



Chicago Observation Wheel

Feasibility Study with Annexes

CONFIDENTIAL: A feasibility study commissioned by Voirrad, LLC, promoter of the Chicago Observation Wheel. Revised: 12 August 2010. © Catchment.

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Section One: Introduction

Introduction

Voirrad, LLC (hereinafter “the Developers”), has retained Catchment Attraction Management and Consulting Services, LLC (hereafter “Catchment”), to assess the feasibility of developing an Observation Wheel in Chicago, Illinois – on or proximate to the Navy Pier. Chicago is one of the largest tourist catchments in the world, with approximately 44.7 million visitors per annum. A sizable majority – some 60% – visit the catchment for “leisure.” The Observation Wheel is intended to be both a standalone attraction, i.e., a giant Ferris wheel, and a panoramic viewing platform for taking in the Chicago skyline and Lake Michigan. As currently configured, it is planned to be 492 ft high which will make it taller than the comparable and highly successful London Eye which reaches 443 feet. The success of the Observation Wheel is predicated upon it being a unique and attractive alternative for the leisure time and spending of tourists.

Scope of service

- **Evaluate the themed entertainment industry**, its development and trends, with special emphasis on observation wheels and similar attractions.
- **Assess the size of the greater Chicago market catchment**, including the residential population and tourist market to estimate annual visitation.
- **Draw definitive conclusions about the proposed project and the vitality of the market catchment**, which must support the proposed Observation Wheel, as well as develop a strength, weakness, opportunity, and threat (“SWOT”) analysis of the project given the existing market and economic conditions.
- Utilizing attendance and spending estimates, **develop pro forma operating results, estimate return-on-capital deployed, and appraise the project’s potential to meet the client’s developmental, business, and investment objectives.**

In order to accomplish the objectives within its scope of services, and for which it has been retained, Catchment has divided the project into a specific set of tasks. They are:

- **Market Demographic, Economic, and Climate Assessment:** Catchment will review all relevant demographic (population, number of tourists, household income, etc.) and all pertinent economic and climate data relating to the proposed project’s target market.

- **Competitive Analysis:** The number, quality, and location of competitive visitor attractions in the Chicago area (existing and planned) will be evaluated to understand their impact on the future performance of the proposed project.
- **Performance of Similar Attractions:** Catchment will also review the performance of other similar projects to see what can be learned from their performance to date and how that information impacts this project’s feasibility.
- **Estimate Attendance:** Based upon the market study findings, assessment of competitive projects, and analysis of the performance of similar projects in other markets, Catchment will estimate attendance for the proposed Observation Wheel within the greater Chicago market.
- **Financial Analysis:** Operating revenues and expenses for the Observation Wheel will also be forecasted, but expenses will be based – to some extent – on information supplied by the Developers. The principals of Voirrad, LLC, i.e., the Developers, are experienced former theme park operators with significant experience in the themed entertainment space. Revenue projections will be based wholly on Catchment’s own estimates and derived from forecasted per capita guest spending and attendance.
- **Capital Investment Assessment:** The Developers have provided an estimated cost to produce and erect the Observation Wheel through their partners, which they estimate to be \$136.0M. Catchment will assess whether the estimated operating results can support an investment of that magnitude as well as support other start-up costs associated with a project of this caliber.

Feasibility Assessment

Through the completion of the aforementioned tasks, Catchment will assess the feasibility and sustainability of the Chicago Observation Wheel. Feasibility is here defined as the project's ability to meet the pre-determined goals of the Developers and their eventual equity partners. Since the objectives of the Developers are known, i.e., the development of the Observation Wheel, Catchment emphasizes the interests of potential equity sponsors and investors. We stipulate that a feasible project is one that, at a minimum, generates a “solid” minimum return on capital deployed and is sustainable. A solid return on investment is considered to be an estimated annual return between 15% and 20% adjusted IRR based on an unleveraged investment. Leverage will, of course, increase the estimated return. Sustainability means that the project produces sufficient positive cash flow to cover all operating expenses, debt service, income taxes, and reinvestment expenses throughout “normal” times. “Normal” times expressly exclude additional financing requirements caused by

“acts of God” and serious macroeconomic adjustments. The various calculations employed by Catchment to test “feasibility” and “sustainability” will be explained in greater detail below.

Key Assumptions

Catchment assumes, for the purposes of assessing the Chicago Observation Wheel project, that the Developers will ensure that the final product is of the same quality as – or of superior quality to – the London Eye. Catchment presupposes that the Observation Wheel will offer more or less unobstructed and, therefore, excellent views of both the Chicago skyline and Lake Michigan. It must also occupy a prominent location that generates foot-traffic prior to the addition of the attraction. Excellent views, however, trump foot-traffic. In its estimates, Catchment also takes for granted that a first class operator, or an experienced operations team, will be in place to manage the project at least six months prior to the opening of the Observation Wheel to the general public. It also assumes that a first class operator will hire an experienced marketing manager who is knowledgeable in both the themed entertainment space and destination resort markets, preferably the Chicago catchment. Finally, our projections presuppose that an experienced marketing manager will have the requisite tools and sufficient opening budget to develop and execute a first rate marketing and sales plan.

Our Philosophy

Catchment sees its role as providing management and/or investors with analyses based on quantifiable metrics and solid argumentation to help reduce uncertainty in the evaluation of new “green field” investments, the acquisition of existing businesses, or retooling operations. We understand, moreover, that there are a lot of things to analyze and measure in all important business decisions, but especially with those of this type. Perfect certainty is, on the other hand, unrealistic. Yet the analyses found in this feasibility study are explicitly marshaled to support decision-making by reducing uncertainty insofar as reasonably possible within the limits set by the scope of our services and capabilities. We also understand that all decisions regarding investments have serious consequences if they turn out wrong. Catchment takes that implicit charge very seriously.



Section Two: Standard Addendum to this Report

The following feasibility study contains confidential information provided to the client, in this case Voirrad, LLC (the “Client”) as potential developers of the Las Vegas Observation Wheel. The materials contained herein are intended and were prepared solely for the use of our Client and not with a view toward public disclosure under any securities laws or otherwise. Any reproduction of this study in whole or in part, or the divulgence of any of its contents, without the prior written consent of Catchment or the Client is prohibited. The information contained in this study was obtained from the Client and/or has been derived by Catchment from publicly available information, published sources, or original research conducted by Catchment. All projections, and their underlying assumptions, are inherently subject to a high degree of uncertainty; therefore, actual results achieved during any period covered by the attached analyses may differ from the estimates contained herein and these variations may be material. No warranty of any projections herein is expressed or implied hereby. The information presented makes no allowance for more than incremental change in the macroeconomic environment. No representation or warranty, express or implied, is made as to the accuracy or completeness of such information and nothing contained herein is, or shall be relied upon as, a representation, whether as to the past, the present or the future. No person has been authorized to give any information or to make representations to potential investors other than those contained in this presentation, and, if given or made, such other information or representations must not be relied upon as having been authorized by Catchment or its Client. This material was not prepared for use by readers unfamiliar with the themed entertainment and attraction industry and, accordingly, neither shall Catchment be liable in any respect for the accompanying material if used by persons other than the Client and potential investors. Catchment has no obligation to update or otherwise revise the accompanying materials. Catchment shall not be liable for any claims, damages or related expenses or liabilities, including but not limited to incidental, consequential, special, general or punitive damages, arising from an actual or potential transaction using any of the assumptions, projections or analyses offered herein. Nothing herein shall constitute an offer to buy, sell, or recommend securities.

Section 8: Project feasibility, estimated return-on-capital deployed

All comments in this section refer to the “New Business Valuation Model (version 6.1) spreadsheet, unless otherwise noted, which spreadsheet is annexed to this feasibility study. We project that investors can anticipate a healthy IRR of 36.4% at the end of OY5 based on our projected attendance and forecasted EBITDA as explored above. The project is clearly feasible, but our conclusion must be tempered by the conditions and concerns raised previously and throughout this study. To reach this conclusion, Catchment assumed -- or estimated -- the following:

- 1. Initial investment.** Catchment assumed that it would cost \$136.0M to produce, ship, and erect the Observation Wheel, which estimate comes from the client, i.e., Voirrad, and is primarily the result of its negotiations with the ride vendor. Catchment estimated an additional \$7M in start-up capital and \$4.6M in transaction, legal, and contingency expenses. The employed ratios are based on actual costs from other projects for the same items. We also assumed that the land on which the attraction is to be built will be secured in exchange for equity in the project, which impairs slightly the results for the equity partner(s) as demonstrated here. Catchment will fine tune its estimate, if required, once the final equity structure becomes clearer. The total estimated investment in the project is \$147.6M.
- 2. Leverage.** Although we understand that some, if not considerable leverage will be employed to complete the Chicago Observation Wheel, our estimate of return-on-capital is unleveraged. If the investment is leveraged at 33% debt and 67% equity, the projected IRR improves from 36.4% to 48.8%. To estimate this return, we assume a \$29.2 in a senior secured debt instrument at 8% interest and a subordinate instrument of \$19.5M at 12%. We also assume a revolving line of credit (a “revolver”) of \$2.5M with an interest rate of 12%. A revolver is typically employed to cover short-term working capital deficits, generally caused by seasonality or capital investment in the themed entertainment industry. The only debt service shown on the New Business Valuation spreadsheet is for the revolver. As the financing structure becomes known, Catchment will fine tune the operating results, cash flows, and IRR contained in its model.
- 3. Depreciation & Taxes.** In the interests of full disclosure, Catchment recommends that the equity shareholders and eventual operator retain a CPA firm to maximize profitability. We used straight-line asset depreciation on the original asset and all subsequent improvements. Our tax estimate is based on the application of Federal, Illinois, and Chicago tax rates and law. The same can be said of our property tax estimate. Although we have done our due diligence to estimate both as accurately as possible, we are neither accountants nor tax specialists. The following table, Table 41, lists the taxes used by Catchment in assessing the tax burden to the owners and operators of the Observation Wheel.

Tax category	Chicago	Type
Federal income	34.00%	Income
State income	4.80%	Income
Sales	9.75%	Sales
Admissions	9.00%	Ticketing
Restaurant	11.00%	Sales
Personal property	--	--
Real property	7.60%	Real estate
Personal property replacement tax	2.50%	Income
Employer withholding	12.40%	Wages

4. **Reinvestment rate.** The reinvestment rate within the themed entertainment sector is slightly over 8% of annual revenues. We estimated a reinvestment rate of 1.3% for plant integrity and upkeep as well as periodic changes in the pre-show, merchandise, and food & beverage facilities. This is one additional advantage to this type of attraction: Observation Wheels are not reinvestment intensive, which in some measure compensates for the large initial investment.
5. **Cash flow after re-investment, i.e., free cash flow.** We estimate that the Chicago Observation Wheel will generate significant free cash flow from OY1. Annual free cash flow will grow from \$27.6M in OY1 to some \$34.9M in OY5 and a cumulative FCF for the period is estimated to reach \$165.0M. The significant free cash flow is the result of the Observation Wheel's low operating costs, high EBITDA margin, and relatively low reinvestment cost.
6. **IRR.** Catchment estimates an internal-rate-of-return of 36.4% at the end of OY5, with a high degree of confidence in the result. The components of that result are the sum of the initial investment, the projected annual cash flows, and the estimated terminal value of the asset. To calculate the terminal value of the asset, we employ an industry standard formula of xEBITDA. The multiple used for calculation purposes is 6.5. Although we can debate the correct multiple to be used, almost all sales of successful assets in the themed entertainment sector in non-recessionary periods have been well above multiples of 8x EBITDA.
7. **DCF & NPV.** We ask the prospective investor to consult Annex 2 to this document. Suffice it to say that even with the application of a compound discount rate of 10%, the Observation Wheel generates a NPV of \$200.2M. (The standard Excel formula yields an NPV of \$182.0M. The standard Excel formula discounts all cash flows, including the initial cash flow which should not be discounted.) Given that a "zero" return for NPV means that the Observation Wheel repays its original investment plus covers the risk discount of 10%, a NPV of \$200.2M implies that this is an excellent investment opportunity.

Section 9: Annexes to Chicago Observation Wheel Feasibility Study

Annex 1: Voirrad, LLC, estimate to produce, erect, and complete the Observation Wheel.

<u>ITEM</u>	<u>ESTIMATED COST (US\$)</u>
Hubless Observation Wheel	
150 Meter Hubless Wheel, Ex Works (€87 M)	\$106,000,000
Shipping, Delivered To Site	\$6,000,000
Insurance	\$150,000
Total-Observation Wheel, Delivered	\$112,150,000
Site Preparation	
Demolition, Grading, Etc.	\$150,000
Fencing, Barricades, Security, Etc.	\$200,000
Total-Site Preparation	\$350,000
Architectural/Engineering/Code Compliance	
Engineering, (Civil, MEP)	\$750,000
Architectural	\$300,000
Code Consultant	\$40,000
Permitting	\$25,000
Total-Arch./Eng./Code Comp.	\$1,115,000
Construction	
Utilities	\$30,000
Foundations	\$5,000,000
Steel Erection	\$6,000,000
Loading Platform	\$3,000,000
Mechanical	\$500,000
Hydraulic	\$100,000
Electrical, General Lighting, Etc.	\$1,000,000
Pneumatics	\$100,000
General Conditions	\$535,000
Project Management	\$750,000
Total-Construction	\$17,015,000
Miscellaneous	
Test & Commissioning	\$350,000
Contingency	\$5,000,000
Total-Miscellaneous	\$5,350,000
TOTAL	\$135,980,000

DCF, IRR, & MIRR Analyses							
	Initial Investment	OY1	OY2	OY3	OY4	OY5	E-NPV
Discount Rate		0.9	0.8	0.8	0.7	0.6	\$182.0
Annual FCF	(147.6)	35.6	29.9	31.5	33.2	34.9	
Cumulative Annual FCF		(112.0)	(82.1)	(50.6)	(17.5)	17.5	
Asset Value		276.6	302.8	320.3	339.0	358.7	
NPV (FCF+Terminal Asset Value)		164.5	220.6	269.7	321.5	376.2	
Annual DCF	(147.6)	32.3	24.7	23.7	22.6	21.7	
Cumulative DCF		(115.3)	(90.5)	(66.9)	(44.2)	(22.5)	
Disc. Terminal Asset Value		251.4	250.2	240.7	231.5	222.7	
NPV (DCF+Discounted TAV)		136.2	159.7	173.8	187.3	200.2	
	Initial Investment	OY1	OY2	OY3	OY4	OY5	IRR
IRR (FCF+OY5 Asset Value)	(147.6)	35.6	29.9	31.5	33.2	393.7	36.4%
IRR (FCF+OY4 Asset Value)	(147.6)	35.6	29.9	31.5	372.1		40.4%
IRR (FCF+OY3 Asset Value)	(147.6)	35.6	29.9	351.8			47.5%
	Initial Investment	OY1	OY2	OY3	OY4	OY5	MIRR
MIRR (FCF+OY5 Asset Value)	(147.6)	35.6	29.9	31.5	33.2	393.7	29.8%
MIRR (FCF+OY4 Asset Value)	(147.6)	35.6	29.9	31.5	372.1		34.4%
MIRR (FCF+OY3 Asset Value)	(147.6)	35.6	29.9	351.8			42.1%
	Investment Value	OY1	OY2	OY3	OY4	OY5	CAGR
CAGR Investment Analyses	147.6	164.5	220.6	269.7	321.5	376.2	20.6%
Avg.		11.5%	34.1%	22.2%	19.2%	17.0%	20.8%
Check CAGR/St.Dev		178.0	214.6	258.7	312.0	376.2	78.6
	Asset Only Value	OY1	OY2	OY3	OY4	OY5	CAGR
CAGR Analysis	147.6	276.6	302.8	320.3	339.0	358.7	19.4%
Avg.		87.4%	9.5%	5.8%	5.8%	5.8%	22.9%
Check CAGR/St.Dev		176.3	210.5	251.5	300.3	358.7	72.3

Cell coding & model keys:

Scenario
Input cells
Result cells
Est. based on third party data
Macro control buttons
Report cells

For tab and formula notes please see:

[ROI & Investment Evaluation tab.docx](#)