ambiotex
understand your heartbeat

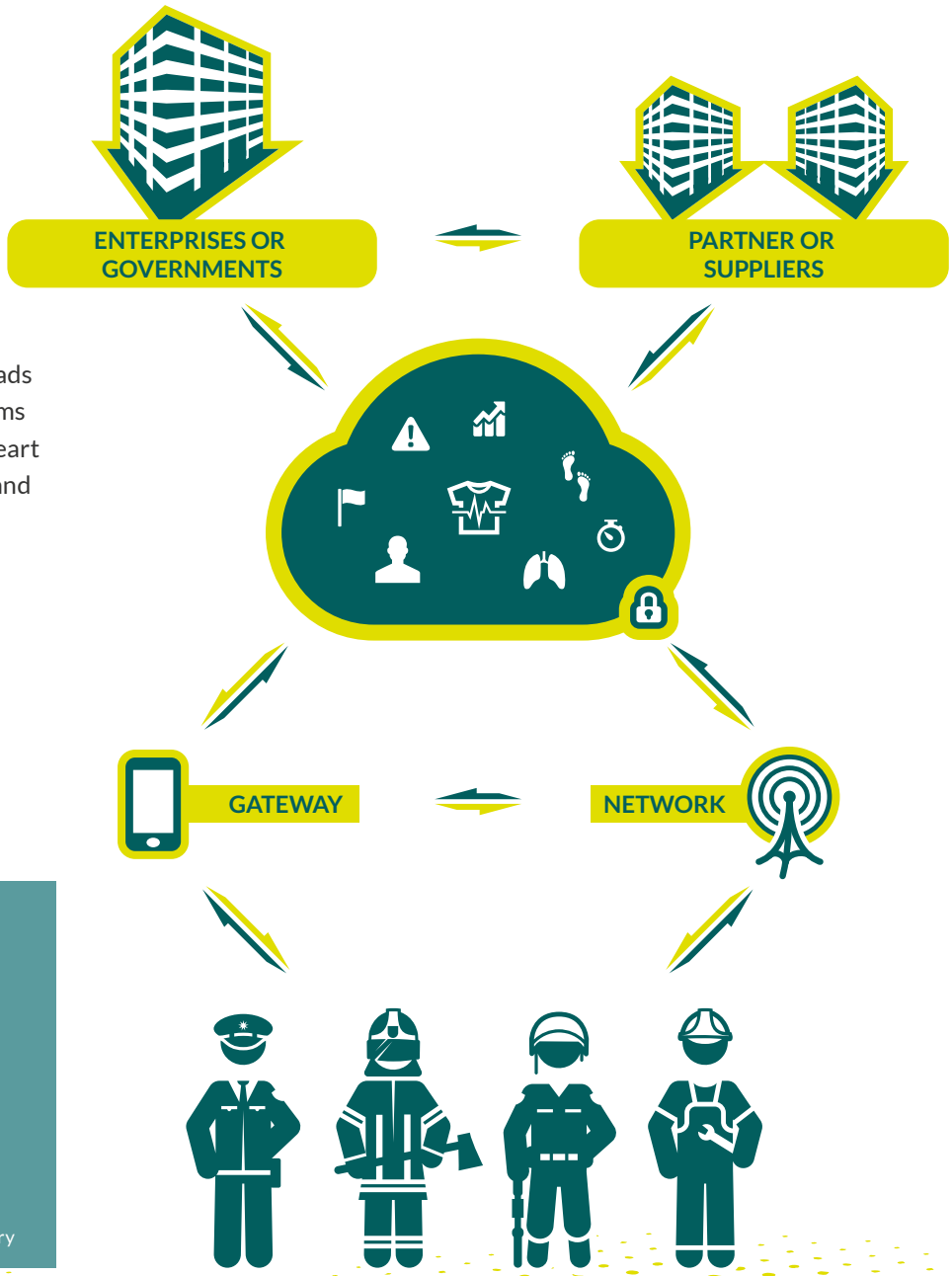
WEARABLE TECHNOLOGY FOR A HEALTH AND SAFETY ENVIRONMENT

The workplace has been transformed by the Internet and the new innovations emanating from it. With the emerging Internet of Things, employees will have unlimited digital access to information and business intelligence. Wearable Technology WT, first pioneered in the health and fitness markets now shows great potential for the business sector too.

By wearing smart wearable sensor technologies, the employee's vital signs are constantly measured and the business process is greatly enhanced. Smart garments with woven-in sensors made with conductive threads use advanced software algorithms for tracking vital signs such as heart rate, breathing and stress level and can detect when workers are in physically stressful situations.

In recent years, stress has been found to influence many diseases. The consequences of stress are not only physical discomforts, but can also be of a psychological nature (depression, anxiety or fatigue), which results in a greater number of days of absence and/or lower productivity.

This affects businesses in several industries: HSE, Military, Law, Enforcement, Construction, Firefighting, Agriculture, Mining and Engineering are all industries where technology, in particular Wearable Technology, provides great added value.



- Profile (age, gender, measures)

Vital data from ambiotex shirt:

- Heart Rate Variability (HRV)
- HRV analysis, Stress test
- Pulse rate
- Fall detection
- Individual anaerobic threshold
- Step tracking
- Respiration Rate
- Activity history (Running, Cycling, etc)
- Duration (length, time)
- Intensity (low, medium, max)
- Alerts/ Alarm
- GPS tracking
- Employee health and performance history

USPs FOR THE EMPLOYER

- ✓ Enhance workplace safety, productivity and efficiency (man down alert)
- ✓ Improves employee satisfaction
- ✓ Substantial savings through:
  1. Increased productivity and efficiency,
  2. Enhanced employee well-being,
  3. Reduced work-related injuries and workplace safety (from fainting, falls, dizziness, cardio-vascular diseases or other biometrical signs that are not visible on the outside)
- ✓ Provide individual feedback and coaching
- ✓ Employee engagement patterns and success criteria
- ✓ Analysis, calculation and quantification of "stress" risk factor:
  - Job satisfaction
  - Healthy behavior
  - Offering Feeling of security
  - Motivation and challenge
  - Entertainment within organization
- ✓ Collected data is secure and belong to the organization

USPs FOR THE EMPLOYEE, SOLDIER, OFFICER

- ✓ Higher job satisfaction: Studies show that workers who are more fit and have a healthier lifestyle, are happier and more satisfied with their work experience.
- ✓ Personal analytics Dashboard for more insights: being better informed and make adjustments to their behavior and work style
- ✓ Beneficial also in leisure time
- ✓ "Cool" product. Proud to own it.
- ✓ Security where and when needed: Alarm is triggered and employer informed i.e. in case of fall, active push of help button, high stress level, geo location boundary crossed.
- ✓ Obtain assistance more quickly

AREAS OF USE

- ✓ Duty of Care: exploit latest technology innovations to improve employee safety (gov. regulation)
- ✓ Hazardous work environment with low oxygen content
- ✓ (Work-) force readiness: physical and psychological fitness
- ✓ Motivation
- ✓ Monitoring effects of working environments on health conditions
- ✓ Training
- ✓ Marketing
- ✓ Elite athlete selection or recruiting

TECHNICAL REQUIREMENTS AND LIMITATIONS TO THE SIGNAL STRENGTH

- ✓ App runs on iOS smartphones.
  (Android (>4.4) available in Q3 2015)
- ✓ The signal transmission must be guaranteed as the working environment can impact the two streams of communication within the shirt:
  1. Signal flow from Tech Unit to smart phone via Bluetooth Low Energy
     - Signal strength of up to 100 m in open spaces / outdoor
     - The strength of the signal needs to be tested
     - The range of the BLE is limited by metal, concrete or water
  2. Signal flow from smartphone to server (for the analysis of vital data)
     - Secure Networks, wireless or satellite signals must be present to transmit location signals
     - Alternative: over 3G or 4G
- ✓ Tech Unit is splash water protected