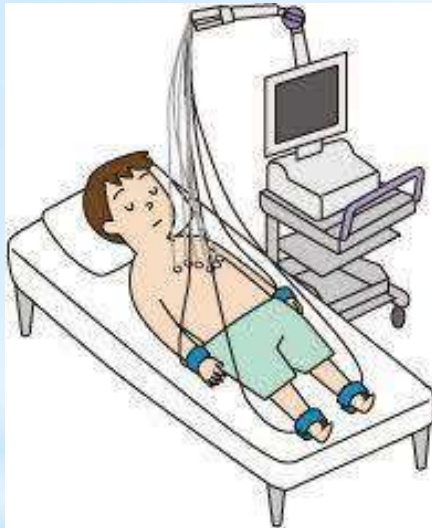# Ngaia®
エヌガイア

NAGAOKA Solution Provider

Problem

- Current ElectroCardioGram (ECG) devices require users to lay flat and still.

- Unexpected noise on your ECG, caused by motion, can lead to an incorrect diagnosis.

Doctors need to collect accurate ECG, even while patients are moving:
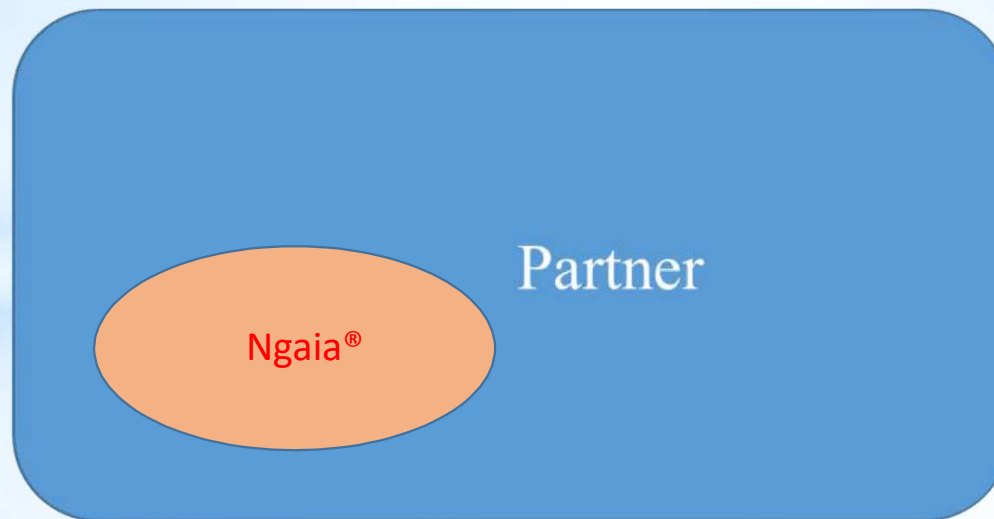
- Noise-free ECG
- Real-time ECG

Solution

- Ngaia® ECG, our heartrate monitoring system,
  - ① collects noise-free ECG data through our advanced algorithms,
  - ② processes data in real time,
  - ③ transfers data to doctors, and
  - ④ stores large amounts of ECG data.

- Accurate ECG data can be collected even while users move!

- In your own home you can also easily check your heart condition on a regular basis.
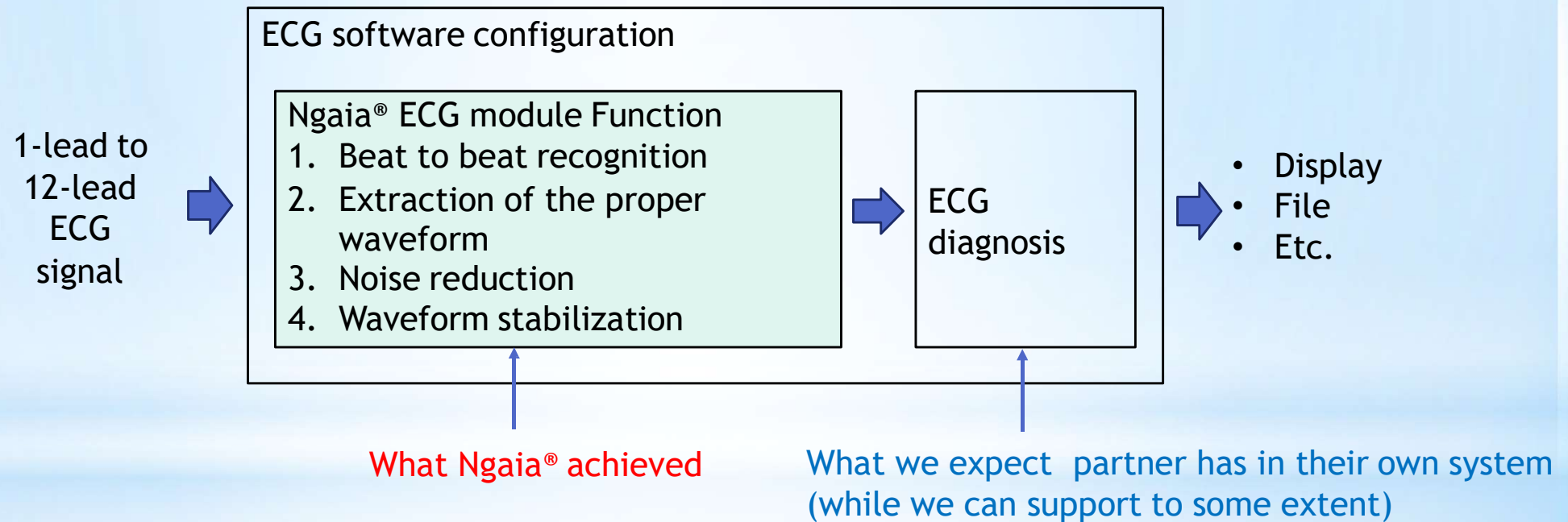
Business Model

- Add Ngaia® ECG into your product or system
- Expected partners and/or licensees can find new solution with Ngaia®

Ngaia® Configurations Image

ECG software configuration

1-lead to 12-lead ECG signal →

Ngaia® ECG module Function
1. Beat to beat recognition
2. Extraction of the proper waveform
3. Noise reduction
4. Waveform stabilization

→ **ECG diagnosis** →

- Display
- File
- Etc.

What Ngaia® achieved

What we expect partner has in their own system (while we can support to some extent)

Competitive Advantage

- Ngaia® ECG can analyze the wave form of users in motion,
  such as when users are in a vehicle, in an airplane or when they are running.

- Ngaia® ECG also can provide ECG from animals in motion.

- Ngaia® ECG can obtain parameters from every single heartbeat

  Parameters:

  recognized value points   : Pb, Pa1, Pa2, Pe, Qb, Qa, R1, Sa1, R2, Sa2,

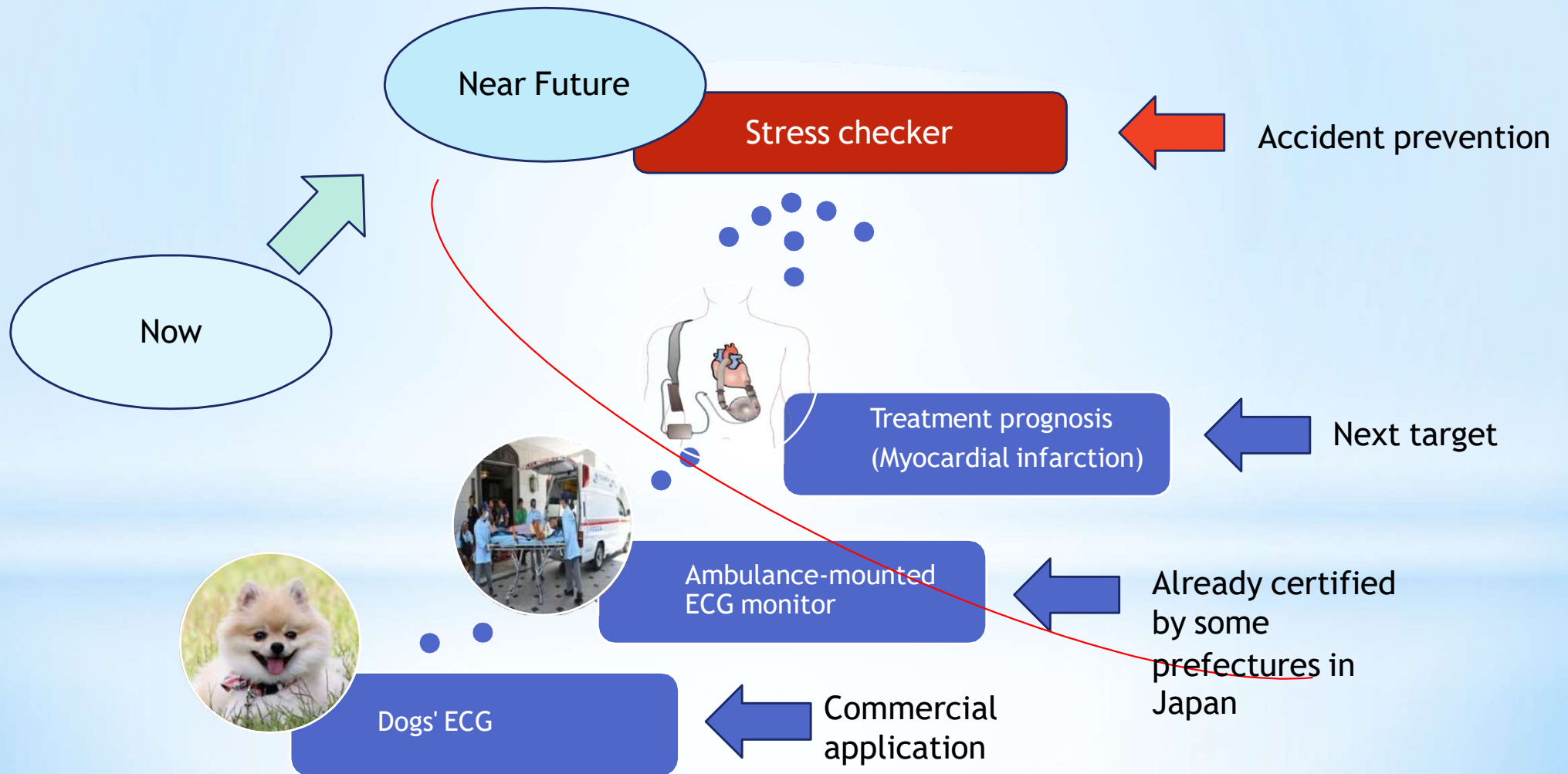   Stj, St1,St2, St3,Ta1, Ta2, Te

  recognized intervals   : PP, PR, VAT,RR, QRS, QT, QTc

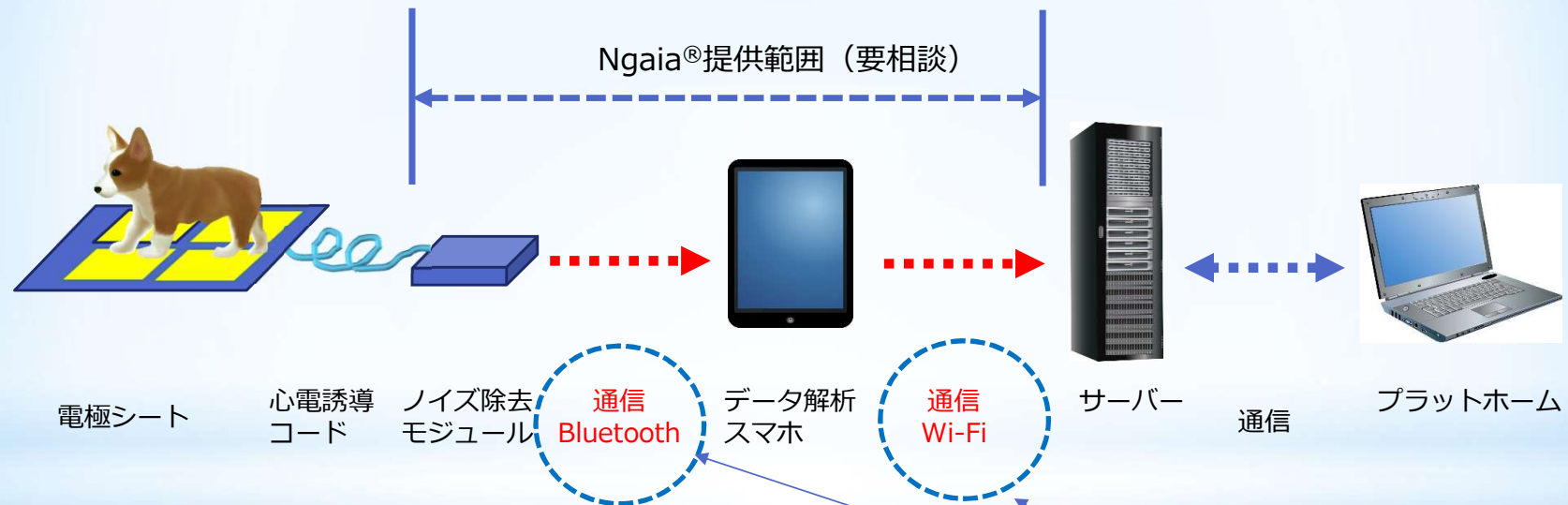- Ngaia® ECG can diagnose heart failure from every single heartbeat
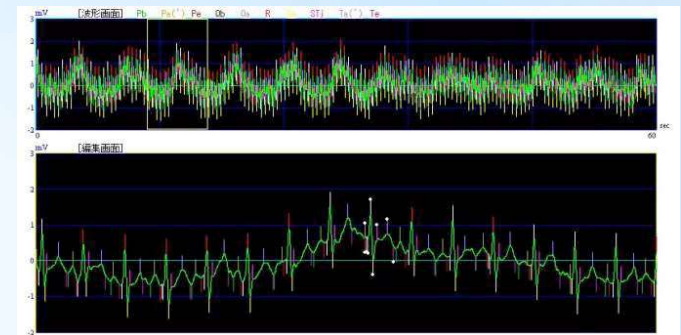
P	115 msec	QRS	59 msec
PR	167 msec	QTc	437 msec
QT	342 msec	VAT	29 msec
RR	612 msec	HR	98 BPM

Ngaia® specification

	Ngaia® ECG-H（for human application）	Ngaia® ECG-A （for animal application）
Measurement item	Electrocardiogram (less than 12 induction)	Electrocardiogram (less than 12 induction)
Recognition parameters	Electrocardiogram PP, PR, VAT, RR, QRS, QT, QTc (time) Pb, Pa1, Pa2, Pe, Qb, Qa, R1, Sa1, R2, Sa2, Stj, St1,St2, St3,Ta1, Ta2, Te (Potential, time)	Electrocardiogram PP, PR, VAT, RR, QRS, QT, QTc (time) Pb, Pa1, Pa2, Pe, Qb, Qa, R1, Sa1, R2, Sa2, Stj, St1,St2, St3,Ta1, Ta2, Te (Potential, time)
Target	Human	Dog
OS	Windows® 10	(iOS/Google to be discussed)

Contact

- NAGAOKA & CO., LTD.
- TEL:+81 798 26 1001
- ngaia@nagaoka-mint.co.jp