CAIRNS WORKFORCE NEEDS ANALYSIS

(Looking Forward 5 to 10 years)

Cairns Regional Council

North Australia Research Group

Ref: J2382 | April 2012

5 STEP PROCESS

1. **Looking Back Analysis**
2. **Looking Back Workshop**
3. **Looking Forward Analysis**
4. **Looking Forward Workshop**
5. **Analysis Future Needs & Issues**

LOOKING BACK

ECONOMIC STRUCTURE

BASE INDUSTRIES

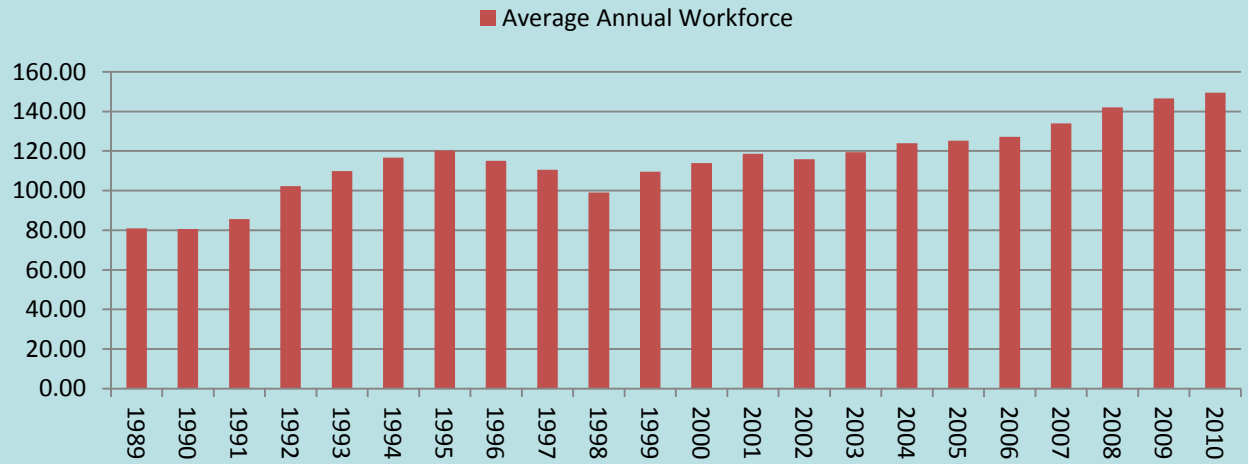
SERVICES STRUCTURE

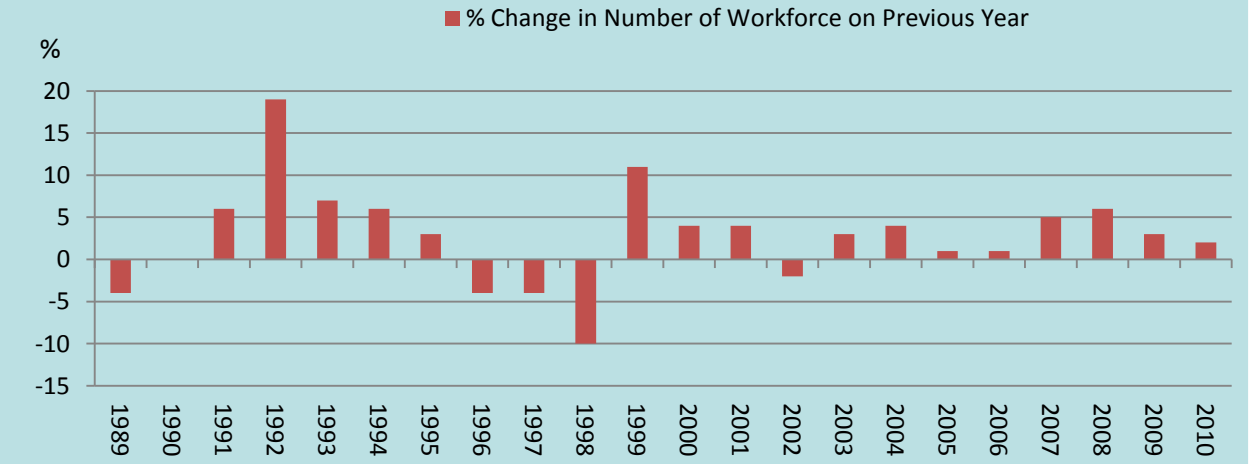
OTHER OUTSIDE EARNINGS

TOTAL WORKFORCE

Average Yearly Workforce Since 1989, FNQ Statistical Division

Year	Average Annual Workforce	% Change in Number of Workforce on Previous Year
1989	80.94	-4%
1990	80.69	0%
1991	85.65	+6%
1992	102.32	+19%
1993	109.94	+7%
1994	116.61	+6%
1995	120.31	+3%
1996	115.07	-4%
1997	110.51	-4%
1998	99.14	-10%
1999	109.63	+11%
2000	113.96	+4%
2001	118.59	+4%
2002	115.87	-2%
2003	119.47	+3%
2004	123.94	+4%
2005	125.29	+1%
2006	127.15	+1%
2007	134.02	+5%
2008	142.07	+6%
2009	146.66	+3%
2010	149.49	+2%





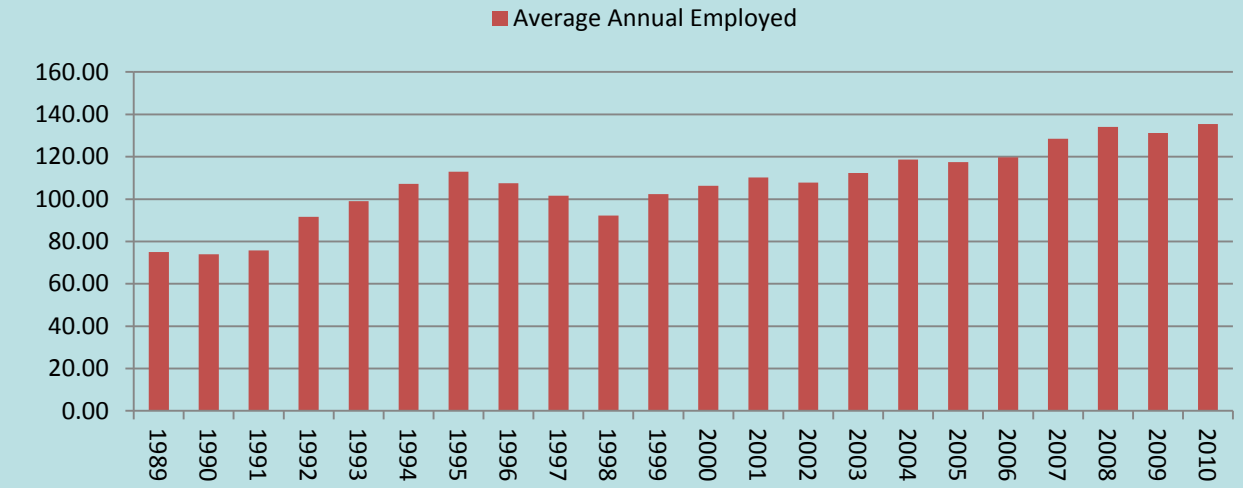
- **SLOW DOWNS & ACCELERATIONS**
- **AVERAGE 2.66% PA.**

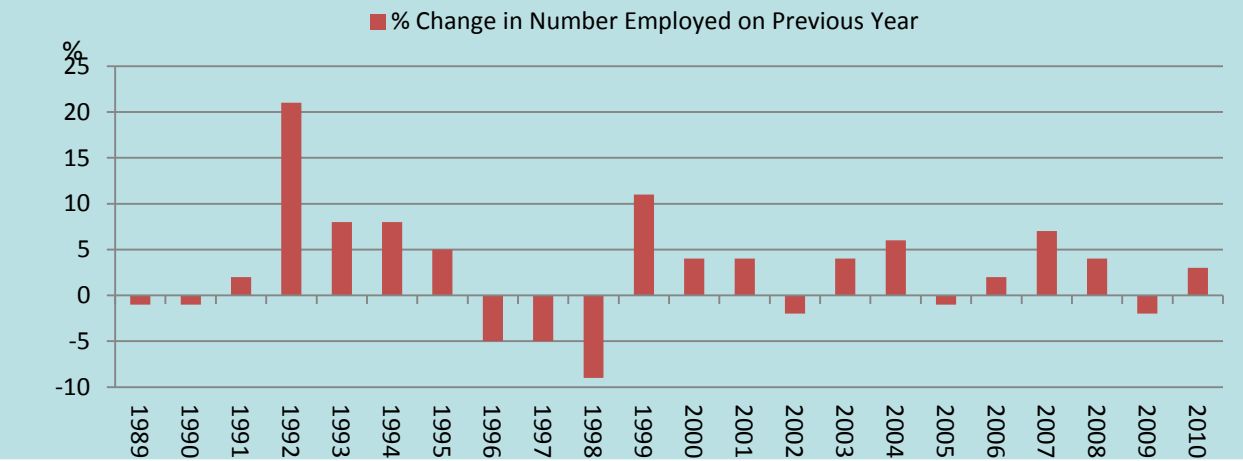
Source: Cummings Economics from ABS data.

EMPLOYED WORKFORCE

Average Annual Employed, FNQ Statistical Division, 1989 to 2010

Year	Average Annual Employed	% Change in Number Employed on Previous Year
1989	74.95	-1%
1990	73.97	-1%
1991	75.79	+2%
1992	91.58	+21%
1993	98.99	+8%
1994	107.13	+8%
1995	112.91	+5%
1996	107.45	-5%
1997	101.55	-5%
1998	92.21	-9%
1999	102.30	+11%
2000	106.29	+4%
2001	110.21	+4%
2002	107.72	-2%
2003	112.29	+4%
2004	118.61	+6%
2005	117.45	-1%
2006	119.66	+2%
2007	128.43	+7%
2008	134.07	+4%
2009	131.22	-2%
2010	135.42	+3%





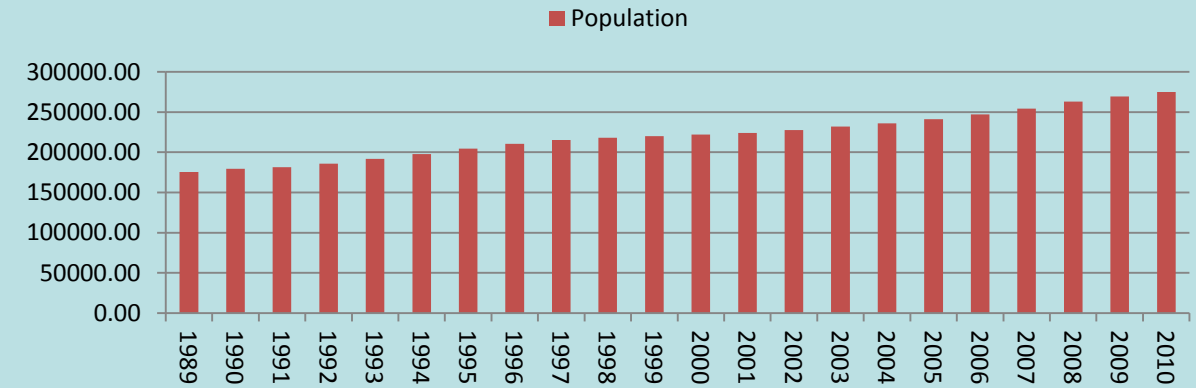
- **GROWTH 2.66% PA.**

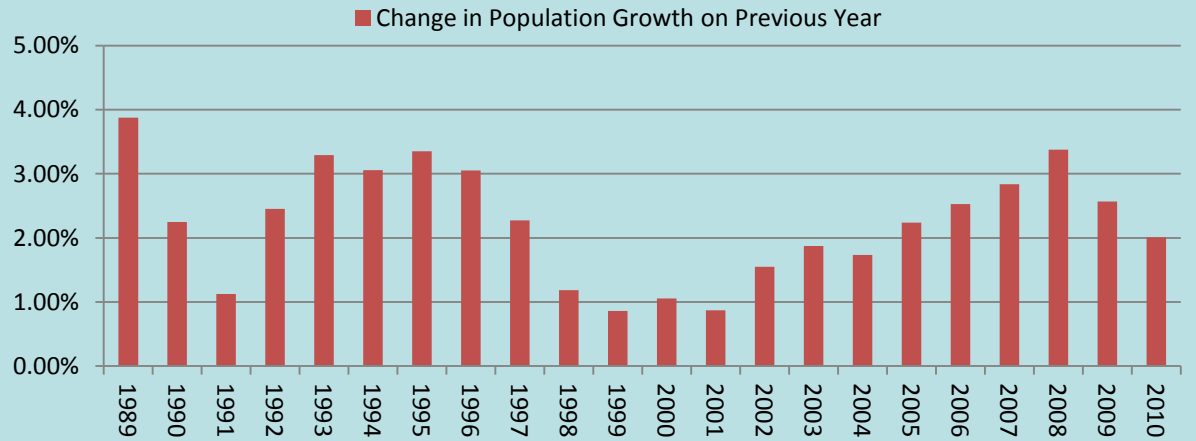
Source: Cummings Economics from ABS data.

POPULATION

Estimated Residential Population & Growth, FNQ Statistical Division, 1989 to 2010

Year	Population	% Change in Population Growth on Previous Year
1989	175432.00	3.88%
1990	179378.00	2.25%
1991	181399.00	1.13%
1992	185848.00	2.45%
1993	191961.00	3.29%
1994	197826.00	3.06%
1995	204452.00	3.35%
1996	210695.00	3.05%
1997	215481.00	2.27%
1998	218037.00	1.19%
1999	219914.00	0.86%
2000	222235.00	1.06%
2001	224163.00	0.87%
2002	227638.00	1.55%
2003	231906.00	1.87%
2004	235921.00	1.73%
2005	241200.00	2.24%
2006	247295.00	2.53%
2007	254309.00	2.84%
2008	262896.00	3.38%
2009	269645.00	2.57%
2010	275058.00	2.01%





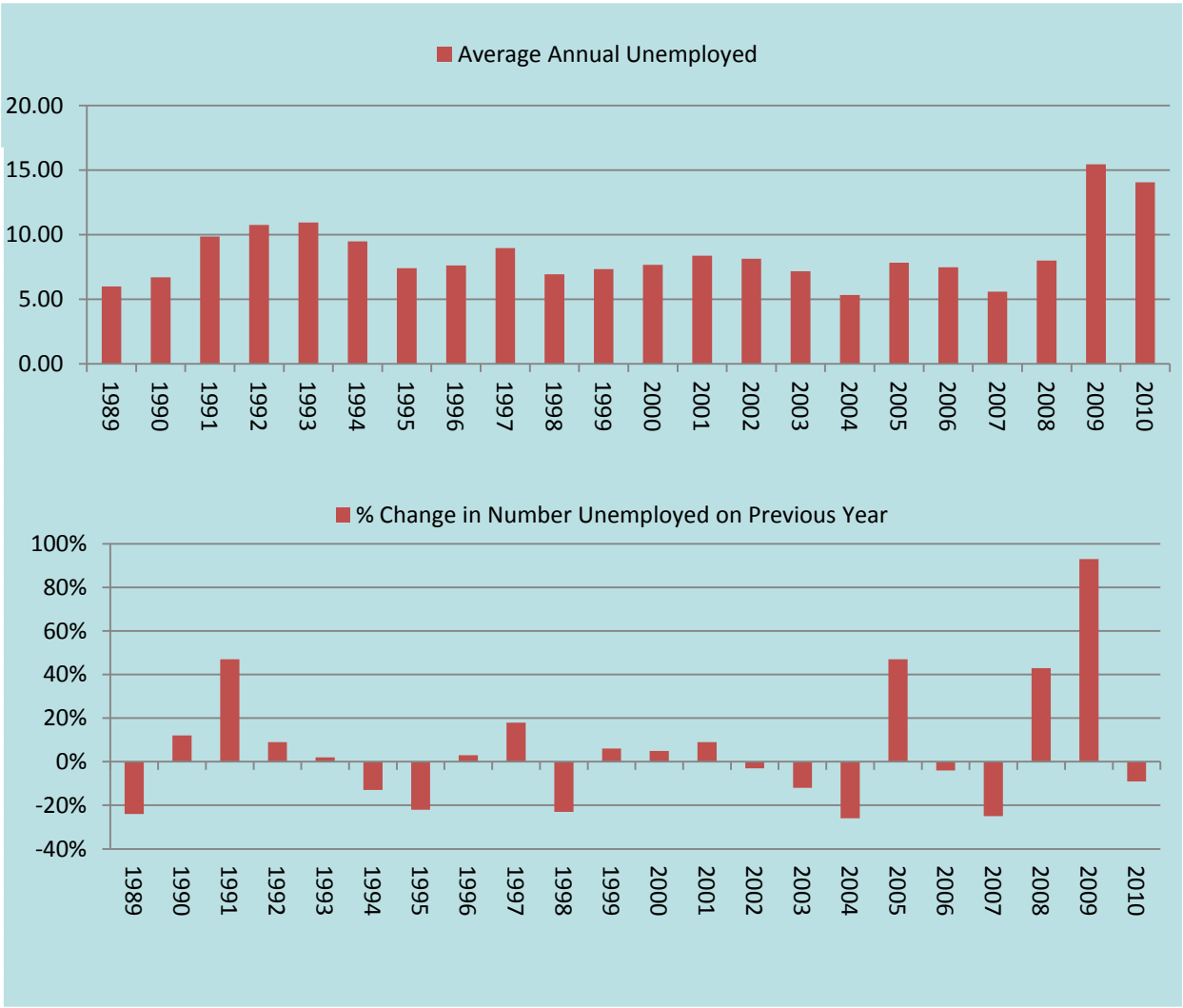
- **GROWTH 2.16% PA. – NO DECLINES**
- **LAG IN REACTION TO WORKFORCE CHANGES**
  - **Dip W/F 1989 – Pop'n 1991**
  - **Peak W/F Gwth 1992 – Pop'n Gwth 1995**
  - **Dip W/F 1998 – Pop'n 2002**
  - **Peak W/F Gwth 1999 – Pop'n gwth 2003**

Source: Cummings Economics from ABS data.

NUMBER UNEMPLOYED

Average Annual Unemployed, FNQ Statistical Division, 1989 to 2010

Year	Average Annual Unemployed	% Change in Number Unemployed on Previous Year
1989	5.99	-24%
1990	6.71	+12%
1991	9.86	+47%
1992	10.75	+9%
1993	10.95	+2%
1994	9.48	-13%
1995	7.40	-22%
1996	7.62	+3%
1997	8.96	+18%
1998	6.93	-23%
1999	7.33	+6%
2000	7.66	+5%
2001	8.39	+9%
2002	8.15	-3%
2003	7.18	-12%
2004	5.33	-26%
2005	7.83	+47%
2006	7.49	-4%
2007	5.59	-25%
2008	8.00	+43%
2009	15.44	+93%
2010	14.07	-9%



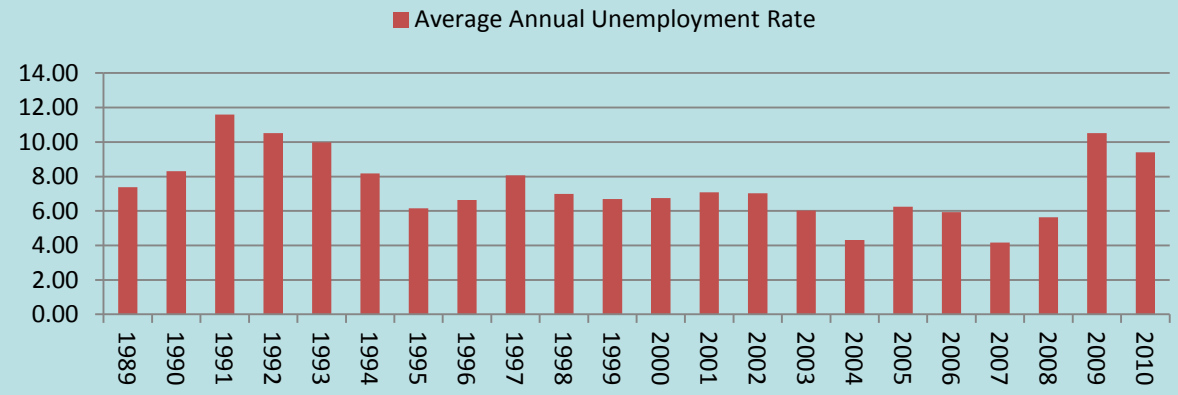
- **SHARP RISES IN 1990/91, 2005, 2008/09**
- **RELATIVELY STEADY 1998 - 2002**

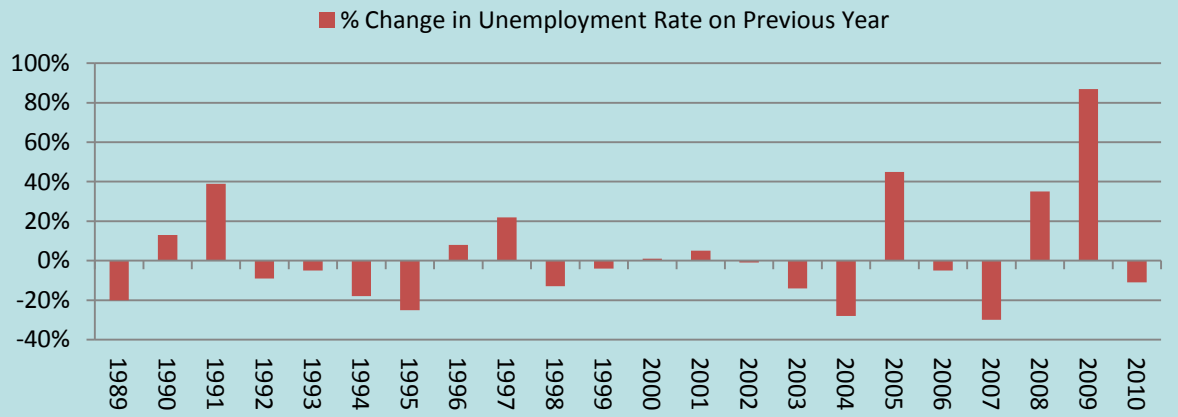
Source: Cummings Economics from ABS data.

UNEMPLOYMENT RATE

Average Annual Unemployment Rate, FNQ Statistical Division, 1989 to 2010

Year	Average Annual Unemployment Rate	%Change in Unemployment Rate on Previous Year
1989	7.38	-20%
1990	8.32	+13%
1991	11.59	+39%
1992	10.51	-9%
1993	9.98	-5%
1994	8.17	-18%
1995	6.15	-25%
1996	6.63	+8%
1997	8.06	+22%
1998	6.99	-13%
1999	6.69	-4%
2000	6.75	+1%
2001	7.08	+5%
2002	7.02	-1%
2003	6.02	-14%
2004	4.31	-28%
2005	6.24	+45%
2006	5.93	-5%
2007	4.16	-30%
2008	5.63	+35%
2009	10.52	+87%
2010	9.41	-11%



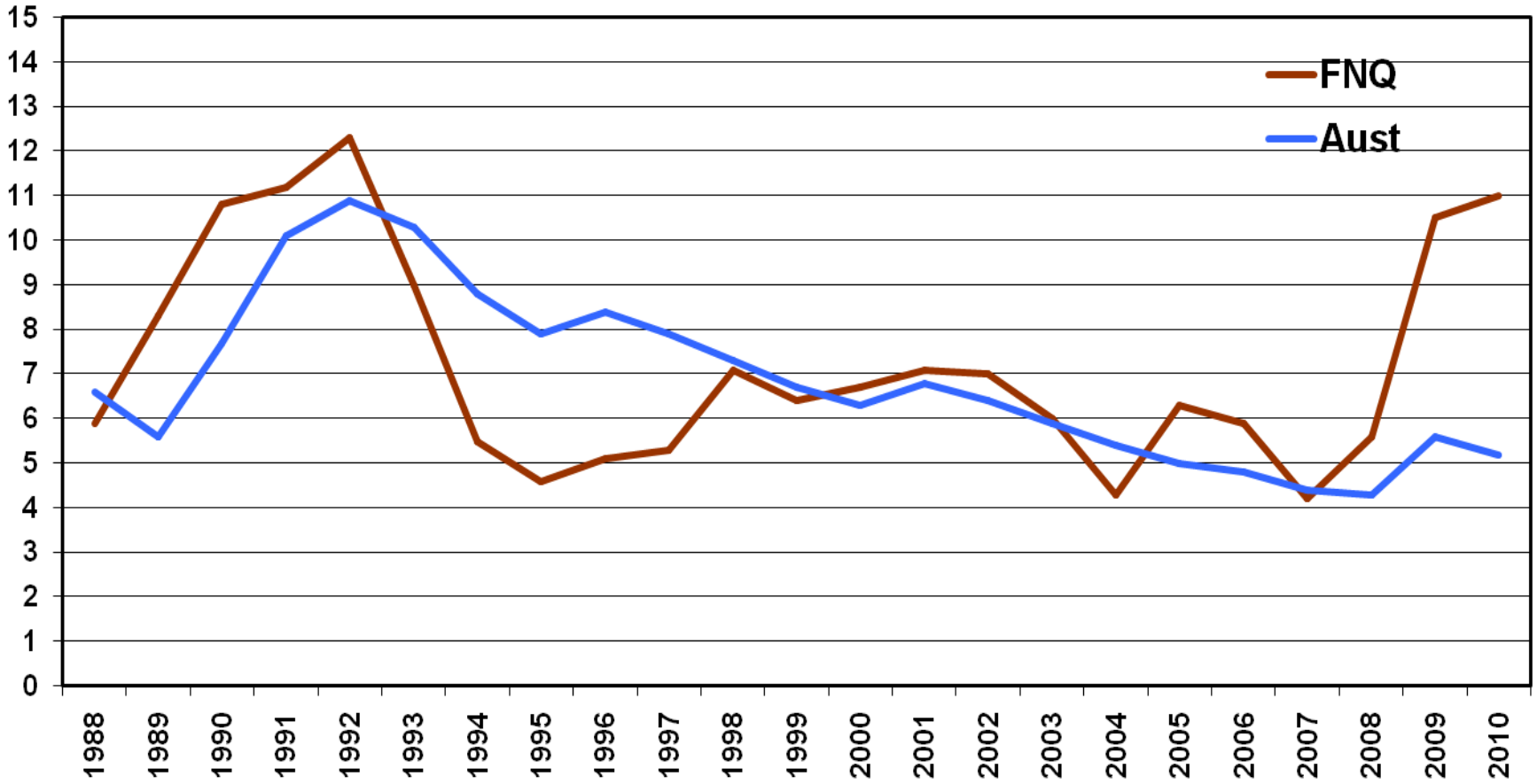


- **AVERAGE 7% - CONSISTENT WITH DESIRED PLACE TO LIVE**
- **VERY HIGH – 1991 – 1993, 2009 – 2010**
- **INDIGENOUS – 1% POINT**
- **SUDDEN DOWNTURNS 1989 & 2008**

Source: Cummings Economics from ABS data.

UNEMPLOYMENT RATE

Unemployment Rate, FNQ & Australia, 1989 to 2010



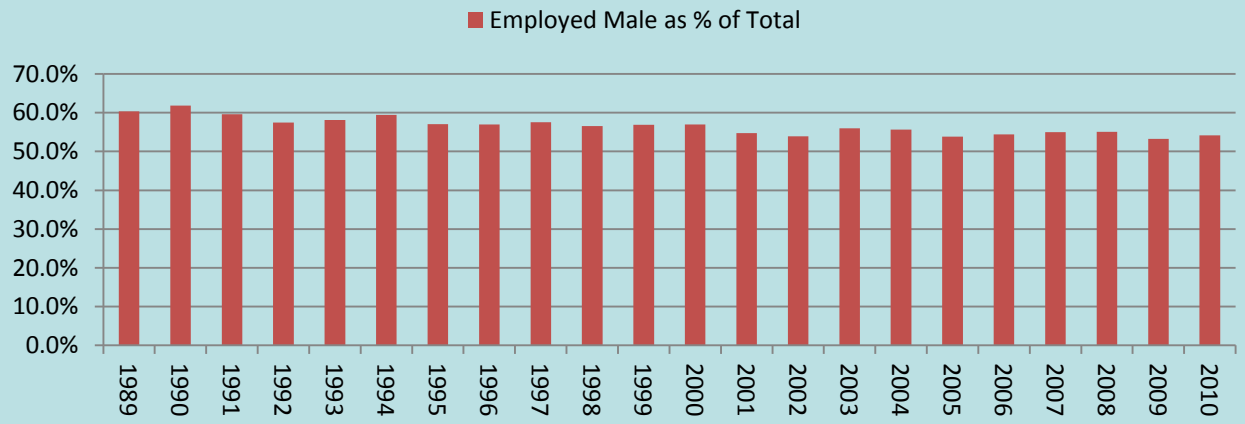
- **LATEST - OUT OF SYNC WITH NATIONAL**

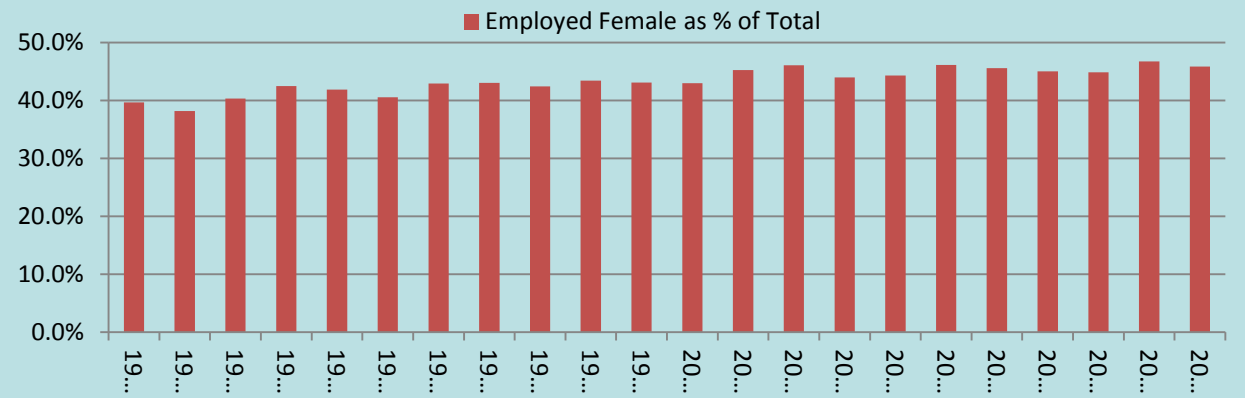
Source: Cummings Economics from ABS data.

MALE / FEMALE

Employed Male / Female as a % of Total, FNQ Statistical Division, 1989 to 2010

Year	Employed Male as % of Total	Employed Female as % of Total
1989	60.3%	39.7%
1990	61.8%	38.2%
1991	59.6%	40.4%
1992	57.5%	42.5%
1993	58.1%	41.9%
1994	59.4%	40.6%
1995	57.1%	42.9%
1996	57.0%	43.0%
1997	57.5%	42.5%
1998	56.6%	43.4%
1999	56.9%	43.1%
2000	57.0%	43.0%
2001	54.7%	45.3%
2002	53.9%	46.1%
2003	56.0%	44.0%
2004	55.7%	44.3%
2005	53.9%	46.1%
2006	54.4%	45.6%
2007	55.0%	45.0%
2008	55.1%	44.9%
2009	53.2%	46.8%
2010	54.1%	45.9%





- **RATIO 1989 - 60 / 40 2010 - 55 / 45**
- **SLOW RISING TREND**

Source: Cummings Economics from ABS data.

AGE OF UNEMPLOYED

Percent of Unemployed by Age Grouped, FNQ Statistical Division

Period	Young 15 - 24	Main workforce 25 – 54	Older 55 plus
Nov 07 – Apr 08	41%	59%	0
May 08 – Oct 08	38%	62%	0
Nov 08 – Apr 09	35%	57%	8%
May 09 – Oct 09	30%	63%	7%
Nov 09 – Apr 10	32%	66%	2%
May 10 – Oct 10	39%	58%	3%
Nov 10 – Feb 11	42%	54%	4%

- **NOV 07 TO FEB 11 ONLY**
- **YOUNG – HIGH BEFORE GFC 41% & RETURNED TO 42%**
- **GFC PERIOD – IMPACT ON MAIN WORKFORCE & OLDER**

Source: Cummings Economics from ABS data.

(2) ANALYSIS BY INDUSTRY

- CENSUS ONLY
- 1996 – 2001 – LITTLE GROWTH
- 2001 – 2006 – STRONG GROWTH
- CAIRNS – STATISTICAL SUB DIVISION ONLY

ANALYSIS BY INDUSTRY - CAIRNS

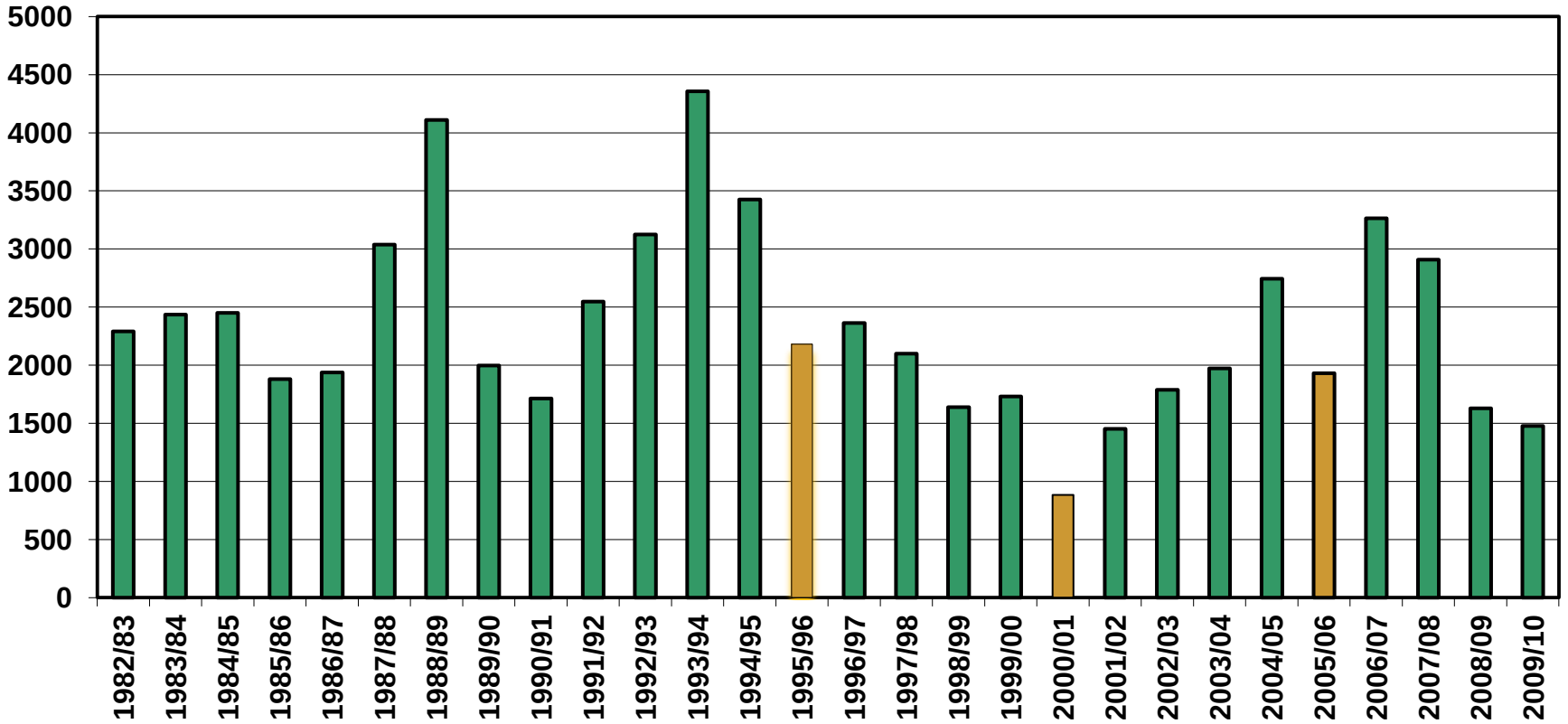
Workforce Changes, Cairns Statistical Division (SSD)

	Growth 1996 - 2001	Growth 2001 - 2008	
Agriculture, forestry & fishing	-15.88%	-27.04%	
Mining	-23.96%	+74.35%	
Manufacturing	+5.16%	+0.02%	
Electricity, gas, water & waste services	+53.28%	+21.68%	
Construction	-14.66%	+71.93%	Construction affected
Wholesale trade	-6.14%	-8.48%	
Retail trade	+15.23%	+10.94%	
Accommodation & food services	+1.83%	-2.44%	
Transport, postal & warehousing	+3.34%	+15.33%	
Information media & telecommunications	-12.11%	-3.94%	
Financial & insurance services	-13.77%	+12.50%	Construction affected
Rental, hiring & real estate services	-6.55%	+26.06%	Construction affected
Professional, scientific & technical services	+0.56%	+21.68%	
Administration & support services	+4.06%	+3.65%	
Public administration & safety	+9.21%	+38.48%	
Education & training	+19.52%	+11.93%	
Health care & social assistance	+15.14%	+26.57%	
Arts & recreation services	-6.14%	+2.40%	
Other services	-12.81%	+12.45%	
Total	+1.21%	+16.35%	

- **Note: CONSTRUCTION AFFECTED.**

Source: Cummings Economics from ABS data.

DWELLING APPROVALS
FNQ Statistical Division



- Note: DECLINE 1995/96 TO 2000/01 RISE 2000/01 TO 2005/06

Source: Cummings Economics from ABS data.

WORKFORCE CHANGES
Cairns SSD

	Growth 1996 - 2001	Growth 2001 - 2008	
Agriculture, forestry & fishing	-15.88%	-27.04%	A Agriculture
Mining	-23.96%	+74.35%	M Mining
Manufacturing	+5.16%	+0.02%	
Electricity, gas, water & waste services	+53.28%	+21.68%	
Construction	-14.66%	+71.93%	
Wholesale trade	-6.14%	-8.48%	
Retail trade	+15.23%	+10.94%	
Accommodation & food services	+1.83%	-2.44%	T Tourism related
Transport, postal & warehousing	+3.34%	+15.33%	
Information media & telecommunications	-12.11%	-3.94%	
Financial & insurance services	-13.77%	+12.50%	
Rental, hiring & real estate services	-6.55%	+26.06%	
Professional, scientific & technical services	+0.56%	+21.68%	
Administration & support services	+4.06%	+3.65%	
Public administration & safety	+9.21%	+38.48%	G
Education & training	+19.52%	+11.93%	G Government services
Health care & social assistance	+15.14%	+26.57%	G
Arts & recreation services	-6.14%	+2.40%	T Tourism related
Other services	-12.81%	+12.45%	
Total	+1.21%	+16.35%	

- **Note: - AGRICULTURE - MINING - TOURISM RELATED**

Source: Cummings Economics from ABS data.

MALES / FEMALES PERCENT BY INDUSTRY

2006 Census, Cairns SSD, Place of Usual Residence

	Males	Females	Cf % Female 1996 Census	Change 1996 -2006 % points
Agriculture, forestry & fishing	72%	28%	28%	-
Mining	90%	10%	14%	-4%
Manufacturing	78%	22%	24%	-2%
Electricity, gas, water & waste services	82%	18%	13%	**+5%**
Construction	86%	14%	13%	+1%
Wholesale trade	72%	28%	28%	-
Retail trade	41%	**59%**	61%	-2%
Accommodation & food services	44%	**56%**	55%	+1%
Transport, postal & warehousing	71%	29%	27%	+2%
Information media & telecommunications	55%	45%	42%	+3%
Financial & insurance services	37%	**63%**	65%	-3%
Rental, hiring & real estate services	44%	**56%**	48%	**+8%**
Professional, scientific & technical services	46%	**54%**	47%	**+7%**
Administration & support services	49%	**51%**	48%	+3%
Public administration & safety	58%	42%	34%	**+8%**
Education & training	28%	**72%**	66%	**+6%**
Health care & social assistance	22%	**78%**	81%	-3%
Arts & recreation services	51%	49%	47%	+2%
Other services	55%	45%	42%	+3%
Total	53%	47%	45%	+2%

☐ *Denotes industries where female employment exceeds male employment.*

- **FEMALES STRONG IN SERVICES**
- **REMALE RISE – INDIVIDUAL INDUSTRIES/INDUSTRY STRUCTURE**

Source: Cummings Economics from ABS data.

MALES / FEMALES PERCENT BY OCCUPATION

2006 Census, Cairns SSD, Place of Usual Residence

	Males	Females	Cf % Female 1996 Census	Change 1996 - 2006 % points
Managers	63%	37%	36%	+1%
Professionals	45%	**55%**	50%	+5%
Technician & trade workers	86%	14%	13%	+1%
Community & personal service workers	35%	**65%**	64%	+1%
Clerical & administration	19%	**81%**	79%	+2%
Sales workers	35%	**65%**	65%	-
Machinery operators & drivers	92%	8%	14%	-6%
Labourers	62%	38%	39%	-1%
Total	53%	47%	45%	+2%

☐ *Denotes females over 50%.*

Source: Cummings Economics from ABS data.

OCCUPATION BY AGE

2006 Census, Cairns SSD, Place of Usual Residence

	15 - 19	20 – 24	25 – 34	35 – 44	45 – 54	55 – 64	65+
Managers	1.2	5.0	19.6	**28.2**	**27.9**	**15.1**	**2.9**
Professionals	0.8	5.9	**24.6**	**28.4**	**26.6**	11.9	1.9
Technician & trade workers	**8.3**	**12.3**	**26.4**	23.6	19.1	9.1	1.3
Community & personal service workers	**7.4**	**13.3**	**26.1**	25.7	18.1	8.1	1.12
Clerical & administration	3.7	9.0	22.3	**27.9**	**24.2**	11.4	1.5
Sales workers	**22.6**	11.1	18.8	19.1	16.8	10.4	1.2
Machinery operators & drivers	2.3	6.6	18.1	**26.5**	**25.2**	**18.0**	**3.2**
Labourers	**10.3**	**11.0**	18.6	22.6	22.4	**13.3**	**2.4**
Total	7.1	9.3	22.3	25.3	22.4	11.7	1.9

☐ *Denotes significantly above average for that age group.*

Source: Cummings Economics from ABS data.

PROJECTIONS 2006 - 2011

Average Annual Growth of Cairns SSD, Intercensal Periods	
1976 - 1981	3.2% pa
1981 – 1986	3.9% pa
1986 – 1991	3.9% pa
1991 – 1996	3.7% pa
1996 – 2001	1.3% pa
2001 – 2006	3.1% pa
2006 - 2011	3.2% pa
Average 1976 - 2011	**3.1% pa**

Source: Cummings Economics from ABS data.

Estimated Workforce Changes, Cairns SSD, 2006 - 2011

	Growth 1996 - 2001	Growth 2001 - 2006	Est Growth 2006 - 2011
Agriculture, forestry & fishing	-15.88%	-27.04%	(-3%)
Mining	-23.96%	+74.35%	+150%
Manufacturing	+5.16%	+0.02%	+12%
Electricity, gas, water & waste services	+53.28%	+21.68%	+16%
Construction	-14.66%	+71.93%	+6%
Wholesale trade	-6.14%	-8.48%	+6%
Retail trade	+15.23%	+10.94%	+16%
Accommodation & food services	+1.83%	-2.44%	+3%
Transport, postal & warehousing	+3.34%	+15.33%	+20%
Information media & telecommunications	-12.11%	-3.94%	+6%
Financial & insurance services	-13.77%	+12.50%	+10%
Rental, hiring & real estate services	-6.55%	+26.06%	+10%
Professional, scientific & technical services	+0.56%	+21.68%	+20%
Administration & support services	+4.06%	+3.65%	+8%
Public administration & safety	+9.21%	+38.48%	+30%
Education & training	+19.52%	+11.93%	+25%
Health care & social assistance	+15.14%	+26.57%	+25%
Arts & recreation services	-6.14%	+2.40%	+5%
Other services	-12.81%	+12.45%	+16%
Total	**+1.21%**	**+16.35%**	**+16%**

PROJECTIONS 10 YEARS TO 2021

GLOBAL ECONOMIC CONDITIONS

Next 5 years	Mining & Primary Industries	Tourism
High commodity prices and Australian dollar	Excellent prospects	Poor prospects
5 – 10-years period		
Reduced commodity prices and Australian dollar	Good but reduced prospects	Improved prospects

POPULATION GROWTH

GOVERNMENT PROJECTIONS

APPENDIX 1

PROJECTION

AT 2011 **110,000**

ACTUAL 2011 **153,000**

Forward Resident Population Projections, Cairns Regional Council Area			
	2011 Actual	**2016**	**2021**
At PIFU medium 1.9% pa	170,270	187,072	205,532
At long term actual 'trend' growth rate 3.0% pa	170,270	197,390	228,829

Estimated Total Workforce, Cairns SSD (slower 2011 – 2016, faster 2016 - 2021)						
	2011	**Growth 2011-2016**	**2016**	**Growth 2016-2021**	**2021**	**Growth 2011-2021**
PIFU based	81,400	(1.4% pa) (+5,800)	87,200	(2.2% pa) (+10,100)	97,300	(+15,900)
Long term average based	81,400	(2.4% pa) (+10,300)	91,700	(3.2% pa) (+16,100)	107,800	(+26,400)

Estimated Growth in Workforce, Rankings by Industry Sectors, 2011 to 2021

	PIFU	Trend
Health care, etc.	2781	3588
Mining	1331	3106
Retail trade	1883	3061
Construction (1)	1418	2604
Public administration & safety	1595	2470
Education & training	1417	2195
Transport, postal & warehousing	1288	2051
Manufacturing	734	1474
Professional scientific & technical services	741	1407
Accommodation & food services	552	957
Other services	529	879
Administrative & support	221	517
Rental, hiring & real estate (1)	211	391
Financial & insurance (1)	178	332
Wholesale trade	148	275
Information, media & telecommunication	102	198
Electricity, gas, etc.	82	169
Arts & recreation services	93	161
Total	**15,681**	**26,407**

The projected workforce proportions by industry in 2021 under the Trend scenario were compared with 2006 composition for Townsville and Brisbane indicating movements towards similar patterns to Brisbane but with:

- Manufacturing still low.
- Construction still higher.
- Retail still relatively high.
- Accommodation and food services still high.
- Transport, etc., still high.
- Services of finance and insurance, professional scientific and technical services remaining below Brisbane.
- Health care and social assistance up to Townsville's 2006 level.
- Public administration and safety (includes defence) increasing but still well below Townsville.

Estimated Workforce Increases by Occupation, 2011 – 2021

	PIFU	TREND
Professionals	3241	5129
Technicians & trades workers	2618	4852
Clerical & administrative workers	2295	3793
Community & personal service workers	1862	2757
Managers	1548	2685
Sales workers	1477	2489
Labourers	1269	2199
Machinery operators & drivers	1134	2126

The foregoing relates to Cairns Statistical Sub Division (SSD). Outside of Cairns SSD, Douglas' growth is likely to remain modest over the next five years under the influence of the high dollar but pick up over 2016 to 2021.

Babinda area's high level of manufacturing will fall with the mill closure over the period 2011 to 2016 but likely to exhibit a general growth across service sectors 2016 to 2021.

FUTURE NEEDS

- Cairns has been recording growth rates in population averaging about 30% each decade for the last four decades and strong growth can be expected over the next decade, but with continuing volatility.

- While the scale of the task of meeting a need for a 20 – 30% (16,000 – 26,000) increase in workforce over the next decade seems large, it is within scale of past trends.

- Volatility in the level of construction activity with consequences for associated sectors is likely to remain a special problem.

- The next ten years is likely to see an upsurge in mining and associated workforce needs and based on work in recent years, the city's employment and training institutions have recognised this and are gearing up to cope with it.

- Direct agricultural employment in the city is low but the sector is important in the surrounding region with a feature of 'outsourcing' employment from farms into district centres and the regional city of Cairns.

- Tourism employment is facing efficiency and outsourcing pressures. The city's training institutions might seek wider markets.

- Long term chronic need to attract skilled workforce will be in:
  - Education, especially higher education.
  - Health and allied health services.
  - Professional and managerial staff.
  - Engineering and skilled trades.

- Oversupply of youth workers seems likely to continue and worsen mildly with projected industry changes.

FUTURE ISSUES

- It is implicit in the projections that Cairns will be a larger more multidimensional city as scope for 'outside earnings' changes, and as the city 'catches up' in the extent and range of its service industries.
- In seeking to influence job creation prospects, there is a need for a more holistic regional approach that recognizes the importance of the full range of the region's 'base' industries in underpinning the Cairns economy.

- There will continue to be a real need to cope with volatility, especially in construction and related sectors, with a need
  - for businesses to factor this into their financial arrangements, and
  - for the city/region to be ready with projects to quickly initiate if major downturns occur.

- There is a need to recognize the impact that falling transport and communication costs has on the scale and composition of growth.
  - = To ensure the city is not late in the NBN roll out and further studies made into positive and negative effects on employment.
  - = To ensure that in the changed international circumstances, the region's freight transport infrastructure is improved.
  - = To use Cairns' strategic position in air and sea transport (especially in the wider north Australia, Papua New Guinea, Pacific, and Papua Indonesia area), to counter centralizing trends to metropolitan centres caused by improved transport. This involves a need to take a "wider regional market approach" not just for supply of workforce to mines, but across the supply of a wide range of goods and services. This will require a whole range of businesses and institutions to change their conception of their market/service boundaries including media, employment and education and training institutions.

- Better information on employment and unemployment composition needs to be made public.

- While it is desirable to maximize training, the scale of workforce needs means that large workforce numbers will need to be attracted.

- The major issue about training is the lack of training support for many jobs beyond schooling, apprenticeship systems and HEC's schemes. While this is common at a national level, the region needs to address it.

- Cairns faces a range of negatives in attracting workforce.
    a) Wages and salaries offered not being high enough.
    b) Being away from career path opportunities available in metropolitan centres.
    c) Social problems of distance from family.
    d) Social problems of adaptation of employees and family members to a different climate and perceptions of that climate.
    e) Inferior availability compared to metropolitan centres of health, education, sporting and entertainment facilities.

The following gives suggestions for overcoming some of the problems:

a) The city needs to keep up with social infrastructure that can be justified for its size. It can be argued that at present, it is well below what it should be in higher education, health, and some sporting and entertainment facilities.

b) The city needs to be able to present a good image of itself to prospective workforce. The employment agencies are often in the front line of this and the Council needs to engage with the employment agencies to review what is available in this field with a view to helping to correct any deficiencies.

c) Well adapted skilled potential employees can be available locally, who are missed by some institutions that fail to advertise locally. Employers should be encouraged to advertise locally (especially governments) rather than just transfer in staff who often do not adjust well.

d) At times, lack of availability of suitably skilled staff within Australia can be overcome by recruiting from overseas. The system set up by the Commonwealth with the Chamber of Commerce acting as a recommending agency on the question of local availability of skills appears to have worked well and should be supported.

- The youth unemployment question needs to be addressed and the education and training institutions ‘take on board’ some of the underlying causes raised by the employment agencies.

- Scope for a higher rate of female participation is becoming limited and likely to occur mainly from transfer from part time/casual to full time work and older workers are likely to be able to and want to stay in the workforce longer.

- The importance of an employer's perspective needs to be appreciated, especially in a city like Cairns, and it is recommended that the analysis in this report be used to help restore confidence after the great deal of recent negative publicity and views about the city's prospects.

CAIRNS WORKFORCE NEEDS ANALYSIS

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