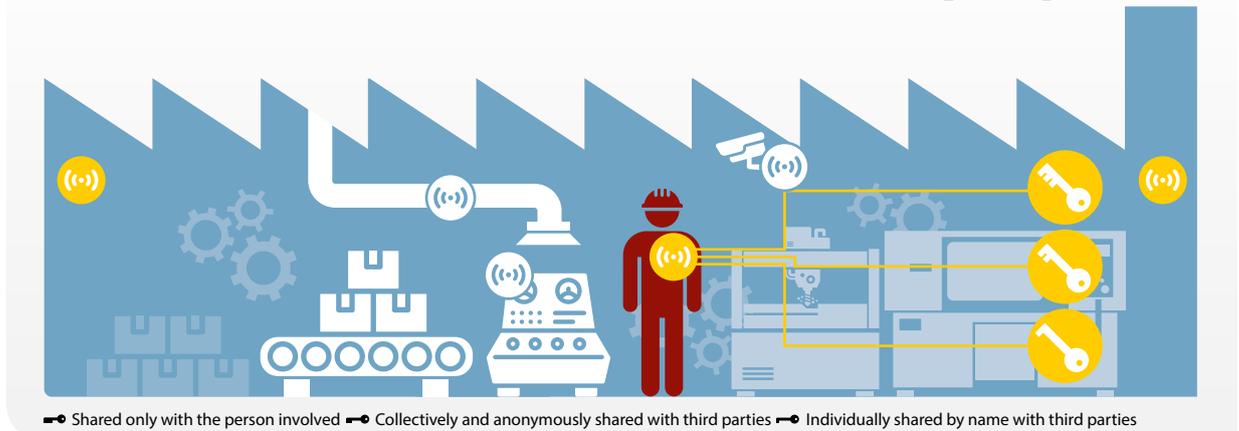


STATIONARY EXPOSURE SENSORS WITH INDOOR LOCATION TRACKING (ILT)



Stationary exposure sensors and modelling tools can be used to draw up concentration maps of workspaces. This can be done for more than one chemical substance simultaneously. If employees are fitted with an ILT device, individual exposure profiles can be developed by combining an individual's indoor location data with the concentration map data.

Advantages	Disadvantages
By monitoring the movements of an employee, they can be given a signal if they enter a high-concentration zone.	Wearing an ILT device means that all the movements of an employee during the day are visible, including how often they go outside (e.g. to smoke) or to the toilet.
If employees just wear an ILT device, individual exposure profiles can be generated for all substances subject using stationary monitoring data.	Because modelled concentration maps are less accurate than (personal) measurements, these exposure profiles are also less accurate.

ETHICS

- By combining ILT with stationary exposure sensors, an employee is only required to wear an ILT in order to develop exposure profiles for a variety of substances (*justice*);
- Employees should have a say in whether or not they wear an ILT device (*self-determination, well-being*);
- If ILT is coupled with GPS coordinates the data can be used to identify employees – which makes it personal data and privacy-sensitive (*privacy*);
- The introduction of ILT can have negative side effects:
 - Stationary exposure sensors with ILT may contribute to a shift in responsibility to control high exposures onto employees themselves (*responsibility*);
 - ILT data could also be used for other purposes, e.g. in an employees' performance review (*trust*).