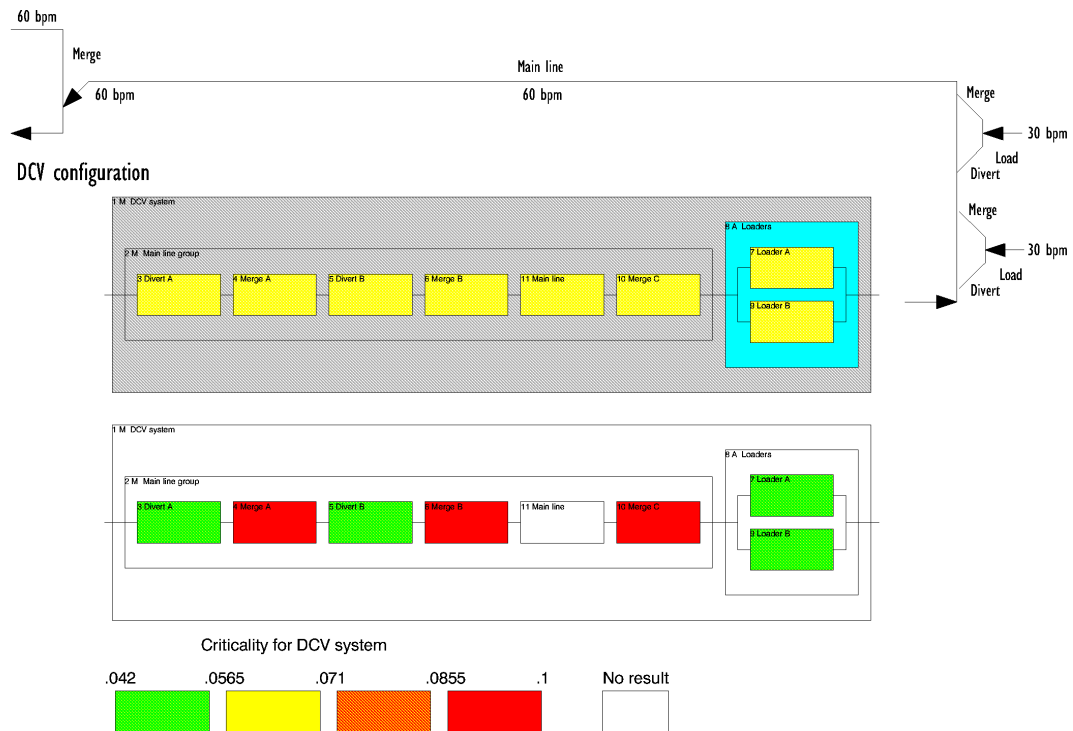


Which Technology?

Analytical Decisions, as part of an inter-terminal baggage link design study, was asked to investigate the availability (and from this the relative operating

representation as a PDD (process dependency diagram) in Analytical Decisions' RAMP tool. This diagram, coupled with data collected from Heathrow maintenance information and other operations in Oslo and

initial concepts through to already installed systems. The tool can be used to develop high-level models of availability (typically used at the requirements stage), but it is equally capable of highly detailed models of installed equipment.



System schematic and RAMP model showing criticality results

costs) of two contrasting technologies: DCVs and high speed belts.

The Approach

Availability is a function of the inherent reliability of the equipment and the maintenance strategy, so we used our well-developed ARM assessment process to answer the question. The study itself consisted of the four steps:

- system analysis
- model development
- model validation
- simulation and interpretation of results

The figure shows a schematic of the DCV system and its

Amsterdam allowed the system's availability to be characterised.

The Results

The simulation results were used to pinpoint elements that have a high criticality—the red colour-coded elements in the figure. The highlighting of such elements is useful in supporting design work aimed at removing these "bottlenecks".

It is also useful in focussing maintenance effort supporting an existing system to achieve the greatest availability for a given budget.

A Flexible Approach and Tool

The RAMP tool is highly flexible and is able to support ARM studies at all project stages from

The Analytical Decisions approach supports the following topics:

- pinpointing critical areas as candidates for re-design;
- prioritising contingency planning;
- providing quantitative evidence for the expected consistency of system operation;
- assessing different maintenance philosophies and options;
- sizing the maintenance support required;
- supporting the setting of realistic service levels.