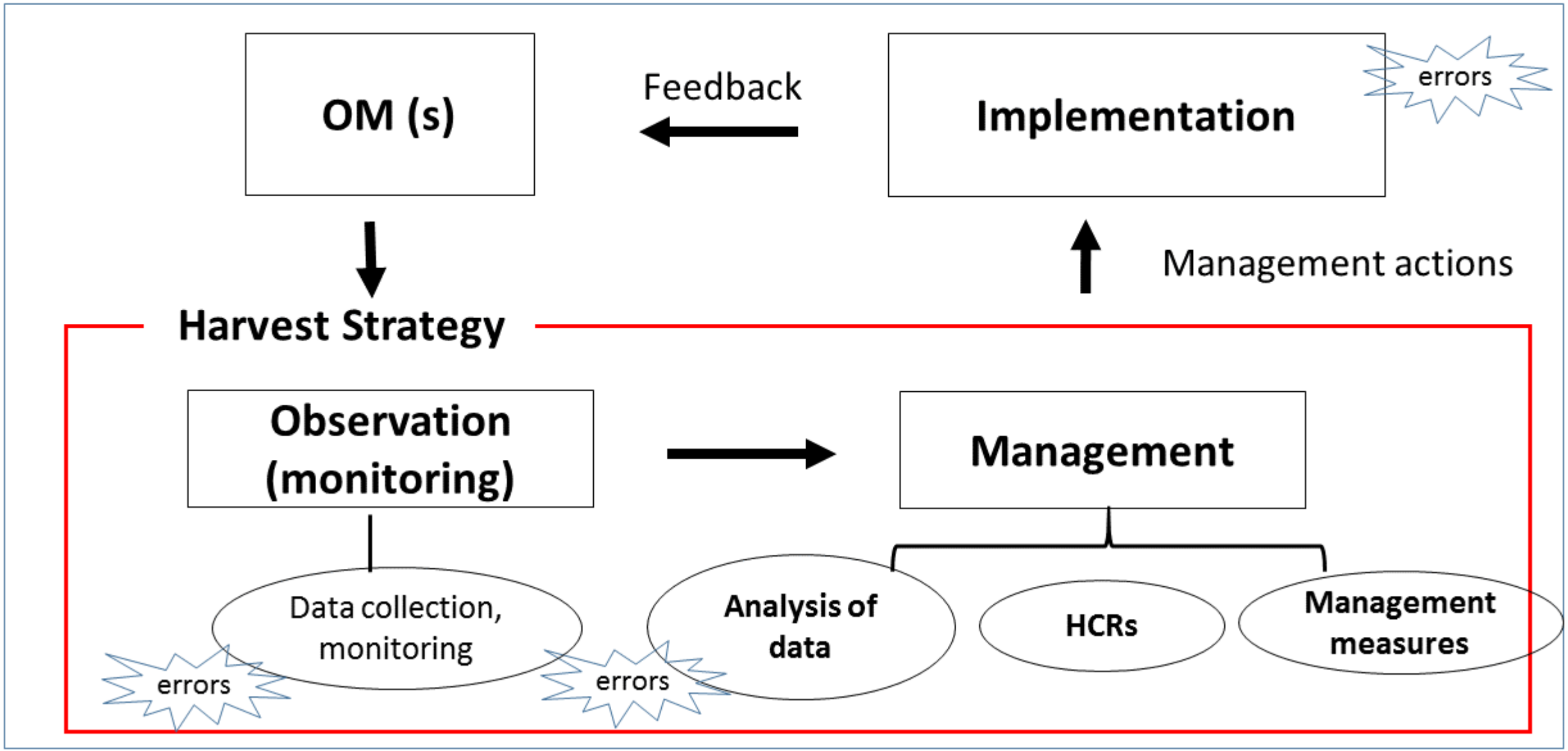MSE framework