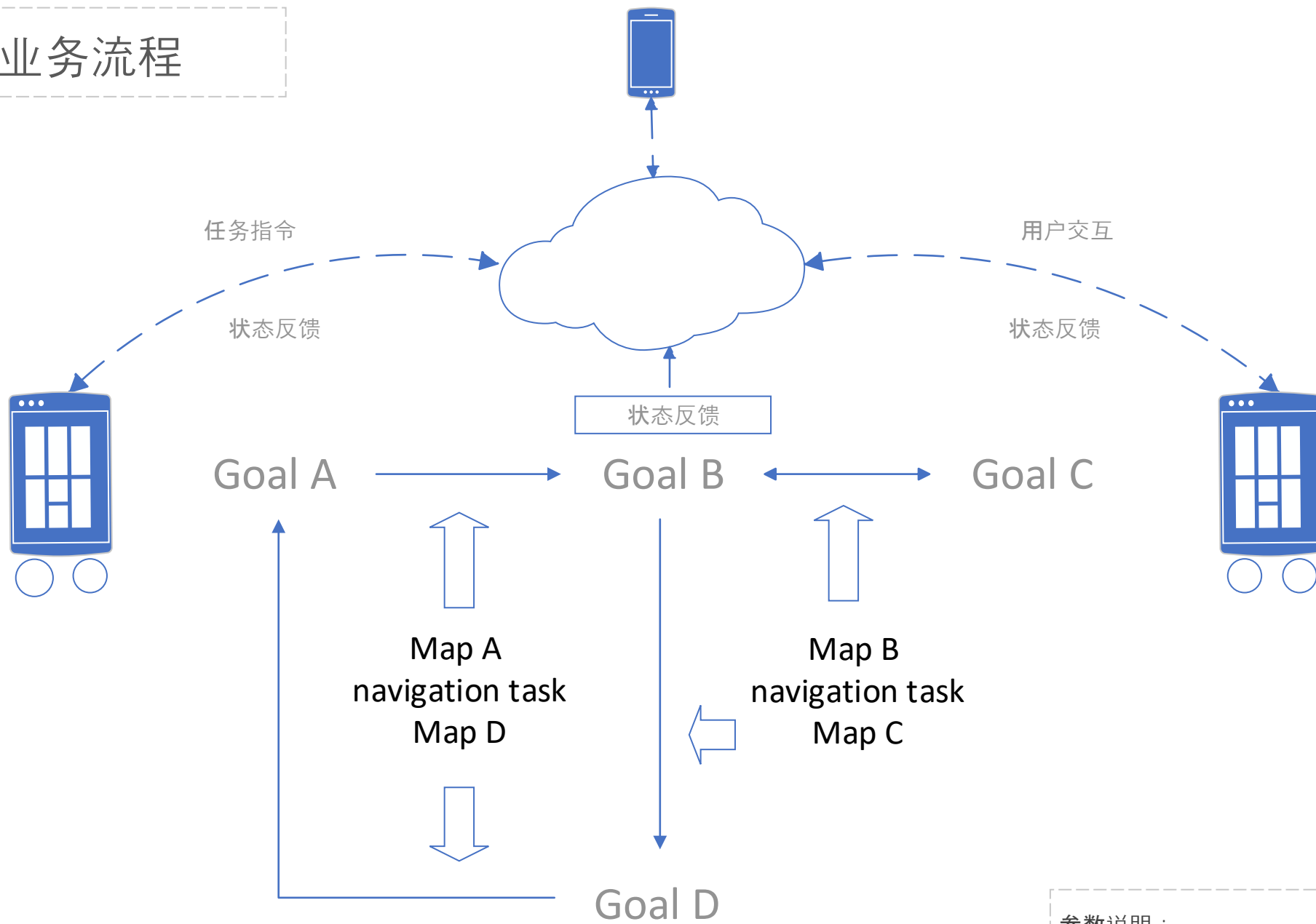


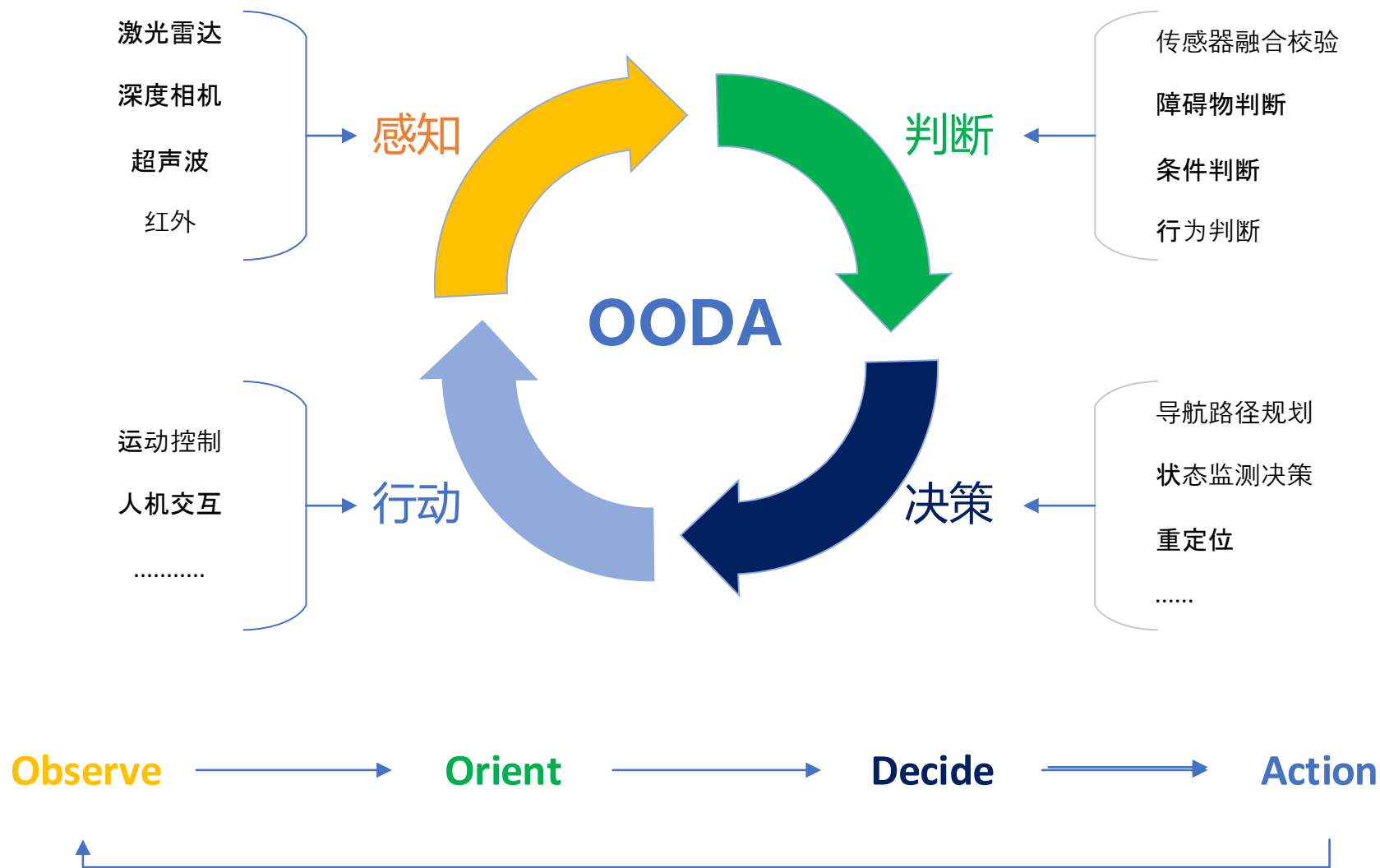
业务流程



参数说明：

- Goal A : 充电桩位置
- Goal B : 电梯位置
- Goal C : 用户位置
- Goal D : 垃圾集中点

软件框架概念



软件框架设计 [package]

motor base/stm32 <---> Jetson-NX

STM32

banana_base

banana_kinematics

real_vel
sensor_data
robot_status

kinematics
odom_wheel

Remote dirving/ B/S & C/S

banana_remote_driving

- : send vel

- : send goal
point

vel_ctrl/Jetson-NX

速度优先级:

banana_priority level

- 3: safety-controller
- 2: Application/b/s & c/s
- 1: joy/key(TEST)
- 0: Navigation

banana_vel_smoother

cmd_vel_raw

cmd_vel

banana_taskFlow/Jetson-NX

PIUGIN

taskflow-server

map-server

sensor-layer

networking

.....

plugin

Rebuild-Map

initialPose

banana_slam

banana_navigation

banana_pose_ekf

V-slam/VO
GPS
IMU
odom_wheel

banana_core

MapLoad

Navigation

RecTask

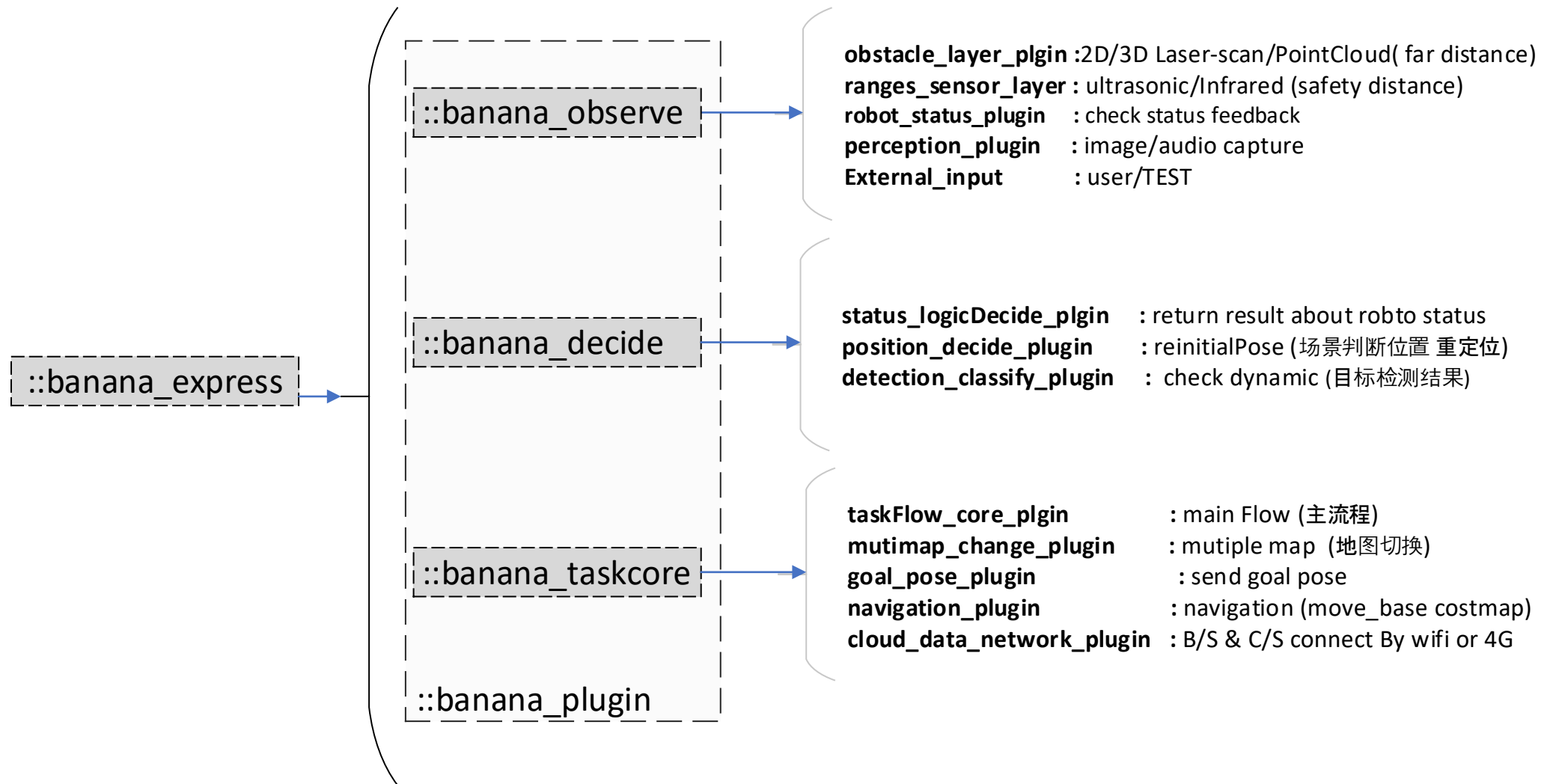
Application/Android & Ios

banana_api_json

Post: robotID ,communityID
Post: robotID,NO
Post: arrived
Post: open
Post: succeed

banana_express

代码设计 [code][c++]



`::banana_express`

性能优化 [code][c++]



Jetson-性能优化

1. 减少创建不必要的ROS 通信，避免频繁占用Net
2. 使用Boost lib 多线程机制，避免单进程高频率占用cpu
3. 使用ROS::nodelet / Ros::plugin 算法间通信零开销，零拷贝
4. 动态加载plugin，任务切换中实现进程灵活加载退出
5. 考虑编译优化，CPU指令集优化
6. 考虑大型矩阵运算使用GPU(cuda)进行加速

::banana_express