

Counting solution	Type	Direction	Operation	Strengths and weaknesses	Accuracy	Price
Infrared sensors (in passage)	In motion	No	People are counted by comparing their temperature with the ambient temperature by means of infrared radiation. The sensor is placed horizontally at a height of 0.7 to 1 metre and pointed across the passage so that passing people “cut” the IR beam	<ul style="list-style-type: none"> (+) Detect direction of movement. (+) Sturdy, widespread technology that is easy to install (-) Problem of accuracy when groups enter at the same time; limited to restricted areas of entry 	++	\$
Thermal sensors (IR cameras)	In motion	Yes	People are counted by detecting the infrared radiation from the heat they generate. Operation is similar to passive IR sensors, but sensors can be installed above the counting area.	<ul style="list-style-type: none"> (+) Mobile and easy to install at height, which improves counting of a group of people entering simultaneously compared to IR, and offer a wider area of coverage (+) Can operate with strong ambient lighting 	+++	\$\$
Optical sensors (3D sensors)	Static and in motion	Yes	Uses 2 video large-pixel cameras to capture the same image from different angles, making it possible to form a 3D view by estimating the distances and sizes of objects. The sensor tracks the flow of people without ever identifying them or storing images.	<ul style="list-style-type: none"> (+) Accuracy of up to 99% (+) No GDPR issues (no identification) (+) Tracks people (+) No influence of the light environment or heavy traffic flow 	++++	\$\$\$
Beacons (BLE but also WIFI, RFID, UWB)	Static and in motion	Yes	Triangulation between the two BLE (bluetooth) sensors and the mobile phone makes it possible to identify the smartphone position.	<ul style="list-style-type: none"> (-) The technology assumes that visitors have installed and activated the application on their smartphone. Failure to do so reduces accuracy. (+) Installation already in place for interior guidance 	+	\$\$
Counting video	Static and in motion	Yes	Automated counting method using a video camera installed at the site. Counting data is collected and stored in the video memory card and subsequently analysed to count people on computer.	<ul style="list-style-type: none"> (+) Highly accurate (+) Combined with other video uses (-) GDPR issues if the camera retains the videos or recognises the people recorded (-) Installation is more complex and storage is required. 	++++	\$\$\$\$