Final report

Version

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Prepared for the Regional District of the Okanagan Similkameen by LOCAL Decisions

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The Regional District of the Okanagan Similkameen (RDOS) engaged LOCAL Decisions to conduct a participative decision-making process to support the 2021-2022 Electoral Area E Official Community Plan (OCP) review. This document includes the summarized results from the process and provides analysis and interpretation to help inform the community vision for the OCP.

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Executive summary

This document presents the results of a multi-round survey designed to support a review of the Official Community Plan for RDOS Electoral Area E (Naramata). The surveys are an important part of a participative decision-making process in which citizens determine the fundamental objectives and priorities for their community. The local government's role is to use this information to inform and motivate the design of specific policies, plans, and projects. The focus of these surveys is thus on broad, long-term *ends* rather than specific *means*.

The three-round survey was conducted during late 2021 and early 2022. More than 500 people participated in Round 3, which is comparable to the number from Naramata who voted in the 2018 local government election. The survey results show evidence of conflicting preferences, priorities, and interests within the community. However, several objectives emerge as having broad support. In addition, through the exploration of scenarios, we identify several potential compromises. The compromises are based on trade-offs for which there exists clear majority support.

To summarize:

1. Natural beauty and preservation of the Naramata hillsides emerged as a dominant priority. Although the RDOS faces constraints in satisfying this fundamental objective (e.g., existing property rights and "facts on the ground"), decision-makers should seek to limit further impacts on the farms and forests around Naramata.
2. There is a strong desire for change in the Naramata village. "Vibrant Village" was by a large margin the top-rated scenario despite requiring trade-offs between several fundamental objectives. For example, increased vibrancy requires increased density within the village. This, in turn, entails infrastructure costs and a potential loss of "rural charm". A head-to-head comparison of "Vibrant Village" and "Preserve and Conserve"—the scenario that most closely matches the status quo—indicates majority support for change.
3. Despite many complaints in Round 1 about large houses, seasonal occupancy, and vacation rentals, "Vibrant Village" (with few restrictions and a market orientation) received more support than "Housing-Focused Village Growth" (with restrictions on property rights intended to improve affordability).
4. Despite Naramata's relative affluence as a community, there is no majority support for increased taxes and fees to fund additional public services and amenities. However, infrastructure investments are supported to the extent that they enable the achievement of other objectives such as vibrancy or increased housing supply in the village.

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Methodology

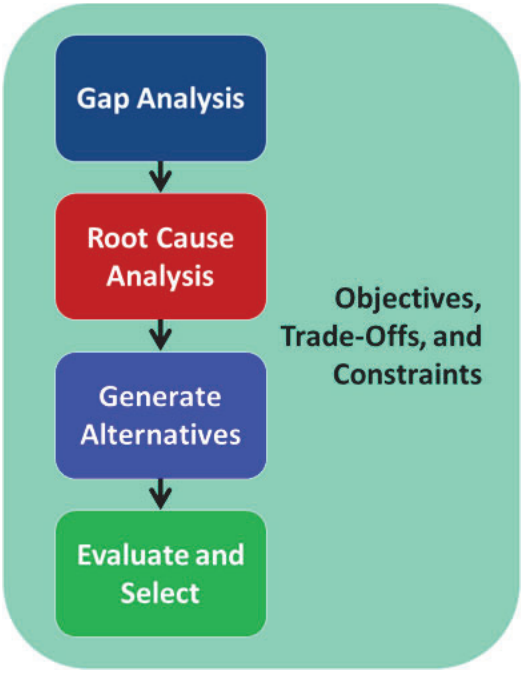
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LOCAL Decisions relies on a decision-theoretic framework to structure the participative decision-making process. The goal is to achieve an appropriate division of labor between citizens and the government that serves them. In practice, this means that the *objectives* that drive the entire decision process come from the community. We use market research techniques to engage with the public and learn about the community's preferences, priorities, and interests. What follows is a summary of our methodological approach.

Framework

An OCP Review is ultimately a decision-making process. As a result, we can draw on the work of academics and practitioners not only in planning, but also in diverse fields such as decision theory, market research, political science, economics, and philosophy. Our participative decision-making approach is built on knowledge accumulated in these fields and provides two important advantages: First, the process model provides a structured set of decision-making activities, each with its own well-defined information requirements, processes, and outputs. The purpose of the process model is to help us acquire the right information from the right sources at the right time so that the local government can make the best possible policy choices. The model thus provides a roadmap of best practices that leads us through the decision-making phases of the OCP review.



Second, the discrete activities in the process model enable the establishment of a clear division of labor and decision rights. To illustrate, some phases of the decision-making process belong to the community. Most obviously, the goals and the objectives to be realized through OCP policies should be the goals and objectives of the people who live and work there. Other phases of the decision process are best undertaken by experts with specialized knowledge and experience. For example, the evaluation of alternatives relative to the community's objectives is best undertaken by professional planners with the support of other specialists, such as engineers, lawyers, and accountants. The decision-making process model thus provides clarity regarding both deliverables and roles in each phase of the decision process.

Techniques

A vast literature and body of experience exist on topics such as “public consultation” and “participation decision making”. A critical result from this work is recognition of the importance of an appropriate division of labor, as discussed above. Put simply: non-expert stakeholders should not be proposing and evaluating alternatives. Conversely, non-stakeholding experts should not be guessing about the preferences of citizens or imposing their own objectives on the community. Much of this comes down to *technique*. Not all methods for eliciting the preferences of the community are equal. Some conventional techniques, such as face-to-face meetings, have been shown to be fraught with self-selection bias and dysfunctional group dynamics. The result is often political disengagement by important subpopulations. This, in turn, threatens the democratic legitimacy of the participative decision-making process. Anonymous surveys (like anonymous voting) provide a partial solution. However, surveys that are too long, too complex, poorly constructed, or single-mode can yield similarly biased results.

The surveys we use for preference elicitation have the following characteristics:

1. Large diverse panel (large *n*)
2. Anonymous
3. Multi-mode
4. Highly structured
5. Short, simple, and graphics-heavy
6. Recursive

The most important of these features is the final one: recursive. Our survey approach is based on the Delphi method, which is an iterative approach to collecting information from participants. The surveys are iterative since participants are asked to complete multiple questionnaires during the consultation phase. The surveys are recursive in the sense that the results from each round are used to inform the surveys in subsequent rounds. Thus, when participants react to and rate items in latter rounds of the survey, they are reacting and rating the thoughts and ideas of their neighbors from previous rounds. In this way, meaningful deliberation can occur without the overhead, conflict, and other shortcomings of public meetings.

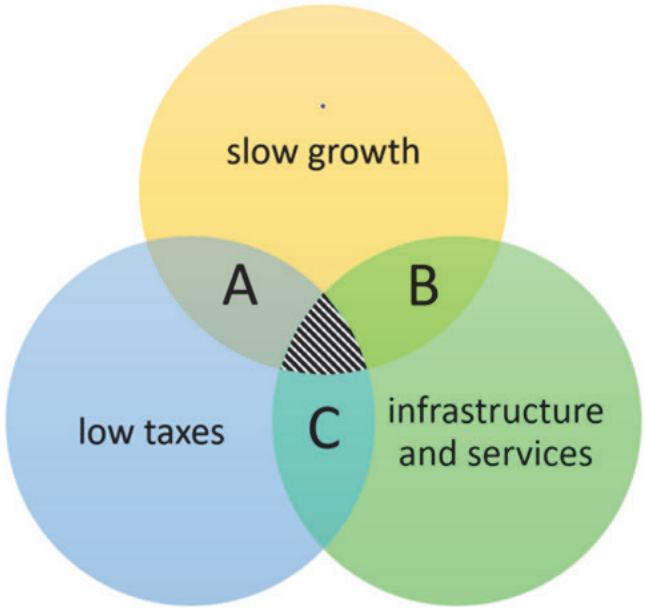
Survey structure

Round 1: Brainstorming

The danger in using a simple survey to ask a community: “What do you want from your OCP?” is that we typically get back a long, unprioritized list of conflicting wants and needs that provides planners with little practical guidance. In other cases, participants are unable to articulate their true objectives. For example, they focus on means (e.g., specific projects or potential solutions) rather ends. The first survey thus emphasizes simpler concepts: “likes” and “dislikes”. Participants reveal much about their objectives when they enumerate what they like and dislike about their community. The Round 1 survey is thus structured as an asynchronous and technology-mediated brainstorming session. Its focus is on eliciting the full range of perspectives rather than on evaluating or measuring support for the perspectives.

Structuring

Following Round 1, the likes and dislikes were mapped to a set of **fundamental objectives**. One difficulty that occurs in practice is that a community’s fundamental objectives inevitably involve interdependencies. For example, a rural community might want amenities but also want to keep taxes low and protect their rural ambiance. The three objectives form a trilemma—which we call the Rural Growth Triangle—because communities cannot generally achieve all three: good amenities (infrastructure and services), low taxes, and low density (slow growth).



The feasible combinations of objectives lead to a relatively small set of **scenarios**. For example, in the Rural Growth Triangle, low taxes, low amenities, and preservation of rural ambiance is a feasible scenario in which two of the objectives (low taxes and preservation of rural ambiance) are satisfied but the third (high amenities) is not satisfied. We use the interdependencies between the fundamental objectives to simplify and structure the objectives into stylized scenarios (see Objectives and Scenarios). The scenarios provide the basis for preference elicitation in Round 2 and Round 3.

Round 2: Preliminary evaluation

Scenarios help us address a second problem: individuals typically have difficulty articulating their preferences in complex, multi-criteria decision problems. Thus, rather than asking participants to identify their preference ordering over objectives, we use the scenarios to implement discrete choices. Choosing between simple, concrete scenarios is a comparatively easier task. Preferences and priorities can be induced from the choices the participants make.

The Round 2 survey implements a series of choice experiments in which participants are asked to identify their preferences in a series of pairwise scenario comparisons. We favor pairwise comparisons over direct scoring because the pairwise comparison are simpler. In addition, pairwise comparison enables the calculation of a "consistency index" for each participant. The consistency index can be used to identify inconsistent preferences, which are often the result of superficial or mischievous submissions.

In addition, participants in Round 2 are provided with text areas where they may advocate for or against each scenario. The survey thus collects quantitative information (through the pairwise comparisons of scenarios) as well as richer qualitative information.

Round 3: Final evaluation

The task in Round 3 is identical to that in Round 2. However, Round 3 includes quantitative and qualitative feedback from Round 2. Specifically, participants see the distribution of ratings for each pairwise comparison. In this way, they can see whether their preferences are widely held within the community. Second, participants see a summary of comments from Round 2 for and against each scenario. This feedback, which is a central feature of the Delphi method, encourages participants to think more deeply about their preferences. In some cases, participants' preferences may change based on the comments they read in the Round 3 survey.

Methodology summary

Participative decision-making is achieved in this framework by allocating responsibility for fundamental objectives to the community and allocating responsibility for satisfying those objectives to the technical professionals who develop and execute local government policy. Objectives are elicited using a series of surveys in which the results of each are used to construct the subsequent survey. The final results take the form of preference ratings over feasible scenarios. The feasible scenarios differ from another in terms of fundamental objectives elicited indirectly in Round 1. The survey results thus provide insight into the community's priorities around fundamental objectives and their willingness to make trade-offs between interdependent objectives.

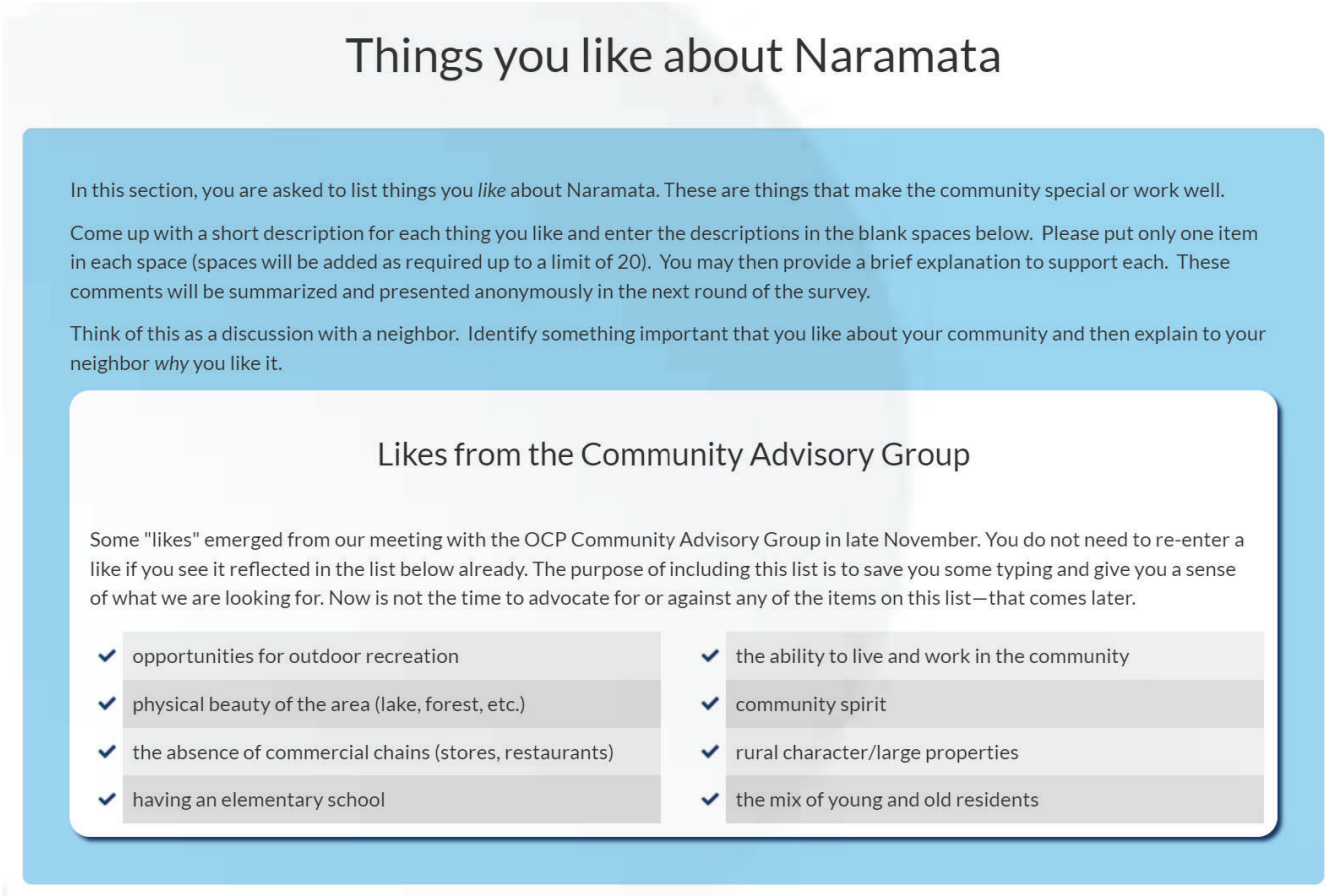
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Round 1: Identify objectives

Contents

- Participation
- Seeding
- Construct mapping
- Demographics
- Satisfaction with the OCP review process

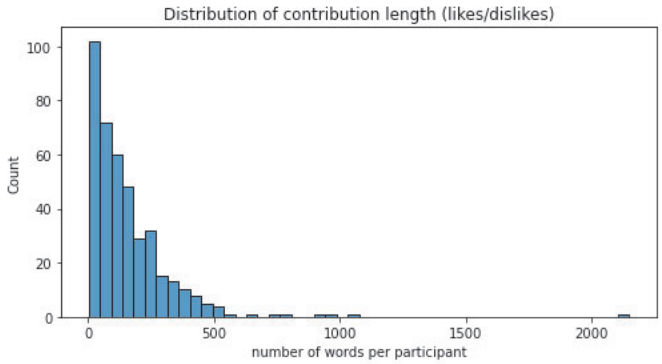
The purpose of Round 1 was to elicit an exhaustive list of likes and dislikes from the community. Participants were provided with free-form text areas and were encouraged to list and describe up to 20 likes and dislikes. The instructions for the Round 1 survey "likes" question is shown below.



Participation

The following is a summary of participation in the Round 1 brainstorming exercise:

Number of registrations	642
Number of particpants submitting a response	405
Total number of comments	2996
Median comments per participant	7.4
Median words per comment	14
Median length of contribution per participant (words)	107



Seeding

As the instructions above show, the question was *seeded* with responses from a face-to-face brainstorming session with the Community Advisory Group. Seeding was used for two reasons:

1. Help participants understand the requirements of the task by providing concrete examples of likes and dislikes.
2. Save participants time. As in face-to-face brainstorming, participants are encouraged to avoid submitting ideas that have already been identified and recorded.

We also provided an interactive web-based summary of likes and dislikes as the survey progressed. This is analogous to recording ideas on a whiteboard during a conventional face-to-face brainstorming session. Individuals using the dashboard could click on a construct (discussed below) and see a list of the verbatim comments submitted to that point associated with that construct.

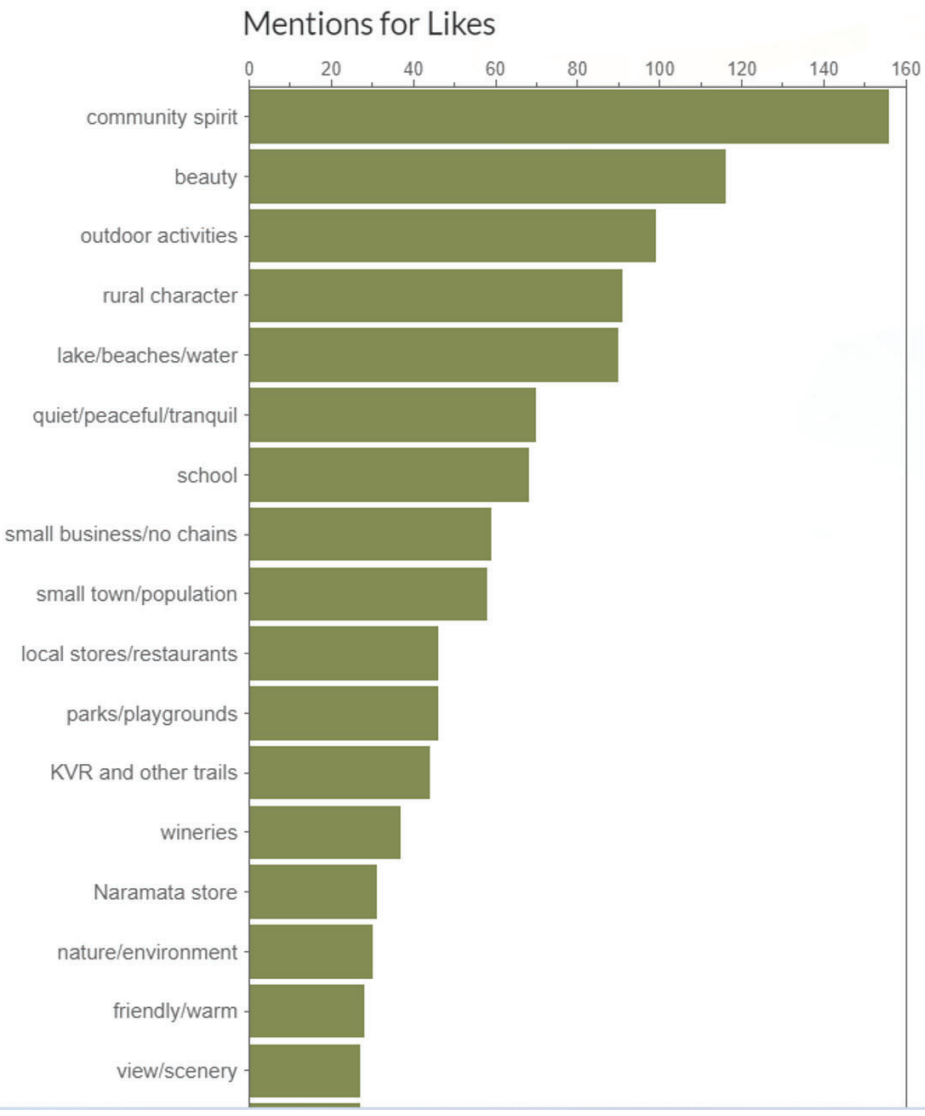
Round 1 Preliminary Results

Recall the purpose of Round 1 of the Electoral Area E OCP review surveys: Generate a complete list of likes and dislikes (or strengths and weaknesses) from a broad cross-section of the community.

The chart below shows the results received so far grouped into general terms. The likes/dislikes are shown on the left and the length of the bars shows the number of mentions so far. Keep in mind that Round 1 is not a voting exercise—the lengths of the the bars *do not indicate priority or importance*. Priorities and trade-offs are the topic of Rounds 2 and 3. The bars are shown for interest. Note as well that some versions of the survey were pre-seeded with a list of likes and dislikes from the Community Advisory Group. This seeding impacts the length of the bars.

Note: if you click on a the bar for any item, you can see the responses from the commmunity.

Likes Dislikes



Construct mapping

Common practice when analyzing unstructured qualitative data is to map the responses to a set of *constructs*. The constructs are meant to capture the essence of each response using a shared vocabulary. Here, the construct emerged inductively. A planner read each response and either mapped to response to an existing construct or created a new construct.

Type	Responses	Constructs
likes	1768	110
dislikes	1228	132

Likes

The following is a list of “like” constructs with the number of mentions. The number of mentions is shown merely as a rough indicator of importance. Recall that seeding and access to periodically-updated web-based summaries during the survey explicitly discouraged participants from submitting likes and dislikes that had already been captured. The counts below thus strongly underestimate the importance of the most popular constructs.

Like	Number of mentions
community spirit	156
beauty	116
outdoor activities	99
rural character	91
lake/beaches/water	90
quiet/peaceful/tranquil	70
school	68
small business/no chains	59
small town/population	58
parks/playgrounds	46
local stores/restaurants	46
KVR and other trails	44
wineries	37
other	32
Naramata store	31
nature/environment	30
friendly/warm	28
agricultural land	27
village/downtown	27
view/scenery	27
age/cultural mix of residents	26
walkability	24
vineyards and orchards	23
climate	23
farmers market	23
work and live in community/opportunity	21
darkness/lack of lights	19
history/old buildings/continuity/authenticity	18
community groups/volunteers	17
proximity to Penticton/shopping	14
library	14
remote/secluded	14
cultural diversity of people	14
low density	13
the people/neighbors	13
Naramata Center	12
low crime/safety	12
community events	12
location/geography/topography	12
peacocks	11
walking/hiking	11

low traffic	10
wildlife	10
fire service	10
yacht club/marina/boat launch	9
proximity to farms	9
resort town/tourism	8
Naramata Church	8
Naramata Inn	8
mix of town and country	7
governance	7
proximity to friends and family	7
family oriented	6
large properties	6
utilities/services	5
lack of commercial activity	5
natural landscape	5
lifestyle	5
arts community	5
access to cycling	5
external designations (e.g., Cittaslow)	4
special events	4
bus service/transit	4
quality of life	4
few suburbs/little development	4
creeks	4
small footprint/proximity	4
Naramata uniqueness/magic	4
biking	4
some development/growth	4
bed and breakfasts	3
awareness of ecology/conservation	3
forest/trees	3
daycare	3
old age pensioners club/hall	3
low building heights	3
rustic charm	3
water system	3
pub	3
a good place to raise kids	2
lack of industrial use	2
animal lovers	2
MyNaramata.com	2
interest in native culture and reconciliation	2

unique country roads	2
fewer rules/freedom	2
community garden	1
cleanliness/pride	1
low speed limits	1
the ability to contribute to the community	1
year-round residents	1
proximity to outdoor activities via car	1
educated entrepreneurs	1
lack of large marina	1
breweries	1
museum	1
affordable housing	1
old trees in the village	1
road upgrades	1
status quo	1
fresh air	1
train dock	1
little tunnel	1
availability of seniors/handicap housing	1
potential to be world class	1
bear smart	1
eclectic architecture	1
variety of styles and shapes and colors of houses	1
free wifi at the wharf park	1
individuality of the neighborhoods	1

Dislikes

The following is a list of “dislike” constructs with the number of mentions.

Disike	Number of mentions
new residential development/sprawl	152
road safety/maintenance	145
lack of businesses	66
crime/inadequate policing	65
number of vacation rentals	52
poor cellphone coverage	52
lack of affordable housing/gentrification	49
empty houses/seasonal occupancy	32
road use conflict	32
traffic/congestion	29
septic/lack of sewer	28
excessive red tape/rules	23
speeding	20
cultural change	18
no dog park/dogs off leash	17
camping	16
too few streetlights	15
anti-development sentiment	14
too much commercialization	14
other	13
water supply/governance	13
too many streetlights/house lights	12
wildfire risk	11
single road in/out	11
lack of planning/vision/information	10
logging/clearcutting	10
trail use conflict	9
litter/garbage/junk	9
lack of sidewalks	9
too many jurisdictions/governance	9
lack of enforcement/guidance	9
noise	8
inadequate marina	8
Naramata Centre land use	8
land/housing prices	8
lack of recycling/waste management	8
building character and form/aesthetics	8
lack of activities for kids/teens	7
drainage problems	6
building height/size in the village	6
wineries	6

problems with tourists/focus on tourism	6
signs/visual pollution	6
lack of commercial services	6
lack of worker accommodation	6
lack of parking/parking enforcement	5
control of vacation rentals & bed and breakfasts	5
lack of venues for indoor activity	5
lack of community hall/gathering space	5
few/expensive long term rentals	5
restrictions on infill housing	5
attitude of residents	5
densification	4
electric power cost/reliability	4
high prices/poor service at local businesses	4
lack of retail/commercial space	4
bias in favor of developers	3
lack of public beach access	3
above-ground services	3
Increasing crowds	3
logging trucks/commercial traffic	3
lack of a vibrant town centre	3
private docks	3
pesticide use	3
dominance of grapes over food	2
RDOS office and yard	2
issues with Canada Post	2
noise from watercraft	2
tax increases	2
lack of childcare	2
lake pollution	2
resistance to change	2
inadequate transit	2
transient workers	2
destruction of wildlife corridors	2
lack of public restrooms	2
lack of charging for electric vehicles	2
landfill	2
lack of clubs/societies/sports leagues	2
too many restrictions/bylaws	2
lack of tourist accommodation	2
private buoys	2
loss of orchards	2
speed of change	2

lack of access to the KVR/public land	2
vacant lots in town	2
increased assessed value	2
lack of swimming area	2
drunk driving near parks	1
loss of agricultural land	1
too little development/growth	1
downtown commercial vacancy	1
lack of a skate park	1
difficulty of making a living farming	1
cannabis production	1
lack of business opportunity	1
swimmers itch	1
building near wildland interface	1
location of the farmers' market	1
underused elementary school	1
skateboarding on pickleball/tennis courts	1
complainers	1
lack of a bridge to Summerland	1
problems with parks/maintenance	1
poison ivy	1
inability to put second dwelling on ALR	1
air quality/burning	1
large houses on agricultural land	1
on-demand water heaters	1
lack of storage lockers	1
lack of support for tourism	1
large steel bins/sea cans as storage	1
too many benches	1
lack of action on climate change	1
no outdoor theatre	1
lack of fire service in remote areas	1
lack of knowledge of indigenous history	1
foreshore conflict	1
lack of community beautification	1
solar panels on free standing mounts	1
development without infrastructure	1
potential loss of elementary school	1
lack of seniors housing	1
no gas station	1
concentration of land ownership	1
management of lake level	1
public smoking	1

too many house guests/visitors	1
excessive heat/climate change	1
inadequate first responder coverage	1
poor internet service	1
cost of drainage	1

The full list of likes/dislikes and the mapping to constructs is found in Appendix A.

Demographics

Three types of demographic information were collected from participants in Round 1: age, neighborhood, and ownership/residence status. This information was collected for two reasons:

1. Help inform panel recruiting decisions by identifying under-represented subpopulations.
2. (Rounds 2 and 3) Determine whether demographic variables influence preferences.

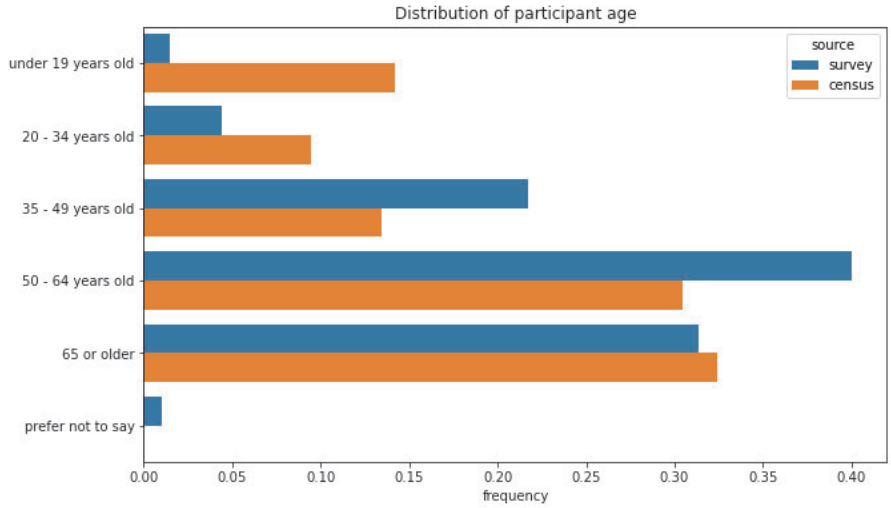
Age

The table below shows the breakdown of participants by age group. We see that we had reasonably good participation across all age groups except the two youngest cohorts. A lack of participation in the "under 19 years old" cohort is not surprising since few people in this age group have a role in local government (the minimum voting age in British Columbia is 18 years). The "20 - 34 years old" cohort is also underrepresented (see the graph below); however, the purpose of Round 1 is brainstorming, not measurement. Our objective in brainstorming is to have *some* representation from each age group. We are less concerned with achieving samples of a particular size.

The table includes data from the 2016 census for RDOS Electoral Area E. Detailed 2021 census results for Naramata were not available at the time of this analysis.

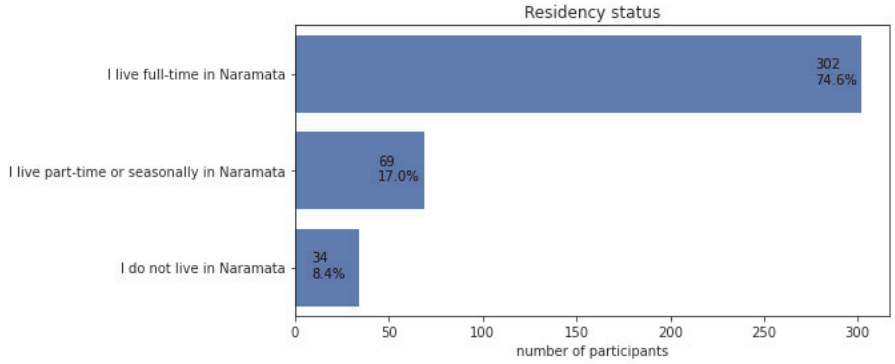
Age Group	participants in Round 1	Naramata population (2016)
under 19 years old	6	285
20 - 34 years old	18	190
35 - 49 years old	88	270
50 - 64 years old	162	610
65 or older	127	650
prefer not to say	4	0
Total	405	2005

The tabular age data above is summarized graphically below. Here we see under-representation (relative to the Area E population) in the two youngest cohorts.



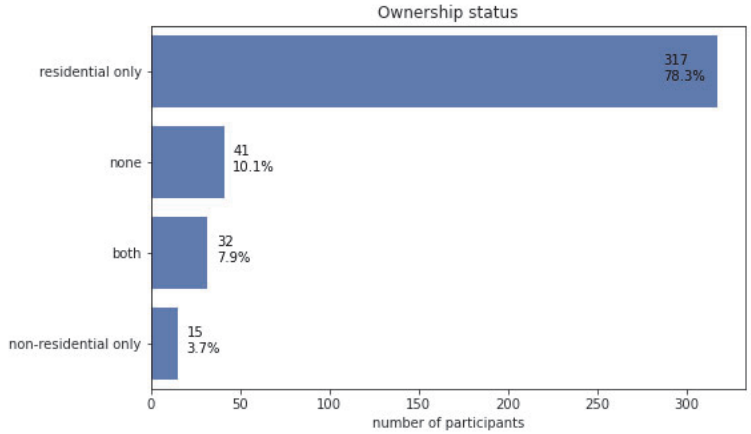
Residency

The chart below shows the residency status of participants. The results suggest that we were able to reach a good number of seasonal residents.



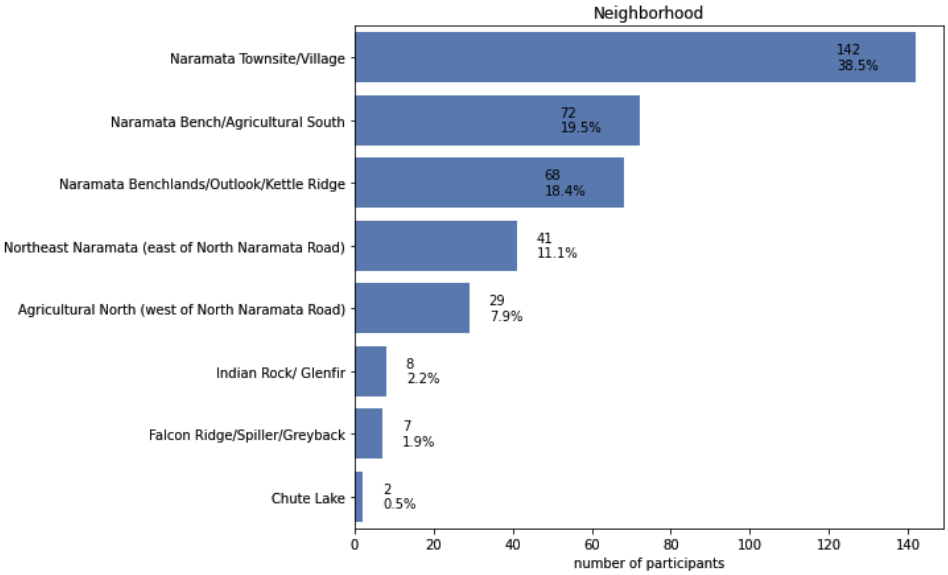
Ownership

The chart below shows ownership status. Most participants own some kind of property in Naramata. However, we did get a good sample of participants who do not own any property in Electoral Area E. This group includes renters.



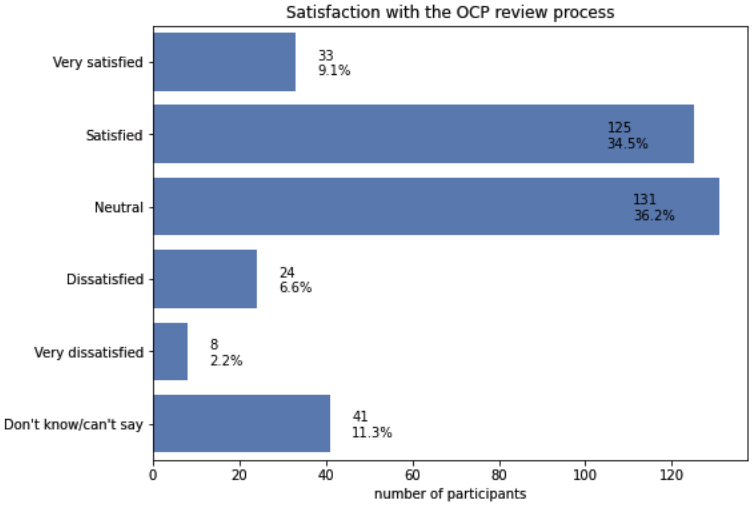
Neighborhoods

Participants who own property in Area E we asked to indicate their neighborhoods. The predefined list of choices below was provided by the RDOS.



Satisfaction with the OCP review process

We asked participants at the end of each survey round to tell us whether they are satisfied with the OCP review to that point. The results for Round 1 are shown below. We see a large number of "Don't know/can't say", which is understandable given most participants' lack of experience with multi-round Delphi surveys.



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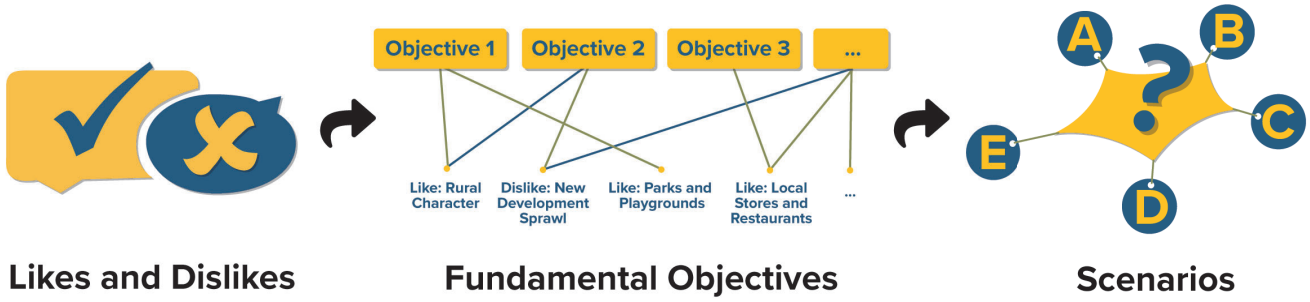
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Objectives and Scenarios

Contents

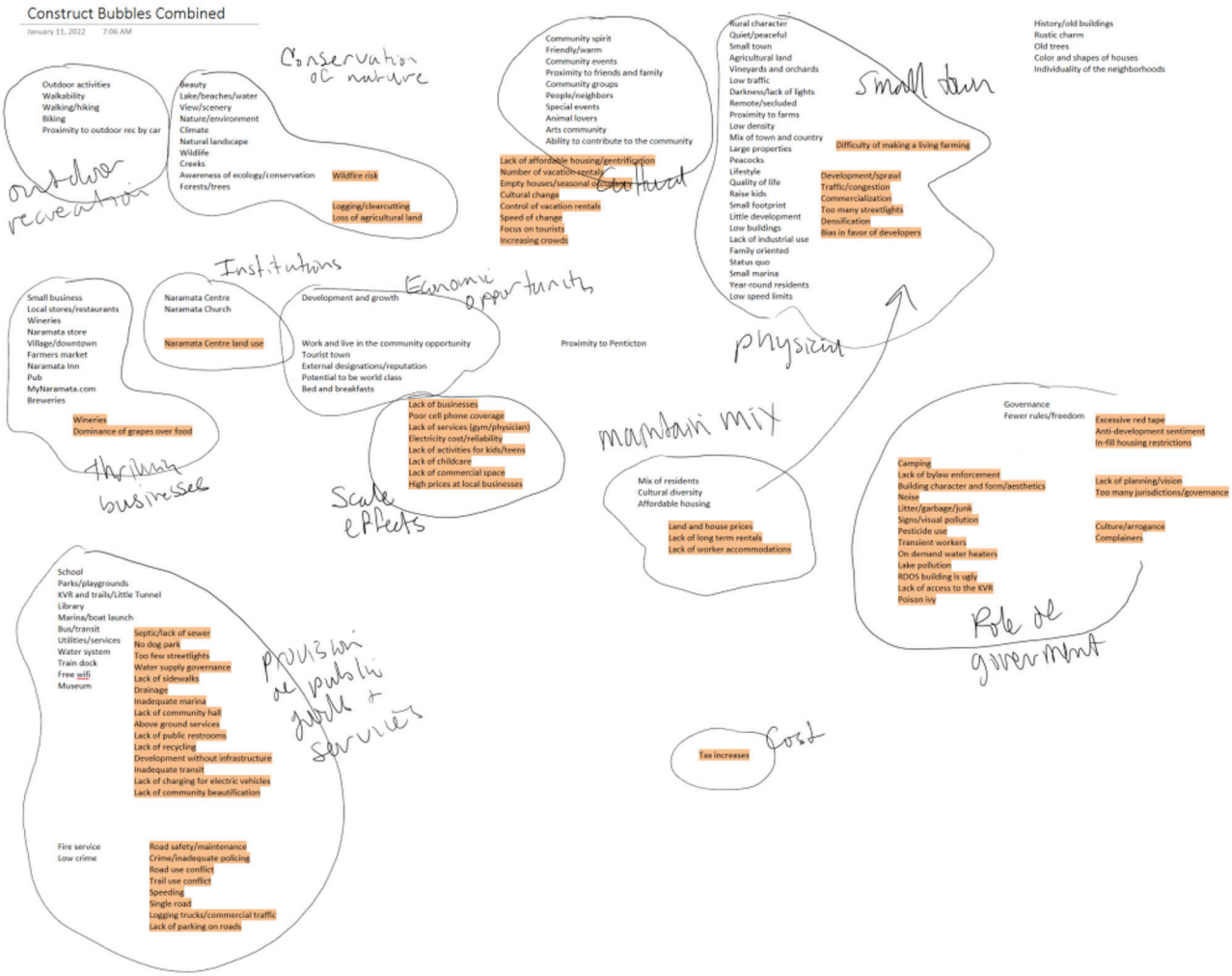
- Clustering and mapping
- An objectives hierarchy
- Scenarios

This section builds on Methodology and describes the specific implementation of our approach to participative decision-making. The subsections below describe the process of moving from likes and dislikes to fundamental objectives to scenarios.



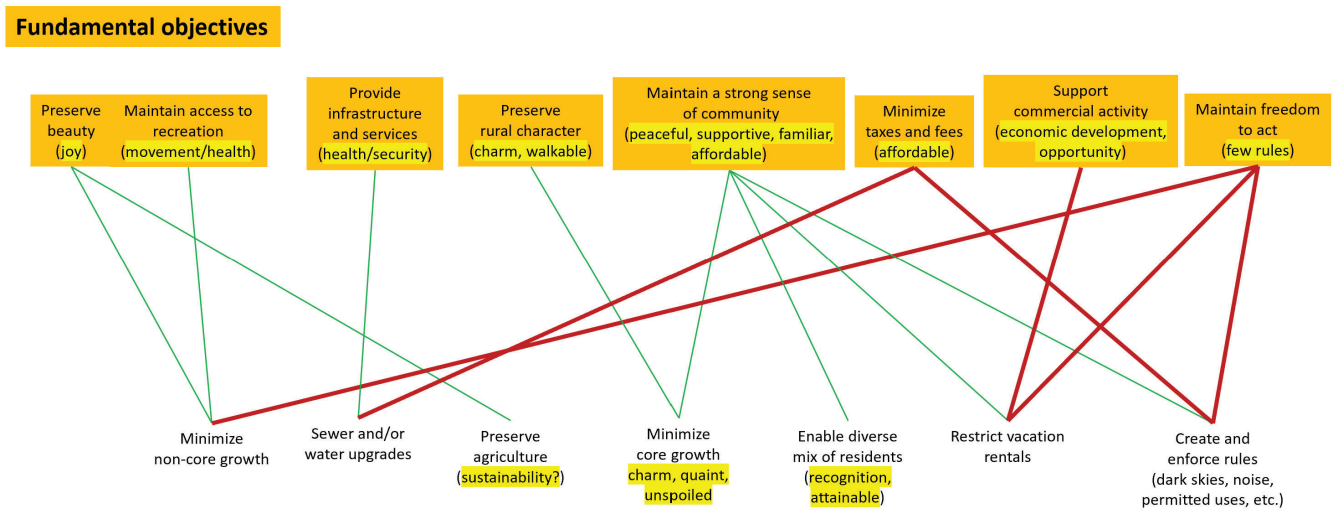
Clustering and mapping

The likes and dislikes from Round 1 were clustered by LOCAL Decisions and the RDOS. The clusters of likes and associated dislikes help us to identify potential "fundamental objectives" within the community. For example, some participants said they *like* the natural beauty of the area. Similarly, some people said they *dislike* things that reduce natural beauty, such as pollution and clearcutting. Together these point to a fundamental objective such as "conserve nature" or "preserve beauty". A draft version of the cluster and mapping process is shown below



An objectives hierarchy

The next step was to ensure the candidate fundamental objectives from the clustering and mapping stage were indeed fundamental (and not merely *means* objectives). The final set of fundamental objectives is shown below:



Some fundamental objectives are complementary and move together. For example, “preserve beauty” and “maintain access to recreation” can be seen as complementary in the Naramata context— land use policies that contribute to one objective are likely to contribute to the other. Conversely, several objectives might conflict in the Naramata context. For example, “preserve beauty” may conflict with “support commercial activity” and “maintain freedom to act”.

Scenarios

The objectives hierarchy can thus be translated into a set of scenarios that embed these complementary and adversarial dependencies. If we consider only two levels of achievement for each objective (high, low), the fundamental objectives above induce a set of $2^7 = 128$ unique scenarios. Of these, we identified five that were:

1. feasible
2. not obviously dominated (worse on all dimensions relative to some other scenario).

The scenarios are thus *feasible realizations of different levels of fundamental objectives*. They should not be thought of as *alternatives* or specific proposals for the community. The purpose of the scenarios is to elicit preferences *in the face of interdependencies* over the fundamental objectives. Specific policies, plans, and projects should only be generated and evaluated once the community's fundamental objectives are measured and interpreted.

The descriptions used in the Round 2 and Round 3 surveys for the five feasible scenarios are included below. Each describes the scenario in terms of the fundamental objectives above. So, for example, the description of "Self-Funded Rural" captures the basic trade-off identified in the Rural Growth Triangle (see Methodology):

- low growth: **achievement** of the conservation and small-town related objectives
- good amenities: **achievement** of the objectives related to infrastructure and services
- but higher taxes and fees: **failure** to achieve the low-cost objective

A short title and stylized image were added to each scenario to make the scenarios more distinct and memorable.

Self-Funded Rural

Preservation of the hillsides and agricultural land and relatively little change to the size or commercial vibrancy of the village. New infrastructure, services, and public amenities are prioritized by the community and paid for with increased taxes and fees.



Preserve and Conserve

Preservation of the hillsides and agricultural land and relatively little change to the size or commercial vibrancy of the village. New infrastructure, services, and public amenities are kept to a minimum to keep taxes and fees low.



Housing-Focused Village Growth

Preservation of the hillsides and agricultural land with an increase of housing in the village, including new opportunities for legal suites and carriage houses. Relatively little change in commercial vibrancy due to restrictions on commercial activity that aim to maximize housing available for families and workers. Increases in taxes and fees to support the infrastructure required for additional housing in the village.



Vibrant Village

Preservation of the hillsides and agricultural land with all growth channeled to the village. Relatively few restrictions on commercial activity to attract new small businesses and services. The cost of increased infrastructure required for additional commercial and residential activity is split between developers and residents.



Welcome the World

New development on the hillsides and in the village (subject to the restrictions of the provincial Agricultural Land Reserve). Commercial opportunity and growth are maximized by attracting investments from outside the community. The cost of increased infrastructure required for additional commercial and residential activity is split between developers and residents.



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Round 2: Preliminary evaluation

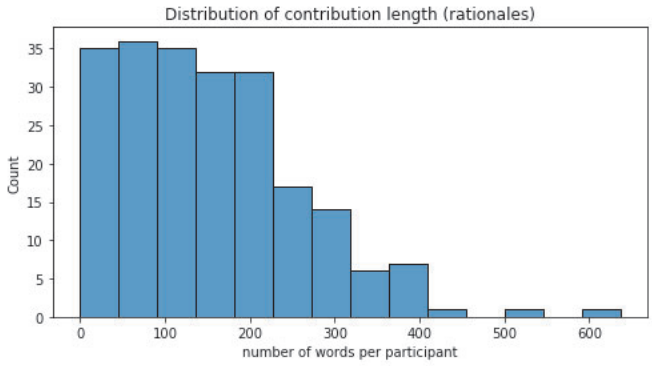
Contents

- Participation
- Results
- Heterogeneity of preferences
- Demographics
- The impact of demographics on preferences
- Satisfaction with the OCP review process

The purpose of Round 2 was to allow participants to evaluate the scenarios relative to each other and to make comments for and against each scenario.

Participation

Number of registrations	785
Number of participants submitting a response	495
Total number of comments	1196
Median comments per participant	5.5
Median words per comment	23
Median length of contribution per participant (words)	143



Results

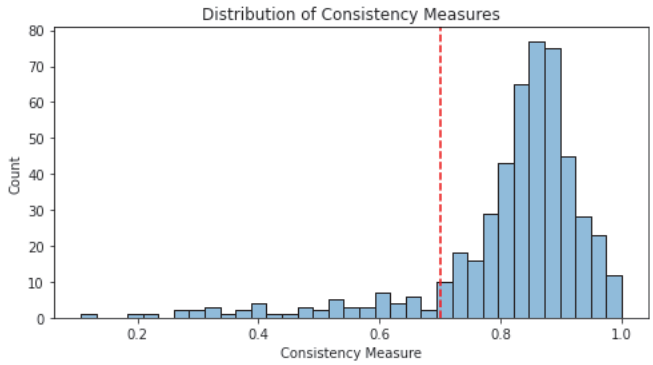
Rationales

The full list of rationales (pros and cons for each scenario) submitted in Round 2 can be found in Appendix B.

Consistency of the ratings

Pairwise comparisons provide an opportunity for assessing the consistency of the participants' responses. The expectation is that an individual's preferences are transitive: if they prefer alternative A to alternative B and prefer B to C then they should prefer A to C. Moreover,

their average score for A minus their average score for C should correspond to their stated preference for A over C. The distribution of consistency scores for Round 2 is shown below.



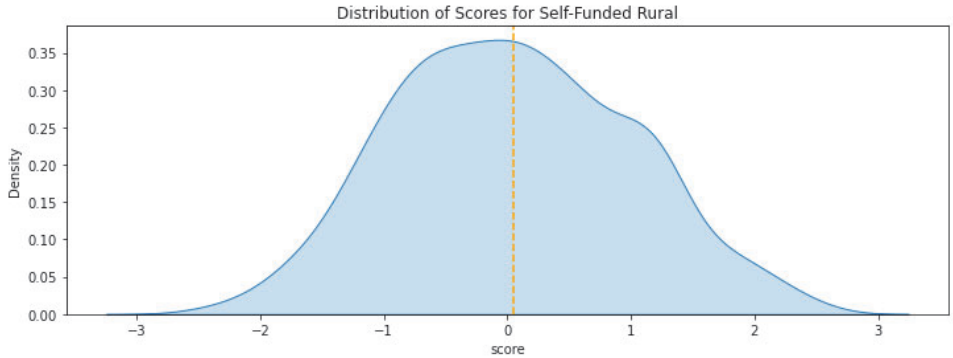
Few individuals have perfectly consistent preferences, so we use a threshold of 0.7 to differentiate valid from invalid responses (red dotted line above). Any participant with a consistency score less that this threshold is removed the analysis below.

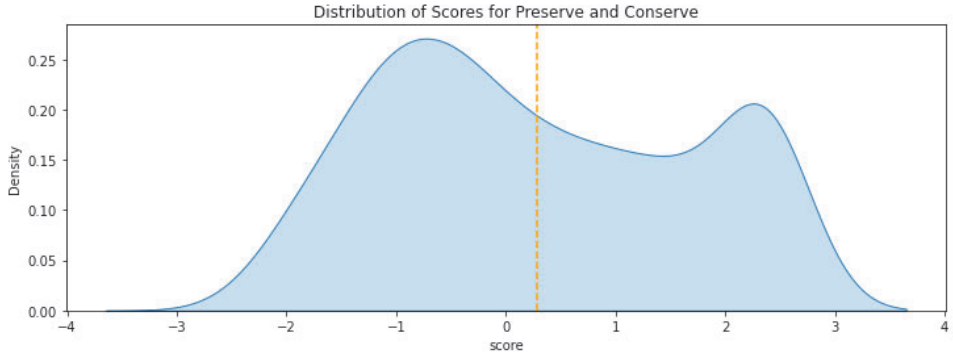
Number of consistent responses	439

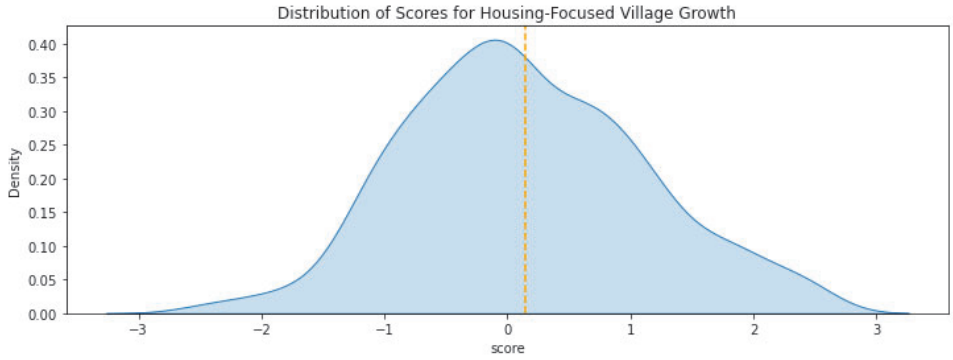
Individual distributions

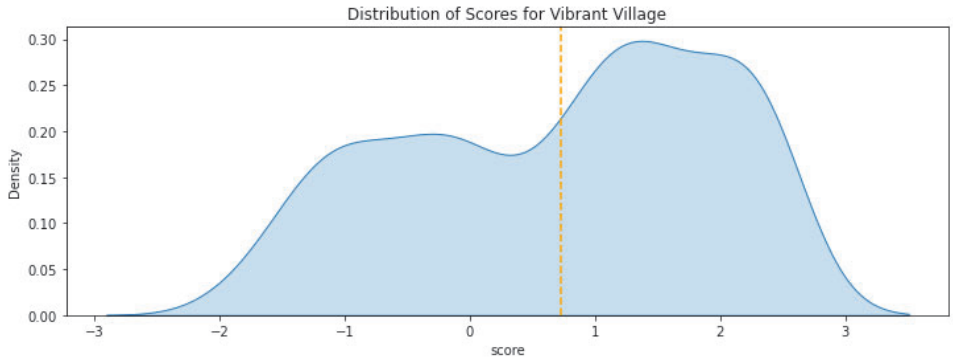
Pairwise comparisons enable the calculation of a "priority vector" for each combination of participant and scenario. The distributions of participant scores are shown below as kernel density plots (smoothed histograms) for each scenario. The mean score is shown in each case by the dotted orange line. Values below the zero midpoint indicate that the scenario is *less preferred* relative to the other scenarios.

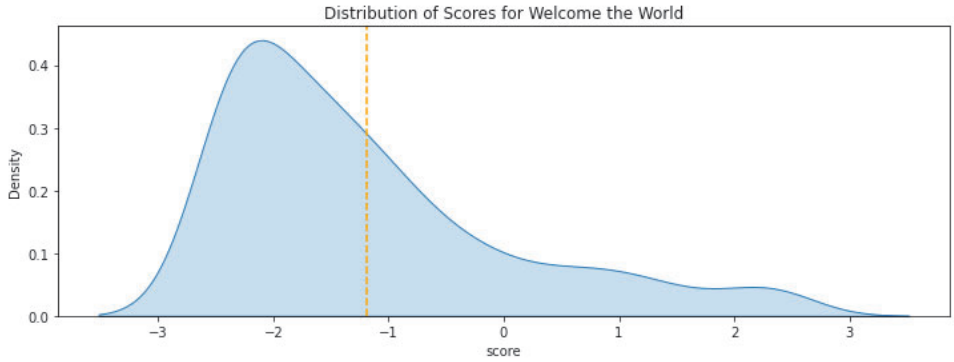
Some of the distributions below are bimodal, indicating polarization: some people strongly support the scenario; others strongly oppose it. Unimodal distributions centered on zero, such as "Self-Funded Rural" and "Housing-Focused Village", suggest the absence of strong preferences one way or the other for these scenarios.





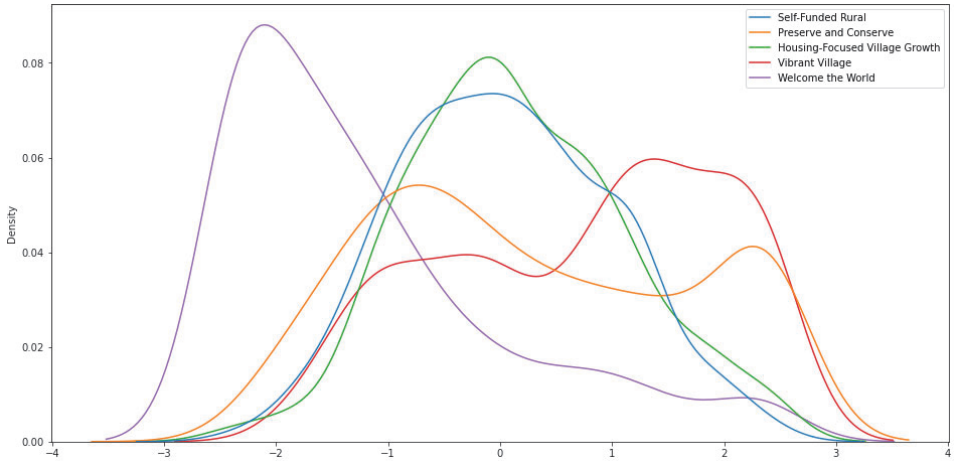




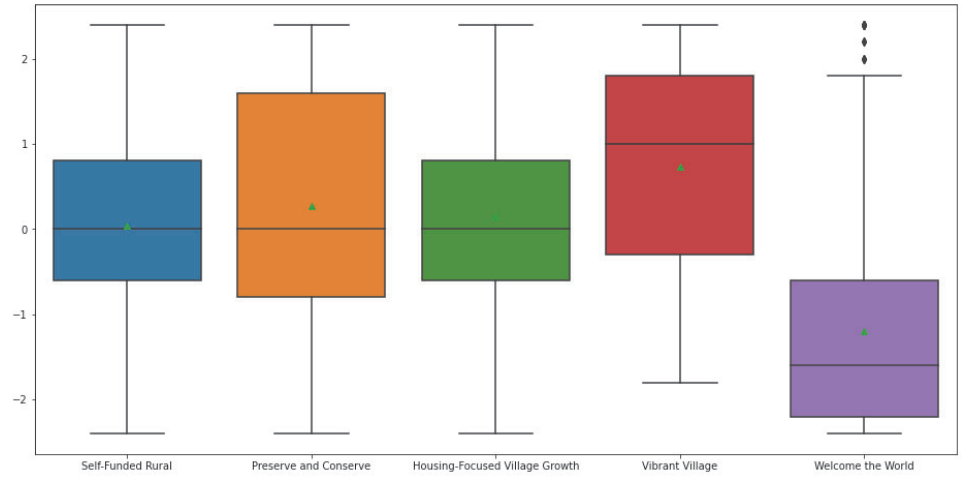


Comparison of scores

The individual distributions above can be superimposed to give an overall picture of aggregate preference. The distribution of the “Welcome the World” scenario is clearly on the less preferred end of the scale. “Vibrant Village” is bimodal, but the right-most hump suggests strong support from a relatively large subset of participants.

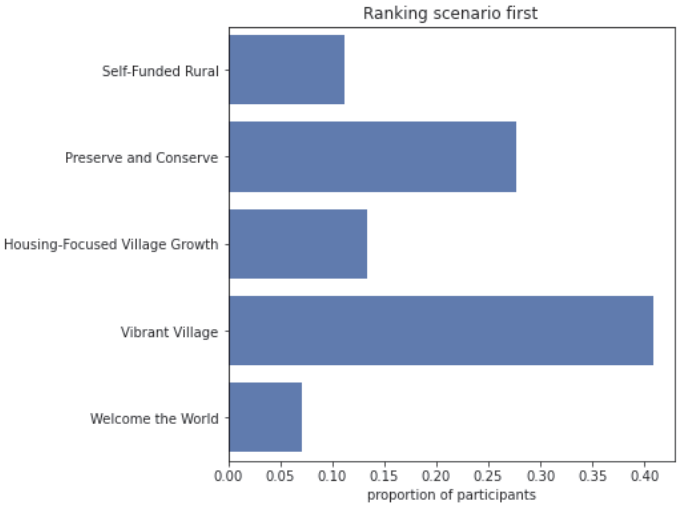


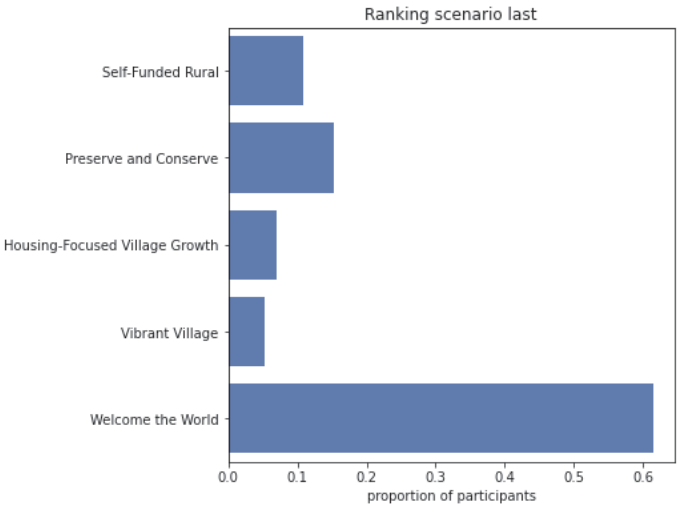
The distributions above can be simplified as boxplots. The colored box portion of each boxplot shows the range of scores (shown along the vertical axis) for the middle 50% of responses. The horizontal line bisecting the box is the median (50% of responses above and below the score) and the mean is shown as a small triangle. We see from this presentation that “Vibrant Village” has the highest mean and the highest median in Round 2.



Heterogeneity of preferences

As the distributions above show, each scenario has supporters and opponents. We can show this by conducting a first/last analysis. Here we identify each participant's most preferred (highest score) and least preferred (lowest score) scenario. Then, for each scenario, we count the number of participants who rated the scenario highest (or lowest).



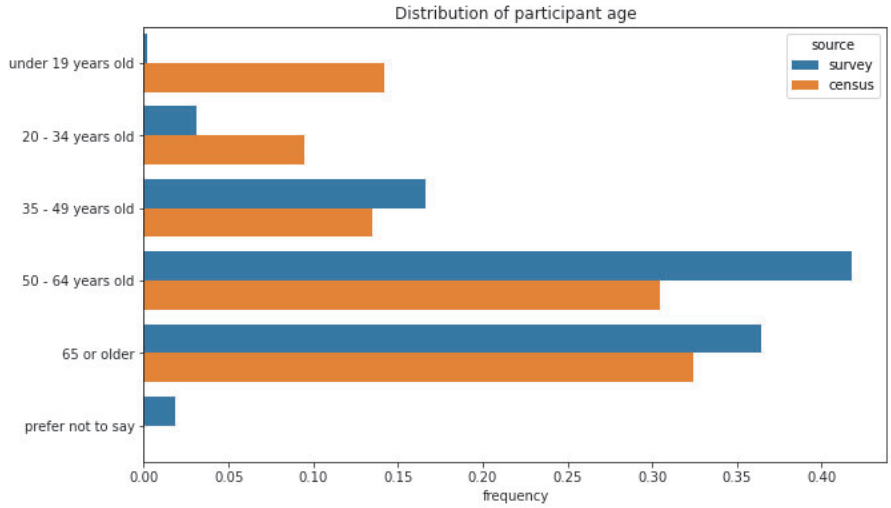


These charts show us that, in Round 2, no scenario was universally hated or loved.

Demographics

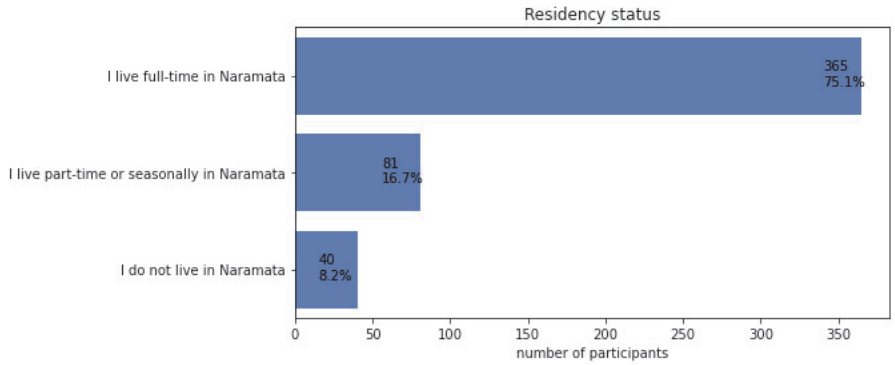
Age

Age Group	participants in Round 2	Naramata population (2016)
under 19 years old	1	285
20 - 34 years old	15	190
35 - 49 years old	81	270
50 - 64 years old	203	610
65 or older	177	650
prefer not to say	9	0
Total	486	2005



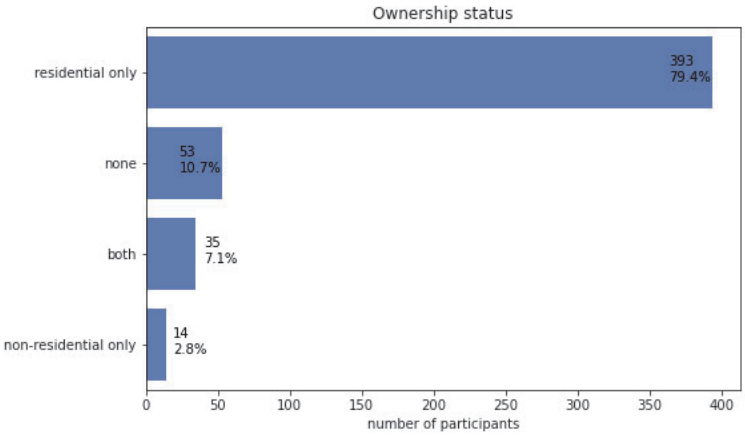
Residency

The chart below shows the residency status of participants in the Round 2 survey. These proportions are roughly similar to Round 1.

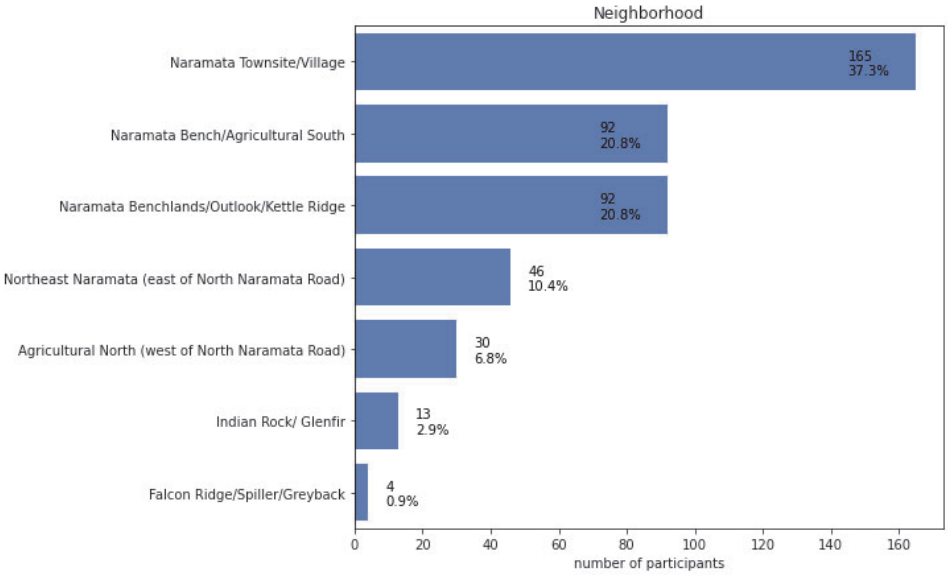


Ownership

The chart below shows ownership status.



Neighborhood



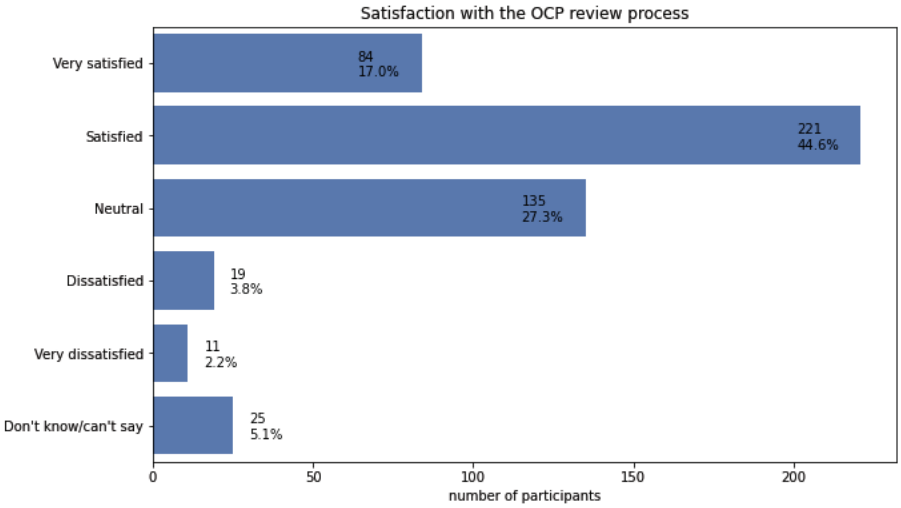
The impact of demographics on preferences

Demographic information was collected in order to determine whether situational factors such as age, ownership status, and location within Electoral Area E have an impact on preferences. However, the analysis of demographic covariates is conducted on the final (Round 3) results only.

Satisfaction with the OCP review process

We asked participants at the end of each survey round to tell us whether they are satisfied with the OCP review. The results for Round 2 are shown below.

It is natural, as the multi-round survey progresses, for people to better understand the process. Here we see an increase in “satisfied” and “very satisfied” relative to Round 1 with decreases in all the other categories.



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Round 3: Final evaluation

Contents

- Feedback from Round 2
- Participation
- Results
- Heterogeneity of preferences
- Evidence of deliberation
- Demographics
- The impact of demographics on preferences
- Satisfaction with the OCP review process

The purpose of Round 3 was to allow participants to evaluate the scenarios relative to each other *given* quantitative and qualitative feedback from Round 2.

Feedback from Round 2

The Round 3 survey differed from Round 2 in two important respects. First, the scenario descriptions (see Objectives and scenarios) were augmented with pros and cons from the Round 2 results. This mapping process was similar to the construct mapping process at the end of Round 1. RDOS planning staff read each comment and mapped it to an inductively-generated set of pros and cons. Each pro and con was given a name and a concise description/explanation using participants' wording where possible. An example of an augmented scenario presented in Round 3 is shown below. A summarized list of the pros and cons for each scenario is in Appendix C.

Self-Funded Rural

Preservation of the hillsides and agricultural land and relatively little change to the size or commercial vibrancy of the village. New infrastructure, services, and public amenities are prioritized by the community and paid for with increased taxes and fees.



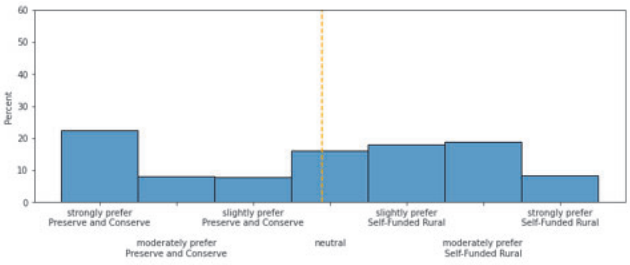
Pros

- ✓ **Taxation for infrastructure**
  It makes sense that any infrastructure improvement is paid through taxation.
- ✓ **Want new infrastructure/amenities**
  I like the idea of the new infrastructure and more services and amenities. Prioritize improvements and regular upkeep.
- ✓ **No development**
  Good plan, no messing up our hillsides, and small growth to the village and paid by those desiring to live there, not developers.
- ✓ **Locals first**
  I like the local angle. Ensuring projects and growth serves locals first.
- ✓ **Pay fair share**
  I do not mind paying my fair share for properly run local services in order to protect the natural environment.
- ✓ **Community control over infrastructure/amenities**
  If new things are needed, they are determined and voted on by the community, as compared to a Developer Driven approach to village

Cons

- × **Misses out on developer contributions**
  Developers should be required to provide infrastructure and community beautification. Look to Sidney and Langford on the island for examples.
- × **No commercial growth in the village**
  Would like to see a bit more vibrancy in the village.
- × **No tax increase**
  I am opposed to having our taxes increased; need to know the increases in advance
- × **Community cannot afford amenities**
  Increased cost, don't think we currently have the year- round population to really support services and public amenities
- × **Community can't choose**
  Allowing the community to prioritise capital investments will pit one segment of the community against the other. Differences of opinions for what should be the priority.
- × **No opportunities for employment**
  A viable village, in the social sense, requires a demographic range that encourages families at

In addition, each pairwise comparison in the survey included the corresponding results from Round 2. For example, the image below was shown when participants were asked to compare the "Preserve and Conserve" scenario to the "Self-Funded Rural" scenario. The histogram shows many participants in Round 2 strongly preferred "Preserve and Conserve". On the other hand, there is a hump on the right, suggesting a comparably large group preferred "Self-Funded Rural", but were less adamant about their preference. These two phenomena (a smaller group of people with strong preferences and a larger group with weaker preferences) largely cancel. The mean score (dotted line), which is a function of both number of participants and the stated strength of their preferences, is close to the neutral point.

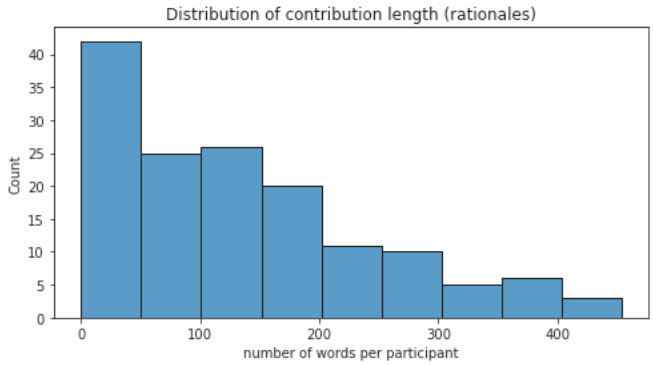


Participation

The survey instructions for Round 3 made it clear that there would not be a Round 4. Thus, although participants had the opportunity to justify their choices (as in Round 2), they were warned that their comments would be part of the public record but not summarized and shared as part of the participative decision-making process. This accounts for the small median for "comments per participant" below.

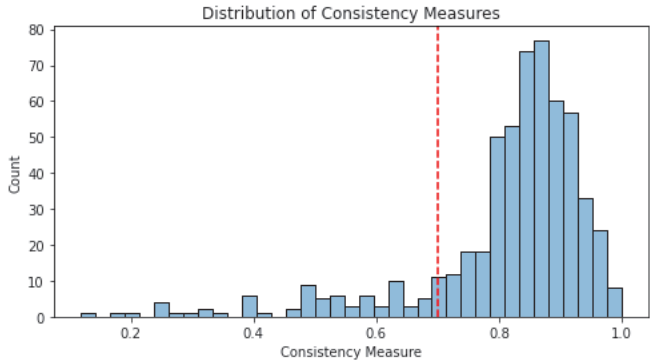
Number of registrations	917
Number of particpants submitting a response	566
Total number of comments	595
Median comments per participant	4
Median words per comment	26
Median length of contribution per participant (words)	107

Despite the warning above, some participants did respond with substantial additional comments.



Results

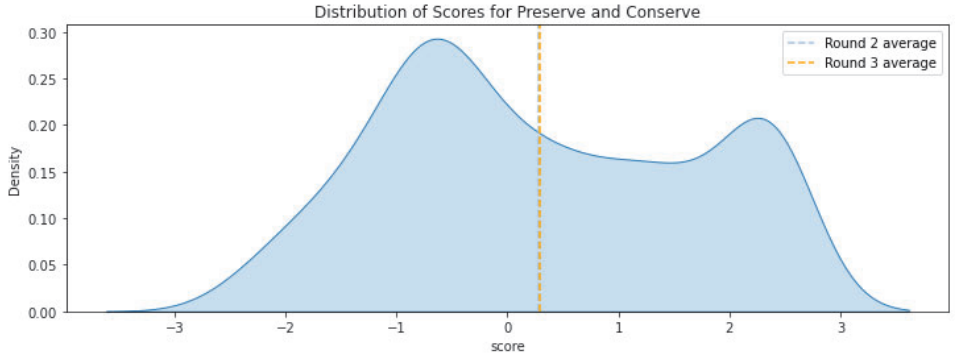
Consistency of the responses

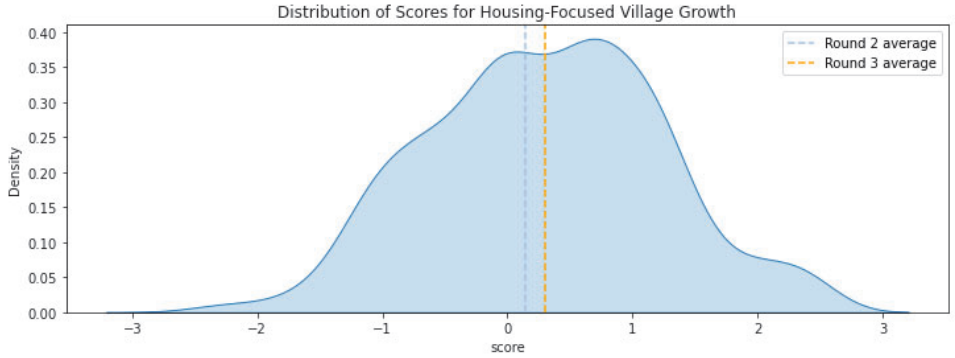


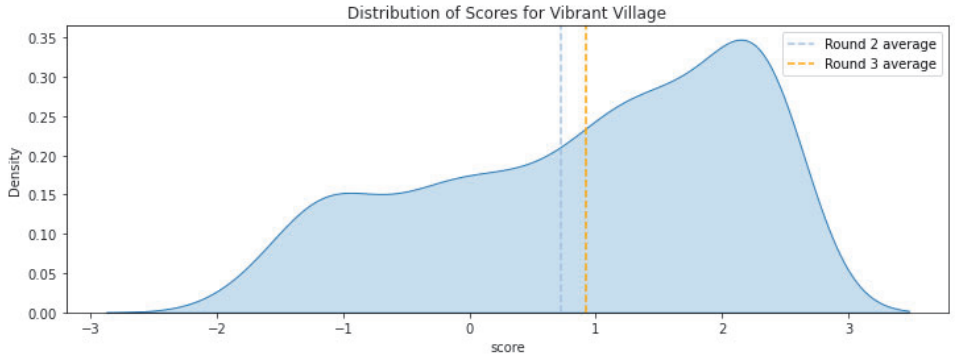
Number of consistent responses	491

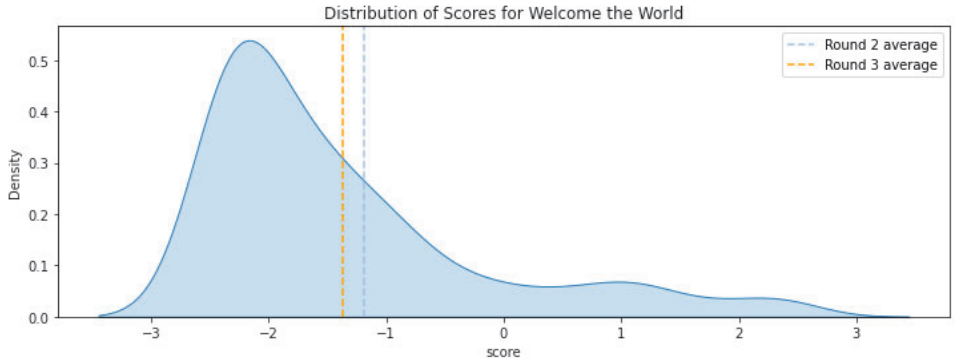
Individual distributions



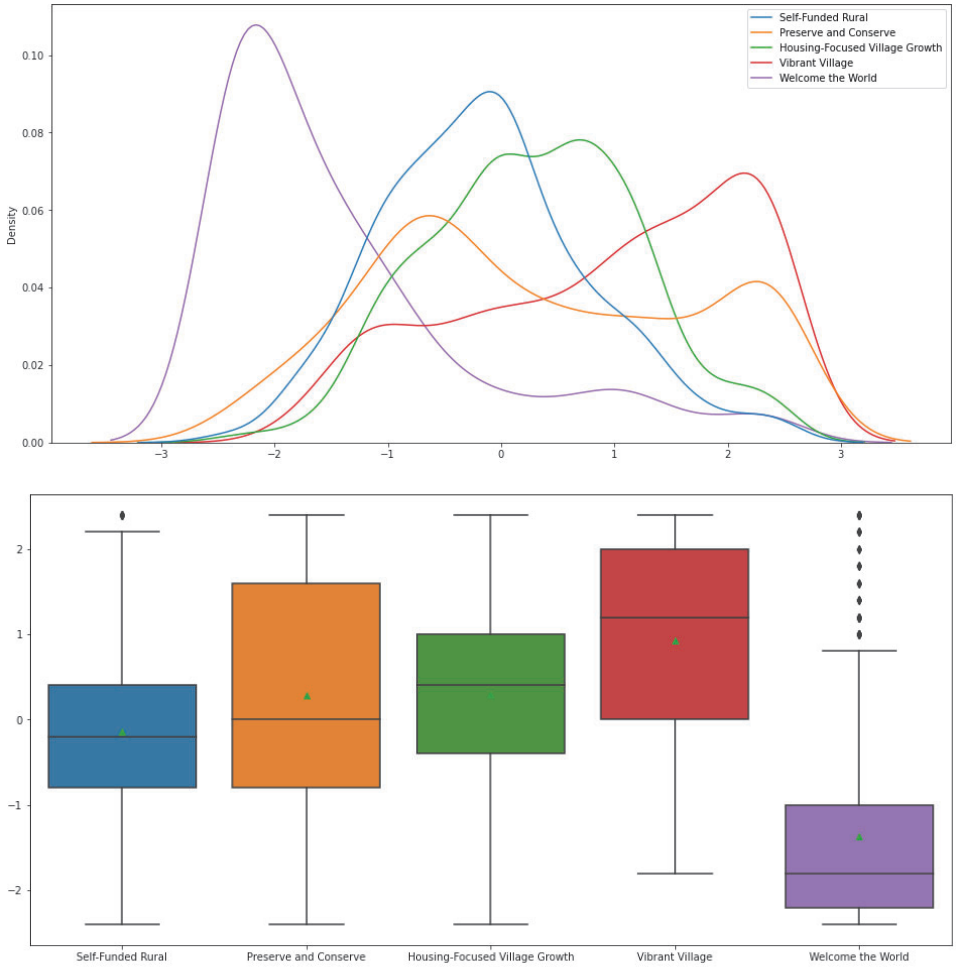








Comparison of scores



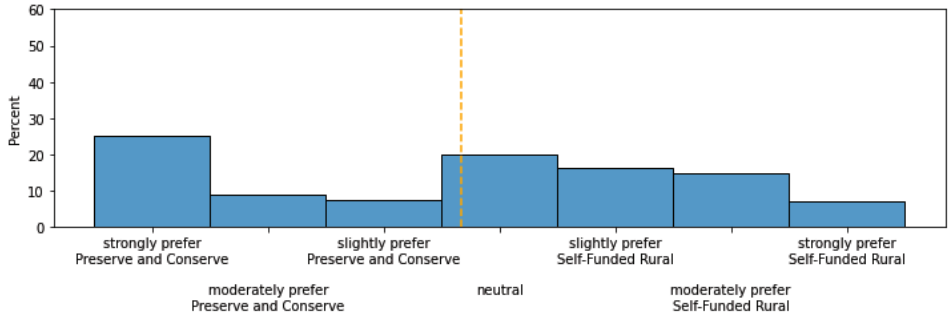
The information from the boxplot is shown in table form below:

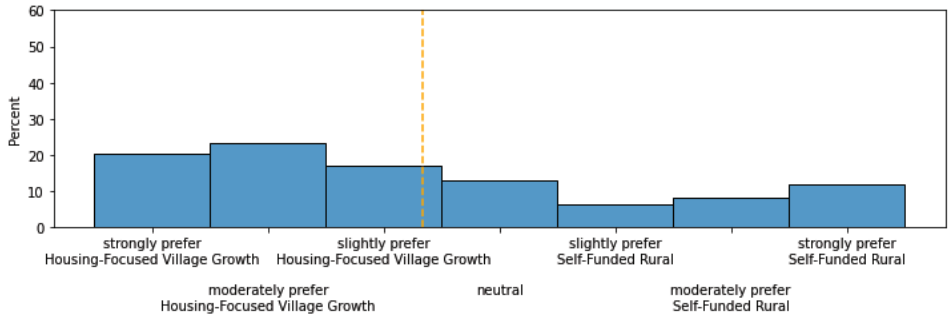
	Self-Funded Rural	Preserve and Conserve	Housing-Focused Village Growth	Vibrant Village	Welcome the World
count	491.00	491.00	491.00	491.00	491.00
mean	-0.14	0.29	0.30	0.92	-1.37
std	0.92	1.40	0.93	1.24	1.21
min	-2.40	-2.40	-2.40	-1.80	-2.40
25%	-0.80	-0.80	-0.40	0.00	-2.20
50%	-0.20	0.00	0.40	1.20	-1.80
75%	0.40	1.60	1.00	2.00	-1.00
max	2.40	2.40	2.40	2.40	2.40

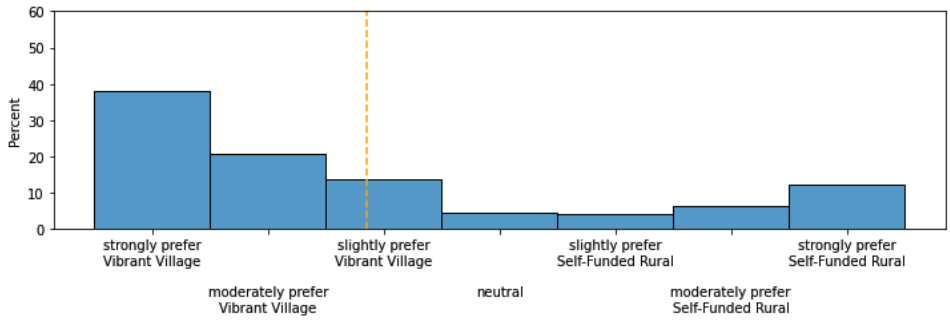
The “Vibrant Village” scenario has the highest mean and median score (denoted “50%” in the table above). Of the five scenarios, only “Housing-Focused Village Growth” and “Vibrant Village” have median scores greater than zero (neutral). This suggests that only these two are rated favorably overall by a majority of Round 3 participants.

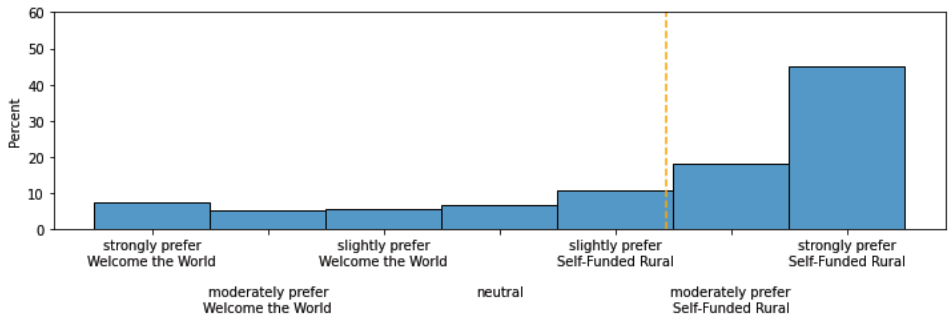
Pairwise responses

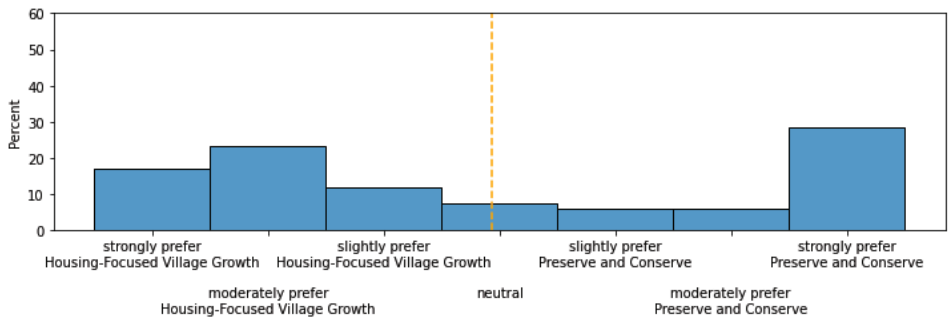
The individual pairwise results are shown below. These results provide the most insight into specific trade-offs, as discussed in more detail in Interpretation.

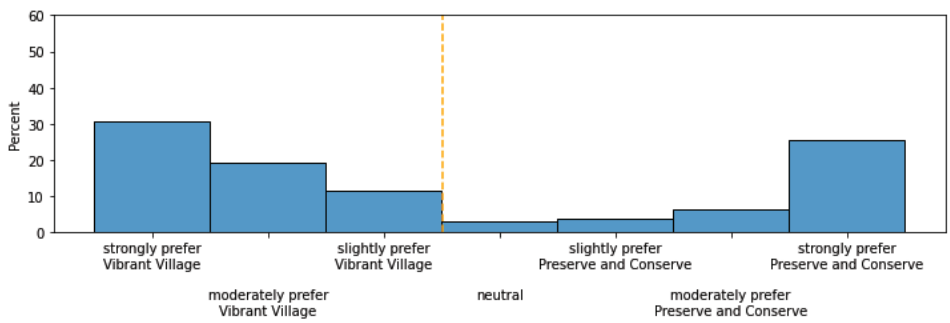

Percent
0
10
20
30
40
50
60
strongly prefer
Preserve and Conserve
slightly prefer
Preserve and Conserve
slightly prefer
Self-Funded Rural
strongly prefer
Self-Funded Rural
moderately prefer
Preserve and Conserve
neutral
moderately prefer
Self-Funded Rural

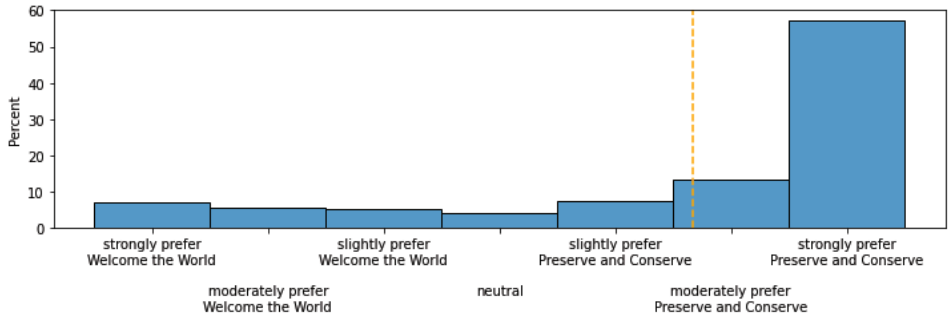

Percent
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strongly prefer
Housing-Focused Village Growth
slightly prefer
Housing-Focused Village Growth
slightly prefer
Self-Funded Rural
strongly prefer
Self-Funded Rural
moderately prefer
Housing-Focused Village Growth
neutral
moderately prefer
Self-Funded Rural

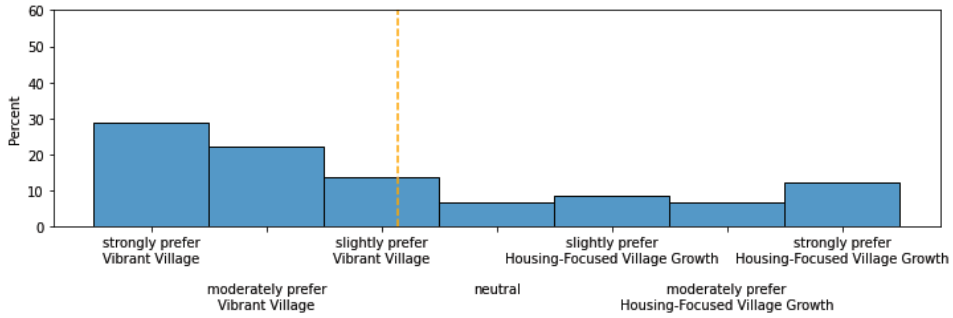

Percent
0
10
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30
40
50
60
strongly prefer
Vibrant Village
slightly prefer
Vibrant Village
slightly prefer
Self-Funded Rural
strongly prefer
Self-Funded Rural
moderately prefer
Vibrant Village
neutral
moderately prefer
Self-Funded Rural

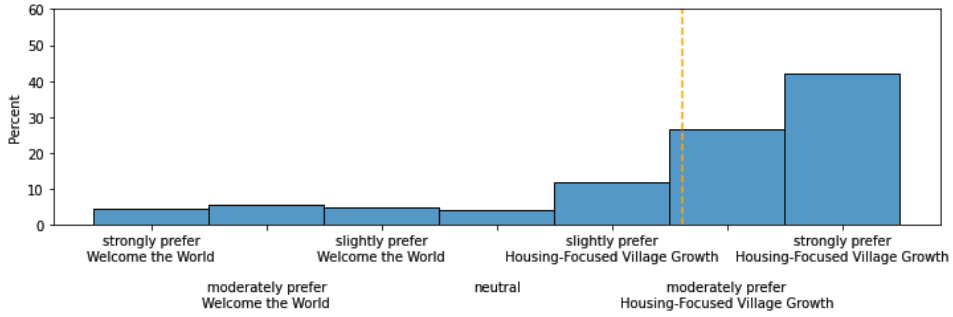

Percent
0
10
20
30
40
50
60
strongly prefer
Welcome the World
slightly prefer
Welcome the World
slightly prefer
Self-Funded Rural
strongly prefer
Self-Funded Rural
moderately prefer
Welcome the World
neutral
moderately prefer
Self-Funded Rural

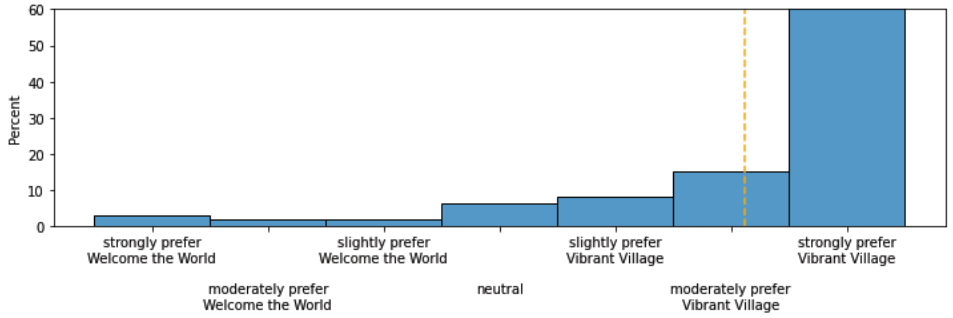

Percent
0
10
20
30
40
50
60
strongly prefer
Housing-Focused Village Growth
slightly prefer
Housing-Focused Village Growth
slightly prefer
Preserve and Conserve
strongly prefer
Preserve and Conserve
moderately prefer
Housing-Focused Village Growth
neutral
moderately prefer
Preserve and Conserve


Percent
0
10
20
30
40
50
60
strongly prefer
Vibrant Village
slightly prefer
Vibrant Village
slightly prefer
Preserve and Conserve
strongly prefer
Preserve and Conserve
moderately prefer
Vibrant Village
neutral
moderately prefer
Preserve and Conserve





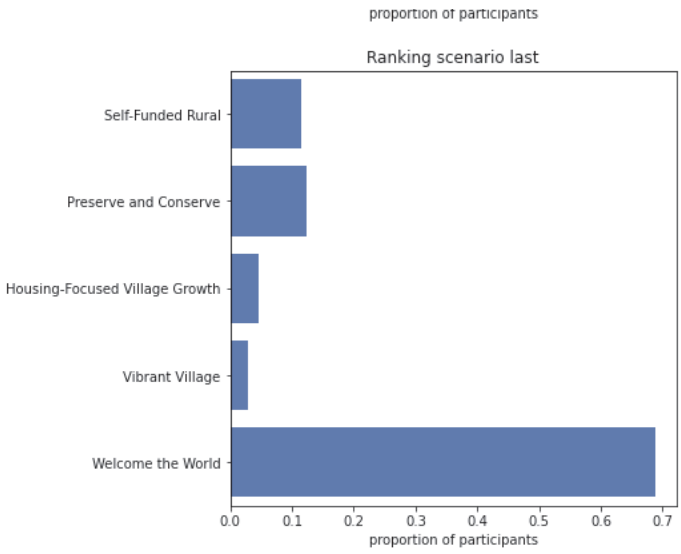




Heterogeneity of preferences

As discussed in the Round 2 analysis, each scenario is most preferred (and least preferred) by some portion of participants.

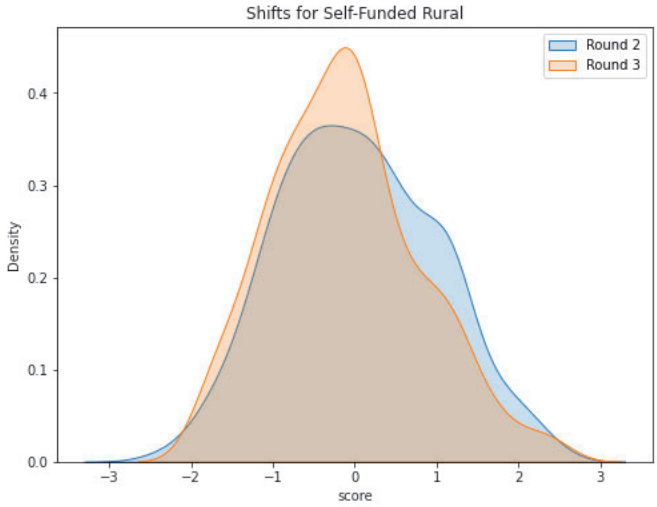


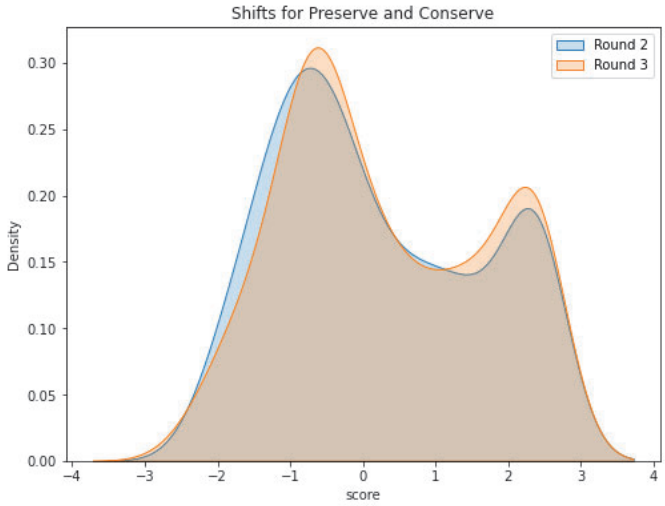


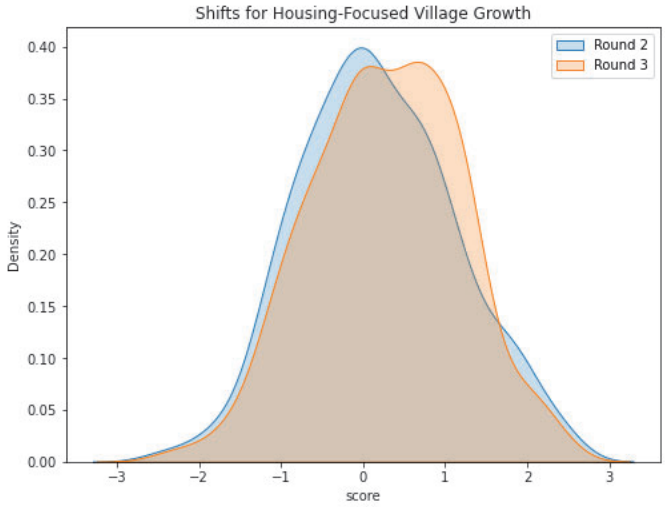
Evidence of deliberation

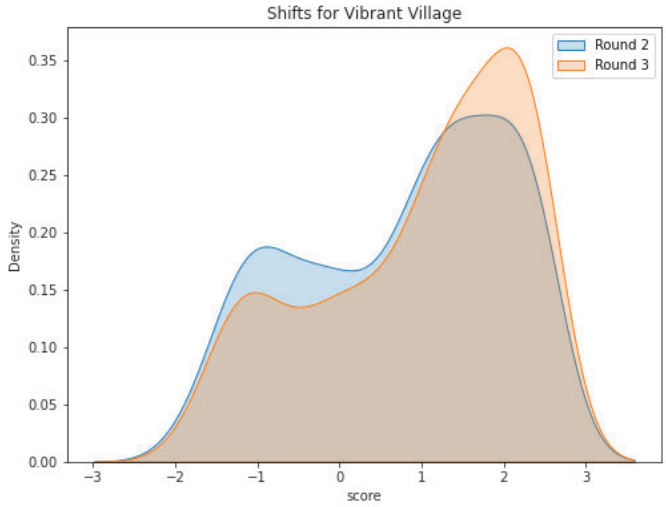
An important hypothesized benefit of iterated Delphi-like surveys is that the inclusion of quantitative and qualitative feedback from one evaluation round to the next helps participants think about and refine their preferences. For example, participants may see new information or perspectives in the comments from the previous round that cause them to re-evaluate. Similarly, the histograms may show surprisingly strong aggregate preferences one way or the other, thereby reinforcing or refuting their prior beliefs.

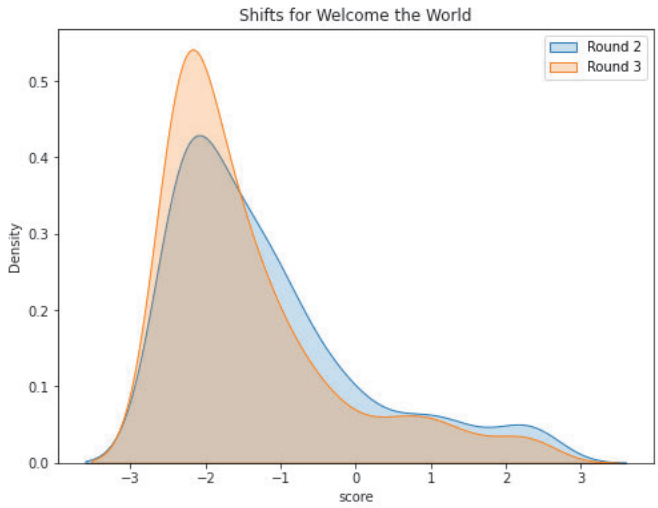
The graphs below show the shifts in the distribution of scores for each scenario from Round 2 to Round 3. In some cases, such as “Self-Funded Rural”, we see little change: the distribution of scores in Round 3 is similar to Round 2, but with less variance. The distribution for “Preserve and Conserve” was markedly bimodal in Round 2 (indicating polarization within the community) but the feedback from Round 2 appeared to have little impact on this polarization. The other three scenarios, however, saw shifts. Support for “Housing-Focused Village Growth” increased modestly whereas the bimodality of “Vibrant Village” decreased in Round 3, leading to much stronger support for that scenario overall. In contrast, strong opposition to “Welcome the World” increased in Round 3.


Shifts for Self-Funded Rural
Round 2
Round 3
Density
score


Shifts for Preserve and Conserve
Round 2
Round 3
Density
score


Shifts for Housing-Focused Village Growth
Round 2
Round 3
Density
score





We can formalize the analysis of changes from round to round by conducting a paired *t*-test for each scenario. An anonymized key is used to match participants in each round so that the measured changes are within-participant.

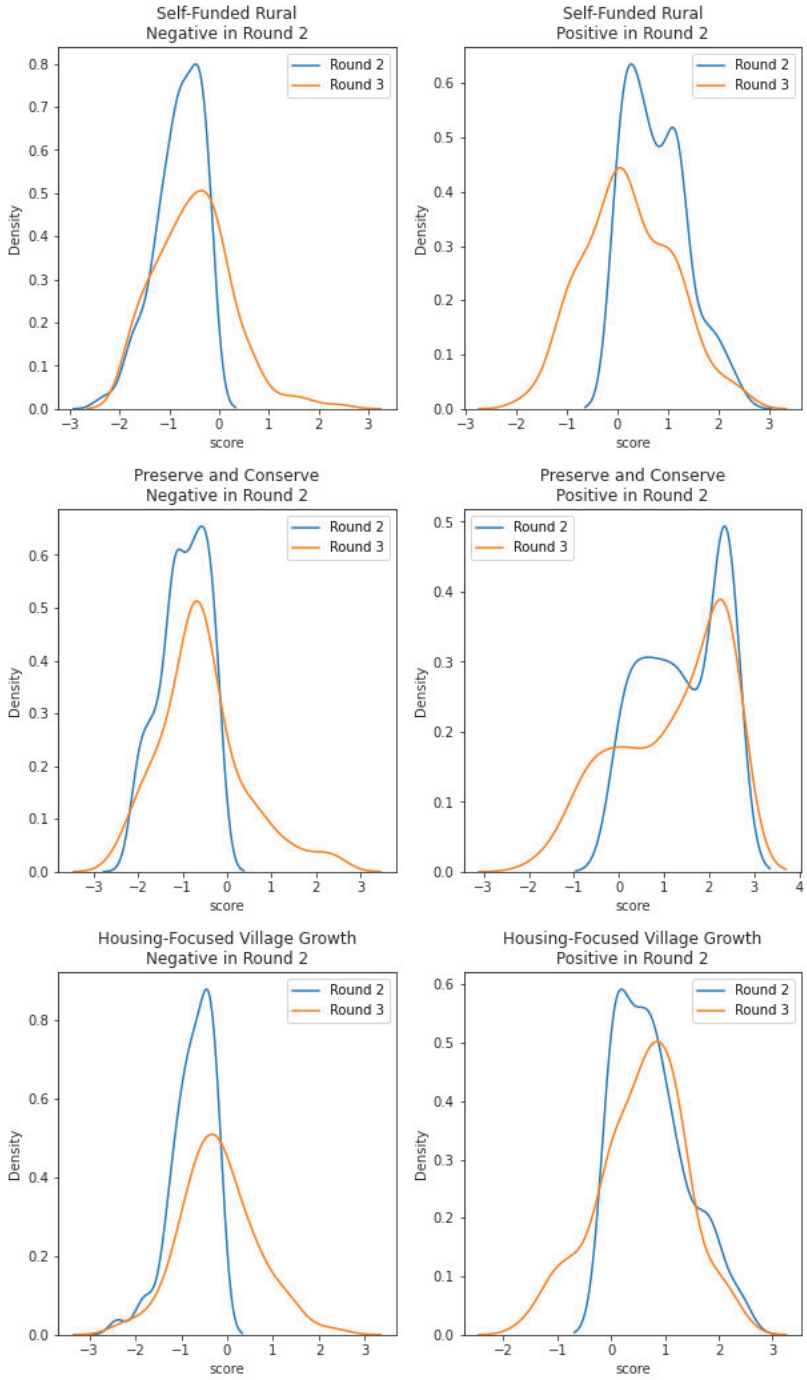
The table below shows the average within-participant changes from Round 2 to Round 3 for each scenario. For example, the average change in "Self-Funded Rural" was negative, indicating an overall decrease in support. This difference is expressed as a *t*-statistic and the probability that the true change from round to round is zero is provided by the *p*-value. As discussed above, we see no significant change to "Preserve and Conserve", which suggests relatively stable preferences regarding that scenario. However, we see significant changes in all other scenarios including large shifts for "Vibrant Village" (positive) and "Welcome the World" (negative).

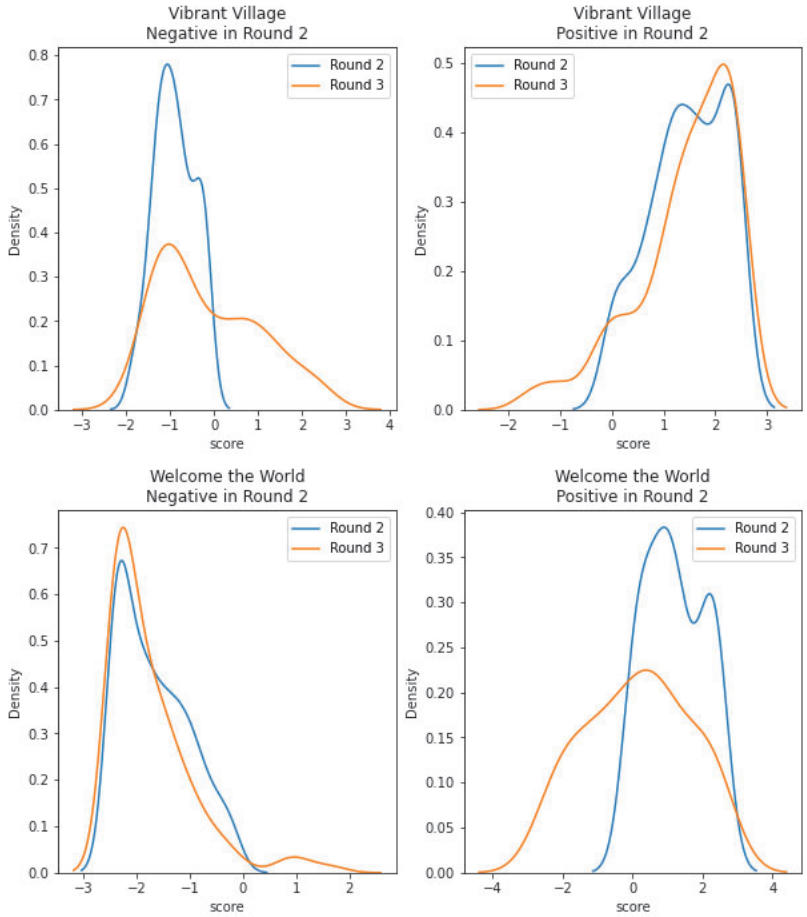
Scenario	Mean difference Round 3 - Round 2	t-statistic	p-value
Self-Funded Rural	-0.15	-2.95	0.003
Preserve and Conserve	0.09	1.59	0.113
Housing-Focused Village Growth	0.1	1.96	0.051
Vibrant Village	0.2	3.69	0
Welcome the World	-0.24	-4.46	0

Another indication of "deliberation" is a shift in a participant's rating of a scenario from one side of the neutral zero point to the other. To show this, we divide the participants into two groups for each scenario based on their Round 2 ratings: negative if their rating was less than zero and positive if it was greater than zero. When then overlay the distribution of scores in Round 3 for each group.

For "Self-Funded Rural", we see a softening of stances on both sides: some negative raters switched to positive and some positive switched to negative. This is likely reversion to the mean rather than an effect of deliberation since this scenario did not evoke strong preferences either way. However, we see shifts away from the mean in other cases. For example, participants in favor of "Preserve and Conserve" in Round 2 became more strongly in favor in Round 3. We see similar "doubling down" by those in favor of "Vibrant Village" and against "Welcome the

became more strongly in favor in Round 3. We see similar "doubling down" by those in favor of "Vibrant Village" and against "Welcome the World". However, for those two scenarios, we also see migration from the opposing side. For example, a large portion of those against "Vibrant Village" in Round 2 migrated to the positive side in Round 3. These two effects (hardening by supporters and softening by opposers) combine to create the large positive change observed in the *t*-tests.

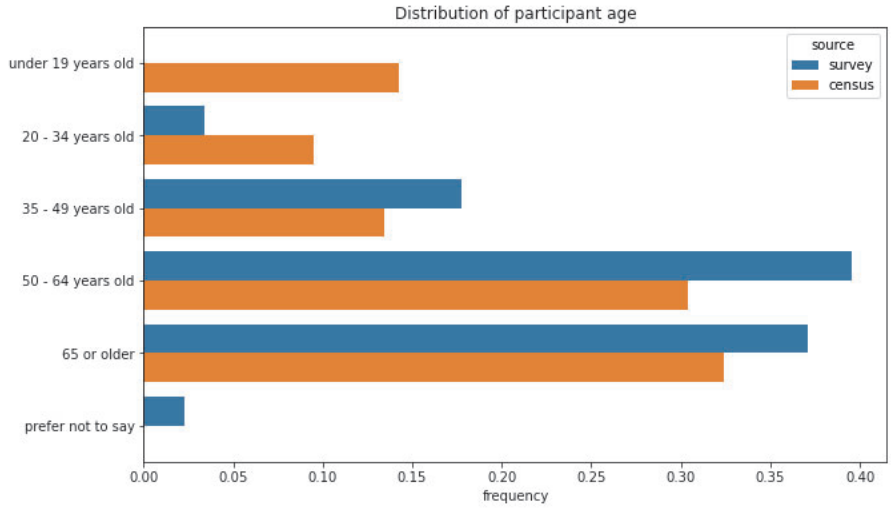




Demographics

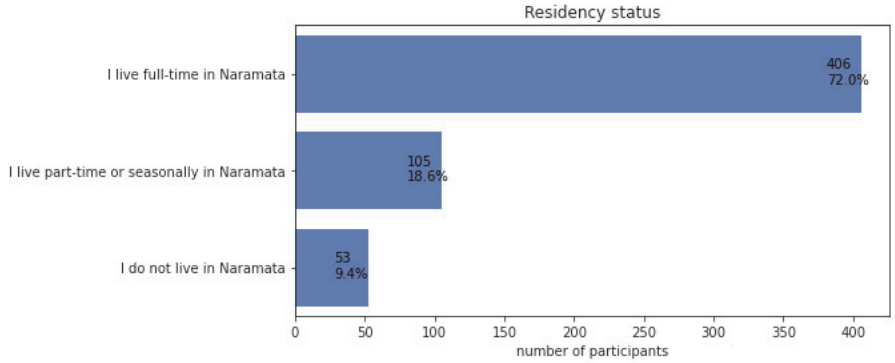
Age

Age Group	participants in Round 3	Naramata population (2016)
under 19 years old	0	285
20 - 34 years old	19	190
35 - 49 years old	100	270
50 - 64 years old	223	610
65 or older	209	650
prefer not to say	13	0
Total	564	2005



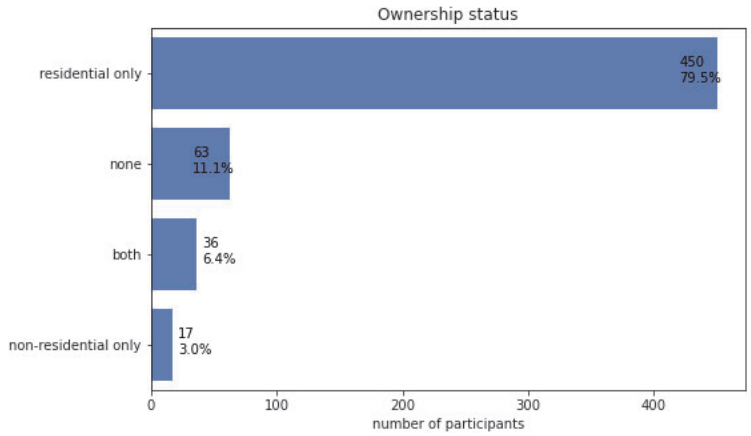
Residency

The chart below shows the residency status of participants in the Round 3 survey.

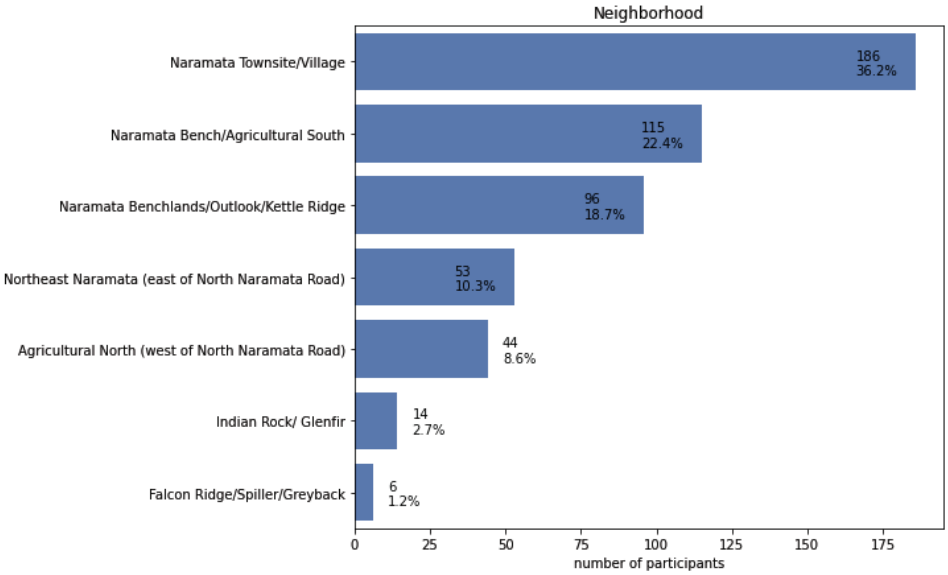


Ownership

The chart below shows ownership status.



Neighborhood

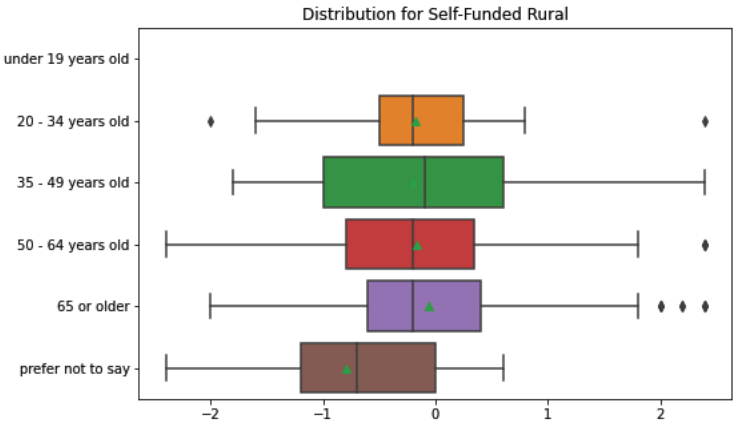


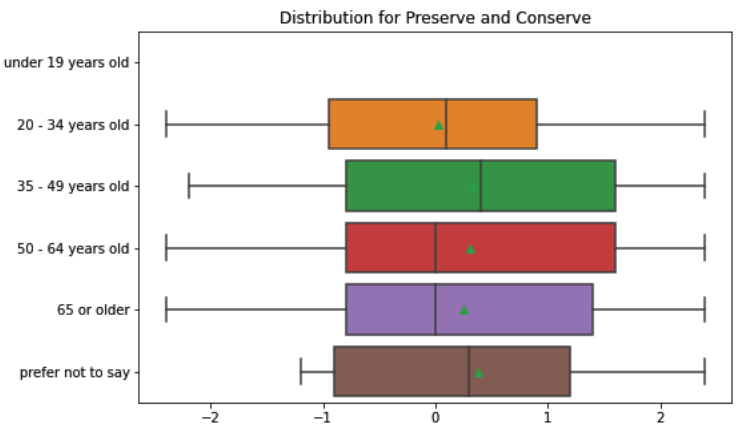
The impact of demographics on preferences

Demographic information was collected in order to determine whether situational factors such as age, ownership status, and location within Electoral Area E have an impact on preferences.

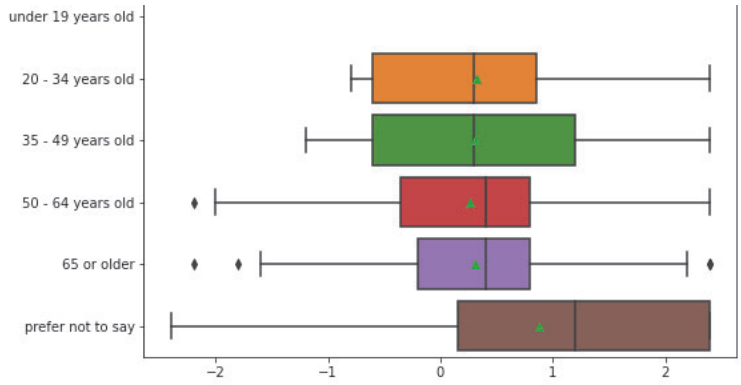
Visual analysis

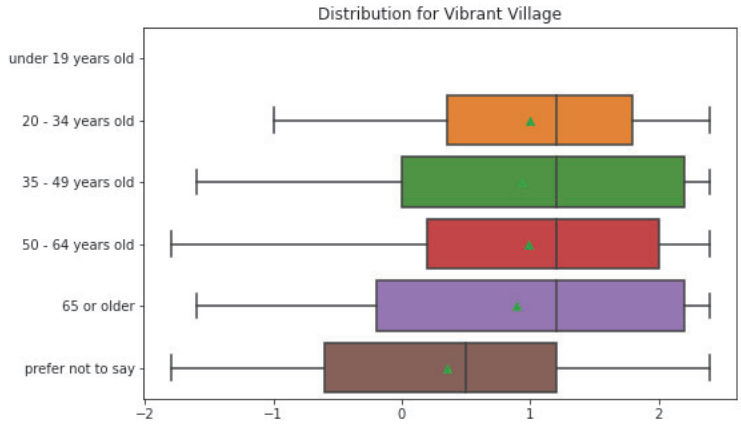
One way to test for variation in results due to demographic covariates is to use boxplots. Here the total score for each scenario is plotted by participant age group:

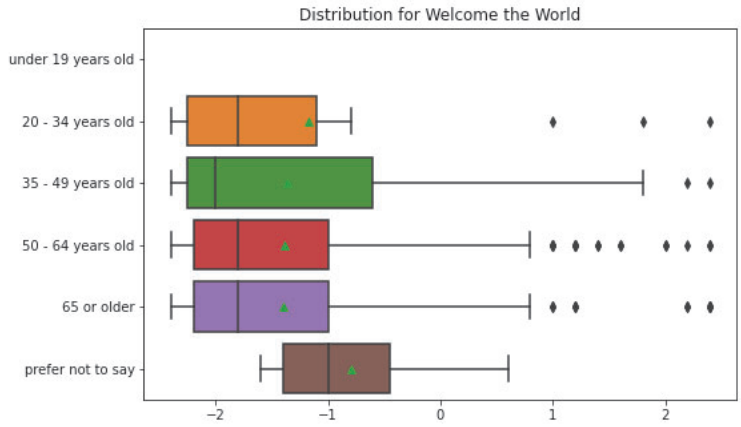












Statistical analysis

The means in most of the plots above are close to each other. In those cases where the means are different, the underlying cause is often a small sample size. For example, the “under 19 years old” and “prefer not to say” categories vary much more than those with more participants and thus give the impression of large differences.

Even when there is sufficient data, *true* differences are hard to spot. For example, support for the “Self-Funded Rural” scenario appears to be lower among 20-34 year-olds than the other groups in the boxplots. A difference is certainly plausible since this scenario involves amenities and infrastructure being funded out of taxation and fees. Younger people, who generally have less accumulated wealth, may oppose these costs.

We conduct a statistical analysis to determine whether younger people really are less supportive of the “Self-Funded Rural” scenario. Here we construct a linear model in which the score for the scenario is a function of indicator (or “dummy”) variables for each age group. The linear regression output below includes three coefficients for different age groups. The “under 19 years old” and “prefer not to say” groups do not appear because they were removed from the analysis (too little data). The “20 -34 year old” category does not appear in the results because it is used as the reference or baseline. All coefficients are thus relative to the “20 -34 year old” category.

The *p*-values for each dummy coefficient provide the probability that each group is the same as the baseline. In each case, the values are high, suggesting that true differences between the three categories and the baseline (and thus between the three categories themselves) are

unlikely. This is supported by the model's overall "Prob (F-statistic)" measure provided in the top half of the regression summary. A high value such as this suggests that the model (support for "Self-Funded Rural" as a function of age category) has little predictive value. We thus conclude that age group has no significant impact on support for this scenario.

Dep. Variable:	SFR	**R-squared:**	0.005
Model:	OLS	**Adj. R-squared:**	-0.002
Method:	Least Squares	**F-statistic:**	0.7369
Date:	Thu, 02 Jun 2022	**Prob (F-statistic):**	0.530
Time:	00:00:54	**Log-Likelihood:**	-638.88
No. Observations:	481	**AIC:**	1286.
Df Residuals:	477	**BIC:**	1302.
Df Model:	3		
Covariance Type:	nonrobust		

OLS Regression Results

	coef	**std err**	**t**	**P>|t|**	**[0.025**	**0.975]**
Intercept	-0.1750	0.229	-0.763	0.446	-0.626	0.276
C(AgeValue)[T.35 - 49 years old]	-0.0318	0.249	-0.128	0.898	-0.522	0.458
C(AgeValue)[T.50 - 64 years old]	0.0067	0.238	0.028	0.978	-0.461	0.475
C(AgeValue)[T.65 or older]	0.1213	0.240	0.506	0.613	-0.349	0.592

Omnibus:	14.692	**Durbin-Watson:**	2.077
Prob(Omnibus):	0.001	**Jarque-Bera (JB):**	15.453
Skew:	0.439	**Prob(JB):**	0.000441
Kurtosis:	3.018	**Cond. No.**	12.9

Notes:
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

We can simplify this analysis for the remaining scenarios and covariates by focusing exclusively on the model's overall *p*-value.

Scenario	p-value
Self-Funded Rural	0.53
Preserve and Conserve	0.846
Housing-Focused Village Growth	0.969
Vibrant Village	0.908
Welcome the World	0.913

In no case is the *p*-value smaller than a significant threshold of (say) 0.05.

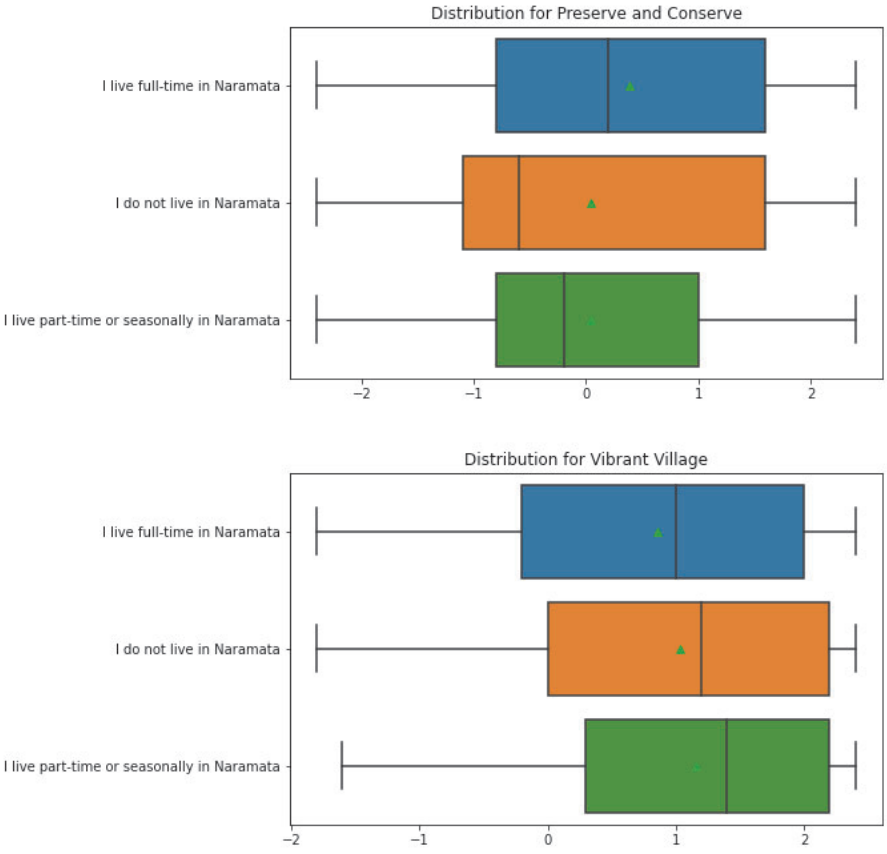
Other covariates

We now use the *p*-value approach described above to assess the effect of the other demographic covariates on the preference scores for each scenario.

Residency

Scenario	p-value
Self-Funded Rural	0.666
Preserve and Conserve	0.048
Housing-Focused Village Growth	0.515
Vibrant Village	0.088
Welcome the World	0.125

Here we see a *p*-value close to the conventional significance threshold ($\alpha < 0.05$) for the "Preserve and Conserve" scenario and a marginally significant effect for "Vibrant Village". We can investigate the effects of residency graphically:



Looking at these results, we see a potential difference between full-time residents and non-residents when rating the "Preserve and Conserve" scenario. Non-residents were less in favor of the conservation scenario in Round 3.

We can examine this apparent difference more closely by showing the full linear model for the "Preserve and Conserve" scenario. The baseline category in this model is "I do not live in Naramata" and the coefficients show differences between the baseline and the other categories. Although the coefficient for "I live full-time in Naramata" is relatively large, the 95% confidence intervals around the estimate include zero (equivalently: the *p*-value for the coefficient is greater than 0.05). We conclude, therefore, that residency has no statistically significant impact on the preferences for this scenario and the apparent differences between groups are within the range we might expect from random sampling error.

Dep. Variable:	PC	**R-squared:**	0.012
Model:	OLS	**Adj. R-squared:**	0.008
Method:	Least Squares	**F-statistic:**	3.060
Date:	Thu, 02 Jun 2022	**Prob (F-statistic):**	0.0478
Time:	00:00:55	**Log-Likelihood:**	-853.47
No. Observations:	489	**AIC:**	1713.
Df Residuals:	486	**BIC:**	1726.
Df Model:	2		
Covariance Type:	nonrobust		

OLS Regression Results

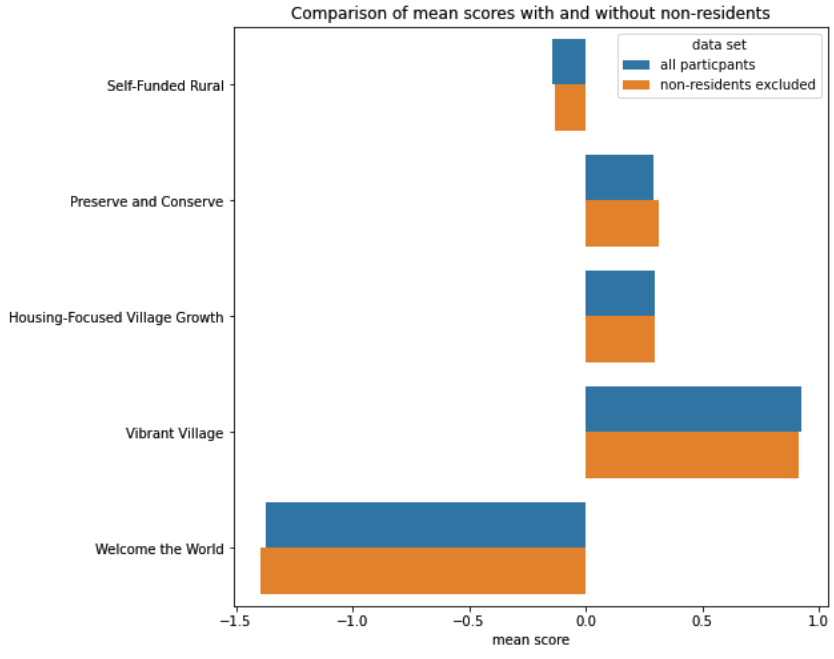
	coef	std err	t	P>|t|	[0.025	0.975]
Intercept	0.0383	0.203	0.189	0.850	-0.360	0.437
C(LiveStatusValue)[T.I live full-time in Naramata]	0.3454	0.216	1.597	0.111	-0.079	0.770
C(LiveStatusValue)[T.I live part-time or seasonally in Naramata]	0.0082	0.246	0.033	0.974	-0.476	0.492

Omnibus:	201.231	**Durbin-Watson:**	1.889
Prob(Omnibus):	0.000	**Jarque-Bera (JB):**	28.122
Skew:	0.156	**Prob(JB):**	7.82e-07
Kurtosis:	1.867	**Cond. No.**	7.29

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

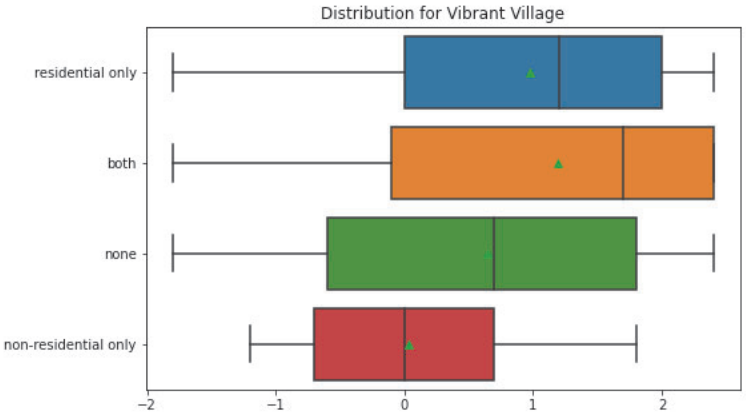
To verify, we can examine what happens to the overall preference ordering if we remove non-residents from the analysis. The plot below shows the scores for each scenario using (a) all participants and (b) a smaller dataset that exclude non-residents. Although there are slight changes to the means for all scenarios, the aggregate preference ordering of the scenarios remains unchanged. This confirms the conclusion above that residency has little impact on preferences.



Ownership

Scenario	p-value
Self-Funded Rural	0.707
Preserve and Conserve	0.075
Housing-Focused Village Growth	0.829
Vibrant Village	0.007
Welcome the World	0.168

Here we see evidence of an ownership effect for the "Vibrant Village" scenario. Examining this graphically, we see that participants who own non-residential property *only* (e.g., agricultural land, businesses) appear to support village vibrancy less than the other groups.



Running the full model with the "residential only" category as the baseline, we see a large, reliably negative, coefficient for "non-residential only".

Dep. Variable:	VV	**R-squared:**	0.025
Model:	OLS	**Adj. R-squared:**	0.019
Method:	Least Squares	**F-statistic:**	4.099
Date:	Thu, 02 Jun 2022	**Prob (F-statistic):**	0.00686
Time:	00:00:55	**Log-Likelihood:**	-794.88
No. Observations:	491	**AIC:**	1598.
Df Residuals:	487	**BIC:**	1615.
Df Model:	3		
Covariance Type:	nonrobust		

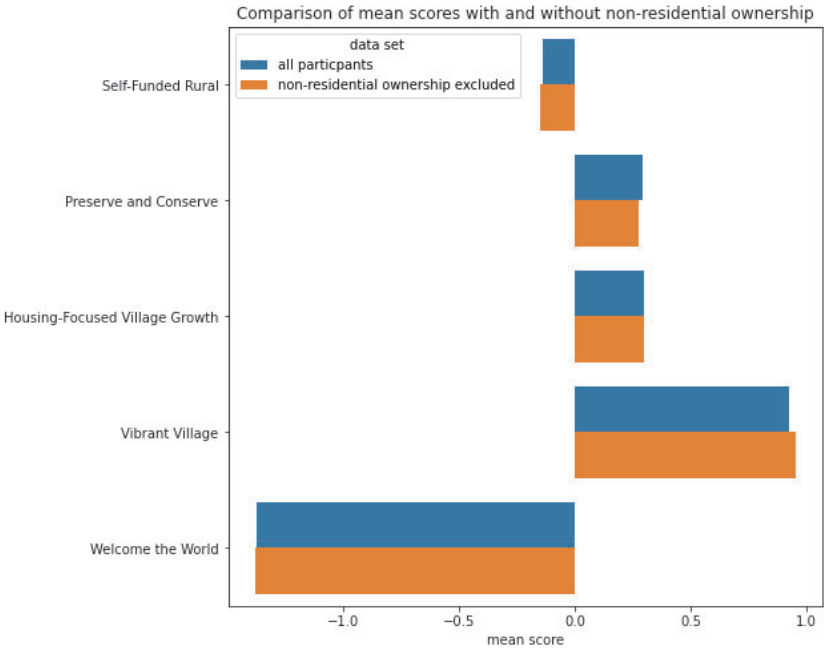
OLS Regression Results

	coef	std err	t	P>|t|	[0.025	0.975]
Intercept	0.9740	0.062	15.745	0.000	0.852	1.096
C(Ownership, Treatment(reference='residential only'))[T.both]	0.2193	0.232	0.944	0.346	-0.237	0.676
C(Ownership, Treatment(reference='residential only'))[T.non-residential only]	-0.9455	0.334	-2.835	0.005	-1.601	-0.290
C(Ownership, Treatment(reference='residential only'))[T.none]	-0.3259	0.178	-1.831	0.068	-0.676	0.024

Omnibus:	76.436	**Durbin-Watson:**	2.007
Prob(Omnibus):	0.000	**Jarque-Bera (JB):**	38.371
Skew:	-0.524	**Prob(JB):**	4.65e-09
Kurtosis:	2.117	**Cond. No.**	6.10

Notes:
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

We should keep in mind, however, that the "non-residential ownership" group is small. We see this when we perform a sensitivity analysis on the overall results. Removing non-residential property owners from the overall results yields barely perceptible change in the mean scores.

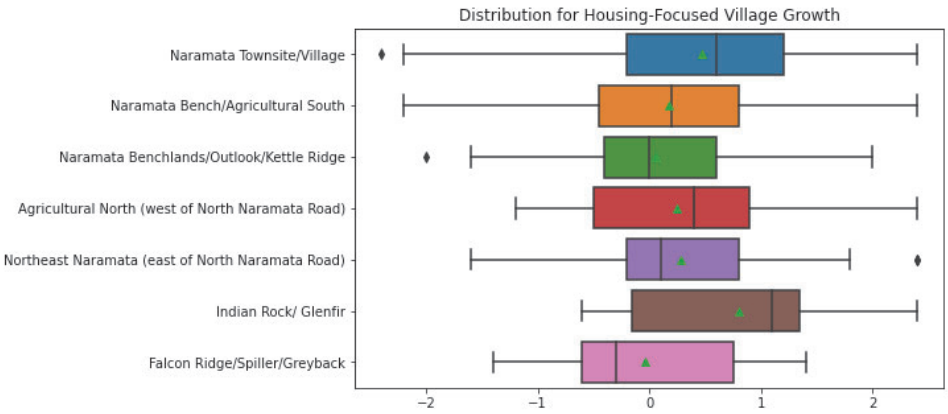


Neighborhood

Scenario	p-value
Self-Funded Rural	0.729
Preserve and Conserve	0.427
Housing-Focused Village Growth	0.006
Vibrant Village	0.171
Welcome the World	0.188

We conclude from these *p*-values that neighborhood has little value on preferences for the scenarios other than "Housing-Focused Village Growth".

Looking at this graphically, we see no obvious differences except for "Falcon Ridge/Spiller/Greyback" and "Indian Rock/Glenfir", from which we only have a handful of participants.



A full model shows significant differences between the baseline ("Naramata Townsite/Village") and "Naramata Bench/Agricultural South" (less preferred) and "Naramata Benchlands/Outlook/Kettle Ridge" (less preferred).

Dep. Variable:	HFVG	**R-squared:**	0.040
Model:	OLS	**Adj. R-squared:**	0.027
Method:	Least Squares	**F-statistic:**	3.061
Date:	Thu, 02 Jun 2022	**Prob (F-statistic):**	0.00605
Time:	00:00:56	**Log-Likelihood:**	-585.72
No. Observations:	443	**AIC:**	1185.
Df Residuals:	436	**BIC:**	1214.
Df Model:	6		
Covariance Type:	nonrobust		

OLS Regression Results

	coef	std err	t	P>|t|	[0.025	0.975]
Intercept	0.4716	0.072	6.560	0.000	0.330	0.613
C(Neighborhood, Treatment(reference='Naramata Townsite/Village'))[T.Agricultural North (west of North Naramata Road)]	-0.2202	0.171	-1.291	0.197	-0.555	0.115
C(Neighborhood, Treatment(reference='Naramata Townsite/Village'))[T.Falcon Ridge/Spiller/Greyback]	-0.5049	0.380	-1.327	0.185	-1.253	0.243
C(Neighborhood, Treatment(reference='Naramata Townsite/Village'))[T.Indian Rock/ Glenfir]	0.3284	0.255	1.288	0.198	-0.173	0.829
C(Neighborhood, Treatment(reference='Naramata Townsite/Village'))[T.Naramata Bench/Agricultural South]	-0.3005	0.115	-2.613	0.009	-0.526	-0.074
C(Neighborhood, Treatment(reference='Naramata Townsite/Village'))[T.Naramata Benchlands/Outlook/Kettle Ridge]	-0.4152	0.126	-3.292	0.001	-0.663	-0.167
C(Neighborhood, Treatment(reference='Naramata Townsite/Village'))[T.Northeast Naramata (east of North Naramata Road)]	-0.1898	0.156	-1.220	0.223	-0.496	0.116

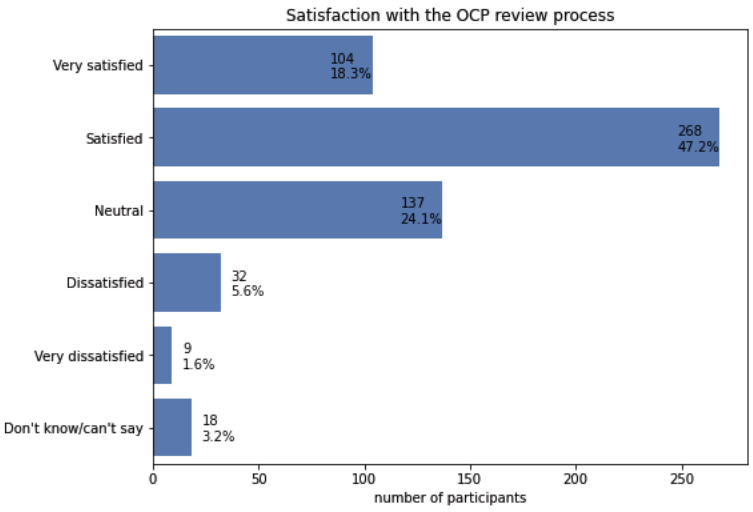
Omnibus:	0.897	**Durbin-Watson:**	2.056
Prob(Omnibus):	0.639	**Jarque-Bera (JB):**	0.997
Skew:	-0.074	**Prob(JB):**	0.608
Kurtosis:	2.821	**Cond. No.**	9.29

Notes:
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Satisfaction with the OCP review process

We asked participants at the end of each survey round to tell us whether they are satisfied with the OCP review. The results for Round 3 are shown below.

It is natural, as the multi-round survey progresses, for people to better understand the process. Here we see few changes relative to Round 2.



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Interpretation

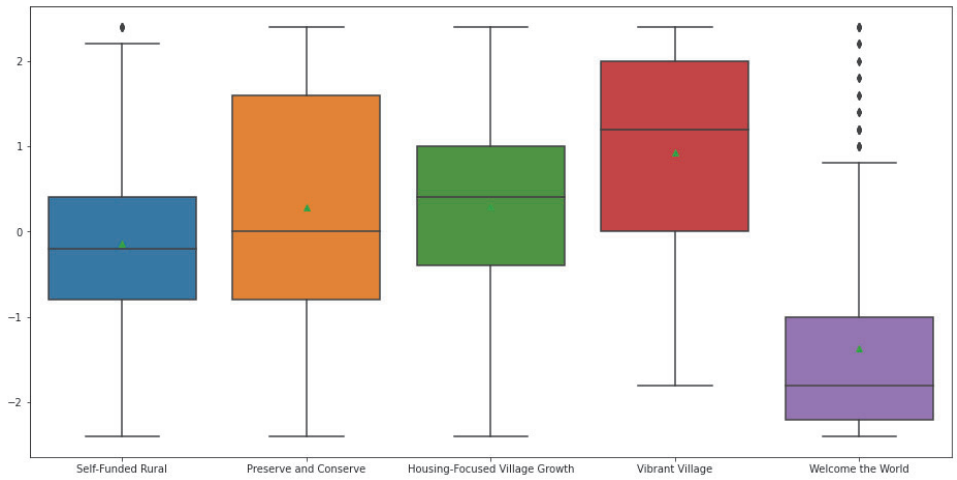
Contents

- Overall results
- Satisfaction

Overall results

The purpose of this three-round survey exercise was to gain a better understanding of the "preference landscape" in Naramata. We use the term "preference landscape" rather than "preferences" or "will of the community" because few communities have tidy, flat, monolithic preferences. Instead, individuals within communities have different preferences, priorities, and economic interests. The purpose of the surveys was to uncover these differences and to search for the "high ground"—those places on the undulating preference landscape where a majority of the community can find something to like.

We see in the Round 3 results clear winners and losers. As we see in the boxplot below, the "Vibrant Village" scenario has the highest mean score (triangle) and the highest median score (horizontal line through the box). In contrast, the "Welcome the World" scenario has the lowest mean and median scores.



Fundamental objectives

Decision-making research shows that individuals generally have difficulty prioritizing their fundamental objectives. We are better, however, at choosing between simple alternatives. The choices made in a survey like this thus tell us *indirectly* about how participants prioritize conflicting objectives. To illustrate, recall the scenario description of "Vibrant Village":



> Preservation of the hillsides and agricultural land with all growth channeled to the village. Relatively few restrictions on commercial activity to attract new small businesses and services. The cost of increased infrastructure required for additional commercial and residential activity is split between developers and residents.

This can be translated into attainment levels (high or low) for the fundamental objectives identified in the Objectives and Scenarios section:

Fundamental Objective	Attainment Level	Explanation
Preserve beauty/maintain access to recreation	high	minimize hillside development
Provide infrastructure and services	high	permits densification and commercial development within the village, thus attracting new business and helping to pay for publicly-provided services and infrastructure
Preserve rural character/maintain a strong sense of community	low	some rural character is lost with increased population
Minimize taxes and fees	low	expenditures on infrastructure, such as sewer, required upfront to support village densification
Support commericial activity	high	population support for and few restrictions against commercial activity
Freedom/property rights	high	freedom from heavy restrictions on density and commercial use *in the village*

"Preserve and Conserve", is a different scenario with different attainment levels for some of the fundamental objectives:



> Preservation of the hillsides and agricultural land and relatively little change to the size or commercial vibrancy of the village. New infrastructure, services, and public amenities are kept to a minimum to keep taxes and fees low.

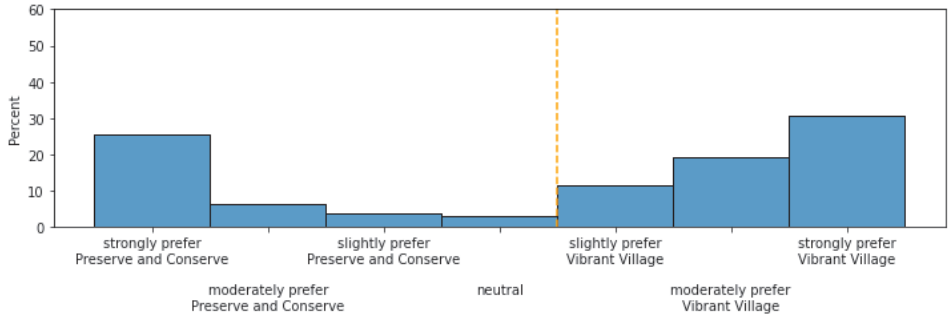
Fundamental Objective	Attainment Level	Explanation
Preserve beauty/maintain access to recreation	high	minimize hillside *and* village development
Provide infrastructure and services	low	new services and infrastructure kept to a minimum; little growth to attract other amenities
Preserve rural character/maintain a strong sense of community	high	status quo
Minimize taxes and fees	high	status quo with little new spending
Support commericial activity	low	status quo
Freedom/property rights	low	restrictions on development and commercial activity

The two scenarios thus represent different solutions to the Rural Growth Triangle: "Preserve and Conserve" prioritizes slow growth (rural character, sense of community) and low taxes over infrastructure and services. "Vibrant Village", in contrast, prioritizes infrastructure and services over both slow growth and low taxes. The key to the "Vibrant Village" compromise, however, is that the growth only occurs in the village—an area with a tradition of higher density and commercial activity.

We can put the attainment levels for the fundamental objectives side-by-side to better visualize these differences:

Fundamental Objective	Vibrant Village Attainment Level	Preserve and Conserve Attainment Level
Preserve beauty/maintain access to recreation	high	high
Provide infrastructure and services	high	low
Preserve rural character/maintain a strong sense of community	low	high
Minimize taxes and fees	low	high
Support commericial activity	high	low
Freedom/property rights	high	low

Now consider the head-to-head comparison for these two scenarios. We see stronger support on average for "Vibrant Village":



Unfortunately, it is hard to know which objectives in the "Vibrant Village" package lead most survey participants to prefer it over "Preserve and Conserve"—infrastructure for densification, commercial activity, or property rights. The problem, as discussed in Methodology, is that fundamental objectives are often interdependent and must be considered as a package. For example, Naramata cannot support densification without infrastructure (e.g., sewer). And the community will find it difficult to pay for that infrastructure without densification to provide a larger base for taxes and fees. Densification and infrastructure are thus mutually causal.

The best that we can say is that participants in the survey prefer the package called "Vibrant Village" to a different package called "Preserve and Conserve". Indeed, the results of Round 3 show that "Vibrant Village" is preferred to *all* the competing scenarios. This preference represents a complex trade-off between "vibrancy" on one hand (with all the positives and negatives vibrancy entails) and preservation on the other.

Specific trade-offs

As noted above, it is generally not possible in the local government context to *isolate* these fundamental objectives and find the most important. However, some of the scenarios considered here differ in specific ways. The pairwise comparisons can thus provide important information about aggregate preferences regarding certain issues.

Commercial vibrancy versus affordability

Recall the description of "Housing-Focused Village Growth":

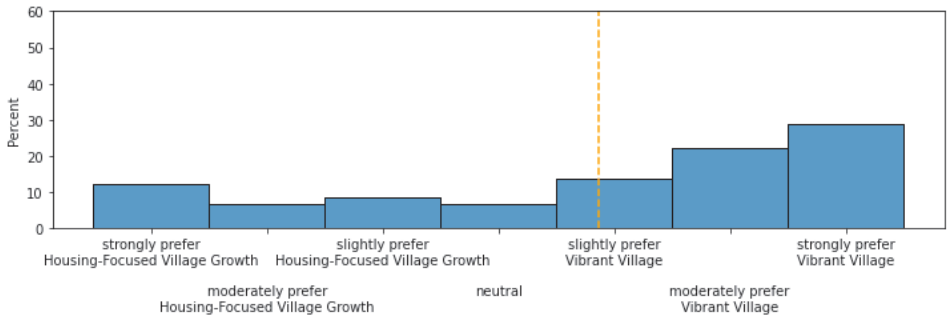


> Preservation of the hillsides and agricultural land with an increase of housing in the village, including new opportunities for legal suites and carriage houses. Relatively little change in commercial vibrancy due to restrictions on commercial activity that aim to maximize housing available for families and workers. Increases in taxes and fees to support the infrastructure required for additional housing in the village.

Fundamental Objective	**Vibrant Village Attainment Level**	**Housing-Focused Village Growth Attainment Level**
Preserve beauty/maintain access to recreation	high	high
Provide infrastructure and services	high	high
Preserve rural character/maintain a strong sense of community	low	high
Minimize taxes and fees	low	low
Support commericial activity	high	low
Freedom/property rights	high	low

The two scenarios are similar in that they both protect the hillside and encourage densification in the village. In both cases, taxes and fees may increase to enable densification, as discussed above. The primary difference between the two scenarios is the *purpose* of densification. "Vibrant Village" seeks densification as a means to attract people, services, and commercial activity to the village. "Housing-Focused Village Growth", in contrast, seeks densification as a means to increase the housing supply (and thus the affordability) of the village. "Housing-Focused Village Growth" necessarily involves restrictions on land use, hence the low attainment score on "Freedom/property rights".

Now consider the results of the head-to-head comparison:



The aggregate preference for "Vibrant Village" over "Housing-Focused Village Growth" suggest that, given the choice, participants prioritize "vibrancy" over "affordability" (which entails restrictions).

Amenities and infrastructure versus low taxes

A perennial question in government concerns the appropriate balance between taxation and publicly-provided services. Two scenarios are relevant to this question: “Preserve and Conserve” and “Self-Funded Rural”.

The description for “Self-Funded Rural” follows:

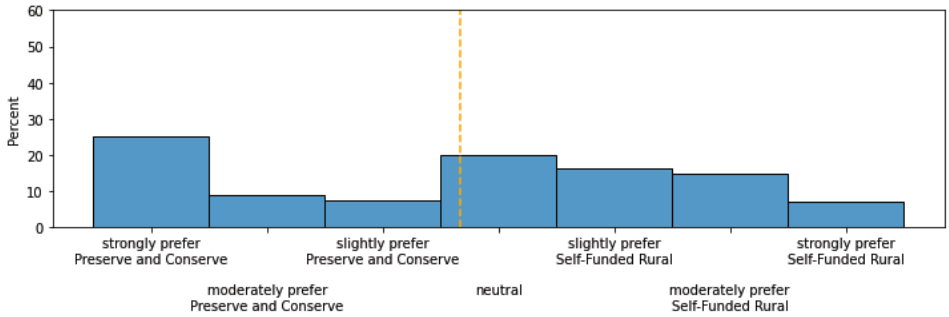


> Preservation of the hillsides and agricultural land and relatively little change to the size or commercial vibrancy of the village. New infrastructure, services, and public amenities are prioritized by the community and paid for with increased taxes and fees.

In terms of fundamental objectives, the two scenarios are similar:

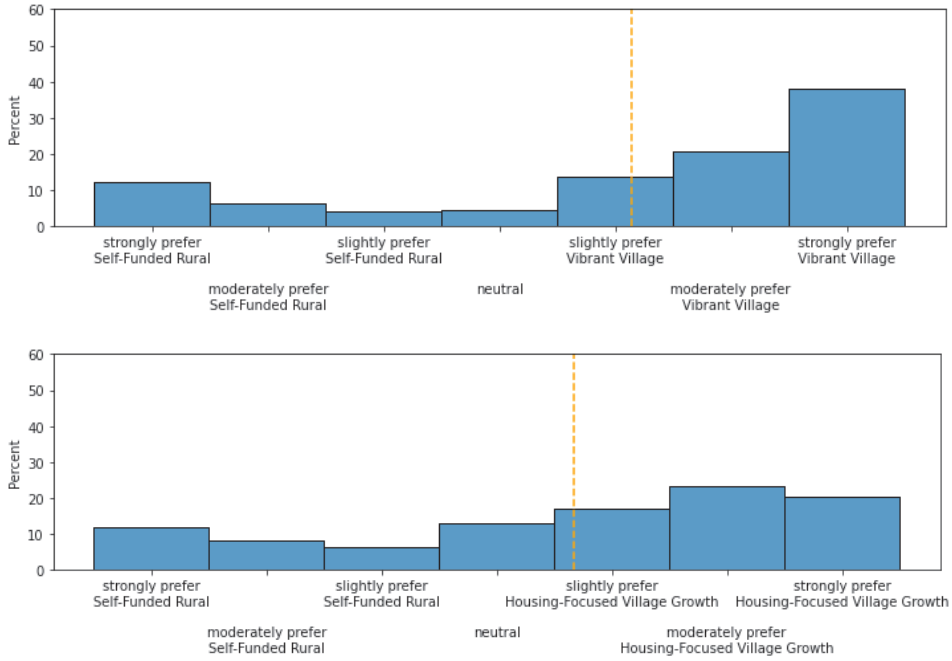
Fundamental Objective	**Preserve and Conserve Attainment Level**	**Self-Funded Rural Attainment Level**
Preserve beauty/maintain access to recreation	high	high
Provide infrastructure and services	low	high
Preserve rural character/maintain a strong sense of community	low	low
Minimize taxes and fees	high	low
Support commericial activity	low	low
Freedom/property rights	low	low

Both scenarios represent little new growth either on the hillsides or in the village. The only difference between the two involves the provision of public-funded amenities. The “Preserve and Conserve” explicitly prioritizes low taxes and fees whereas “Self-Funded Rural” acknowledges that amenities could be provided if people were willing to pay for them.



There are similar numbers of participants on either side of the zero neutral line in this comparison. However, those favoring "Preserve and Conserve" exhibit stronger preferences. This pulls the mean to the left. Overall, the implication is that the majority prefer lower costs to more public amenities.

Support for increased taxes and fees is stronger when a broader objective is involved. The comparisons below show "Self-Funded Rural" and the two village growth scenarios: "Vibrant Village", which is relatively unrestricted, and "Housing-Focused Village Growth", which relies on restrictions to increase the supply of affordable housing. Increased taxes and fees are explicit in all three scenarios. However, the two village growth scenarios offer something in return—either commercial vibrancy or increased housing supply.



Village growth versus unrestricted growth

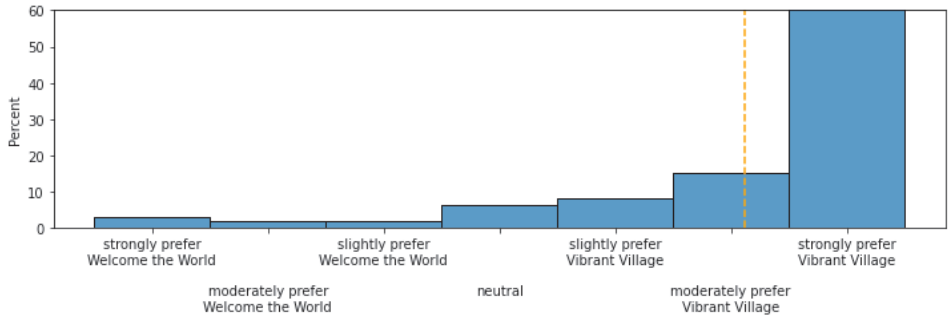
As noted above, "Vibrant Village", which limits growth to the village, is preferred to "Preserve and Conserve", which limits all growth.

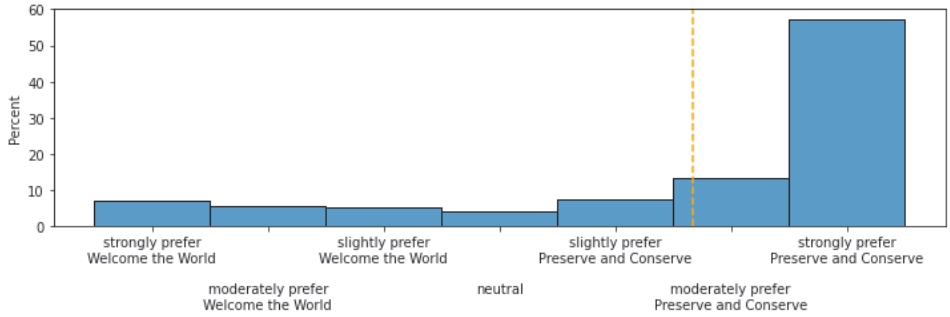
The description of the "Welcome the World" scenario follows:



> New development on the hillsides and in the village (subject to the restrictions of the provincial Agricultural Land Reserve). Commercial opportunity and growth are maximized by attracting investments from outside the community. The cost of increased infrastructure required for additional commercial and residential activity is split between developers and residents.

The primary difference between "Welcome the World" and "Vibrant Village" is restrictions on hillside growth. The results are unambiguous:





Participants strongly prefer both no growth and village-only growth to relatively unrestricted growth.

Satisfaction

Overall, the proportion of *dissatisfied* participants measured in Round 3 was less than 8% (versus approximately 65% satisfied or very satisfied).

It is difficult in an iterated process to differentiate between dissatisfaction with the *process* and dissatisfaction with the *results* as they emerge. The open-ended question that accompanied the satisfaction question in Round 3 provides conflicting signals. For example:

> The language and presentation of the options for Naramata throughout this process have a distinct bias towards old school development and developers [...]

And:

> [...] everything seems skewed to "no growth" and NIMBY attitudes.

In other comments, we see a rejection of the results:

> The way this survey was designed doesn't provide for direction that I believe represents the true feeling of the village residents. [...] I believe at the outset, the RDOS should have provided education on what the current OCP allows, and why large second homes are being built on the hillsides, and large tracts of land are cleared for dense single family home development. The recent example of clear cut to scar the landscape is exactly why the OCP needs change. Nobody wants row upon row of housing on the bench.

The results of Round 3 show that some people—albeit a small minority of survey participants—not only support the "Welcome the World" scenario (which leaves decisions regarding non-ALR development to the market) but prefer it outright.

The primary purpose of these surveys is to provide local government staff and decision-makers with guidance about how to move forward with long term plans. At the same time, however, the survey results may also lead to greater recognition by citizens of the diversity of preferences, priorities, and interests within their community. Such an understanding of differences is critical if communities are to identify and embrace compromise solutions.

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