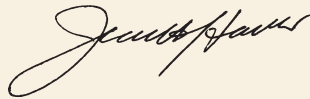


## CERTIFICATION OF KEY PERFORMANCE INDICATORS

We hereby certify that the performance indicators are based on proper records, are relevant and appropriate for assisting users to access Curtin University of Technology's performance, and fairly represent the performance of Curtin University of Technology for the financial year ended 31 December 2012.



**Colin Beckett**  
Chancellor



**Jeanette Hackett**  
Vice-Chancellor

On behalf of the University Council

Dated this 13th day of March 2013

## CURTIN'S KEY PERFORMANCE INDICATORS

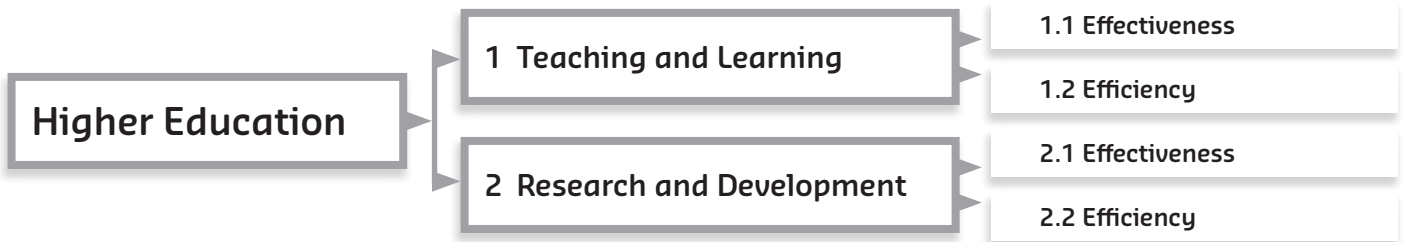
### Introduction

As expressed through its mission, Curtin is committed to innovation and excellence in teaching and research for the benefit of our students and the wider community. The institutional effectiveness and efficiency Performance Indicators used by Curtin are designed to demonstrate progress towards meeting Teaching and Learning and Research and Development objectives, and targets as espoused in the University's Strategic Plan and Enabling Plans.

The Performance Indicators used are divided into two categories – effectiveness and efficiency – and are used in the following context:

- **effectiveness:** measures the extent to which outcomes have been achieved
- **efficiency:** measures the resources used to attain a certain level of output.

The following diagram summarises the approach.



Trend data for the last four years is provided, where available, so that overall direction and rate of progress can be observed. This trend data also identifies broad changes in cases where short-term variability may hide longer-term trends.

## Key Performance Indicators (continued)

**HIGHER EDUCATION PERFORMANCE****1 Higher Education Teaching and Learning Performance Indicators**

	Ref.	Name	Objective
1.1 Effectiveness	a	Employment and Study Destinations of New First Degree Graduates	Focus on high-quality courses in areas of strength.
	b	Perceived Course Quality – Australian Graduate Survey	Focus on high-quality courses in areas of strength. Drive international excellence.
	c	Perceived Teaching Quality – Curtin eVALUate Unit Survey	Develop a culture of excellence and innovation. Drive international excellence.
	d	Subject Load Pass Rate	Focus on high-quality courses in areas of strength. Drive international excellence.
1.2 Efficiency	e	Teaching and Learning Expenditure per Equivalent Full-Time Student Load (EFTSL) and as a Percentage of Curtin Total Expenditure	Enhance capacity and financial sustainability.
	f	Teaching and Learning Expenditure per Successful EFTSL	Enhance capacity and financial sustainability.
	g	Graduate Productivity Rate – Course Completions per 10 Full-Time Equivalent (FTE) Academic Staff	Enhance capacity and financial sustainability.
	h	Commencing (First Year) Bachelor Degree Retention	Enhance capacity and financial sustainability. Drive international excellence.

**2 Higher Education Research and Development Performance Indicators**

2.1 Effectiveness	i	Growth in Research EFTSL	Strengthen research capability and performance.
	j	Institutional Grants (\$) Ranking	Strengthen research capability and performance. Enhance capacity and financial sustainability.
	k	Total Research Income (\$) Ranking	Strengthen research capability and performance. Enhance capacity and financial sustainability.
	l	Cooperative Research Centre (\$) Ranking	Strengthen research capability and performance. Enhance capacity and financial sustainability.
	m	Research Publication (weighted Higher Education Research Data Collection (HERDC) points) Ranking	Strengthen research capability and performance.
2.2 Efficiency	n	Research Funding per Research Staff (using Research Performance Index database)	Strengthen research capability and performance. Enhance capacity and financial sustainability.
	o	Weighted Research Publication per Research Staff (using Research Performance Index database)	Strengthen research capability and performance. Enhance capacity and financial sustainability.

## 1 TEACHING AND LEARNING PERFORMANCE INDICATORS

### Strategic objectives:

- S1. Develop a culture of excellence and innovation.
- S2. Focus on high-quality courses in areas of strength.
- S4. Drive international excellence.
- S5. Enhance capacity and financial sustainability.

### 1.1 Teaching and Learning Effectiveness

Ref.	Name	Objective
a	Employment and Study Destinations of New First Degree Graduates	Focus on high-quality courses in areas of strength.
b	Perceived Course Quality – Australian Graduate Survey	Focus on high-quality courses in areas of strength. Drive international excellence.
c	Perceived Teaching Quality – Curtin eVALUate Unit Survey	Develop a culture of excellence and innovation. Drive international excellence.
d	Subject Load Pass Rate	Focus on high-quality courses in areas of strength. Drive international excellence.

## Key Performance Indicators (continued)

**Focus on high-quality courses in areas of strength, measured by:**  
**(a) Employment and Study Destinations of New First Degree Graduates**  
*Benchmark gauge: Australian Universities' Average*

This indicator measures Curtin's effectiveness in both assisting students to reach their full potential and in producing graduates who are of productive value to employers and the community. Table a. shows results from the Australian Graduate Survey (AGS), which combines the Graduate Destination Survey (GDS) and Course Experience Questionnaire (CEQ). It summarises the major activities of new first degree (that is, bachelor, bachelor honours, and diploma) Curtin graduates each year of the series, and

compares these with the national average sourced from Graduate Careers Australia (GCA). Surveys in each year deal with the graduates of the previous year. Therefore the latest available national data, which is from the 2011 AGS survey, applies to the views of students who graduated in 2010. In addition to this national data, Curtin also has access to the views of its own 2011 graduates from the results of the latest survey conducted in 2012, as follows:

**Table a. Employment and Study Destinations of New Bachelor Degree Graduates<sup>1</sup> 2009–2012**  
 Australian Citizens and Permanent Residents only

Activity	2009 survey <sup>5</sup>		2010 survey <sup>5</sup>		2011 survey <sup>5</sup>		2012 survey <sup>4</sup>	
	Curtin	All <sup>2</sup>	Curtin	All <sup>2</sup>	Curtin	All <sup>2</sup>	Curtin	All <sup>2</sup>
Full-time work	61%	52%	55%	49%	56%	49%	59%	n/a
Full-time study	11%	18%	12%	19%	13%	19%	12%	n/a
Not working, seeking full-time work	6%	5%	8%	6%	6%	6%	5%	n/a
Part-time work, seeking full-time work	8%	9%	9%	10%	9%	10%	7%	n/a
Part-time work, not seeking full-time work	9%	10%	11%	10%	10%	10%	11%	n/a
Not working, seeking part-time work	1%	1%	1%	1%	1%	1%	1%	n/a
Unavailable for work/study	6%	5%	5%	6%	5%	5%	5%	n/a
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>n/a</b>
Percentage Graduates in Mode of Choice <sup>3</sup>	84%	81%	79%	79%	80%	79%	84%	n/a
<b>Curtin Target (minimum)</b>	<b>82%</b>		<b>82%</b>		<b>82%</b>		<b>82%</b>	
<b>Benchmark (Aust Unis' Avg. in prior year)</b>	<b>86%</b>		<b>81%</b>		<b>79%</b>		<b>79%</b>	
<i>Total Number of Respondents</i>	<i>2,012</i>	<i>63,492</i>	<i>2,095</i>	<i>65,045</i>	<i>2,217</i>	<i>68,205</i>	<i>1,981</i>	<i>n/a</i>
<i>Response Rate</i>	<i>61%</i>	<i>n/a</i>	<i>61%</i>	<i>n/a</i>	<i>65%</i>	<i>n/a</i>	<i>57%</i>	

<sup>1</sup> Data is sourced from the Australian Graduate Surveys conducted by Curtin and other universities of all their graduates.

<sup>2</sup> All refers to All Australian Universities. While Curtin has access to its 2012 survey results, national data for 2012 are not available until 2013.

<sup>3</sup> Definition: the percentage of new first degree graduates working in the mode of their choice as a percentage of the total number of graduates seeking work. Mode of Choice = (the number of graduates in full-time work + number in part-time work, not seeking full-time work) / (total number of respondents minus those in full-time study and those unavailable for study or work).

<sup>4</sup> From 2012, previously used PERMRES to determine graduates' citizenship was replaced by HECSRES. HECSRES is based on the method of fee payment instead of self-reported citizenship status after course completion to determine domestic and international graduates. This change was initiated by GCA as part of their continual process improvement. GCA has indicated that analysis suggests there are only minor differences in results from the two measures of residency.

<sup>5</sup> 2009–2011 survey results continue to be based on PERMRES, thus the results were unchanged from those previously reported.

#### Notes

a. Rounding errors may occur.

b. Graduates are surveyed in the year following their completion/graduation. For example, the 2012 survey applies to students who completed their course in 2011.

c. GDS/AGS datapoints are frequencies and not means, thus standard deviations are not reported.

d. Survey data for 2012: Confidence Level = 99%; Confidence Interval = 1.89.

e. National data from the 2012 survey is not yet available.

In relation to the GDS, the 84% outcome in 2012 for the item 'Percentage of graduates in their mode of choice' exceeds Curtin's minimum target of 82%. However, it is acknowledged

that labour market conditions influence this indicator and this must therefore be considered when comparing this indicator to previous years' benchmarks or Curtin's target.

### Focus on high-quality courses in areas of strength and drive international excellence, measured by:

#### (b) Perceived Course Quality – Australian Graduate Survey

*Benchmark gauge: Australian Universities' Average*

The AGS conducted by Curtin and other institutions provides graduate outcome measures of teaching and learning within the Course Experience section. New graduates are asked to rate their perceptions using five aspects of their recently completed course: good teaching, clear goals and appropriate standards, generic skills, overall satisfaction and graduate qualities. Graduate perceptions of the extent to which they have developed generic and general skills, together with their overall satisfaction, are fundamental to monitoring the quality of teaching and learning.

Surveys in each year deal with the graduates of the previous year. AGS survey data for all universities was analysed by the Australian Council for Educational Research on behalf of the GCA. Graduates assign scores across a range from -100 to +100 against each criterion. A score of -100 corresponds

to complete disagreement, while at the other end of the scale a +100 indicates complete agreement. Results are shown in Table b. In addition to this national data, Curtin also had access to its own results of the latest survey, conducted in 2012 for students who graduated in 2011.

On average, 94% of Curtin's 2011 graduates (surveyed in 2012) were broadly satisfied with their course experience, comparable to last year. However, it is important to note that from survey year 2010, the GCA implemented the new, fully labelled CEQ scale for the first time (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree). Previously only the two extreme rating points were labelled (strongly disagree and strongly agree). The significant improvement in CEQ results since 2010 may be partly attributed to this scale modification.

**Table b. Perceived Course Quality – Australian Graduate Survey (AGS) of all New Bachelor Degree Graduates 2009–2012**  
Average Graduate Score -100 (complete disagreement) to +100 (complete agreement)

AGS Scale	2009 survey		2010 survey <sup>4</sup>		2011 survey		2012 survey	
	Curtin	All <sup>2</sup>	Curtin	All <sup>2</sup>	Curtin	All <sup>2</sup>	Curtin	All <sup>2</sup>
Good teaching	+21 (43.1)	+23	+31 (37.2)	+31	+31 (37.9)	+33	+33 (37.2)	n/a
Clear goals and standards	+17 (38.6)	+19	+24 (34.4)	+25	+24 (35.0)	+26	+24 (34.3)	n/a
Graduate qualities	+34 (43.3)	+40	+46 (32.0)	+48	+45 (33.3)	+49	+46 (32.5)	n/a
Generic skills	+33 (42.9)	+37	+45 (32.2)	+46	+45 (33.1)	+47	+46 (32.6)	n/a
Overall satisfaction	+34 (51.6)	+39	+47 (41.6)	+48	+47 (42.0)	+49	+48 (41.1)	n/a
Per cent Broad Agreement <sup>3</sup> Overall Satisfaction	86%	88%	94%	93%	94%	94%	94%	n/a
<b>Curtin Target (minimum)</b>	<b>90%</b>		<b>90%</b>		<b>90%</b>		<b>90%</b>	
<b>Benchmark (Aust Unis' Avg. in prior year)</b>	<b>88%</b>		<b>88%</b>		<b>93%</b>		<b>94%</b>	
<i>Total Number of Respondents<sup>1</sup></i>	2,899	73,951	2,988	83,363	3,158	92,325	2,847	n/a
<i>Response Rate</i>	57%	n/a	57%	n/a	57%	n/a	50%	n/a

<sup>1</sup> A student undertaking a double major has had the option of completing two AGSs. Of the 2,847 Curtin respondents to the 2012 survey, 687 provided additional information about a major.

<sup>2</sup> All refers to All Australian Universities.

<sup>3</sup> Broad agreement includes responses of 3, 4 and 5 on a 5-point scale where 5 is 'strongly agree', so eliminating 'disagree' and 'disagree strongly'.

<sup>4</sup> GCA implemented the new, fully labelled CEQ scale for the first time for the 2010 survey (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree). Previously only the two extreme rating points were labelled (strongly disagree and strongly agree).

#### Notes

a. Graduates are surveyed in the year following their completion/graduation. For example, the 2012 survey applies to students who completed their course in 2011.

b. Bracketed figures are the standard deviation for each CEQ/AGS scale.

c. Survey data for 2012: Confidence level = 99%; Confidence interval = 1.71.

d. National data for 2012 is not yet available.

## Key Performance Indicators (continued)

**Develop a culture of excellence and innovation and drive international excellence, measured by:****(c) Perceived Teaching Quality – Curtin eVALUate Unit Survey***Benchmark gauge: None*

The Curtin eVALUate Unit Survey (eVALUate) is automatically available for all students who are enrolled in Curtin's coursework units. The survey focuses on student achievement of unit learning outcomes – it asks students' level of agreement with three key indicators: what helped their achievement of learning outcomes; their level of motivation and engagement; and their overall satisfaction with the unit.

Percentage Agreement of the item 'Overall, I am satisfied with this unit' provides an indicator of student satisfaction with the quality of the teaching and learning experiences of the unit.

In 2012 agreement in overall unit satisfaction is 84% in both Semester 1 and Semester 2, 1% below Curtin's target. There is no benchmark, as this is an internal Curtin survey.

**Table c. Perceived Teaching Quality – Curtin eVALUate Unit Survey 2009-2012**

Total Agreement as a percentage of Total Response

	2009		2010		2011		2012	
	Sem1 <sup>2</sup>	Sem2 <sup>2</sup>	Sem1 <sup>2</sup>	Sem2 <sup>2</sup>	Sem1 <sup>2</sup>	Sem2 <sup>2</sup>	Sem1 <sup>2</sup>	Sem2 <sup>2</sup>
Per cent agreement <sup>1</sup> in overall satisfaction	83%	83%	83%	84%	82%	84%	84%	84%
<b>Curtin Target (minimum)</b>	<b>80%</b>	<b>80%</b>	<b>85%</b>	<b>85%</b>	<b>85%</b>	<b>85%</b>	<b>85%</b>	<b>85%</b>
<i>Number of students who could participate</i>	<i>35,342</i>	<i>33,201</i>	<i>39,457</i>	<i>34,059</i>	<i>42,449</i>	<i>33,875</i>	<i>43,443</i>	<i>32,903</i>
<i>Response Rate</i>	<i>45%</i>	<i>41%</i>	<i>44%</i>	<i>43%</i>	<i>44%</i>	<i>43%</i>	<i>41%</i>	<i>44%</i>

<sup>1</sup> Agreement consists of 'strongly agree' and 'agree' on a 5-point scale, the others being 'strongly disagree', 'disagree', and 'unable to judge'.

<sup>2</sup> The survey covers all locations and study periods included in the Semester 1 and Semester 2 events.

**Focus on high-quality courses in areas of strength and drive international excellence, measured by:**

**(d) Subject Load Pass Rate**

*Benchmark gauge: All WA and All Australian Universities rates*

The Subject Load Pass Rate indicator (also often referred to as 'Success Rate' or 'Progress Rate') measures quantity and timeliness of students attaining a pass result in their units of study. Sound curriculum design, good pedagogy, appropriate assessment practices and learning support should sustain subject load pass rates and, thus, course progression, minimising course completion times.

The data in Table d. shows that Curtin's overall Subject Load Pass Rate in 2012 is 86%, meeting the 'All WA Universities' benchmark; however, falling 2% below the 'Curtin University Target' and the 'All Australian' benchmarks.

This indicator is the percentage in each academic year of assessed subject load (based on credit points studied) for which students, both domestic and international, were awarded a passing grade.

**Table d. Subject Load Pass Rate (SLPR) by Branch of Learning 2009–2012**  
Student Load Passed as a Percentage of Student Load Assessed

Branch of Learning	2009	2010	2011	2012
Science, Computing, Engineering, Architecture, Agriculture	87%	85%	85%	84%
Administration, Business, Economics, Law	86%	86%	86%	85%
Humanities, Arts and Education	89%	87%	86%	85%
Health Sciences	95%	95%	94%	93%
Curtin Overall SLPR	88%	87%	87%	86%
<b>Curtin Target (minimum)</b>	<b>88%</b>	<b>88%</b>	<b>88%</b>	<b>88%</b>
<b>All WA Universities Benchmark (prior year)<sup>b</sup></b>	<b>88%</b>	<b>88%</b>	<b>87%</b>	<b>86%</b>
<b>All Australian Universities Benchmark (prior year)<sup>b</sup></b>	<b>89%</b>	<b>89%</b>	<b>88%</b>	<b>88%</b>

**Notes**

a. Data source: the Commonwealth annual student statistical collections from Student One. The Subject Load Pass Rates presented in the table exclude Higher Degree by Research student load.

b. Benchmark source: The 'All WA' and 'All Australian Universities' benchmarks are derived from an average of success rates and success ratios for equity groups (low socio-economic status, regional locations, remote locations and students with disability) reported in the Institutional Performance Portfolio by DIISRTE.



## Key Performance Indicators (continued)

## 1.2 Teaching and Learning Efficiency

Ref.	Name	Objective
e	Teaching and Learning Expenditure per EFTSL and as a percentage of Curtin Total Expenditure	Enhance capacity and financial sustainability.
f	Teaching and Learning Expenditure per Successful EFTSL	Enhance capacity and financial sustainability.
g	Graduate Productivity Rate – Course Completions per 10 FTE Academic Staff	Enhance capacity and financial sustainability.
h	Commencing (First Year) Bachelor Degree Retention	Enhance capacity and financial sustainability. Drive international excellence.

## Enhance capacity and financial sustainability, measured by:

## (e) Teaching and Learning Expenditure per EFTSL

Benchmark gauge: None

## (f) Teaching and Learning Expenditure per Successful EFTSL

Benchmark gauge: None

Teaching and Learning expenditure relates to the teaching of coursework (that is, non-research) programs. The two indicators reported in Table e. show: (i) the average cost of teaching each Equivalent Full-Time Student Load (EFTSL) where load is sourced from the Commonwealth annual statistical collections from Student One; and (ii) the average cost of teaching each successful EFTSL. Both of these provide an insight into the efficiency with which monies directed towards the Teaching and Learning objective have been spent. Table f. shows the comparison in 2012 dollars (that is, after applying CPI adjustments to previous years' data).

It is important to note that average expenditure per EFTSL is largely dependent on the mix of disciplines taught by an institution. Curtin's high representation of laboratory-based courses raises service delivery costs when compared to institutions where non-laboratory-based courses feature more prominently. Also, Curtin incurs higher than average costs in supporting the delivery of regional higher education programs through its presence in Kalgoorlie, Northam, Esperance, Margaret River, Albany, Geraldton, Karratha and Port Hedland.

Table e. Teaching and Learning Expenditure<sup>1</sup> at Historical Cost 2009–2012

Expenditure and EFTSL details	2009	2010	2011	2012
A. (1) Teaching and Learning Expenditure (\$'000)	\$493,500	\$503,221	\$527,701	\$568,841
(2) Total Curtin Expenditure (\$'000)	\$609,138	\$636,639	\$678,446	\$712,064
(3) Teaching and Learning Expenditure percentage	81.0%	79.0%	77.8%	79.9%
B. Total Taught EFTSL	26,198	26,595	25,978	24,427
C. Successful EFTSL	23,034	23,162	22,544	21,069
Indicator (e) Teaching and Learning Expenditure (\$) per EFTSL	\$18,837	\$18,922	\$20,313	\$23,288
<b>Curtin Target</b>	<b>\$14,500</b>	<b>\$14,500</b>	<b>\$14,500</b>	<b>\$14,500</b>
Indicator (f) Teaching and Learning Expenditure (\$) per Successful EFTSL	\$21,425	\$21,726	\$23,408	\$26,998
<b>Curtin Target</b>	<b>\$16,500</b>	<b>\$16,500</b>	<b>\$16,500</b>	<b>\$16,500</b>

<sup>1</sup> All University Expenditure is now reported on (i) Teaching and Learning or Research and Development, in line with the University's objectives; and, (ii) consistent with the University's Financial Statements.

## Note

a. Benchmarks are not available.

Table f. Teaching and Learning Expenditure at Constant Dollar Value 2009–2012

Expenditure and EFTSL details	2009	2010	2011	2012
A. (1) Teaching and Learning Expenditure (\$'000)	\$531,068	\$530,391	\$547,568	\$568,841
(2) Total Curtin Expenditure (\$'000)	\$655,510	\$671,012	\$703,989	\$712,064
(3) Teaching and Learning Expenditure percentage	81.0%	79.0%	77.8%	79.9%
B. Total Taught EFTSL	26,198	26,595	25,978	24,427
C. Successful EFTSL	23,034	23,162	22,544	21,069
Indicator (e) Teaching and Learning Expenditure (\$) per EFTSL	\$20,271	\$19,943	\$21,078	\$23,288
Indicator (f) Teaching and Learning Expenditure (\$) per Successful EFTSL	\$23,056	\$22,899	\$24,289	\$26,998
Higher Education Indexation Factor <sup>1</sup>	1.313323	1.340903	1.362022	1.413301

<sup>1</sup> Higher Education Indexation Factors in the table are extracted from the Commonwealth Special Gazette No S54 (9 May 2012) and used to convert historical cost figures to December 2012 price levels.

#### Enhance capacity and financial sustainability, measured by:

##### (g) Graduate Productivity Rate – Course Completions per 10 FTE Academic Staff

*Benchmark gauge: ATN average*

The indicator Graduate Productivity Rates provides an insight into the efficiency with which monies directed towards the Teaching and Learning objective have been spent.

These rates show changes over time in the output of graduates for every 10 full-time equivalent staff. Table g(i) provides the rates for undergraduate and postgraduate coursework students, where the numerator is based on graduate numbers and the denominator on 'Teaching' and 'Teaching and Research' staff only.

Curtin's 2012 postgraduate coursework graduates per 10 FTE academic staff is 24.7 and exceeds Curtin's target of 20.0. However, it is below the Australian Technology Network (ATN)<sup>1</sup> benchmark of 28.9.

The undergraduate productivity rate at 58.8 graduates per 10 FTE academic staff exceeds Curtin's target of 57.0 and the ATN benchmark of 57.6.

<sup>1</sup> The ATN universities consist of the five major former Institutes of Technology across Australia: Queensland University of Technology; University of Technology, Sydney; RMIT University; the University of South Australia; and Curtin University.

## Key Performance Indicators (continued)

Table g(i). Graduate Productivity Rates<sup>1</sup> 2009–2012Graduations per 10 FTE Academic Staff<sup>2</sup>

	2009	2010	2011	2012
<b>Undergraduate</b>	61.6	61.5	62.7	58.8
<b>Curtin Target (minimum)</b>	57.0	57.0	57.0	57.0
<b>Benchmark<sup>3</sup> (ATN in prior year)</b>	53.9	55.5	54.5	57.6
<b>Postgraduate Coursework</b>	26.7	26.9	25.9	24.7
<b>Curtin Target (minimum)</b>	20.0	20.0	20.0	20.0
<b>Benchmark<sup>3</sup> (ATN in prior year)</b>	28.7	28.4	29.1	28.9

<sup>1</sup> This table has been revised for the 2012 report to utilise the most appropriate calculation methodology based on available data and to align with the Research Degree Productivity calculation in Table g(ii). Historical data has been recalculated to ensure accurate trend reporting.

<sup>2</sup> Graduations have been replaced by Completions as the most current graduate indicator for a reporting year, thus removing the previous one year time lag. The denominator has been shifted to align with those completions and an average of the current and two prior years staff FTE is used including all staff classified as 'Teaching' or 'Teaching and Research'.

<sup>3</sup> The ATN benchmarks have been re-aligned and are recorded from the prior year.

**Notes:**

a. Curtin Source: Curtin BI Tools. 2012 Completions as at 30/1/13.

b. Benchmark Source: DIISRTE Selected Higher Education Student (2009–2011) and Staff (2007–2011) Data Collection.

c. 2012 casual staff FTE is currently unavailable. It is assumed that 2012 casual staff FTE is the same as 2011.

Table g(ii) shows Research Degree Completions Productivity Rates, with the data disaggregated to the master and doctorate levels. The denominator is restricted to staff eligible to supervise research students.

The research degree completion rate has improved against 2011 outcomes and, at 3.4, has exceeded Curtin's target of 3.1 completions per 10 academic FTE and the ATN benchmark of 2.7.

Table g(ii). Research Degree Completions Productivity Rate 2009–2012

Research Higher Degree Completions per 10 FTE Academic Staff<sup>1</sup>

	2009	2010	2011	2012
Master	0.5	0.4	0.5	0.5
Doctorate	2.2	2.3	2.6	2.9
All Research	2.7	2.7	3.1	3.4
<b>Curtin Target (minimum)</b>	3.0	3.0	3.0	3.0
<b>Benchmark (ATN in prior year)</b>	2.7	2.1	2.4	2.7

<sup>1</sup> Staff data comprise a three-year average of teaching and research academic staff of Lecturer B level and above in academic organisational units only and from all funding sources. Hourly paid academic staff are excluded. These staff data are derived from the Commonwealth annual statistical collections. An average of the staff in the current and previous two years is taken.

**Notes**

a. Curtin Source: Curtin BI Tools. 2012 Completions as at 30/1/13.

b. Benchmark Source: DIISRTE Selected Higher Education Student (2009–2011) and Staff (2007–2011) Data Collection.

**Drive international excellence and enhance capacity and financial sustainability, measured by:****(h) Commencing (First-Year) Bachelor Degree Retention***Benchmark gauge: ATN and All Australian Universities retention rates*

Resources devoted to teaching students during a year are not efficiently expended if students do not return to their studies in the following year. High efficiency is achieved when high numbers of students return (are retained) into the following year. This measure focuses on the most vulnerable group (first-year students) in Curtin's largest course offering – bachelor courses – which comprises more than two-thirds of all students.

The 2011 commencing bachelor degree students who returned in 2012 is 85%, which exceeds the University's minimum target of 83%. The 2011–12 outcome matches 2010–11; however, remains 2% below the two prior years. It exceeds the All Australian Universities benchmark but falls 1% below the ATN Universities benchmark.

**Table h. Commencing (First-Year) Bachelor Degree Retention 2009–2012**

Per cent of first-year students returning the subsequent year

	2008–09	2009–10	2010–11	<b>2011–12</b>
First-Year Bachelor Degree Retention Rate	87%	87%	85%	85%
<b>Curtin Target (minimum)</b>	<b>75%</b>	<b>83%</b>	<b>83%</b>	<b>83%</b>
<b>ATN Universities Benchmark</b> (prior year's rate)	<b>84%</b>	<b>86%</b>	<b>87%</b>	<b>86%</b>
<b>All Australian Universities Benchmark</b> (prior year's rate)	<b>83%</b>	<b>84%</b>	<b>84%</b>	<b>83%</b>

**Notes**

a. Curtin Source: Student Record System S1.

b. Benchmark Source: DIISRTE Institution Performance Portfolio. 2012 benchmark data is unavailable, therefore the prior year is used for comparison.

## Key Performance Indicators (continued)

**2 RESEARCH AND DEVELOPMENT PERFORMANCE**

## Strategic objectives:

- S3. Strengthen research capability and performance.  
 S5. Enhance capacity and financial sustainability.

**2.1 Research and Development Effectiveness**

Ref.	Name	Objective
i	Growth in Research EFTSL	Strengthen research capability and performance.
j	Joint Research Engagement Scheme (\$) Ranking	Strengthen research capability and performance. Enhance capacity and financial sustainability.
k	Total Research Income(\$) Ranking	Strengthen research capability and performance. Enhance capacity and financial sustainability.
l	Cooperative Research Centre (\$) Ranking	Strengthen research capability and performance. Enhance capacity and financial sustainability.
m	Research Publication (weighted HERDC points) Ranking	Strengthen research capability and performance.

**Strengthen research capability and performance, measured by:****(i) Growth in Research EFTSL***Benchmark gauge: WA Universities and National Growth rates*

One of Curtin's educational strategies to raise its research profile is to increase research by higher degree enrolments and EFTSL.

Table i. shows research by higher degree EFTSL growth of 4.7% between 2011 and 2012, which is lower than the Curtin Target but higher than the All WA Universities and All Australian Universities benchmarks. In Australia, Curtin ranking in total research enrolled EFTSL stays at 10th in 2012.

**Table i. Growth in Research EFTSL 2009-2012**

Year-on-year percentage change

	2009	2010	2011	<b>2012</b>
Doctorate EFTSL	981	1,116	1,222	1,304
Master EFTSL	167	183	192	177
Total Research EFTSL	1,148	1,298	1,414	1,481
<b>Curtin Target</b>	<b>+6.5%</b>	<b>+6.5%</b>	<b>+6.5%</b>	<b>+6.5%</b>
Research Growth (% change)	+10.2%	+13.1%	+8.9%	+4.7%
<b>All WA Universities Benchmark</b> (prior year growth)	<b>+3.5%</b>	<b>+6.7%</b>	<b>+4.6%</b>	<b>+2.8%</b>
<b>All Australian Universities Benchmark</b> (prior year growth)	<b>+1.6%</b>	<b>+4.9%</b>	<b>+7.7%</b>	<b>+4.4%</b>
<b>National Ranking</b> (prior year) (of 126 Australian institutions)	<b>11</b>	<b>12</b>	<b>10</b>	<b>10</b>

**Notes**

a. All EFTSL data are for the year at 31 March.

b. Benchmarks source: DIISRTE Selected Higher Education Student Statistics for Western Australian and Australian universities.

c. Rounding errors may occur.

## Key Performance Indicators (continued)

**Strengthen research capability and performance and Enhance capacity and financial sustainability, measured by:****(j) Joint Research Engagement Scheme (\$) Ranking***Benchmark gauge: National*

The Joint Research Engagement (JRE) scheme replaced the Institutional Grant Scheme (IGS) from 2010. The JRE was distributed across universities by a performance-based formula comprising Category 2-4 research income (weighted 60%); weighted publications (10%); and higher degree by research student places measured in EFTSL (30%). Research income is collected in four categories under the Higher Education Research Data Collection (HERDC). However, only Category 2 (Other public sector research income), Category 3 (Industry and other research income) and Category 4 (Income from Cooperative Research Centres) (CRC) are utilised for JRE. Research income and publication data are averaged over the most recent two years of data available, while student load data is sourced from the most recent year.

Table j. provides the JRE allocations by university and is ranked according to each institution's share of the total JRE for 2012. Comparative data is given for 2011 and 2010 JRE allocations. Curtin has maintained its rank of 9th nationally under the JRE and remains the highest ranked of the ATN universities.

ATN universities are identified in the table in italics, Western Australian universities are identified in bold type, and universities with medical schools and supporting departments are identified with the letter 'M'.

**Table j. Joint Research Engagement (JRE) Scheme Funds and Percentage Share of National Total for 2010–2012**  
 Ranking according to %JRE Share in 2012

Rank	University	JRE		IGS	
		(\$'000) 2012	% Share 2012	% Share 2011	% Share 2010
1	University of Melbourne (M)	36,906	10.9%	11.5%	11.6%
2	University of Sydney (M)	34,892	10.3%	10.9%	11.5%
3	University of New South Wales (M)	31,346	9.3%	9.0%	8.5%
4	University of Queensland (M)	30,397	9.0%	8.9%	8.8%
5	Monash University (M)	25,418	7.5%	7.4%	7.8%
6	Australian National University	17,553	5.2%	4.9%	5.1%
7	<b>University of Western Australia (M)</b>	16,392	4.9%	5.0%	5.2%
8	University of Adelaide (M)	15,814	4.7%	4.7%	4.8%
9	<b>CURTIN UNIVERSITY OF TECHNOLOGY</b>	9,628	2.9%	2.8%	2.6%
10	<i>Queensland University of Technology</i>	9,499	2.8%	2.7%	2.4%
11	University of Newcastle (M)	8,651	2.6%	2.6%	2.6%
12	University of Tasmania (M)	8,432	2.5%	2.5%	2.6%
13	<i>University of South Australia</i>	7,677	2.3%	2.2%	2.1%
14	Griffith University	7,615	2.3%	2.2%	2.1%
15	Flinders University of South Australia	6,334	1.9%	1.9%	1.9%
16	La Trobe University	6,036	1.8%	1.9%	1.8%
17	University of Wollongong	5,987	1.8%	1.7%	1.7%
18	<i>RMIT University</i>	5,927	1.8%	1.7%	1.7%
19	Macquarie University	5,816	1.7%	1.7%	1.8%
20	<b>Murdoch University</b>	5,678	1.7%	1.7%	1.5%
21	<i>Deakin University</i>	4,906	1.5%	1.4%	1.3%
22	University of Technology, Sydney	4,751	1.4%	1.5%	1.6%
23	James Cook University	3,565	1.1%	1.1%	1.2%
24	University of Western Sydney	3,214	1.0%	0.9%	1.0%
25	University of New England	3,112	0.9%	0.9%	1.0%
26	Charles Darwin University	2,781	0.8%	0.8%	0.7%
27	Swinburne University of Technology	2,776	0.8%	0.8%	0.8%
28	Victoria University of Technology	2,464	0.7%	0.7%	0.7%
29	<b>Edith Cowan University</b>	2,417	0.7%	0.7%	0.6%
30	University of Canberra	1,956	0.6%	0.5%	0.5%
31	Charles Sturt University	1,795	0.5%	0.6%	0.6%
32	Southern Cross University	1,668	0.5%	0.5%	0.5%
33	Central Queensland University	1,279	0.4%	0.4%	0.4%
34	University of Southern Queensland	1,247	0.4%	0.4%	0.3%
35	University of Ballarat	903	0.3%	0.3%	0.3%
36	Australian Catholic University	826	0.2%	0.2%	0.2%
37	University of the Sunshine Coast	568	0.2%	0.1%	0.1%
38	Bond University	472	0.1%	0.1%	0.1%
39	Melbourne College of Divinity	333	0.1%	0.1%	0.1%
40	<b>University of Notre Dame Australia</b>	219	0.1%	0.1%	0.0%
41	Batchelor Institute	110	0.0%	0.0%	0.0%
<b>Total</b>		<b>337,363</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



## Key Performance Indicators (continued)

**Strengthen research capability and performance and Enhance capacity and financial sustainability, measured by:**  
**(k) Total Research Income (\$) Ranking**  
*Benchmark gauge: ATN, National*

Under the 2012 HERDC for 2011 Activity, Curtin's research income increased by 6.8%, which places Curtin 14th nationally. While industry income declined between 2009 and 2010 likely due to the pipeline effect from the global financial crisis, there was a 21.5% increase in industry funding in 2011 as contracts secured in 2010/11 became

active. Growth in Other Public Sector Research Funding was modest in 2011 with continued lack of state government investment in research. Of particular note is the continued increase in prestigious Australian Competitive Grant income (9.4% on 2010), which has grown 45% between 2007 and 2011 and now represents 30% of Curtin's research income.

**Table k. All Research Funding: Comparison between Curtin and the Average of All ATN Universities and National Ranking 2009-2011**

	2009			2010			2011		
	Curtin \$'000	ATN <sup>1</sup> \$'000	Nat Rank	Curtin \$'000	ATN <sup>1</sup> \$'000	Nat Rank	Curtin \$'000	ATN <sup>1</sup> \$'000	Nat Rank
Australian Competitive Research Grants <sup>2</sup>	15,405	14,885	17	17,230	15,676	16	18,846	17,255	18
Other Public Sector Research Funding <sup>2</sup>	30,870	20,198	9	25,575	16,315	9	26,477	18,858	10
Industry and Other Funding for Research <sup>2</sup>	13,085	11,463	13	10,877	14,023	19	13,212	16,414	17
Cooperative Research Centres Funds <sup>2,3</sup>	5,342	5,560	8	4,790	5,071	9	3,932	4,778	9
<b>Total</b>	<b>64,702</b>	<b>52,107</b>	<b>12</b>	<b>58,472</b>	<b>51,084</b>	<b>14</b>	<b>62,467</b>	<b>57,305</b>	<b>14</b>
<b>Curtin Target</b>	<b>63,000</b>	<b>n/a</b>	<b>n/a</b>	<b>63,000</b>	<b>n/a</b>	<b>n/a</b>	<b>63,000</b>	<b>n/a</b>	<b>n/a</b>

<sup>1</sup> ATN refers to the average of all ATN universities.

<sup>2</sup> Source: the Commonwealth's Higher Education Research Data Collection.

<sup>3</sup> Note: all financial data are for calendar year periods, except for CRC data, which is reported on a 30 June financial year.

**Strengthen research capability and performance and Enhance capacity and financial sustainability, measured by:**  
**(I) Cooperative Research Centre (\$) Ranking**

*Benchmark gauge: National*

Established through the Commonwealth Government's CRC program, CRCs link the public and private sectors across Australia and bring together a wide range of expertise and facilities, with a focus on new and innovative research, leading to competitive technological applications. However, the CRC program had been in a hiatus from approximately 2007 to late 2009 as the federal government undertook a review of the program. While the review led to federal reinvestment into the CRC program, the resultant new CRCs, established under the new allocations of funding, have taken time to establish. In addition, funding from CRC differs from other funding sources in that it is calculated on a 30 June financial year. It is reported here for the year that it is included under the HERDC report.

Nationally there has been a 10% decrease in CRC research income compared with income reported against the 2010 year of activity. While Curtin's proportion of total CRC income has declined somewhat, Curtin maintains a national rank of 9th for CRC income.

Table 1. expands on the CRC funding data provided in the previous table.

ATN universities are identified in the table in italics, and Western Australian universities are identified in bold type.

## Key Performance Indicators (continued)

Table 1. Cooperative Research Centre Funding for the HERDC reporting year

Rank	University	(\$'000) 2011	% Share 2011	% Share 2010	% Share 2009
1	University of Melbourne	10,184	9.4%	8.7%	9.4%
2	University of Queensland	9,959	9.2%	9.8%	10.0%
3	University of South Australia	9,463	8.8%	7.2%	6.6%
4	<i>University of Tasmania</i>	7,644	7.1%	7.1%	5.7%
5	Monash University	7,303	6.8%	7.2%	7.6%
6	University of Canberra	7,283	6.7%	6.4%	3.5%
7	<i>Queensland University of Technology</i>	7,176	6.6%	5.9%	7.0%
8	University of New England	4,454	4.1%	3.2%	3.4%
9	<b>CURTIN UNIVERSITY OF TECHNOLOGY</b>	3,932	3.6%	4.0%	4.4%
10	La Trobe University	3,409	3.2%	2.9%	1.9%
11	University of Sydney	2,799	2.6%	3.0%	3.8%
12	<i>James Cook University</i>	2,787	2.6%	0.6%	0.8%
13	Deakin University	2,707	2.5%	2.7%	1.1%
14	<b>Murdoch University</b>	2,679	2.5%	2.6%	4.3%
15	Swinburne University of Technology	2,643	2.4%	2.0%	2.3%
16	University of New South Wales	2,642	2.4%	4.1%	5.1%
17	University of Adelaide	2,475	2.3%	4.0%	3.4%
18	<i>RMIT University</i>	2,322	2.2%	3.1%	3.6%
19	Griffith University	2,314	2.1%	2.1%	2.3%
20	Southern Cross University	1,784	1.7%	2.5%	2.3%
21	<b>University of Western Australia</b>	1,616	1.5%	1.0%	1.7%
22	University of Newcastle	1,556	1.4%	1.6%	1.8%
23	University of Wollongong	1,500	1.4%	1.2%	1.0%
24	Central Queensland University	1,004	0.9%	0.5%	0.5%
25	<i>University of Technology, Sydney</i>	997	0.9%	1.0%	1.1%
26	Charles Darwin University	958	0.9%	0.7%	1.0%
27	Charles Sturt University	934	0.9%	1.6%	1.1%
28	Macquarie University	902	0.8%	0.8%	0.8%
29	Flinders University of South Australia	783	0.7%	1.0%	0.6%
30	University of the Sunshine Coast	608	0.6%	0.2%	0.0%
31	Australian National University	493	0.5%	0.2%	0.5%
32	University of Southern Queensland	457	0.4%	0.5%	0.5%
33	University of Western Sydney	162	0.1%	0.4%	0.5%
34	Batchelor Institute	17	0.0%	0.0%	0.0%
35	Victoria University of Technology	0	0.0%	0.1%	0.1%
36	<b>Edith Cowan University</b>	0	0.0%	0.0%	0.1%
37	Australian Catholic University	0	0.0%	0.0%	0.0%
38	Bond University	0	0.0%	0.0%	0.0%
39	Melbourne College of Divinity	0	0.0%	0.0%	0.0%
40	University of Ballarat	0	0.0%	0.0%	0.0%
41	<b>University of Notre Dame Australia</b>	0	0.0%	0.0%	0.0%
<b>Total</b>		<b>107,946</b>	<b>100%</b>	<b>100%</b>	<b>100.0%</b>

**Strengthen research capability and performance, measured by:**  
**(m) Research Publications (weighted HERDC points) Ranking**  
*Benchmark gauge: National*

Research publications are considered an important measure of research performance throughout the higher education sector. The publication of a piece of research demonstrates that referees, expert in the appropriate field, have judged the work worthy of acceptance and dissemination to the research community. Publications are also forming a major component of judging quality of research by Commonwealth initiatives such as the Excellence in Research for Australia (ERA) exercise.

Table m. gives Curtin's relative performance in respect of the publications indicator over the period 2009–2011 against averages for the ATN universities and ranked against all Australian universities. Total publications declined in 2011. Journal articles increased as a proportion of total publications.

**Table m. All Research Publications: Comparison between Curtin and the Average of All ATN Universities and National Ranking 2009–2011**

	2009			2010			2011		
	Curtin wt pts	ATN <sup>1</sup> wt pts	Nat Rank	Curtin wt pts	ATN <sup>1</sup> wt pts	Nat Rank	Curtin wt pts	ATN <sup>1</sup> wt pts	Nat Rank
Books <sup>2</sup>	172.5	95.9	10	40.6	63.8	30	30.4	64.1	32
Book chapters <sup>2</sup>	136.3	145.5	19	107.5	121.8	18	76.7	116.7	26
Journal Articles <sup>2</sup>	804.1	709.0	12	920.1	788.7	11	878.2	840.5	12
Conference Articles <sup>2</sup>	504.1	453.5	5	572.8	496.3	3	510.1	471.7	6
<b>Total</b>	<b>1,617</b>	<b>1,404</b>	<b>10</b>	<b>1,641</b>	<b>1,471</b>	<b>11</b>	<b>1,495</b>	<b>1,493</b>	<b>12</b>
<b>Curtin Target</b>	<b>1,714</b>	<b>n/a</b>	<b>n/a</b>	<b>1,714</b>	<b>n/a</b>	<b>n/a</b>	<b>1,714</b>	<b>n/a</b>	<b>n/a</b>

<sup>1</sup> ATN refers to the average of all ATN universities.

<sup>2</sup> Source: HERDC.

## Key Performance Indicators (continued)

## 2.2 Research and Development Efficiency

Ref.	Name	Objective
n	Research Funding per Research Staff (using Research Performance Index database)	Strengthen research capability and performance. Enhance capacity and financial sustainability.
o	Weighted Research Publications per Research Staff (using Research Performance Index database)	Strengthen research capability and performance. Enhance capacity and financial sustainability.

The Research Performance Index (RPI) is an internal initiative that collects information on research performance on an annual basis, at the level of an individual staff member.

These newly developed measures are to gauge research efficiency in terms of funding and publications (research input/output respectively).

**Strengthen research capability and performance and Enhance capacity and financial sustainability, measured by:  
(n) Research Funding per Research Staff (using RPI database)**

*Benchmark gauge: None*

The cohort of research staff has remained fairly stable in recent years. The efficiency measures below reflect the changes in research income and research publications for 2009 to 2011 (reported in 2010 to 2012), represented below in Table n. and o.

Maintaining current cohort size, the targets represent a stretch target for income and publications. However, the targets are based on the premise that efficiencies will be maximised with capacity and concentration.

**Table n. Research Funding Efficiency**  
Research funding per research staff member

	2010 <sup>1</sup>	2011 <sup>2</sup>	2012 <sup>3</sup>
Research funding per staff member	\$49,278	\$43,121	\$44,683
<b>Curtin Target</b>	<b>\$55,000</b>	<b>\$55,000</b>	<b>\$55,000</b>

<sup>1</sup> Based on 2009 performance data collected in 2010.

<sup>2</sup> Based on 2010 performance data collected in 2011.

<sup>3</sup> Based on 2011 performance data collected in 2012.

Strengthen research capability and performance *and* Enhance capacity and financial sustainability, measured by:  
 (o) Weighted Research Publications per Research Staff (using RPI database)  
*Benchmark gauge: None*

**Table o. Research Publication Efficiency**

Weighted research publication per research staff member

	2010 <sup>1</sup>	2011 <sup>2</sup>	<b>2012<sup>3</sup></b>
Weighted HERDC points per staff member	1.23	1.21	1.07
<b>Curtin Target</b>	<b>1.26</b>	<b>1.26</b>	<b>1.26</b>

<sup>1</sup> Based on 2009 performance data collected in 2010.

<sup>2</sup> Based on 2010 performance data collected in 2011.

<sup>3</sup> Based on 2011 performance data collected in 2012.