

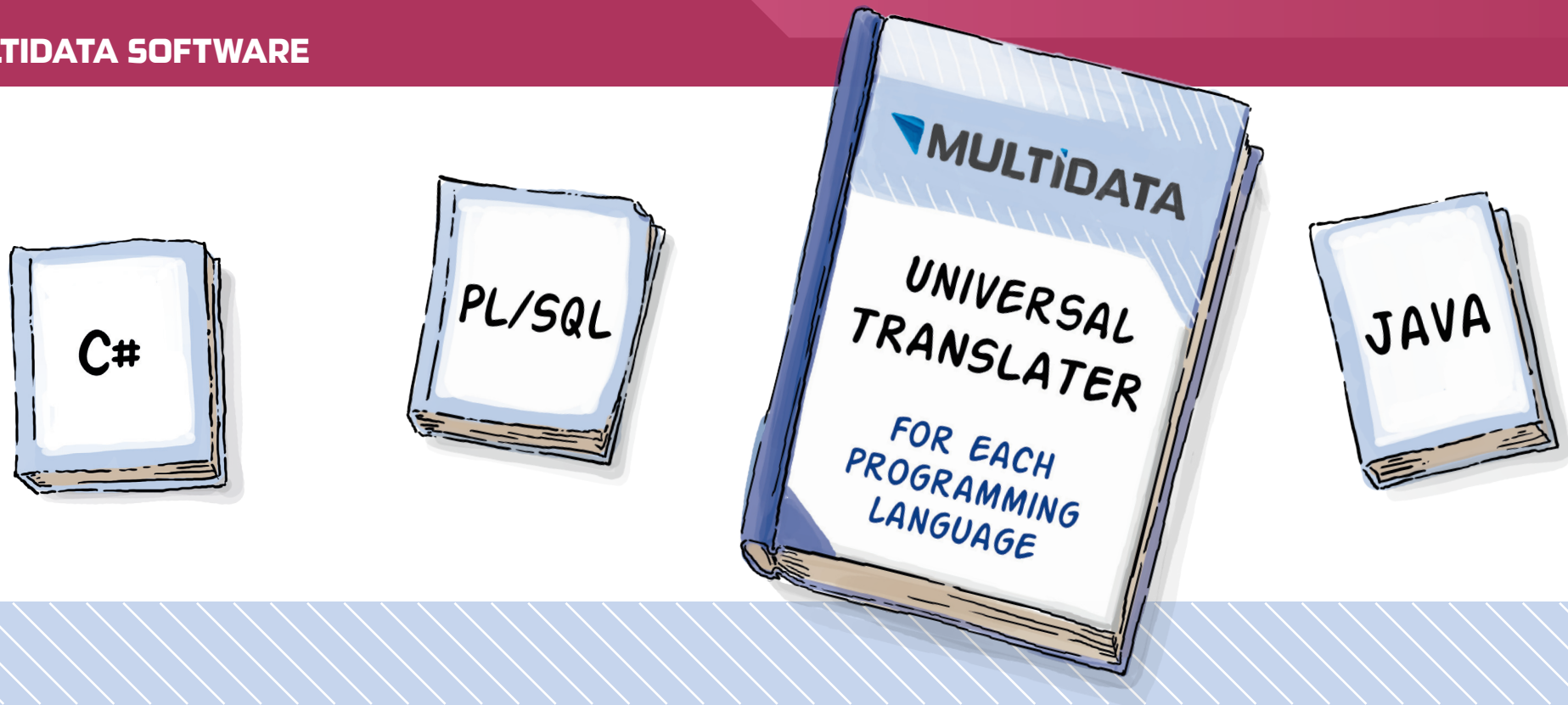


MD-PREMIUM.NET
AFW

"It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change."

Charles Messier (1730—1817)

Application Framework



Start into a high-tech and sustainable future with Multidata

Companies often are confronted with new and great challenges.

They result on the one hand from the permanent changing market or from organization structures to be adapted within the company and on the other hand from the usage of old, not updateable any more software solutions or a big amount of isolated applications, which hardly enable the interaction and a comprehensive reporting.

If you think about homogenizing the existing software infrastructure or about modernizing the active solution, most of the time you will end up at the topic “new development”, even if the offending object “only” is a not state-of-the-art any more user interface, which urgently should be modernized.

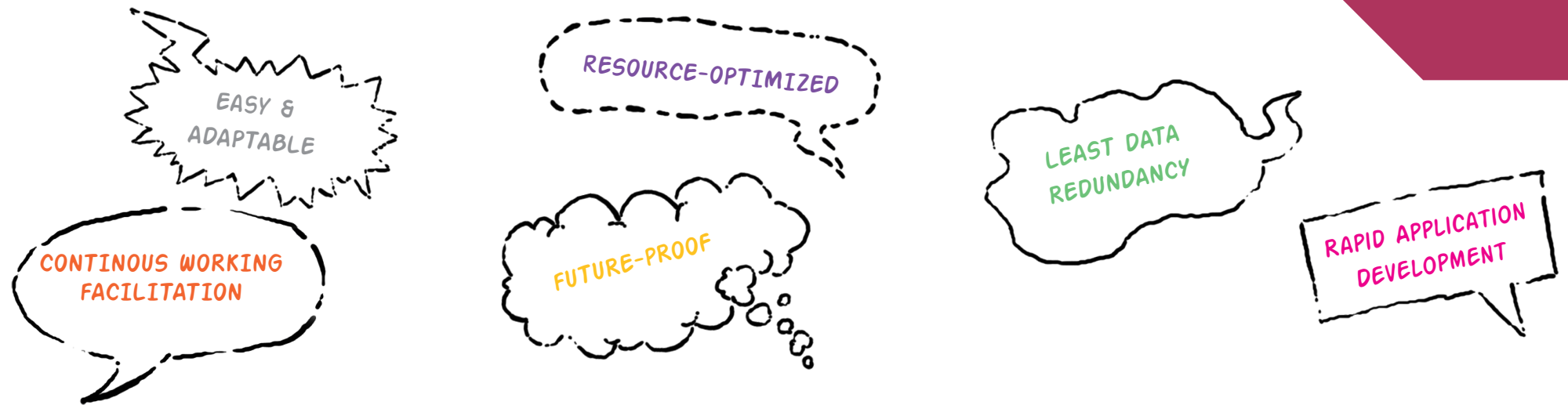
The reason: The business logic is integrated in the client or GUI and in case of a user interface modification it has to be re-programmed.

The software engineers of Multidata Software are busy with exactly this lack of software development since nearly 20 years.

MD-Premium.NET Application Framework is the result of this long-lasting, customer-oriented development process and also is the fundament of a homogeny and future-oriented application environment. It has left behind such problems a long time ago and is prepared to realize new requirements easy and everlasting. This is enabled by a unique technology, which is based on a programming language independent metadata level and which is targeted to build a consistent software environment. Permanently more well-known companies already recognized this resource-saving advantage and count on our “MD-Premium.NET Application Framework” in the areas of development and modernization.

How you channel your company into a state-of-the-art and sustainable direction too, you read on next pages.

QUICK FACTS



With the Application Framework you are able to...

- ▼ merge different applications onto one homogeny platform.
- ▼ embed and modernize existing software applications.
- ▼ self-develop new applications with a compared low programming effort.
- ▼ easy use the applications due to a uniform user interface.
- ▼ embed tables and create reports without big effort or technical know-how – as well as every user too.
- ▼ work more efficient in the whole application with help of drag & drop functions.
- ▼ use the sophisticated access permission system.
- ▼ compile multi-lingual applications on Unicode base (usage of Cyrillic font or even Farsi is enabled).
- ▼ create web shops very easy with a portal or to integrate standard web shops like „Magento“ via interface.
- ▼ refresh your applications independent from the customization degree at any time with standard updates.

The Application Framework provides you...

- ▼ a future-proof investment, because it is independent from programming languages. A metadata level achieves sparing of time-intensive re-programming works in case of programming language change.
- ▼ an easy adaption to new technologies or embedding new user interfaces, because the business logic is stored in the database.
- ▼ predefined business logics, layouts and reports.
- ▼ Rapid Application Development.
- ▼ least data redundancy and resource-optimizing data management by object-oriented XML resources. At customer implementations only individual attributes have to be modified in the course of customizations (no program code necessary for controlling the application's behavior).
- ▼ the usage of the client of your choice. In case of the Windows client you save the costs of the application server (2-tier application).
- ▼ continuous working facilitation (Repository Explorer, wizards, dialogue and pop-up support and many more).

BENEFITS

MD-Premium.NET Application Framework and all with it compiled modules contain following features:



Individual Look & Feel of User Interface - Work without glasses

You can modify the look & feel of the GUI with point-and-click – there are different skins available (also familiar Office styles). A highlight is the option of the seamless font scaling and thus the size adaption of input fields to the individual user demands.



Integrated Reporting - Values, data, facts at the push of a button

MD-Premium.NET is delivered with many standard reports. You can adapt them individually or create new ones. For that two different reporting systems are available: XtraReports and Crystal Reports. If you want to use other report technologies of course we can integrate them smoothly.

Integrated Business Intelligence - Efficiency at the reports

Additionally to the reporting system the Application Framework is equipped with business intelligence (BI) in form of an OLAP & chart function. If you use this add-on, desired data display can be adjusted in runtime via drag & drop. By this method creating new reports, which are not part of MD-Premium.NET's standard scope of supply, is obsolete in 90% of cases.

Integrated Workflow Management - Activate workflows automatically

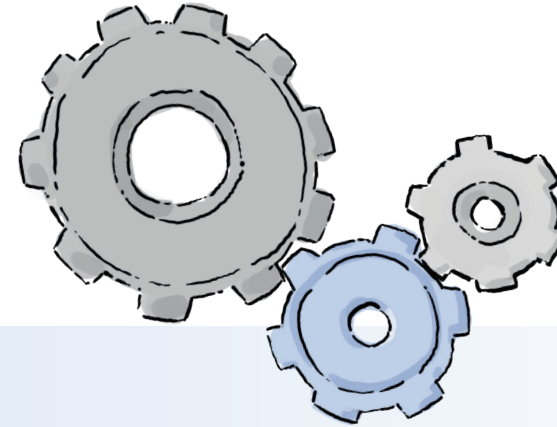
A continuous workflow management is a fix part of the Application Framework and is used for example in module MD-Premium.NET DOC (Document Archiving System) for the automated document filing.

Integrated Help Function - The extensive reference tool

The integrated help function offers an exact technical documentation of program flows and supports you at your work with step-by-step instructions or video tutorials. You can call the help directly in the software or online, it is available in German as well as in English and is always up-to-date. News are automatically documented from our developers, so you can retrace processes or make settings by yourself. You can download (PDF) or print the online technical documentation topic-specific or totally.

MULTIDATA APPLICATION FRAMEWORK AT A GLANCE

MD-Premium.NET Application Framework (AFW) is a .NET & Oracle database-based and also Unicode-able development tool with the target to develop Enterprise applications fast, intuitively and with little programming effort. A metadata level takes care for the decollation from programming languages and thus for saving time-extensive redevelopment work in case of a programming language change.



Rapid Application Development - No need for re-inventing the wheel


Because of ready structures, processes and layouts (database structure, business logic, validating and access rules, user interface etc.) you can concentrate on the root of the matter instead of struggling with common problems of Windows or web development.


Furthermore Rapid Application Development is supported by the usage of familiar design and user-friendly tools. For example the Repository Explorer enables an easy XML editing and several wizards, dialogues and application-wide drag & drop functions deliver an additional assistance.


Predefined Business Logics - The basis for efficient work

We offer you solutions in two ways: If you are a developer, we provide you our development tool MD-Premium.NET Application Framework, with which you are able to compile investment-secure and future-proof solutions or to renew existing ones. If you are an end-user, we provide you a broad product portfolio of standard solutions.

These are:

 **MD-PREMIUM.NET**
ERP
Enterprise Resource Planning

 **MD-PREMIUM.NET**
FSI
Financial Software & Interface

 **MD-PREMIUM.NET**
CRM
Customer Relationship Management

 **MD-PREMIUM.NET**
GEO
Geo Data Management

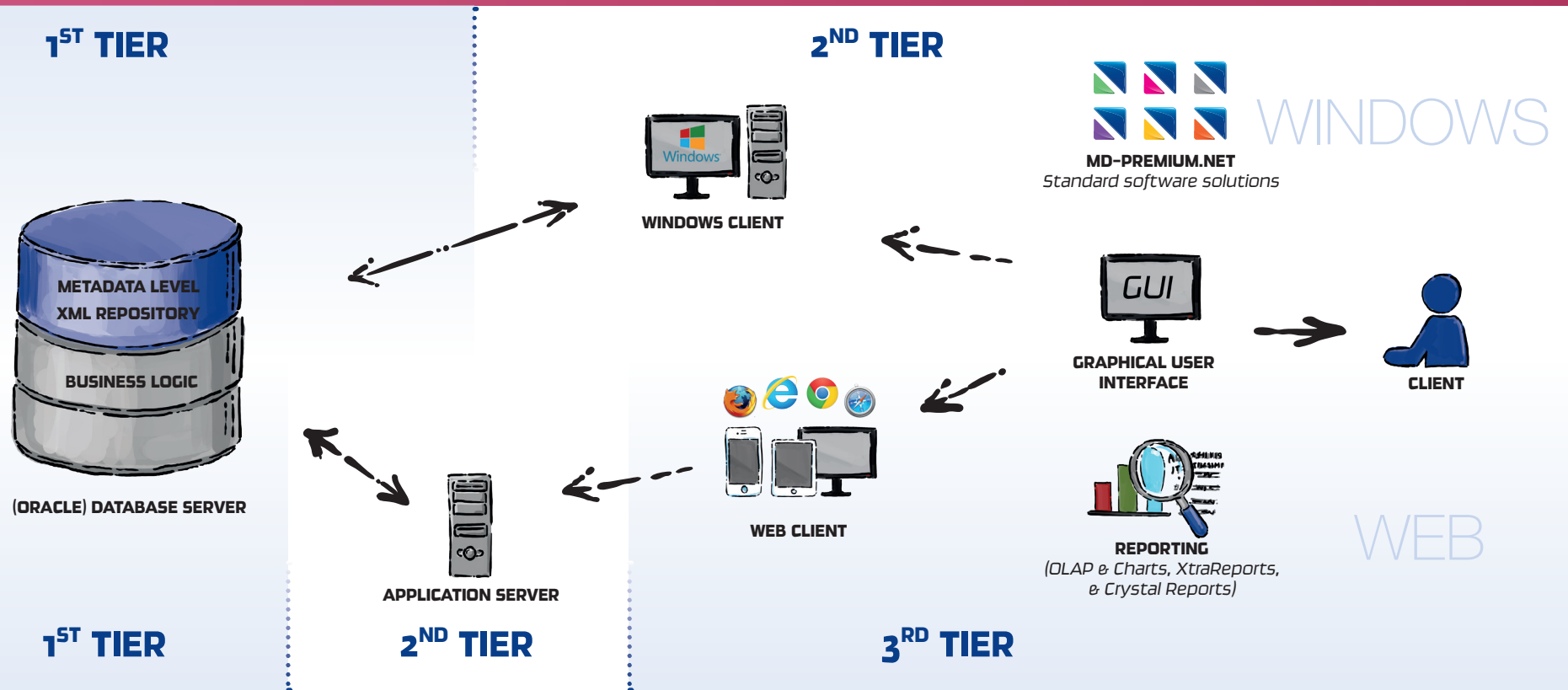
 **MD-PREMIUM.NET**
DOC
Document Archiving System

 **MD-PREMIUM.NET**
HRM
Human Resource Management

Because all modules are developed on basis of our Application Framework, these solutions are either ready out-of-the box or can be adapted to your individual demands with help of the Application Framework.

Existing business logics and all their functions are the fundament for the further development. So conventional calculations like the discount calculation of the ERP system are already part of the business logic and have not to be programmed again.

SOFTWARE ARCHITECTURE



Tier compilation - Clear structures

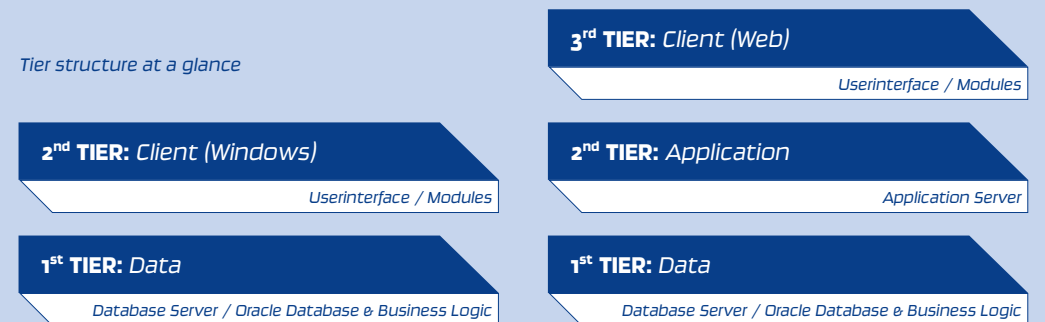
The predefined application architecture of the Application Framework offers a variety of additional options, contrary to other Frameworks: The Multidata Framework is not limited to a certain application type, but is equipped with many different business logics (e.g. ERP, CRM, HRM).

It also is not bound to one platform, but is available on Windows and in the web.



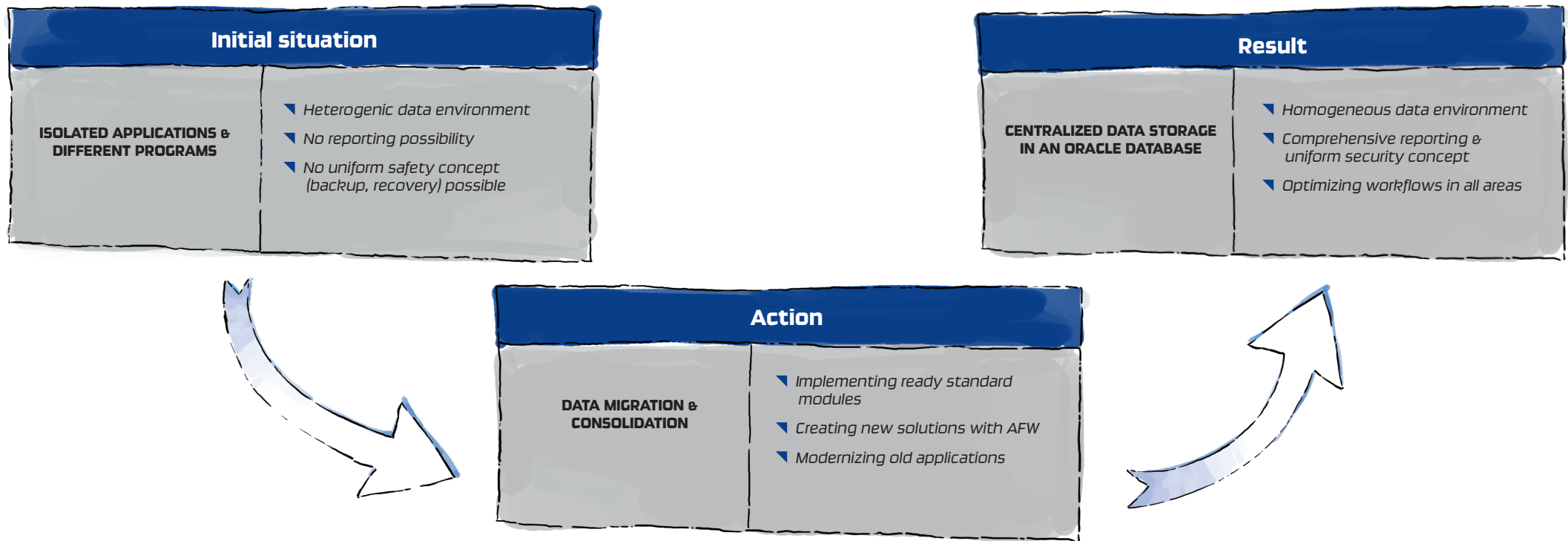
All functions of our software solutions and such, which are realized in the web client you find on our web page www.multidata.at under "Product Matrix".

Tier structure at a glance



The Multidata Application Framework is a 2-tier resp. a 3-tier application: For the Windows client **no** application server is necessary contrary to the web client.

DATA CONSOLIDATION AT A GLANCE



Data consolidation - Working on one platform

If you are bound to an isolated application or you are not able to make a comprehensive reporting resp. only one-way, or worse, you are not able to make any program interaction, then we have good news for you: a data consolidation can be done quickly with the Application Framework.

One of the most important tasks of the Framework is to merge different platforms onto **one** homogeny environment (Oracle database). For that existing data sources (e.g. Excel or Access files) are imported into the database unprocessed.

The user-friendly tools from Oracle are very important for that.

With the Application Framework data can be read automatically and without elaborate re-preparation and be displayed in a ready-made user interface.

This consolidation not only leads to a comprehensive reporting, but also to a uniform security concept and to an optimization of workflows in **all** application areas.

1ST TIER: DATABASE & METADATA LEVEL

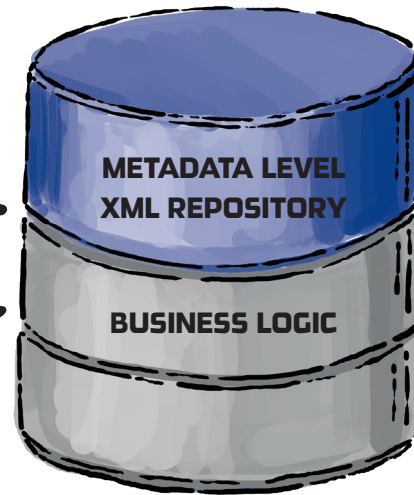
METADATA LEVEL

- Programming language-independent
- Description of processes, masks, commands & layouts takes place in XML

XML-REPOSITORY

- Storage and control of user interface behavior - object-oriented meta data level

BUSINESS LOGIC
Data & functions



(ORACLE) DATABASE SERVER

REPOSITORY EXPLORER

- Tool for XML resource editing & visualizing

PL / SQL

Separation from database and GUI - The magic formula

The complete business logic is deposited in the database and not in the client like in other applications. The XML Repository makes the connection between the business logic and the user interface with help of commands. Thus a total separation of these two areas is reached. This capsulation of data, reporting and user interface guarantees the frictionless modification of the client software to new technologies and the easy embedding of self-developed user interfaces and reports. For example if you change a function, which lies in a business layer, then this modification will be visible immediately at all clients (Windows as well as web client). One of the biggest advantages results from this circumstance: The software remains fully updatable – no matter how high the customization degree is.

If you are .NET programmer, all .NET functions are available as assemblies. So you are able to use the Multidata Application Framework also from .NET side with familiar tools like MS Visual Studio.

Independence due to metadata level - Our uniqueness for your future-proof solution

Thanks to an abstract metadata level you are not dependent from programming languages any more. The description of processes, masks, commands and layouts takes place in this metadata level – our XML Repository. Into process description invested time remains anyway – in opposition to conventional development tools. Due to the fact, that the behavior of the application has not to be recoded, you save time and money and moreover create a future-proof application!

XML example for field validation with calling a database function and cursor skip into a certain field:



XML Repository & Merging - The heart of the Application Framework

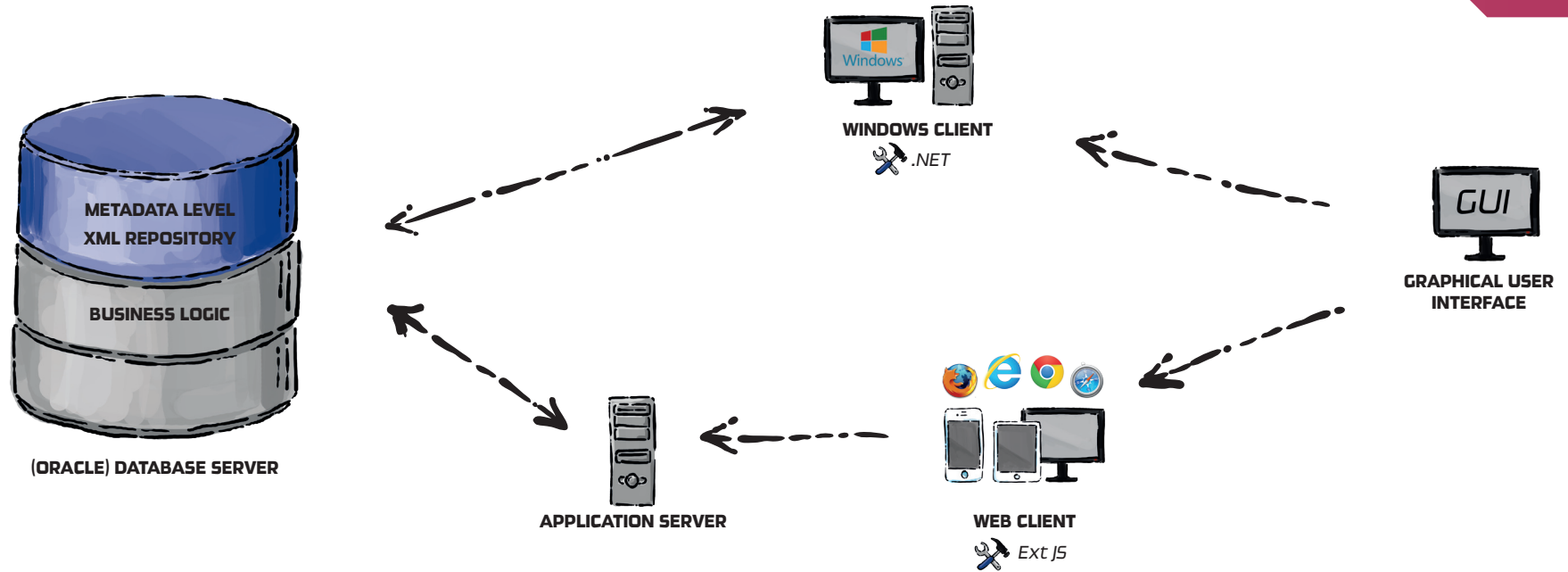
The centrepiece of the Application Framework, which most important task is to provide metadata for the client, is the XML Repository and the related merging process. The merging process combines and merges during runtime the XML resources which lie in the metadata level.

The object-oriented behaviour resp. the system of attributes inheritance – apart from that only programming languages have it – is inherited to the XML Repository and the contained resources.

The resources thus have object-oriented attributes and are adapted by derivation or overwriting onto different levels (application level, user level, department level, client level). They represent working processes, workflows, work cases (e.g. customer-sided order processing), subjacent tables and their relations and also layout descriptions.

By this inheritance possibility merest data redundancy and resource-optimized data maintenance is guaranteed. You also reach time-optimized program processes and another big advantage is the fact, that in case of customizations in the course of an implementation only individual attributes have to be modified and so the behaviour of an application can be controlled without program code.

2ND/3RD TIER: THE CLIENTS



No agony of choice at the clients

You don't have to decide, whether the application compiled with the Framework should run on a conventional desktop application or with a web browser. The applications can be used with a Windows client (.NET) or with a web client (Ext JS; all common browsers with actual version possible) any time.

If you want to use both clients, modifications immediately are visible in the Windows client as well as in the web client.

With this software architecture the fundament for an efficient and future-proof working is given.



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