



a whitepaper by



*Unlocking the power  
of open text data.*

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**CONNECT YOUR DATA,  
FILTER WHAT MATTERS,  
IMPRESS WITH INSIGHTS.**

# UNLOCKING THE POWER OF OPEN TEXT DATA

*Traditionally businesses have been forced to rely on closed multiple-choice questions for surveys, despite the fact that open questions can often provide more valuable and more in-depth responses. In this white paper we'll look at the challenges of analysing open text data and how advanced AI systems like INQQA can help businesses harness that power.*

## Feedback, feedback, feedback

Today we live in something of a feedback culture. Everybody wants our feedback, whether we've purchased something, worked for a specific company or done business with someone. And this feedback has become a crucial asset for companies to help them understand what their customers or their staff think of them, their products and their services. This in turn can be used to drive everything from product development to strategic company decisions.

This feedback data can come from many different sources, such as surveys, online reviews, social interactions or even chat logs. However, in reality, the main focus for companies getting this data has always tended to be direct surveys using multiple choice questionnaires. The key reason for taking this approach is the ease with which the resulting data can be processed and then analysed.

This is despite the fact that asking one or two open-ended questions (compared to maybe 10 closed multiple-choice questions) provides a much more natural and detailed way of getting feedback. This is because open questions allow people to be more expansive and less directed with their answers. If you have a good culture within your company, or good relations with your customers, people will want to give you detailed feedback, and the insights provided can be ultimately more valuable than those gained from closed questions.

That's not to say companies have been completely ignoring this type of open feedback – they haven't. The challenge, however, is that analysing that data and extracting detailed insights from it has always been both labour-intensive and hugely costly, particularly if you are looking at responses from large numbers of people across multiple languages, which is certainly likely to be the case for large multi-national organisations.



# WHY COMPANIES TEND TO IGNORE OPEN TEXT DATA

This has led to companies generally approaching open text data (if they have it) in one of three ways:

**1. They don't do anything with it – this is often the most common route.**

**2. They perform a bit of manual analysis. If there is a small amount**

**of data, somebody will go in and look at what's written and manually make notes – most companies don't have the resources to do this on any meaningful scale.**

**3. They will engage a technical team (more than likely externally) to do the analysis for them. The downside of this is that it requires huge budgets, specialist knowledge and a dedicated technology set. On top of this, co-ordinating the analysis can mean managing groups of different stakeholders to get the insights required.**

The reality is that turning open text into relevant and actionable insight is tough and expensive to set up, as well as needing to be constantly managed.

At the same time, a whole industry has built up around survey design that focuses on how to structure multiple-choice questions, as well as what procedures need to be followed in order to arrive at the right questions to ask. A lot of time and effort is spent by market researchers and management consultants crafting questions in such a way that the companies doing the surveys get consistent quantitative signals about the subjects they're focused on.

## Why closed question surveys only give you part of the picture

This process has powered surveys for decades. However, there are clear and obvious downsides to basing decision-making on closed questions like this. For a start, and most obviously, you're missing everything you haven't thought of asking, but that may also be highly relevant to the question at hand. This is because there is no possibility for people to express their opinion or their experience in its full richness. So, by not using open text, companies are potentially missing all that learning.

And it goes further than that. "Open text is more appreciated by the people who are giving feedback because they feel they're not being narrowed down into the thinking streams of the designer of the questionnaire – closed questionnaires often force people to answer in a certain direction," says Eric de Boer, Senior Principal at global management consultancy firm, Korn Ferry. "With open text questions people can answer how they like to answer."

Of course, the survey industry knows this, and there are solutions out there to help companies analyse open text, but the bulk of these systems are limited. "Survey analysis platforms like Qualtrics or Glint do offer some level of open text analysis, and some of the big technology platforms like Azure, Amazon and Google provide text analysis solutions, but they are very simplistic," continues de Boer. "At best, they have relatively small in-built libraries of words that are given a sentiment score. These frequently don't take into account the fact that sentiment is often dependent





on the context of the question. For example, if I ask people: 'what do you really like at your employer?' And they say, 'my remuneration', then remuneration is certainly meant as a positive thing. But if you are asking them: 'What could be improved in this environment?' Then remuneration in this context would take on a negative connotation."

Another key reason people turn to closed questions is that they can be easily compared over time to spot trends. "Say you are asking whether people have trust in their leadership on a scale of one to five and a thousand people are answering that, if you do the same survey next year it is relatively simple to compare the averages," explains de Boer.

*"Most platforms are not capable of trending open text questions in this way, and also they're not really capable of giving you the opportunity to test hypothesis – males versus females, the millennials versus the older generation etc."*

That being said, the fact that using open text means companies need to ask less questions and people can express themselves more freely, really does make the whole survey design and completion process much simpler.

So how can organisations harness the power of open text data?

### **How INQQA solves the challenges of open text data analysis**

This is where INQQA comes in. INQQA is an AI-driven data analysis tool that allows companies to quickly and confidently present clear insights from open text data. Whether they're doing customer or staff surveys, market research, analysing chat log data, tracking social media interactions, or looking at reviews for insight, INQQA can take that open text data and turn it into valuable and actionable insights. And it can do this without breaking the bank.

INQQA helps solve the challenges of working with open text in a number of ways: not only can it work at scale (it's currently certified up to 250,000 pieces of information in an individual project); but its intuitive interface also allows somebody without any technical knowledge to analyse the data in the way they want, even if they're dealing with multi-lingual responses.

### **How INQQA works**

Importing open text data into INQQA is simple and can be done through a variety of data formats, but typically customers use Microsoft Excel. This can be done simply by dragging and dropping files onto the INQQA client (we will talk more about different deployment methods for INQQA later in this paper). Once the data is ingested, INQQA quickly analyses it in 38 languages simultaneously.

The powerful thing about open text data is that answers can go in any direction, but this also presents its own unique challenges; mainly around people's differing use of language and structuring of their answers. So, INQQA "cleans" the data to filter out certain characters and account for the different ways people use language, as well as breaking up the text into sentences and paragraphs.

Once this initial "cleaning" has been done, INQQA looks at what people are writing about, and groups the relevant bits of answers together into specific subject areas. This is then presented to the users via an intuitive visual interface that allows them to see at a glance the key concepts being discussed. Each concept can be clicked on and zoomed into to see the different instances where these concepts have been mentioned. This means users don't have to look individually at the hundreds – or even thousands – of entries where respondents have said that the salary is great, or that they get great benefits. All these comments would be simply grouped under the heading of "pay and benefits".

**INQQA'S AI ALGORITHMS ARE TRAINED TO UNDERSTAND SPECIFIC LANGUAGE CONCEPTS USING BIG TEXT DATA COLLECTIONS, LIKE WIKIPEDIA. THEY ARE THEN REFINED USING TWITTER, WHICH HELPS ENSURE THAT WHEN ANALYSING OPEN TEXT DATA INQQA WILL BE STABLE ENOUGH TO PERFORM, NO MATTER HOW BAD THE LANGUAGE STRUCTURE.**

# TEACHING THE AI TO WORK THE WAY YOU WANT

**Making the insights relatable and relevant for the organisation.**

At this point, INQQA allows the user to provide their own input into the data and how the categories within the analysis are structured. For example, taking the concepts above, it may be that the user wants to have pay and benefits split into two different categories, or possibly that areas like “diversity” need to be expanded to “diversity and inclusion”.

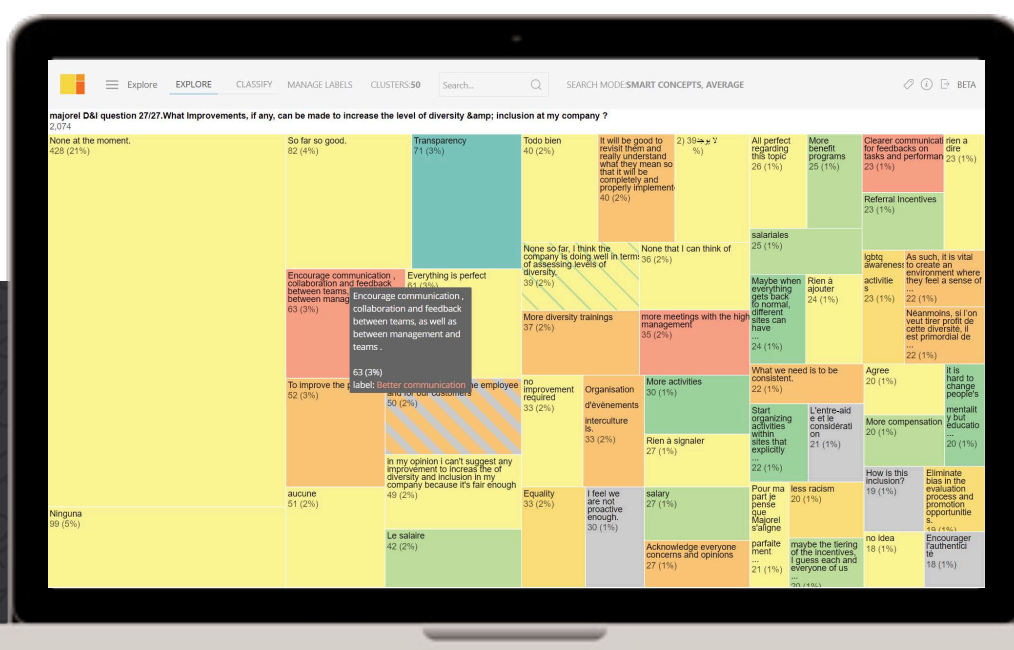
Alternatively, it could be as simple as just changing the name of a category to fit more with the company's own internal language – for example, some companies may want to refer to “pay and benefits” as “remuneration”, or to use “connection and collaboration” instead of “teamwork”. Ultimately, every company has their own way of defining concepts, so providing this human knowledge, or human interpretation, of the data – which takes between 15 and 20 minutes for a typical use case, or up to an hour for a really in-depth and granular analysis – plays a vital part in making the insights relatable and relevant for the organisation.

## Spotting and comparing trends with open text

Once this process is done the AI applies this new knowledge to the whole data set and the formatting can be saved so that it can be applied to future projects. This means that if a company wants to do a repeat survey on the same concepts, they can just take the model from the last time they ran the survey, and it will be consistently applied to the new data. This allows project teams to compare the results of these outcomes to see trends in data and also see when new concepts come up – something which up until now has been almost impossible with open text data.

Also, because of the way INQQA is able to quantify and report on open text data, this also means that areas that have traditionally seen exclusive use of closed questioning, such as employee sentiment in HR or brand association in market research, can be moved to open questions and still compared back against previous results so that trending analysis can be easily continued. Switching to open questions in these areas allows users to get a less restricted view of people's feelings and associations providing companies with a broader understanding of their challenges or successes.

Using an external team to manually analyse the data in this way could take weeks, whereas INQQA can do it in a matter of minutes. This is a huge productivity gain and opens possibilities for companies to start using open text data to gain insights much more frequently.



*INQQA has been created to combine the power of AI with an intuitive user interface so that users can easily get the clear insights they need from their text data.*

# REVIEWING AND REPORTING MADE VERY SIMPLE

Once the data has been classified into the concepts that the user wants to look at, it can be reviewed in different ways. The Classify view displays full answers, which, on mouse-over, highlights sentences with their respective categories.

If the user needs to search for specific things within the data, INQQA also provides a smart search. Using this enables the user to group together things about a topic or a general category. The user can also search for specific concepts and INQQA will find anything that is related to that concept – so they're not just limited to searching for a specific word.

To enable deeper analysis and cross-referencing with other data, graphical visualisations of the results can be created directly within INQQA. How the user chooses to do this really depends on the context in which they're working. From the results within INQQA it's possible to select the insights to highlight, and then export these so they can be used in PowerPoint presentations, or whatever other format the user is working in, and then shared with different stakeholders.

## Easily accessible

The intuitive nature of the INQQA interface means that users can be up and running with the platform with a minimum of training. Often as little as 30 minutes is required, after which users are pretty much able to run their own analyses. The feedback received is that INQQA is highly intuitive and easy to use, even fun! There are some areas that are not as intuitive, and those areas are usually covered off within the training process.

## Integrating INQQA into your Workflow

A series of one-click integrations are currently being worked on with some of the big data analysis platforms, as well as the Salesforce platform and Microsoft platforms. However, because INQQA integrates with backend systems of other third-party systems using open APIs it is easy to create custom integrations to ensure INQQA can fit seamlessly into customers' specific workflows.

THE AI USES AUTOMATED TOPIC CLUSTERING TO GROUP SIMILAR CONCEPTS TOGETHER IN A TILED VIEW. FROM HERE THE USER IS ASKED TO TAKE THEIR OWN "HUMAN" INSIGHT AND USE THAT TO SUPERVISE THE MACHINE LEARNING PROCESS. WHEN THE USERS APPLIES THEIR OWN CRITERIA TO THE WAY THE CONCEPTS ARE SPLIT UP AND LABELLED THEY ARE EFFECTIVELY DOING WHAT IS CALLED SUPERVISED LEARNING, ALLOWING THE ALGORITHMS TO BETTER UNDERSTAND HOW THE USER, AS AN EXPERT, INTERPRETS THE DATA. BECAUSE THE USER IS PRESENTED WITH A STATISTICALLY SIGNIFICANT SAMPLE, EVERY SIGNAL THAT THEY GIVE IS EFFECTIVELY SUPERCHARGING THE SPEED AT WHICH THE ALGORITHMS ARE LEARNING – ONE CLICK CAN SEND THOUSANDS OF LEARNING SIGNALS TO THE ALGORITHMS MAKING THE JOB OF ANALYSING THE DATA EASY, QUICK AND EVEN FUN.



# HOW IS INQQA DEPLOYED

As mentioned above, INQQA can be deployed in a number of different ways.

The main INQQA deployment is cloud-based. This means that all companies have to do is login to the INQQA domain and they have the full power of the system at their finger tips.

INQQA can also be deployed on-premises on a companies' own internal servers or public cloud domains. This deployment can be fully customised to work as part the company's existing workflows.

Finally, using containerisation it is possible to run an instance of INQQA on an individual laptop.

This range of deployment scenarios gives users the flexibility to use INQQA in almost any way they need to.

## Data Security

Data protection is essential for customers, and INQQA is fully compliant with GDPR practices as a data processor. Data is handled in the following ways within the INQQA platform:

**Using INQQA's secure cloud solution.** Here everything is hosted in a private cloud, in certified data centres.

**Using a direct connection to the client's own infrastructure** ensuring that all data stays in their own environment. For example, it's possible for INQQA to link to a Google or Office (OneDrive/Sharepoint) file so the data remains there.

**Using a stand-alone version of the software** directly hosted within the client's infrastructure.

Typically, INQQA doesn't store any personal data because it doesn't need to. While analysis of open text data does provide more useful insight if it includes background variables, like age, gender, corporate division etc, this is typically done at group level.

*INQQA uses proven deep learning technology alongside bespoke technologies that have been developed by the company and used to help many clients since 2007. This is put together in a way that is easy for the user to both use and understand.*



# INQQA

# INQQA PUTS YOU IN CONTROL OF YOUR DATA

We could sing the praises of INNQA, but sometimes letting the people that use the system tell you why it's such a game changer is a much more powerful way to do this. Here's what Eric de Boer, Solutions Architect, Korn Ferry, an early adopter of INQQA has to say:

*"One of the most powerful aspects of INQQA is that it's multi-lingual and unbiased when it comes to sentiment. When you have a lot of information and thousands of people answering in all kinds of languages, you want to be able to analyse it as quickly as possible and as simply as possible – and INQQA's user interface lets you do that."*

*"In fact, INQQA's user interface is kind of genius. It's so simple because the AI really picks up the common concepts in the answers from all the different languages. This means we don't have to worry about translations anymore, which is a huge advantage and cost saving."*

*"On top of this, being able to fine-tune and refine the categorisations helps make the information more communicable and relevant. You can name the categorisations something that the customer's business relates to. Lots of companies have their own internal language which they use in every-day interactions, and INQQA allows you to align with this language making it much more digestible."*

*"Not only that, but this process can be done interactively, the combination of the AI and smart user interface means there's no in-depth programming to be done to get the answers you want. I can just share screens with the team I'm working with, ingest the data by dragging and dropping the Excel file onto my browser. And in the space of a cup of coffee, INQQA is running its first analysis. Once you have that, the analysis can be refined within a matter of just 10, 15, 20 minutes. After that, the human wisdom that we put in INQQA is applied to the whole data set, and then everything is ready for traditional data analysis."*

*"The user interface of INNQA is now so advanced that when I want to do the data analysis, I can do it in the same meeting. While I'm interacting with the client, I can tell them the story that their data sets out, and then we can test any different hypotheses – opinions of males versus females etc."*

*"Ultimately, the whole process is in my hands, I have complete control of everything – even to the point that I can give customers official outputs so that they can use them in all kinds of presentations and meetings. For anyone working with open text data INQQA makes life much simpler – we are no longer afraid to ask any open question we want to any audience. And let's not forget, it works so damned fast."*



# WHAT IS YOUR DATA TELLING YOU?

**Easily get the clear insights  
you need from your text.**

**GET INQQA**

**WWW.INQQA.COM**