

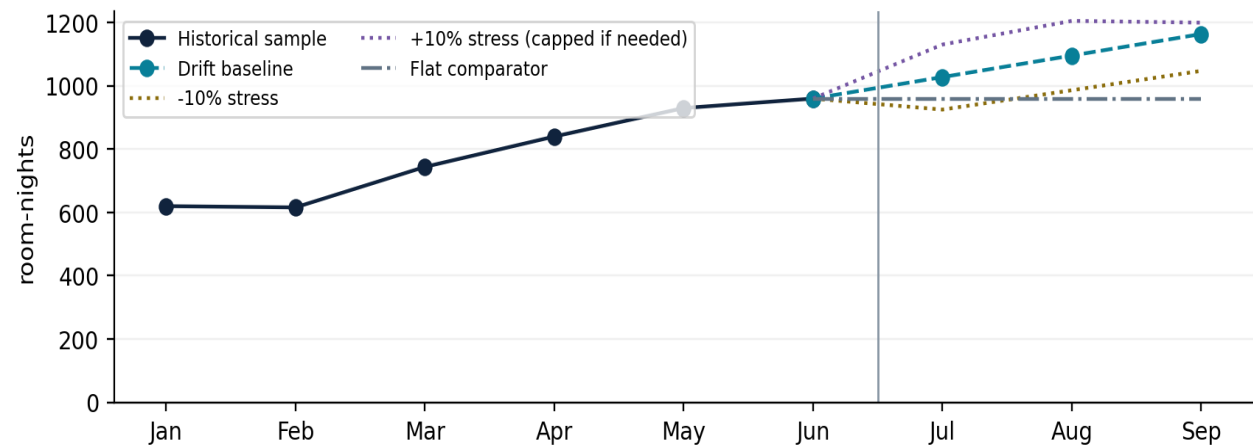
Hotel operations

Forecasting & Trend Projections

Projection cut-off: 30 June 2026 | July-September planning illustration. This is a worked historical example, not a current forecast. Synthetic data; no customer records or actual post-June outcomes are used.

Planning question

What room-demand range should staffing and availability planning accommodate?



Projection summary

June actual	Average monthly change	Q3 drift baseline
960	68	3,288

The drift baseline continues the January-June average absolute monthly change. The flat comparator holds June constant. Stress lines apply an assumed +/-10% adjustment; they are not probability bounds.

What can be used for planning

Compare the range with booking pace and staff availability. Revenue projections additionally need an agreed ADR assumption; do not assume constant rates.

All inputs are synthetic. Baseline extrapolation is a transparent example method, not a validated demand model or a performance guarantee.

Method & historical checks

Reproducible baseline

Average monthly change = (June - January) / 5 = (960 - 620) / 5 = 68 room-nights per month.
Raw horizon-h baseline = June + h x average monthly change, for h = 1, 2, 3.

Negative values are bounded at zero. For the hotel examples, room-night projections are also bounded by known available room-night capacity. Bounds are stated explicitly; capacity is unknown for the other examples.

Three chronological one-step checks

Train on January-March and predict April; extend through April and predict May; extend through May and predict June. At each origin, both methods use only data available before the predicted month. Errors are absolute differences in the KPI unit.

Test month	Actual	Flat	Drift	Flat error	Drift error
Apr	840	744	806	96	34
May	930	840	913.3	90	16.7
Jun	960	930	1,007.5	30	47.5

Diagnostic	Flat comparator	Drift baseline
Mean absolute error (MAE)	72	32.7

How to interpret the check

Drift MAE is lower than the flat comparator in these three one-step tests. This is a small historical diagnostic, not evidence of durable superiority. The drift example is not selected or tuned by this result.

Only three forecast errors are available. There is no independent multi-quarter test, no validated seasonal pattern and no three-month-ahead accuracy estimate. A real scope requires more history and horizon-appropriate validation.

KPI definition

Sold room-nights for the 40-room synthetic property. June has 960 sold of 1,200 available room-nights, or 80% occupancy.

Scenario assumptions & decisions

July-September values (room-nights)

Period	-10% stress	Drift base	+10% stress	Flat comparator
Jul	925.2	1,028	1,130.8	960
Aug	986.4	1,096	1,205.6	960
Sep	1,047.6	1,164	1,200	960
Q3 total	2,959.2	3,288	3,536.4	2,880

Tables show one decimal where needed; monetary summary values are rounded to whole EUR. Fractional counts are planning averages, not partial completed events. Calculations and totals use unrounded values.

Meaning of the stress cases

Lower stress = 90% of the bounded drift baseline; upper stress = 110%, subject to known hotel capacity. The 10% adjustment is an illustrative planning choice. It is not estimated from forecast errors, assigned a likelihood or presented as a confidence interval.

Hotel capacity: July 1,240, August 1,240 and September 1,200 available room-nights (40 rooms, no closures). Upper values that exceed capacity are capped. Unconstrained room demand and displaced bookings are not estimated.

Industry / area assumptions

No room closures are assumed. Capacity is 1,240 room-nights in July and August and 1,200 in September. All scenarios stay within capacity.

Proposed actual-versus-plan review

When July actuals are available, reconcile the KPI definition and reporting cut-off first. Record actual minus baseline and its percentage of baseline. If actuals sit outside the illustrative stress cases, investigate the driver and revise the assumptions; this is a proposed planning trigger, not a statistical anomaly rule.

Repeat the calculation with each accepted new period, compare the drift and flat baselines, and keep a dated log of assumptions and revisions. No post-June actuals are supplied here, so actual forecast performance is not claimed.

Source and scope

ReTriev dashboard sample data: hotel operating dataset

Forecasting setup is optional and scoped to the selected KPI and feasible history. Predictive machine learning, cash forecasting, causal attribution and recurring updates are not implied by this example.