Aide-Memoire: Evaluation of the ICT Graduate Schools Initiative – Final Report

To:	Hon Chris Hipkins, Minister of Education
From:	s9(2)(a), Manager, University Investment
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Purpose

1. This briefing summarises the findings of the evaluation of the ICT Graduate Schools initiative. We recommend that this aide-memoire is released in full.

Background

Three ICT Graduate Schools were created through an initiative to join industry into the design and delivery of ICT provision

2. As previously advised (B 17/00841 and AM 18/00167 refer) Budget 2014 allocated $28.6m over four years for an ICT Graduate School programme. These Schools have the objective of bringing employers into the design and delivery of education, research and development. The short-term objectives of the initiative are the delivery of more graduates with the high-level, industry focused ICT skills and knowledge sought by businesses, and stronger engagement between the ICT industry and educational providers. It was also envisaged that the Schools would undertake research and development activity with industry partners.

3. Three ICT Graduate Schools were established – in Auckland (delivery sites in Auckland and Hamilton), Wellington and the South Island (delivery sites in Christchurch and Dunedin). Each is linked to local industries' innovation precincts or technology hubs. The Schools differ in the type of provision each offers, which reflects regionally located skills needs.

The initiative has been reviewed to determine whether the initiative has met the policy intent and whether the anticipated short-term outcomes have eventuated

4. Following establishment of all three Schools, the TEC commissioned a review of the initiative. The purpose of this review was to:

   a. determine how well the ICT Graduate Schools have been implemented in line with the initiative's policy objectives; and
   b. provide recommendations for improvement to the delivery of ICT Graduate Schools policy objectives.

5. The TEC engaged MartinJenkins to evaluate the ICT Graduate Schools initiative. The evaluation approach employed mixed methods (including analysis of operational and administrative data, site visits, interviews and case-studies) to ensure the evaluation was informed by a wide range of evidence.

The initiative has delivered against most of the short-term policy objectives

The Schools are delivering more career-ready ICT graduates

6. Although the Schools have not delivered the number of graduates they anticipated, (295 equivalent full-time students (EFTS) delivered to end 2017 compared to 459 EFTS proposed), the total number of graduates with an ICT qualification has increased since the introduction of the Schools. Prior to the Schools, ICT post-graduate programmes delivered around 95 domestic EFTS per year. The Schools have increased this by approximately 140 domestic EFTS per year so the Schools and wider system combined deliver around 235 EFTS.

ICT Graduate School graduates have skills the industry is seeking

7. The evaluation indicates that industry considers ICT Graduate School students to have higher quality skills than graduates of other ICT programmes. Industry is particularly pleased with the technical, communication, and problem-solving skills of students, together with the ability to work well in a team environment. Students also consider that their technical and soft skills have improved after attending the Schools.

8. Equipping students with these skills can be attributed to key aspects of the Schools' programmes including having course content aligned to the needs of industry, providing opportunities for learning in a group environment, use of evidence-based teaching practices, and the practical learning opportunities provided by internships. Industry reports that the internship is particularly valuable since it allows employers to assess the skills of graduates before employing them.

9. Early evidence suggests that a high percentage of the Schools' graduates are being employed within the ICT industry, although not all Schools are recording data on this outcome. Employers have reported that they value the students' diverse educational and professional backgrounds, which leads to different and disruptive thinking sparking innovation and change.

Industry is highly engaged with the Schools and is keen to continue its involvement

10. The key difference between the ICT Graduate Schools and providers of other government-funded ICT qualifications is the involvement of industry. Industry contributes to the Schools through providing real-world course content, experiential learning opportunities, networking opportunities and exposure to cutting-edge developments and practises, as well as informal advice. This means that programmes of study intrinsically ensure graduates have the skills sought by industry.

11. The evaluation indicated that the initiative has brought businesses and the tertiary education organisations (TEOs) closer together, and they are collaborating well. The Schools have said that industry involvement is essential to the delivery of the programmes, but found the talent needs of the ICT industry were sometimes challenging to define.

12. Industry partners have said that they consider themselves fully engaged in the Schools and that this involvement brings benefits including opportunities to establish stronger networks and better recruitment processes. Industry has indicated it is keen to remain involved in the Schools. This will provide opportunities to further cement and grow relationships and deliver even better outcomes for students and industry.

But there have been several challenges

Joint ventures may not be optimal due to TEOs being in competition

13. The evaluation report raises the question of whether the consortia model comprising a 'host TEO' in partnership with other TEOs is the best model for delivering the outcomes of the initiative.

14. Incorporating multiple TEOs into a consortium means that TEOs have to work together. This is often challenging because current funding models mean TEOs are in competition for students given government funding is dependent on student numbers. Different TEOs have different student management and reporting systems. This creates challenges for the Schools to aggregate and report data.

Lack of innovation in the funding model affects innovation in provision

15. The ICT Graduate Schools have reported that their funding agreements are too prescriptive and associated reporting is onerous. The Schools also contend that the funding model does not take into account the actual costs of providing education as ICT Graduate Schools have a resource-intensive delivery model with small class sizes and complex technical needs including specialised software and equipment. With additional funding and fewer constraints, the Schools indicate they would be more innovative in their provision.

16. However, host institutions are also reluctant to move away from traditional teaching models as it may affect the number of students who enrol in the School and therefore the amount of funding they get. This makes it difficult for the Schools to take risks with alternative methods of provision.

The qualification approval process is too long

17. The long qualification approval process impacts the ability of Schools to quickly respond to emerging trends and changes in skills needs.

18. The Committee for University Academic Processes (CUAP) is responsible for reviewing and approving university qualifications. This process can take several months, which impacts on the Schools ability to respond to change in the ICT sector.

We may have been over-confident on the timeframes required to fully establish the Schools

19. As noted previously, the Schools took longer to set up and establish than anticipated. In addition, it also took longer than anticipated for industry to be fully confident that the Schools would address its needs.

20. This has meant that the Schools have not yet reached the stage of performing research and development in combination with industry partners, which was initially envisaged to occur over the funding period. Until now, the Schools have been focussed on establishing and building their reputation, creating and cementing industry relationships and recruiting students. The Auckland and Wellington Schools have both indicated that they have begun initial conversations around developing research collaborations, but this is still at an early stage.

Conclusions and next steps

21. Early indications are that the ICT Graduate Schools initiative has achieved the short term objectives of the fund. This implies that the initiative has been successful, although there are a number of challenges that have been identified.

22. The Schools will provide a progress update on 2018 delivery in August/September 2018. Once we have received this information, we will provide you with an update illustrating how the Schools are tracking against 2018 targets and make recommendations for the future of the fund, including around whether we can free up the funding mechanism to enable the Schools to do more and achieve even better outcomes.

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Deputy Chief Executive, Delivery
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21 August 2018

Hon Chris Hipkins

Minister of Education

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