

Federation Square:

Masterpiece...

...or Publicly-Funded Folly?

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Project Evaluation (1.011)

Executive Summary

In 1996, the State of Victoria announced its intentions to commemorate the 2001 centennial of the Australian Federation with the construction of Federation Square, a \$150 million Australian public space intended to become the cultural heart of Melbourne. The Square would be suspended over an existing commuter railyard and would connect Melbourne's Central Business District and the Yarra River. Six years and \$450 million later, Federation Square is finally complete. Although not finished in time for the centenary celebrations, it is hoped that Federation Square still has the potential to become the civic center and city symbol that was originally intended. The following is an evaluation of the social, political, economic, and cultural aspects of the Federation Square project, both during and after construction. By examining the project from each of these different perspectives, the causes for various failures become clearer and the requirements for future success are more easily understood. At this time, stakeholders are still having trouble fully justifying the significant costs of construction and the overall value of the project is still very much in question. However, it should be remembered that it is only natural for such an innovative project to inspire debate and there is no question that the development has struck a positive chord with many observers.

Introduction & Project History

As early as the mid-19th century, it was recognized that Melbourne lacked a true civic center. Plans for a significant public square were never incorporated into the original Hoddle-designed grid. Throughout the 20th century, many looked to the Yarra riverfront as a likely site location, particularly the area adjacent to the Prince's Bridge and Flinders Street Rail Station. This has long been the southern gateway for the city and,

if properly developed, could serve as a connection between the Central Business District and the river. However, most of the space was taken up by rail activity and, despite many ambitious plans to construct a development over the railyard, very little was accomplished. A scheme to build a partial deck along the northern edge of the railyard was implemented in 1967, thus establishing the towering Prince's Gate development. Composed of two 15-story structures and also known as the Gas & Fuel Towers, this development was never fully completed and served as little more than a barrier between the city and the river. Its popularity was low and it was ultimately acquired and demolished by the State of Victoria in the mid-1990s.

In 1996, after the Prince's Gate towers were cleared, the State announced an international design competition for a development to be constructed directly above the rail yard. It was hoped that the final open space and architecture scheme would rival the grandeur of Sydney's opera house and help to elevate Melbourne's status in the global community. The entire site (approximately 3.6 hectares or 8.9 acres in size) would be supported by a massive, elevated deck.

A joint venture formed by London-based Lab architecture studio and Melbourne-based Bates Smart architects won the design competition and the formal planning process began immediately. This was the first major contract for Lab and it moved its headquarters to Melbourne for the duration of the project. The project, although initiated by the State of Victoria, also had financial support from the City of Melbourne, the Commonwealth Government, and private sector investors. The project was intended to be completed in time for the 2001 centennial commemoration of the establishment of the Australian Federation and the initial cost estimate hovered between \$110-150 million

Australian. Ultimately, both the financial and timeline estimates proved to be grossly inaccurate.

Basic Project Components

The following provides a brief overview of the major components of the Federation Square development. Some of these components will be referenced and explored in greater depth throughout the subsequent project analysis.

The Deck

In order to develop the project, a massive deck first had to be constructed over the Jolimont rail yard. The engineers went to great lengths to ensure that rail noise and vibrations would not affect the activities above deck, ultimately utilizing over 4,000 vibration absorbing spring coils and rubber pads. The deck was completed in 1998 and the final cost for the structure was approximately \$64 million Australian. This was the first tangible sign that construction costs would surpass earlier estimates.

The Plaza (including St Paul's Court)

Atop the deck is an irregularly shaped plaza consisting of sandstone cobbles in a wide variety of colors. The space is designed to hold up to 15,000 people, but is configured in such a way that it can also be a suitable setting for more intimate gatherings. In order to obtain the desired paving materials, the design team identified a little-known type of Kimberley sandstone, established a new quarry, and transported the newly found minerals back to Melbourne. This was reportedly the first commercial use of this material and a new stone pattern cataloguing system had to be developed. An artist was commissioned to incorporate poetry and artwork inscriptions into the paving design.

The Atrium & The Environmental Climate Control System (aka The Labyrinth)

Stretching across the plaza is a five-story, glass enclosed public space supported by an intricate metal network. The atrium provides 24-hour access between the northern boundary of the site and the river. A portion of the atrium has been designed for enhanced acoustics and encloses the mid-sized BMW Edge theatre. Below the plaza is a passive cooling system referred to as the “labyrinth” because of its unique, convoluted structure. The labyrinth was designed to provide a more sustainable source of climate control for the atrium area. When fully operational, the system should use 1/10th the amount of energy used by traditional air conditioning systems. At the time of construction, it has an estimated payback period of 4 years (based on a figure of \$100,000 USD in cost savings per year).

The Buildings

A series of major, structurally innovative structures were placed around the plaza. Triangular façade panels in a variety of materials (zinc, glass and sandstone) give the buildings their unique appearance. Each structure is slightly different in form and a variety of clients had to be taken into consideration, including:

The Australian Center for the Moving Image

SBS Radio and Television Broadcaster

National Gallery of Victoria

Transport Pub

Melbourne Visitor Center

20+ restaurants and retailers

Project Analysis

Tremendous costs and risks were involved in the construction of Federation Square. Only significant and long-lasting benefits could truly justify such an undertaking. This analysis focuses on Federation Square's sustainability and long term potential as a major public space. Clearly, the poor design and overall unpopularity of the Prince's Gate development contributed to its relatively short lifespan. Federation Square is a chance to prove that lessons have been learned from Prince's Gate and that, this time, a much more appropriate space has been created. Although the project is still quite new, it is still possible to use currently available information to predict Federation Square's prospects for fulfilling its intended goals.

The Selection Process

As outline above, the architect selection was the result of a state-initiated design competition. Of the 177 entries, 96 were from within the state of Victoria, 30 were from the neighboring state of New South Wales, and 41 were from overseas. The expert selection panel consisted of professionals in the fields of architecture, landscape architecture, project development, and the arts. Included among the judges was Daniel Libeskind, the architect currently charged with the task of designing the structures for the former World Trade Center Site.

While the collective knowledge of such a prestigious group of experts was certainly valuable, the selection process took little account of the actual stakeholders, particularly the public taxpayers that were funding that project. Of course, one of the major goals was to identify a stunning, cutting-edge scheme and appointing such an

expert panel was arguably the best way to accomplish this. There was the desire to push design standards and to create a space worthy of international attention. According to Damien Bonnice, the first project director for Federation Square,

And we knew when we went to a competition and we said to the architects: 'We're up for a bold interpretation of a new civic and cultural space'. We knew we were going to get something controversial. In fact, I said many times, before the competition selection was made, that if we don't have a controversy with the architecture of this development, we've failed.¹

However, it is also important to remember that another major goal was to create a space that would become integrated into Melbourne's overall economic and social fabric. Additional attention to public input may have been helpful in identifying the needs, desires, and preferences of the potential users of the space. Although the vast majority of the funding for the project was public, the people of Melbourne and Victoria had little opportunity to interact with the project before much of the design process had already been completed. It is only now, once the project is complete, that we are now able to see if it "works" for the people.

Social Aspects

From the perspective of the average Melbourne or Victoria resident, the completion of Federation Square could potentially have many benefits. An accessible, attractive link between the Central Business District and the riverfront has been established and, thanks to the Atrium, this route is safe and comfortable 24 hours a day, 365 days a year. There is a great deal of additional space specifically designed for cultural and civic activities. Both the Ian Potter art gallery and the Centre for the Moving Image offer high-quality exhibits at no cost. The SBS broadcasters provide public access

¹In the Mind of the Architect, Episode II, Program Transcript. Australian Broadcast Corporation, 2000, http://www.abc.net.au/arts/architecture/ep_trn2.htm

multicultural/multilingual television, radio, and online programs. The Melbourne Visitor Centre serves as a clearinghouse for information on both Melbourne and Victoria. There is an effort to develop a diverse program of events for the various function and performance spaces. All of this, of course, can boost the city's image as a cultural center, increase Melbourne's livability, and give residents a new source of civic pride.

On the other hand, there are also ways in which Federation Square can prove to be a negative from the society perspective. Although it was hoped that the development would appeal to a variety of audiences, there might be certain groups that are more attracted to it than others. It could turn out to be largely populated by tourists (drawn because they were told it was one of *the* sites to see) or young, urban dwellers (drawn by the trendy new pubs). The additional activity around Federation Square could result in significant increases in traffic congestion, thus altering the character of adjacent districts. Those individuals that do not find the aggressive architecture appealing may opt not to visit at all. It has been suggested that the outdoor space is almost too large for a city with Melbourne's relatively low population densities. Instead of being a crowded, active civic center, the Square may simply feel empty and vast during most times of the day. Additionally, the configuration of buildings around the Square creates a wind-tunnel effect, thus decreasing the comfort level of the space.

In the end, could this be considered the best use of government funds? A large amount of money was spent on a single prestige project when the investment could have been used for other, more functional purposes. City infrastructure, social services, and education are certainly areas that would have benefited from such a major infusion of funding.

Political Aspects

As a public undertaking, Federation Square was more vulnerable to the influence of politics than most development projects. The project had been initiated by the administration of Jeff Kennett, a Victorian Premier that had also invested in other expensive, high profile development schemes. In 1999, Kennett was replaced in office by Steve Bracks, who was openly critical of the Federation Square project prior to election.

During the year prior to the Bracks election, public opposition to the project had been mounting. The main cause for controversy was the fact that an angular structure planned for the northwestern corner of the site would block views of the nearby St. Paul's Cathedral. The Bracks government supported complete removal of the obstruction from the plan but the design team opposed any such alterations. Damien Bonnice, the State's Office of Major Projects manager for Federation Square, ultimately resigned out of frustration over how the government was handling the controversy. During 2000, direct responsibility for the project was transferred from the Office of Major Projects to Federation Square Management (FSM), a company owned by the State Government of Victoria. Major cost overruns was cited as the cause for this reassignment. In the end, the structure, which came to be known as the western shard, was reincorporated into the design with a significantly lower stature. During this time, the Bracks government was accused of trying to leave its "mark" on the project. Significant delays resulted from the controversy and the decision to reduce the structure's height is still a major point of debate.

Financial Aspects

Most of the financing for Federation Square was provided by City, State, and Federal funds. The final breakdown of funding is as follows:

Figure A: Total Final Costs for Federation Square

Funding Source	Australian currency (millions)	American currency equivalent (millions)***	Total Population (millions)	Cost per capita (Australian \$)	Cost per capita (US \$) ***
Melbourne (City)	64	38.4	3.3	19.39	11.64
Victoria (State)	280	168	4.8	58.33	35.00
Australia (Federal)	50	30	19.8	2.53	1.52
Total Government Support	394	236.4			
Loans *	18	10.8			
Other sources **	38	22.8			
Total Cost	450	270			

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*Loans acquired by Federation Square Management in 2000/2001

** Including private sources such as the BMW sponsorship of the Edge amphitheater

*** All Australian dollar – USD currency conversions are based on a rate of .60. This is the approximate average exchange rate for the period July 1997 – November 2002.

Originally, both the State of Victoria and the City Council pledged approximately \$50 million Australian (\$30 million USD) for the project. Under these proposed State contributions, the per capita amount would have been less than \$3 Australian (just over \$1.50 USD) for both the State and the City. At the time, the development was expected to cost between \$100 and \$150 million Australian (\$60-\$90 million USD). As seen in the chart above, the total final costs for the project reached \$450 million Australian (\$270 USD). In the end, the State covered the bulk of the overruns with a total contribution of approximately \$280 million Australian (\$168 million USD), or approximately \$58.33 Australian for each of its residents (approximately \$35 USD per capita). Victoria provide a series of financial bailouts until April 2002, at which point the government indicated that additional funding would have to be generated by the recently established Federation

Square Management (FSM). At the time, it was expressed that FSM would not need a substantial amount of additional funds (by that point, the total cost of the project has reached \$394 million), but the remaining construction activities proved to be more expensive than anticipated. To cover a portion of this gap, Federation Square Management did acquire an \$18 million Australian (\$10.8 USD) loan in FY2002. Presumably much of the remaining costs were covered by some combination of private sources, such as the BMW-sponsored Edge amphitheater.

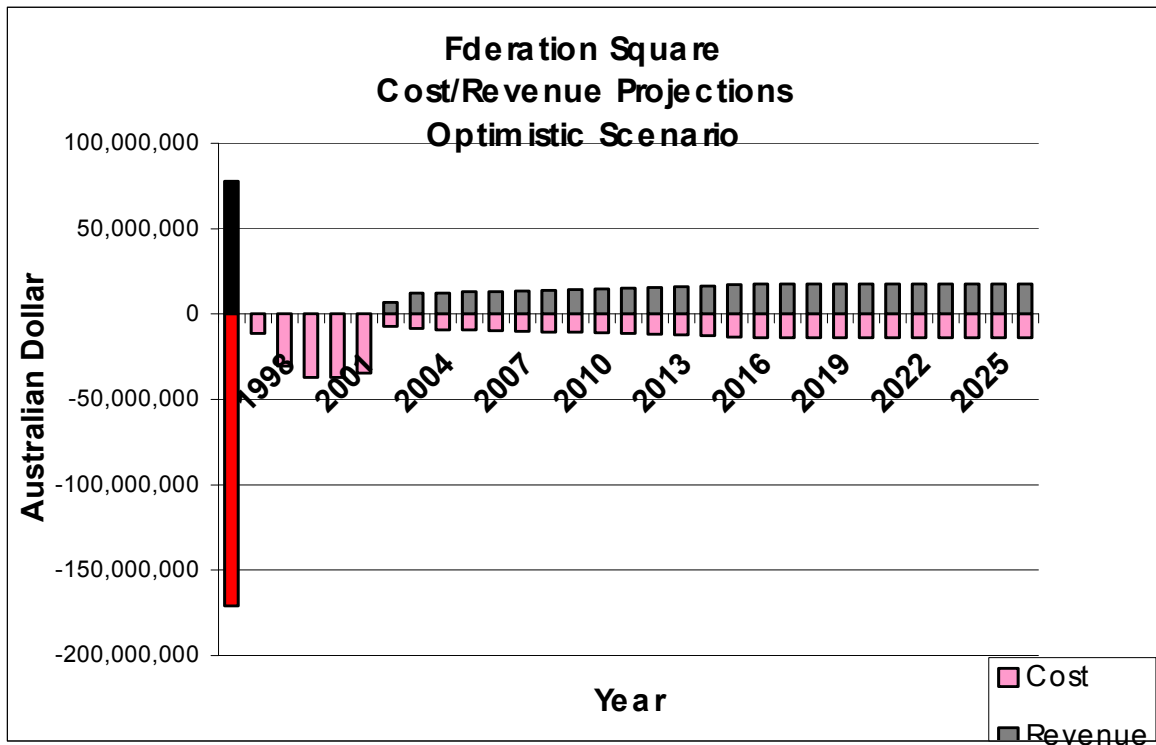
Some of the reported reasons for the substantial cost overruns include:

- Addition of an entirely new component (the Art Museum) during the design stage.
- The political battles and subsequent delays/design alterations described above.
- Underestimation of the complexity of the project. Projects this large, intricate, and innovative are rarely attempted. The architects have admitted that much of the innovation stemmed from the fact that, as designers that had never actually seen a project through to the construction stage, they had little conception of what they could *not* do. The approach was not particularly realistic and huge, unexpected costs naturally resulted.
- Increase in design standards for the support deck.
- Delays due to labor disputes.

However, it must be remembered that profitability was not the main goal of the project. Even when the construction costs were substantially lower, this was not viewed upon as a typical investment project. Above all else, it was a public undertaking designed to both revitalize the Yarra waterfront and enhance both the city and the state. The following is a projected cost/revenue stream assuming a very optimistic scenario: total

construction costs are held at the original estimate of \$150 million Australian and annual revenues are higher than average. A 10% discount rate is used to obtain the present values for costs and revenues (indicated in red and black bars, respectively).

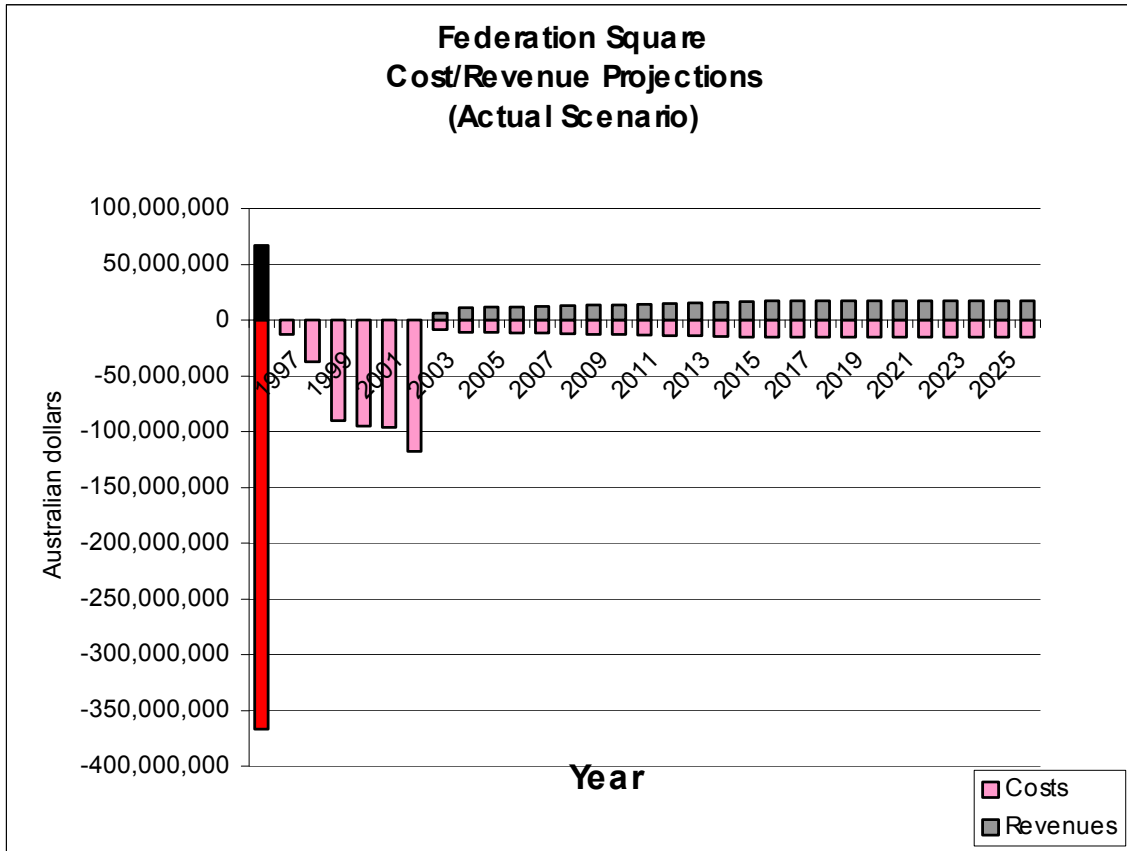
Figure B: Projected costs and revenues for first 30 years of project lifetime



Created by: Jodie Misiak

Even under these advantageous conditions, it seems highly unlikely that the present value of the project’s lifetime income will ever be equal or greater than the present value of total costs (both construction and operating). This, of course, represents the most optimistic of all scenarios and stands in sharp contrast with the actual situation. Below is a chart illustrating the actual scenario currently faced by FSM. Again, the year zero present values of both costs and revenues are shown in red and black, respectively.

Figure C: Projected costs and revenues for first 30 years of project lifetime



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Although management currently expects revenues to cover all operating costs, surpluses are not substantial and it will be impossible recoup the massive construction costs.

Near the end of construction, the Melbourne City Council considered early revenue projections and decided to break financial ties with the project. However, other major supporters, particularly the Victorian government, are not measuring economic success in financial revenues alone. Although much more difficult to quantify, the overall economic impact of the development is considered to be a more appropriate measure of

success. Based on broader economic criteria, was it a worthwhile investment for Victoria? Was it wise for the State to invest so much into just one of its cities?

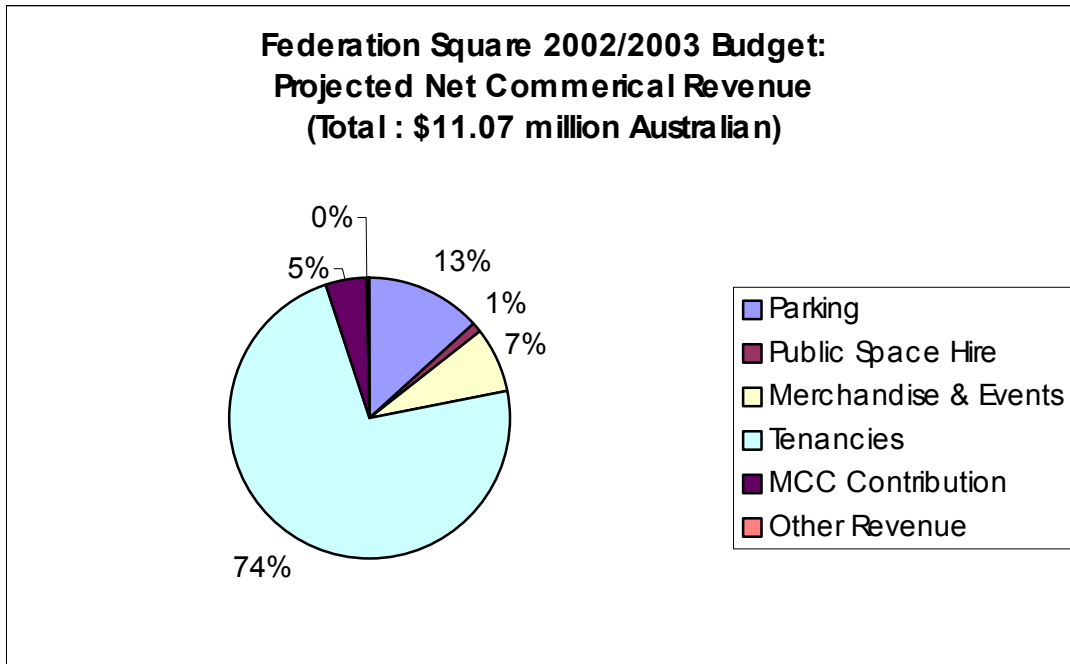
Over 70% of Victoria's total population live in Melbourne and the city is considered the economic, political, and cultural center for the state. Given such conditions, it is no surprise that the larger state investments would be focused on Melbourne. Additionally, Melbourne is already a high profile tourist destination and is probably the best place in the State for tourism related investments. According to State Tourism Statistics, Melbourne and its surrounding region is by far the most popular destination within Victoria for both national and international visitors. In FY2002 (shortly before the opening of the project), just over 6 million domestic tourists and approximately 1 million international tourists were drawn to the Melbourne region of Victoria. These are by far the largest single tourist flows for any part of Victoria.

Currently, tourism accounts for \$8.5 billion Australian (5.2% of Victoria's Gross State Product) and 144,000 total jobs (6.2% of state employment). The State is aiming to increase its number of outside visitors presumably in the hopes that it can catch up to Sydney, which holds the largest market share in Australia (particularly of international visitors). Currently, Federation Square is expected to attract a total of over 6 million visitors annually. This is well above the population figures for both Melbourne (3 million) and Victoria (4.8 million). Clearly, a large number of outside visitors are expected but, at this point, the actual number is still not definite. As of February 2003, approximately 2 million people have visited the development, but figures on domestic/international share are not yet available. On one hand, the worldwide publicity surrounding Federation Square may lead to a substantial increase in visitors to the

Melbourne region. On the other hand, it may turn out that the primary visitors to the Square are either local or outside visitors that are visiting Melbourne for other reasons.

Regardless of the visitor composition, increased foot traffic is predicted to have a positive economic impact on the adjacent business district and Federation Square operations and businesses are expected to create 600 new jobs. FSM has used rental incentives to attract and retain high-quality, locally based commercial tenants to the project. Since Federation Square is still unproven as a retail environment, commercial tenants that chooses to locate at Federation Square pay a rent comprised of both a reasonable base amount and a percentage of business turnover. This is intended ensure that businesses do not incur too many losses during the early months of Federation Square operations. Although this can make Federation Square a more attractive location for business, it could prove to be a risky move for FSM. Since rent levels are dependent upon business sales, the management company can only reach targeted revenue levels if tenants are doing well. In the end, the property may be fully leased but revenue streams could be much lower than predicted. As the chart below demonstrates, the tenancies represent the largest component of annual commercial receipts (approximately \$8 million Australian or 74% of the total). This creates an incentive for management to work with tenants and make the commercial environment as accommodating as possible - a place where small, independent businesses can succeed.

Figure D: Projected 2002-2003 revenue breakdown for Federation Square



Created by: Jodie Misiak. Based on financial figured provided by Federation Square Management (2002-2003 Corporate Business Plan)

Cultural Aspects

At the heart of the Federation Square project has been the clash between the political/economic feasibility and the desire for cultural innovation. The emphasis on cultural value sets Federation Square apart from many public projects and, as demonstrated above, has caused a great deal of controversy. The government took a major risk when awarding the design contract to Lab + Bates Smart but, after six tumultuous years, there is still much optimism for the project.

It speaks for the future, not of the past and I think its going to be one of the most exciting offerings about the way we celebrate 100 years. I suppose we could have done a sewage scheme instead. There’s got to be room for the spirit, and if there’s not room for the spirit in Australia we’re a very poor community.

Robert McClelland, Victorian Minister for Planning
 1992-99²

² As quoted for the multimedia production, *In the Mind of the Architect*, Program Transcript, Australian Broadcasting Corporation, 2000, http://www.abc.net.au/arts/architecture/ep_trn2.htm

The visitor responses to the Square have varied wildly and include everything from disgust to delight, puzzlement to pleasure. Some examples include:

Melburnians are bemused by Federation Square...It's bizarre. To me it looks like a camouflaged spaceship. The management said that it's going to be as important to Melbourne as the Eiffel Tower, which is bloody stupid.³

Everything was weird and wonky; the walls were at angles and the floors were irregular and the windows were tilted, and it started making me feel a little bit trippy. For the first 20 minutes I wasn't sure if it was the architecture or if it was the funny-looking dim sim I'd bought from the greasy takeaway place before the tour.⁴

It really is Melbourne asserting in a big way its cultural life...Ten years ago everything in the cultural realm seemed to be heading north towards Sydney. Federation Square is a huge statement of Melbourne's cultural possibilities.⁵

Neutral reactions seem relatively uncommon. Perhaps such strong emotion represents the first real achievements of Federation Square. After all, great architecture seeks to inspire; the observer is naturally forced to consider space and form in new ways. Some will respond positively to this experience while others end up feeling extremely uncomfortable. In either case, they will most likely go home, tell their friends about it, and encourage a whole new set of curious people to interact with the project and discover their own feelings for the space. At the same time, they may decide to attend a concert, view an exhibition, or grab an iced tea at an outdoor café. This is how a place begins to

³ Melbourne identity and radio broadcaster Neil Mitchell as quoted in the Anthony Dennis article *Melbourne Gets Square*, The Sydney Morning Herald, October 19, 2002, <http://www.smh.com.au/articles/2002/10/18/1034561312647.html>

⁴ Danny Katz. *Somebody Tell Me What it Does*, The Age, October, 25, 2002, <http://www.theage.com.au/articles/2002/10/23/1034561540623.html>

⁵ Leon van Shaik (Professor of Architecture, RMIT University) as quoted in the Anthony Dennis article *Melbourne Gets Square*, The Sydney Morning Herald, October 19, 2002, <http://www.smh.com.au/articles/2002/10/18/1034561312647.html>.

acquire a life of its own. This process may be slow, but the complex nature of Federation Square ensures that it will certainly not be boring.

Conclusion

It is still too early to determine if Federation Square will have a lasting, positive impact on Melbourne and Victoria. However, it seems like the most difficult parts came during the design/construction phases and prospects are now improving. Some controversy continues, but at least the project is complete and people do not have to speculate any longer. It is suspected that much of the early negativity resulted from simple fear of the unknown. A monstrous, expensive thing was growing up along the riverfront and few understood what it was all about. Perhaps more interaction with the public during the design phase would have alleviated some of this apprehension. However, any additional public involvement may have also resulted in a less innovative design. In any case, better project estimates would have given stakeholders a more realistic picture of the costs involved. The original cost projections were much too low and unnecessarily created unrealistic expectations. But, again, perhaps a higher cost estimate would have discouraged the government from taking the project on.

There is no way to go back and change the many flaws of the construction process, but FSM is now focusing on changing attitudes for the future. The tenant mix is impressive and numerous events have been planned. If all goes well, the Square will become slowly integrated with Melbourne's urban fabric.

Resources

Federation Square Management. 2002-2003 Corporate and Business Plan

Andrew Brown May. *Federation Square: A Place in History*. November 2001.

MIT Presentation by Peter Davidson and Donald Bates - Directors, Lab architecture studio (February 28, 2003)

On-line Resources, including:

-*The Age* (Victoria) newspaper (various articles): <http://www.theage.com.au/>

-2002 Architecture Biennale de Venezia site:
<http://194.185.28.38/gb/archi/Next/index.cfm>

- Damien Bonnice statements to Victoria Parliament, Transcript, May 2000,
http://www.parliament.vic.gov.au/Privileges_Committee/May2000Appendix1.html

-Federation Square: <http://www.federationsquare.com.au/>

-*In the Mind of the Architect*, Transcript, ABC Television Production, 2000
<http://www.abc.net.au/arts/architecture/>

-*Inside the Square: Story of Federation Square*, ABC Television Production,
<http://www.abc.net.au/fedsquare/>

-Lab Architecture Studio: <http://www.labarchitecture.com/flash.html>

-State of Victoria site (Government Projects Page):
<http://www.mpv.vic.gov.au/web3/majorproj.nsf/allDocs/RWP2FE2BBDDDF8FC7BCA256C29000BF924?OpenDocument&Expand=3.1.2&>

-*Sydney Morning Herald* (various articles): <http://www.smh.com.au/>

-Victoria Tourism site
(<http://www.tourismvictoria.com.au/index9.php>)

