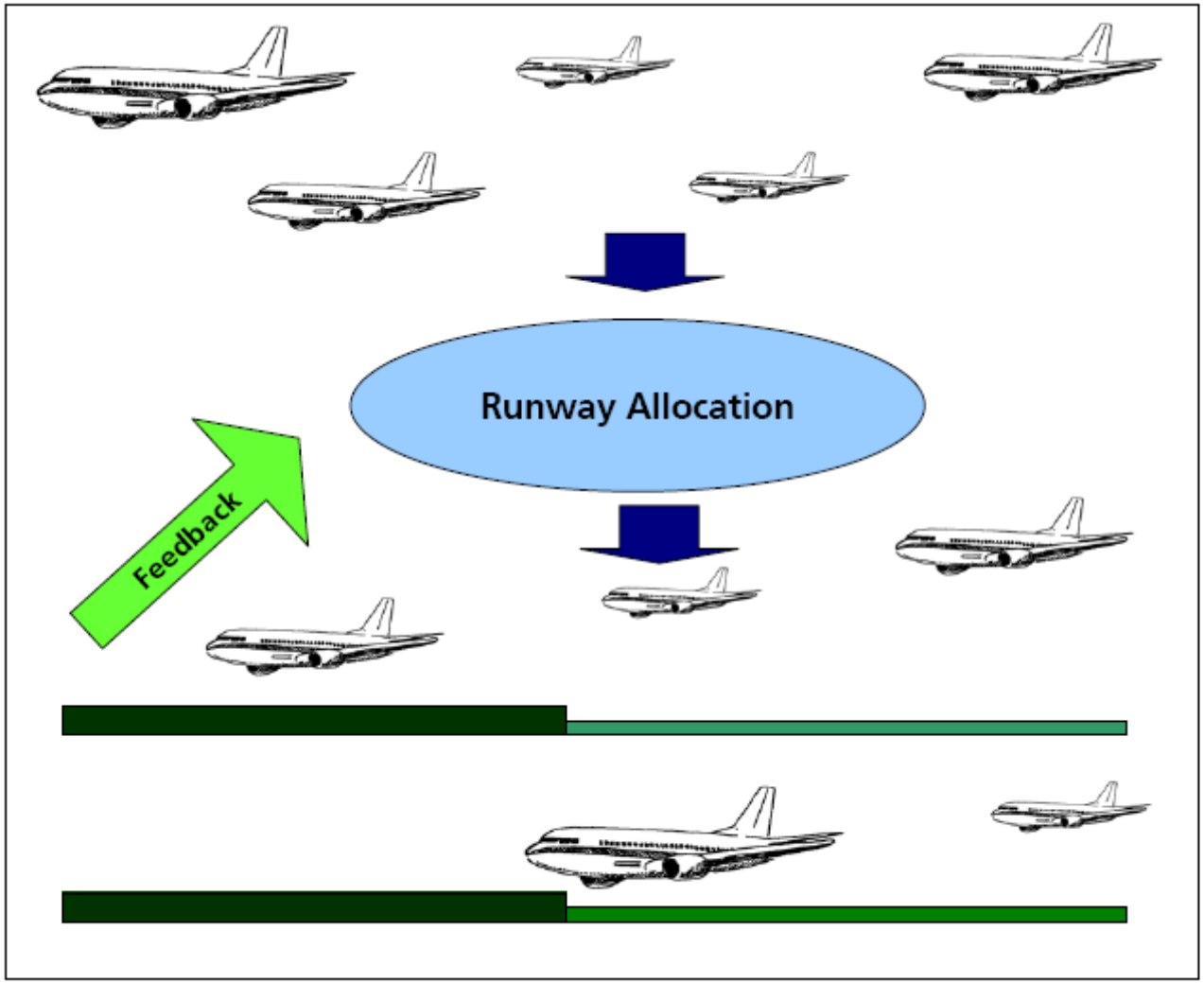


DLR, Air Transport and Airport Research

## Approximation of optimal Runway Allocation by means of „reinforcement learning“

Airport capacity is mainly affected by scaling space aircrafts have to comply with during approach for landing. Especially airports with several run- ways can achieve a considerable increase of capacity by optimal sequencing according to aircraft types and coordinating arriving planes on various runways.

In a simulated test-environment allocating strategies are defined in order to be able to minimise delays during dense traffic phases and to guarantee an optimal utilisation of the runway resources without violating safety issues.

The employment of „reinforcement learning“ methods generates an iterative process, evaluating decisions of the past by cost effected (= delay) and involving these experiences in strategies to be investigated in the future.