



Presented at the FIG Working Week 2023,
28 May - 1 June 2023 in Orlando, Florida, USA

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The potential of AVM and AI Opportunities and risks for appraisers

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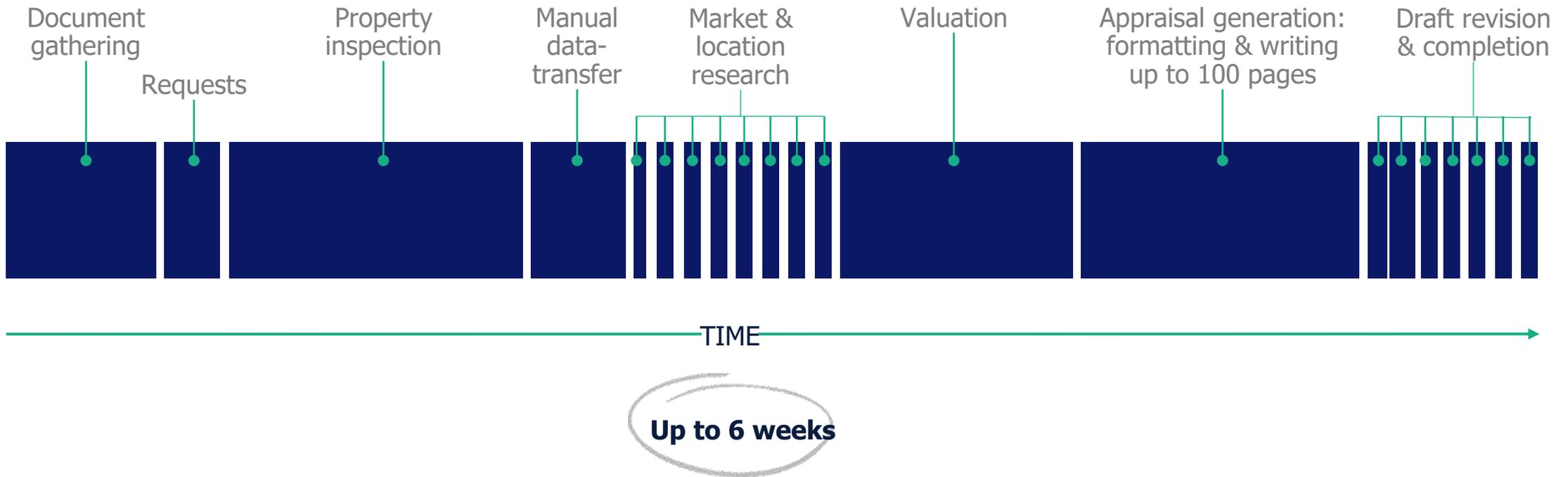




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AVMs in Germany

- Their use has become increasingly popular
- Investors use them in investment decisions
- Even lenders are now allowed to use them as supportive tools
- Is this the end for the appraisal industry?

“Salmon fish swimming in the river”

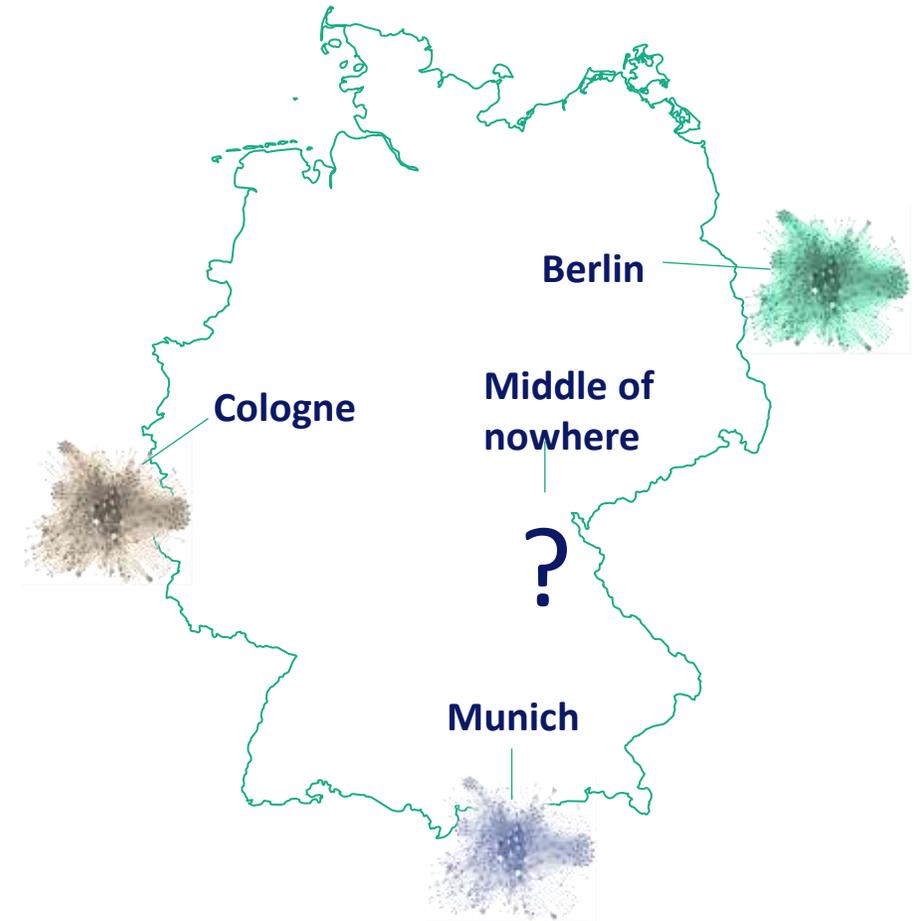


Concerns regarding the use of AVM

- Mostly used for overall automated valuation
- Imprecise for more complex properties
- Garbage in, garbage out (i.e. areas with few data available)
- Blackbox nature

Standard AVMs

- Classical models (regressions) assume spatial homogeneity, i.e., spatial independence and thus the global validity of the coefficients.
 - Only linear relationships
- Either single AVM for every city or poor performance in regions with few data



Using AVMs to gain insights instead of full valuations

- Making relationships transparent
- Explain market mechanisms
- By this, creating a use case also for commercial properties

Gravitational model (potential model)

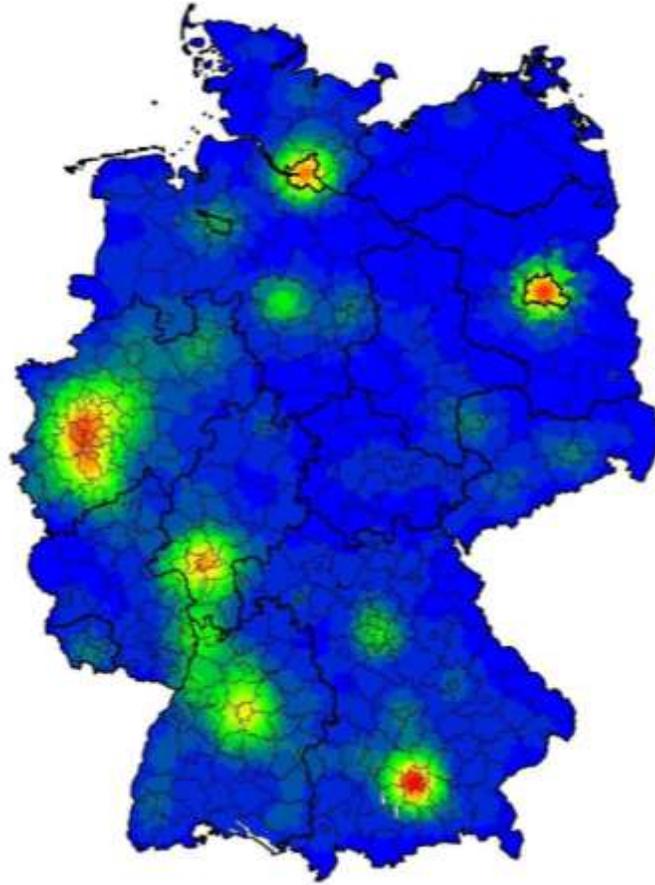
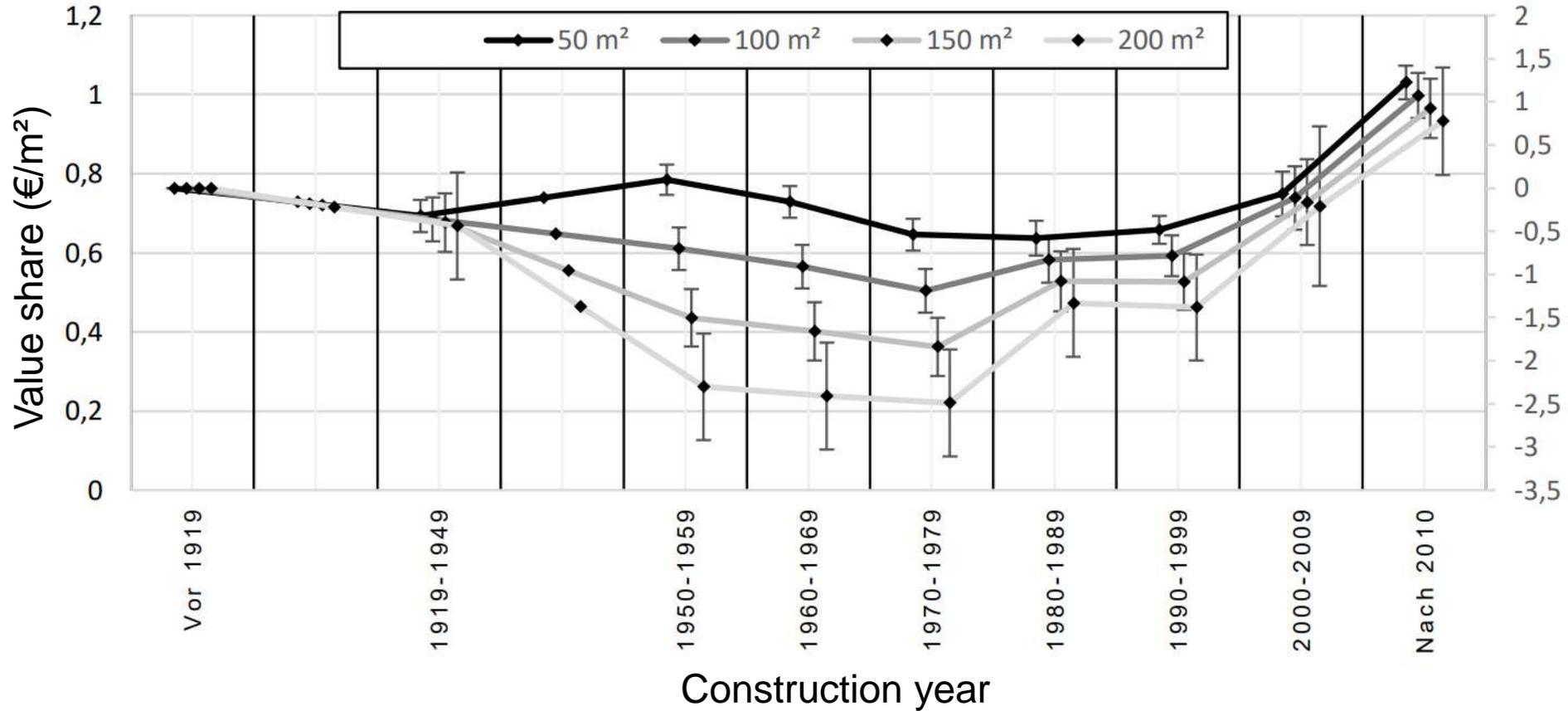


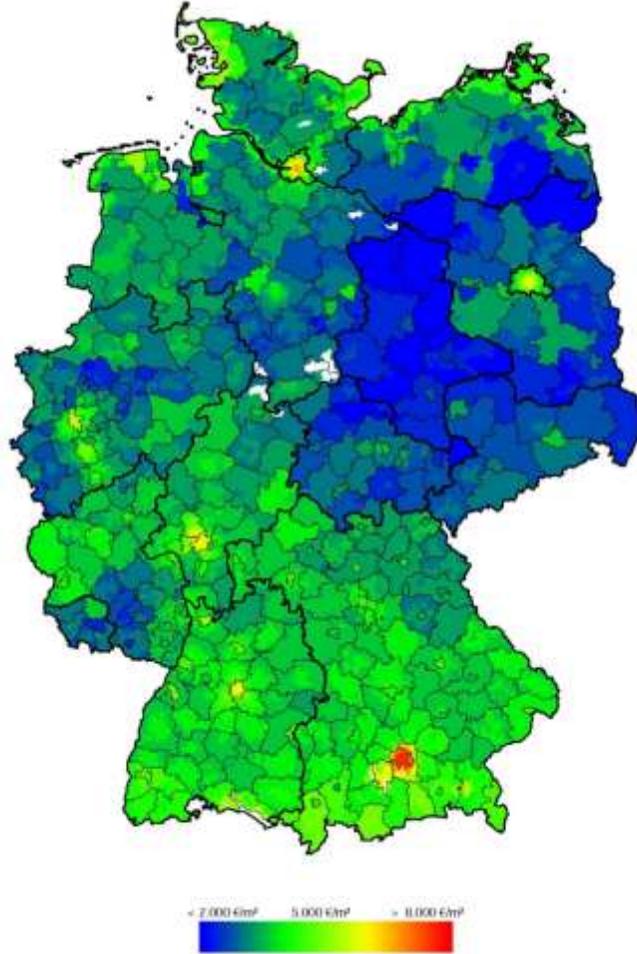
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Housing Prices In Germany



Conclusion

- Rather than replacing human appraisers, AVM can be valuable tools for them
- Can be used to
 - Gain insights into market mechanisms
 - Give fact-based explanations
 - Accelerate the appraisal process