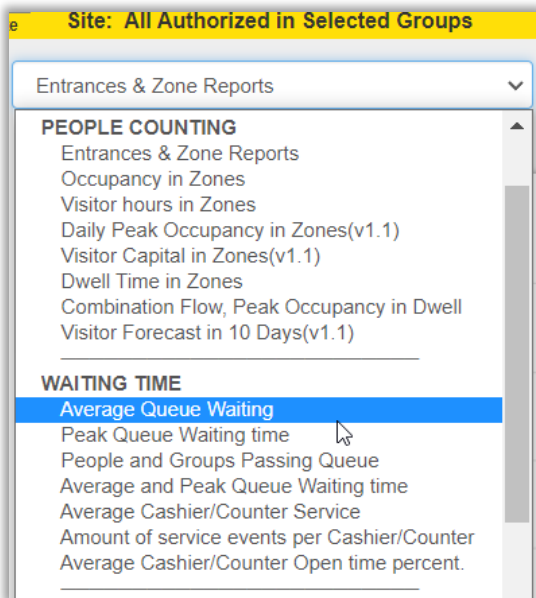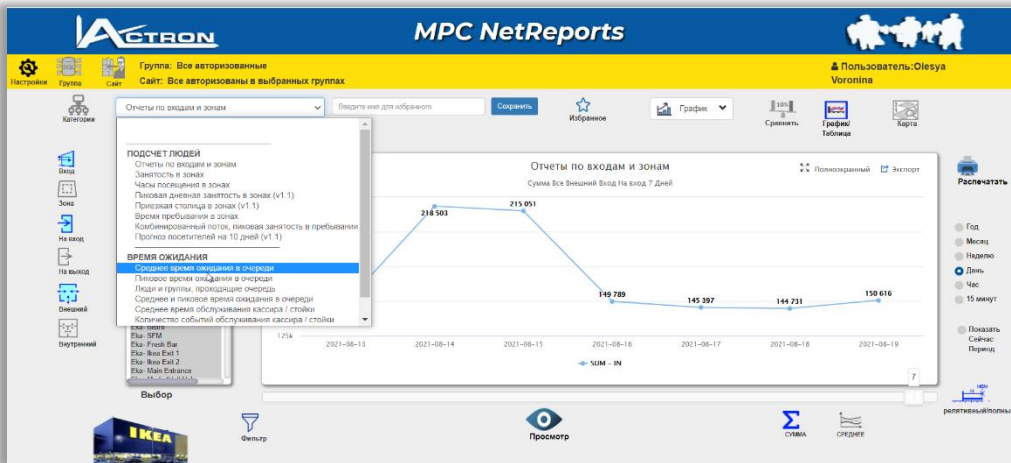# ActQueue   Queue Waiting time system

.If the waiting time is too long many customers will not come back.

MPC Universe is supporting the Queue waiting time system.
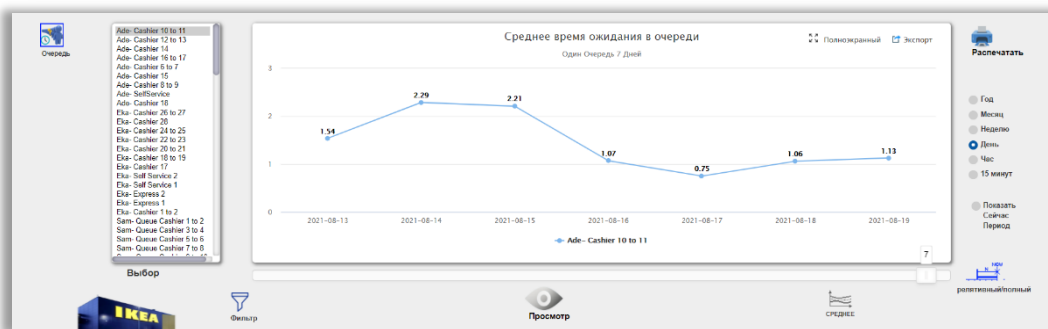
These waiting time reports are supported.
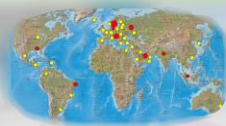
Average waiting time report

Select the Average waiting time report in the list

The icon to the left will now show that we are working with different Waiting time related reports.

The first time it will show the first queue in the list. It will show the same time period as we had before (in this case 7 days).

The values are shown in minutes. (Represented **decimal** of practical reasons. E.g. 1.5 minute 1 minute and 30 seconds)

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Advantages

- **Works fine in an environment with unorganized queues with trolleys etc.**
  Video systems do not

- **Tof technology (Time of Flight)**
  This means that they are the **most accurate sensors** in the market

- Not **sensitive for external disturbances and light conditions**

- Very accurate **height filter makes separation of Trollies and people accurate**.

- R**atio between Groups and People calculate in real time**.
  Gives accurate waiting time calculations in Real time

- **Efficiency** of the current cashier person influence **the service time.**

- Measures **Open/Close time** for the queue.

- **Sending SMS or email alerts operation personal**

Visualization and Alerts
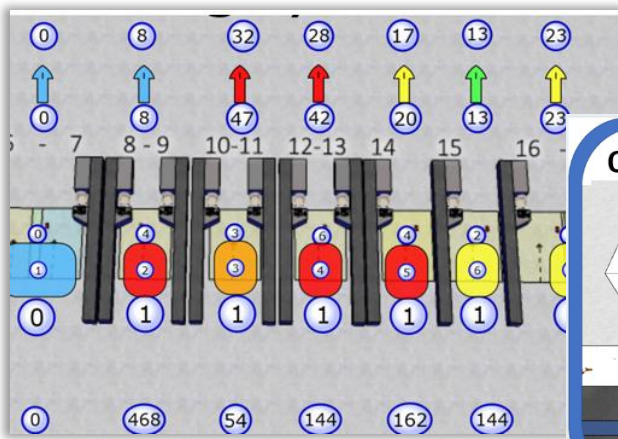
It is possible tom set the max waiting time in a queue until there will be an alert

An Alert will be generated automatically, which will inform the personnel to add another cashier-

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Theory:

TOF stands for Time Of Flight.

There are other technologies for Queue and Waiting measurement.
(e.g. bases on video technology) Some of them are working OK in a homogeneous
queue (without a big variation of distances between people and a lot of different trolleys.

Example where a queue system based on e.g. Video technology works OK

That will never work fine in an environment with unorganized queues with trolleys etc.
That means that the sensor is constantly sending out a matrix of infrared beam pulses and measures the
time for the light to return.

The Tof technology can separate the height of object and
people very accurately (withing 1-2 cm)

This means that the sensor can re-create the shape of
people and object without interference
from external light and temperature.
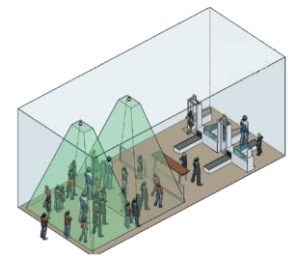
This means that they are the **most accurate sensors** in the market as well as they are the
least sensitive for external disturbances

The sensors are designed so it is possible to set up different counting lines. These
lines count people in both directions. These lines can be turned in any direction
and any shape. But the most unique feature is that it is possible to measure occupancy
in different zones and filter people from trollies and other objects with an accurate **height filter**.

On top of this it is possible to count the **ratio between Groups and People** passing a line.
This means that we constantly can judge how many groups are waiting in the queue and together
with the current measured service time **calculate in real time** the accurate waiting time.

A **group can** be a couple, a family, a parent and a child etc.
It is obvious that the service time is more proportional to the number of groups
than to the individual people.
Therefore, this unique feature to estimate the number of groups is very important
for the accuracy.

The service time is also varying dependent on the average amount of items per
purchase. So that is also different from time to time.

Also, the efficiency of the current cashier person influence **the service time.**
This means that we can also measure the average service time and,
if the client wants, match to the individual cashier person.
The system can also measure **Open/Close time** for the queue.

The system is prepared for monitoring of the expected waiting time also to be visible for the customers.
Beside that there could be a function for **sending SMS or email** to the personnel who is responsible
for opening new queues to keep the waiting time on an acceptable level.

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