# Briefing Note for Associate Minister Hon Nikki Kaye "ICT Trades Academy"

## Subject:

Extending Trade Academy areas to include Information and Communications Technology (ICT) as a technology component and amend the existing Trade Academy definition of trade and technology to include this.

## Recommendations:

1. That the Ministers' update and amend the current Trade Academy scope of trades and technology to include Information and Communications Technologies as part of the Technology component of the scope.
2. That the Minister for Education extends the scope of technology to include information and communications technologies (ICTs)
3. That appropriate Ministerial and legislative processes are in place to gazette the scope and then issue process for Ministry of Education officials to establish Trade Academies with ICT scope for late 2015 with an early 2016 start.

## Issue:

- New Zealand Technology Industry Association and its members have identified that there are 10,000 ICT related jobs that are currently not filled. Previous industry reports have estimated there were more than 60,000 jobs.
- Number of young people not engaging in education, employment and training post school continues to be high, particularly for Māori[1] and Pasifika[2] youth.
- Trade academies were established to equip our young people with the skills needed for tomorrow's workforce. ICT skills will be a pre-requisite for that workforce.
- Last year the Government introduced a new voational pathway "Creative Industries Sector", which affirms the notion that ICT has a signifant vocational/trade component and with wide labour force engagement and potential
- Technology does not include Information and Communications Technology (ICTs) in the definition, therefore ICTs have not been included in the range of trade options available for academies.
- The workforce of today and tomorrow require ICT skills across all industries
- ICT must be included as a trade area and available in the trade academy initiative.

## Considerations:

The current limitations of the Trade Academy scope of technology decreases significantly the opportunities for young people, particularly Māori and Pasifika to be skilled and trained in the areas of Information and Communications Technologies, where there are existing and future jobs, enterprise opportunities and the significantly positive downstream social and economic impacts this will have for these young people, their families and communities. The resulting benefits for the New Zealand Inc will be tangible and also to diversify our economic and export offerings in a challenging global export market.

## Background[3]:

Trades academies aim to get young New Zealanders **engaged in education and equip tomorrow's workforce** with relevant **skills by linking with the wider industry training system**. (key words highlighted)

The purpose of a trades academy is to:

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[1] Source: MBIE Labour Website: NEET figures for Māori – March 2015 were 19.7% cf to 11.8% national rate - http://tinyurl.com/o8zc6j7

[2] Source: MBIE Labour Website: NEET figures for Pasifika – March 2015 were 17.5% cf to 11.8% national rate - http://tinyurl.com/q4xfktw

[3] Source: Ministry of Education Website: Extract copied from http://tinyurl.com/6kkqjqn

- **motivate** more students to **stay engaged in learning and training** by providing them with a greater number of **options for study**
- provide students with **clear pathways post-school** by giving them a **head start on training for vocational qualifications and smooth access to employment**
- **improve the responsiveness** of schools **to business and economic needs**.

A key priority for Government is to help students to remain engaged in education and achieve worthwhile qualifications. Trades academies will provide students with an integrated pathway into a trade through closer alignment of schools, the tertiary sector and industry.

A trades academy does this by (abridged version adapted from website):

- delivering trades and technology programmes
- ensuring that programmes have clear and relevant links to current Government strategies, especially the Tertiary Education Plan, Ka Hikitia, Pasifika Education Plan, Success for All (Special Education Needs)
- engaging young people in education through
    - high quality teaching and learning programmes
    - the use of culturally responsive approaches and contexts
    - constructive and coherent career advice and guidance so that students and their parents can manage career development
- developing viable working partnerships between secondary schools, tertiary organisations, industry and iwi that promote education, welfare and safety of students.

## High Tech Youth Academy Course Structure

The High Tech Youth Academy (HYTA) is a creative learning program that harnesses and encourages creativity, innovation, exploration, and connectedness to high technology driven industries and jobs in the ideas/content economy. The learners will have:

- internationally recognized high-tech industry qualifications and skills including: Microsoft, Adobe and Autodesk
- practical experience in the high tech industry through shadow programs and internships with partner companies
- opportunities to produce commercial and community projects
- the ability to earn and secure opportunities for employment
- the opportunity to develop business operations and entrepreneurship skills
- A large electronic portfolio of work with peer reviewed exemplars

### *Programme Content and Domains*

- **Culture, Identify and ICT skills as drivers of future employment and enterprise** –
- **Industry Internships and work placement for each student** will be established based on the students desired area of focus. This may change over the course duration, and opportunities, so initially tasters will be available in the first 10 weeks, with more settled placements to take place in the second 10 week block.
- **Microsoft & Adobe software training** will be provided throughout the course

- **Ko wai Au? Who am I (Person and Creative) Term 1 (10 week prog – 5 week theory and practical, 3 week practical, 2 week demonstration prep)**

    - 1. Culture & Identity

        - What is it?
        - What is it used for?
        - How do/could we use it?
        - How do/could we use it as a resource for enterprise?
    - 2. Models of learning
        - How your brain works?
        - How do you learn?
    - 3. Ideas Auction??
        - Creating ideas
    - 4. Culture and Innovation
        - redefining

- **Design focus Term 2 (10 week prog – 5 week theory and practical, 3 week practical, 2 week demonstration prep) – Adobe Creative Suite, Autodesk Product Design and Entertainment suites will be used**
    - 1. Design
        - What is design?
        - What is a design process?
        - What is it used for?
        - Why do we use it?
        - How do we use it?
        - Given the skills I have, what design process works for me?
    - 2. Creativity and Innovation Process
        - What is a creativity/innovation process?
        - What does it achieve?
        - Why should I/we use one?
        - How do we use it?
        - Demonstrate how to use it?
    - 3. Complex collaborative problem solving skills (using ACT21s framework)
        - Collect and share information about the collaborator and the task
        - Check links and relationships, organise and categorize information
        - Rule use: set up procedures and strategies to solve the problem using an "If, then.." process
        - Test hypotheses using a "what if" process and check process and solutions

- **Enterprise and Business Term 3 (10 week prog – 5 week theory and practical, 3 week practical, 2 week demonstration prep)**
    - 1. Sector Knowledge
        - Creative Industries
        - Technology Industries
        - Service Industries
        - Social Sector

    - 2. Entrepreneurship
        - What is an entrepreneur?
        - Why do they do what they do?
        - How do they do what they do?

    - 3. Business – Marketing, Planning, Resource Management, Human Resource, Management, Finance, Law
        - What is a business?
        - How do I set one up?
        - How do I manage one?
        - What should I know about developing products and/or services?

    - Technical skills development – Certification
        - Microsoft IT Academy: Server software
        - Adobe: 3D Modeling
        - Game & Apps Development Software: Unreal Development Kit, IPhone & Android Development Kit
        - Autodesk: 3D Modeling & Design
        - Cisco Academy: Networking hardware
    - Incorporate business tools:
        - DreamSparks – MS IT Academy
        - Google Apps -

- **Electives: Term 4**
    - Gaming and Apps development
    - 3D Animation and Modeling (VR, 3D printing and CNC machining)
    - Media development
    - Science and Technology (Robotics)

## *NZQA – Literacy and Numeracy Achievement Standards from Level 1 to 3*

- Business (Existing)
- Design (Existing)
- Entrepreneurship (Existing) but at Level 4
- Culture and Identity (New)
- Culture and Innovation (New)