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ORC Advance Web Application

About Client

The ÖRC was founded on April 12, 1980 in Großgmain / Salzburg as an association for the breeding of retriever dogs in Austria by Dipl.Ing. Günther Daghofer and Maria Anna Baronin Mayr-Melnhof founded. The ÖRC is a member of the Austrian Association of Cynologists (ÖKV) and through this member of the Federation Cynologique Internationale (FCI).

The ÖRC is a member of the Austrian Hunting dogs association (ÖJGV) and integrated into the hunting dog industry in Austria through this association.



The association aims to promote breeding, to strengthen the understanding of nature and the appropriate keeping of Retriever pedigree dogs in Austria as well as their breed-appropriate training, leadership and testing.

"Retriever pedigree dogs" are breed hunting dogs:

- Golden retriever
- Flat coated retriever
- Labrador retriever
- Chesapeake Bay Retriever
- Curly Coated Retriever
- Nova Scotia Duck Tolling Retriever

Executive Summary

ÖRC being one of the biggest and strongest dog associations in the world has managed a very large community of its members since the last few decades. They're responsible for maintaining the biggest Austrian dogs database and their pedigree records. Every single dog in this database needs to have a complete health history, tests and training certificates verified by professional associations.

Most of all, this platform allows the breeder to explore the possibilities and genetic data of the dogs for mating and also manage this record in the best possible manner.

The current systems that ÖRC was using were outdated and scattered across multiple platforms. This project was commissioned by their board to start unifying the platform and offer a modern and easy to use solution to their community under a single application.

So, we are required to an application that satisfy following requirements:

- User Friendly Interface
- Multi-Lingual (Localization)
- Seamless User Transition
- Paid User Management (Memberships)
- Scalable
- Web and Mobile Friendly
- Fast and Reliable
- Multi-level User Permissions (User groups)
- Flexible to grow
- Secure

That's a pretty decent requirement set and we usually get tons of such requests so our analysis team started the analysis. The analysis soon gave us realization of a much bigger problem lying under the current platform.

Challenges

As ÖRC is a very old and stable association, they always had some kind of systems in place to manage their members, breeders, events and dogs but unfortunately all of these systems were developed multiple times under the different board members. As the association's member base grew, each system was just trying to solve one problem at time. The board members are not very tech savvy and no company in the past ever explored their real problems before as most of these systems were developed by different companies.

In the end they had about 4 different systems in place all in single language (Dutch).

- Members and Event Management (ASP & MSSQL)
- Dogs and Pedigree Management (PHP & MySQL)
- CMS system (PHP & MySQL)
- News section (Third party cloud solution)

All these systems were completely independent and were actually residing on multiple servers as well. So, for an end user, the experience was pretty bad as there was no connection or session sharing between any of these systems.

Dogs and Pedigree Management

The screenshot shows the 'Zuchtdatenbank des ÖRC' website. It features a search bar with a 'Suchen' button and a 'Zuchtdatenbank des ÖRC' header. Below the search bar, there are several sections: 'Datenbank-Suche' with buttons for 'Hunde suchen', 'Deckrüden', 'Zuchtbüchlein', 'Züchlerverzeichnis', 'Wurfankündigungen', and 'Aktuelle Wülf'; 'Herzlich Willkommen, auf der Zuchtdatenbank des ÖRC.' with a login button; 'Schnellsuche Pedigree' with a search input; and 'Datenbestand' showing 'Aktuell enthält unsere Datenbank 33.030 Hunde, darunter 16.225 Rüden und 16.805 Hündinnen.' There are also 'Hilfethemen' and 'Begriffe' sections.

The screenshot shows the 'Österreichischer Retriever Club (ÖRC) - Community' website. It features a navigation menu with 'Home', 'Der ÖRC', 'Rassen', 'Jagd', 'Show', 'Welpen', 'Weserest', 'Ausbildung', 'Working Test', 'Field Trial', 'Zucht', and 'Veranstaltungen'. The main content area is titled 'Online-Anmeldung für eine Mitgliedschaft beim Österreichischen Retriever Club' and contains a detailed form for membership application, including fields for name, address, and contact information. It also lists the various breeds recognized by the club.

This is another screenshot of the 'Österreichischer Retriever Club (ÖRC) - Community' website, showing the same 'Online-Anmeldung für eine Mitgliedschaft beim Österreichischen Retriever Club' form. It highlights the 'Bitte lesen Sie nachstehende Information vor der Online-Anmeldung als Mitglied durch:' section, which provides detailed information about the club's history, mission, and the requirements for membership, including the need for a written declaration of intent.

Our project managers soon assembled a team and with detailed analysis of the project, we were introduced to following initial challenges

- Importing Data from multiple database platform
- There was zero technical documentation available
- The code filenames and database structures were in Dutch
- Previous developers are nowhere to be found
- User and Dog attachments are scattered on multiple platforms

We have seen many projects where no technical documentation is available but our team is very mature in reverse engineering the applications to build a better understanding of the system. In this project, we faced one of our biggest enemies in codebase and structure i.e. No English. The table names, files, classes and everything was in Dutch. One might ask that this can be resolved by simply engaging Dutch to English translators but you might be forgetting that 98% of the time, the translators are non-technical people. We are used to engaging translators for converting pages or CMS based content, but this time we are talking about the code and very deep technical stuff. That only an experienced programmer can even understand in the first place.

Another big challenge is having an old system with completely different languages and databases. This job is not our regular data migration job in which we just grab the data and migrate that data to a new database. This required a mix and match of data like we never did before. To make things more complex, there were huge discrepancies inside the data. Like we were told that every dog is assigned with a unique ID which is going to be common between both systems and you guessed it right, that was not the case.

Furthermore, the MSSQL database was not normalized at all by the previous company. There was zero relation between the tables and even after getting everything translated, understanding these relations were going to be another sweet pain for us.

Proposed Solution

After identifying our challenges and knowing our problems better, our project managers drafted a very clever plan. As one of the major problem was to translate the complex coding structures, we started exactly from here with below steps

- Extracting every Dutch string and File name into a simple Excel Sheet
- Then we wrote a script to translate those automatically in sheet
- Then manually translation was improved so words can make sense
- At this point, we engaged translators to show their magic

By end of this process, we were able to cover 80% of the translation inside the code. We quickly started to reverse engineer the code and database structures, with our team's tireless efforts we were able to create ERD and UML diagrams of all old systems. So, the reverse engineering process was all started and at this point, we were all very confident about our way forward.

Now the next major step in the process was to design a database structure that entertains all these basic client requirements and is capable to hold all the data from these multiple data sources. System architect team proposed a very flexible and promising design that provided the base for the whole project to grow.

With consultation and close coordination with our client we decided the following stack for building the much more powerful platform.

- Laravel
- MariaDB
- ReactJS
- WordPress

Laravel

Our company has many departments and the Laravel team is one of the strongest assets of ours. We love Laravel because it never disappointed us and above all our clients love the solutions we built using it.

For this project, Laravel was used for all major operations. Some of them are listed below

- Creating the New Database & Structure (Migration)
- Importing Data from multiple sources (Seeding)
- Normalizing newly imported data
- Business Logic
- Membership Management
- Multi-Lingual Support
- API interface for ReactJS

Our Laravel team developed a very powerful and stable platform for every other part of the system to communicate back with the database effectively. Our import process was all managed via CLI and it was so powerful and flexible that we were able to merge 3 different databases.

MariaDB

To grow this system and support our new plan we decided to use MariaDB as it offered most flexibility for holding all different types of data. The latest version of MariaDB also offered us to make this system highly scalable.

Laravel works beautifully with MariaDB out of the box and this is one of the widely used combinations among the expert community. We were able to use the powers of MariaDB to create a flexible data structure that supported this mega project easily. Our new database is

- Clean Design
- Well connected
- Modernized Structure
- Normalized
- Easy to expand


ReactJS


Our team always loves to work with advanced JavaScript based technologies but our relation with ReactJS is kind of romantic. Every engineer in the JS team admires the flexibility and power of this framework.

We used React to create beautiful panels for the admins, staff and end users. The complete Members area was designed using react. We were able to accomplish following things using React

- Easy to Use Admin Panel
- Beautiful and User-Friendly User Panel
- Quick Page loads
- Single Page App Experience
- Real-time Language Switches

Admin Dogs Page



Choose Language: 
Member Panel
Logout

- Dashboard
- Persons
- Dogs
- Events
- Payments
- Moderation
- Notifications
- Types
- Training
- Permissions
- Roles
- Members
- Settings
- Phrases

Dogs

+ New

Reset Search
Advance Filters


Approved	Gender	Name	Race	Date Of Birth	Color	Studbooknumber	Father	Mother	Actions
Approved	F	X #1 BRUNAS	Labrador Retriever	27/11/2019			XANDI VOM FICHTENHORST	APRIL OF PONDCASTLE	Detail Delete Edit
Approved	F	O #7 VON DER SOMMERHÖHE	Labrador Retriever	26/11/2019			ROCHEBY STERLING	BOUCHERON QUATRE QUEEN'S JOY	Detail Delete Edit
Approved	F	O #6 VON DER SOMMERHÖHE	Labrador Retriever	26/11/2019			ROCHEBY STERLING	BOUCHERON QUATRE QUEEN'S JOY	Detail Delete Edit
Approved	F	O #5 VON DER SOMMERHÖHE	Labrador Retriever	26/11/2019			ROCHEBY STERLING	BOUCHERON QUATRE QUEEN'S JOY	Detail Delete Edit
Approved	M	O #4 VON DER SOMMERHÖHE	Labrador Retriever	26/11/2019			ROCHEBY STERLING	BOUCHERON QUATRE QUEEN'S JOY	Detail Delete Edit
Approved	M	O #3 VON DER SOMMERHÖHE	Labrador Retriever	26/11/2019			ROCHEBY STERLING	BOUCHERON QUATRE QUEEN'S JOY	Detail Delete Edit
Approved	M	O #2 VON DER SOMMERHÖHE	Labrador Retriever	26/11/2019			ROCHEBY STERLING	BOUCHERON QUATRE QUEEN'S JOY	Detail Delete Edit
Approved	M	O #1 VON DER SOMMERHÖHE	Labrador Retriever	26/11/2019			ROCHEBY STERLING	BOUCHERON QUATRE QUEEN'S JOY	Detail Delete Edit
Approved	F	L-Wurf vom Waldschrott					RICHBERT VOM WALDSCHRATT	AUGUSTINE VOM WALDSCHRATT	Detail Delete Edit
Approved	M	WINDINGBROOKS BAL COMBE SIMUR	Golden Retriever	28/07/2019	gold	GR 8835	THINK TWICE ZERGES	BONNIEBROOK'S DULSIF DAY	Detail Delete Edit

10

1 2 3 4 5 > >>

Admin Dogs Page


Deutsch



Österreichischer Retriever Club

- VERPAARUNG
- WELPEN
- ÖRC VERANSTALTUNG
- ZÜCHTER SUCHE
- HUNDE SUCHE
- MITGLIEDER SUCHE

Übersichtsseite



Österreichischer Retriever Club

Remember me
 [Forgot password?](#)

ANMELDEN

Not registered [Create an account?](#)

**Admin Karigar**

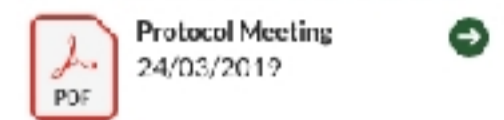
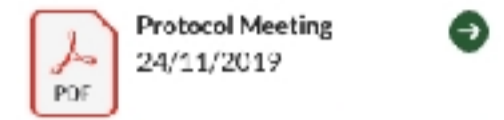
National Group: Burgenland
 Phone: 232323
 Email: admin@test.com
 Member Since: 08/03/2020
 Membership Number: 111

My Dogs

XANDL VOM FICHTENHORST
 XANDL VOM FICHTENHORST
 XANDL VOM FICHTENHORST

MY DATA[EDIT PERSONAL DATA](#)[MY PAYMENTS](#)[MATING](#)[PUPPIES](#)[MY DOGS](#)[ÖRC EVENTS](#)[MY REGISTRATIONS](#)[FIND A BREEDER](#)[FIND A DOG](#)[FIND OTHER MEMBERS](#)[› TRAINING-GROUND](#)[› EVENT ADMIN](#)[› MEMBER ADMIN](#)[› BREEDER ADMIN](#)[› FINANCE ADMIN](#)[› BREEDER DETAILS](#)**Welcome admin****Personal data**

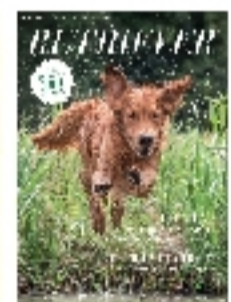
First Name	admin
Last Name	karigar
Date Of Birth	09/03/2020
Phone	232323
Email	admin@test.com
Gender	Male
National Group	Burgenland
Mobile	232323
Member Since	08/03/2020
Membership Number	111
Active	Yes
Breeder	No
Hunting License	No
Disabled Card	No
UH to	13/03/2020

Board protocols[More](#)**Board protocols**

March 20



December 19



September 19

WordPress

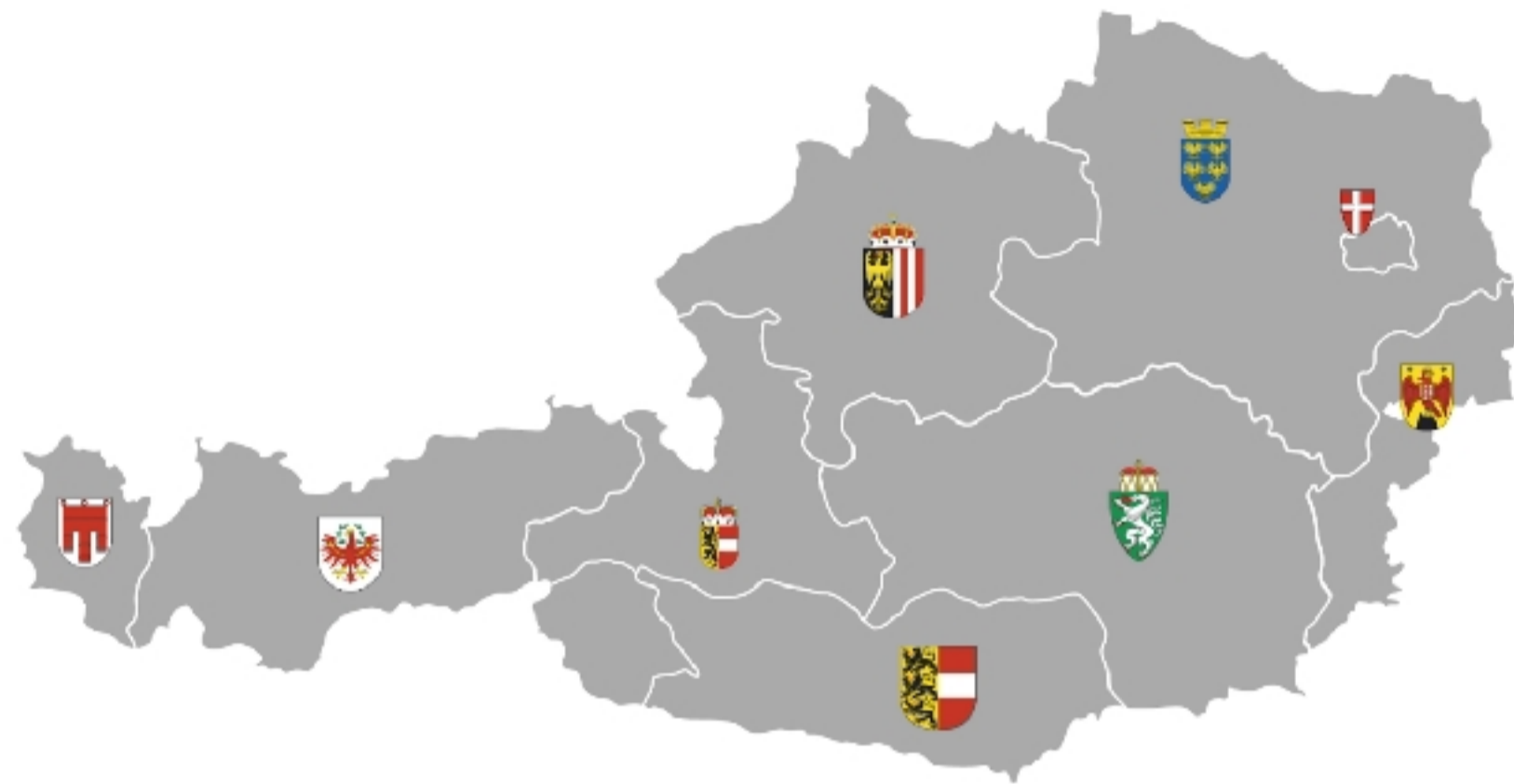
We obviously don't need to explain our reason for choosing Wordpress, whenever we knew that we need a user-friendly and easy to use CMS, WordPress is usually our first choice. As most of the clients just love Wordpress due the ease of use.

We were able to import all previous data from multiple CMS systems into a single WordPress installation. On top of that, we created a custom integration between WordPress and Laravel for seamless experience for the end users.



ÖRC Landesgruppen & Ausbildungsstätten

... immer ganz in Ihrer Nähe



Alle Landesgruppen anzeigen →



Conclusion

We created the new solution with maximum flexibility and power to our clients and some of the high end features are listed here

- Full Dynamic Forms and Data structures
- Dynamic Phrases & Multi-Lingual Support
- Centralized Notification System
- Dynamic Notification Templates
- Dynamic Roles and Permission Controls
- Configurable Major System parts
- Centralized Finance & Membership Management
- Easy Entity Connection
- Power Payment integration with Mpay24
- Moderation System

Our new system is much more unified, easy to use and easily expandable. The client loved the new solution and obviously their community enjoyed it as well.

For us, this is one of the other projects that we can be proud to put our name on. Our team's effort and commitment was something that was far fetch at the start.

Technologies Applied



Thanks For Watching!




Contact us today and we will turn your ideas into successful projects.

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