



“With the DR Retrofit we can get really good, clear and quick images that help us to achieve our care goals”.

A quick study: how DR speed supports better Zoo care

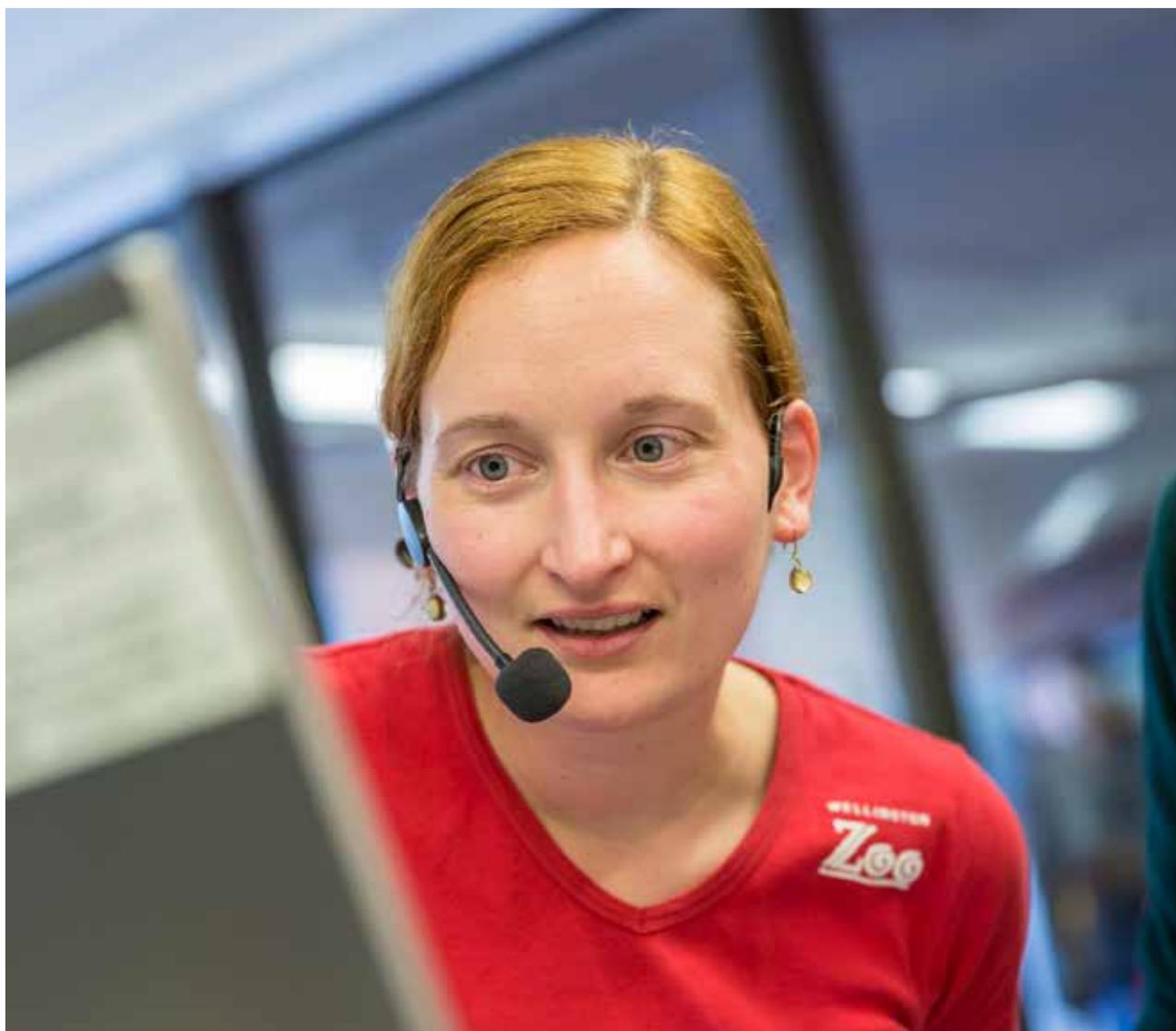
Case study Wellington Zoo, The Nest Te Kōhanga,
New Zealand

AGFA 
HealthCare

Interview

INTERVIEWEE: DR. BAUKJE LENTING

Senior Veterinarian



Wellington Zoo's world-renowned The Nest Te Kōhanga animal hospital in New Zealand enhances care for Zoo residents and local wildlife alike, while improving clinical workflows, with Agfa HealthCare's DX-D 30C Retrofit

At The Nest Te Kōhanga at Wellington Zoo in New Zealand, speed is always of the essence. "With our wildlife patients, the aim is to quickly figure out the illness or injury and get them back into the wild when they have recovered. For wildlife and our Zoo residents, we need to keep the time spent under anesthesia as

short as possible. In both cases, fast imaging is crucial," explains Dr. Baukje Lenting, Senior Veterinarian. In this state-of-the-art facility, the portable direct radiography DX-D 30C Retrofit with cesium iodide detector is 'a quick study': easy to use and offering very fast, high-quality images.

PASSION FOR ANIMALS AND CONSERVATION

The Nest Te Kōhanga opened in 2009, and is staffed by permanent veterinarians, two full time and one part time veterinary nurses, a practice manager, and four rotating veterinary residents, as part of the Massey University Masterate Programme. This amazing facility offers seven rehabilitation rooms, a custom-built salt water pool and state-of-the-art equipment, including digital radiology, a dental machine, ultrasound and endoscopy. In the main treatment room, staff make X-rays, change bandages and perform health checks, while surgery takes place in the sterile operating room. The rooms for 'in-patients' can be adapted, from adding incubators for critically ill small animals, to creating enclosures for larger patients or even setting up aviaries that can be expanded as the patient heals, prior to release back in the wild. The saltwater pool helps maintain water proofing and fitness for sea birds.

This is definitely not your usual animal hospital! Very centrally located in the Zoo, it is an integral part of the visitors' experience and the Zoo's conservation efforts. "It's very interactive; most of the rooms are on display, and we can talk to visitors while we work, explaining what we are doing, and sharing with them our passion for conservation and the animals," comments Dr. Lenting.

Imaging in a Zoo creates its own unique challenges, she describes. "The variation in patient size is huge: from a 3-inch reptile to a 200 kg lion. What's more, for some species there are no examples of what a 'normal' image should look like, so we have to extrapolate from a similar type of animal." For the safety of the animals and staff, as well as to ensure perfect positioning, most of the animals are anesthetized for imaging. Minimizing the time spent under anesthesia is therefore a priority for the entire hospital team.



"We commonly see chest and shoulder injuries in our wild bird patients. With the DR we can image those areas very accurately, allowing us to detect things we wouldn't otherwise be able to."

– Dr. Baukje Lenting, Senior Veterinarian





A CRUCIAL VIEW

Before building The Nest Te Kōhanga, the Zoo did not have its own imaging system. The X-rays were taken at the Zoo using computed radiography (CR) cassettes which were then physically driven to the local Pacific Radiology imaging center where they were processed. Then the Zoo vets could access the images on-line. “Pacific Radiology were very generous with their time and resources, but the process took a lot of time for us to get our images,” comments Dr. Lenting. Whenever possible, the Zoo staff would wake up the animal while waiting for the images, but if positioning was crucial, the patient might have to be kept under anesthetic until the vets confirmed that the images were good.

Imaging is vital for the animals’ care in multiple areas: “We use it for wellness checks, and for diagnosing illness, trauma or injury,” explains Dr. Lenting. “Even for diagnosing animals who have ingested dangerous or toxic materials. We see plenty of fish hooks in wild sea birds, for example. Then, there are the local Kākā, a type of parrot, who are intensely curious. They can ingest bits of metal, especially lead. If we suspect lead poisoning, the direct radiography (DR) offers enough detail and resolution for us to see any particles that might remain in the gastro-alimentary tract, so we know how to treat the bird, in combination with blood tests to assess the birds’ blood lead levels.”

POSITIONING IS KEY FOR GOOD DIAGNOSIS

A DR system was an obvious addition to the new facilities; however, finding the right one wasn’t so easy. Dr. Lenting explains, “We tried out a number of different systems, and then Cass Medical, the local Agfa HealthCare partner, got us the DX-D 30C Retrofit, and it was just right: the quality, the speed, the portability, ...”

The DR makes positioning the animal easy, as the vets can immediately check the images and adapt the positioning as necessary, for better images, faster, with less time under anesthesia. Assuring the best positioning also supports faster, more informed diagnoses.

The DR is very user-friendly, even for the veterinary residents, who are quickly up and running with the system. And the speed and ease-of-use have supported the hospital in enhancing its workflow efficiency: “We’re a busy clinic, with ever-increasing numbers of wildlife patients, which is marvelous!” smiles Dr. Lenting. “To be able to do several imaging procedures back-to-back, efficiently and quickly, really helps with the workflow in the clinic and how many patients we can look at in a day. When we are busy we might do imaging for three to five

patients in a day, as well as other care tasks, so speed is important for our workflow.”

Agfa HealthCare’s ‘gold-standard’ MUSICA image processing provides the detail the Zoo needs for the smaller and larger patients. “With the DR, we get sufficient detail and good resolution of bone structure and internal organs, even, for example, for silvereyes, a small bird weighing only 10 grams. And then of course we go up to that 200 kg lion, for which we can image most body parts.”

“We treat a lot of birds, because New Zealand has many wild bird species. We commonly see chest and shoulder injuries in our wild bird patients, but with their strong flight musculature we can’t feel these easily by hand. With the DR we can image those areas very accurately, allowing us to detect things we wouldn’t otherwise be able to.”



“The DR makes positioning the animal easy, as the vets can immediately check the images and adapt the position as necessary, for better images, faster, with less time under anesthesia.”

IMAGES WHERE THEY ARE NEEDED!

One key factor in selecting a DR solution was portability. “We wanted to have the flexibility to carry out imaging in animals’ habitats if necessary. By taking images directly in the habitat, we could keep anesthesia times short for a sick animal or very large animal like a giraffe. We could also easily image, for example, a giraffe’s hooves – lameness can be a problem area for these animals – in the hold in the habitat.”

The hospital can also send digital images to outside specialists, such as orthopedic surgeons, for a second opinion.

Dr. Lenting concludes, “In our fast-paced environment, speed is crucial, as I imagine it would be for other clinics, as well. What’s more, having up-to-date technologies is important for us: part of our strategy is to ‘Punch above our weight’, to be a leader in our domain. And finally, the goals of The Nest Te Kōhanga are to provide Zoo and wildlife patients with an excellent level of care, make sure the welfare of all our animals is meeting our high standards, and also to contribute directly to conservation both locally and internationally. With the DR Retrofit we can get really good, clear and quick images that help us to achieve those goals.”





Since The Nest Te Kōhanga opened, there has been a huge increase in the number of wild animals treated: from 155 in 2010 up to 478 in 2015. Dr. Lenting attributes this to increased awareness of the work of the hospital in caring for wildlife and in conservation.

AGFA HEALTHCARE AND CASS MEDICAL'S CONTRIBUTION

When The Nest Te Kōhanga opened, the Zoo tried several third-party DR solutions, but was not satisfied. Agfa HealthCare and its local partner Cass Medical worked closely with the

Wellington Zoo to find a DR solution that met the needs of The Nest Te Kōhanga for a portable solution offering fast, high-quality images for a very diverse range of animal sizes.

DR Retrofit

- All the workflow and image quality benefits of direct radiography
- Very fast images and very fast workflow
- Cesium iodide detectors offer excellent image quality
- MUSICA image processing provides clear details and excellent resolution, for both very small and very large animals
- Easy to use and to learn
- Portable

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