



Digital City Darmstadt - A Comprehensive Approach supporting a Sustainable and Resilient Urban Development Strategy – Flashlight –

Michael Kolmer, Department of Economy and Urban Development
City of Darmstadt / Germany

ESA Online Seminar Space for Twin Cities: Digital City
November 12th, 2020



#1 EUROPEAN ICT POLE OF EXCELLENCE

above all cities with
80.000 - 170.000 inhabitants

Source: European Commission, Studie
„Mapping the European ICT Poles of
Excellence: The Atlas of ICT Activity in
Europe“, 2014, JRC85353

DIGITAL HUB CYBER SECURITY

2017



Bundesministerium
für Wirtschaft
und Energie

bitkom

#1 GERMAN CITY of the FUTURE 2015, 2016, 2017, 2018 & 2019

Source: Institut
der Deutschen Wirtschaft

FACTS & FIGURES about DARMSTADT

- Center of the southern Rhine-Main Metropolitan Region / Greater Frankfurt Area
- City of Science officially part of the city name since 1997
- Digital City of the IT industry association bitkom since 2017
- 162,500 inhabitants, continuously growing since 1997/98
- 133,000 jobs, also increasing since the mid-2000s
- 45,000 university students
- 4 universities, 3 Fraunhofer Institutes, 1 Helmholtz Institute and about 30 further R&D institutions
- **Proud home of ESA European Space Operations Centre – ESOC**

German Smart City Index 2020 Darmstadt #4, Smallest City within the Top 5

Source: bitkom IT-
Industry Assoc.

VISION OF DIGITALSTADT DARMSTADT



Digitalstadt
Darmstadt
Vision

The **Digitalstadt Darmstadt** is an international **pioneer** and **flagship** project for the use of new technologies to improve everyday life in cities.

Building on Darmstadt's unique character as a city of **science** and **culture**, we want to make it **attractive** and **livable** for the future.

Our digital services are **valuable** for **citizens**, the **economy and science**. They provide a **secure and independent** approach to data, strengthen the **participation** in our community and ensure **sustainable use of our resources**.

A UNIQUE ECOSYSTEM FOR THE DIGITAL MODEL CITY

PUBLIC ENTERPRISE

HeAG

+ >150 OTHER
BUSINESSES



SCHWARMSTADT
20-35-YEAR-OLDS

DIGITAL STRATEGY
HESSE



digitales.hessen

SUSTAINABILITY
100% CLIMATE-NEUTRAL



COUNCIL

BUSINESSES
MERCK



LOCATION



METROPOL
REGION
Frankfurt/RheinMain

software AG



START-UPS



HIGH EST



BUSINESSES



CITIZENS



SCIENCE

STRATEGIC FEDERAL PROJECTS

UNIVERSITIES



INDUSTRY 4.0



TECHNISCHE
UNIVERSITÄT
DARMSTADT



h_da
HOCHSCHULE DARMSTADT
UNIVERSITY OF APPLIED SCIENCES

INTER-
DISCIPLINARITY



esa



CRISP
Center for Research
in Security and Privacy



EUROPEAN
ORGANISATIONS

RESEARCH INSTITUTES
DIGITALISATION



CYBERSECURITY
VISUAL COMPUTING
ELECTROMOBILITY



INTERNATIONALITY

CULTURE



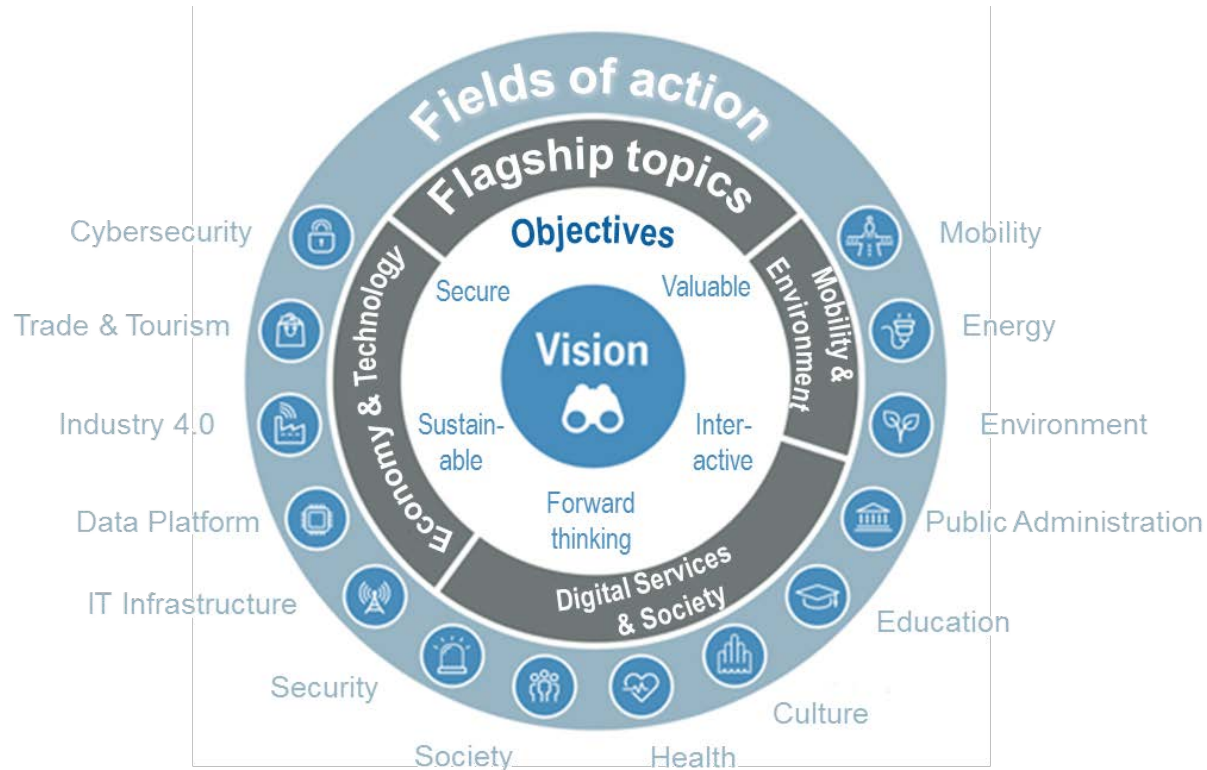
Darmstadt
bleibt
weltoffen.

HOSPITALITY

STEM ORIENTATION



FLAGSHIP TOPICS AND AREAS OF INTERVENTION



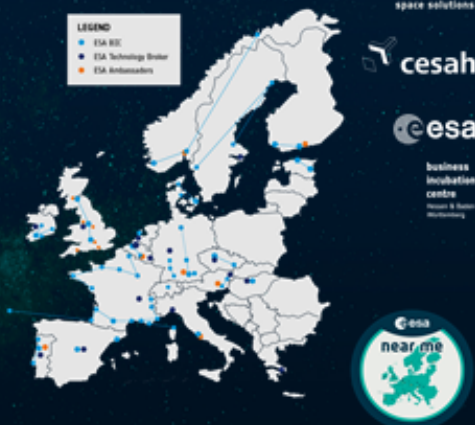
Joint Project Approach: Environmental Sensor Network Darmstadt Air Quality Modeling and Forecasting

- Objective: Provision of air quality data to support the development of sustainable and environment-friendly mobility solutions for an improved environment and quality of life.
- Screening of the synergistic use of satellite data (S2, S5p, SNPP, SPOT) and Digital City Darmstadt / environment network information (traffic information, sources of air pollution) within a local air quality model.
- Providing information on air quality at street level (100m) (including forecasts up to 2 days) via OGC geo services (web)

In co-operation with Deutsches Zentrum für Luft- und Raumfahrt / German Aerospace Center DLR –

ESA BIC Hessen & Baden-Württemberg

- Since 2007: cesah operates the ESA BIC in Darmstadt on behalf of ESA
- cesah is part of a growing network of 20 ESA BICs with more than 800 start-ups across Europe.
- Since 2018: ESA BIC Hessen & Baden-Württemberg with 2 new sites, together with IHK Reutlingen & Airbus in Friedrichshafen
- Since 2014: cesah is ESA Technology Transfer Broker for Germany (2014) in close cooperation with EurA.



Hackathons as a means for open innovation - now 100% online

Success Stories

SuperVision Earth: Preventing Pipeline Incidents with Satellite Monitoring

- October 16th, 2019 - SuperVision Earth GmbH is accepted as start-up #100 in the ESA BIC Hessen & Baden-Württemberg.
- SuperVision Earth is a provider of digital monitoring solutions for the gas pipeline sector.
- SuperVision Earth uses earth observation data for this and is supported by cesah in Darmstadt.



Success Stories

Solorrow: The mobile app for easy entry into Precision Farming



- Satellite-derived field potential analysis
- Application maps for farmers with just a few clicks
- Helps saving up to 20% costs for fertilizer and other chemicals
- Helps farmers protecting the environment and comply with regulations





THANK YOU FOR YOUR ATTENTION

michael.kolmer@darmstadt.de

