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 - pureSpinningMode 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() pureSpinningCmd() defaultBackwardCmd() publishGoalMarker() computeCurrentEuclideanAnd AngularErrorsToCarrotGoal() checkGoalReached() resetDivergenceDetection() divergenceDetectionUpdate()

- checkCarrotHalfPlainConstraint()

generateTrajectory()computeNewPositions()