



# Digital Strategy Borchen-Etteln

**Digital Village Twin 2030**

*Digital &  
Social!*

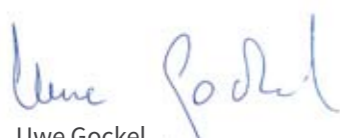




*The future*  
is not what  
someone offers us,  
but what we  
make of it!

” Unanimous resolution in the council of the municipality of Borchten on 23.06.2022:  
**The council of the municipality of Borchten approves the digitisation strategy for the district of Etteln. The solutions developed in Etteln should, if possible, be transferred to the other districts.** “

23 June 2022

  
Uwe Gockel  
Mayor of the municipality of Borchten

  
Ulrich Ahle  
District Head Borchten-Etteln



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The digitalisation strategy contains projects and ideas to achieve our target image of becoming a digital model village. It provides us with the opportunity to tap into implementation opportunities as they arise.

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Good conditions have been created by the village community: Broadband connection for all

## Our vision

The digital transformation is fundamentally and rapidly changing the way we live and work. We are actively shaping the change and thus opening up optimal future opportunities for our home village of Borchten-Etteln.

**Borchten-Etteln has the best prerequisites for transferring Smart City concepts from the city to the village level.**

We have proven that we can transfer a **voluntary commitment** supported by the broad population from traditional to digital projects. We will use this momentum to develop Borchten-Etteln into the digital lighthouse village in Germany. We will actively pass on the experiences and solutions to the other districts and comparable municipalities.

**The aim is**  
to further increase the quality of life for all people in Borchten-Etteln and to develop the economic, social and ecological potential. In doing so, we take into account the interests of all age groups.

## Borchten-Etteln sets out on the road to the digital future

For some years now, the digital transformation has had a major influence on all areas of life and business - our everyday life is changing in an impressive way. More and more cities, also in Germany, are discovering and tapping into the potential that arises from increasing digitalisation. Digital solutions are increasingly being used to reduce the costs of running a municipality on the one hand and to increase the quality of life of the citizens living in the municipality on the other. However, all over the world and also in Germany, people live not only in urban areas and cities but also in rural areas and „in the village“.

**In Borchten-Etteln, togetherness is lived.** Business, politics and society work together to



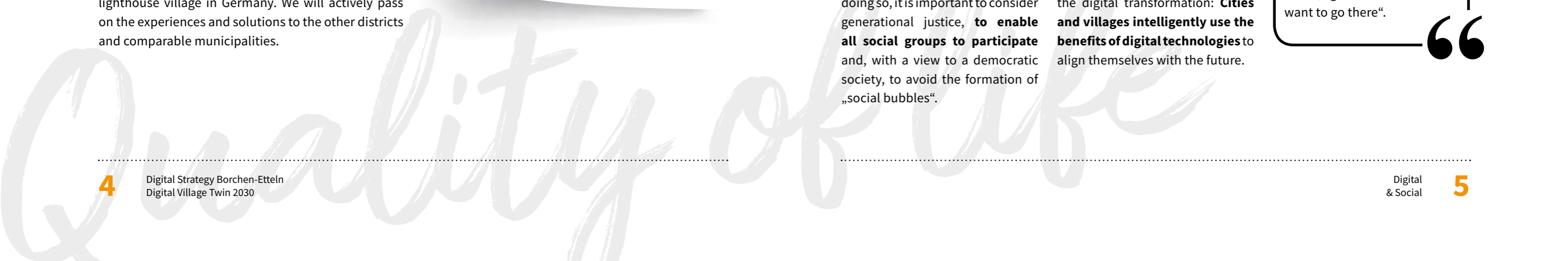
The village of Etteln in the municipality of Borchten set out years ago to tap the potential of digitalisation for people living in a village. **For nine years, the village community has been working in a broad-based, participatory process.**

The trigger for this process was a conversation between the then mayor and the then CDU parliamentary group leader, who is now the district head in the beautiful village at the river. **The mayor's statement at the time was:**

**All people in Germany should be offered the opportunity** to use the potential of digitalisation for themselves, regardless of their age, gender or whether they live in a city or in the countryside. In doing so, it is important to consider generational justice, **to enable all social groups to participate** and, with a view to a democratic society, to avoid the formation of „social bubbles“.

continuously develop the infrastructure in the village and the attractive living space and to make it fit for the future. That is why it is our concern to tackle the digital transformation together. „Smart City“ is the topic with which municipalities can approach the digital transformation: **Cities and villages intelligently use the benefits of digital technologies** to align themselves with the future.

“ I often get enquiries from outside about building sites, but we can no longer offer them in Nord- and Kirchborchen (settlement focal points). When I then point out two building plots that are still available in the district of Etteln, I get the answer „I don't want to go there.“ ”



# 2 Introduction

At the same time, the primary school was threatened with closure because the minimum number of pupils was temporarily no longer reached. The Etteln-aktiv association was founded to campaign for the preservation of the primary school. The association successfully lobbied for the preservation of the school site through the municipal administration, the district government and the state government in Düsseldorf. **Today, the primary school is secured as part of the Kirchborchen-Etteln primary school, and the association is one of the pillars of social development in the village.**

When the opportunity arose in 2013 through the German Child and Youth Welfare Services to receive funding for process support, this was the starting signal for a strategy process based on broad citizen participation. The core statement at the start in 2013: **„Etteln is challenged to change this situation and to secure our common future in a liveable village!“**

The so-called „Anschwing Initiative“ (start up initiative) began with a village workshop in which the strengths and weaknesses of the village were worked out. The weaknesses

were worked on over the next few months in the three working groups „Building and Housing“, „Education“ and „Marketing/Digital“. Subsequently, the primary school location was secured, the vacancy rate was reduced or the bus connection was reduced from a 60-minute to a 30-minute interval. Within the framework of the „Marketing/Digital“ group, a new village logo, an image brochure presenting the strengths of the village, an image film and the new website [www.etteln.de](http://www.etteln.de) were created. **The new slogan for the village was created with the participation of all citizens:** 15,000 bread bags were printed with a call for suggestions. „Etteln ... there's more in it“ was the result.



Subsequently, the integrated community development concept (IKEK) for the entire municipality



village e-car ettCAR with Ulrich Ahle (head of Borchen-Etteln) and Claudia Günter (Etteln-aktiv) in an interview with SAT.1 NRW

of Borchen was developed in 2017. The village of Etteln was able to build on the results of the start up initiative and develop a number of project ideas, some of which included digital technologies. As part of the future forum „Digitalisation in the countryside“, the funding commitment through the EU LEADER programme for the **acquisition of an village e-car and the realisation of a village app** was announced at the end of 2018. Another focus of the event was the question of how digital solutions can enable older people to live longer in their own homes.

In February 2020, the **village e-car ettCAR** was handed over to its intended purpose at the first annual kick-off event with a seven-seater Nissan. It is connected to the internet, can be booked and opened via an app and is available to citizens free of charge. In this form, the vehicle is unique in the district of Paderborn and beyond. 160 registered drivers, 800 bookings and 45,000

kilometres of mileage after a good two years are proof of the acceptance of this vehicle among the population.

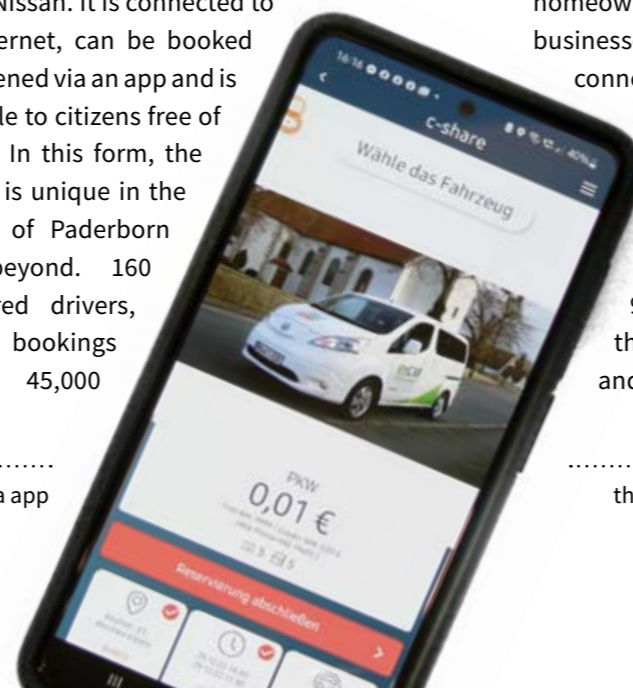
In 2018, it became clear that the digital infrastructure had to be expanded before further digital applications could be realised. In that year, the municipality of Borchen, together with Deutsche Glasfaser, decided to provide the individual districts of the municipality with fibre optic connections for the individual houses. Since Deutsche Glasfaser carries out the expansion on its own account, only those households were provided with a direct internet connection where it was economically viable. In the district of Etteln, about 50 homeowners and agricultural businesses were not offered a connection. As early as 2017, the district of Paderborn began developing a project to close these so-called „white spots“ with the help of 90 percent funding from the federal government and the state. As the only

## Borchen-Etteln sets out on the road to the digital future

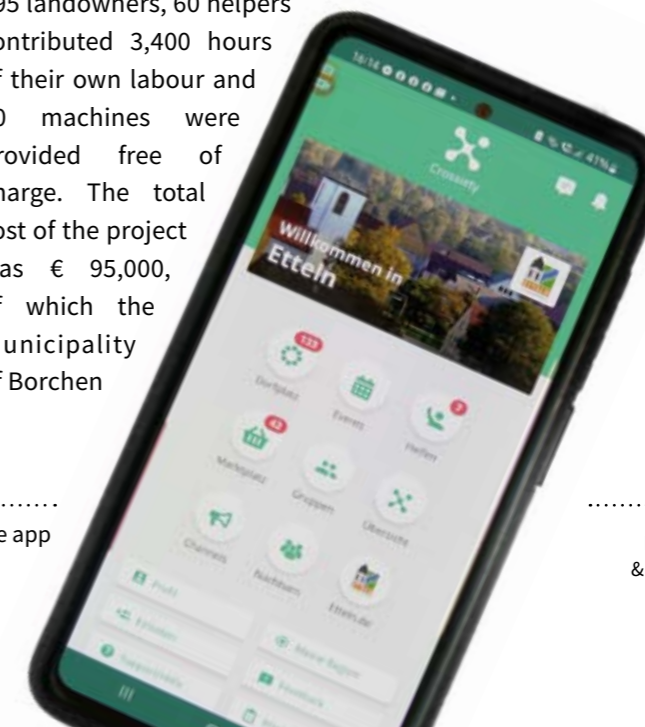
municipality in the district of Paderborn, the municipality of Borchen decided not to join this project. According to the estimate of an expert office, the connection of the 74 households in the municipality of Borchen would have amounted to 5.13 million euros and thus the own contribution of the municipality of Borchen would have been 513,000 €. This sum seemed disproportionate for only 74 households. Thus there was no solution for the houses in the outer area of Borchen-Etteln for digital participation in the fast internet. But here, too, the Borchen-Etteln village community found a solution: **the houses in the outer area were to be provided with a fibre optic connection by the village community itself.** 47 households and farms joined the project, and 30 kilometres of fibre were laid in the first half of 2020. Building permission contracts were concluded with 195 landowners, 60 helpers contributed 3,400 hours of their own labour and 20 machines were provided free of charge. The total cost of the project was € 95,000, of which the municipality of Borchen

paid € 50,000. A publicly funded extension for Borchen-Etteln would have cost € 2.7 million. **In Etteln, every house and „every milk can“ now has a fast internet connection.** This is also unique in the Paderborn district. After three years of planning by the Paderborn district, € 70 million in funding was made available for the „white spots“ programme in 2021 and implementation at the district level (outside Borchen) is now beginning.

After the completion of the digital infrastructure, the next project of the digital transformation journey could be tackled: the digital village app. This project was also funded by the LEADER project. After a requirements analysis, which particularly focused on usability by older people, and a market analysis, the decision was made in favour of the village app from the Swiss provider Crossiety.



ettCAR booking via app



the digital village square in the village app

# 2 Introduction



Digital display with news and dates from the village app

• LIVE

## Borchen-Etteln sets out on the road to the digital future

More than 100 other villages in Switzerland and Germany had already opted for this solution. The village app was presented to the population at the second annual kick-off event on 29 January 2021, which was digitally broadcast from the Alpaka Gold Studios in Borchen-Etteln. After 250 participants inside in the community centre of Borchen-Etteln in 2020, a total of 800 people aged between 5 and 91 participated digitally in the second edition in January 2021. Within a week, more than 440 people from Etteln registered in the new village app. This was a ramp-up in usage that had not been seen before in any of the other Crossiety locations.

In 2022, about 760 citizens will be using this digital communication platform. Another unique feature is the „digital display“, which displays selected news and events from the village app on a large screen suitable for sunlight in the shop window of the local bakery.

At the beginning of 2022, the new **e-cargo bike ettCARGO** was presented to the public at the second Corona digital annual kick-off, which was again attended by more than 700 participants. This will also be connected to the internet and will be available to citizens free of charge.

Public funding for the digital projects described above always referred only to the material and investment costs.

All conception, realisation and support work was done by the village community itself. This was a successful transfer of a decades-old tradition of voluntary work by the village community from „analogue“ projects to the world of digital projects. Especially in the Corona phase, communication and networking as well as the joint work of volunteers on projects could be quickly shifted to digital platforms and video conferences.

Borchen-Etteln benefits from its beautiful scenic location in the Altenau valley and the simultaneous proximity to the regional centre of Paderborn in East Westphalia Lippe. The centre of Paderborn can be reached by



Presentation of the new e-cargo bike ettCARGO

car in 15 minutes and by bus every 30 minutes within 22 minutes. The A33 motorway slip road Borchen-Etteln is 3 minutes away and Paderborn-Lippstadt Airport is 15 minutes away.

Etteln is thus located in the digital model region East Westphalia Lippe of the state of North Rhine-Westphalia. The local grid operator Westfalen Weser is implementing a **digital local grid distribution station** in Borchen-Etteln from the NRW funding programme, for example, which temporarily buffers solar power in a large battery storage unit during the day and feeds it back into the grid when needed. Borchen-Etteln was chosen as the location for this project because it has the highest density of private solar installations in the entire supply area of the grid operator. Of a good 600 houses in the village, 230 have

a PV system on the roof. **In total, Borchen-Etteln generates 34 times its own energy needs from renewable energies with a mix of wind energy, solar and biomass plants.**

The voluntary project team led by the district leader, who is the CEO of the FIWARE Foundation based in Berlin, is very well networked in the digital field. The Fraunhofer Institutes IEM in Paderborn and IOSB-INA in Lemgo, the University of Paderborn, consulting firms such as Unity AG, but also the Borchen-Etteln-based consulting firm solutiT or even the city of Paderborn have already promised to support further digitisation activities in Borchen-Etteln.

In order to be able to make better use of these activities and support services and to align them in a goal-oriented manner, the creation



New development area „Auf der Großen Rute“

of this digitalisation strategy was started in 2021 and adopted by the council of the municipality of Borchen in June 2022.

**Borchen-Etteln has created something unique so far with its commitment supported by the village community** - the

goal for the next few years is to create a digital lighthouse project with charisma for the whole of Germany and beyond and to share the results and experiences with other villages and rural regions in order to improve the quality of life for the people and to improve future viability in social, economic and ecological terms.

This is done according to the village motto „Etteln ... there is more in it“.

# 3 Approach

## Digital solutions

A number of digital solutions have already been created in Borchten-Etteln in recent years. With the **complete expansion of the fibre optic network**, the basis for the area-wide use of digital solutions was created in 2020. The **digital village app** has been in operation since the beginning of 2021 and has found widespread use among the population right away. The **digital display** at the village bakery also offers people who do not use a digital device access to current

village information. The **village e-car ettCAR** is connected to the internet and can be both booked and opened via an app. The **e-cargo bike ettCARGO** completes the mobility offer.

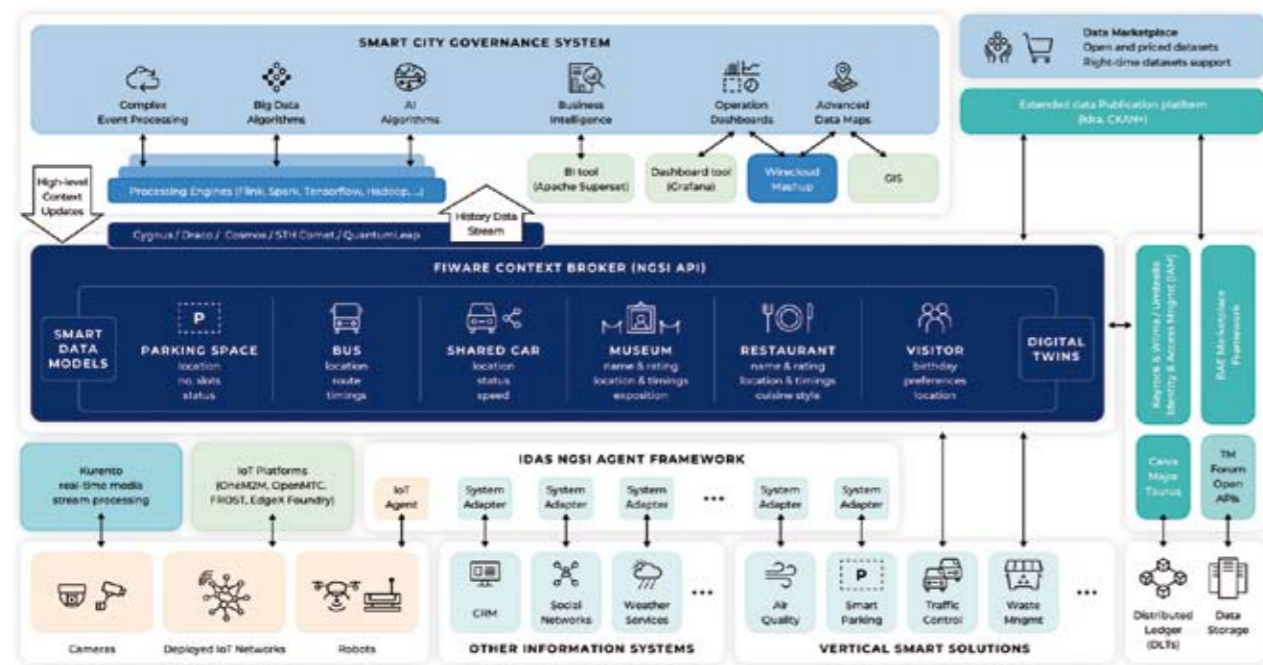
These and other digital solutions were initially implemented as „silos“ and cannot yet work together.

In this respect, the initial situation in Borchten-Etteln does not differ

„Don't always walk on the path laid out, which only leads where others have already gone.“  
Alexander Graham Bell

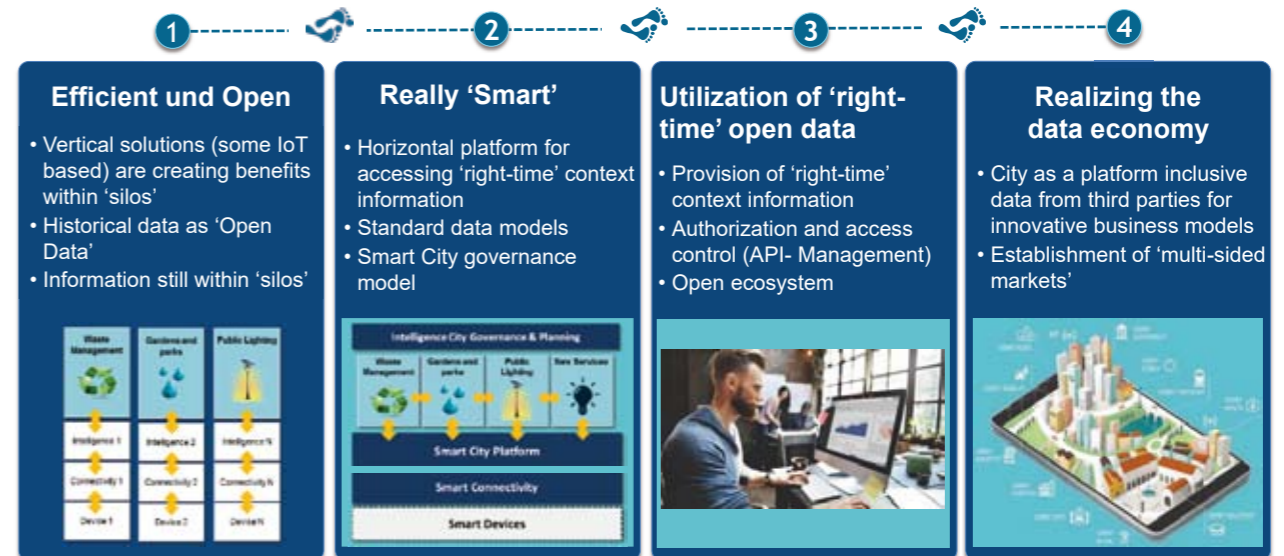
from that of larger cities, both in Germany and in other European countries.

To break down these existing silos and avoid the creation of new ones, the standard interfaces and standard data models that have



Smart City Reference Architecture

Source: FIWARE Foundation



Digital transformation journey

Source: FIWARE Foundation

emerged in the FIWARE ecosystem are to be used. The FIWARE Foundation, based in Berlin, provides licence-free software components and data standards for the digitisation of cities and municipalities. FIWARE is now the world's leading licence-free (open source) technology in this field.

It is planned to use the Smart City Platform of the neighbouring municipality of Paderborn as the integration platform in Borchten-Etteln.

This was realised in 2020 based on FIWARE technology and the FIWARE reference architecture for smart cities. The city of Paderborn published the platform on Gitlab as an open source solution at the

end of 2020 and thus made it available to other municipalities. A project in Berlin or even the first five cities from South Westphalia have decided to use this data platform.

In the first field of action of the Borchten-Etteln digitalisation strategy, a solution that was created for a large city is transformed to meet the requirements of a village.

**In the further phases, intelligent solutions** (smart solutions) from other areas such as agriculture, mobility or the energy industry will also be integrated on the platform. It is also planned to collect real-time data and use it for smart solutions. **At the end of the project, the basis for the 'data economy' will be created.**



**Turn the page for the Digital Strategy Etteln 2030**



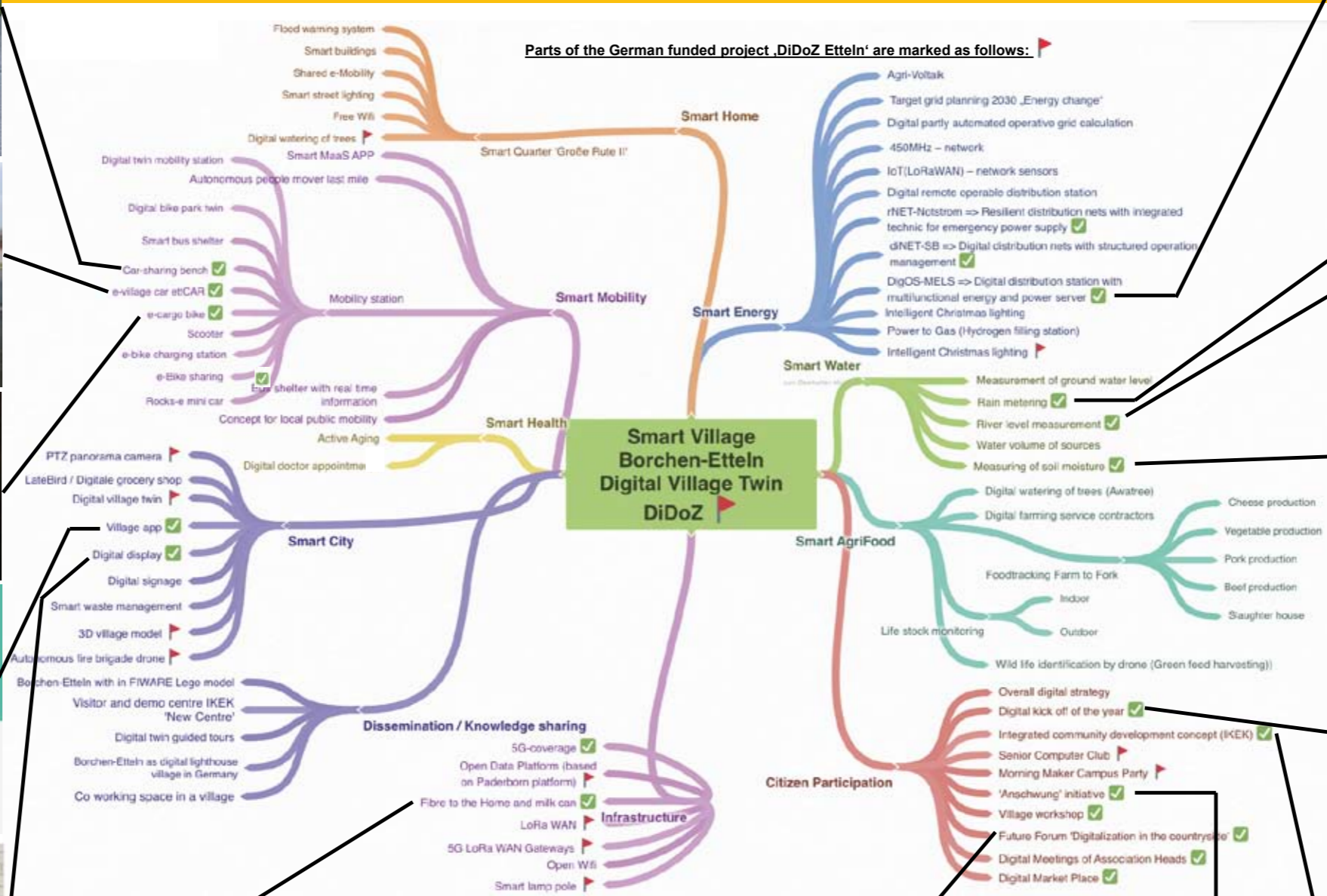
# Digital Strategy Borchchen- Etteln 2030



Borchchen-Etteln prepares the way for the digital future.  
„Etteln ... there is more in it“

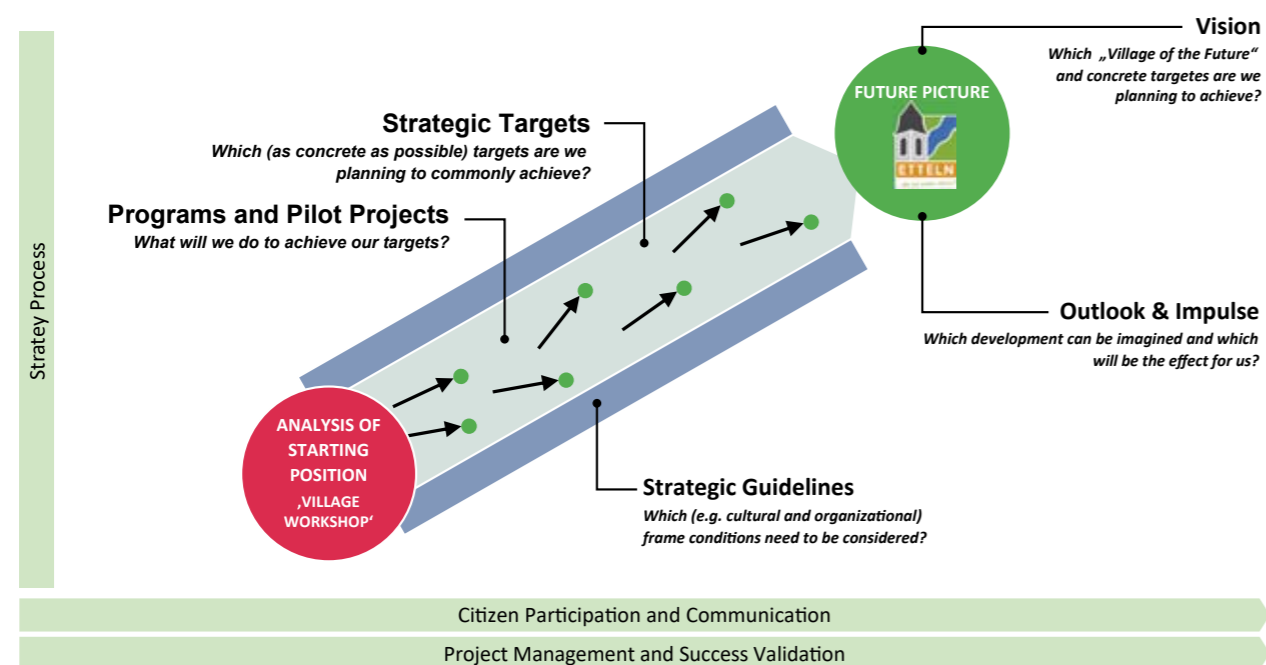


Also the display is now digital



# 4 Fields of action

## Basic principle of strategy development in Borchten-Etteln



The individual programmes and pilot projects are grouped into different fields of action, which are presented below. They serve to develop the district of Etteln from the initial situation, as determined in the village workshops in 2013, in the direction of the image of the future. In this context, it is important to take strategic guidelines into account when defining and selecting programmes and pilot projects. On the one hand, these guard rails are determined by the financial and technical framework

conditions, but they also take into account, in particular, the objective in Borchten-Etteln to advance digitisation in a socially responsible manner.

**The focus is always on the benefits and added value that digitalisation offers to the citizens and businesses in Borchten-Etteln.**

The individual fields of action of the Borchten-Etteln Digital Strategy are presented below. Here, both sub-

projects that have already been completed, for which approved funding applications exist, for which funding applications have already been submitted, but also sub-projects for which there is only a rough idea so far, are presented as a whole.

The procedure for implementing the Borchten-Ettelner digitalisation strategy follows the strategy process outlined above (source: Unity AG, Büren).

### Infrastructure

#### Realised projects

Digital solutions cannot be realised without a digital infrastructure. On the one hand, this infrastructure serves to collect data describing what is happening around us and, on the other hand, to be able to access this data and make it usable for intelligent solutions. Borchten-Etteln was the first village in the Paderborn district with a fully developed **fibre optic network**. German Telekom has already upgraded the wireless network to the point where **5-G technology** is available throughout Etteln. Driven by a private initiative, a first **LoRa-WAN network** is also available.

#### Selected planned projects

Another important element of the digital infrastructure is the data platform. As part of the funding project „DiDoZ Borchten-Etteln“, it is therefore planned to make the **open data platform** that was developed for the city of Paderborn also available for Etteln and, in perspective, for the entire municipality of Borchten.

#### Benefit

The digital infrastructure as such does not yet generate any direct benefit for citizens, but it is a prerequisite for the digital applications in the other fields of action.



Infrastructure

### Citizen participation

#### Realised projects

The principle of „turning those affected into those involved“ also applies to digital change processes. For this reason, the change process was carried out from the very beginning with the broad participation of the citizens in the **village workshops** within the framework of the start up initiative and in the preparation of the Integrated Community Development Concept (**IKEK**). This participation took place with interested citizens as well as with representatives of the associations and local groups, which traditionally meet several times a year in Borchten-Etteln. During the Corona pandemic and the associated restrictions, these **meetings** took place purely digitally. Events such as the **annual kick-off** were also held digitally during the pandemic with enormous participation by the village population. The **digital village square** with the Crossiety app, which has already been installed since 2021, additionally supports communication and exchange in the village.

#### Selected planned projects

In order to better reach the younger and older citizens in particular, two projects are planned in the area of citizen participation:

on the next page it continues



# 4 Fields of action

The **Senior Computer Club** is intended to introduce older people who do not yet have access to digital media to its use. In cooperation with the Workers' Welfare Association in Paderborn, the training of so-called digital mentors from Borchten-Etteln is planned.

The **Morning Maker Campus Party** aims to get youths and young adults more involved in the design and implementation of digital applications in Borchten-Etteln.

## Benefit

Intensive citizen participation enables a high level of acceptance and use of the digital applications. Since the beginning of the pandemic, citizens have been able to experience how useful and important digital solutions are for everyday life.

## Citizen participation



## Smart AgriFood

### Realised projects

Digitalisation also offers significant potential for agriculture and food production to further increase both productivity and food quality. In 2020, the farmers of Borchten-Etteln have taken the opportunity to also provide their stables and business premises outside the centre of Borchten-Etteln with a fibre-optic connection. Implementation projects have not yet been realised in this field of action.

### Selected planned projects

**Farm-to-fork** is the term used to describe the digital tracking of food from its origins through processing to „the fork“. For example, when buying a beef steak, a QR code can be used to trace where the calf was born, where it grew up, where it was slaughtered and cut up and finally sold.

In the case of **poaching detection by drone**, it is planned to use autonomously flying drones to fly over green areas with infrared cameras before mowing in order to detect fawns so that they can be protected and do not have to lose their lives during harvesting.

In the case of **digital tree irrigation**, the automatic and demand-oriented irrigation of a new plum meadow is planned. When controlling the irrigation, information such as soil moisture or weather forecasts are taken into account.

## Benefit

In agriculture, digitalisation offers significant potential for increasing productivity on both conventional and organic farms. The resources used are used more efficiently. For example, water is only used for irrigation when it is necessary and there is no rain in the foreseeable future.

Consumers can see how and where their food was produced. In addition, the importance of regionally and locally produced food is increasing.

Digitalisation also has positive effects on **animal welfare**, both for farm animals and wildlife, as the example of fawns shows. In addition, digital technologies can offer adaptation services in the course of climate change to partially compensate for negative effects of climate change. Similarly, early warning systems can be developed to detect the effects of climate change at an early stage.

## Smart AgriFood



## Smart Water

### Realised projects

Currently, a **digital rain gauge** and a **soil moisture sensor** are installed in the area of the community hall, the measured values of which are currently only displayed on the screen in the digital display of the Zacharias bakery. Based on a private initiative, an ultrasonic river level meter has been installed at the Altenau bridge near the fire station to measure the water level of the Altenau. This measurement data is also not yet freely accessible.

### Selected planned projects

The start of an **EU-funded project (WATERVERSE)** is planned for October 2022, in which further sensors will be installed. Based on these measurements and using artificial intelligence, it is planned to install a **flood warning system** in Borchten-Etteln. On the other hand, an attempt will be made to answer the question of whether the more frequent drying out of the Altenau in the summer months is due to the lower rainfall in recent years or to the renaturation measures in the upper reaches of the Altenau.

## Benefit

For both farmers and citizens, the projects offer the opportunity to make better use of the **valuable resource of water**, but at the same time to be better protected from its dangers.



# 4 Fields of action

## Smart Energy

### Realised projects

Borchen-Etteln is actively shaping the energy transition. Hundreds of citizens are involved. There are solar panels on more than 230 roofs in Etteln, and 18 wind turbines and a biogas plant are currently generating renewable electricity.

Borchen-Etteln was selected by the local distribution network operator Westfalen Weser for the construction of a large battery storage facility (**DigOS-MELS**) because it is the town with the highest density of private solar installations in the entire supply area.

This storage unit, which contains batteries from the BMW i3, stores electricity from the surrounding private solar plants during the day and returns the energy at the medium-voltage level for cross- and longitudinal stabilisation of the power grid when the sun is not shining.

At the behest of the Borchen-Etteln landowners, WestfalenWind offers an electricity tariff exclusively for Etteln that is priced 30% below the basic utility tariff. **Nowhere else in the Paderborn district is electricity as cheap as in Borchen-Etteln.**

### Selected planned projects

Westfalen Weser is planning further digitalisation projects in Borchen-Etteln to support the energy transition.

Under the term **Agri-Voltaik**, the construction of an open-space solar plant is planned together with a farmer from Borchen-Etteln. What is special about Agri-Voltaik is the fact that the land used is not taken out of agricultural use. In this specific case, blueberries are to be planted under the solar panels in the future.

### Benefits

More than 50% of the citizens of Borchen-Etteln already benefit from the favourable electricity prices. In addition to this direct benefit, we all profit from an increasingly higher share of renewable energy production.

## Smart Energy



## Smart Home



## Smart Home

### Realised projects

The term smart home refers to the digitalisation of flats and houses. For example, the roller shutters can be closed automatically or the lighting can be controlled digitally. The room temperature can also be lowered and only raised again shortly before I get home.

Digital solutions also have the potential to enable older or even impaired people to live alone and independently in their own homes for longer.

### Selected planned projects

In the hope that the second section of the „Auf der Große Rute“ building area can be realised in the future, it is planned to create an intelligent residential quarter. In addition to the **flood warning system** and **intelligent tree watering system** already described, **intelligent street lamps** are to play an important role here. These street lamps can not only adapt the illuminance to the needs and thus work even more energy-efficiently, but also represent an important infrastructure if they are equipped with further sensor technology and public charging options or enable free WLAN.

### Benefit

Smart homes offer the possibility of operating buildings much more efficiently, while at the same time reducing costs and increasing the quality of living. Living independently in one's own four walls for longer also offers significant potential benefits, especially for older people.

## Smart Mobility

### Realised projects

Digital support for the question of how to get from A to B is the most important aspect of both realised and planned projects. The **village e-car ettCAR**, the **e-cargo bike ettCARGO** or the digital car-sharing bench are available to citizens free of charge and have become an integral part of the village landscape.

### Selected planned projects

In the future, these digitally supported mobility services will be combined in a **mobility station** in the area of the „Post“ stop. The current mobility services will then be supplemented by additional **rental bicycles** and the possibility to store one's own bicycles in a protected place. In the future, the route from the front door to the mobility station will be covered by driverless small vehicles (**autonomously driving people movers**). In a further expansion stage, it is planned that these vehicles can join together in a convoy and travel to Paderborn together.

### Benefit

Intelligent mobility in combination with local public transport will further increase the attractiveness of Borchen-Etteln. Increasingly more people will be able to do without their own car, save money and at the same time make a contribution to the environment.

## Smart Mobility



# 4 Fields of action



Smart Health

## Smart Health

### Realised projects

Since the end of 2020, the Borchten district of Etteln no longer has a general practitioner's practice.

### Selected planned projects

In the area of smart health, it is to be investigated how, for example, the possibilities of **telemedicine** are able to offer a basic range of medical care again locally in Borchten-Etteln.

The potential of digitalisation for older people to live longer in their own homes (**active aging**) has already been described above.

### Benefit

The intelligent wristwatches (smart watches) give a first feel for the potentials that digital solutions offer for the health and well-being of each individual.

## Smart City

### Realised projects

Smart City is an overarching concept in the digitalisation of cities and municipalities. The digital **village app Crossiety** has been in use in Borchten-Etteln since the beginning of 2021. In order to give people without smartphones access to the information, the **digital notice box** is located in the digital display of the Zacharias bakery.

### Selected planned projects

As part of the funding project „DiDoZ Etteln“, it is planned to create a **3-dimensional model** of the village by flying over it with a drone. In the future, sensor values from the village will be displayed in this model, e.g. how much rainfall there has been at the different locations of the rain gauges or how many rental bicycles are currently available. This will create a **digital twin** of the village. In cooperation with the local retail trade, the realisation of an automated „corner shop“ (LateBird) is to be investigated.

### Benefit

This field of action digitally supports different areas of life for citizens and increases the quality of life. Up-to-date information, food available around the clock or intelligent waste management will further increase the attractiveness of Borchten-Etteln.



Smart City

## Dissemination

### Realised projects

Etteln is increasingly developing the topic of digitalisation into a brand essence and is using this to further improve its image both internally and externally. Many of the targeted projects are to be supported by public funding. It is therefore only logical to make the results available to the general public.

Digital solutions also have the potential to enable older or even impaired people to live alone and independently in their own homes for longer.

### Selected planned projects

The vision is to establish Borchten-Etteln as a **digital lighthouse village in Germany**. The first step is to make the results in Etteln available to the other Borchten districts. At the same time, the results are to be presented and disseminated nationwide. Visitor groups will be able to experience digitisation in the countryside directly in a **visitor and demo centre**. The project „**Neue Mitte Etteln**“ (**New Centre Etteln**) will examine whether the community hall in Borchten-Etteln can meet future requirements or whether a new concept for a multifunctional building should be considered.

### Benefit

Taken as a whole, the individual fields of action will make Borchten-Etteln even more lovable and liveable in the course of this decade.

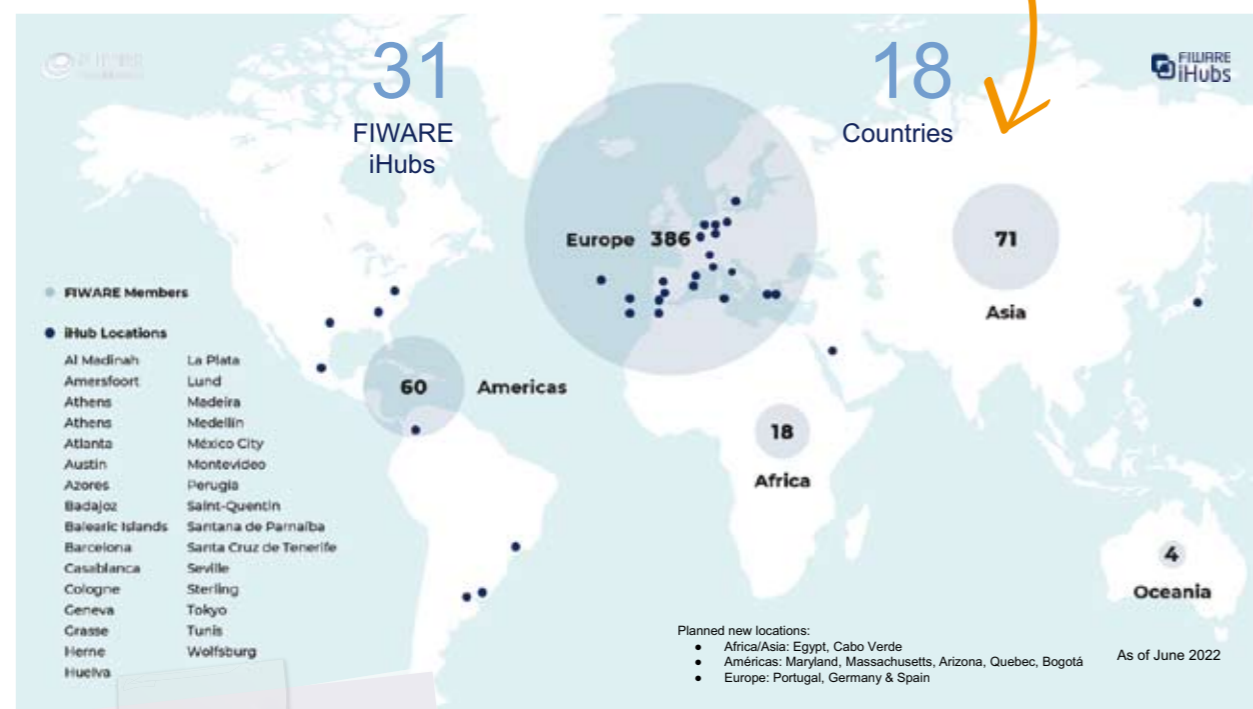
Etteln  
there is more in it!



Dissemination

# 5 Dissemination of results

## Worldwide network of FIWARE iHubs



Source: FIWARE Foundation

The digital transformation journey in Borchten-Etteln is designed to make the experiences and results available to other villages and small municipalities.

Here, the international concepts of the FIWARE iHubs (Innovation Hubs), which have grown over many years, are used. A FIWARE

iHub is to be established in Borchten-Etteln in the future.

This concept of FIWARE iHubs was originally developed within the framework of the „Future Internet PPP (Public Private Partnership)“ of the European Commission. **In total, more than 500 million euros have been invested in developing the**

**FIWARE technology and building the ecosystem between 2011 and 2016.** This includes € 300 million of EU funding, € 100 million from the private side of the PPP and another € 100 million from venture capital firms that have invested in startups bringing FIWARE-based solutions to market. To translate this investment into a sustainable future, the FIWARE Foundation

was originally established at the end of 2016 by Atos, Engineering Informatica, Orange and Telefonica in coordination with the European Commission, with headquarters in Berlin. **The four founding companies have since grown into well over 500 members from all over the world in different member groups.**

There is already a **close network of FIWARE iHubs in Europe** and also on other continents. All these FIWARE iHubs work according to the same principles and are used to sharing results with each other. The iHub aims to positively influence the attitude of citizens in rural areas towards the use of digital solutions and to build

acceptance where this is not yet the case. In this context, it is extremely important to **build trust in the security of digital solutions.**



**iHub -Incubator**  
Development of a local ecosystem for start-ups in digital innovation



**iHub -Centre**  
Rooms for meetings, workshops and reference visits



**iHub -School**  
Training centre for the Digitization of cities and communities and the application of FIWARE technologies



**iHub -Business**  
Marketplace and business development for FIWARE-based solutions



**iHub -Lab**  
Provision of a test environment for digital solutions

Source: FIWARE Foundation




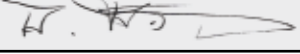




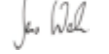



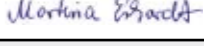





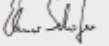







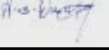









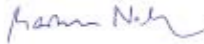
# 6 Support network

The following cities and organisations have signalled their willingness to accompany Borchten-Etteln on its digital transformation journey and to provide existing solutions and experiences:



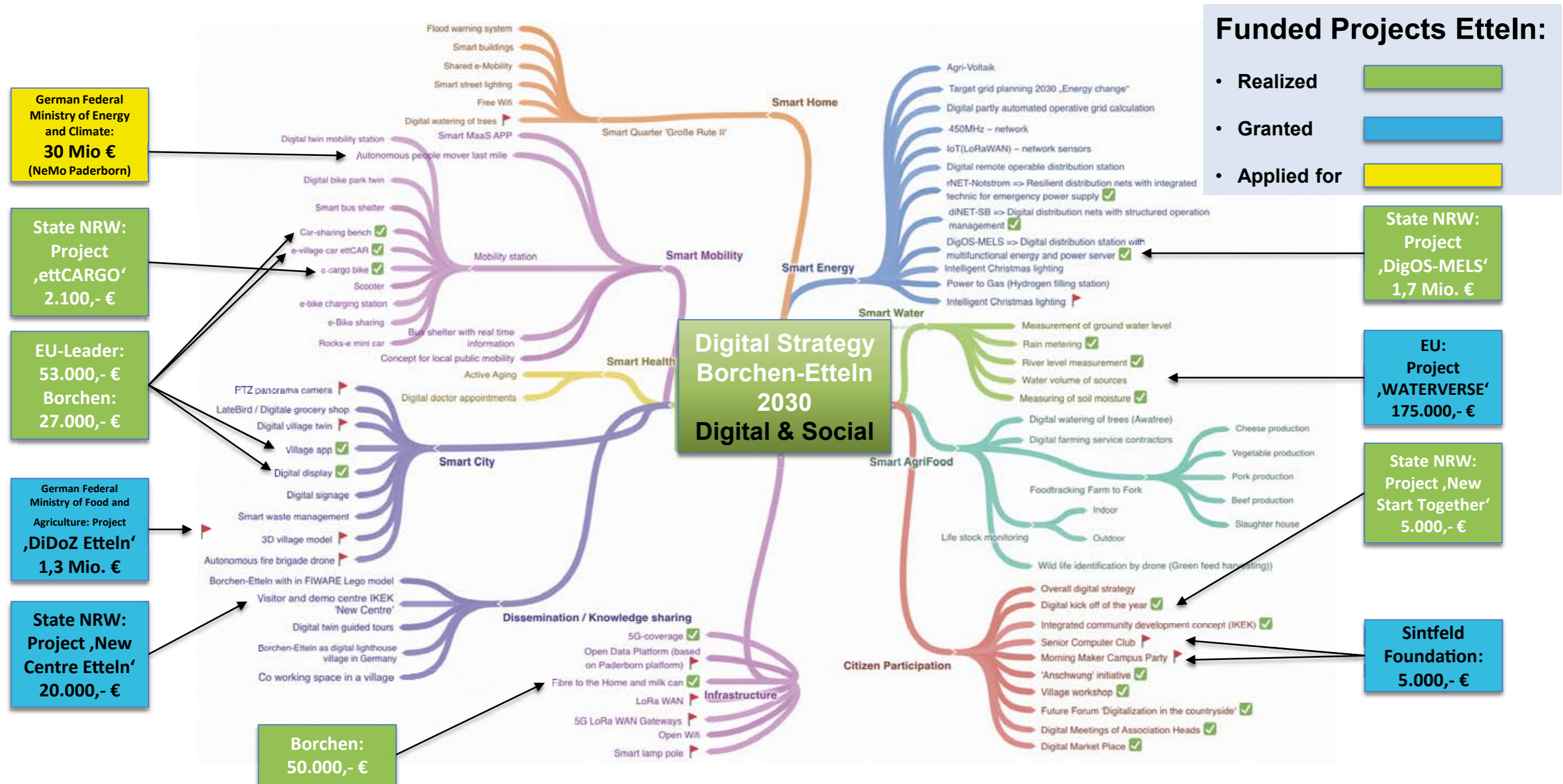
- + Unity AG, Büren
- + solutiT, Borchten-Etteln
- + University Paderborn
- + Fraunhofer IEM, Paderborn
- + Fraunhofer IOSB-INA, Lemgo
- + RWTH Aachen
- + University of Applied Sciences Bochum
- + ATB, Bremen
- + Westfalen Weser, Paderborn
- + City of Paderborn
- + City of Lemgo
- + City of Wolfsburg
- + Public utilities Lübeck
- + Digitalagentur Heidelberg
- + City of Delbrück
- + Paderborn district
- + Software Innovation Campus Paderborn
- + digital.interkommunal (City of Lemgo and Community of Kalletal)
- + EDAG Production Solutions, Fulda
- + mendigital GmbH
- + Südwestfalen Agentur GmbH
- + „5 for South Westphalia“
  - + Soest
  - + Arnsberg
  - + Olpe
  - + Menden
  - + Bad Berleburg

# 7 Editorial team

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Voluntary fire brigade Etteln 	Tobias Knaup	
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Friends of the Etteln Primary School 	Antje Kelly	
Parents' Council of the St. ,Meinolfus Day Care Centre Etteln 	Mareen Henning	
Fishing Club Etteln 	David Sauerland	
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Etteln Agriculture 	Benedikt Hansmeyer Martin Nolte	 

## Overview of funding projects

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*... da ist mehr drin!*

