A Holistic Approach to Data Quality

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harris interactive
KURUNDATA

Introduction

Toluna delivers real-time consumer insights at the speed of the on-demand economy. By combining global scale and local expertise with innovative technology and award-winning research design, we help clients explore tomorrow, now. Toluna is the parent company of Harris Interactive Europe and KuRun Data. Together, we push market research toward a better tomorrow.

Today, Toluna is a technology company delivering real-time insights at the speed of the on-demand economy. We do what no other insights company can: combining innovative technology, award-winning research design, vertical expertise, and a panel of more than 36 million consumers.
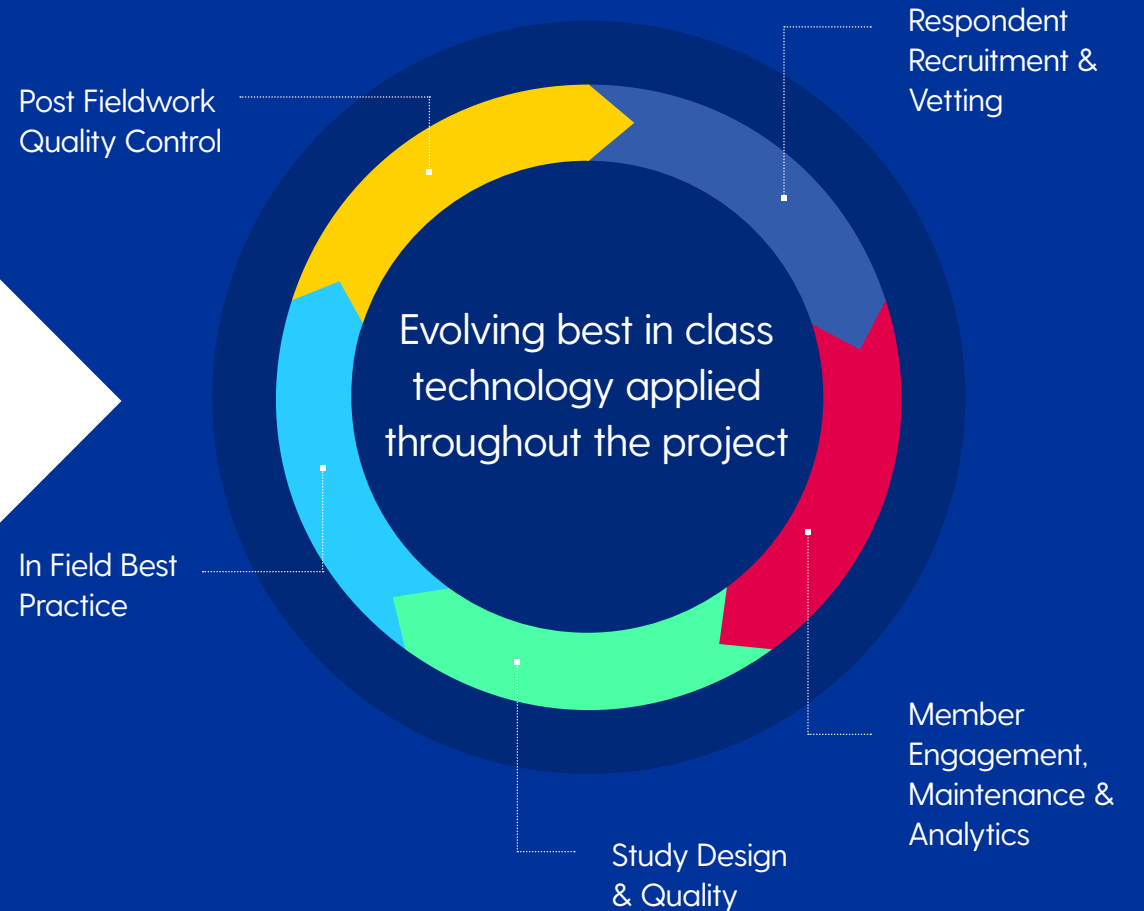
By using Toluna for your insights needs you'll get more research done in less time with less budget. It means you can design a research program that meets your needs, whether that's self-service or full consultancy. It means you can trust your insights because quality is baked into every part of our process. And it means you can do it at scale.

Our best-in-class approach to quality

Our commitment to quality is the very foundation of our business and is embedded throughout all of the work that we do.

You need to be able to trust the insights you receive from us, and to help you do this, we have developed a holistic approach to quality.

Respondent Recruitment & Vetting

Post Fieldwork Quality Control

Evolving best in class technology applied throughout the project

In Field Best Practice

Member Engagement, Maintenance & Analytics
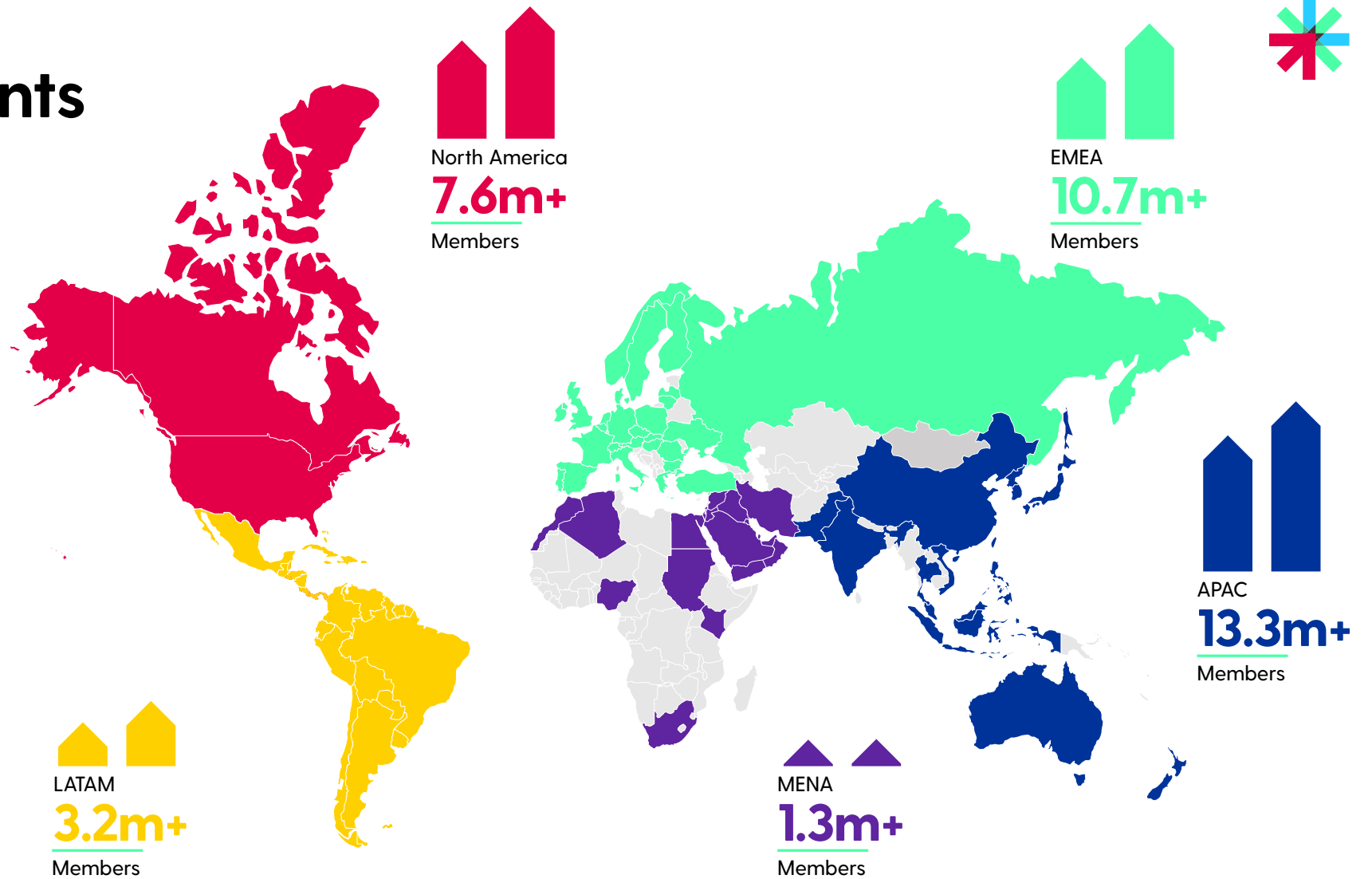
Study Design & Quality

Respondent Recruitment & Vetting

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- ▷ Member Engagement, Maintenance & Analytics
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- ▷ In Field Best Practice
- ▷ Post Fieldwork Quality Control

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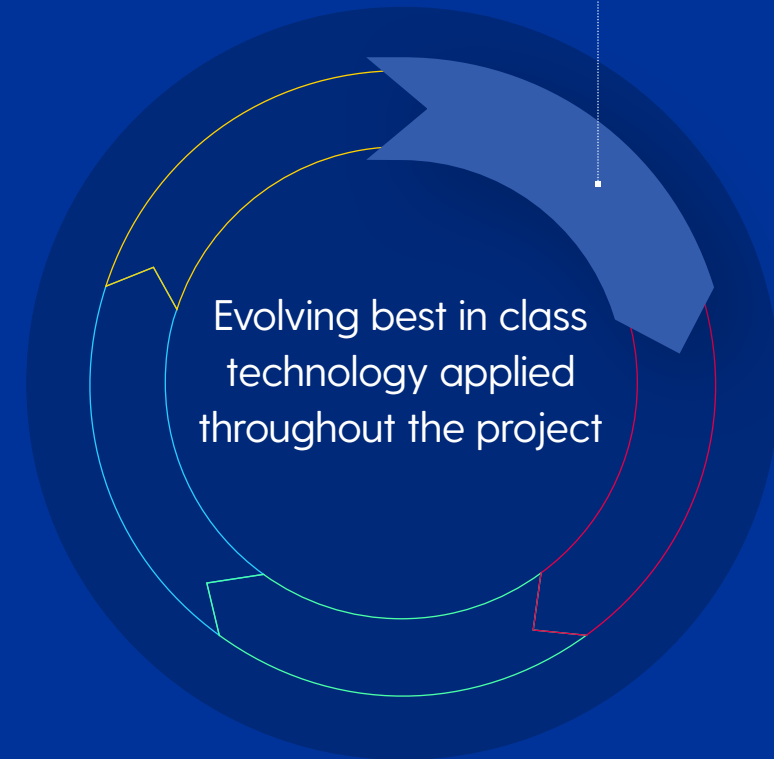
Global Respondents at the Ready

At Toluna we've built the industry's largest community of influencers - more than 36 million people around the globe - and these people are available to connect directly with brands. These robust profiles help provide insights into consumer profiles and behaviors.

North America
7.6m+
Members

EMEA
10.7m+
Members

APAC
13.3m+
Members

LATAM
3.2m+
Members

MENA
1.3m+
Members

Panel Recruitment

▶ The acquisition of consumers, healthcare, and B2B specialists has been at the heart of Toluna's activity for over 20 years not only for its proprietary global community, but on behalf of its clients, recruiting millions of highly engaged respondents.

▶ It starts with ThinkAction™, our proprietary affiliate network with a portfolio of more than 3,000 high quality and vetted media partners.

▶ All Toluna Influencers have completed our registration process and are validated by automated, proprietary, and third party technology.

▶ This ensures Toluna's ability to connect brands with real, highly profiled, and engaged consumers.

Publishers
SMM
Video
Mobile
Display
SEM

thinkaction
powered by toluna*

Quality Starts with Recruitment

Our members are of the highest quality and we apply quality measures both upon registration, and post registration

At Registration

- ▶ Automated Anti-Fraud System on Registration Form
- ▶ Postal Address Verification
- ▶ Double Opt-in
- ▶ Email De-duplication

- ▶ Google invisible re-CAPTCHA
- ▶ GEO IP Verification
- ▶ Email Domains Blacklisting
- ▶ Linked Account Detection & Control

Post Registration

- ▶ Behavioral Pattern Recognition
- ▶ Panel Quality Scoring Algorithm
- ▶ At Entry & In-Survey Checks

- ▶ Digital Fingerprinting
- ▶ Panelist Activity Monitoring
- ▶ Final Check: Pre-Incentive Redemption

We Evaluate the Quality of our Members on an Ongoing Basis

Dynamic Panel Quality Scoring Algorythm

Our internal quality scoring algorithm looks at 25+ data points to continuously score panelists based on their performance, both for validation and to ensure data consistency.

▶ Pre-survey rejections (digital fingerprint)

▶ Incorrect country respondents (based on IP, etc.)

▶ In-survey (red-herrings, speeding, straight lining, poor open-ends)

▶ Post-survey status

▶ Lookalike behavioral and data patterns

▶ Specific 30-day monitoring of new members

The respondent's scoring determines their participation status.

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We Supplement our Panel with Respondents from the Highest Quality Partners

Our Partners undergo initial vetting measures, as well as rigorous ongoing quality checks.

▶ Each prospective Partner is required to complete an RFI (request for information) covering business model (recruitment, incentives, communication, etc.) and latest panel book, as well as full details of quality standards and procedures.

▶ Partners are required to participate in parallel testing before being activated on client studies.

▶ Leveraging our internal quality checks and analytics, we rate our partners to ensure they meet our quality standards.

▶ Scheduled and ad-hoc assessments are conducted to review the level of quality provided. A feedback loop is in place for any data queries, along with a strike system for repeated quality issues.

Member Engagement, Maintenance & Analytics

- Respondent Recruitment & Vetting
- Member Engagement, Maintenance & Analytics
- Study Design & Quality
- In Field Best Practice
- Post Fieldwork Quality Control

Evolving best in class technology applied throughout the project

# The World's Largest Social Voting Community

Toluna.com is the heart of our member experience

Toluna.com is a unique community and the world's largest online social voting platform. Influencers can **interact** with each other, **complete** online surveys, play fun **games**, participate in **live forums**, create **topics/opinions**, and much more, for which they are recognized.
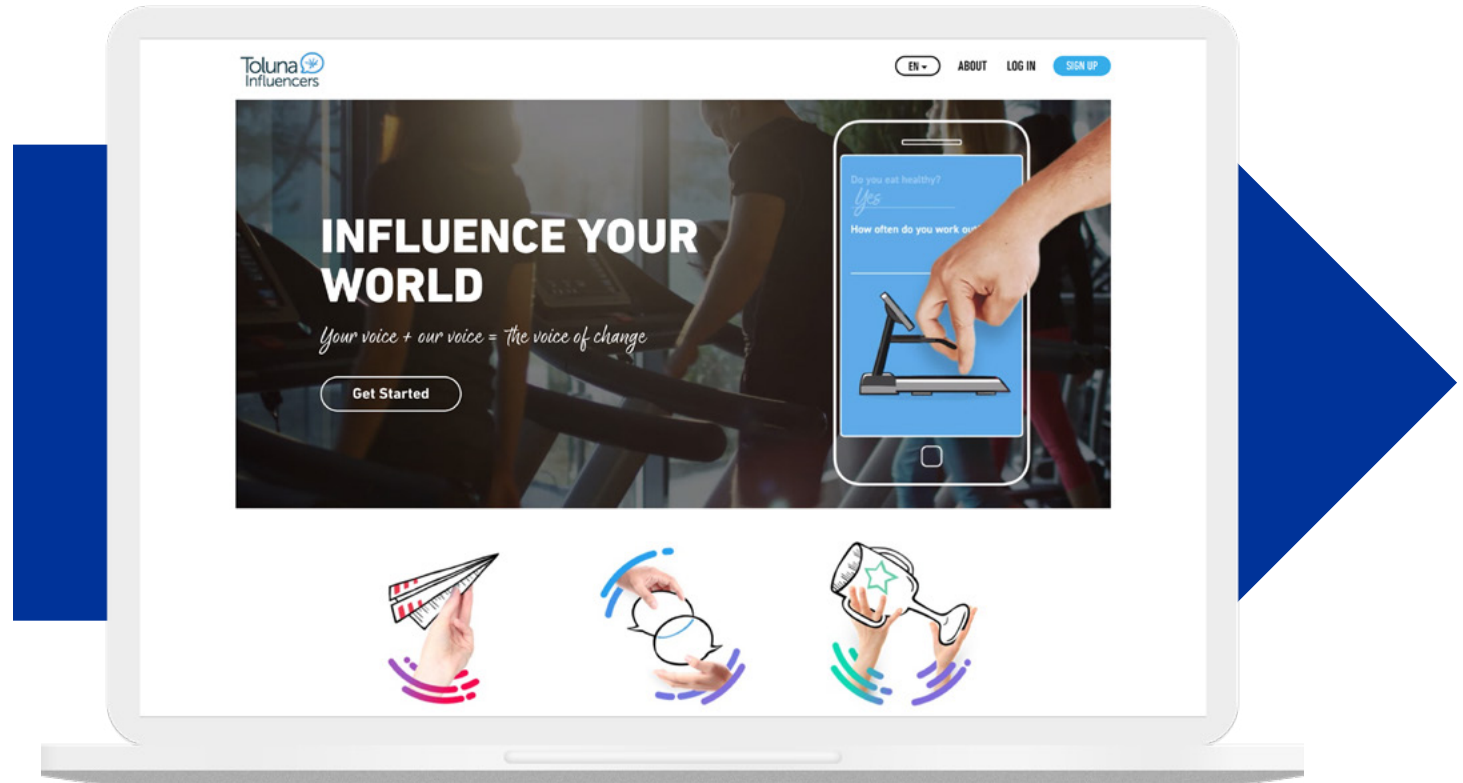
Innovative Approach to Panel Management

▶ Lifecycle Marketing is a holistic vision of an influencer's (panelist) partnership with Toluna, ensuring a consistent, compelling brand experience, and developing a personalized and relevant relationship

▶ The Toluna UX is unique, empowering members to provide their insights and make a difference in a way they care about, enjoy, and feel appreciated.

Lifestyle Marketing — Recognition, Aquisition, Engagement, Support
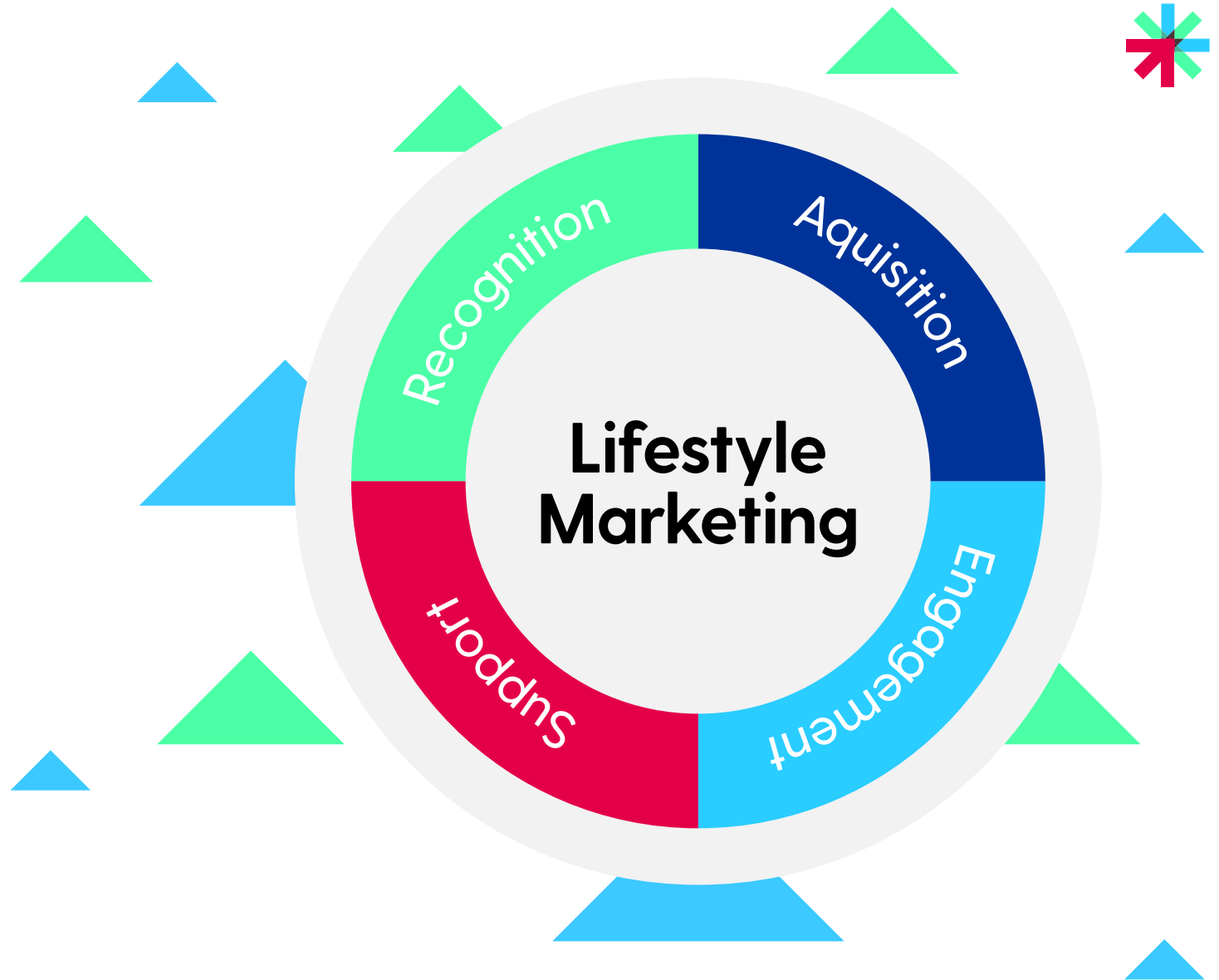
Pillars of Engagement

▶ Toluna.com is a destination for our members, where we build relationships by leveraging our community site, app, digital channels of communication, and gamification.

▶ Lifecycle Marketing initiatives are an innovative way to engage with our influencers about topics that matter to them. It's linked to what's making the news and operated with a global vision and a local execution, catering to all.

1

Toluna
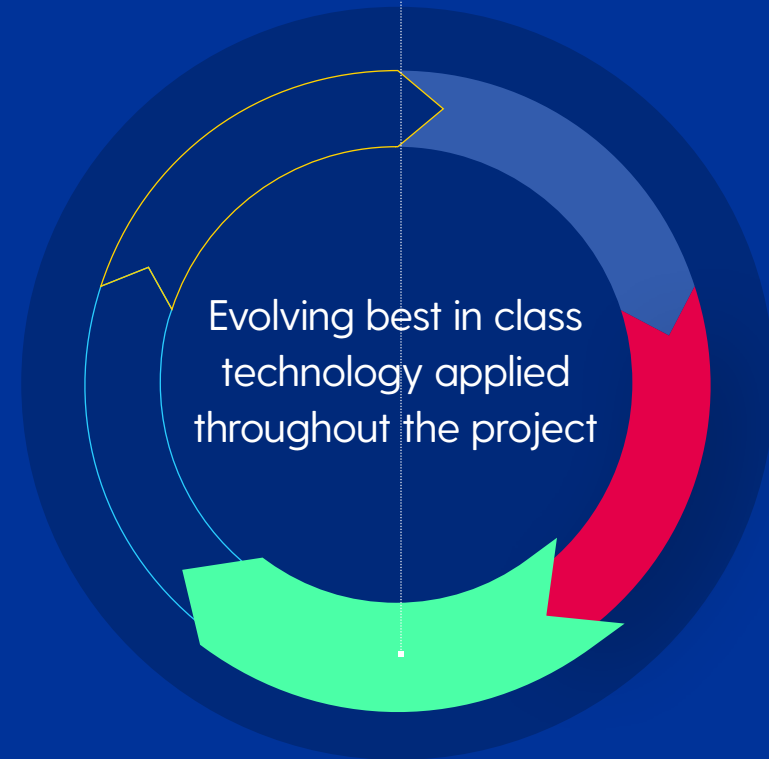
2

Initiatives

3

Communications

4

Gaming

Study Design & Quality

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Key Areas of Study Design

1 Questionnaire Structure

2 Respondent Experience

3 Target Audience & Sampling

Optimal questionnaire design is pivotal to gathering quality insights. Every aspect of a study must be carefully considered to ensure respondents are engaged and attentive.

Respondents are like you and me...

They lead busy lives, and are exposed to constant physical and digital stimulus. This means they lose interest if the survey does not have a logical flow, if the questions are not clearly written, or if the survey is not engaging.

Survey Structure

The best way to ensure a positive respondent experience, and high quality insights is to create a survey that walks the respondent through a logical experience.

▶ **The Screener** (includes demographic questions)

- ▶ Here you ask the questions that determine whether a respondent fits the target profile.

- ▶ These questions determine the population incidence among the sample universe.

▶ **The body of the survey**

- ▶ Once a respondent has passed the screening section, they move into the main part of the survey.

- ▶ Critical considerations include: flow (the storyline); appropriate sections; language; methodology; and question structure (the format in which questions are asked, routing to cover different groups/segments, etc.).

▶ **Survey close**

- ▶ Thank respondents and, where appropriate, remind them what their insights will be used for.
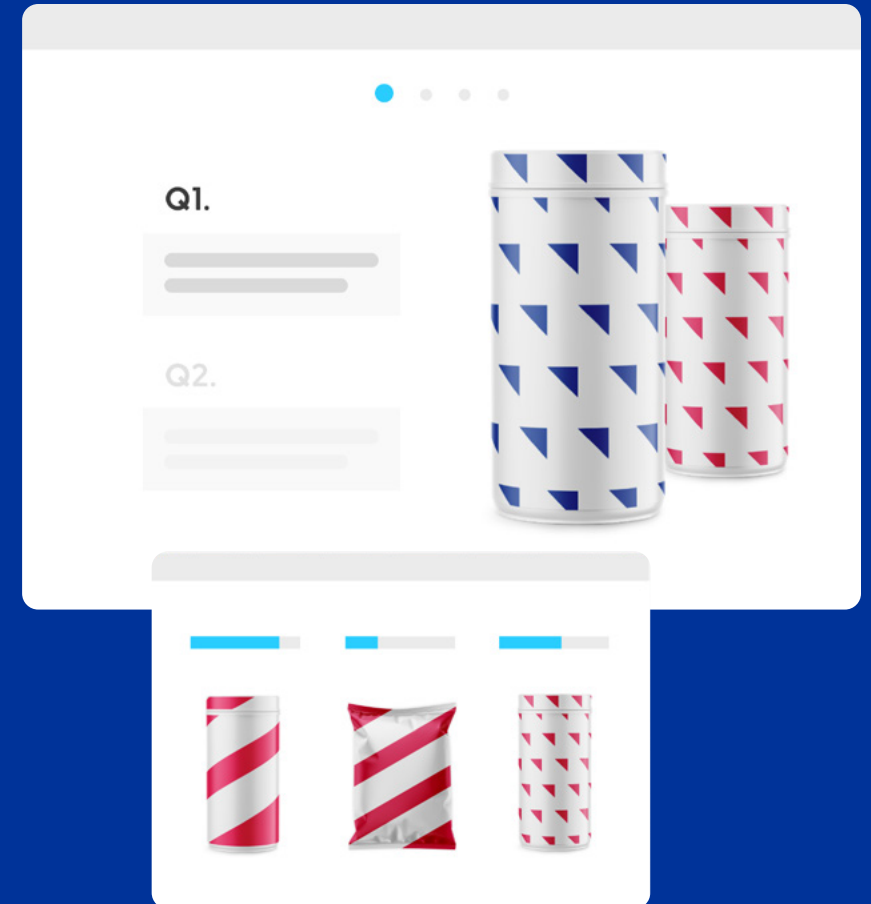
The Screener

▶ This is a crucial part of the survey. It is where respondents form their first impression of the survey and ensures the appropriate target audience for the survey. Typically, about 25% of survey abandons/drop-outs happen in the screener section.

▶ Consider this section carefully to avoid bias and ease respondents into the survey.

▶ Do not ask direct questions. Instead, ask questions in a general way to prevent bias. If looking for users/buyers of a certain product/ brand, consider starting with an unprompted awareness question, then move on to a prompted list.

▶ If screening for industry is required, include a broader list of industries. This will help mask the survey's target industry.

It seems obvious, but if you are looking for mothers of children of a certain age, you can ask...

✔ Do you have children? How many?

Then ask the age of the child/children

✖ Do you have children ages 2-4yrs old?

The Body of the Survey

We're here to help provide you with suggestions to design a survey that truly engages with respondents.

Trade-offs: Keep the balance

If something "non-optimal" is needed for the survey (for example, if long grids cannot be avoided), then balance that with a more fluid section in other parts to help the overall flow and experience.

Connect the sections

With online surveys where there is no interviewer present, explain the flow. Use introductory or connecting language for each section.

Question language

Ensure clear, unambiguous questions with short and simple sentences.

Never introduce multiple concepts/ideas in a single question. Ask separate and precise questions. Set up device-agnostic surveys. No matter the screen size, the look and usability must remain optimal.

Open-ended questions

How will these be leveraged in the analysis? Is there a coded question alternative?

Too many open-ended questions can cause fatigue and annoyance. Don't over-use, keep them specific, and avoid multiple questions in one.

If you want to know specifically how the audience felt about the content of a webinar:

▶ DO NOT ask: What did you think of the webinar?

▶ First consider if it is best to ask with a closed question(s), consider what you really want to know.

▶ If you decide to ask with an open-ended questions, ask: Please describe in your own words how you felt about the content of this webinar?

Closing the Survey

Thank respondents and, where appropriate, remind them what their insights will be used for. This makes respondents feel valued.

Ask for feedback. We strive to design engaging and interesting surveys. Ask the respondent about their experience taking the survey.

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Minimize Respondent Burden

Definition of burden:

The accumulated effect of cognitive and manual efforts exerted on a survey and the time it takes to complete the entire task.

Unnecessary burden will lead to:

▸ Respondent dissatisfaction

▸ Speeding

▸ Random responses

▸ Respondent Experience

▸ Non-differentiation or straight-lining

▸ Abandoning the survey

▸ Reduced response rate to future surveys and panel attrition

The basic must-haves:

▸ Clear instructions

▸ Short, simple questions

▸ Provide transitions when moving from one part of the survey to the next

▸ Provide adequate response choices that cover the entire choice set

▸ Keep it short

Use a "funnel" approach for sensitive items:

▸ Ask multiple questions to gradually define the precise target respondent

▸ Ask more general, impersonal, or less precise questions on the topic before asking for personal or detailed information

Avoid lengthy grids:

▸ Break grids into multiple exercises

▸ Repeat the grid headers multiple times

▸ Use interactive grid displays like carousels and accordion

Use filter for response choices:

▸ Reduce the number of items the respondent sees in large grids or large lists of items

Use fewer scale points:

(except Net Promoter or other specific methods)

▸ Prefer five or seven scale points

▸ Use the same type of scale throughout the survey

Survey Look and Feel

The survey interface and how it is presented to respondents impacts engagement and quality. Grids don't have to be monotonous; we use other tools such as card sorts and accordion style questions to provide interactivity. Gamification also helps with both children and adults. Open-ended surveys can be dictated especially when taken from a mobile device.

We strive to script surveys that are engaging, and are always happy to advise on different ways to create them.

Single Select Grid Tool - Sliding Scale Style

Below are some statements that could describe the Toluna Brand. Please rate the brand on how much you agree or disagree with each statement.
(please select one response for each statement)
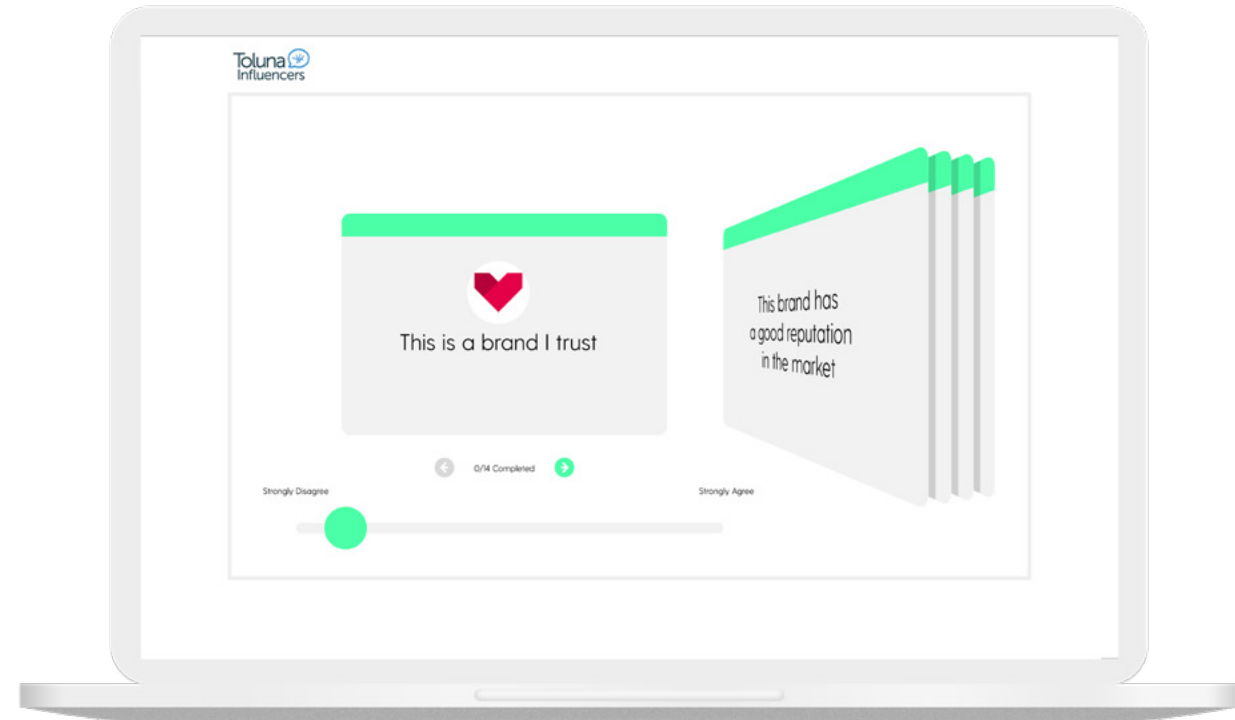
Accessibility / Device Compatibility

Today, more than 50% of surveys are completed via mobile devices. Every survey Toluna sets up is device agnostic and mobile-optimized (providing the survey design allows it. Respondents are only exposed to surveys compatible with their device type (detected on the fly). However respondents choose to respond, they have a comparable survey experience.

▶ Improving engagement

▶ Improving representation

▶ Reducing field time

▶ Zero cost or time penalty

▶ Zero impact to respondent

Target Audience

As the sample size **increases**, the margin of error **decreases**. Therefore, a **larger sample size is preferable** to ensure confidence in the data. If budgets prohibit larger sample sizes, be aware of the impact on the margin of error.

Researchers usually work with an **"acceptable" margin of error** of 5% at the 95% confidence level. We can calculate the **margin of error** at different sample sizes to determine what sample size will yield reliable results at the desired level.

Sample Size	Margin of error at 95% confidence level
150	8%
300	5.7%
500	4.4%
1000	3.1%
2000	2.2%

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Sampling and Fieldwork for Quality Insights

For each project, we work with our clients to define precise sampling needs. This then translates into how we set our automated sampling tools and/or precise sampling specs for our expert samplers internally, including:

▶ Sample sizes and quotas

▶ Sampling methodology (targeting, non-targeting, sampling for market sizing, etc.)

▶ Fieldwork duration vs. even completion across the fieldwork period

▶ Quotas: Online representative vs. nationally representative, considering the challenges and trade-offs

▶ Sample blends (especially important for trackers and trended projects)

▶ Fieldwork duration

▶ Monitoring sampling and data trends during fieldwork to ensure accuracy

Questionnaire design for respondent engagement and quality insights: Key considerations

1. Why do respondents take surveys (what is their motivation)? They take surveys for many reasons including interest in the topic, interest in influencing the decision making on specific products/services; curiosity; in some cases, as a way to pass time or for monetary incentives.

2. Ensure that respondents **understand** what is being asked. Questions and answer choices must be clear at first read!

3. Pay attention to the **burden** being placed on the respondent in terms of cognitive burden and manual effort.

   If the survey does not follow a logical flow and is not engaging and easy to navigate, then the best-case scenario is that the respondent will drop out. The worst-case is that they will complete the survey without paying attention.

4. Pay attention to survey's look, feel, and accessibility. The attention to design must be also reflected in the presentation of the survey on screen. Consider the type of device the respondent will use to complete the survey.

5. Target audience and sampling.

In-field Best Practices

▶ Respondent Recruitment & Vetting

▶ Member Engagement, Maintenance & Analytics

▶ Study Design & Quality

▶ In Field Best Practice

▷ Post Fieldwork Quality Control

Evolving best in class technology applied throughout the project

End-to-End Survey Quality Checks

Checks are performed on every survey, across all phases, including:

▶ Every time a respondent clicks on a survey link

▶ Throughout the entire duration of the survey completion

▶ After the survey is completed

1. At survey entry, internal proprietary technology coupled with external technology is used to vet each respondent as they attempt to enter the survey.

2. During the survey, our technology and expertise is deployed to observe and measure respondent behavior for the entire duration of each survey.

3. Post fieldwork, we perform final quality control checks.

Upon Survey Entry

Before even starting a survey, several additional data checks are applied to ensure quality, including:

▶ **A country check** to make sure the respondent is coming from the survey country

▶ **Time zone checks** to confirm the respondent is coming from the suitable location

▶ Language device and browser checks

▶ Digital fingerprinting (de-duplication)

▶ Link encryption to prevent fraud

▶ Automatically applied reCAPTCHA to re-test respondents when suspicious behavior is detected

▶ Participation limited

▶ Survey entry IP address checks to verify the IP address is not a VPN, Server, Proxy, or Tor. This also allows us to confirm if the IP address has been flagged as engaging in fraudulent activity in the past

▶ Integration with CDNetworks technology to automatically detect and block bot activity. This solution uses AI to detect bot behavioral patterns such as mouse movements, click patterns, headless browsers and more

In-Survey Quality Checks

Our quality algorithm uses four main pillars to flag and/or terminate surveys on-the-fly. We employ a hierarchical model:

Step 1 (extreme behavior)

▶ **Red Herring:** We terminate those failing more than one red herring question on the fly

▶ **Straight-lining:** We immediately terminate extreme straight-liners (SD 0 on 2 grids of 15+ items, 5+ scale)

▶ **Speeding:** We immediately terminate extreme speeders (under ¼ of the median LOI)

▶ **Open-ends:** We can immediately terminate those using banned words (profanities)

Step 2 (flags)

At a higher level, we use the algorithm to enhance quality, based on flags created at previous steps. Here we apply more stringent parameters for speeding and straight-lining:

▶ We terminate those being flagged as Speeders and Straight-liners simultaneously

▶ We look at all flag combinations to keep or remove the survey
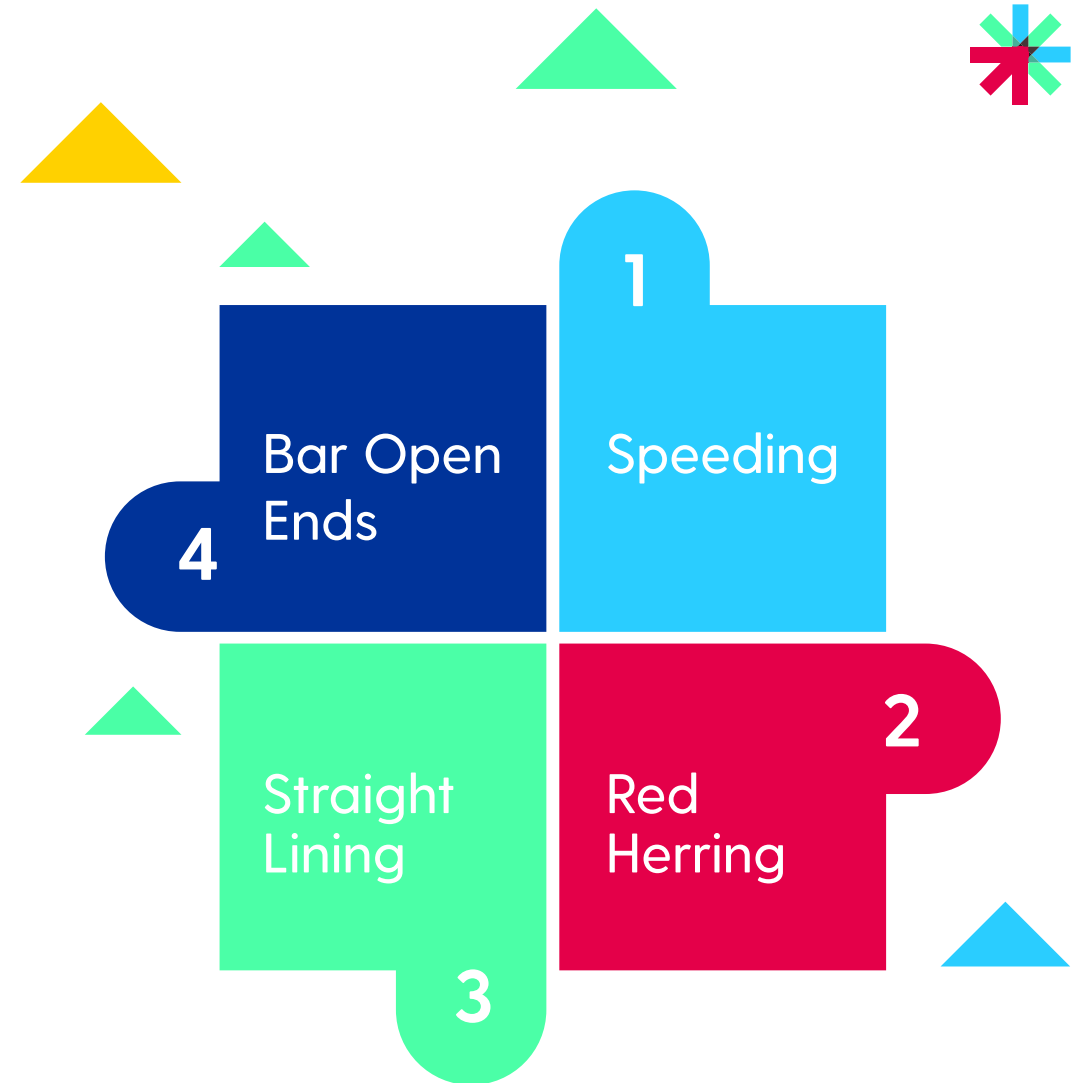
4 Bar Open Ends

1 Speeding

3 Straight Lining

2 Red Herring

Important: We cannot apply these methods to surveys NOT hosted on our platforms. However, we are always happy to support our clients with project-specific advice on questionnaire design and checks that can be applied to the platform hosting the survey.

In-Survey Quality Checks

It is important to remember that respondents are just like any of us. They are subjected to constant physical and digital stimulus and can get distracted. We aim to detect inattentiveness, and build additional logic into our surveys to place flags on any incongruent answers. These flags are then reviewed in final quality control.

▶ We study each questionnaire to identify questions that could be used for plausibility checks. These are questions we can link and use to detect if a respondent provides contradictory answers (e.g., a respondent that wears braces as well as dentures, or stating a very high income while declaring themselves unemployed).

▶ We script logic that places flags where dubious answers are provided (e.g., a respondent stating the value of sunglasses purchased as too high for the type of shop in which they bought them).

▶ For trended projects, we identify data points to be used during fieldwork as KPIs to detect unexpected changes in trends. These are monitored through our analytics tool, which allows us to immediately react in case of errors or unwanted behavior

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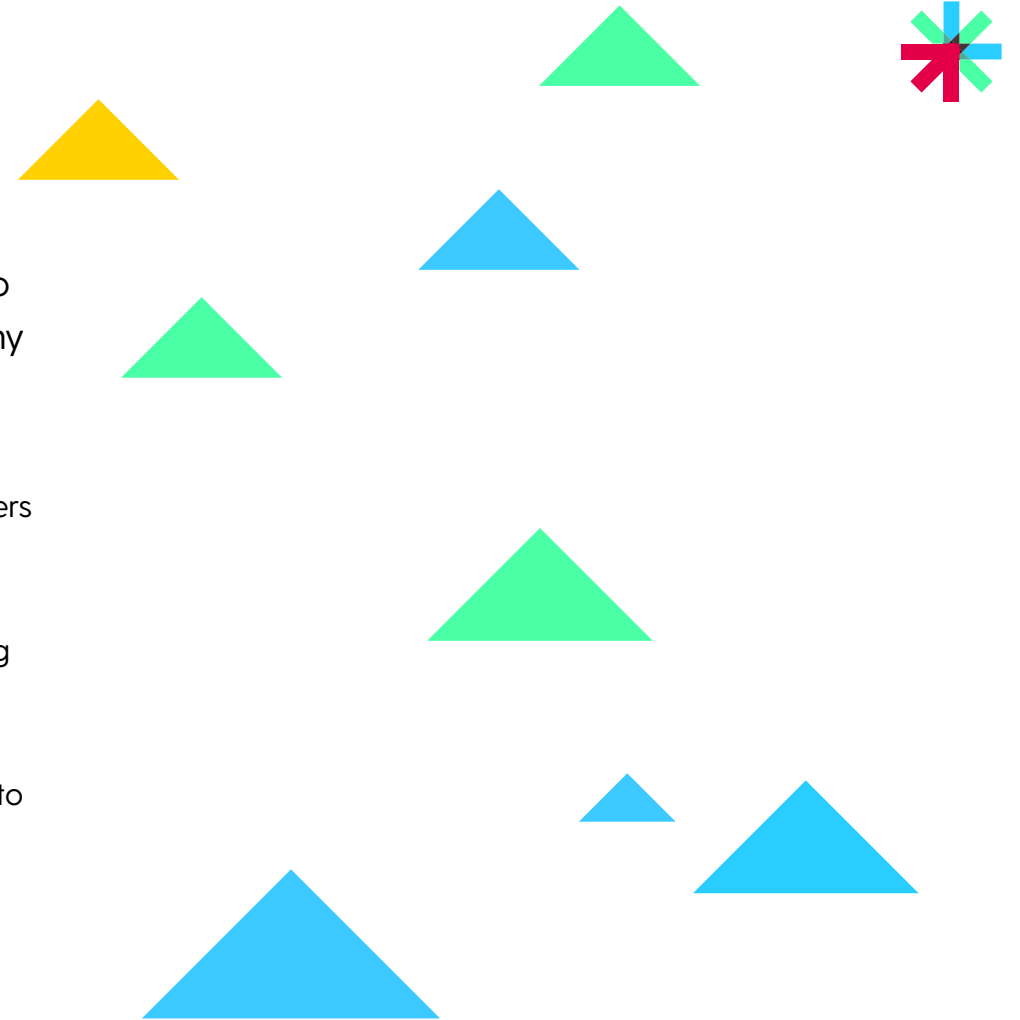
Post-Fieldwork Quality Control

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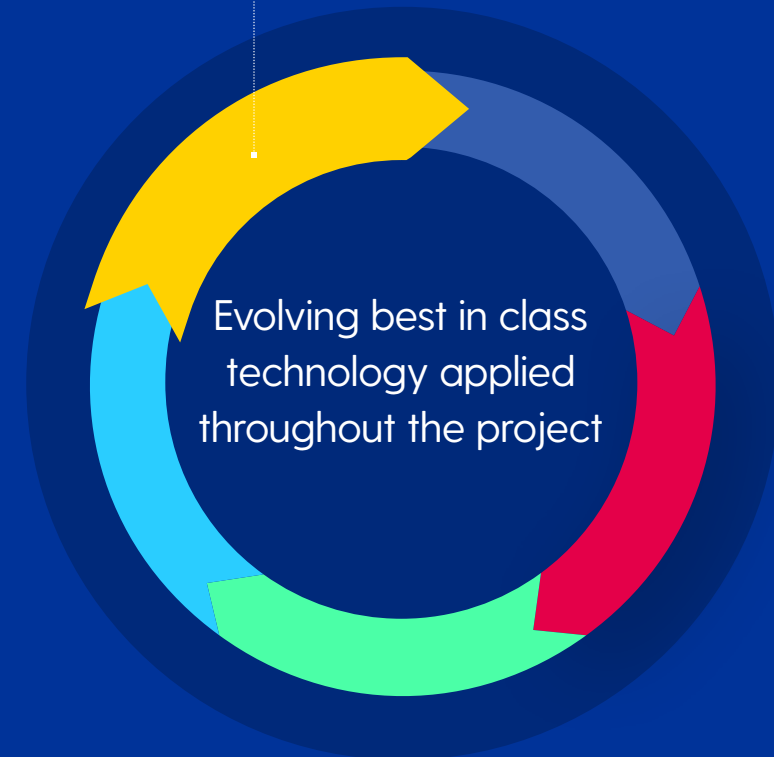
Post-fieldwork Quality Control

Not all checks can be automated or performed on the fly. Post fieldwork, and during data processing, a final quality control process is applied where:

▶ All respondents flagged by our quality algorithm or through the additional plausibility and validation flags are reviewed

▶ The open ends are checked for coherence against the question itself

▶ A syntax re-checks the data

▶ Any flags on non-plausible close-ended answers are reviewed

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We Are Here to Help

We aim to provide proactive advice and support wherever necessary or useful, whether project-by-project or on an overall level.

This document is an overview and clients should feel free to contact us for further information, consulting, or support on any aspects of our quality processes.

We can also offer survey-specific or general support and training for individuals or groups to help clients achieve optimal quality.

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