

Translation Potential

Medical Application

Target Group

NYHA Classification Scheme



NYHA Class III and IV heart failure patients have the most severe kind of heart failure.

Current Treatment

- Patients are monitored by the cardiology department of hospitals, by being called every two weeks.
- If health status seems to be deteriorated, an ECG and blood withdrawal are performed.
- The drawn blood is processed in high throughput machines in hospital laboratories to measure the NT-proBNP concentration.

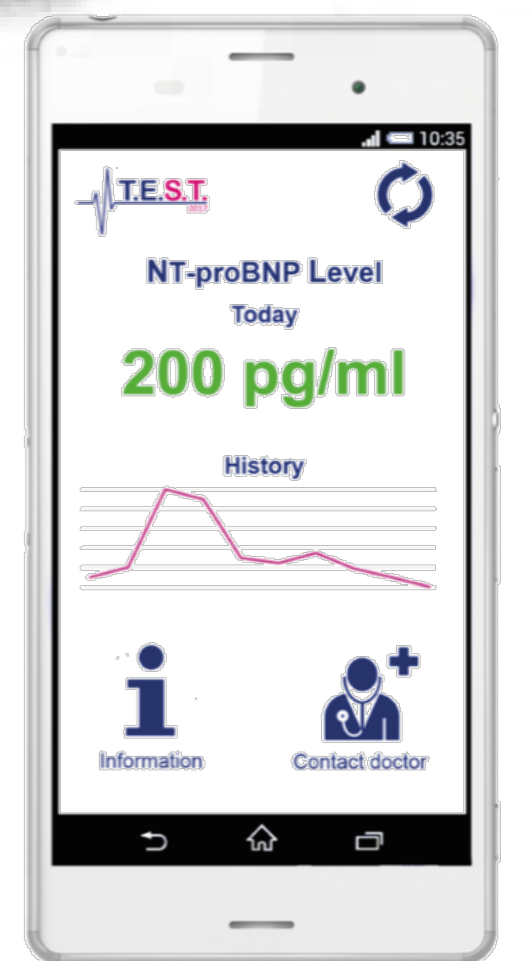
Results Survey

82 respondents

- **91,5%** experiences a fingerstick as not bothersome
- **83%** wants to receive information about their current health status
- **58,8%** wants to share data with researchers

Envisioned Treatment

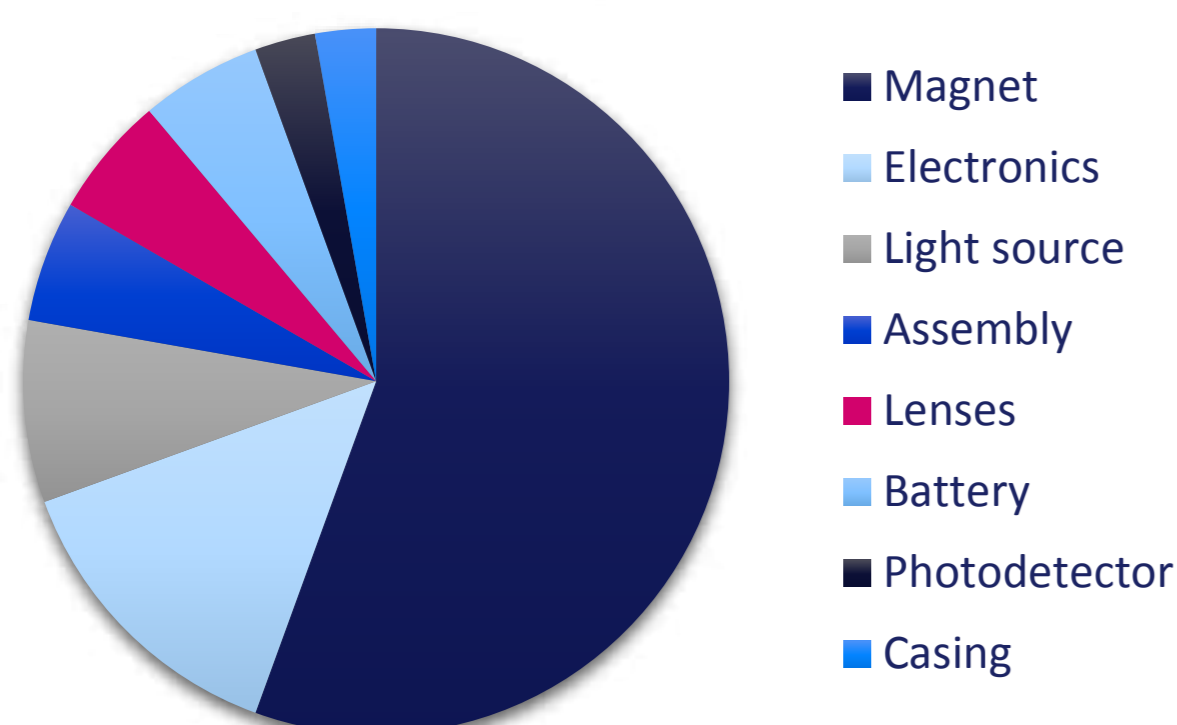
- At home, the patient measures the NT-proBNP concentration and other variables.
- Data can be tracked via an app and compared with earlier measurements.
- The cardiologist receives a notification when the health status deteriorates.



Industrialization And Commercialization

Production Costs

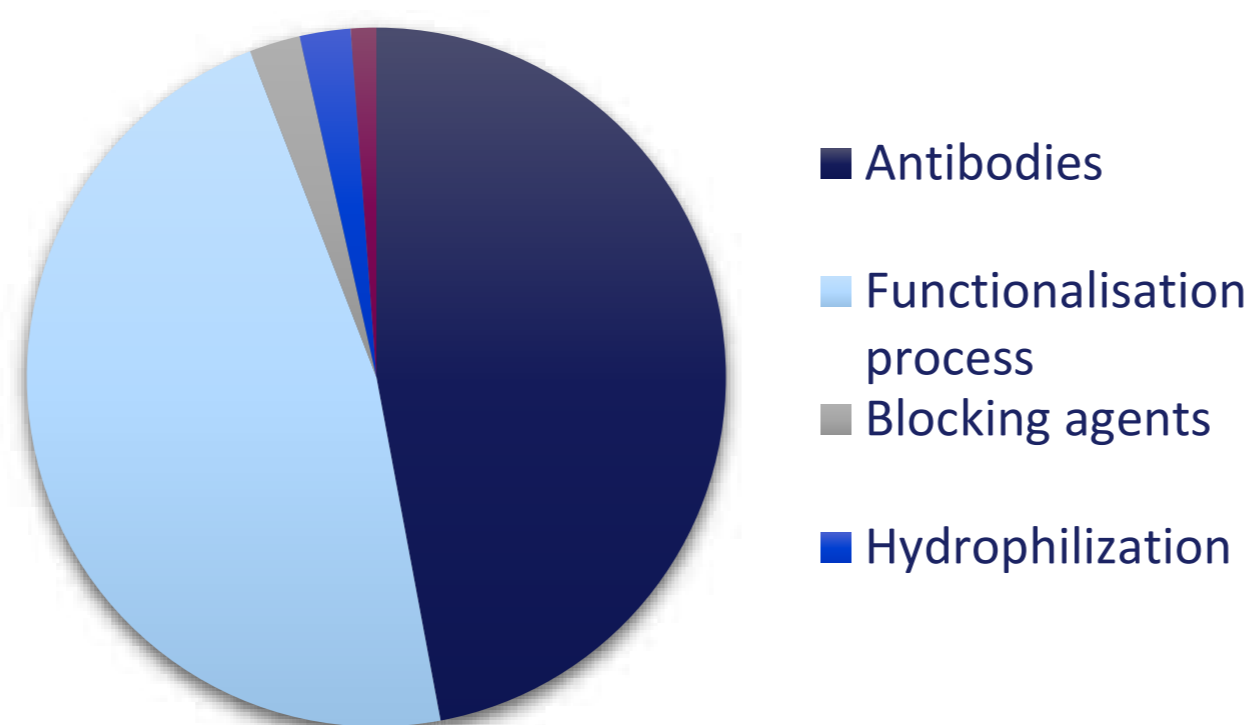
Analyser € 180,-



Selling price: €500,-

Production costs are tripled on the advise of sensor manufacturers to arrive at the selling prices.

Cartridge € 0,33



Selling price: €1,-

Competitor Analysis

	Existing sensors	Our Sensor
Price Analyser	€ 1.500 - € 10.000	€ 500
Price Cartridge	€ 15 - € 40	€ 1

NT-proBNP test in clinical laboratory: €14,68

The device is far less expensive than its competitors and therefore suitable for home sensing.

Saving Potential

In the Netherlands, every year:



- Current hospitalization costs **30.000 x € 15.000 = €450 million**
- Costs monitoring of NYHA III and IV patients **100.000 x € 1.000,- = €100 million**
- Targeted prevention of hospitalizations **50 %**
- Investing 100 million euros will save 350 million euros

CONSULTED WITH

Patients • Cardiologists • General Practitioners • Clinical Chemists • Hartstichting

Technology Readiness (EARTO)

