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Hochschule Hof
University of Applied Sciences

iisys
Institute for Information Systems at Hof University

DIGITAL REGIONS
Interreg Europe

Digital Regions Action Plan

PP 7 Institute of Information Systems (iisys) at Hof University of Applied Sciences (HOF)

Images:

Image 1 (top left): Co-learning Lab workshop in Kronach. Developed with the Man Machine Interface budget for the Kronach region and in cooperation with the DIGITAL REGIONS stakeholder group member *Innovation Centre for Kronach* IZK

Image 2 (top right): Stakeholder group members and project team during the final Stakeholder group meeting.

Image 3 (bottom left): Technology transfer during the 3rd project meeting of the Moonrise consortium at iisys in July 2022.

Image 4 (bottom right): Autonomous shuttles which were implemented due to the *Mobilität digital Hochfranken (MobiDig)* and the *Shuttle Modellregion Oberfranken (SMO)* projects, which served as blueprints for the PUMA project idea.

Source: Hof University of Applied Sciences

Content

Part I – General information

Project: Digital Regions

Partner organisation: Institute of Information systems of Hof University of Applied Sciences

Other partner organisations involved (if relevant): None

Country: Germany

NUTS2 region: Oberfranken

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Part II – Policy context

The Action Plan aims to impact:

- ☐ Investment for Growth and Jobs programme
- ☒ European Territorial Cooperation programme
- ☒ Other regional development policy instrument

Name of the policy instrument addressed:

INTERREG B under the European Territorial Co-operation programme

Region!Innovativ & *T!Raum* under the Programme Family "Innovation & Structural Change" 2020 – 2025 (Federal Ministry of Education and Research)

Regional development budget of Hof University of Applied Sciences

Part III – Details of the actions envisaged

1 MOONRISE PROJECT: MASS CUSTOMISATION FOR THE INTRODUCTION OF PRODUCTION-RELATED IT SYSTEMS IN CORPORATE NETWORKS

1.1 BACKGROUND

The Moonrise project faces similar challenges as the Portuguese SAMT project did, a good practice handed in via Digital Regions: SMEs in Upper Franconia often face difficulty in actively and efficiently joining R&D activities and learning about and incorporating new technologies, updating their old, and training their workforce along. The project aims at gathering existing industry networks, based on active good practice exchange and two ERDF projects at iisys, and offers solving challenges of digital transformation with participatory collaboration. Main work packages consist of:

- Development of an Open Collaboration concept
- Best and Bad practice analysis and development of a process model for the integration of IT applications in SMEs
- Transfer through interactive learning
- Model projects for improving the IT infrastructure towards smart factories
- Model projects for improving the working environment towards digital work

The project brings together five companies (mostly SMEs) from northern Bavaria and ten SMEs from southwest Saxony who are manufacturers, IT service providers and process consultants. The project works with an open innovation combined with a collaboration engineering approach and replaces the cost-intensive project model common among process consultants to an SME-specific process model with a positive culture of error. The goal is to introduce various prototypical IT-solutions to the manufacturing SME partners. Two universities - Hof UAS and Chemnitz - will take on the research and development tasks of the project, while the networks *IT-Cluster Oberfranken* (73 IT SME members from Upper Franconia and a member of the Digital Regions Regional Stakeholder Group), and *SüdWestSachsen Digital* (71 mostly manufacturing SME members from Saxony) ensure sustainable transfer and network communication.

1.2 KNOWLEDGE APPLIED FROM DIGITAL REGIONS

Partner good practice/ experience	How this good practice/experience has contributed to the actions developed in your Action Plan (detail any transfers, full or partial of good practice)
IOTEC - Development of Technological Capabilities for the Industrial Application of the Internet of Things project. **NUTS2 regions Castile and León, Spain and Centro, Portugal.** ***The IOTEC project transferred IoT technologies to innovative industries through the identification of SMEs, identification of needs, training and consultancy to the industry SMEs and the development of inter-regional events directed to industrial SMEs. More than 60 regional SMEs invested in R&D in order to obtain new ICT products and services in IoT. The project delivered training and advice to involved SMEs.***	The IOTEC project transferred innovative IoT technology across the Portuguese-Spanish border with great success and was supported by the Interreg VA Spain-Portugal (POCTEP) Programme. Within the Federal Republic of Germany, cross-state public funded activities are rare, although there are only 30 km between Hof and Plauen, main towns in the area on both sides of the border. Even EU projects such as the EFRE technology transfer projects at Hof UAS have not been able to cross the state border so far, because EU funds are administered by the state governments in Munich and Dresden and transfers to companies in the other state are undesirable. The successful cross-border, interterritorial focus of the IOTEC project encourages technology transfer across the former inner German border, which is still a major obstacle for joint projects. Moonrise managed to involve Bavarian and Saxonian partners by opting for national funding from the Federal Ministry of Education and Research. The project will approximately follow the same steps as IOTEC: Transfer through (1) the identification of stakeholder SMEs and networks in the region (done) (2) identification of their needs (3) Training and consultancy to the manufacturing SMEs (4) Events that transfer knowledge about the industrial internet of things vision, technological possibilities, best practices and effective introduction procedures. The goals of *Moonrise* are similar to those of the IOTEC project: • Foster intelligent growth in the cross-border cooperation area, • promote innovation, research, and technological development • increasing the capacity for excellence in R&I • developing links and synergies between enterprises, R&D centres, clusters, higher education to promote Industry 4.0 technologies

Spread of Additive Manufacturing and advanced materials Technologies **Portugal** ***The SAMT project developed links and synergies between enterprises, R&D centres, clusters, higher education and R&D+I governmental & regional institutions. The output was a Technology Roadmap on plastic and mould industry techniques, AM and advanced materials), a transnational collaborative Platform, the creation of training material in the form of Open Educational Resources, and both multi key enabling technologies demonstrators and transnational implementation of multi-key enabling technology demonstrative pilots.***	Like SAMT, Moonrise works with • Collaboration between organizations throughout the value chain • Promoting corporate investment on R&D. • Collaboration of industry with clusters and universities in R&D activities And envisages • Improving technological knowledge and solutions • Developing a culture of innovation within the project network

1.3 ACTION DESCRIPTION

Main objectives	**Value brought by this action into the region**	**Players involved and role in the implementation and collaboration between them**
Development of an Open Collaboration concept Process model for the integration of IT applications in SMEs: Identification and analysis of best and bad practices and development of an SME-specific process model; implementation and transfer Model projects for the transformation of the IT infrastructure	First collaboration engineering project across the Bavarian-Saxonian border Strong networking effects and synergies between the existing entrepreneurial landscape and the regional research community In-depth development of the technological and economic potential of digitalisation, networking and the application of new technologies	Universities – R&D partners: • Hof University of Applied Sciences (Hof UAS) • Technical University of Chemnitz Associations, establishes communities of practice – Networking and dissemination partners: • Vereins Südwestsachsen Digital e.V. • Verein IT-Cluster Oberfranken e.V. (Digital Regions RSG member) Manufacturers – Learning partners:

Model projects for the transformation of the working environment Utilization and knowledge transfer	Establishment of a cooperation network to support companies in successfully shaping digitalisation Knowledge and growth pool that creates benefits for all stakeholders involved. The goal is to increase productivity in the IT sector and to create future-proof jobs	• Alpha Sigma GmbH (Fiber composite parts) • Hommel Küchen- und Möbelmanufaktur GmbH (individual furniture) • Raithel + Co Technische Federfabrik (Springs and bent parts) • ROHEMA PERCUSSION (Music instruments) • Pfand Textilausrüstung (Textile processing) • Schleifscheibenfabrik Alfons Schmeier (abrasive wheels) • Vogtlandia Bürstenfabrik (brushes) • Zschiesche GmbH (print) IT service providers and process consultants – Learning partners: • Duramentum (Process optimization) • IPlaCon GmbH (process optimization) • Nxtgn (strategic digitalization) • ONTEC (automation systems) • Simba n³ (digital transformation) • SYS TEC electronic (electronic solutions) • Vogler Engineering (Industry 4.0 software solutions)

1.4 TIMEFRAME AND FUNDING

***Project/Action Investment Line/*Funding Source + Amount**	***Submitted For Funding***	***Funding Decision***	***Project Start Date / Finish date***	***Other key milestones***
Federal Ministry of Education and Research Funding ***REGION.innovativ – Arbeitswelten der Zukunft in strukturschwachen Regionen***	28.06.2021	14.07.2021	*September 2021* *July 2024*	*Project month 9* *Collaboration concept Open Collaboration developed. Existing best practices were identified and a process model for the introduction of digital*

(Working environments of the future in structurally weak regions) **€ 5 Mio**				*technologies in SMEs was developed on this basis.* *Project month 31* *The pilot projects were successfully implemented. The collaboration concept has been implemented and adapted. The transformation roadmap has been completed and is already being actively shared in the networks.*

1.5 WORKPLAN

WP	Tasks
Work Package 1: **Development of an open collaboration concept** **Lead: Technological University Chemnitz**	Task 1.1 Requirements analysis
	Task 1.2 Creation of a collaboration concept
	Task 1.3 Implementation and evaluation of the concept
	Task 1.4 Transfer of the collaboration concept to the networks
Work Package 2 **Development of an SME-specific process model for the introduction of production-related IT systems** **Lead: Institute for Information Systems, Hof UAS**	Task 2.1 Identification and analysis of best and bad practices
	Task 2.2 Development of an SME-specific process model
	Task 2.3 Implementation and evaluation of the process model
	Task 2.4 Transfer of the SME-specific process model
Work Package 3 **Model projects for the transformation of the IT infrastructure** **Institute of Information Systems**	Task 3.1 Manufacturing Execution System
	Task 3.2 Retrofitting of existing systems
	Task 3.3 Advanced data analysis

Work Package 4 **Model projects for the change of the working style** **Technical University of Chemnitz**	Task 4.1 VR/AR technology in production
	Task 4.2 mobile work in production
	Task 4.3 On-the-job qualification using digital technologies
Work Package 5: **Utilization and knowledge transfer** **SWS Digital** **IT Cluster Oberfranken**	Task 5.1 Project management
	Task 5.2 Public relations
	Task 5.3 Transfer through interactive learning
	Task 5.4 Publications
	Tas 5.5 Transfer to other SMEs

1.6 BUDGET BREAKDOWN FOR THE ACTION

The exact budget information is not available.

Category of funding	Expenditure Amount
Salaries	~ 1 full time employee per company and business network, 4.5 FTEs for the Universities
Material costs	~300.000 €
TOTAL of the whole project	Roughly 5 million € funding and 6.7 million € total budget

1.7 VIABILITY AND SUSTAINABILITY

The project has had its kick-off and has thus resulted in policy change. It will be implemented under the leadership of the two involved universities. Through the multiplication effect of spreading best practices and project success stories through the business networks, a number of follow up projects will be started with the IT service providers and process consultancies. It is expected that those SMEs are going to work together in future projects as well because they have complementary competencies that are both necessary for successful

IoT projects. The software that will be developed during the project as a side aspect will be open sourced. The IT service providers are expected to further use and develop this software in future projects beyond the scope of Moonrise. The universities will try to acquire funding for further research projects that aim at higher levels of automation using advanced artificial intelligence in contrast to the current goals that aim at first steps towards smart factories.

1.8 IMPACT EXPECTED

A

15 SMEs benefit directly by applying Industry 4.0 to new processes, services, and products.

The 144 SMEs members of SWSD and ITCO networks (73 + 71) will benefit indirectly by their network's communication activities.

B

The MOONRISE project aims to design a cross-sector, participative collaboration of producing SMEs, IT service providers and process consultants in business networks. With the help of an SME-specific process model, an open, constructive approach with a positive error culture is created that significantly increases the efficiency of the digital transformation in SMEs and enhances their innovative strength.

1.9 MONITORING ACTIVITIES IN PHASE 2

To be concreted in line with the monitoring methodology: LP's survey

Annex 1 which includes a detailed description of the different activities and meetings involving the local stakeholders to define the actions and expected impact to be included in this action plan.

09th JUN 2020	2nd Stakeholder meeting, presentation of all best practices
09th JUL 2020 & 01st OCT 2020	Meeting between Anne, Désirée, Matthias Guenther (Finance officer) and the professors Valentin Plenk (Vice president R&D at Hof UAS) and René Peinl (new scientific head of the Institute of Information systems) to transfer Digital Regions and its Best Practices. Prof. Peinl did follow-up research and brainstorming on the Good Practices on his own
30th SEPT 2020	Presentation of Moonrise during a *Fabrik der Zukunft* event
26th NOV 2020	1 Swiss Smart Factory site visit. Presentation of Moonrise project
22nd MAY 2021	4th stakeholder meeting, presentation and discussion of CoLearningLab Best practice by Professor Peinl. Moonrise Project idea presented by Professor Peinl

21st SEP 2021	5th stakeholder meeting Professor Peinl presents the Moonrise project in detail

2 CONSOLIDATION OF THE DIGITAL REGIONS REGIONAL STAKEHOLDER GROUP VIA TRANSFERRAUM NORDOSTBAYERN OR RESEARCH & TRANSFER NETWORK

2.1 BACKGROUND

Knowledge transfer is one of the key missions of both Universities of Applied sciences and the INTERREG programs. When our Digital Regions Regional Stakeholder Group expressed the wish to come together as a group even after the end of the project, as they appreciate the exchange, we offered two possibilities on the part of Hof UAS: First, a continuation as a research advisory board, which is invited in a regular rhythm, and second, as part of the Transfer Space North East Bavaria (*Transferraum Nordostbayern*).

In their joint initiative, the East Bavarian Technical University Amberg-Weiden and the University of Applied Sciences Hof have set themselves the common goal of taking the lead in establishing, shaping, and implementing an innovation ecosystem. Their initiative covers all counties at the border with the Czech Republic, which are the only counties eligible for the T!Raum (TransferSpace) funding in Bavaria. Both universities of applied sciences act as the poles for innovations in a structurally weak border region in a new cooperation model and assume a function as innovation drivers in a bidirectional transfer process.

The T!Raum project provides for a so-called workshop area, in which transfer activities are carried out in different formats and a so-called steering area, which can cover the area of management and conceptual development. The steering area defines the partners, while supra-regional partners are integrated into the workshop area. The Digital Regions stakeholders in Upper Franconia are potential regional partners, and multipliers for the exchange of good practice from the project. The application draft for the T!Raum funding has been handed in, and approval or denial of application is pending.

2.2 KNOWLEDGE APPLIED FROM DIGITAL REGIONS

Partner good practice/ experience	**How this good practice/experience has contributed to the actions developed in your Action Plan (detail any transfers, full or partial of good practice)**
Technology Gateways **Ireland** **Companies all over Ireland are using Technology Gateways to develop new or better products and services and smarter ways of doing things. Through the Technology Gateway Network, they are leveraging the expertise of over 300 industry-focused researchers, to-**	Our networking for the Transfer Space was enriched by the Technology Gateways approach to maximizing the benefit of their individual strength in a rural area: The specialized gateways are spread across the whole country, as our stakeholders are over the region. Distances are a noticeable obstacle to intra-regional exchange: meetings and travel to events that require more than an hour's drive in non-pandemic times are difficult and not common in the traditionally small-scale region, especially for SMEs. To accommodate this situation, the Gateways tightly network and share expertise.

gether with the specialist equipment and facilities of the 11 institutes of technology, to access near-to-market innovation and solutions. **Within each Gateway, a dedicated Gateway Manager and a team of sector specific business development staff act as the key contact points for industry and manage the successful delivery of projects on time and within budget.**	The Upper Franconian interest in connecting those regional entities and individuals who are interested in coming together regardless, can be supported by creating the same benefits the TG Ireland do: Training opportunities, co-creating new development and innovation opportunities within the network.
Fab Lab Network **Slovenia** **The global FabLab Network is an open and creative community of makers, engineers, researchers, scientists, artists, teachers, students and experts of all ages who collaborate and work together in innovative ways in more than 1000 FabLabs in 78 countries. A number of different organizations have shown their interest in being part of the Network: businesses, schools, development agencies, public and private institutes from all over Slovenia**	While the options for the so-called steering areas are open, our stakeholders are regional partners and multipliers. On a downscaled level, the networking aspect of the Slovenian Fab Lab Network is of interest to the consolidation of the stakeholder group: Each member is part of an already existing organisation with its own specialized role, network, and competences. The common goal of all of them is advancing the innovative strength of the region. Similar to the specialized FabLabs, they will be part of a stronger network; both in the role of point of contact for their network of contacts, but also be able to refer their contacts to other members of the stakeholder network.

2.3 ACTION DESCRIPTION

Main objectives	Value brought by this action into the region	Players involved and role in the implementation and collaboration between them

Consolidation of RSG Maintaining the benefits of the existing network Tighter network of innovation promoters of the region Innovative technology input via partner universities of applied sciences	Quicker, shorter ways between innovation promoting institutions by already existing contacts Fostering both the regional and the European innovation network in the Bavarian border region by networking for new projects	**Universities of applied sciences:** • Hof UAS • Amberg-Weiden UAS **Involved Stakeholders from Digital Regions:** • IT-Cluster Oberfranken • Wirtschaftsregion Hochfranken • Oberfranken Offensiv • Digitales Gründerzentrum Einstein 1 • District Government of Upper Franconia • Chamber of Commerce of Upper Franconia • Hof District Office / Economic Development • Selb District Office / Economic Development • Wunsiedel District Office / Economic Development

2.4 TIMEFRAME AND FUNDING

Project/Action Investment Line/Funding Source + Amount	***Submitted For Funding***	***Funding Decision***	***Project Start Date / Finish date***	***Other key milestones***
Programme Family "Innovation & Structural Change" 2020 - 2025 ***Programme "T!Raum - TransferRäume for the future of regions"*** ***2 000 000 € (whole project)*** ***89 500€ (HOF)***	*Project outline submitted on 15th NOV 2021*	*Decision of first draft expected for JUNE 2022*	*2023* *-* *2026*	*-*

Amberg-Weiden UAS is the main applicant.

2.5 WORKPLAN

WP	Tasks
Work Package 1: **LOI organization**	Task 1.1 5th Stakeholder Meeting for Digital Regions to discuss options for consolidation
	Task 1.2 Application finalisation and organisation of LOIs
	Task 1.3 Discussion of advisory board solution on the 6th Stakeholder meeting & implementation of decisions
Future Work Package 2: **Stakeholder management** **Option 1:** **Sub-project TraIn - Transfer network for innovation promotion**	Task 2.1 Building the network
	Task 2.2 Exploring goals and forms of cooperation
	Task 2.3 Implementation

While the project proposal is underway, the exact work packages for the group have yet to be determined.

2.6 BUDGET BREAKDOWN FOR THE ACTION

The project outline was submitted. In the two-stage application procedure, after pre-selection of the outlines, the actual application submission is requested. The decision is expected for summer or autumn 2022. Therefore, more detailed information is not yet possible.

2.7 VIABILITY AND SUSTAINABILITY

If the project application of the Hof-Amberg-Weiden Transfer Space is approved, funding and the organisation of technology transfer, regular exchange and networking opportunities between the current RSG will be provided for until the end of the project. The collaboration and innovation process will be strenghthened.

If the project application is not approved of, the Vice president of Hof UAS is ready to invite to regular meetings to consilidate the RSG in the form of a transfer network. Another alternative for the consolidation of the group is the biannual Kronach project *(*Action 4).

2.8 IMPACT EXPECTED

A. A yet not defined number of SMEs and innovation networks with SME members are involved, including our stakeholders. 9 Organisations from the Digital Regions RSG sent LOIs. Their stakeholders, in return, are SMEs who can benefit from the project.

B. The project is expected to sustainably strengthen the technology transfer and innovation process beyond the Hof region, in the entire structurally weak area of Bavaria.

2.9 MONITORING ACTIVITIES IN PHASE 2

The LP will send a survey and report on the results.

ANNEX

Annex 1: Meetings leading to the project

02nd AUG 2021	Anne-Christine's mail to Professor Nase about Digital Regions and its Regional Stakeholder Group.
21st SEP 2021	5th Stakeholder meeting (focus on the consolidation of the group): Professor Michael Nase presents the initiative Subsequent workshop and discussion
OCT 2021	Stakeholders send in letters of intent
15th NOV 2021	Project application handed in
16th MAY 2022	RSG meeting 6 to inform stakeholder about alternatives

3 PUMA PROJECT: UBIQUITOUS MOBILITY SERVICE FOR BETTER ACCESS OF RURAL BORDER REGIONS

3.1 BACKGROUND

The research group Multimedia Information Systems at *iisys* possesses both long-term expertise in digital solutions for mobility and a regional mobility decision makers and service providers network, which was built up through the "Mobilität digital Hochfranken – MobiDig" project (Realization of a comprehensive data repository with data on mobility in the region), the SMO (Shuttle Model Region Upper Franconia I and II) projects and the *Aktmel* (Current registration data access and analysis) project. The group leader Professor Richard Göbel was inspired by our networking to scale these solutions for a cross-border, European-wide INTERREG project. The PUMA project wants to help connecting regions across national borders by creating a digital image of said region and starting pilot public connections along routes which are in demand in rural areas.

The Digital Regions team at Hof UAS helped with partner matchmaking on several INTERREG platforms. The INTERREG Central community proved the most successful tool. By December 2021, 17 interested contacts were made, and more exchanges followed. We succeeded in identifying a lead partner, the Rzeszow Regional Development Agency (Szopena 51, 35-959 Rzeszów, Poland). Together with them, the *Digital Regions* team and professor Göbel built a consortium in close cooperation with the LP. Currently, the consortium is working on handing in their project proposal until the 23rd of February. The *Digital Regions* team at iisys is proud to have helped launch the second INTERREG application in the history of its organisation.

3.2 KNOWLEDGE APPLIED FROM DIGITAL REGIONS

Partner good practice/ experience	**How this good practice/experience has contributed to the actions developed in your Action Plan (detail any transfers, full or partial of good practice)**
IOTEC - Development of Technological Capabilities for the Industrial Application of the Internet of Things project. **NUTS2 regions Castile and León, Spain and Centro, Portugal.** **The IOTEC project transferred IoT technologies to innovative industries through the identification of SMEs, identification of needs, training and consultancy to the industry SMEs and the development of inter-regional events directed to industrial SMEs. More than 60 regional SMEs invested in**	The IOTEC project transferred innovative IoT technology across the Portuguese-Spanish border with great success and was supported by the Interreg VA Spain-Portugal (POCTEP) Programme. PUMA envisages INTERREG Central funding because we considered it the most fitting tool for cross-border technology transfer. The project goes one step further by not only transferring but building up technological solutions across borders. IOTEC is both inspiration and encouragement for this step. Like the project, we approached and were approached by regions with similar issues: Rural, structurally weak territories affected by migration away from already thinly populated areas and by commuting. All partners seek mobility solutions for the elderly and alternatives for heavy car use in the region. One of

R&D in order to obtain new ICT products and services in IoT. The project delivered training and advice to involved SMEs.	the first steps in the project will be the identification of needs. The project will result in inter-regional pilots, and dissemination events.

3.3 ACTION DESCRIPTION

Description of the action planned, including at least:

Main objectives	Value brought by this action into the region	Players involved and role in the implementation and collaboration between them
WP 1 Assessing challenges and needs in the partner regions Collecting data on points of interest and movement of citizens across the border in alignment with national data protection regulations Creation of digital images of the involved regions and their neighbouring region at the other side of the border Testing visualisation tools Simulating mobility solutions for all partner areas WP 2 Pilot actions WP 3 Dissemination of methodologies, learnings, good practice	Preliminary work for the creation of a public transport offer for rural border regions A comprehensive overview over mobility interests in the region Creation of a digital image showing main commuting routes and potential for more efficient transport offers (for municipalities, local governments, public transport providers) Creation of a policy overview over data access in the partner regions Creation of a cross-border means of transport pilot Creation of a Europe-wide network of partners Spreading scalable methodologies on data collection and analysis, mobility solutions for rural areas, and visualization tool recommendations for transportation planners	Lead partner: • Rzeszow Regional Development Agency (PL) Universities – R&D partners: • Hof University of Applied Sciences (D) Application, Networking and dissemination partners: • Municipality of Moravske Toplice (SI) • Pannon Business Network Association (HU) • Venetian cluster (IT) • RDA Pongau (AU) • StadtLABOR Graz (AU)

3.4 TIMEFRAME AND FUNDING

Project/Action Investment Line/Funding Source + Amount	***Submitted For Funding***	***Funding Decision***	***Project Start Date / Finish date***	***Other key milestones***
INTERREG B CE ***For Hof: 305 760€*** ***Overall: 2 000 000€ (estimation)***	*23rd FEB 2022*	*Autumn 2022*	*01st JAN 2023* *31st DEC 2025*	*Year 1* *WP1: Data collection and analytics* *Year 2* *WP 2: Pilot actions* *Whole project timespan* *WP 3: Exchange and dissemination of knowledge*

3.5 WORKPLAN

WP	**Tasks**
Work Package 1: **Data Collection and Analytics** **Trans-border contribution to analyse data and design** **Lead: iisys**	Task 1.1 Data collection Data on pieces of lands, buildings, points of interest, inhabitant distribution, existing transport Buy data from navigational software solutions Conduct surveys (on where people are and go to)
	Task 1.2 Simulation Tools
	Task 1.3 Analytics
Work Package 2: **Pilot action** **Involvement: All partners**	Task 2.1 Addressing trans-border mobility challenges with integrated tools and solutions
	Task 2.2 Pilot action

	Task 2.3 Good Practice implementation
Work Package 3: **Trans-border cooperation networks for cross-border mobility** **Involvement: Everyone**	Task 3.1 Learning outputs
	Task 3.2 Communication and dissemination

More detailed description of **WP 1 Data collection**:

Collecting data on pieces of lands and buildings (e.g. taken from plane) and inhabitant distribution show where people are, while points of interest show where people go. Navigational software solutions like Google maps and mobile phone providers like Telefonica sell data on existing transport and movement. Their company Teralytics https://www.teralytics.net/ sells data for roughly 60.000€ per year. One can analyse where people are frequently going, and what modes of transport they use. Surveys are another possible method. If a digital twin cannot be achieved, consistent amount of data like the number of cars, number of inhabitants, buildings etc. can be enough to simulate the region.

The project outputs will include scalable learnings on how to set up a cross border data set, how to work on critical points (legal, administrative) of border traffic & data collection (Schengen barriers).

WP 2 Pilots:

- Implementation of new transport services: Initiate services, choose candidates & possibilities
- Test the usability of different transport simulation tools

WP 3 Good practice

- See entities who are responsible for public transport and create a feedback loop with regional and cross-border regional stakeholders

3.6 BUDGET BREAKDOWN FOR THE ACTION (HOF)

Category of funding	Expenditure Amount
Salaries	218 400 €
Overheads (i.e. calculated at x % of staff costs)	87 360 €
TOTAL	305 760 €

3.7 VIABILITY AND SUSTAINABILITY

The Mobility project aims to make transportation available to a region on a comprehensive basis, even in remote areas. The work and lessons learned in the course of data collection and analysis, and solved problems, obstacles and experiences are shared with other regions and stakeholders in the own region. If the funding decision is received by the end of 2022, personnel for the implementation of the project at iisys will be available.

3.8 IMPACT EXPECTED

A.

As for now not yet defined number of pubic authorities and local transport SMEs will benefit directly by applying Industry 4.0 to mobility processes, services, and products linked to the project outputs; at minimum 3. 5 Stakeholders for the project have bee identified, as well.

B.

The Mobility projects wants to implement public transport alternatives for comuting which are viable in their speed, offer, and mans of transport. Regions which have discussed that cross-border comuting is an mportant issue in their region but who have not had the possibility to work on the issue yet, like the municipalities of Moravske Toplice or Graz (associated partner of the Pannon Business Network) will have the staff and funding to do so.

Many rural regions in Europe are facing shrinking and aging populations. The provision of an adequate infrastructure for the population with everyday goods, medical care or access to leisure activities is a constant challenge due to the low population density. A particular problem is the mobility of elderly and disabled people who cannot use their own car. Elderly and disabled people are heavily dependent on public transport for their mobility.

However, the provision of a comprehensive mobility offer in rural regions is difficult to achieve. Due to the low population density, a time-controlled regular service would have very low usage. Accordingly, not only would the cost of such a service be unacceptable, but the service would also have negative effects on the environment, such as a very high carbon footprint.

Currently, many rural areas are increasingly establishing on-demand services with smaller vehicles. Some regions already try to combine this demand-controlled service with a timed regular service, facilitating time efficient trips between arbitrary locations in a larger area. The planning of such a system and its operation are, however, a complex task also requiring the prediction of transport demands over the time for both activities. Recent research indicates that predictions of demands are feasible if a sufficient precise virtual image of the mobility of the region is available.

In recent decades, areas on the borders of the countries of the European Union have grown together due to open borders and people crossing these borders for shopping, work or leisure activities. Therefore, these areas form new regions with common requirements for a mobility system. This means that a combined system of scheduled and on-demand cross-border services would be required. This also means that these virtual images, consisting of data about these regions, must exist.

MONITORING ACTIVITIES IN PHASE 2

To be concreted in line with the monitoring methodology (LP)

ANNEX

Annex 1: Table of networking activities leading to the action

29th June 2021	Anne's mail to Professor Göbel to discuss Interreg funding opportunities and Digital Regions
23rd JUL 2021	Call between Anne and Prof. Göbel to discuss Interreg funding opportunities and Digital Regions
16th AUG 2021	Call with Dr. Diehl, national contact point INTERREG Matchmaking by Anne and Mr. Jodlbauer
01st SEPT 2021	Call with Robert Jodlbauer EUREGIO EGRENSIS (member of our Digital Regions local stakeholder group and regional INTERREG B/C Advisory Office) Several more calls afterwards. Matchmaking by Anne.
20th SEPT 2021	Call with Dr. Thomas Bonn about state funding programme "Start Transnational" to cover application costs in INTERREG B programmes Matchmaking by Anne
13th DEC – 16th DEC	One on one discussions between interested partners and Katrin
16th DEC 2021	Meeting with potential Lead Partners to fix the Lead.
23rd DEC 2021	Meeting between Prof. Göbel and further interested partners
03rd JAN 2022	Discussion of project idea, outline, and proceedings with Professor Göbel, Katrin and lead partner (Rzeszów RDA)
16th JAN 2022	Discussion of project work packages and consortium building with Professor Göbel, Katrin and lead partner (Rzeszów RDA)
16th JAN to 02nd FEB 2022	Further discussions with interested parties, stakeholders and associated partners By Katrin
20th JAN 2022 26th JAN 2022 27th JAN 2022 03rd FEB 2022	Building an Austrian partner network Coordinated by Katrin
03rd FEB 2022	First meeting with all involved partners. Preparation of application Coordinated by LP. Input by Prof. Göbel and Katrin

4 STRATEGY AND STAKEHOLDER MANAGEMENT FOR THE MAN MACHINE INTERFACE RESEARCH CENTRE / AUßENSTELLE KRONACH

4.1 BACKGROUND

In 2014, the Man Machine Interface Budget was established to specifically support SMEs in the Kronach region through collaboration with the Institute for Information Systems. In addition to the activity of the Digital Regions Project Manager, the position of Network Manager for the Man Machine Interface program for the Kronach region, and Industry 4.0 technology transfer fund at Hof UAS, was created for the Digital Regions project manager (Désirée and Katrin). It is funded through the regionalization fund for the region at Hof UAS. As this worked well, it was decided to continue the stakeholder management in a different form, to create another position out of it.

Through the exchange of good practices with Kronach stakeholders, the idea arose to apply the proven stakeholder management method from the Digital Regions project to the Kronach region after the end of the project, and to take inspiration from the good practice exchange. The first format, inspired by the Technology Audits Good Practice, proved successful.

09th JUN 2020	2nd Stakeholder meeting, presentation of all best practices
12th DEC 2022	Discussion of Technology Audits good practice with the Digital Regions stakeholder Innovation Centre of the Kronach region
8th FEB 2022	Call between Valentin Plenk (Vice president R&D of Hof UAS) to determine goals and actions for the future of the MMI strategy
15th FEB 2022	First Cyber Tuesday Format with the Innovation Centre of the Kronach region proved a success. Commitment to continue the format was reached.
18th FEB 2022	Meeting between Anne and Katrin to determine frame and funding for the strategy in Kronach
09th APR 2022	Funding decision for a new position related to the MMI budget

4.2 KNOWLEDGE APPLIED FROM DIGITAL REGIONS

Partner good practice/ experience	**How this good practice/experience has contributed to the actions developed in your Action Plan (detail any transfers, full or partial of good practice)**
Industry 4.0 Technology Audits **Cantabria, Spain**	The Cyber Tuesday format offers a free consulting hour for SMEs from the Kronach region. The Kronach Innovation centre and the network manager of Hof UAS/Katrin discussed the Audit's approach to reacting to businesses' needs, convince them of using

The programme works using a public call in order to know the interest of companies in developing the technology audit work. Once these are selected ther is a work with the managing team of the companies. The implementation is developed with the collaboration of companies' teams. **Aware of it, the Regional Government of Cantabria has launched the Industry 4.0 Audits programme to help SMEs in their digitalisation process. The goal is to show companies what is their level of maturity and provide them recommendations when implementing their digital transformation.**	resources for tangible results and new steps towards digitalization. The audits used a mixed methodology: recommendations from experts, internal meetings with companies, final studies with the main board of directors. Although the audits are free, SMEs must dedicate internal resources to this work. In return, they obtain a tangible result and the possibility of developing new actions in comparison with the options of facing these challenges by their own, which makes the Man machine interface mission very comparable to the I4.0 technology audit's.
DIGITAL REGIONS Stakeholder Management **Hof**	The INTERREG approach to building up and engaging a regional stakeholder group serves as a template for the Kronach region.

4.3 ACTION DESCRIPTION

Main objectives	Value brought by this action into the region	Players involved and role in the implementation and collaboration between them
Increasing the number of SMEs in the Kronach region which take steps towards or augment Industry 4.0 processes	Supporting the innovative strength of the Kronach region and strengthening technology transfer between Hof UAS and local companies Strengthening the regional innovators and SME network Bringing together Industry 4.0 needs and innovation offers	Universities – R&D partners: • Hof University of Applied Sciences (Hof UAS) Associations, establishes communities of practice – Networking and dissemination partners: • Innovation centre for the Kronach region Stakeholders To be determined. Part of the Hof Digital Regions Stakeholders is expected to join.

4.4 Timeframe and Funding

Project/Action Investment Line/Funding Source + Amount	***Submitted For Funding***	***Funding Decision***	***Project Start Date / Finish date***	***Other key milestones***
Hof UAS budget for regional development ***Source: Bavarian Ministry of Science & Art*** **35 000€**	*09th MAR 2022*	*08th April 2022*	*01st AUG 2022* *31st DEC 2022*	*Trial of first CyberTuesday format on FEB 15 2022* *Start of action on AUG 01 2022* *MAR 29 2022 Second Cyber Tuesday* *APR 08 2022 Funding decision* *Planned July/August 2022 First strategic session with regional stakeholders* *JUN 12, 2022, Third Cyber Tuesday*

4.5 Workplan

Include an outline of the Work-plan for each project. A suggestion could be to breakdown the Work-plan in work packages and tasks as below:

WP	**Tasks**
Work Package 1: **Buildup of a regional stakeholder group**	Task 1.1 Regional analysis
	Task 1.2 Invitations and kick-off
Work Package 2 **Workshops**	Task 2.1 Workshop organization
	Task 2.2 Follow-up implementation of proposed actions
Work Package 3 **Networking**	Task 3.1 Events to ensure cohesion and interest

Work Package 4 **Communication**	Task 4.1 Creation of communication materials
	Task 4.2 Social Media outputs
	Task 4.3 Event organisation

4.6 BUDGET BREAKDOWN FOR THE ACTION

Category of funding	**Expenditure Amount**
Salaries	35 000€
Overheads: Travel & Subsistence, Events	~ 2 000€
TOTAL	37 000 €

4.7 VIABILITY AND SUSTAINABILITY

The UAS is planning to fund a vacancy of half a year or more to be in charge of the Kronach actions.

4.8 IMPACT EXPECTED

A. Aside the 67 SME members of the Innovation Centre Kronach, at least 2 SMEs from the region in question are expected to join the MMI stakeholders. So far, 6 SMEs have attended the CyberTuesday format.

B. Without the action, the uptake of MMI projects and budget options would be significantly slower. So far, 200 000€ can still be used for research projects, and should be put into use.

MONITORING ACTIVITIES IN PHASE 2

Survey by LP

5 ORIGINAL POLICY INSTRUMENT: ERDF BAVARIA

Several staff members and decision makers at Hof UAS who were in touch with or involved with our project, notably professor Peinl, scientific head of the Institute of Information systems, are ready to launch new project ideas and hand in applications for the new ERDF Bavaria fund. We attended the information and Q&A session of the managing Bavarian ministry, but have not received information on opening calls yet. This is the main reason why there have been no conrete actions on our original policy instrument so far.

We discussed approaches which would make ERDF applications for universities more simple and clearer for universities with both our stakeholder at the government of Upper Franconia and with the deputy head and press spokesman for the EU Commission in Bavaria, who spoke at our "6th EU Forum" event in PR5.

Part IV: Signatures

Date: 20.05.22

Signature: Uebelhack
S1 (Projektmanagement)

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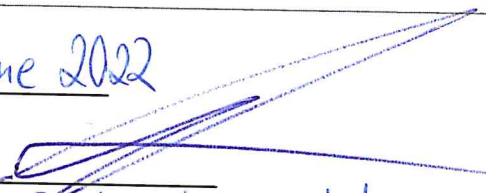
Date: 21. June 2022

Signature: 

Prof. Dr. Dr. h.c. Jürgen Lehmann

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Interreg Europe

European Union | European Regional Development Fund

Sharing solutions for better regional policies

Date: _____

Signature: _____

ANNE-CHRISTINE HABBEL

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