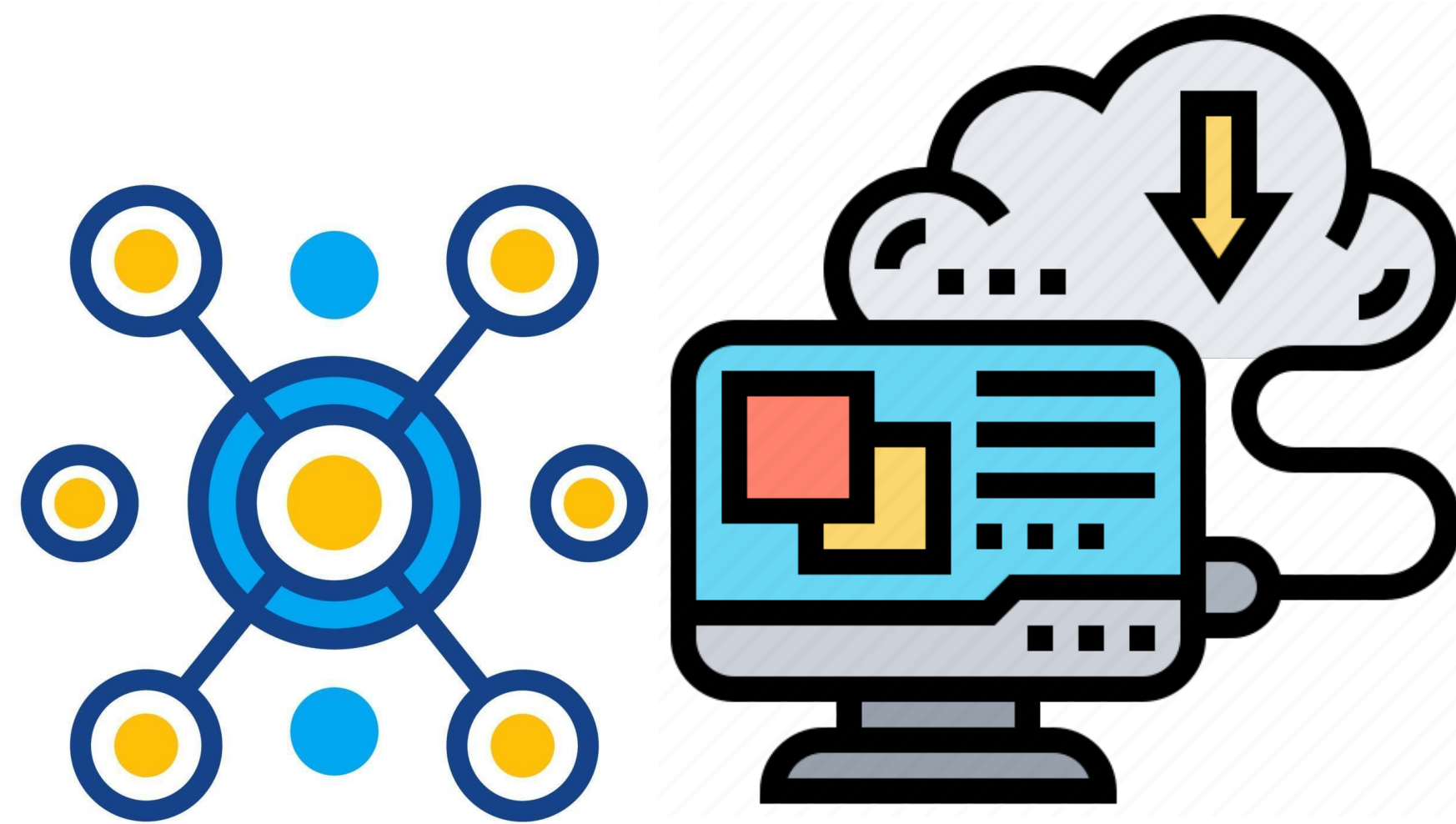


Depot
Takeoff / Landing Pads

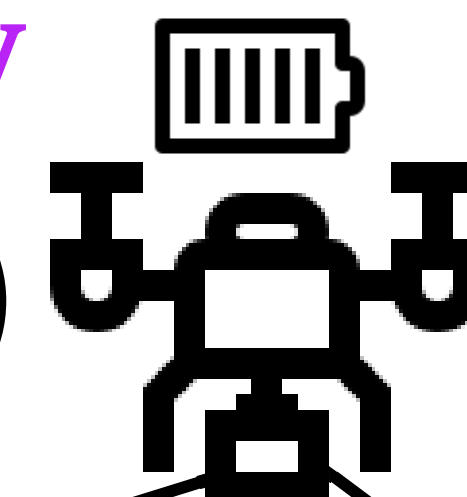


Central Operations Hub

GPS Geo-Fence

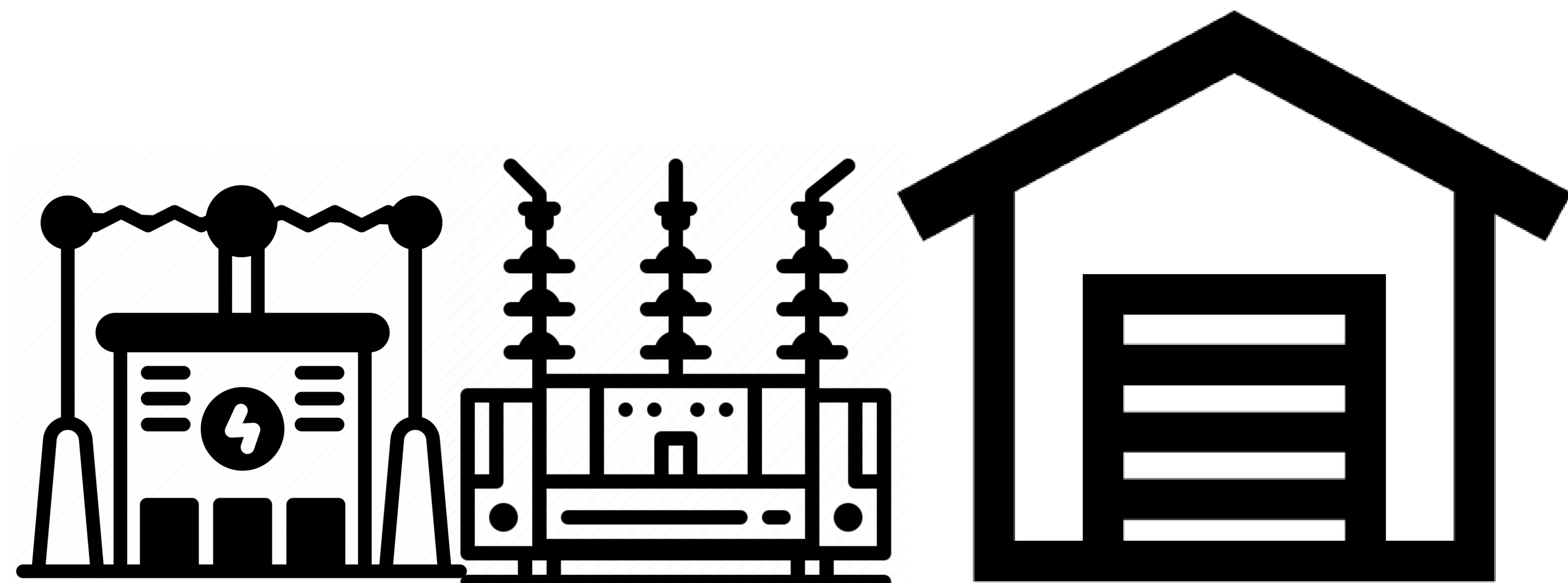
A_{u3} antennas in a
uniform planar array

$(x_{u_3}, y_{u_3}, z_{u_3})$



UAV u_3

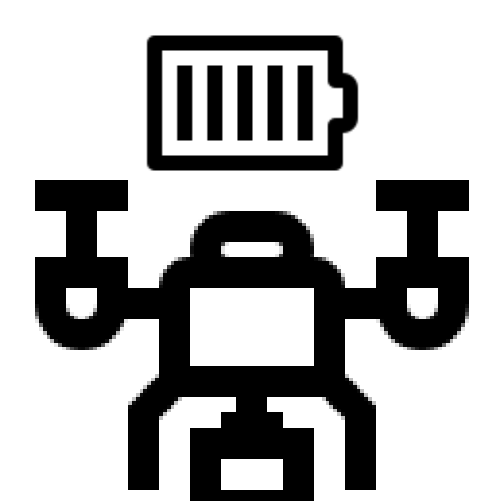
MU-MIMO Uplink Beams
from the GNs



Cluster C3: GNs $g_{11}-g_{15}$
Grid Substation

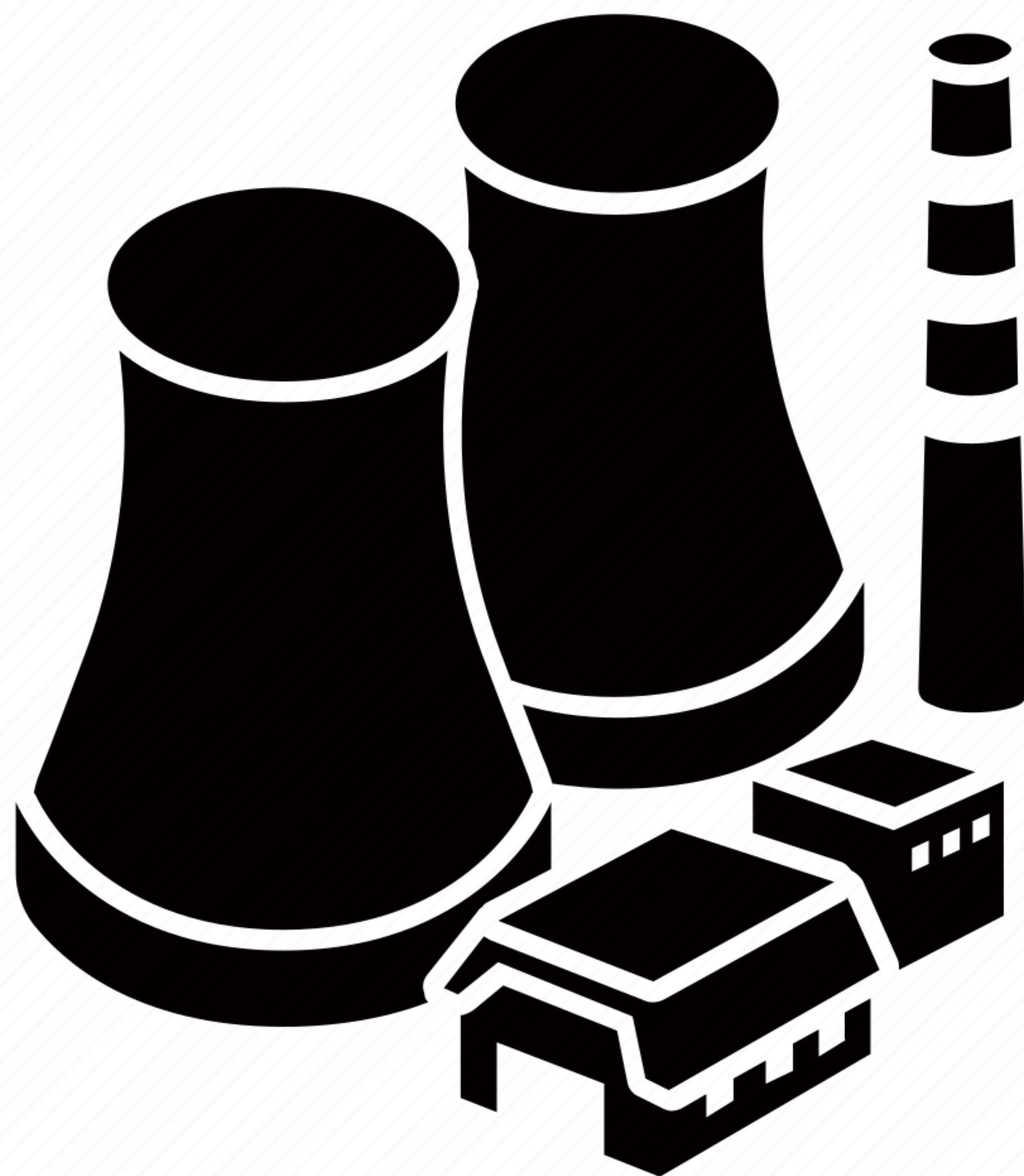
A_{u1} antennas in a
uniform planar array

$(x_{u_1}, y_{u_1}, z_{u_1})$



UAV u_1

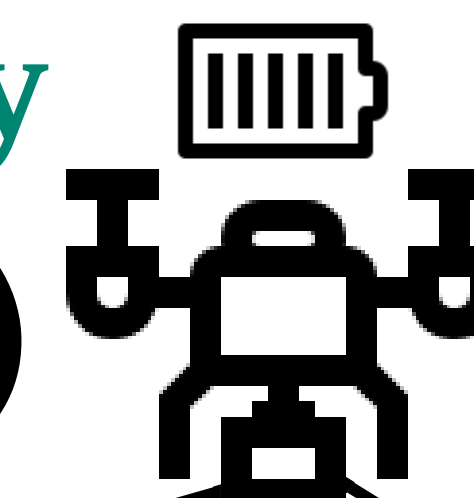
MU-MIMO Uplink Beams
from the GNs



Cluster C1: GNs g_1-g_5
Power Generation Station

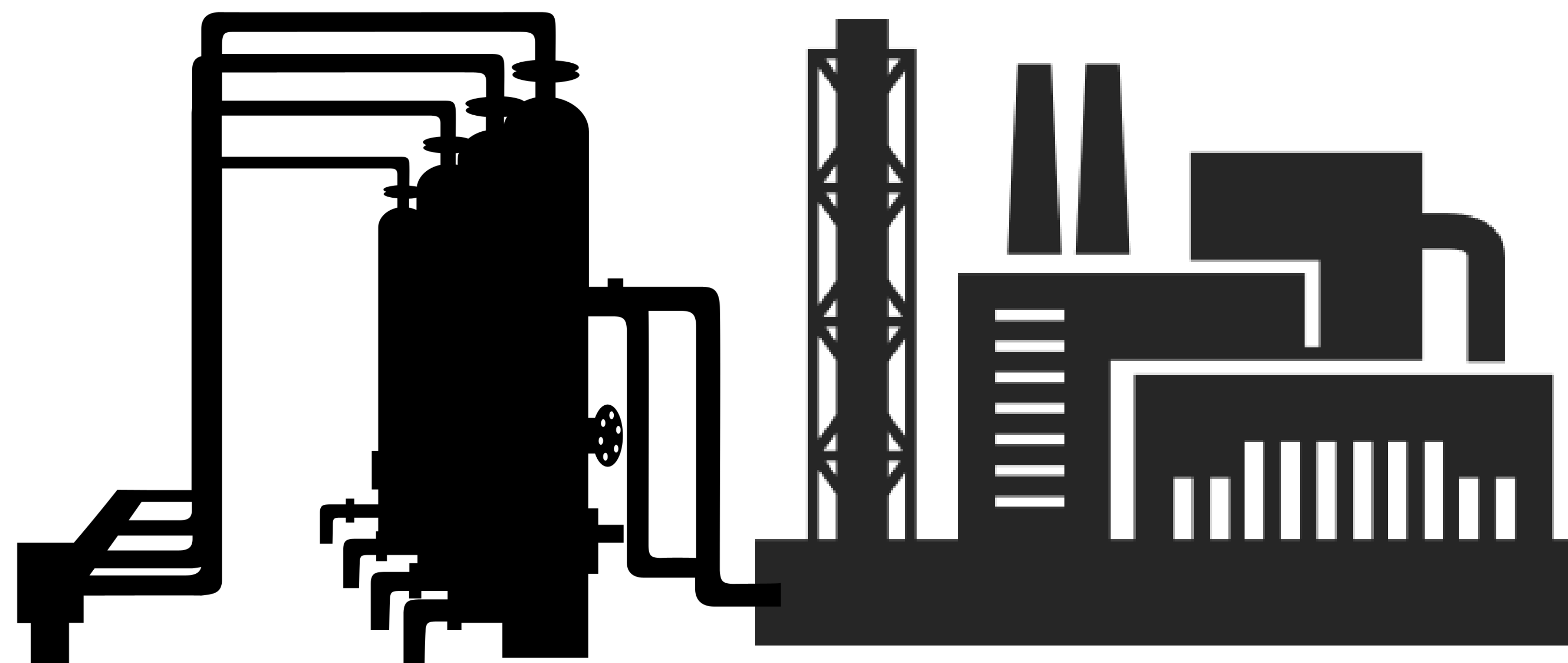
A_{u2} antennas in a
uniform planar array

$(x_{u_2}, y_{u_2}, z_{u_2})$



UAV u_2

MU-MIMO Uplink Beams
from the GNs



Cluster C2: GNs g_6-g_{10}
Power Generation Station