RES | Suite

Data Meaning Discovery

Analyzing the meaning
of data with reliability and
precision

A valid support for DBAs, Data Administrators,
Application Developers, or generally anyone who
needs to utilize archived files for which they have
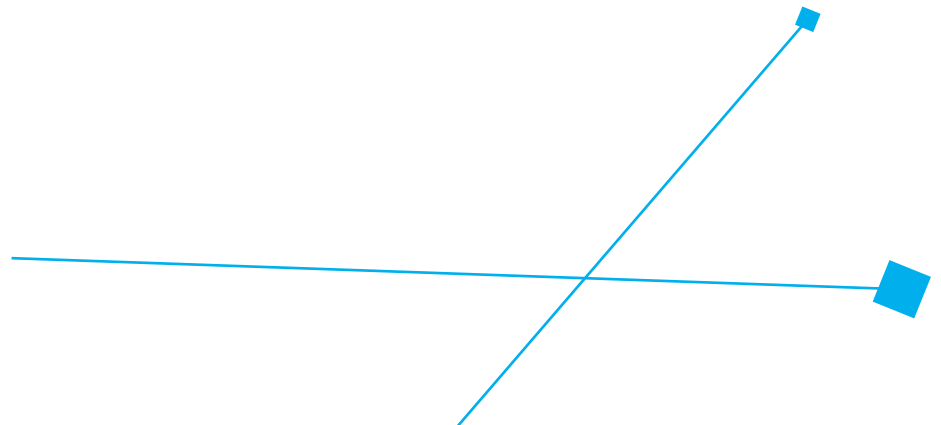very little knowledge of, or no knowledge at all.

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■ Data Meaning Discovery

The solution for automatic recognition of the meaning of data

The rapid and continuous evolution of large IT systems has over the years led to a dramatic increase in the complexity of these systems on several fronts, including that relating to the subject of "data heritage". The very high amount of information handled, the tendency to develop fewer and fewer custom applications and to acquire software packages, the impossibility of guaranteeing know-how through adequate data administration functions and tools, has made it difficult if not impossible to maintain the in-depth knowledge of them over time, especially on a functional level, of the meaning of the data itself. All this can be aggravated by frequently incorrect design of the databases that can lead to the placement of valuable critical information in terms of security and privacy, in entities that are unexpected or at least difficult to trace.

These deficiencies are a weakness, especially at this current time, where attention is particularly high regarding the treatment of some data, specifically the so-called personal or "sensitive" types, subject to privacy policies based on various current regulations (GDPR, General Data Protection Regulation - EU Regulation 2016/679).

For these reasons, a strong need arose to have tools to support IT organizations in identifying and obtaining detailed knowledge of the data underlying the business processes in a short time and with the minimum effort possible.

The solution - Data Meaning Discovery

• **Data Meaning Discovery (DMD)** is the RES IT solution designed for automatic recognition of the meaning of data in order to support DBA, Data Administrator, Application Developers and more. Generally anyone in need of using archives of which they do not have even partial knowledge.

• **Data Meaning Discovery** makes it possible to identify the meaning of the data in a fully automatic manner, assigning the likely probability of it belonging to a given domain and class identification.

• **Data Meaning Discovery** can be a huge help when it comes to dealing with issues of identification and obfuscation of personal or sensitive data, but also in the case of impact analysis, data archiving/updating and Quality Assurance projects. DMD is also a useful complement to other RES Suite tools, such as Daisy.

Functionality of Data Meaning Discovery

Data Meaning Discovery: is an automated system for recognizing the meaning of data which, starting from the most common DBMS catalogs or simple files, identifies the required columns or fields (e.g. names, surnames, addresses, tax codes, but with access to the appropriate dictionaries, potentially any kind of information) analyzing the content of the data present in the archives and identifying the percentage of probability of belonging for the data itself to a given domain.
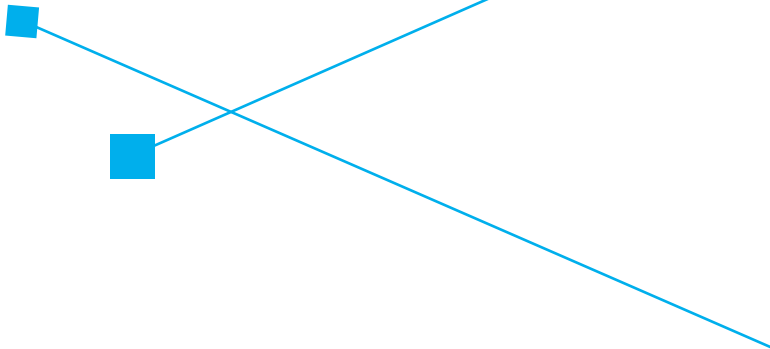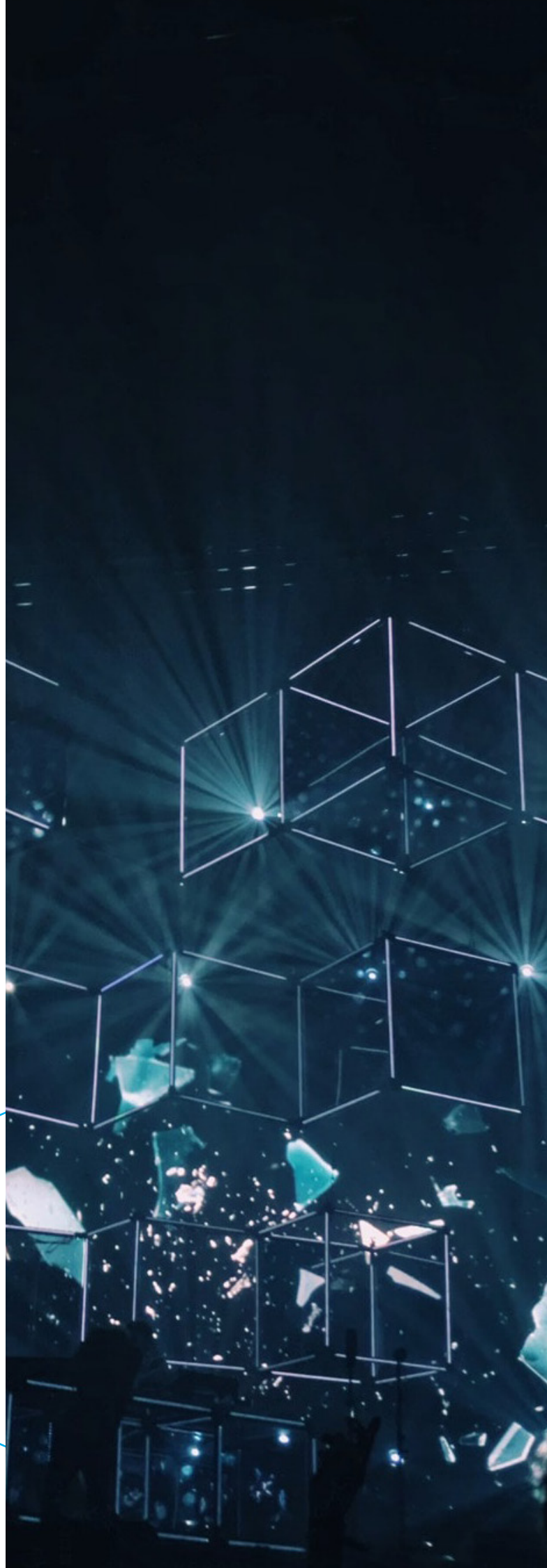
The analysis, with very high performances even on relevant data volumes, is performed using mathematical-statistical algorithms which take advantage of a series of look-up tables supplied with the system, which can be easily expanded or implemented by users. The results obtained can then be verified and validated to produce a certain classification for the data itself.

Data Meaning Discovery is able to analyze:

- Relational Data Bases (Oracle, SQLServer, DB2, MySql)
- Structure delimited files (e.g. CSV)
- Generic sequential files

Data Meaning Discovery makes understanding the analysis usable, through:

- Summary report for each class of data for which recognition is requested
- The Data Meaning Discovery Repository in which the data is collected is structured in a consistent, persistent form, open to queries and processes aligned to critical decision-making purposes

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