```
base_local_planner
::WorldModel


+ footprintCost()
+ footprintCost()
+ footprintCost()
+ ~WorldModel()
# WorldModel()
```

```
base_local_planner
::PointGrid

- resolution_
- origin_
- width_
- height_
- cells_
- max_z_
- sq_obstacle_range_
- sq_min_separation_
- points_

+ PointGrid()
+ ~PointGrid()
+ getPointsInRange()
+ footprintCost()
+ updateWorld()
+ gridCoords()
+ getCellBounds()
+ sq_distance()
+ gridCoords()
+ gridIndex()
and 15 more...
```

```
base_local_planner
::VoxelGridModel

- obstacle_grid_
- xy_resolution_
- z_resolution_
- origin_x_
- origin_y_
- origin_z_
- max_z_
- sq_obstacle_range_

+ VoxelGridModel()
+ ~VoxelGridModel()
+ footprintCost()
+ updateWorld()
+ getPoints()
+ footprintCost()
+ footprintCost()
+ footprintCost()
- lineCost()
- pointCost()
- removePointsInScanBoundry()
- worldToMap3D()
- worldToMap2D()
- mapToWorld3D()
- mapToWorld2D()
- dist()
- insert()
```

```
base_local_planner
::CostmapModel

- costmap_

+ CostmapModel()
+ ~CostmapModel()
+ footprintCost()
+ lineCost()
+ pointCost()
+ footprintCost()
+ footprintCost()
+ footprintCost()
```