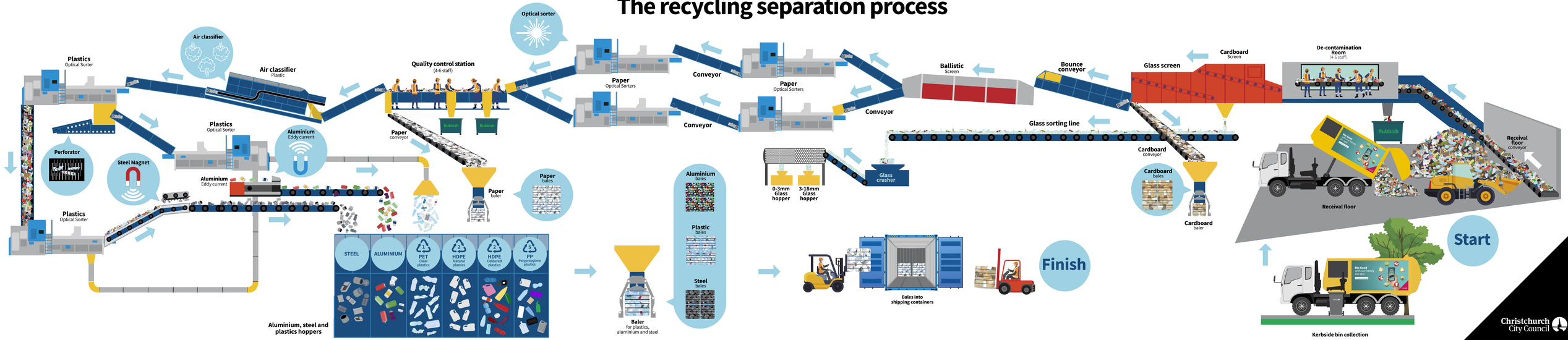The recycling separation process