



# **TEC review overview: Techtorium New Zealand Institute of Information Technology**

## **Techtorium New Zealand Institute of Information Technology**

Techtorium New Zealand Institute of Information Technology (Techtorium) is a private training establishment (PTE) operating in Newmarket, Auckland. Techtorium receives Student Achievement Component (SAC) funding from the TEC for delivery of qualifications in information and communications technology and computer engineering.

## **Why we initiated the review**

Techtorium was identified for review based on routine analysis of the August 2016 single data return (SDR). In May 2017 we engaged Grant Thornton to undertake a review of four qualifications delivered at Techtorium during 2017.

The qualifications reviewed were:

- › Diploma in PC Support (Level 5)
- › New Zealand Diploma in Information Technology and Technical Support (Level 5)
- › Diploma in Networking and Security (Level 6)
- › New Zealand Diploma in Systems Administration (Level 6)

## What we found and what we have done

Findings	Actions taken
<p><b>Delivery</b></p> <ul style="list-style-type: none"> <li>Teaching hours for the Diploma in PC Support were under-delivered, compared to those entered in STEO. This was mitigated by over-delivery of self-directed learning hours.</li> </ul>	<ul style="list-style-type: none"> <li>Taking into consideration that overall there was no significant under-delivery of learning hours, we are not seeking any funding recovery.</li> <li>We have discussed with Techtorium the importance of delivering qualifications as approved, and ensuring NZQA and STEO approvals are updated as delivery changes over time.</li> </ul>
<p><b>Records</b></p> <ul style="list-style-type: none"> <li>25 learners are recorded in the April 2017 SDR under the wrong qualification. The courses (which are the basis for funding) reported for these learners were correct.</li> <li>Two students are recorded in the April 2017 SDR under incorrect NSN numbers. Courses and qualifications reported for these learners are correct.</li> </ul>	<ul style="list-style-type: none"> <li>No funding recovery is necessary, as the courses reported, and therefore funding claimed, were correct.</li> <li>Techtorium has resubmitted its April and August 2017 SDRs to correct these administrative errors.</li> </ul>
<ul style="list-style-type: none"> <li>Four students were removed from the December 2016 SDR who should have been reported, having reached the point at which they were eligible for TEC funding.</li> </ul>	<ul style="list-style-type: none"> <li>While the removal of these learners will have impacted Techtorium's EPIs, the change would not be material to future funding decisions.</li> <li>We have clarified with Techtorium the rules for reporting confirmed student enrolments, and acknowledge that the PTE has scheduled additional staff training.</li> <li>No further action is required.</li> </ul>

## About our monitoring processes

The TEC invests approximately \$3 billion into tertiary education each year – funding about 700 tertiary education organisations (TEOs). It's vital we have a high performing sector that provides excellent outcomes for New Zealanders. We continue to enhance our approach to monitoring to help ensure this happens. Monitoring is a 'business as usual' role for the TEC that contributes to both student success and sound stewardship of public money. We engage with TEOs on how they are delivering against their investment Plans, their financial viability and their operational performance.

Our regular monitoring function includes a range of activities, from routine audits to more specialised investigations resulting from a range of intelligence-led risk monitoring activities, data analysis or complaints. You can read more about our monitoring framework [here](#).

**We work with the sector in an open and transparent way across this area of our work, to ensure TEOs are clear about our processes and expectations.**



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# Techtorium New Zealand Institute of Information Technology

Report to the Tertiary Education Commission

September 2017



# Restrictions and disclaimers

This report has been prepared solely for the Tertiary Education Commission's (TEC) exclusive use specifically focused on the objective and scope as agreed.

The scope of our work has been limited both in terms of the areas of the qualifications which we have reviewed, and the extent to which we have reviewed them. There may be matters, other than those noted in this report, that might be relevant in the context of the Tertiary Education Commission's (TEC) funding and which a wider scope review might uncover.

This report is confidential and has been prepared exclusively for TEC. It should not be used, reproduced or circulated for any other purpose, in whole or in part, without prior written consent, and such consent will only be given after full consideration of the circumstances at the time. Events and circumstances occurring after the date of our report will, in due course, render our report out of date and, accordingly, we will not accept a duty of care nor assume a responsibility for decisions and actions which are based upon such an out of date report. Additionally, we have no responsibility to update this report for events and circumstances occurring after this date

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# Executive Summary

## Overall observations

- 1 Grant Thornton has been engaged by the Tertiary Education Commission (**TEC**) to conduct a review of the Techtorium New Zealand Institute of Information Technology Limited (**Techtorium**) in May 2017.
- 2 The objective of the review is to ensure that:
  - Students have actually enrolled and attended the programmes;
  - Programmes are taught in accordance with and comply with the learning hours and weeks entered into STEO and therefore, meet the TEC funding requirements;
  - Programmes are delivered in accordance with learning hours approved by New Zealand Qualifications Authority (**NZQA**) (if details are available);
  - Students awarded a qualification have been assessed and there is evidence of programme delivery; and
  - Techtorium's internal quality assurance and control processes (in relation to programme delivery) are robust and fit for purpose

# Key findings

- 3 Overall, we did not identify any significant issues in relation to Techtorium's assessed delivery on the programmes selected for review.
- 4 Both the Diploma in PC Support and Diploma in Networking and Security are due to expire in 2017 and Techtorium is in the process of transitioning these two programmes to two new programmes being the New Zealand Diploma in Information Technology Technical Support and the New Zealand Diploma in Systems Administration respectively.
- 5 We summarise below our key findings for this review:
- 6 Comparison between STEO and NZQA information:
  - No issues for the two new qualifications (Level 6 Systems Administration and Level 5 IT Technical Support) and the old Level 6 Networking and Security qualification
  - PC Support - Difference in total learning hours per NZQA (1,100 hours – 25 hours x 44 weeks) compared to STEO (1,760) hours
- 7 We summarise our findings in relation to the average assessed delivery below.

## Techtorium - learning hours delivery summary

	STEO	Average assessed delivery	Average delivery percentage
<b>NZ2596 - New Zealand Diploma in Information Technology Technical Support (Level 5)</b>			
Teaching hours per week	20	21	
Self-directed study hours per week	10	23	
Total learning hours (40 weeks)	1,200	1,750	>100%
<b>PC9000 - Diploma in networking and security (Level 6)</b>			
Teaching hours per week	25	20	
Self-directed study hours per week	10	35	
Total learning hours (40 weeks)	1,400	2,210	>100%
<b>PC9316 - Diploma in PC support (Level 5)</b>			
Teaching hours per week	25	21	
Work experience hours per week	5	-	
Self-directed study hours per week	10	23	
Total learning hours (40 weeks)	1,760	1,750	99.4%
<b>NZ2601 - New Zealand Diploma in Systems Administration (Level 6)</b>			
Teaching hours per week	20	20	
Self-directed study hours per week	10	35	
Total learning hours (40 weeks)	1,200	2,210	>100%
* 2017 calculations based on the same number of weeks delivered in 2016 or where available, the 2017 full year course schema			

## 8 PC Support

- The actual delivery is over a period of 40 weeks (or on a rolling basis, it could be 39 weeks) rather than 44 weeks as recorded in STEO
- No work experience hours are delivered (compared with 5 hours in STEO)
- Actual teaching hours are lower than STEO (21.3 hours compared to 25 hours)
- Self-directed hours are higher than STEO (22.5 hours vs 10 hours)
- Overall delivery of 99.4%.

## 9 Information Technology Technical Support

- Teaching hours delivered is higher than STEO (21.3 hours compared to 20 hours)
- Self-directed hours are higher than STEO (22.5 hours vs 10 hours)
- Delivery greater than 100%

## 10 Networking and security and Systems Administration

- Teaching hours delivered is lower than STEO (20.3 hours vs 25 hours)
- Self-directed study hours are higher than STEO (35 hours vs 10 hours)
- Delivery greater than 100%

## 11 Review of student records:

- We did not identify any significant issues with records kept
- Enrolment supporting documentation – for level 6 students who have been with the school previously, a new student folder is set up. We have identified some instances where the student folder did not have all enrolment records replicated, we consider this should be consistent across all student files. We discussed this with Techorium and it confirmed that this will no longer be an issue as student files are now all included in the Student Management System
- We consider that Techorium is not currently utilising its student management system fully. Techorium confirmed that it is in the process of upgrading its Student Management System to a more comprehensive version and that a training session has been organised with the provider to ensure Techorium can fully utilise the functionalities available. Accordingly, this should not be an issue going forward

## 12 Student reporting – SDR

- Issues were identified in the December 2016 SDR return
- There were some instances where a student has been given a new NSN when they already have an existing one due to the Student Management System not being able to find an exact match
- Some students who are withdrawn have been ticked in the Student Management System as 'suspended' rather than 'withdrawn' which resulted in these students not being included in the December return
- The errors identified in the December 2016 SDR return have a direct impact on the EPI calculations which are published by the TEC and is used as the basis of funding considerations



- 25 students were reported in the 2017 SDR under an incorrect qualification

# Introduction

## Background

- 13 Techtorium receives Student Achievement Component (**SAC**) Funding from the Tertiary Education Commission.
- 14 Techtorium prides itself as being responsive to the needs of the ICT industry and the industry employer's requirements and tailoring its courses to meet these demands.
- 15 Its focus is on providing Level 5 to 7 Diplomas in Information and Communications Technology (**ICT**) and computer engineering, which will equip students with the practical skills and knowledge to enable them to gain employment in the growing ICT industry.
- 16 Techtorium currently offers six qualifications, although two of these qualifications are transitioning in 2017 to two of the other existing qualifications. This is a direct result of New Zealand Qualifications Authority's (**NZQA**) Targeted Review of Qualifications (**TROQ**) review.
- 17 The qualifications offered comprise of three one year diploma courses and one two-year diploma course as follows:
  - Information Technology Technical Support (Level 5) (1 year) (previously Diploma in PC Support)
  - System Administration (Level 6) (1 year) (previously Diploma in Networking and Security)
  - Software Development (Level 6) (2 years)
  - Cloud Management (Level 7) (1 year)
- 18 In addition to the above, Techtorium also offers Introduction to Computer Engineering (**ICE**) courses to secondary school students.
- 19 To ensure it enrolls students who are interested in ICT and want to study at Techtorium, Techtorium has an interview process in place for new students. To provide students with a taster of what it is like to study at Techtorium, it offers ICE courses to secondary students as well as a 'Student for a day' initiative where potential students can come to the school and buddy up with a current student to see what it's like to study at Techtorium. Whilst the initiative is 'student for a day', sometimes students stay for longer than one day.
- 20 Techtorium is focused on preparing students for employment. As part of this, it utilises up-to-date technology to teach students and has employed a marketing manager to establish relationships with employers to unlock job opportunities. It then helps 'prep' students for interviews by providing them with interview training and guidance on how to dress appropriately.
- 21 Techtorium operates from its premises in Newmarket.

- 22 The amount of SAC funding received by Techtorium for the period from 2016 to July 2017 is as follows:

### Techtorium - delivery summary

Qualification	2016 EFTS	2017 EFTS
PC9316 - Diploma in PC Support	91.9	14.1
PC9000 - Diploma in Networking and Security	46.8	4.0
NZ2596 - NZ Diploma in Information Technology Technical Support	-	76.0
NZ2601 - NZ Diploma in Systems Administration	-	36.0
	138.6	130.1
Total delivery (excludes international fee-paying students)	151.9	142.1
Percentage of total for selected programmes	91.3%	91.6%

\* 2017 figures are year to date only  
 \* Techtorium is partly funded and therefore, funding amounts are excluded from table above

## Definitions

- 23 For the purposes of this report, the terms used are defined as follows based on the guidance provided within the NZQA Qualifications Framework:

- **Direct hours:** direct contact time with teachers and trainers;
- **Teaching hours:** direct hours plus time spent in assessments; is equal to total learning hours less self-directed hours;
- **Self-directed hours:** time spent studying and doing assignments and practical tasks; and
- **Total learning hours:** Direct hours, self-directed hours and time spent in assessment.

## Approach

- 24 TEC engaged Grant Thornton to conduct a review of specific courses offered by Techtorium. The scope and objectives of our review are defined within the executive summary.
- 25 In determining our review approach, we reviewed the information received from TEC and selected four of the programmes offered by Techtorium for review based on the level of EFTS consumed in 2016 and 2017 (year to date). We confirmed our selection with the TEC prior to contacting Techtorium. These programmes were:
- PC9316 - Diploma in PC support (Level 5) (**PC Support**)
  - PC9000 - Diploma in Networking and Security (Level 6) (**Networking**)
  - NZ2596 - NZ Diploma in Information Technology Technical Support (Level 5) (**IT Support**)
  - NZ2601 - NZ Diploma in Systems Administration (Level 6) (**Systems Admin**)
- 26 Our onsite visit commenced with a meeting with Mr Patrick Dowling (Founder and Principle Advisor) and Ms Jan Hutchinson (CEO) where they provided us with an overview of Techtorium's operations.
- 27 Based on our discussions, we understand that Techtorium is in the process of transitioning it's previously level 5 (PC Support) and level 6 (Networking) qualifications to the new qualifications

(IT Support and Systems Admin). A mapping process for the level 5 and level 6 programmes performed prior to transition ensures both programmes taught concurrently for each level comply with the programme as approved by the NZQA.

- 28 The old programmes are expiring in May 2017 and accordingly, students enrolled in the old programmes should graduate by October 2017.
- 29 As a result, PC Support and IT Support share the same timetabling. This arrangement is the same for Networking and Systems Admin.
- 30 Techtorium uses Google Classroom to track student work/assessment submissions. Google Classroom allows the trainer to post assessment documents up on the 'classroom' and for students to submit their work and trainers to mark and return the work to the students. In addition, submitting on Google Classroom also provides details around the student's submission (e.g. assignments were submitted on time or late) or class statistics (how many students have submitted) and therefore, is a useful tool for trainers. Techtorium also utilises Facebook as a way of communicating with students. Every level has its own separate Facebook group and all trainers are members of all Facebook groups.
- 31 We obtained a detailed listing of student enrolment data submitted by the school to the TEC. For each qualification reviewed, we selected a sample of 15 students. We analysed student data with reference to our discussions with TEC as part of our student selection process. Our sample comprised a selection of students who meet our specific selection criteria with the remaining students selected based on a random sample.
- 32 We examined student enrolment, assessment and completion records as well as other information including the QMS and relevant programme material for each of the qualifications selected.
- 33 We examined course timetables and weekly course delivery summaries as well as guidelines provided to students in the student handbook. We further discussed the programme including learning hour requirements with trainers to obtain an overall understanding of each programme.
- 34 In computing total teaching hours for each course, we took total class time per week multiplied by the number of weeks adjusting for holidays. In addition to this, we made a further adjustment based on discussions with students and tutors as to self-directed study hours required. Where there was a difference between the student's recollection and Techtorium's documented expectation of self-directed study or the trainers' estimates, we have used the most conservative student's estimation.

## Limitations

- 35 The terms of this engagement and the scope of the work you have asked us to undertake does not constitute an assurance engagement in accordance with the requirements of the Chartered Accountants Australia and New Zealand (**CAANZ**), and is not designed to provide assurance under International or New Zealand Standards on Auditing or Assurance. Accordingly, no assurance opinion or conclusion has been provided.
- 36 The information contained in this report is based on information provided by Techtorium, TEC, NZQA, trainers and students. Our review was based on enquiries, analytical review procedures, interviews and exercise of judgement. Our review is also based on a small sample of students for each selected programme. Because of the test nature and other inherent limitations of our

review, there is an unavoidable risk that some material misstatements or errors may remain undiscovered.

- 37 Our assessment of learning hours is based on discussions with staff and students and it is inherent in this approach that the view may be biased depending on who was sampled and their recollection of past events.
- 38 Furthermore, our calculations are based on unrounded figures, whereas for presentation purposes, these have been rounded to the nearest 1 decimal place. Therefore, there may be minor variations when computing total learning hours based on information presented. In addition, in computing actual learning hours delivered, we have deducted the hours for any public holidays.

## Principal information relied upon

39 We list the principal information we have relied on in preparing our review below:

- Techtorium's Investment plan for 2015 to 2017
- TEC SDR data
- Techtorium's course information for the selected programmes
- Student Handbook
- Techtorium's QMS manual
- Discussions with Mr Patrick Dowling (Founder and Principal Advisor), Ms Jan Hutchinson (CEO), 9(2)(a) [REDACTED]  
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[REDACTED]
- Interviews with various students enrolled in the courses examined
- TEC STEO information
- NZQA approvals and RO482 for the selected programmes

# Review of programme delivery and funding conditions

40 We set out below our findings on Techtorium's programme delivery.

## Reconciliation of programme approval and funding requirements

41 As part of our review of Techtorium's programme delivery, it is important to ensure that the programme details as approved by NZQA are consistent with those approved by the TEC for funding purposes.

42 For each of the programmes specified, we have compared the NZQA RO482 (or course approval letter) and TEC's STEO. We summarise our reconciliation below:

## Reconciliation of programme approval and funding requirements

Programme	NZQA RO482 information	TEC STEO information
<b>NZ2596 - New Zealand Diploma in Information Technology Technical Support (Level 5)</b>		
Time period (teaching weeks)	40 weeks	40 weeks
Credits	120	120
EFTS	1.0*	1.0
Teaching hours (per week)	Not specified	20.0
Self-directed hours (per week)	10.0	10.0
Learning hours (total)	1,200*	1,200
<b>PC9000 - Diploma in networking and security (Level 6)</b>		
Time period (teaching weeks)	40 weeks	40 weeks
Credits	140	140
EFTS	1.2*	1.0
Teaching hours (per week)	25.0	25.0
Self-directed hours (per week)	10.0	10.0
Learning hours (total)	1,400	1,400
<b>PC9316 - Diploma in PC support (Level 5)</b>		
Time period (teaching weeks)	44 weeks	44 weeks
Credits	Not specified	120
EFTS	Not specified	1.0
Teaching hours (per week)	Not specified	25.0
Work experience hours (per week)	Not specified	5.0
Self-directed hours (per week)	Not specified	10.0
Learning hours (total)	1,100**	1,760
<b>NZ2601 - New Zealand Diploma in Systems Administration (Level 6)</b>		
Time period (teaching weeks)	40 weeks	40 weeks
Credits	120	120
EFTS	1.0*	1.0
Teaching hours (per week)	20.0***	20.0
Self-directed hours (per week)	10.0	10.0
Learning hours (total)	1,200	1,200
* Recalculated based on total credits		
** Recalculated based on NZQA course approval letter of 25 hours x 44 weeks		
*** Recalculated based on total learning hours of 1200 hours over 40 teaching weeks		

- 43 For PC9316 (PC Support), Techorium advised that there was no specific RO482. Instead, there is a course approval and accreditation letter from the NZQA. NZQA were unable to provide us with any additional information on this matter.
- 44 Overall, the information between NZQA and TEC in relation to qualification credits, EFTS and total learning hours is consistent except for the diploma in PC Support, where there is a difference in total learning hours.
- 45 Generally, a Type 2 change is required to be submitted for changes in teaching weeks, teaching hours and the removal of the work experience component. This has not been done for the two older expiring qualifications. We recommend future changes be notified to the NZQA as soon as possible although we do not consider this to be an ongoing issue as the corresponding qualifications are expiring.

- 46 It is our understanding that TEC bases its funding on the data entered into STEO. Accordingly, while there are differences between RO482 and STEO, our testing focused on the adherence to the learning hours included in STEO.
- 47 Generally, we expect EFTS calculated using total teaching weeks, total credits or total learning hours to equate to the same EFTS. We have recalculated the equivalent EFTS value based on FTE teaching weeks and total learning hours and compared this to the stated EFTS value of the programme. We detail the variances identified below:

#### Techtorium - information based on STEO database

Qualification	EFTS value	Teaching weeks	Total learning hours
PC9316 - Diploma in PC Support	1.0	44	1,760
PC9000 - Diploma in Networking and Security	1.0	40	1,400
NZ2596 - NZ Diploma in Information Technology Technical Support	1.0	40	1,200
NZ2601 - NZ Diploma in Systems Administration	1.0	40	1,200
<b>Equivalent EFTS value based on the information above</b>			
PC9316 - Diploma in PC Support		1.3	1.5
PC9000 - Diploma in Networking and Security		1.2	1.2
NZ2596 - NZ Diploma in Information Technology Technical Support		1.2	1.0
NZ2601 - NZ Diploma in Systems Administration		1.2	1.0

- 48 Our analysis above shows that the teaching weeks do not reconcile to the stated EFTS value. However, we note that in all cases, the EFTS value was equal to or exceed the EFTS value included in STEO.

### Review of learning hours delivery per course

- 49 Our assessment of total learning hours is based on information collated from the following sources:
- Course schemas (course notes and outlines documented within OneNote used by trainers)
  - Discussions with staff and students
- 50 We comment on each programme examined in the subsections below.

### PC9316 Diploma in PC Support and NZ2596 Diploma in Information Technology and Technical Support

- 51 As mentioned previously, Techtorium is currently transitioning from the PC Support programme to the new IT Support programme as the PC Support programme is expiring this year. Techtorium is currently delivering these two programmes concurrently. To ensure the content delivered under this arrangement adheres to both programme's content requirements, Techtorium undertook a mapping exercise.
- 52 We understand from discussions with Trainers that the assessments are generally the same and that from a student's perspective, they will not notice a difference, except that those enrolled in PC Support will have a unit standards based assessment (with unit standard numbers), while those on IT Support will not have a unit standards number on their assessment cover sheet.



- 53 Techorium has rolling intakes and therefore, students can start their one-year diploma course at the start of any term of the year. There are four standalone modules for the level 5 diplomas and a different module is delivered each term. All modules begin with an induction (as there may be new students starting that term).
- 54 For the PC Support programme, the STEO database records 44 teaching weeks and 1,760 learning hours. This is different to the new IT Support programme, which has 40 weeks and 1,200 learning hours.
- 55 Our review of the course schemas identified that the programme delivery structure is consistent between 2016 and 2017 (year to date). The programme delivery is either 8:30am to 12:30pm or 12:45pm to 5pm, Monday to Friday. There are no scheduled breaks, however, students can take a short break if required. Students are required to do two hours of course work after class. This equates to approximately four direct learning hours and two self-directed learning hours each day and is equivalent to twenty direct learning hours and ten self-directed learning hours each week.
- 56 The above delivery timetable is more consistent with the STEO information for IT Support rather than PC Support. The PC Support qualification requires 1,760 hours delivered through a combination of teaching hours (25 hours each week), work experience hours (5 hours per week) and self-directed learning hours (10 hours per week).
- 57 Through discussion with trainers, we understand that there are no changes in programme content/assessment or objectives between 2016 and 2017 but 'technology improvements' are made when new technology emerges (e.g. using Windows 10 rather than Window 8).
- 58 In class, there are generally two trainers present. Trainers go around the classroom to ensure that students are on track and may quiz them to check their work or understanding of the topic.
- 59 All trainers have an open door policy and students can Facebook trainers if additional help is required.
- 60 Additional workshops are also provided which are Monday/Wednesday 12:30pm to 1pm for stream one and Tuesday/Thursday 11:45am to 12:45pm for stream two. Workshops are set up based on student needs.
- 61 Discussions with trainers also noted that the coursework provided to students can be made up of assessments/assignments (which may or may not have started in class) to be completed or pre-reading for the next day's material. The workload provided to students for the two hours coursework completed outside of class is based on the trainer's estimate based on his or her experience.
- 62 Responses from discussions with students around additional contact time outside of class with trainers varied. Some students noted they were able to speak to trainers during class time and therefore, additional contact time was not required, whereas other students noted some additional contact time during the week. We applied an estimate of 15 minutes per week, which we consider is a conservative estimate given that half of the students interviewed did not require additional contact time outside of class. The most common responses from students that reported additional contact time outside of class was 10 to 15 minutes.
- 63 Based on the above, direct learning hours is made up of class time of 20 hours a week, plus workshops of 1 hour in total per week plus 15 minutes of time spent with trainers outside of class. This equates to 21.25 hours of direct contact time per week, which we use in our assessment of programme delivery percentage below.

- 64 Student responses in relation to 'work experience', was that it is optional. This is consistent with our discussion with tutors who noted there are no work experience requirements for this programme. Some students mentioned work experience is offered but they did not take part in it while some other students did get some work experience as trainers for the school holiday courses.
- 65 In terms of self-directed study, students' responses vary significantly. Student responses range between no study at all, apart from when assessments are due, to around four to five hours a day Monday to Friday and sometimes weekends as well if assessments are coming up. More than 50% of the students interviewed reported studying less than 10 hours a week. However, for the purposes of this review, we have used the most conservative response obtained, which is 22.5 hours a week.
- 66 It should be noted however, that whilst the total number of weeks in 2016 is 40 weeks, as Techorium has rolling intakes, and the number of weeks each term is different, students that do not commence study in Term 1 can have a difference of one week (less) over their one-year diploma.
- 67 We summarise our assessment of total learning hours relative to STEO in the table below.

#### Learning hours delivery - PC9316 Diploma in PC Support (Level 5)

	STEO	2016	2017
Teaching weeks	44 weeks	40 weeks	NA
Teaching hours per week	25.0	21.3	21.3
Work experience hours per week	5.0	-	-
Self-directed study hours per week	10.0	22.5	22.5
Total learning hours per week	40.0	43.8	43.8
Total learning hours	1,760.0	1,750.0	1,750.0*
Assessed delivery percentage		99.4%	99.4%

\* Calculated assuming 40 weeks in one study year based on FY16

#### Learning hours delivery - NZ2596 - NZ Diploma in Information Technology Technical Support (Level 5)

	STEO	2016	2017
Teaching weeks	40 weeks	40 weeks	NA
Teaching hours per week	20.0	21.3	21.3
Self-directed study hours per week	10.0	22.5	22.5
Total learning hours per week	30.0	43.8	43.8
Total learning hours	1,200.0	1,750.0	1,750.0*
Assessed delivery percentage		>100%	>100%

\* Calculated assuming 40 weeks in one study year based on FY16

- 68 The assessed delivery percentage for PC Support is 99%. Whilst actual teaching hours per week is lower than STEO and no work experience hours is provided, the most conservative student response provided an estimate for self-directed study hours greater than that approved in STEO. This had an overall effect of offsetting the under-delivery in teaching hours and work experience hours required in STEO. We highlight however, that this programme is expiring and therefore, this will not be an issue going forward.

- 69 For IT Support, the assessed delivery percentage is greater than 100%. Our review concluded that actual teaching hours and self-directed study hours are higher than STEO's requirements.

## PC9000 Diploma in Networking and Security and NZ2601 NZ Diploma in Systems Administration

- 70 Consistent with the PC Support and IT Support programme delivery above, the Networking programme is expiring and Techtorium is currently in the process of transitioning to the Systems Admin programme. A mapping exercise was also undertaken to ensure the concurrent delivery of these two level 6 programmes comply with the programme as approved by NZQA.
- 71 There is only one cohort per term for level 6 and class time is from 8:30am to 12:30pm Monday to Fridays. Techtorium introduced remote learning late last year into this programme, which replaces one 'in-class' session per fortnight, to a remote learning environment, where students can participate in the class remotely via their computers. Although students are provided with the remote learning opportunity, some students participate in the remote learning session at Techtorium.
- 72 Discussions with trainers noted that students must be visible at all times. The trainers are also present throughout the whole session and it is no different to the 'in-class' session except that students participate 'remotely'. Techtorium introduced this to replicate the environment these students will eventually work in, as most IT support is performed remotely these days for clients in their offices. Student's feedback in relation to this has been generally positive with only one student interviewed who did not like this method of delivery. Discussion with trainers also noted they did not identify any student issues that arose as a result of changing to this method of delivery.
- 73 Workshops are provided in the breakout room where required, but this is during class time and therefore, we have not allocated any additional contact hours because of this.
- 74 Generally, the majority of students interviewed did not require additional contact hours with tutors. A small portion of students provided an estimate of around 10 to 15 minutes a week. For the purposes of our review, we have applied a conservative estimate of 15 minutes per week.
- 75 Based on the above, direct learning hours is made up of 20 hours of class time a week, plus 15 minutes a week for additional contact time with tutors equating to a total of 20.25 hours a week.
- 76 Student responses in relation to self-directed learning hours varied significantly and ranged between no study required (except when assessments are on) to four to six hours a day Monday to Sunday. The students who responded that they did not require any additional time for study (except during assessments), also stated that they were able to complete all course work during class.
- 77 Discussions with trainers, students and a review of 'One Note comments' noted course work is generally made up of assignments not completed during class time, additional reading or research.
- 78 We have adopted the most conservative estimate (using 5 hours per day for seven days) of 35 hours per week in our assessment of delivery percentage.
- 79 We summarise our assessment of total learning hours relative to STEO in the table below.

### Learning hours delivery - PC9000 - Diploma in Networking and Security (Level 6)

	STEO	2016	2017
Teaching weeks	40 weeks	40 weeks	40 weeks
Teaching hours per week	25.0	20.3	20.3
Self-directed study hours per week	10.0	35.0	35.0
Total learning hours per week	35.0	55.3	55.3
Total learning hours	1,400.0	2,210.0	2,210.0*
Assessed delivery percentage		>100%	>100%

\* Assessed based on current FY2017 programme schema reviewed

### Learning hours delivery - NZ2601 - NZ Diploma in Systems Administration (Level 6)

	STEO	2016	2017
Teaching weeks	40 weeks	40 weeks	40 weeks
Teaching hours per week	20.0	20.3	20.3
Self-directed study hours per week	10.0	35.0	35.0
Total learning hours per week	30.0	55.3	55.3
Total learning hours	1,200.0	2,210.0	2,210.0*
Assessed delivery percentage		>100%	>100%

\* Assessed based on current FY2017 programme schema reviewed

- 80 The assessed delivery percentages for both Networking and Systems Admin are greater than 100%. For Networking, the actual teaching hours is less than the amount recorded in STEO, however, this is offset by the most conservative student self-directed learning hours estimate provided. As with the PC Support, this qualification is expiring and therefore, this will not be an issue going forward.

# Review of student records

## General

- 81 We present below a summary of our findings in relation to verifying the existence, eligibility and programme completion details for our sample of students.

### Techtorium - student data verification summary

Qualification	Appropriate enrolment and support records	Appropriate completion and assessment records
PC9316 - Diploma in PC Support	Yes	Yes
PC9000 - Diploma in Networking and Security	Yes	Yes
NZ2596 - NZ Diploma in Information Technology Technical Support	Yes	Yes
NZ2601 - NZ Diploma in Systems Administration	Yes	Yes

- 82 Based on work performed, there were no significant issues identified with enrolment records or completion records (where applicable) for all of the students examined. Student records are stored electronically.
- 83 We note however, as some of the students selected are currently studying at Techtorium, assessment records for the most recent term had not yet been marked.
- 84 Techtorium has a system where students are provided with a new student number for each different programme they are studying. For example, students enrolled in a level 5 programme would have their ID numbers starting with '101' while students enrolled in a level 6 programme would have their ID number starting at '201'. Techtorium considers this method allows staff to identify immediately which programme students are studying.
- 85 When students enrol in a new programme (for example, from level 5 to level 6), a new student ID number is provided and a new student file is set up. During our review, we note some level 6 student files did not include all the student verification documentation, however, on further examination into the same student's level 5 student file, the domestic enrolment verification documents were included. We do not consider this to be an issue but recommend that a consistent policy be applied to all student files.
- 86 Further discussion with Techtorium confirmed that going forward, all student information will be stored on the Student Management System (SMS) (Artena) and therefore, this will not be an issue going forward.
- 87 Student files generally include the enrolment form including verification details and pastoral notes (which details notes on the student made by the trainers or notes where students have texted/called in an absent day). Most files also included acceptance letters (although this is not on the school letterhead) as well as student transcripts (which are manually generated). Techtorium has changed its student management system to Artena during 2016. Techtorium had not yet fully utilised the functions within this system and therefore, transcripts are currently being

prepared manually and student assessments over their study period are kept on excel spreadsheets. As Techtorium grows, manual processes will become more cumbersome and prone to errors and therefore, we consider the functionalities within Artena should be utilised to avoid the need for manual spreadsheets.

- 88 Techtorium advised that it will be upgrading Artena from the basic version currently used to one with more functionality. In addition, training has been organised with the SMS provider to ensure Techtorium can fully utilise the functions available.

## Attendance

- 89 Techtorium takes attendance very seriously and actively monitors student attendance and rolls are taken every day. Attendance is one of its three 'A's' (attendance, achievement and attitude) Techtorium consider is vital not only for the student's studies but also later in employment.
- 90 If attendance falls below 90% then the first warning letter is issued. If a student continues to have attendance issues, then a second letter is sent which notifies the student of their upcoming meeting with the principal. If the issue is not then rectified, then a third letter is issued which is more serious and may result in the student being withdrawn.
- 91 A Remedial Action Plan (RAP) is put in place if students are falling behind in assessments and the plan sets a date for the student to work towards completing outstanding assessments.

# Other matters

## Student reporting – SDR submissions

- 92 During our review, we identified several issues with Techtorium's SDR submissions. The majority of the errors arose due to a change in its SMS towards the end of 2016. We outline the issues identified and the impact on student reporting below.
- 93 We identified three students who are recorded in the 2017 SDR return as being enrolled in the level 5 diploma who were not undertaking the level 5 programme. These students are actually enrolled in NZ2604 NZ Diploma in Software Development which is a new two year level 6 programme introduced in 2017. However, an administration error (due to an error in creating a new qualification in the SMS) resulted in these students being reported under the wrong qualification, although the right course was submitted in the SDR for funding purposes. Further investigation identified a total of 25 students reported under the incorrect qualification.
- 94 In addition to the above, we identified two students who had a different NSN in the SDR return to the one used to record their record of learning with NZQA. We discussed this issue with 9(2)(a) who advised that this issue arose as Artena could not find an exact match based on the student details entered. When this occurs, Artena generates a new NSN number, however, these students did in fact have an existing NSN number. Details of their qualifications are entered under the right NSN number on NZQA and the courses and qualifications included within the SDR returns are also correct except the NSN number. As the qualification and course entered in the SDR return is correct, there are no issues in relation to the funding received for these two students.
- 95 We also note an anomaly in Techtorium's SDR submissions where students originally submitted in the August SDR submission disappeared from the Dec SDR submission. We selected a small sample to determine the reasons for this anomaly and noted that three students withdrew from the course and another was a 2011 student who has not been enrolled since. Discussions with 9(2)(a) noted this was due to a change in SMS and that the error for the withdrawn students occurred due to the student being incorrectly treated in the system (i.e. suspended rather than withdrawn).
- 96 The students excluded from the December 2016 SDR returns have a direct impact on the full year EFTS-weighted qualification completion rate. This EPI calculated is then published by the TEC where individual PTEs are ranked based on their EPIs. This data is also used for future funding considerations purposes.
- 97 We note the errors identified do not appear to be intentional. Techtorium have confirmed that training has been scheduled for staff members to minimise errors going forward. We recommend that Techtorium discusses the issue with TEC given the errors that have resulted in the EPI calculations.



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