

beCo-Logistics

Solutions for material handling

What we do??

beCo is a company that focuses on Indoor mapping solutions for large complexes including airports, university campus, commercial areas and so on. We build custom solutions to meet your demands and improve process efficiency at all functional domains.

How we can help??

We design custom maps to requirement, both indoors and outdoors to help organisations utilise resources and area better. By monitoring spaces in real time through our maps we help you chart routes and navigate to the right place avoiding collisions and reducing confusions. Our technology also helps to monitor factors of sensitive goods, Avoid Collisions Between Forklift and handle Goods with care.

PRODUCT

Understanding the need existing among various industries for an effective wayfinding and tracking system, We Have developed custom solutions to meet demands.beCo focuses on Indoor mapping and tracking solutions for large complexes including airports, university campus, commercial areas and so on. Building custom solutions to meet your demands we improve process efficiency at all functional domains.

Custom maps, both indoors and outdoors are designed to requirement which in turn help organisations utilise resources and area better. By monitoring spaces in real time through maps we help you chart routes and navigate to the right place avoiding collisions and reducing confusions. Our technology also helps to monitor factors of sensitive goods and handle them with care.

Provided below are certain key statistics on forklift accidents caused in the United states of America in the year 2017 . The data indicates why it is important for a proper collision avoidance system be setup in warehouses and other large areas that employs forklifts.

- Forklifts account for around 85 deaths every year.
- Forklift accidents that result in serious injury total 34,900 annually.
- Non-serious injuries related to forklift accidents reach 61,800 each year.
- A forklift overturning is the most common incident, accounting for 24% of all forklift accidents.

LEADING CAUSES FOR COLLISIONS

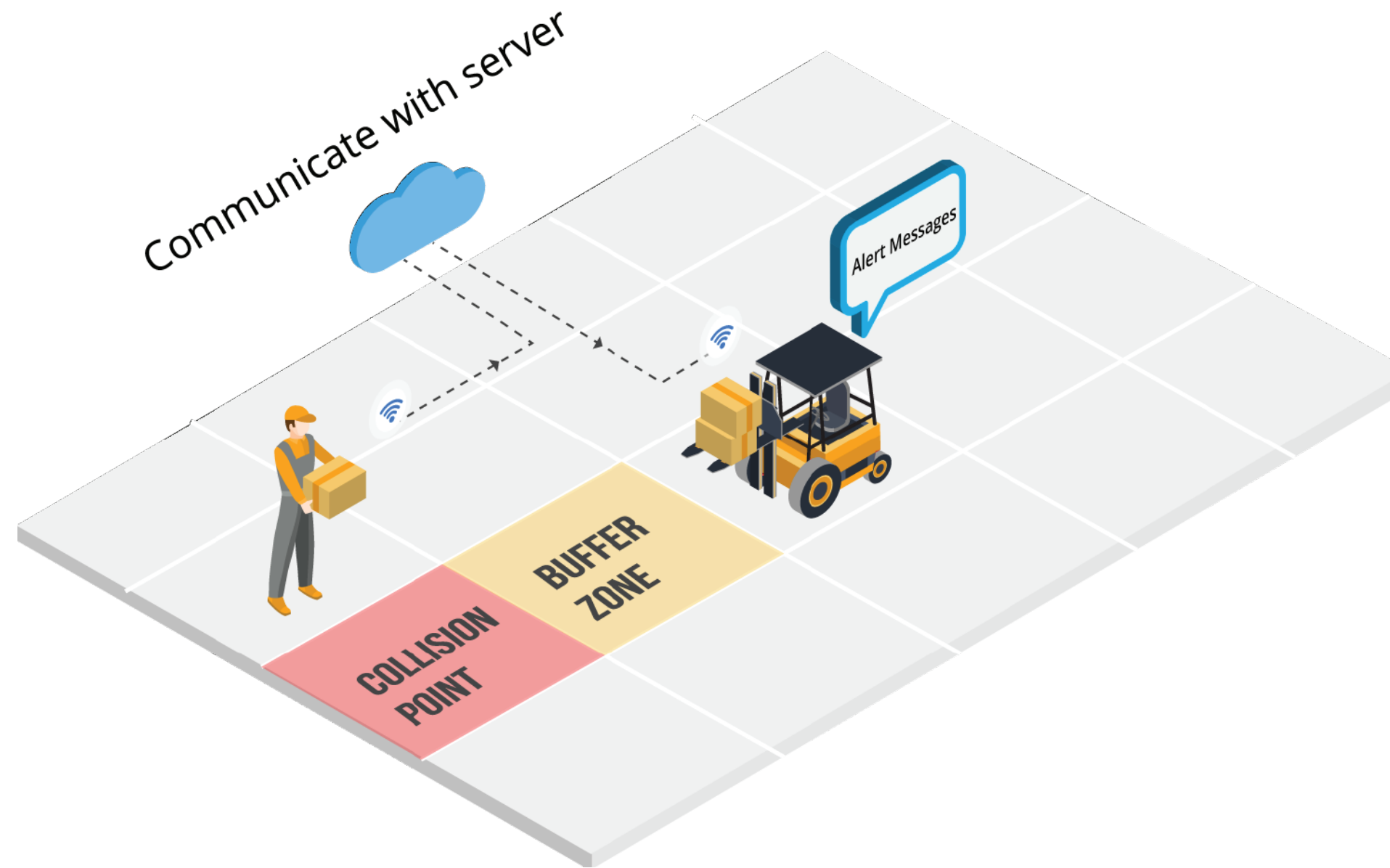
- Loads carried on the front of the forklift obstruct the drivers visibility.
- Constant misplacement of packages or equipment's on the accessible paths.
- Fast movement of the forklift and swift movement of employees towards junctions where visibility of both parties are minimum.
- Uneven weight distribution of the forklift and rear wheel dependant turns, lead to more accidents and collisions.
- Minimum visibility while reversing lead to Collision between forklift and racks.
- Handling of forklifts in close proximity to racks and movements in the same range causes accidents.

SOLUTION

Our solution focuses on providing timely alerts and signals for precaution, to avoid possible collisions by understanding the situation in real time. By integrating the right hardware and building a technology solution that works we focus on minimising risks and chances for possible collisions within the suggested premise. The solution directly solves 3 main scenarios in which accidents and collisions occur involving a forklift within a warehouse.

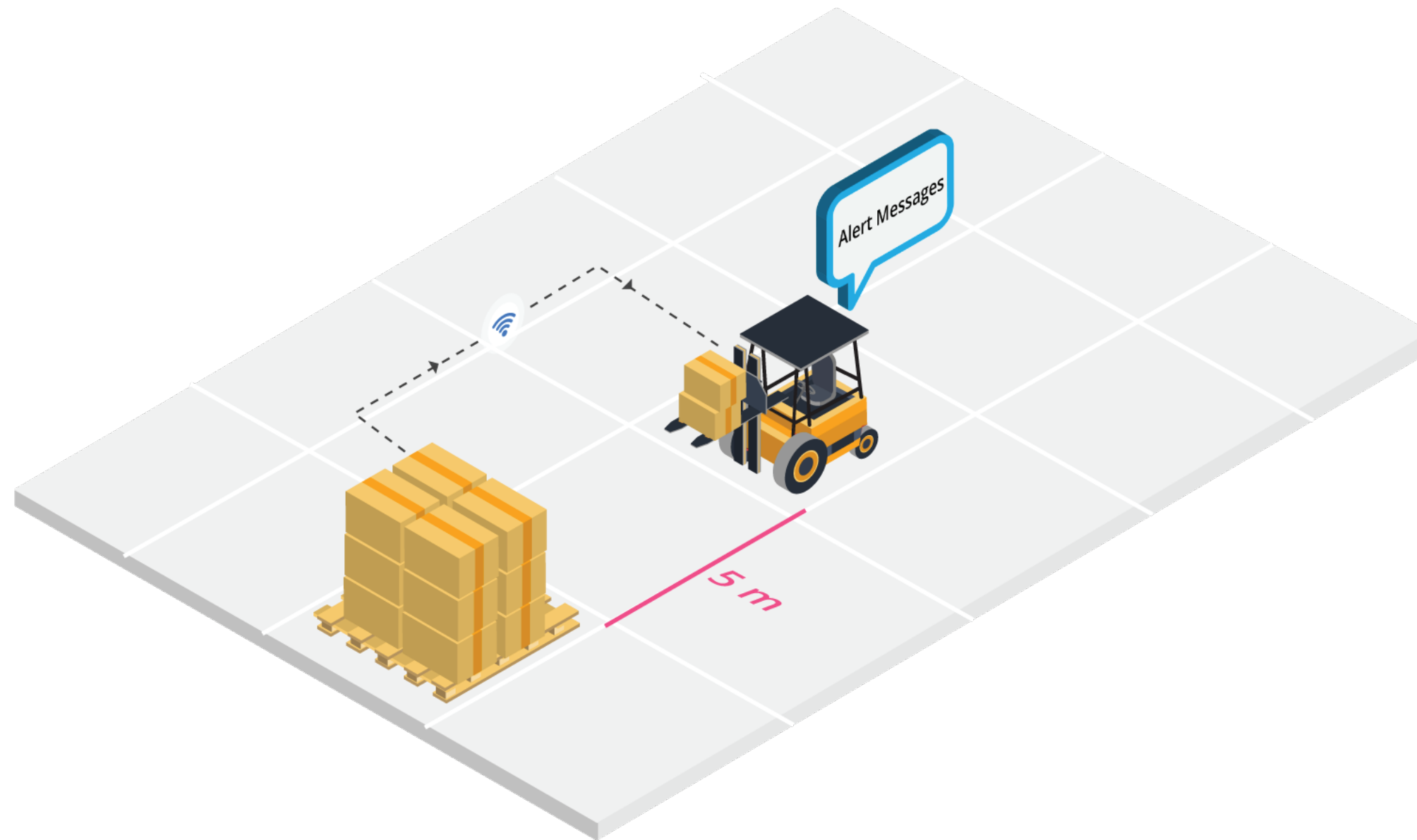
- 1** Collision between forklift and employees at junctions where visibility of both parties are limited.
- 2** Collision between forklift and a misplaced object.
- 3** Collision between forklift and racks.

CASE 1



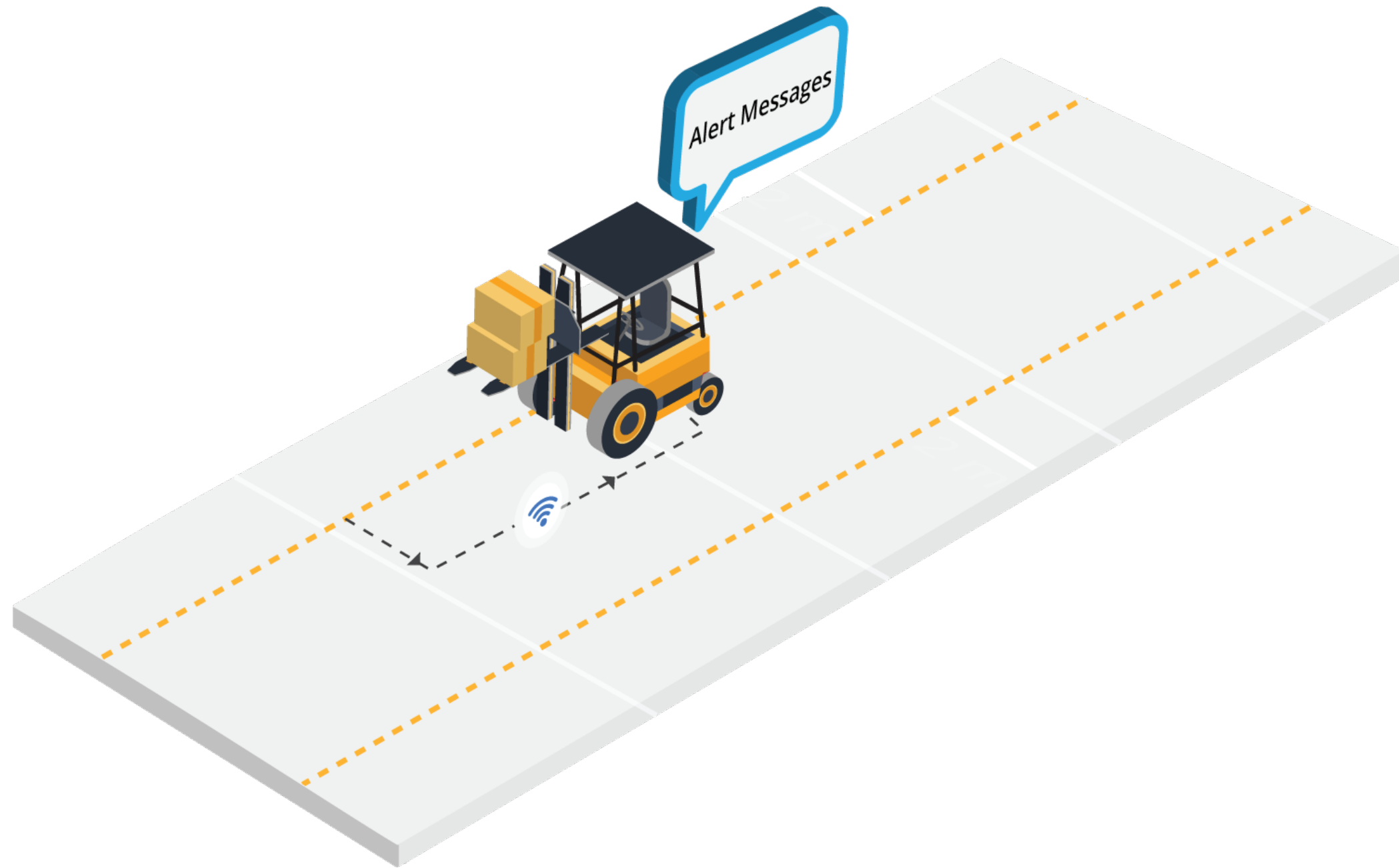
- Beacon tags are provided to both employee and forklift.
- The warehouse floor is divided into grids.
- Factors such as speed of the forklift, employee movement etc. are captured and possibility for collision is analysed with the help of beacons.
- Understanding the chances of collision, early alerts and notification is provided to the forklift.

CASE 2



- Sensors are installed over the forklift
- The sensors constantly check the proximity of an obstacle.
- Once an obstacle is intercepted within its pre-set range, forklifts are notified via alerts and the date is logged

CASE 3



- Limits to the accessible path is set.
- Position of the forklift is tracked in real-time based on a fixed beacon kept on the forklift.
- If the forklift crosses the boundary line within the accessible path warning and alerts would be provided to the fork lift

Navigation:

Navigation is made perfect with our solutions. Simply by knowing the source and destination, routes can be charted analysing real time situation and traffic. The shortest route or the most efficient route is picked accordingly depending on the availability and situation prevailing.

Real time Analytics:

We build data analytics software's and solutions to suit your requirements. Arranging the data in the right order our systems help organisations take more-informed decisions quickly. Data analytics initiatives help businesses improve operational efficiency, optimize performance and respond faster to emergency situations. Our technology also helps you monitor factors regarding sensitive materials for better control.

Asset tracking and resource Management:

Losing track of equipment's or consignments itself can be a disastrous turnout concerning logistics. Locating necessary equipment's when needed or when there is a shortage is fairly a time consuming task. Our map engine based technology lets you locate assets in real time and also verify its availability. By identifying the need we can help you demand these equipment's and finding it without confusion through our asset tracking services.

Logistics Management:

With the technology support provided, ware house's can easily manage the consignments within the facility. Inbound and outbound movement of all packages can be planned and allocated based on real time data. This improves efficiency and reduces time lost in the process of handling logistics.

Beacons :

- We make use of beacons.
- These are tiny transmitters placed at a known location to transmit a continuous radio signal with limited information content such as its identification or location on a specified radio frequency.
- Beacons uses Bluetooth low energy (BLE), also known as Bluetooth 4.0 or Bluetooth Smart.
- Beacons require very little power due to the beacons low energy and the devices therefore does not lose battery.
- Beacons can provide an accurate picture of where someone is positioned.

Sensors :

- Various proximity sensors are equipped to help avoid collisions and reduce damage. Proximity sensors often emit an electromagnetic field (mainly Infrared light) and look for variations in the field or return signal.
- The maximum distance that this sensor can detect is defined "nominal range". Some sensors have adjustments of the nominal range or means to report a graduated detection distance.
- Proximity sensors often have high reliability and long functional life as it has less mechanical parts and limited physical contact with other objects.

Map Engine :

- A navigation engine and a route engine run behind the scenes of our map view.
- A Web interface plots the path points and navigable areas that can be used for navigation by Android/ iOS SDK.
- Our application supports unidirectional and bidirectional navigation.
- Our web interface gives complete control to edit the routes and points.
- Our navigation engine supports navigation between floors which makes use of escalators and elevators.

RFID :

RFID stands for Radio-Frequency Identification. These are small electronic devices that consist of a small chip and an antenna. The chip typically is capable of carrying 2,000 bytes of data or less. The RFID technology system has 3 parts.

- A scanning antenna.
- A transceiver with a decoder to interpret the data.
- A transponder - the RFID tag - that has been programmed with information.

The scanning antenna is usually affixed to a platform and kept stationary, other antennas that can be hand-held are also available. These antenna's identify RFID tags when they pass through the vicinity, and the chip on the tags are activated which in turn communicates a unique information. These RFID Tags usually do not need batteries that they can stay active for a very long time. 'Active RFID' tags that can communicate from long distances have their own power source, whereas 'Passive RFID' tags do not require a power source and have virtually unlimited lifespan.

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Past : Co Founder & COO –
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THANK-YOU!