



PROPERTY DATA SPECIFICATION

TPX MLS & Syndication Server

Canonical property schema, source identity, field definitions, Houzez mappings, media rules and integration requirements for TPX property exchange.

Specification purpose

This document defines the common TPX property data contract used by the central server and intended for the Houzez Connector, API integrations and future XML feed mappings.

Contents

A single property model allows TPX integrations to exchange inventory consistently while preserving source ownership and property identity.

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01 - Data Model Principles

TPX uses one canonical property record as the authoritative network representation of each source listing.

The data model must work independently of WordPress while still mapping cleanly to Houzez. This allows the same TPX record to be populated from Houzez, a custom API integration or a future XML feed without changing the core property semantics.

Core Principles

- One canonical TPX property represents one source listing.
- Source ownership remains associated with the originating organization.
- A stable external identifier links repeated synchronizations to the same property.
- Syndicated copies are distribution records and must not become new canonical source properties.
- Property data is normalized at the TPX layer before distribution.
- Coordinates and media identity are preserved for downstream search, maps and syndication.
- Exchange availability is separate from ordinary listing data.

CANONICAL MODEL

```
graph TD
    A[SOURCE SYSTEM] --> B[PROPERTY SOURCE IDENTITY]
    B --> C[CANONICAL TPX PROPERTY]
    C --> D[PRIVATE EXCHANGE]
    D --> E[SYNDICATED COPIES]
```

Data contract

The production Laravel validation schema remains authoritative for fields accepted by the current API. This specification defines the target common model and should be kept synchronized with implementation changes.

02 - Identification & Source

Identity fields prevent duplicates and preserve the relationship between an external listing and its canonical TPX record.

Field	Type	Requirement	Purpose
id	Integer	TPX generated	Internal canonical TPX property identifier.
external_id	String	Required for external sync	Stable property identifier in the originating system.
source_type	String	Required by source relationship	Identifies the integration source, e.g. houzez, api or xml.
source_agency_id	Integer	Required	Identifies the organization that owns the canonical source record.
external_url	String/URL	Optional	Reference URL for the originating listing where supported.

PropertySource Relationship

IDENTITY KEY

```
SOURCE AGENCY
+
SOURCE TYPE
+
EXTERNAL ID
|
PROPERTY SOURCE
|
TPX PROPERTY ID
```

The external ID must remain stable across edits. Changing it without a controlled migration can cause TPX to treat an existing listing as a new property.

Cross-agency protection

An authenticated agency must not be able to overwrite a canonical property owned by another source agency.

03 - Listing & Transaction

Listing fields describe how the property is presented and whether it is offered for sale, rent or another supported transaction state.

Field	Type	Requirement	Description
title	String	Core	Primary listing title.
description	Text	Optional	Full property marketing description.
status	String	Core	Transaction/listing status used by the property.
development	String	Optional	Development, project or estate name.
for_sale	Boolean	As applicable	Indicates sale availability where represented separately.
for_rent	Boolean	As applicable	Indicates rental availability where represented separately.

Transaction Consistency

Sale and rental fields should be internally consistent. A sale listing should carry the relevant sale price; a rental listing should carry the relevant rental price and, where applicable, rental period.

EXAMPLE

```
{
  "external_id": "PROPERTY-1001",
  "title": "Modern Sea View Villa",
  "status": "for-sale",
  "sale_price": 6250000
}
```

04 - Property Characteristics

Physical property fields support listing display, filtering, comparison and syndication to receiving websites.

Field	Type	Unit / Format	Description
bedrooms	Integer	Count	Number of bedrooms.
bathrooms	Number	Count	Number of bathrooms.
property_size	Number	Configured area unit	Internal usable/built property area.
land_size	Number	Configured area unit	Land or plot area.
parking	Integer	Count	Parking spaces where known.
furnishing	String	Controlled value	Furnishing state.
year_built	Integer	YYYY	Year construction was completed where known.

Units

Area values should not be exchanged without a known unit convention. TPX integrations should normalize source units before distribution or carry explicit unit metadata when the platform adds that capability.

Avoid presentation text in numeric fields

Values such as 'approx. 250 sqm' should be parsed into structured numeric data before entering a numeric property-size field. Marketing qualifiers belong in descriptive content.

05 - Financial & Tenure

Financial fields must remain structured so receiving systems can display, filter and calculate property information consistently.

Field	Type	Description
sale_price	Number	Asking sale price.
rental_price	Number	Rental asking price.
rental_period	String	Rental period such as monthly where supported.
common_fee	Number	Common-area or maintenance fee.
common_fee_period	String	Period associated with the common fee.
tenure	String	Ownership/tenure classification.
lease_years	Integer	Lease duration in years where applicable.
foreign_quota	Boolean / controlled value	Indicates foreign quota status where relevant to the market.

Currency

Price fields require a consistent currency context. The central data model should not infer currency from formatted text. If multi-currency storage is introduced, currency should be represented explicitly alongside the numeric value.

STRUCTURED PRICING

```
sale_price: 6250000
rental_price: 45000
rental_period: monthly
```

06 - Location Data

TPX location data supports conventional property search, mapping and proximity-based location intelligence.

Field	Type	Description
address	String	Property address where the source is permitted to distribute it.
province	String / mapped location	Province, state or equivalent administrative area.
district	String / mapped location	District, city area or equivalent subdivision.
subdistrict	String / mapped location	More granular administrative area where supported.
latitude	Decimal	Property latitude.
longitude	Decimal	Property longitude.

Coordinate Requirements

Latitude and longitude should describe the actual property location whenever available. They are critical for map display and proximity searches such as distance from airports, schools, transport stations or landmarks.

COORDINATES

```
{
  "latitude": 12.5684,
  "longitude": 99.9577
}
```

Houzez Mapping

TPX Field	Houzez Field
latitude	houzez_geolocation_lat
longitude	houzez_geolocation_long

07 - Features & Classification

Classification fields should use stable normalized values while integrations map them to local taxonomies.

Data	Recommended Representation	Purpose
property_type	Controlled classification / mapped taxonomy	Apartment, villa, single-family home and other property categories.
features	Collection of normalized values	Pool, gym, air conditioning and other property features.
labels	Collection / controlled values	Marketing or operational labels where supported.

Taxonomy Mapping

TPX should not depend on the numeric term IDs used by a particular WordPress website. Connectors should map TPX classifications to the appropriate local Houzez taxonomy terms.

MAPPING PRINCIPLE

```
TPX PROPERTY TYPE
|
NORMALIZED VALUE
|
CONNECTOR MAPPING
|
LOCAL HOUZEZ TAXONOMY
```

Network consistency

Where different members use different local taxonomy names, the connector mapping layer should resolve those differences without changing the canonical meaning of the TPX property.

08 - Media Specification

Property media must preserve originals, display order and featured-image state so receiving systems can build complete local listings.

Media Attribute	Purpose
property_id	Associates the media record with the canonical property.
original source/reference	Identifies the original image resource.
sort_order	Defines gallery ordering.
is_featured	Identifies the primary property image.
media type	Allows future distinction between images and other supported media.

Distribution Rule

MEDIA FLOW

```
SOURCE ORIGINAL
|
TPX PROPERTY MEDIA
|
TARGET CONNECTOR
|
DOWNLOAD ORIGINAL
|
LOCAL WORDPRESS MEDIA LIBRARY
```

Receiving Houzez websites should download required originals into their own Media Library rather than permanently hotlinking remote source images. This improves local reliability and allows Houzez to generate its own derivatives.

Featured Image and Gallery

The connector should preserve which image is featured and the intended image order when constructing the receiving Houzez gallery.

09 - Exchange & Syndication Data

Exchange fields determine whether a canonical property may be distributed through the private TPX network.

Field	Type	Description
exchange_available	Boolean	Whether authorized network members may syndicate the property.
exchange_available_at	Datetime	When the property became available to the network.
exchange_withdrawn_at	Datetime	When network availability was withdrawn.

AVAILABLE

```
{
  "exchange_available": true
}
```

WITHDRAWN

```
{
  "exchange_available": false
}
```

Syndication Identity

Receiving systems need enough metadata to identify the canonical property and the specific syndication relationship. For Houzez, TPX-managed syndicated copies are expected to preserve metadata such as the TPX property ID, syndication ID, source agency ID, local agency ID and syndicated role.

Lifecycle rule

When an available property is withdrawn, active non-revoked syndications are revoked. Receiving connectors should ultimately unpublish or disable their managed copies rather than creating independent orphan listings.

10 - Houzez Mapping

The TPX Houzez Connector maps the canonical model to genuine local Houzez property posts.

TPX Data	Houzez Target
title	post_title
description	post_content
sale_price	fave_property_price
rental_price	Houzez rental price field(s) configured by connector
bedrooms	fave_property_bedrooms
bathrooms	fave_property_bathrooms
property size	Houzez property-size field
land size	Houzez land-area field
property_type	Houzez property type taxonomy
province / district	Houzez location taxonomies
features	property_feature taxonomy
latitude	houzez_geolocation_lat
longitude	houzez_geolocation_long
images	Featured image and Houzez gallery via WordPress Media Library

Owner Metadata

OWNER PROPERTY

```
_tpx_property_id  
_tpx_source_type = owner  
_tpx_last_sync
```

Syndicated Metadata

SYNDICATED PROPERTY

```
_tpx_property_id  
_tpx_syndication_id  
_tpx_source_agency_id  
_tpx_local_agency_id  
_tpx_managed = 1  
_tpx_role = syndicated
```

Critical connector rule

A local post marked as a TPX syndicated property must never be uploaded to TPX as a new owner-originated source property.

11 - Validation & Normalization

TPX should reject structurally invalid data and normalize external representations before they become part of the canonical record.

Validation Categories

- Required identifiers are present.
- Numeric fields contain valid numeric values.
- Boolean fields are true/false rather than presentation strings.
- Coordinates are valid geographic decimal values.
- Sale/rental price fields are consistent with the transaction state.
- External IDs are stable and valid within the source context.
- Source agency authorization matches the canonical property relationship.

Null and Empty Values

Integrations should distinguish between 'not supplied', 'unknown' and an intentional empty value wherever the API contract requires that distinction. A connector should not overwrite good canonical data with an accidental empty string unless the source genuinely intends to clear the field.

Dates and Times

Exchange availability timestamps and future lifecycle timestamps should use a consistent server-side datetime representation. External integrations should avoid locale-formatted date strings.

Text Encoding

Property titles and descriptions should be transmitted using UTF-8 JSON so multilingual property content can be preserved without conversion loss.

12 - Integration Rules

All TPX integrations should obey the same identity and ownership rules even when their source formats differ.

REST API

CURRENT SYNC ENDPOINT

POST /api/v1/properties/sync

The authenticated agency plus source identity determines which canonical property may be created or updated.

Houzez Connector

The connector should map Houzez fields into the TPX model for owner properties and map canonical TPX data back into genuine local Houzez posts for syndicated properties.

Future XML Feeds

XML MAPPING

```
EXTERNAL XML FIELD
|
SOURCE-SPECIFIC MAPPING
|
NORMALIZED TPX FIELD
|
CANONICAL PROPERTY
```

XML feeds do not need to use TPX field names directly. The importer must map source fields into this specification and preserve a stable source identifier.

Recommended Integration Sequence

IMPLEMENTATION FLOW

```
DEFINE SOURCE IDENTITY
|
MAP SOURCE FIELDS
|
VALIDATE / NORMALIZE
|
SYNC TEST PROPERTY
|
STORE TPX PROPERTY ID
|
TEST UPDATE
|
TEST EXCHANGE AVAILABILITY
|
TEST SYNDICATED COPY
```

Specification Governance

Changes to the canonical property model should be versioned and reflected consistently in the Laravel validation layer, API documentation, Houzez Connector mapping and XML mapping documentation.

Single source of truth

This Property Data Specification should become the reference used when deciding what a TPX field means. Implementation-specific names may differ, but they should map back to one canonical definition.

TPX - Real Estate Technology for Houzez

Private MLS, property syndication and integration infrastructure for controlled real-estate networks.