BaseLocalPlanner Δ 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 - alpha offset betta offset yaw goal tolerance - xy goal tolerance carrot distance carrot angular distance divergenceDetectionLastCarrot LinearDistance 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() - computeCurrentEuclideanAnd

AngularErrorsToCarrotGoal()
- checkGoalReached()

resetDivergenceDetection()divergenceDetectionUpdate()checkCarrotHalfPlainConstraint()

generateTrajectory()
computeNewPositions()