

Final Project Report: “New Corporate Office Location”

Background Info

This company is located within the Pittsburgh region and has recently announced in an all employee meeting the intentions to relocate its existing headquarters facilities to a different location in the Pittsburgh region. The company has been in its currently functional location since 1998. Over this timeframe there has been vast changes due to enhanced technology and the way we conduct business which resulted in excess office space. With such a large facility, over 400,000 sq ft, updated work from home policies, and global manufacturing facilities has resulted in regular occupancy of less than 50% on average throughout the week. There has been an increased call by the employee base for modernized facilities with enhanced collaboration zones, meeting room technology, and networking infrastructure - the decision to move or renovate was inevitable.

Decision Description

This decision will be made by company senior leadership at the local site level, with supplied input from an outside consultant, employee focus groups, surveys, and top customers. At the direction of the company Chief Executive Officer, we have set the strategic objective of being Net 0 by 2050 in alliance with the European Commission Plan. As mentioned in the background, there has been calls from employees to renovate existing facilities; however, restrictions from current business park prohibits many of the carbon reduction and efficiency plans the company wishes to explore. As a result, the decision to move rather than renovate has been made.

Strategic Criteria & Alternatives

The company is running off several primary drivers, these are guiding principles in the way we do business, serve our customers, serve our people and communities around us. These drivers are based on our Mission and Vision Statement, Core Values, Purpose Statement, and Governances. What we thought was critical to highlight, was what senior leadership highlighted in the all employee presentation, our core values. We have 7 core values: Integrity, Safety & Quality, Support Our People, Customer Focus, Continuous Improvement, Collaboration and Innovation. Specifically, Support Our People, Customer Focus, Collaboration, and Innovation are the values we've highlighted as our strategic criteria.

As a part of the decision to move three location alternatives was presented to the employee base:

Canonsburg, PA
City of Pittsburgh, PA
Cranberry Township, PA

When evaluating the alternatives for the purpose of this project, several expansions on the provided information were required to justly create and execute judgements consistently. Cranberry is a functional facility that requires upgrades to meet existing facility requirements.

The Cranberry facility is near several other major business, hotel chains, and restaurants for lunch and dinner options. Inner City Pittsburgh is a fully functional facility ready for move in. The facility in City limits is near other major businesses, a wide range of multi-star hotels and lodging options, and an excellent array of restaurants for lunch and dinner options for customers visiting town. Canonsburg has an existing facility but requires construction buildout to meet expected employee and customer needs. Canonsburg is near the interstate, further away from other businesses and restaurants, but does have excellent access to Pittsburgh International Airport.

Control Criteria & Bottom Level Factors

For this project we used the Benefits, Opportunities, Costs, and Risks model to aid in the decision-making process. After brainstorming and careful deliberation, we have chosen the following as the decision-making control criteria: Economic, Environmental, and Organizational. The bottom level factors are the benefits, opportunities, costs, and risk related to the economic, environmental, and organizational criteria. For example, an organizational opportunity that the company may see because of the move is recruitment. This means that by moving to a new location the company would be able to better recruit and attract new talent to the company. Please see Table 1 for the Control criteria and bottom level factors used for this model.

Table 1 - Super Decisions BOCR model

Benefits	Opportunities	Costs	Risks
Economic (Corporate Finance)	Economic (Corporate Finance)	Economic (Corporate Finance)	Economic (Corporate Finance)
Tax Benefits	Long-term growth	Taxes	Over-budget Moving Expenses
Corporate Partnerships	Philanthropy	Utilities	Employee Wages
Lease Payments		Moving Expenses	
Environmental (Sustainability)	Environmental (Sustainability)	Environmental (Sustainability)	Environmental (Sustainability)
Reduced Carbon Footprint	Reduced Carbon Footprint	Recycling & Waste Management	Increased Carbon Footprint
Energy Efficiency	Recycling & Waste Management	Efficiency Upgrades	Recycling & Waste Management
Organizational (Business Processes)	Organizational (Business Processes)	Organizational (Business Processes)	Organizational (Business Processes)
Employee Satisfaction	Recruitment	Disruption to production	Lose employees
Office Workflow	Business Longevity		Recruitment efforts
Organizational (Amentities)			Matching Existing Capabilities
Lodging			
Airport Access			
Restaurants			

Results

After completing the proper judgements, we then completed the ratings model and obtained the following results in Table 2 which can be found below. In compiling the ratings model, we thought about how the benefits, opportunities, costs, and risks associated with the decision for the company to move impact the strategic criteria of innovation, customer focus, supporting our people, and collaboration. For example, in reviewing the opportunities, which represent the long-

term benefits, the opportunities associated with the decision for the company to move can have an above average impact on innovation.

Reviewing the results of the ratings table, we saw that opportunities are the strongest in terms of priority and hold a commanding lead among the other factors of benefits, costs, and risk. Followed behind opportunities in terms of priorities is benefits which is then followed by costs and risks. Looking at the real-world implications of the priorities, they are very applicable to the thoughts employees and executives may have about moving corporate offices. For example, for a company that wants to move, many of the decision factors that the executives and employees evaluate will favor the long-term opportunities in support of sustainable growth strategies. This move provides a variety of potential opportunities to the employees, customers, and overall business success over the years to come. Another item to note from Table 2 is the significance of the strategic criteria in the decision-making process. We can see that Innovation is considerably high at 0.4977, and Customer Focus shortly behind at 0.3485.

Table 2 - BOCR Model Ratings Table

Ratings Table						
			0.4977	0.3485	0.0988	0.0551
	TOTALS	PRIORITIES	Innovation	Customer Focus	Support Our People	Collaboration
1.Benefits	0.4132	0.2872	0.3061	0.6643	0.1263	0.3061
2.Opportunities	0.7813	0.5430	0.6643	1.0000	0.6643	0.6643
3.Costs	0.1651	0.1147	0.1263	0.0000	0.6643	0.6643
4.Risks	0.0793	0.0551	0.0647	0.0000	0.3061	0.3061

After synthesizing the various portions of the BOCR model, completing synthesis with multiplicative and additive(negative) formulas, and compiling all the data in excel, we were able to obtain the results which can be found below in Table 3. Evaluating the results, the best short-term decision for the company would be to move to Cranberry Township, PA which outscored the other alternatives by a far margin (0.5656). This can be explained due to the lower costs compared to the other alternatives even though Cranberry has lower short-term benefits than the other two alternatives.

Our model revealed that the best long-term decision for the company would be to move to Inner City Pittsburgh, PA. The reason this alternative scored above the others is because opportunities in the inner city are high and opportunities have the highest ranking among the priorities. The combination of these two factors weighs heavily on making the Inner City the best long-term decision. While the inner city has the highest risk, we saw that even with that elevated risk the Inner City still rates highest among the alternatives for the long-term because risk is weighted lowest among the priorities.

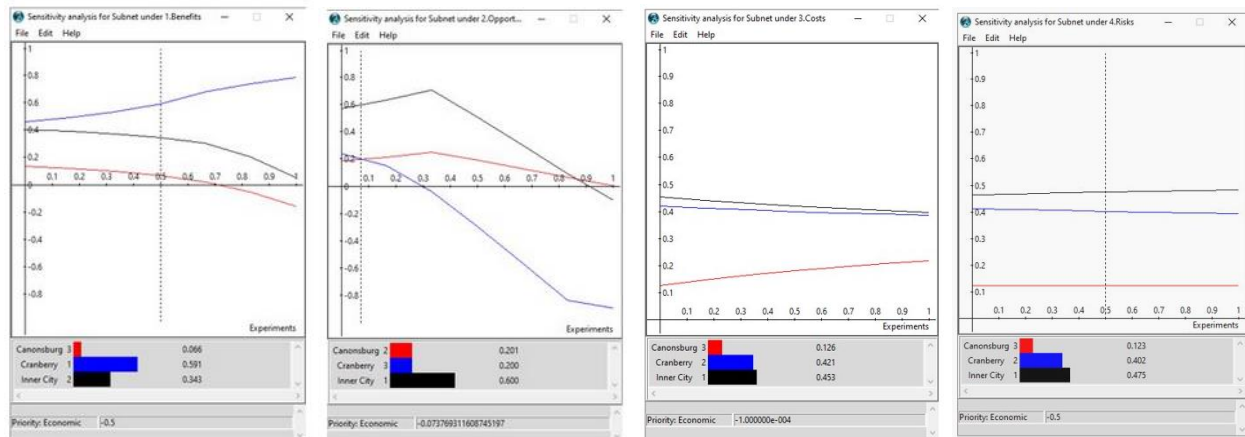
Table 3 - BOCR Final Results

Final Results						
	0.2872	0.5430	0.1147	0.0551		
	B	O	C	R	Short Term	Long Term
Canonsburg	0.2589	0.1323	0.4306	0.1139	0.1838	0.125495
Cranberry	0.2564	0.4493	0.2537	0.2113	0.5656	0.418474
Inner City	0.4847	0.4184	0.3157	0.6748	0.2506	0.456031

Sensitivity Analysis

In conducting the sensitivity analysis, we completed an AHP sensitivity analysis and a ANP row sensitivity analysis. The AHP sensitivity analysis examined the sensitivity of the benefits, opportunities, costs, and risks factors in the model. The resulting graphs below in Figure 1 depict each factors sensitivity to changes in the model. From the graphs below, benefits and opportunities are more sensitive to changes in the model. This can be seen by the way the slope of each graph changes when the parameters approach one. This change is also reflected in the value of the alternatives. For both the benefits and opportunities graphs, the slopes of the graphs change significantly as the parameters approach one. Conversely, when looking at the graphs for costs and risks, the slopes do not change greatly due to changes in the model when the parameters approach one. This means that costs and risk are not as sensitive to changes in the model compared to benefits and opportunities which are more sensitive to changes in the model. One important takeaway from the sensitivity analysis is that as the parameters in the model move closer to one, the Cranberry and Inner-City alternatives converge towards one another with respect to cost. This means that as changes are made to the parameters of the model, the closer they get to one, the more the value of the alternatives with respect to cost will converge towards one another.

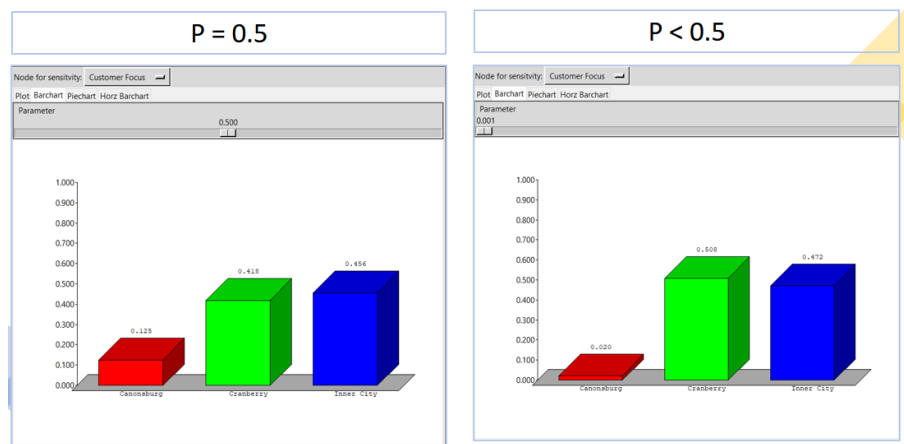
Figure 1 - AHP Sensitivity Analysis



The second part of the sensitivity analysis focuses on the ANP row sensitivity analysis. This analysis focused on looking at the effects of changing the p-value for the strategic criteria nodes and defining the impact that these changes have on the value of the alternatives. From the analysis of the four strategic criteria, the two that were affected the most by changes in the p-value were customer focus and support our people. For each analysis we chose to use a p-value of 0.5. Looking at customer focus first, when we decreased the p-value from 0.5 to close to zero, we saw a shift in the values of the alternatives. At 0.5, Cranberry is at 0.418 but once $P = 0.001$, Cranberry increases to 0.508. This is a 0.090 increase in the value of Cranberry and puts it as the top alternative when originally Inner City was the top alternative. Comparing this with increasing the p-value from 0.5 to close to one, Cranberry decreases by 0.048 to a value of 0.370 which is less than the change when the p-value is less than 0.5. This means that this node for the strategic

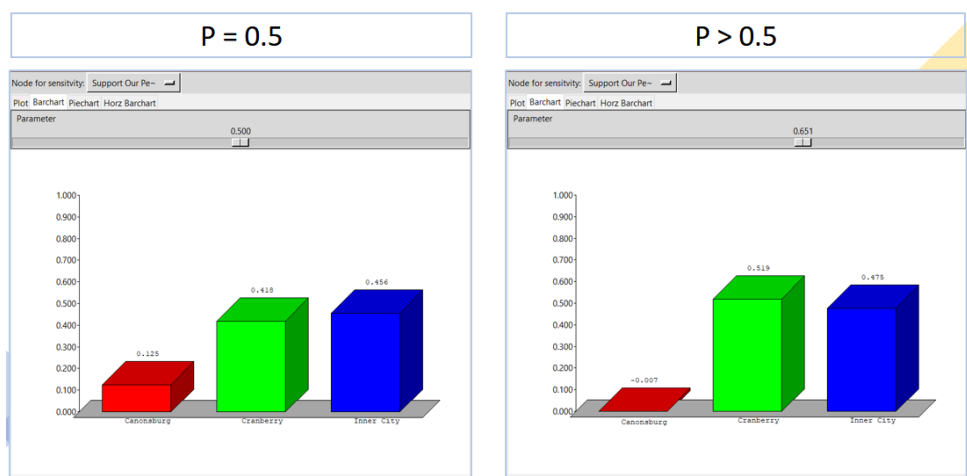
criteria of customer focus is sensitive to change in the p-value and if we were to change the p-value for the model, it would have a considerable influence on the alternatives. Figure 2 provides an illustration of this difference when the p-value is less than 0.5.

Figure 2 - ANP Row Sensitivity Analysis: $p < 0.5$



Looking at the criteria of supporting our people, at $P = 0.5$, Cranberry starts out at a value of 0.418. As P approaches 0.651, it increases to 0.519 which is a 0.101 increase in the value of the Cranberry alternative. As P approaches 0.651, the value of the Inner-City alternative increase slightly but eventually Cranberry surpasses this alternative. As this is occurring, the value of the Canonsburg alternative rapidly decreases towards zero. Figure 3 illustrates this change below. Once the p-value increases past 0.651, all the alternatives began to rapidly decrease and continue to decline as the p-value approaches 1. These results show that this node for the strategic criteria of support our people is sensitive to changes in the p-value and if the p-value for the model is changed, the value of the alternatives would be altered as well. Overall, the sensitivity analysis reveals factors in the model that will have a significant affect on the value of the alternatives if changes are made to the model.

Figure 3 - ANP Row Sensitivity Analysis: $p > 0.5$



Conclusion

Final recommendation will be based on company strategic goals. If the company is seeking a short-term solution, Cranberry township would work best. Even with Cranberry scoring lower with benefits, it does well with expected short-term costs. Alternatively, if the company intends to remain in the Pittsburgh area for another 30+ years, the long-term Inner-City option will be best suited for a growth and sustainability strategy over that term. Inner-City Pittsburgh offers availability and opportunity to enter strategic partnerships with schools, restaurants, and local businesses. While the Inner-City includes a higher risk control criteria it is a lower priority and the significant amount of benefits and opportunities coupled with lower cost makes this the more optimal relocation solution. If we were to assemble and complete the model again, there are two things that we would do differently. The first is we would make sure that we are properly approaching the ratings model and weighing the benefits, opportunities, costs, and risks properly against the strategic criteria. The second would be to not include one bottom level factor under any of the control criteria but instead to incorporate that one bottom level factor into another control criteria. Overall, this analysis and framework applies strategic thinking to a critical decision that has a variety of factors and criteria that need to be accounted for to find and evaluate the best alternative.