



2.3

URDF: Adding simple geometry

Getting the simulation ready

Tasks:

- ✓ Remove unneeded bins
- ✓ Move bin to turtlebot delivery station
- ☐ Add a pedestal







```
<?xml version="1.0" ?>
<robot name="hrwros" xmlns:xacro="http://www.ros.org/wiki/xacro">

  <!-- robot system -->
  <xacro:include filename="$(find hrwros_support)/urdf/robot_system/robot_system.xacro"/>

  <!-- bins -->
  <xacro:include filename="$(find hrwros_support)/urdf/bin/bin.urdf.xacro"/>
  <xacro:bin_urdf prefix="bin_1_"/>

  <!-- depth camera -->
  <xacro:include filename="$(find hrwros_support)/urdf/depth_camera/depth_camera.urdf.xacro"/>
  <xacro:depth_camera_urdf prefix="depth_camera_"/>

  <!-- break beam -->
  <xacro:include filename="$(find hrwros_support)/urdf/break_beam/break_beam.urdf.xacro"/>
  <xacro:break_beam_urdf prefix="break_beam_"/>

  <!-- workcell -->
  <xacro:include filename="$(find hrwros_support)/urdf/workcell/workcell.xacro"/>

  <!-- Joints -->
  <joint name="workcell_to_world" type="fixed">
    <parent link="world" />
    <child link="world_interface" />
  </joint>

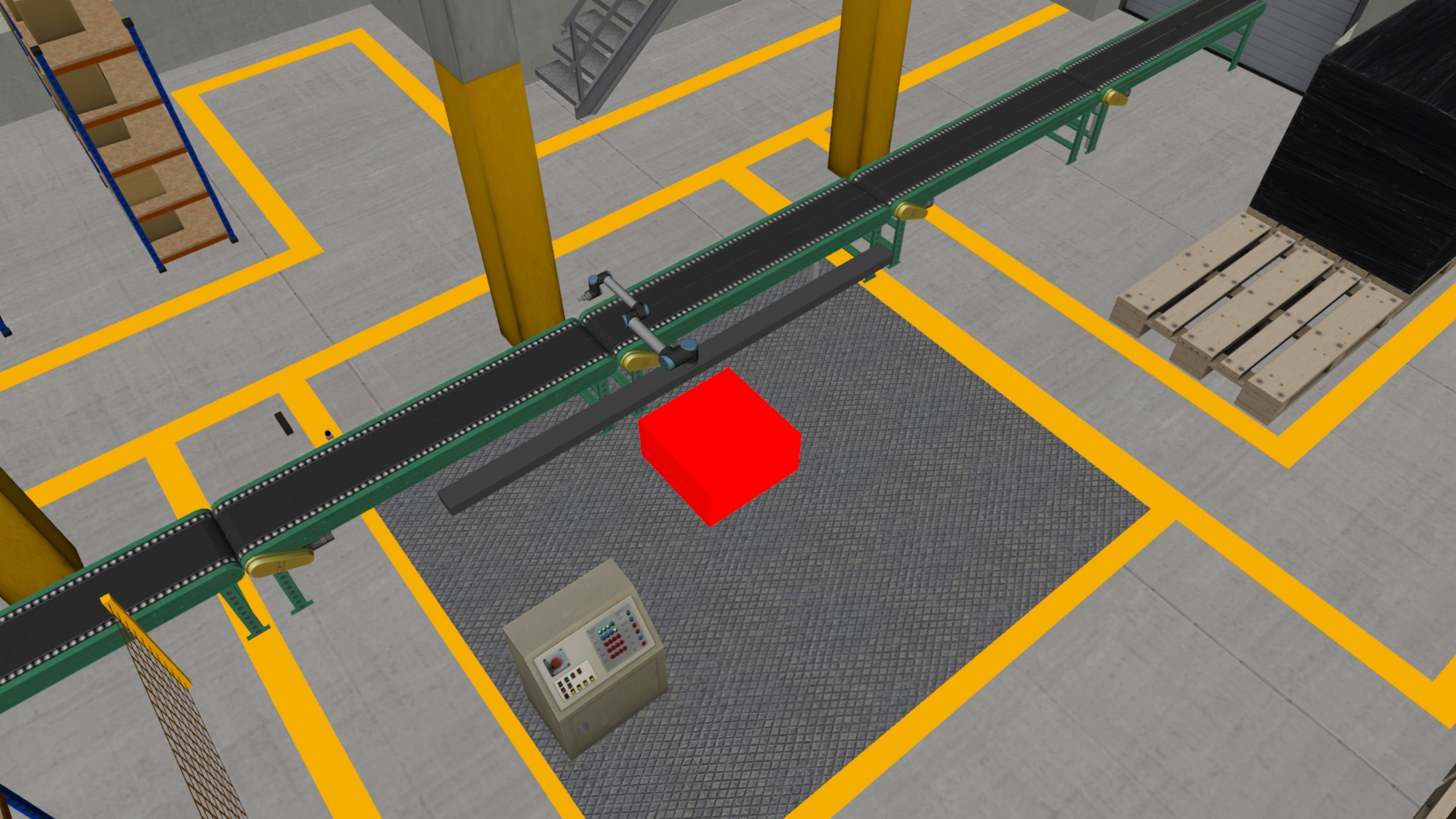
  <!-- a break beam type sensor in the frame break_beam_frame -->
  <joint name="break_beam_joint" type="fixed">
    <parent link="world" />
    <child link="break_beam_world_interface" />
  </joint>

  <!-- a kinect camera in the frame kinect_camera_frame -->
  <joint name="camera_link" type="fixed">
    <parent link="world" />
    <child link="depth_camera_world_interface" />
  </joint>

  <!-- a bin in the frame bin1_frame -->
  <joint name="bin_1_joint" type="fixed">
    <parent link="world" />
    <child link="bin_1_base link" />
    <origin xyz="-8.0 -2.2 0.0" rpy="0 0 0" />
  </joint>

  <link name="pedestal">
    <visual>
      <geometry>
        <box size="1 1 1" />
      </geometry>
    </visual>
  </link>

  <joint name="pedestal_joint" type="fixed">
    <parent link="world" />
```

Results

So far:

- Defined the structure of the pedestal:
 - link
 - joint
- Defined basic geometry:
 - Box

Still to do

Tasks:

- Update the dimensions
- Specify a color
- Place it *on* the floor
- Put it in the right location