


RESOURCE MANAGEMENT

IF YOU WANT TO REACH THE PEAK OF EFFICIENCY YOU NEED THE RIGHT TOOLS

 Resource management systems are nowadays indispensable tools in passenger and ramp handling. While the development of first-generation IT systems was mainly set off by a need to replace paper-and-pencil based dispatching practices, systems have later evolved into earlier stages of systematic planning of staff and resources such as gates and check-in counters. In the light of rising flight movements and passenger numbers, efficient resource management becomes increasingly important. Inform has been providing airports and ground handlers with its GroundStar resource management systems since 1991; GroundStar is now used in more than 180 airports worldwide.

However airport operators and ground handlers differ considerably in the degree to which resource management systems are used. While some organisations use IT systems only as graphical support tools for planners and dispatchers, others strongly rely on resource management systems, including optimisation technology and automatic task assignment via mobile devices.

Resource demands are derived from the flight schedule, providing the basis for creating staff rosters. On the day of operations, the available employees are deployed and operations are monitored. The imple-

mentation of resource management systems is usually strongly motivated by the requirements of operational departments such as check-in or boarding services.

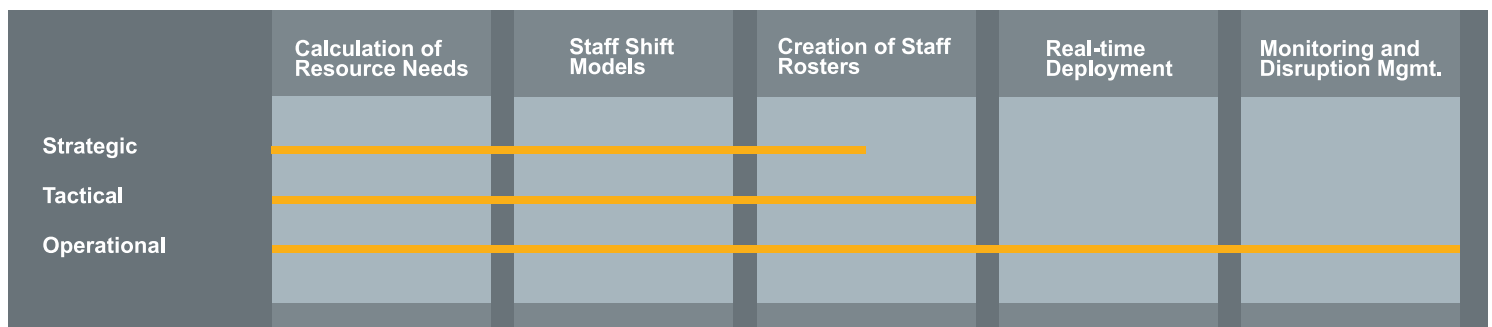
Other departments, however, may well be affected at different levels of resource management. The figure right shows that the early core processes can also be applied with a tactical or strategic focus. On a tactical level, for example, a commercial department may carry out best-fit analyses, evaluating the effect of an additional airline. Strategically, a human resources department may be interested in devising future recruiting and training strategies. Note that even if the focus is different, each of the levels will involve the calculation of resource needs and shift model design. The different levels will be addressed at different times, i.e. strategic and tactical what-if analyses will usually be carried out much earlier than the operational processes.

In light of the importance of staff and equipment costs in airport operations, cutting-edge technology can provide a decisive competitive advantage. For example, mobile communications can greatly improve the deployment process. Since its installation of vehicle-mounted devices based on analogue trunked radio at Frankfurt airport, Inform has had more than 15 years of experience

in integrating mobile solutions in resource allocation. Nowadays most GroundStar implementations integrate mobile staff communication technology. On the ramp, most solutions are based on vehicle-mounted, hand-held devices or cell phones with WLAN, GPRS or UMTS/3G technology. In the terminal, interactive voice response and web-based solutions are widely used.

Mobile communications ease the allocation of tasks and keep dispatchers from the time-consuming and error-prone oral assignment of tasks to staff. However other effects are equally important. Mobile communications increase the visibility of staff as the dispatcher always knows where agents are. With agents confirming their task start times, better estimations for the respective end times can be made, enabling more efficient task allocation. Delays become known to the dispatcher when agents do not report finishing a task on time. Finally actual task times are made available for analysis purposes and – on a tactical level – enable feedback of working standards into the planning stage.

At first glance the effect of modern optimisation technology is not obvious. As an example, we may consider the generation of optimised shift plans. When fluctuations of flight movements over the season are low,



1. Overview of the basic steps in resource planning and dispatching

2. Application of core processes to different planning levels

