AMNAYA

AMNAYA / PERFORMANCE & EVIDENCE

Measures and control charts

Define a measurable result, retain the denominator and distinguish a business target from statistical process behaviour.

REFERENCE 04 | Version 1.0 | 5 November 2026
Parametric planning reference. All default quantities, budgets, prices and chart data are illustrative. They are not project performance, approved spending, adopted policy or an investment offer.

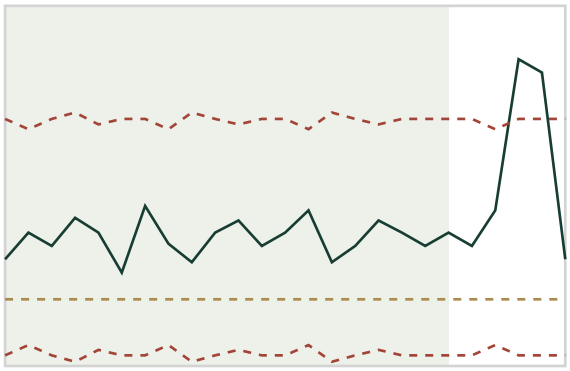
Measure	Default target / record
Discovery	36 interviews across 3 segments; eight dated sources; five alternatives. Report selection limitations.
Quality	Defective evaluation units / inspected units <=5%. Count binary nonconforming units; multiple defects per unit need a different chart.
Individual cycle time	One defined observation per unit, in hours; target <=8 hours. Do not substitute subgroup averages into this Individuals calculation.
Budget	(Actual cost for delivered scope - approved scope budget) / approved scope budget. Trigger review above 10%; this is not automatic permission to overspend.
Critical policy/safety	Zero unresolved critical obligations before live activity or continuation.
Claim coverage	100% of material public claims have dated evidence, defined scope and an authorised review.

Measurement contract

For every measure define purpose, unit, source, numerator, denominator, sampling frame, collection period, exclusions, missing-data rule, owner, baseline version and target. Preserve raw records and distinguish observed, estimated, simulated and synthetic values.

Chart methods / synthetic worked example

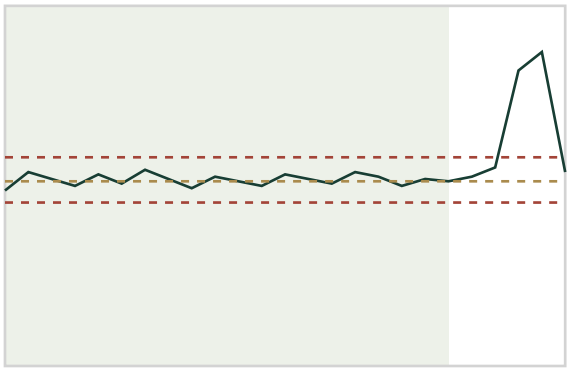
p-chart



1 25 observations

Shading: frozen baseline, first 20 observations

Individuals / hours



1 25 observations

Shading: frozen baseline, first 20 observations

Solid green: observations. Red dashed: three-sigma limits. Gold dashed: business target. The 25 observations are synthetic; points 23 and 24 deliberately illustrate signals.

p-chart

Freeze the first 20 observations. Pooled p-bar = total defective units / total inspected units = 9.66% (199/2,060). Each limit = p-bar +/- 3 x sqrt[p-bar x (1-p-bar) / n], clipped to 0-100%. Limits change with sample size n. Default target is 5%, independent of these limits.

Individuals chart

Mean = 8.06 hours. Average successive moving range = 0.3684 hours. Limits = mean +/- 3 x MR-bar / 1.128, approximately 7.08-9.04 hours. The 8-hour target is distinct from process limits. The individual chart can show an untruncated negative lower limit when mathematics yields one; consider the physical context.

Interpretation and limits

Only pointwise three-sigma signals are implemented. No run/trend rules or automatic causal inference. Check independence, a stable baseline and consistent definitions. A small baseline (<20), sparse expected counts, baseline signals or zero variation require caution and method review. Repeated testing can increase false signals. Staying inside limits does not establish fitness for purpose.

NIST: p-chart reference

NIST: Individuals chart reference

Open the control-chart workbench