**Slide Navigation2**

Nav2 uses behavior trees to call modular servers to complete an action. An action can be to compute a path, control effort, recovery, or any other navigation related action. These are each separate nodes that communicate with the behavior tree (BT) over a ROS action server. The diagram will give a good first-look at the structure of Nav2.

The expected inputs to Nav2 are TF transformations conforming to REP-105, a map source if utilizing the Static Costmap Layer, a BT XML file, and any relevant sensor data sources. It will then provide valid velocity commands for the motors of a holonomic or non-holonomic robot to follow.

We also provide a set of starting plugins to get you going. NavFn computes the shortest path from a pose to a goal pose using A\* or Dijkstra’s algorithm. DWB will use the DWA algorithm to compute a control effort to follow a path, with several plugins of its own for trajectory critics. There are recovery behaviors included: waiting, spinning, clearing costmaps, and backing up. There are a set of BT plugins for calling these servers and computing conditions. Finally, there are a set of Rviz plugins for interacting with the stack and controlling the lifecycle.