

# Contact Centre Analytics & Total Business Improvement

How to unlock the power of your data with contact centre analytics to improve three key areas of your business

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# Contents

<b>1. Introduction</b>	3
<b>2. Preparing your data and systems</b>	5
2.1 Data Discovery	7
2.2 Cataloguing	8
2.3 Creating the single view	9
<b>3. Analytics tools</b>	10
<b>4. Business results</b>	13
<b>5. More information</b>	16



# 1. Introduction



This white paper focuses on the importance of analytics in contact centres, how to do the groundwork to get your systems and data in order, what modern analytics tools you can use, and finally what benefits you will see.

Analytics, implemented properly, will allow you to improve three main areas of your business:

- Optimise resources – ensuring you meet cost to serve targets.
- Better operational performance – ensuring you meet quality of service targets.
- Enrich the customer experience – ensuring you meet sales, satisfaction and loyalty targets.

The multiplication of channels and data that digital technologies have brought us is overwhelming for businesses and customers alike.

For senior executives to make good strategic choices, for mid-level management to translate them operationally, and for front-line staff to carry out them in the moment, everyone – including customers – needs access to up-to-date and accurate data.

We call it a single version of the truth.

For any complex system like a large modern business to work effectively, there needs to be a way to both collect data from across the business and then analyse it.

Other than face-to-face and ecommerce, most of the channels used today – think voice, webchat, mobile, social media, instant messaging, and so on – are managed in the contact centre, which for many businesses is now the main hub for customer interactions and transactions.

## The centre of your business

If your company has a contact centre of more than, say, 20 seats, it is likely to be a main focus of your customer service, customer experience, and sales efforts.

With the customer experience being a board-level concern for many forward-thinking companies, which seek to leverage it as a new source of competitive advantage and differentiation, it's only natural that the contact centre has become more strategically important.

And yet the contact centre itself is also a complex web of interacting systems, data, and people; a microcosm of the business itself. It therefore follows that there needs to be some method for collating and making sense of all the data that the contact centre collects before it can be analysed to fuel business decisions.

## Your analytics is only as good as your data

The plethora of analytics tools available to businesses today are capable of incredible things, as we will see. But they will only give accurate and useful information – the truth – if they can chew on the right data. Rubbish in, rubbish out, as the saying goes.

What you're really trying to do with analytics is make connections between lots of data points to tease out new business insights and trends that would otherwise remain 'hidden' in the data. So before embarking on an AI-enabled 'Big Data' programme, your company needs to ensure its available data is complete, accurate, up-to-date, and relational – that is, capable of being queried and related in multiple ways.

In section 1 of this white paper we look at how any business, even one with multiple and disconnected legacy systems, can do this.

## AI won't give you all the answers, you need human brains too

In section 2 we will look at some of the analytics tools and methods available today, including data mining, deep learning, Bayesian analysis, predictive analytics, and others. These powerful tools enable you to dive deep into multiple layers of data, cross-check with other data sources (including external ones) and uncover new connections and trends.

What needs to be understood though is that while these tools take raw data, crunch it and churn out richer, summarised, cross-referenced data, that all still needs to be looked at by people to be turned into business and operational insight.

There are three key elements you need to get right in order to unlock the insight required.

- The first is to connect all the different areas of the business, and their disparate data sources, to create a single view of the whole business and of each customer.
- The second is to be able to collate, analyse, interrogate and visualise all that data in order to uncover connections that have previously been hidden.
- And finally, you need to be able to take that new knowledge and turn it into operational insight that tells you and your teams what needs to be done to transform your 'business as usual'.

# 2. Preparing Your Data and Systems

Within all the departments, business functions, IT systems, and databases of your business you will have lots of structured, semi-structured, and unstructured data.

Structured data would be things like your customer and transaction databases, through to unstructured data which could include things like website visitor meta-data.

It could be contained in databases, XML files, file systems on individual workstations, or cloud-based file systems. Around 80% of all organisational data is thought to be unstructured, and modern data discovery tools should be able to uncover most of it.

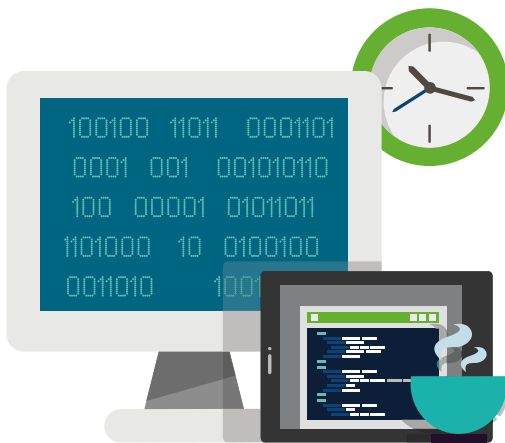
There is a lot of extremely valuable business information locked up in all that data if only you could interrogate it and make sense of it. Using deep-dive data mining, the location, type, and volume of all this data can be discovered. This search should encompass anywhere that customer and other relevant information might reside; from your operational systems to

customer testimonials to marketing mailing lists to email inboxes to customer complaints and everything in between.

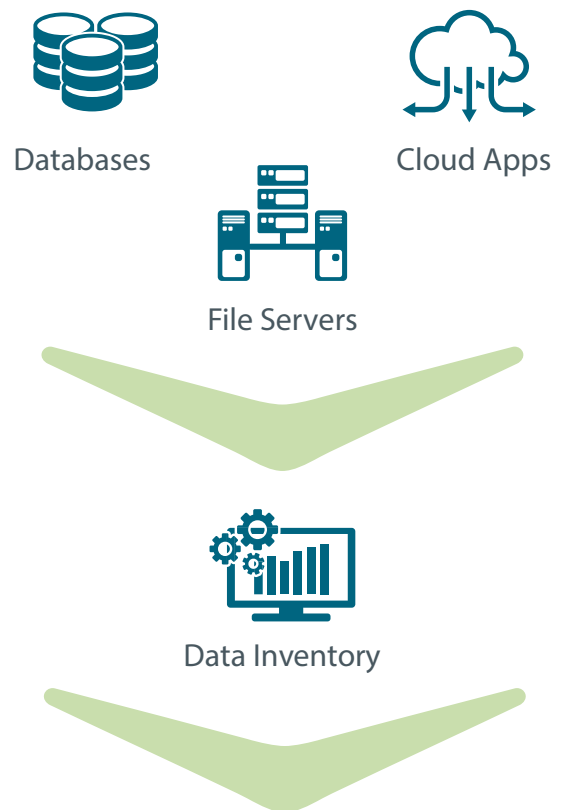
In order to be able to ask questions of all this data it then needs to be tagged and collated. What we are really talking about is creating an indexed copy of all your data, which means the original databases and files do not need to be altered. The goal is to organise the data in such a way that every piece of data which belongs to, for example, customer John Smith, is tagged as such.

Your analytics suite should be able to derive information from unstructured data by applying metadata tags. Applying tags turns your information into data and allows you to group and categorize this new data so it can be analysed and evaluated. Software can also use smart algorithms or tools such as Regular Expressions to comb unstructured documents for specific types of data and extract that information automatically.

What you now have is a portal for accessing all your data, enterprise-wide. This central repository should be kept up to date by running the tagging and indexing routines on data as it is acquired and updated. Its true value is in giving you a single view of your business, and of each customer.



- Data can quickly and easily be loaded from structured, semi-structured and unstructured data sources simultaneously
- Data is tagged on load with GDPR-relevant metadata tags including data subject (the customer or prospect that the data is about), data owner, data location and retention period
- Once loaded a central data inventory of all organisational data is created
- From here users can conduct a data audit, organise the data inventory, identify high-risk data sources and quickly identify what actions are needed to attain compliance



# 2.1 Data Discovery

The first step is to find out exactly what personal and sensitive data is held and where that data can be found.

Using deep-dive data mining, the location, type, and volume of all personal and sensitive data can be discovered. This search should encompass anywhere that customer information might reside, from your operational systems to customer testimonials to marketing mailing lists to email inboxes to customer complaints and everything in between.

This information is found in structured databases, semi-structured XML files, unstructured file systems on individual workstations, cloud-based file systems – you name it, you need to check if there is personal or sensitive data in those systems. Indeed, 80% of all organisational data is unstructured if you believe the statistics!

Finding out where information is held can be easy in some systems. On the other hand, you could be trying to find out how many John Smiths you have across multiple databases and a few thousand workstations, and then establish how many of these John Smiths are unique individuals, and which records relate to exactly which John Smith.

Data discovery software can take all this information and search against it simultaneously, instantly finding and collating everything from siloed data sources.



# 2.2 Cataloguing

While finding all the personal and sensitive information a company owns certainly looks like the biggest challenge now, cataloguing all that data after it has been found can be just as hard.

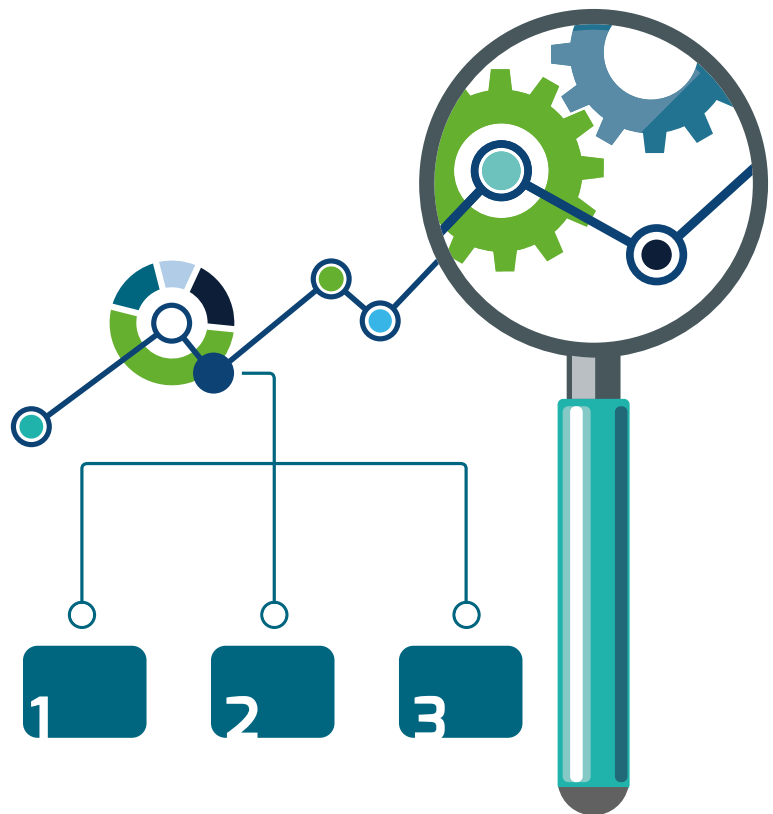
A clear information tagging strategy is needed to get a clear picture of all the information a company owns and to understand to which data subject each item belongs.

Without some sort of automatic metadata tagging process, it is going to take a lot of effort to understand – for example – where you keep IP addresses, who owns the IP address, what you're using them for, and what the legal basis for processing them is.

Modern data discovery software includes comprehensive metadata cataloguing to help identify what data is held where, why, by whom, and for what reason.

Smart business rules and regular expressions can extract structure from unstructured and semi-structured data sources, to help automatically build a 'big picture' of personal and sensitive metadata.

So instead of just finding out whose data is held where, you can now find out what types of data are held where.





## 2.3 Creating the Single View

Aside from bringing all the data together, the other great challenge of single customer view has always been what technology to use to store and access that data and keep it up to date.

Assuming you are not moving all your data into a single central repository – which is even harder and likely impossible to do in many cases – what we are talking about is creating an indexed copy of all your data.

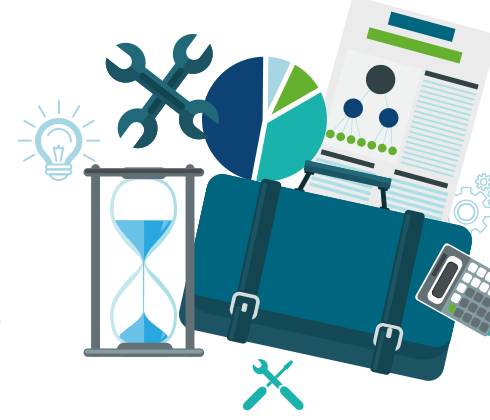
This 'clipboard' of the data we discovered in step 1 and then catalogued in step 2 is your single customer view.

By storing all the files in a unified 'index' format, the challenges posed by joining different data from different file types and different data sources are easily overcome.

In addition to finding how much John Smith data you have, you should now have a full visual history of each John Smith's interactions with the company.

What you now have is a portal for accessing all your data about any individual customer. This central repository should be kept up to date by regularly running the discovery and cataloguing processes on newly acquired data.





# 3. Analytics Tools

## Unlock your data to gain insights

In a business world where established companies, business models, and even whole industries are transformed and made obsolete almost overnight, the ability to spot a trend before others and act on it quickly are tremendous sources of competitive advantage.

As the contact centre is now the touchstone for so many customer interactions, it is one of your company's most important sources of information – including customer feedback and complaints; CSAT, NPS, and other KPI data; analyses of contact frequency and type; sales, up-sales, and cross-sales results; and even meta data on website and self-service usage.

Assuming you have gone through the data discovery stage outlined above and have all this data tagged in some sort of central repository, you now need to be able ask questions of it. There are three considerations when it comes to business analytics: speed, accuracy, and depth of information. Your operational and management teams need the freedom to ask all sorts of different questions, which means they cannot be limited to a set number of pre-defined reports. Your analytics suite should allow them to quickly create reports without coding, writing

SQL, or getting the IT Team involved. Using a simple drag and drop interface they should be able to create even complex, cross-tabulated reports on multiple data sources.

When reports are run the data used to compile them should be as up-to-date and as accurate as possible. This means your central repository, if you are using one, should be updated regularly if not in real-time as transactions happen and data is acquired. Running reports manually is incredibly time-consuming, particularly if the data must be prepared beforehand. Your analytics system should be able to automate most of these tasks and give reports daily, or in real-time, to the people who need them. Managers can then spend their time analysing reports rather than producing them.

For humans to learn anything from all this data – even if it has already been analysed by some deep learning or data mining AI system – reports need to be presented in a way that allows users to drill down and interact with them. Sometimes a trend is not visible at the very top level and it takes looking deep into the data, and cross-checking with other sources, to tease out valuable insight. Spreadsheets of numbers just don't work for most people, so different types of visualisations of data should be available.

## Visualising your data for insight

You need to be able to collate, analyse, interrogate and visualise all your data, in as near real-time as possible, in order to uncover connections that have previously been hidden.

Today's analytics suites do all the tagging, number crunching, and analysis before you even make a query. Their sophistication varies, but most should have a fair number of standard report types that you can customise and run without needing to call IT or become an SQL wizard.

Self-service analytics allows your managers to go far beyond customising reports and create all kinds of charts and other visualisations to tease out connections and correlations between different pieces of data.

Even in environments where many applications the business uses may be SaaS or cloud-hosted – and the data in these systems effectively ring-fenced – new self-service technologies are emerging such as Data Preparation (or Data Wrangling), Search-driven BI, Smart Data Discovery and Prescriptive Analytics tools that allow users to extract, cross-reference, and run reports on the data they need.

Self-service analytics tools served by an enterprise-wide warehouse of meta-tagged data allows users to get the insight they need while enabling IT to retain control over infrastructure, data governance, and security.

## Types of Analytics Tools and their uses

In the contact centre there are three main uses for analytics tools:

### 1. Planning and Resource Optimisation

In complex omnichannel contact centre environment getting staffing levels right to ensure you always have the right skills available is quite an art – but actually with modern analytics it's becoming a science.

Work Force Management (WFM) software includes deep learning algorithms which monitor call (and other media) volumes to look for patterns which might not be obvious to human observers. While this technology is essentially a modern, AI-enabled extension of the type of scheduling software that has existed for decades, there are also new tools for planning.

As companies capture more and more data about all aspects of their businesses, not just the contact centre, analytics can be used to better understand the drivers of customer contact to predict when spikes in call and other channel volumes are likely to occur. This can be based on an analysis of historical data as well as the ongoing monitoring of enterprise-wide activity.



## Performance Assessment

The more closely you are able to monitor agents' conversations the more detailed and specific feedback you are able to give to improve their performance. This is also the most effective way to maintain compliance in regulated sectors and guard against risks associated with employee misbehavior.

While in the past this level of monitoring would have meant hiring more and more QA people, AI software like speech analytics, speech to text, text analytics, and sentiment analytics all make use of Natural Language Processing (NLP) to understand conversations. The vast amount of unstructured data in conversations can then be analysed for keywords and phrases, tone of voice, and so on. Any calls or chat sessions which are outside of certain parameters can then be flagged for further investigation by a QA team member. Desktop analytics, which monitors the activity and inputs on an agent's desktop, can associate a screen recording with every call or chat, and also monitor for non-compliant activity, such as not ticking a checkbox or missing a screen.

At the same time, investing in analytics gives a double whammy to efficiency. Firstly the insight gained can be used to improve performance; and secondly, the admin time taken to produce these kinds of reports is also hugely reduced, which allows managers and leaders to instead spend their time learning from the data.

## Improving the Customer Experience

Tools we have already seen like sentiment analytics and predictive analytics can assess customers' responses and intentions with a view to predicting their behavior. In the multichannel and omnichannel contact centre it is also important to understand the complex interplay between different channels, media, customer segments, and drivers of customer contacts. For example, while a certain demographic may prefer self-service for some functions, another demographic may phone the contact centre to accomplish the same goals.

Using the analytics tools above to understand how your customers currently act is just the first step in the process however. Customer journey and interaction analytics allow you to change customer behavior by funneling customers to specific channels for specific purposes and then measure the customer effort involved, the number of steps for the customer, and the efficiency for the company. Once analysed the data can be used to redesign processes, offer new channels and services to improve the customer experience, or recalibrate the balance between self-service and agent assisted channels.



# 4. Business Results

As we have seen Analytics, implemented properly, will allow you to improve three main areas of your business:

- This 'clipboard' of the data we discovered in step 1 and then catalogued in step 2 is your single customer view.
- By storing all the files in a unified 'index' format, the challenges posed by joining different data from different file types and different data sources is easily overcome.
- In addition to finding how much John Smith data you have you should now have a full visual history of each John Smith's interactions with the company.

## Transformation of Customer Experience

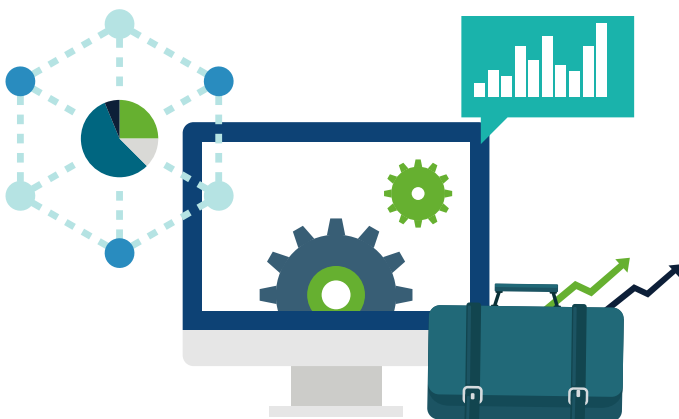
So here we are. You have found and catalogued all your personal and sensitive customer data, built a central repository for it, tagged it, and have in place an analytics suite to ask questions.

What can your organisation do with this vast treasure trove?

The most effective way of marketing and selling to customers, and then serving and delighting them on an ongoing basis, is to treat each customer as an individual. We doubt anyone would argue against that.

Companies without a single customer view – most companies today – are unable to do that. To them a customer is the records tied to this address; the transactions from that phone number; the meta data from this IP address; these comments from this Facebook account; and these orders from this credit card going to this address.

They have no way of joining all those records up to get a full picture of the individual with whom they are dealing.



Many of the greatest customer experience and marketing challenges we face today are all to do with our inability to gain a single view of our data:

- You cannot personalise products and offers without a full understanding of a customer's wants, needs, and behavior.
- You cannot effectively meet with a customer at multiple touchpoints (email, phone, web, chat) if your organisation doesn't know it's the same customer each time.
- You cannot proactively service them and anticipate their problems before they happen if you cannot see everything that's going on.

Your business is now able to:

- View and follow the complete trail of phone interactions, website visits, emails, purchases, social media comments of every customer and prospect.
- See the business outcomes of those behaviours in terms of purchases, cancellations, returns, complaints, and customer service requests.
- Use that insight to improve products, services, processes, and customer journeys with a view to increasing revenues and profits while reducing costs to serve.
- Uncover new business opportunities in your own market, or related markets, that you otherwise would never have known about – at least until a competitor did it.

## Operations

Of course, having a single customer view is about more than just having all customer data in one place. It must be kept up to date, be accessible by sales, marketing and customer service staff, and whatever system you keep it on has to be integrated into customer interaction workflows across your different engagement channels.

On a simple level, when a customer calls in to the contact centre the agent should know that the customer has already emailed about the same issue. Taking it a step further, if the agent has access to the company website's meta data, they might also see that the customer has tried several times to look the same issue up in the self-service system.

To facilitate that, it's important to have a single user interface for agents to access all this information. Intelligent workflow can even follow an interaction and present data on the agent's screen at the appropriate time.

The result is faster, more accurate interactions that can easily take place over any channel and draw on any data source, system or process that is required for the agent to get the job done.

In our experience companies deploying centralised solutions that eliminate data siloes and deliver single customer view data to agents see on average a 20% boost in productivity as well as improvements in customer satisfaction and loyalty rates.

The objective of business analytics is to constantly transform your organisation based on accurate business intelligence in order to maintain or improve market position.

In the contact centre specifically, this greater level of insight at the level of the individual customer enables you to:

- Seamlessly manage interactions that cross multiple channels without asking the customer to update you or repeat information;
- Route customer enquiries to exactly the right team or person without delay;
- Proactively engage the customer to head off service issues before they become a problem;
- Personalise upsell, cross-sell, and renewals offers to meet a customer's exact needs and circumstances;
- Understand the commonalities of your best customers so you can find more like them.

It has long been said that a company's data is one of its most valuable assets, but how many companies take this to its logical conclusion?

If your data is not tagged and collated in a central repository; if your business analytics suite is not automated, customisable, and visual; and if your management is not able to interact with and

deep-dive into reports, then you are potentially missing out on opportunities.

### **Better operational efficiency**

In terms of time and cost saving, our own analytics suite is used by a bank to produce reports in 30 minutes that previously took a third-party company anywhere from two weeks to a month to create. A charity in the UK saves three days a month which dramatically speeds up time to insight, while a healthcare company saves an estimated half a million pounds a year.

If you want your contact centre operations to offer the type of joined up, efficient, cross-channel experiences that digitally savvy customers are now demanding, you need a modern analytics suite powered by a single customer view of your data.

While the full digital transformation of your business and contact centre requires an awful lot more than this, in terms of 'bang for your buck' you will get you an awful lot of the benefits without ripping and replacing a single piece of hardware or software.








# More Information

Infinity's Analytics combined with a Data Discovery and Management module have been specifically designed to help companies gain a single customer view and maximise the insight to be gained from that data.

To arrange a demo of our Analytics suite, and discuss how it can work for your business, please get in touch.

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-  [www.infinityccs.com](http://www.infinityccs.com)

While indexing your customer data with DDAM can help you create a Single Customer View, Infinity's Desktop and Workflow solutions provide your agents and other staff with the tools to access that intelligence from a single user interface so that it can be used to improve customer interactions.

