

## Witte Group:

### Witte plusprint GmbH - Self-adhesive materials

High-quality labels for long-term and resistant marking in standard and automotive industries; printers and accessories, RFID solutions, printed electronics, front panels and die-cut parts.



### Witte plusguide GmbH - Vehicle safety products

Warning plates, conspicuity markings made of reflective films as well as protective equipment based on current laws and regulations.



### Witte safemark GmbH - High Security Printing

Security marking systems for authorities and industry: seals, vehicle stickers, forgery-proof and transfer-proof labels and supporting systems such as digital verification platforms.



### DSD Staatliche Dokumente GmbH - State documents with a certified value printing company

Documents, forms and print pieces with security features up to the highest security levels, also with digital verification for authorities and industry.



### Maquiladora Gráfica Mexicana, S.A. de C.V.

Self-adhesive printed matter and special labels, seals and die-cut parts, high-quality cardboard sales packaging. With two locations in Guadalajara and Tijuana, MGM looks after Mexican, US American and international customers, primarily from the automotive, entertainment and electronics industries as well as the alcoholic beverage industry.



## Witte plusprint® - printed electronics...

... printed labels & packaging, printed security,  
printed functionalities



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Witte printed technology

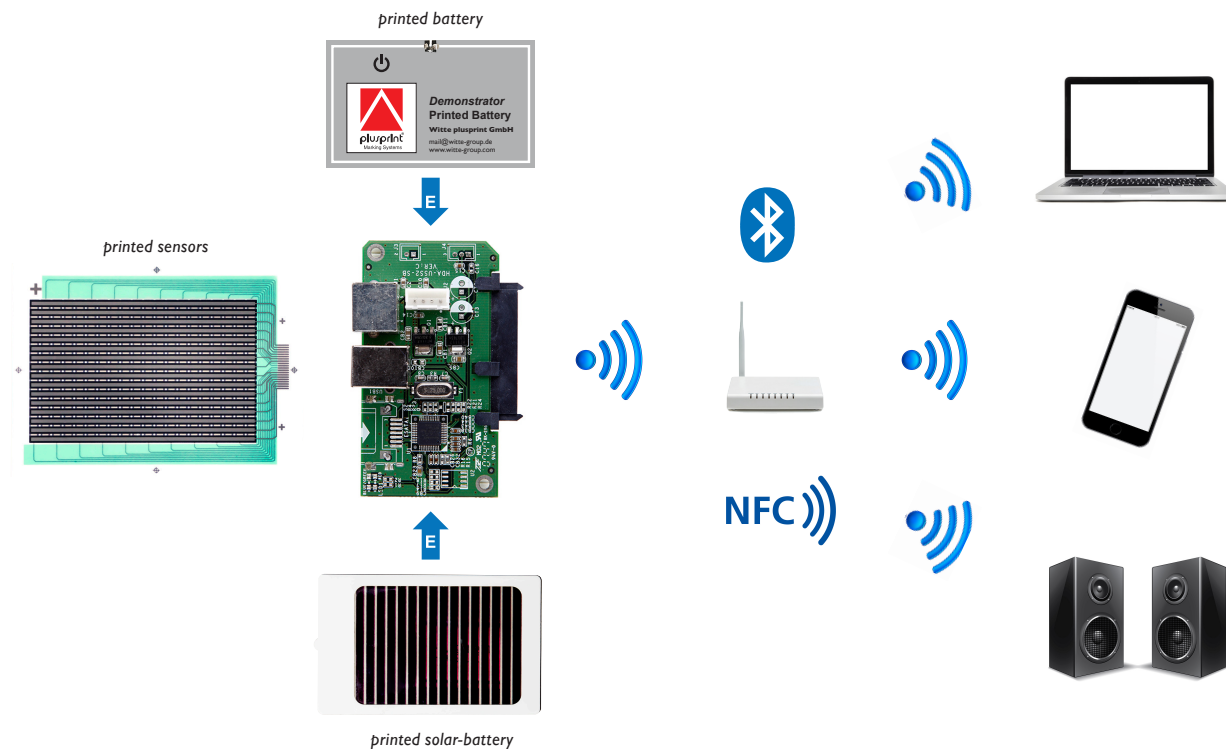
# Witte plusprint® - printed electronics...

## The benefits of printed electronics

**Extremely thin, flexible and partially transparent** electronic components for a wide variety of usage areas – such as entertainment electronics, packaging, automotive, the pharmaceutical industry, energy or white goods.

The Witte Group with its strong partner network and its existing core competencies in the areas of functional printing and finishing offers solutions for a wide range of applications.

Innovative products such as **printed circuits and functional surfaces, energy storage and printed solar cells, smart labels or fully printed electronic components** for example for the implementation of the Internet of Things (IoT) are the result.



Platform to demonstrate combinations of printed and conventional electronics for e.g. IoT

# Witte plusprint® - printed electronics...



## Our core competencies in the field of printed electronics

- Conductive polymers or inks for low cost use on foil, paper, glas or fabrics
- Single layers or stacked electronic devices
- Shining packages with capacitive or resistive switch-mechanism and printed energy supply
- Sensor platform **PlusSense** for IoT: completely printed sensors, direct connection to conventional electronics, printed energy supply, data transmission via WLAN, bluetooth, NFC
- SmartPack** and **SmartLabel** platform
- Printed devices:
  - Heating elements
  - Solar cells (OPV)
  - Sensors
  - Keyboards
  - Electrochromic displays
  - Internet of things (IoT, IoE)
  - Batteries
  - Antennas (RFID, NFC)
  - Capacitors, resistors
  - Lighting for packaging

