Limit xy gradually function

dist = current pos sp - current pos
slope = (cruise speed xy- 0.01) / target threshold xy
Vel_limit = slope * sqrt(dist x* dist x + dist y * dist y) + 0.01
Vel_mag_xy = sqrt(vel_sp x * vel_sp x + vel_sp y * vel_sp y)

vel_mag_xy <= vel_limit

Yes

vel sp x = vel sp x / vel_mag_xy * vel_limit
vel sp y = vel sp y / vel_mag_xy * vel_limit

Return