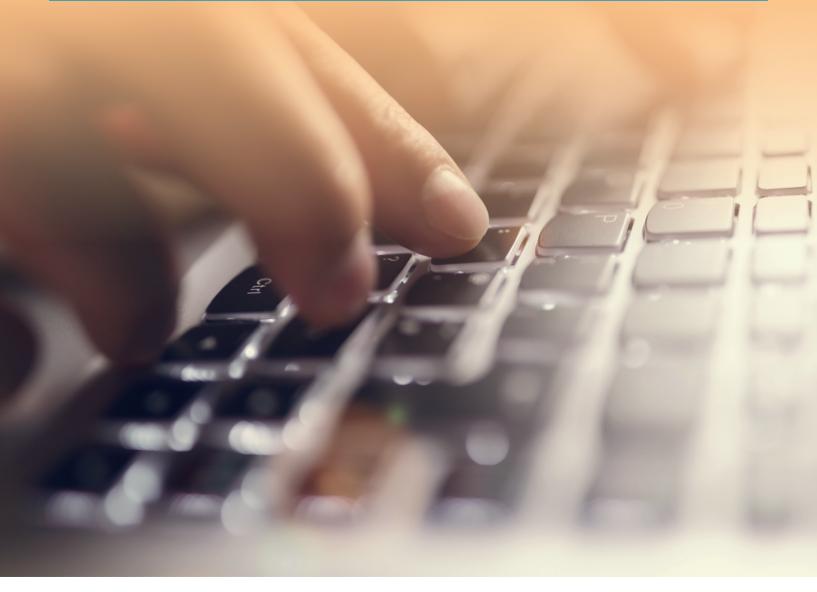




# Smart systems and connected creative services.

The cross-sectoral priority area "Information & Communication Technology, Innovative and Production-Related Services" is making Thuringia fit for the digital future.









# The cross-sectoral priority area "ICT, Innovative and Production-Related Services".

As part of the process of elaborating the Thuringian Innovation Strategy (RIS3 Thuringia), more than 500 stakeholders from academia, the economy, and intermediary sectors came together to identify the most promising future growth fields that Thuringia has to offer. They concluded that "Information & Communication Technology, Innovative and Production-Related Services" is one of Thuringia's five "fields of innovation" and thus a mainstay of the region's future economic success.

Global trends such as accelerating digitalization and the emerging Internet of Things are spurring Thuringian stakeholders on to develop new smart systems and digital services. Thuringia is well-positioned to master this challenge, thanks to the specific competences and market leadership in this area plus the broad-based creative potential.

Moreover, the region's outstanding academic and non-aca-

demic research landscape offers ideal conditions for networking between academia and the economy in this particular cross-sectoral priority area. This in turn will pave the way for the creation of the products and services of the future. Given that this has been defined as a cross-sectoral priority area, the advances made here will serve to foster innovations in the other fields of specialization as well.

### Specialization profile as defined in the Thuringian Innovation Strategy



### IT infrastructure & systems

- > IT hosting, cloud computing
- System solutions with renewable energies
- > Smart grids, smart cities
- Smart production, industrial automation, robotics & teleassistance



### Software & creative services

- eCommerce, digital engineering, simulation
- Big-data aanalytics
- > eHealth
- > App development
- Design & marketing solutions



### Digital media/ media for people

- Virtual reality, (3D) audio, multimedia-analytics
- Distribution of digital goods
- Adaptive learning media
- > Edutainment
- Support and R&D for new audiovisual formats

 $The specialization\ profile\ serves\ as\ the\ baseline\ for\ implementing\ the\ Innovation\ Strategy\ and\ will\ be\ fine-tuned\ over\ time.$ 

### The Working Group.

Thuringian stakeholders are working together closely in an effort to find common solutions to the pressing challenges of our times. The members appointed to the Working Group meet regularly to further develop the cross-sectoral priority area in its role as a digitalization enabler while generating suitable recommendations for action.



"Transitioning into a digital future is both an opportunity and a challenge. The forums' members are helping equip Thuringia for this process. We look forward to getting many supporters on board."

Prof. Dr.-Ing. Dr. rer. nat. h.c. mult. Karlheinz Brandenburg (Fraunhofer Institute for Digital Media Technology IDMT), Working Group Spokesman



"The Working Groups represent a new networking format that is already showing excellent results."

Thomas Fischer (TecArt GmbH), Deputy Working Group Spokesman

### Under the programmatic slogan "Making Thuringia fit for the digital future", the Working Group has defined three key targets for making this vision for the future a reality:

#### Key Target 1

Smart, secure systems – By bundling R&D competences in the field of information & communication, smart secure systems are to be used to expand existing market positions and to develop new business segments for cyber-physical systems and the Internet of Things.

#### **Key Target 2**

Connected digital services – Thuringia is to reinforce the internationally competitive and visible e-competence of the Land, particularly that of its SMEs, when it comes to the designs, tools, methods, and standards used to develop and manage value-added electronic service systems.

### **Key Target 3**

Creative digital worlds - Innovations from the core competences of this cross-sectoral priority area, especially the potential of the creative industry, are to be used to satisfy demand for new services and products in the converging digital worlds of the workplace, home, and school.

- You, too, can get involved! Visit our forum events or join the discussion on the forums of our online platform:
  - > Smart Services
  - > Industrial Media Applications

Discussion platform and forum calendars



www.cluster-thueringen.de/mitmacher



### Thuringian networks.

#### ITnet Thüringen e.V.

The main mission of ITnet is to promote the smart networking and growth of the IT industry in Thuringia. Thus, its agenda includes helping to shape economic policy, performing location marketing, and structuring the joint activities of its members, specifically through networking and cooperation. Another key objective of the network is to expedite complex modernization projects through cooperative valueadded chains, thereby helping to boost competitiveness. Cooperation agreements are already in place between ITnet and two other networks, Mobile Cluster Mittledeutschland and TowerByte eG. ITnet currently represents 21 enterprises with a total of 900 employees.

#### Mobile Cluster Mitteldeutschland

Established in 2014, this network's mission is to provide comprehensive representation for the mobile communications industry vis-à-vis the business, scientific and political sectors. The services availa-

ble range from market surveys and strategic consulting, to conception, design and ground-up development and marketing. The cluster currently comprises eight member companies whose 150 employees serve prestigious clients such as HRS, Wirtschaftswoche, and AVIS.

#### TowerByte eG

This is a federation of 21 independent member companies with a total of more than 300 employees. The main topic is eBusiness, in whose various segments the individual companies are specialized. These segments include the development of online-shop software, mail-order solutions, mobile applications, online marketing, and web design. The member companies of the registered cooperative closely, e.g. on certain projects where their profiles complement one another.



"What we want to achieve, in creating a network among the stakeholders of our industry, is to increase the market presence of the IT industry in Thuringia while at the same time serving as the one-stop and competent contact for policymakers on all aspects of the digitalization of society."

#### Michael Erdmann

(Chairman of the Board, ITnet Thüringen e.V)



### Success, made in Thuringia.

Thuringia's innovative capacity in "ICT, Innovative and Production-Related Services" is best evidenced by the many success stories attributable to the regional associations, networks, and enterprises active in this field. Here are just a few:

#### sMobiliTy-Smart-Mobility Thüringen

The project "sMobiliTy" involves the development of a cloud-based system & service platform for electro-mobility in order to establish a smart network of roads, ecars, and grid operators. The service platform, which was designed to be interoperable, manufacturer-independent, and capable of integrating new solutions, serves as an ICT infrastructure for the networking and optimal usage of all technical systems relevant to e-mobility. The project consortium comprises six enterprises, three research institutes, and one municipality. The project has been subsidized by the Federal Ministry for Economic Affairs and Energy (BMWi) as part of the "ICT for Electrical mobility" initiative.

### Energy-Efficient and Energy-Independent Cyber-Physical Systems (CPS)

Cyber-physical systems are the basis for the "Internet of Things & Services" as well as for the "Industry 4.0" strategy. In this context, the IMMS Institute for Microelectronic & Mechatronic Systems develops innovations such as solutions for the wireless interconnection of sensors and actors that are standards-compliant, real-time-capable, and energy-efficient. Among other things, IMMS has made the industrial computing system MICA real-time-capable, thereby fulfilling one of the key requirements of Industry 4.0. The condition-monitoring solution developed in this connection was awarded the 1st prize in the MICA competition sponsored by HARTING.

## Interactive, Robotic Rehab Assistant for Walking & Orientation Training of Stroke Patients (ROREAS)

Every year, some 250,000 people in Germany suffer a stroke, making this the most frequent cause of physical disability for adults. After a stroke, a patient must often learn to speak and walk all over again – an arduous and time-consuming process. The robotic rehab assistant is able to assist inpatient stroke patients during their walking exercises, so as to improve their mobility as well as their sense of orientation in spaces. ROREAS was developed as a joint project involving the MetraLabs GmbH, the Technical University of Ilmenau, and a rehab clinic, with additional support from the insurance company BARMER GEK.

### Selected companies

ADVA Optical Networking SE, Meiningen

ART-KON-TOR Kommunikation GmbH, Jena

Berghof Systeme e. K., Königsee-Rottenbach

B-S-S Business Software Solutions GmbH, Eisenach

**CETIMA Software & Consulting GmbH,** Schmalkalden

CGI Deutschland Ltd. & Co. KG, Erfurt

DAKO Systemtechnik und Service GmbH & Co. KG, Jena

dotSource GmbH, Jena

diva-e Ageto GmbH, Jena

emgress GmbH, Jena

ESET Deutschland GmbH, Jena

Funkwerk AG, Kölleda

GODYO Business Solutions AG, Jena

IBYKUS AG. Erfurt

incowia GmbH, Ilmenau

Intershop Communications AG, Jena

KIDS interactive GmbH, Erfurt

MAZeT GmbH, Jena

MetraLabs GmbH, Ilmenau

 ${\bf Mitan\,Wirtschaftssoftware\,AG,}\, S\"{o}mmerda$ 

Navimatix GmbH, Jena

 ${\bf ORISA\ Software\ GmbH,} \textit{Jena}$ 

PDV Systeme GmbH, Erfurt

TecArt GmbH, Erfurt

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