ESOMAR 37

37 Questions to help buyers of online sample

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Q1

What experience does your company have in providing online samples for market research? How long have you been providing this service?

Toluna is a leading technology company that delivers real-time insights at the speed of the on-demand economy. With 25 offices in Europe, North America, MENA, LATAM, and Asia Pacific, we work with many of the world's most renowned brands and corporations. Through the years, we have built and nurtured one of the largest and most diverse qualified online panels in the world. Our proprietary panel recruitment methods, profiling, and sample management technologies offer access to over 43 million respondents from 70+ countries. Our panel profiling includes over 200 questions on a wide variety of topics, enabling companies to interview many hard-to-reach audiences with ease and efficiency.

Toluna adheres to the globe's most stringent guidelines for panel management and data quality, privacy, and security. We are members of many industry associations committed to innovating data quality, ensuring best practices, and adapting to landscape changes. We feel it is important to have a voice at the table, and the company has executive members of ESOMAR, the German Society for Online Research (DGOF), the German Association for Market and Social Research (BVM), the Australian Market & Social Research Society (AMSRS), the Japanese Market Research Association (JMRA), the Market Research Society Singapore (MRSS), the Korea Research Association (KORA), and the Market Research Society (MRS). Toluna also has a corporate delegate on the Syntec Etudes Board (French research association).

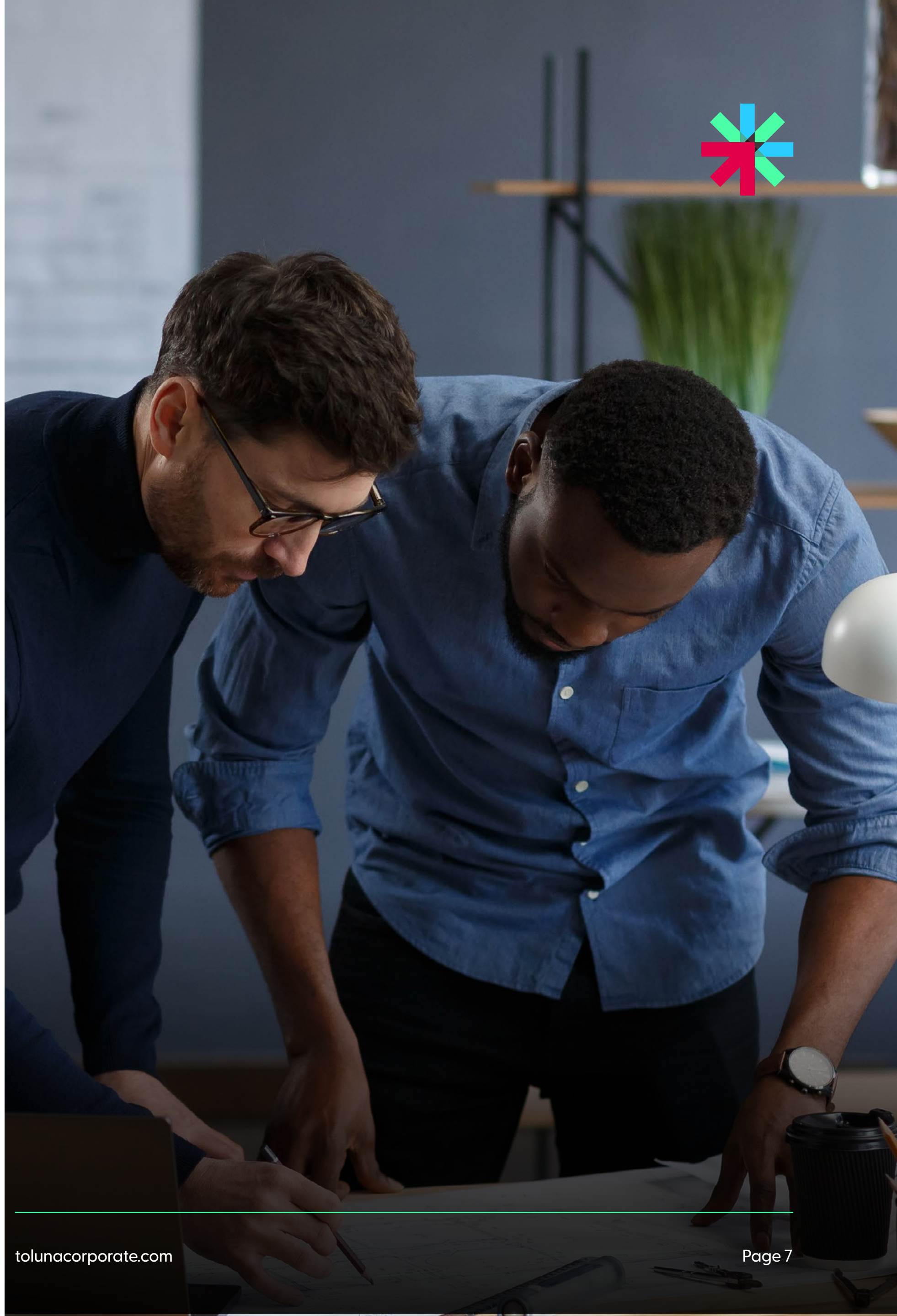
Q2

Do you have staff with responsibility for developing and monitoring the performance of sampling algorithms and related automated functions who also have knowledge and experience in this area? What sort of training in sampling techniques do you provide to your frontline staff?

Yes, Toluna's R&D group has teams dedicated to innovating via technology and constantly improving our sampling and routing logic. This is true for both our own routing logic and for integrations with external partners. We also have a cross-functional team of experts that continuously monitors platform performance to make optimizations for efficiency and successful delivery.

Frontline staff members are trained on sampling best practices and methodologies and how to implement them for different project types and use cases (e.g., DIY, full-service support).

All samplers go through an extensive certification program that provides advanced-level understanding of sampling and blending concepts, as well as how to create an effective sampling plan to seamlessly deliver projects.



Q3

What other services do you offer? Do you cover sample-only, or do you offer a broad range of data collection and analysis services?

Toluna provides a true end-to-end insights solution. With the Toluna Start platform, users have access to a wide range of automated, semi-automated, and custom insights solutions that cover survey design, integrated survey respondents, and reporting dashboards with insights. Our clients can also access our research experts from around the globe to support them in creating actionable recommendations that drive successful business decisions.

We offer both quantitative and qualitative solutions and provide access to DIY, full-service support, or a light touch of help when needed. Offerings include:

- Toluna Start platform
- Automated solutions and methodologies that span Brand Health, New Product Development, Market Understanding, and Advertising & Creative Testing
- Simple, fast custom survey creation
- Sample-only access to Toluna Influencers, our global panel of over 43 million consumers across 70+ markets
- Reporting and Dashboarding
- Toluna Start Qual, which incorporates asynchronous activities and live video to dig deeper into consumer perceptions, behaviors, and motivations
- Full-Service Support & Consultancy

Sample Sources and Recruitment

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What this section is about

Answers to the questions in this section will help you understand the types of sample available from different sample providers in the market and the sources they rely on. This will help you evaluate the quality of the sample being offered, whether it is suitable for measuring change over time, and whether there are any specific constraints you need to consider when using it. It will also allow you to understand whether the sample provider is drawing the sample from its own sources or aggregating sources from other providers. We recommend that you first identify the sample types being offered and then ask the relevant questions for all sources.

Broadly speaking, there are two models of sample sources and recruitment:

Panels

These are databases of potential participants who declare that they will cooperate for future data collection if selected, generally in exchange for a reward/incentive. This includes traditional access panels, co-branded panels, or opt-in databases of individuals who agreed to complete research projects and also undertake other nonmarket research activities (watch ads, download an app, complete marketing offers, etc, also known as loyalty programmes, or rewards communities within GPT (Get paid to) sites.) Loyalty card and subscription databases are included here if there is a continuous relationship with members who understand the commitment asked of them.

Intercepts

This includes intercepts from offer walls, affiliate networks, social media or other platforms to drive traffic to a survey. Intercept is an approach where potential participants are asked to take a survey for a reward while they are engaged in another activity such as playing an online game, reading news, or some other online activity. Intercepted participants may be previously unknown to the sample provider or may have been pre-identified and profiled through a prior survey experience.

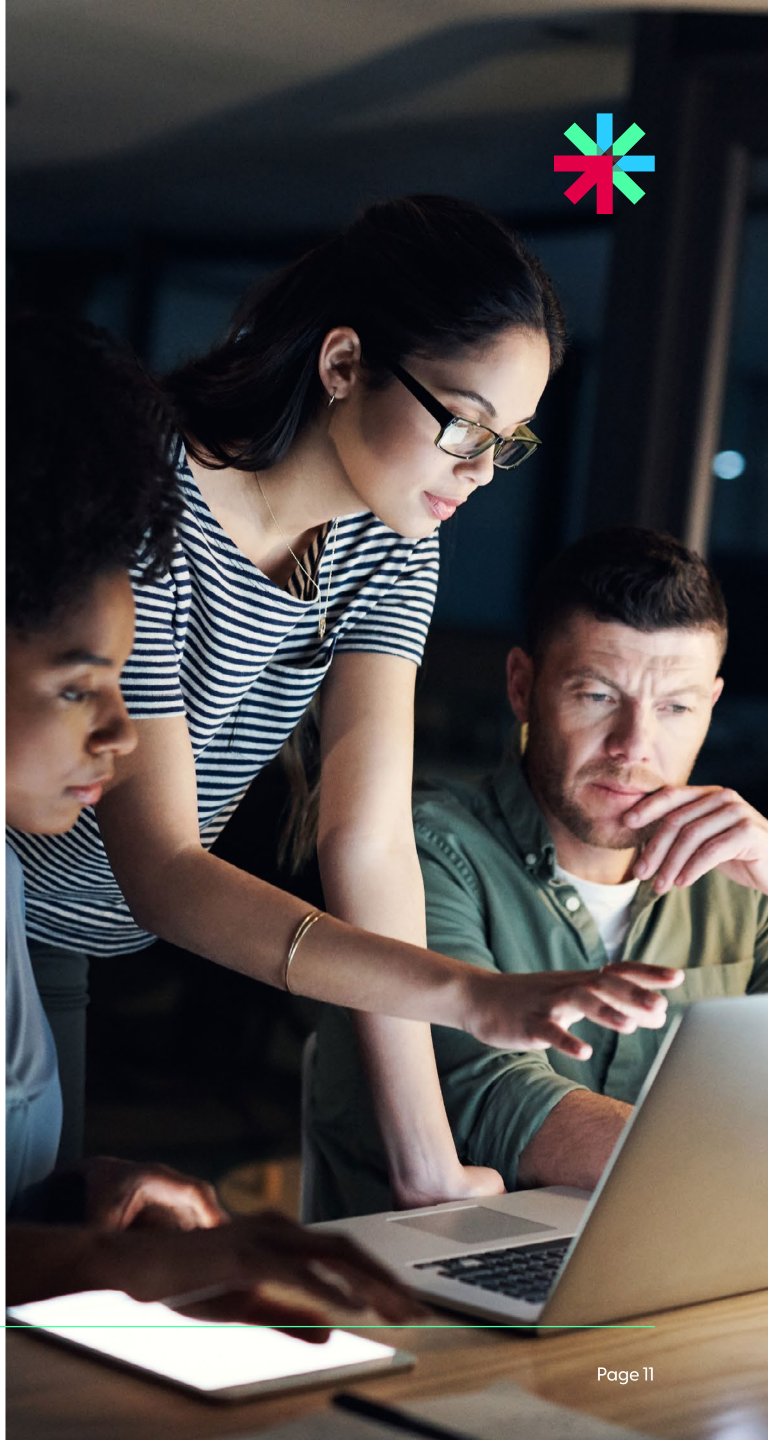
Q4

Using the broad classification above, from what sources of online sample do you derive participants (panels/ intercepts)?

Toluna has its own unique supply ecosystem, including our proprietary **global panel community**. Toluna Influencers are highly profiled, deeply engaged, and provide millions of high-quality insights for the world's leading brands every month.

We have also developed our own private network of premium partners with high-quality, engaged audiences. These partners are carefully vetted, and include traditional research panels, loyalty communities, media owners, and online and mobile app publishers. This enables us to reach consumers who are willing to take part in surveys, but may not be interested in joining a panel, around the globe at the speed of demand. These potential respondents are asked a series of demographic and attitudinal questions before being directed to available surveys corresponding to their profile.

This combination of sources provides our clients with access to over 43 million consumers in 70+ markets.



Q5

Which of these sources are proprietary or exclusive and what is the percent share of each in the total sample provided to a buyer?

Toluna's Influencer Community (**www.toluna.com**) is our proprietary panel and our network of partners is private with exclusive and deep relationships.

The percent share of each in the total sample depends on a variety of factors, including the country, sample size, target audience, demand, and time in the field. And this proportion continues to evolve as our global reach continues to grow via both our panel and partner network.

While we do not break out sample percentages on a project basis, we can maintain sample source composition for data consistency. Our sample sources are leveraged according to client/project needs to ensure the right audiences are interviewed and the highest value insights are extracted. The overall sample composition depends on the project specifications.

Q6

What recruitment channels are you using for each of the sources you have described? Is the recruitment process ‘open to all’ or by invitation only? Are you using probabilistic methods? Are you using affiliate networks and referral programs and in what proportions? How does your use of these channels vary by geography?

The acquisition of consumers, as well as healthcare and B2B specialists, has been at the heart of Toluna’s activity for over 20 years, enabling us to recruit millions of highly qualified and engaged respondents every year.

The Toluna Influencers community of online and mobile consumers and open to all internet users to join **www.toluna.com**.

ThinkAction, our proprietary affiliate network, is comprised of over 3,000 key, diverse media players across the globe. ThinkAction provides access to internet and mobile users through all digital marketing channels, which include, but are not limited to SEM, SMM, Email, Native, Video, Mobile, Blogs, and Display. The combination of our media portfolio, expertise, and technology ensures that we source a first-in-class panel.

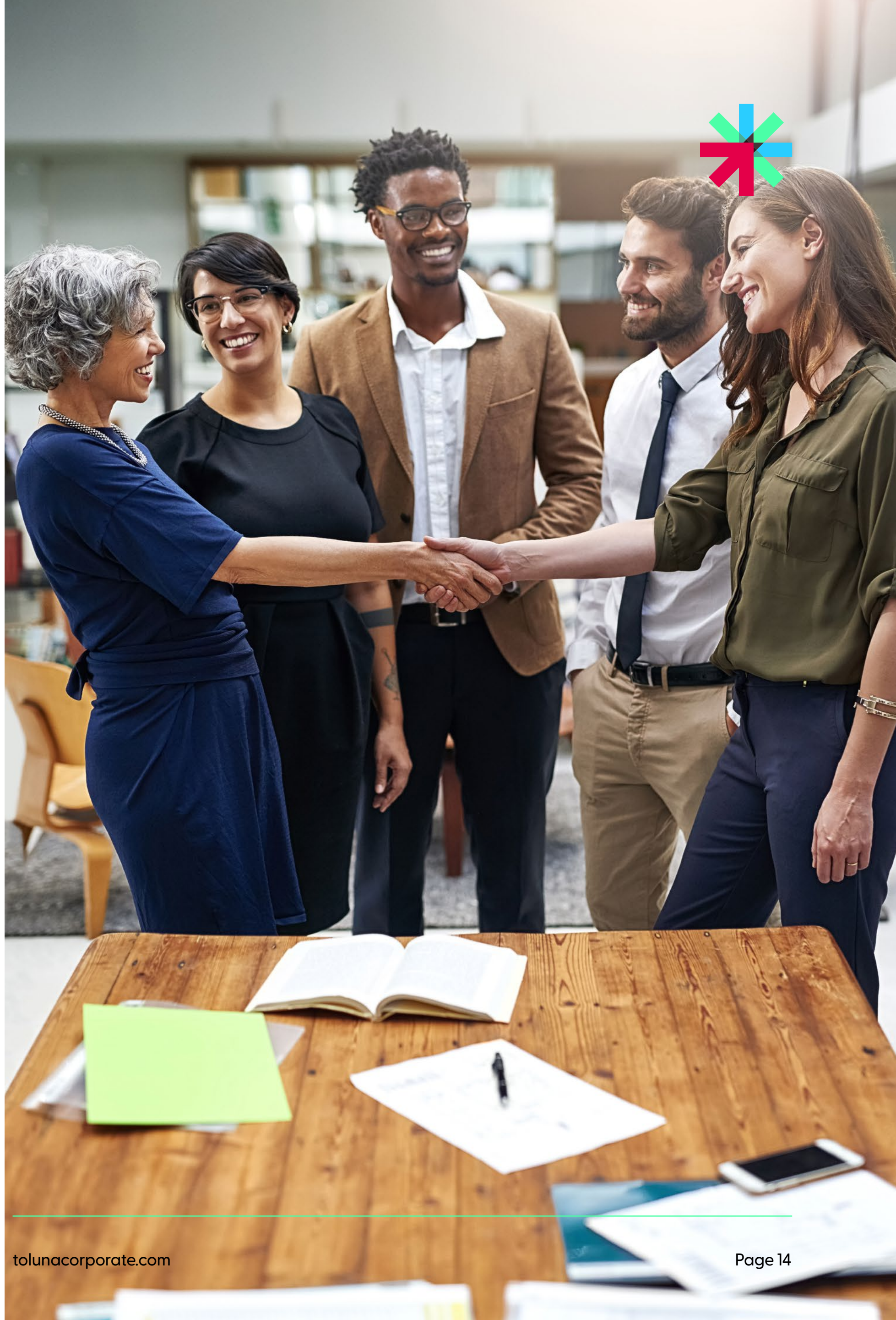
The Toluna Influencers community is inclusive and open to all consumers, in line with ESOMAR guidelines and national laws. In parallel to the ThinkAction in-house affiliate network, we run a referral program that provides rewards to those who invite their friends to join the Toluna panel.

Additionally, we have a focus on mobile app recruitment campaigns following the successful launch of the Toluna Influencers app in April 2020. The app has seen over 6.7 million downloads and accounts for 20% of traffic—a number that continues to grow every day, enabling Toluna to reach audiences on the go.

Q7

What form of validation do you use in recruitment to ensure that participants are real, unique, and are who they say they are? Describe this both in terms of the practical steps you take within your own organization and the technologies you are using. Please try to be as specific and quantify as much as you can.

At Toluna, we understand that data quality is one of the most important aspects of market research. Our data is the foundation of our insights, and the quality of our data is key to producing accurate insights that our clients can trust. We strive to provide the highest quality data to our clients by employing the latest technologies, processes and methods. We have invested heavily in our own panel, platform, and quality solution to keep data quality at its best. Our holistic approach to data quality helps us identify and address potential issues, if there are any, quickly and efficiently. At Toluna, our commitment to data quality sets us apart from our competitors and helps ensure that our clients can trust the insights we provide. We strive to provide data that is accurate and reliable, so that our clients can make informed decisions with confidence.



We have six major groups of sample quality checks and balances:

Pre-panel: vetting of recruitment sources & quality screening on sign-up

- Unique emails identification: Panelists are not able to create multiple accounts with the same email address.
- Unique contact details detection: At panel registration, we collect data points like First name, Last name, Postal code, phone numbers, email address, and other data points. Using this data, we can identify panelist accounts that are very likely to be duplicates and act automatically.
- Accounts must be active and in good standing to take surveys.
- CAPTCHA security code validation: Prevents automated registration. It is applied at panel registration.
- Double-opt in email confirmation: This ensures validity of the email address provided. Respondents who want to join our panel receive a confirmation link on the email address provided. Once they click on the confirmation link, they are allowed to continue.
- Email domain validation: “Disposable email” providers (websites that generate email addresses that are available for only a few minutes or limited number of messages received) are not allowed; accounts using these domains are not allowed to register. We’re using multiple sources to detect emerging fraudulent email domains to continuously update our validation.
- Detection of anomalies and patterns in panel registration data: Accounts having multiple elements in common are blocked for abuse. The data are aggregated at the recruitment source level and leveraged to run the same checks from third-party partners.

Pre-ecosystem: partner vetting, including pilot test sample quality

- Benchmarking the partner on behavioral, representativity, and attitudinal quality KPIs. If a partner exhibits issues in any one of these categories, they are allowed to retry once. After two fails, six months are given for the partner to fix their underlying issues before any more potential retests. Partners are not activated until they have successfully passed this sample quality benchmark.

Pre-survey - real-time blocking based on device & survey response

- Duplicate devices detection with digital fingerprinting: a third-party digital fingerprinting tool gathers many data points from a respondent's device, such as operating system version, browser version, plug-in, etc., and assigns a relative weight to each data point. The data gathered is put through machine learning models and algorithms to create a unique digital fingerprint of each computer. We do not allow respondents with the same digital fingerprint into the same survey.
- Suspicious activity check (including cross-industry activity): We also deploy a pre-survey fraud probability analysis to determine if the respondent is suspicious based on device and IP address inked data points. Respondents with high-risk scores are denied entry into a survey. The data is aggregated and continuously monitored for other suspicious data patterns like country hopping, user agent masking, IP address masking, click farm activity, and other patterns that show that a respondent is suspicious. Once the system determines patterns, the respondent is removed from the panel.
- Behavioral pre-screening: Toluna deploys an automated 4-6 question library to identify respondents that are attentive, have 5th grade or higher language comprehension, are not using translators, and are not exhibiting extreme under- or over-statement patterns.
- Country Geo-IP validation: A respondent connected from an IP outside the survey country is not allowed to participate in the survey.
- Anonymous open proxy detection: Respondents are not allowed to participate in a survey if they're coming from an anonymous open proxy. Use of a proxy hides device identity and geo-location. We found that a lot of the industry is also not properly addressing residential proxies, which other industries such as entertainment have started to act against. We've joined a cross-industry platform that allows us to share real-time data between industries to identify suspicious behavior. Our system allows us to make real-time pre-survey distinctions between a clean proxy (often used by remote workers) and a proxy associated with suspicious behavior.

In-survey: real-time flagging or removal based on survey response patterns

- Open End checks: All in-platform OE responses are put through our natural language processing/machine learning quality tools to determine if the response is nonsensical or suspicious (e.g., gibberish, duplicated, etc.)
- Profiling consistency checks: Certain profilers recorded in survey and compared to the profiled responses of the respondent to determine if they are fraudulent.
- Quality scoring algorithm: Based on the aggregated pre-survey checks, in survey checks, and post field checks we're able to assign a quality score to our panelists. If they exhibit patterns of suspicious behavior, they are removed from the panel.
- Speeding: Identify respondents that are taking a usually quick time to complete the survey.
- Attention checks: Identify and remove respondents that are not paying attention to the survey.
- Straight (flat)-lining checks: Identify disengaged respondents with flat lining checks on grid questions.

Post-survey: removal based on open-end quality and extreme outlier responses

- Post-field cleaning aggregation: Used to identify new types of quality threats or suspicious behavior patterns so we can continuously learn and stay ahead.

Across surveys

- Quality scoring: Scores based on behavioral patterns across projects are computed for each participant and updated after each survey. An out-of-range score results in the participant being removed or blocked from our sample ecosystem
- KPI stability: metric-level monitoring of stability across projects

Toluna continues to invest in advanced technologies and processes for data quality, as well as the ongoing prevention of data quality threats in the Market Research industry, by using a range of tools to ensure that data is accurate and reliable. We have more enhancements rolling out this quarter and throughout the year.

To keep up with our latest data quality processes, please check the latest version of our Data Quality eBook here: QR CODE to data quality eBook here

Q8

What brand (domain) and/or app are you using with proprietary sources? Summarise, by source, the proportion of sample accessing surveys by mobile app, email or other specified means.

Toluna Influencers are able to engage with us via our proprietary panel **www.toluna.com** and our mobile app 'Toluna Influencers' available in both Android and iOS stores. We build personalized and relevant relationships with our members by leveraging an omni-digital channel CRM tool to ensure we are interacting with them at both the optimal time and channel (On site, In App, Email, Push, SMS, etc.). This agile approach empowers our members, creating a strong relationship and the delivery of valuable insights. The proportion of sample varies at a panelist demographic, country, and project level, but globally, we see 25% of traffic coming from our mobile app, 30% from notifications (email, push, SMS), and 45% from our website.

Q9

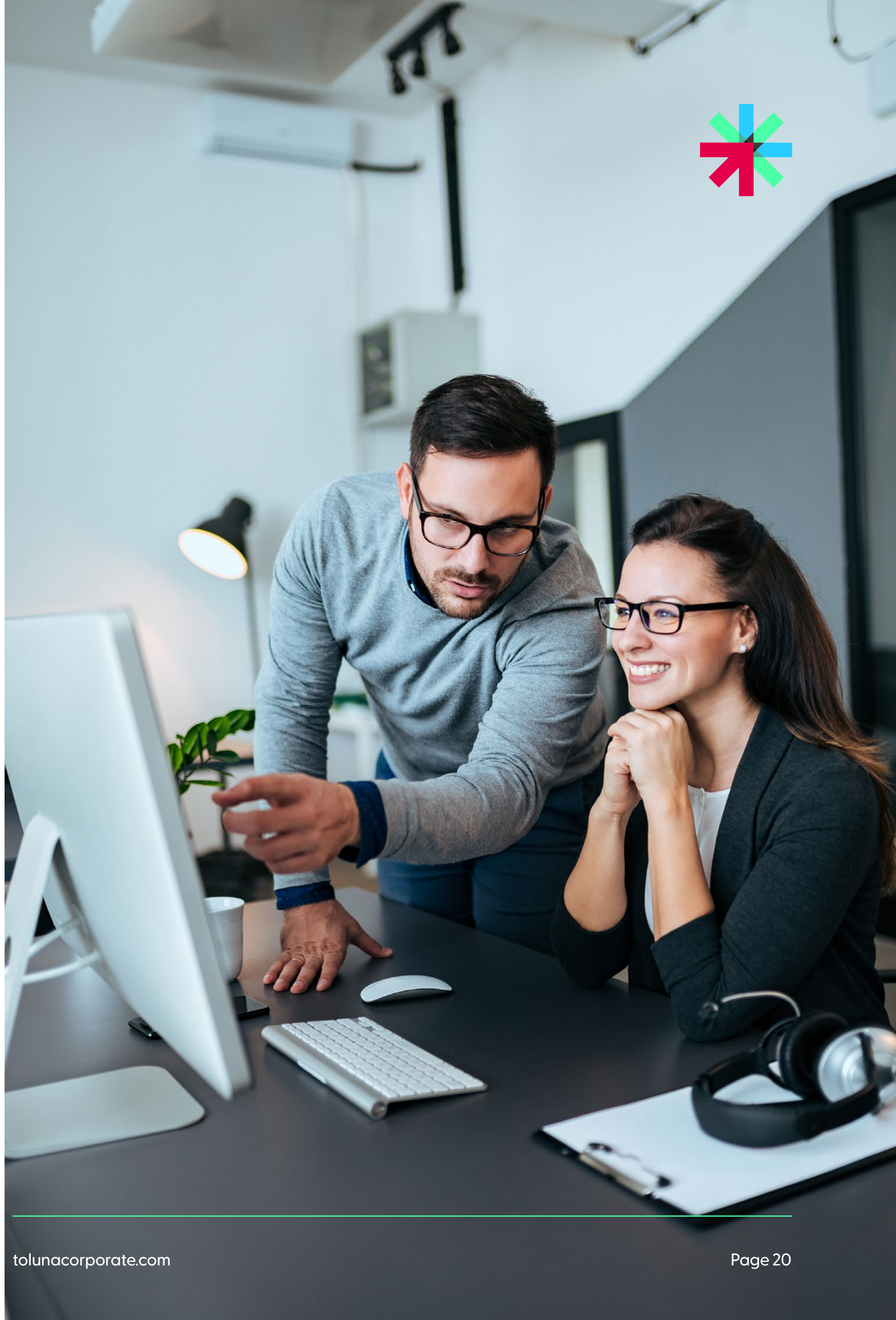
Which model(s) do you offer to deliver sample? Managed service, self-serve, or API integration?

Toluna offers a flexible service model to accommodate the needs of all client partners.

Clients can conduct self-service research via our end-to-end consumer intelligence platform, Toluna Start. With just a single login, they're able to instantly conduct any quantitative or qualitative research with our panel of Toluna Influencers and see results populate in real time.

For those looking for a more consultative approach, our team of in-house experts fuses sector expertise and award-winning research designs with Toluna's innovative tools and technologies to create custom research programs tailored to your business needs.

We also offer API integration for those clients who wish to have a direct line to our Influencer community of thoroughly profiled, highly engaged respondents.



Q10

If offering intercepts, or providing access to more than one source, what level of transparency do you offer over the composition of your sample (sample sources, sample providers included in the blend). Do you let buyers control which sources of sample to include in their projects, and if so how? Do you have any integration mechanisms with third-party sources offered?

Toluna ensures sample quality and consistency regardless of respondent source. Not only are we transparent with clients who want to better understand sample composition, but we can also modify sampling sources based on the individual project (i.e. partner restrictions, iHUT, etc.) and clients can specify sample sources when we are sampling for them or through API integration.

Overall, the composition of sample for a given study will always account for the client's objectives and what is important to research quality for that project.

For third-party integration, Toluna offers access to consumers from our proprietary panel and private network of premium partners to meet our clients' needs: global scale, data quality and consistency, agility and flexibility on capacity/reach, and automatically identifying the right audience to provide greater insights from thoroughly profiled and highly engaged users. All third-party partners adhere to our quality chart and holistic vision as outlined in our **Data Quality eBook**.

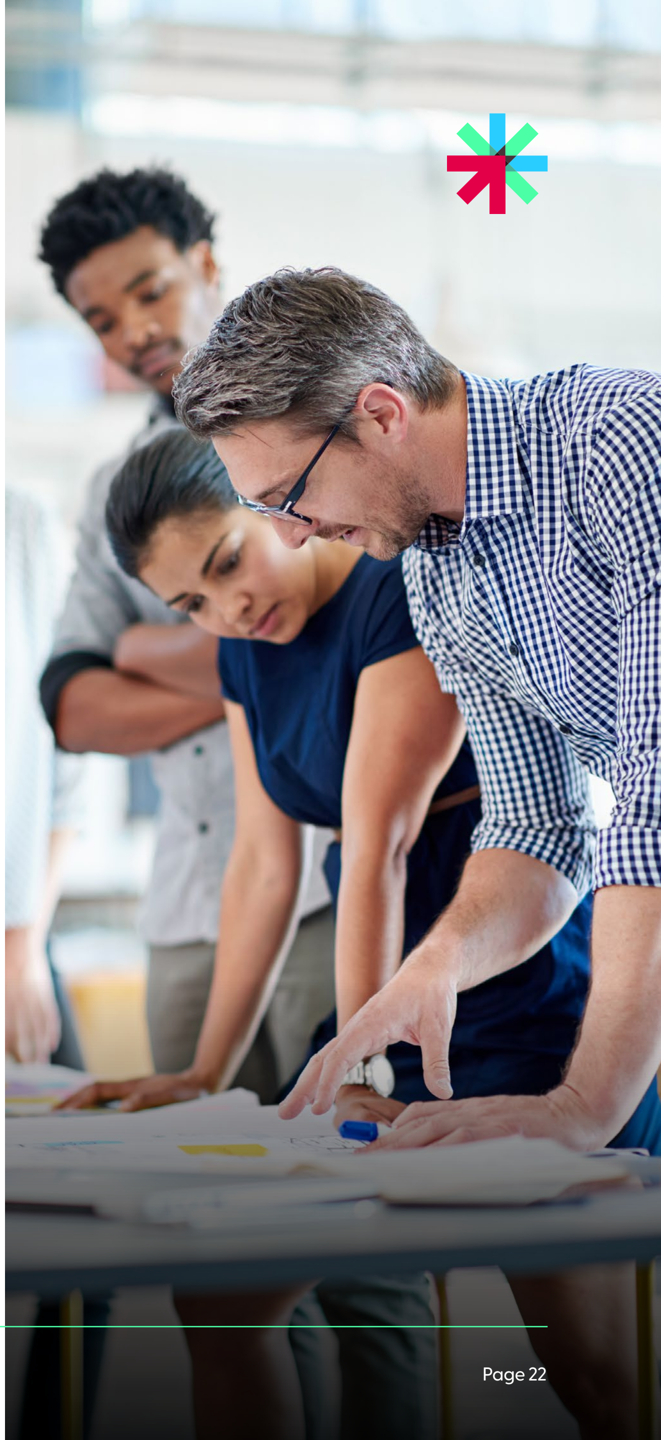
Q11

Of the sample sources you have available, how would you describe the suitability of each for different research applications? For example, Is there sample suitable for product testing or other recruit/recall situations where the buyer may need to go back again to the same sample? Is the sample suitable for shorter or longer questionnaires? For mobile-only or desktop only questionnaires? Is it suitable to recruit for communities? For online focus groups?

All sample sources are selected with suitability in mind. With our unique blend of supply and respondent access, we're able to support a large range of quantitative and qualitative projects. These include, but are not limited to:

- Barometers
- Consumer and Brand Health Trackers
- iHUTs
- Recontacts
- Focus Groups

Our surveys are fully compatible and optimized for both desktop and mobile use, allowing our panelists to participate in surveys that match their profile through the channel of their choice—whether that be through mobile app, website, or email invitation. We leverage the best channels for each project based on UX and device compatibility.



Sampling and Project Management

What this section is about

Answers to the questions in this section will help you understand the processes and procedures that are undertaken to provide you with a sample of participants for your survey. You should understand what biases may be inherent in, or as a result of, the approaches taken and the likely severity of those biases.

Q12

Briefly describe your overall process from invitation to survey completion. What steps do you take to achieve a sample that "looks like" the target population? What demographic quota controls, if any, do you recommend?

Demographic quota controls can be nationally representative or based on client specifications and can be set up as nested or non-nested based on the project requirements. We recommend using nationally representative quotas, as a bare minimum, unless the study requires a specific type of targeting. Clients are also welcome to custom target and leverage over 200 profiling attributes available on Toluna Influencers.

The Toluna Influencer panel is diverse, highly engaged, richly profiled, and ready to provide their valuable opinions to help companies make better decisions.

They receive invitations to surveys through a variety of digital channels (email, push, SMS, etc.) based on their personal preferences, and can also log into the website or app to view available projects on their own time. Each invitation presents the survey opportunity, incentive, estimated time to complete, clear instructions to start the survey, and the link to begin.

Once a Toluna Influencer is in the survey, they answer its questions and submit the survey upon reaching its conclusion. We consider a response complete when all questions marked as mandatory have been answered and the survey is submitted. Those panelists who answer screening questions, but do not qualify for the survey, are not counted as complete responses. Instead, they are directed to other survey opportunities through our router. If the survey has already closed by the time a panelist clicks the link, they are also directed to other survey opportunities for which they are eligible.

Our technology ensures random sampling and considers the varying response rates of different demographics—over-sampling for groups with lower response rates to ensure that interviews are done within the specified time frame.

Q13

What profiling information do you hold on at least 80% of your panel members plus any intercepts known to you through prior contact? How does this differ by the sources you offer? How often is each of those data points updated? Can you supply these data points as appends to the data set? Do you collect this profiling information directly or is it supplied by a third party?

Accurate profiling information is critical to our business. We collect the most relevant, up-to-date profiling information not only for the benefit of our clients, but also so we can provide our panel members with a more personalized, relevant experience. For these reasons, we take great care in how profiling is messaged to respondents and how frequently we collect this data.

At least 80% of our panel members are profiled on the following—all of which are derived from questions we ask them directly:

- Basic demographic information (i.e. age, gender, post/zip code)
- Computed GEO Regions in each country (i.e. States, Provinces, Departments, MSAs, DMAs, Districts, Metro Areas, etc.)
- Computed segmentations (Social Grade, Generations, Parents)
- Top-10 essential profiling attributes (i.e. Education, Employment, Work Position, Ethnicity and Race where applicable, Marital Status, Monthly and Annual HHI, Household Composition, Number of Children under 18, Primary Grocery Shopper).

Q13

What profiling information do you hold on at least 80% of your panel members plus any intercepts known to you through prior contact? How does this differ by the sources you offer? How often is each of those data points updated? Can you supply these data points as appends to the data set? Do you collect this profiling information directly or is it supplied by a third party?

Beyond the Top-10 essential profiling attributes, 50% or more of our panel members are profiled on our Top-25 attributes.

Each routable profiling attribute is assigned an expiration date, in number of days. We assign these expiration dates based on the importance of the question to our clients' needs, as well as the nature of the question itself (i.e. For "Have you purchased X product in the past 3 months?" we set expiration at 90 days). When a data point expires, we re-ask the question via our router or make it available for answering again in our Profiling Surveys.

For our partner panels, we make it mandatory to have age and gender profiled. Additionally, we strongly encourage all partners to map as many attributes as possible, with special consideration for our Top-25 attributes. This additional mapping increases their conversion rates and provides a better experience to their panelists.

Profiling attributes can be appended to our datasets, except for directly identifiable data points (such as name, email, address, etc.).

Q14

What information do you need about a project in order to provide an estimate of feasibility? What, if anything, do you do to give upper or lower boundaries around these estimates?

The Toluna Start platform provides all clients with the ability to automatically calculate feasibility for any given project, considering:

- Number of completed surveys
- Length of survey
- Incidence rate
- Qualification criteria
- Demographics
- Quota structure
- Exclusions rules
- Special tasks

Any deviations within +/- 15% on the factors above are acceptable for feasibility to hold true—and it does so for an additional 45 days after the fact.

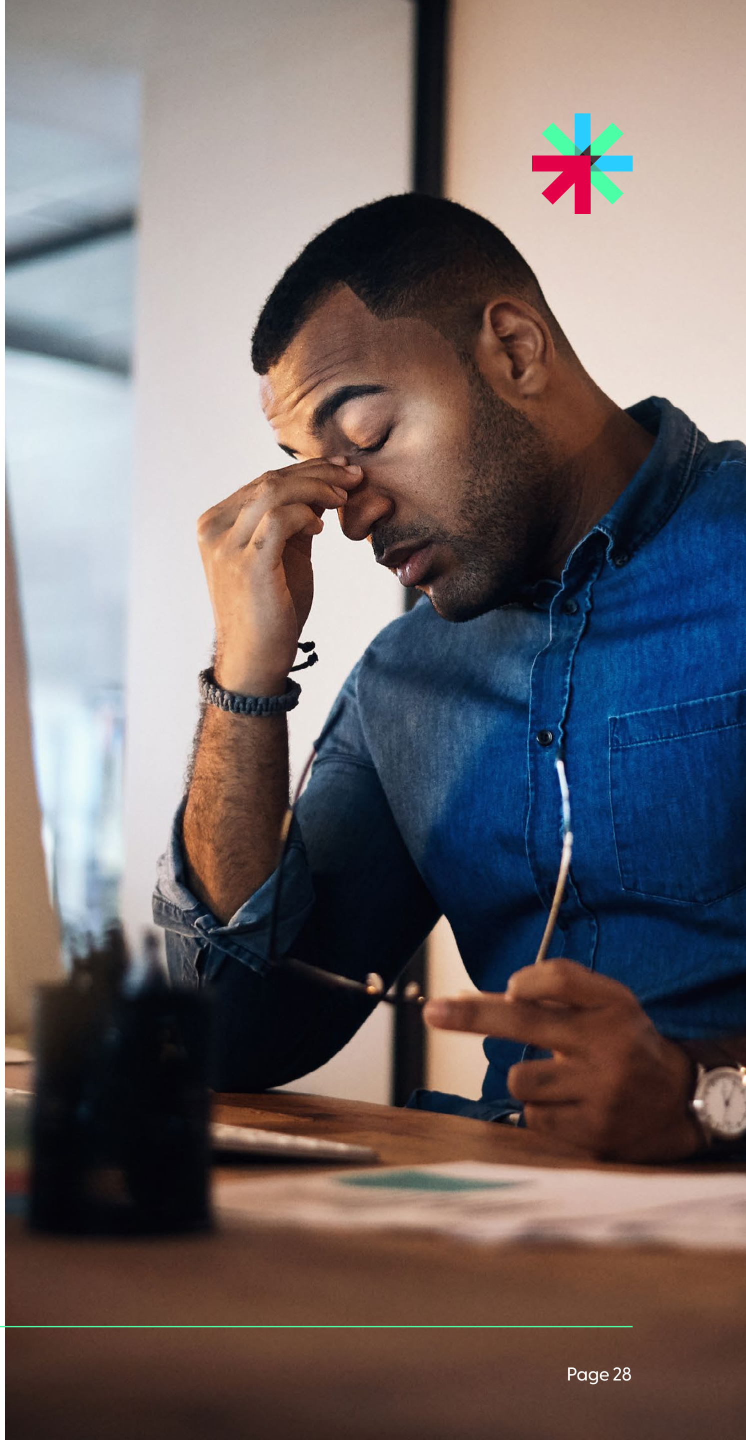
In total, this information helps us assess whether a project can be completed on time and to our client's desired specifications. If there are any issues, we work collaboratively with our client to determine the best course of action.

Q15

What do you do if the project proves impossible for you to complete in field? Do you inform the sample buyer as to who you would use to complete the project? In such circumstances, how do you maintain and certify third party sources/sub-contractors?

If one of the parameters changed since we bid on a project—such as lower-than-expected incidence rate or longer time to complete a survey—a project may be impossible to complete in the field. If/when this occurs, we alert our clients, discuss the reasoning, and offer potential solutions (such as revising quota structure or making amendments to the screening criteria).

If/when a third-party partner is needed to finish fieldwork, we are fully transparent with our clients. We've built an extensive network of trusted third-party sources that we select based on the quality of respondents they provide. Each must complete our detailed quality chart during the initial vetting process and is closely monitored for performance.



Q16

Do you employ a survey router or any yield management techniques? If yes, please describe how you go about allocating participants to surveys. How are potential participants asked to participate in a study? Please specify how this is done for each of the sources you offer.

Toluna employs an in-house survey router, or 'sample allocation engine,' that connects our clients' projects to our full audience of consumers. The sample allocation engine can allocate respondents to projects using filters or specific methods for sampling, including:

- **Quota Sampling:** As demographic breaks are established, we create quotas for the number of respondents needed to meet specific criteria. Survey traffic is distributed and routed to achieve these quotas.
- **Targeted Screening:** Targeting respondents to participate in surveys based on demographic, attitudinal, or behavioral information.
- **Census Outgo:** At times, clients are looking to replicate census or another set of parameters on outgo and do not want quotas set to manage incoming survey data. For example, a census distribution of respondents touch their survey and don't necessarily

If the participant profile does not match the survey criteria, they can re-enter the router and see if they qualify for a different survey.

Participants receive invitations to surveys through a variety of digital channels (email, push, SMS, etc.) based on their personal preferences, and can also log into the website or app to view available projects on their own time.

Q17

Do you set limits on the amount of time a participant can be in the router before they qualify for a survey?

Toluna's profiling and router technology matches respondents with a potential survey as quickly as possible in order to prevent a negative experience and respondent fatigue. If it takes longer than usual—either due to the profile or lack of available survey opportunities—respondents are given the option to continue (thus expressing their consent and motivation) or return to Toluna.com to engage with other aspects of the Toluna Influencer community.

Q18

What information about a project is given to potential participants before they choose whether to take the survey or not? How does this differ by the sources you offer?

Transparency and concise messaging set clear expectations for respondents. Regardless of source, we empower our respondents to decide whether they wish to participate in a survey by sharing the estimated length of survey, the survey theme or category, and the reward they will receive for participation.

Q19

Do you allow participants to choose a survey from a selection of available surveys? If so, what are they told about each survey that helps them to make that choice?

First, we match our surveys with panelists based on their profile and present only those which are suitable to them. From these available surveys, they can choose based on the category, estimated length of survey, and incentives for participation.

Q20

What ability do you have to increase (or decrease) incentives being offered to potential participants (or sub-groups of participants) during the course of a survey? If so, can this be flagged at the participant level in the dataset?

For each project, incentive levels are determined based on subject matter, time commitment (i.e. length of survey), and incidence rate. In exchange for their time and opinions, Toluna Influencers earn points to redeem from a catalogue of reward partners, which are adapted on a country level for cultural personalization. Panelists are free to select their preferred rewards from the available offers, and these are delivered in a timely manner to ensure satisfaction. If a client requires a custom incentive process, Toluna can implement one.

We can adjust incentives during a survey and can flag this at the participant level in the dataset. Typically, this would be done to fairly reward our respondents if we notice a survey is taking longer than expected.

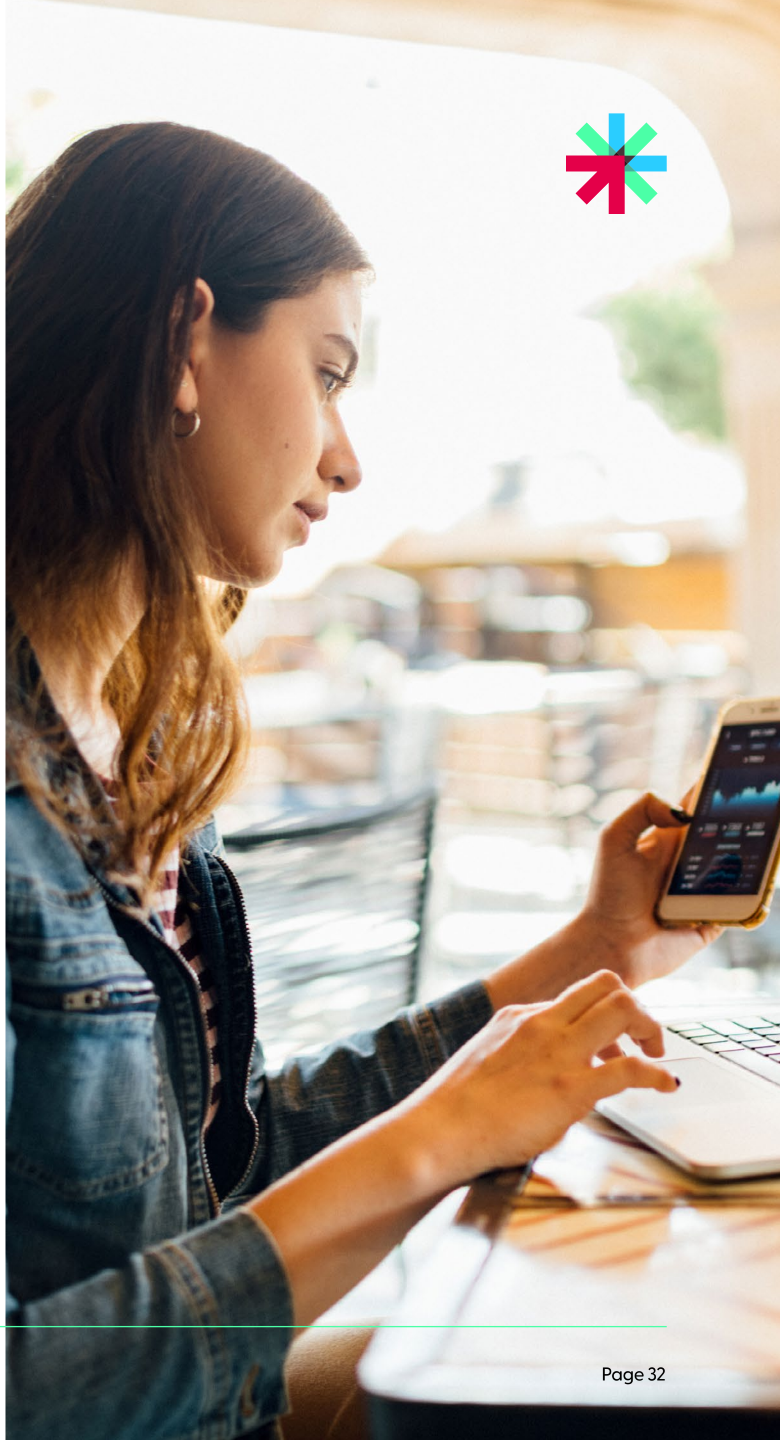
Q21

Do you measure participant satisfaction at the individual project level? If so, can you provide normative data for similar projects (by length, by type, by subject, by target group)?

We conduct an annual Influencer Satisfaction (ISAT) survey on our panel to gauge and track member satisfaction, as well as to gather feedback on how we can improve the user experience.

Additionally, we operate under clear best practices based on survey length/duration and design in order to maintain a high satisfaction level amongst respondents.

Toluna Influencers can also contact our help desk at any time with any query. This reinforces our value proposition of empowerment and being the voice of change.



Q22

Do you provide a debrief report about a project after it has completed? If yes, can you provide an example?

Our team provides a link for our clients to track field progress in real time. Within Toluna Start, clients can access data instantly through:

- **Real-time infoboards and dashboards:** Within moments of launch, you can view KPIs and side-by-side pack comparisons (significance tested), as well as filter infoboards on age/gender, and up to ten custom options to gather insights on different consumer groups
- **Advanced analytics:** Conduct further custom analysis within Toluna Start by weighting data, creating sub-populations, filtering, and more.
- **Customized information:** In addition to further insights from our team of experts, you can drag and drop fully editable infoboards, PowerPoint slides, and word cloud verbatims. You can also build tables and re-run banners as needed.

Upon request, our Research Solutions team will also deliver a detailed report with project findings for an additional cost.

Data Quality and Validation

What this section is about

This section focuses on the quality of the in-survey data. In-survey data quality includes project level data validity and representativeness, survey-taking behaviours, sample blends, participant characteristics, and project level data health and audit practices

Q23

How often can the same individual participate in a survey? How does this vary across your sample sources? What is the mean and maximum amount of time a person may have already been taking surveys before they entered this survey? How do you manage this?

Toluna's panel respondents cannot participate in the same survey more than once and are limited to completing five surveys in a single day. This is true across all sample sources and made possible through technology that we developed to ensure each respondent is unique and recognizable, even if they attempt to take a survey from a different source. This is aligned with ESOMAR industry practices guidelines.

Q24

What data do you maintain on individual participants such as recent participation history, date(s) of entry, source/channel, etc? Are you able to supply buyers with a project analysis of such individual level data? Are you able to append such data points to your participant records?

For individual participants, we maintain records on:

- Date of registration
- Last login
- Last survey started
- Survey participation history
- Incentive History
- Site activity
- Profiling

We can provide project-level analysis of this data upon request.

Profiles of our panelists are appended to participant records, and third-party data can also be appended upon request.

Q25

Please describe your procedures for confirmation of participant identity at the project level. Please describe these procedures as they are implemented at the point of entry to a survey or router.

Identity misrepresentation is a very real challenge for any business operating in the online space, and the research industry is no exception. Just like a bank protects their customers' assets and a technology company protects their customers' information, we protect our clients' surveys from malicious actors trying to gain incentives by misrepresenting who they are, where they are, or what they think.

We do this by running a range of device and behavioral checks before every survey a respondent enters. These checks go beyond registration and ongoing on-platform monitoring and are based on both proprietary and off-the-shelf solutions. Combined, these checks form a shield to separate authentic respondents from those who are trying to misrepresent themselves.

Specifically, there are two types of checks we apply pre-survey: device checks and behavioral checks.

Device checks

(1) We've joined with companies across industries (including finance, technology, entertainment, and research) to share information about suspicious IP addresses. The resulting cross-industry database helps us identify respondents who are misrepresenting their location or operating from an IP address that has been identified as associated with fraud. By removing these IP addresses (645% more than through traditional market research industry methods), we have reduced speeding and straight lining, which has ultimately improved overall data quality.

Q25

Please describe your procedures for confirmation of participant identity at the project level. Please describe these procedures as they are implemented at the point of entry to a survey or router.

Device checks

(2) We leverage anti-bot checks to detect bot behavior or questionable device settings and prevent access to the survey. Bots are presented with JavaScript-based challenges to prove their humanity.

(3) To ensure the respondent is coming from the correct location, we conduct country and time zone checks, language and browser setting checks, and background setting checks. We also conduct IP address validations to determine the country of the IP address. These are verified against the survey's target market and measured against expectations for the target market.

(4) We use digital fingerprinting technology to identify individual respondents. This enables us to build a profile of devices that each panelist uses and flag anomalies in their behavior.

Behavior checks

We integrate several advanced bot detection solutions into our pre-survey checks. These enable us to identify abnormal behavioral patterns and prevent survey access for those respondents who were flagged as suspicious.

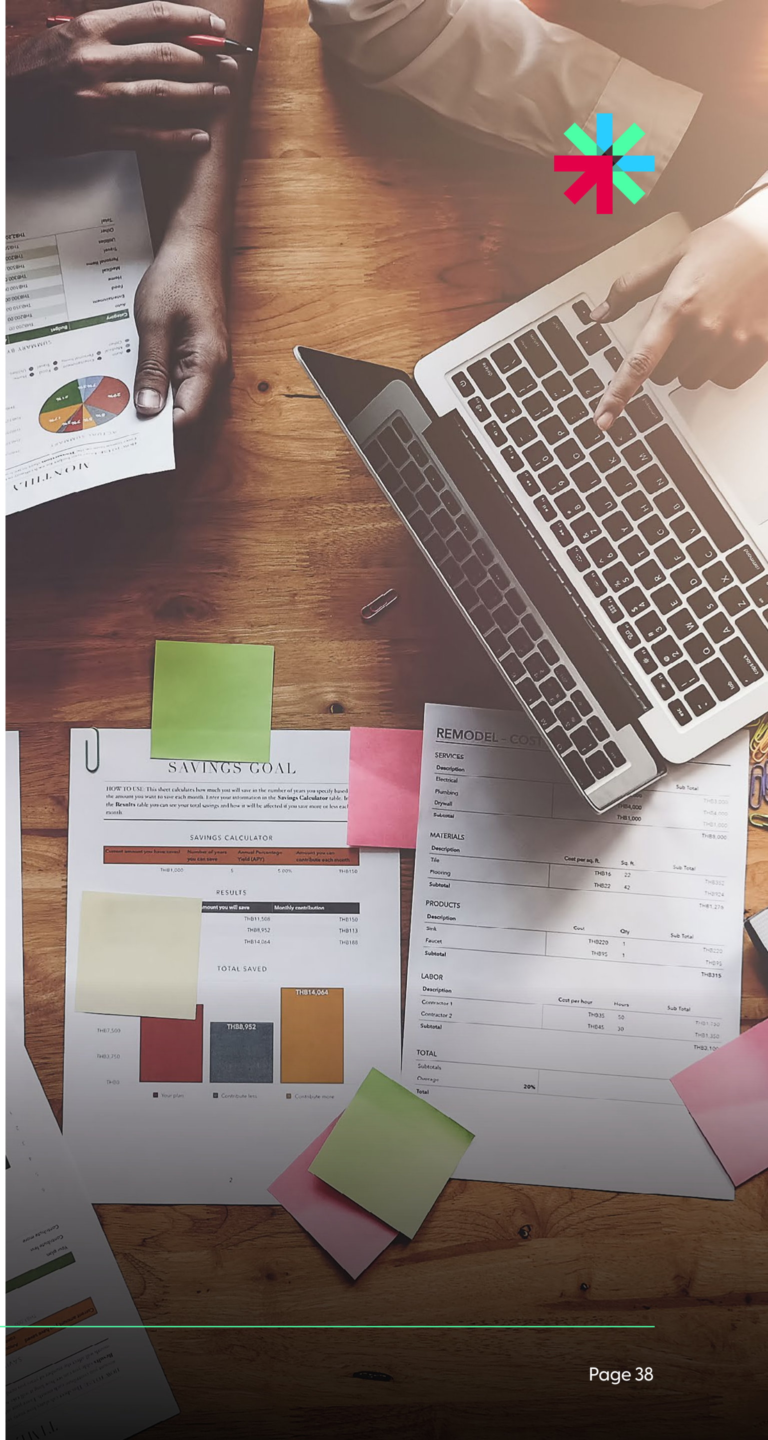
For further details about our holistic approach to quality checks, please refer to our Data Quality eBook.

Q26

How do you manage source consistency and blend at the project level? With regard to trackers, how do you ensure that the nature and composition of sample sources remain the same over time? Do you have reports on blends and sources that can be provided to buyers? Can source be appended to the participant data records?

Feasibility is the key to managing sample source consistency. At the start of a project, feasibility is used to determine how we can consistently deliver completed surveys from a specific source. If there are additional waves of research, each wave is run with the same methodology as the initial assessment in order maintain source consistency.

We have data about blends and sources and can share each with clients upon request. Source data can also be appended to participant profiles.



Q27

Please describe your participant/member quality tracking, along with any health metrics you maintain on members/participants, and how those metrics are used to invite, track, quarantine, and block people from entering the platform, router, or a survey. What processes do you have in place to compare profiled and known data to in-survey responses?

In addition to our suite of registration and pre-survey checks, we maintain an individual quality score on every panel member, which is determined by an algorithm that accounts for each panelist's behavior in surveys, as well as any flags a panelist may have received from the device and behavioral pre-survey checks. This continuously updated quality score determines the degree to which a respondent can participate in Toluna's surveys in real-time.

1. If a panelist's quality score is above the pre-defined threshold, they are allowed to participate in any survey.

2. Sometimes, panelists fall below the threshold and end up in the 'grey zone.' This could occur because they are distracted and provide an illogical answer, or if they take a survey too quickly. Of course, these aren't immediate signs of a repeat offender. Therefore, these respondents are simply monitored more closely rather than being removed from right away.

3. If the member's quality score is below the grey zone due to repeatedly providing responses below the expected quality standard, the member is blocked and can no longer access surveys.

Q27

Please describe your participant/ member quality tracking, along with any health metrics you maintain on members/ participants, and how those metrics are used to invite, track, quarantine, and block people from entering the platform, router, or a survey. What processes do you have in place to compare profiled and known data to in-survey responses?

Our quality algorithm consists of more than 25 different checks, which are evaluated on an ongoing basis. These checks include, but are not limited to:

- Repeated speeding
- Repeated poor-quality open-end responses
- Repeated pattern responses
- Repeated failing of red herring questions
- Repeated illogical or inconsistent responses (e.g. providing demographics that are different than the demographics submitted when registering)
- Using unusual device settings or IP addresses
- Other behavioral and device checks.

Our response consistency checks, specifically, are a recent improvement to identify those respondents who repeatedly provide inconsistent answers for basic questions, like age and gender, which raise doubt about the sincerity of the panelist's responses. By deploying real-time analytics and machine-learning models, we identify those who shouldn't be allowed to participate in surveys and those who are in danger of falling into this category. This allows us to proactively monitor 'at-risk' respondents and block them immediately if they fall short of our quality expectations.

Q28

For work where you program, host, and deliver the survey data, what processes do you have in place to reduce or eliminate undesired in-survey behaviours, such as (a) random responding, (b) Illogical or inconsistent responding, (c) overuse of item nonresponse (e.g.," Don't Know") (d) inaccurate or inconsistent responding, (e) incomplete responding, or (f) too rapid survey completion?

Toluna takes data integrity very seriously and has invested significant effort to eliminate as many potential biases from survey data as possible. Even in projects that are programmed and hosted by the client, we proactively provide consultancy to clients on items such as questionnaire design and respondent experience. For projects programmed and hosted by Toluna, best practices and due diligence are applied throughout the project.

For in-field quality checks, we use complex, in-survey algorithms to evaluate respondents' engagement and detect potential negative behaviors. We base our live quality assessment model on four pillars:

1. Red herring questions measure respondents' attentiveness by testing their response against questions with known answers (i.e. "what year is it?" or "please select the fourth option from the list"). Most of the time, an incorrect answer to such a question highlights lack of engagement and attention, which would call into question the effort that is being put into answers for the rest of the survey questions. Once we notice repeated failures on red herring questions, we screen out the inattentive respondent.

2. Speeding through a survey in a very short time period compared to other respondents is the most notable sign of a poor-quality respondent. However, we have found that it is not easy to assess this behavior because of complicating factors like internet connection, number of questions seen, and even demographic-level differences in survey response time. Therefore, we assess this data very carefully before deciding that a respondent has sped through. As this measure is different for every study, it is implemented during a survey; if a respondent reaches certain milestones too quickly, we will screen them out.

Q28

For work where you program, host, and deliver the survey data, what processes do you have in place to reduce or eliminate undesired in-survey behaviours, such as (a) random responding, (b) Illogical or inconsistent responding, (c) overuse of item nonresponse (e.g.," Don't Know") (d) inaccurate or inconsistent responding, (e) incomplete responding, or (f) too rapid survey completion?

3. Straightlining is a pillar that we lean upon to assess the quality of data collected on grid questions. This can arise in the form of flat-lining (providing the same answer to all grid questions) or non-differentiation (providing very similar answers to all items). Questionnaire design plays a critical role in making the respondent's task as manageable as possible, but we also monitor these behaviors during the survey and will automatically close the survey upon repeated straightlining behavior.

4. Poor quality open-end responses. Because surveys require an answer for most or all questions, open-ended questions require the most effort from respondents. This means there's a greater chance of poor-quality data in the form of irrelevant comments, or even random characters, in order to move onto the next question. We monitor for profanities, random letters, verbatim length, and similarity of verbatims within a survey. We apply a mix of automation and human monitoring to remove participants providing poor quality open-ended responses.

In addition to these checks, we recommend using plausi-checks in surveys to identify those providing contradictory information (i.e. not having kids but buying diapers on a weekly basis). As research continues to be democratized, it is critical that researchers continue to focus on questionnaire design in order to eliminate as many potential biases as possible. Our team's expertise in this area helps to ensure clients are getting the highest quality data possible.

Policies and Compliance

What this section is about

Sample providers, buyers, and their clients are subject to data protection and related information security requirements imposed by data protection laws and regulations. In addition, they may be subject to laws and regulations that may impact incentives paid to participants.

These laws and regulations vary by jurisdiction with different laws and regulations applying in different countries or states within countries, and are generally interpreted based on where the participant resides.

Applicable data protection laws and regulations include, but are not limited to: the Act on the Protection of Personal Information or APPI (Japan); the Australian Privacy Act (Australia); the California Consumer Protection Act or CCPA (state of California in the United States); the Children's Online Privacy Protection Act or COPPA (United States); the Data Protection Act (United Kingdom); amendments regarding data localisation requirements to the Data Protection Act (Russian Federation); the General Data Protection Law (Brazil); the EU General Data Protection Regulation or EU-GDPR (EU/ EEA); the Health Insurance Portability and Accountability Act or HIPAA (United States); the Graham-Leach Bliley Act or GLBA (United States); and PIPEDA (Canada). AB 2257 (the state of California in the United States) is an example of law and regulation related to employment which may impact incentives paid to participants.

Information security frameworks and standards include, but are not limited to COBIT, HITRUST, ISO 27001, the NIST Cybersecurity Framework and SOC 2.

Answers to the questions in this section can help you understand the data protection, information security and compliance policies, procedures and practices that a sample provider has implemented

Q29

Please provide the link to your participant privacy notice (sometimes referred to as a privacy policy) as well as a summary of the key concepts it addresses. (Note: If your company uses different privacy notices for different products or services, please provide an example relevant to the products or services covered in your response to this question).

This link directs you to our participant privacy policy, which can be found in the footer of our panel website, Toluna.com, as well as in our mobile application alongside Cookie and Terms and Condition policies. Key concepts addressed in Toluna's privacy policy include:

- Who we are and what we do
- Data that is collected
- Data processing purposes
- Data sharing
- Data retention, acquisition, disposal
- Data subject rights
- Cross-border transfers
- Security measures employed
- Contact information

Q30

How do you comply with key data protection laws and regulations that apply in the various jurisdictions in which you operate? How do you address requirements regarding consent or other legal bases for the processing of personal data? How do you address requirements for data breach response, cross-border transfer, and data retention? Have you appointed a data protection officer?

Toluna applies the GDPR as a base approach on a global level, and then applies stricter measures on a local level if required by law. We obtain the consent from our panelists to be contacted for survey participation and provide a copy of our privacy and cookie notices so they may understand the treatment of their personal data.

Toluna has an Incident Response Plan that is reviewed on a regular basis, and we provide ongoing training to all Toluna staff on this. We also have a data retention policy in place, whereby:

1) client personal data samples are erased within 6-12 months

2) panelist data is erased within three years of opting out or becoming inactive.

We have a Litigation Hold process and can erase panelist personal data upon request. We have appointed a global data protection officer, who can be reached at **DPO@Toluna.com.**

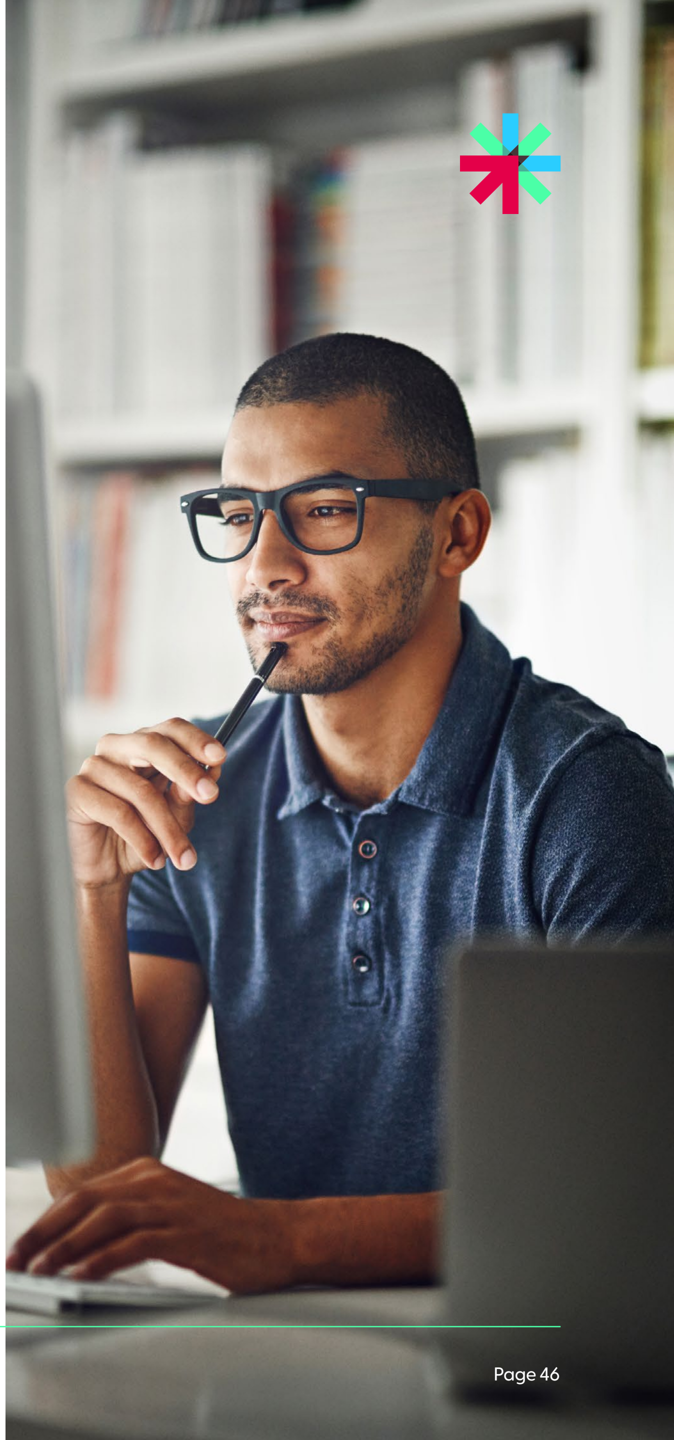
Q31

How can participants provide, manage and revise consent for the processing of their personal data? What support channels do you provide for participants? In your response, please address the sample sources you wholly own, as well as those owned by other parties to whom you provide access.

Toluna has employed a cookie consent tool, whereby a respondent can elect to allow or opt out from cookies. Additionally, we have set up a dedicated link for panelists to make requests to manage their data, including:

- Requests for data erasure
- Requests to opt out
- Requests for data access
- File a complaint

In addition to this dedicated link, any respondent—including those from third-party sources—may contact the group Data Protection Officer directly at **DPO@Toluna.com.**



Q32

How do you track and comply with other applicable laws and regulations, such as those that might impact the incentives paid to participants?

Toluna has a legal team that receives regular updates on applicable laws and regulations from external sources. Additionally, Toluna is a member of multiple market research societies, including ESOMAR, where we have a representative on the ESOMAR Legal Affairs Committee. These resources help us maintain awareness of any new laws that might impact the services we perform.

Q33

What is your approach to collecting and processing the personal data of children and young people? Do you adhere to standards and guidelines provided by ESOMAR or GRBN member associations? How do you comply with applicable data protection laws and regulations?

We recognize that the collection and processing of children's data, as well as data from other vulnerable groups, is a legitimate and valuable form of research. They are entitled to have their voices heard, too. As certain types of research may require special care, we take precautions to ensure the welfare of those participants. Only adults are allowed to be members of our panel, and if we are tasked with a project that requires survey participation from children under the age of 16, we ask their parents/guardians for their consent.

We adhere to all standards and guidelines provided by ESOMAR or GRBN member associations, with particular attention paid to **ESOMAR and GRBN's Guideline on Research and Data Analytics with Children, Young People, and Other Vulnerable Individuals**. If local law requires a higher age when asking parent/guardians permission for children to participate, we raise that age to comply with the local law (i.e. under the Brazil LGDP, the minimum age is 18).

Q34

Do you implement "data protection by design" (sometimes referred to as "privacy by design") in your systems and processes? If so, please describe how.

Data protection is an integral part of Toluna's business. We have implemented and continue to maintain a "privacy by design" process. All new processing, systems, and products are reviewed prior to their creation and/or launch to ensure respondents' privacy is protected.

Additionally, we provide training for our staff to ensure that privacy is accounted for at the very beginning of all new processing. Special consideration is given to the principles under Article 5 of the GDPR, which provides guidance on the legal basis of processing and ensures that the rights of individuals are respected.

Q35

What are the key elements of your information security compliance program? Please specify the framework(s) or auditing procedure(s) you comply with or certify to. Does your program include an asset-based risk assessment and internal audit process?

Toluna is accredited for ISO 27001:2013. Our risk methodology is based on ISO 31000, which entails external and internal audits. We also employ state-of-the-art technical security solutions to protect our environment. Production applications are vetted against OWASP standards.

Toluna ensures that respondents are not associated with any personal identifying information they might provide, and our data center is redundant to make sure that data is quickly recoverable in the event of natural disaster.

Overall, we have an uptime rate of 99.97 percent. Scheduled maintenance and feature upgrades are announced at least 48 hours in advance and are completed during off hours.

Q36

Do you certify to or comply with a quality framework such as ISO 20252?

You need insights you can trust. That's why our best-in-class, holistic approach to quality is baked into all aspects of the process, including:

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

We are constantly reviewing, investing in, and evolving this process to provide the highest quality insights for our partners.

We also adhere to the best practices outlined in ISO 20252.

Metrics

What this section is about

This section lists common sample and data health metrics. Reviewing metrics periodically can serve as the basis for a conversation with sample providers about consistency and reliability, as well as whether the sample is appropriate for the population and business question being examined. Unexpected or unexplained shifts in metrics may also indicate the potential for bias or error. While not all of these metrics are required and there are no benchmarks on the "right answers," providing transparency over time will create a meaningful dialogue about quality and utility.

Q37

Which of the following are you able to provide to buyers, in aggregate and by country and source?

- Average qualifying or completion rate, trended by month
- Percent of completes rejected per month/ project, trended by month
- Percent of members/accounts removed/ quarantined, trended by month
- Percent of paid completes from 0-3 months tenure, trended by month
- Percent of paid completes from owned/branded member relationships versus intercept participants, trended by month
- Average number of dispositions (survey attempts, screenouts, and completes) per member, trended by month (potentially by cohort)
- Average number of paid completes per member, trended by month (potentially by cohort)
- Active unique participants in the last 30 days
- Active unique 18-24 male participants in the last 30 days
- Maximum feasibility in a specific country with nat rep quotas, seven days in field, 100% incidence, 10-minute interview
- Percent of quotas that reached full quota at time of delivery, trended by month

Toluna can provide all these metrics to buyers upon request.