Data Centric

www.DataCentric.es

MDM

MASTER DATA MANAGEMENT

How to create a Master Database

Introduction

Francis Bacon said "Knowledge is power". Thus today´s major players, Facebook, Google, Amazon, Alibaba and others, work on obtaining information. They all accumulate tremendous amounts of information about their consumers, their business and their industry.

This goes from de-structured information (photographs, emails, power point, presentations and so forth) to transactional information (sales, claims, deliveries, times, etc.), to metadata, to information about organizations and particularly customers (ages gender, contacts, tastes, dislikes, interests and relations....). With this information, anything can be done, from predicting the sales of a new product to winning a country´s elections. Anything, provided the data is analyzed correctly.

IN THIS EBOOK YOU WILL SEE:

- The importance and advantages of having a data model linked to a master database.
- How to choose which elements are to configure Master Data.
- Master Data Management (MDM) techniques to create a master file.

"KNOWLEDGE IS POWER"

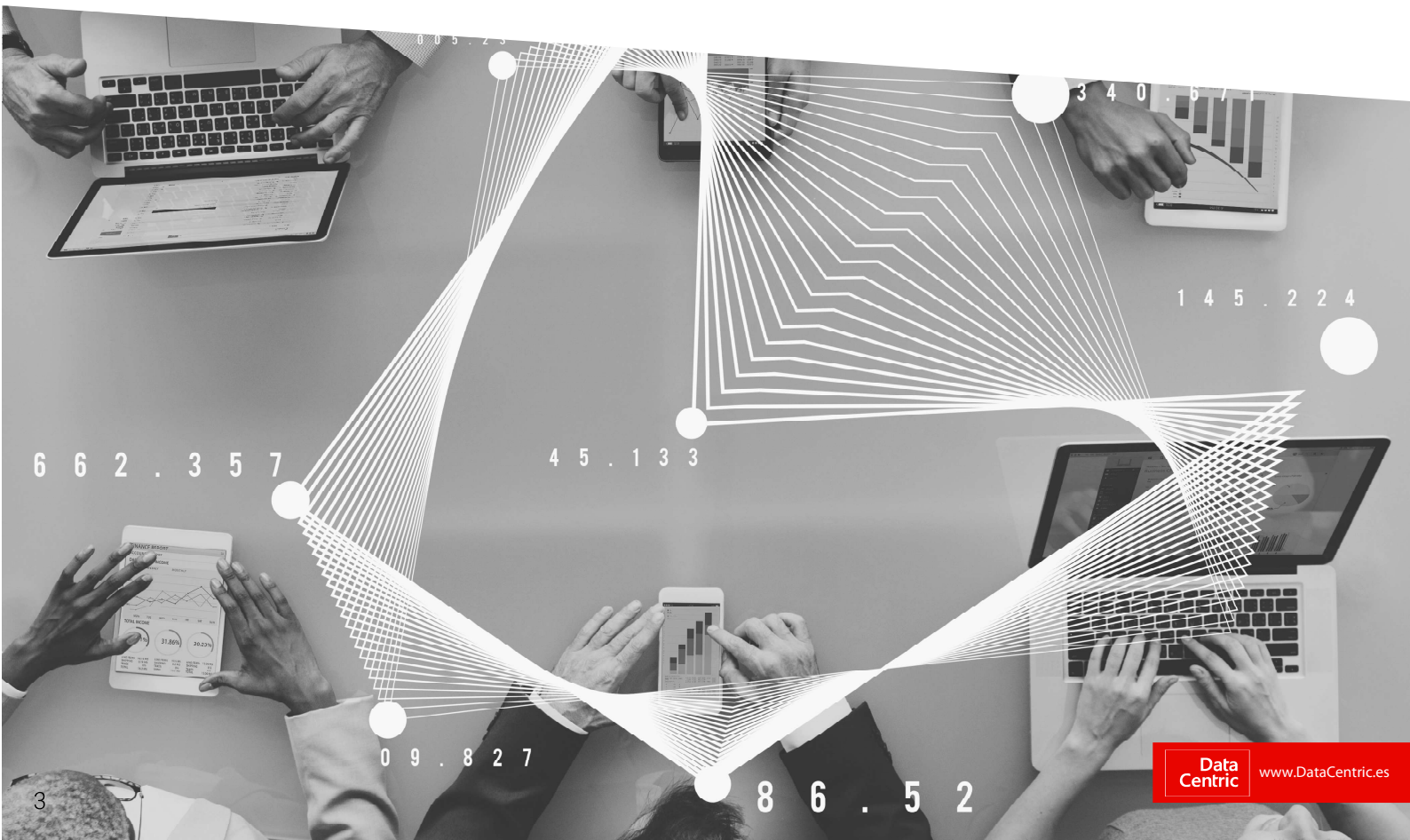
1 Why Master Data Management is so important for your company

Structuring information, that is, taking advantage of Big (and now actually Deep) Data is the great problem posed by the huge amount of knowledge that most companies have.

Companies no longer find themselves in a phase where they are worried about collecting data. Company's own forms, Data Licensing, opt-ins and opt-outs and assignment of data from use on platforms or browsing already covers that need. The true problem is lending meaning to the myriad of information that a company can collect in hundreds of ways.

That structuring is what is defined as Master Data Management and it is the first step in Data Governance. The first step is for your company to begin to use Big Data to:

- Optimize its processes
- Reduce costs
- Make better business decisions
- Increase its profitability and customer satisfaction
- Design strategies and products with greater certainty about their success



Where do I start?

There are four major categories of data to classify information: **persons, products, places and concepts**. Each company will attach priority to a different category. While any given company may consider only one category to be the backbone of its data model, for other companies, all categories may be vital. This backbone is what is known as Master Data, a master database that ties together and hierarchically organizes all of the company's information.

This is why establishing Master Data is our number one priority.

The importance of Master Data

Since Master Data is the most important information that a company has, any minor mistake in the database and all of the other categories and sub-categories will suffer from a knock-on effect. And the whole company will be compromised.

More than 100 million dollars in undelivered products. This is the figure that Hershey´s (American company and one of the largest chocolate manufacturers in the world) lost during the 1999 Christmas season due to a failure in its information management when migrating databases to a new ERP.

It is also important to check new data and keep them updated. For instance, we could assure ourselves that the prices are modified from the Master Data so that the promotions replicate evenly in eCommerce and physical stores alike. This is a mistake that many large surface outlets make.

Lastly, when we create our Master Data we are forced to standardize both the process and entrance forms in order to make it easier for us to analyze them and curb errors in the future.

Data Masters have the advantage of:

- Being a source of reliable information
- Showing the data consistently over time
- Being able to evolve according to changes in business model yet keep the same format, which facilitates reading and analysis despite the changes
- Centralizing and consolidating the most important information while eliminating unsubstantial information and duplicate data.

2 What is Master Data Management

The aim of Master Data is to organize all of a company's information in a database to be able to work with the data at the same time in a coordinated fashion, that is, updating all of the tables at the same time while avoiding duplicities and mistakes, and drawing related insight instead of isolated and incomplete information.

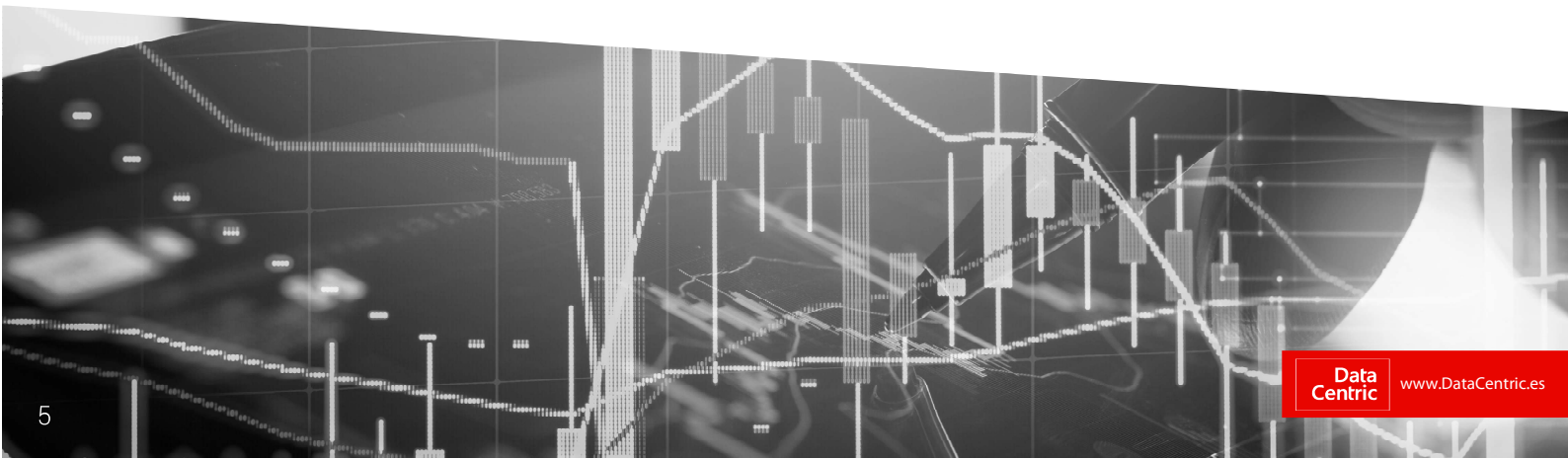
This doesn't mean that we consolidate all of the databases we have into a single database but rather that we generate a new database where all the data is represented, related and updated.

Master Data Management is a series of steps and techniques that help us to maintain and create Master Data. This includes:

- Optimizing processes
- Collecting and organizing the data
- Update the data
- Purging the duplicates
- Erasing or eliminating the errors
- Creating common fields

Thanks to this, we were able to get our data architecture to become something easy to interpret for the entire staff, from managers seeking overall figures to analysts and scientists looking for the most minute details. A great amount of time and energy is required to create and keep Master Data up to date because specific software is needed. Because this always depends on the size of the company and its degree of development in data management, outsourcing this service becomes advisable, particularly when companies have thousands of records in separate, unrelated databases.

At Datacentric, Data Governance and Master Data Management are one of our pillars that we offer as a service guaranteed by 20 years' experience in managing Big Data.



3 What I should include in my Master Data

If a Master is a compendium that unifies and relates different databases in my company but it is not compendium of all of my databases a single file, then what should I include in it? The answer will naturally depend on each company.

This does not mean that everything is left entirely to each business's free will. There are various indicators helping us determine the fields in all of our databases that we should use in our Master File.

Behaviour

The first filter is to differentiate between static elements and actions, **i.e. customers, products, resources and employees that give way to and undergo actions.** Sales, shipments, returns are actions that depend on these previously mentioned elements being in place. And of course these are the elements that could be master data.

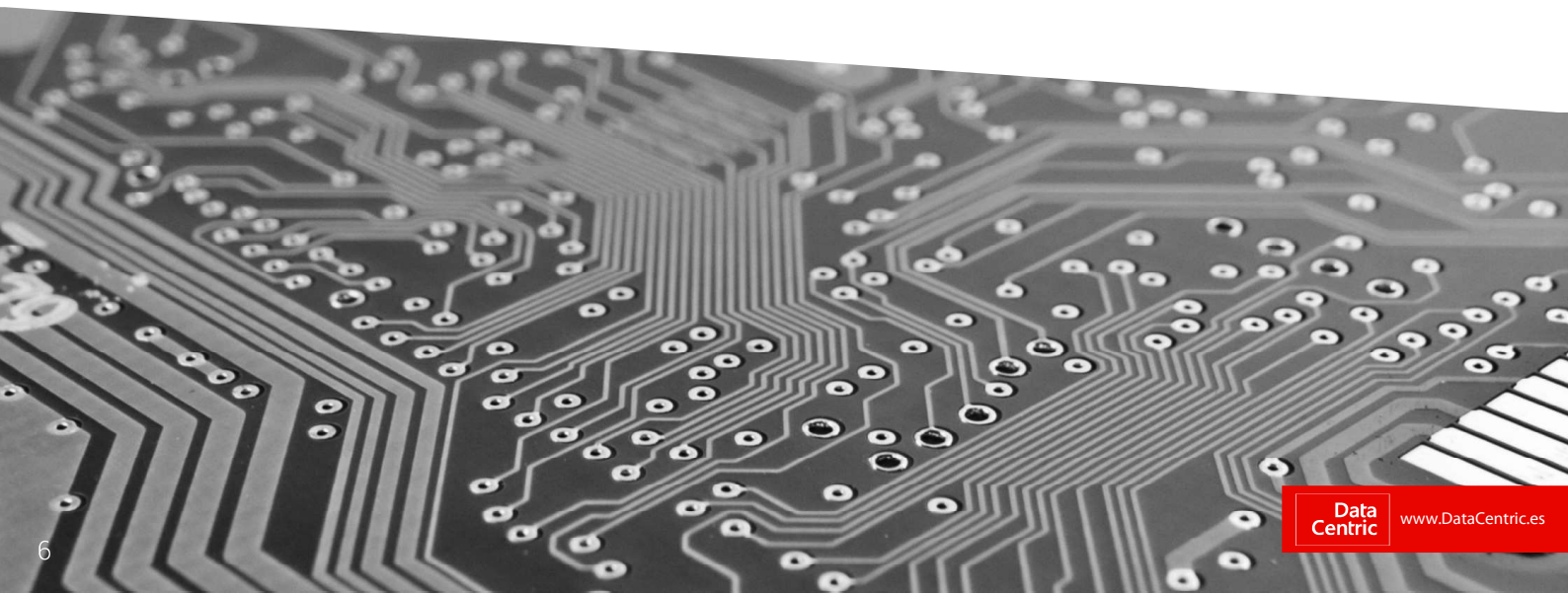
Life Cycle

Changing status over time is another KPI that indicates a piece of data is master data. In other words, the data has a life cycle. **A customer, for instance, registers in an initial phase, is consulted for analysis and campaigns, and is updated according to purchasing or eliminated.**

This data lifecycle is known as CRUD (Create, Read, Update, Destroy), although each company may have its own phases. For instance, in the case of an adserver, this cycle includes the "search" phase when audience availability is consulted before campaigns are offered.

Volume or cardinality

This refers to the volume of records or elements in a piece of data. **In all likelihood, if a company has just 2 products, it won't need to include them in its master data** In fact, it is not very likely that it would need an ERP to manage them and so it would probably not need a data management service.



Longevity

The time during which data either remains "active" in the company or undergoes modifications determines its importance and, therefore, whether or not it is master data. A sale is a one-off action **while an SaaS license may be active in our databases for years and undergo changes involving the subscription model or SLA updates.**

Complexity

Complexity is one of the variables that most determines whether data belongs in a master file. If you do not need to monitor more than a simple account, it doesn't matter whether it meets any other requisite. It will probably be able to be included in related tables with sub-databases. But because no other element is attached to it, it will only add an unnecessary dimension to our already complete file.

Ikea, for instance, would include in its master data a piece of furniture but would not include its components. The company that manufactures these components would consider appropriate as master data. This doesn't mean that Ikea doesn't count them at all, but just that it will have a secondary database that records the components of each piece of furniture for the purposes of examining costs, availability, profitability and so forth.

Value

The value of a piece of data for a company is measured in terms of its business objective and it works together with complexity. A company without product seasonality will not include months in its master data. But a resort should because they directly impact their financial results, staff, and advertising. And infrastructure costs will align with them.

Stability

The elements in Master data should have a certain degree of consistency over time, but as we have seen before, they should also have a life cycle. In other words, a one-off sale is too volatile but a Foundation's works of art will undergo nearly no changes over their lifespan, with the exception of perhaps maintenance or updating their attributes. In no event will any of them be in the company Foundation's master file.

Nevertheless, this value is usually the most difficult to establish in company data since practically all live organisms and all elements change considerably over time. There may perhaps be other variables that determine the belonging of any data to the master file. In the example of the Foundation's works of art, it is the value of the company's business objectives that would initially exclude them from their master data.

Reuse (or shared use)

The first filter that we should apply is whether an element should be accessible to other platforms and departments. This variable depends on the size of the company and its systems, so it does not always apply. The clearest example is customers for a company with several locations and means of contact. Each office should be able to update its information after an interaction. Sales and marketing departments must be able to have that possibility and also the DMP that they can use for their campaigns.

4 10 Steps to create Master Data

1) Put together an exclusive Data Governance team for the project

This may sound obvious, but it is the first step that many companies forget and they delegate the task to in house staff that may not be fully qualified or may have to do this task at the same time as other on-going tasks.

2) Locate and classify the sources of information

We need to gather all in house data, but also need to seize the opportunity to include other sources of information from, let's say, data licensing services (www.datacentric.es).

3) Identify the tools that produce and consume data

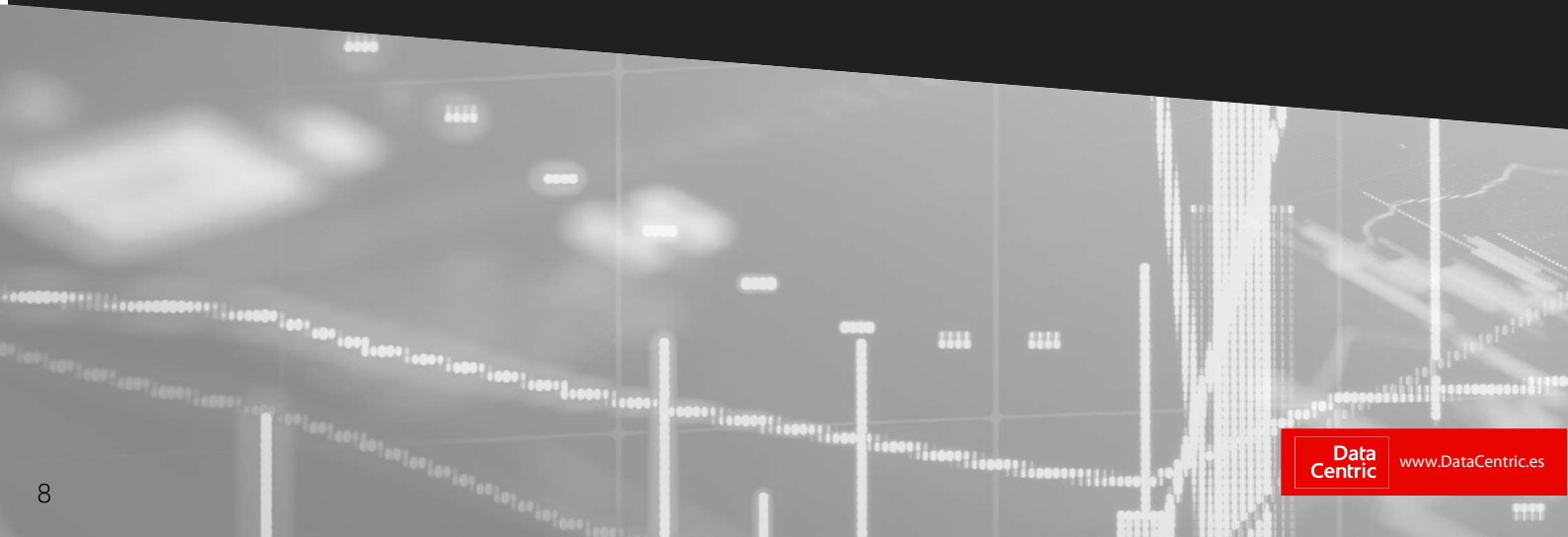
A company may have more than one ERP system. For instance it may have SAP and also not have it consolidated with CRM, meaning that the data cannot always be found in the same systems. We need to establish the right functions for each platform (for instance sales notifications) and the connection of these systems with Master data.

4) Select the proper tools to manage the information

The size and complexity of our databases and their scalability will depend on the use you would like to make of the information. An SME will be able to use merely an excel file, but this is not very easily scalable. A basic modular CRM like Sugar can offer you growth options for the future but may end up being limited for a company that wants to significantly expand. Sales force is a very complete CRM but does not have its own ERP

5) Create a data architecture

This can be done by establishing the master data as explained in the previous chapter and by creating tables and describing both master data and the relationships between these tables.



6) Integrate and test the connection between the master data and the rest of the databases

Once we have created the Master file, we need to test whether the way it interacts with the rest of the tables is what was expected, drawing all sorts of information and information requests.

7) Integrate and test the different platforms connected to our master data

This is done by checking to make sure that all of the systems (CRM, ERP, web, Apps, etc.) perform the requests correctly via API and obtain the expected results. We should anticipate configuration problems with the servers during this configuration phase if we use different technologies (for instance Microsoft platforms in servers with Windows integrated into a Linux hosted website server using Ruby on Rails).

8) Define the necessary security measures

Personal data protection and information society and e-commerce service legislation is one of the issues that is currently changing, which means that you will need an expert legal department or else consultancy services from a company that is expert in Big Data like DataCentric (www. datacentric.es). To consult or modify our company's different files, a flow chart and access privileges will also need to be established.

9) Generate documentation and train the company

This involves helping all employees and agencies consulting or modifying our databases to understand the new model and its importance.

10) Establish a roadmap for revisions and updates

Depending on how our company and the market evolve, we will need to revise our master data. This is why it is important to bear in mind that creating this file is not a one-off or static event.

Conclusions

Master Data Management is one of a company's most basic, complex disciplines. It is a process that requires knowledgeable professionals to be involved, and these professionals must be knowledgeable not only about data management and analysis but also about the company's business.

Decisions made when putting together a master data file affect the company's future. They hampering or facilitate access thus completely determining the insight a company will be able to draw. This is what also makes it imperative to know how to explain the project to the company's Board of Directors and involve them.

But one of the first steps that it is a good idea to take is to have a database management and Big Data service specialist like DataCentric.

With more than 20 years' experience in major industries (telecommunications, finance, power generation, retail, consumer based sectors...) we have a solid reputation as a leading service company in master data management, data licensing, data strategy, and data analysis. These services will help your company put together a master data file able to withstand all of the processes and add value to your decision-making.

Why wait to give your business the best competitive advantage of all? Knowing your customers and the market.

Data Centric

business
consumer
location
insight

What do you expect to provide your business with the greatest competitive advantage of all? The knowledge of your customers and the market

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