```
{nav_core::BaseLocalPlanner
                   ||
{cl move base z::backward
 local_planner::BackwardLocalPlanner
|- paramServer
- backwardsPlanPath
-costmapRos
 goalMarkerPublisher
- k_rho
- k_alpha

    k_betta

- pure_spinning_allowed
 _betta_error
- linear_mode_rho_error
_threshold

    goalReached

- initialPureSpinningStage_

    straightBackwardsAndPure

SpinningMode
- enable obstacle checking
- inGoalPureSpinningState_
alpha_offset_
-betta offset
- yaw_goal_tolerance
- xy_goal_tolerance
- carrot_distance_
- carrot_angular_distance

    divergenceDetectionLastCarrot

Linear Distance_
- max_linear_x_speed_
- max_angular_z_speed

    currentCarrotPoseIndex

- waiting

    waitingTimeout

    waitingStamp

|+ BackwardLocalPlanner()
+ ~BackwardLocalPlanner()
+ computeVelocityCommands()
+ isGoalReached()
+ setPlan()
+ initialize()
+ initialize()
+ initialize()
- reconfigCB()

    findInitialCarrotGoal()

updateCarrotGoal()
resamplePrecisePlan()

    straightBackwardsAndPure

SpinCmd()
- defaultBackwardCmd()
```

- publishGoalMarker()

generateTrajectory()computeNewPositions()

 computeCurrentEuclideanAnd AngularErrorsToCarrotGoal()
 checkCurrentPoseInGoalRange()
 resetDivergenceDetection()
 divergenceDetectionUpdate()
 checkCarrotHalfPlainConstraint()