PUBLIC SERVICE

Redesign an evening bus service

Compare a daytime tradeoff with timed evening transfers, then prepare rider research.

Decision question
Which service design should the transit board take into a corridor pilot?

Study objective
Choose the wording and operating questions for a corridor pilot.

Hypothesis to check
Protecting daytime frequency and making transfers explicit may change reactions to the evening service.

Decision owner
Transit board and operations team

BASELINE

Baseline

Modeled acceptance **46 / 100**

Modeled risk **34 / 100**

The transit authority proposes a six-month pilot of Route 12 buses every 30 minutes until midnight on weekdays. To fund the service, afternoon buses would run every 30 minutes instead of every 20 minutes. Fares stay the same. The authority will review boardings and operating cost after three months.

ALTERNATIVE

Timed transfers and protected daytime service

Modeled acceptance **47 / 100**

Modeled risk **33 / 100**

The transit authority proposes a six-month pilot of Route 12 buses every 30 minutes until midnight on weekdays. Keep the current daytime frequency and schedule evening departures to meet trains. Fares stay the same. Publish wait times, missed connections and operating cost each month, with a public review after three months.

Fictional worked study computed from an authored audience. Results describe generated cases and heuristic scenario scores. The two versions share their audience and seed. Human fieldwork is proposed and has not been performed for this example.

Survey response distributions

120 generated cases per version. Shares use substantive answers to each question. Human respondents: 0.

QUESTION 1

The bus service described here meets my travel needs.

	Baseline 120 answered / 120 asked	Alternative 120 answered / 120 asked
1	0 (0%)	0 (0%)
2	23 (19.17%)	20 (16.67%)
3	91 (75.83%)	93 (77.5%)
4	6 (5%)	7 (5.83%)
5	0 (0%)	0 (0%)

10 changed across 120 answered pairs. 0 pairs excluded. Distribution distance 2.5 pp.

QUESTION 2

I trust the transit authority to deliver the service described here.

	Baseline 120 answered / 120 asked	Alternative 120 answered / 120 asked
1	0 (0%)	0 (0%)
2	13 (10.83%)	13 (10.83%)
3	80 (66.67%)	79 (65.83%)
4	27 (22.5%)	28 (23.33%)
5	0 (0%)	0 (0%)

1 changed across 120 answered pairs. 0 pairs excluded. Distribution distance 0.83 pp.

QUESTION 3

Which factor most shapes your reaction to this bus proposal?

	Baseline 120 answered / 120 asked	Alternative 120 answered / 120 asked
Cost	68 (56.67%)	58 (48.33%)
Fairness	0 (0%)	0 (0%)
Implementation	52 (43.33%)	62 (51.67%)
Trust	0 (0%)	0 (0%)
No major concern	0 (0%)	0 (0%)

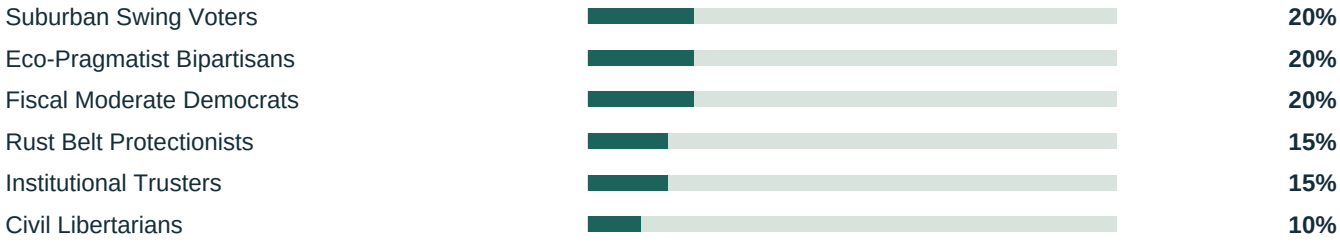
10 changed across 120 answered pairs. 0 pairs excluded. Distribution distance 8.33 pp.

Audience and context graph

Authored shares and scenario links define the exercise. Field evidence is addressed separately.

Evening bus corridor users

Illustrative US city bus corridor



Who to recruit

Recruit current after-dark riders, people who could use the route if it ran later, bus operators and riders affected by reallocated daytime service.

Evidence to collect

Compare boardings by route and hour with shift-end times. Recruit at stops and through employers to reach people missing from existing ridership records.

Context graph excerpts

11 nodes and 11 relationships in the complete graph download.

Redesign an evening bus service / contains / Evening bus corridor users
Intended audience (authored): "Evening bus corridor users"

Redesign an evening bus service / contains / Evidence to gather
What to check with people (evidence needed): "Recruit late-shift riders and daytime riders separately. Measure completed trips, wait time, missed connections and t..."

Redesign an evening bus service / contains / Economic security
Baseline wording (evidence needed): "cost"

Evidence to gather next

This example proposes human fieldwork before a real decision.

Decision rule

Use model differences to choose field questions. A service decision requires observed trip performance, rider access and an affordable operating plan.

FIELDWORK STEPS

01 Pretest both descriptions with five daytime and five late-shift riders.

02 Recruit riders and potential riders independently of the operator team.

03 Randomly show one description per participant and field the same three questions.

04 Compare observed response distributions and service-use measures before the board review.

RECORDS TO CHECK

- Boardings by route, stop and hour
- Train connections and missed-transfer logs
- Vehicle and operator cost for each service design

How this report was reproduced

Both versions use the same frozen authored audience, instrument and seed. Scenario indices use a 0-100 scale. Survey response shares and paired changes describe generated cases. Check wording, coverage and actual behavior with people before interpreting a modeled contrast.

Example release	1.0.0 / 2026-11-22
Signal engine / survey method	3.7.0 / 1.3.0
CiviSphere audience dataset	1.0.0
Fixed seed / cases per version	19427 / 120
Human respondents	0
Input SHA-256	895c97ccbcf2e40e8da8fbcd1c0818b2bfcde9d8258d2e351928adde4950ad16
Result SHA-256	af6ce90ca41e2aef0adc49a8aa46bb1d4909e75b5da8e3599f944b575a96256b