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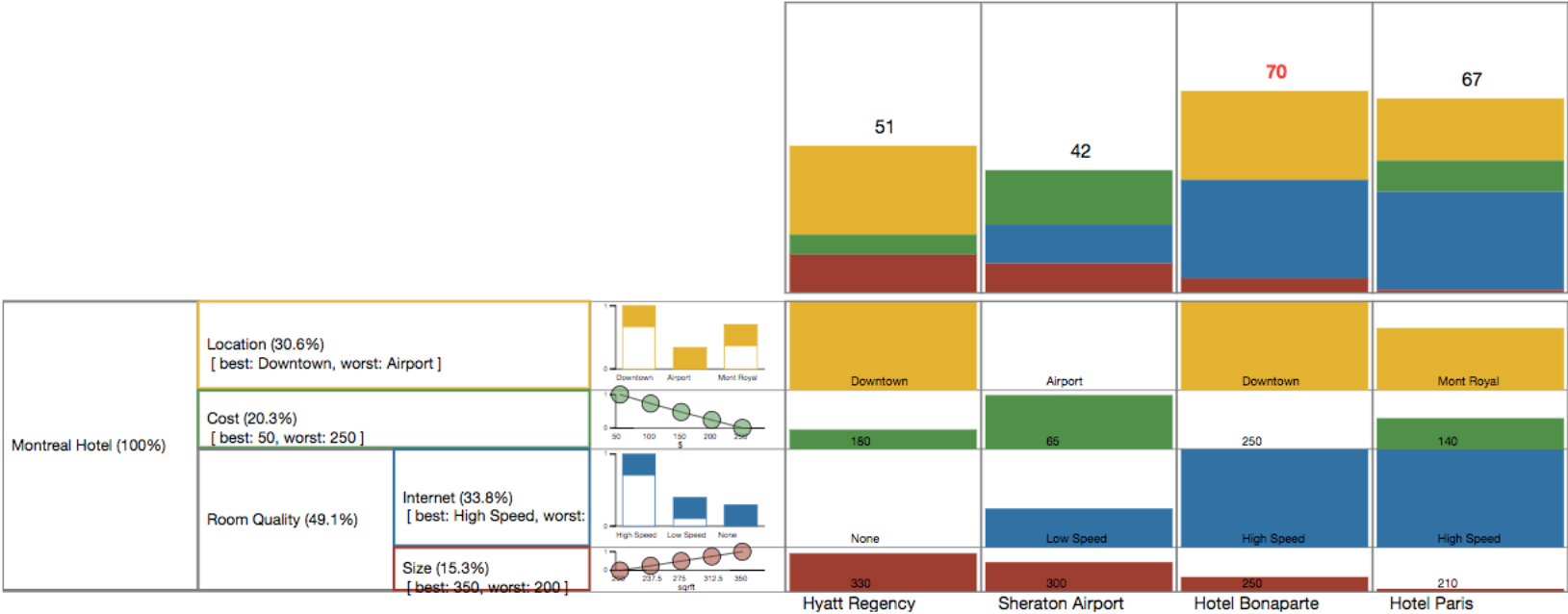
Web ValueCharts: Supporting Decision Makers with Interactive, Web-Based Visualizations

Aaron Mishkin

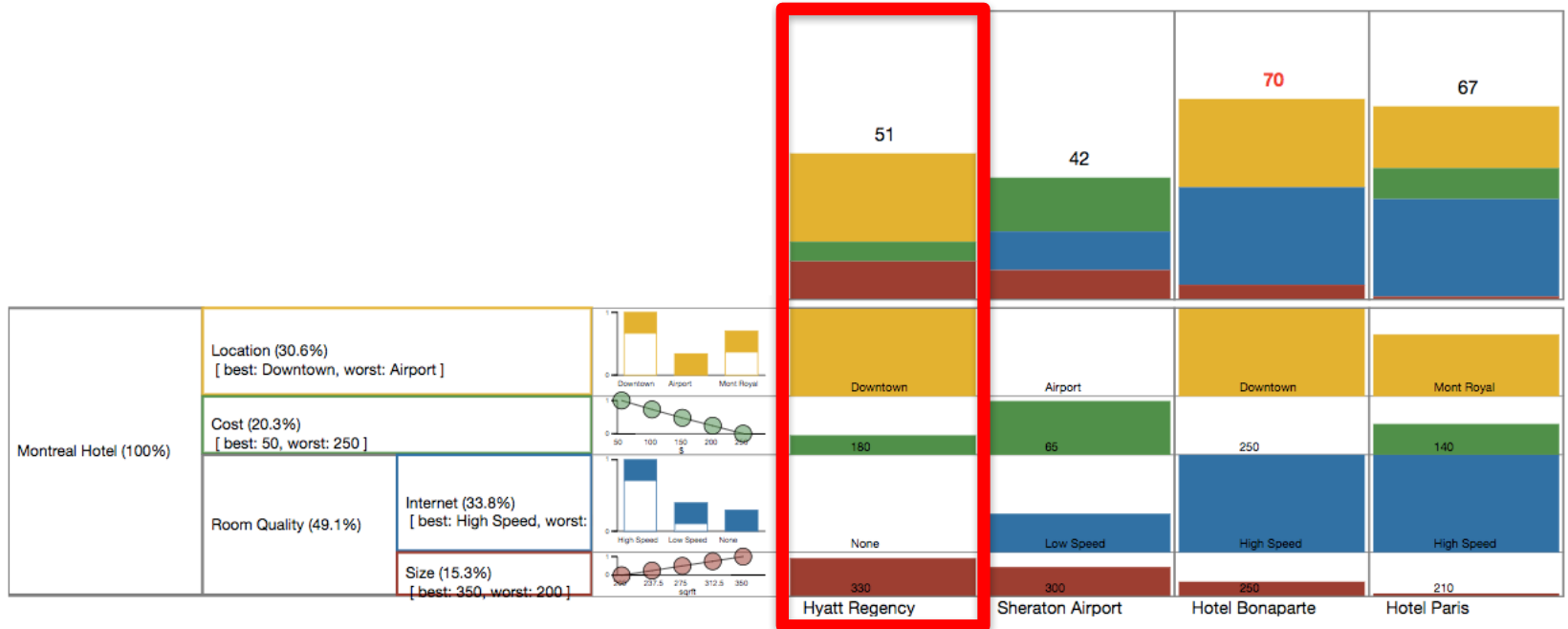
Program: BSc in Computer Science

Supervisors: David Poole and Giuseppe Carenini

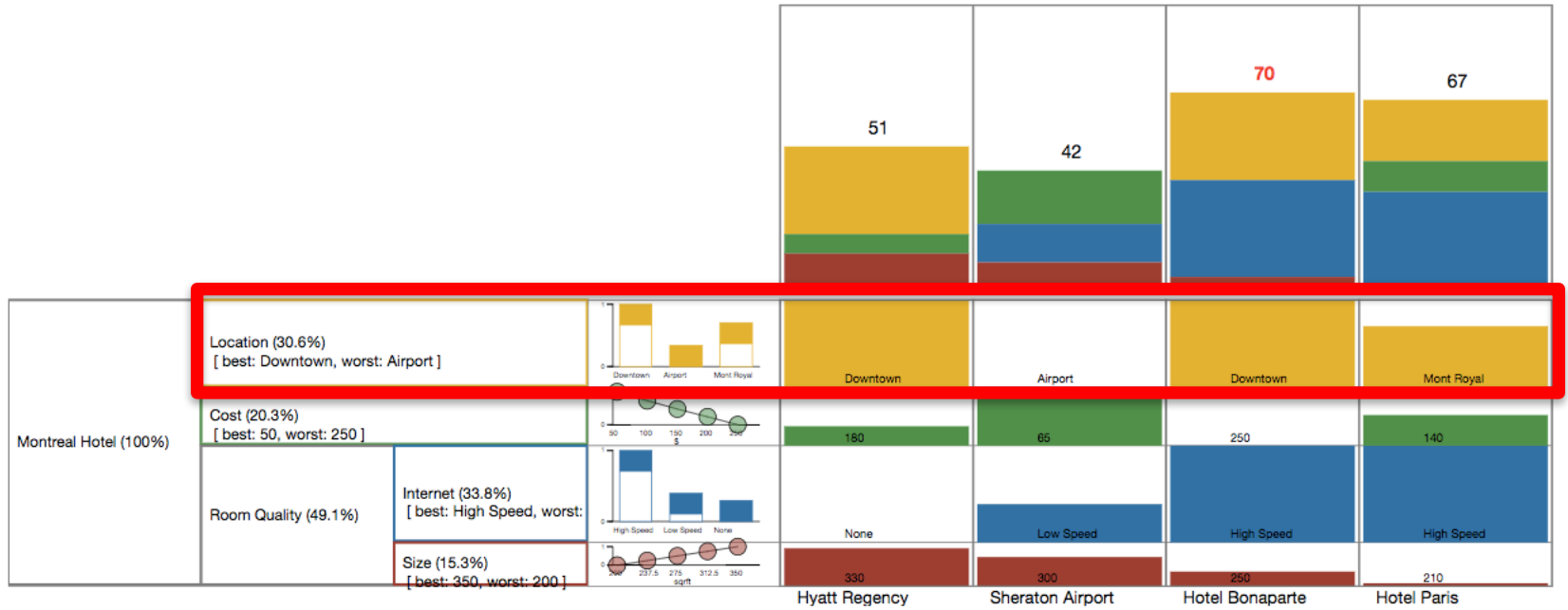
Example: Choosing a Hotel



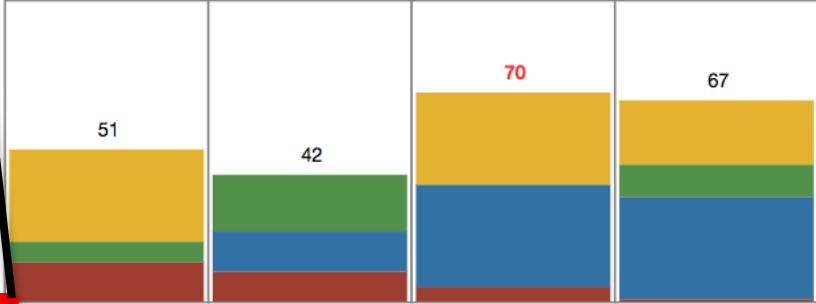
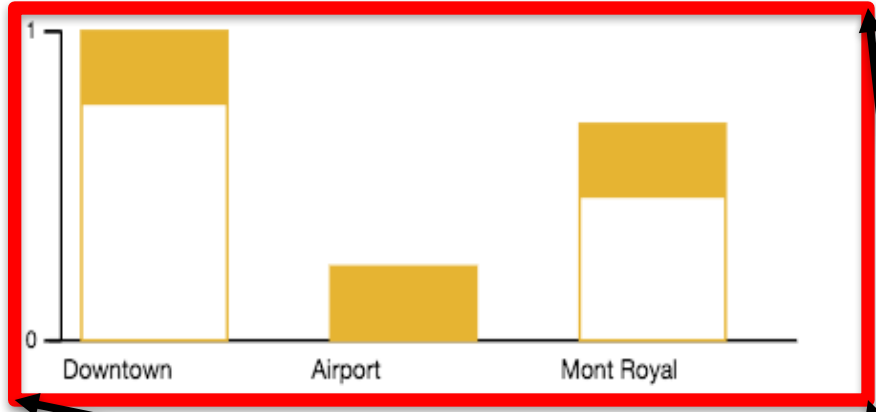
Hotel Alternatives



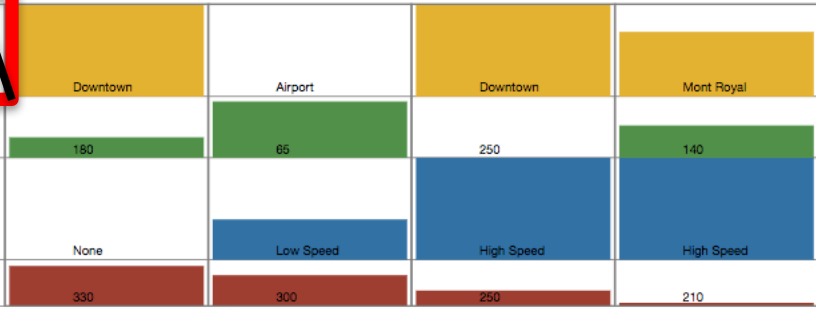
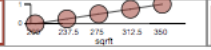
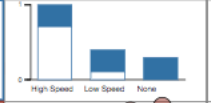
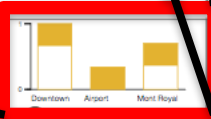
Hotel Criteria



Score Functions for Criteria

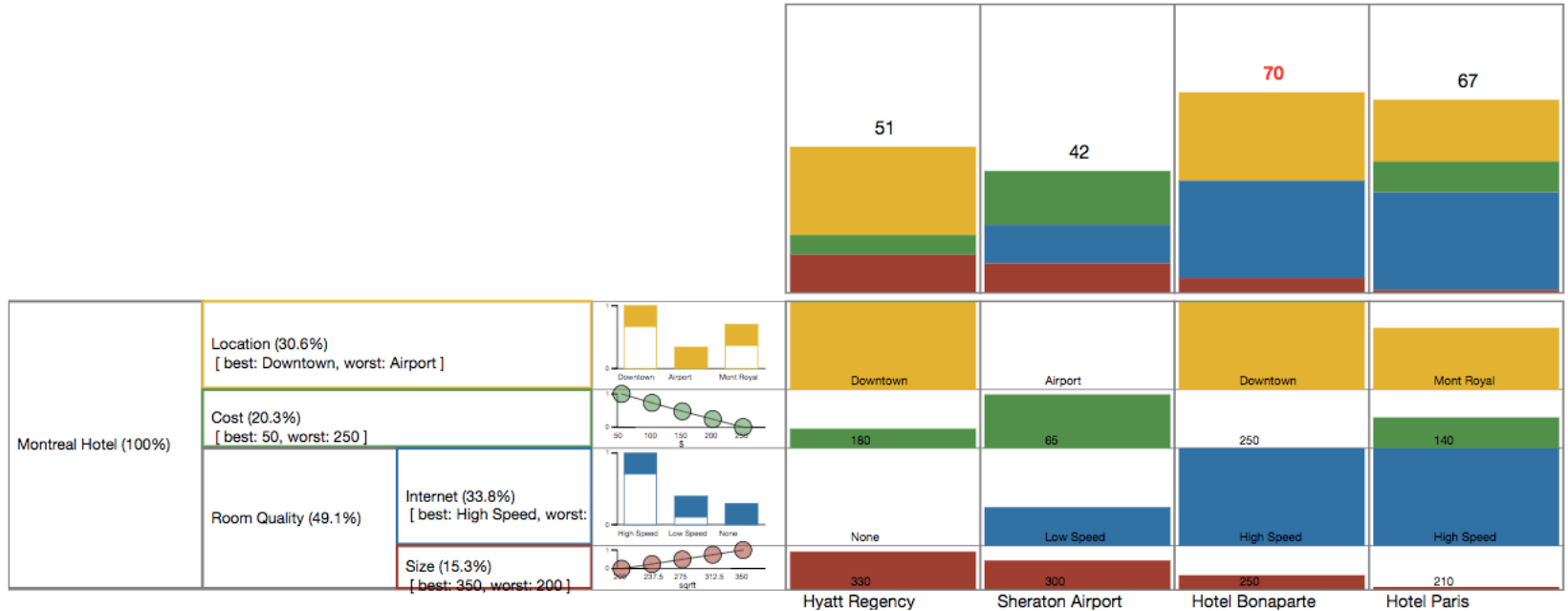


Montreal Hotel (100%)	Location (30.6%) [best: Downtown, worst: Airport]
	Cost (20.3%) [best: 50, worst: 250]
	Room Quality (49.1%)
	Internet (33.8%) [best: High Speed, worst: None]
	Size (15.3%) [best: 350, worst: 200]

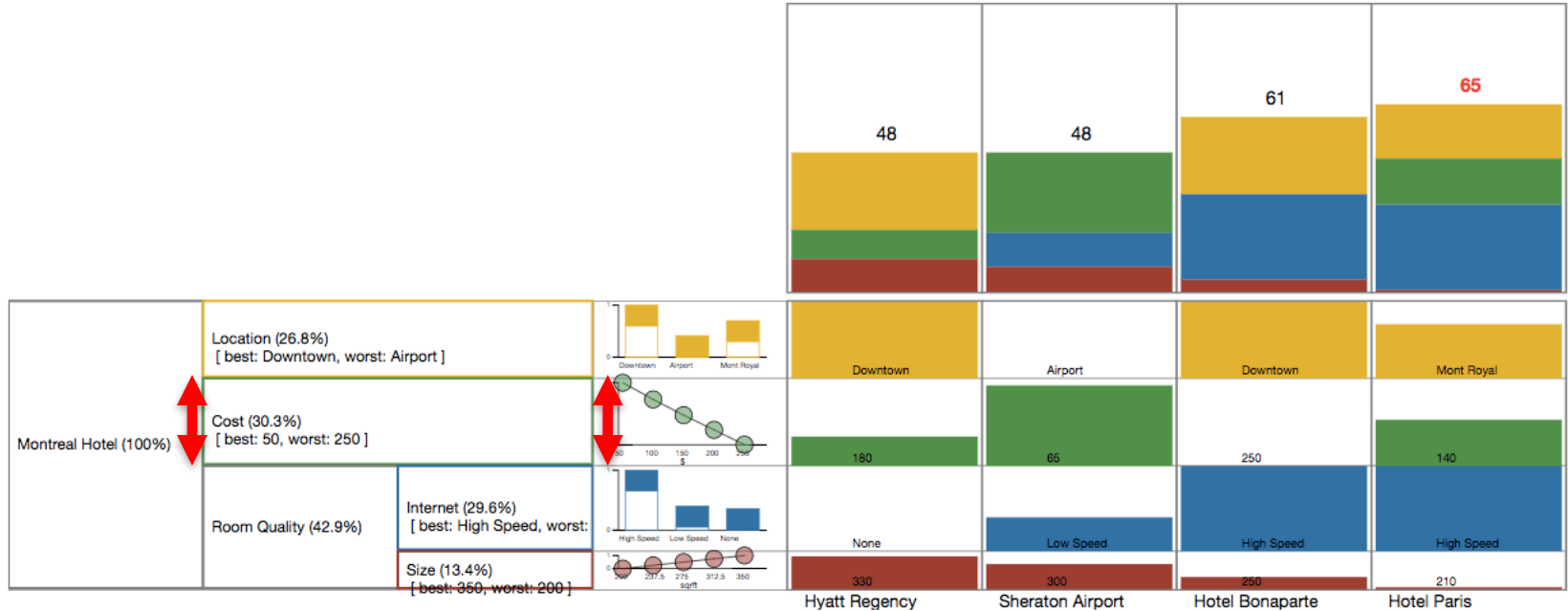


Hyatt Regency Sheraton Airport Hotel Bonaparte Hotel Paris

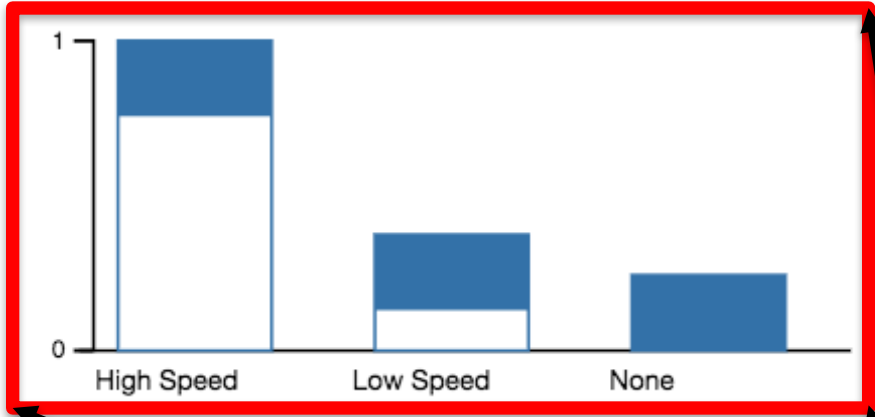
Re-weighting the “Cost” Criteria



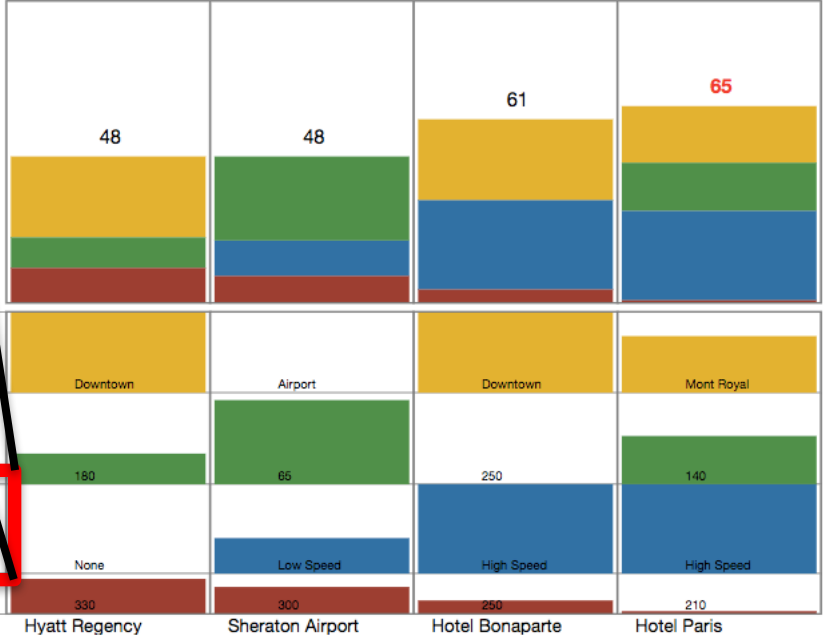
Re-weighting the “Cost” Criteria



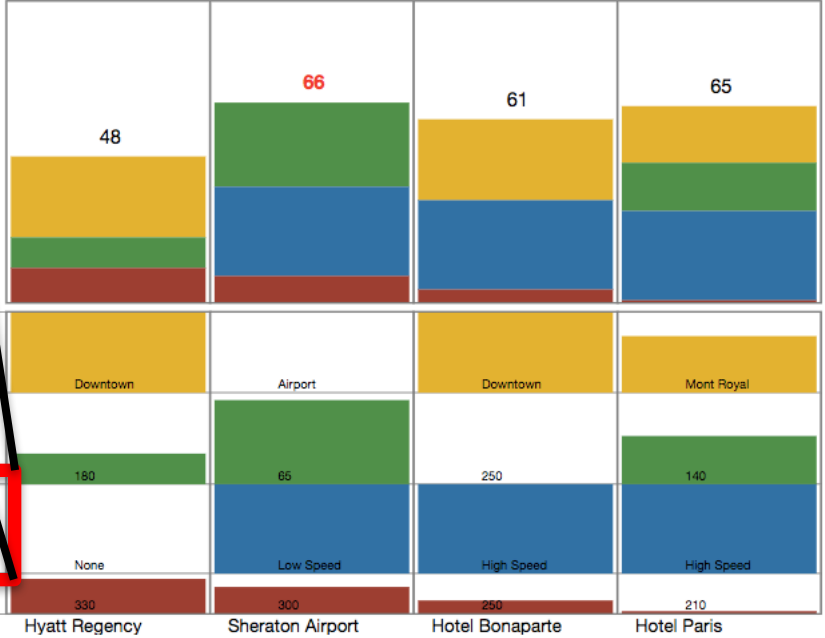
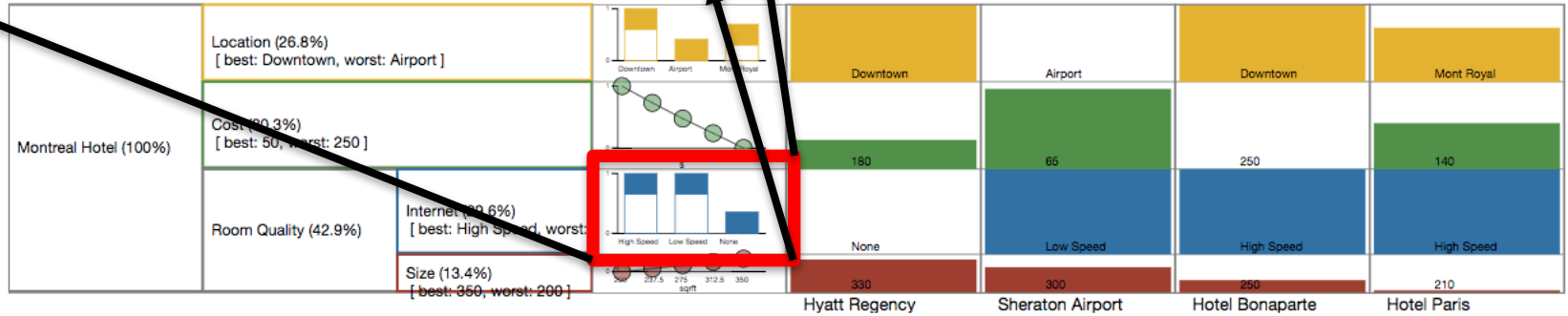
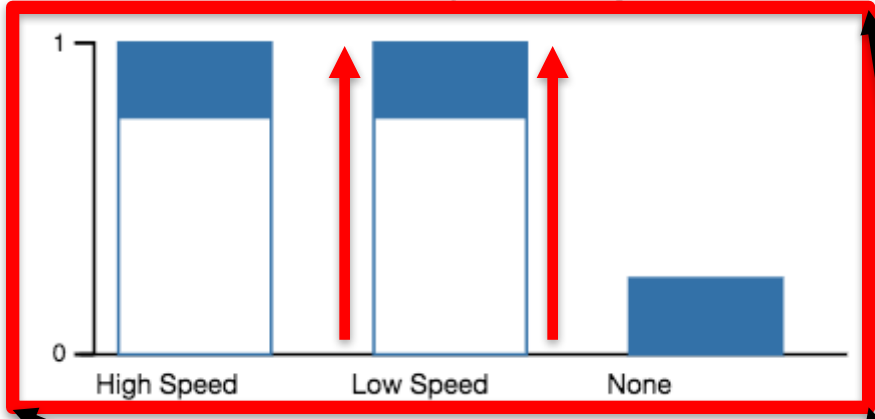
Modifying Scores for "Internet"



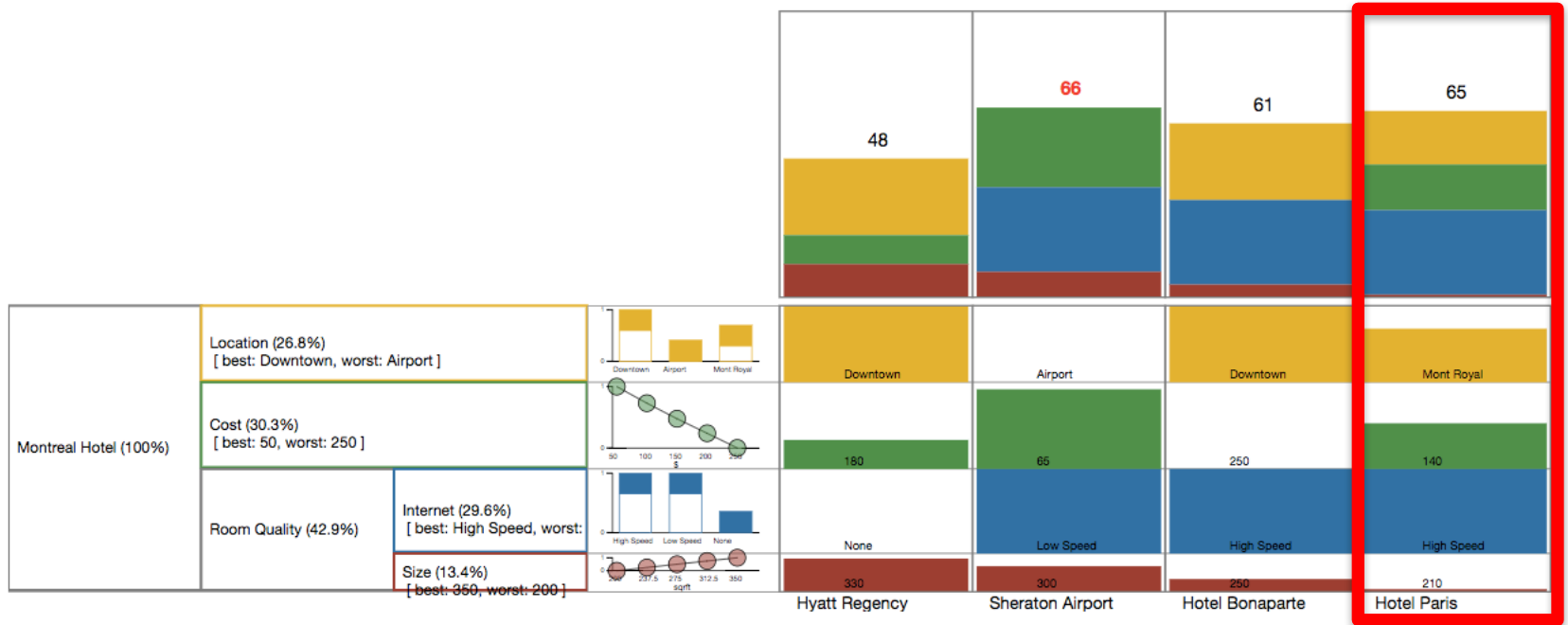
Montreal Hotel (100%)	Location (26.8%) [best: Downtown, worst: Airport]	
	Cost (40.3%) [best: 50, worst: 250]	
	Room Quality (42.9%)	
	Internet (30.6%) [best: High Speed, worst: None]	
	Size (13.4%) [best: 350, worst: 200]	



Modifying Scores for "Internet"



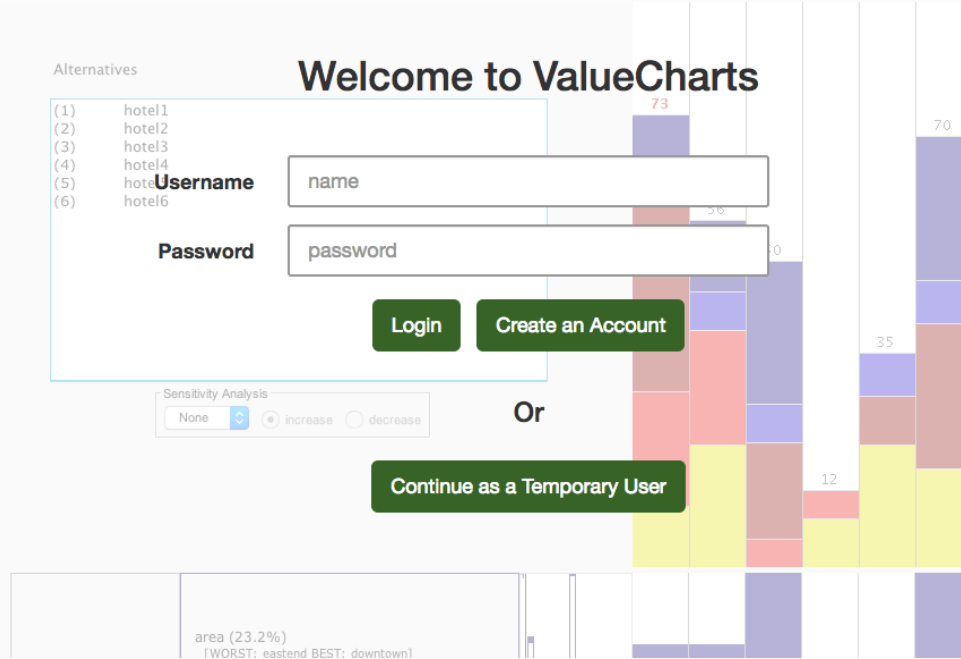
Choosing Hotel Paris



Efficacy and Adoption

- ❑ A comprehensive evaluation in 2008 found ValueCharts to be very effective at supporting decision tasks¹.
- ❑ Convincing decision makers to adopt ValueCharts requires a platform for creating, using, and sharing them.

Web ValueCharts



Summary

- ❑ ValueCharts are powerful tools for supporting multi-attribute decisions.
- ❑ Web ValueCharts is an open-source web application for creating and sharing ValueCharts.
- ❑ Industrial and scientific pilot projects are occurring in the near future.

Acknowledgements

- UBC ValueCharts Research Group
 - Especially David Poole, Giuseppe Carenini, and Emily Hindalong.

Work supported by NSERC USRA and Engage grants.

References

1. J. Bautista, Carenini G., An Integrated TaskBased Framework for the Design and Evaluation of Visualizations to Support Preferential Choice. In *Proceedings of Advanced Visual Interfaces (AVI 2006)- Venice, Italy, May 25-28, 2006*