



# Vet PACS

by MINNOVAA



**MINNOVAA**  
Medical Imaging Innovations

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# 1 A Comprehensive and Full-Featured PACS Solution for Veterinary Imaging

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MiNNOVAA proudly presents **Vet PACS**, a full-featured PACS solution designed specifically for veterinary imaging centers. Leveraging our 15 years of experience in delivering robust PACS systems for human healthcare, we have adapted our proven technology to meet the unique needs of veterinary imaging.

While our PACS solutions have been successfully implemented in hospitals and imaging centers worldwide, this new version is specially tailored to support veterinary practices. **Vet PACS** incorporates all the essential features of our established PACS systems, including:

**DICOM-compliant imaging storage and retrieval:** Ensuring compatibility with all veterinary imaging modalities such as X-rays, ultrasounds, CT scans, and MRIs.

**Seamless workflow integration:** Streamlining the capture, transfer, and analysis of veterinary imaging studies for faster diagnosis and treatment planning.

**Advanced image viewing and manipulation tools:** Offering precise measurement, zooming, and 3D reconstruction capabilities for accurate veterinary diagnostics.

**On-premise architecture:** A major advantage, as it allows veterinary centers to maintain complete control over their images and data. All images are stored locally, ensuring quick access and full ownership. Additionally, with internet access, **Vet PACS** enables **secure teleradiology**, allowing veterinarians to access images from anywhere, at any time, with high security.

**Scalable architecture:** Adapting to the needs of small veterinary clinics and large multi-location veterinary hospitals alike.

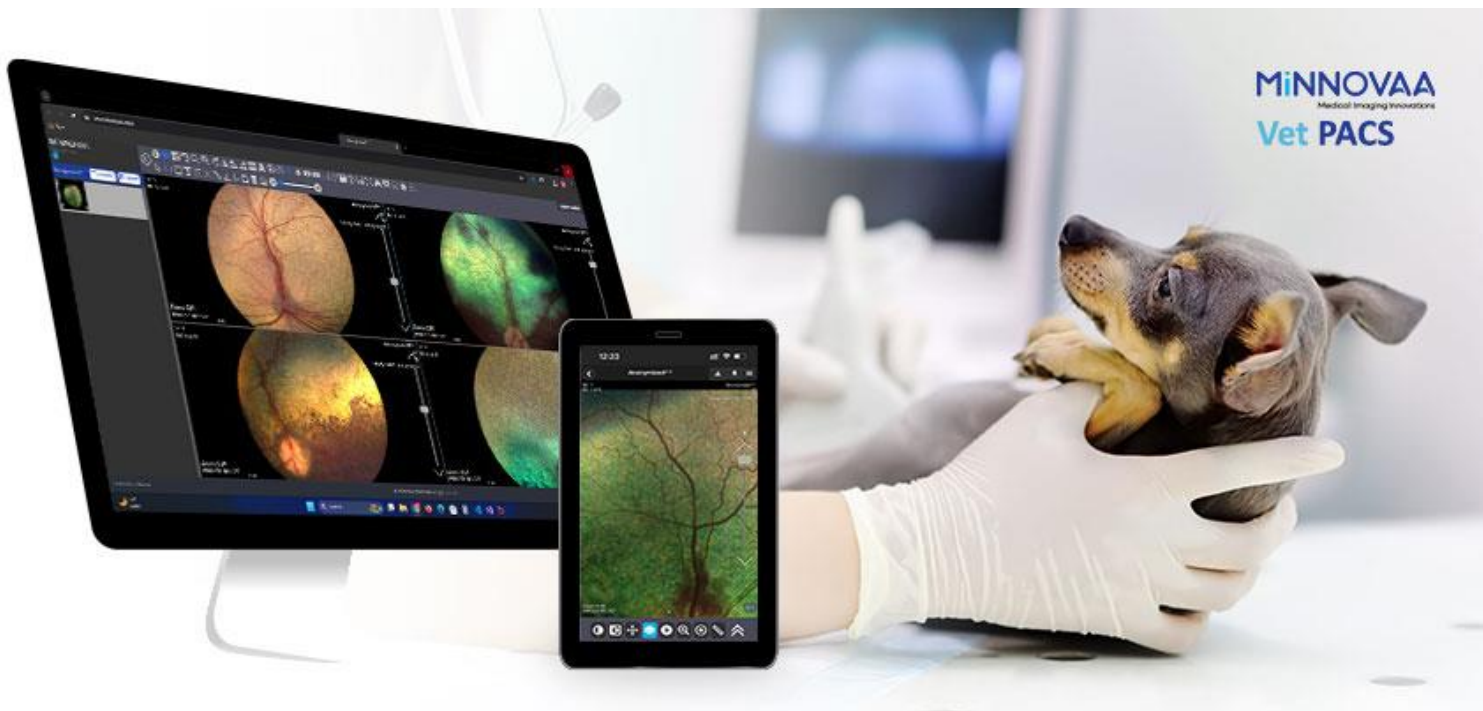
**Enhanced security and compliance:** Adhering to the highest standards of data protection to safeguard sensitive veterinary patient records.

With **Vet PACS**, veterinary practices gain access to a modern, fully integrated imaging solution that meets their unique needs while benefiting from the reliability and expertise MiNNOVAA has cultivated in human healthcare.

## 1.1 Novel - The Central Core of Vet PACS

**Novel** is the powerful software engine at the heart of **Vet PACS**, installed on the PACS server, and it serves as the backbone of the system. It provides a comprehensive administrative portal and web-based image-viewing capabilities, ensuring seamless management for both users and system administrators.

This software is available **on-premise or on-site**, meaning the veterinary center must prepare a suitable server for the installation of **Novel**. Once installed on the central imaging server, **Novel** handles all critical operations, including communicating with imaging devices to retrieve images, interacting with web or desktop clients for image viewing, and integrating with other healthcare IT services. It covers crucial areas such as device setup, data storage and retrieval, security management, user access, workflow optimization, and delivering images to radiologists or veterinarians, while allowing image searches and result sharing with clients.



Here are the key features that **Novel** brings to **Vet PACS**:

**1- Support for multiple types of medical imaging:**

**Novel** seamlessly handles various imaging modalities, including X-rays, ultrasounds, MRIs, and CT scans, ensuring that all veterinary imaging needs are met.

**2- Image storage management:**

It efficiently manages the storage of images, providing advanced options for organizing and accessing large datasets, keeping the imaging process smooth and uninterrupted.

**3- Low hardware requirements:**

**Novel** can run on a server with modest specifications, such as a regular PC, without needing specialized hardware, making it highly cost-effective and easy to implement in various settings.

**4- Backup management:**

Integrated backup management ensures that all images and critical data are securely stored and can be retrieved in the event of hardware failure or other issues, minimizing the risk of data loss.

**5- Optimized storage using compression technologies:**

**Novel** uses advanced compression methods like **MPEG4** and **JPEG2000**, allowing the storage of twice the amount of images in the same space. This doubles the efficiency of fixed storage, reducing the overall storage burden without compromising image quality.

**6- Support for virtual environments:**

**Novel** can be installed on **virtual machines (VMs)** or even in **off-site datacenters**, providing flexibility for veterinary centers that prefer a virtualized infrastructure or centralized data management.

**7- No limitations on image size, number, or users:**

The system imposes no restrictions on the number or size of images stored, nor the number of concurrent users viewing images. This ensures that large veterinary centers with high imaging volumes and multiple users can work efficiently without performance bottlenecks.

**8- Support for DICOM and non-DICOM images:**

**Novel** supports both **DICOM** and **non-DICOM** images, ensuring compatibility with a wide range of imaging devices and formats, making it suitable for various veterinary imaging workflows.

**9- Peering method for fast image viewing:**

**Novel** incorporates a **peering method** that significantly boosts the speed of image viewing on the web, especially for video-based imaging studies. This ensures that even large and complex video files can be accessed and viewed swiftly, improving diagnostic efficiency.

**10- Advanced web-based image viewer with professional tools:**

**Novel** includes a **Zero-Footprint viewer**, meaning it requires no installation on client devices and can be accessed directly from any web browser. This viewer provides all the professional tools needed for advanced image analysis, including zoom, measurement, annotation, and 3D reconstruction. It supports secure image access by using **SSL and**

**VPN encryption**, ensuring that all data exchanged between the server and the viewer is fully encrypted and protected from unauthorized access.

With these capabilities, **Novel** ensures that **Vet PACS** provides a robust, flexible, and scalable imaging solution, perfectly tailored to the needs of veterinary centers.

## 1.2 XEUS - The Professional Imaging Workstation for Vet PACS

**XEUS** is MINNOVAA’s advanced desktop-based **Imaging Workstation**, providing veterinary professionals with cutting-edge tools for viewing and analyzing medical images. Installed on client or user systems, **XEUS** offers an array of professional features designed to enhance diagnostic capabilities and streamline workflows for veterinarians and radiologists.



Here are the core features of **XEUS**:

**1- Crystal-Clear Visualization:**

XEUS delivers high-definition, crystal-clear visualization of medical images. It supports multiple imaging modalities, ensuring that every detail is presented with maximum clarity, helping veterinarians make precise diagnoses quickly and confidently.

**2- Empowering Analysis Tools:**

The workstation is equipped with powerful analysis tools that allow for precise measurements, annotations, and advanced manipulations. These tools empower users to conduct in-depth evaluations of images, such as identifying subtle abnormalities or comparing multiple imaging studies side by side.

**3- Media Writing (CD/DVD Imaging & DICOM Print/Filming):**

XEUS provides seamless media writing functionality, enabling users to write medical images onto CDs or DVDs with the necessary DICOM format for easy sharing. Additionally, **DICOM Print/Filming** allows for the printing of images directly onto specialized imaging film or standard paper, making it simple to produce physical copies for archives or referrals.

**4- Pro Reporting:**

XEUS includes a comprehensive **Pro Reporting** feature, allowing users to create diagnostic reports with ease. This system supports various formats, including structured templates, voice dictation, and intelligent reporting with AI integration. Veterinarians can generate reports that are both detailed and standardized, enhancing communication between radiologists, clinicians, and other healthcare providers.

**5- Professional Viewer Features:**

**Hanging Protocols:** Automates the display of images based on user preferences, ensuring a consistent and efficient workflow.

**Fusion:** Allows the blending of images from different modalities (e.g., CT and MRI) to provide comprehensive diagnostic views.

**MPR (Multiplanar Reconstruction):** Enables the viewing of cross-sectional images from different planes, enhancing the visualization of complex anatomy.

**In-place 3D Visualization:** Delivers real-time 3D rendering of images directly on the workstation for advanced diagnostic assessments.

**DICOM-TLS (Transport Layer Security):** Ensures encrypted and secure image exchange, safeguarding sensitive data.

**MPEG4 and JPEG2000 Support:** Provides enhanced compression for image storage without losing quality, optimizing storage space and bandwidth.

**MIP (Maximum Intensity Projection):** Helps visualize high-density areas like bone or contrast-filled blood vessels, providing clarity in specific studies.

**Save Annotations:** Enables users to save their notes and annotations directly on the images for future reference or collaborative diagnosis.

**TIC (Time Intensity Curve):** Analyzes dynamic imaging sequences like ultrasound to measure and graph changes over time.

**DSA (Digital Subtraction Angiography):** Enhances vascular studies by removing background structures from images, leaving a clear view of blood vessels.



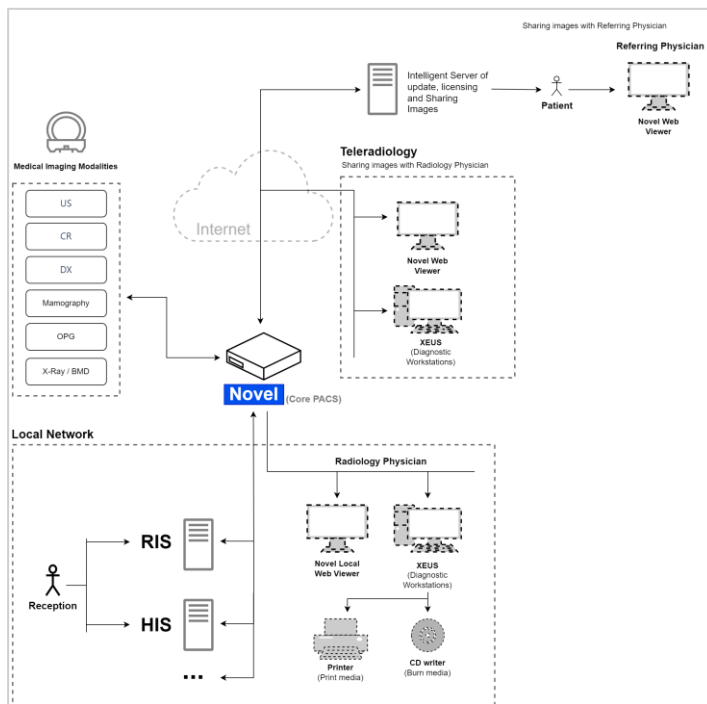
With these advanced features, **XEUS** empowers veterinary professionals to access, view, and analyze images with unparalleled precision, ensuring accurate diagnoses and improved patient care. Whether it's viewing images in crystal-clear detail, performing advanced analyses, or creating professional reports, **XEUS** is the ultimate tool for veterinary imaging.

## 1.3 Unique Value Features of Vet PACS Beyond Standard PACS Services

**Vet PACS** offers a range of unique value features that go beyond traditional PACS functionalities, providing comprehensive support for veterinary imaging practices. These features enhance workflow efficiency, facilitate communication, and ensure the highest standards of security and performance.

### 1- Workflow Management:

Vet PACS seamlessly integrates with other information systems and services using standard protocols, ensuring that all relevant data is immediately available. This integration means that all imaging devices are supported, centralizing medical data and eliminating fragmentation. Users can access information across multiple platforms, including mobile devices and laptops, allowing for constant access from anywhere. Additionally, the system offers automated management of access levels and features for automatically assigning images to the relevant physician or sending patient information directly to imaging devices. This automation increases both speed and accuracy in workflows, significantly enhancing operational efficiency.



**2- Image Sharing:**

With the capability to view images on the web, Vet PACS enables easy sharing of images with pet owners or referring veterinarians. This feature streamlines the treatment process by facilitating collaboration. Image sharing can occur through various channels, including email, SMS, or popular messaging apps. Along with images, diagnostic reports, prescriptions, and medical records can also be shared, ensuring that all relevant information is easily accessible for informed decision-making.

**3- Reporting and Measuring:**

Vet PACS provides professional reporting features through pre-designed templates that expedite report creation. Users can generate reports via voice dictation or convert spoken words into text, enhancing productivity. Furthermore, a variety of measurement and image processing tools are available, ensuring accurate diagnoses. The system includes a full set of filters, annotations, and measurement tools to assist in detailed image analysis and reporting.



**4- Additional Features:**

**Web-Based Viewer for Mobile Devices:** Vet PACS includes a web-based viewer that is fully optimized for mobile devices, allowing veterinarians to access and review images on the go.

**Video Module:** This feature supports advanced imaging techniques, including video-based studies, enhancing the diagnostic capabilities of the system.

**Advanced Image Compression Technologies:** Utilizing DICOM standards such as **JPEG 2000** and **MPEG4**, Vet PACS offers sophisticated compression methods that reduce storage needs while maintaining high image quality.

**Security Protocols:** The system employs robust security measures, including **SSL encryption, LDAP integration, two-step authentication**, and comprehensive auditing capabilities. These protocols ensure that patient data remains secure and protected against unauthorized access.

With these unique value features, **Vet PACS** elevates the veterinary imaging experience, providing a comprehensive, secure, and efficient solution that enhances patient care and improves operational workflows. The combination of advanced technology and user-friendly interfaces ensures that veterinary professionals can focus on delivering the best possible care for their patients.

# 2 Key Advantages of Vet PACS

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**Vet PACS** offers several significant advantages that enhance the operational efficiency of veterinary clinics and improve patient care. These benefits include:

## **1- Time-Saving Efficiency:**

Vet PACS is designed to streamline workflows, providing a very fast and professional system for managing resources. By automating various processes and integrating seamlessly with existing systems, it significantly reduces the time spent on administrative tasks. This efficiency translates into cost savings for clinics, allowing them to allocate their time and resources more effectively, ultimately enhancing overall productivity and service delivery.

## **2- Enhanced Security:**

With all data centralized, Vet PACS ensures that information and images are secure and easily manageable. The service includes comprehensive logging and robust security protocols, giving veterinary centers peace of mind regarding the safety of their sensitive information. Additionally, users can create multiple backup copies without incurring extra costs, ensuring that in the event of unforeseen incidents, data can be quickly restored and replaced without disruption.

## **3- Comprehensive Support:**

MiNNOVAA provides exceptional support for Vet PACS through a three-tiered system that includes telephone support, on-site assistance, and a ticketing system. Available 24/7, this support framework ensures that veterinary centers receive timely help for any needs or issues they encounter. The dedicated technical team at MiNNOVAA is always ready to assist, ensuring smooth operations and minimizing downtime.

## **4- Technical Development Without Extra Costs:**

MiNNOVAA offers ongoing technical development as part of the Vet PACS service without additional fees. If veterinary centers have specific needs or request custom features, the MiNNOVAA team is committed to delivering these enhancements promptly. This comprehensive solution covers the entire imaging workflow and ecosystem for veterinary clinics, eliminating the need for additional services. Furthermore, the MiNNOVAA development team is agile and proactive, continually updating and improving the software and services to ensure that end-users always have access to the latest features and technologies.

## **5- Online Training and Documentation:**

MiNNOVAA provides users with access to an online academy, where they can easily receive training on using Vet PACS effectively. This platform offers various courses tailored to different user levels, ensuring that all staff members, regardless of their technical expertise, can learn to utilize the system efficiently. Additionally, comprehensive documentation and special guides are available, providing users with the resources they need to navigate the software and maximize its capabilities. These

educational resources empower users and enhance their proficiency in utilizing Vet PACS for optimal patient care.

In summary, **Vet PACS** not only addresses the fundamental needs of veterinary imaging but also provides numerous advantages that promote efficiency, security, and support. These features ensure that veterinary clinics can focus on providing high-quality care while benefiting from a comprehensive, cost-effective imaging solution tailored to their unique requirements.



# 3 Business proposal

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**full business proposal will be provided upon written request of the prospect.**

At MiNNOVAA, we are fully prepared to respond to any requests or needs from the client side in the shortest possible time. We offer online demos, organize meetings with our product team, and provide comprehensive documentation to ensure your requirements are met effectively.

For further information, please feel free to reach out directly to our technical team.

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