



# Action Plan Nordhessen



Regionalmanagement NordHessen

Regionalmanagement Nordhessen GmbH 19.11.2021

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### 1. General Information

Project: SCALE UP

Partner organisation: Regionalmanagement Nordhessen GmbH

Other partner organisations involved (if relevant):

**Country:** Germany

NUTS2 region: Kassel (DE73)

Contact Person: Dr. Astrid Szogs

Email address: szogs@regionnordhessen.de

Phone number: 0561-97062-28

# 2. Policy Context

In the following, the policy context will be described: First, the policy instrument and its objectives will be addressed. After that, the purpose and intended policy changes will be summarized.

## 2.1. Policy Instrument, purpose and intended policy changes

The policy instrument addressed are the Operational Programme ERDF 2014-2020 Hessen Axis 1, Investment Priority 1b Promoting business investment in R&I, clusters and the guideline of the State of Hesse for the promotion of start-ups and medium-sized businesses (MFRL) of December 13, 2016 (StAnz. 52/2016, p. 1686) - last amended by guideline of 02.04.2018 (StAnz. 14/2018 p. 446).

Thehe indicator, addressed in the proposal, is the following: "Number of SMEs from the industrial sector which have started new projects to increase their innovation capacities for scaling up". By the end of the project, 5 SMEs from the industrial sector should have started new projects to increase their innovation capacities for scaling up. This aim will be addressed by **Action 1**, the project MOVE IT. It aims at having strategy forums which should foster cooperation between companies which should lead to **new project proposals** in the end.

For **Action 2**, the funding source will be funds from the state of Hesse. After discussions with the Hessian authorities, ERDF cannot be addressed for this project because there are no adequate funding lines. The project is funded by **the guideline of the State of Hesse for the promotion of start-ups and medium-sized businesses** (MFRL) of December 13, 2016 (StAnz. 52/2016, p. 1686) - last amended by guideline of 02.04.2018 (StAnz. 14/2018 p. 446). A part of this guideline are projects for strengthening the readiness to start a business, for increasing competitiveness and for improving entrepreneurial qualifications, under which the project Open Innovation Challenge can be subsumed.

To strengthen SMEs in the industries relevant for our region, special instruments are necessary, which focus the activation, collaboration, growth and innovation processes of these companies and involve them in international cross-sectoral knowledge exchange. Those tools, specifically formats and subjects, that might be most adequate and relevant to reach this aim, were evaluated during this project.

The Action Plan aims to impact: X Investment for Growth and Jobs programme

European Territorial Cooperation programme

X Other regional development policy instrument

The policy instrument OP ERDF 2014-2020 shall be improved by focusing the special needs of growth of SMEs from the industrial sector. Especially, cross-sectoral approaches and strategies for international knowledge exchange and innovation management will be taken into account. In particular, the industries that are due to disruptive technology changes at risk in Northern Hesse will be targeted. Through this new and additional focus, a new project (Open Innovation Challenge) shall be initiated and funded by the guideline of the State of Hesse for the promotion of start-ups and medium-sized businesses, whereas the ERDF project (Move IT) shall be influenced. This increases the ability of regional industries to develop new process- or product- innovation, thus being able to react to the fast-changing markets. This will be in line with the innovation strategy of the state of Hesse as well as with the regional cluster development strategy of the region of Northern Hesse. Most SMEs do not have the capacities to initiate innovation processes on their own, so that external cluster and/or expert support are needed to evaluate future risks and potential of growth for SMEs through product or process innovations.

The envisaged policy changes are that we will influence an already approved project with learnings from SCALE UP. The project MOVE IT is funded by ERDF OP 2014-2020 Hessen. It aims at having strategy forums which should foster cooperation between companies which should lead to **new project proposals** in the end.

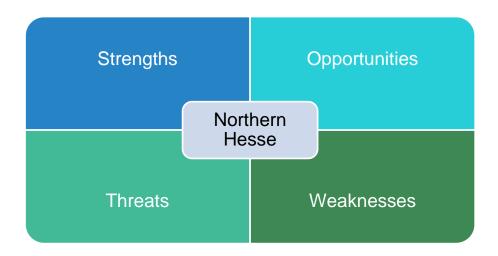
# 3. Background and Methodology for Designing the Action Plan

The content of this action plan has been developed by using the following procedures:

- Regional Context and SWOT analysis
- Local Co-Creation Events with Project Stakeholders
- Learning between the SCALE UP Partners through the Exchange of Good Practices,
   Study Visits and Peer Reviews
- Conducting a Survey to SMEs

In the following sections, we will explain and describe each of these points.

### 3.1. Regional context and SWOT analysis



After the Rhine-Main region, Northern Hesse is the second largest economic region in Hesse and has developed positively in economic and socio-structural terms from a very low level over the past ten years. The region is characterized by a strong tradition as a location for industry and commerce. It is not only large companies, but especially small and medium-sized enterprises (hereinafter: SMEs) that decisively shape the economy and are responsible for value creation and jobs in the region. Approximately 14,000 SMEs are active in the manufacturing sector in Northern Hesse. However, SMEs face major challenges from disruptive technologies and new global megatrends resulting from these technologies, as these changes create a need for new products, services and business models. Unlike large companies, however, SMEs often lack the resources to meet the challenges of digitization independently in the long term and sustainably, and to take advantage of the new opportunities presented by disruptive technologies and megatrends. Therefore, the instruments offered and developed in the context of the Scaleup project offer an extremely valuable input to this challenging situation that SMEs are facing.

Northern Hesse is located in the middle of Germany. It is mostly a rural area which spans about 7.000 square kilometers. Furthermore, it has about a million inhabitants. The GDP (gross dosmetic product) is 33 million euros. Thanks to its transport connections, it is also the logistics center in Germany and it has an export quota of 43 percent.

The region of Northern Hesse has a lot of **strengths**. For one, with its central location it has very low cut-off times in logistics. It has a strong Industry, for example the mobility industry with an annual revenue of 13.6 billion euros, the health industry which generates 4.2 billion euros in revenue every year and the energy industry. The City of Kassel lies in the center of Germany. Culturally it has a lot of things to offer, a good public connection and a high quality of life with a low cost of living. As an R & D engine and talent pool for start-ups, we have the

University of Kassel and the Fraunhofer Institute. As an extra measure, the founding activities are well supported by the University, the Regionalmanagement Nordhessen as well as the regional idea and business plan competition *promotion Nordhessen*. The Regionalmanagement Nordhessen engages in supraregional marketing with its cooperation networks around relevant clusters and research topics (for example deEnet, MoWin.net and IT-network).

While the region has many strengths, it also has some **weaknesses**: Even though it has a central location, the east-west rail and road connection is rather weak. As Northern Hesse is a rural area, it is facing demographic changes, especially in the district of Werra-Meißner. The salary structure in Northern Hesse is compared to southern Hesse rather low. Even though we have the University of Kassel and Fraunhofer as R+D engine, it has a low level of expenditures for R+D activities. In Kassel, there is 1.5% of the GDP spent on R+D activities while the European average is 2.0% (Hessische Landesregierung, 2013). It is also missing a fast and uncomplicated financial support system for smaller companies.

There are also a lot of **opportunities** for the region of Northern Hesse: To increase the R+D activities of SMEs and their possibilities to grow, we need to strengthen the innovation capacity, thus ensuring that business models of these SMEs will be proofed in the future and can increase collaboration with large companies from regional industrial sectors. There are also high potentials for Cross-Innovation and Cross-Cluster Innovation. To support cluster-development or comparable associations, research results from the networks of research organisations and enterprises should be used. These can lead to innovative products, which would create a rise in innovation capacity in the most important sectors of the region. At the same time, there is also further potential for real laboratories in the districts and the city to increase system innovations. Last but not least, the utilization lines for SME funding programs should be stronger supported.

Talking about the **threats**, there are significant challenges created by disruptive technologies and new global mega trends which result from these technologies. One example would be the mobility-shift by autonomization of traffic, digitalization and the electrification of drivetrains. The challenges of SMEs are that they have no or too little resources to conquer the consequences created by these disruptive technologies. Another problem is that Intellectual Property issues overwhelm SMEs: They have too little resources and not enough human resources to systematically examine and protect their IPs.

As mentioned above, the topic of promoting SMEs is therefore extremely relevant for Northern Hesse, and the strengthening of the competitiveness of small and medium-sized enterprises and start-up support should be particularly emphasized in this context, as SMEs have an outstanding role to play in managing structural change and the transition to a global knowledge-based economy, as well as in creating new employment opportunities. In order to maintain and expand the competitive and innovative strength of the Northern Hesse region in the future, it is imperative that current and future trends are considered at an early stage. Only in this way can regional players succeed in preparing for changes in the markets, generating innovations and positioning themselves successfully on the market in the long term. Most SMEs do not have the capacities to initiate innovation processes on their own, so that external cluster and/or expert support are needed to evaluate future risks and potential of growth for SMEs through product or process innovations. Due to our regional context, **the focus lies on SMEs in the industry sector**.

#### 3.2. Local co-creation events and interregional learning process

During year 1, we hold our first and second stakeholder meeting, we reflected the needs of SMEs and the approaches we already have in our region to support SMEs with scaling up and innovation. We identified the following initiatives in our region:

- 1. Establishment of an ICT cluster in North Hesse with the work package "Promoting R&D
- 2. Science Park of the University of Kassel
- 3. Working Groups of the Entrepreneurs' Association of Northern Hesse
- 4. IHK Hessen Innovativ
- 5. MoWiN Innovation Lab
- 6. promotion Nordhessen
- 7. House of Energy with the offer of a Forum Startup+
- 8. Scaleup Initiative of the EEN Hessen

From this list of initiatives, the following three Best Practices were selected:

- 1. IHK Hessen innovativ
- 2. MoWiN Innovation Lab
- 3. Scaleup initiative of the EEN Hessen

They represent a good selection of interesting and complementary formats which also include an initiative from Southern Hesse. IHK Hessen innovativ is the innovation and technology transfer consultancy of the Hessian Chambers of Industry and Commerce. The aim is to support member companies and founders in innovation management issues and in overlapping topics in order to improve or maintain their competitiveness. The MoWiN Innovation Lab is a new collaboration format, developed in 2018. It takes place quarterly and offers MoWiN.net members the opportunity to present their innovations to a professionally selected panel of experts and have them evaluated. The aim is to identify cooperative R&D projects through targeted networking between companies and the university in order to strengthen R&D activities. The ScaleUp initiative of the EEN from Wiesbaden (Southern Hesse) offers individual support for scaleups in their growth as well as assistance with financing opportunities. As part of the project work to date, Scaleup Hessen invited multipliers, planned joint activities, interviewed scaleup companies, organized A2F events, an A2F guide and peer meetings.

During semester 3 and 4, we held two co-creation workshops with our stakeholders to reflect on the learning process and further develop our Action Plan. In order to decide which Best Practice to choose for transfer to our region, we reflected on the lessons that were learned in the past study visits. After that, we analyzed the needs of our region and what is missing in order to identify and adapt the most appropriate Best Practice available in the Scaleup context.

*First*, we clustered the Best Practices with the following scheme to find that there are similar projects or approaches in the countries.

Project	Accelerators	Financing	Using talent	Others
Partner		instruments	pools	
Murcia	TRACCIÓN	SUBSIDIES FROM	/	
(Spain)	(TRACTION)	THE INSTITUTO DE		
	ENTREPRENEURIAL	FOMENTO FOR THE		
	PROGRAMME 360	ENTRY OF PRIVATE		
	INNOVATION	INVESTORS IN		
	ACCELERATOR	NEWLY CREATED		
	INCOOVA	COMPANIES		
Lazio (Italy)		FARE VENTURE		OPEN
				INNOVATION
				CHALLENGE
				ESA BIC
				PROGRAMME
				(ESA TTP)
Attica	EGG SCALEUP	COMPETITIVENESS		INNOVATION
(Greece)	PLATFORM	TOOLBOX		CENTER OF
				ATTICA
				REGION

Lublin	NLAB LUBELSKIE-	INVESTORS AND		REGIONAL
(Poland)	NEVADA	EXPORTERS		BRAND
	ACCELERATION	ASSISTANCE		"LUBELSKIE"
	BRIDGE	CENTRE (COIE)		
Nottingham	UPSCALER		NTU	
(Great	PROJECT		EMPLOYABILITY	
Britain)	THE BIG HOUSE			
	ACCELERATOR			
	PROGRAMME			

Throughout the **study visits**, there was a productive exchange with questions and answers. All study visits were very interesting and useful to get more in-depth insight from the stakeholders. We learned more about the scale-up-ecosystems in the different regions.

## The key learnings from the study visits were the following:

- The focus of the Best practices was not always narrowed to innovation- and growthpromoting
- The Scale-up term was used differently and dependent on the regional context.
- While the initiatives are addressing innovative topics and are very unique, there are mostly structural programmes which are very cost intensive.
- The **MoWiN Innovation Lab** has a good reputation in the region and was also well received by the other partners.

Secondly, we reflected on the question what kind of additional initiative to support scaleups and innovation activities could be needed in our region. Throughout the discussion with the Stakeholder Action Group and with a look to current developments, we identified the following thematic scopes and formats for our region as relevant:

Thema	atic scopes	Fo	rmats
1.	Sustainability and Green Deal	1.	Mentoring network/ peer-to-peer
2.	Digital Transformation		mentoring: Exchange with a suitable
3.	Economic Recovery		tandem company on technology and
4.	Resilience of companies and		market trends; Exchange with a
	employees		university department on technology
5.	Shortage of skilled		trends; Exchange on innovation
	workers/recruitment of skilled		methods and innovation processes
	workers and therefore further		
	education and training of skills	2.	Accelerator: Support in developing
	among employees		ideas for the future and innovations (e.g.
			creative workshops); Support during the

- Organizational development and corporate culture (Diversity and inclusion)
- 7. Internationalization

- growth phase and internationalization;
  Training and coaching on sales;
  Consulting by experts in the alignment
  to new future fields (technologies +
  markets); Consulting by experts in the
  testing and validation of own new
  business ideas
- Open Innovation: Cooperation with research of universities; Cooperation with students (master's theses, internships); Cooperation with start-ups (validation or pilot projects)
- 4. Joint R&D projects
- 5. Topic Workshops/Innovation Labs

Furthermore, our analysis and discussion showed that there is a need to better **link the** various services within the region of Northern Hesse, as well as between Northern and Southern Hesse and to network them more sustainably. The regional distance often results in a lack of exchange and information. Implementing an Accelerator seemed difficult because another accelerator is just starting up in the region and we do not want to compete.

In order to link our results back to the concrete and current needs of SMEs, we conducted a **survey targeting SMEs**. Based on the assumptions made above, we selected the following Best Practices for the Peer Reviews which we looked at in detail:

- INNOVATION ACCELERATOR (Murcia)
- THE BIG HOUSE ACCELERATOR PROGRAMME (Nottingham)
- OPEN INNOVATION CHALLENGE (Lazio Innova)

We found especially that the method of open innovation could be target-oriented for the region of Northern Hesse.

Based on our findings during the co-creation workshop, we developed a survey, which took place in semester 4 and is in the appendix of this document. The aim of the survey was to link our results back to the needs of SMEs and to ensure that the actions we have developed will be effective for the target group. This survey can bee seen as a preparatory activity that helped

to better define our actions. As only 16 companies participated in the survey, the results are not representative, but at least tendencies can be deducted. The survey results confirmed that companies in our region are mostly interested in innovations for products and their targeted markets are B2B and European markets. The subjects which they found most relevant were digital transformation, shortage of skilled workers and sustainability. The formats they are interested in are the following: exchange with a suitable tandem company on technology and market trends and exchange and/or cooperation with a university department on technology trends. For their future innovation activities, the wished for the following services/support: Information on funding programs (EU, national, state), advice/support on funding opportunities and with applications, meeting opportunities and dialogue with scientists (dialogue between SMEs and research) and exchange of views in networks of entrepreneurs. The reasons why they mostly did not have participated in funded projects are that they find it too complex, too bureaucratic and that it ties up too many resources. The findings show the relevance of our work as a cluster organization but it also shows a further need for initiatives which address certain topics (Digitalization, Internationalization) and the need of SMEs for collaboration between universities and other companies.

In June 2021, another co-creation workshop took place, where we refined our actions together with the Stakeholder Action Group. We reflected the whole learning process from the beginning and decided to implement the following actions:

- 1.) Influencing the implementation of an already approved EFRE project
- 2.) Transfer the Best Practice "Open Innovation Challenge" from Lazio Innova to Northern Hesse
- 3.) Institutionalizing the exchange and update on innovation and scaleup content within the stakeholder group and working on joint initiative

# 3.3. Institutionalizing the exchange and update on innovation and scaleup content within the stakeholder group and working on joint initiatives

Based on the discussions with our stakeholder action group and the expressed need to better link the various services within the region of Northern Hesse, as well as between Northern and Southern Hesse and to network them more sustainable, we plan to institutionalize our stakeholder action group in a long-term perspective. The regional distance between the Northern and the Southern part in the state of Hesse often results in a lack of exchange and information. We will try to close this gap by including the core stakeholders in the region and offering two meetings a year for further networking, using synergies and develop new initiatives helping SMEs to scale up. The organisations in the region who are involved will be the Stakeholder Action Group, which are mainly Regionalmanagement Nordhessen GmbH, IHK

Hessen innovativ, EEN Hessen, Hessian Ministry for Economy, Energy, Transport and Housing, Science Park GmbH and Hessen Trade & Invest GmbH (HTAI). The players have been chosen because they are on the one hand crucial players in the field of innovation consultancy from Northern and Southern Hesse and on the other hand also have a multiplier role in their respective regional innovation ecosystem. They can thus easily inform other important players in their ecosystems via e.g. monthly newsletters to members, via network meetings and diverse other forms of exchange. A too large group of potentially relevant actors is avoided in order to enable effective discussions and dialogue. The organisations do not need endorsement of the public administration to take part in this stakeholder group.

## 4. Actions

# 4.1. Action 1: Influencing the implementation of an already approved EFRE project: MOVE IT

### 4.1.1. The background

As stated in chapter 3.1., Northern Hesse is characterized by SMEs from the industrial sector. At the same time, SMEs do rarely have the capacities to initiate innovation processes on their own which is among other indicators evident from the low level of expenditures for R+D activities in Kassel, being even below European average. Therefore, Regionalmanagement Nordhessen GmbH started the project MOVE IT in January 2021. It is funded by the addressed policy instrument OP ERDF 2014-2020 and aims to foster cross-sectoral cooperation of SMEs within the framework of a strategy forum for the development of new business fields. From the presented Best Practices during the SCALE UP Project, the UpScaler project from Nottingham goes in a similar direction. It supports high-growth companies to 'scale-up' their businesses through workshops, a peer-to-peer network and grants for coaching and graduate placements. The support includes a series of strategic leader workshops delivered by experts in their field and a monthly forum which addresses specific scale-up challenges and provides peer-to-peer learning opportunities and networking. We aim to transfer these elements and the lessons learnt from the UpScaler project to the project MOVE IT.

#### 4.1.2. Action

The project MOVE IT aims at having a strategy forum for the development of new business fields and project ideas. Thereby, the monthly Forum of Nottinhgams UpScaler Project should be transferred which addresses specific scale-up challenges and provides peer-to-peer learning opportunities and networking. This should be an integral part of the MOVE IT strategy

forum. In three to six follow-up workshops, at least three project proposals should be developed until they are ready for implementation. Thereby, the indicator will be addressed for 5 SMEs to be involved starting new projects.

During the first year, in 2021, the initial analysis phase took place, where a survey was conducted. This experiences and findings of the SCALE UP survey we have conducted earlier this year have been incorporated into the conception of the MOVE IT survey. The aim of the survey was to identify thematic fields that arise in the face of digitalisation and to address the innovation potential at the interfaces of the clusters Decentralised Energies, ICT and Mobility. and to investigate which topics exist beyond the already known areas such as energy-efficient production, Industry 4.0 or electromobility. Furthermore, the aim was to find out which member companies or which of their business areas are affected by the megatrends mentioned and are subject to profound change. Subsequently, it will be examined what is needed to respond to challenges and to take advantage of opportunities in emerging growth industries. One of the findings of the survey were that digital technologies are very important for the business model while at the same time most SMEs employees lack the competencies to use these technologies. To address these needs and at the same time to strengthen cooperation between companies and opening the dialogue for innovation topics in the region, will be one of the main goals for the next year. The next envisaged steps for 2022 are the followings:

- 1. Identifying innovative start-ups as cooperation partners: For this purpose, innovative start-ups are selected that are already active at the previously identified interfaces in areas of the emerging industries. Supra-regionally effective start-ups from the areas of mobility, energy and ICT are identified. These will present selected ideas to top companies in the participating clusters. The contact initiation is intended to generate mutual added value and benefit. Superregional start-ups benefit from the industry knowledge and expertise of the clusters as well as from potential cooperation or participations, which in turn should strengthen the future viability of the clusters and the members in the medium to long term.
- 2. Project Development Workshops: In joint workshops, the results of the event are presented, discussed and project plans are developed until they are ready for implementation. In particular, cooperation between regional SMEs and up-and-coming start-ups promises innovations that will further increase the competitiveness and attractiveness of the business location. Therefore, lessons learnt about promotion, management, cost-efficiency, logistics, programme design from the Nottingham Up Scaler Project should be incorporated here, e.g., through a meeting where the plans will be discussed based on their former experiences.

- 3. Accompanying public relations work: All activities are accompanied by publicity. All events taking place within the framework of the measure will be documented on existing websites and via social networks (photo/video, short reports) and, if possible, also made accessible to the public via other channels (press releases, publications in trade journals, etc.).
- 4. Integration of the thematic areas into the cluster work: Following the event, regular workshops will be offered to concretise upcoming projects or cooperation. The cluster management will play a moderating role here and at the same time contribute its experience in the areas of applying for and managing funding and project development. The workshops will expand and strengthen the service catalogue of the clusters. In order to measure the results of the project, the following indicator "number of new developed projects" and "new cooperation" and "media coverage" will be used. Furthermore, the identified topics will be integrated into the cluster work as fields of action. The targeted integration of start-up companies as members in the networks will increase their innovative strength in the long term. The results of the project will be made available to all members of the respective networks so that even those not involved can benefit from them.

## 4.1.3. Players involved

The coordinator of the project is Regionalmanagement Nordhessen GmbH – being the PP2 – and thereby responsible for the implementation of the action / MOVE IT project and for proposing the changes. The players involved are the clusters decentralized energy technologies (deENet). mobility (MoWiN.net) and ICT (IT-network) from Regionalmanagement Nordhessen GmbH and thereby the members of the associations and cluster actors. The players have been chosen as they bundle all crucial public and private players in the addressed fields within the cluster, thereby representing all necessary and important actors. We thus have access to all actors as well as to expertise as regards e.g. cocreation workshops as an instrument to evaluate future risks and potential of growth for SMEs through product or process innovations.

	deENet	ICT-Cluster/	MoWiN.net
		IT-Network	
Legal form	Registered	Non-profit,	Non-profit, registered
	association	registered	association
		association	
Total number of members or	98	44	103
cluster actors			
SME members	63	33	38

Large companies	5	9	45
Research institutions	4	1	15
Other actors	26	2	5

#### 4.1.4. Timeframe

The project duration is from 01.01.2021 - 31.12.2022. The next envisaged steps for 2022 are described in chapter 4.1.3.

### 4.1.5. Costs (if relevant)

There are no additional costs.

# 4.1.6. Funding sources (if relevant):

Funding source is the addressed policy instrument Operational Programme ERDF 2014-2020 Hessen.

# 4.2. Action 2: Implementing a new project: Open Innovation Challenge Nordhessen

# 4.2.1. The background

Based on the Peer Reviews, we selected the Best Practice "Open Innovation Challenge" from Lazio Innova, to be adapted to and implemented in the Northern Hessian context.

The Open Innovation Challenge from Lazio Innova is a systematic approach to engage and channel public/private resources to find solutions for specific business opportunities and needs. It contains the following steps:

- Raise awareness of Large Corporates on the importance of open innovation and collaboration with startups;
- Guarantee open call for expression of interest of large/medium corporates to launch a challenge (expression of interest);
- Facilitate the open innovation assessment of Large Corporates through a team of experts from Lazio Innova:
- Leverage the Lazio startup ecosystem disseminating and promoting the large corporates needs (open innovation startup recruitment);
- Engage public financial resources to facilitate the challenge (i.e. mentoring, prize award)
   (open innovation public resources)
- Leverage private resources (sponsor corporate additional prizes i.e. internship, additional prize money, experts human resources ..) (Open innovation leveraging private resources).

The Open Innovation Challenge Nordhessen will transfer the core elements but it will focus on SMEs instead of large companies (see 4.2.2. Action). As stated in chapter 3.1., the topic of promoting small and medium-sized enterprises is extremely relevant for Northern Hesse. SMEs are facing major challenges regarding disruptive technologies and new global megatrends resulting from these technologies. Unlike large enterprises, however, SMEs often lack the resources to address the challenges independently, sustainably and over the long term as well as to take advantage of new opportunities arising from disruptive technologies and megatrends. That's where the Open Innovation Method has the potential to offer new possibilities.

#### 4.2.2. Action

The goal of the proposed project is to provide know-how to support SMEs in solving problems resulting from global trends and challenges such as digitalization and climate change. SMEs can act both as solution recipients and solution providers and thus represent the target group. The project follows the method of Open Innovation and contains the following steps:

- In a first step, the procedure consists of working together with SMEs to identify and name challenges in the area of digitization that they cannot solve on their own. Digital solutions that arise from sub-topics such as internationalization or socially scalable challenges such as mobility in rural areas can also be considered.
- In a second step, the challenges identified are presented by the SMEs to potential solution providers at a reverse pitch event.
- Startups and/or SMEs can apply by offering solutions for the announced challenges.
   The participants will experience an accompanying program through coaching and exchange among each other.
- Finally, the best submitted solutions are selected and prize money is awarded to the winners.

In the long term, this will enhance the design and adaptability of SMEs in the region and support the players in establishing new business fields. With this joint project, the Northern Hessian clusters of decentralized energy technologies, ICT and mobility want to integrate awareness of the effects of megatrends as a cross-sectional perspective into the cluster work and develop target group-specific services. This creates optimal conditions for network members to meet the challenges and take advantage of synergy potential and opportunities. In this context, the project also aims at the cooperation of start-ups with established companies, which offers a lot of potential to increase the innovation dynamics of the participating clusters in general. In the end, 12 companies in total should benefit from this Open Innovation Challenge.

## 4.2.3. Players involved

The coordinator of the project will be the Regionalmanagement Nordhessen GmbH with its cluster organizations. There will be a cooperation with other relevant stakeholder organizations, e.g. the Science Park GmbH, the EEN Hessen and IHK Hessen innovativ.

#### 4.2.4. Timeframe

The planned project period will be probably from 01.12.2021 to 31.01.2023. The format of the Open Innovation Challenge will possibly be online and/or hybrid. A total of 5 events are to take place. First, a workshop is held with potential companies to identify and concretize 3-4 challenges. In a subsequent event, the companies will pitch the challenges to potential solution providers (reverse pitch). Potential solution providers can apply. The selected solution providers receive accompanying coaching (2 workshops) to flesh out the solution. Finally, the final event takes place where the solutions are presented. Please find the detailed time schedule in the appendix.

#### 4.2.5. Costs (if relevant)

Year	Staff costs	Material costs	Total costs	Public funds	Own funds
2021	1.119€	0 €	1.119€	839 €	280 €
2022	56.180 €	23.625 €	79.805 €	59.854 €	19.951 €
2023	4.682 €	13.250 €	17.932 €	13.449 €	4.483 €
Total costs	61.981 €	36.875 €	98.856 €	74.142 €	24.714 €

#### 4.2.6. Funding sources (if relevant):

The funding source will be funds from the state of Hesse. After discussions with the Hessian authorities, EFRE cannot be addressed for this project because there are no adequate funding lines. It is funded by the guideline of the State of Hesse for the promotion of start-ups and medium-sized businesses (MFRL) of December 13, 2016 (StAnz. 52/2016, p. 1686) - last amended by guideline of 02.04.2018 (StAnz. 14/2018 p. 446). A part of this guideline are projects for strengthening the readiness to start a business, for increasing competitiveness and for improving entrepreneurial qualifications, under which the project Open Innovation Challenge can be subsumed.

# 5. Appendix

# App. 1: Excerpt from the questionnaire

1. c	ompany size
a.	☐ Microenterprises (employees < 10; annual sales: < € 2 million).
b.	☐ Small company (employees < 50; annual sales: € 2 - 9 million)
C.	☐ Medium-sized enterprise (employees < 250; annual sales: € 10 - 49 million)
d.	□ Large company (employees ≥ 250; annual sales: ≥ 50 million €)
2. Ir	n which industry does your company operate?
	vhat do you develop?
	Process
	Service/new business models
4. W □ B	What is your target market? (Multiple answers possible)
□В	2C
	liche
	uropean markets
□ Ir	nternational markets
5. ir	n which areas would you like external support given Covid-19?
	Customer acquisition
□ S	Support in applying for Corona aid.
□ A	dvice on "home office and data security" topics
	Consulting on resilience

☐ Software for use in the home office
□ Sonstiges:
6. % share of revenue from activities in research and development.
□ <5%
□ 5-10%
□ 10-15%
□ >15%
If answered, then question 7
7. What is the percentage of employees in your company are involved in research and
development?
□ no own research and development
□ less than 2.0 %
□ 2,1 - 6,0 %
□ 6,1 - 10,0 %
□ more than 10%
8. were/are you involved in EU projects or application for EU funding?
□ yes
□ no
If answered with yes, then question 8.1.
If answered with no, then question 8.2.
8.1 If yes, in which ones?
8.2. if no, why not?
☐ It is not of interest to us.

☐ It is of interest to us, but so far the following has prevented us from doing s
9. were/are you involved in ERDF projects or application to ERDF projects?  ☐ yes
□ no
If answered with yes, then question 9.1.
If answered with no, then question 9.2.
9.1 If yes, in which ones?
9.2. if no, why not?
☐ It is not of interest to us.
$\square$ It is of interest to us, but so far the following has prevented us from doing s
9.3 Do you have any suggestions for improving the ERDF funding instrument?
10. What have you done so far to ensure the competitiveness of your company?
□ Renewing the business model
☐ Developing new customer groups
☐ Changing management tools
☐ Cooperation with universities
☐ Cooperation with other companies
☐ Outsourcing of processes and resources
☐ Utilization of subsidies and grants
☐ Change of interfaces to the customer
☐ Protection of know-how (patents, trademarks, design protection, etc.)

☐ Product innovations and change in service offerings
☐ Optimization of the use of resources
☐ Changes in internal processes (process innovations)
□ Partnerships in purchasing
☐ Development and qualification of employees
O
11. What internal factors hinder or make it difficult for your company to be competitive in the
future?
☐ Insufficient employee qualifications (e.g., lack of language skills or competencies in the area of digitalization).
☐ Lack of knowledge of the environment (research institutions, neighboring companies, etc.)
☐ Lack of knowledge of innovation methods and tools
☐ Lack of knowledge for evaluating ideas with regard to future marketability
☐ Internal communication barriers
12. which services/support would you like to have for
future innovation activities of your company?
☐ Exchange of opinions in networks of entrepreneurs
☐ Further training offers on innovation topics
☐ Provision of up-to-date know-how on innovation methods and instruments
☐ Digital information on innovation topics in the region
☐ Meeting opportunities and dialog with scientists (dialog between SMEs and research)
☐ Project consulting and project management for innovation processes
☐ Information on funding programs (EU, national, state)
☐ Advice/support on funding opportunities
☐ Advice/support with the application process
☐ Advice/support with financing
Advice/support on technology screening/scouting
☐ Consulting/support on technological feasibility issues

☐ Consulting/support in strategy development (strategic corporate roadmap)
☐ Market analysis (qualitative/quantitative)
☐ Consulting/support in exploitation and market access
☐ Consulting/support in partner search/ecosystem analysis
☐ Consulting/support for internationalization
$\qed$ Consulting/support in strategies for property rights (patents, trademarks, design protection,
etc.)
☐ Participation in B2B events
13. what types of innovations are relevant for your company?
□ Process innovations
□ Product innovations
□ Service innovations
☐ Business model innovations
☐ Innovations in corporate culture and organizational development
Innovations in corporate culture and organizational development
14. what format content around your innovative company would you like to see in the region?
$\hfill\square$ Exchange with a matching tandem company on technology and market trends.
☐ Exchange with a university department on technology trends
☐ Exchange on innovation methods and innovation processes
$\hfill\square$ Support in developing ideas for the future and innovations (e.g. creative workshops)
☐ Support during the growth phase and internationalization
☐ Training and coaching on sales
☐ Consulting by experts in the alignment to new future fields (technologies + markets)
☐ Consulting by experts in the testing and validation of own new business ideas
☐ Cooperation with research foci of universities
☐ Cooperation with students (master's theses, internships)
☐ Cooperation with startups (validation or pilot projects)

15 Which topics are of interest to you?
☐ Sustainability/climate protection/reduction of emissions
☐ Economic recovery (economic recovery)
☐ Resilience of the company and employees
Digitalization/digital transformation
Corporate culture
$\hfill\square$ Shortage of skilled workers/recruitment of skilled workers
☐ Diversity and inclusion
☐ Further education and training of digital competencies among employees
$\hfill\square$ Further education and training of English language skills among employees
☐ Internationalization

Thank you for your assistance!

# App. 2: Time schedule Open Innovation Challenge

Nr.	АР		Zeitplan													
		M1	M2	М3	M4	M5	M6	M7	M8	М9	M10	M11	M12	M13	M14	Summe
1	Analysephase															
1.1	Bedarfsanalyse und Identifikation von Challenges					M1										400
2	Open Innovation Challenge															
2.1.	Planung & Konzeption								M2						МЗ	500
2.2.	Begleitendes Coaching (externe Personalkosten)															200
2.3.	Begleitende Öffentlichkeitsarbeit							M4	M4							400
3	Verstetigung															
3.1	Integration in die Clusterarbeit														M5	180
Summe																1680
		M1:	Erfolgr	Erfolgreicher Abschluss der Analysephase und Identifikation konkreter Challenges												
	M2:	Veröffe	entlichu	ing von	Challe	nges (	Revers	e Pitch	ing Eve	ent)						
		M3:	: Präsentation konkreter Lösungen (Final Event)													
		M4:	Corporate Identity entwickelt und Webseite veröffentlicht													
		M5	Erfolgreiche Integration der Themenbereiche in die Cluster-/Netzwerkarbeit													

Date:
Signature:
Stamp of the organisation (if available):