# IB Diploma Extended Essay

"To what extent has the design of Federation Square been a success?"

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## **ABSTRACT**

The aim of this Essay was to investigate the design of Federation Square a large civic centre in Melbourne, Australia. The topic evidently stands in the subject of *Visual Arts* as the topic question and main focus of the essay is about the aesthetics and functionality of Federation Square's design. The numerous research questions were formulated in an attempt to best investigate the subject matter and title of the essay:

"To what extent has the design of Federation Square been a success?"

To answer this question within the essay, I had to firstly clearly define what I thought a successful design was. Then apply these principles to demonstrate to what extent the design of Federation Square has been a success.

Through personal visits to Federation Square and consultations with individuals who know the subject matter well such as distinguished architects and Federation Square workers I was able to develop a comprehensive argument, which concluded that the design of Federation Square has been an immense success due to various reasons.

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# **ESSAY**

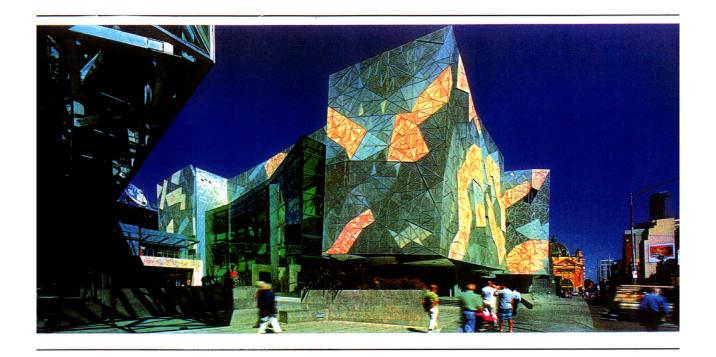


Image 1

"To what extent has the design of Federation Square been a success?"

How has the design of Federation Square accomplished its intended purpose and even allowed Federation Square to surpassed the expectations placed upon it? Federation Square is an important landmark situated in the Central Business District of Melbourne in the state of Victoria, Australia. It is a relatively large civic centre opened in 2002 as a gift to the people in celebration of the Centenary of Federation of the Australian states (1901). The site that now holds Federation Square, previously held some of Melbourne's most unpopular buildings. The early history of the site included a morgue, however in recent history the site was home to the Gas and Fuel Towers, two brown towers which stood next to the Jolimont rail yards. During the 1990s, Melbourne saw large-scale gentrification with the population of the Central Business District rising from 5,000 to 15,000 people. The Centenary of Federation provided the impetus for the redevelopment of the area.

The design of Federation Square should be treated as a work of Visual Art, this essay evaluates the colour, shape and texture and functionality of the design.

Living so close to Federation Square I have always had a fascination with the design, I remember that during the construction of The Square, I admired the modern look of the buildings. My interest has continued until now and I see it fitting that I use this interest to my advantage and investigate further the design of Federation Square in my Extended Essay. The Design of Federation Square is the product of a design competition set up by the State Government of Victoria, who finally commissioned LAB Architecture of London and Bates Smart architects of Melbourne<sup>2</sup> to essentially fashion the look of Melbourne's new city block.

The judging panel said of the winning design:

"It draws inspiration from the unique characteristics of Melbourne's arcades and laneways, and transforms these elements into a new form of organisation, celebrating the city. The design will invite pedestrians to explore a complex and urban linkage of open and closed spaces, a set of different amenities brought together in the architectural equivalent of Federation."

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<sup>&</sup>lt;sup>1</sup> Claire Coney, Federation Square, Hardie Grant Books, South Yarra, 2003, page 1

<sup>&</sup>lt;sup>2</sup> ibid, page 31

<sup>&</sup>lt;sup>3</sup> Federation Square Management Pty Ltd, *Federation Square: Design*, Project Brochure, Melbourne, 2001, page 13

One of the design aims of LAB + Bates Smart Architects was to develop a living, breathing centre, and a location where one could congregate and walk unimpeded from the chaos of the city into the relative calm of the parklands bordering the Yarra River. It has been a success in the essence that it has rejuvenated the north bank of the river and has become a new heart for Melbourne. For many generations before Federation Square, Melbournians had always dreamt of doing something with the railway lines that had separated the city from the Yarra River since the late 19<sup>th</sup> century. The success of the centre can also be measured by the fact that it has turned one of the most despised and 'ugly' corners in Melbourne into a civic centre with a unique mix of cultural and commercial activities.

The State Government of Victoria set several precedents and some expectations with the design of Federation Square, some of the prerequisites included:<sup>6</sup>

- The design should create a connection between the city and the Yarra River
- Provide an area for city office workers to relax and congregate.
- Create an icon for the city of Melbourne, and to showcase the cities positives to the rest of the world.
- Create a place of which the people of Melbourne could be proud
- The first stage of the architectural competition demanded that the design should provide an area capable of accommodating up to 10,000 people in an open-air amphitheatre.

The Design has been a success in the way that it has fulfilled and even surpassed the expectations and prerequisites of the State Government. What constitutes an architectural success? Economical, Social, Aesthetical, and Government factors need to be discussed to identify to what extent the design of Federation Square has been a success.

Fed Square as it is colloquially known is imaginative in the way that it gives a vision of urban life; it is a completely new city block, which brings together social, cultural and commercial activities. A range of distinct elements are brought together in

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<sup>4</sup> ibid, Page 4

<sup>&</sup>lt;sup>5</sup> ibid

<sup>&</sup>lt;sup>6</sup> Coney, pages 40-42

harmony through the design creating areas for different activities thus forming a complex theatrical ensemble. Many people may not find the aesthetics of the design pleasing however I don't believe they could argue that the functionality of the design has many flaws. This is one of the biggest successes of Fed Square. An example of design's successful functionality lies with the National gallery of Victoria, which is an occupant in Fed Square. The floor layout utilises a simple figure eight design in the gallery spaces, there is also an overlapping composition of the different gallery halls, and this allows both a direct route through the layout or by the optional and diverse pathways, which are inherently created with this design. **Refer to image below:** 



Image 2

It allows visitors to wander through in many various combinations of ways making each visitor's journey unique. The design remains simple in the way that the focus of the halls always returns to the central area of public foyer in the middle of the gallery complex. The minimalist approach to the design layout also makes for allows a gallery curator to fashion particular exhibitions in a number of different ways meaning exhibitions can be customised and be given an atmosphere to suit the displayed work. Seemingly, small details such as these are common at Fed Square, they add together to create such as large-scale success. <sup>7</sup>

<sup>&</sup>lt;sup>7</sup> Federation Square, (Melbourne, Victoria) 2007

Mrs Frances Lindsey the Deputy Director (Australian Art) at the National Gallery of Victoria believes that the design of Federation Square has provided a world-class gallery, the design has provided abnormally large lifts to enable the gallery to display large paintings in the galleries on the upper levels something that was not possible in the gallery's previous home. 8 Mrs Lindsey also confirms the sentiments of other Federation Square users. In Mrs Lindsey's opinion the design has been a success in the means that the design is ageless. The design has allowed for numerous different uses. The design has considered that in the future the large gallery spaces might be converted to retail or cultural spaces.

"Patrons will come and go, but Federation Square will stand for centuries..."

Ironically many critics of Federation Square who believe that the project is 'unattractive' might find themselves in the gallery looking at some of the most beautiful paintings in Australia.

The construction of Federation Square was an ambitious project, and one of the most complex in the city's history. It has created a city block over the existing train lines, which were once described as a scar on the face of Melbourne. Using modern technology such as new railway management software, the rationalisation of the original 53 rail tracks into only 12 has enabled the new civic centre to be built over the top of them, thus hiding them from view, on Melbourne's busiest intersection. 10 Railway punting operations located in this area were also moved to areas further from the central business district.

The success in revitalising this area of central Melbourne can be seen in the pictures on the following page:

<sup>&</sup>lt;sup>8</sup> Frances Lindsey (Deputy Director NGV), 2007

<sup>9</sup> ibid.

<sup>&</sup>lt;sup>10</sup> Paul Carter, Mythform: the Making of Nearamnew at Federation Square, The Miegunyah Press, Melbourne 2005, Page 22

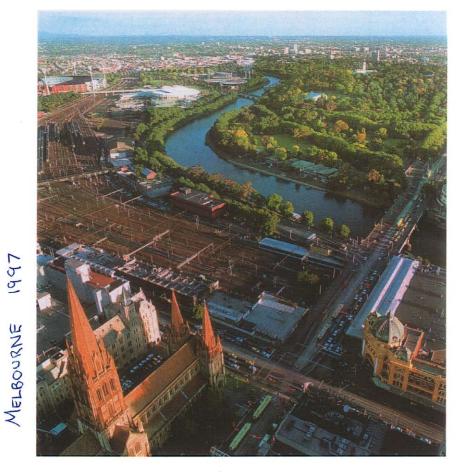


image 3

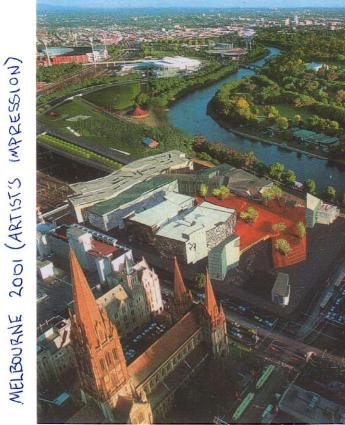


Image 4

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Before the rejuvenation of the area, the 'infamous' Gas and Fuel Corporation Towers stood as a barrier in between the rectangular central business district and the Yarra River, which flows along the southern edge. 11 Federation Square has become the first city block to functionally connect the central business district with the Yarra River. The design has allowed 24-hour access to the public, there is no closing time at Federation Square this is pivotal to the success the design has also included many entrances and exits, which allow the public to pass through the centre in a number of directions. 12 The layout of the entire square is based on a principle of complex harmony, the 'shard' and jagged nature of the geometry cause the layout to seem complex and even disorganised, often patrons of The Square are overwhelmed by the size and nature of the layout. The geometry, although confusing at first glance actually allows a relatively large internal floor space for the buildings while also maintaining the large public outdoor areas. This works by having the multiple levels of the building overlapping each other. The different buildings fit together in harmony without touching, they tessellate, the significance of this is that it means the space inbetween the buildings is not waisted and can be used by the public to move throughout The Square an example of this concept is between the building which houses the Racing Museum and the National Gallery of Victoria. Situated in between these buildings the design has placed a versatile function facility, called BMW Edge. Using closed and open thoroughfares, the design has been able to replicate the unique lane ways, which hold some of Melbourne's most stylish cafés and boutiques. The success of these design elements can be supported by the fact that commercial cafes and restaurants have been able to open on the north bank of the Yarra River, patrons are able to walk directly from the city through Federation Square to access the river. The design can also be considered a success because the design has met and even surpassed the governments demand for a link between the city and the river in such an imaginative and creative manner.

The unique manner of the layout is evident in the layout map on the following page:

<sup>&</sup>lt;sup>11</sup> Gervork Hartoonian, Federation Square, Architecture Australia Magazine March/April 2003 issue, Architecture Australia, 2003, Page 14

<sup>12</sup> ibid, page 15



Commercial properties such as Seven Eleven have been placed in areas where the space would otherwise be useless. The Seven Eleven store was placed below the building that houses machinery that keeps Federation Square operational, this area is unsuitable for the National Gallery of Victoria and the SBS Television recording studios due to the possibility of vibration and noise from plant room machinery. 

This seven eleven is different to other Seven Eleven outlets throughout Melbourne City, the normally exorbitant bright lights and large signage of the Seven Eleven branding has been toned down to make sure that the outlet remains subtle.

#### **Refer to Picture Below:**

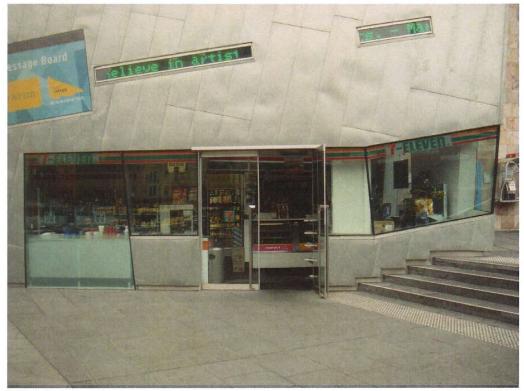


Image 6

On the following page is an image of a normal seven eleven outlet for comparison:

<sup>&</sup>lt;sup>13</sup> Federation Square, (Melbourne, Victoria), 2007



Image 7

The outlet at Federation Square does not allow us to be distracted from the clean lined design of the building that houses it. Although the 'hidden' nature of the placement of the outlet might interfere with the number of potential customers of the store, the design of Federation Square has not been allowed to be overtaken by the branding requirements of commercial outlets. This is an achievement for the architects and designers, other large-scale projects have not been as successful in allowing the design to overcome such restraints, examples include the proposed redevelopment of Madison Square Garden in New York City.

Another of Melbourne's famous and important landmark stands two kilometres south of Federation Square along St. Kilda Road. The Shrine of Remembrance was built after the Second World War to honour the service men and women who died. <sup>14</sup> The Shrine of Remembrance is situated on a hill in the middle of the St. Kilda Road boulevard. This means that there is an unrestricted view of the shrine from either end of St. Kilda Rd. Due to the heritage and significance of The Shrine, government regulations and hight limits restrict the number of floors that buildings on the east side of St. Kilda Rd and Swanson Street and can be built with. The design of Federation Square, which is located on the east side of Swanson Street, was governed by these hight limits. <sup>15</sup> The below photo shows the view along St. Kilda Road from the Shrine of Remembrance towards the Central Business District. St. Paul's Cathedral can be seen in the middle ground however, it is obvious that Federation Square cannot be seen.



**Image 8** 

<sup>&</sup>lt;sup>14</sup> The Shrine of Remembrance (Melbourne, Victoria) 2007

 $<sup>^{\</sup>rm 15}$  Phillip Goad,  $\it Urbanity$ , Architectural Media Magazine May/June 2000 issue, Architecture Australia, 2000, p35

Federation Square is also successful in the way that it fits in with the existing city buildings, the colours chosen for the exterior of The Square are colours inspired by the buildings which neighbour this area. Federation Square, although vastly different architecturally, is able to sit harmoniously with the neighbouring buildings by using a combination of the colours of these buildings. The buildings of Federation Square on the northern edge of the piazza along Flinders Street were originally designed to be taller then they are. 16 However, the Melbourne City Council felt that the height of these buildings hindered the view of St Paul's Cathedral on the opposite side of the road. The final design of Federation Square removed some of the buildings along the northern boundary creating a foot traffic thoroughfare and one of the many access points to the piazza. Other buildings, such as the visitors centre were lowered in hight to allow an uninterrupted view of St Paul's Cathedral from the southern edge of the city. 17 Through this design, St Paul's cathedral is integrated with Federation Square, a spatial connection between The Square and the cathedral is created by the two 'shard' buildings framing the south façade of the cathedral, this also makes the cathedral an integral part and central focus of this part of Federation Square.

#### Refer to image below.



Image 9

<sup>16</sup> ibid. p36

<sup>17</sup> ibid

The completion of Fed Square has led to various other improvements in the local area. Due to the increased tourism in the area generated by the Information Centre positioned on the intersection of Flinders and Swanson Streets, St Paul's Cathedral located across the road from Fed Square has seen restoration. The modern design of Federation Square sits in contrast with the heritage of both St. Paul's Cathedral and the famous façade of Flinders Street Railway Station. Since the opening of Federation Square, visits to St Paul's cathedral have increased by 200 thousand per annum; the historic cathedral also saw a restoration in 2005. Federation Square has provided a city square for Melbourne, an area where city office workers can congregate for lunch hours. Federation Square has been an enormous success in providing Melbourne with its first functional civic square. Melbourne has been voted equal first as the world's most liveable city<sup>18</sup>, this is partly due to the gentrification of the inner urban area, including the development of Federation Square. Fed Square has had a profound impact on the daily life of many Melbournians who work in the city; it has provided a fusion of arts, events, leisure, hospitality and promenading. Its dynamic architecture has made it an icon, its riverside location and the parkland that surrounds it has also ensured it has become a drawcard for locals and tourists alike. The centre has an annual visitation of more then 9 million people. 19

John Brumby the former state Minister for innovations in the Government of Victoria said :

"Federation Square is recognised as a Victorian icon. It has become a must see destination for tourists and locals..."

As John Brumby is a government official this confirms the sentiment that Federation Square is an icon of the city of Melbourne, it also shows that Federation Square has met the expectations of the Government; a major success for the project.

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<sup>&</sup>lt;sup>18</sup> Peta Greig, Melbourne 'world's top city', The Age Newspaper, February 6 2004, P4

<sup>&</sup>lt;sup>19</sup> John Brumby, Media Release: 'Federation Square Proves A Hit in 2003-2004', November 3 2004

<sup>&</sup>lt;sup>20</sup> ibid.

The unique facade of Federation Square utilises an outer shell of triangular panels some made of opaque glass, sandstone and others of perforated metal, this allows light to pass through whilst maintaining a solid looking exterior. The below image shows how the façade of Federation Square sits approximately 900 millimetres from the actual structural barrier of the building.

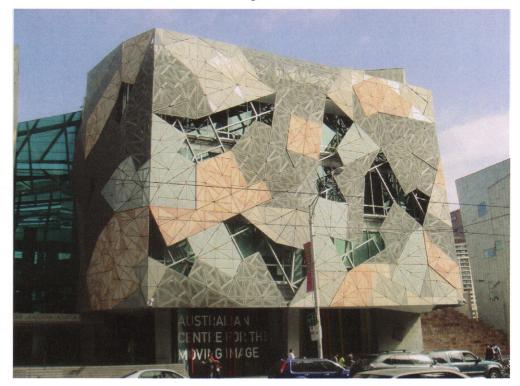


Image 10

Glass windows can be seen behind the façade, this means that the temperature of the interior remains relatively constant due to the outside panels reflecting or absorbing the heat, while allowing light to pass through due to their opaque nature. The cladding materials include glass, zinc both perforated and smooth, as well as sandstone, <sup>21</sup> which adds warmth and contrast against the cool grey of the metal. The colours are chosen to represent two sides of Australia, the urban environment is represented through the grey colours while the desert of Australia is represented with the sandstone. <sup>22</sup> Varying proportions of the façade, materials are used with the triangular pinwheel grid making different patterns and figurations, which create significant

<sup>&</sup>lt;sup>21</sup> Leon Van Schaik, *Design City Melbourne*, John Wiley & Sons Ltd, West Sussex, 2006, pp 82-83

<sup>22</sup> ibid.

surface qualities, which are unique to each part of the buildings. An overall coherence of The Square is maintained by new understandings of surface geometries; this allows the individual buildings of The Square to be differentiated from each other while staying aesthetically similar.



Federation Square also uses state of the art yet simple technology in the cooling system. Below the deck, that Federation Square sits on and above the railway lines lies a maze of concrete chambers, the walls are ribbed or rippled to give more surface area (**Picture below**). During the night cool air is pumped into the chambers, which zigzag back and forth under the buildings above, where the air is able to cool the concrete walls. The walls remain cool until the next day, air can be pumped through the chambers, and cooled by the concrete, and the cool air is then directed to the interiors.



Image 12

This method of cooling is remarkable in its efficiency; the system is capable of keeping the interior at a temperature 12 degrees below that of the exterior natural temperature. This is comparable to conventional cooling methods, however uses 10% of the energy requirements and releases less then 10% of the greenhouse gas emissions.<sup>24</sup> This technology was pioneered at Federation Square. Although successful in providing cooling to the complex, this system has its problems admits

<sup>&</sup>lt;sup>23</sup> Ecolibrium, *The Labyrinth: Cooling Federation Square*, 2003, Retrieved 28 April 2007, <a href="https://www.airah.org.au/downloads/2003-02-F02.pdf">www.airah.org.au/downloads/2003-02-F02.pdf</a>>

<sup>&</sup>lt;sup>24</sup> ibid.

Norman Bates. There is inherently some noise produced through the pumping process, however the machinery is located in isolated buildings away from tenants minimising the problem.<sup>25</sup> Federation Square is an example of a successful environmentally friendly development, not only is the cooling system efficient, the centre also collects rainwater for use in toilets, the wood flooring and panelling used in The Square is totally recycled coming from an abandoned warehouse in Melbourne's northern suburbs.

With a project as large as Federation Square, it would not be without its share of engineering problems. The large glass atrium (image below) suffered failures in glass ceiling panels, these glass panels allowed sun light to stream into the atrium, however due to these engineering problems the atrium is now covered with corrugated iron panelling, the atrium now needs to be artificially lit.



<sup>25</sup> ibid.

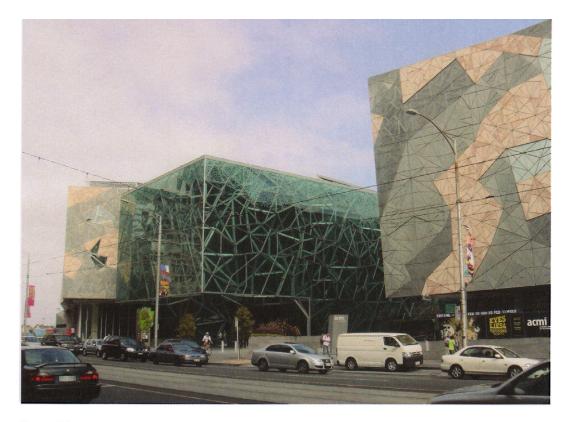


Image 14

Although The Square has suffered some minimal problems, the success of the design should be considered a large-scale success. Many architects such as distinguished Melbourne architect Ivan Rijavec believe that Federation Square is an icon of modern Australian Design.

"It [Federation Square] should be celebrated for taking Australian design out of the dark-ages and on to par with the rest of the world." 26

The design has been a success in many ways, including the use of new, innovative and challenging techniques, which have now been copied and used in other projects around the world including a project in the Netherlands and the Perth Arena in Western Australia.<sup>27</sup> However, how do the complex façade features of Federation

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<sup>&</sup>lt;sup>26</sup> Ivan Rijavec (Melbourne Architect) 2007

 $<sup>^{27}</sup>$  Peter Ker, 'Architects cry copy cat over Federation Square', The Age Newspaper, January 27 2007, page 9s

Square add to the overall success of the aesthetics? The façade of Federation Square is what makes it special it is unique and the success of Federation Square in an aesthetical sense owes a lot to the use of this. There are, however, harsh critics of Fed Square who maintain a point of view that the overall appearance of The Square lacks personality, and that it is essentially an imitation of the Jewish Museum in Berlin designed by Daniel Libeskind who also happened to be on the judging panel.<sup>28</sup>

### Refer to pictures below for comparison:



Image 15 - Jewish Museum, Berlin



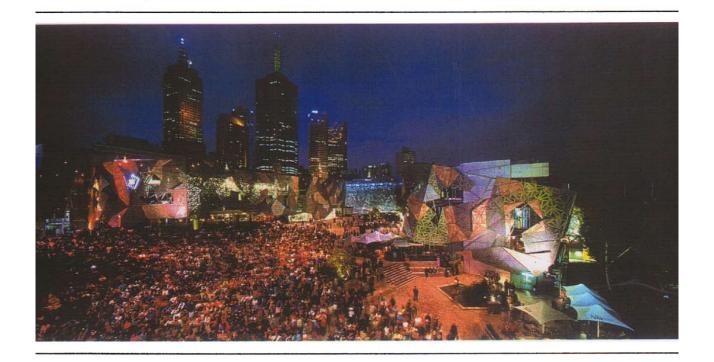
Image 16 - Federation Square, Melbourne

Norman Day a Melbourne architect and former professor at the Royal Melbourne Institute of Technology, has the opinion that the 'shattered' geometry of the overall layout means that the featured buildings fit loosely together without a common connection.<sup>29</sup> However, the open plan feeling that The Square has is partly due to the large piazza covering around one-third of the total area. The Piazza was an idea of the governments to create a large area where people could congregate and an area that could be used for various activities. There is no doubt that this piazza has become a success with between ten and fifteen thousand people often gathering here to watch

<sup>&</sup>lt;sup>28</sup> Norman Day, *Federation Square*, Architecture Australia Magazine November/ December 1998 issue, architectural media publisher, 1998, page 12

<sup>&</sup>lt;sup>29</sup> Coney, Page 74

events on the large screen located on the exterior of one of the buildings.<sup>30</sup> The Piazza also accommodates a raised platform acting as a stage where free performances and event promotions such as the official launch for the Melbourne Formula One Grand Prix, can be made. In 2003-2004 there were around 970 events staged at Federation Square, including the Melbourne International Arts Festival, The Melbourne Food And Wine Festival and the Official Olympic Torch Relay Welcoming Ceremony.<sup>31</sup>



<sup>30</sup> Federation Square (Melbourne), 2007

<sup>31</sup> Brumby

In the original design of Federation Square there was no Visitors Centre provided. <sup>32</sup> However, the then Premier of Victoria Jeff Kennett commissioned the architects to provide such in the final design. <sup>33</sup> The result is a successful location of the visitors centre on the busiest intersection in Melbourne and across the road from the main Rail — Way Station. It is housed in a 'shard' building, a building that makes use of zinc and aluminium panels to create a distinct and sharp object, this causes the visitors centre to stand out, making it more visible for potential patrons. Although highly functional, the placement of the visitors centre in this location has led to a discrepancy in the overall pleasing aesthetics of The Square. The original design placed an architectural tower in this position, it is a pity that the Information centre was placed here without the thought of combining the two. **Refer to image below:** 



Image 18

The colours used in the information centre differ to those used in the rest of Federation Square. The blue-film glass, causes the centre to be distinctively different, it is not necessarily a good thing, although the design placement of the centre is a success in that it has provided an invaluable resource for Melbournians and tourists.

<sup>32</sup> Goad

<sup>&</sup>lt;sup>33</sup> Federation Square, *Architecture and Design Background: Venue Design,* 2003, Retrieved 3 May 2007, <a href="http://www.federationsquare.com.au/index.cfm?pageID=29">http://www.federationsquare.com.au/index.cfm?pageID=29</a>

The design of Federation Square has been very successful in a number of ways. Not only has the design fulfilled the expectations of Melbourne locals, it has surpassed the design demands put in place by the State Government of Victoria. Aesthetically the design has provided a beautiful addition to cityscape, it has also been an invaluable asset in the renewal and gentrification of the central Melbourne area. The modern architecture has made it an icon, thus fulfilling one of the prerequisites of the design formed by the judging panel. The creation of a pathway between the city and the Yarra River has enabled the development of parkland along the northern edge of the Yarra. The success of Federation Square can also be measured in the number of annual visitors, which numbers close to 10 million people. Federation Square is a functional space, providing a civic area, which had never existed in Melbourne. This civic centre allows audiences of 10,000 people to gather for events fulfilling another demand put in place by the government. There is no doubt that the design of Federation Square has played a significant role in The Square becoming a success in the eyes of locals and distinguished architects such as Ivan Rijavec. The aesthetics of the design combined with its functionality make it a worldclass venue, however, surprisingly Federation Square is relatively unknown outside of Australia. There is magnetism in Federation Square; people are drawn to its large spaces, if the design was a failure would so many people utilise the spaces every day? The success in the design lies in 3 distinct areas:

- Fulfilling and surpassing the government expectations
- Aesthetically
- Functionality

The success of The Square can also be measured when comparing it to other projects on a similar scale, it seems that Federation Square is the ultimate building, every detail be it small or large has been thought of in an attempt to create such a success. Other developments on a similar scale lack the imagination that is evident in the design of Federation Square. Perhaps the design has been such an immense success because it is the product of an international design competition and also because it was such an important project; providing Melbourne with its first civic centre. There is little doubt that the design of Federation Square has been a huge success in the criteria that is normally expected of such public buildings.

# **Bibliography**

## **Primary Sources:**

- Federation Square, (Melbourne, Victoria), 2007
- Frances Lindsey (Deputy Director NGV), 2007
- The Shrine of Remembrance (Melbourne, Victoria) 2007
- Ivan Rijavec (Melbourne Architect), 2007

## **Secondary Sources:**

- Claire Coney, Federation Square, Hardie Grant Books, South Yarra, 2003
- Federation Square Management Pty Ltd, Federation Square: Design, Project Brocher, Melbourne, 2001
- Paul Carter, *Mythform : the Making of Nearamnew at Federation Square*, The Miegunyah Press, Melbourne, 2005
- Gervork Hartoonian, Federation Square, Architecture Australia Magazine March/April 2003 issue, Architecture Australia, Melbourne, 2003
- Phillip Goad, *Urbanity*, Architectural Media Magazine May/June 2000 issue, Architecture Australia, Melbourne, 2000
- Peta Greig, Melbourne 'world's top city', The Age Newspaper, Australia, February 6 2004
- John Brumby, Media Release: 'Federation Square Proves A Hit in 2003-2004', November 3 2004
- Leon Van Schaik, Design City Melbourne, John Wiley & Sons Ltd, West Sussex, 2006
- Ecolibrium, *The Labyrinth: Cooling Federation Square*, 2003, Retrieved 28 April 2007, <www.airah.org.au/downloads/2003-02-F02.pdf>
- Peter Ker, 'Architects cry copy cat over Federation Square', The Age Newspaper, Australia, January 27 2007
- Norman Day, Federation Square, Architecture Australia Magazine November/ December 1998 issue, Architectural Media Publisher, Melbourne, 1998
- Federation Square, Architecture and Design Background: Venue Design, 2003, Retrieved 3 May 2007,
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