

A smartwatch for horses



WWW.EQUUSENSE.CA

Equusense is a game-changing technology platform that empowers horse owners to monitor and track the well-being of their horses like never before. Equusense combines a physical wearable device with an online platform to provide real-time insights into a range of vital signs, including heart rate, movement, location and body temperature.

With its user-friendly interface and comprehensive approach, Equusense is set to revolutionize the way that horses are cared for and managed, providing a more accurate and holistic picture of their health status.

ABOUT US

Our diverse backgrounds in electrical, mechanical, and biomedical engineering, along with our entrepreneurial and project management experience, make us well-equipped to tackle complex challenges. We pride ourselves on being exceptional problem-solvers, innovative thinkers, and meticulous designers, bringing a collaborative, multi-disciplinary approach to our work.

We leverage our individual strengths to achieve shared goals, with a strong focus on customer satisfaction and equine well-being. Our commitment to delivering high-quality solutions that exceed expectations drives us forward.

Nathalie Drzewiecki
Project Manager
Electrical Engineering Student
10 years in the Equine Industry

Ryan Baker
Software Design
Electrical Engineering Student
MBA in Strategic Planning

Peter Shmerko
Hardware Design
Electrical Engineering Student
Student Researcher

Hamza Syed
Biomedical Research
Mechanical Engineering Student
3rd Time Founder

Elian Dupre
Case Design and Testing
Mechanical Engineering Student
3rd Time Founder

Supported by our team advisors
Dr. Thilo Pfau
Jeff Ryzner

WHO WE'RE HELPING

People like **Sarah**.
Sarah worries about her horse.

Why does she worry?

Sarah's previous horse had **colic** and passed away unexpectedly

Any injury would cost her hundreds in vet bills and set her back for the competition season

She's financially and emotionally invested

Overall, **Equusense** is supporting horse owners worldwide who have deep care and worry for their equine friends.

YOUR HORSES HEALTH. ANYTIME. ANYWHERE.

Think about **your** pet

What if we said...

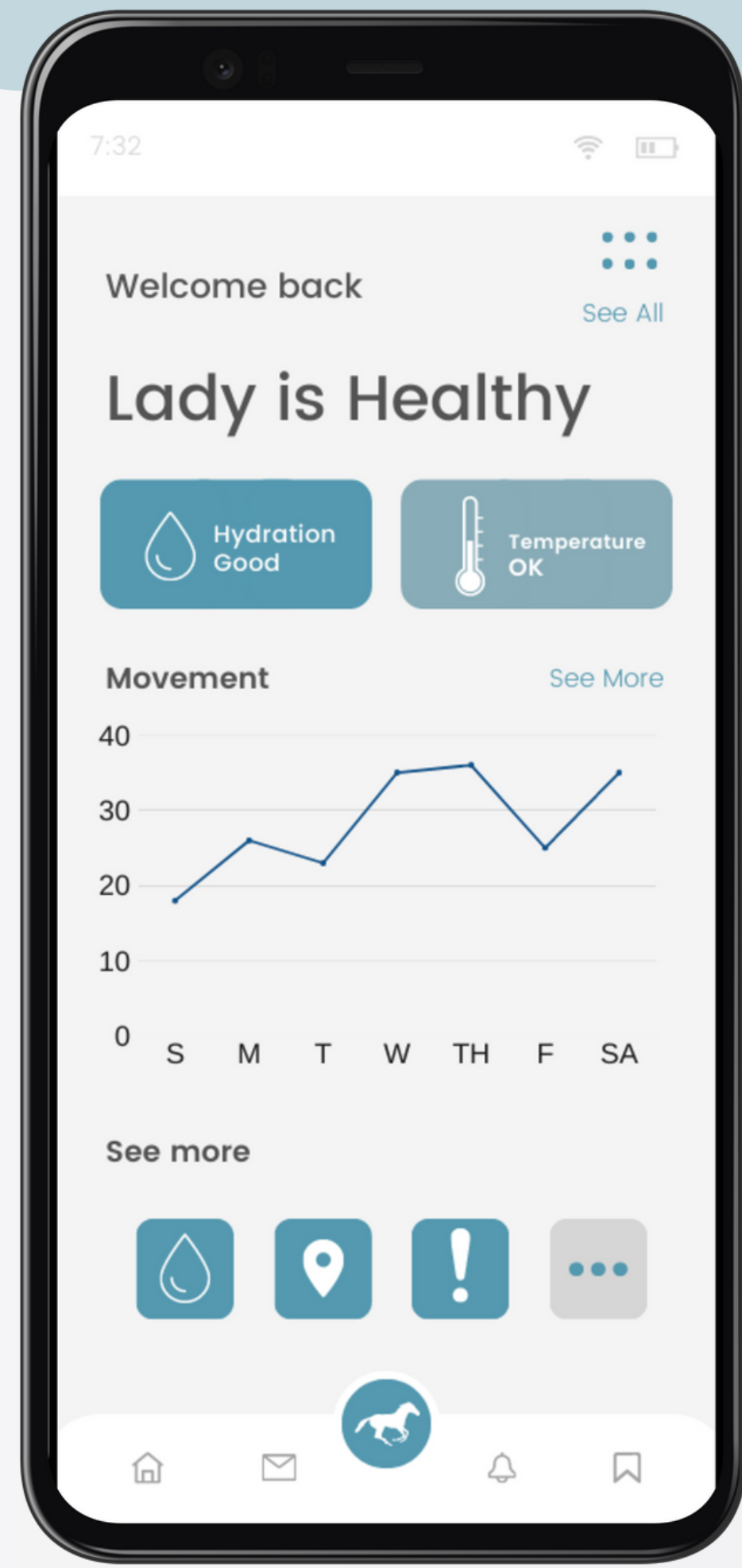
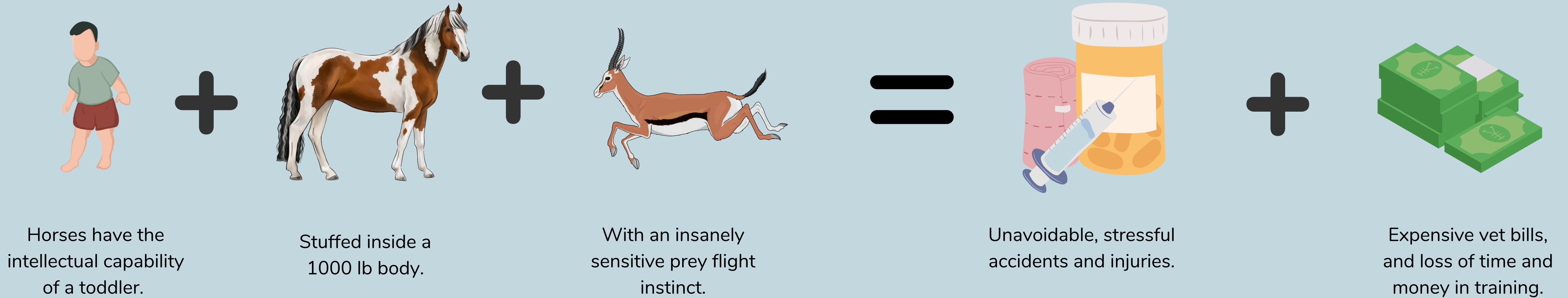
- you can only see them **2-3 times per week**
- they **don't live at home** with you anymore
- no one checks in on them for **hours or days**,
- and any potential injuries or vet bills have **tripled** in cost



This is a **reality** for many horse owners.

- In 2010, there were an estimated 963,500 horses in Canada, with 33% of these horses located in Alberta [1]
- The average yearly cost of keeping a horse is rising, with data showing an increase from \$1,500 per year in 2003, to \$2,700 per year in 2010 [1]
- **Monitoring of horses is almost exclusively dependent on human staff and owners.**

Okay. But **why** is this such a big problem?



Common Ailments & Issues

- **Colic** - encompasses all forms of gastrointestinal conditions. Thought to be the #1 killer of horses globally.
- **Tendon and ligament injuries** - common in riding or sport horses, can be caused due to overstrain of tissues during exercise or turnout.
- **Puncture wounds** - commonly caused during turnout or when horses are left unsupervised, need to be treated to prevent lameness.

In all cases, **early detection** and **prevention** are critical for a good recovery.

Introducing...

The **Equusense** Monitor

Providing early detection of ailments, health stats and location.
By monitoring temperature, HR, GPS location, and movement of your horse.



DESIGN PILLARS

These three design pillars describe the foundations of the Equusense monitor design. They led the group through market research, customer interviews, and the product development.

1

Safety

The design must be safe and comfortable for use on the horse in all conditions. It must be dust and water resistant, and rugged enough to withstand barn conditions.

2

Ease of Use

Most people should be able to easily use the device and extract value from it without requiring veterinary training or in-depth knowledge.

3

Low Power

The design's components should be energy-efficient, to allow for a minimum time of **one week*** between charging cycles.

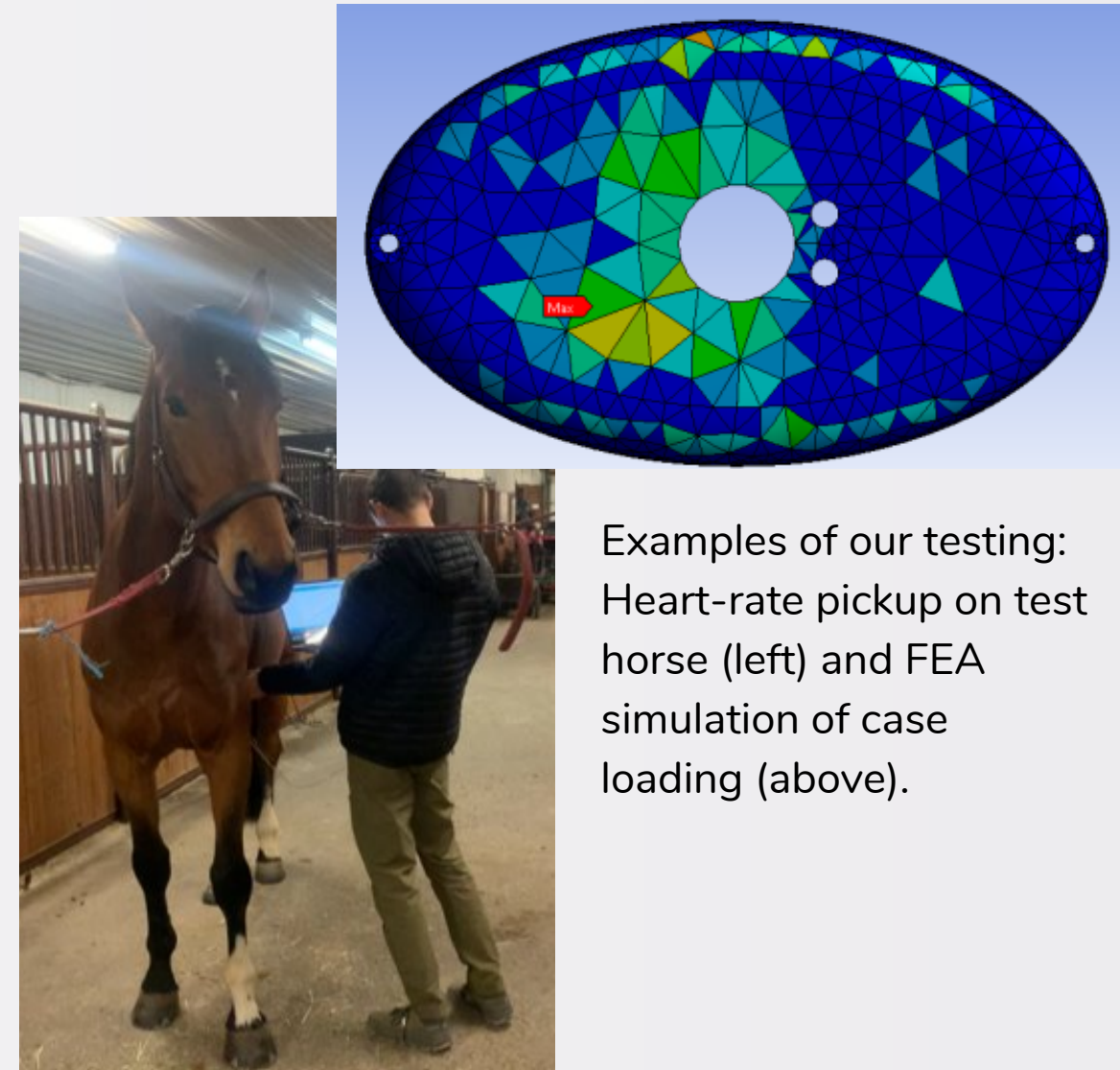
*Though this criteria has not yet been field tested, it did influence the selection of components. Most of the data collected using the monitor can be duty-cycled to achieve a wide range of battery life.

TESTING

Testing of the business concept was completed through customer discovery interviews, surveys, and publications.

There are three ways in which the Equusense monitor is tested:

1. **Simulations:** testing circuits using software, and FEA to test case loading
2. **Laboratory:** testing for water and dust resistance, HR pickup on real horse
3. **Real-world:** mounting dummy cases on the horse, UI feedback from customers



MARKET VALIDATION

First, we needed to learn 1) how much horse owners **worry** about their animals, and 2) what the **root cause** of their worries are.

To start, we reviewed some **provincial** and **national** publications:

- There is a trend for competition and recreation survey responders to increase their involvement in the equestrian sport [3]
- Competition horse owners spend \$1,885.04 each year on "horse care products and services" [2]
- Alberta, British Columbia, and Saskatchewan statistics together represent 55.8% of the total amount of horses in Canada [1]

Here's results from our **Equusense-led customer discovery survey**.

61% Of responders worry about their horse **at least** once per day.

We also **interviewed** numerous **horse owners** for insights.

- Owners are willing to pay more than expected for access to a device like the Equusense monitor.
- Real-time health vitals (HR, temperature) are not as important as day-to-day trends.
- Equestrians worry about their horses "all the time", and spend thousands each year to keep them safe.

NEXT STEPS

Field Testing Alpha & Beta Prototypes	Customer Hardware and App Testing	Seed Round	MVP Launch
April 2023	May 2023	June 2023	September 2023

With our goal of creating game-changing technology to monitor equine wellness, we're striving to push our product to market as promptly as possible. The sooner the Equusense monitor becomes commercially available, the more horse's lives are able to be saved, and the quicker we are able to improve owner's peace of mind.