, especially the three major cities of Dresden, Leipzig and Chemnitz, and their immediate surroundings.



A detailed picture of the status quo in Saxony can be obtained from the analyses of the innovation location Saxony (2019), the technology report (2018) and the results of the annual surveys on the innovation behaviour of the Saxon economy (2016 - 2019).

After the reunification of Germany, Saxony has written success stories.

Its early focus on future-oriented industries has significantly accelerated the structural change. The proportion of research, development and export-intensive branches in the manufacturing industry in Saxony is significantly higher than the East German average and almost reaches West German levels.

The economic power has increased by more than 20 % after the turn of the century. With 112.7 billion euros, Saxony will generate a good third (34 %) of the GDP of all the new Länder (excluding Berlin) in 2015.

The gross domestic product of Saxony in 2018 was around 126.4 billion euros. This means that in the last 10 years (2008: 94 billion euros) it has increased by about 35% and corresponds to about 4% of the total German GDP (3,386 billion euros).

Many Saxon SMEs have already developed into hidden champions. They are internationally competitive and have successfully penetrated new markets abroad. Products "Made in Saxony" continue to enjoy increasing popularity worldwide. In 2018, exports amounted to about 40.5 billion euros, slightly below the previous year's figure of 41.4 billion euros. The share of exports in the GDP in 2018 was thus 32 %.

The economic successes are also reflected in the labor market. Saxony is well on the way to full employment. At 6.0 %, the unemployment rate in 2018 was around 0.7 percentage points below the previous year's level (6.7 %).

Small and medium-sized enterprises form the backbone of Saxony's economy. This makes SMEs the most important employer and trainer in the Free State. This strong SME character is also reflected in R&D behaviour: Saxony's small companies with 10-49 employees in particular are well above the German average (17 % vs. 10 %). Saxony's large companies, on the other hand, with 26 %, are below the average of 41 % for Germany as a whole. With regard to R&D activities, Saxon companies are above the national average. In 2017, 22 % of all companies carried out R&D activities in Saxony, extrapolated to about 3,150 companies. The above-average share of companies with continuous R&D activities (14 %) is particularly positive. Here Saxony achieves a value that far exceeds the overall German average.

The share of innovation expenditure in turnover - the so-called innovation intensity - was lower in Saxony's economy in 2017 (2.6 %) than the German average (3.1 %) and in other parts of eastern Germany (2.8 %). The share of R&D expenditure (1.1 %) in turnover also shows a difference to the German average (- 0.6 percentage points). This is primarily due to the small-scale economic structure.



At 39%, the share of capital expenditure on tangible and intangible assets (e.g. software, patents, licenses) was ten percentage points higher than the German average. The share is also significantly higher than in the other eastern German states.

The share of sales from product innovations in Saxony is about 0.5 percentage points below the German average. The gap for market innovations is significantly larger than for new product ranges. In terms of the share of cost reductions attributable to process innovations and the increase in sales due to quality improvements, Saxony is also slightly below the German average (0.6 and 0.3 percentage points respectively).

## 2 Regional RI Maturity

### 1.1 RI Performance of Regional Policy Making

RI Category	RI Component	Indicator	Type of measurement	Metric	Data source	Assessment (Modest/Moderate/Substantial) + Short description
Purpose	Motivation for doing/supporting research/innovation	M1: Integration of innovation/S&T in policy planning and strategies	Qualitative	Inclusion of innovation/S&T components in the official policies of the organizations (e.g. strategic plans, policy documents, etc.)	Regional policy/planning documents – Partners’/Experts’ assessment	Substantial To integrate innovation, science and technology is part of the main objectives of the Saxon RIS3.
	Motivation for engaging with RI	M2: Integration of RI components in policy planning and strategies	Qualitative	Inclusion of RI components in the official policies of the organizations (e.g. strategic plans, policy documents, etc.)	Regional policy/planning documents – Partners’/Experts’ assessment	Substantial The inclusion of RI components into the RIS3 is from TGZ point of view substantial and will be even more substantial in the updated innovation strategy.
		M3: Financial commitment on RI components	Quantitative	Budget allocation for RI components in the budget of regional policy makers: (a) presence of	Budget documents – Partners’/Experts’ assessment	Moderate There are no specific budgets for RI components available, but some funding programmes address RI topics, without mentioning it, e. g. the technology transfer funding.



				specific budget headings for RI or its components; (b) annual amount (%; or €); (b) evolution (increase, decrease, stable over the last 3 years – or other programming period where appropriate)		
	<b>Ethics (justification of intended outcomes)</b>	E1: Significance of UNDGs in policy planning and strategies	Qualitative	Reference to UNDGs in regional policy documents (e.g. strategic plans, policy documents, etc.)	Regional policy/planning documents – Partners’/Experts’ assessment	Moderate There are no direct references to the UNDGs in the RIS3 of Saxony, but the most chapters deal with them.
<b>Process</b>	<b>Anticipation</b>	A1: Foresight and strategic planning activities (e.g. Scenario building, delphis, etc.) (adapted from Eastwood et al. 2017)	Quantitative/Qualitative	Number of foresight and strategic planning activities in the current and preceding governing period (e.g. regional legislature, depending on local	Regional policy/planning documents – Partners’/Experts’ assessment	Substantial There is a regularly monitoring of the objectives to be achieved. In this framework strategic planning activities take place, e. g. energy and climate program, sustainability strategy of the Free State of Saxony, skilled worker strategy, etc.

				regulation) [Presence/Absence of activities if the number is not available]		
	<b>Public engagement</b>	PE1: Public perceptions on public involvement in science and technology (Tsanos and Apospori 2017)	Quantitative	% of respondents who stated that “the public should be consulted and public opinion should be considered when making decisions about science and technology”	Special Eurobarometer 340 (national data), p. 87.	Moderate In the science barometer 2019 the Germans were asked whether they agree that the public is sufficiently involved in decisions on science and research in Germany. Only 4 % declared that the totally agree, 12 % agree in general, 30 % are undecided, 34 % don’t agree, 17 % totally don’t agree and 2 % have no opinion about that.
		PE2: Formalisation and extent of public involvement in regional science and technology decision-making (Tsanos and Apospori 2017)	Qualitative	Qualitative discussion and self-classification as: - Formalised / high involvement - Formalised / low involvement - Not formalised / high involvement - Not formalised / low involvement	Partners’/Experts’ assessment	Moderate I personally think that there are a lot of possibilities of involvement in Germany, but the society is not willing to take part, except those, who are really experts on the fields. Nowadays, a lot of people think that they are experts after watching a youtube clip, but that is not true. But exactly those people have the opinion that the involvement is too low. I think the bad assessment of satisfaction in terms of involvement is a result of that. (Marcel Bellmann)

	<b>Responsiveness</b>	RES1: Potential to adapt policies and strategies (adapted from Eastwood et al. 2017)	Qualitative	Existence of stakeholder/public feedback mechanisms in policy/strategy implementation	Regional policy and strategy documents/ Partners'/Experts' assessment	Substantial The feedback of the stakeholders and the public usually plays a role in policy or strategy implementation, e. g. the innovations strategy is presented on several regional conferences and you have also the opportunity to assess the strategy online.
		RES2: Openness and transparency of the planning and policy process (adapted from Eastwood et al. 2017)	Qualitative	Existence of stakeholder/public communication mechanisms in policy/strategy implementation procedures	Regional policy and strategy documents/ Partners'/Experts' assessment	Substantial The planning and policy process is very open and transparent in Germany, but this has also negative impacts, such as delays in processes and deterrence of investors, e. g. wind park investors
	<b>Reflection</b>	REF1: Reflexive guidance in regional policy/strategy on RI (adapted from Eastwood et al. 2017)	Qualitative	Existence of offices, fora, committees, etc. for the monitoring and assessment of program/project implementation activities involving RI and its components	Regional policy and strategy documents/ Partners'/Experts' assessment	Substantial The programmes and strategies we know are regularly monitored by the responsible organizations/institutions, which are sometimes even founded to implement and monitor a programme.
		REF2: Regional support/incentives for the use of standards and	Qualitative	Existence of regional programs/actions supporting	Regional policy and strategy documents/	Moderate Incentives are especially provided in the future fields, e. g. in energy topics.

		certifications related to RI (e.g. ISO, SA, UNI) (adapted from Eastwood et al. 2017)		/requiring the use of instruments such as codes of conduct and standards in R&I	Partners'/Experts' assessment	
	<b>Governance</b>	G1: Extent of R&I networks (e.g. platforms, hubs, incubators, accelerators) promoting / supporting RI in the region (Tsanos and Apospori 2017)	Quantitative/Qualitative	Self-assessment in terms of: - Number of networks [Existence of networks if the number is not available] - Extent of involvement of regional policy makers in these networks - Formal / informal character of networks	Regional policy and strategy documents/ Partners'/Experts' assessment	Modest There are a lot of networks, clusters and initiatives in Saxony, but only a few of them are supporting RI in the region. For the district of Bautzen it can be said that there are less than 5 of such dealing with RI. So far TGZ can assess it, the participation of regional policy makers is very low in that networks. The networks have both, formal and informal character.
		G2: Activities of funders to promote RI at regional level (Tsanos and Apospori 2017)	Quantitative/Qualitative	Self-assessment in terms of: - Number of funding mechanisms to support RI activities	Regional policy and strategy documents/ Partners'/Experts' assessment	Modest As RI is a relatively new topic for the policy makers, funders and SMEs, the number of funding programmes aiming to higher responsibility is low. It cannot be stated, how many € are invested in RI projects.

				[Existence of mechanisms, if the number is not available]; - € invested in RI-relevant projects		
	<b>Ethics (deontology)</b>	E2: Ethical considerations in the evaluation for the regional funding of R&I proposals (Tsanos and Apospori 2017)	Quantitative/Qualitative	% of R&I proposals for funding by regional policy makers that are subject to evaluation of ethical concerns (i.e., R&I practices, ethical implications for the objects of R&I, ethical acceptability of R&I outcomes) over total number of R&I proposals [Existence of evaluations, if the number is not available]	Regional policy and strategy documents/ Partners'/Experts' assessment	n. a. It is not possible for TGZ to answer that question.
<b>Products</b>	<b>Gender/equality and diversity</b>	GE1: Gender gap of core human resources in	Quantitative	% difference between the share of economically	EU regional statistical	Moderate Concerning the brochure "The role and opportunities of women in science and research" of the Saxon State Ministry

		science and technology (Tsanos and Apospori 2017)		active population for women and the share of economically active population for men in science and technology	yearbook 2015, p. 256	for Science and Art from 2019, almost 50 percent of students in 2017 were young women - in some subjects like medicine, there are many more. As many as 53.6 per cent of students completed a bachelor's degree and 48 per cent a master's degree. In the case of other qualifications, the proportion of women decreases as the Career increases: Almost 43 percent of all doctorates are locked up by women, less than 29 percent of all habilitations. At a good third of the junior professorships are female occupied. Only 28% of W2 and only 18 percent of W3 professorships have women pause. Almost all of these values have been increased in the last eight years. The percentage of women is growing steadily, but much too slowly. The Free State Saxony is still below the national average for almost all of these values .
	<b>Gender/equality and diversity</b>	GE2: Support for gender equality in regionally funded R&I projects (adapted from Tsanos and Apospori 2017)	Quantitative/Qualitative	Number of regionally funded R&I projects supporting gender equality and/or creating of RDI jobs that employ women [Existence of funded projects, if the number is not available]	Regional policy and strategy documents/ Partners'/Experts' assessment	Moderate Women and men are always treated equally when it comes to professional qualification measures and staff recruitment via support programmes. The exact number of women and men cannot be stated.
	<b>Open access</b>	OA1: Regional policies for dissemination of and open access to scientific, technical and	Qualitative	Qualitative discussion and self-assessment in terms of: - Existence of a regional policy for	Partners'/Experts' assessment	Moderate There are some initiatives which promote open innovation in Saxony. The current valid innovations strategy of Saxony uses the term only 1 time. The updated strategy aims to create new spaces in which Open Science and Open Innovation can take place even more efficiently

		economic information (adapted from Tsanos and Apospori 2017)		open access - Regional institutional mechanisms for establishing, maintaining and monitoring open science and innovation		
		OA2: Inclusion of open access / open science measures in research policies and calls for proposals (adapted from Tsanos and Apospori 2017)	Qualitative	Existence of Regional open science / open innovation repositories or of regional support (e.g. financial) for the participation in sector or other repositories	Regional programming documents	Modest There is no funding programme, which finances open access or science in Saxony. On national level SMEs can use some funding programmes regarding this topic.
	<b>UN Development Goals</b>	UN1: Degree of impact on UNDGs	Qualitative	Qualitative discussion and partners' assessment in terms of the UNDGs which regional policy impacts the most	Partners'/Experts' assessment	Substantial Concerning the Saxon Sustainability Strategy from 2018, Saxony takes into account every 17 SDGs in 9 fields of action: 1. education and science 2. public finances 3. energy and climate 4. natural foundations of life and resource protection 5. cities and rural areas 6. economy, innovation, skilled workers 7. health and quality of life 8. cultural diversity, social cohesion and equal opportunities 9. international relations and development cooperation

						Above all, there are the cross-field challenges demographic change, digitalization and globalization.
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## 1.2 RI Performance of Enterprise

Category	Component	Data source	Metric	Type of measurement	Indicator	Assessment (Modest/Moderate/Substantial) + Short description
Purpose	Motivation for doing/supporting research/innovation	RRI Development plan, "1. Formulate your goal"	Inclusion of innovation/S&T components in the official planning of the organizations (e.g. strategic plans, vision ad mission statements, etc.)	Qualitative	M1: Integration of innovation/S&T in corporate planning and strategies	Moderate For the most SMEs, making profit is the top goal of their business. Phrases like "The business of business is business." dominate the development of the SMEs. Only a few bigger companies have adopted strategies for a sustainable development.
	Motivation for engaging with RI	RRI In-depth Assessment Tool	Inclusion of RI components in the official planning of the organizations (e.g. strategic plans, vision ad mission statements, etc.)	Qualitative	M2: Integration of RI components in policy planning and strategies	Moderate On the basis of the RRI Assessment in SMEs <ul style="list-style-type: none"> <li>• 43 % ensure governance of innovation,</li> <li>• 40 % reflect on ethics,</li> <li>• 31 % promote science and education,</li> <li>• 34 % perform stakeholder's engagement,</li> <li>• 20 % operate open access and</li> <li>• 17 % pursue gender equality in managing the innovation process.</li> </ul>



		Self-assessment (*)	Budget allocation for RI components in companies' budget: (a) presence of funded programs targeting (selected) RI components; (b) annual amount (% or €); (b) evolution (increase, decrease, stable over the last 3 years – or other programming period where appropriate)	Quantitative	M3: Financial commitment on RI components	Modest This cannot be stated by TGZ as RI is not very common in SMEs (see description in indicator 1)
	<b>Ethics (justification of intended outcomes)</b>	Self-assessment(*)	Participation in programs and schemes, and adoption of instruments both mandatory and voluntary relevant for the achievement of the UNDGs (e.g. ethics codes, voluntary guidelines,	Qualitative	E1: Significance of UNDGs in companies' activities and strategies	Moderate Concerning the self-assessment 40 % of the companies reflect on ethic issues.

			certifications, standards)			
<b>Process</b>	<b>Anticipation</b>	Self-assessment(*)	Number of foresight and strategic planning activities in the current and preceding planning period (specify the relevant planning period) [Presence/Absence of activities if the number is not available]	Quantitative/ Qualitative	A1: Foresight and strategic planning activities (e.g. Scenario building, delphis, etc.) (adapted from Eastwood et al. 2017)	Moderate TGZ assumes that SMEs do foresight and strategic planning activities during their innovation process. If they won't do this, innovations could fail and the whole SME would be in danger.
	<b>Public engagement</b>	RRI In-depth Assessment Tool	Qualitative discussion and self-assessment of the companies' experience in users' engagement techniques (e.g. living labs)	Qualitative	PE1: Users' involvement in design and development processes	Moderate Only 34 % of the SMEs, taking part on the self-assessment in Saxony stated that they engage the public in the innovation process.
		RRI In-depth Assessment Tool	No. of public-sponsored projects on engagement in R&I joined [Presence/Absence	Quantitative/ Qualitative	PE2: Participation in public-sponsored engagement projects on R&I	n. a. TGZ cannot estimate the number of public-sponsored projects.

			of activities if the number is not available]			
	<b>Responsiveness</b>	RRI In-depth Assessment Tool /Self-assessment	Implementation of users/communities feedback mechanisms in companies' operations	Qualitative	RES1: Potential to adapt production processes and business strategies (adapted from Eastwood et al. 2017)	Moderate TGZ cannot estimate the potential, but concerning other Interreg CE projects, SMEs often think about changing, especially their business strategies towards servitization of products.
		RRI In-depth Assessment Tool /Self-assessment	Adoption of CSR instruments, such as social budget, sustainability reporting etc. detailing the social/environmental value of corporate operations to customers and stakeholders	Qualitative	RES2: Openness and transparency of corporate operations (adapted from Eastwood et al. 2017)	Moderate TGZ cannot estimate whether CSR instruments are common or not, but a lot of companies in the sphere of TGZ are open for donations for charitable projects of the society.
	<b>Reflection</b>	Self-assessment(*)	Existence of/participation in offices, fora, committees, etc. for the monitoring and assessment companies	Qualitative	REF1: Reflexive guidance in companies strategies (adapted from Eastwood et al. 2017)	n. a. This cannot be assessed by TGZ

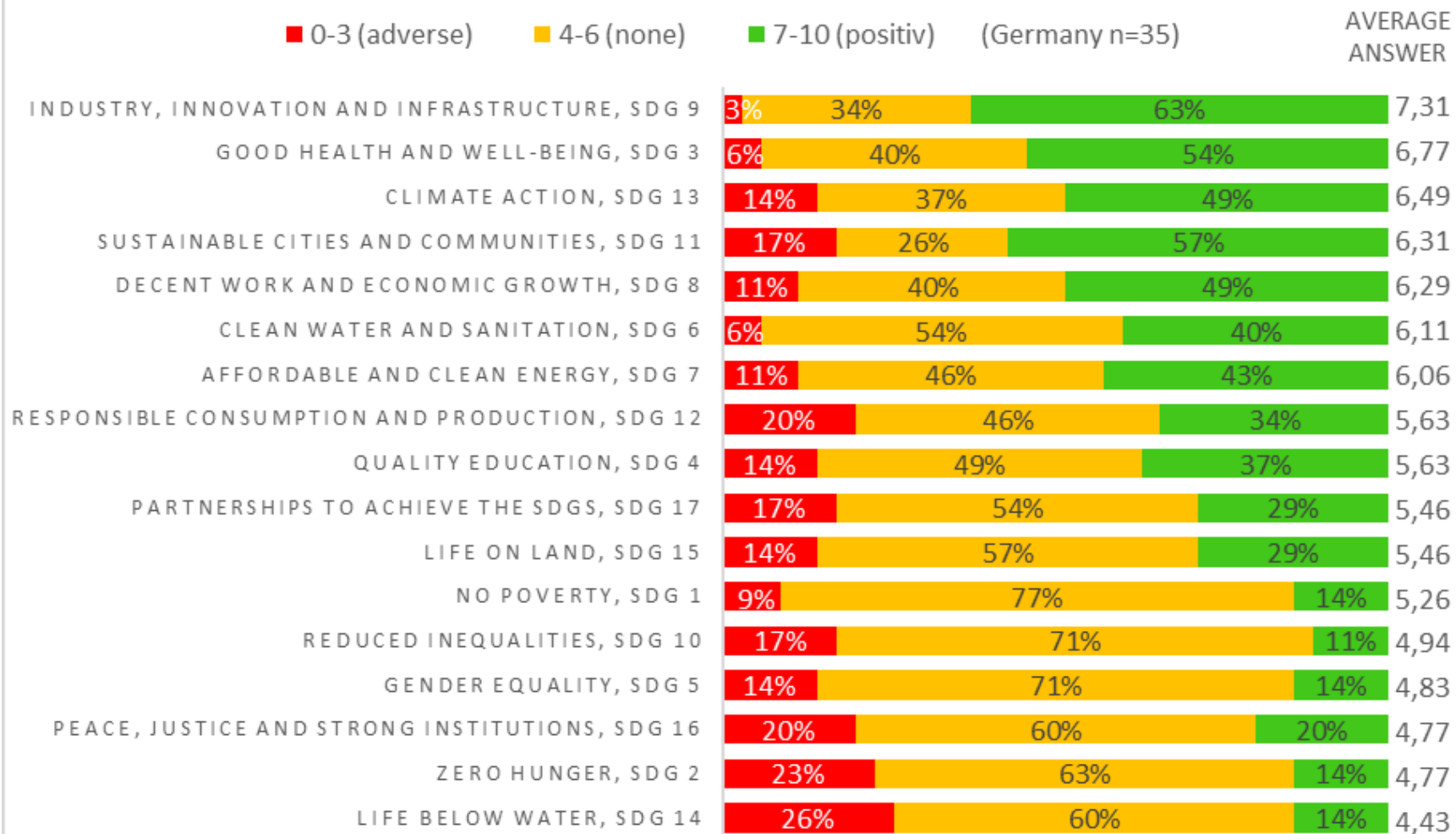
			activities relevant to RI			
		Self-assessment(*)	Instruments used by companies, such as codes of conduct, standards, etc. related to RI (e.g. ISO, SA, UNI)	Qualitative	REF2: Use of standards and certifications related to RI (e.g. ISO, SA, UNI) (adapted from Eastwood et al. 2017)	Moderate A lot of SMEs introduced standards and certifications. But in the most cases they do this, because their customers (big companies) want them to do it. The standards have a negative reputation within the companies in our area, because they are seen as job creation measure for auditors, which earn a lot of money with it and create even new company problems, which lead to higher production costs.
	<b>Governance</b>	Self-assessment(*)	Self-assessment in terms of: - Number of networks joined [Existence of networks if the number is not available] - Extent of involvement of companies in these networks (e.g. leading working groups, participating in exchanges of best practices, etc.)	Quantitative/ Qualitative	G1: Participation in R&I networks (e.g. platforms, hubs, incubators, accelerators) promoting / supporting RI in the region (adapted from Tsanos and Apospori 2017)	Substantial The Saxon SMEs like it to participate in networks. The networks are not specifically RI oriented, but affect RI topics, especially the networks related to energy and sustainability topics. During the past few years the number of networks, which affect RI, increased and are even supported by the state sometimes. The character of the networks is both, formal and informal and is depending on the type of the network.

			- Formal / informal character of networks			
		RRI In-depth Assessment Tool	Self-assessment in terms of: - Number of successful bids [Existence of mechanisms, if the number is not available]; - € acquired to invest in RI-relevant projects - Sources of funds acquired by the companies	Quantitative/ Qualitative	G2: Third party funds acquired to promote companies' RI related activities (adapted from Tsanos and Apospori 2017)	n. a. This cannot be evaluated by TGZ.
	<b>Ethics (deontology)</b>	Self-assessment(*)	Qualitative discussion and self-assessment of the utilization of Codes of Conduct or other instruments for ensuring the integrity of R&I practices	Qualitative	E2: Adoption or adherence to Codes of Conduct or other instruments for ensuring the integrity of R&I practices in the company	n. a. This cannot be evaluated by TGZ.

<b>Products</b>	<b>Gender/equality and diversity</b>	RRI In-depth Assessment Tool / Self-assessment	% female employee in R&I roles in companies	Quantitative	GE1: Gender gap of human resources in companies' R&D/technical offices/divisions (adapted from Tsanos and Apospori 2017)	Modest Concerning the RRI self-assessment only 17 % of the SMEs in the German project region pursue gender equality.
	<b>Gender/equality and diversity</b>	RRI In-depth Assessment Tool / Self-assessment	Number of companies' initiatives supporting gender equality and/or creating of R&I jobs that employ women [Existence of initiatives, if the number is not available]	Quantitative/ Qualitative	GE2: Companies' programs/measures to support for gender equality in R&I activities/functions	n. a. TGZ cannot evaluate this key figure.
	<b>Open access</b>	RRI In-depth Assessment Tool / Self-assessment	Qualitative discussion and self-assessment in terms of the frequency of using open access/open data sources to know up-to-date research outputs for the business operations	Qualitative	OA1: Evidence of use of and/or contribution to open data repositories as input to /output of innovation processes	Modest Only 20 % of the SMEs taking part at the self-reflection stated that they operate open access.

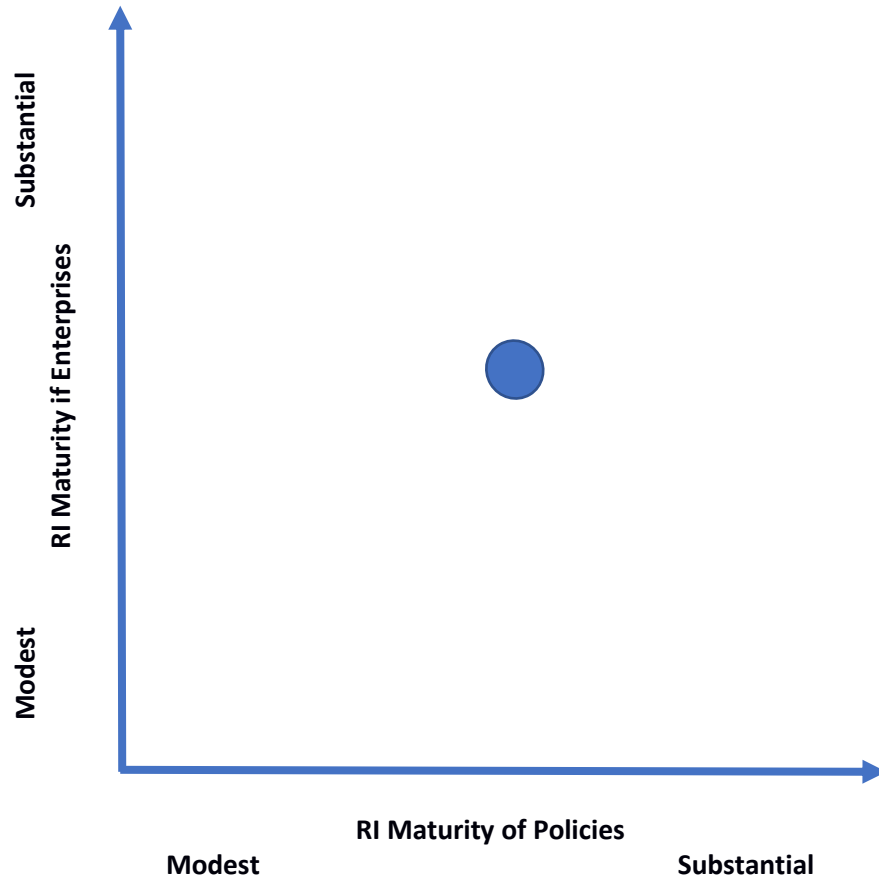
		RRI In-depth Assessment Tool / Self-assessment	Number of R&I funding/policy programs joined by companies [Existence of programs, if the number is not available]	Quantitative/ Qualitative	OA2: Participation in R&I funding/policy programs requiring a commitment to an open access / open science policy	n. a. There are no statistics to that key figure available.
	<b>UN Development Goals</b>	Self-assessment tool, “RI Drivers - Responce of the innovation process to the dimensions of RRI”	Self-assessment of the impact of companies’ innovative products/services on sustainable and inclusive development (10 point scale)	Quantitative	UN1: Degree of impact on UNDGs (17 indicators, on for each indicator)	Moderate Please see graphic on the next page

## WHAT KIND OF IMPACT CAN HAVE YOUR INNOVATIVE PRODUCT/SERVICE ON...





### 1.3 Assessment of Local RI Maturity Level



Drag and drop the dot to illustrate the local positioning



## 2 Priorities for Action

Depending on the assessment, partners can then define measures and actions either to strengthen the alignment of public policies and firms' activities, to fill the gaps in public policy, or to elaborate initiatives to stimulate firms' commitments. Check Table 3 of the D.T2.2.1 RI Roadmap Template and Guidelines.

Priority could be given to:

- Develop regional policies for RI and start target engagement/communication initiatives to raise firms' awareness on the matter
- Expand firms' participation in regional policies for RI
- Strengthen the policy environment for RI to maintain and foster corporate involvement
- Consolidate and develop existing alignments and initiatives

Illustrate the local choice.

As the topic Responsible Innovation is a relatively new topic for SMEs in Saxony, TGZ, in close cooperation with a local expert from the University of Applied Sciences, Mr. Markus Will, developed a workshop concept in which different aspects of Responsible Innovation will be presented to the participating SMEs. All in all, 4 workshops will be carried out between January and April 2020. The first 3 workshops are accessible for enterprises only. The final workshop will be carried out in the framework of the 2<sup>nd</sup> National Targeted Event in Germany. In that final workshop a broader audience will take place, especially network initiatives dealing with sustainability and other RI topics, policy makers and sectoral agencies which further disseminate the topic RI among its target groups. Below, the topics of each single workshop is visualized.

<u>WORKSHOP 1</u> Sustainability in the context of companies	
Target groups:	Management and executives, management system representatives
Training objective:	Creating the basis for sustainability management
Training contents:	17:30 – 18:00 Greeting and expectation check 18:00 – 19:00 Buffet and Lunch-Talk



	<p>Lecture: "From the Mickey Mouse to the Donut Model: Sustainability and the Role of Enterprises"</p> <p>19:00 - 20:00 Group work and discussion: A first (simplified) sustainability assessment of your own company ("Sustainability Journey" and materiality matrix)</p> <p>20:00 - 20:30 Summary</p>
Date:	29.01.2020

<p><u>WORKSHOP 2</u></p> <p>Risk and opportunity analysis within the framework of environmental and quality management systems</p>	
Target groups:	Management and executives, management system representatives
Training objective:	Applicable methodological knowledge for risk management in the context of quality and environmental management systems (ISO 9001 and ISO 14001) and occupational health and safety management (ISO 45001)
Training contents:	<p>17:30 – 17:45 Greetings and expectation check</p> <p>17:45 – 18:30 Keynote lecture: "Managing the unexpected - risk management in companies".</p> <p>18:30 - 19:00 Buffet and time for discussions</p> <p>19:00 - 19:45 Group work: Procedure of a risk/opportunity analysis</p> <p>19:45 - 20:30 Presentation of the group work and discussion</p>
Date:	25.02.2020



<u>WORKSHOP 3</u> Responsible Research and Innovation (RRI) Combining product development processes and sustainability	
Target groups:	Management and executives, management system representatives
Training objective:	Basic knowledge of RRI methods as well as the sustainability assessment of products (Sustainability Heat Map, Life Cycle Assessment, etc.)  Applicable methodological knowledge for the "Design-for-X" in view of the amendment of ISO 14006
Training contents:	17:30 – 18:00 Greeting and expectation check  18:00 - 18:45 Buffet and lunch talk: Lecture: "Responsible Innovations - RRI Concepts and Methods"  19:00 - 19:45 Group work on methods of product evaluation (MET matrix) and eco-design  19:45 - 20:30 Presentation of the group work and discussion
Date:	02.04.2020

WORKSHOP 4 in combination with 2 <sup>nd</sup> National Targeted Event Circular Economy	
Target groups:	Management and executives, management system representatives, network initiatives, chambers of commerce and craftsmen, policy makers
Training objective:	Basic knowledge to the circular economy and recycling management, possibilities and limits of the approach
Training contents:	<ul style="list-style-type: none"> <li>- Presentation of the ROSIE project</li> <li>- Introduction to the topic of responsible innovation</li> <li>- Basic knowledge of the circular economy and recycling management, possibilities and limits of the approach</li> <li>- Results of the ROSIE project</li> </ul>



	<ul style="list-style-type: none"> <li>- Round table discussion</li> <li>- Outlook</li> <li>- Company tour</li> </ul>
Date:	23.04.2020

### 3 Lessons from the Pilot Actions

Describe the main outcomes from the local pilot actions. Refer to you input to:

- D.T3.2.1 - Pilot Local Area Start-Up Report
- D.T3.2.2 - Pilot Local Area Mid-Term Report
- D.T3.2.3 - Pilot Local Area Final Report

TGZ hat major problems in finding enterprises who are willing to take part in the pilot action. In the end, together with an external expert from the University of Applied Sciences Zittau/Görlitz, a workshop concept attracted the attention of 7 enterprises/institutions. The pilot action in Germany started in January 2020 and will finish in April 2020. That's why the Pilot Local Area Start-Up and Mid-Term Report includes only a short description of the current status at reporting time. The final report will be filled with more contents.

Anyway, there are already some lessons learned. TGZ learned that only contacting enterprises via a-mail was not enough to attract their attention. That's why direct discussions were held with enterprises, which lead to some declaration of interests. TGZ also created an own leaflet to promote the pilot action. The leaflet was distributed during a big conference, held in TGZ in October 2019. Moreover, TGZ built up a database with network and initiatives, which are active in business support and sustainability issues. These networks and initiatives were asked to send the offer of TGZ to their member enterprises/institutions. This activity in conjunction with the leaflet, lead to the most declarations of interest. Unfortunately, the suggested methods UNI/PdR, STIR and LivingLabs are not really applicable for the enterprises and institutions in our project region. That's why, we decided to design 4 workshops to different topics, which help the enterprises and institutions to gain new or to consolidate knowledge to different standards that are important in daily business, e. g. ISO 14006, ISO 9001, ISO 14001 and ISO 45001.



## 4 Lessons from the Study Visits

Illustrate whether you got specific inspiration from the study visits, as described in:

- D.T2.3.2 - Report and material from Transnational Study Visit 01
- D.T2.3.3 - Report and material from Transnational Study Visit 02
- D.T2.3.4 - Report and material from Transnational Study Visit 03

Further reference may be made to inspirational content in:

- D.T3.4.2 - Report on KM / IM session 01
- D.T3.4.3 - Report on KM / IM session 02
- D.T3.4.4 - Report on KM / IM session 03

TGZ participated in the Transnational Study Visits. The first Transnational Study Visit was carried out in Milan on 8<sup>th</sup> and 9<sup>th</sup> October 2018. During the meeting other EU projects, dealing with Responsible Innovation presented their approach. Especially the self-assessment tools were very interesting for TGZ. The 2<sup>nd</sup> Transnational Study Visit was held in Lublin on 3<sup>rd</sup> and 4<sup>th</sup> April 2019. The presentation of local Polish pilot actions as well as the pilot actions of each partner contributed to a “re-thinking”-process of the German pilot action. Especially the Czech pilot action showed that Responsible Innovation can be applied in various business branches, like language schools. The 3<sup>rd</sup> Transnational Study Visit took place on 1<sup>st</sup> and 2<sup>nd</sup> October 2019 in Nova Gorica. The study visit was held in the premises of local companies and showed the results of the consultation process.

## 5 The Roadmap

### 5.1 Action #1: Raise awareness to Responsible Innovation in enterprises

In order to deliver on your identified priority/ies, you need to put in place a number of actions, stemming from what you learned from the pilot actions and the exchange with other partners. Each action can be described according to the following table.

#### The Goal

What goal(s) are you trying to reach? What exactly will be achieved? What will be established and in what timeframe?

With action#1, TGZ follows the goal to raise awareness to the topic responsible innovation in enterprises. The enterprises will gain and refresh their knowledge to topics which belong to responsible innovation, such as sustainability management, risk and opportunity management, circular economy. Moreover, they will learn how to use different methods and instruments, such as materiality matrix, Sustainability Heat Map and Life Cycle Assessment. The timeframe of the pilot action is January 2020 to April 2020.

#### The Strategy



The people	<p>Who should be involved? Who should be consulted? Should you form a team? If so, who should be included? Who are the key players? Which stakeholders might be interested/willing to participate?</p> <p>The pilot action aims to people from the higher management, CEOs and management system representatives. The pilot action will be carried out by TGZ staff and an external expert form the University of Applied Sciences Zittau/Görlitz. In the first 3 workshops only the enterprises/institutions will participate. The final workshop will be used to disseminate project results among a bigger target group (see action #2)</p>
The resources	<p>What financial resources do you need? How much time will you need to invest? How much time will others have to invest? What financial resources could be allocated for support (for example, the engagement of an external expert? What resources are needed for sustainability?</p> <p>The pilot action will be used to transfer basic knowledge to the topic. The pilot action has a value of around 10.000 €. 5.000 € are foreseen for the external expert and 5.000 € for TGZ for preparation and implementation of the workshops. Consultancy needs, which occur after the workshops, are not part of action#1 and the ROSIE project.</p>
Institutional incentives	<p>What institutional support/change do you envisage? How can your institution support that change? Which incentives could your institution offer to foster that change? How might your institution benefit from that change?</p> <p>If any consultancy need will occur after the pilot action, TGZ will offer the enterprises its support in finding the right incentives for it. In Germany, there are a lot of funding programmes, which can be used for innovation actions. To make enterprises more responsible, could be one of the measures of the funding programmes. As TGZ is one of the RI consultants in the region, we can give an initial consultation to the companies and for detailed questions recommend the right partners.</p>
Tasks and timeframe	<p>What tasks do you need to fulfil to reach your goal? Which tasks should be tackled first/last? How much time will you need? What are your interim goals/achievements? Which tasks would you like to co-develop with other stakeholders? Which tasks can you delegate?</p> <p>At first, we designed an attractive workshop concept to attract enterprises. Afterwards we needed the interest of companies to participate. It was very difficult for us to reach the companies, but finally, we found 7 companies with interest in participating. The enterprises were asked to send their de-minimis declarations. Then we signed a contract with an external expert from the University of Applied Sciences. From January to April 2020 the pilot action will be carried out. Our main aim is not to lose a company during the workshop process. During the final workshop on 23<sup>rd</sup> April 2020, the results of the pilot action will be presented to a broad audience.</p>
Opportunities and strengths	<p>Has anybody else had the same issues as you? If so, how did he/she solve them? Where can you find resources/material that would support your development? Which networks could you join?</p>



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There are several networks in our region, dealing with sustainability or business issue topics. We asked those networks to promote our pilot action among its members. These networks will be invited to participate in the final workshop to learn about the project and the results.

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Threats and risks

What threats do you see that can affect your policy? What risks do these threats generate for the development of your initiatives? What prevention and mitigation actions could be put in place?

The biggest threat is that the enterprises lose their interest during the workshops due to different issues, like boring lecture, wrong topics, etc. We will prevent this, when asking the companies to their expectations of the workshops and collecting feedback after the workshops.

### The Monitoring System

When will you evaluate your efforts? What evaluation methods will you use? What data should be collected? How can you verify that you achieved your goal?

We will ask for feedback after each single workshop. We will verify that we achieved our goal during the final workshop, when the enterprises present the results of their participation.

### The Dissemination

What results and insights should you share with others? What results and insights are transferable? What else should be communicated? Who are your target groups/audiences? What are the appropriate channels for them? What results/insights should not be communicated, and why?

We will share pictures from the workshops via facebook. We will also share the workshop concept to the ROSIE partners and the public. The target groups of our communication are enterprises, BSOs, Sectoral agencies and policy makers. The channels are facebook, events and press articles.

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## 5.2 Action #2: Raise awareness to Responsible Innovation in policy, networks, ...

In order to deliver on your identified priority/ies, you need to put in place a number of actions, stemming from what you learned from the pilot actions and the exchange with other partners. Each action can be described according to the following table.

The Goal	
What goal(s) are you trying to reach? What exactly will be achieved? What will be established and in what timeframe?	
With action#2, TGZ follows the goal to raise awareness to the topic responsible innovation in the policy, networks, BSOs and Sectoral agencies. These players will be informed about the ROSIE project and the local pilot action results during the final workshop, which will be the 2 <sup>nd</sup> NTE at the same time. The final workshop and 2 <sup>nd</sup> NTE will be held on 23 <sup>rd</sup> April 2020 in Zittau. Moreover, the players will be invited and involved in the final ROSIE meeting, which will be organized on 27 <sup>th</sup> May 2020 in Zittau.	
The Strategy	
The people	Who should be involved? Who should be consulted? Should you form a team? If so, who should be included? Who are the key players? Which stakeholders might be interested/willing to participate?  Action#2 aims to people from policy, networks, BSOs and Sectoral agencies. The final workshop will be used to disseminate project results among the players.
The resources	What financial resources do you need? How much time will you need to invest? How much time will others have to invest? What financial resources could be allocated for support (for example, the engagement of an external expert? What resources are needed for sustainability?  The final resources needed are very low. The meeting venue can be used for free. Only the catering has to be paid by TGZ.
Institutional incentives	What institutional support/change do you envisage? How can your institution support that change? Which incentives could your institution offer to foster that change? How might your institution benefit from that change?  The mentioned players get an insight into the ROSIE project and the pilot action during the 2 <sup>nd</sup> NTE. Further information can be provided on demand.
Tasks and timeframe	What tasks do you need to fulfil to reach your goal? Which tasks should be tackled first/last? How much time will you need? What are your interim goals/achievements? Which tasks would you like to co-develop with other stakeholders? Which tasks can you delegate?  First of all, we need to finish the workshops. Then we need the readiness of at least one enterprise to present the results of the workshops for the enterprise. As the 2 <sup>nd</sup> NTE will be organized in conjunction with the final ROSIE workshop, the time for preparation will be efficiently used.



**Opportunities and strengths** Has anybody else had the same issues as you? If so, how did he/she solve them? Where can you find resources/material that would support your development? Which networks could you join?

See action#1

**Threats and risks** What threats do you see that can affect your policy? What risks do these threats generate for the development of your initiatives? What prevention and mitigation actions could be put in place?

Additional to threats and risks in action#1, we have the risk that the mentioned players are not interested in the topic and thus don't participate. With an attractive event programme, we are confident to reach around 30 to 40 participants for the event.

**The Monitoring System**

When will you evaluate your efforts? What evaluation methods will you use? What data should be collected? How can you verify that you achieved your goal?

We will evaluate the satisfaction of the mentioned players after the 2<sup>nd</sup> NTE and will ask them, which topics are especially interesting for them in the future. Then we have the chance to continue the activities on RI topics with them, e. g. in the framework of a network to be established. This will happen after the project's lifetime.

**The Dissemination**

What results and insights should you share with others? What results and insights are transferable? What else should be communicated? Who are your target groups/audiences? What are the appropriate channels for them? What results/insights should not be communicated, and why?

See action#1