



Presentation September 2008

# **Presentation of BodyKom Series ECG**

## **In partnership with HP**

**BodyKom**<sup>TM</sup>  
-series

**Business Partner**



# Public report of BodyKom ECG service

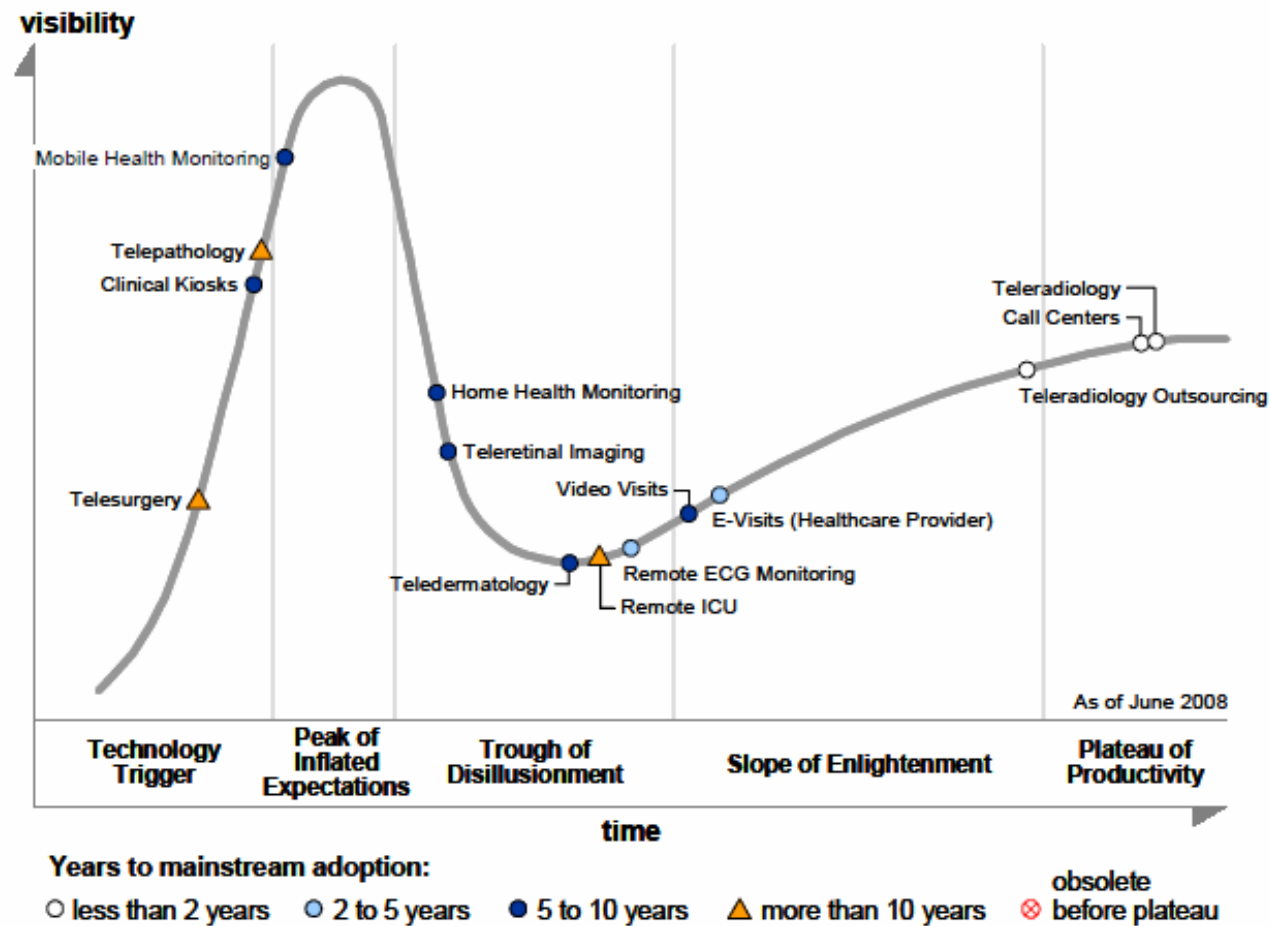


## Technical Report - Concordance between a tape recorder-ECG and telemetric transferred ECG via the Internet.

G. Kennebäck<sup>1</sup>, C. Wredler<sup>1</sup>, S. Jonsson<sup>2,3</sup>, S. Lind<sup>1</sup>, H. Teriö<sup>2</sup>, C. Sylvén<sup>1</sup>

1. Division of Cardiology, Department of Medicine at the Karolinska Institute, Huddinge, Karolinska University Hospital.
2. Department of Biomedical Engineering, Karolinska University Hospital
3. Department of Clinical Science Intervention and Technology at the Karolinska Institute, Huddinge, Karolinska University Hospital.

Figure 1. Hype Cycle for Telemedicine, 2008





The BodyKom Series™ package includes

- Equipment
- Technical service and support
- End-to-end fulfilment solution

At a monthly flat rate per package in cooperation with our partners

Core partners:

HP - Fair Isaac - WIP - CSC - Visuera -  
Karolinska University Hospital

## Butiken

### BodyKom

- BodyKom paket
- Extra tillbehör

## MENY

[Bruksanvisningar](#)[E-shop](#)[Information](#)[Kundtjänst](#)[Service](#)[Startsida](#)

Inloggad:  
Jonas Ågren

[logga ut](#)

BodyKom / BodyKom paket / /

### Bodykom Paket [artnr: BK0002]

Priset avser månadskostnad/paket

Paketet innehåller:

- \* Terminal och laddare
- \* Sensor och laddare
- \* Elektroder
- \* Nackband
- \* Väska



**Pris: 1800 kr**

Antal:

Din kundvagn: Bodykom Paket (50 st) ▼ Summa: 90000 kr

[Gå till kassan](#) | [Ändra i kundvagnen](#) | [Töm kundvagnen](#)

### Log In:

Username:

Customer

Password:

Login

## Overview

View devices for the following site BODYKOM ▼ Refresh

Communicator Id	Health Monitor Id	Last Modified	Create Rule	View Rule	Download ECG
46708319104	HEALTH_MONITOR_ID_5	2007-01-31	<a href="#">Create Rule</a>	<a href="#">View Rule</a>	<a href="#">Download ECG</a>
46703088523	00:04:3e:4a:6c:53	2008-01-22	<a href="#">Create Rule</a>	<a href="#">View Rule</a>	<a href="#">Download ECG</a>
46703759914	00:04:3e:68:c3:7f	2008-01-15	<a href="#">Create Rule</a>	<a href="#">View Rule</a>	<a href="#">Download ECG</a>
46703579468	00043EA65C94	2008-09-08	<a href="#">Create Rule</a>	<a href="#">View Rule</a>	<a href="#">Download ECG</a>
46702376073	00:07:80:83:04:D6(2)	2008-07-16	<a href="#">Create Rule</a>	<a href="#">View Rule</a>	<a href="#">Download ECG</a>
46703387823	00:07:80:83:04:f5	2007-12-12	<a href="#">Create Rule</a>	<a href="#">View Rule</a>	<a href="#">Download ECG</a>
+46702376073	00:07:80:83:04:D6	2008-06-12	<a href="#">Create Rule</a>	<a href="#">View Rule</a>	<a href="#">Download ECG</a>



## Step 3 - select pulse interval for Patient Kit

### Pulse event

Rule Name

Report pulse under  BPM

or pulse over  BPM

Lasting longer than  heartbeats

Report only if event occurred between  -  Hours (ex 14:35)

Rule should be active on ECG received  -  (ex 2007-11-24)

Next »



## Create Rule

Step 2 of 4, Define notifications and file generation details for this rule

### Notifications

Generate event notification ☐

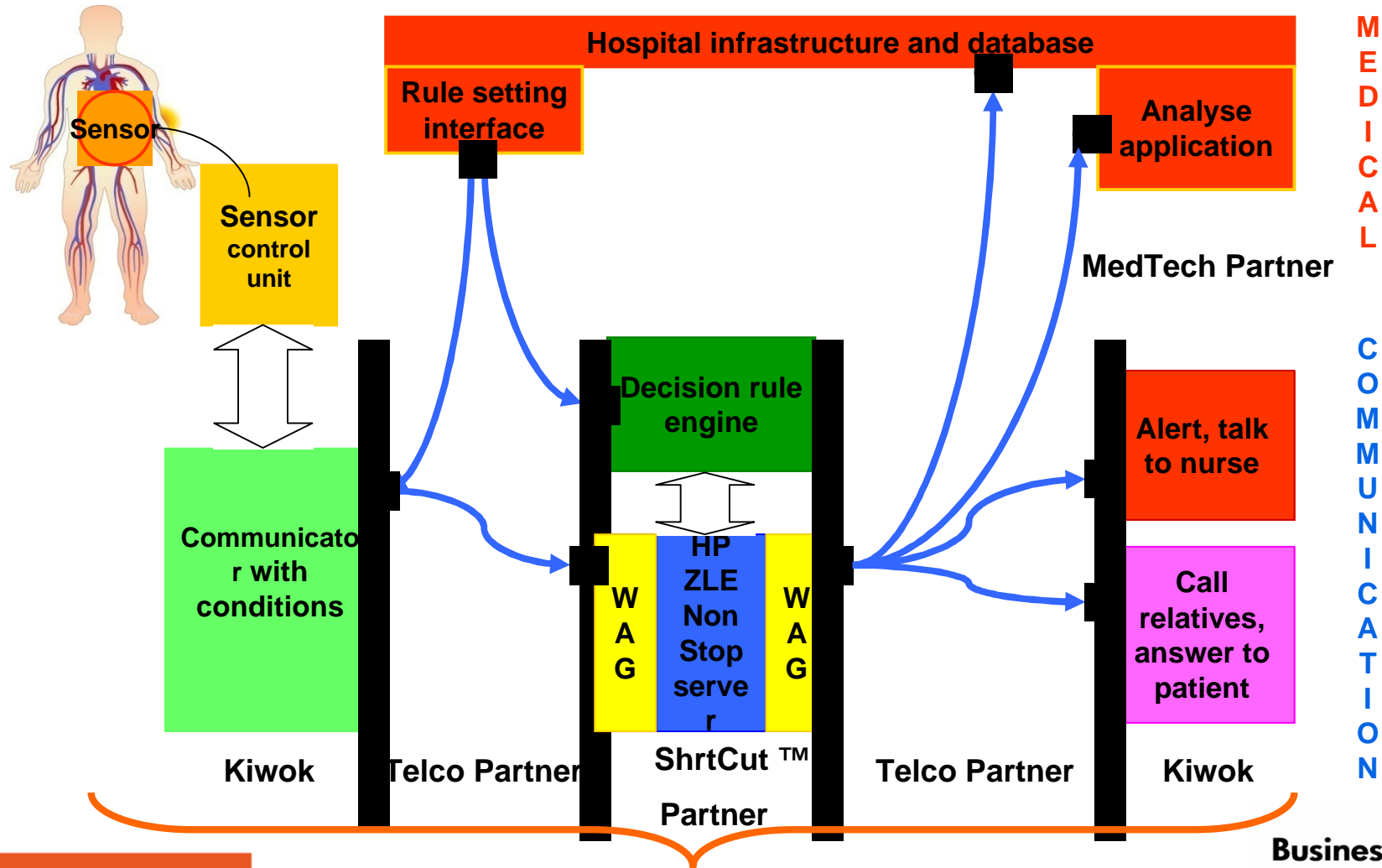
SMS Notification  (ex +4673010101;+4673010101)

Email Notification  (ex name@adress.com;name2@adress2.net)

### Deliver ECG data file

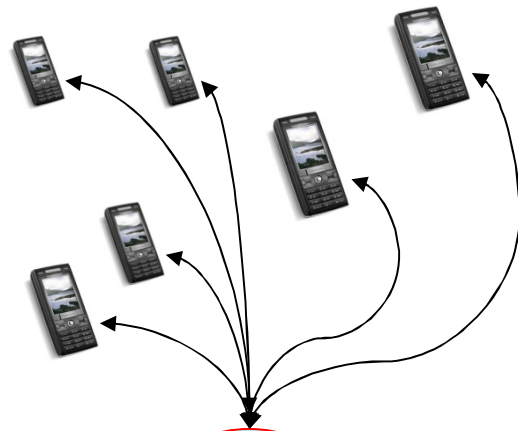
Generate ECG data file for every event ☒

[Next »](#)[« Prev](#)





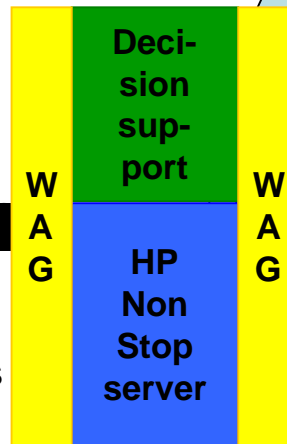
# NonStop Hub – Hospital access point



BodyKom  
AP

One single Mobile Data Access Point at the mobile operator is part of the BodyKom Series ECG Service

The In-Hospital Hub is linked to the Kiwok ShrtCut Master Hub



When all hospitals in a group are accessible over a national or corporate hospital net

- Ø Different services can be applied over the hub, also in between hospital units
- Ø One secured access point for mobile healthcare solutions to all hospitals. BodyKom Series ECG is one of those
- Ø All diagnose data, although unidentified at this stage, can be stored in-hospital
- Ø Legal aspects can be fulfilled

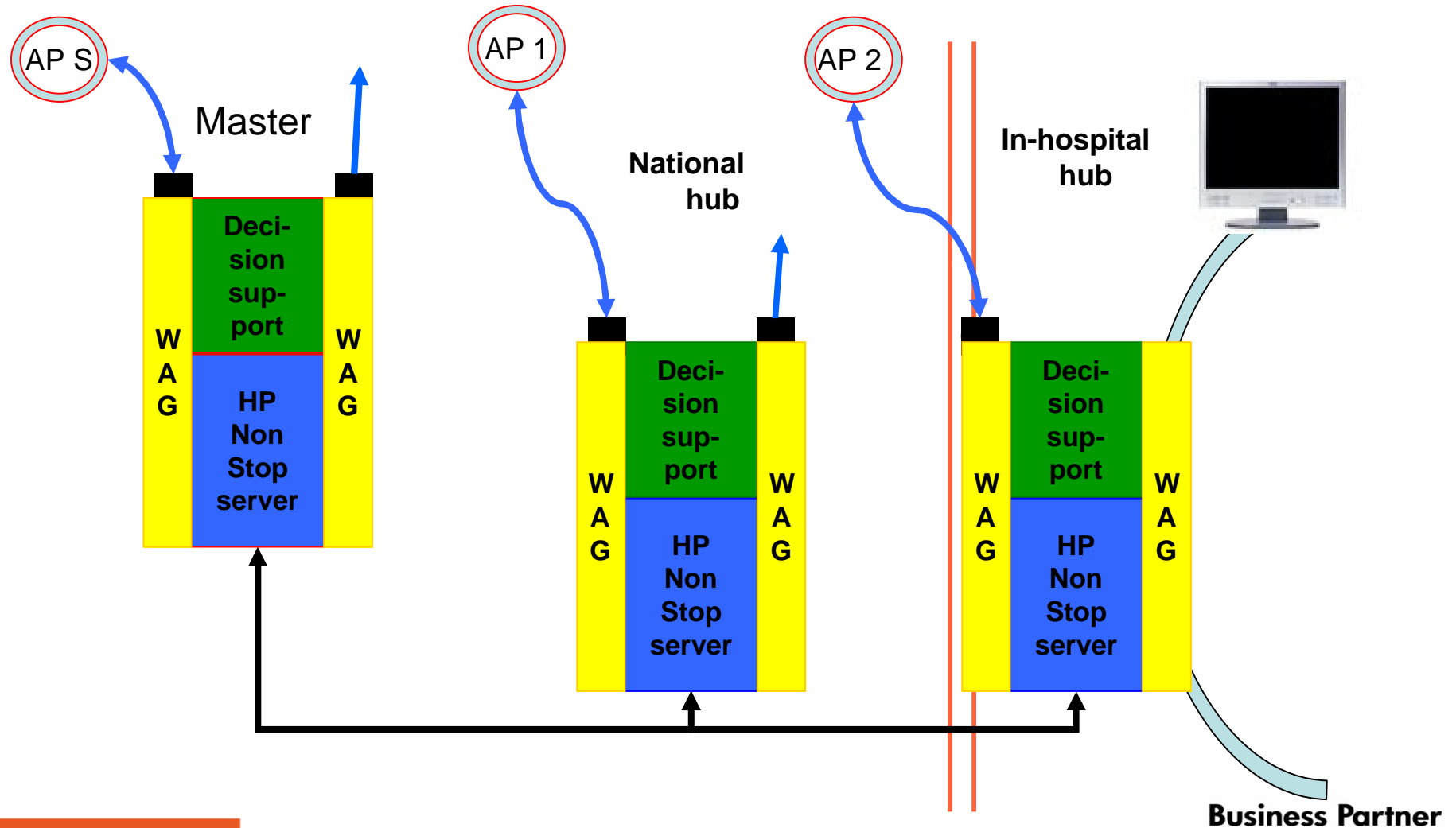
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# A global network of ShrtCut hubs

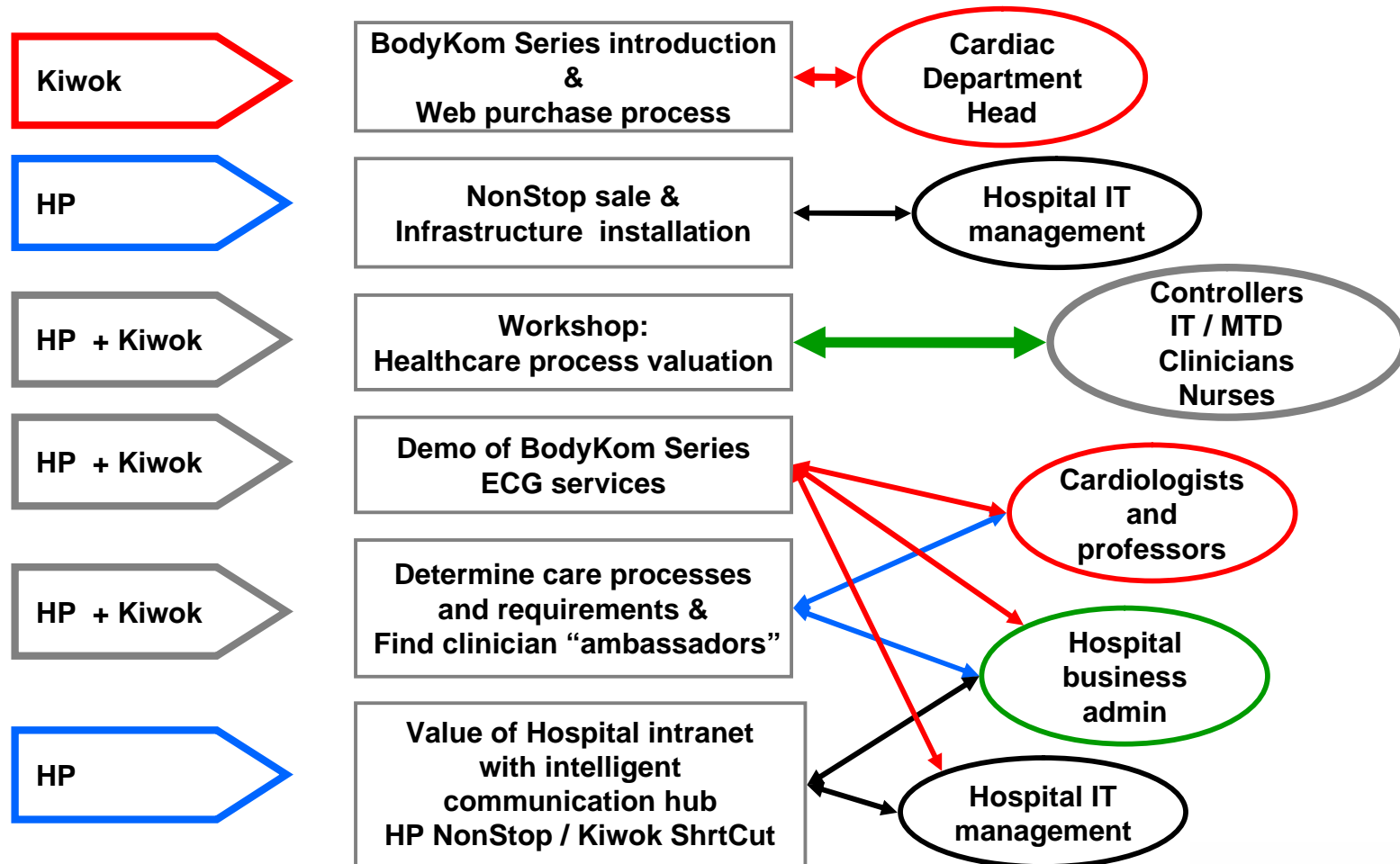


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# Strategic Sales steps



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# Decision support by intelligent communication

- § Limit the amount of information distributed to health care providers
- § Transmit information automatically
- § Patient integrity – identification behind the firewall
- § Reuse existing business intelligence application – Fair Isaac experience from bank and finance
- § Reuse existing hospital applications and common evidence based treatment

EXAMPLES:

- Personalised profile
- Messages to family members
- Alert
- Position
- Data values out of limits
- Physical advises
- Guidelines according to agreement – patient/doctor

**It is about life quality for the patient – quality of care  
– quality in use of resources**

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Karolinska University Hospital and Uppsala Akademiska Hospital have introduced our solution:

- more than 80 patients connected to ECG
- evaluating health care processes
- evaluating financial benefits

Karolinska University Hospital MTA will publish the findings from the BodyKom Series™

***The Swedish Ministry of Health and Social Affairs is supporting Kiwok in the method development of mobile monitoring of diagnosis data.***

***Together we will arrange an event in India next spring.***



## BodyKom Series™ ECG

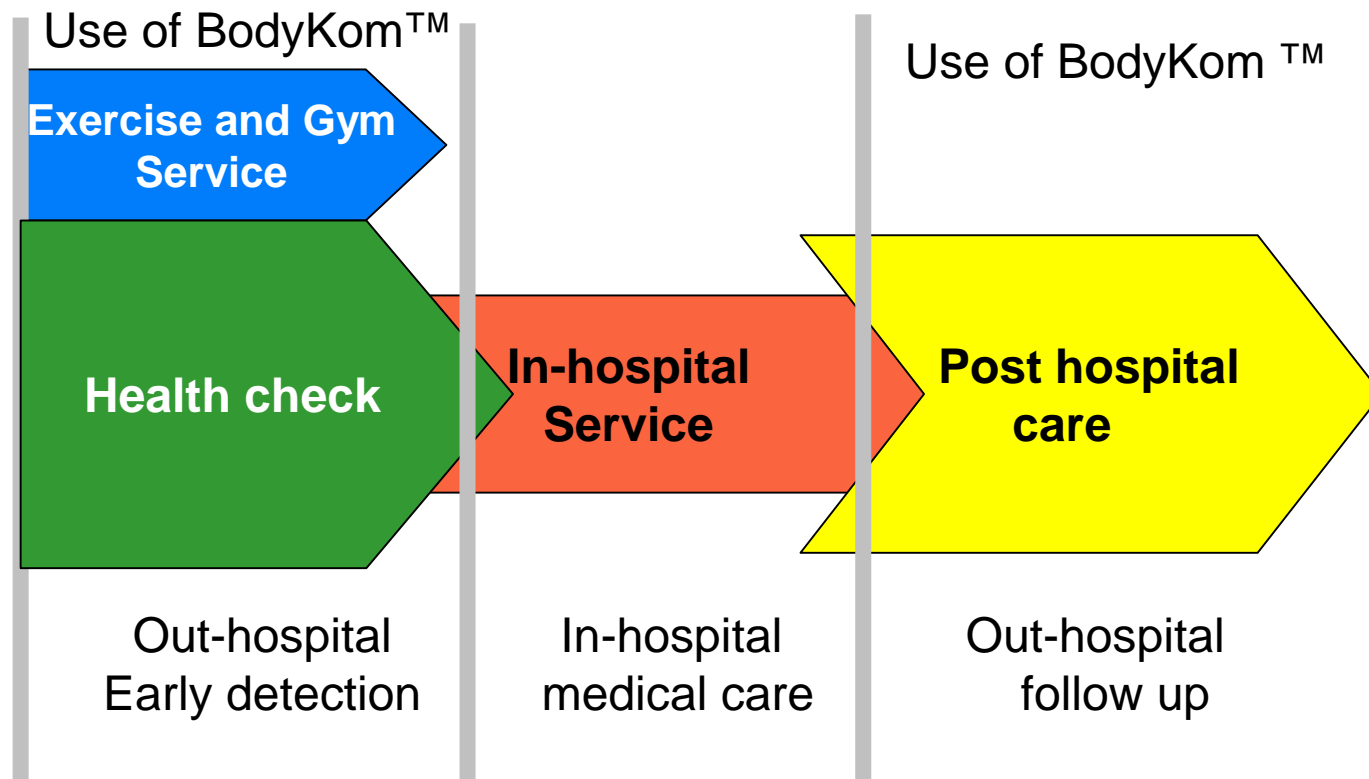
- Remote care based on a combination of mobile monitoring and intelligent communication
- Helps heart patients to live a normal daily life, being mobile and relatively undisturbed but at the same time under observation
- Operates in all locations with mobile phone coverage



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# The individual perspective

All type of health conditions have at period where you still can be going on, e.g.

Ø Heart diseases

Ø Blood pressure

Ø Diabetics

Pregnancy

Epileptics

Elderly

Demented

Chronicle obstructive lung diseases



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Remote care

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## Zone 3 Global

- Health control in real time
- See threats coming up
- Out-hospital care - gives more and costs less

## Zone 2 Healthcare

- See the source of ill-health
- One euro in preventive care saves six euro in in-hospital treatment
- Diagnostic support



## Zone 1 Individual

It is about life quality, to be safe wherever you want to go, to work and live your normal daily life.



**KIWOK™**

Heart Failure > 22 million

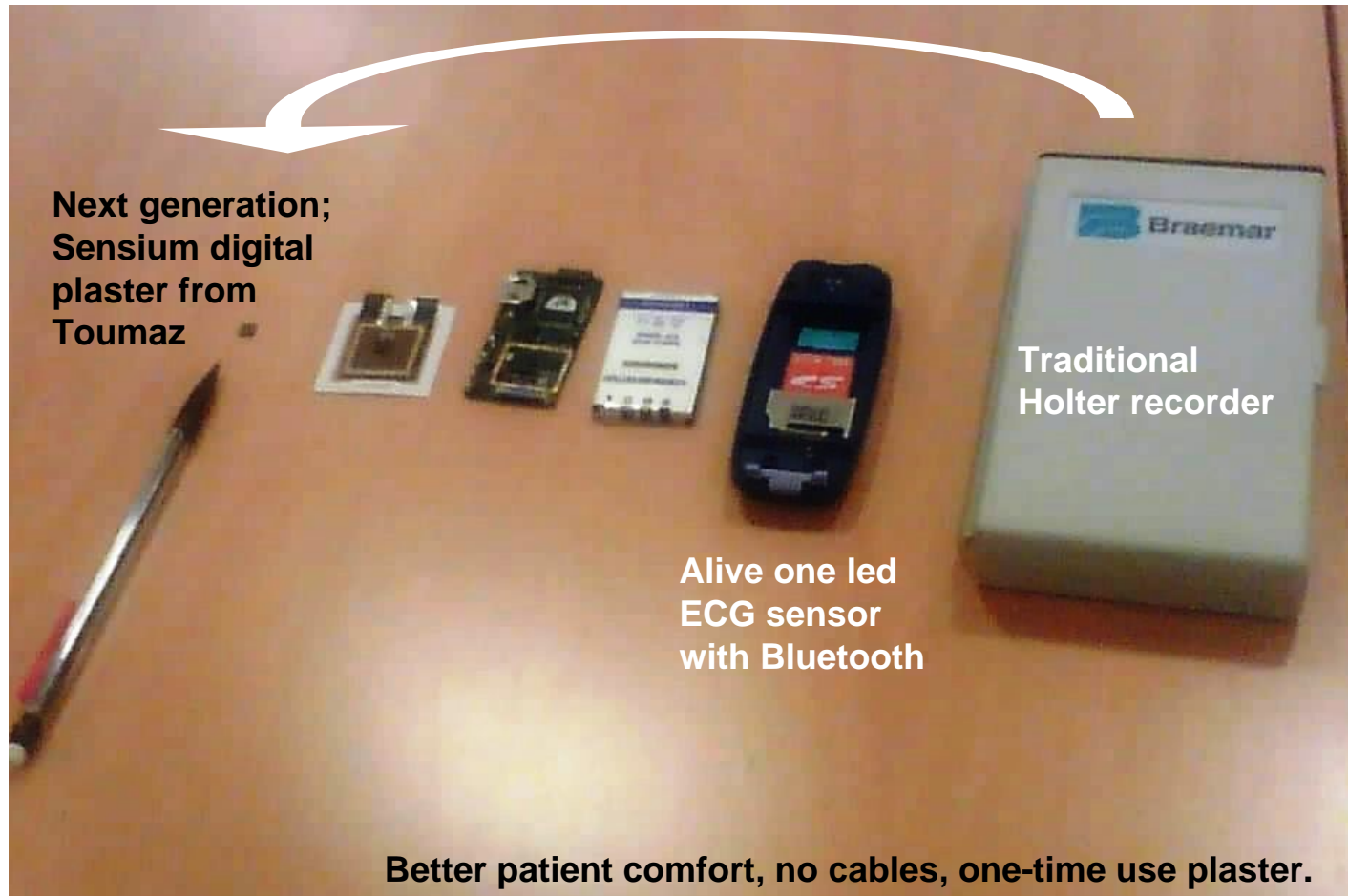
Diabetes – fastest growing disease

Blood pressure – the human body's early warning system

Together over 100 million people



## BodyKom Series ECG is a global solution







## Contact

[www.kiwok.com](http://www.kiwok.com)

Watch our web videos!

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Remote care

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**KIWOK™**

## Patients

- Continuous monitoring during normal activity
- Early warning – event based
- Freedom of movement while under professional supervision
- Peace of mind for relatives and carers

## Doctor

- Reduced average care time
- Potential reduction in in-hospital monitoring time
- Relevant diagnostic information – with soft variables

## Government

- Significant financial savings
- Greater efficiency
- Compatible with new e-Health requirements



## BodyKom™ Series is:

- built to communicate with various types of networks, regardless of how strict a security level is desired
- an open infrastructure which can connect to all types of clinically verified sensors

## BodyKom™ Series can:

- be connected to existing analyse applications at health care units and hospitals
- work and initiate actions in real-time when so is needed
- send and receive information to and from electronic health record (EHR)

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## Findings and lessons learned

- Work is proceeding according to plan
  - Data through put is OK – tested by ECG simulator
  - Cardiology Department sees good opportunities of efficiency
  - Expected improved care quality for the patient
- Requests on increased scope
  - Many new ideas coming from hospital staff
  - Combining soft variables with vital signs / automated messaging
  - Developed methods to cover longer diagnose periods
  - See effect of medication – shorter lead time to best program
- New areas suitable for mobile monitoring
  - Same process in other areas like diabetes and blood pressure
  - Use of multi sensors over longer periods for better trend analyse





# BodyKom Core

Business Partner



Ability to deliver  
secured and scalable,  
global fulfillment  
solutions



Ability to deliver the  
best decision support  
for intelligent  
communication



Gives redundant  
communication to all  
type of terminals



Global Hosting Partner



Logistic Operations  
and Support



Tools for business  
processes

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## An indication of the potential

- CVD diseases are estimated to cost the EU economy €169 billion a year  
(British Heart Foundation Statistics)
- 22 million people in the western world suffer from heart failures  
(IEEE Spectrum Dec, 2004)
- Diabetes takes 6 % of total health care budget in Spain and 5 % in Portugal  
(International Diabetes Federation)
- Diabetes is on the rise worldwide, increasing to 230 million cases from 30 million in the past 20 years  
(The New York Times July, 2006)
- USA – digital home health care 2010 will be worth 2,1 billion \$US  
(eWEEK.com special report June 30, 2006)
- USA – remote care will reach 64 million patients by 2010  
(eWEEK.com special report June 30, 2006)
- Australia – 275 new diagnosed diabetes patients every day  
(Kiwok Australia May, 2006 )
- Heart failure, diabetes and blood pressure takes approx 60 % of the budget  
(Stockholm County Council)

# Basis for BodyKom business

## Facts

- ü Global problem
- ü Large volume process
- ü Globally accepted medical decision rules and procedures

## Customer requests

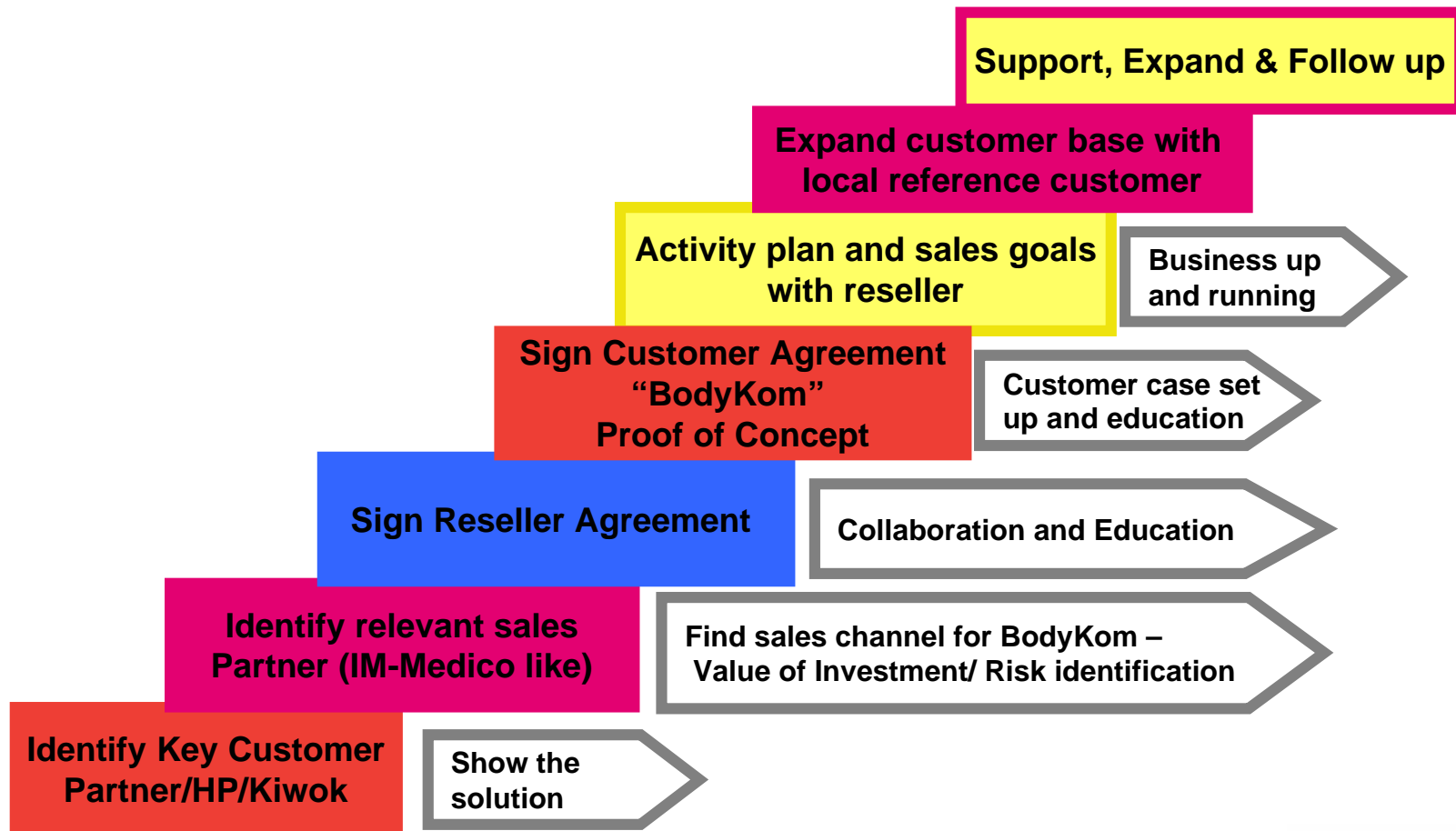
- ü Need for reliable solution - scalable based on usage
- ü No more capital investment
- ü Use standard equipment – local preferences

## Impact

- ü Important to stay out of the Medical Area
- ü Work with partners
- ü Relevance for the customer
- ü Business Model



# Strategic Reseller steps



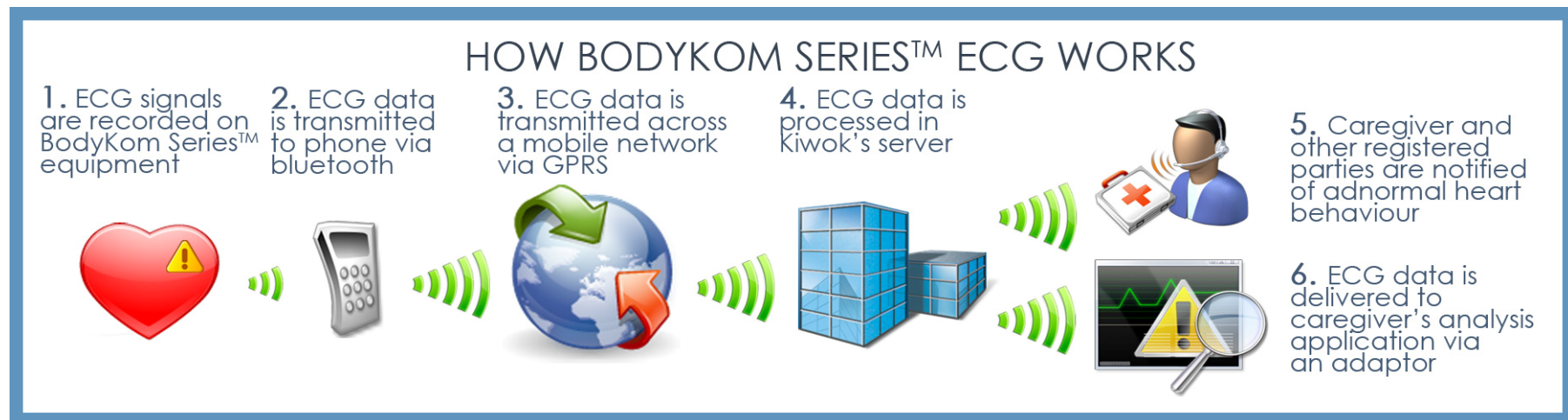
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## In-Hospital NonStop hub

### Single access for Out-Hospital diagnose data





## The Team



**Olle Leckne**, temporary CEO

**Björn Söderberg, Anders Björlin, Agneta Wistrand, Jonas Perman**



**Mobile Gala:**  
*Innovation of the Year 2005*



**Swedish Society of Medicine:**  
*Swedish IT-prize of Healthcare*  
2006



**Swedish Competence Gala:**  
*IT-Innovator of the Year 2007*



**SIME Award:**  
*Best Mobile Solution 2007*



2005 Gold Mobile

2006 Healthcare IT-prize

2007 IT-Innovator

2007 SIME Award

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# The BodyKom Story

There is a true story  
behind our concept.

And this is how it all  
began.....

[Login - BodyKom Portal](#)



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Budget limitation

Nursing shortage

“Traditional” approach

- Based on in-hospital-service
- Lot of manual steps
- Too much data
- Islands of information

Need for increased efficiency

Ü Costs

Ü Number of visits

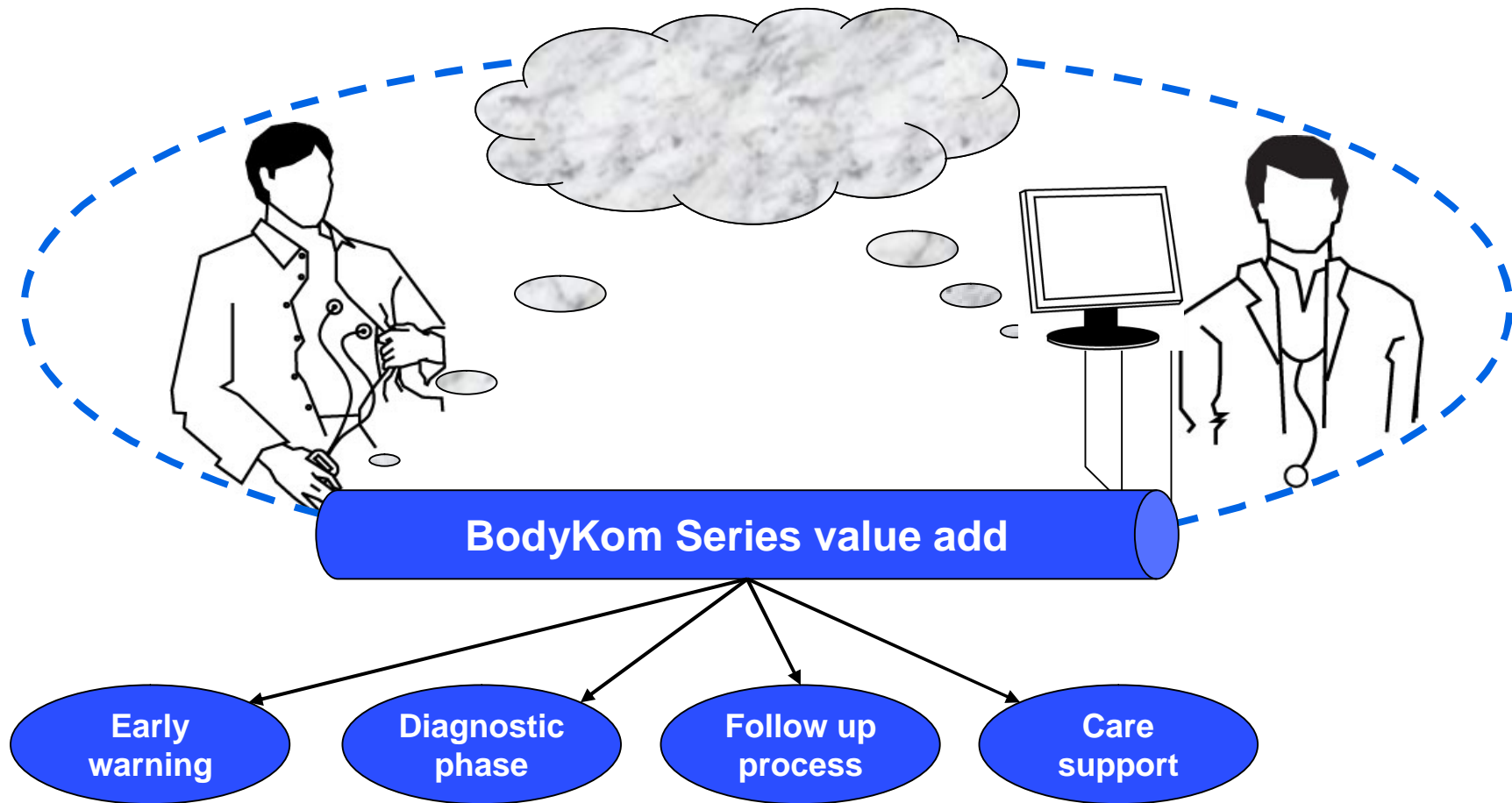
Ü Diagnose time







# BodyKom Concept – Mobile Monitoring enabled with intelligence



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