

# 2012 SUPERCHEAP AUTO BATHURST 1000

Economic Impact Report



Prepared for Bathurst Regional Council

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# 2012 SUPERCHEAP AUTO BATHURST 1000

## EXECUTIVE SUMMARY

Bathurst Regional Council commissioned the Western Research Institute (WRI) to prepare an economic impact analysis of 2012 Supercheap Auto Bathurst 1000 on the Bathurst and Central West regional economies, and on NSW as a whole.

The impacts were estimated in terms of value added, household income, and full-time equivalent (FTE) employment.

**Table 1. Total impact of Supercheap Auto event on the economies of Bathurst, Central West and New South Wales**

Region	Value Added \$mln	Household Income \$mln	Employment FTE
Bathurst	25.28	14.47	255
Central West	30.53	15.35	305
NSW	55.43	28.32	475

Total expenditure in Bathurst (spectators, teams, event promoter, contractors, media, suppliers and police) during the event was \$25.89 million (an increase of 18.71% compared to the 2008 event - \$21.81 million).

Spectators' expenditure, despite sluggish economic conditions and lower per capita expenditure, stood at \$20.45 million during the event in Bathurst, an increase of 27.02% compared to 2008 (\$16.10 million).

The Bathurst hospitality sector was the largest beneficiary of the event, with an additional \$6 million generated in value added (9.84% of the gross value added in 2012 in the Bathurst hospitality sector) and 97 FTE jobs created.

The economic impact was calculated using an input-output table constructed for the Bathurst and Central West regions and for New South Wales. This table was then used to estimate the economic impact of the event by examining how the regional and state economies would be expected to change due to additional expenditure by spectators, event promoters, teams, contractors and suppliers, police and media during the event. The economic impact was estimated using the marginal coefficients model, which addresses the overestimation problems associated with traditional economic impact analysis.

# 2012 SUPERCHEAP AUTO BATHURST 1000

## 1. INTRODUCTION

Bathurst Regional Council commissioned the Western Research Institute (WRI) to prepare an economic impact analysis of the Supercheap Auto Bathurst 1000 event ("Supercheap Auto") that took place at Mt. Panorama, Bathurst, from 4 to 7 October 2012, being the 50th Anniversary of the races at Mt. Panorama.

In 2009, WRI estimated the economic impact of four Mount Panorama motor racing events on the Bathurst economy, including the Drive Bathurst and Sprint Bathurst event (December 2008), WPS Bathurst 12 Hour race (February 2009), Shannons Celebration of Motor Sport (April 2009), and the Supercheap Auto event (October 2008).

The 2009 study showed that the impact of the Supercheap Auto event far exceeded the impact of the other three events combined. In addition, the anniversary of the Supercheap Auto event portended increased expenditure by the spectators, event organisers and businesses, and therefore a greater economic impact on the Bathurst and Central West regional economies.

The significance of the 2012 Supercheap Auto event in terms of its scale and historical anniversary influenced the scope of this study, limiting it to this one event.

- The economic impacts were determined for the Bathurst, Central West and New South Wales economies. The impacts measured include direct impacts of the race and the flow-on effects on upstream industries) measured in terms of value added, household income and full time equivalent employment.
- The impacts were estimated by gathering information on the total and per capita expenditure by different types of spectators, as well as aggregate expenditure by the event promoter, participating teams, contractors and suppliers, as well as police and media present at the event.

WRI has conducted this study, analysing primary data collected through surveys, and also modelling the economic impacts of increased expenditure, using WRI proprietary software.





## 2. METHODOLOGY

### 2.1 Data collection

Spectator expenditure data for the Supercheap Auto event was drawn from the survey of 828 spectators at the event conducted by WRI for Bathurst Regional Council. That data was analysed to allocate average daily expenditure by type of visitor and average length of stay.

Bathurst Regional Council provided contact details for the promoters of the 2012 event. The event promoter provided information regarding its own expenditure as well as contact details for participants, media, contractors and suppliers. These in turn were contacted to ascertain their expenditure in Bathurst associated with the events.

Other sources of information used in assessing the economic impacts of the events included:

- Bathurst Visitor Information Centre; and
- NSW Police.

The information collected was analysed and cross checked to minimise the possibilities of double counting. It was also aggregated to ensure confidentiality.

### 2.2 Modelling

WRI used input-output analysis to estimate the economic impact of the Supercheap Auto on the Bathurst, Central West and NSW economies. Input-output modelling provides a detailed picture of the structure of the economy at a particular point in time. The input-output tables constructed for the analysis are for the 2011/12 financial year and so estimate the impact of the sporting event in that year.

The input-output tables for this project were derived from the Australian Bureau of Statistics (ABS) 2008/09 National input-output table. Tables for NSW, Central West and Bathurst<sup>1</sup> were created from the ABS data and adjusted to reflect the economic structure of each region.<sup>2</sup> Further information is available in Appendix 1.

The impact of Supercheap Auto sporting event was estimated as a final demand impact. Specifically, the expenditure associated with the event was allocated to the relevant sectors (contained in the Australian and New Zealand Standard Industrial Classification – ANZSIC-2006) to give the estimated impacts of this expenditure including both initial and flow-on effects.

<sup>1</sup> Bathurst is defined as Bathurst Local Government Area (LGA)

<sup>2</sup> The Central West is defined as Central West statistical area level 4 (SLA4). The Central West table included the following Statistical Areas Level 3 – Bathurst, Bathurst East, Bathurst Region, Oberon, Condobolin, Cowra, Cowra Region, Forbes, Grenfell, Parkes, Parkes Region, West Wyalong, Lithgow, Lithgow Region, Mudgee, Mudgee Region (West and East), Wollangambe – Wollemi, Blayney, Orange, Orange – North, Orange Region.

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The impact of the Supercheap Auto race in each region has been provided in terms of:

- Value added which is equal to gross output minus intermediate inputs. Value added is equivalent to the contribution to gross regional product (the local equivalent of gross domestic product).
- Household Income which measures the benefit received by regional households from economic activity. It typically refers to compensation of employees but can also include income in return for other forms of productive activity.
- Employment, which refers to full-time equivalent (FTE) employment, is a measure of the total level of labour resources used. The FTE of a full-time employee is equal to 1.0. The FTE of a part-time employee will be a fraction of this depending on the relative number of hours worked.

All impacts estimated in this report use marginal coefficients to provide a more accurate representation of the flow-on effects of expenditure than would be possible using a linear model. That is, the marginal coefficients model largely overcomes the overestimation of impacts that can result from using the linear approach. A more detailed description of the marginal coefficients approach can be found in Appendix 1.

One of the intentions of WRI and Bathurst Regional Council was to obtain results that are comparable to the ones contained in the 2009 report, and to ensure methodological consistency of both reports. This objective was achieved; however a few qualifications need to be made about the results and methodology:

- Structural change in the intervening period was underway at nationwide, local and business enterprise levels. As shown further in the report, this was manifested in altered expenditure and employment levels and patterns, the changing role of support racing events during the Supercheap Auto races, as well as ongoing integration of the regional economies of Bathurst and the Central West;
- The 2009 analysis utilised the input-output tables issued by the Australian Bureau of Statistics for the year 2004-05, while the present report used 2008-09 input-output table, updating them for the relevant years (2008-09 in the former case and 2011-12 in the latter). However, the full impact of structural changes may not always be captured, when reports are updated. Also, the modelling of the economic effects necessarily involves conversion of the expenditure data to basic prices. In the 2009 report a manual process based on a set of assumptions about the local economy was performed by the analyst, whereas in the present report the conversion is performed by an algorithm embedded in the software. The difference between conversion procedures may slightly affect the comparison of the economic effects and multipliers.



## 3. EXPENDITURE PATTERNS

The Supercheap Auto was held between Thursday 4 October and Sunday 7 October in 2012. Total attendance over the four days was 207,205, with 57,939 people being at the circuit on the Sunday for the main event. The event is organised by V8 Supercars Australia Pty Ltd (V8 Supercars). In 2012 the following classes of motor racing were held over the course of the event, V8 Supercars, the Carrera Cup Australia, Formula Ford, touring cars, Legends and the V8 Ute racing series.

### 3.1 Spectator expenditure

The data on spectator expenditure was collected through 828 surveys conducted in the few days preceding the races in the Bathurst CBD, during the races at the racing circuit and after the race via e-mail.

The surveys sought specifically to determine the expenditure patterns of spectators. Data from that survey was applied to spectator numbers for the 2012 event to generate an estimate of the economic impact of spectator expenditure on the Bathurst, Central West and NSW economies.

Expenditure patterns for visitors to Bathurst staying overnight were analysed by type of accommodation utilised and average length of stay. This data was included in the modelling of impacts on the Bathurst region. Similarly, expenditure patterns for visitors staying overnight in accommodation outside Bathurst, but in the surrounding region, were also analysed by average length of stay and included in the modelling of impacts on the Central West region and NSW.

Specific expenditure items were excluded from the assessment of the economic impact on the Bathurst economy. These items and the reason for exclusion are listed below:

- Expenditure by residents of Bathurst – this was conservatively assumed to be expenditure switching, whereby the money spent associated with the Supercheap Auto event would otherwise have been spent on another good or service in Bathurst;
- Expenditure on food, beverage and merchandise at Mount Panorama – this was excluded because the revenue generated goes to the suppliers who have a contract with V8 Supercars rather than into the Bathurst economy;
- Expenditure on camping accommodation in Bathurst – V8 Supercars makes a payment to Bathurst Regional Council which includes the temporary lease of the camping areas on Mount Panorama as well as other places in Bathurst township. The payments made by V8 Supercars are included in the assessment of the economic impact of promoter expenditure examined in Section 4. However, the revenue from camping ground rental by spectators goes to V8 Supercars rather than to the Bathurst economy.
- Expenditure on tickets – this revenue goes to V8 Supercars and is therefore not a direct contributor to the Bathurst economy.

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The average daily expenditures for different types of spectators in Bathurst, Central West and NSW during the Supercheap Auto event are shown in Tables 3.1, 3.2 and 3.3 below.

**Table 3.1: Average expenditure per person per day in Bathurst**

Type of expenditure	Accommodated Overnight in Bathurst				Accommodated Overnight in region	One day visitor
	Hospitality	Home hire	Camping	Other		
Accommodation	\$179.37	\$99.31		\$29.56		
Food & beverage (hospitality sector)	\$20.85	\$31.55	\$7.73	\$10.21	\$5.74	\$16.14
Food & beverage (retail sector)	\$16.27	\$20.56	\$22.77	\$12.73	\$5.55	\$19.34
Other retail	\$4.89	\$8.43	\$6.46	\$3.44	\$3.28	\$9.20
Petrol	\$9.25	\$13.65	\$11.66	\$7.92	\$6.14	\$21.99
Car hire	\$10.67	\$5.52	\$1.94	\$0.49	\$2.58	\$8.62
Transportation	\$3.88	\$3.72	\$0.88	\$1.38	\$0.36	\$4.11
Entertainment	\$2.51	\$0.88	\$0.54	\$1.04	\$0.36	\$2.21
Other	\$1.00	\$43.03	\$0.74	\$0.12	-	-
<b>Total</b>	<b>\$248.69</b>	<b>\$226.65</b>	<b>\$44.99</b>	<b>\$66.89</b>	<b>\$24.01</b>	<b>\$65.47</b>

Persons staying overnight in hotels, motels and guest houses reported the highest average daily expenditure at \$248.69 while spectators who were camping in Bathurst had the lowest average daily expenditure of overnight visitors (\$44.99). However, it should be noted that their expenditure on camping ground rental has not been included. Spectators staying overnight in campgrounds reported the highest overall average expenditure on food and beverage, particularly in the retail sector which includes supermarkets, corner stores and bottle shops, as well as on petrol. The average length of stay for people staying overnight in Bathurst in all types of accommodation was 4.81 nights.

Persons staying overnight in other locations in the Central West had insignificant average daily expenditure in Bathurst, and hence this was not included in Table 3.2. Outside Bathurst, spectators reported highest daily average expenditure in Orange (\$107.85) and Oberon (\$88.32), with most of the money spent on accommodation.

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**Table 3.2: Average expenditure per person per day in the rest of Central West**

Type of expenditure	Accommodated Overnight in:			
	Orange	Blayney	Lithgow	Oberon
Accommodation	\$100.49	\$48.24	\$82.28	\$85.06
Food & Beverage (hospitality sector)	\$2.44	\$1.87	\$1.56	\$0.72
Food & Beverage (retail sector)	\$1.82	\$1.87	\$1.42	\$1.81
Other retail	\$0.88	\$0.06	\$0.03	\$0.05
Petrol	\$1.45	\$0.27	\$0.48	\$0.36
Car hire	\$0.43	-	-	-
Transportation	\$0.20	-	-	-
Entertainment	\$0.14	-	-	\$0.17
Other	-	-	-	\$0.15
<b>Total</b>	<b>\$107.85</b>	<b>\$52.31</b>	<b>\$85.77</b>	<b>\$88.32</b>

Most of the expenditure made in the rest of NSW (excluding Central West) was attributed to day trippers; hence zero expenditure on accommodation in Bathurst, and minimal expenditure on other items in Bathurst. On average day trippers spent \$327.9 per day, with accommodation outside Bathurst and Central West standing at \$271.31 per night.



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**Table 3.3: Average expenditure per person per day in the rest of NSW**

Type of expenditure	Overnight in Bathurst	Overnight in the region	Day trippers
Accommodation		\$92.71	\$271.31
Food & Beverage (hospitality sector)	\$3.99	\$1.85	\$8.47
Food & Beverage (retail sector)	\$0.46	\$1.04	\$5.06
Other retail	\$0.55	\$1.16	\$3.47
Petrol	\$5.05	\$4.41	\$13.29
Car hire	\$6.73	\$8.18	\$21.93
Transportation	\$1.78	-	\$3.92
Entertainment	-	\$0.19	\$0.45
Other	\$0.03	-	-
<b>Total</b>	<b>\$18.59</b>	<b>\$109.54</b>	<b>\$327.90</b>

Average daily expenditure was multiplied by the average length of stay in each category of spectator to calculate total spectator expenditure in Bathurst as shown in Table 3.4. It is estimated that spectators at the 2012 Supercheap Auto event spent \$20.44 million in the Bathurst region (\$7.71 million in the rest of Central West, \$5.05 million in the rest of NSW) with accommodation being the most significant type of spending, followed by food and beverage from the retail sector.

It should be noted that expenditure on accommodation includes payments made under the home hire scheme. This is officially run through the Bathurst Visitor Information Centre with a percentage of the rentals paid being received by Bathurst Regional Council. In 2012 a total of 134 homes were let under this scheme. However, as the scheme has been operating for a number of years, it is understood that there are many other homes being let privately during this event.

**Table 3.4: Total spectator expenditure in Bathurst, rest of Central West and rest of NSW at the 2012 Supercheap Auto Bathurst 1000**

Type of expenditure	Bathurst	Rest of Central West	Rest of NSW	Total
Accommodation	\$6,782,919.62	\$6,909,949.00	\$2,199,298.00	<b>\$15,892,166.62</b>
Food & beverage (retail sector)	\$4,598,250.61	\$291,071.00	\$2,067,929.00	<b>\$6,957,250.61</b>
Food & beverage (hospitality sector)	\$2,683,935.55	\$293,897.20	\$91,548.89	<b>\$3,069,381.64</b>
Other retail	\$1,420,681.24	\$42,007.36	\$68,624.87	<b>\$1,531,313.47</b>
Petrol	\$2,645,478.34	\$127,476.50	\$133,202.80	<b>\$2,906,157.64</b>
Car hire	\$759,410.54	\$17,343.06	\$274,252.70	<b>\$1,051,006.30</b>
Transportation	\$364,245.93	\$8,093.43	\$210,670.20	<b>\$583,009.56</b>
Entertainment	\$210,350.06	\$14,034.79	\$3,632.94	<b>\$228,017.79</b>
Other	\$976,247.00	\$10,264.75	\$4,295.31	<b>\$990,807.06</b>
<b>Total</b>	<b>\$20,441,518.88</b>	<b>\$7,714,137.09</b>	<b>\$5,053,454.72</b>	<b>\$33,209,110.68</b>

In assessing the economic impact of the 2012 Supercheap Auto, the expenditure made in Bathurst on home hiring should be treated with caution. While the money is paid to residents of Bathurst, it does not necessarily remain in the Bathurst economy. It is likely that many of the residents of the City who rent out their property during this period choose to leave the area on a short vacation and spend the money received at their temporary destination. In the absence of any information regarding the spending patterns of these home owners, it has been assumed that fifty percent of the rental money received is spent outside the Bathurst region. However, it should also be noted that the revenue from home hire is a relatively small component of the overall contribution to the economy of Bathurst.

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## 3.2 Competitor expenditure

A survey of teams participating in the 2012 Supercheap Auto event was undertaken to determine the level of expenditure in Bathurst associated with the event. This incorporated questions regarding type of expenditure as well as the number of persons included in the team. The total expenditure by teams associated with competitors in the various events at the 2012 Supercheap Auto in Bathurst, Central West and NSW is shown in Table 3.5 below.

**Table 3.5: Total competitor expenditure in Bathurst, Central West and NSW at the 2012 Supercheap Auto Bathurst 1000**

Type of Expenditure	Bathurst	Central West	NSW
Accommodation	\$1,060,351.00		
Meals	\$222,524.00	-	-
Retail purchases	\$81,019.00	-	-
Travel and flights	\$82,139.00	-	\$14,934.00
Fuel	\$29,869.00	-	-
Equipment hire	\$18,668.00	-	-
Car rental	-	-	-
Subcontractors	\$14,934.00	-	-
Entertainment	\$18,668.00	-	-
Clothing and footwear	-	-	-
Catering chef	-	-	-
<b>Total</b>	<b>\$1,528,172.00</b>	<b>-</b>	<b>\$14,934.00</b>

Key features are as follows:

- Competitors at the 2012 Supercheap Auto spent approximately \$1.53 million, including \$1.06 million and \$0.22 million on accommodation and meals respectively. Virtually all expenditure by competitors was made in Bathurst, none in other Central West LGAs and a small fraction in the rest of the New South Wales.
- Competitor expenditure in 2012 pertaining to the Bathurst economy represents a fall of 33.2% from the 2008 expenditure level (\$2.28 million). This is attributed to fewer participants in the support events (920 in 2012 versus 1871 in 2008) and the smaller overall expenditure of support teams (\$0.95 million in 2012 versus \$1.7 million in 2008).
- However, the expenditure by core teams (i.e. teams participating in the main Sunday event) in Bathurst stood at \$0.57 million, a level comparable to core team expenditure in 2008 (\$0.59 million).



## 3.3 Promoter, Media, Contractor, Supplier and Police Expenditure

Expenditure data was supplied by V8 Supercars (promoter of the event), a sample of contractors and suppliers for the event, V8 Supercars media and NSW Police. The total expenditure from these various groups has been aggregated to ensure confidentiality of the data.

Total aggregated expenditure by the promoter, media, contractors and suppliers and NSW Police in the Bathurst, Central West and NSW regions, resulting from the 2012 Supercheap Auto event, is shown in Table 3.6.

**Table 3.6: Total promoter, media, contractor, supplier and police expenditure at the 2012 Supercheap Auto Bathurst 1000**

Industry Sector	Bathurst	Other Central West	Other NSW
Printing, Publishing & Recorded Media	\$250.00		\$13,870.00
Electricity, Gas & Water Supply	-	-	\$406,106.00
Construction	\$39,577.00	-	\$55,442.00
Retail/Wholesale Trade	\$216,845.00	\$31,321.00	\$108,702.00
Accommodation, Cafes and Restaurants	\$1,017,242.00	\$29,500.00	\$17,850.00
Transport and Storage	\$230,797.00	\$4,530.00	\$203,813.00
Communication Services	\$13,866.00	-	-
Property and Business Services	\$214,765.00	\$28,752.00	\$671,815.00
Government Administration and Defence	\$1,615,693.00	-	-
Health and Community Services	\$93,098.00	-	\$38,000.00
Cultural and Recreational Services	\$56,245.00	\$45,289.00	\$7,486.00
Personal and Other Services	\$431,053.00	-	\$3,820.00
<b>Total</b>	<b>\$3,929,431.00</b>	<b>\$139,392.00</b>	<b>\$1,526,904.00</b>

It should be noted that Bathurst Regional Council incurs expenses associated with the operation of the Supercheap Auto event. These are primarily associated with maintenance of the track, spectators' area and other cleaning and maintenance costs. In addition, there are costs associated with the off-track events held in conjunction with the Supercheap Auto. It could be argued that these expenses are only incurred because of the events and should be deducted from the overall income generated in the city. However, it is likely that in the absence of the events this money would be spent elsewhere. Moreover, the expenditure associated with the maintenance works is generally spent locally. Hence, substantial expenditure is assigned to the government administration and defence sector.

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## 4. ECONOMIC IMPACT OF THE 2012 SUPERCHEAP AUTO BATHURST 100

Tables 4.1 to 4.3 provide estimates of the contribution of the Supercheap Auto to value added (gross regional product), household income (wages and salaries) and full time employment in NSW, Central West and Bathurst, based on the marginal coefficients model. The impacts are expressed in 2011-12 dollar values and include flow-on effects.

### 4.1 Impact on New South Wales

**Table 4.1: Impact of the Supercheap Auto on NSW**

NSW (marginal coefficients), including Central West						
	Value Added	\$mIn	Household	Income	Employment	FTE
				\$mIn		
Initial Impact		17.45		10.13		226
Flow-on		37.98		18.19		249
Total Impact		55.43		28.32		475
Multiplier		3.177		2.794		2.102

When flow-on effects are taken into account, the additional expenditure attributed to the Supercheap Auto event is estimated to generate the following in the NSW economy:

- Approximately \$55.4 million in value added (gross regional product), representing 0.01% of gross state product of NSW;
- Approximately \$28.3 million in household income; and
- Approximately 475 FTE jobs, representing 0.02% of NSW total full-time employment.

#### Summary of impacts on NSW:

- **\$55.4m in GRP (0.01% of GSP for NSW).**
- **\$28.3m in household income**
- **475 FTE jobs (0.02% of NSW full-time employment)**

## 4.2 Impact on Central West

**Table 4.2: Impact of the Supercheap Auto event on Central West SLA4**

Central West (marginal coefficients), including Bathurst						
	Value Added	\$mIn	Household Income	\$mIn	Employment	FTE
Initial Impact		15.26		9		196
Flow-on		15.26		6.35		109
Total Impact		30.53		15.35		305
Multiplier		2		1.706		1.559

When flow-on effects are taken into account, the additional expenditure attributed to the Supercheap Auto event is estimated to generate the following in the economy of the Central West:

- Approximately \$30.5 million in value added (gross regional product), representing 0.26% of gross regional product of the Central West;
- Approximately \$15.4 million in household income; and
- Approximately 305 FTE jobs, representing 0.35% of the Central West total full-time employment.

### Summary of impacts on Bathurst:

- **\$30.5m in GRP (0.26% of GRP of Central West)**
- **\$15.4m in household income**
- **305 FTE jobs (0.35% of Central West total full-time employment)**

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## 4.3 Impact on Bathurst

**Table 4.3: Impact of the Supercheap Auto event on Bathurst LGA**

Bathurst (marginal coefficients)				
	Value Added \$mIn	Household Income \$mIn	Employment	FTE
Initial Impact	10.53	6.88		140
Flow-on	14.75	7.59		115
Total Impact	25.28	14.47		255
Multiplier	2.401	2.103		1.826

When flow-on effects are taken into account, the additional expenditure attributed to Supercheap Auto races is estimated to generate the following in the economy of Bathurst LGA:

- Approximately \$25.3 million in value added (gross regional product), representing 1.45% of Bathurst's gross regional product;
- Approximately \$14.5 million in household income; and
- Approximately 255 FTE jobs, representing 1.6% of Bathurst's total full-time employment.

### Summary of impacts on Central West SLA4:

- **\$25.3m in GRP (1.45% of Bathurst's GRP)**
- **\$14.5m in household income**
- **255 FTE jobs (1.6% of Bathurst's total full-time employment)**

## 4.4 Impact by industry sector

As shown in Table 4.4, sector-wise the largest relative economic impacts were experienced in the Bathurst hospitality sector, with value added from the event representing 9.84% of the total value added in the Bathurst hospitality sector in financial year 2011/12 (and FTE jobs created by the event representing 9.9% of all jobs in the Bathurst hospitality industry). Hospitality is followed by food and beverage manufacturing (7.35% of total value added and 7.37% of FTE jobs in the Bathurst food and beverage sector), chemical product manufacturing (4.38% and 5.00%), and textile manufacturing (4.0% and 3.33%) and printing (3.45% and 3.33%).

**Table 4.4: The economic impact of Supercheap Auto races on Bathurst economy by sector – top 5 sector impacts based on value added**

Sector	Value Added			Household income		Employment (FTE)		
	\$mIn	% of total from event	% of total in Bathurst	\$mIn	% of total from event	No.	% of total from event	% of total in Bathurst
Hospitality	6	23.7	9.84	3.86	26.7	97	38	9.90
Food & beverage mfg	1.69	6.7	7.35	1.02	7.1	14	5.6	7.37
Chemical product mfg	0.57	2.2	4.38	0.35	2.4	4	1.4	5.00
Textile mfg	0.2	0.8	4.00	0.13	0.9	2	0.9	3.33
Printing	0.38	1.5	3.45	0.24	1.7	4	1.7	3.33

In line with value added, the sector benefiting most from the sporting event in Bathurst in terms of FTE employment is hospitality (97 full time jobs created as a result of event). Other top employment impacts were in retail trade (18 full time jobs), personal and other services (18 full time jobs), food and beverage manufacturing (14 full time jobs) and public administration (11 full time jobs).

### Top 5 employment impacts of the event:

- **Hospitality (97 FTE jobs)**
- **Retail (18 FTE jobs)**
- **Personal and other services (18 FTE jobs)**
- **Food and beverage manufacturing (14 FTE jobs)**
- **Public administration (11 FTE jobs)**

# 2012 SUPERCHEAP AUTO BATHURST 1000

## COMPARISON: 2011 FORMULA 1 GRAND PRIX

	2012 Supercheap Auto	2011 Formula 1 Grand Prix
Value Added	\$55.4m	\$39.34m
FTE Jobs	475	411

The \$55.4m generated by the Supercheap Auto event in value added represents 1.29% of gross value added of the NSW arts and recreation industry for 2011/12 financial year.

The \$55.4m in valued added generated by the Supercheap Auto event represents 17% of net inflow of money into NSW from all major events.

## 4.5 Comparison with other motor racing events

The economic significance of the Supercheap Auto event should be viewed in comparison to other major motor racing events held in Australia in 2011/12:

- The 2011 Formula 1™ Australian Grand Prix (24-27 March 2011) in Melbourne that created 411 FTE jobs and generated \$39.34 million in value added (gross state product) in the state of Victoria;<sup>3</sup>
- Australian Moto GP races and Phillip Island 500 V8 Supercars races that generated respectively \$24.26 and \$13.83 million in gross output in the Bass Shire local economy.<sup>4,5</sup>

## 4.6 Economic impact of the Supercheap Auto event in the context of the Arts and Recreation Industry

WRI also notes that a more appropriate reference point for the assessment of the economic impact of the Supercheap Auto event on NSW is value added generated in the NSW arts and recreation industry and the economic impact of all major events held in NSW.

In the former case, the value added generated by the Supercheap Auto event (\$55.4 million) represents 1.29% of the value added (in current prices) of NSW arts and recreation industry in 2011/12 financial year (\$4,266 million).<sup>6</sup>

In the latter case, the value added generated by the Supercheap Auto event in NSW (\$55.4 million) is compared to \$326 million, representing the net inflow of monies into NSW from 56 major events (festivals, sporting and entertainment events) during July 2011-April 2012, as documented by the Destination NSW. The value added generated by the Supercheap Auto event stands at 17% of the net inflow of money into the NSW from these events.

**The comparison suggests that the Supercheap Auto event in 2012 had substantial economic impact on the state and local economies in both relative and absolute terms.**

3 Ernst & Young. The Economic Impact of the 2011 Formula 1™ Australian Grand Prix. Report Prepared for Tourism Victoria, July 2011.

4 Urban Enterprises Pty Ltd. Social and Economic Value of Events, Bass Coast Shire Council. September 2011, Appendix B.

5 The gross output, as reported by Urban Enterprises is not directly comparable to value added provided in this report.

6 Australian Bureau of Statistics, Category 5220.0, series A2714315C.



## 5. COMPARISON WITH PREVIOUS STUDY

The 2009 study into the economic contribution of racing events at Mount Panorama (including the Supercheap Auto event) was determined using input-output analysis (marginal coefficients model). The same approach was used in this report.

This study has shown that the Supercheap Auto event make a significant contribution to the regional economies of Bathurst and the Central West (in terms of value added, household income and FTE employment), and had a sizeable impact on the NSW economy (particularly in terms of arts and recreation gross value added). The previous study also came to a similar conclusion with regard to the Bathurst economy.

Key differences between the two studies are shown in Table 5.1.

**Table 5.1: Comparison of expenditure and economic impacts of 2008 and present study**

Expenditure and impacts	2008	2012	% change
Spectator expenditure (\$mIn)	16.1	20.44	26.9
Competitor expenditure (\$mIn)	2.29	1.52	-33.6
-core teams	0.59	0.57	-3.4
-teams in support events	1.7	0.95	-44.1
Promoter, sponsor, media, contractor and police expenditure (\$mIn)	3.42	3.92	14.6
Value added (\$mIn)	23.02	25.28	9.8
Household income (\$mIn)	12.01	14.47	20.5
Employment FTE (no.)	282	255	-9.6

Differences between the total impacts estimated in the two studies can be attributed to a number of key influences including:

- Event-related changes, such as a smaller number of team members in the support events (920 in 2012 against 1871 in 2008), longer length of stay for spectators (4.81 in 2012 against 4.09 nights in 2008), and the ongoing popularity of camping arrangements;
- Sluggish consumer spending, resulting from the overall economic uncertainty and growth slowdown, and smaller per capita spending. Despite this economic climate, the event attendance was better than usual, with aggregate expenditure by spectators increasing by 26.9%;

## 2012 SUPERCHEAP AUTO BATHURST 1000

- Substantial expenditure outside of the Bathurst regional economy, as attested by transactions (e.g. expenditure by teams and event promoters) made in the rest of the Central West and NSW and other states; and
- Structural shifts in the Australian economy that render labour more productive and expensive, and that induce businesses to employ less labour to produce the same value of output as before. In Bathurst, this development was manifested in wages' growth (\$42,000 in 2008 against \$57,000 in 2012) and smaller number of jobs created by the event (255 in 2012 against 282 in 2008).

In general, these influences have contributed to changes in both the initial impact and the total impact of the Supercheap Auto event in the Bathurst region.



## 6. CONCLUSION

The impact of the Supercheap Auto event on the economy of the rest of NSW is substantial even taking into account the size of the NSW economy. The event contributed \$55.43 million in value added (which represents 0.01% of the annual NSW gross state product and 1.29% of the value added in the NSW arts and recreation sector), \$28.32 million in household income and 475 FTE jobs in the rest of NSW.

This report indicates that the Supercheap Auto event contributed \$25.3 million in terms of GRP (value added), \$14.5 million in terms of household income and 255 FTE jobs to the Bathurst region. This total impact, including initial and flow-on effects, is equal to 1.45% of GRP (value added), 1.36% of household income and 1.6% of employment of the Bathurst local economy.

The event also had a significant impact on the Central West economy, contributing \$30.5 million in GRP, \$15.3 million in household income and 305 FTE jobs.

In relative terms, the impacts of the Supercheap Auto event were significant as well: the value added generated by the event in NSW stood at 17% of the value added generated by 56 major events in the state, as documented by Destination NSW.

The findings of this report are conservative in that marginal coefficients were used to estimate flow-on effects eliminating the overestimation of flow-on effects that usually occurs in the standard linear model.

Moreover, this study takes no account of various intangible and unquantifiable benefits the Supercheap Auto event brings to the Bathurst region, including, but not limited to:

- The development of human capital, as manifested in skill acquisition by Bathurst businesses and residents;
- Improvements in business enterprise, manifested in the increased professionalisation of event management, governance of infrastructure, and expanding opportunities for innovation; and
- Positive cultural changes, such as greater exposure to international business practices and creation of an environment for better service delivery and continuous learning.

Overall, these findings indicate that the Supercheap Auto event for 2012 was a significant contributor to the economic well-being of its regional economies.

## APPENDIX 1: DETAILED METHODOLOGY

This Appendix discusses the basics of economic impact analysis, including an overview of what input-output tables are, how the tables are constructed and the assumptions of the model. The Appendix also describes the input-output table used in this study.

### 7.1 Input-output tables

Input-output tables are part of the Australian national accounts. An input-output model provides a detailed picture of the structure of an economy at a particular point in time. It includes all the transactions that occur during a specific period, usually one year.

- The rows of an input-output table show the disposal of the output of an industry to itself and to other industries as well as final demand categories (i.e. exports and household consumption); and
- The columns show the origin of inputs into production, whether they are intermediate inputs (i.e. intra- and inter-industry purchases) or primary inputs (i.e. labour and capital).

One of the main attractions of input-output models is their relative ease of use and the level of detail obtained concerning the structure of the economy. The Australian Bureau of Statistics (ABS) notes the usefulness of input-output tables:

*"Input-output tables provide detailed information about the supply and disposition of commodities in the Australian economy and about the structure of, and inter-relationships between, Australian industries. Detailed data on supply and use of commodities, inter-industry flows and a range of derived data, such as input-output multipliers, are provided for economic planning and analysis, and construction of models for forecasting purposes."* (ABS Introduction to Input-Output Multipliers, Cat. 5246.0)

The main use of input-output tables is economic impact analysis, where the tables are used to estimate the benefits generated by new initiatives on each and every sector of an economy. For example, if there is a change in the purchasing or sales pattern of any industry, the flow-on, or multiplier effects on upstream industries can be calculated.

### 7.2 GRIT procedure

The input-output tables for this project were extracted from the Australian Bureau of Statistics (ABS) 2008/09 national input-output table using the Generation of Regional Input-Output Tables (GRIT) technique. The GRIT technique is basically a hybrid method of deriving regional input-output tables from the National input-output table while at the same time allowing for the insertion of superior data (employment data, estimates of wages and salaries, gross operating surplus and final demands, and primary industry data) at various stages in the construction of the tables.

The GRIT procedure was developed by Associate Professor Guy West and Professor Rod Jensen of the University of Queensland and is the most widely used method of constructing input-output tables in Australia. The GRIT method is also widely used in America and Europe. The system is “variable interference” in that the analyst is able to determine the extent to which they interfere with the mechanical processes by introducing primary or other superior data. The GRIT system is designed to produce regional tables that are: consistent in accounting terms with each other and with the ABS national table; capable of calculations to a reasonable degree of holistic accuracy; and capable of being updated with minimum effort as new data becomes available.

## 7.3 Modelling procedure

The application of both marginal coefficients and SIRE models involved the following two steps:

- The expenditure profiles of spectators, competitors, event promoter, contractors and suppliers, media and police were constructed from the primary data, with various expenditure items (e.g. meals, fuel, accommodation etc) allocated to the industries at the end of the supply chain. For example, if the spectator purchased petrol from the retail outlet, the expenditure is assigned to ‘Petroleum, Coal, and Chemical Manufacturing’, rather than the ‘Retail’ sector;
- Expenditures are recorded in purchasers’ prices, i.e. incorporate transport and trade margins and taxes, while the transactions in input-output tables are recorded in basic prices (i.e. net of margins). The software converts purchasers’ prices into basic prices by re-allocating trade and transport margins back to the trade and transport sectors. During conversion, the trade margin, representing a fraction of the above-mentioned fuel purchase transaction is allocated back to the ‘Retail’ sector.

# 2012 SUPERCHEAP AUTO BATHURST 1000

## APPENDIX 2: DETAILED TABLES

**Table 8.1 Economic Impact of the 2012 Supercheap Auto Bathurst 1000 on NSW by industry sector**

	Value Added			Household income		Employment (FTE)		
	\$mIn	% of total from event	% of total in NSW	\$mIn	% of total from event	No.	% of total from event	% of total in NSW
Agriculture	1.85	3.3	0.03	0.24	0.8	14	2.9	0.02
Coal mining	0.25	0.5	0.00	0.06	0.2	1	0.1	0.00
Other mining	0.11	0.2	0.00	0.02	0.1	0	0	0.00
Food & beverage mfg	4.14	7.5	0.05	2.31	8.1	31	6.6	0.05
Textile mfg	0.29	0.5	0.03	0.16	0.6	3	0.7	0.03
Wood product mfg	0.1	0.2	0.01	0.07	0.2	1	0.2	0.01
Paper product mfg	0.16	0.3	0.02	0.1	0.4	1	0.2	0.02
Printing	0.49	0.9	0.04	0.28	1	5	1	0.04
Chemical product mfg	1.08	1.9	0.02	0.58	2	6	1.2	0.02
Non-metallic mineral	0.21	0.4	0.01	0.14	0.5	1	0.3	0.01
Primary metal production	0.06	0.1	0.00	0.02	0.1	0	0.1	0.00
Fab metal product mf	0.26	0.5	0.01	0.16	0.6	1	0.3	0.01
Transport equip mfg	0.16	0.3	0.01	0.11	0.4	1	0.3	0.01
Machinery & equip mf	0.33	0.6	0.01	0.21	0.7	3	0.7	0.01
Other mfg	0.23	0.4	0.03	0.12	0.4	3	0.7	0.02
Utilities	1.33	2.4	0.02	0.58	2.1	7	1.4	0.02
Construction	0.62	1.1	0.00	0.32	1.1	7	1.4	0.00
Wholesale	2.36	4.3	0.01	1.47	5.2	15	3.2	0.01
Retail	1.79	3.2	0.01	1.09	3.8	28	5.8	0.01
Hospitality	11.29	20.4	0.10	6.57	23.2	180	37.9	0.10
Transport & storage	3.07	5.5	0.01	1.35	4.8	22	4.7	0.01
Communications	2.13	3.8	0.01	0.47	1.6	6	1.2	0.01
Finance & insurance	6.99	12.6	0.01	3.54	12.5	19	4	0.01
Real estate & rental	1.61	2.9	0.02	0.79	2.8	9	1.9	0.02
Own dwellings	4.28	7.7	0.01	0	0	0	0	0.00
Professional & scientific	3.01	5.4	0.01	1.99	7	28	5.8	0.01
Administrative services	1.98	3.6	0.02	1.69	6	17	3.6	0.02
Public admin	1.32	2.4	0.01	1.04	3.7	12	2.6	0.01
Education	0.79	1.4	0.00	0.66	2.3	9	1.9	0.00
Health & community	1.29	2.3	0.00	1.09	3.8	17	3.5	0.01
Arts & recreation	0.43	0.8	0.01	0.21	0.7	4	0.9	0.01
Personal & other	1.44	2.6	0.02	0.88	3.1	22	4.6	0.02
Total	55.43	100	0.01	28.32	100	475	100	0.02



# ECONOMIC IMPACT REPORT

**Table 8.2 Economic Impact of the 2012 Supercheap Auto Bathurst 1000 on Central West LGAs by industry sector**

	Value Added			Household income		Employment (FTE)		
	\$mIn	% of total from event	% of total in Central West	\$mIn	% of total from event	No.	% of total from event	% of total in Central West
Agriculture	2.59	8.5	0.37	0.33	2.2	23	7.5	0.28
Coal mining	0.39	1.3	0.03	0.09	0.6	1	0.4	0.02
Other mining	0.23	0.7	0.02	0.04	0.2	0	0.1	0.00
Food & beverage mfg	1.19	3.9	2.77	0.64	4.1	12	4	2.73
Textile mfg	0.18	0.6	1.00	0.1	0.7	2	0.7	0.91
Wood product mfg	0.09	0.3	0.10	0.06	0.4	1	0.3	0.10
Paper product mfg	0.35	1.1	0.27	0.22	1.4	2	0.7	0.22
Printing	0.36	1.2	0.84	0.2	1.3	4	1.2	0.87
Chemical product mfg	0.51	1.7	0.62	0.28	1.8	4	1.2	0.69
Non-metallic mineral	0.13	0.4	0.14	0.09	0.6	1	0.3	0.16
Primary metal production	0.01	0	0.02	0	0	0	0	0.00
Fab metal product mfg	0.12	0.4	0.08	0.08	0.5	1	0.2	0.14
Transport equip mfg	0.08	0.3	0.11	0.06	0.4	1	0.2	0.19
Machinery & equip mfg	0.1	0.3	0.08	0.07	0.4	1	0.3	0.10
Other mfg	0.23	0.7	0.52	0.11	0.7	3	1.1	0.44
Utilities	0.47	1.6	0.20	0.21	1.4	3	0.9	0.26
Construction	0.26	0.8	0.04	0.13	0.8	2	0.8	0.03
Wholesale	1.09	3.6	0.23	0.68	4.5	7	2.2	0.23
Retail	1.13	3.7	0.20	0.69	4.5	17	5.4	0.19
Hospitality	10.41	34.1	3.44	6.04	39.4	150	49.1	3.43
Transport & storage	1.31	4.3	0.40	0.61	4	10	3.1	0.40
Communications	0.62	2	0.23	0.14	0.9	2	0.5	0.19
Finance & insurance	0.62	2	0.17	0.31	2	2	0.5	0.21
Real estate & rental	0.39	1.3	0.26	0.19	1.2	2	0.7	0.25
Own dwellings	2.38	7.8	0.23	0	0	0	0	0.00
Professional & scientific	0.57	1.9	0.15	0.38	2.5	5	1.6	0.15
Administrative services	1.08	3.5	0.34	0.93	6	9	2.9	0.35
Public admin	1.18	3.9	0.19	0.93	6	11	3.5	0.20
Education	0.42	1.4	0.07	0.35	2.3	5	1.5	0.08
Health & community	0.7	2.3	0.09	0.59	3.8	9	2.9	0.09
Arts & recreation	0.24	0.8	0.29	0.12	0.8	2	0.8	0.22
Personal & other	1.11	3.6	0.42	0.69	4.5	16	5.3	0.40
<b>Total</b>	<b>30.53</b>	<b>100</b>	<b>0.26</b>	<b>15.35</b>	<b>100</b>	<b>305</b>	<b>100</b>	<b>0.35</b>

# 2012 SUPERCHEAP AUTO BATHURST 1000

**Table 8.3 Economic Impact of the 2012 Supercheap Auto Bathurst 1000 on Bathurst LGA by industry sector**

	Value Added			Household income		Employment (FTE)		
	\$mIn	% of total from event	% of total in Bathurst	\$mIn	% of total from event	No.	% of total from event	% of total in Bathurst
Agriculture	1.14	4.5	2.28	0.18	1.3	10	3.8	1.79
Coal mining	0.01	0	0.20	0	0	0	0	0.00
Other mining	0.01	0.1	0.05	0	0	0	0	0.00
Food & beverage mfg	1.69	6.7	7.35	1.02	7.1	14	5.6	7.37
Textile mfg	0.2	0.8	4.00	0.13	0.9	2	0.9	3.33
Wood product mfg	0.08	0.3	0.67	0.05	0.4	1	0.3	0.77
Paper product mfg	0	0	0.00	0	0	0	0	0.00
Printing	0.38	1.5	3.45	0.24	1.7	4	1.7	3.33
Chemical product mfg	0.57	2.2	4.38	0.35	2.4	4	1.4	5.00
Non-metallic mineral	0.18	0.7	0.95	0.13	0.9	1	0.6	0.71
Primary metal production	0.01	0.1	0.10	0.01	0	0	0	0.00
Fab metal product mfg	0.12	0.5	0.71	0.08	0.6	1	0.2	1.25
Transport equip mfg	0.16	0.6	0.73	0.12	0.8	1	0.5	0.56
Machinery & equip mfg	0.05	0.2	0.50	0.04	0.3	1	0.2	1.25
Other mfg	0.22	0.9	2.75	0.13	0.9	3	1.3	2.31
Utilities	0.73	2.9	1.46	0.38	2.6	5	1.9	1.79
Construction	0.27	1.1	0.24	0.15	1.1	3	1.2	0.20
Wholesale	0.93	3.7	1.35	0.64	4.4	6	2.5	1.25
Retail	1.1	4.3	1.00	0.74	5.1	18	7.1	0.91
Hospitality	6	23.7	9.84	3.86	26.7	97	38	9.90
Transport & storage	1.2	4.7	2.14	0.63	4.4	10	3.9	2.04
Communications	1.05	4.1	1.09	0.28	1.9	3	1.3	0.67
Finance & insurance	0.87	3.4	1.14	0.5	3.4	2	0.9	0.95
Real estate & rental	0.51	2	1.70	0.28	2	3	1.2	1.58
Own dwellings	2.11	8.4	1.10	0	0	0	0	0.00
Professional & scientific	0.73	2.9	0.97	0.53	3.6	7	2.8	0.96
Administrative services	1.11	4.4	1.71	0.98	6.8	10	3.9	1.72
Public admin	1.18	4.7	0.79	0.98	6.8	11	4.5	0.76
Education	0.62	2.4	0.39	0.53	3.7	7	2.8	0.37
Health & community	0.69	2.7	0.48	0.6	4.2	9	3.5	0.48
Arts & recreation	0.23	0.9	1.28	0.13	0.9	3	1	1.30
Personal & other	1.12	4.4	2.38	0.76	5.3	18	7	2.28
<b>Total</b>	<b>25.28</b>	<b>100</b>	<b>1.45</b>	<b>14.47</b>	<b>100</b>	<b>255</b>	<b>100</b>	<b>1.60</b>

*Note.* Much of the expenditure made by persons and households in the retail sector flows to sectors where products were manufactured (e.g. food and beverage manufacturing, textile manufacturing, chemical product manufacturing etc), with only a fraction of expenditure left in the retail sector. This explains the low figures for value added, household income and employment in retail sector, and high figures in relevant manufacturing sectors in the table.

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## WESTERN RESEARCH INSTITUTE

WRI is a regional development research organisation located in Bathurst, New South Wales. WRI holds a wealth of knowledge on employment, business development and investment issues affecting regional Australia. It has worked with Commonwealth, State and Local Governments and industry groups on numerous investment and development programs in regional areas. WRI has strong credentials in business and commercial market consulting and applied economic modelling including input-output analysis, shift-share, agribusiness and regional socio-economic surveys and analysis.

### Dr. Andrew Johnson - Chief Executive Officer BA(Hons I) Newcastle, PHD (UWS)

Andrew Johnson has over 20 years' experience in research leadership with a strong focus on the resources and not for profit spheres.

Andrew has recently held the position of Director of Research Development at the University of Newcastle (UoN), Australia. During his 12 years, Andrew achieved a number of substantial outcomes including raising in excess of \$30 million in research funds to support a number of collaborative research partnerships with industry and government. He led the establishment of the Research Development office at UoN and built a team of 4 Research Development staff. He was Interim CEO of the CRC for Social Inclusion bid which was short listed in 2010. Andrew also played a key role in the highly successful energy strategy led by Research Division UoN which included a successful \$30 million EIF application for the Newcastle Institute for Energy and Resources.

Andrew's skills are best suited to building capacity, sustaining collaborations, managing research programs and building networks and spheres of influence, both in the public sector and industry. Attracting new business and partnerships and ensuring their longevity by establishing appropriate governance mechanisms drives his approach to work.

### Ms Danielle Ranshaw – Research Manager BEc&Fin NSW

Danielle's experience in project management in the information technology sector combined with qualifications in economics and finance provides a solid background for WRI projects. With skills in systems design and development, Danielle has been able to extend WRI's capability in developing robust and increasingly complex systems to support research fieldwork. Additionally, Danielle has extensive experience in business process analysis, performance planning and review, report writing and project planning.

### Dr. Ivan Trofimov - Research Officer PHD (Macquarie) MEcSt (UNE) MA (Auckland)

Ivan is an economic and public policy analyst and brings experience in macroeconomics, corporate governance and international trade to WRI projects. Prior to joining WRI, he worked in corporate advisory firms, focusing on economic research and evaluation of corporate governance practices, and in a peak industry body, responsible for pharmaceutical policy formulation in Australia. He was also involved in consulting projects for the Commonwealth Secretariat, APEC Research Centre (New Zealand) and Pacific Islands Trade and Investment Commission. Ivan holds a PhD in Applied Economics (Macquarie) and master degrees in agricultural and development economics (UNE) and (Auckland). He has published several papers in international economic journals.

### Ms Rebecca Hood - Research Officer BBus (Fin/Acc) With Distinction CSU

After working in the Financial Services Industry for several years coupled with a degree in Finance and Accounting from CSU, Rebecca brings strong skills in finance, economics, business and accounting to WRI projects. Rebecca's extensive experience in the finance field and her high level understanding of current market knowledge gives Rebecca a solid understanding of the financial needs of regional and rural Australia. Having prior experience with local councils and retail, Rebecca also brings a robust understanding of the needs of regional businesses to her role at WRI

### Ms Dale Curran – Executive Officer BA ANU

Dale is responsible for all administrative processes at WRI including executive support, finance, management of the Board of Directors and maintenance of policies. She has worked in a variety of roles at WRI, including Fieldwork Supervisor and Research Assistant, and has worked on several community and business surveys. Dale brings a high level of organisational skill to her role as Executive Officer.

## WRI ASSOCIATES

### Mr Tom Murphy – Associate

B.Ec. (Hons I) M.Sc. (Econ) Lancaster

Tom Murphy was WRI's founding CEO and held this position from 1999 until his retirement in December 2012. Under Tom's leadership WRI completed over 300 projects for all levels of government and government departments, industry groups, businesses, financial institutions, regional development boards and community groups, and educational institutions including universities, TAFE and schools in NSW, Victoria and Queensland.

Tom previously held academic positions as senior lecturer in Economics and Director of the Regional Economics Research Unit in the Faculty of Commerce, Charles Sturt University, Bathurst and positions at the University of New England and Macquarie University. He has also held the positions of Economic Analyst with the Office of National Assessments in Canberra, with responsibility for the ASEAN economies and Senior Consultant with KPMG Peat Marwick Management Consultants.

Tom's particular expertise is in regional economics and labour markets, and he has published in a wide range of economic subject areas in refereed and non-refereed articles, books and textbooks. Tom has a high local media profile in Western NSW for economic and social commentary and also features regularly on national radio particularly in connection to the quarterly agribusiness survey conducted for Westpac Australia wide.

### Dr Guy West - Associate

Professor Guy West is experienced in regional economics with specialisation in applied quantitative economics. Current research interests include the theory and application of inter-industry models particularly in an integrated spatial econometric framework, the nature of economic structure at the regional and national levels, and regional economic projection, planning and growth. This revolves primarily around the study and identification of economic structure, involving concepts such as fundamental economic structure, structural change and evolution.

Dr. West has published extensively in international journals at both theoretical and empirical levels. He is an accomplished computer programmer and has developed a number of specialised economic models for analysing structural change, as well as more generalised software for inter-industry analysis. Some of this software is used extensively in universities in Australia, US, UK and Europe. He has been actively involved in consulting and advisory work in the area of economic impact analysis, planning, development and economic policy for federal, state and local government and the private sector.

