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NAIROBI CITY TWIN / HOUSEHOLDS

Households

Domain Guide

Explore household types, where households form and the dates that give those relationships context.

City	Nairobi
Coverage	Public sample available
List price	$5,995 USD - standalone domain
Guide edition	Striped Donkey V5.89 - 7 September 2026

Use this guide

Read the documented coverage and limitations alongside the published sample and release evidence. Model counts and sample distributions describe their stated source and period. The final accepted order specifies licensed scope, usage rights, duration and delivery.

Useful questions

- Compare household types across wards
- Inspect formation dates and current member counts
- Review the scope of membership histories

Scope and limitations

Nairobi's 2.77 sits close to, but still under, its own KNBS 2019 Nairobi reference of ~2.9. Disclosed here, not glossed over.

Several integration defects affecting lifecycle consistency were identified and repaired during release hardening. Public history records the affected behavior and resolution; exact staging, transaction, ordering and row-repair mechanics

remain internal.

The lifecycle model was expanded so remarriage can be represented without forcing an artificial household recreation. The behavioral fix is public; exact pairing and household-assignment logic is not.

Earlier city releases differed in a few household-history capabilities. The public model is now normalized at the semantic level; physical migration steps and field-level changes are intentionally withheld.

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01 How Households fits the City Twin.

The household generated at the beginning of the city is not necessarily the household the citizen belongs to today. FCTE models formation, marriage, departure, childbirth, widowhood, divorce and remarriage as changing relationships between the same persistent synthetic citizens - not as static groupings assigned once and left alone.

Households live inside Demographics' own data structure (Household / HouseholdMember) - this page documents them on their own because the lifecycle is the story, not because they're a separate engine domain.

Nairobi City Twin™ · 1940-2026

Supporting links

Demographics'

02 Known and possible relationships.

Connections follow the published domain scope. Optional, contextual and planned relationships retain their stated limits below.

Domain or context	Relationship and published scope
Demographics	Citizen / Death (age-eligibility and mortality-triggered widowhood) CitizenOrigin (Pregnancy childbirths tagged NaturalizationPath = 'Pregnancy')
Ward	household placement, ward-aware since the v3.4/v1.1 generation model fix
Water	Meter / Billing (~70% of Nairobi's meters, Nairobi release-integrated)
Health	Patient (field exists; Patient has 0 rows, Nairobi)
Social Protection	WIDOW beneficiary type exists, but is not created or triggered by Widowhood's real death-cascade mechanism above

Supporting links

Demographics

Housing

Social Protection

Health

Water

03 Not a table of groupings. A record of who belongs where, and when that changed.

FCTE Households represent household composition, headship and membership as it exists for real synthetic citizens today - and as it existed for them before today, one row per membership span, not one row per citizen.

A longitudinal household identity with formation and closure context - every household is either active or historically closed.

Membership spans capture relationship role and residence period so a citizen can be followed through changing household composition.

Exactly one current Head per active household (certification check/C18), reassigned automatically when a household's circumstances change.

TwoParent, SingleMother, SingleFather, ChildHeaded, Extended, SinglePerson and Other - a measured classification, not a generated label (certification check).

Formation, departure, marriage, childbirth, widowhood, divorce and remarriage - represented as distinct longitudinal lifecycle mechanisms and independently auditable.

The same Household ID is read by Housing (Tenancy, RentPayment, Eviction) and registered for Health (Patient) - one identity, several real roles.

Household identity and membership belong to the shared Demographics lifecycle. This page documents household change separately because it is central to the longitudinal resident story, while internal architecture remains controlled.

Supporting links

Housing

Health

Demographics

04 Households don't stay the way they were generated.

The records below are representative synthetic release examples. Pick a resident to trace the public household journey without exposing the underlying physical membership rows.

Female, DOB 1999-11-25, Nairobi. Four household rows, four different roles, under six years - a marriage, a divorce, and a remarriage eleven days after the divorce closed her single-person household.

Living as a Child in a bulk-generated household before marrying out.

Marriage-formed household - closed after 5½ years by divorce.

Divorce-formed single-person household - lasted 11 days before remarriage.

Remarriage-formed household - her current, live residence today.

Female, DOB 2001-10-18, Nairobi. Married into household HHLM001887863 in 2020, had a son in 2021, and departed alone after a 2026 divorce - custody of their son stayed with the father, who kept the household.

Born into this household; left at 18 to marry.

Marriage-formed household with Citizen 1887863 (Head). Son Citizen 5022698 born here 2021-02-16 (naturalization-path context = 'Pregnancy') - a real childbirth into an existing household, not a new household code.

Divorce-formed single-person household. Her ex-husband (1887863) kept HHLM001887863 and full-time custody of their son - an independent per-child custody roll, not automatic.

Male, DOB 1998-02-15, Nairobi. No marriage, no divorce - just an adult child leaving the household he was born into, as represented by the household departure mechanism.

Born into this household; departed independently at age 19 - no marriage, no death, just an adult child moving out.

Departure-formed single-person household - his current, live residence today.

Trace a Citizen Yourself →

Supporting links

Trace a Citizen Yourself →

05 Lifecycle transitions are represented as longitudinal events, not static flags.

Six of these run as an incremental pass over the existing population; the seventh (Formation) only runs once, at city origin. Dissolution is not an eighth mechanism - it is the shared consequence, the Dissolve Household If Empty step, triggered automatically by Widowhood or Remarriage when a household's last current member leaves.

Households are initialized with city- and area-aware demographic context. Exact starting volumes, assignment sequence and generation methods are controlled.

A Child-role citizen 18+ leaves to head a brand-new single-person household.

Two Child-role citizens marry via age-banded propensity, rank-aligned by DOB within their ward.

Household roles are updated consistently after a death so longitudinal household state remains coherent. Exact reassignment sequence and transition logic are controlled.

Departing spouse forms a new single household; each child independently rolls custody - siblings can split between parents.

Closes and dissolves both partners' prior single households before forming one new joint household.

A known v1 boundary, disclosed: Remarriage currently excludes widowed parents who kept custody of a still-populated household.

06 A population, then a lifecycle laid on top of it.

Household formation begins from city- and area-aware demographic context, then lifecycle changes are applied through controlled incremental passes. Release integrity checks protect chronology and relationship consistency. Exact staging, transaction, pairing and row-level repair logic are intentionally not published.

Mean household size (2.77, Nairobi), family structure mix and every lifecycle-event count on this page, verified live via analysis-ready.

Widowhood's child-headed household outcome (13.4% of all Nairobi households) - a direct, measured consequence of the Death + cascade mechanism, not separately generated.

Household size, composition, relationship structure and lifecycle-event distributions are calibrated to published demographic evidence and city-level certification targets. Exact matching weights and transition rules remain controlled.

Individual synthetic assignments are generated under controlled domain rules. Exact sampling, assignment order and parameterization are not published.

View Household Generation Methodology →

Realism reference band for certification check.

Fertility grounding for the Pregnancy mechanism, per city.

certification check - a measurement, not a target; no cited external benchmark yet.

Structural (certification check-C21) and realism (certification check-R08) batteries run live in Nairobi.

Open Household Source Catalogue →

Supporting links

View Household Generation Methodology →

Open Household Source Catalogue →

07 From a household code to a real membership history.

Every row above is real and currently live on Nairobi release - not illustrative. See Follow the Citizen above for the full traced timeline.

Direct synthetic records from the current City Twin™ release. No record represents a real family.

Explore Household Data →

Public entity family	Represents	Disclosure boundary
Household identity	Synthetic household formation and closure context	Physical household fields are controlled
Membership journey	Relationship roles and residence spans through time	Exact reassignment sequence and fields are controlled
Housing connection	Tenure and housing context	Physical join path is controlled
Lifecycle context	Birth, death, marriage and migration effects on household state	Transition mechanics are controlled

Household ID	HouseholdCode	FormationDate	Status

Supporting links

Explore Household Data →

08 Does the synthetic lifecycle resemble a real household?

Both structural and realism certification pass with 0 FAIL in Nairobi today - a stronger position than most domains at this stage, achieved after several real bugs were found live and fixed. Two disclosed gaps remain, not hidden.

Open Household Realism Report →

The full certification check-C21 structural battery plus the 8-check certification check-R08 realism battery run live against Nairobi release.

A separate 8-check realism suite (certification check-R08) passes 8/8 on this City Twin™ today, with 0 FAIL and 0 WARN.

Explore Every Household Check →

- certification check - one current membership per citizen: 0 violations, Nairobi
- certification check - at most one current Spouse per household: 0 violations, Nairobi
- certification check - JoinDate never precedes member's own DOB: 0 violations, Nairobi
- certification check - every Head has a matching HouseholdMember row: 0 violations
- certification check - dissolved households carry zero current members: 0 violations
- certification check - chronological ordering across multi-hop chains: 0 violations, Nairobi
- certification check - 80+ mortality-cohort consistency check: PASS, Nairobi (floor 15%)

• certification check - mean household size within 1.5-7.0: PASS, Nairobi

• certification check / R03 - birth/death rates within UN WPP 2022 bands: PASS, Nairobi

• certification check - family structure measurement (7 categories): informational, no FAIL condition

Supporting links

Open Household Realism Report →

Explore Every Household Check →

09 Synthetic household data has boundaries.

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Earlier city releases differed in a few household-history capabilities. The public model is now normalized at the semantic level; physical migration steps and field-level changes are intentionally withheld.

patient-to-household relationship exists in the data structure but Patient itself has 0 rows on Nairobi today - registered, not yet generated.

No synthetic household corresponds to a real family. Every citizen, relationship and lifecycle transition on this page is statistically generated, not drawn from real civil records.

View All Household Limitations →

Supporting links

View All Household Limitations →

10 The lifecycle got more honest with every real bug found.

View Full Demographics Change Log →

Supporting links

View Full Demographics Change Log →

11 From household formation to a place in the city.

Formed by one of the seven Household Lifecycle mechanisms - Housing waits for it, doesn't create it.

A housing occupancy relationship opens in the same area, carrying tenure and rent context through time.

The household's own composition changes; Housing reacts only when the household itself dissolves.

Multiple Tenancy rows per unit stay queryable, ordering enforced by repair workflows and H14.

Available as Standalone Domain · Multi-Domain Bundle · Full City Twin™

Supporting links

Explore This Record →

View the analysis example →

See the Evidence →

Review licensing & delivery details →

View Pricing & Licensing →

Browse Households Data →

Housing

Explore Multi-Domain Access →