

# Convention Activity Survey Year to September 2013 report

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INNOVATION & EMPLOYMENT**  
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## **Overview**

*A total of 554,000 delegates attended 5,600 conferences for around 1.16 million delegate days in the year ended September 2013. This compared to 586,000 delegates, 6,300 conferences and 1.3 million delegate days in the year ended September 2012. Around 31 per cent of multi day conferences and 37 per cent of one day conferences were held in Auckland in the year ended September 2013.*

*Over all events excluding special occasions, 3,476,000 delegates attended 41,400 events for around 4.4 million delegate days in the year ended September 2013. This compared to 2,812,000 delegates, 41,200 events and 3.9 million delegate days in the year ended September 2012. Thirty two per cent of all events were held in Auckland.*

## **Introduction**

The Convention Activity Survey (CAS) measures event activity at qualifying venues in New Zealand. The event activity measured includes meeting/seminar, incentive activity, conference/convention, trade show/exhibition, and special occasion, commonly known as MICE activity. The CAS is part of a broader Convention Research Programme, in which the Convention Delegate Survey measures the annual contribution of multi-day convention and conference activity to the New Zealand economy.

## **CAS participants**

### **Convention Bureaux**

Thirteen Convention Bureaux participate in the Convention Research Programme out of the 19 Bureaux that there are in total. As such, the CRP is not a national programme but covers a significant majority of conference/convention activity in New Zealand. The participating Convention Bureaux are Auckland, Bay of Plenty, Hamilton and Waikato, Rotorua, Taupo, Hawke's Bay, Manawatu, Wellington, Marlborough, Nelson, Christchurch and Canterbury, Dunedin and Queenstown.

## Qualifying CAS Venues

The Convention Bureaux and the Ministry of Business, Innovation and Employment have agreed that to qualify for inclusion in the Convention Activity Survey, a venue must

- promote their venue as suitable for a range of business-related MICE activities, especially conventions/conferences and meetings
- have theatre-style *minimum* capacity of 50
- aim or plan to host a minimum of 12 conventions and/or business related events each year

Venues are also classified in five different types, as follows:

- **Event or Convention Centre:** Venue whose primary function is hosting conventions, conferences and other large business events.
- **Stadium/showground:** Facility usually designed for large events, for example trade shows, exhibitions, conferences and other business events.
- **Hotel:** An establishment that provides accommodation and has onsite conference and other function facilities such as meeting rooms.
- **Other Accommodation (Motel, Motor Lodge etc.):** Other primarily accommodation establishments with conference facilities not classed as a hotel.
- **Other Venues:** Other establishments that provide conference and function facilities but not accommodation, for example restaurants, vineyards, and theatres.

The delegate capacity for a venue is defined as the largest number of MICE delegates that can be comfortably hosted at one time in spaces regularly used to host MICE events within the venue. The estimate is based on minimal partitioning and theatre style set up of free-form spaces. The capacity of spaces used only for non-MICE events (for example, concerts and sporting events) is excluded from the reported delegate capacity.

Venues do not have to be a member of the Convention Bureau in their area, nor do they have to agree to submit data in order to be included in the venue population list. Each Convention Bureau is asked to identify the entire population of qualifying CAS venues in its area. In the September 2013 quarter, event activity was recorded or estimated for a total of 338 venues in the 13 regions.

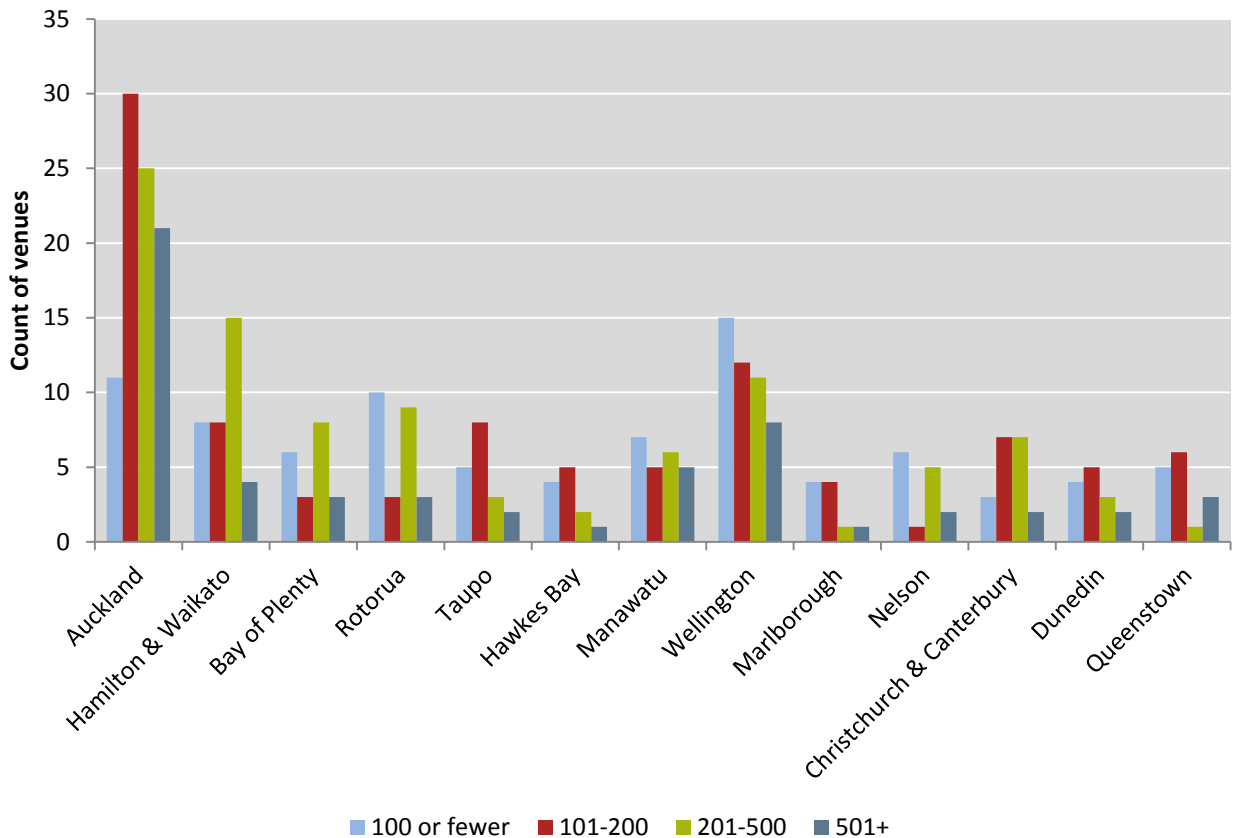
In the September 2013 quarter, 141 venues (55% of recorded capacity) submitted data for at least one of the three months. The number of venues actively contributing data to the CAS has remained relatively constant over the last two years, ranging between 135 and 147 venues each quarter.

Table 1 Comparing venue participation rates for 2013 Q2 and 2013 Q3

Region	Venues submitting as % of those identified in region		Capacity of venues submitting as % of capacity in region	
	2013Q2	2013Q3	2013Q2	2013Q3
Auckland	30%	32%	49%	58%
Hamilton & Waikato	25%	29%	39%	40%
Bay of Plenty	29%	30%	22%	20%
Rotorua	40%	32%	82%	34%
Taupo	32%	28%	33%	32%
Hawkes Bay	46%	50%	72%	70%
Manawatu	30%	30%	40%	40%
Wellington	49%	54%	81%	85%
Marlborough	60%	60%	82%	81%
Nelson	43%	43%	70%	70%
Christchurch & Canterbury	65%	74%	86%	85%
Dunedin	57%	64%	38%	43%
Queenstown	73%	73%	87%	57%
Total	39%	42%	55%	55%

The distribution of the venues by size is shown in Figure 1 below. Eighty-seven venues (26%) are located in Auckland.

Figure 1 Number of venues by delegate capacity and region (2013 Q3)



## Overview of event activity for the year ended September 2013

An estimated total of about 52,600 events occurred in the 13 regions in the year ended September 2013. Sixty two per cent of these were meetings/seminars. Table 2 shows about 39% of the delegate days for the year ended September 2013 were in Auckland.

Table 2 National overview of MICE activities (YE September 2013)

Region	Single day Events	Multi-day Events	Total Events	Delegates (all events)	Delegate days		
					Count	Market share	Change in market share from September 2012
Auckland	13,340	3,499	16,840	1,993,616	2,379,793	39%	-3%
Hamilton & Waikato	5,125	842	5,967	561,323	649,589	11%	2%
Bay of Plenty	2,228	421	2,649	251,354	296,488	5%	1%
Rotorua	1,963	700	2,664	194,178	264,908	4%	-1%
Taupo	1,347	488	1,835	131,783	194,746	3%	No change
Hawkes Bay	1,362	161	1,524	99,281	117,310	2%	No change
Manawatu	3,408	658	4,066	401,679	470,716	8%	No change
Wellington	6,627	2,001	8,628	576,008	774,117	13%	-2%
Marlborough*	572	108	680	41,185	54,062	1%	NA
Nelson	1,281	242	1,523	115,237	151,619	2%	-1%
Christchurch & Canterbury	3,145	699	3,844	429,234	513,237	8%	3%
Dunedin	1,005	271	1,276	105,564	133,719	2%	No change
Queenstown	670	463	1,133	105,069	166,453	3%	No change
<b>Total</b>	<b>42,075</b>	<b>10,553</b>	<b>52,628</b>	<b>5,005,509</b>	<b>6,166,757</b>		

\*Marlborough joined the programme in July 2012, so only one year of activity is recorded.

There were over 6 million delegate days in the year ended September 2013. **Error! Reference source not found.** shows the split in delegate days for different event types for the last four quarters. The variation by season can clearly be seen. Over all event types combined, there was a peak in the September quarter and a trough in the March quarter. However the December 2012 quarter was the peak season for incentive activities and special occasions.

Table 3 Delegate days by event type for each quarter during the year to September 2013

Event type	2012Q4	2013Q1	2013Q2	2013Q3	Total
Meeting/seminar	455,079	342,916	467,256	520,898	1,786,148
Incentive activity	46,522	35,842	36,765	30,341	149,470
Conference/convention	308,214	256,258	278,524	316,747	1,159,742
Trade show/exhibition	220,982	194,663	320,413	595,364	1,331,421
Special occasion	515,173	345,648	367,938	389,871	1,618,630
Don't know	29,729	28,154	28,099	35,362	121,345
<b>Total</b>	<b>1,575,699</b>	<b>1,203,481</b>	<b>1,498,995</b>	<b>1,888,583</b>	<b>6,166,757</b>

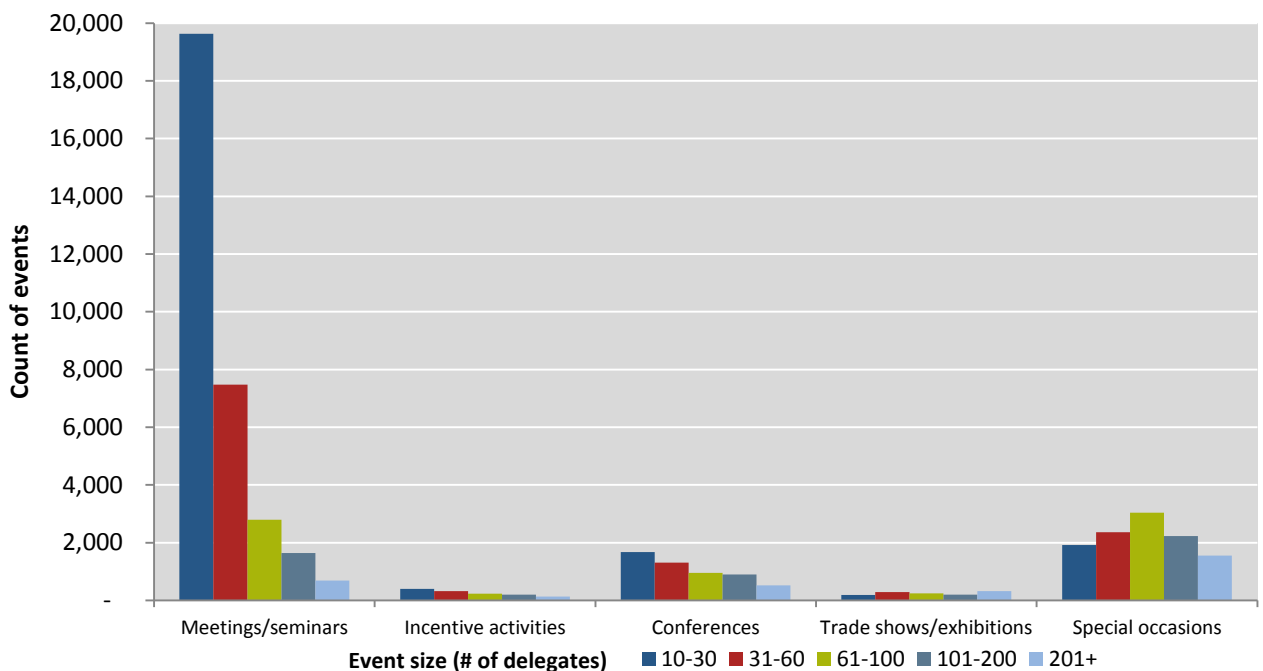
Table 4 shows that most events in the year ended September 2013 were commissioned by businesses, with associations and government entities coming a distant second and third.

**Table 4 Type of organisation commissioning an event**

Events run for...	2012Q4	2013Q1	2013Q2	2013Q3	Total
Associations	2,366	1,413	2,244	2,435	8,457
Business	6,491	4,810	6,339	7,242	24,882
Government	1,663	1,204	1,776	1,857	6,500
Education	1,014	885	1,201	1,479	4,579
Personal	1,445	1,725	1,093	941	5,203
Other/don't know	615	504	736	1,029	2,884
<b>Total</b>	<b>13,593</b>	<b>10,541</b>	<b>13,390</b>	<b>14,982</b>	<b>52,506</b>

With the exception of special occasions, small events with fewer than 60 delegates attending dominate MICE activity in the year ended September 2013 (refer Figure 2). Small meetings/seminars formed 53% of all events, with about 19,600 meetings having 10-30 delegates and about 7,500 meetings with 31-60 delegates. Smaller conferences also dominated conference activity, with 31% having 10-30 delegates and a further 24% having 31-60 delegates.

**Figure 2 Number of events by event type and event size (YE September 2013)**



### Trends in the number of events reported since YE June 2010

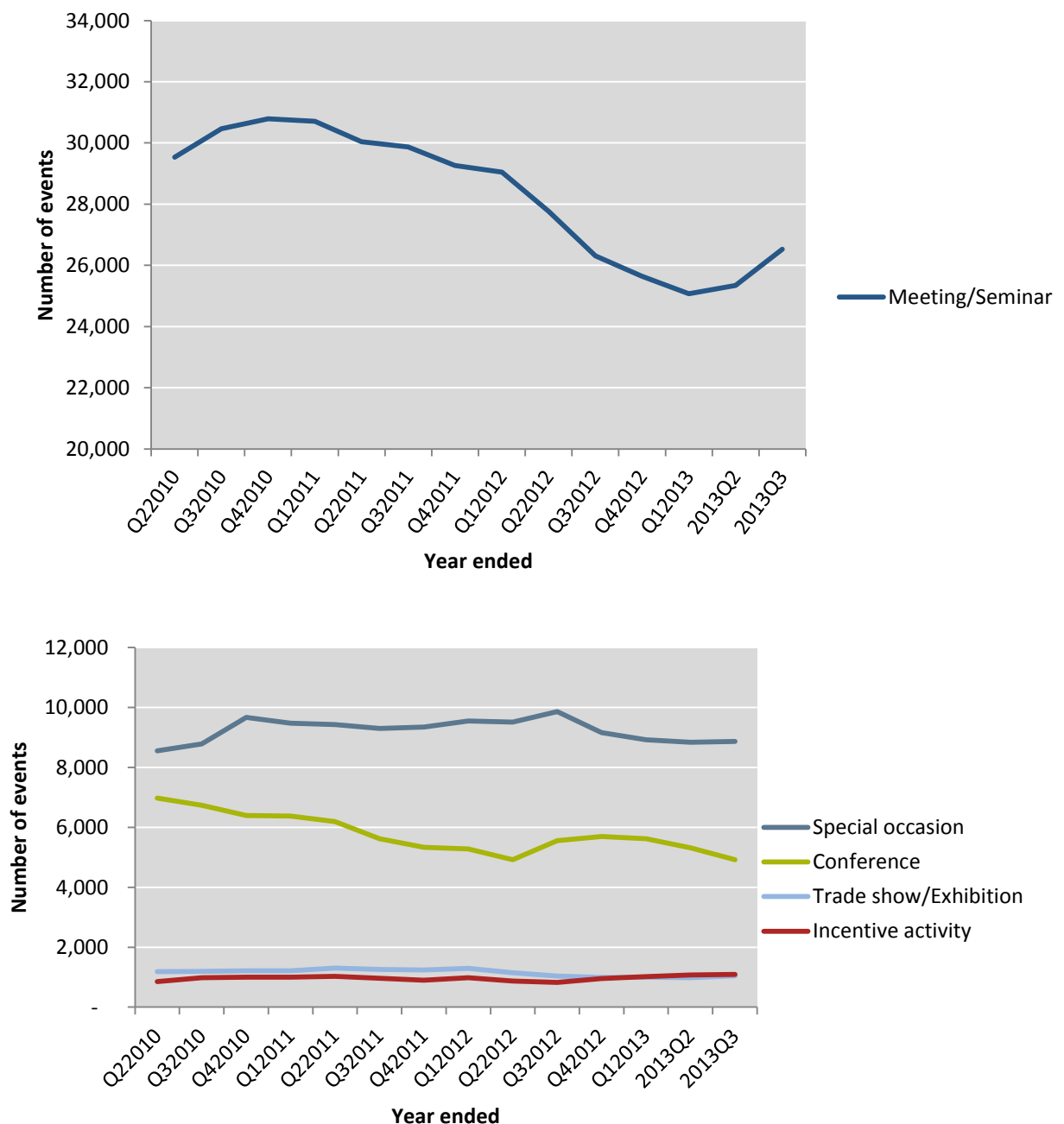
Since June 2010 quarter, it has been possible to construct rolling annual totals for different variables. Figure 3 shows variation or trend for the number of events (meetings, incentive activities, conferences, trade shows/exhibitions, and special occasions) reported for each year ended quarter

from June 2010 to September 2013. Note that Bay of Plenty, Hamilton & Waikato and Marlborough have been excluded, given that they have not been contributing data for the whole period shown in the chart.

As can be seen, the annual number of meetings/seminars increased in the year ended September 2013 and is now back around the same level as it was for the year ended September 2012. Special occasions have held steady since falling off from their peak in the year ended September 2012.

Conference/convention activity fell further from the year ended March 2013 and is just marginally above the trough of the year ended June 2012.

**Figure 3 Trend in number of events by event type (YE June 2010 through to YE September 2013). Bay of Plenty, Hamilton & Waikato and Marlborough are excluded.**



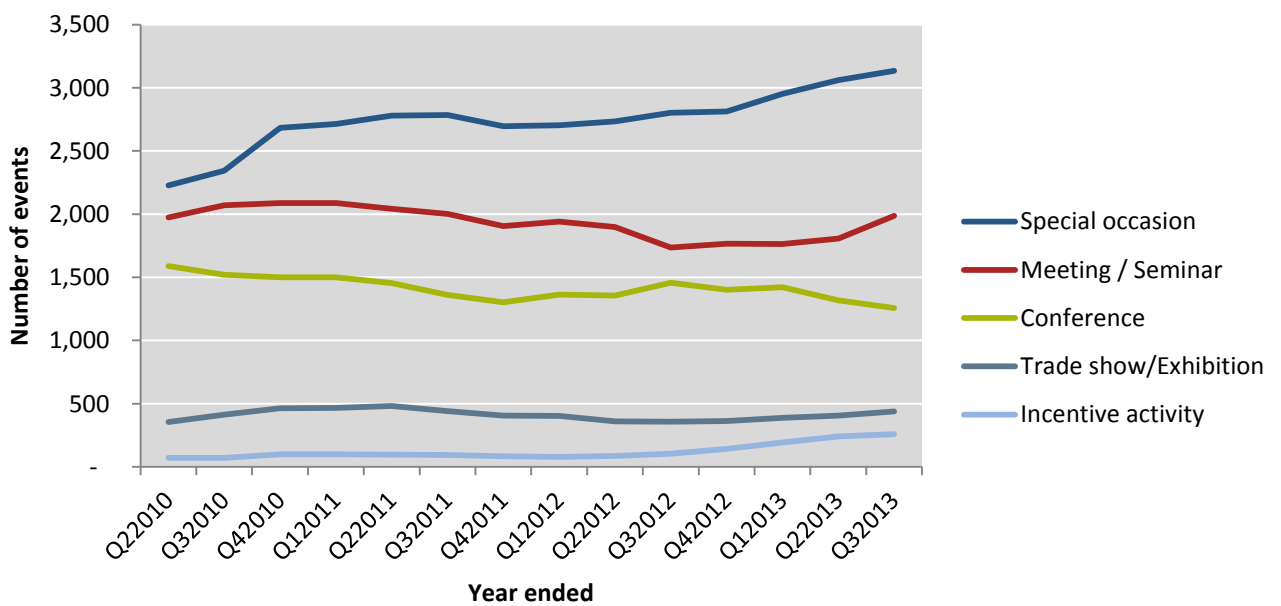


### Trends in larger events (>100 delegates)

It appears that there has been an increase in large special occasion events (100+ delegates) since the CAS started in July 2009. Over the same period, the number of larger conferences has declined. While the number of large meetings/seminars also dropped for some time, this has recently recovered to its initial level, almost back to its peak of late 2010/early 2011. Trade shows/exhibitions have been reporting a roughly similar number of events over the period while the number of incentive activity events has risen.

Note that this trend analysis excludes Hamilton & Waikato and Bay of Plenty (joined the CAS in 2011Q3) and Marlborough (joined the CAS in 2012Q3).

Figure 4 Number of Events with >100 delegates from YE June 2010 to YE September 2013 (excludes Hamilton & Waikato, Bay of Plenty and Marlborough)



## Conference/Convention activity for year ended September 2013

In this section the focus is solely on conferences/conventions which account for 11% of all events and 19% of the delegate days in the year ended September 2013.

Table 5 shows that 3,426 (63%) of the conferences held in the year ended September 2013 were multi day events, with just over half of these (1,733) being two days in duration.

**Table 5 Number of conferences and delegate days by conference duration and region (YE September 2013)**

Region	Duration of Conference			Market share of multi day conferences	Conference Delegate days		Market share of Multi day conference delegate days
	One day	Two days	>2 days		Single day	Multi-day	
Auckland	721	549	510	31%	73,124	331,360	34%
Hamilton & Waikato	169	112	99	6%	14,496	91,584	9%
Bay of Plenty	87	51	42	3%	6,013	31,588	3%
Rotorua	136	129	147	8%	10,240	74,116	8%
Taupo	85	94	98	6%	6,611	48,514	5%
Hawkes Bay	36	18	28	1%	2,563	12,146	1%
Manawatu	102	141	96	7%	9,744	50,861	5%
Wellington	399	394	341	21%	36,806	167,068	17%
Marlborough	32	22	17	1%	2,800	13,106	1%
Nelson	44	42	48	3%	2,475	26,922	3%
Christchurch & Canterbury	84	83	94	5%	6,167	58,093	6%
Dunedin	40	42	50	3%	3,259	23,801	2%
Queenstown	35	57	124	5%	2,625	58,435	6%
<b>Total</b>	<b>1,971</b>	<b>1,733</b>	<b>1,693</b>	<b>100%</b>	<b>176,923</b>	<b>987,596</b>	<b>100%</b>

Auckland hosted the greatest proportion (31%) of multi-day conferences, with 34% of the delegate days; followed by Wellington with 21% of the multi-day conferences and 17% of the multi-day conference delegate days.

Table 6 indicates that in the year ended September 2013, 43% of the multi-day conference delegates were reported to be from the local region, with a further 48% travelling to the conference from another region.

Nine per cent of multi-day conference delegates were from Australia or other overseas locations.

Note that the delegate origin is no longer a compulsory question in the survey, as this information is not always available to the venues recording the data. Values for missing data are imputed and this

imputation process is done independently for sub-categories and category totals. As a result, the delegate numbers by origin do not add up to the total number of delegates.<sup>1</sup>

Table 6 Mix of *multi-day* conference delegates by region (YE September 2013)\*

Region	Local	Regional	Australian	Other International	Total
Auckland	64,889	33,324	6,529	3,995	133,303
Hamilton & Waikato	12,454	9,989	467	832	38,067
Bay of Plenty	6,715	4,407	343	398	14,619
Rotorua	2,703	18,682	2,911	471	25,450
Taupo	1,736	11,152	947	277	14,834
Hawkes Bay	2,471	2,065	220	3	4,656
Manawatu	11,186	5,377	587	872	20,915
Wellington	24,961	35,609	2,148	1,371	62,594
Marlborough	837	2,461	131	36	3,630
Nelson	2,421	5,951	399	295	9,219
Christchurch & Canterbury	6,948	10,954	860	467	18,749
Dunedin	2,113	5,085	665	220	8,580
Queenstown	2,568	11,518	3,600	1,154	19,336
<b>Total number of delegates</b>	<b>142,000</b>	<b>156,573</b>	<b>19,806</b>	<b>10,391</b>	<b>373,951</b>

\*Based on estimates by venues (as opposed to the conference organisers who handle conference registration).

For the year ended September 2013, Statistics New Zealand<sup>2</sup> reported that a total of 55,840 international visitors reported that their main reason for visiting New Zealand was to attend a convention/conference (either single or multi-day). Of these, 35,504 (64%) were Australian. This was up from the previous year ended September 2012, when 52,976 international visitors stated their main reason for visiting New Zealand was to attend a convention/conference, and 32,368 (61%) were from Australia.

In comparison to the above, the CAS has a figure of 148,547 international delegates attending all events in the year ending September 2013, of whom 65,752 (44%) were Australian.

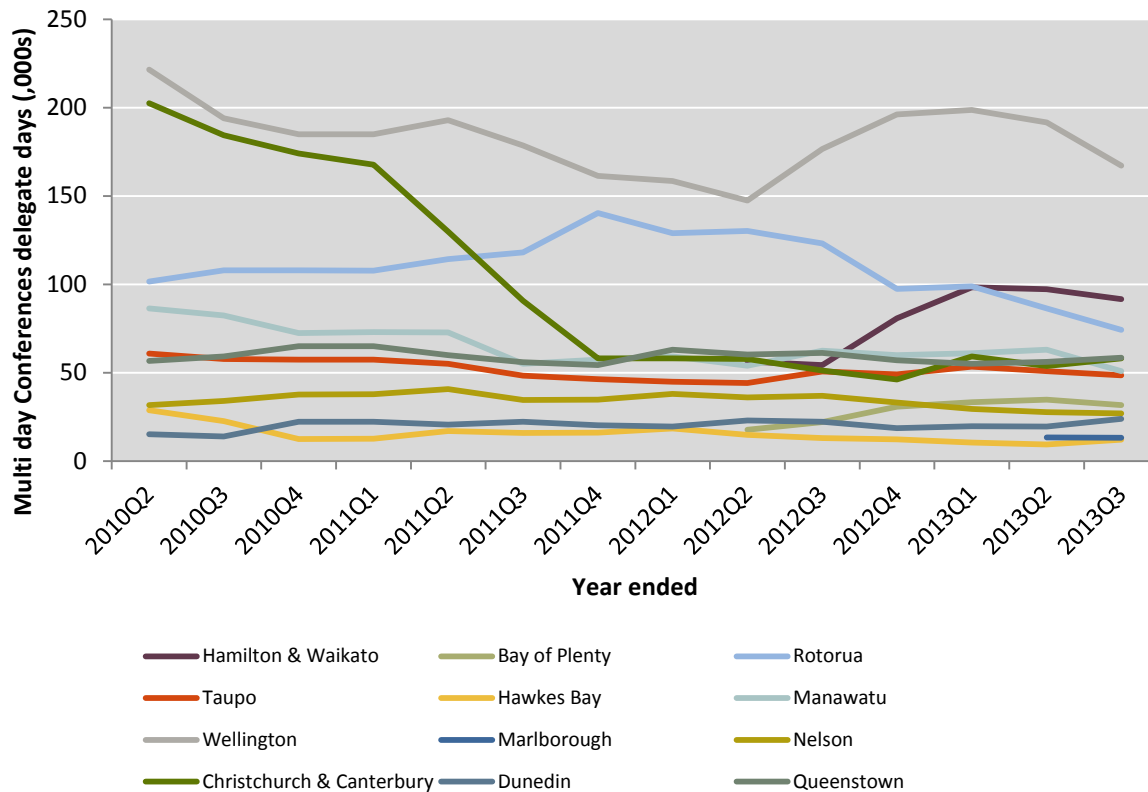
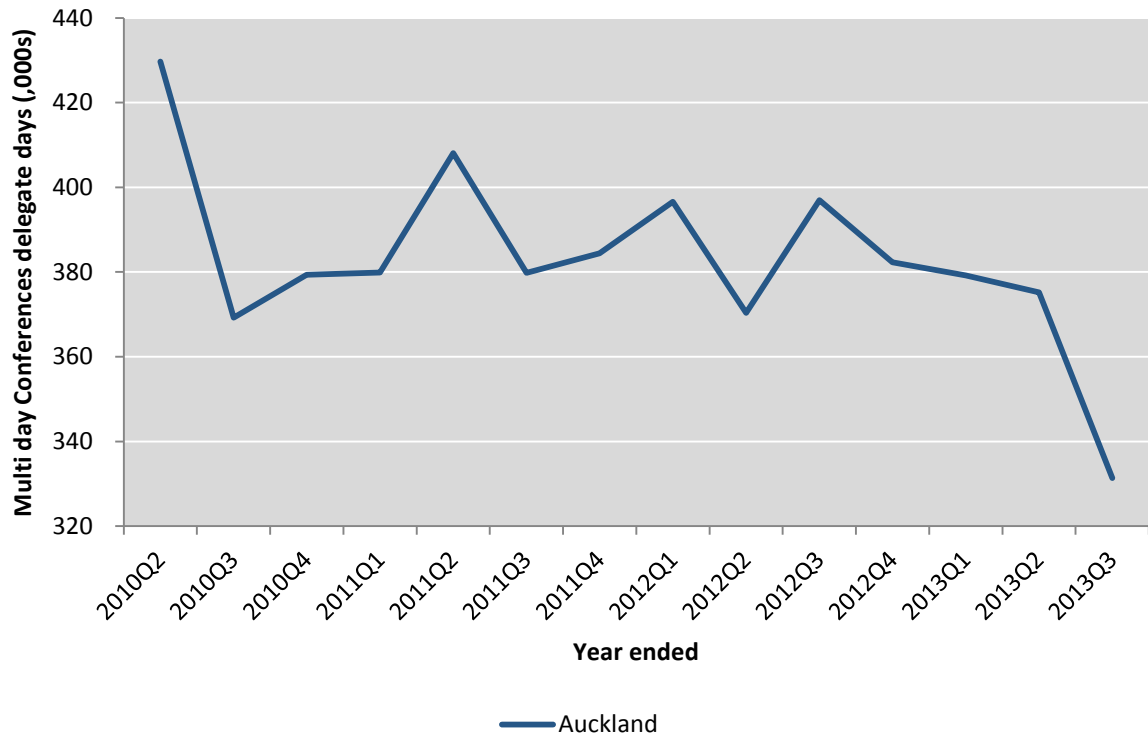
### Trends in multi-day conferences

Figure 5 shows there has been quite a significant variation in the number of delegate days for multi-day conferences over the period from the year ended June 2010 through to the year ended September 2013.

<sup>1</sup> Of the 141 venues that submitted data in the September 2013 quarter, 34 did not report on delegate origin for at least one event and 3 did not report delegate origin for any of their events. Nine per cent of all events in the September 2013 quarter had no numbers recorded for delegate origins. See Appendix 2 for a description of the imputation process.

<sup>2</sup> Statistics New Zealand International Travel and Migration. Data available from <http://www.stats.govt.nz/infoshare/>

Figure 5 Comparing multi-day Conference delegate days by region (YE June 2010 to YE September 2013)



Bay of Plenty and Hamilton & Waikato have six quarter-year-ends included in this chart since they joined the Convention Research Programme in the September 2011 quarter. Marlborough joined in the September 2012 quarter so has two quarter-year-ends included.

## Appendix 1 – Regional results

This appendix includes reports on regional level activity for the year ended September 2013. Each table presents information on specific type of MICE activity, namely:

- Meetings/seminars
- Incentive activity
- Conference/Conventions
- Trade Shows/Exhibitions
- Special Occasion.

Further data and comparisons may be made using the excel pivot tables available from the MBIE website (<http://www.med.govt.nz/sectors-industries/tourism/tourism-research-data/other-research-and-reports/convention-research/activity-survey>).

## Meetings/seminars – Year ended September 2013

A meeting or seminar is defined as a formal gathering of people to discuss matters of shared interest, usually within a single session.

Region	Count of meetings for YE September 2013		Market share of multi day meetings		Total delegate days	Count of meetings/seminars by event size (# of delegates) for YE September 2013				
	Single day	Multi-day	YE September 2012	YE September 2013	YE September 2013	10-30	31-60	61-100	101-200	201+
Auckland	8,312	2,263	41%	39%	728,137	5,956	2,560	961	666	343
Hamilton & Waikato	3,369	496	9%	9%	170,780	2,529	787	357	163	49
Bay of Plenty	1,359	222	4%	4%	76,875	1,002	377	153	84	27
Rotorua	1,262	306	5%	5%	72,825	1,008	384	110	45	16
Taupo	776	204	3%	4%	44,028	666	186	59	30	11
Hawkes Bay	866	89	1%	2%	37,908	602	216	81	44	13
Manawatu	2,312	295	6%	5%	122,937	1,693	585	227	104	58
Wellington	4,275	1,080	17%	19%	273,873	3,139	1,243	424	267	82
Marlborough	284	48	NA	1%	14,514	219	73	20	11	6
Nelson	733	101	2%	2%	36,399	519	199	66	37	12
Christchurch & Canterbury	2,070	390	7%	7%	137,343	1,468	564	232	143	58
Dunedin	652	133	2%	2%	41,128	475	189	72	32	10
Queenstown	333	176	3%	3%	29,404	349	110	33	18*	
<b>Total</b>	<b>26,603</b>	<b>5,802</b>	<b>100%</b>	<b>100%</b>	<b>1,786,148</b>	<b>19,625</b>	<b>7,474</b>	<b>2,795</b>	<b>1,626**</b>	<b>684**</b>

\*Cells with fewer than 5 events have been merged to protect venue confidentiality.

\*\* Excludes Queenstown.

## Incentive activities – Year ended September 2013

An incentive activity is defined as an activity occurring at a CAS venue that incentivises or rewards the invited event delegates for exceptional business achievement.

Region	Count of Incentive activities	Market share of incentive activities		Total delegate days	Count of incentive activities by event size (# of delegates) for YE September 2013		
	YE September 2012	YE September 2012	YE September 2013	YE September 2013	10-30	31-60	61+
Auckland	314	25%	23%	33,502	82	74	133
Hamilton & Waikato	172	9%	13%	16,448	42	41	89
Bay of Plenty	74	3%	5%	7,992	18	15	40
Rotorua	54	5%	4%	6,604	28	14	12
Taupo	45	5%	3%	3,763	22	14	10
Hawkes Bay	22	4%	2%	1,656	12*		12
Manawatu	107	5%	8%	19,122	14	14	76
Wellington	300	14%	22%	30,912	64	69	122
Marlborough	30	NA	2%	3,232	10	10	7
Nelson	59	5%	4%	8,141	24	16	19
Christchurch & Canterbury	78	14%	6%	6,229	30	25	25
Dunedin	34	5%	2%	2,814	15	10	8
Queenstown	81	7%	6%	8,565	45	18	18
<b>Total</b>	<b>1,372</b>	<b>100%</b>	<b>100%</b>	<b>149,470</b>	<b>394**</b>	<b>320**</b>	<b>572</b>

\*Cells with fewer than 5 events have been merged to protect venue confidentiality.

\*\* Excludes Hawkes Bay.

## Conferences/Conventions – Year ended September 2013

A conference or convention is described as a formal gathering of people at a CAS venue to discuss matters of shared interest involving multiple sessions and speakers.

Region	Count of conferences/conventions for YE September 2013			Market share of multi day conferences		Total single-day conference delegate days	Total multi-day conference delegate days	Count of conferences/conventions by event size (# of delegates) for YE September 2013				
	Single day	Two day	>2 days	YE Sept 2012	YE Sept 2013	YE Sept 2013	YE Sept 2013	10-30	31-60	61-100	101-200	201+
Auckland	721	549	510	33%	31%	73,124	331,360	509	456	288	306	221
Hamilton & Waikato	169	112	99	6%	6%	14,496	91,584	153	74	55	51	46
Bay of Plenty	87	51	42	3%	3%	6,013	31,588	60	37	38	30	16
Rotorua	136	129	147	9%	8%	10,240	74,116	119	111	79	65	35
Taupo	85	94	98	6%	6%	6,611	48,514	104	62	46	39	21
Hawkes Bay	36	18	28	1%	1%	2,563	12,146	27	22	17	10	6
Manawatu	102	141	96	6%	7%	9,744	50,861	140	68	52	44	32
Wellington	399	394	341	21%	21%	36,806	167,068	314	310	193	201	84
Marlborough	32	22	17	NA	1%	2,800	13,106	24	16	16	12	7
Nelson	44	42	48	3%	3%	2,475	26,922	48	22	27	25	12
Christchurch & Canterbury	84	83	94	5%	5%	6,167	58,093	96	54	49	52	12
Dunedin	40	42	50	2%	3%	3,259	23,801	36	30	40	22	9
Queenstown	35	57	124	5%	5%	2,625	58,435	44	48	61	45	19
<b>Total</b>	<b>1,971</b>	<b>1,733</b>	<b>1,693</b>	<b>100%</b>	<b>100%</b>	<b>176,923</b>	<b>987,596</b>	<b>1,674</b>	<b>1,308</b>	<b>960</b>	<b>900</b>	<b>519</b>



## Trade shows/exhibitions – Year ended September 2013

Trade shows and exhibitions are defined as a showcase of goods and services held for the benefit of a specific industry or interest group.

Region	Count of trade shows/exhibitions	Market share of trade shows/exhibitions		Total tradeshow/exhibitions delegate days	Count of trade shows/exhibitions by event size (# of delegates) for YE September 2013				
	YE September 2013	YE September 2012	YE September 2013	YE September 2013	10-30	31-60	61-100	101-200	201+
Auckland	395	28%	31%	561,058	48	91	62	71	118
Hamilton & Waikato	146	10%	11%	180,174	17	31	31	21	39
Bay of Plenty	59	7%	5%	88,892	9	18	11	6	18
Rotorua	79	5%	6%	35,188	24	21	12	9	13
Taupo	39	4%	3%	34,992	8	8	11*		12
Hawkes Bay	40	4%	3%	6,220	7	8	8	6	5
Manawatu	103	8%	8%	128,815	11	17	27	19	24
Wellington	195	15%	15%	48,177	29	64	39	31	31
Marlborough	19	NA	1%	1,614	6	7*		5*	
Nelson	34	4%	3%	25,837	9	9*		5	12
Christchurch & Canterbury	85	8%	7%	167,628	12	7	16	16	38
Dunedin	44	5%	4%	25,372	9	10	11	5	10
Queenstown	30	3%	2%	27,454	6	6	7	10*	
<b>Total</b>	<b>1,267</b>	<b>100%</b>	<b>100%</b>	<b>1,331,421</b>	<b>195</b>	<b>286</b>	<b>242</b>	<b>199</b>	<b>327</b>

\*Cells with fewer than 5 events have been merged to protect venue confidentiality.

## Special Occasion activities – Year ended September 2013

Special occasion activities are defined as a social gathering or celebration, for example a gala dinner, ball, graduation, cocktail party, birthday party, or wedding.

Region	Count of special occasion activities	Market share of special occasion activities		Total special occasion delegate days	Count of special occasion activities by event size (# of delegates) for YE September 2013				
	YE September 2013	YE September 2012	YE September 2013	YE September 2013	10-30	31-60	61-100	101-200	201+
Auckland	3,435	34%	31%	623,710	516	679	916	734	621
Hamilton & Waikato	1,264	12%	12%	160,744	194	290	391	259	149
Bay of Plenty	619	7%	6%	76,940	100	144	196	125	79
Rotorua	510	3%	5%	60,431	90	137	125	91	69
Taupo	428	3%	4%	53,542	100	103	129	70	45
Hawkes Bay	409	5%	4%	51,965	48	56	154	103	52
Manawatu	799	8%	7%	125,636	142	165	229	166	122
Wellington	1,463	13%	13%	206,346	300	280	373	314	202
Marlborough	239	NA	2%	17,447	92	53	46	28	11
Nelson	376	3%	3%	45,529	97	101	105	53	24
Christchurch & Canterbury	902	6%	8%	127,578	124	233	240	178	125
Dunedin	256	3%	2%	34,326	53	50	77	55	23
Queenstown	288	2%	3%	34,436	63	74	65	60	26
<b>Total</b>	<b>10,988</b>	<b>100%</b>	<b>100%</b>	<b>1,618,630</b>	<b>1,919</b>	<b>2,366</b>	<b>3,044</b>	<b>2,236</b>	<b>1,550</b>

## Appendix 2 – Method for estimating unrecorded MICE activity

This section describes the imputation methodology used to estimate MICE activity for venues that are included in the CAS but have not supplied data.

For the 2009-2012 period, a simple method of estimating the missing data was used. Basically, the weighting was based on the reported capacity for the region. The weight was applied at the regional level, and was calculated as:

$$\frac{\text{(The total reported delegate capacity for the region)}}{\text{(The delegate capacity of the venues that submitted data)}}$$

In general, this calculation generated an average weight of around 1.4 across the 12 Convention Bureaux regions. This meant that the recorded activity (events, delegates, delegate days) would be multiplied by 1.4 to estimate the total activity for the region.

In 2013, the nearest neighbour method was chosen to estimate the missing venue data. The weighting or estimation is based on venues rather than individual events. Thus, the individual events recorded by a venue are aggregated to months, then to the quarter. This data is then combined with the full list of venues so that the dataset includes those venues who have registered with CAS and supplied data, and those who have registered without data and those that have not CAS registered.

Imputation uses the nearest neighbour classification in SPSS to calculate the likely responses for count of events, sum of event days, type of event, sum of delegate days, sum of delegates and all of the associated subgroups. The imputed values are the means of the five nearest neighbours based on the delegate capacity, region and venue type as shown in Table 7. Regions were combined into five strata in order to create a sufficient pool of 'nearest neighbours'.

Table 7 Nearest neighbour criteria for estimation of missing venue data

Feature	Population (across all Bureaux)
Capacity	<ol style="list-style-type: none"> <li>1. &lt;101</li> <li>2. 101-200</li> <li>3. 201-400</li> <li>4. 401-1000</li> <li>5. 1001+</li> </ol>
Regions	<p>Five strata of regions:</p> <ul style="list-style-type: none"> <li>• Auckland, Wellington</li> <li>• Bay of Plenty, Hamilton &amp; Waikato, Hawkes Bay, Manawatu</li> <li>• Christchurch &amp; Canterbury, Nelson</li> <li>• Dunedin, Queenstown</li> <li>• Rotorua, Taupo</li> </ul>
Venue type	<ul style="list-style-type: none"> <li>• Hotels</li> <li>• Convention/event centres</li> <li>• Stadiums/show grounds</li> <li>• Other</li> </ul>

As is shown in Table 8, the estimation process provides results that are quite consistent with the data reported by venues – the mean number of events, delegates and delegate days are not dissimilar. It also reveals that smaller venues do not necessarily hold fewer events, but the events they do host tend to have much fewer delegates and delegate days than those of larger venues.

**Table 8 Comparison of mean counts per quarter for venues reporting / not reporting for the CAS**

Venue capacity	Reporting venue figures					Estimated figures for non-reporting venues				
	100 or fewer	101-200	201-500	501-1000	>1000	100 or fewer	101-200	201-500	501-1000	>1000
	<b>Measure (mean # per quarter per venue)</b>									
Delegate days	1,036	2,220	5,181	6,290	17,897	1,174	1,997	4,277	7,330	19,400
Multi-day events	7	10	16	10	8	6	7	11	12	9
Single day events	16	32	50	40	31	17	31	42	45	36
Total delegates	678	1,597	3,835	4,844	14,379	859	1,623	3,237	5,712	15,990
One day conference delegate days	31	78	234	345	305	73	96	183	460	359
Multi-day conference delegate days	199	526	1,236	1,362	3,547	310	284	880	1,483	3,522

Imputation is more appropriate than weighting for data of this sort. We have a range of information on characteristics of non-reporting venues such as their number, capacity and venue type that was not taken into account in the old weighting method. Much better use of this information is made with imputation.