

## BodyKom background and status

Kiwok, a Swedish company founded in 2003, develops service products that are based on a need for real time information as part of the product. In order to make the service product readily accessible, the business model is to sell a complete service at a fixed monthly charge.

Kiwok has created a solution as a service – BodyKom Series™ to collect diagnosis data from individuals that then with the aid of modern technology, forwards the data to an existing database at a hospital, clinic or company care centre. This out of hospital care solution means patients can be offered a new form of care outside hospital but with the same security as an inpatient.

The BodyKom Series works anywhere in the world and there is a massive need for it – over 100 million users in the industrialised world. The solution is designed to gather diagnosis data for the most commonly occurring illnesses such as heart failure, diabetes and changes in blood pressure. The care procedures for all these are the same the world over – a global de facto standard. The solution is based on verified technology.

The focus of the care is partly related to the fact that one of the founders had suffered heart problems and saw the need for mobile monitoring but also to the know-how about care and care needs that the company has acquired during the product development process.

All industrialised countries are suffering major problems due to rising costs within healthcare and care. Reform programmes have been implemented in countries like England, Germany, Canada, Australia and also to a certain extent, in Sweden. Care procedures are being restructured to reduce administration costs with the aid of IT. Digital procedures offer better decision-making platforms for diagnosis and care. Affluent lifestyle illnesses such as heart conditions, diabetes and high blood pressure are increasingly costly. New solutions within these areas offer an opportunity to deliver greater benefits to both patients and healthcare providers.

### Solution focus

BodyKom is a general concept for the remote monitoring of various health conditions. At present, the company is focusing on solutions for heart problems. BodyKom Series ECG is a solution that enables doctors and care personnel to receive ECGs from their heart patients via a mobile network. BodyKom means patients can be mobile and perform their everyday activities with relatively little interruption yet be under observation at the same time. The solution works wherever there is mobile phone network coverage.

With BodyKom the care provider receives diagnosis data immediately the patient's heart starts acting abnormally. Measures can be initiated automatically, e.g. by notifying the doctor and informing relatives. The doctor or nurse interfaces with the patient and they agree what rules are to apply for dealing with the patient's diagnosis data and that are fed into their care profile. Patients can remain in their normal everyday environment – a quality of life that contributes to human quality of life.

## Customer benefits

The benefits to patients and care providers include:

- *obtaining diagnosis data quicker* as patients can be connected for longer periods and live their everyday lives as normal
- *fewer repeat visits for patients* as doctors can get the right diagnosis data quicker
- *doctors treating patients become more effective* as they can decide what is to be monitored, how and when data are to be provided and what data are irrelevant
- *freeing up beds* e.g. when patients can be given adequate remote monitoring in the monitoring phase after an operation
- *enabling geographically independent treatment* where the patient and one or several doctors can see the same diagnosis data and gain a better platform for their care decisions
- *continuing with current care procedures* and allowing personnel to work with familiar equipment and still achieve benefits
- *being able to automate procedures done manually today* such as the rough diagnosis patients do themselves and be able to integrate this in the analysis system if so wished
- *using existing investments* as data can be input into existing analysis applications
- *freeing up time for care personnel* with automatic message services e.g. SMS or email if specific events occur

## Business concept

The Kiwok business concept is to deliver correct diagnosis data from normal everyday patient environments, sorted and adapted for care, with high efficiency.  
The aim is to deliver benefits for patients, care providers and society.

## Vision

BodyKom should contribute to more people being in active healthcare/keep fit regimes and fewer people receiving medical treatment and being inpatients – to give people a better quality of life and reverse the trend of accelerating care costs. This can be achieved by detecting symptoms at an early stage and so avoid or minimise inpatient care.

## Strategies

Kiwok should be Number One in packaging and developing new service solutions in partnership with its customers and bring these to market with the aid of a creative partnership and new business models.

The service solutions brought to market by the company are intended for an international market where Sweden forms a platform and pilot environment for service development and packaging.

Kiwok seeks approved components of the plug-and-play variety that require a minimum of customisation in the business environments of customers. The development of technology will be done by qualified partners and suppliers.

## Partnership

The strategy for bringing BodyKom to market is to work with partners. These will be a combination of global organisations that provide credibility and scalability, and who will play an active role in marketing the concept internationally, together with local organisations of relevance to customers and who know the local marketplace and local conditions.

BodyKom services run on a communication hub, ShrtCut™, built for large-scale global use. Kiwok global partners are: HP, FairIsaac, WIP and CSC. Kiwok undertakes joint marketing activities with its partners today. The aim is to establish our brand with strong global credibility.

## Market

Heart disease is a global problem with huge associated costs:

- In Sweden around 42,000 heart operations are performed each year (Swedish National Board of Health and Welfare statistics 2005). If 25% of these patients can go home one day earlier, this would be the equivalent of unblocking 10,000 care bed days or 40-60 MSEK.
- According to Stockholm County Council (SLL), heart disease, diabetes and blood pressure problems account for 60% of the healthcare budget and that remote monitoring could free up 25 – 40% of this.
- According to Uppsala University Hospital patients who have undergone simpler heart operations could conceivably be sent home with a remote monitoring kit rather than remaining an inpatient for 3-4 days.
- European CDS 2005 reveals that 57% of care costs arise in hospitals, 5% are costs for diagnosing/care outside hospitals.
- 22 million people in western world suffers from heart failure  
(*IEEE Spectrum Dec 2004*)
- 'Overall CVD (Cardio Vascular Diseases) are estimated to cost the EU 169 billion Euros each year, of which around 62% are direct healthcare costs.' 'In the UK 18% of all healthcare costs are related to CVD.' The healthcare spend on people with CVD in Germany is about 423 Euros per capita/year  
(*European Cardiovascular Disease Statistics 2005*)
- Heart disease is the number one killer in Canada  
(*Statistics Canada National Public Health Survey*)
- Treatment of heart disease is the single biggest cost item in the healthcare budget – \$18 billion  
(*Statistics Canada National Public Health Survey*)

## Current status

Stockholm County Council has bought the BodyKom ECG solution for use at Karolinska University Hospital (Karolinska) and Uppsala University Hospital. BodyKom ECG is used with patients at Karolinska since June 2006, primarily as a replacement for traditional 24 or 48 hours ECG recordings and event recorders. Astrid Lindgrens Children's Hospital in Uppsala is planning to use BodyKom with small children to diagnose heart diseases.

In Norway at Akers Hospital in Oslo our solution is in use since two weeks ago and it will also be implemented at the St Olav's Hospital in Trondheim.

Outside Sweden, BodyKom has been presented in over half the EU and in Canada, Thailand, Korea, Australia and the USA. Initiatives to establish new clinical pilots are underway in Denmark, Canada, Italy, the Nederland's, India, Korea and Australia.

## More information

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