AGING RESIDENTIAL AREAS IN RURAL GERMANY.

CHALLENGES AND SMART RESPONSES
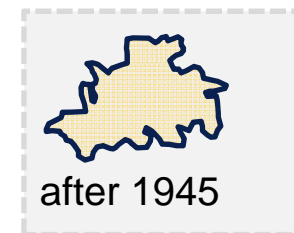
Markus Schaffert
Hochschule Mainz

Agenda

1. German villages & their single-family housing areas

2. Dealing with the challenge

   a. Influencing factors & Indicators

   b. Data & GIS-based analyses

Villages and rural cities in Germany

Münsterdorf,
Schleswig-Holstein,
Brühick, (2008)CC BY 3.0

Schreyahn,
Niedersachsen,
Axel Hindemith ,CC BY 3.0

Fürth Odw.,
Hessen,
Rudolf Strickler, CC BY 3.0

Flossenbürg,
Bavaria
flossenbuerg.de

Bayrisch Zell,
Bavaria
Kogo, 2008, GFDL

Changing villages – structure, demographics

*as
d 773
t time*

before 1945

after 1945

Year: Inhabitants

1829: 1101
1939: 2011
1961: 3626
2011: 10.640

2000-2011
-2,3%
(Hessenagentur)

Fürth Odw. 2015,
aerial picture: google maps

Changing villages – structure, demographics

village centre | 1945-1990 | after 1990 | commercial district

Foto: Schaffert 2017
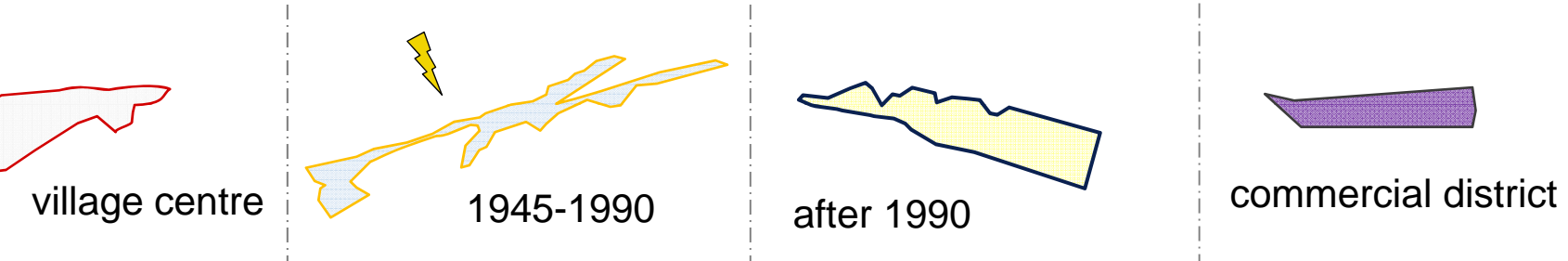
Generation change & aging of residents

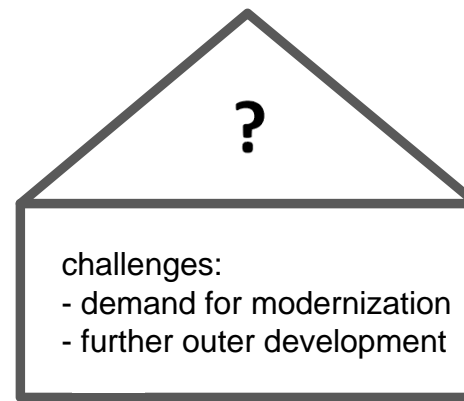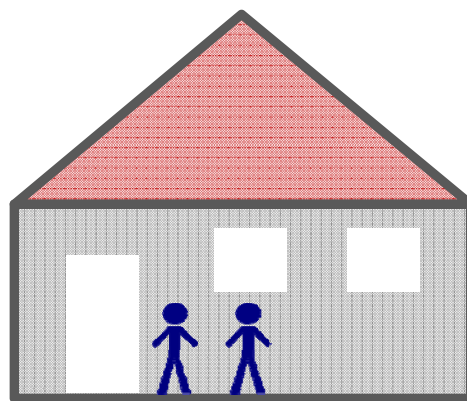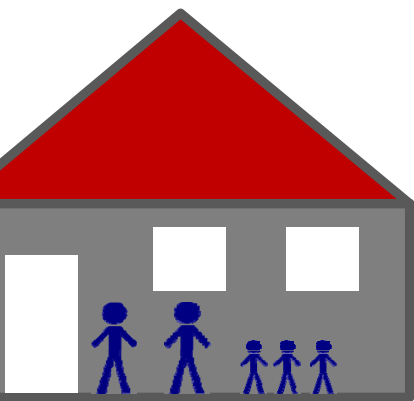## in single-familiy housing areas

long term vacancy?!

village´s image

more than 12 million
SFHs in Germany

Deilmann; Lorbeck 2016,
Statistisches Bundesamt 2014

*…on the way to a
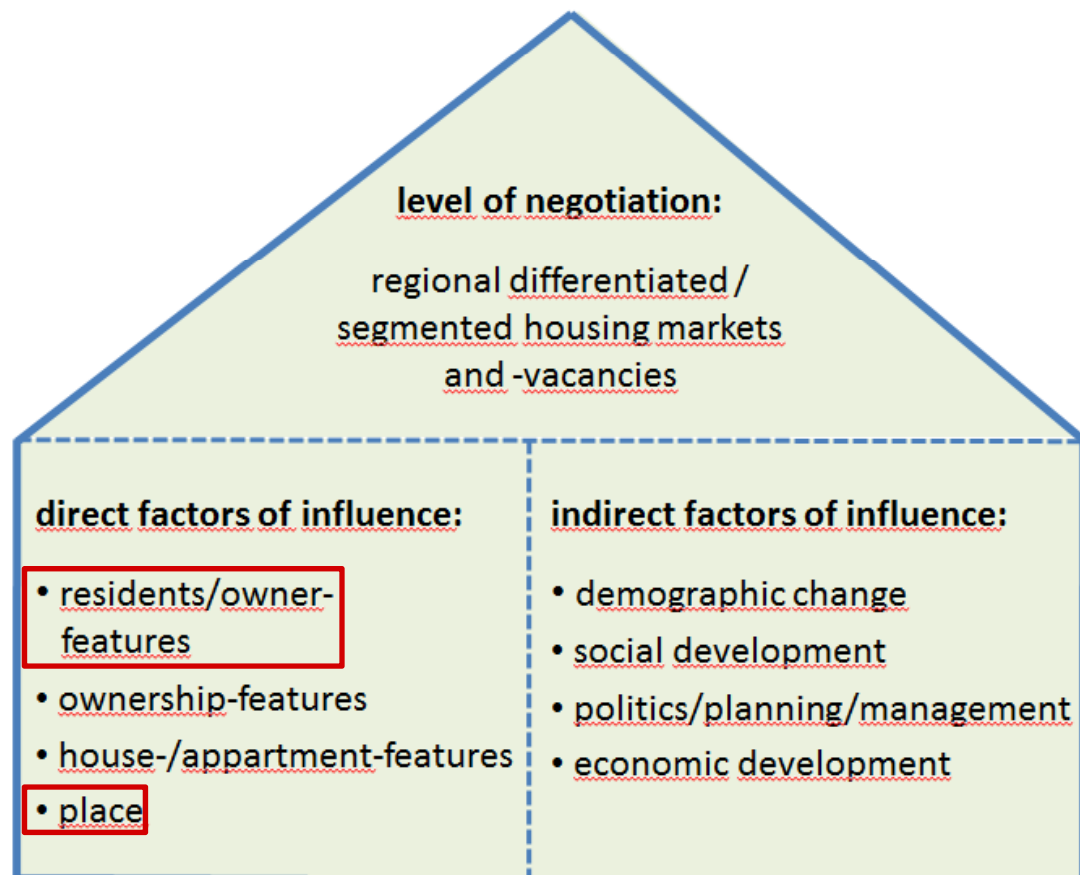monitoring strategy*

?

challenges:
- demand for modernization
- further outer development

2010

2030

Vacancy – influencing factors

level of negotiation:

regional differentiated /
segmented housing markets
and -vacancies

direct factors of influence:

- residents/owner-features
- ownership-features
- house-/appartment-features
- place

indirect factors of influence:

- demographic change
- social development
- politics/planning/management
- economic development

Schaffert 2011

Case study – rural Bavaria

LK Neustadt/ Waldnaab

0   100000   200000
Meter
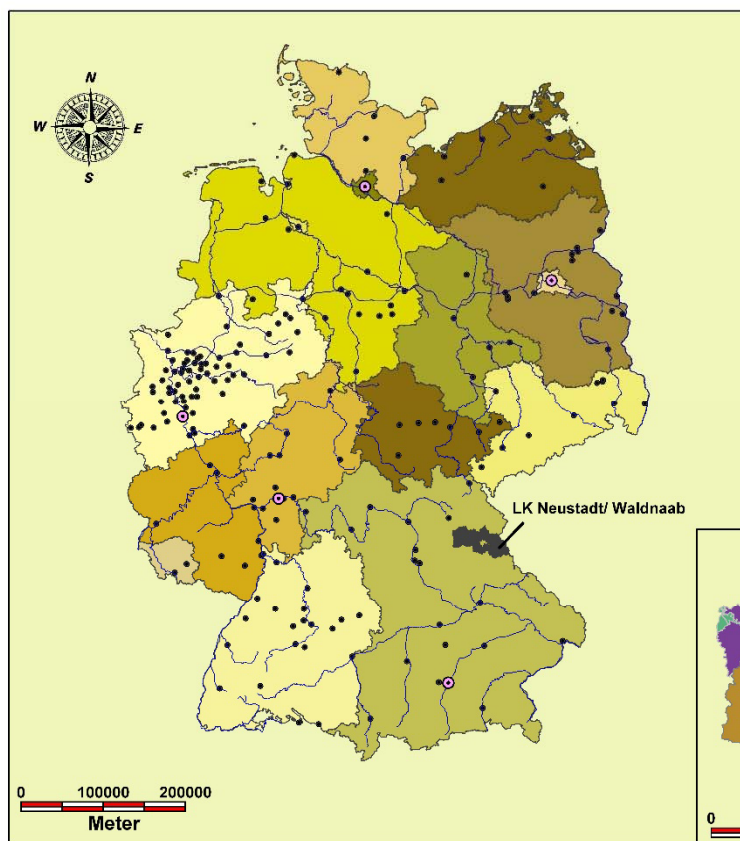
photo: www.flossenbuerg.de
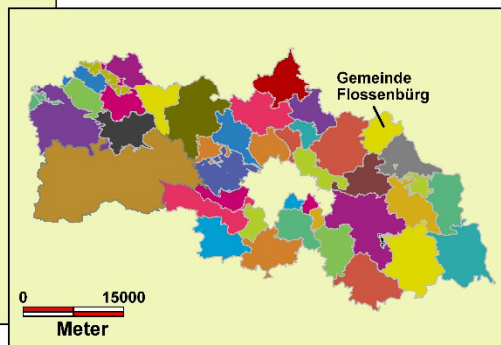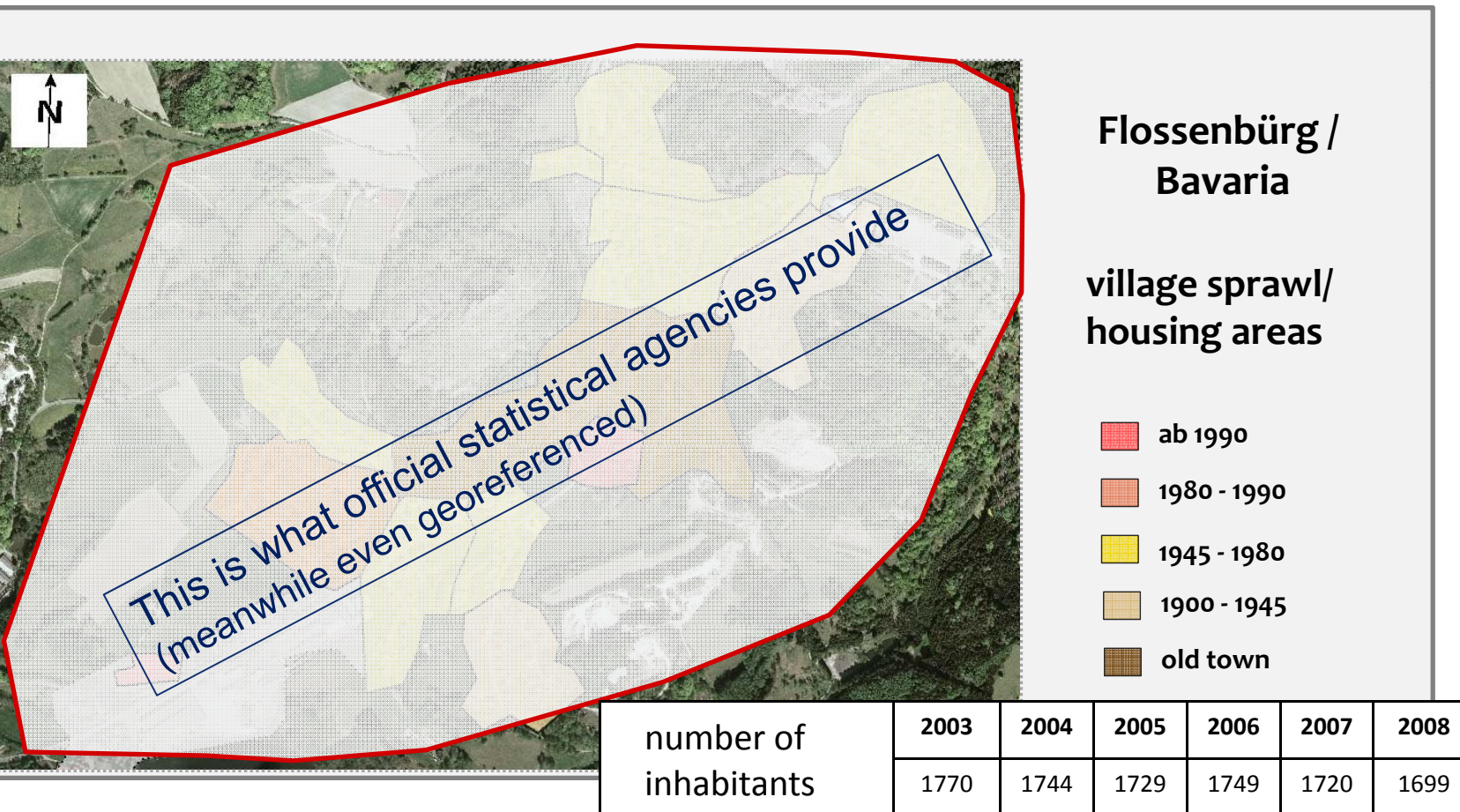
Gemeinde
Flossenbürg

0   15000
Meter

Case study – rural Bavaria

Flossenbürg / Bavaria

village sprawl/ housing areas

- ab 1990
- 1980 - 1990
- 1945 - 1980
- 1900 - 1945
- old town

This is what official statistical agencies provide (meanwhile even georeferenced)

	2003	2004	2005	2006	2007	2008
number of inhabitants	1770	1744	1729	1749	1720	1699

Case study – rural Bavaria

Some progress (since 2013) by Zensus2011:
georeferenced grid (down to 100x100m)
Census: every 10 years - data not up to date)
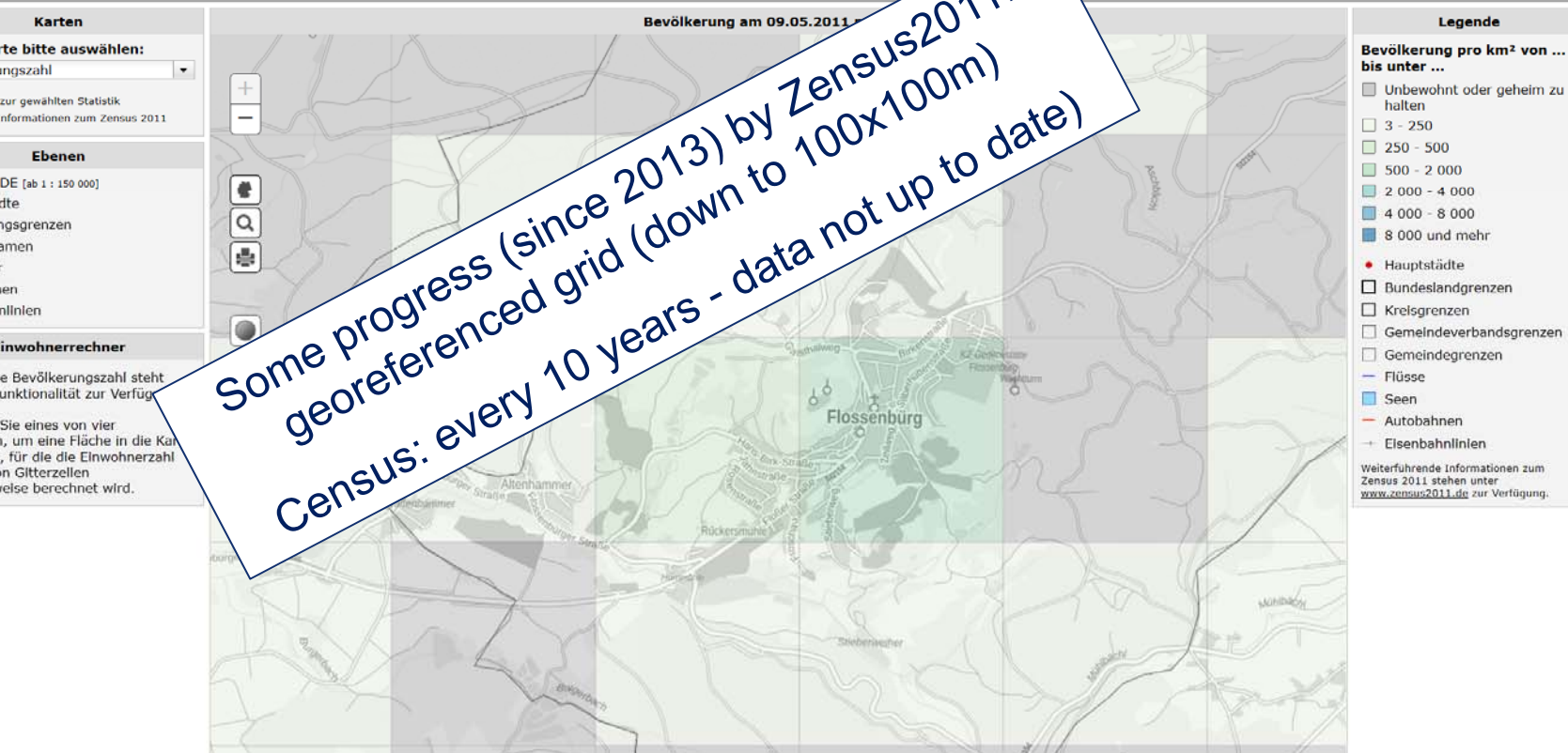
Demographic Information of living population in Rinchnach

rtsdatum	Geschlecht	PLZ	Ort	Ortsteil	Strasse	Hausnummer	Zusatz	Wohnungsart
03.1988	w	94269	Rinchnach		Musterstr.	3		HW
03.1958	w	94269	Rinchnach		Musterstr.	3	a	NW
05.1995	m	94269	Rinchnach	Stadl	Musterstr.	12		HW
12.1965	m	94269	Rinchnach	Grub	Musterstr.	13		HW

Information about changes (birth, death, migration in/to/withthin)

sart	Ereignisdatum	Geburtsdatum	Geschlecht	PLZ	Ort	Ortsteil	Strasse	Hausnummer	Zusatz	Wohnungsart
ZUZ	10.03.2008	18.03.1988	w	94269	Rinchnach		Musterstr.	3		HW
TOD	13.04.2017	12.03.1958	w	94269	Rinchnach		Musterstr.	23		NW
UMZ	12.05.2009	12.05.1995	m	94269	Rinchnach		Musterstr.	12		HW
WGZ	01.12.2005	12.12.1965	w	94269	Rinchnach		Musterstr.	2		HW
GEB	02.12.1974	02.12.1974	m	94269	Rinchnach		Musterstr.	3		HW

not georeferenced

not ready-for-planning

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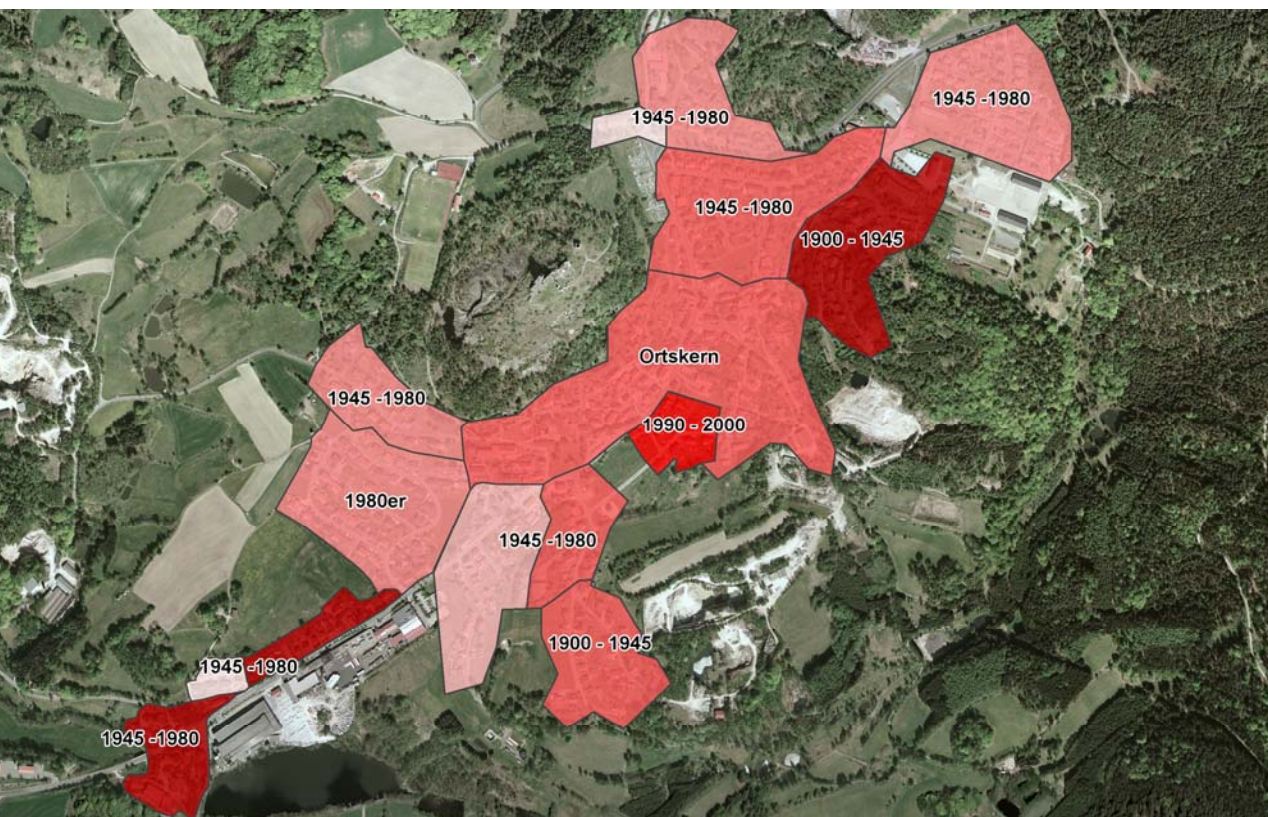# Age structure
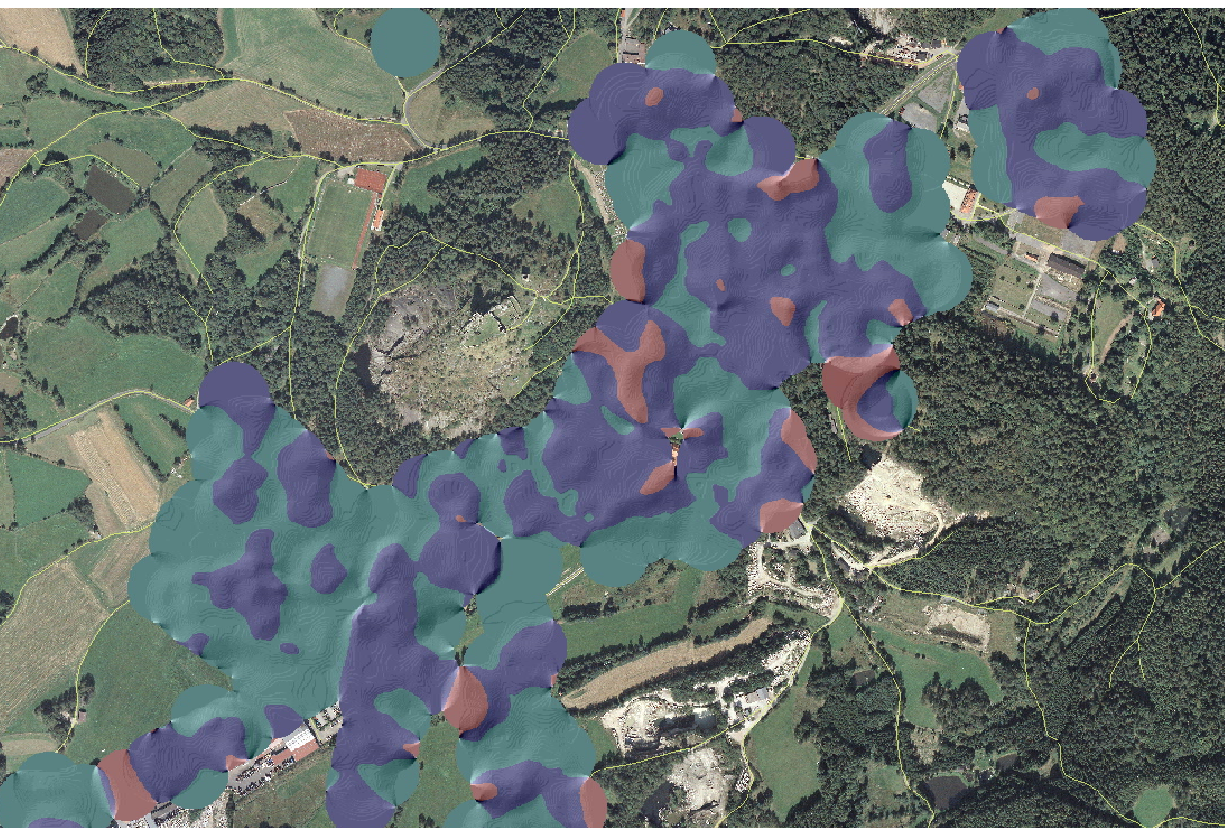
using the municipal population register for small scale population analyses
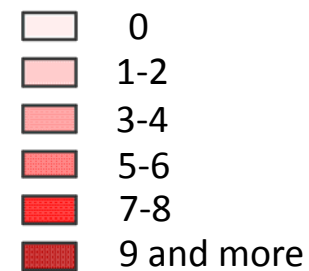

■ 65 years or more

■ 45-65 years

■ 45 or younger

chaffert 2011

houses endangered by vacancy

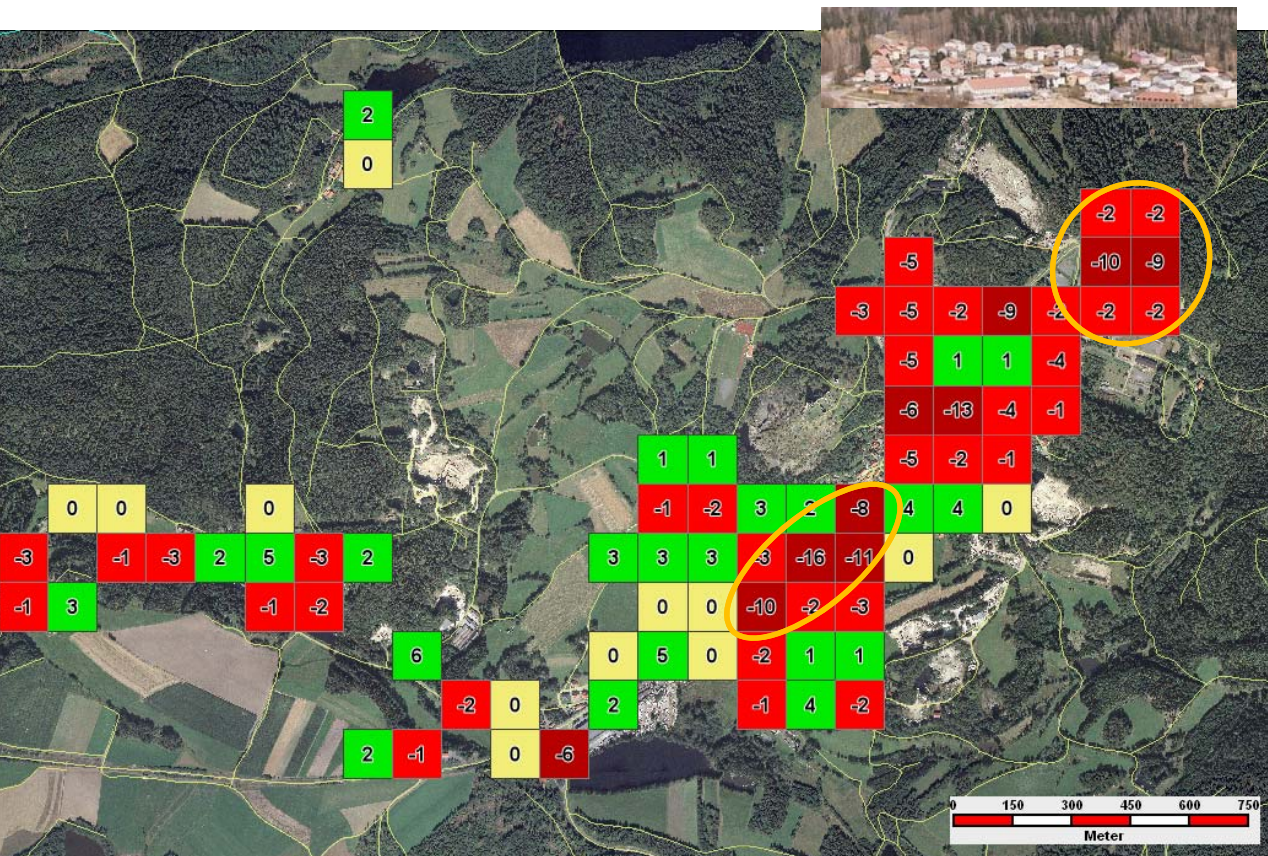using the municipal population register for small scale population analyses

Share of houses with vacancy risk* / per neighbourhood

- 0
- 1-2
- 3-4
- 5-6
- 7-8
- 9 and more

*inhabitated by 1 or 2 persons beeing 65 years or older

(intra-urban) net migration
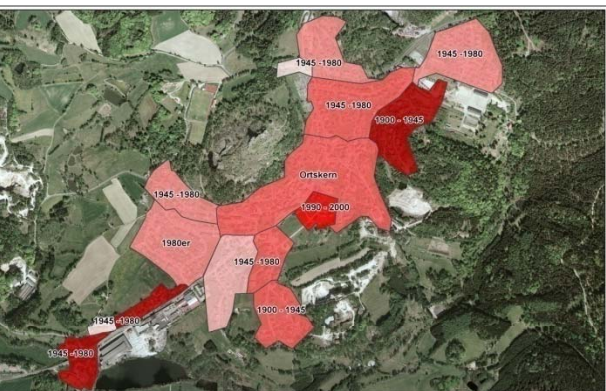
Single family housing
1945-1980 (mainly 1950s)

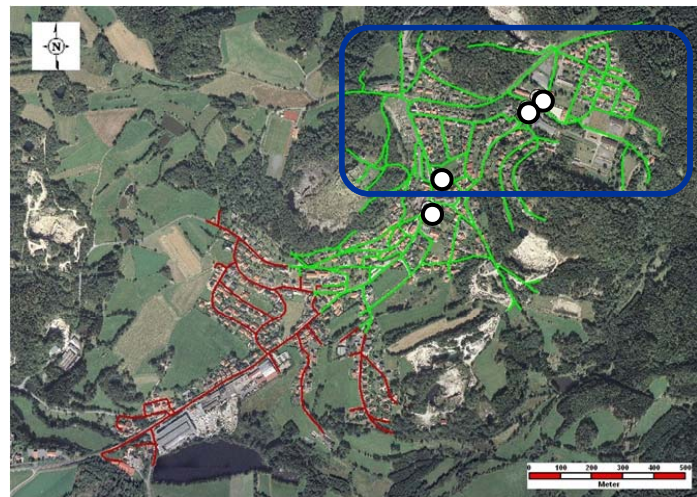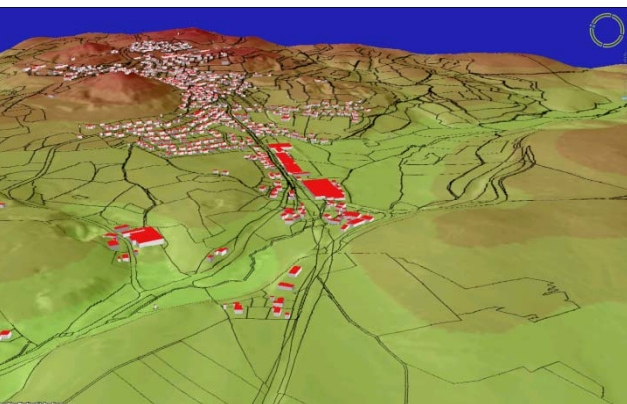using the municipal population register for small scale population analyses

resident loss between 1999 und 2009

- − 6 persons and more
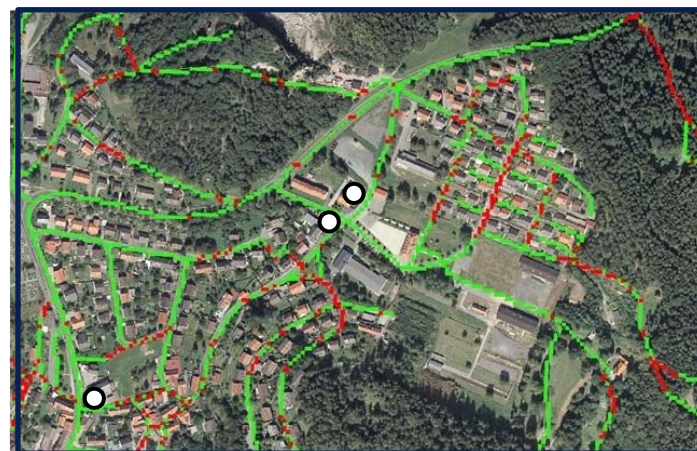- -1 untill − 5 persons
- +/- 0 persons
- +1 bis + 5 persons

Location/ place/ accessibility

chability – infrastructure of basic
vices within walking distance

</= 500 m distance

\> 500 m distance

○ baker, butcher,
supermarket

> 5% slope

<= 5% slope

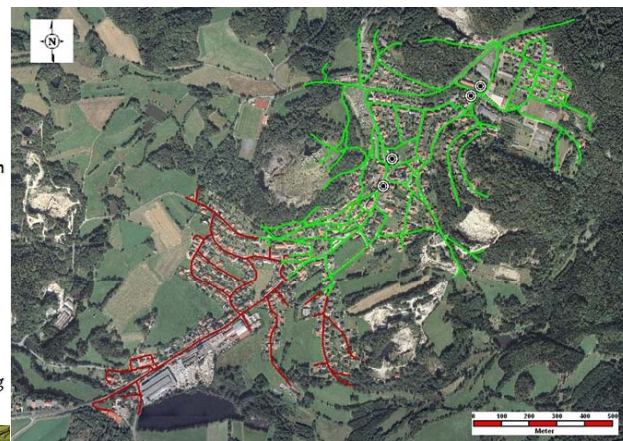# Indicators & GIS

Flossenbürg/Opf.

Steigungen der begehbaren
Wege - nach Abschnitten
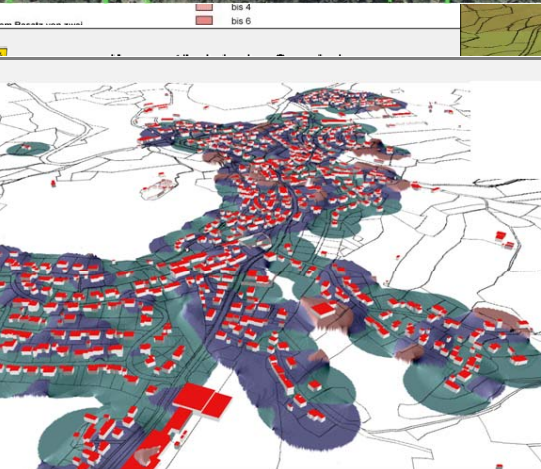(basierend auf 5m Raster)

über 5% Steigung

bis inklusive 5% Steigung

Flossenbürg/Opf.

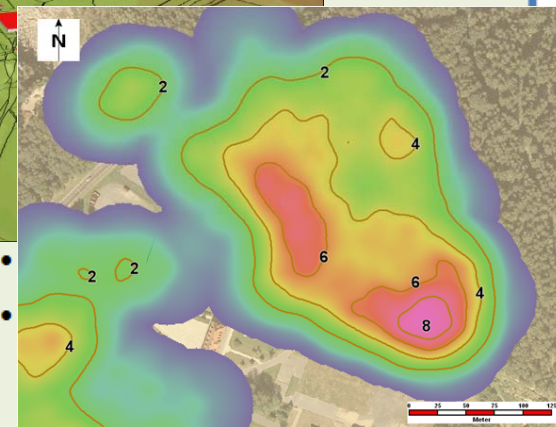Erreichbarkeit
der Grundversorger
(Bäcker Metzger,
Supermark)

</= 500 m Entfernung

> 500 m Entfernung

Versorgungs-
einrichtung

Flossenbürg/Opf.

Durchschnittsalter der
Einwohner

– „Altersgebirge" mit
Flurstücken und Gebäuden

(Stand 01.08.2009)

über 80 Jahre

65 bis 80 Jahre

46 bis 65 Jahre

unter 45 Jahre

Flossenbürg/Opf.

Gebäude in einem
Umkreis von 25 m²
um die jeweils betrachtete
Rasterzelle (Auslösung 1 m)

2

4

6

8

Linie gleicher
Bebauungsdichte

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ture Work: → monitoring of SFH in an intra and supra-
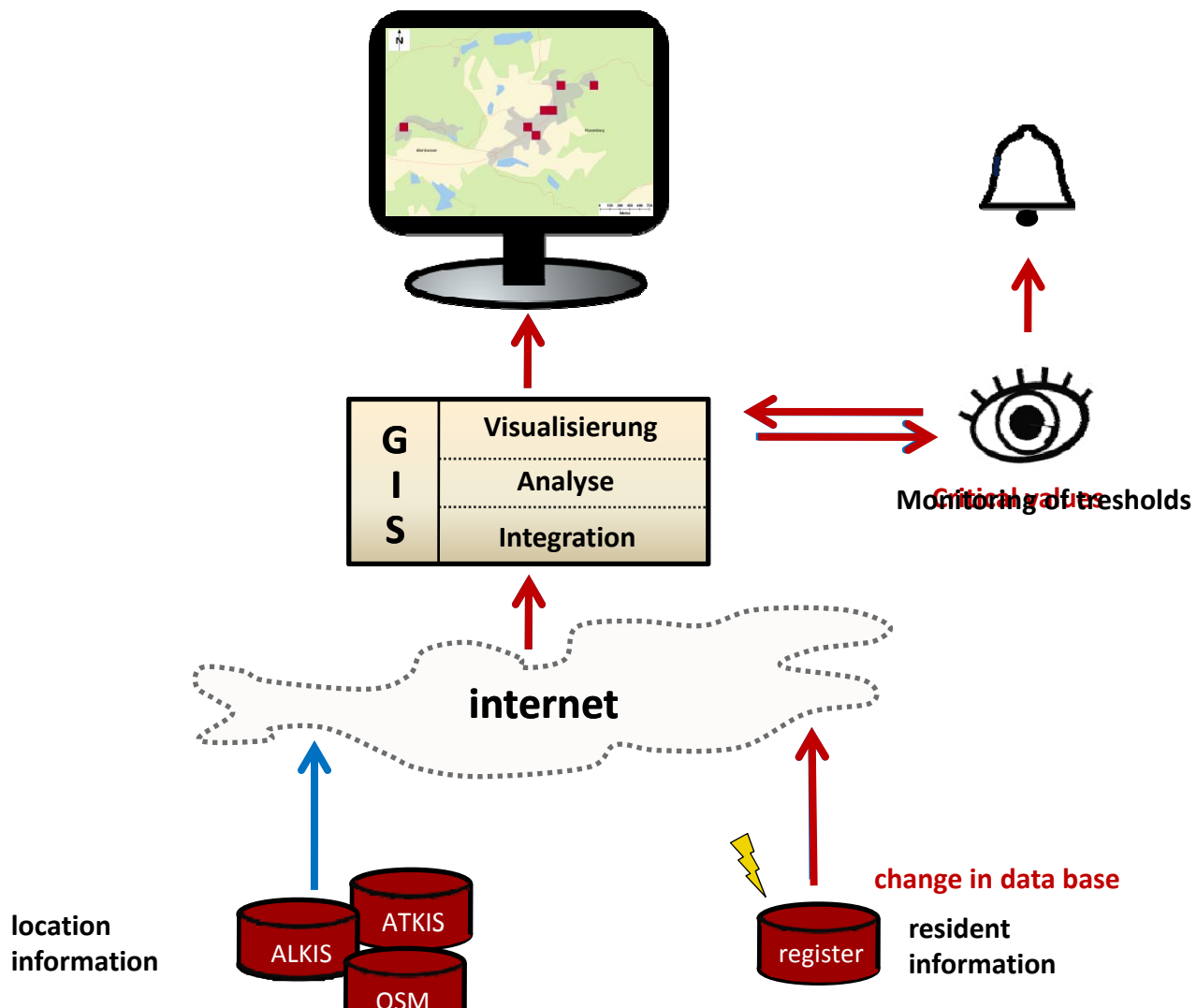mmunal setting (e.g. county-wide)

Housing conditions?

Weighting of indicators (and their spatial differences) and
combining them according to the weighting

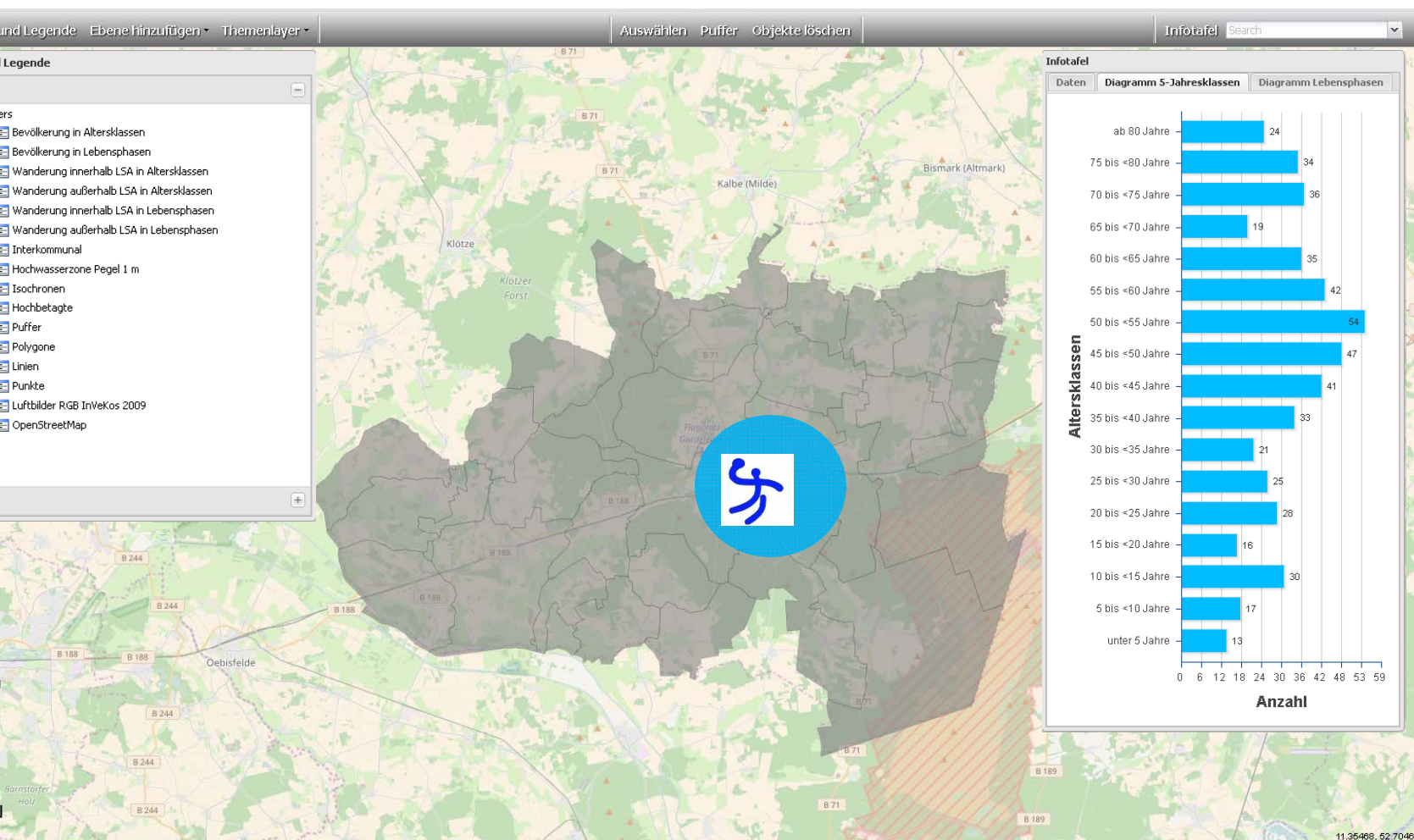Providing this information in a supra-communal spatial data
nfrastructure

Developing clients suitable for planning support

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G I S
| Visualisierung |
| Analyse |
| Integration |

Monitoring of thresholds

Critical values

internet

location
information

ATKIS

ALKIS

OSM

change in data base

register

resident
information

Thank you for your attention!

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What has been done so far:
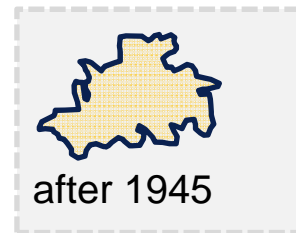
Selection of indicators

Identification of suitable spatial data and analyses for calculating these indicators

proof of concept in Flossenbürg

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after 1945

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Fürth Odw. 2015,
aerial picture: google maps