ESPON

EUROPEAN UNION

Co-financed by the European Regional Development Fund

Inspire Policy Making with Territorial Evidence

TARGETED ANALYSIS //

DIGIPLAN – Fact sheets on digital plan data in Germany

Annex 2.5 of final report

Final delivery // June 2021

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These three fact sheets summarise three experiences in digitisation of plan data at three levels in Germany. This explorative investigation includes information on the digitisation of plan data, on the digital platform that contains plan data, the current uses of digital plan data as well as foreseen developments of the investigated platforms. The inputs are based on both a desk study and interviews with experts at:

- the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) for the investigation of ROPLAMO.
- Office of Geodata Infrastructure Bavaria (GDI-BY), Agency for Digitalisation, High-Speed Internet and Surveying State Ministry of Economic Affairs, Regional Development and Energy for the investigation in Bavaria.
- State Office for Geoinformation and Rural Development (Landesamt für Geoinformation und Landentwicklung, Baden-Württemberg) City of Stuttgart for the investigation in Stuttgart.

Germany (federal; four levels of government) - ROPLAMO

The states have the planning authority in their territory in the German Organisation of Spatial Planning. In the ROPLAMO project, the federal authorities have attempted to bring together the regional development plans and the spatial development plans produced by the states and regions respectively in order to provide a national overview.

There is no public portal, which provides State Development Plans and Regional Development Plans.

Background information	
Main stakeholder(s)	Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR)
Level of digitalisation of the geoportal	Undetermined, because the portal is not published
The digitisation of plan data	
Main purpose(s)	The spatial development plan monitor (ROPLAMO) of the BBSR aims to provide a complete overview of the graphical definitions (definition maps) of the State Development Plans and Regional Development Plans, which is used internally.
Added value	With digital geodata, the scope of the area and the type of definition (purpose or principle of regional planning) can be analysed nationwide regarding the thematic fields in the regional development plans (e.g. wind energy, securing raw materials, flood protection).
Main driver(s)	Nationwide information (geodata) on the graphical definitions of the state and regional plans is required, for example, in the context of federal transport route planning or the federal planning of extra-high voltage lines.
Main obstacle(s)	Digitisation requires high-resolution image files of the plans. Sometimes the relevant maps could only be delivered in a poor resolution or the plan data consists of many detailed maps, which means a lot of effort for digitising.
Standards and methods	The plan data are digitised with a specific software and turned into a uniform projection and vector geodata sets, which are then stored in a file geodatabase. The geodata are checked and assessed internally.
The current platform	
Type of digital plan data included	This project includes the State Development Plans and Regional Development Plans which are digitised continuously.
Legal status of the digital plan data	Only the printed plans of the planning authorities are legally binding.
The current uses of digital plan data	
Type of users	The digital plan data is used internally in the BBSR. There is also cooperation with the Federal Network Agency and the Federal Real Estate Agency.

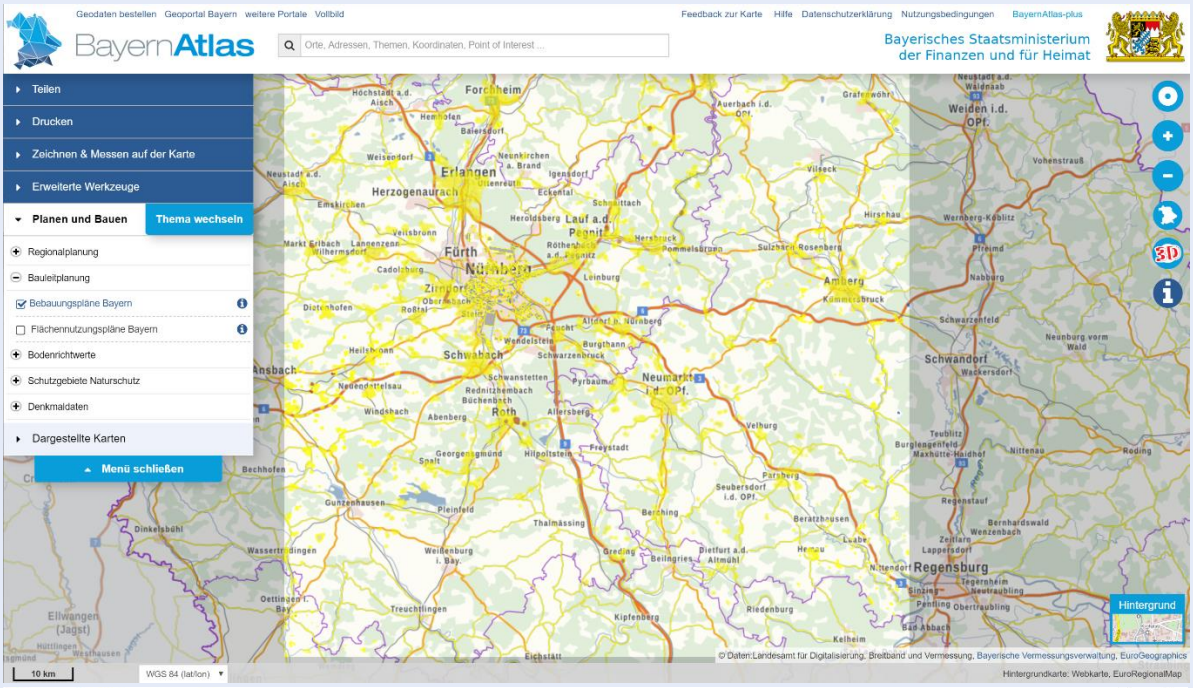
Germany (federal; four levels of government) - ROPLAMO	
Number of users	(No information)
Example of evaluation of planning practices or innovative practices	The ROPLAMO data form the basis for various evaluations and publications (e.g. about controlling wind energy through regional planning) as well as contributions within the context of scientific policy advice (e.g. regional planning report).
Foreseen developments	
According to the experience of the last few years, there is a great need for binding graphic specifications for the State Development Plans and Regional Development Plans. Due to the increasing provision of digital plan data by the planning authorities the BBSR will only have to collect the data but digitalisation by the BBSR will not be necessary anymore.	

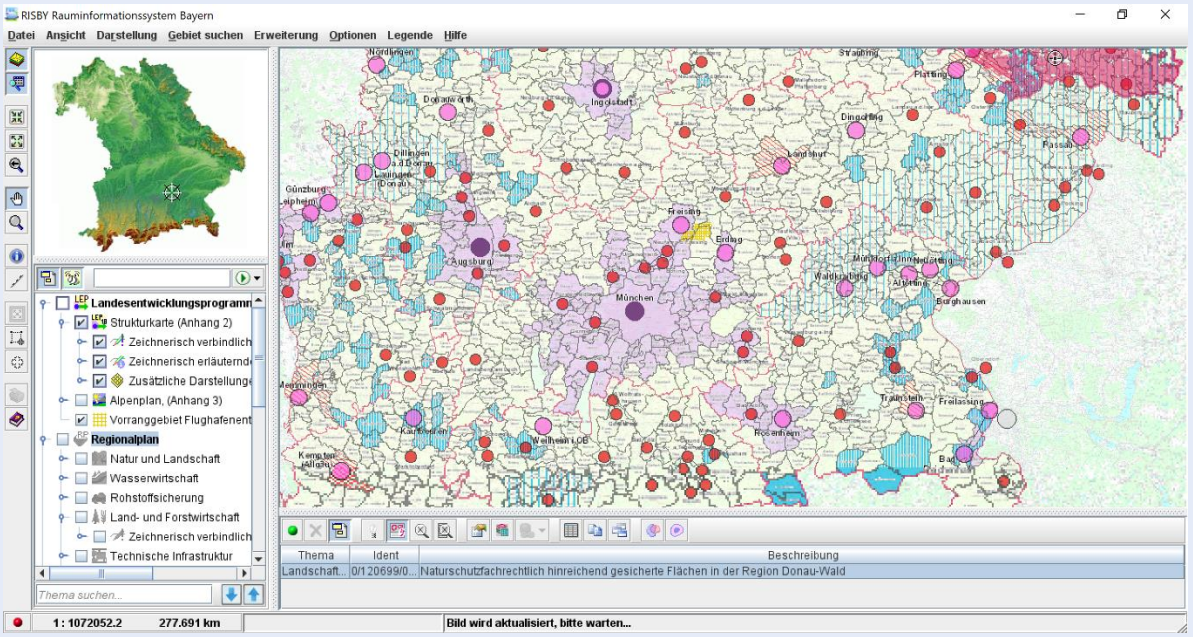
Level	Planning instruments (Name in English)	Planning instruments (Name in local language)	Included in the geoportal?
Sub-national	State Development Plan (States)	Raumordnungsplan	Included and stored in the Geodatabase, but not published
	Regional Development Plan (Counties)	Regionales Entwicklungskonzept	Included and stored in the Geodatabase, but not published

Germany (federal; four levels of government) – State of Bavaria

The states have the planning authority in their territory in the German Organisation of Spatial Planning. In addition, the districts are responsible for their territories and the municipalities have planning sovereignty over land use plans. Bavaria is located in the southwest of Germany and consists of about 2050 municipalities. The Bavarian Geoportal, called BayernAtlas, has the topic Planning and Building and visualizes several plan data. In another online application (RISBY), State Development Plans and Regional Development Plans are displayed.

The digital plan data portal investigated are BayernAtlas (BA) (https://geoportal.bayern.de/bayernatlas/) and RISBY (http://wirtschaft-risby.bayern.de/)





Background information

Germany (federal; four levels of government) – State of Bavaria	
Main stakeholder(s)	Agency for Digitalisation, High-Speed Internet and Surveying (land use plans) Bavarian State Ministry of Economic Affairs, State Development and Energy (State Development Plans and Regional Development Plans)
Level of digitalisation of the geoportal	BayernAtlas: Intermediate (the user can make a limited number of simple operations based on the available plan data) RISBY: Basic (the user can only see plan data in digital form)
The digitisation of plan data	
Main purpose(s)	BayernAtlas: - Open governance: Provide planning information to the public - Ease for planning authorities: Due to digital availability, there are fewer requests to the authorities. - RISBY: - Compilation of all 18 Bavarian Regional Development Plans
Added value	BayernAtlas: Cost and time reduction of the authorities BayernAtlas and RISBY: Data availability
Main driver(s)	The Project "Establishment of a Geodata Infrastructure in Bavaria" was launched in 2003 due to e-government initiative to publish geodata via the internet. The INSPIRE Directive was crucial for the state and regional planning (RISBY). In addition, the amendment of the Building Code in 2017 had the consequence that the municipalities should publish their land use plans on a central internet portal of the state.
Main obstacle(s)	BayernAtlas: Although the municipalities are offered many opportunities to publish their land use plans, challenges lie in the voluntary participation, technical equipment and available resources of the municipalities. RISBY: The main obstacle to state and regional development plans is that both geo-referenced data and textual information exist.
Standards and methods	In order to involve as many of the diverse municipalities as possible, there are various ways of making the plan data available for the central internet portal. The municipalities can provide their plan data themselves with the use of a data acquisition tool, as geodata (Shape Files according to the XPlanung Version 3.0) or as a WMS service. The Geodata Infrastructure Bavaria GDI-BY checks the shape files during import to the data model. The central internet portal is currently in progress. In addition, the plan data will also be visualised via BayernAtlas.
The current platform	
Type of digital plan data included	BayernAtlas: Usually, the current land use plans are made available. However, it should be considered, that the plan data is always provided by the responsible municipality and therefore differences between the local plan data can exist and are shown on BayernAtlas. RISBY: On the RISBY page the current published data on State and Regional Development Plans can be found.
Legal status of the digital plan data	The published digital plan data (land use plans) is only considered as information. Legally binding information can only be provided via the municipality. Normally, the signed original plans are legally binding. This also applies to the State and Regional Development Plans.
The current uses of digital plan data	
Type of users	BayernAtlas: The use of the land use plans is not monitored. The target group are all those who benefit from the illustration of land use plans on the internet: Citizens, planners, economy and administration. RISBY: State and regional planners, authorities, experts and planning offices; universities, research institutes
Number of users	RISBY: Between 5,000 and 7,000 calls per month (4,500 registered users)

Germany (federal; four levels of government) – State of Bavaria

Example of evaluation of planning practices or innovative practices	BayernAtlas: Some municipalities make their land use plans available via an IFrame from BayernAtlas as an overview on their own website.

Foreseen developments

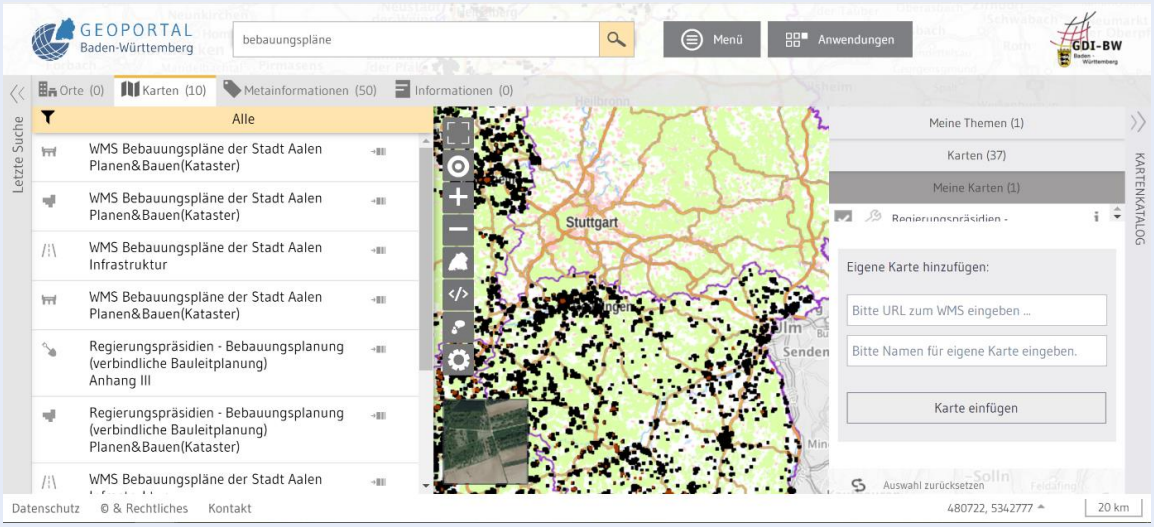
A revision of the current form of providing the urban land use plans is considered.
According to the IT Planning Council decision, the standard XPlanning must be applied on the State and Regional Plans by 2022.

Level	Planning instruments (Name in English)	Planning instruments (Name in local language)	Included in the geoportal? (https://geoportal.bayern.de/bayernatlas/)
Sub-national	State Development Plan	Raumordnungsplan	BayernAtlas: Some parts (e.g. alpine map) RISBY: All plan parts
	Regional Development Plan	Regionales Entwicklung-skonzept	Both portals: Yes, several topics
Local	Land use plans	Baufläche	BayernAtlas: Depends on the municipality RISBY: No

Germany (federal; four levels of government) – State of Baden-Wurttemberg (City of Stuttgart)

The states have the planning authority in their territory in the German Organisation of Spatial Planning. In addition, the districts are responsible for their territories and the municipalities have planning sovereignty over land use plans. Baden-Württemberg is located in the southwest of Germany and consists of around 1100 municipalities, of which Stuttgart is one of several independent cities. The state-wide geoportal includes various geodata as well as several plan data.

The digital plan data portal investigated is the Geoportal of Baden-Württemberg (https://www.geoportal-bw.de/)



Background information	
Main stakeholder(s)	State Office for Geoinformation and State Development Baden-Württemberg
Level of digitalisation of the geoportal	Intermediate: the user can make a limited number of simple operations based on the available plan data (e.g. Iframe generator, sharing, printing, drawing, measuring, WMS upload)
The digitisation of plan data	
Main purpose(s)	Stuttgart: Data availability, no need to visit offices and copy plans Baden-Württemberg (BW): INSPIRE Directive has encouraged many municipalities to digitise plan data (land use plans)
Added value	Stuttgart: In the administration there was a reduction of effort regarding data availability. In addition, information services for the citizens concerning construction projects can be provided.
Main driver(s)	BW: Although the INSPIRE Directive does not stipulate the digitisation of plan data, this has nevertheless prompted many municipal authorities to digitise their land use plans.
Main obstacle(s)	Stuttgart: Vectorising all plan data requires a lot of effort, especially regarding very old zoning plans with different plan graphics.

Germany (federal; four levels of government) – State of Baden-Wurttemberg (City of Stuttgart)	
Standards and methods	There are two methods for the nationwide established XPlanning-Format Raster-Ring-Scenario: Scan land use plan. Record ring (area of validity). Georeference ring. Legends, reasons (information that makes the zoning plan easier to read) are also scanned and linked to it. Finally, this results in a raster image with a georeferenced ring and additional information. Fully-Vectorial-Scenario: Land use plans are recorded in GIS compatible format. The individual objects (building area, commercial area, etc.) are recorded as vectors, which allows GIS-based evaluations. Most municipalities in BW have digitised in the Raster-Ring-Scenario. For new zoning plans, the aim is to achieve full vectorial acquisition. Standard: The State Office for Geoinformation and State Development has produced a technical guideline for the provision of land use plans in the geodata infrastructure of Baden-Württemberg. It contains technical recommendations which guarantee the standardised provision of the plan data.
The current platform	
Type of digital plan data included	In Stuttgart, the archive has been digitally acquired since 2003. Every year new zoning plans are added in raster ring format, which is an ongoing process. Initiated by the INSPIRE process, the plan data will be published in the near future. Some other municipalities have just begun to digitise their plan data. The current plan data should be provided on a state-wide portal which is used especially for land use plans. There are overlaps between old and new plans. Old plans are therefore removed when the last part of the plan becomes invalid or is replaced by new plans.
Legal status of the digital plan data	The original printed and signed plan is legally binding. Even in the case of vectorial data, the original plan is valid.
The current uses of digital plan data	
Type of users	The internal users of the land use plan portal are not monitored. However, the target group comprises actors involved in construction projects.
Number of users	(No information)
Example of evaluation of planning practices or innovative practices	In Stuttgart, planning projects are presented to the city council using digital plan data. In addition, the participation of the population in planning processes takes place via the municipal homepage.
Foreseen developments	
In Stuttgart, there are plans to switch from the Raster-Ring-Scenario to the Fully-Vectorial-Scenario XPlanning-Format in the future, at least for the new plan data.	

Level	Planning instruments (Name in English)	Planning instruments (Name in local language)	Included in the geoportal? (https://www.geoportal-bw.de/)
Sub-national	State Development Plan	Raumordnungsplan	Yes (partly)
	Regional Development Plan	Regionales Entwicklungskonzept	Yes (partly)
Local	Land use plans	Baufläche	Depends on the municipality

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