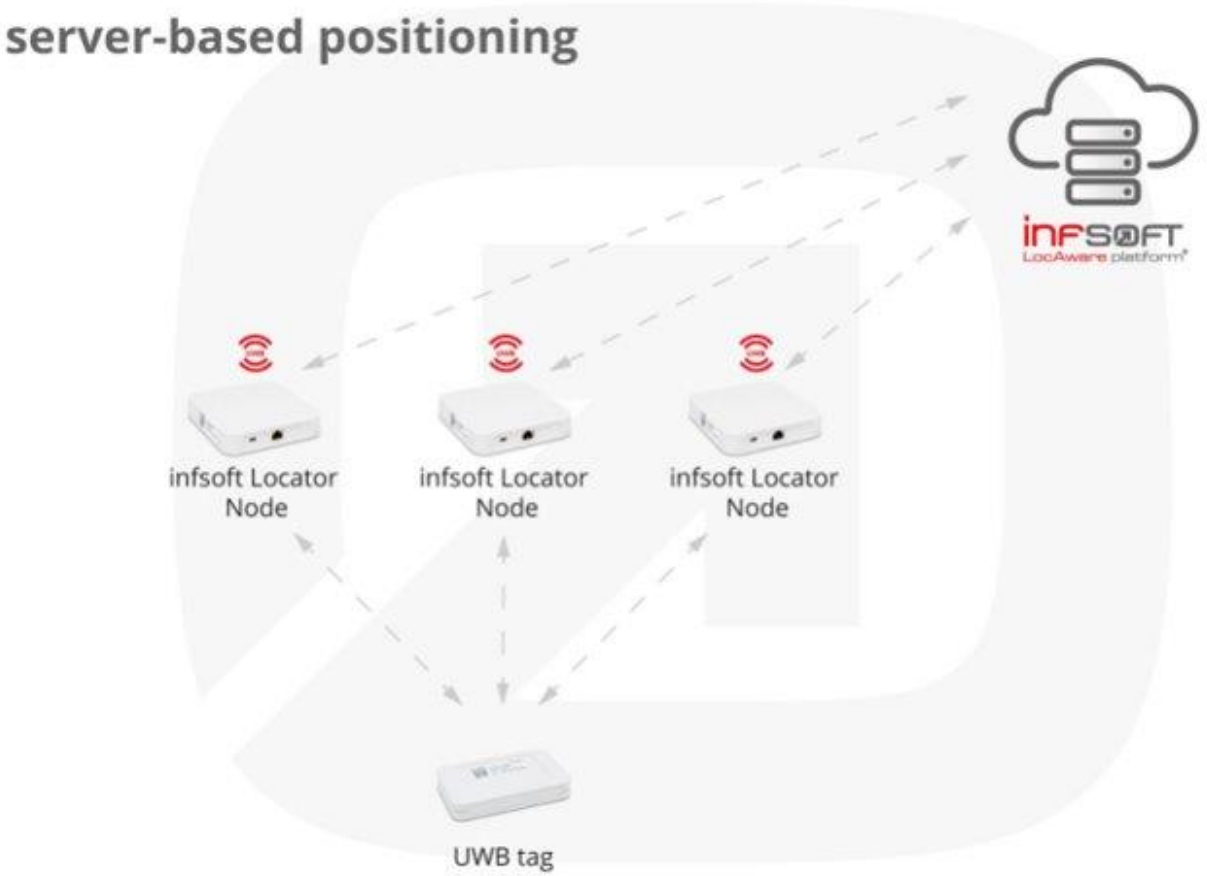
Tracking in industrial environments using UWB

- **Reactive**: Continuously tracking the object using a small tag offering an accuracy better than 30 cm in contrast to beacons (1-3 meters) or Wi-Fi (5-15 meters)) and responding to its movements.
- **Hard real time system:** Failing to deliver the exact location of a person at the correct time can lead to extreme consequences.
- **Quasi-continuous:** Latency time is very low (position request up to 100 times/second).
- **Dependability:** It must work correctly when it is being used (High reliability) It must be available to work when needed. High availability). It must not endanger any human life (High safety).

Distributed

- The Tag measures the distance to several Nodes and sends the data back to them. The Node processes the data it receives and sends them to a Platform via Wi-Fi, Ethernet or UMTS. Here, the position is displayed for example on a map.



Distributed Systems

- **Heterogeneous System:** Must be able to run in a variety of Operative Systems.
- **High Scalability:** The system must remain efficient no matter the number of Nodes and Tags connected.
- **High Failure Handling:** Corrective measures must be implemented to ensure the correct operation of the system.
- **High Concurrency:** To ensure access to the location of tags from several sub-systems at the same time.