

The Purposes of Valuation

Foundations • The Valuation Engineer

William Bert Craytor • October 1, 2026

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Formal definition. The *purpose* of a valuation is the transaction, obligation, or legal procedure for which an opinion of value is required. It is the top level of this journal’s classification of valuation practice. The eight recognized purposes are: (1) purchase and sale; (2) lending and collateral; (3) compulsory acquisition or expropriation (eminent domain in United States terminology); (4) taxation and assessment; (5) damages and compensation; (6) ownership transfer and allocation; (7) financial reporting; and (8) insurance. Beneath the purpose three things are settled, in whatever order the assignment forces and often together: the *property interest* valued, the *governing law*, and the *basis of value*; beneath those, the *valuation methodology*. The purpose is not itself a basis of value or a method. It constrains the levels below it. Where the governing law prescribes the basis or the method, the appraiser follows it; the rest is left to professional judgment. One purpose does not fix a single basis or method.

Intuitive framing. This entry’s context is classificatory: it sets out the journal’s ontology — the structured set of categories the journal uses to organize valuation practice: Purpose at the top; beneath it the property interest, the governing law and the basis of value, settled together; beneath those, methodology — and places this quarter’s verified instruments (in the wide sense of any formal legal text in force: a statute, decree or regulation, or a treaty; verified: checked against the official text, or marked [C] where only commentary was read) within it. It is written for appraisers who accept assignments across purposes and jurisdictions.

Four terms, before anything else, because each has an everyday appraisal meaning that is narrower or different from the one used here. *Purpose* means the transaction, obligation or procedure for which the value opinion is required; it is not USPAP’s *intended use* (how the client will use the report) or *intended user* (who will rely on it), though the two often coincide, and it does not mean the forum in which the opinion is later argued. *Basis of value* (an international-standards term; USPAP’s *type and definition of value*) means the kind of value the assignment must produce — market value, assessed value, a value defined by a statute — and not cost basis, tax basis or the basis of an adjustment. *Property interest* means the rights being valued — fee simple, leased fee, leasehold, a land-use right. One house can carry several of these interests at once, each with a different value under the same basis. *Methodology* means how the figure is reached. These are different questions: the purpose says why the valuation is needed; the basis says what kind of value is required; the interest says what is being valued; the law says which of those has already been decided; the methodology says how the value is estimated.

A classification earns its keep at the top split. Put the wrong question first, and every branch below inherits the error.

Two candidates for the top split were considered and rejected. The first was *type of compensation* — market value here, scheduled figures there, formula prices elsewhere. It fails because compensation is an *output* of the hierarchy, not its root: in the material this department has surveyed, the same purpose (compulsory acquisition) yields market value plus a statutory twenty-five percent in

Sweden's Expropriationslagen, ch. 4;¹ an objective value excluding lost profits in Argentina's Ley 21.499, art. 10;² and a figure taken from official price lists by the statutory committee in Qatar's Law No. 8 of 2022.³ A classification that put these three in different top-level categories would separate cases that belong together.

The second rejected candidate was *forum* — “court valuation” as a category of its own. It fails because courts encounter every purpose: contested sales, lender claims, expropriations, tax appeals, damages actions, divorces and probate, accounting disputes, insurance claims. A forum is where a purpose is argued, not what the valuation is for. There is no such thing as a court value; there is a value, for a purpose, that a court is asked to settle.

What survives is **purpose**. The purpose is fixed before any professional judgment begins — it arrives with the engagement — and it is the starting point of the classification: it constrains the questions that follow without necessarily fixing a single answer to any of them. Lending alone, for instance, may call for market value, for the mortgage-lending value of some European systems (a cautious long-run value used to size loans, such as the German *Beleihungswert*), or for a statutory collateral basis. Beneath the purpose three things are settled, and not in a fixed order. The *governing law* may prescribe the basis of value before any interest has been examined, as the expropriation statutes below do; a disputed *property interest* may stop any basis from being applied until the interest is fixed; and where neither is prescribed, the *basis of value* is set for the assignment, by the client's instructions or the appraiser's choice, from those the purpose admits. Only when those three are settled is a *valuation methodology* selected. Where the governing law prescribes one of them, the prescription is part of the purpose's legal context, not a matter of appraisal judgment — and, as the survey below shows, **how much the law decides is itself a fact about each system**, to be established, not assumed. This entry calls that fact *where the discretion sits*: which decisions the law or regulation has already made, and which remain for the appraiser.

Two vocabulary notes before the survey, both matters of discipline. *Right-of-Way* is United States practice vocabulary for the branch of compulsory-acquisition work concerned with corridor acquisitions for transport and utility projects; it names a practice specialty, not a distinct legal power, and this journal keeps it as a recognizable branch on practice grounds while classing it, legally, under compulsory acquisition. *Highest and best use* — the use that is legally permissible, physically possible, financially feasible, and maximally productive — is likewise United States practice vocabulary. Both terms are defined here at first use, and neither is to be imposed on the judgments of other jurisdictions, which frame these questions in their own terms.

Where appraisers encounter it. The eight purposes, with the instruments this department has verified this quarter placed under them. The survey is uneven by design: it reports where the verified material is, and says so where a branch is empty.

1. Purchase and sale. The valuation that precedes or supports a private bargain. In a voluntary private transaction the basis of value ordinarily follows from the parties' purpose and instructions rather than from a compulsory statutory rule; the law's role is background. No instrument in this quarter's verified material regulates this purpose directly.

2. Lending and collateral. The valuation that supports credit secured on property. No instrument in this quarter's verified material is placed here. A recent United States rule under this

¹*Expropriationslagen* (1972:719), chapter 4, as amended with effect from 1 August 2010 (twenty-five percent markup; toleransavdrag abolished; expectation value included); verified at riksdagen.se. [P]

²Ley 21.499 (1977), art. 10 (*valor objetivo*; “No se pagará lucro cesante”; work-conferred increase excluded); InfoLeg, norma 37292, read in machine translation (Spanish), art. 10 read verbatim. [P]

³Law No. 8 of 2022 on the expropriation of real estate and its temporary seizure for public benefit, in force 1 December 2022, repealing Law No. 13 of 1988; Al Meezan, Qatar Legal Portal, read in machine translation (Arabic). [P]

heading governs automated valuation models, and the journal does not treat such rules as valuation material: the output of an automated model is not, by itself, an appraisal (USPAP Advisory Opinion 18), and this entry concerns appraisals.

3. Compulsory acquisition / expropriation. The general heading is *compulsory acquisition* or *expropriation*; *eminent domain* is the United States manifestation of the same power, and *Right-of-Way* (defined above) is the United States practice branch. This is the most heavily populated purpose in the survey, and the place where the hierarchy shows its structure most clearly: the basis of value is prescribed, and differently, in every instrument checked. The table below puts like beside like; it asserts no equivalence between any two rows.

Purpose 3: compulsory acquisition — what each instrument provides

Jurisdiction	Instrument	Provision (closely paraphrased)
Ontario (Canada)	Expropriations Act, s. 14(4)(b) ⁴	Increase <i>and</i> decrease in value attributable to the scheme are excluded from market value.
Argentina	Ley 21.499, art. 10	Compensation is the <i>valor objetivo</i> of the property; lost profits (<i>lucro cesante</i>) are not compensable.
Poland	UGN, arts. 134(3)–(4); art. 150 ⁵	Value follows current use unless the designation consistent with the purpose of the expropriation yields more, in which case the higher figure governs; art. 150 makes <i>wartość odtworzeniowa</i> (replacement value) a basis of value distinct from the approaches that produce it.
Czechia	Act No. 184/2006 Sb., § 10(4)–(5) ⁶	Compensation is the higher of <i>cena obvyklá</i> (the usual price, defined in Act No. 151/1997 Sb., § 2) and <i>cena zjištěná</i> (the price computed under the official valuation regulation); § 10(5) disregards appreciation and depreciation connected with the purpose of the expropriation.
Sweden	Expropriationslagen, ch. 4	Compensation is market value plus twenty-five percent.
Finland	Lunastuslaki (603/1977), as amended by 520/2025, in force 1 August 2025 ⁷	Compensation is market value plus twenty-five percent; of the reliable valuation methods, the one yielding the highest value is to be used.
Italy	DPR 327/2001, art. 37 ⁸	For building land (<i>aree edificabili</i>), compensation is <i>valore venale</i> (market value), reduced by twenty-five percent where the expropriation is for economic and social reform; Corte cost. 348/2007 requires compensation to be a <i>serio ristoro</i> (serious restoration), not necessarily full market value.
France	Code de l'expropriation, art. L. 322-2 ⁹	Value is fixed at the date of the first-instance decision, but only the actual use of the property one year before the opening of the public inquiry is taken into account. The final paragraph disregards changes in value since that reference date caused by the announcement of the works, by the prospect of changes to the land-use rules, or by public works carried out in the built-up area in the three years before the inquiry.
Qatar	Law No. 8 of 2022	Just compensation (art. 2), determined by statutory valuation committees (art. 5) from official price lists, at the value on the date of the expropriation decision (art. 11).
Kenya	Land Value (Amendment) Act 2019, s. 107A (land value index) ¹⁰	Valuation for compensation <i>shall be based on</i> the Act's provisions and a statutory land value index (s. 107A).

Within purpose 3 the survey forced one sub-branch that practice rarely names: **statutory forced sale between private parties at a statutory price**. The state supplies the compulsion and the pricing formula but is not the acquirer; the statute fixes the price rule — a formula, or a named basis such as market value — where the parties would otherwise bargain.

Purpose 3, sub-branch: statutory forced sale between private parties

Jurisdiction	Instrument	Provision (closely paraphrased)
England & Wales	Leasehold and Freehold Reform Act 2024 ¹¹	Leasehold enfranchisement (a residential leaseholder’s statutory right to buy the freehold — in US terms, the fee simple — or extend the lease) at a statutory price. Enacted but <i>not yet in force</i> : the valuation provisions await commencement.
Ireland	Landlord and Tenant (Ground Rents) (No. 2) Act 1978; price under s. 7 of the Landlord and Tenant (Amendment) Act 1984 ¹²	Ground-rent buyout by the tenant; the price is set on a willing-purchaser, willing-vendor basis, capped by a capitalization of the rent at the yield on Irish Government securities (government bonds).
Japan	Article 14 building-purchase right ¹³	Forced sale of buildings between private parties under the statutory right.

4. Taxation and assessment. The valuation supplies the value used in calculating or administering the tax. The recurring question is how far a value produced by mass appraisal (USPAP Standards 5 and 6) for the whole tax roll may depart from the actual value of one property before the owner can displace it. One verified instrument on that question is in the table below.

⁴*Expropriations Act*, RSO 1990, c. E.26, s. 14(4)(b) (scheme disregard); verified against ontario.ca e-Laws. [P]

⁵*Ustawa o gospodarce nieruchomościami* (UGN) of 21 August 1997, arts. 134(3)–(4) (higher-value conferral); art. 150 (*wartość odtworzeniowa* as a basis of value); verified at isap.sejm.gov.pl (ISAP consolidated text as at 3 August 2026). [P]

⁶Act No. 184/2006 Sb., § 10(4)–(5); Act No. 151/1997 Sb., § 2 (definition of *cena obvyklá*); verified at zakonyprolidi.cz and re-read on the official e-sbirka.gov.cz, 19 September 2026. [P]

⁷*Lunastuslaki*, as substantially amended by Law 520/2025, in force 1 August 2025 (basis restated as *markkina-arvo*; the reliable method or methods leading to the highest value; fixed increase of twenty-five percent; new 38 a §; § 30); verified at finlex.fi. [P]

⁸DPR 327/2001 (Testo Unico), in force 30 June 2003, art. 37 as rewritten by art. 2, para. 89 of Law 244/2007; verified at Normattiva [P]. Corte Costituzionale, sentenza n. 348/2007, deposited 24 October 2007 (*serio ristoro* standard); read in machine translation (Italian) [P].

⁹Code de l’expropriation pour cause d’utilité publique, art. L. 322-2 (date of value; use one year before the public inquiry; final paragraph, changes in value caused by the announcement of the works, by the prospect of changes to the land-use rules, or by public works in the built-up area in the three years before the inquiry); consolidated text at codes.droit.org (re-read on legifrance.gouv.fr, 19 September 2026), read in machine translation (French). [P]

¹⁰Land Value (Amendment) Act, 2019 (Act No. 15 of 2019; Kenya Gazette Supplement No. 137; assent 2 August 2019, commencement 19 August 2019), s. 2 (inserting into s. 2 of the Land Act, 2012 the definitions of “just compensation” and of “prompt”, not more than one year after the taking of possession) and s. 4 (new s. 107A: valuation of freehold and community land for compensation “shall be based on” the provisions of the Part and the land value index; s. 107A(3) defines the index); verified against the original enactment at new.kenyalaw.org, 30 September 2026. [P]

¹¹Leasehold and Freehold Reform Act 2024 (c. 22), s. 37 and Schedule 4 (standard valuation method, Part 5; para. 17, no marriage value and no hope value); *none of the valuation provisions is in force; no deferment or capitalisation rates prescribed*; legislation.gov.uk. [P]

¹²Landlord and Tenant (Ground Rents) (No. 2) Act 1978, ss. 16(2)(f) and 17; Landlord and Tenant (Amendment) Act 1984, s. 7 (including s. 7(4), (5) and (8): gilt-yield cap and fee-simple fractions); irishstatutebook.ie. [P]

¹³Act on Land and Building Leases, Article 14 (building purchase demand at market value, *jika*), construed by the Supreme Court of Japan, Second Petty Bench, 28 August 2026; source: Kitanippon Shimbun, read in machine translation (Japanese). [C]

5. Damages and compensation. The valuation measures a loss — value being part of the harm — outside the purposes listed elsewhere here. Purpose 5 does not mean every valuation used in litigation. Courts consider each of the eight purposes; a divorce valuation and an eminent-domain valuation may both be litigated, and litigation does not make them the same kind of valuation. Purpose 5 applies only where measuring the loss or damage is itself the valuation objective. One verified instrument this quarter is placed here: Ukraine’s statutory compensation for war damage, described below.

6. Ownership transfer and allocation. The valuation that allocates or transfers an interest between persons who hold or held it together: partition, succession, marital allocation on divorce, a shareholder or partner buy-out, the dissolution of a partnership. Shared ownership comes to an end or changes hands, and the value has to be divided between the parties. The basis of value is often set by the law governing the relationship — family, succession, corporate or partnership law — or by the parties’ agreement, rather than chosen by the appraiser. No instrument in this quarter’s verified material addresses this purpose directly.

7. Financial reporting. The survey in this issue is empty. No financial-reporting instrument entered this quarter’s verified material; the branch appears in the ontology but is not populated in the data, and the classification does not pretend that it is.

8. Insurance. The valuation that sets the sum insured or the loss under a policy. No insurance instrument was confirmed in this quarter’s survey; the branch is reported empty.

Purpose 5: statutory compensation for war damage. Ukraine’s Law No. 2923-IX, with Cabinet of Ministers Resolution No. 600/2023, compensates destroyed housing at the floor area multiplied by a unit rate.¹⁴ The question it answers — what it costs to restore the owner to the position before the building was destroyed — resembles the replacement and indemnity question of purpose 8, and its measure resembles replacement cost. Its placement follows from the journal’s rule that a shared measurement method does not decide where a regime is placed (otherwise expropriation compensation measured by replacement cost would also fall under insurance); the objective decides it. Here the objective is to measure the owner’s loss from the destroyed building, arising from a statute and not from a policy of insurance, so the regime belongs to purpose 5, damages and compensation.

Other purposes — what each instrument provides

Jurisdiction	Instrument	Provision (closely paraphrased)
<i>Purpose 4: taxation and assessment</i>		
Germany	§ 220(2) BewG ¹⁵	The owner may displace the assessed property-tax value (<i>Grundsteuerwert</i>) only by proving that it exceeds the property’s market value (<i>gemeiner Wert</i>) by at least forty percent. The legislature established this provision in December 2024 following the Federal Fiscal Court’s interim relief orders of 27 May 2024; the Court’s three judgments on the merits, upholding the federal property-tax valuation model, followed on 12 November 2025.
<i>Purpose 5: damages and compensation (statutory compensation for war damage)</i>		
Ukraine	Law No. 2923-IX; Cabinet of Ministers Resolution No. 600/2023	The amount of compensation for housing that has been destroyed is calculated by multiplying the area by a unit rate.

¹⁴Law No. 2923-IX of 23 February 2023 (in force from 22 May 2023), article 8(4) (area multiplied by value per square meter); Cabinet of Ministers Resolution No. 600 of 30 May 2023 (destroyed-housing formula; 150 m² cap); official website (zakon.rada.gov.ua), read via machine translation (Ukrainian). [P]

The court digests use a different list and the two are not in competition. The journal’s court digests classify their decisions into eight *litigation categories*: the types of situations in which valuation disputes come before a court. This entry’s list, by contrast, classifies the purposes for which valuations are made. Because the lists answer different questions they do not match one to one: professional liability, for instance, is a type of lawsuit and not a reason for carrying out a valuation. A purchase and sale can itself be litigated — in California, buyers frequently sue over a price inflated by misrepresentation and misleading statements — and the valuation in that suit measures the buyer’s loss (purpose 5), not the price of a bargain (purpose 1). The concordance (a table matching each item on one list to its counterpart on the other) below shows how they correspond.

Digest category	Purpose in this entry
Expropriation, eminent domain and condemnation	3. Compulsory acquisition / expropriation
Taxation	4. Taxation and assessment
Lending, foreclosure and mortgage regulation	2. Lending and collateral
Valuer and appraiser professional liability	5. Damages and compensation: the valuation measures the loss another valuation caused
Family law, divorce and equitable distribution	6. Ownership transfer and allocation
Estate, trust and probate	6. Ownership transfer and allocation; 4 where a transfer tax is the occasion
Partnership, shareholder and buy-out disputes	6. Ownership transfer and allocation
Insurance, casualty, environmental diminution and private contract damages	8. Insurance; 5. Damages and compensation
<i>no category</i>	1. Purchase and sale; 7. Financial reporting

There are two structural findings which are common to all the branches and are part of the ontology.

The existence and validity of the property interest being valued must be established, or explicitly assumed, before its value can be interpreted. In three jurisdictions this quarter’s survey found that the key issue was not what the property is worth but whether the interest being valued is actually validly held — a title dispute being one form of that question: the *Cowichan* and *Wolastoqey* cases in Canada,¹⁶ in which the validity of the existing titles is itself at issue; in Mexico the amparo litigation (a Mexican constitutional-rights action) concerning titles granted under Porfirio Díaz (1876–1911), with jurisprudencia 1a./J. 177/2025¹⁷ (*jurisprudencia* in the Mexican sense: a rule settled by the Supreme Court or a circuit court that binds lower courts, not “philosophy of law”); and in Indonesia, where nominee arrangements (land held in an Indonesian citizen’s name for a foreigner) are invalid under articles 21 and 26(2) of the Basic Agrarian Law.¹⁸ These questions do not constitute a ninth purpose and must not be listed as such. They belong to the *property*

¹⁵*Bewertungsgesetz* (BewG), § 220(2) (“um mindestens 40 Prozent”), codified by the *Jahressteuergesetz* 2024 of 2 December 2024 [P]; Bundesfinanzhof, interim-relief orders of 27 May 2024, II B 78/23 and II B 79/23, and judgments of 12 November 2025, II R 3/25, II R 25/24 and II R 31/24 (press release Nr. 078/25 of 10 December 2025; reasons published 22 January 2026), reported via Deloitte Tax-News and EY Deutschland, read in machine translation [C].

¹⁶*Cowichan Tribes v Canada (Attorney General)*, 2025 BCSC 1490, Supreme Court of British Columbia, 7 August 2025 (first instance; declarations suspended for eighteen months; under appeal); source: Mandell Pinder LLP case summary (commentary) [C]. *J.D. Irving, Limited v Wolastoqey Nation*, 2025 NBCA 129, New Brunswick Court of Appeal, 11 December 2025 (*the department has not read the judgment; scope of the decision contested in commentary*) [C].

¹⁷Jurisprudencia 1a./J. 177/2025 (11a.), registro digital 2031077, approved 13 August 2025 by the Primera Sala; precedent: Amparo directo en revisión 2060/2021, decided 23 October 2024 (4:1, ponencia Ríos Farjat); *Semanario Judicial de la Federación*, read in machine translation (Spanish). [P]

¹⁸Basic Agrarian Law (Law No. 5 of 1960, UUPA), Articles 21 and 26(2) (nominee arrangements void). [C]

interest, whatever the purpose of the instruction: a value opinion attaches to a specific interest, and it cannot be interpreted unambiguously until that interest has been specified — established as fact, or adopted as an explicit assignment assumption.

In certain systems the structure is compressed: the levels are still there, but the statute, not the appraiser, has made the decisions at most of them. In other words, several decisions that an appraiser would make in another jurisdiction have already been made by the statute. Under Qatar’s Law No. 8 of 2022 the statute names the basis — just compensation (*ta’wid ’adil*, art. 2) — and fixes who values (two statutory valuation committees, art. 5), the method (official periodic price lists) and the date (the date of the expropriation decision, art. 11); no level leaves discretion to the appraiser. Similarly, in Kenya the land value index, on which valuation for compensation must be based, and in Ukraine the unit rate compress the structure in the same way within their own fields: the figure starts from a predetermined instrument rather than from an appraisal prepared specifically for the property. The point at which discretion lies is a fact specific to each system, and an appraiser who has been trained in a system where professional judgment is free but engaged in one where it is not must establish that fact before carrying out any other action.

Worked appraisal example. Take one event — a public authority acquires a parcel compulsorily — and run it down the hierarchy in two of the surveyed systems. The purpose is the same in both: purpose 3. Everything below the top level differs, including who decides what.

Finland. The basis of value is prescribed, and so is the compensation built on it: under the Lunastuslaki (603/1977), as amended by 520/2025, in force 1 August 2025, the basis is market value, and the compensation is that value plus a statutory twenty-five percent — a compensation measure, not a second basis. The statute also reaches one level further down than most: it directs that, of the reliable valuation methods, the one yielding the highest value be used. That is a methodology-level instruction — but note precisely what it does. It does not name a method; it states a *selection rule* over methods, and leaves the formation and execution of each candidate method with the appraiser. The appraiser values the parcel by the reliable approaches the evidence supports, takes the highest, adds the statutory twenty-five percent.

Qatar. Under Law No. 8 of 2022 the hierarchy compresses to its shortest surveyed form: in other words, every decision an appraiser would make elsewhere is made by the statute or by the statutory committee applying it. The statute names the basis, just compensation; statutory committees determine it from official price lists, at the value on the date of the expropriation decision. Basis, method, and date are all fixed at the level of the instrument; there is no method-selection question because there is no method selection.

The same purpose, the same kind of event, and in one system the professional question is “which method does the evidence best support?” while in the other there is no professional question of that kind at all. This is what it means to say the structure is durable but its allocation is local: the levels are always there; which of them are open is decided by each legal system, and the appraiser’s first task is to read where the discretion sits. The department states no view on which allocation is preferable.

Why it matters for defensibility. A report is defensible against this ontology when it states, in this reporting order (whatever order the decisions were made in):

- (a) **the purpose of the valuation**, since it constrains everything else, and a report reused for a different purpose is a different report;
- (b) **the property interest valued**, including whether any question of title validity is open, since a value opinion cannot be interpreted until the interest it attaches to is specified, as fact or as a stated assumption;

- (c) **the governing law, and where the discretion sits** — which decisions the law has made and which are left to professional judgment;
- (d) **the basis of value and its source** — prescribed by the governing law, with the instrument cited, or chosen by the appraiser within what the purpose admits;
- (e) **the methodology**, selected within whatever room (c) and (d) leave, with practice vocabulary from the appraiser's home jurisdiction (Right-of-Way, highest and best use) defined at first use and never imposed on foreign instruments or judgments.

The characteristic failure is silence on (c): a report that imports the discretion of the appraiser's home system into an instrument that does not grant it. The Finland–Qatar comparison above is the cautionary pair — not because either arrangement is wrong, but because a method-selection argument has a place in one and no place in the other.

Cross-references: 011 The Scheme, and Effects on Value — the counterfactual machinery of purpose 3's disregard rules.

013 Terminological Divergence — the vocabulary discipline this entry's rule (e) requires.

014 The Basis of Value and the Approach — the basis the purpose constrains and the law often prescribes.

Dictionary: basis of value; expropriation; assessed value; statutory purchase right; title validity.

Recent Court Decisions, this issue: North America; European Union; United Kingdom; South America; Middle East and North Africa; Sub-Saharan Africa; East Asia; Southeast Asia.

Addendum: Prolog Formalization

The following machine-readable companion (012-valuation-purpose.pl) formalizes this entry in the journal's Prolog knowledge base. It is also published as a browsable galley alongside this article.

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% SPDX-License-Identifier: AGPL-3.0-or-later
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%% 012-valuation-purpose.pl
%%
%% v1.1.0: purpose constrains, not determines; beneath it the property
%% interest, the governing law and the basis of value are settled together
%% (no fixed order), then methodology; purpose 5 renamed damages and
%% compensation.
%% v1.2.0: Ukraine's war-damage law placed under purpose 5 (damages and
%% compensation): its objective is to measure the owner's loss.
%%
%% Prolog companion to Foundations entry 012, "The Purposes of
%% Valuation" (concept id: valuation_purpose).
%%
%% Encodes the journal's ontology of valuation practice: the eight
%% purposes, the five-element hierarchy, in three levels, beneath each, the placement of
%% every instrument verified for Vol. 1, No. 2, and the two structural
%% findings (anterior title questions; chain compression). Every
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%% placement carries the source against which it was verified.
%%
%% Diacritics are omitted in atoms and quoted strings for galley
%% portability; the entry text carries the full forms.

:- module(purposes_of_valuation,
    [ purpose/3, hierarchy_level/2, instrument/4, adjacent_instrument/4,
      sub_branch_instrument/5, anterior_question/3, chain_compression/3,
      unpopulated/2, digest_category/2, verified_source/2, check/0 ]).

% Portability: Scryer Prolog loads the list predicates on request and has
% no built-in forall/2 inside a module; for_all/2 below is the ISO
% definition, so the module runs unchanged in Trealla, SWI and Scryer.
:- use_module(library(lists)).

for_all(Cond, Action) :- \+ ( call(Cond), \+ call(Action) ).

% =====
% THE EIGHT PURPOSES
% =====
% purpose(Ordinal, Id, Label)

purpose(1, purchase_sale,          'Purchase/Sale Transactions').
purpose(2, lending_collateral,      'Lending/Collateral Valuation').
purpose(3, compulsory_acquisition, 'Compulsory Acquisition / Expropriation').
purpose(4, taxation_assessment,     'Taxation/Assessment').
purpose(5, damages_compensation,    'Damages/Compensation').
purpose(6, ownership_transfer,      'Ownership Transfer/Allocation').
purpose(7, financial_reporting,     'Financial Reporting/Accounting').
purpose(8, insurance,              'Insurance Valuation').

% Right-of-Way is kept as a recognizable branch of purpose 3 on
% practice grounds; legally it falls under compulsory acquisition.
% "Eminent domain" is the United States manifestation of purpose 3's
% underlying power, not a separate purpose.
practice_branch(compulsory_acquisition, right_of_way,
    'US practice vocabulary; corridor acquisitions').

% =====
% THE HIERARCHY (durable; its allocation is local)
% =====
% hierarchy_level(Order, Level)

% Level 2 holds three elements settled together, in no fixed order.
hierarchy_level(1, purpose).
hierarchy_level(2, property_interest).
hierarchy_level(2, governing_law).
hierarchy_level(2, basis_of_value).
hierarchy_level(3, valuation_methodology).

% The purpose constrains what follows; it does not fix a single answer.
constrains(purpose, property_interest).
constrains(purpose, governing_law).
constrains(purpose, basis_of_value).
constrains(governing_law, basis_of_value). % often prescribed by statute
precedes(property_interest, interpretation_of_value).
precedes(level(2), valuation_methodology).

% =====

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```

% INSTRUMENT PLACEMENTS
% =====
% instrument(Jurisdiction, Instrument, PurposeId, WhatItProvides)
% Every fact restates, closely paraphrased, what the entry's footnote for
% that instrument supports. verified_source/2 names what was actually read,
% which is the primary text for most rows and a secondary source where it
% says so.

instrument(ontario, 's. 14(4)(b), Expropriations Act',
    compulsory_acquisition,
    'increase and decrease attributable to the scheme excluded').

instrument(argentina, 'art. 10, Ley 21.499',
    compulsory_acquisition,
    'valor objetivo; lucro cesante (lost profits) not compensable').

instrument(poland, 'arts. 134(3)-(4) and art. 150, UGN',
    compulsory_acquisition,
    'higher of current use and expropriation-purpose designation; wartosc odtworzeniowa a basis of
    ↪ value distinct from the approaches (art. 150)').

instrument(czechia, 'sec. 10(4)-(5), Act No. 184/2006 Sb.',
    compulsory_acquisition,
    'higher of cena obvykla (Act No. 151/1997 Sb. sec. 2) and cena zjistena; sec. 10(5) disregard').
    ↪

instrument(sweden, 'ch. 4, Expropriationslagen',
    compulsory_acquisition,
    'market value plus 25 percent').

instrument(finland, 'lunastuslaki 603/1977, as amended by 520/2025 (in force 1 Aug 2025)',
    compulsory_acquisition,
    'market value plus 25 percent; of the reliable methods, the one yielding the highest value').

instrument(italy, 'art. 37, DPR 327/2001',
    compulsory_acquisition,
    'building land: valore venale less 25 percent for economic and social reform expropriations;
    ↪ Corte cost. 348/2007 requires serio ristoro').

instrument(france, 'art. L. 322-2, Code de l\'expropriation',
    compulsory_acquisition,
    'value at date of first-instance decision; actual use one year before opening of public inquiry
    ↪; final paragraph disregards changes in value caused by the announcement of the works, the
    ↪ prospect of land-use rule changes, or public works in the built-up area in the three years
    ↪ before the inquiry').

instrument(qatar, 'Law No. 8 of 2022',
    compulsory_acquisition,
    'just compensation (art. 2); statutory valuation committees (art. 5); official price lists;
    ↪ value at expropriation-decision date (art. 11)').

instrument(kenya, 'Land Value (Amendment) Act 2019, s. 107A (land value index)',
    compulsory_acquisition,
    'valuation for compensation shall be based on the Act and a statutory land value index').

instrument(ukraine, 'Law No. 2923-IX; Cabinet of Ministers Resolution No. 600/2023',
    damages_compensation,
    'war-damage compensation for destroyed housing as area x unit rate: its objective is to measure
    ↪ the owner\'s loss, so purpose 5; the replacement-cost measure does not decide placement').

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```

instrument(germany, 'sec. 220(2) BewG',
    taxation_assessment,
    'assessed value displaced if it exceeds market value (gemeiner Wert) by at least 40 percent;
    ↳ codified Dec 2024 after BFH interim-relief orders of May 2024; merits judgments of 12 Nov 2025
    ↳ upheld the federal model').

% adjacent_instrument/4 is kept, empty, for regimes outside the eight.

:- dynamic(adjacent_instrument/4).

% -----
% Sub-branch of purpose 3: statutory forced sale between
% private parties at a statutory price.
% sub_branch_instrument(Jurisdiction, Instrument, PurposeId, Status, What)

sub_branch_instrument(england_wales,
    'Leasehold and Freehold Reform Act 2024',
    compulsory_acquisition, not_in_force,
    'leasehold enfranchisement at a statutory price; valuation provisions await commencement').

sub_branch_instrument(ireland,
    'Ground Rents (No. 2) Act 1978; price under s. 7 of the 1984 Act',
    compulsory_acquisition, in_force,
    'willing-purchaser/willing-vendor basis capped by gilt-yield capitalisation').

sub_branch_instrument(japan,
    'Article 14 building-purchase right',
    compulsory_acquisition, in_force,
    'forced sale of buildings between private parties').

% =====
% STRUCTURAL FINDINGS
% =====

% Title validity is anterior to every purpose: it lives at the
% property_interest level of the hierarchy, not as a ninth purpose.
% anterior_question(Jurisdiction, Matter, HierarchyLevel)

anterior_question(canada,
    'Cowichan / Wolastoqey litigation: validity of existing titles in question',
    property_interest).

anterior_question(mexico,
    'Porfirian-title amparo; good-faith-purchaser jurisprudencia 1a./J. 177/2025',
    property_interest).

anterior_question(indonesia,
    'nominee arrangements void, Basic Agrarian Law arts. 21, 26(2)',
    property_interest).

% Chain compression: systems in which the purpose fixes lower levels
% of the hierarchy, leaving them outside appraiser discretion.
% chain_compression(Jurisdiction, LevelsFixed, Mechanism)

chain_compression(qatar,
    [basis_of_value, valuation_methodology],
    'statutory committees, official price lists, expropriation-decision date').

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chain_compression(kenya,
    [basis_of_value, valuation_methodology],
    'land value index').

chain_compression(ukraine,
    [basis_of_value, valuation_methodology],
    'area x unit rate under Cabinet of Ministers Resolution No. 600/2023').

% =====
% CONCORDANCE WITH THE COURT DIGESTS
% =====
% The digests file decisions under eight litigation categories, the keys
% of valuation-purposes.sty. They are where valuation disputes reach a
% court, not a second list of purposes.
% digest_category(PackageKey, PurposeIds)

digest_category(expropriation, [compulsory_acquisition]).
digest_category(taxation,      [taxation_assessment]).
digest_category(lending,      [lending_collateral]).
digest_category(liability,    [damages_compensation]).
digest_category(family,       [ownership_transfer]).
digest_category(estate,       [ownership_transfer, taxation_assessment]).
digest_category(partnership,   [ownership_transfer]).
digest_category(insurance,     [insurance, damages_compensation]).

% =====
% SCOPE
% =====
% Purposes 7 and 8 are EMPTY in this issue's survey (1, 2 and 6 carry
% no instrument either, and the entry says so under each). The branches are
% present in the ontology and unpopulated in the data.

unpopulated(financial_reporting, 'no instrument verified this issue').
unpopulated(insurance, 'no insurance instrument verified this issue').

% =====
% PROVENANCE
% =====

verified_source(ontario, 'Expropriations Act, R.S.O. 1990, c. E.26, s. 14(4)(b)').
verified_source(argentina, 'Ley 21.499, art. 10, read verbatim').
verified_source(poland, 'UGN consolidated text, arts. 134, 150, 152').
verified_source(czechia, 'Act No. 184/2006 Sb. and Act No. 151/1997 Sb., consolidated').
verified_source(sweden, 'Expropriationslagen (1972:719), ch. 4, consolidated').
verified_source(finland, 'lunastuslaki 603/1977, as amended by 520/2025, in force 1 Aug 2025').
verified_source(italy, 'DPR 327/2001 art. 37; Corte costituzionale 348/2007').
verified_source(france, 'Code de l\'expropriation, art. L. 322-2, consolidated').
verified_source(qatar, 'Law No. 8 of 2022').
verified_source(kenya, 'Land Value (Amendment) Act 2019, ss. 2 and 4 (new s. 107A), verified
    ↪ against the original enactment at new.kenyalaw.org, 30 Sep 2026').
verified_source(germany, 'sec. 220(2) BewG as codified Dec 2024; BFH merits judgments 12 Nov
    ↪ 2025').
verified_source(ukraine, 'Law No. 2923-IX; Cabinet of Ministers Resolution No. 600/2023').
verified_source(england_wales, 'Leasehold and Freehold Reform Act 2024 (valuation provisions not
    ↪ commenced)').
verified_source(ireland, 'Landlord and Tenant (Ground Rents) (No. 2) Act 1978; s. 7 of the 1984
    ↪ Act').
verified_source(japan, 'Article 14 building-purchase right; Second Petty Bench decision of 28
    ↪ Aug 2026 from press report, machine translation').

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verified_source(canada, 'Cowichan / Wolastoqey litigation, decisions as reported; Wolastoqey
    ↪ judgment not read').
verified_source(mexico, 'jurisprudencia 1a./J. 177/2025').
verified_source(indonesia, 'Basic Agrarian Law, arts. 21, 26(2); no source URL carried').

% =====
% CHECKS
% =====
%
% 1. Exactly eight purposes, ordinals 1..8, distinct ids.
% 2. Exactly five hierarchy levels, ordinals 1..5.
% 3. Every placement (direct, adjacent, sub-branch) names a declared
%     purpose, and every jurisdiction placed anywhere has a verified
%     source.
% 4. Unpopulated purposes have no direct instrument placements
%     (adjacency is recorded separately and does not populate).
% 5. Chain-compression jurisdictions are placed somewhere in the
%     ontology, and every level they fix is a declared hierarchy level
%     other than purpose itself.
% 6. Anterior questions sit at a declared hierarchy level and never at
%     the purpose level: title validity is not a ninth purpose.

eight_purposes :-
    findall(N, purpose(N, _, _), Ns), sort(Ns, [1,2,3,4,5,6,7,8]),
    findall(Id, purpose(_, Id, _), Ids), sort(Ids, SIds), length(SIds, 8).

five_levels :-
    findall(N, hierarchy_level(N, _), Ns), sort(Ns, [1,2,3]).

purpose_id(Id) :- purpose(_, Id, _).

placements_valid :-
    for_all(instrument(_, _, P, _), purpose_id(P)),
    for_all(adjacent_instrument(_, _, P, _), ( P == none ; purpose_id(P) )),
    for_all(sub_branch_instrument(_, _, P, _, _), purpose_id(P)),
    for_all(sub_branch_instrument(_, _, _, S, _),
        memberchk(S, [in_force, not_in_force])).

all_sourced :-
    for_all(instrument(J, _, _, _), verified_source(J, _)),
    for_all(adjacent_instrument(J, _, _, _), verified_source(J, _)),
    for_all(sub_branch_instrument(J, _, _, _, _), verified_source(J, _)),
    for_all(anterior_question(J, _, _), verified_source(J, _)).

empty_purposes_empty :-
    for_all(unpopulated(P, _),
        ( purpose_id(P),
          \+ instrument(_, _, P, _),
          \+ sub_branch_instrument(_, _, P, _, _) )).

compression_grounded :-
    for_all(chain_compression(J, Levels, _),
        ( ( instrument(J, _, _, _) ; adjacent_instrument(J, _, _, _) ),
          for_all(member(L, Levels),
              ( hierarchy_level(N, L), N > 1 )) )).

anterior_not_a_purpose :-
    for_all(anterior_question(_, _, Level),
        ( hierarchy_level(N, Level), N > 1 )).

```

```

concordance_valid :-
    findall(K, digest_category(K, _), Ks), length(Ks, 8),
    for_all(digest_category(_, Ps),
        ( Ps \== [], for_all(member(P, Ps), purpose_id(P)) )),
    % the two purposes with no digest category are exactly these
    findall(P, ( purpose_id(P), \+ ( digest_category(_, L), memberchk(P, L) ) ), Un),
    sort(Un, [financial_reporting, purchase_sale]).

check :-
    eight_purposes,
    concordance_valid,
    five_levels,
    placements_valid,
    all_sourced,
    empty_purposes_empty,
    compression_grounding,
    anterior_not_a_purpose,
    format("012-valuation-purpose: all checks passed~n", []).

```