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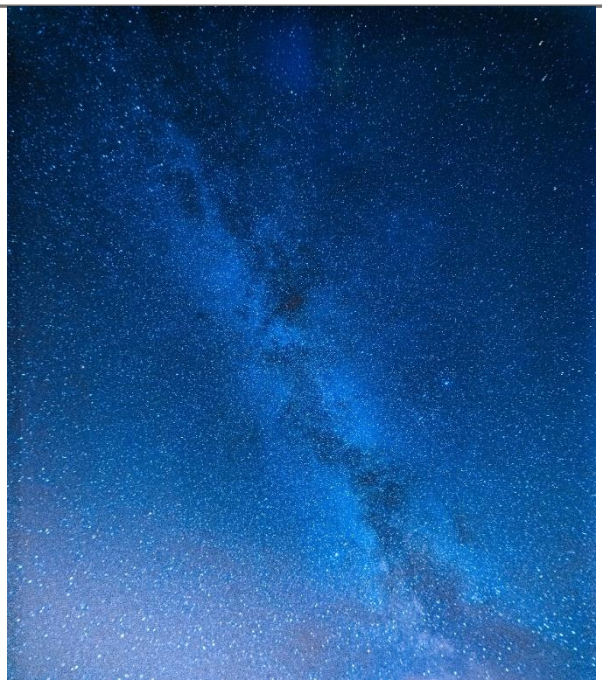
DISCOVER, SCOPE, DELIVER



Safyr®: Hi-fidelity metadata for your SAP and other ERP packages

How to solve the challenges of accessing, discovering, analysing and using the metadata in your ERP and CRM packages

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Silwood Technology Limited

Contents

Executive Summary

Despite the growth of Cloud based enterprise systems which promise much to their customers, most large and medium sized organisations still rely on Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) packages such as SAP, JD Edwards, PeopleSoft, Siebel and Oracle E-Business Suite to enable the effective running of their operations. In addition Salesforce and the Microsoft Dynamics packages have been gaining a significant foothold in the enterprise market.

In response to the need to comply with regulations, reduce risk, improve profitability, competitiveness and customer engagement, increasing numbers of organisations are embarking upon data catalog, data governance, advanced analytics, artificial intelligence (AI) and other digital transformation programs to help them use the data in their systems more effectively to meet their goals. To ensure the success of these initiatives it is critical that data from these ERP and CRM systems are included in these programs where appropriate.

One of the key factors in all these projects is to be able to identity and use the metadata ("the data about the data") in the source applications. For many source systems this is an easy and quick process. For ERP and CRM packages however this can present a significant problem because of the nature of the data landscapes which underpin them.

As you might expect in applications that support such broad and multifaceted business processes, each of these ERP or CRM packages have large, complex and customised database models underpinning the intricate application functionality. Their lack of easily accessible logical descriptions, relationship definitions and more means that it is very challenging for data and business analysts to quickly access and understand the metadata which is vital for these data transformation projects.

These characteristics often leads to delays, cost overruns or under delivery and in extreme cases project failure as customers have to rely on mostly manual methods, technical specialists or external consultants to do this work.

This paper will describe the importance of metadata in the context of data and information management projects and explore the particular challenges in incorporating the metadata from ERP and CRM packages. It will also introduce how Silwood Technology's software product, Safyr®, for ERP and CRM metadata discovery, analysis and exploitation can help to solve those challenges and support you in avoiding some of the problems these packages commonly present.

"Silwood Technology is unique in having recognised, and acted on, the need for a better understanding of enterprise applications, notably the dominant ERP and CRM solutions provided by SAP and Oracle. Having this depth of understanding is critical for many enterprise projects, ranging from business intelligence to data governance, from data integration to master data management, and from data migration to application development.

Moreover, the company's discovery capabilities are not stand-alone but act as complementary technology to the established tools and products that are typically used to provide such solutions."

Philip Howard
Bloor Research

ERP and CRM metadata

ERP and CRM applications provide a broad set of functionality, which means that they offer a valuable solution which supports many business processes. However the breadth of functionality comes at a price for organisations when they need to incorporate their data in their data transformation projects. ERP and CRM applications have large and complex data structures in order to support the business functionality. For example a typical SAP system has around 90,000 base tables. The sheer scale of these data models commonly causes problems for those who need to identify where that relevant data is located.

There are other complications too. The naming conventions for the database tables and columns in most ERP and CRM's are not very helpful. For example how would a data scientist (rather than an application specialist) know what the table called TF120 in SAP means or F060116 in JD Edwards. This is because the database system catalogue does not contain any detailed or useful description for tables and attributes or any information about how tables are related to each other. All of the above means that locating particular tables and their associated tables can be very difficult if you don't know exactly what you are looking for in the first place.

The need to know about and analyse the metadata in these applications is often the function of the job of the data architect, data analyst, data modeller or data warehouse designer etc. Their technical skills may not extend to being able to manually extract the data required from the base system. They need to be able to search for the parts of the data model which are relevant to them using business terms such as "Customer", or "Chart of Accounts" or "Personnel data" rather than trying to figure out the meaning of the technical metadata. They might also need to find tables associated with transactions or programs such as "Create Sales Order" or for concepts such as "Order to Cash". Standard tools and methods do not provide functionality for this and as most applications have had customisations made to their standard model, looking at templates or standard documentation are of limited value.

Without a software tool to automate the process, all the major ERP applications (SAP, SAP/BW, Oracle, Siebel, PeopleSoft, and JD Edwards) require significant manual effort to be expended to find the detailed metadata necessary to allow a data analyst or modeler to do their job. This adds significant time, cost and risk to critical projects.

Often they will not be aware that a tool such as Safyr exists and so believe that being able to have ready access to the metadata information is not possible and that they have to continue to use methods which are time-consuming and costly.

"The data in these (ERP) systems makes sense and are useful, but only in the context of the hard-coded processes.

In short, the data is trapped inside a complex web of thousands of database tables whose integrity is solely controlled by a rigid fossilized collection of software algorithms.

If you don't believe me, just ask your SAP support staff for access to directly update (or even read) a data table."

John Schmidt (vice president of Global Integration Services at Informatica Corporation)

What is metadata and why is it important?

Metadata is information about the data collected. According to the DAMA International Data Management Book of Knowledge (DMBOK), Metadata *"includes information about technical and business processes, data rules and constraints, and logical and physical data structures."*

Metadata provides context, and where necessary, the basis for data lineage across enterprise data sources. Donna Burbank from Global Data Strategy summarises the importance of metadata in her diagram "the who, what, where, why, when and how of metadata."

Who	What	Where	Why	When	How
Who created this data?	What is the business definition of this data element?	Where is this data stored?	Why are we storing this data?	When was this data created?	How is this data formatted? (character, numeric, etc.)
Who is the Steward of this data?	What are the business rules for this data?	Where did this data come from?	What is its usage & purpose?	When was this data last updated?	How many databases or data sources store this data?
Who is using this data?	What is the security level or privacy level of this data?	Where is this data used & shared?	What are the business drivers for using this data?	How long should it be stored?	
Who "owns" this data?	What is the abbreviation or acronym for this data element?	Where is the backup for this data?		When does it need to be purged/deleted?	
Who is regulating or auditing this data?	What are the technical naming standards for database implementation?	Are there regional privacy or security policies that regulate this data?			

[1]

Typically, metadata describes the structure and location of data. For example, the organisation has a Customer table with a set of fields, each of a particular data type, and the table resides on a particular computer on the network. In addition, the metadata may describe how pieces of information in the organisation relate to each other. So for example, the Customer has a series of Contacts associated with it which can be located by accessing all the Contacts with the same Customer code.

The ability to find, analyse and utilise metadata becomes important whenever there is a need to understand where and how data is stored. In all the following examples, one of the crucial questions will be: "where can I find the information about the data that I am looking for?"

[1] Diagram courtesy of Donna Burbank, Global Data Strategies (2017)

Example projects which rely on accurate metadata

Implementing a data catalog, data governance or enterprise metadata management platform

Enterprise metadata management is a broad discipline that covers all aspects of the tasks and processes needed to make sure that an organisation can use the metadata across all its systems to drive more value from its data. This can be used to support analytics, master data, and governance or compliance programs. The metadata required is both technical and business in nature as it is used as a reference for a wide range of projects.

Data governance and compliance technology and programs can fall within the remit of enterprise metadata management or be implemented separately. Regardless of the software and technology tools used a key requirement is to scan, import and exploit metadata from a wide variety of sources.

Without a quick, accurate and effective way of provisioning enterprise metadata management, data governance or catalog software with metadata from ERP and CRM packaged applications their benefits are likely to be delayed, costs to overrun or the project to under deliver or fail completely.

> "While Safyr has always represented pretty cool technology it has, to a certain extent, been a slow burner.
>
> The advent of data catalogs makes it a must have capability for the environments it supports.
>
> It's an idea whose time has come
>
> **Philip Howard, Bloor Research, 2018**

Finding personal data or personally identifiable information for GDPR, CCPA and other data compliance projects

Locating personal data is critical to enable the processes and any system changes required to comply with an ever increasing level of regulatory requirements. For ERP and CRM applications this can prove to be very challenging because of their opaque database naming conventions, size and the fact that the business descriptions for tables and attributes are not in the database system catalog.

Creating and maintaining a data warehouse

Building and maintaining a data warehouse is a good example of why you need a clear understanding of the metadata in your applications. Given the strategic nature of your ERP and CRM systems their data are often prime candidates for inclusion in a warehouse. Being able to access and understand the data landscape of these systems is critical to ensuring that the right data is used in the data warehouse and that business users can have confidence in it.

Developing custom reports

It is often vital to provide consistent, accurate and timely reports directly from the data across the enterprise IT landscape, including ERP and CRM applications. Having accurate details of the metadata structures will ensure

that information is taken from the right tables and fields in the underlying database and also reduce the time taken to develop the reports.

Implementing a Master Data Management strategy

It is important to include ERP and CRM applications in a comprehensive master data management program. Regardless of whether the master data is focused around customer, product or other areas it is necessary to have a clear view of the metadata in all contributing systems. Finding master data in ERP and CRM systems can prove difficult and time consuming if there is no simple way of accessing and understanding their metadata.

Upgrading or rationalizing multiple ERP applications

Organisations that are engaged on projects to upgrade to a newer version of an ERP or CRM application will require information on any changes that had been made to the original so that they can be replicated easily in the new implementation. Being able to compare the metadata in both versions will enable the project team to identify where customizations have been made in the past and where they might be required in the new version.

Migrating from a legacy application to packaged ERP system

When planning to migrate from legacy applications to packaged ERP or CRM applications there are two specific areas which would benefit from having a clear view of their metadata. Firstly in order to align the two systems it is important to understand the metadata in the target application to ensure that its data can support the breadth of functionality available in the legacy system.

Secondly during the 'data take on' phase it is imperative that historical data from the legacy application is loaded accurately into the ERP or CRM database. Having clear insight into the metadata in the ERP application will reduce the time taken to model the target system.

Building interfaces between ERP's and other disparate systems

It is also rare for a software package to be implemented in isolation so there will be a need for data to be exchanged between applications. Meeting the challenge of application integration requires a thorough knowledge of the data structures in all of the participating applications so that accurate mapping and integration rules can be established.

Without a detailed knowledge of the ERP metadata in order to identify the key points of integration, these projects can be prolonged and delay the benefits of the overall initiative to the business.

"Safyr is a brilliant tool; a "must have" for SAP analysis, maintenance and integration.

If an organization is considering sharing data between SAP instances internally or externally and doesn't use this tool to understand both ends of the interface, they are just burning money with a flamethrower."

Brian Farish
CDO Liberty Office Professional Services (used Safyr at AMD)

ERP and CRM metadata - the three challenges

Traditional ERP and CRM systems have particular characteristics in the way their metadata is structured and stored which make it more difficult for data analysts and scientists to find and use. Historically two of the reasons for this are to enable support for multiple languages and to run on different database platforms.

Some ERP packages support multiple languages. Users can see the screen dialogs and report texts in their language of choice (English, German, Italian….). Information required for this, and other metadata, is stored in the application data dictionary tables. This means that the physical table and column names where the data is stored bear little resemblance to the descriptive text for each respective column. For example, in SAP, the table called KNA1, which is one of the Customer Master tables, and in that table there is a column called ORT01 which equates to 'City'.

The result is that it is very difficult to understand the structure of the metadata by looking at the Table and Column names, as you might do with any other database. The logical (business) descriptions and other metadata are held in the data dictionary tables belonging to the application.

"The team was originally informed that **no data model was available** for the SAP application or for SAP BW".

Scott Delaney
BI Team Leader
Hydro Tasmania

Hydro Tasmania
The power of natural thinking

The second reason is to support RDBMS independence. With the exception of SAP S/4HANA, enterprise applications can be implemented on a range of RDBMS types (DB2, Oracle, and Microsoft SQLServer etc.). The applications implement many of the features normally associated with an RDBMS via their own Data Dictionary. For example, the relationship information defining how tables are joined is held in the data dictionary, not in the database catalog.

The above plus the size, complexity and level of customisation of these systems results in these three main challenges in finding and exploiting ERP and CRM application metadata.

Challenge 1 – Where is the metadata? (Discovery and Access)

Most ERP and CRM packages are based on a relational database platform. Therefore you might therefore be forgiven for thinking that it would be fairly straightforward to use a database scanner or a data modeling tool to pull out all the table and attribute names automatically. In principle this should work, however, there are two key characteristics of enterprise ERP and CRM packages which make this an unworkable solution.

Firstly, the database system catalogs contain no meaningful metadata, by which I mean business names and descriptions for tables and attributes. In addition there are no table relationships defined so it is virtually impossible to identify how tables are related. The result is that users would be faced with trying to decipher what the physical names for tables and attributes

mean as well as how tables are related without any information about primary and foreign key constraints.

The second main challenge is that ERP and CRM packages have very large and unwieldy data models. For example, SAP has over 90,000 tables, a typical Oracle eBusiness Suite implementation has over 20,000 tables and even JD Edwards systems have in excess of 4,000 tables. We have also worked on Salesforce implementations with over 3,000 tables. These numbers can vary greatly due to the level of customisations made to the data model. Trying to navigate a data model with thousands of tables with no useful business descriptions is not likely to produce useful results in acceptable timescales.

You might also try to find the metadata by searching through whatever documentation is available, engaging consulting services or relying on internal technical specialists. In addition the various vendor tools available are not designed for business or data analysts to use.

Finally some users resort to searching the internet for data models of their ERP and CRM systems.

So where is the useful business metadata?

ERP and CRM packages typically store their logical or business metadata in a series of data dictionary tables in their application layer. Obviously the exact structure of each ERP or CRM package will vary in the types and detail held. However as a minimum they all contain business names and descriptions for tables and attributes. With the exception of JD Edwards for example they all contain the information to determine how tables are related. Relationships between tables in JD Edwards are inferred from the Business View layer in the application.

There is often other information about Views, Domains etc., or other data which for example allows for different kinds of application hierarchy to be constructed from the information in the Data Dictionary tables.

If it is possible to access and query the data dictionary tables then it may be feasible to construct SQL, or possibly ABAP queries in the case of SAP, to extract their contents to populate a database or perhaps a spreadsheet.

But, what do you do with the metadata once you have done this?

Challenge 2 - How can I find what is relevant? (Metadata analysis)

It is unlikely that you will need to use all the metadata in your ERP or CRM system, even for a data catalog project. For example does it make sense to include all 90,000 tables and a million attributes from an SAP system if say half of them contain no data?

Therefore it is necessary to be able to quickly and accurately find and curate the tables which represent the business artefacts you need for your project.

What are the traditional methods and tools to help you do this?

Use vendor tools

Each packaged application vendor (SAP, Oracle, Microsoft and Salesforce) provide some tools which can be used to find tables and related tables. They can also provide the business descriptions which are so vital to making the data catalog of value to the end user.

These tools however are not designed for use by data analysts or architect. They do not provide the global search, introspection and filtering capabilities necessary for true metadata exploration of such large and complex systems. They are commonly only used by technical application specialists and do not provide an intuitive interface into the metadata.

Other information and data management software vendors may claim to be able to connect to some or all of these packages and to import their metadata. This could be possible if the user knows exactly what tables he is looking for and where to find them. This knowledge however, is very rare and so without having access to all the metadata for a package and easy yet comprehensive analysis and scoping facilities, it will be necessary to know what you are looking for before you start.

Investigate documentation and templates

As mentioned above, using documentation, if it is up to date and accurate would appear to offer a solution. However, there are limitations with this approach. For example, finding tables and related tables which are used in the context of a specific business process from tens of thousands may take a significant amount of time, especially if the documentation is not structured in a way that makes this feasible.

Using templates may also appear to be a solution, however, they will not reflect the customisations made to your particular system and they may not have been developed using the same version of the software you are using. Identifying the differences would be a frustrating and time-consuming task. In addition, these templates rarely cover all aspects of the applications data model so there are likely to be significant gaps between what you need and what they provide.

Using external consultants

You may employ external consultants from a System Integrator or perhaps one of the software vendors to perform this work for you. It frees up your own staff and hopefully the resource you hire have specialist knowledge about the applications under scrutiny.

This can be an expensive and risky undertaking. It means that your own staff are not in control and that when changes or rework is required you need to hire consultants again. It may also be necessary for the consultants to have access to some application vendor tools to perform this work which can further add to the expense involved in engaging them.

Internet search or guesswork

It is possible to try to locate data models or metadata from your ERP or CRM application package using internet search. This presents its own challenges as the results may not be as accurate as necessary, perhaps because the versions are different and obviously anything found will not reflect your customisations.

Using metadata extracted into a spreadsheet or database

Even if you have managed to extract all the metadata from your application and load it into a database or spreadsheet you will then be faced with task of trying to formalise the relationships between tables and also how tables are related to views and domains. You may also want to know, for example, which tables are accessed by specific transactions or programs or other components of the application which represent specific business concepts.

Using this method can result in a considerable amount of work and lost time on the project.

One other challenge you may encounter is if you have multiple instances of the same ERP or CRM and you need to determine if their underlying data landscapes are exactly the same. The problem of comparing the metadata between instances can be significant if you do not have a solution which can enable this.

Regardless of which of the above methods you use you still have to make the results available in other products. These can include data catalog, data governance, metadata management, ETL, data migration, master data management, data modeling and other tools and technologies.

Challenge 3 – Playing nice with other technologies (Reusing ERP and CRM metadata)

Once you've identified the relevant metadata from your packages then you need to be able to reuse it quickly and easily in other technologies being used on the project.

However you access and scope the metadata, if it is not able to be produced in a format which can be easily brought into those technologies then you may have to resort to hand keying or copying and pasting it. These are time consuming, costly and potentially inaccurate methods especially for large numbers of tables or tables with a lot of columns.

Imagine for example trying to rekey the information from a single SAP table, MARA (General Material Data) into a data catalog. It has over 240 attributes (columns) each with a business description and is related to over 1500 other tables in the SAP system. We normally estimate that it takes about 1 day to rekey the metadata from 5 tables accurately into another system.

Clearly it is likely that you will need metadata from more than a few tables for your project so this is not really a viable option.

Obviously the quickest, most effective and accurate method is to import it using whatever mechanisms are available. Depending on which 3rd party products you are implementing, this may be via API or scanning or importing files in various formats.

Alternatively you may have to develop bespoke integrations with them. However, this is not necessarily a simple task, especially when the metadata is complex as you may also need to understand the data structures of the target product in order to know how to create the source to target mappings necessary. If you have large quantities of metadata, there may be issues with speed of processing. Also, if you have not been able to access and analyse the rich metadata in the application then merely loading physical table and column names is of dubious value.

How Safyr® solves the three challenges

The software tools market is crowded with products offering data catalog, data warehousing, ETL, reporting, data integration, enterprise metadata management, and a host of other functionality and which are all designed to help you meet your data and information management projects requirements. Many of these are based on some kind of metadata architecture. Most recognise the importance of metadata for good project governance and implementation.

However as outlined above ERP and CRM applications require a more specialised software based solution to help you make practical use of their metadata in project implementations.

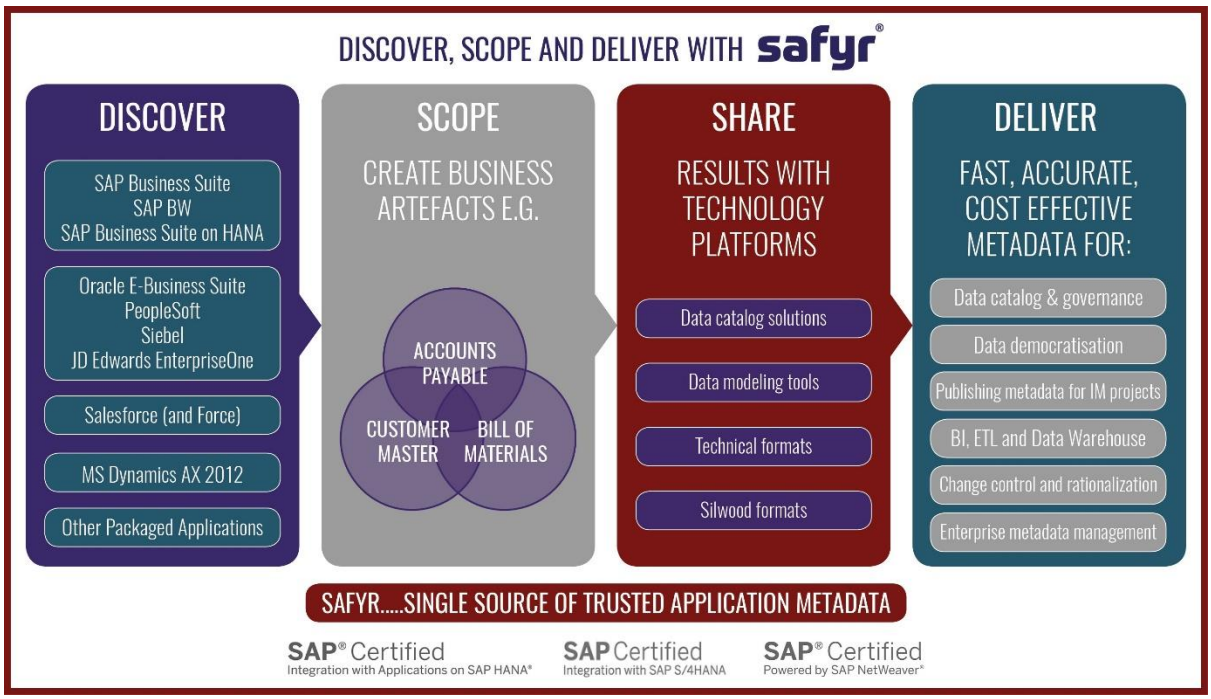
"Harnessing Safyr's power to rapidly comprehend, visualise and quantify often hidden and complex data models of ERP systems will reduce delivery risk and avoid a lot of common pitfalls faced with data transformation projects."

Alex Smith,
Head of Strategy
& Solutions

Use Safyr to extract application metadata from your systems

Safyr is a specialist product designed to provide you with the ability to extract and store metadata from your ERP or CRM applications as implemented including:

- SAP Business Suite (including SAP BW and S/4HANA)
- Oracle eBusiness Suite
- PeopleSoft
- Siebel
- JD Edwards
- Microsoft Dynamics AX,
- Microsoft Dynamics CRM
- Salesforce (and Force based systems)



Safyr repositories, which store the extracted metadata, can be implemented on Oracle, SQLServer or DB2 RDBMS. These can be used in a single user or client server multi user configuration. In addition the product ships with SQLite RDBMS, a desktop database system.

Once the repository is populated, there is no need to access the source system for day-to-day access to these structures. If that source application metadata changes or you wish to check that the current data model is consistent you can re-extract and use the Safyr Compare facility to find any differences between the two versions.

Safyr extracts and makes available the following information:

- Business and technical names for tables
- Business and technical names for columns in tables
- Relationships between tables
- Data Elements
- Domains
- Views
- Indexes
- Table row count
- Application hierarchy (where available from the package)

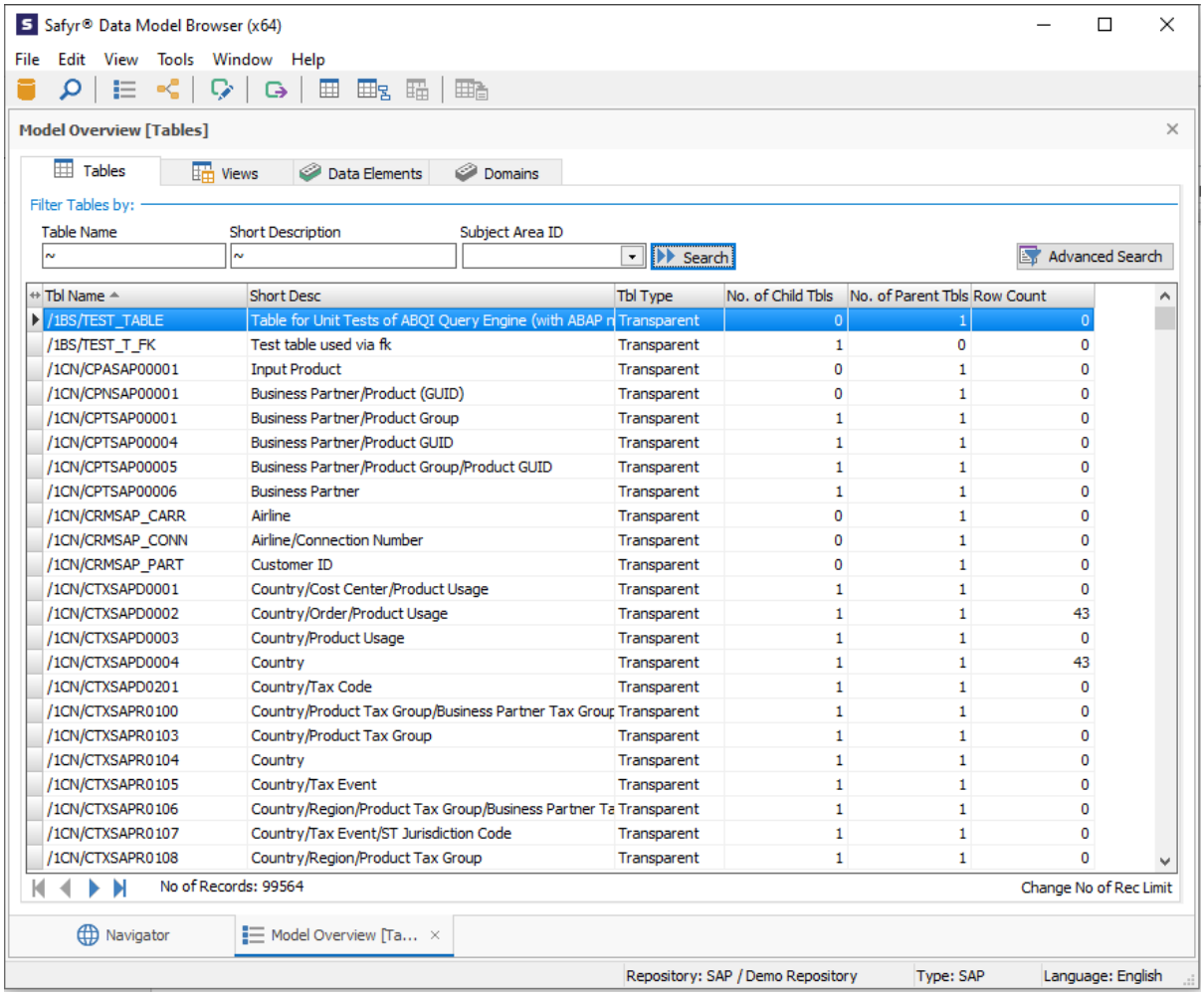
Scoping and analysing your metadata

Once stored in Safyr's repository you can the product's exploration, search, filter and analysis functions to find and curate the detailed metadata for specific topics and discover the relationships between tables that you need. Each package has its own way of structuring the metadata. For example SAP's is very complex and contains information Safyr uses to build an Application Hierarchy from which for example, you can search for tables associated with programs and components. JD Edwards' hierarchy is much less complex and is based on Business Views.

However the metadata is structured, Safyr presents it to you in a meaningful way by combining the technical and business terminology and using whatever information is provided by the package. The same interface is used to analyse each package.

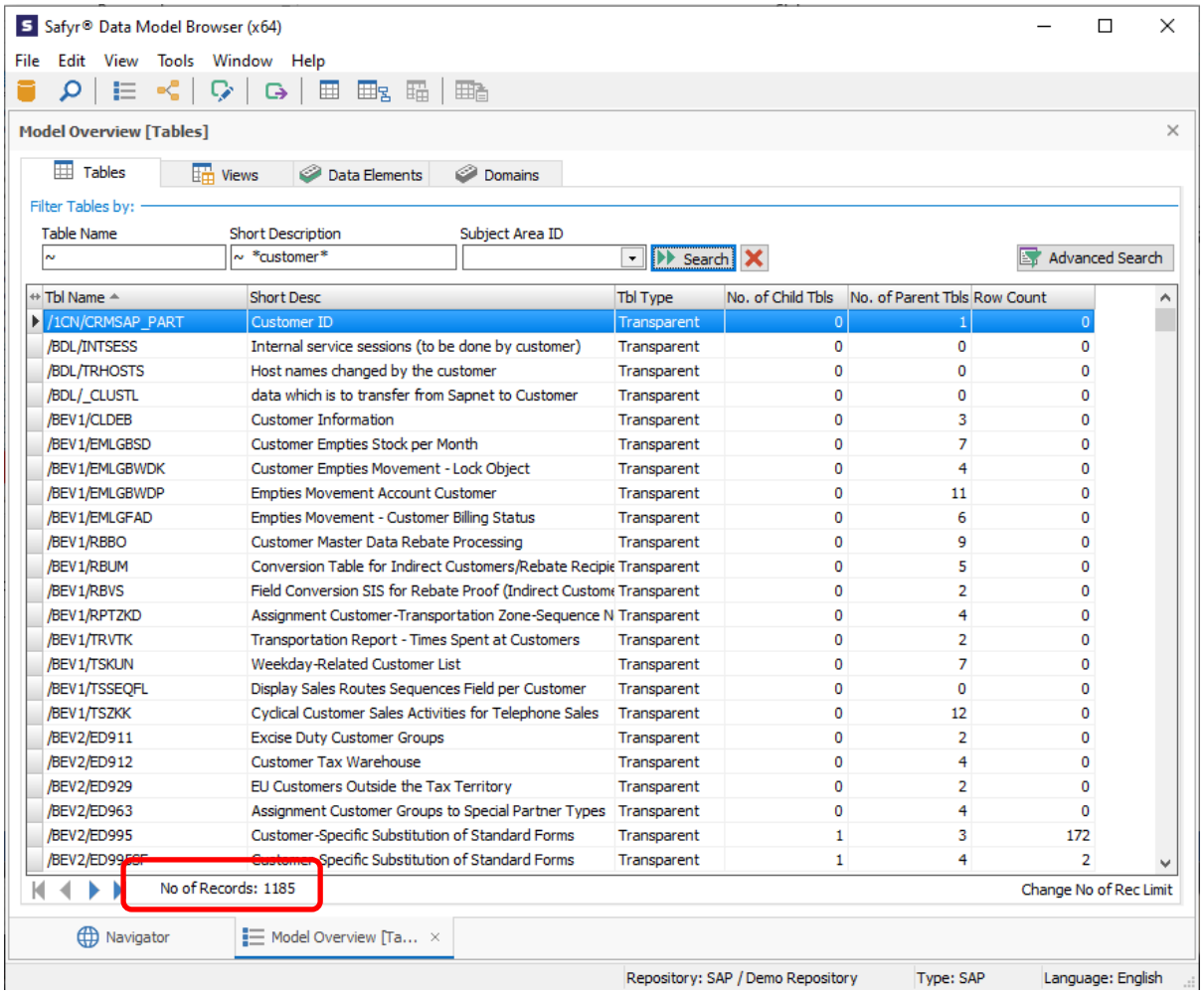
Safyr makes it practical for both technical and business users to quickly discover the location of the data items in which they have an interest. Once you have found the groups of tables that are of interest you can save them as Safyr Subject Areas. A Subject Area can be any grouping of tables in a given instance of an application. It can contain 1 or all the tables in a system, even for SAP. This means it becomes easy for you to find all the tables that use a particular field, or find all tables with a particular string in their name.

The image from Safyr below indicates that this particular SAP system has 99,564 tables.



Imagine you are looking for SAP customer master tables. As a possible first step you might want to search for tables whose description contains the text “customer”. You can perform this search quickly and easily by typing in the search criteria in the “Short Description” column. You do not need to know which tables may be in scope and you do not need to know the physical names for those tables.

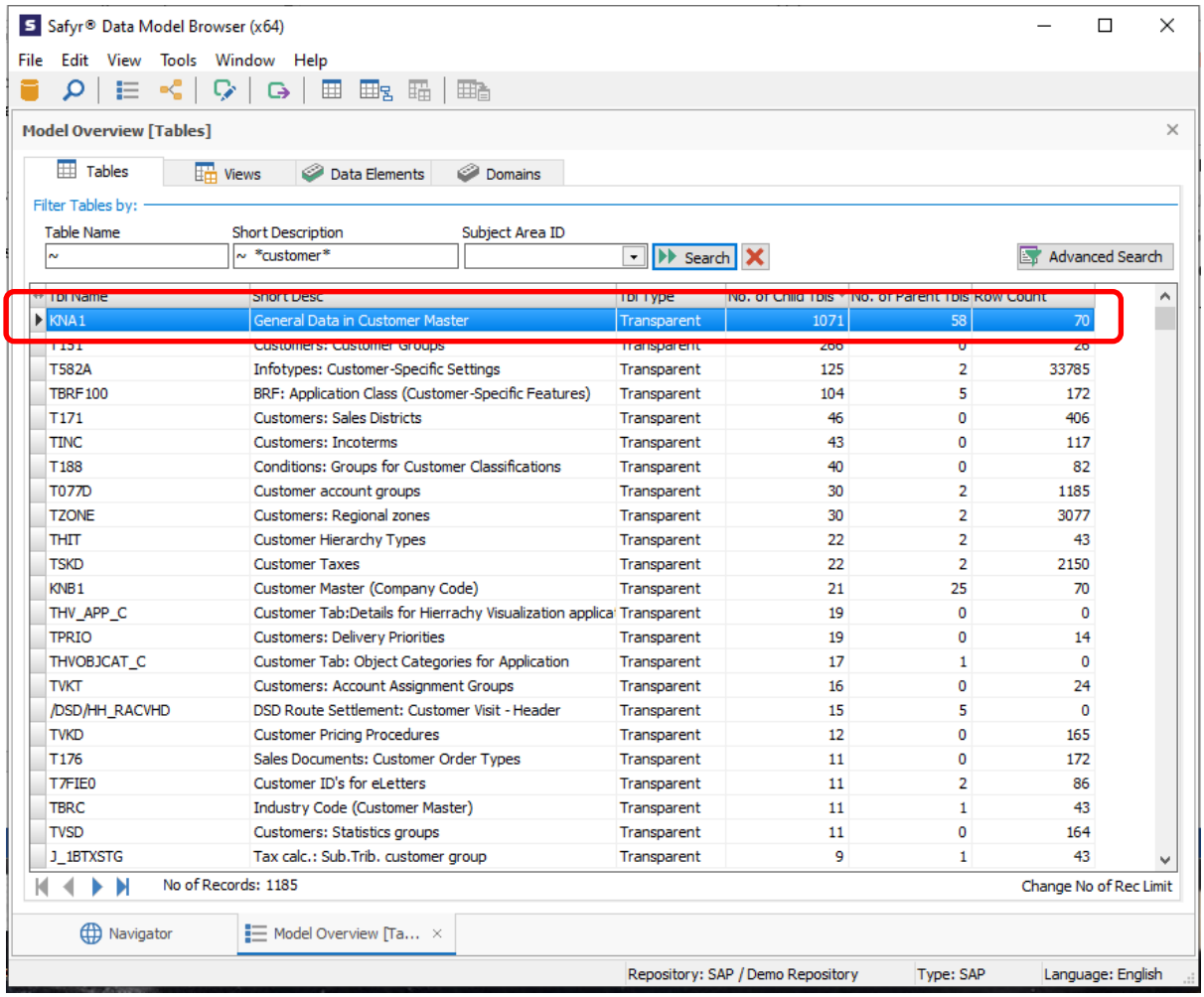
In the image below you can see that there are 1,185 tables which meet that criteria.



You can also see that information about numbers of Child and Parent tables and Row count are also provided for each table.

In the image below you can see that by sorting on number of related tables brings Table KNA1 - General Data in Customer Master to the top as it is connected to the most tables.

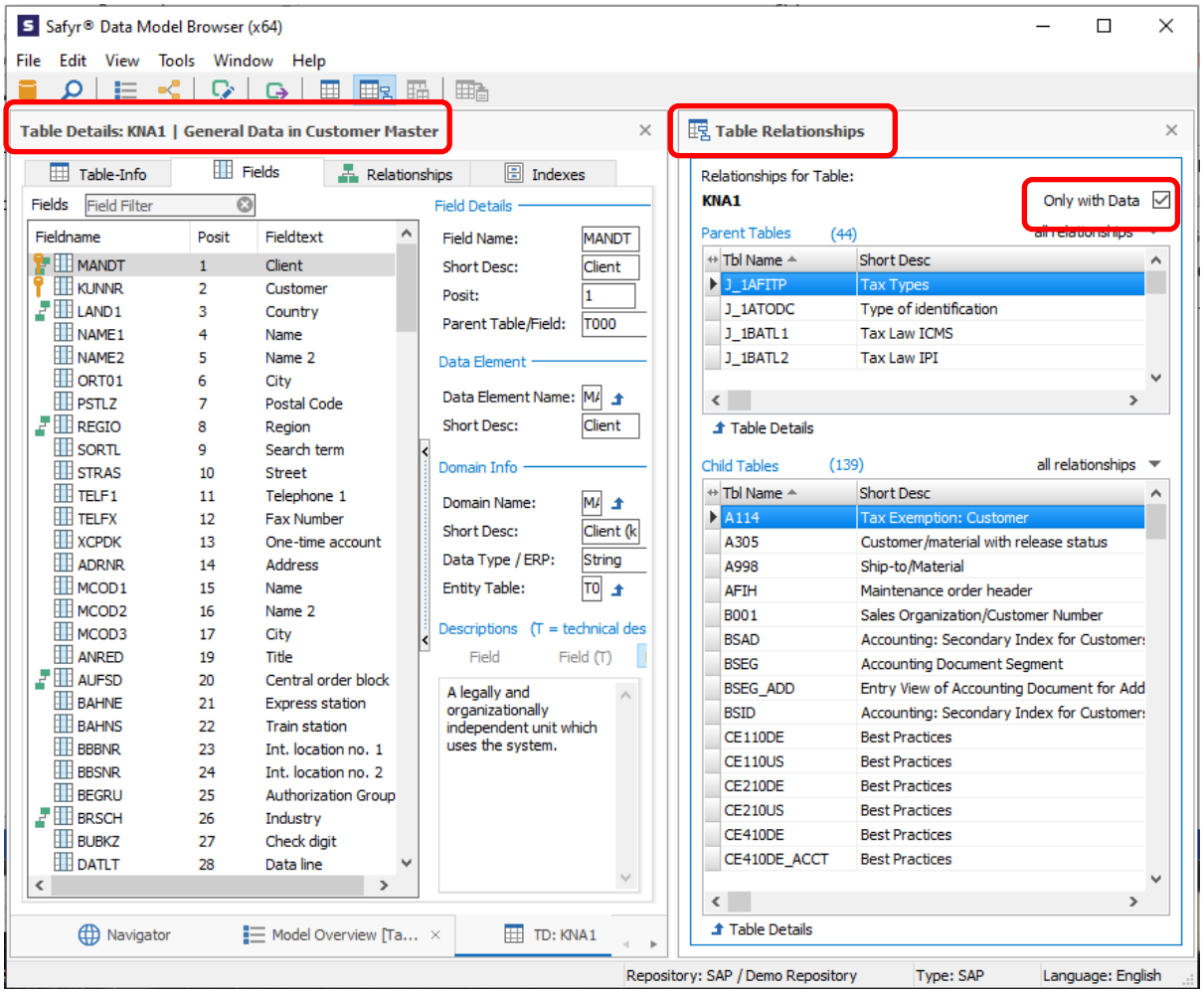
This means it might be what you are looking for, or at least a good start and you can drill down to look at table and field details. Fields are identified as primary or foreign keys as appropriate and navigation route to related tables is shown.



Having found an 'interesting' table, all the relationship information that shows how the table is joined to other tables is immediately and easily available.

In the next image you can see Parent and Child tables for the chosen SAP table.

Note 'only with data' is selected so only those related tables which contain data will be seen.

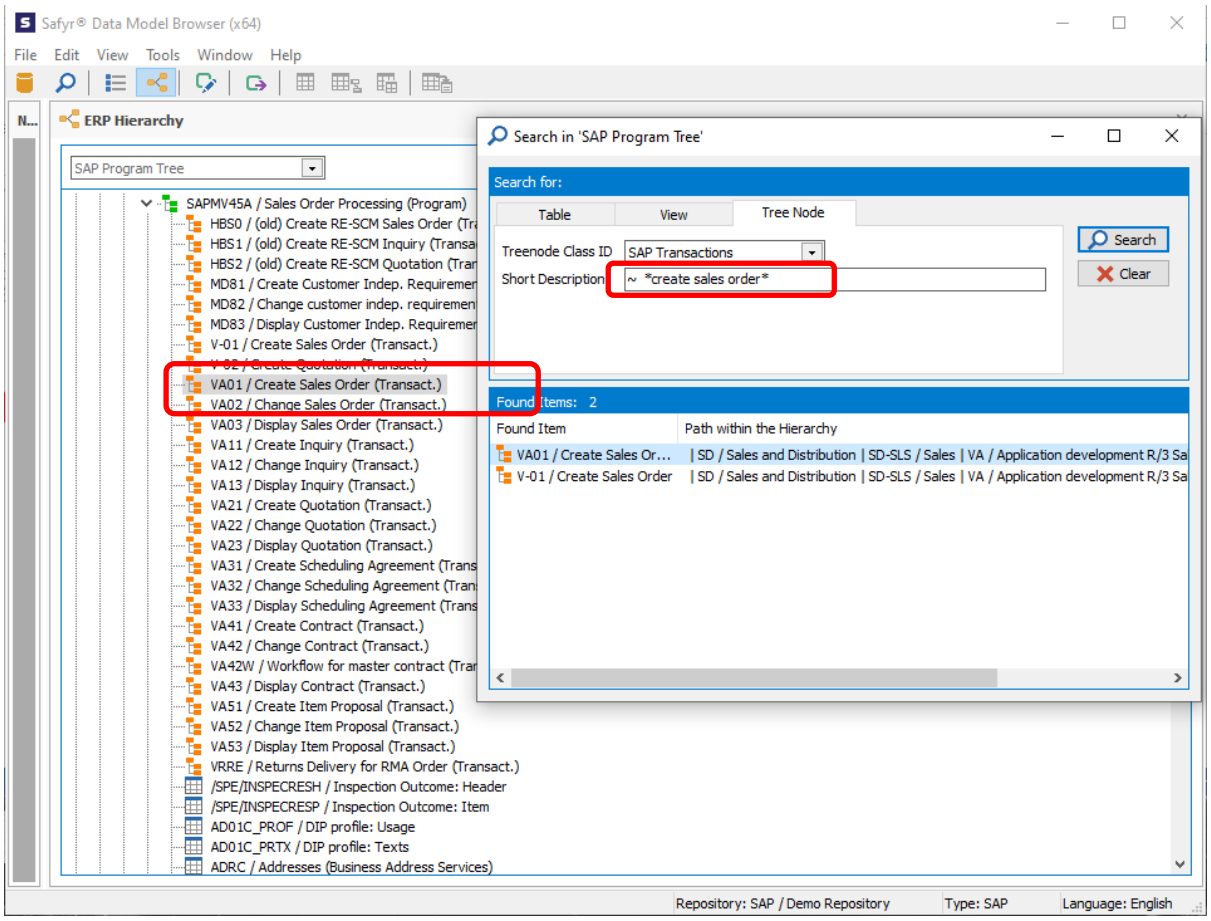


Safyr also creates a searchable hierarchy of application components where the package allows.

Content depends on what is provided, however it can encompass components, programs, business views, transactions and more. This is often a more effective way of finding the tables needed. For example if you wanted to locate the tables used by a particular program or transaction you could use the search facilities in the hierarchy view to find them.

In the image below the user has searched for the SAP transaction VA01 (Create Sales Order).

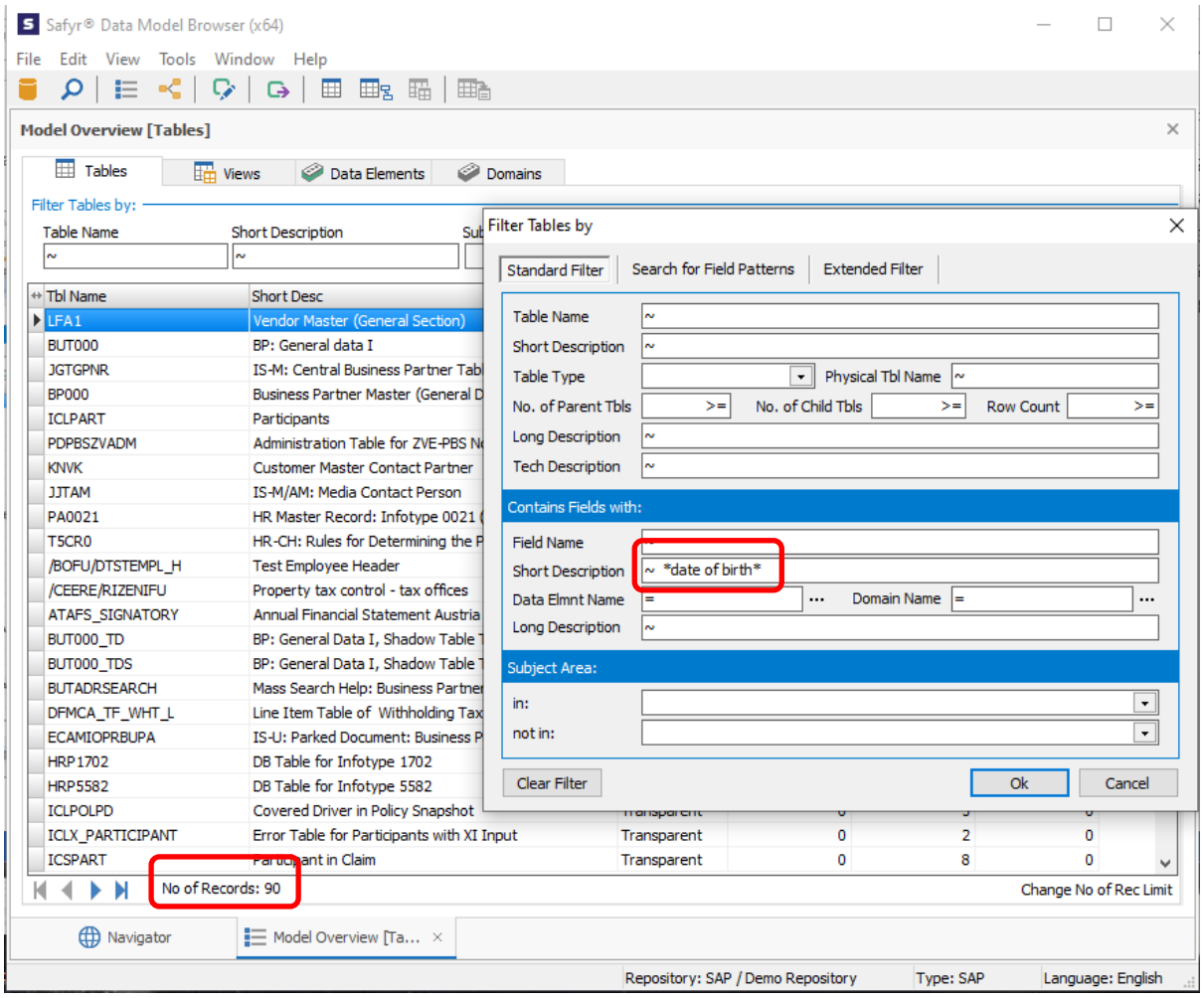
The result shows it as part of the Sales Order Processing program. Safyr will show all the tables associated with that program. They are denoted by the blue icon e.g.: AD01C_PROF / DIP profile: Usage



In the example below the user has searched for any tables with a Field description which contains the text “Date of birth”.

This could be in support of a GDPR, CCPA or other requirement which needs to find Personal Data or PPI for use in regulatory compliance applications.

You can see that there are 90 tables which fulfil that criteria.



Using Subject Areas in other software products and tools

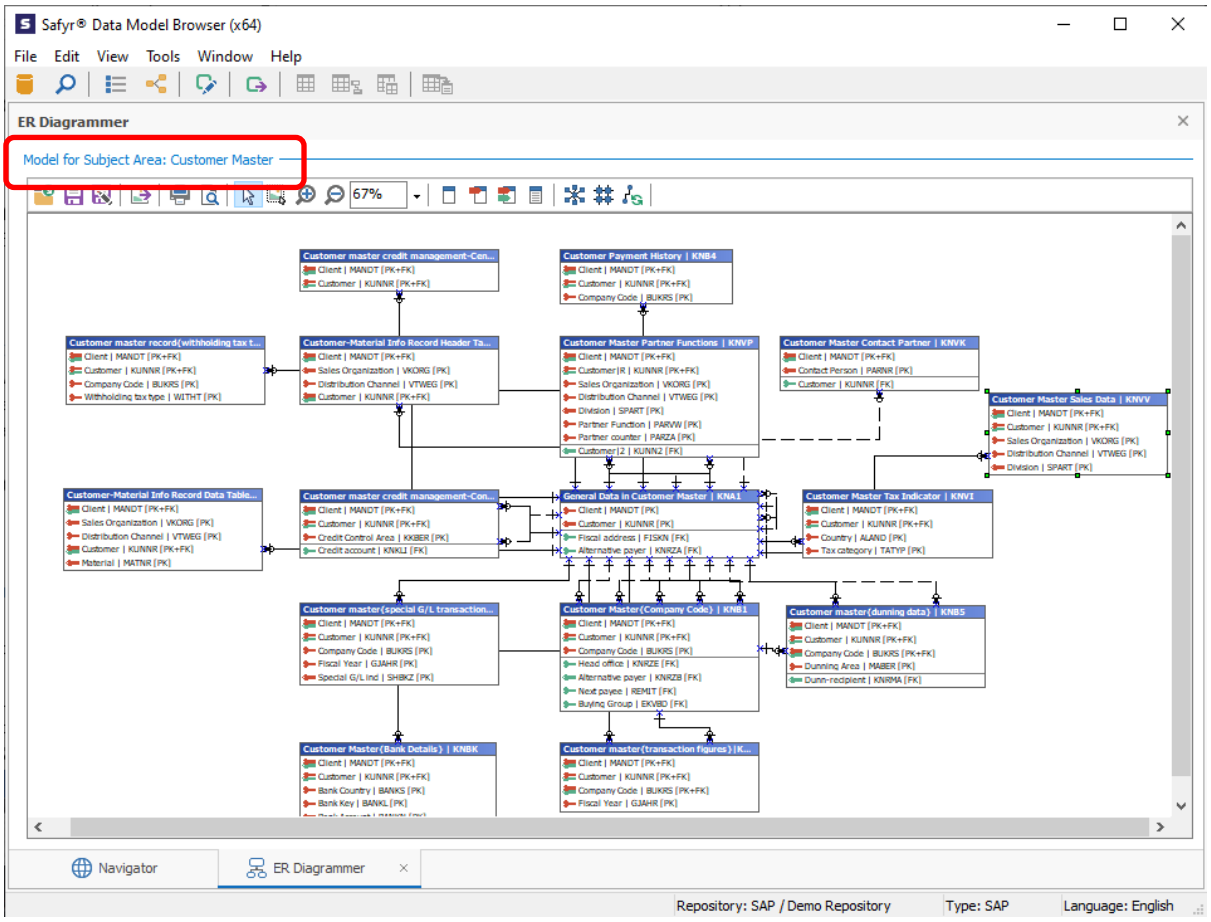
Results of scoping and analysis in Safyr are called Subject Areas. These can contain any number of tables. The content of Subject Areas can be exported to a range of data catalog, enterprise metadata management, data governance, data modeling or other tools. These include:

- Collibra Catalog
- Informatica Enterprise Data Catalog (EDC)
- ASG Data Intelligence
- Data Advantage Group MetaCenter®
- Infogix Data3Sixty®
- Adaptive Metadata Manager™
- Erwin (includes Erwin Data Catalog and Erwin DM)
- Idera ER/Studio
- SAP Power Designer.
- Systems Architect

There are other generic export formats for

- CSV
- XML
- XLS (Safyr Report)
- Safyr ERDiagrammer
- Safyr Compare

Example of Subject Area content displayed in Safyr's Enterprise Relationship Diagrammer which allows for results to be quickly viewed and shared.



Pre-configured Subject Areas

Finally Silwood have developed a number of pre-configured Subject Areas for most of the applications Safyr supports. These provide a fast start to metadata analysis. They are available for both standard business concepts and for GDPR.

The advantage of these is that they work with the application as implemented and any changes to the content of the tables they include are incorporated. It also means you can use them as a base and quickly amend them by adding or deleting tables.

Safyr Summary

Any project that involves accessing data from large ERP packages like SAP needs an understanding of the data structures involved will benefit from the use of Safyr. Normally, the personnel in such projects do not have the specialist knowledge of these applications and are reliant on scarce and expensive resources outside the project team to give them the information they require. Safyr reduces this dependency on external resources by providing such projects with a discovery and exploration technology for Enterprise Applications.

Safyr customer use case examples

Metadata for a Data Catalog

ATB Financial, a Canadian Bank use Safyr to provision their Collibra data catalog with metadata from their SAP systems.

Before using Safyr they had spent considerable time and resources trying to achieve this with various combinations of SAP and other tools with no success.

This presented the customer with a significant problem which put the whole project at risk as it was critical that SAP metadata be included in the data catalog.

"We took what would have been months of work (and possibly a barrier to progress) and completed the activity within hours and nominal resource investment.

We're pleased to have been able to achieve a high degree of efficiency with this collaborative effort."

Wellington Holbrook, ATB Chief Transformation Officer discussing the impact of using Safyr to provision Collibra data catalog with SAP metadata

ATB Financial

Metadata for Application Consolidation

A Canadian based energy company was engaged on a project to rationalise their JD Edwards applications. The objective was to reduce 8 implementations of JD Edwards into 2 new JD Edwards systems. They used Safyr to give them insight into the differences between the data models underpinning each system and to make their data mapping process faster and more accurate.

Each of the 8 systems had been implemented by a different integration partner and there was no simple and effective way to understand their highly customised individual data landscapes. This was critical to enabling them to be able to work out how those data models mapped onto the new applications. It was not possible to undertake this work using JD Edwards or data modeling tools.

Metadata for Data Migration

An aircraft manufacturer was engaged on a project to replace over 100 legacy applications with a new SAP system. Their challenge was data migration because all historical data from the legacy systems had to be moved into the new application.

As soon as the customer's data migration team started to try to become familiar with the SAP data model they realised the scale of the problem they faced. Without an easy way to understand its complex metadata, made worse by the level of customisation required, they would struggle to meet deadlines and more importantly increase the risk associated with inaccurate data migration.

They used Safyr to give their data analysts rapid and accurate insight into the SAP data model. This helped them to save thousands of man hours of manual work and to accelerate their data migration process.

"Frankly we simply could not have done what we did without some way to extract that (SAP) metadata automatically.

To discover it and hand enter it manually would have taken thousands of hours."

Used Safyr to enable accurate legacy data migration into SAP

Senior Data Architect, Aircraft Manufacturer

Metadata for a Business Intelligence project

Hydro Tasmania, an Australian energy company initiated a Business Intelligence project after the implementation of SAP ERP to replace a number of legacy applications. In addition to the ERP they also acquired SAP Data Services and SAP Business Objects.

The customer initially understood that these products worked together seamlessly. Data Services does connect to SAP to extract data, however it does not provide any metadata discovery capabilities.

Therefore when it was time for the BI team to try to find the tables and related tables they needed in their new SAP system they were unable to do so quickly and easily. This caused significant delays, reduced the trust the business had in the data and could have threatened the BI project altogether.

They used Safyr to accelerate their access to the SAP metadata and for locating the tables they needed. They calculated that it gave them a productivity gain of over 90% compared to the methods they had been using previously.

Using Safyr with SAP BW

A large Manufacturing company were using SAP BW as their primary BI environment for SAP. The InfoCube-based architecture of BW can often lead to a proliferation of Cubes that are effectively 'silos' of consolidated business information.

The customer used Safyr's BW capability to catalog the many InfoCubes in each of their BW instances. This helped them to identify areas of commonality as a means to rationalise the multitude of Cubes. Finally they combined the results from Safyr with their data modelling tools to visualize Cubes as start-schemas to communicate capabilities to end users.

Finding Personal Data for GDPR

A UK based utility company uses Safyr to identify Personal Data items in its SAP system as part of its program to ensure GDPR compliance. They have improved confidence in their ability to deliver information about Personal Data into their GDPR platform.

"….the time saved or additional productivity was equivalent to at least ¾ of a Full Time Employee.

….tasks that, without Safyr, would have taken days or weeks now take hours or possibly a day"…

"and mentions a specific example where previously finding a specific set of tables took 93 hours, the same task now took only 35 minutes using Safyr."

Used Safyr to recover a failing SAP ERP/SAP Business Objects project

Hydro Tasmania
The power of natural thinking

Further information

If you would like to learn more you can visit our website at https://www.silwoodtechnology.com.

You can download a trial copy of Safyr here.

You can request a free data model here.

Follow this link to set up a call or demonstration of Safyr.

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