

REAL ESTATE AND ITS DATA RESPONSIBILITY FOR THE FUTURE

**REAL
ESTATE
LAB**

White Paper
by
DVW e.V.





REAL ESTATE AND ITS DATA

RESPONSIBILITY FOR THE FUTURE

Real Estate Lab @INTERGEO 2025 – White Paper by DVW e.V.

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Real Estate Lab @INTERGEO 2025

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EXECUTIVE SUMMARY

Germany has one of the densest real estate data landscapes in Europe – and systematically exploits it below its potential. Not because data is lacking, but because it is fragmented, insufficiently accessible, and not designed to meet the demands of a data-driven economy.

The Real Estate Lab @INTERGEO 2025 turned this gap into the starting point for a structured professional initiative: experts from geospatial information, the real estate sector, public administration and academia jointly developed an inventory, formulated concrete demands and produced an implementation concept. This white paper documents the results and addresses them to policy-makers, public authorities and the professional community.

Diagnosis. The extended concept of real-estate-market-transparency in this white paper encompasses three core dimensions: *legal relationships* (who is the owner, what encumbrances exist), *property characteristics* (use, condition, energy consumption, location) and *market behaviour* (price formation, vacancy, speculation) (cf. Section 1.2). The underlying data exists – in cadastral and geospatial information systems (ALKIS as the core technical resource), in the land register, in purchase price registers and in municipal planning systems. However, it is neither linked nationwide nor uniformly accessible. Four structural deficits prevent effective use: legal fragmentation across 16 federal states with far-reaching standardisation deficiencies, the absence of a rental price register, a systematically distorting share deal gap, and a disclosure obligation under § 197 of the Federal Building Code (BauGB) that is factually ineffective (see Sections 2 and 3.3 in detail).

Five core demands. The Real Estate Lab formulates five fields of action that are mutually dependent; omitting individual elements compromises the functioning of the overall system:

1. **Mindset shift** (Section 7.1): Real estate data is strategic infrastructure, not an administrative by-product. Political leadership responsibility at federal and state level is the prerequisite for all further steps. This applies equally, in advance, to senior administrative levels of the responsible authorities and to the responsible executives of private-sector companies.
2. **Legal modernisation** (Section 7.2): §§ 192–199 BauGB must be fundamentally reformed. Priority elements: statutory rental price register, share deal reporting obligation, Federal Coordination Office of the property valuation committees (new § 192a BauGB) and digital land register access. The 2026 BauGB reform **or reforms following shortly thereafter** is/are the central window of opportunity.
3. **Technical interconnection** (Section 7.3): ALKIS (Official Real Estate Cadastre Information System) as the base register for a nationally uniform real estate data infrastructure; standardised APIs as access points for business, government and research; machine-readable core data model.
4. **Access harmonisation** (Section 7.4): A nationally uniform licence model, transparent fee structures and standardised research access – differentiated by type of use, not by federal state. Goal: a national one-stop shop for official real estate data.
5. **Quality assurance** (Section 7.5): Binding standards for currency, completeness and consistency; AI readiness as a mandatory metadata field; annual quality report of the Federal Coordination Office.

Why now. Two external requirements substantially limit the available timeframe for action: the EU Anti-Money Laundering Directive (2024/1640) obliges Germany to establish a central access point for real estate information by 10 July 2029 – this deadline is fixed by EU law (cf. Sections 5.3 and 7.7). At the same time, AI development opens a time window of at most five years: anyone wishing to deploy AI-supported market analyses based on official transaction data by 2030 must invest in data standards and infrastructure today (cf. Section 2.4). The fact that the national database for the overall energy performance of buildings required under Art. 22 EPBD (EU Buildings Directive 2024/1275) still does not exist even after the implementation deadline of May 2026 has passed, illustrates Germany's considerable need to catch up in building an interoperable and future-proof real estate data ecosystem (cf. Section 2.3).

Outlook. The Real Estate Lab is not conceived as a one-off discussion forum, but as the launch of a structured process in which professional expertise is translated into politically effective demands and pursued. Expert groups on law/governance, technology/standards and access/quality, an institutional coordination point and the Real Estate Lab @INTERGEO 2026 in Munich are the next steps (cf. Section 8.3). The international role models – Netherlands, Sweden, France, Serbia – demonstrate that the challenge is not technical but political-administrative (cf. Section 4).

1 BACKGROUND AND CONTEXT

1.1 The Real Estate Lab @INTERGEO: Concept, Goals and Participants

The underlying idea of the Real Estate Lab grew out of a long-standing and today particularly consequential observation. The following can be noted: real estate valuation, the real estate market and real estate information are inseparably linked – yet in Germany they have traditionally been treated and discussed in isolation. Those working in geospatial information not infrequently declare that they have nothing to do with the real estate market and property values; those who assess property values point to methods and regulations that cover their own needs; those who observe and discuss the real estate market do not concern themselves with the values of individual properties. This situation is historically explicable, but can no longer be justified professionally – economically, ecologically or socially.

DVW e.V. (German Association for Geodesy, Geoinformation and Land Management), the **GDI-DE Economic Council** (German Spatial Data Infrastructure) and **Hinte Expo & Conference GmbH** developed an initiative: to bring together experts from both worlds, to articulate mutual requirements and to develop shared solutions for a more economically and socially beneficial use of real estate data, while progressively raising this work to an international standard of comparison. The goal is not another concept paper, but a mindset shift – from institutionally fragmented responsibilities to a cooperatively shared governance responsibility for a capable real estate data infrastructure as the structural foundation of social and economic development in Germany.

The first **Real Estate Lab 2025** took place in September 2025 as part of **INTERGEO** in Frankfurt – the world's largest conference and exhibition of the geospatial community. Invited participants included representatives from business and public administration, among them Esri Deutschland, VALUE AG, Fahrländer Partner AG, Scout24 SE, ZIA e.V., and Deutsche Bank, as well as public

authorities and academia – AdV, BKG, BBSR, GDI-DE, the Frankfurt Property Valuation Committee, the Ministry of the Interior and Construction of Mecklenburg-Vorpommern and Mainz University of Applied Sciences – plus international guests: IVSC, NSPS (USA) and Waarderingskamer (Netherlands). This composition reflects the initiative's intent: all actors are needed to close the data gaps that no single actor can close alone.

1.2 Real Estate Data as a Strategic Resource – an Extended Concept of Valuation and Transparency

In this white paper, real estate valuation is not understood in the narrow sense of market value assessment under § 194 BauGB (Federal Building Code), mortgage lending value determination under the BelWertV (Mortgage Lending Value Ordinance) or tax-related appraisal, but as a comprehensive concept: it is the evidence-based assessment of the **utility** of real estate, the associated **risks** and its **social role** – e.g. in the economy, in science, in the state, and in relation to citizens, while also encompassing the psychological significance of real estate for individuals and thereby for society as a whole. A new, more comprehensive five-dimensional concept of valuation is therefore introduced (Fig. 1).

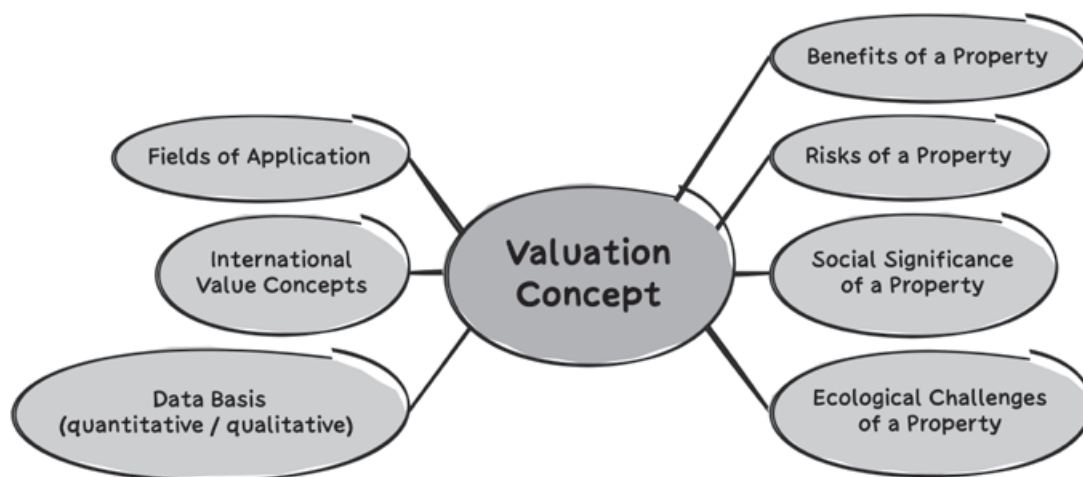


Fig. 1: Comprehensive Concept of Valuation
(Source: Real Estate Lab @INTERGEO 2025, Figure: P. Ache)

Fig. 1 illustrates the five dimensions of this extended concept of valuation. It describes the current fundamental prerequisites and their interconnections: **valuation in the comprehensive sense** encompasses the assessment of the **utility** of a property (suitability for use, development potential, locational quality), the capture of its **risks** (market, climate and legal risks) and the analysis of its **social role** (significance for individuals, housing provision, land policy, investment management). Added to this are, on the one hand, the required consideration of the **international concept of value**, since real estate markets in Germany are no longer self-contained systems at local, regional or national level. Institutional investors, capital flows and valuation standards cross borders. International frameworks such as the IVS (International Valuation Standards of the IVSC), the RICS Red Book Guidelines or the European Valuation Standards (TEGoVA/EVS) provide orientation, but presuppose functioning data infrastructures. Without comparable, internationally compatible data, Germany loses attractiveness and credibility as a real estate location. On the other hand, the **data basis (quantitative and qualitative)**: precise, evidence-based valuation (in the broad sense) – whether

of individual properties, sub-markets or the real estate market as a whole – requires that sufficient comparable transactions, complete property characteristics and reliable time series are available. This prerequisite is also indispensable for estimating and subsequently evaluating the success of policy decisions: at federal level (e.g. rent controls, KfW subsidies, property tax reform), at state level (housing support programmes, regeneration areas, thermal planning) and at municipal level (pre-emption rights, the use of heritable building rights (Erbbaurecht), land funds, changes to development plans). Without empirically robust impact measurement, state action in the field of real estate policy remains structurally without regulatory feedback.

To achieve a concrete and active realisation of the extended concept of valuation that today's requirements demand, transparency in the real estate market plays an important role. However, this term is often used diffusely and without substantive definition, which makes constructive debate difficult. The FIG Position Paper on real estate market transparency states: "The term is often used in a quite random manner without providing context for its use which undermines any kind of constructive debate. One could be forgiven for thinking that society, politics, and the economy are 'avoiding' a debate about the meaning of this term." (Ache et al. 2024).

It is therefore necessary not only to define the concept of "**Real Estate Market Transparency**" but also to describe it in tangible dimensions. Transparency does not merely mean that purchase prices and transaction volumes are accessible – even though this alone is not taken for granted in Germany – it also means that the data is actually usable by stakeholders for their respective tasks. Fig. 2 illustrates the six dimensions that, alongside accessibility – which should by now be considered self-evident – make up a robust concept of transparency.

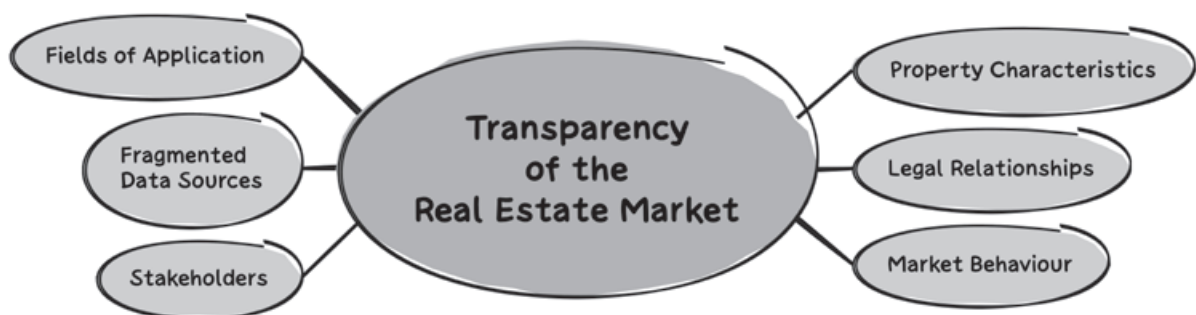


Fig. 2: Real Estate Market Transparency – Dimensions and Areas of Influence
(Source: Real Estate Lab @INTERGEO 2025, Figure: P. Ache)

The substantive core consists of three dimensions: **legal relationships** (who is the owner, what encumbrances and rights exist, what trust structures conceal economic owners), **property characteristics** (use, age, size, condition, energy consumption, location in the planning context) and **market behaviour** (price formation processes, market power, vacancy, speculation). Only by linking these three dimensions is it possible to make reliable assessments of markets, risks and policy measures.

This data fundamentally exists – in cadastral and geospatial information systems (ALKIS as the core technical resource), in the land register, in the purchase price registers of the property valuation committees, in energy performance certificate registers, in municipal planning systems. However, it is neither linked nationwide nor uniformly accessible: **fragmented data sources** across 16 federal

state levels, without or with only restricted automated exchange and without or only partially implemented shared standards, prevent effective use.

The uses of this data – the **fields of use** – range from investment security and lending through housing market monitoring and subsidy evaluation to combating money laundering and assessing external security risks. Real estate market transparency thus touches virtually every area of the economy, public administration, research and society.

Ultimately, what is decisive for change is who bears responsibility: **stakeholders** from public authorities (BKG, AdV, ministries), private companies (banks, data providers, project developers) and national as well as international associations (DVW, ZIA, IVSC, RICS, TEGoVA, CLGE) must act jointly. Neither public institutions alone nor the market alone will create the necessary structures.

1.3 Between Insight and Action: Why Change Is Not Happening

Germany has a remarkably dense and qualitatively sound data landscape for real estate – cadastral and geospatial information, land registers, purchase price registers of the property valuation committees, standard land values, rent indices, energy performance certificates and development plans. The problem lies not in a lack of data, but in its fragmentation, incompleteness and insufficient digitalisation. The cause is structural: as a federally constituted state protected by the Basic Law, Germany holds these records across 16 state jurisdictions and around 400 municipal property valuation committees – without automated exchange, without a uniform standard, without a central register. The legal-federal and the technical dimension of this fragmentation are addressed centrally in Section 2.3 (interoperability deficit) and Section 3.1 (nationally uniform regulation despite federalism); what stands at the centre here is the prior question: why is the need for action – long recognised – not being translated into action?

The central barrier to using real estate data is not the quantity or indeed the quality of available information – it is making it usable. Heterogeneous formats, missing metadata and still-manual provision processes prevent automated processing. Valuation processes that could in principle be fully digitalised are slowed by media discontinuities or are partly still conducted in analogue form, or are simply not possible at all.

Within the professional community there is broad consensus: the technical prerequisites exist, professional expertise in academia, public administration and business exists, and a primary knowledge deficit can barely be identified in the view of the professional community. The key obstacles lie elsewhere – in lagging organisational structures, unclear and sometimes conflicting responsibilities, insufficient resources for building structured digital data management, and a lack of strategic prioritisation.

Three patterns explain the absence of change: *First*, **institutional inertia** – public authorities and companies optimise their own data management, not interoperability. *Second*, **flawed logic of benefit** – the repeatedly refuted but psychologically understandable notion that exclusive control over data secures a competitive advantage. In the short term this logic may hold; in the long term it inhibits innovation and undermines the collective performance capacity of the market. *Third*, the **absence of a capable state** as coordinator: without binding statutory requirements, without clear governance structures, without financial prioritisation, every initiative remains isolated.

The Real Estate Lab sees itself as a contribution to overcoming this deadlock. It stands for the will to develop solutions jointly – not to wait for complete harmonisation, but to combine pragmatism with strategic perspective. **Act now, rather than waiting for optimal conditions.** The diagnosis that follows (Section 2) sets out in concrete terms the structural deficits at which this action must be directed.

2 DIAGNOSIS: REAL ESTATE DATA IN GERMANY – POTENTIAL AND OBSTACLES

Fig. 3 provides an overview of four diagnostic fields, elaborated in detail in Sections 2.1 to 2.5: from structural efficiency and quality problems through missing market transparency and a fragmented data landscape to the serious data gaps in rental prices and share deals, and the requirements of an AI-capable infrastructure. The diagnosis is unambiguous: the problem lies not in a lack of data, but in its insufficient linkage, incomplete coverage and missing legal foundations.

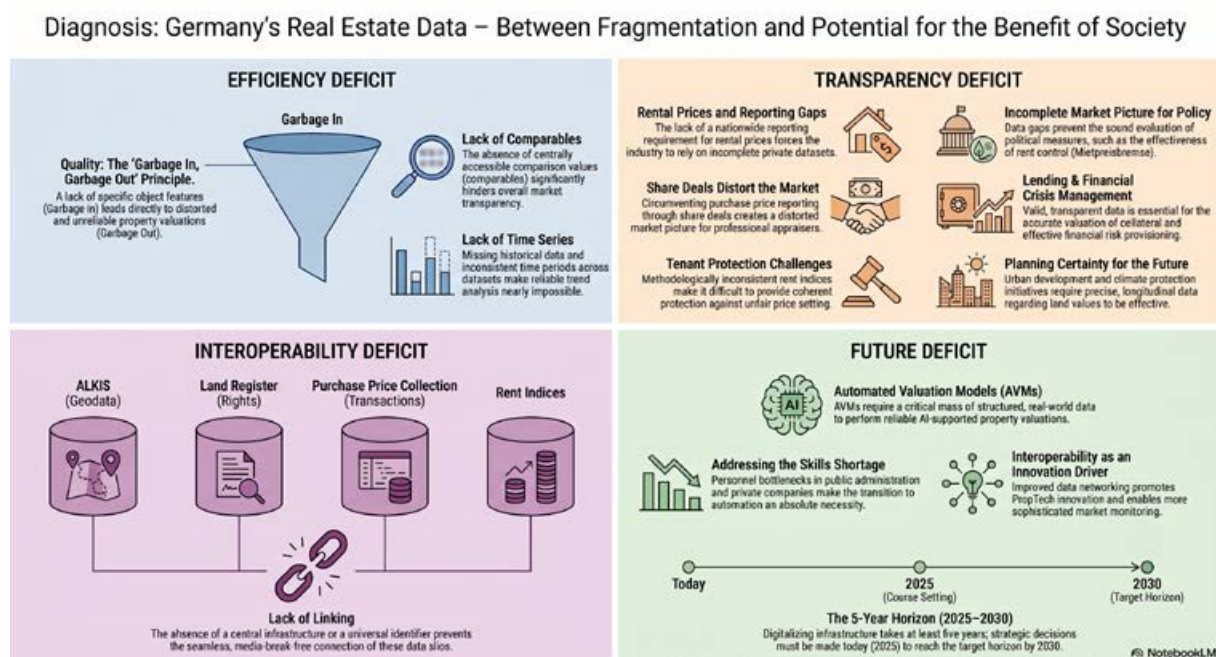


Fig. 3: Diagnosis – Germany's Real Estate Data: Between Fragmentation and Potential for the Benefit of Society

(Source: Real Estate Lab @INTERGEO 2025, Figure: P. Ache via NotebookLM)

2.1 The Efficiency Deficit

The core finding of the Real Estate Lab can be summarised in one sentence: Germany's real estate data exists, but is barely usable even by the state itself, and even less so by citizens, research and the business sector. This is not a technical problem but a structural one – and it has consequences that extend far beyond individual valuation commissions for properties.

Efficiency here does not refer to speed in a superficial sense, but to the capacity of a market to correctly process information, translate it into prices, and accurately identify price-influencing factors. An efficient real estate market requires that comparable data – **comparables** – are available in sufficient quantity, currency, representativeness and quality. In Germany, this is structurally not well ensured. The purchase price registers of the property valuation committees provide the methodological core of the comparative value method, but they are neither homogenised nationwide nor centrally accessible. Anyone seeking reliable, supra-regional comparable prices – e.g. for hotels, office properties or care facilities – encounters 16 state-level organisations, differing disclosure regulations and heterogeneous data depth.

Quality is the second challenge. The informative value of any valuation model – whether traditional or AI-supported – is limited by the quality of the underlying data. If certain property characteristics (e.g. fit-out standard, energy condition) are systematically absent, the result is structurally distorted without this being detectable from the model itself. Missing or inconsistent metadata multiplies this effect.

Forecasting capability finally requires that time series are available – not merely snapshots, but historical data depth enabling trend statements. For many sub-markets in Germany these series are missing, because purchase price registers are regionally limited and evaluation periods have not been harmonised. For an evidence-based real estate economy and administration this is a serious disadvantage that strongly limits both decision-making and evaluation possibilities.

2.2 The Transparency Deficit

Real estate data is not a neutral technical matter. It underpins decisions with considerable macroeconomic consequences: lending, valuation of collateral, urban planning, subsidy programmes, housing market monitoring. Anyone taking these decisions without a robust data basis risks systemic errors – in minor matters as well as major ones.

Market transparency in this context aspires to enable as complete a market picture as possible for all market participants and stakeholders. It thus constitutes a fundamental prerequisite for a functioning real estate market. Moreover, market transparency protects investors from unforeseeable risks, tenants from arbitrary pricing, municipalities from inflated land prices in public purchases and the state from the misuse of public subsidies.

Risk analysis requires that credit and investment decisions are based on valid market data. The financial crisis of 2008 demonstrated what happens when real estate risks are systematically underestimated – and showed that this error is not confined to a single country. In Germany, lending decisions are made on the basis of mortgage lending value assessments that are methodologically sound but rest on a fragmented data supply. The consequence is scope for valuation discrepancies that would be narrowed in other markets by better availability of comparables.

Rental prices represent the most serious data gap: while purchase prices are at least captured by the local property valuation committees, no nationwide data basis exists for the rental market. Rent indices are the only public instrument, but cover only existing rental agreements, are locally restricted and methodologically inconsistent. Asking rents from commercial portals provide signals, but not representative market data. The result: anyone wishing to analyse the rental market – for investment decisions, rent law, subsidy evaluation or social research – is dependent on incomplete,

commercially dominated sources. Given that more than half of Germany's population lives in rented accommodation, this is particularly questionable.

Share deals are the second structural problem. When company shares with real estate ownership are transferred instead of the properties themselves, no purchase price reporting obligation arises – this transaction escapes the purchase price register entirely. For large-scale projects and institutional investors this route is attractive: property transfer tax does not apply to such transactions. The market picture of the property valuation committees is thereby systematically distorted. Precisely in the upper segments – where political and macroeconomic relevance is greatest – the gaps are largest.

Planning certainty is the third protected interest. Urban development, infrastructure investment and climate protection measures affect land values. Anyone wishing to evaluate housing subsidies or quantify the effects of infrastructure projects on property prices needs longitudinal data and spatial differentiation. Both are today only limitedly available in Germany. This substantially constrains the capacity for action of the public sector – and makes it difficult to assess whether state measures achieve their goals.

2.3 The Interoperability Deficit – A Fragmented Data Landscape

Germany's real estate data landscape is rich – and dispersed. The most important sources exist, but are not systematically interlinked: none routinely accesses the others, because shared identifiers, interfaces and standards are lacking. A survey of the relevant data categories shows what exists and where the connecting points are missing.

Cadastral and geospatial information forms the spatial foundation: ALKIS (Official Real Estate Cadastre Information System) provides comprehensive, current geospatial base data with property and ownership geometries. It is technically the backbone of every spatially referenced real estate analysis. Topographic maps, digital terrain models and orthophotos complement it. These data are available in all federal states, but with pricing models, usage rights and interfaces that vary from state to state. Statistically speaking, these data represent the total population of properties to be valued across spatial and substantive sub-markets. **the purchase price registers are to be understood as a sample of property values.**

The **land register** documents legal relationships: owners, encumbrances, easements, mortgages. It is legally binding and regulated under federal law, but administered under state law – and in some cases not yet fully digitalised. The right of inspection is narrowly defined: those who cannot demonstrate a legitimate interest are denied access. This prevents systematic evaluation for market monitoring, anti-money laundering purposes or investment controlling.

Purchase price registers of the local property valuation committees are the methodological heart of real estate valuation in Germany. They contain transaction prices together with property characteristics and other purchase circumstances – the comparables indispensable for the comparative value method. At national level there is no central aggregation of these data. The BORIS platforms (Standard Land Value Information System) provide **standard land values**, not the raw transactions. Nationwide accessibility, as e.g. in the Netherlands or Denmark, does not exist.

Rent indices are legally required (§§ 558c, 558d BGB), but methodologically heterogeneous and spatially limited to individual municipalities. A nationwide rental price register does not exist as official recording. The BBSR (Federal Institute for Research on Building, Urban Affairs and Spatial Development) maintains a municipal rent index collection providing a nationwide overview on a continuously updated basis, but this does not meet current requirements.

Energy performance certificates are held by the German Institute for Construction Technology (DIBt) but are not accessible for external evaluation. **Development plans** and land use plans are only sporadically available in digital form – despite years of effort to establish a uniform exchange standard.

Germany's delayed move towards a modern and capable real estate data economy is further illustrated by the **EU Buildings Directive EPBD** (2024/1275): the national database for the overall energy performance of buildings required under Art. 22 still does not exist as of the implementation deadline in May 2026. While the EU is moving towards interoperable and machine-readable building ecosystems, Germany was still in the process of building corresponding structures in early 2026. The central implementation obstacle here too is the persistent fragmentation of energy performance certificate, cadastral, consumption and building data.

In this context, the Buildings Performance Institute Europe (BPIE) in its study “Coordination requirements for an integrated building database in Germany” focuses particularly on the political process level. Key recommendations include clarifying responsibilities at ministerial level and placing the topic of building data on the political agenda of the IT Planning Council (responsible for modernising registers, with representatives from federal and state levels) (BPIE 2026).

The digital association Bitkom, in its statement on the 2026 BauGB reform, points to a structurally related gap: data generated over the lifecycle of a property – building permit, BIM planning, cadastral data, energy performance certificate, materials passport – is currently not aggregated anywhere. Bitkom therefore calls for a **digital building file** integrating all relevant data points across the entire building lifecycle – including cadastral data, a **digital twin** and a **digital building materials passport**. This means the digital economy too identifies the missing linkage infrastructure as the central structural problem (Bitkom 2026).

The initiative “Made in Germany 2030” – supported by actors from the financial and real estate sectors, including the Banking Associations like vdp, the Sparkassen Financial Group, ZIA, DKB and ING – submitted a concept paper on a national data availability strategy to the Federal Ministry for Digital Affairs and State Modernisation (BMDS) in May 2026. For the building sector, the finding is identical to that of this white paper for the real estate market: “In Germany there is currently no central database for important consumption and condition information in the building sector. [...] These data repositories are highly uncoordinated, in separate silos, often as PDFs, in heterogeneous formats, or not machine-readable at all.” The initiative calls for a federated, wallet-capable data architecture based on the eIDAS Regulation – decentralised data storage with standardised interfaces, verifiable credentials and a “building wallet”. A **building wallet** is a standardised digital data container uniquely assigned to an individual building, aggregating all relevant property data – from the building permit through the energy performance certificate to cadastral and transaction information – across the entire lifecycle. It is based on the eIDAS framework for trustworthy digital identities and enables owners, authorities, banks and insurers to have controlled, standardised access to these data without requiring centralised data storage. The convergence of both diagnoses shows: data fragmentation is not a specificity of the valuation sector – it is the structural root

problem of a data policy that places sectoral silos above interoperable ecosystems (Made in Germany 2030, 2026).

The result: a data landscape without a **connecting link**. No linkage infrastructure, no shared identifier, no nationwide standard. The key lies in building a data architecture that connects these sources without abolishing federal responsibility. **Interoperability** denotes precisely this capacity: linking data from different sources such that their combined informational value exceeds the value of their individual parts.

In practice, interoperability fails at three levels: semantic incompatibilities (same terms, different definitions), technical barriers (different formats, interfaces, APIs) and legal usage hurdles (different licence models, restricted usage rights). Cadastral and geospatial information is technically of high quality and available nationwide – but its legal terms of use vary considerably between states. A nationwide data platform for real estate data built on these geospatial data is therefore not primarily a technical but a governance challenge. The legal-federal dimension of this fragmentation – responsibilities, interstate treaty, nationwide uniform regulation – is addressed centrally in Section 3.1.

2.4 The Future Readiness Deficit

Among all future topics of the Real Estate Lab, none is more urgent than the question: how must the data infrastructure be designed so that Germany can conduct AI-supported market analyses on usable data foundations in five years' time? **Automated Valuation Models (AVMs)** are already established internationally. In countries with centralised data infrastructures – e.g. the Netherlands, Australia, Sweden – AVMs deliver mass valuations for tax purposes, lending and market monitoring. They do not replace valuers, but offer a complement to their work: for mass evaluations, portfolio analyses and initial estimates, for example. The international framework is already being set by the **IVSC** (International Valuation Standards Council), which recognises AI-supported valuation methods as a regular methodology, but links this to quality and transparency requirements.

A valid **data basis** is the central, methodologically non-substitutable prerequisite. AVMs and machine learning methods require a critical mass of structured, complete, nationwide uniform transaction data. A model trained on the basis of fragmented purchase price registers, missing rental data and incomplete property descriptions produces structurally flawed results.

Alongside the opportunity, the use of AI opens a new class of methodological and legal challenges. The decisive dividing line runs not between AI and non-AI, but between methodologically robust and methodologically vulnerable applications. **Automated Valuation Models (AVMs)** based on hedonic price models or machine learning algorithms are embedded in regulation and internationally recognised – provided they are based on transaction data from the property valuation committees (§ 9 para. 1 ImmoWertV), not on data from asking price portals. **Generative AI tools** (LLMs) typically produce non-deterministic outputs, which places them in tension with the principle of reproducibility under German expert opinion law (§ 412 ZPO; BGH NJW 2014, 71). The US ruling *Matter of Weber* (Surrogate's Court Saratoga County, 2024 NY Slip Op 24258) illustrates the reach of this problem: an expert who used Microsoft Copilot to calculate property damage saw his opinion rejected – the judge received three different results from three identical queries. The court thereby formulated a **disclosure obligation for AI use**: “Counsel has an affirmative duty to disclose the use of artificial intelligence.” Reproducibility, disclosure and a correct data basis are thus the central regulatory levers – for the German market as well as internationally.

Value creation through data is no utopia. Countries such as the Netherlands, Denmark or Australia demonstrate that a networked data infrastructure attracts private investment in analysis, advisory services, PropTech and financial products that would not be possible without this foundation. The public sector benefits: through better market monitoring, higher tax revenues and less misdirected subsidy spending.

An often underestimated dimension is the **shortage of skilled professionals** in the digital real estate sector. The public administration – property valuation committees, surveying authorities, urban planning offices – is doubly affected: by the general decline in public sector employment and by a particularly acute shortage of IT and data skills. Three recent studies quantify the deficit. The dbb Monitor puts the employment gap in the public sector at around 570,000 positions, including 39,000 in IT occupations, and projects up to 140,000 missing IT specialists by 2030 (dbb 2025). The IW Cologne counts approximately 133,000 unfilled positions nationwide in digitalisation professions, including 18,655 in IT, data and artificial intelligence (IW Cologne 2025). The IfW Kiel notes that the demographic tailwind is running out and the skills gap is growing structurally – with particular significance for knowledge-intensive activities in public administration (IfW Kiel 2024).

The decisive argument is temporal: **Building an AI-capable data infrastructure requires, in experience, at least five to ten years** – for standardisation, digitalisation, quality assurance and the building of historical time series. Anyone wishing to conduct AI-supported market analysis by 2030 must set the course in 2025. Every year of delay shifts this horizon by a further year.

2.5 Conclusion: Structural Deficit and Mandate for Action

The diagnosis is unambiguous. Four central deficits characterise the German real estate data landscape:

1. **Efficiency deficit:** Purchase price registers are regionally fragmented, not homogenised, and insufficiently accessible for supra-regional comparisons.
2. **Transparency deficit:** Rental prices and share deals remain systematically invisible – the market picture is thereby structurally distorted.
3. **Interoperability deficit:** Numerous real estate data sources exist, yet they remain unconnected. Federal structures prevent uniform data access and delay standardisation processes.
4. **Future readiness deficit:** Without coordinated investment in standardisation, skilled professionals and AI readiness, Germany will fall behind international developments.

These deficits have political consequences. Without complete market data, evidence-based housing policy is not possible. Without reliable time series, subsidy programmes cannot be evaluated. Without interoperable systems, an AI-capable infrastructure cannot emerge. The data question is not an administrative detail – it is a fundamental policy decision.

The Real Estate Lab sees itself as a contribution to overcoming this situation. Section 3 examines which legal framework overcomes these deficits. Section 7 formulates the concrete fields of action.

3 THE LEGAL FRAMEWORK AND WHAT IT MUST DELIVER

3.1 Nationally Uniform Regulation Despite Federalism

The structural core problem of the German real estate data landscape is not technical but legal in nature. The data sources decisive for transparency and market functionality are distributed across two regulatory levels that are not coordinated with each other.

At federal level, the Federal Building Code (§§ 192–199 BauGB) regulates the property valuation committee system: management of the purchase price register, derivation of standard land values, market reporting and disclosure obligations towards third parties. The federal legislature can modify this framework – and is doing so in part with the draft bill for the 2026 BauGB reform. However, the reach of this instrument is limited.

At state level lies sovereign authority over cadastral and geospatial information. The management and use of ALKIS – the Official Real Estate Cadastre Information System – is regulated by the surveying and cadastral laws of the 16 federal states, each with its own fee models, usage rights and technical interfaces. Nationwide uniform usability of these data cannot be achieved without an interstate treaty between the states or an amendment to the Basic Law. § 199 BauGB (Authorisations) has a similar effect in the property valuation committee sector; it ensures that the states are responsible for the concrete implementation of the nationally uniform regulations in the relevant paragraphs of the BauGB and the Real Property Valuation Ordinance (ImmoWertV). That sixteen different interpretations of the legal norms arise in some areas is obvious, but leads to an inconsistent picture and in some areas to constitutional problems that typically emerge in connection with tax assessments (see also BVerfG 2018 on the property tax).

The land register is finally subject to state judicial administration, regulated at federal level by the Land Register Act (GBO) but administered under state law. The right of inspection is narrowly defined: those unable to demonstrate a legitimate interest are denied access. Systematic evaluation for market monitoring, anti-money laundering purposes or investment analysis is thereby legally precluded.

The result: sixteen data holdings without or with very limited automated exchange, no uniform standard, no nationwide accessible purchase price register for the real estate market and no rental price register at all – even though more than half of Germany's population lives in rented accommodation (Fig. 4). Federalism, however, is not the problem – it is the framework within which solutions must be found. That this is possible is demonstrated by, for example, the SAPOS model of the Working Committee of the Surveying Authorities of the German States (AdV): nationwide uniformity through voluntary coordination, without loss of state sovereignty (cf. Section 7.2). At the same time, state law offers testing grounds: some states (e.g. Berlin) have developed pilot solutions in the area of data provision that could serve as a model nationwide.

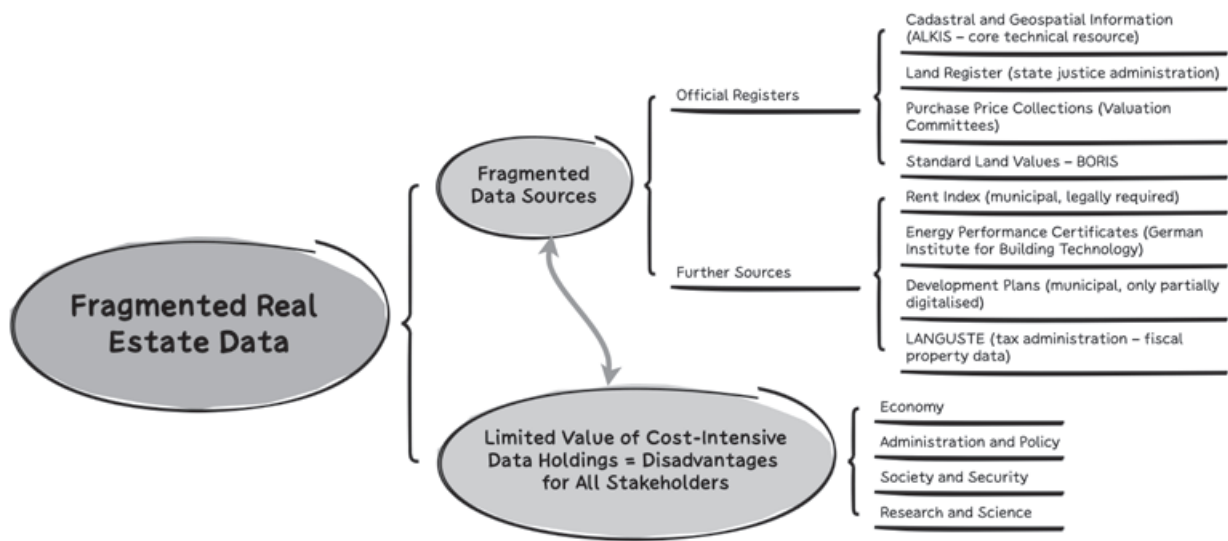


Fig. 4: Fragmented Real Estate Data Leads to Cost-Intensive Data Management and Simultaneously Restricted Benefit

(Source: Real Estate Lab @INTERGEO 2025, Figure: P. Ache)

3.2 The Property Valuation Committee System: Strengths and Structural Limits

The property valuation committee system is the institutional – and since 1960, statutory – backbone of German real estate market monitoring. Around 400 property valuation committees currently maintain purchase price registers at municipal and district level or across district boundaries, assess standard land values and publish real estate market information. Market information is generally published in the form of biennial, annual and in a few cases sub-annual market reports. At state level, upper property valuation committees or central offices in some cases consolidate this data and produce supra-regional market reports. The system has grown historically, is methodologically mature and is well-regarded within the professional community.

The strengths of the property valuation committee as an institution are acknowledged in the field: extensive local knowledge, methodological depth in traditional valuation, legally secured processing of privacy-sensitive purchase price data, and local professional expertise developed through years of practice. The purchase price register is the only public-law data source that captures georeferenced transaction prices with property characteristics – and thus the methodologically indispensable basis for comparative value methods, capitalisation rates and AI-supported valuation methods.

The structural limits are equally evident.

First: **fragmentation**. Around 400 property valuation committees mean 400 local data holdings, in some cases without automated exchange and without nationwide aggregation meeting current requirements. Even the Immobilienmarktbericht Deutschland (German Real Estate Market Report of the property valuation committees), published every two years, is no longer up to date in this respect. Anyone requiring supra-regional comparable prices – e.g. for sports facilities, photovoltaic

areas or logistics properties – encounters 16 state-level organisations with different fee regulations, access arrangements and heterogeneous data depth.

Second: **resource constraint from the expert reports obligation.** The law obliges property valuation committees to produce individual expert opinions (§ 193 para. 2 BauGB). This task ties up personnel that would be needed for the priority task of managing the purchase price register – in times of skills shortages, a serious structural problem, even though the expert opinion system in Germany has changed considerably since 1960.

Third: **missing AI readiness.** For machine learning methods and automated valuation models, both nationwide homogenised, fully machine-readable data structures and the necessary qualifications and expertise at implementation level are lacking.

The draft bill of the BMWBS (Federal Ministry for Housing, Urban Development and Building) “Law on the Modernisation of Urban Development and Spatial Planning Law” of 1 April 2026 (BMWBS 2026) acknowledges these problems in part: § 192 para. 1 anchors real estate market transparency as a statutory goal; § 193 (new version) moves the purchase price register to the foreground as the core task. This is a right step – but not a sufficient one. DVW e.V. has commented on this comprehensively and critically (DVW e.V. 2026).

Bitkom also assesses the BauGB reform in its April 2026 statement as pointing in the right direction but incomplete: “The draft contains important approaches but in some areas falls short of existing needs.” Specifically, Bitkom demands the complete digitalisation of the development plan procedure using the mandatory standard **XPlanung** and interface-open administrative portals for building applications and permits – subject to Digital Government Act obligations from 2028. These demands align with the Real Estate Lab’s requirements for interoperability and freedom from media discontinuities and show: the critique of the reform’s scope formulated in this white paper is not a lone voice (Bitkom 2026).

3.3 Addressing Structural Deficits: §§ 192–199 BauGB (Valuation) in Focus

The effectiveness of a law depends on its critical regulatory provisions. In the current law – and in the current draft reform of the BauGB – four structural deficits can be identified with regard to the official property valuation committee system that prevent modern real estate market monitoring.

Restricted land register inspection rights. The Land Register Act (GBO) links access to a legitimate interest (§ 12 GBO). What makes sense in individual cases becomes a systemic obstacle: property valuation committees are generally unable to retrieve the owner data necessary for a complete purchase price register on an automated basis. A nationwide networked real estate data infrastructure is inconceivable without a modernisation of inspection rights.

Missing rental price register. After Switzerland, Germany has the lowest owner-occupancy rate in Europe (approx. 43–44 %; Eurostat 2023): more than half the population therefore lives in rented accommodation. The purchase price register thereby covers only a small portion of the real estate market. A statutory obligation to maintain a rental price register – analogous to § 195 BauGB – is absent. Rent indices are legally required, methodologically heterogeneous and locally restricted. A nationwide rental price register does not exist. This removes the basis for capitalisation rates, market monitoring and housing policy evaluation. The BBSR has been funding a research project

on nationwide uniform rent reporting since December 2025 (contractor: empirica ag; BBSR 2025) – underlining the need for action that the draft reform leaves unanswered.

Share deal reporting obligation not anchored. When company shares rather than land parcels are transferred, no purchase price reporting obligation arises – the property valuation committee learns nothing of this transaction. In the commercial segment and for large-scale projects this route is structurally preferred: it is tax-efficient (property transfer tax) and circumvents the reporting obligation. The market picture of the purchase price register is thereby systematically distorted.

Disclosure obligation with broadly defined exception clause. § 197 para. 2 BauGB obliges public authorities to disclose information to property valuation committees – but permits refusal in cases of “disproportionate effort”. In practice this exception clause has been regularly and sweepingly invoked; very few requests are actually answered. The disclosure obligation is thus factually ineffective – in direct contradiction to the transparency mandate anchored in § 192 para. 1 BauGB (new version). A further gap adds to this: § 197 para. 1 BauGB does regulate a disclosure obligation of owners and other persons towards property valuation committees, but does not explicitly relate this to the management and evaluation of the purchase price register. This gap too systematically limits data quality.

Scientific access to the purchase price register not regulated nationwide. § 195 para. 3 BauGB permits property-specific information from the purchase price register with a legitimate interest. However, the state-level implementations in practice largely do not provide for corresponding disclosure to universities and research institutions. Universities thus obtain no nationwide uniform access to the raw data indispensable for methodological development and AI research. This has considerable negative consequences for the thorough training of the next generation and for research and development – particularly in the area of AI-supported real estate valuation.

3.4 Public Interest vs. Data Protection:

Where the Public Interest Must Take Priority

The most common objection to greater real estate market transparency is: data protection. This objection deserves to be taken seriously – and equally to be refuted where it is a pretext or where the public interest must take priority.

Data protection protects persons, not markets. The distinction between personal data and market data is decisive: the name of a landowner is personal data. The price at which a piece of land in a particular region, neighbourhood or standard land value zone changed ownership is market data. Both are frequently conflated in public debate – with the result that data protection concerns are deployed as a blanket veto against any form of transparency. Possibly also to grant property valuation committees, which are also active in the private-sector expert opinion market, competitive advantages.

Three areas where the public interest has constitutional weight and structurally outweighs data protection:

Combating money laundering. Real estate transactions remain a preferred channel for money laundering. Concealing economic owners behind trust structures and share deals cannot be uncovered without access to ownership data. The EU Anti-Money Laundering Directive (EU 2024/1640)

demands transparency on economic owners – Germany’s register data is insufficient for this purpose.

Land policy and housing provision. Anyone wishing to manage the land market – through pre-emption rights, land funds or housing subsidy programmes – needs complete market data. Without it, evidence-based land policy is not possible. The Federal Constitutional Court has repeatedly confirmed that **property carries social obligations (Art. 14 para. 2 of the Basic Law)** – state influence on real estate prices through the creation of actual and up-to-date transparency is thereby constitutionally legitimate and dependent on a definition of a contemporary concept of transparency. Where transparency is restricted at this point, there is a risk of misdirected state management, e.g. in tenancy law.

Subsidy evaluation. The effectiveness of state interventions – rent controls, KfW programmes, urban regeneration – can only be measured if market data is available. Anyone who perpetuates subsidy programmes without evidence of their impact acts contrary to the principle of economy in public expenditure.

The legal demarcation is thus clear: protect personal data, open market data. Where market data is provided aggregated, anonymised or at the level of substantive and spatial sub-markets, no interference with personal rights arises – but considerable macroeconomic and social benefit is created.

3.5 Minimum Requirements for a Modern Legal Framework

The diagnosis in Section 2 and the analysis in preceding sections lead to a clear catalogue of demands. A modern legal framework for Germany’s real estate data infrastructure must meet six minimum requirements.

- 1. Statutory anchoring of a rental price register.** Analogous to the purchase price register (§ 195 BauGB), a statutory basis for nationwide recording of rental price data must be created. A complete real estate market monitoring system is structurally incomplete without rental data.
- 2. Introduction of a share deal reporting obligation.** § 195 BauGB must be extended to economically equivalent forms of transfer. Anyone transferring company shares must report a transaction attributable to the purchase price register. The growing dark field must not be permanently tolerated by law.
- 3. Effective enforcement of the disclosure obligation.** The exception clause “disproportionate effort” in § 197 BauGB must be deleted or restricted to narrow, clearly defined exceptions. The statutory transparency goal (§ 192 para. 1 BauGB new version) must not be undermined by a factually ineffective disclosure obligation.
- 4. Institutionalisation of a Federal Coordination Office.** A statutory Federal Coordination Office of the property valuation committees – following the AdV/SAPOS governance model, with supervision by the states and central coordination by a designated state authority – is the organisational prerequisite for a nationwide usable purchase price register. Anyone who does not initiate this step by 2030 will miss the window of opportunity for an AI-capable data infrastructure (cf. Sections 2.4 and 7.1).

5. **AI readiness as a legislative mandate.** The BauGB should contain an explicit mandate for the creation of machine-readable, interoperable data structures as a prerequisite for the use of AI in valuation. Targets for the use of AI, automation and digitalisation in data collection, evaluation and provision must be set in law. Building these structures requires, in experience, five years – the statutory impetus must be set now.
6. **Statutory normalisation of open data access for research.** A nationwide uniform and open regulation for access to the purchase price register for scientific and non-commercial data evaluation must be anchored in the BauGB (further development of § 195 para. 3 BauGB – disclosure of information from the purchase price register). Universities and research institutions require access to property-specific raw data – as an indispensable foundation for methodological development, training and AI research. The example of France shows that such access is legally secure and achievable without disclosing personal data: the Direction générale des finances publiques (DGFIP) has maintained the national database “Demandes de Valeurs Foncières” (DVF) since 2014, which has been freely accessible as open data since May 2019 and contains complete transaction data without buyer or seller names (cf. Section 4).

The 2026 BauGB reform is the concrete parliamentary window of opportunity. It sets important impulses with §§ 192 and 193 BauGB – but falls far short of these six minimum requirements. DVW has addressed these demands in its statement on the stakeholder consultation of 28 April 2026 to the BMWSB (DVW e.V. 2026). Section 7 formulates the concrete fields of action.

4 INTERNATIONAL ROLE MODELS: WHAT GERMANY CAN LEARN

4.1 Comparing Data Infrastructures: Five Countries, Three Models

The international comparison is rather sobering for Germany's situation – not because other countries have found perfect solutions, but because they have solved problems that Germany has been merely discussing for a long time and, unfortunately, still is. Five countries illustrate three fundamental governance models for real estate data infrastructure: the centralised public register (Netherlands, Sweden), open data without personal reference (France) and the commercially dominated system without a public anchor (Switzerland). Serbia shows that countries outside the EU can build functioning digital price registers in a short period of time.

Netherlands. The Dutch *Kadaster* has for decades maintained a centralised real estate transaction register based on notarial purchase deeds. Through the product *Koopsom informatie*, sales prices by address, postcode and sale date have been accessible to everyone since 2003 – updated monthly, from € 3.70 per query. *Kadasterdata.nl* complements this with the *Koopsommenoverzicht*: transaction prices combined with WOZ values, year of construction and price per square metre for surrounding postcode areas.

The **WOZ value** (*Waardering Onroerende Zaken* – valuation of immovable property) is the market value of a property officially assessed annually by Dutch municipalities as of 1 January of the preceding year. It serves as the assessment basis for several levies simultaneously: the municipal

International Role Models in Comparison

Real Estate Data Infrastructure: Six Countries, Three Assessment Dimensions

	Data Access	Institutional Basis	Completeness & Uniformity
 NL Netherlands	 Open Data	 statutory	 nationwide
 SE Sweden	 Open Data	 statutory	 nationwide
 FR France	 Open Data	 statutory	 nationwide
 RS Serbia	 Professional users	 coordinated	 under development
 CH Switzerland	 commercial	 fragmented	 under development
<i>Current status - Germany</i>			
 DE Germany	 Professional users	 statutory / fragmented	 incomplete

Transparency:  high  outdated  not acceptable

Fig. 5: European Countries in Comparison
(Figure and internet based research: P. Ache)

property tax (*onroerendezaakbelasting*, OZB), water board levies, income tax on notional rental income (Box 3) and social policy benefits such as housing allowance and health insurance contributions. Since virtually all Dutch properties receive an annual WOZ assessment, a nationally complete, up-to-date valuation database is created – a foundation that does not exist in Germany despite the property valuation committee system.

Quality assurance for this system lies with the *Waarderingskamer* (Council for Real Estate Valuation), an independent supervisory authority that monitors the correct implementation of the *Wet waardering onroerende zaken* (WOZ Act) by all Dutch municipalities. The *Waarderingskamer* reviews the WOZ values determined by municipalities and the data used for this purpose, sets binding quality standards for valuation methodology and can hold municipalities accountable for failing to meet these standards. For its review, the *Waarderingskamer* uses Automated Valuation Models (AVMs) to validate the consistency and quality of valuations across municipalities. This system – public data infrastructure, legally standardised quality requirements and AVM-supported monitoring – makes the Netherlands the European reference model for state-administered mass real estate valuation.

The model demonstrates: a public register serving both government and private individuals alike is technically and legally feasible – and economically efficient.

Sweden. *Statistics Sweden* (SCB) publishes comprehensive real estate price indices free of charge as part of official statistics under the statistical programme BO0501: monthly and quarterly, resolved at municipal level, with a time series index reaching back to 1981. The *Lantmäteriet* (Swedish Mapping Authority) maintains the property register and makes land information publicly available. The

combination of official property registration and free price statistics makes Sweden an exemplar of market transparency without interference with personal rights: names of buyers and sellers are not published – price data very much are. The time series spanning over four decades enables trend statements, index calculations and cyclical analyses that are structurally impossible in Germany.

France. The conceptually most relevant model for Germany. The *Direction générale des finances publiques* (DGFIP) – the general directorate of public finances subordinate to the Finance Ministry – has maintained the national database *Demandes de Valeurs Foncières* (DVF) **centrally** under its own responsibility since 2014. The data basis is generated automatically from two mandatory sources: notarial purchase deeds are mandatorily transmitted to the DGFIP after each transaction; in parallel, the transactions are linked with cadastral data of the DGFIP, which maintains the national land cadastre. The DGFIP cleans, standardises and publishes the data on the national open data platform *data.gouv.fr*. Transaction type, area, purchase price and location coordinates are recorded – but no buyer or seller names.

Since May 2019, DVF has been fully accessible as open data. *Cerema* and the *Direction générale de l'Aménagement, du Logement et de la Nature* (DGALN) have built on this to develop *DVF+*: a georeferenced database structured in 17 standardised tables, directly integrable into GIS systems, available free of charge under an open licence (Licence Ouverte 2.0). The France model provides empirical proof of a central thesis of this white paper: complete market transparency and data protection are not mutually exclusive – they simply need to be consistently structured.

Serbia. Outside the EU, the *Republički geodetski zavod* (RGZ), the Serbian Geodetic Authority, has built and institutionalised a digital real estate price register. RGZ publishes regular market reports and its own *RGA Apartment Price Index* tracking national residential market price developments. Data extracts from the price register are accessible to specialist users.

The example of Serbia is instructive for Germany: building a central digital register requires political decisions, institutional prioritisation – and, where necessary, external specialist support. What Serbia has built with World Bank assistance in a decade can serve Germany as a conceptual model: the construction of Serbian infrastructure was not a national solo effort. The World Bank has supported Serbia's real estate cadastre and property administration infrastructure since 2015 with consecutive projects – from the *Real Estate Cadastre and Registration Project* to the current *Real Estate Management Project* (World Bank 2015, 2024). In this reform process, British valuation expert Richard Grover of Oxford Brookes University, together with Serbian expert Olivera Jordanović, laid fundamental groundwork as part of the *World Bank ECA Region Programmatic Trust Fund*. The study published in 2019 – analysing Serbia as one of four country cases – identifies four core conditions for successful fiscal real estate reform: comprehensive property registration, reliable transaction price data, a valuation infrastructure conforming to international standards, and an efficient tax collection system (Grover et al. 2019). Grover has also established fundamentally in 2016 that mass valuation methods (AVMs) presuppose a developed, transparent market data system and a capable institutional infrastructure for data maintenance (Grover 2016). It is precisely these conditions that Serbia has successively built through the World Bank projects – Germany does not yet meet them. These requirements correspond directly to the minimum requirements formulated in Section 3.5 of this white paper.

Switzerland. Switzerland represents an alternative model whose limits for transferability to Germany must be noted. A central public transaction register does not exist. Instead, the private-sector company *Wüest Partner* aggregates published transaction data: annually over 20,000 purchase

transactions in the owner-occupied housing market, around 500 investment transactions and nearly 20,000 tenancy agreements. The system works – for market participants who can afford commercial data access. It fails structurally where social interests are at stake: in public housing market monitoring, evaluation of state interventions or combating money laundering. Switzerland illustrates exemplarily what Germany also risks if the public infrastructure mandate is abandoned in favour of private market solutions: an efficient but exclusive data market – with systematic gaps precisely where the common good demands transparency.

4.2 International Framework: IVSC Standards, FIG Transparency Initiative and the Memorandum of Understanding

While national systems reflect different governance models, the *International Valuation Standards Council* (IVSC) with the *International Valuation Standards* (IVS) sets the overarching conceptual framework – directly linking data availability to valuation quality.

The current IVS explicitly recognise machine learning methods and Automated Valuation Models (AVMs) as a legitimate valuation methodology. However, they attach this recognition to clear quality requirements: a **critical data mass** (representative, complete comparable transactions), **model validation** (back-testing against historical data), an **uncertainty statement** on the valuation result (confidence interval) and complete **documentation of model limitations and data assumptions**. These requirements are internationally binding for all IVSC members – and equally for members of RICS, TEGoVA, CLGE and DVW.

The consequence of these standards for Germany can be assessed fairly clearly as follows: under IVS requirements, no quality-assured AVMs can currently be operated for the German market – because the nationwide homogenised data basis necessary for this is lacking.

Countries with centralised data infrastructures have long met these requirements and are already deploying AVMs on a regular basis: the *Waarderingskamer* for the tax-based mass valuation of all Dutch properties, Denmark and Australia for public market monitoring and portfolio analyses by institutional investors.

FIG Transparency Initiative. In parallel with the IVSC's standard-setting, the *International Federation of Surveyors* (FIG) with its Commission 9 "Valuation and the Management of Real Estate" has since 2022 been working programmatically on a systematic definition and operationalisation of real estate market transparency. The result is the FIG position paper "*Viewpoint on Transparency of Real Estate Markets*" (Ache et al. 2024), which introduces a three-dimensional concept of transparency: **Access** (who can retrieve real estate market information?), **Availability** (what information exists?) and **Quality** (currency, granularity, reliability and consistency of data). This three-part definition overcomes the narrowing of the concept of transparency to mere price accessibility frequently encountered in practice and makes it operational for policy decisions. The position paper also emphasises that real estate markets are not fully rational markets – information asymmetries, speculative distortions and political interventions are structural – and that transparency must therefore be understood not as optional but as an institutional infrastructure task.

MoU FIG – IVSC (2025). On 25 February 2025, FIG and IVSC signed a *Memorandum of Understanding* that institutionally anchors the complementary approaches of both organisations: IVSC

contributes valuation standards and quality requirements, FIG the expertise in surveying, geospatial data and property registration. The MoU was signed by IVSC CEO Nicholas Talbot and the Chair of FIG Commission 9, Peter Ache, witnessed by FIG President Dr. Diane Dumashie. An explicit focus of the agreed cooperation – which runs until 2030 – is strengthening **real estate market transparency**, the thematic framework linking IVS standards and the FIG Transparency Initiative. For DVW as Germany's national FIG member, this MoU creates direct institutional backing for the demands formulated in this white paper – and allows them to be cited vis-à-vis the German legislature as part of an international standard.

The international framework thus makes clear: the data question is not an administrative detail, but a precondition for Germany's participation in an international valuation and financial market that is developing methodologically. Those who fall behind do so structurally – not merely temporarily.

4.3 Conclusions: Where Germany's Greatest Potential Lies

The country comparison yields four directly transferable lessons for Germany – each with a clear reference to the minimum requirements formulated in Section 3.5.

First: Open data is not a data protection risk. The France model (DVF) demonstrates empirically that complete transaction data can be published without disclosing buyer or seller names. The empirical evidence argues against the frequently voiced fear that transparency endangers personal rights. Germany could build a structurally analogous system on the basis of existing purchase price registers – the data exists, the legal and political framework for opening it is absent (cf. minimum requirement 6, Section 3.5).

Second: Central coordination is possible within federalism. The Netherlands is a unitary state – its Kadaster model is not directly transferable. But Sweden shows that official price statistics as free official data also work without unitary structures, provided an institutionally anchored competence exists. The AdV as coordinating body of the surveying authorities offers a comparable starting basis – the analogy to the SAPOS model (cf. Sections 3.1 and 7.2) is structurally sound. What is decisive is the political will to agree (cf. minimum requirement 4).

Third: Time series take time. Sweden has been building its price index continuously since 1981 – 44 years of data continuity. Those who begin today will have reliable time series in a decade. Those who do not begin lose this lead irreversibly. The urgency of action is thus not strategic, but arithmetic (cf. minimum requirement 5).

Fourth: The private sector does not replace public infrastructure. Switzerland is the warning signal: a commercial data market without a public anchor produces selective transparency – for those who can afford to pay. Social interests – tenant protection, combating money laundering, subsidy evaluation – are systematically undersupplied. Germany need not follow this path, because the institutional prerequisites for a public infrastructure – property valuation committees, AdV, GDI-DE – are already in place (cf. minimum requirements 1–4).

The conclusion is clear: Germany does not need a new idea – it needs the political resolve to implement what has proven effective elsewhere. France began in 2014, Sweden in the 1980s, the Netherlands even earlier. The gap is measurable. But it is also closeable – if action is taken now.

5 BENEFITS FOR KEY STAKEHOLDER GROUPS

Whilst Chapters 3 and 4 have clarified the legal framework and the international role models, Chapter 5 examines the concrete benefits of a modernised data infrastructure. **Real estate data is not an end in itself.** Its value is measured by what it enables: economic decisions with better information, state interventions with measurable effect, research with a reproducible basis, and social oversight with real enforcement capacity. Chapter 5 shows for whom this benefit concretely arises – and what is lost as long as the data gaps persist.

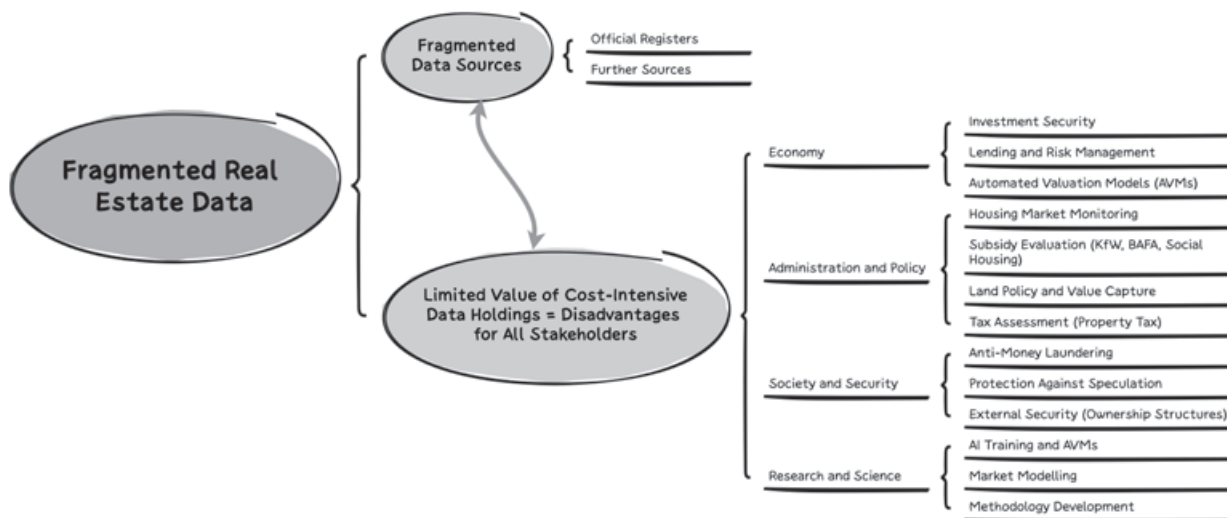


Fig. 6: Fragmented Real Estate Data = Restricted Use for Specific Tasks of Stakeholder Groups
(Source: Real Estate Lab @INTERGEO 2025, Figure: P. Ache)

The economic policy dimension runs through all four stakeholder groups: an opaque real estate market is not merely an administrative problem, but a structural competitive obstacle for Germany as a business location.

5.1 Economy and Business: Investment Security, Lending, Market Liquidity

The real estate market is not a niche market. The real estate assets of private households alone amount to approximately nine trillion euros according to the national economic balance sheets of Deutsche Bundesbank – without the holdings of institutional investors such as insurance companies, pension funds and open-ended real estate funds (Deutsche Bundesbank 2021). The real estate stock thus represents by far the largest single item in Germany's national net worth. Approximately 60 % of collateral in the German banking system is real-estate-secured (Deutsche Bundesbank 2024). Whoever looks at the real estate market looks at the foundation of the German credit economy – and thus one of the central mechanisms for financing investment, businesses and public infrastructure.

Investment security arises only where market data is reliable. Institutional investors – insurance companies, pension funds, REITs and real estate special funds – take purchase and financing decisions on the basis of portfolio valuations, due diligence analyses and market forecasts. These procedures presuppose that comparable transactions are available in sufficient number, depth and

currency. Where they are absent, valuation uncertainty rises – and with it the risk premium. An inefficient information market is an expensive market: the consequences are higher financing costs, reduced investment willingness and a capital outflow towards more transparent markets.

Lending is the direct link between the real estate market and the real economy. The Mortgage Lending Value Ordinance (BelWertV) and European banking regulation (CRR/CRD IV, Basel III/IV) require lending institutions to determine both the mortgage lending value and the market value (i.e. the market value under § 194 BauGB). This dual requirement has triggered a structurally significant response. Since the fragmented purchase price registers of the property valuation committees are insufficient to provide a nationwide uniform, automatable market data basis, the leading banking associations – the Association of German Pfandbrief Banks (vdp) and the German Savings Banks Association (DSGV) – have built their own central databases from their mortgage lending data. These operate entirely independently of the official purchase price register system. This parallel infrastructure is necessary from a banking perspective and technically valuable – but it also illustrates the economic costs that the failure of the public data infrastructure incurs: the national economy pays twice – once for a public data system that fails to fulfil its completeness claim, and once for the private substitute structure that closes this gap.

The systematic gap in the public data infrastructure has prompted the financial sector to undertake its own political initiative: in May 2026, the German Banking Association, vdp, Savings Banks Finance Group, ZIA, DKB, ING and further institutional actors jointly submitted a concept paper on a national “data availability strategy for the building sector” to the Federal Ministry for Digital and State Modernisation. The paper states unequivocally: “For banks, insurers and investors, the fundamental gap in data availability has now become a regulatory and economic problem.” The initiative calls for a national trust framework, standardised data pathways and a roadmap in three phases (0–36 months) – thereby demonstrating that the parallel infrastructures of the financial sector are not a sustainable solution, but an expression of an institutional market failure that the affected parties themselves are no longer willing to tolerate (Made in Germany 2030 2026).

Market liquidity depends directly on market transparency. Information asymmetries – when sellers know far more about a property than potential buyers – reduce willingness to transact and diminish competition. The economic research is unequivocal: more transparent markets are more liquid markets – a foundational theorem established since Akerlof’s analysis of information asymmetries (Akerlof 1970). This applies to equities as much as to real estate. The FIG position paper “*Viewpoint on Transparency of Real Estate Markets*” (Ache et al. 2024) identifies an often-overlooked consequence: opacity does not only harm the market as a whole – it harms property owners directly. Information asymmetries translate into risk discounts on the buyer side, resulting in lower achievable transaction prices. Opacity demonstrably reduces achievable transaction prices (Ache et al. 2024). A functioning price infrastructure also attracts private investment in analysis, financial products and PropTech – sectors that are significantly more developed in countries with open data infrastructures such as the Netherlands and Denmark than in Germany.

The economic policy consequence is clear: high real estate prices and rents are not merely a social policy problem – they are a factor of economic competitiveness. Enterprises competing internationally bear location costs that translate directly into commercial and office rental prices. In a market where price formation processes are opaque and asking prices can deviate substantially from prices actually achieved, even large enterprises lack the basis for well-founded location decisions. An opaque real estate market is not a locational advantage – it is a structural competitive obstacle for Germany as a business location.

5.2 Administration and Policy: Efficiency, Transparency, Evidence-Based Decisions and Policy Evaluation

Public administration and its political bodies take decisions almost daily that act directly on the real estate market: they set standard land values, administer public land, allocate subsidies, adopt development plans, monitor rent controls and levy property tax. The quality of these decisions depends directly on the quality of the available market data. The current state – fragmented data systems, no central access, missing time series – means that public administration frequently decides on the basis of a structurally incomplete market picture.

Housing market monitoring is the steering instrument of state housing policy. The Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR), the state institutes and academic and private researchers produce housing market reports on the basis of available data – whose completeness is, however, regularly limited. Rental prices are not comprehensively recorded, vacancies are not regularly surveyed, share deals remain invisible, and time series begin late – if at all. Evidence-based housing policy, as demanded in coalition agreements and promised in funding programmes, is structurally not fully realisable on the existing data basis.

Subsidy evaluation is the field with the most far-reaching economic policy consequences. Multi-billion-euro funding programmes in the housing and building sector – including the Federal Funding for Efficient Buildings (BEG), KfW renovation and climate protection subsidies, new construction and owner-occupation subsidies, funding for age-appropriate conversion, urban development funding, social housing subsidies, and housing savings premiums – are regularly launched, extended and increased. Their effect on prices, new construction activity, renovation depth and rental trends cannot be reliably measured on the existing data basis. With regard to the requirement for the efficient use of public funds (§ 7 BHO), this is problematic under budgetary law and of growing relevance in times of constrained public budgets. The building sector accounts – including the electricity and heat generation attributable to the sector – for approximately 30 % of Germany's CO₂ emissions (Umweltbundesamt 2024). Climate policy without an empirically adequately founded measurement of effects remains structurally without steering feedback.

Capturing value uplifts is the most significant field of action for an active land policy. State measures – infrastructure projects, development plan amendments, urban development improvements, and climate protection investments – create value uplifts that accrue to a substantial degree to private owners. §§ 153 ff. BauGB (compensation and equalisation payments, purchase prices, land readjustment) provide instruments to secure these value uplifts for the general public; a prospective land value tax has been in political discourse for years. Both instruments presuppose what is currently absent: comprehensive, current and differentiated monitoring of price developments following state interventions. Without this basis, the concept of capturing private gains from state action remains a legal option of limited practical enforceability and is the opposite of building trust through transparency in state action.

Property tax and municipal finance complete the picture. The property tax reform of 2022 has significantly increased the dependence of municipal finance on valid real estate valuations. The Federal Constitutional Court declared the old uniform assessment unconstitutional in 2018 – in part because of its systematic deviation from market values (BVerfG 2018). Preventing a repeat of this error presupposes continuously, nationally harmonised market data – the foundation whose establishment this white paper demands.

5.3 Society and Security: Trust, Resilience, Combating Money Laundering and Speculation, Internal and External Security

The real estate market is not a purely economic system. It is the spatial expression of social conditions: who lives where, who owns land, how property is distributed – these are not purely private-sector questions, but fundamental questions of social cohesion, security and a country's economic strength. Market transparency in this sense is not solely an economic efficiency demand, but rather a condition of the democratic legitimacy of state governance.

Combating money laundering is a particularly urgent social dimension – and a parliamentary stock-taking from spring 2026 shows how far reality falls short of the aspiration. In its response to the minor interpellation of the Die Linke parliamentary group on the real estate transparency register (BT-Drs. 21/5109), the Federal Ministry of Finance provided sobering figures (BMF 2026). The register, extended since the Sanctions Enforcement Act II (2022) to include a real estate dimension, is intended to link beneficial owners behind legal entities with specific real estate holdings. Two findings document the enforcement deficit:

- **Technical blockage.** Of 62.3 million records to be processed, 13.2 % are technically blocked because automated land register retrieval is not possible due to the absence of a legal basis.
- **Factual void.** Of 5,081 legal entities recorded in the register with a real estate attribution, 4,518 (almost 89 %) have had no property attributed to them at all.

The enforcement situation is also sobering in the international context. According to Transparency International (October 2025, cited in BMF 2026), more than one third of EU foreign legal entities report only “fictitious beneficial owners”, i.e. no genuinely identifiable persons. Of 23 fine proceedings initiated against foreign associations, 20 were discontinued. A principal BBSR study on foreign real estate buyers appears not to have been commissioned – which is unlikely to have been due to a lack of interest in the findings, but may have had other reasons. The Federal Government acknowledges that empirically clearly demonstrable findings on money-laundering-related price effects are not available – even though this connection is described in the specialist literature for constricted housing markets such as Berlin.

This finding is the consequence of a structural gap: the real estate transparency register depends on land register data – which is neither fully digitised nor automatically retrievable. Purchase prices are largely available in paper form in title deeds, without machine-readable availability. The transparency register and the purchase price register of the property valuation committees are complementary instruments of market control – both are not fully functional without a linked, machine-readable data infrastructure. This is the direct connection to the core concern of this white paper.

Speculation and housing supply are the social dimension that has remained unresolved for years. Where purchase price registers do not capture share deals, where rental prices are not systematically documented, where vacancies and misappropriation are not comprehensively recorded, public authorities lose their capacity to steer. Pre-emptive rights are hollowed out, land funds cannot operate on an evidence basis, and misappropriation bans cannot be effectively enforced. The result is structural displacement processes in constricted housing markets – with measurable consequences for social cohesion and political trust.

That these consequences directly influence voting behaviour is demonstrated by several recent empirical studies. Furtado & Flynn (2025) show, on the basis of European comparative data, that

housing cost burdens significantly strengthen left-wing redistributive preferences amongst young voters. Ansell & Cansunar (2021) demonstrate for European cities that housing cost burdens increase support for state housing market interventions. The politically most consequential findings concern rental burdens and right-wing populism: a recent study on the German housing market shows that rising local rental prices increase support for the AfD, particularly amongst lower-income long-term tenants in urban areas – with right-wing populist parties regularly instrumentalising the housing problem through a cultural framing offer (competition with immigrants for housing) (Abou-Chadi, Cohen & Kurer 2024). Hilbig (2026) shows in the *American Journal of Political Science*, using the example of municipal social housing, why political will alone is insufficient: local politicians face hard budget trade-offs. Investment in social housing ties up resources that are diverted from other, more immediately visible and electorally effective tasks, whilst the housing policy benefit is diffusely distributed and only materialises in the long term. This incentive structure systematically leads municipalities to promote less social housing than would be socially required – even where the need is indisputable. The finding underscores that housing policy failure is not primarily a matter of absent insight, but of structural misaligned incentives, and that supra-local governance and reliable market data are needed to correct these incentives. Housing policy failure is thus not a neutral administrative problem – it has a political significance that can destabilise democratic systems and internal security.

External security is finally a dimension that has received very high political attention only in more recent times, at the latest since the beginning of the Russian aggression against Ukraine in 2022. The Federal Government notes in its response to the minor interpellation (see above) that 469 US-American and 88 Chinese associations are recorded in the transparency register with German real estate holdings – alongside 409 from the United Kingdom and 336 from Luxembourg (BMF 2026). Which of these legal entities hold real estate in the vicinity of critical infrastructure – ports, energy suppliers, military sites and data centres – is not currently systematically evaluable. The central access point for real estate information that Arts. 11-14 of the EU Anti-Money Laundering Directive 2024/1640 mandatorily prescribes is, according to current planning, not to be established until 10 July 2029. The Foreign Trade Act (AWG) provides examination instruments – but presupposes what is absent: a systematically evaluable, current and comprehensive knowledge of beneficial owners behind transaction structures.

The data question is thus not merely a question of market failure, but a question of internal and external security. The parliamentary stocktaking shows: the existing instruments fail where, owing to the absence of linked real estate data, the necessary data basis is lacking.

5.4 Research and Science: Methodology Development, Raw Data Access, AI Training

Academic research is the precondition for methodological progress. This applies particularly in the real estate sector: the further development of valuation methods, the calibration of automated valuation models (AVMs) and the development of AI-assisted market analyses depend directly on the availability of high-quality, georeferenced raw data. Germany has capable universities and research institutions in the real estate sector – but access to the transaction data indispensable for empirical research is structurally restricted, and often not possible at all.

Methodology development in valuation presupposes comparative data, at minimum for validating existing and practised theoretical models and methods. New valuation approaches – whether ma-

chine learning, regression models or hybrid procedures – must be validated against real transaction data. Without nationwide, uniform access to the purchase price register, such validations are either locally restricted (and thus not generalisable) or dependent on private-sector datasets (and thus not reproducible). The internationally recognised standard for research validity – reproducibility and open data access – is structurally barely achievable under current German conditions for real estate valuation research.

AI training is in this context the most urgent research task of the coming years. Machine learning methods require training data in critical mass, high quality and spatial resolution. As set out in Section 2.4, precisely this basis is absent in Germany. The consequence: algorithmic valuation models that are today being developed and trained at foreign universities and by international PropTech enterprises are based on data from countries with open infrastructures – the Netherlands, Denmark, Australia. German market specificities – the property valuation committee system, standard land value methodology, rental yield – are systematically underrepresented in these models. This disadvantages the German real estate sector in the deployment of AI-assisted methods and jeopardises its methodological competitiveness.

Education and the development of the next generation are the long-term dimension. Valuers, expert witnesses, bank valuers and municipal planners of the next generation will have to work with digital tools and data-driven methods. Universities that today have no access to real market data cannot systematically impart these competencies. § 195(3) BauGB permits property-related information where there is a legitimate interest – but the implementation in state law prevents, in practice, systematic university access. The French model shows that this access can be realised in a legally secure manner and without disclosing personal data (cf. Section 4). Section 3.5 therefore demands the nationwide standardisation of open scientific access as the sixth minimum requirement.

6 VISION 2030: NETWORKED REAL ESTATE DATA INFRASTRUCTURE

The diagnosis has been made (cf. Section 2), the legal framework has been analysed (cf. Section 3), the international role models have been concretised (cf. Section 4), and the social and economic benefits have been demonstrated (cf. Section 5). Section 6 brings these threads together into a vision: what should be different in 2030 compared to today? The answer an achievable architectural principle – built on existing structures, oriented towards international role models, and aligned with the practical benefit of all stakeholders.

6.1 Unified Technical Infrastructure and Interoperability

The structural core problem of the German real estate data landscape is not a knowledge problem. Data exists. Purchase price registers are maintained, standard land values are determined, ALKIS is comprehensively managed, energy certificates are issued, land registers are kept digitally. The problem is that these data sources are not connected to one another: semantically incompatible, technically fragmented, legally restricted (cf. Sections 2.3, 3.1). The 2030 vision therefore does not begin with the construction of new data holdings, but with the networking of what already exists.

Target Vision 2030: Networked Real Estate Data Landscape Guiding Principle: Practical Benefit



Fig. 7: Target-Vision 2030 – Networked Real Estate Data Infrastructure
(Source: Real Estate Lab @INTERGEO 2025, Figure: P. Ache)

The technical basis is clear: **cadastral and geospatial information (ALKIS)** is the base register on which all other data sources are built. Every property is uniquely identifiable via parcel and object reference codes – this is the fundamental precondition for any form of data linkage. On this foundation, a **federated data architecture** emerges by 2030, in which purchase price registers, land register, standard land value maps (BORIS), rent index data, energy certificates, and the real estate transparency register communicate with one another via standardised interfaces (APIs) – not centrally stored, but decentrally networked.

The key term is **interoperability**. International role models show that this is no pipe dream: the Dutch PDOK platform links cadastral data, transaction prices and building information via open APIs (cf. Section 4.1). The French DVF system connects notarial data with the national tax administration and makes all transactions publicly available in a timely manner (cf. Section 4.2). What has been built up over years in those countries is already partially in place in Germany through the property valuation committee system – what is missing is the connecting framework.

Technical interoperability also creates the precondition for **AI-capable data quality**. Machine learning methods and automated valuation models require structured, georeferenced, time-series-capable data of nationally uniform quality (cf. Section 2.4). By 2030 this foundation will exist – it must be laid right now.

6.2 “One-Stop-Shop”: Central Access to Property-, Legal- and Price Data

The networked data infrastructure alone does not yet create added value. Value is created only through access. The 2030 vision therefore provides for **differentiated, but uniformly organised data access** – a one-stop shop for all forms of access to real estate data, regardless of whether users come from the public administration, the economy, research or civil society.

The model is internationally proven: the Dutch Kadaster platform, the Swedish Lantmäteriet access system and the French data.gouv.fr show that a differentiated access system with tiered rights – publicly accessible basic information, fee-based detailed queries for professional users, full access for authorities and science – can be implemented in a functional and legally compliant manner (cf. Section 4). The German equivalent is the **GDI-X platform**, which is being developed as part of the European GAIA-X data space initiative and is intended to combine federal data sovereignty with nationally uniform access.

The 2030 vision operationalises this approach for the real estate sector: a **national real estate data portal** – not a central register, but a federated access point – offers differentiated access levels. For the general public, standard land values, aggregated price indices and market reports are retrievable free of charge and without registration. For **professional users** – valuers, banks, real estate companies, PropTech start-ups – an API-based access to transaction-based data is available, reliably and legally useable on the basis of uniform national licensing models. For **authorities and research**, a privileged access with complete, georeferenced datasets applies under § 195 BauGB – purpose-bound, GDPR-compliant and nationally uniform.

The economic effect should not be underestimated: reliable, platform-based data access reduces transaction costs, enables the development of digital services and attracts private investment into analysis and PropTech (cf. Section 5.1). The institutional effect is equally significant: federal authorities that must, e.g., launch climate protection programmes can only measure their effect if market data is available nationwide in comparable quality (cf. Section 5.2). The one-stop shop model is the response to the interoperability deficit – and the condition for evidence-based policy.

6.3 Sovereign Data Space for Real Estate and Geospatial Data

Opening data does not mean relinquishing control. This is the decisive conceptual turning point for the 2030 vision: **data sovereignty and data availability** are not contradictions – they are two sides of a modern data policy.

The concept of a sovereign data space describes an architecture in which data is stored and managed where it originates – at property valuation committees, land registry offices, state surveying authorities, notaries – but is accessible to authorised users via standardised, regulated interfaces. Data does not leave its context of origin, but becomes interoperable. The European GAIA-X project implements this principle for industrial and public data; for the real estate sector, a sector-specific ecosystem is still lacking.

The 2030 vision provides for the development of a **real estate data space** within the GAIA-X architecture. Three requirements are constitutive:

- **Data sovereignty:** No personal data leaves German or European legal space; all processing steps are traceable and reversible.
- **Security requirements:** Access to data on real estate ownership in the vicinity of critical infrastructure (ports, energy suppliers, data centres, military sites) is subject to a separate authorisation system, coordinated with the Foreign Trade Act and the competent security authorities (cf. Section 5.3).
- **Interoperability with European systems:** The central access point for real estate information prescribed by the EU by 2029 (EU Anti-Money Laundering Directive 2024/1640, Arts. 11–14) is integrated into the national architecture, not placed alongside it as a separate system.

The sovereign data space is not a technical by-product, but a strategic core objective. In a market where more than one third of EU foreign legal entities report only fictitious beneficial owners and 13.2 % of transparency register records are unprocessable due to unavailable land register data (cf. Section 5.3), data sovereignty is not an academic demand, but a condition for the rule of law and internal security.

6.4 Federal Coordination Office of the Property Valuation Committees as the National Coordination Body for Price Data

The institutional core problem of the German real estate data landscape is the **institutional heterogeneity of 16 state-level solutions**. The property valuation committee system is the institutional strength of the German approach – comprehensive, official, methodologically sound. Its systemic weakness is the missing national coordination level (cf. Sections 2.1, 3.1).

The 2030 vision provides for a **Federal Coordination Office of the Property Valuation Committees** – not a new federal authority competing with the states, but a coordination body with three clearly defined tasks.

1. **Standard-setting:** Nationally uniform minimum standards for purchase price registers – depth of coverage, feature set, update frequency, digital formats – are defined and enforced. What § 199 BauGB grants the federal government as a basis for the Real Property Valuation Ordinance (ImmoWertV) is insufficient to overcome the operational heterogeneity of the 16 state-level systems.
2. **Aggregation and nationwide analysis:** Cross-regional market reports, nationwide price indices and AI-compatible training datasets can only emerge if one body consolidates the decentralised purchase price registers into a coherent national dataset. The role model is the existing Working Group of the Superior Property Valuation Committees (AK OGA) – but without its own database infrastructure and without binding authority over the state-level systems, this function remains structurally underfunded.
3. **AI-readiness:** The Federal Coordination Office develops and maintains the nationally uniform quality and format standards that make transaction data usable for machine learning and automated valuation procedures. Without this institutional home, private databases such as those of the vdp and the DSGV remain the only nationally consistent datasets – a situation that generates double costs for the national economy (cf. Section 5.1).

The Federal Coordination Office is not an end in itself. It is the institutional response to the interoperability deficit and the prerequisite for the architecture described in Sections 6.1 and 6.2 to be operated and further developed on a lasting basis. Its statutory anchoring in §§ 192 ff. BauGB, preferably through the 2026 BauGB reform, is the first and most important legislative step.

6.5 Protection of Personal Data and Uniform Terms of Use

No objective of the Real Estate Lab is in contradiction with the protection of personal data. This is not a qualification of data protection – it is proof of its compatibility with a modern data infrastructure. The international example demonstrates it: France, the Netherlands and Sweden have open transaction databases without endangering the protection of personal data. The solution lies in a technical and legal concept that has been proven for years: **anonymisation, purpose limitation and tiered access** (cf. Section 4).

The first step is the consistent use of **anonymisation techniques**. The French DVF system publishes all transaction data including purchase prices and property characteristics – without names, addresses or other personally identifiable features. The purchase price of a property is market information, not a personal communication; its publication without personal reference is GDPR-compliant. In Germany, the current interpretation of § 22 of the e.g. Lower Saxony implementing ordinance to the BauGB (DVO-BauGB) and analogous state regulations **prevents** this transparency – but it requires a nationally uniform regulation that is currently absent.

The second step is the **harmonisation of licensing models**. Currently, different terms of use, fee structures and access requirements apply in each federal state for the use of geospatial data, purchase price registers and standard land values. For nationwide analyses, for AI training and for PropTech applications, this is a structural obstacle: anyone who has to manage 16 different licence agreements and service 16 different fee structures does not develop scalable digital products. The 2030 vision provides for a uniform, nationwide licensing model for real estate and geospatial data – differentiated by type of use and access level, but nationally consistent.

The third step is the **clarification of research access**. § 195(3) BauGB permits property-related information where there is a legitimate interest – the implementation in state law falls short of this potential. In the 2030 vision, a nationally uniform, reliable data access for academic research is guaranteed – as a precondition for methodological progress and AI training data from the official system (cf. Section 5.4).

6.6 Quality Assurance and Update Processes

Currency and documented data quality are constitutive properties of usable market data. Without them, data holdings lose their operational information value. The 2030 vision therefore links data availability inseparably with **measurable quality standards and binding update cycles**.

The international comparison (cf. Section 4) shows that data availability and data quality are inseparable: Dutch purchase price data is published within weeks of the transaction. The Swedish Lantmäteriet updates its transaction database continuously. In Germany, months often elapse between the transaction date and analysis by the property valuation committees – during which purchase price registers accumulate, but are not evaluated.

The 2030 vision defines four measurable quality dimensions. **Currency:** transaction data is transferred to the purchase price register within a maximum of 90 days of contract conclusion and made available to authorised users. **Completeness:** every notarised transaction – including share deals, which the 2026 BauGB reform is intended to make subject to mandatory reporting – is recorded. **Depth:** the nationally uniform feature set of a transaction includes property characteristics, location description, year of construction, energy efficiency class and legal encumbrances in structured, machine-readable form. **Consistency:** the same property, evaluated in two different property valuation committee districts, produces comparable valuation data through nationally uniform methodology.

These four dimensions are not an academic demand – they are the minimum requirement for **AI-compatible training data**. Machine learning methods do not need more data, but better data: structured, complete, consistent and capable of forming time series (cf. Section 2.4). Quality assurance 2030 creates this foundation. The Federal Coordination Office (cf. Section 6.4) monitors compliance with the standards and publishes an annual nationwide quality report – as an instrument of institutional self-disclosure on data quality.

6.7 Guiding Principle as Conclusion: Practical Benefit

All preceding sub-sections describe architecture, institutions, standards and processes. The 2030 guiding principle is measured by whether this architecture functions in everyday practice – for the valuer who must determine a market value, for the mayor who wants to evaluate a housing subsidy, for the PropTech company that is developing a market monitor, for the public prosecutor pursuing a money-laundering suspicion.

Practical Benefit is the simplest and most rigorous test criterion for any data infrastructure: does it help people who have concrete tasks? In the stakeholder groups described in Section 5, specific utility signals can be identified that should be measurable by 2030.

1. In **business:** portfolio valuations are based on nationally uniform, current transaction data – no institutional investor has to fall back on proprietary alternative databases.
2. In **public administration:** funding programmes can be designed and evaluated on a substantially more sound basis. Real estate reports can be presented in a more uniform manner, with open access, and in a more regionally focused way. Municipal heat planning can work with standardised, area-wide data.
3. In **research:** doctoral theses and methodological developments draw on real German transaction data, without bureaucratic individual access procedures. Housing market reports of the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) are based on complete, linked data.
4. In **society:** the real estate transparency register can link the beneficial owners behind all registered legal entities with real estate – instead of, as in 2026, failing to establish any attribution in 89 % of cases (cf. Section 5.3).

The 2030 vision is the **starting point for Section 7** – in which the fields of action are described and in which it is shown which decisions must be taken today for this vision to be achievable by 2030.

The international comparison shows: what is formulated here as a vision already exists elsewhere as reality. Germany is not too large, too complicated or too federalist to take this path – what is lacking is the political will, the institutional coordination and above all the willingness to fundamentally change a status quo that is more than 60 years old.

7 FIELDS OF ACTION AND RECOMMENDATIONS

Section 6 has unfolded the 2030 vision in seven dimensions: a federated, interoperable technical infrastructure based on ALKIS (6.1), a differentiated one-stop-shop data access (6.2), a sovereign data space with clear rights (6.3), a legally anchored Federal Coordination Office for property valuation committees as the institutional roof (6.4), a binding data protection and licensing framework (6.5), measurable quality dimensions (6.6), and – as the guiding criterion – practical benefit for all stakeholder groups (6.7). This vision is achievable. However, it presupposes concrete decisions that must be taken today. Section 7 describes these decisions as seven fields of action.

7.1 Mindset Change: Leadership Responsibility, AI Preparation and Practice Orientation

The first and most important step towards overcoming Germany's real estate data deficits is neither technical, nor legal, nor financial. It is mental. **Real estate data is a strategic resource** – comparable to digital infrastructure or energy supply. Currently, just like other geospatial information, it is defined as an administrative by-product that lies largely unstructured with 16 state authorities and hundreds of property valuation committees. This is a conceptual error that is reflected in each of the deficits described above.

The necessary mindset change has essentially three dimensions.

1. **Leadership responsibility:** Political and administrative decision-makers at federal and state level must drive the real estate data question forward concretely and rapidly. The same applies to those responsible in business enterprises. Not because it is technically exciting, but because housing policy, climate protection, combating money laundering and investment security cannot function properly without a reliable data foundation. This is a fundamental political and economic decision that must not disappear into specialist departments or ante-rooms of corporate headquarters.
2. **Feasibility is documented through existing public administration projects.** The arguments routinely advanced against digitalisation projects – too complex, too federalist, too expensive – are empirically refuted by examples from German public administration practice. The LANGUSTE procedure (Property and Land Database) within the federal-state KONSENS project demonstrates that nationwide, cross-authority data standardisation is feasible. The Digital Land Cadastre 4.0 in Baden-Württemberg shows that technical modernisation also succeeds in the context of state surveying authorities. What is possible in financial and cadastre administration is equally possible in the property valuation committee system.

Action Areas / Recommendations (BauGB as Process Window)

Mindset Change Leadership Responsibility (Federal + State Level) Leadership Responsibility in the Private Sector Feasibility Has Already Been Proven AI Readiness: 5-Year Horizon	Modernise Legal Framework & Clarify Governance Modernise BauGB §§ 192–199 Adapt and Improve Cadastral & Geospatial Information Governance Clarity Monitor EU Anti-Money Laundering Directive 2024	Link & Standardise the Data Landscape Accept ALKIS as the Basic Reference Nationwide Uniform Feature Set for Purchase/Rental Prices and Geodata Standardised APIs (Interfaces) Federal-State Treaty / Framework Legislation Fully Digitalise the Land Register
Open Access: Licences & Usage Rights Nationwide Uniform Licence Model Harmonised Fee Models Across the States Nationally Uniform Anonymisation Standards Standardise Research Access Tiered Access (public – professional – public authorities/research)	Define & Make Quality Visible Four Minimum Standards Public Quality Report (annual) Implement AI Suitability Criteria	ALKIS as Foundation ALKIS: Cornerstone of the Real Estate Data Infrastructure Four Measures Coordination: BKG + AdV + Valuation Committees Federal Coordination Office Showcases: Real Estate Lab 2026 Munich

Fig. 8: Fields of Action and Recommendations
(Source: Real Estate Lab @INTERGEO 2025, Figure: P. Ache)

3. **AI preparation is a question of time.** Building an AI-capable data base – structured, complete, time-series-capable, nationally uniform – requires, from experience, at least five years. Those who want to deploy automated market analyses, AVM-supported mass valuations and AI-based market monitoring in 2030 must set the course in 2025. Deferring this decision shifts the realisation horizon accordingly; the cumulative adaptation costs rise over time, and the gap relative to markets that have already taken this path grows. The mindset change is therefore not merely a cultural demand: it is the fundamental precondition for all subsequent fields of action.

7.2 Modernising the Legal Framework and Clarifying Governance

The legal framework is the starting point for all other fields of action. Without a statutory basis there is no Federal Coordination Office; without a mandatory reporting obligation there is no complete purchase price register; without clear responsibilities there is no functional data policy. The property valuation committee law under §§ 192–199 BauGB (Valuation) was created in its basic structure in 1960 – at a time without digital markets, without European-wide capital flows and without AI-supported valuation. A fundamental modernisation is long overdue.

Four legislative measures with a view to improving price information are a priority.

1. **Anchoring rent data collection in § 195 BauGB.** Rent data is currently not a mandatory component of the purchase price register – although it is indispensable for a complete market analysis (cf. Section 2.2). The 2026 BauGB reform offers the opportunity to close this gap.
2. **Introducing a share deal reporting obligation.** The draft ministerial bill contains initial approaches; they must be implemented consistently. A market picture without share deals is structurally distorted and unusable for evidence-based housing policy.
3. **Statutory anchoring of the Federal Coordination Office for Property Valuation Committees –** as a new § 192a BauGB. Its establishment is the institutional precondition for standard-setting, aggregation and AI-readiness (cf. Section 6.4).
4. **Modernising the Land Register Act (GBO)** to enable automated, controlled data retrieval for the transparency register and the purchase price register. The missing legal basis currently blocks approximately 13 % of transparency register records (cf. Section 5.3).

In addition, the field of action **governance clarity** is needed. Responsibilities between the federal government, states and property valuation committees must be bindingly clarified by an interstate treaty or a framework law – without a binding coordination structure, every standardisation attempt remains voluntary and therefore unreliable.

There is also a European deadline: the EU Anti-Money Laundering Directive 2024/1640 obliges Germany to establish a central access point for real estate information by 10 July 2029. The national implementation legislation must be initiated now, so that design, procurement and implementation can be completed in time.

A hitherto underestimated element of action lies in the better usability of cadastral and other geospatial information at federal level. The **Federal Agency for Cartography and Geodesy (BKG)** plays a key role as the central federal authority in coordinating and providing basic geodata. BKG's services and products – INSPIRE-compliant services, nationwide reference geodata, topographic base data – are currently insufficiently linked with the real estate data of the property valuation committees and the land register. A statutory clarification of BKG's coordination function in networking official basic geodata with real estate data, and beyond this also of the function of recording and providing coordinated, nationally uniform geospatial specialised data in the building sector, would sensibly extend this field of action: from pure valuation to the full breadth of the official geospatial information infrastructure. The statutory mandate to the BKG could be specifically directed via an addition to the building reference in the planned Federal Geodata Act (BGeoDG) § 4 as a "Building and Property Basic Information System".

7.3 Linking the Data Landscape and Achieving Technical Standardisation

Law creates frameworks – technology creates reality. The third field of action translates the legislative measures into a concrete technical architecture. Its starting point is the principle formulated in Section 6.1: **no new data holdings, but networking of what exists.**

The technical foundation of this architecture is **ALKIS – the Official Real Estate Cadastre Information System**, which uniquely references every property nationwide and thus serves as the base register for linking all other data sources. How ALKIS is to be developed from a specialised information system of the surveying administration into an open base register of the real estate data infrastructure is elaborated as an independent field of action in Section 7.6.

The second element of action is the **introduction of a nationally uniform and binding feature set** for purchase price registers. Currently the property valuation committees record transactions according to state-specific requirements – with different features, formats and levels of depth. For nationwide analyses, for AI-oriented model training and for international comparability, this is a structural obstacle. A nationally uniform feature set – year of construction, plot area, floor area, energy efficiency class, location georeferencing, legal status – is not a technical utopia: it is a normative decision that can be realised through recommendations from the Federal Coordination Office and adjustment of the ImmoWertV annexe.

That nationally uniform digitalisation standards for planning data are politically enforceable is demonstrated by the standard **XPlanung** for land use planning procedures. Bitkom calls in its 2026 BauGB reform statement for its mandatory introduction as a compulsory format for all development plans. XPlanung is thus a precedent: it shows that standardisation in the federal space is possible – if a uniform format is regulated and made politically binding. The same principle must apply to the nationally uniform purchase price register feature set (Bitkom 2026).

The third element consists of **standardised data interfaces (APIs)**. Networking purchase price registers, BORIS, land register, rent indices and energy certificates does not require all data to be consolidated in one place – it requires that they be queryable via defined, stable interfaces. The Dutch PDOK model shows how open APIs on public data open up a broad user base while simultaneously preserving data sovereignty (cf. Section 4.1).

The structural problem of federated data management is solved not by a technical tool but by a political instrument: an **interstate treaty** or a **federal framework law** that bindingly establishes nationally uniform minimum standards for formats, interfaces and update cycles. The complete digitalisation and machine-readable development of the land register – still partly paper-based today and legally difficult to access – is the technically most demanding, yet indispensable, building block of this architecture.

7.4 Opening Access: Harmonising Licensing Models and Terms of Use

Data that is technically available and legally accessible, but fragmented in its usability by 16 different licensing models, fee regulations and terms of use, does not fulfil its purpose. The harmonisation of data access is therefore no less important than its technical networking – it is the precondition for a usable market to emerge from a networked infrastructure.

The core problem is well known: anyone who today wishes to conduct nationwide analyses on the basis of geospatial data, purchase price registers and standard land values must conclude up to 16 different licence agreements and service 16 fee structures. This obstacle affects not only Prop-Tech start-ups, but also credit institutions, research institutions and federal authorities (cf. Sections 5.1–5.4). It creates transaction costs that prevent innovation and systematically impede the emergence of a German real estate technology market.

The field of action encompasses four measures.

1. **Nationally uniform licensing model** for all official real estate and geospatial data – differentiated by type of use (private, commercial, authority, science), not by federal state.
2. **Harmonisation of fee models.** Not necessarily free of charge – but nationally uniform and calculable for all user groups. The principle: cost recovery yes, revenue maximisation no.
3. **Anonymisation standards for transaction data.** The French DVF model shows how transaction data including purchase prices can be made publicly accessible without disclosing personal characteristics (cf. Section 4.2). A nationally uniform anonymisation standard – complementing § 22 DVO-BauGB and its state equivalents – creates the legal clarity that is currently absent.
4. And particularly urgently: **normalising research access nationwide.** § 195(3) BauGB permits property-related information where there is a legitimate interest – implementation in the states is heterogeneous and often restrictive. A nationally uniform, reliable scientific access to transaction data – modelled on the research data centres of the statistical offices – is the foundation for methodological progress and for AI training data from the official system (cf. Section 5.4). A differentiated **tiered access** (public – professional – authorities/research) ensures data protection while simultaneously enabling the greatest possible usability.

7.5 Defining Quality and Making It Visible

An infrastructure whose quality is unknown creates no trust. This applies to bridges and to data systems alike. Those who make investment decisions, design funding programmes or train AI models on the basis of real estate data must know: how current is this data? How complete? How consistent? As long as these questions remain unanswered, any data use is burdened with structural uncertainty – and every result is challengeable.

The fifth field of action demands what is described in Section 6.6 as the vision: **binding quality standards and their public visibility.** Four minimum standards are to be defined and enforced.

1. **Currency:** transaction data is transferred to the purchase price register within approximately 90 days of notarisation and made available to authorised users.
2. **Completeness:** the coverage rate is to be raised nationwide to at least 95 % of all notarised transactions – including share deals following the amendment of § 195 BauGB (purchase price register).
3. **Depth:** a nationally uniform core data model defines mandatory features and optional features – both machine-readable.

4. **Consistency:** methodological foundations for valuation data are harmonised by the Federal Coordination Office, so that property valuation committee district boundaries do not create data discontinuities.

These quality standards must not only exist – they must **be visible**. The Federal Coordination Office publishes an annual nationwide quality report that indicates, for each property valuation committee district, the coverage rate, the average processing time and the depth of coverage. This institutional self-disclosure on data quality creates incentives for improvement and gives data users the opportunity to assess for themselves the suitability of a dataset for their intended purpose.

A special quality criterion is **AI compatibility**. Machine learning methods have specific requirements: time-series availability, depth of features for feature engineering, spatial resolution and sufficient sample size. The Federal Coordination Office develops AI compatibility criteria as part of its quality framework and identifies these as metadata for each dataset. This enables research, public administration and business to assess specifically which datasets are suitable for which applications – and closes the circle to the core concern formulated in Section 7.1: to understand data as a strategic resource.

7.6 ALKIS as the Base Register: Bringing Geospatial Data and Real Estate Data Together

ALKIS – the Official Real Estate Cadastre Information System – is the technically most mature and substantively most solid register in Germany in the area of real estate data. It comprehensively and nationwide records every property with unique, stable identification characteristics (parcel and building reference codes), is legally obligated to continuous updating, and is available in all 16 federal states in a defined, technically interchangeable format – the NAS (standards-based exchange interface). These properties make ALKIS the only realistic base register for a real estate data architecture.

The strategic field of action consists of developing ALKIS from a specialised information system of the surveying administration into an **open base register of the real estate data infrastructure** – without relinquishing its substantive responsibility. Concretely, this means four measures.

1. **Nationally uniform opening of ALKIS data access.** The state-specific licensing models and price structures for ALKIS data are the structural impediment to nationwide use. A harmonised right of use – modelled on the open government data principles under the Online Access Act and EU Directive 2019/1024 – would make ALKIS accessible as an open base register and substantially simplify private and scientific use.
2. **ALKIS as the base reference for all linkages.** Purchase price registers, land register, rent indices, energy certificates and the transparency register are referenced via ALKIS object identifiers. ALKIS is thereby the common key of all data sources – not another silo alongside others. This function presupposes that ALKIS management in all states is maintained at a uniform technical standard and continuously quality-assured.
3. **Extension of the NAS standard.** The existing NAS interface is supplemented with extensions that enable linkage with external and specialised data. The BKG coordinates this extension as part of its central federal function in close coordination with AdV.

4. **Pilot project “ALKIS and Purchase Prices”**. In cooperation between AdV, BKG, selected property valuation committees, and the future Federal Coordination Office, a pilot project is carried out that tests the technical linking of ALKIS objects with purchase price transactions and standardises it at federal level. The Real Estate Lab 2026 is the appropriate setting for presenting the first results of this pilot project publicly.

The digital association Bitkom develops in its statement on the 2026 BauGB reform a complementary concept: the **digital building file** as a permanent, lifecycle-accompanying data store – from building permit via BIM planning and cadastral data to the **digital twin** and **digital building resource passport**. This concept supplements the ALKIS integration layer with a building-specific dimension: ALKIS provides the spatial-legal basic reference, the digital building file the property-specific information layer above it. A linkage of both concepts – technically via the ALKIS object identifiers, legally through a nationally uniform data model – would supplement the real estate data infrastructure with the hitherto missing lifecycle perspective and open up the data holdings for AI-supported building and market analyses as well (Bitkom 2026).

ALKIS is not the only field of action – but it is the foundation on which all other fields of action rest. Without a nationally harmonised, open use of ALKIS as a base register, every networking strategy remains a collection of regional isolated solutions. The Real Estate Lab therefore demands that ALKIS be treated as the first and priority element of the national real estate data infrastructure.

7.7 Act Now: The BauGB Reform as a Process Window for Purchase and Rent Price Databases

All six preceding fields of action share one problem: they require political decisions that could be taken – but do not take themselves. The seventh and final field of action is therefore not a substantive one, but a procedural one: it is about **using the right moment**.

That moment is now. The **2026 BauGB reform** – the draft ministerial bill for modernising urban development and spatial planning law, which has been in state and stakeholder consultation since 1 April 2026 – offers the first concrete parliamentary process window in years to implement the legislative measures described in Section 7.2. DVW in its statement of 28 April 2026 has introduced the central demands – rent data collection, share deal reporting obligation, Federal Coordination Office – into the legislative process. This window closes if the reform is passed without the necessary additions.

That the 2026 BauGB reform is rated as inadequate across sectors is demonstrated by the statement of the digital association Bitkom of April 2026. Bitkom welcomes the thrust of the reform – to accelerate and digitalise planning and approval procedures – but notes that the draft “falls short of its possibilities in the use of digital options for simplifying, accelerating and improving the efficiency of construction projects”. The external assessment from the digital economy reinforces the finding of the Real Estate Lab: the process window of the 2026 BauGB reform must be used consistently – now, not at the next reform (Bitkom 2026).

Parallel to the BauGB reform, a second political process window opens in May 2026: the initiative **“Made in Germany 2030”** – sponsors: the Banking Association, vdp, German Savings Banks Finance Group, ZIA, DKB, ING and other actors of the Transformation Partnership for Real Estate – has submitted a concept paper on a national data availability strategy for the building sector to the

Federal Minister for Digital Affairs and State Modernisation (BMDS). The demanded architecture – federated, wallet-capable, built on eIDAS 2.0 and data space sovereignty – is structurally compatible with the vision of this white paper (cf. Section 6.3). The DVW initiative and the real estate finance sector address the same need for action on two complementary policy paths: building and planning law (BauGB, BMWsB) and digital policy (BMDS). Together, both generate political momentum for a national real estate data infrastructure (Made in Germany 2030 2026).

In parallel, a European legal deadline limits the timeframe: EU Anti-Money Laundering Directive 2024/1640 obliges Germany to establish a central access point for real estate information by 10 July 2029. That sounds like sufficient time – but legislative projects of this complexity typically require three to five years in Germany from design to operational implementation. Those who want to deliver by 2029 must begin immediately.

The mandate for action is three-stage:

1. Short-term (2025–2026): Introducing the central demands into the BauGB reform; establishing a federal-state working group on data standards harmonisation; starting pilot projects for machine-readable land register data.
2. Medium-term (2027–2028): Entry into force of the amended §§ 192 ff. BauGB; establishment and operation of the Federal Coordination Office; first nationwide, standardised market reports on the basis of harmonised purchase price registers.
3. Long-term (2029–2030): Operational running of the national real estate data portal; fulfilment of the EU access point obligation; first AI-supported nationwide market analyses on the basis of official transaction data.

The Real Estate Lab has initiated this process – the professional community from geodesy, real estate industry, public administration and research stands ready. The decisions lie with the political actors at federal and state level. They have the instruments, the role models and the timetable before them. Implementation therefore no longer depends on technical or conceptual preliminary work, but on political prioritisation.

8 CONCLUSION AND CALL TO ACTION

8.1 Core Findings: What the Real Estate Lab Demands

Germany has one of the densest real estate data landscapes in Europe – and systematically uses it below its potential. Not because data is lacking, but because it is fragmented, poorly accessible and not designed for the requirements of a data-driven economy. The Real Estate Lab @INTERGEO 2025 made this diagnosis. This white paper draws the consequences.

The **five core demands** can be summarised in one sentence: Germany needs a functional real estate data infrastructure – legally grounded, technically networked, harmonised in terms of licensing law, quality-certified and politically prioritised.

In detail:

1. **Mindset change** (Section 7.1): Real estate data is not an administrative by-product – it is strategic infrastructure. Leadership responsibility at federal and state level is the fundamental precondition for all other steps. The AI time window is open – those who want to be capable of acting in 2030 must decide now.
2. **Legal modernisation of the property valuation committee system** (Section 7.2): §§ 192–199 BauGB (Valuation) must be fundamentally modernised. Core elements: rent data collection, share deal reporting obligation, statutory anchoring of a Federal Coordination Office (new § 192a BauGB), digital land register access. The 2026 BauGB reform is the process window.
3. **Technical networking with cadastral and geospatial data** (Section 7.3): ALKIS as the base register; nationally uniform core data model; standardised APIs as access points for business, public administration and science.
4. **Access harmonisation** (Section 7.4): A nationally uniform licensing model, uniform fee structures and a standardised research access modelled on the research data centres of the statistical offices. Differentiated by type of use, not by federal state.
5. **Quality assurance** (Section 7.5): Binding standards for currency, completeness, depth, and consistency – documented in an annual quality report on real estate data quality from the Federal Coordination Office. AI compatibility as a mandatory metadata requirement.

These five core demands are not independent of one another: the mindset change creates the political will, the legal basis creates the institutional foundation, technology networks the existing stock, licence harmonisation opens access, and quality certification secures trust. The fields of action are mutually dependent; omitting individual elements compromises the functionality of the system as a whole. This is the message of the Real Estate Lab.

8.2 Timetable: First Results by 2030, Further Development from 2031

Building a functional real estate data infrastructure is not a project with a defined end date – it is a structural policy process. However, it follows a logic: first law, then technology, then market. And it has an external fixed point: EU Anti-Money Laundering Directive 2024/1640, which obliges Germany to establish a central access point for real estate information by 10 July 2029. This date is fixed by EU law.

The mandate for action is three-stage. The **timetable** is oriented towards realistic legislative and administrative cycles.

- **Short-term (2026–2027): Laying foundations.** The 2026 BauGB reform must contain the priority amendments to §§ 192 ff. BauGB: rent data collection, share deal reporting obligation, Federal Coordination Office (§ 192a BauGB). In parallel: launch of a federal-state working group on data standards harmonisation; pilot projects for machine-readable land register data; agreement on a nationally uniform licensing model for official real estate data.
- **Medium-term (2027–2028): Building infrastructure.** Entry into force of the amended §§ 192 ff. BauGB; establishment and operation of the Federal Coordination Office; first nationally harmo-

nised market reports on the basis of standardised purchase price registers; introduction of the nationally uniform feature set as a binding ImmoWertV annexe; launch of the quality reporting system.

- **Long-term (2028–2030): Achieving system maturity.** Operational running of the national real estate data portal; fulfilment of the EU access point obligation; first AI-supported nationwide market analyses on the basis of official transaction data; complete digitalisation and machine-readable development of the land register at state level.

From 2030 onwards: Consolidation and further development. A functional infrastructure is not a static state – it must be maintained, further developed and adapted to new requirements. The Federal Coordination Office takes on this role permanently: standard-setting, quality monitoring, international networking and the continuous adaptation of the system to new legal, technical and social framework conditions. The Real Estate Lab and its follow-up events provide the substantive input.

This timetable is ambitious – but it is realistic, if the political will is present. The examples from the Netherlands, Sweden, France and Serbia show that it is not the technical, but the political-administrative decision problem that is paramount.

8.3 Next Steps: From White Paper to Action Concept

A white paper that is read, discussed and archived has not fulfilled its purpose. Its purpose is change. The Real Estate Lab is not conceived as a one-off discussion forum – it is the prelude to a structured process in which expert knowledge is translated into politically effective demands and pursued. This section describes how the transition from paper to practice is to be structured.

Step 1: Establishing expert working groups. The participants of the Real Estate Lab @INTERGEO 2025 form the core of thematic working groups that further elaborate the fields of action described in Section 7. At least three groups are to be formed: (1) Law and Governance (BauGB, GBO, interstate treaty), (2) Technology and Standards (ALKIS integration, APIs, feature set), (3) Access and Quality (licensing models, quality report, AI compatibility). The Federal Coordination Office for Property Valuation Committees – provided it is anchored in statute – is the natural institutional roof for this work.

Step 2: Establishing a coordination body. The expert working groups from Step 1 require a permanent institutional framework. A **coordination body for real estate data infrastructure** – located at DVW or, after its establishment, at the Federal Coordination Office for Property Valuation Committees – takes on four core tasks: it **coordinates** the thematic expert groups and mediates between the areas of responsibility of the federal government, states and property valuation committees. It **develops a joint guideline** that translates the fields of action formulated in Section 7 into binding implementation steps and serves as a reference document for the participating associations – ZIA, BVS, HypZert, gif, RICS, AdV, and BKG. It **specifies a timetable** with clear milestones, responsibilities and resource planning – oriented towards the three-stage plan from Section 8.2. And it **establishes monitoring** that continuously tracks and publicly reports the implementation of the BauGB reform, the establishment of the Federal Coordination Office and the construction of the data infrastructure. Without this coordination structure, the process risks the fate of earlier initiatives: committed expert work without an institutional anchor, dissipating in diffusion of responsibilities.

Step 3: Carrying out the Real Estate Lab 2026. The Real Estate Lab @INTERGEO 2026 in Munich is the next opportunity to continue the process publicly, report results and engage new actors. Substantive focus: the presentation of the results documented in this white paper and the testing of concrete use cases. In the morning, the Real Estate Lab 2025 White Paper, the FIG Transparency Paper and the role of GDI-DE and BKG in the geodata infrastructure will be presented; AdV will present the linking of ALKIS and purchase price registers. In the afternoon, use cases will take centre stage: the use of geospatial information and commercial price data for market analyses (Sprengnetter/ESRI), 3D models in the cost approach (VALUE AG), AI-supported structural recognition (KIT) and international practical examples – Serbia (RGZ), Sweden and the Netherlands. The Real Estate Lab 2026 is thus the first public demonstration that the demands formulated in this white paper are not only politically, but also technically and practically achievable.

The Real Estate Lab has raised the question: **Who bears responsibility for a functional real estate data infrastructure in Germany?** The answer is: everyone. Authorities, enterprises, associations and academia together – coordinated, binding, with a timeframe. With this white paper, the initiative calls on federal and state level, professional associations and academia to assume this responsibility together.

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REAL ESTATE LAB @INTERGEO 2025

This white paper is based on the first Real Estate Lab at INTERGEO 2025 in Frankfurt. Nearly 40 German and international experts analysed Germany's real estate data structure and developed pathways to resolve the country's fragmented real estate data infrastructure within the necessary short- and medium-term horizons.

The 2030 vision: a federated, interoperable real estate data infrastructure with a statutory Federal Coordination Office of the property valuation committees as its institutional roof. With seven concrete fields of action – from a needed BauGB reform through ALKIS integration to AI readiness – the paper calls on federal and state government, professional associations and business to jointly assume responsibility for a capable data infrastructure as the structural foundation of the German real estate market.