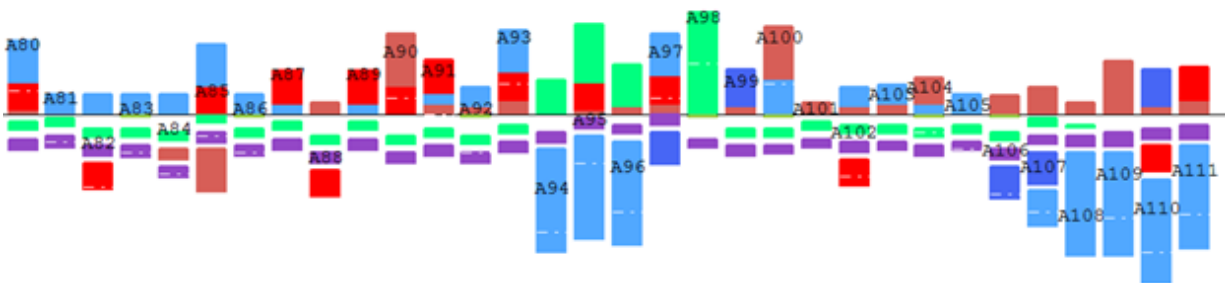


Sophisticated maths simplifies appraisals

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Human-friendly visualisation allows managers and staff to easily understand the appraisal analysis. Credit: University of Portsmouth

The immense challenges in delivering a fair, transparent and objective performance appraisal process in large organisations can be made much easier with a new approach developed by University of Portsmouth Business School researchers.

Professor Alessio Ishizaka and Dr Vijay Pereira developed a tool using sophisticated [mathematical techniques](#) to assess individual performances, compare these across teams and present them in a human-friendly graphical format. It means that appraisals can be far more objective in balancing lots of different criteria of [employees'](#) performances to decide issues ranging from promotions and pay rises, to

training needs and staff retention.

The researchers have already tested the tool, which uses multi-criteria decision analysis and visual analytics, in a large IT [business](#), and organisations are being encouraged to express an interest in taking part in the ongoing development process.

Professor Ishizaka said: "Employees often see performance appraisals as a waste of time that do not add much value. Managers can struggle to ensure that they are balancing lots of different criteria about employees' performance and behaviour, and make judgements about future training and business needs.

"Applying multi-criteria decision analysis (MCDA) means that mathematical techniques can be used to maximise the fairness of the competing comparisons between different criteria and across teams."

Dr Pereira explained: "The graphical visual presentation is human-friendly, making it easy for managers to understand the assessments and discuss them with employees. It, too, is based on mathematical techniques for visualising multiple factors in two dimensions.

"By using this tool, all involved – managers and team members – can have greater confidence in the objectivity of the assessments. This leads to a business advantage meaning talent can be recognised through pay rises and promotions, and nurtured through appropriately targeted training."

Provided by University of Portsmouth

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