

Working paper 2013/03: Exploring Talent

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Preamble

In March 2011 in his keynote address at the McGuinness Institute's *StrategyNZ* workshop, the late Sir Paul Callaghan asked participants to join him on a journey to make New Zealand 'a place where talent wants to live'. Sir Paul emphasised that New Zealand is absolutely capable of achieving this vision, and has many factors in its favour:

We are rich in water and energy resources, we have a great education system, world-class science and engineering, a vibrant artistic and creative sector, quality urban environments and a civil society. When we combine all this with our unique landscapes, and our pristine mountains and seas, we have the chance to be 'the place where talent wants to live' ... What is needed is a national strategy and the resolve to move consciously towards its vision.

But what does this mean in practical terms? The Institute is undertaking its own journey to find out.

The main vehicle for this journey is the *TalentNZ* initiative, in which 30 talented people were interviewed to see what they thought about making New Zealand 'a place where talent wants to live'. This initiative is designed to explore how New Zealand could become a talent-based economy: what works, what fails, and what gets in the way. The project is being undertaken by Charlotte Greenfield and Darren Zhang, recipients of the Institute's *Sir Paul Callaghan Science Meets Humanities Scholarship*. Together they have interviewed 30 Kiwis from throughout the country; the results will be published as a magazine and website to be launched in October 2013 – 30 Kiwis, 7 questions, 210 ideas.

This paper considers current research relating to talent and discusses what talent means to the Institute.

Underlying the *TalentNZ* initiative is a desire to learn how we can enable our youth to become the best talent on the planet, and in so doing, how we might create a model other countries want to emulate. Changing the world one country at a time is a big idea but, as Sir Paul would say, why not New Zealand? Why not be the first country to create a talent-based economy?

Sir Paul's vision recognised the complex relationships between talent, business and country. He saw New Zealand growing businesses that have a low environmental impact, becoming a country that both attracts and retains talent because of its pristine environment and great lifestyle. He did not want our youth to aim to become dishwashers or cleaners for the tourism industry; he believed we could make New Zealand a better place for our young people, our mokopuna – a place where talent wants to live.

Wendy McGuinness

Chief Executive

1. Purpose

This working paper forms part of the Institute's *Project 2058* and is exploratory in nature, bringing together existing research about talent. We wanted to know what work has already been done to define talent, survey the existing landscape of talent in New Zealand, establish capacity-building initiatives, and explore ways to optimise talent. In reality an in-depth report could be written on each of these questions, but that is not the objective of this working paper.

This paper represents a scoping exercise. We have climbed part of the mountain and had a good look around – but we cannot claim to have a clear view from the top. As with all our working papers, this information will feed into more comprehensive research in the future, and specifically, the Institute's *TalentNZ* initiative.

2. Terminology

This section briefly explores terminology that is commonly used in relation to talent. Establishing the Institute's understanding of these terms is important for this paper, and for the *TalentNZ* initiative as a whole.

2.1 Talent

This working paper is about talent, but what does that really mean? In many ways the word talent is at risk of becoming a generic term, used by many but defined by few. Some have even rejected the term on the basis that it means many things in many different contexts. However, we see an inherent value in using a broad and inclusive term. Our recent Think Piece 17, *A Place Where Talent Wants to Live*, tried to make sense of what we understand as talent:

We understand the concept of talent in terms of people and, more specifically, good people who are full of character – honest, hardworking, dependable, creative and committed individuals who want to make a difference. Character, personality and a commitment to practising skills are vital and interlinked in creating the outcome of talent. (McGuinness Institute, 2013)

To explain this further, *character* (often called soft skills) is used to describe the traits and qualities that are distinctive to a person. Examples of character include being hardworking and honest, persuasive, adaptable and having common sense. Personality can be viewed as a number of traits, which become relatively stable and reliable after adolescence.

However, you don't get skills unless you *practise*, which is why we preferred the verb 'practise' rather than the term 'skills' in our think piece. Skills cover special abilities or expertise in a task that are acquired by training, and the more training and repetition the better – think violinist or basketball player. This need to practise relates to general, transferable skills, such as problem-solving and writing skills, and also specialist skills such as fluency in a language or the ability to design software.

Talented people come in a wide variety of forms, be they musicians, computer programmers or business founders. For the Institute, talent is an inclusive term that captures more than skills, or attributes. Further,

it is not a binary term; you can't be talentless or untalented. A conversation about talent is really about how to optimise the talent we have and create the right environment for talent to thrive.

2.2 Talent-based economy

In developing *TalentNZ* we have talked a lot about the need for New Zealand to build a 'talent-based economy'. Importantly, this term is not interchangeable with 'knowledge economy' or the 'High Value Manufacturing and Services (HVMS) sector'. To achieve Sir Paul's vision of creating 'a place where talent wants to live', the Institute is interested in the role and availability of talented people within the New Zealand knowledge economy and the HVMS sector.

The *knowledge economy* refers to industries and occupations that employ highly skilled workers and produce sophisticated goods and services. The Ministry of Business, Innovation and Employment considers an industry to be part of the knowledge economy if at least 25 per cent of its workforce are qualified to degree level or higher and at least 30 per cent of the workforce are employed in professional, managerial, scientific or technical occupations (MBIE, 2009). Talent, however, is not about having a degree, although it can definitely help.

The *HVMS* sector often refers to large businesses that have a high labour productivity rate, spend more than other businesses on product development and are likely to develop entirely new products, and undertake research and development (R&D). The HVMS sector is considered important to New Zealand's growth in productivity and prosperity because it generates high returns for the labour it uses. In 2010 the sector generated approximately 29 per cent (\$37.5 billion) of New Zealand's total value added, while using only 16 per cent (297,000) of the New Zealand labour force (Martin Jenkins, 2012: 7–16). Talent, however, is not about financial return per employee, although delivering value to a common goal, either individually or together, is important.

A *talent-based economy*, defined against the knowledge economy or the HVMS sector, is primarily about people. It is about the optimisation of people and their networks to build an economy that relies on talent. The Institute shares Sir Paul's ambition for New Zealand to move from an agriculture-based economy toward a talent-based economy; we need talent in all sectors of our economy.

3. New Zealand Surveys on Talent

This section presents an overview of some key surveys published in New Zealand since 2005, which identify the skills and attributes that are in demand now and that will be in demand in the near future. These surveys also focus on the reasons why some job applicants and employees fall short, the training and recruitment expectations of businesses, and the barriers many businesses face.

1. Employment Skills Survey (Victoria University, 2006);
2. Skills and Training Survey 2007 (Business NZ & Industry Training Federation, 2008);
3. Business Operations Survey 2008 (Statistics New Zealand, 2009);
4. Do We Have the Skills? (Competenz, 2011);
5. Ministry of Science and Innovation Demand Study 2012 (Deloitte, 2012);

6. New Kiwis Employers' Survey (Auckland Chamber of Commerce & Immigration New Zealand, 2012), and
7. Talent Edge New Zealand – 2013 (Deloitte, 2013).

More detail on the individual surveys can be found in Appendix 1, however the key findings are as follows:

- Businesses currently have a high demand for domain-specific skills, interpersonal and communication skills, and flexible attitudes. Although they are still ranked within the top ten sought-after skills and attributes, businesses' demands for academic achievement, self-motivation, problem-solving, analytical and conceptual skills have decreased since 2000.
- Many businesses think they will need to employ more staff in the future, and that these jobs will require higher skill levels than current jobs.
- Many businesses expect to be able to hire experienced staff, but not all of these expectations are well aligned with the nature of the current labour force.
- The majority of businesses currently have skill or talent shortages, either because they are unable to hire appropriately skilled staff or because their current employees lack certain skills.
- Many businesses are finding vacancies hard to fill as they feel applicants lack motivation, character, work experience, qualifications or skills. The industries struggling most to fill vacancies are the trades, sales, IT, engineering and health industries.
- Businesses' current employees commonly lack initiative, drive, domain-specific skills and general skills.
- As many New Zealand businesses are struggling to find the talent they require, some of them have chosen to recruit employees from overseas. However, the majority of these businesses indicated that they would never extend an offer of employment until they had met the applicant in person. While the primary reason for hiring migrants used to be getting the best person for the job, it now relates to skills and availability. Although the job performance of migrants is generally rated well, they may struggle to adjust quickly to New Zealand workplaces.
- A very high percentage of businesses give their employees some form of training, though this is more likely in large businesses. The top reasons for training staff were to improve domain-specific skills, health and safety skills, computing skills and management skills.

4. Seven Ways to Optimise Talent

There is a broad range of recent research on the topic of talent. To understand and synthesise our research to date, we have pulled out seven big ideas in which talent might be viewed and optimised:

1. Introverts are talented too.
2. Mix it up: quiet and loud spaces are the order of the day.
3. Don't tell talented people they are smart.

4. Embrace an ‘easy come, easy go’ mentality.
5. Erase ‘try’ from your vocabulary; practice makes perfect.
6. Don’t think hierarchy, think mana.
7. Get enough sleep; tired people are not talented.

We are aware that this does not cover all perspectives and research on talent, but rather a way to look at what information we have and discover what is missing. We hope to learn more through further research and the *TalentNZ* interviews.

4.1 Introverts are talented too

In her 2012 book, *Quiet: The Power of Introverts in a World that Can't Stop Talking*, Susan Cain notes how the concept of having a good personality was not widespread until the twentieth century. With the rise of the ‘culture of personality’, people began to view the way others perceived them as important, and people who were bold and entertaining started to be seen as successful. Urbanisation and the rise of big business required people to market themselves in order to succeed in larger, more impersonal settings. While the onset of the ‘culture of personality’ was mainly for self-promotion, there has been a further development, where personalities, and specifically extroversion, are now seen as markers of superior people (Cain, 2012: 20–22, 42).

As Cain notes, ‘today we make room for a remarkably narrow range of personality styles. We’re told that to be great is to be bold, to be happy is to be sociable’ (ibid.: 3). This ‘extrovert ideal’ is evident in modern workplaces. For example, a 20-year longitudinal study by the Stanford Business School showed that verbal fluency and sociability are now the two best predictors of success (Harrell & Alpert, cited in Cain, 2012: 48), and a recent Employment Skills Survey (see Appendix 1) also found that the attributes employers most desired were strong interpersonal and communication skills (Victoria University, 2006: 1).

All too often extroversion, eloquence and even velocity of speech are mistaken for talent. While talented people may have all of these attributes, in themselves they do not constitute talent. Within the workplace, it is important to recognise the complexities and compatibility of different personality traits. For example, research has shown that extroverted leaders enhance the performance of passive employees and that introverted leaders enhance the performance of proactive employees (Grant, cited in Cain, 2012: 56).

4.2 Mix it up: quiet and loud spaces are the order of the day

Cain suggests that the momentum toward corporate teamwork and open-plan offices has been encouraged by the success of internet-based collaboration. Examples such as Linux and Wikipedia are indicative of the great innovations that can be achieved through online collaboration, where people from all over the world work toward a common goal. However, it is important to recognise that methods that work on the internet are not necessarily appropriate for physical workplaces. The internet draws together people who are working separately or even anonymously, often in different countries, whereas physical workplaces inspired by the collaboration of the internet run into more traditional personality obstacles.

In an experiment comparing the results of team brainstorms to individual production of ideas, researchers found that both research scientists and advertising executives came up with more ideas by themselves than they did in groups of four. Not only did they create more ideas individually, but these ideas were

also of equal or greater quality than those created by teams (Dunnette et al., cited in Cain, 2012: 88). However, large teams are effective when they use electronic brainstorming tools. In these situations the larger the group, the better it performs. So while using collaborative methods inspired by the internet's success in the workplace may fail, using digital solutions in the workplace can circumvent traditional personality obstacles, ultimately increasing productivity (Cain, 2012: 78–89, 266).

We should take personality into account not only when choosing our leaders, but also in designing workspaces that can enhance talent. Picture a frequent-flyers lounge without the airport. According to one global survey, 'The three most important aspects of such spaces are interaction with other people, flexible working hours, and an environment that encourages serendipitous discoveries' (Johns & Grattan, 2013). Many modern workspaces are designed for team work and high stimulation. While these environments can be great for extroverts, they can hinder the performance of introverts. To get the most out of staff members, there needs to be an environment that suits all employees, with some stimulating open spaces for interaction, and some private and quiet spaces for deep thinking (Cain, 2012: 6). Simple measures like providing staff with headphones can create privacy within an open office space, allowing employees to work in an environment suited to their personalities and the variety of tasks at hand.

4.3 Don't tell talented people they are smart

The importance of focusing on character when trying to develop talent was illustrated by Carol Dweck in her 2006 book *Mindset: The New Psychology of Success*. She gave 400 eleven-year-olds a series of simple puzzles to complete. Following this, half of the children were briefly praised for their intelligence: 'You must be smart at this!' and half were praised for their effort: 'You must have worked really hard!' Her goal was to test whether this simple feedback would change the student's mindset and behaviour. Following the first test students were given the choice of taking a hard or an easy test. Many of the children praised for their intelligence chose to take the easy test, not wanting to risk losing their label of being smart. Of the children praised for their effort, 90% chose to take the harder test, not making a choice based on likely success, but choosing to explore a more difficult, but potentially satisfying challenge. Next, all of the children were given a very hard test, designed so that none of them would succeed. At this stage it was only the children who had been praised for their intelligence who lost confidence in themselves. Finally, the children were all given a test equivalent to the original test. The performance of the children who had been praised for their intelligence plummeted, while the performance of the children who had been praised for effort increased (Dweck, 2006: 71–73). Dweck's experiment illustrates the point that if we are to develop talent, we must praise effort and not be afraid of failure.

4.4 Embrace an 'easy come, easy go' mentality

For many decades there has been a view that an ideal employee is loyal and spends many years working for the same company. This view is increasingly seen as old-fashioned. In December 2012 the Institute hosted Trade Me founder Sam Morgan for a question-and-answer session with a group of young people.

During this conversation, Morgan insisted that he would not hire somebody who has worked at the same company for seven or eight years. Instead he preferred that people work hard for two years at a company, then move on to a new opportunity. Morgan suggests that working in a number of different environments, such as in the public sector, large corporate companies, small companies and starting your own business, will create a more resilient, diversely talented population. Not only do these people increase their opportunities for finding or creating work, they also become more desirable employees – they work hard and play harder (Morgan, 2012).

In New Zealand the median job tenure is three years for females and four years for males (Statistics New Zealand, 2008: 5–6). This median job tenure is far lower than a traditional view of employee loyalty would suggest.

However, as Morgan noted, this low tenure may actually facilitate the creation of a more diversely skilled and resilient workforce. New Zealand's labour market is highly fluid, with approximately 250,000 jobs created and the same amount destroyed annually. This annual rate of job creation and destruction – 12–14 per cent of all jobs in New Zealand – is one of the highest rates in the OECD (MBIE, 2012: 9). In fact, only 28 per cent of New Zealand businesses survive for ten years or more (Statistics New Zealand, 2012: 10). This means that New Zealanders must become increasingly adaptable and capable of meeting changing demands.

4.5 Erase 'try' from your vocabulary; practice will make you perfect

It is important that we recognise not only that skills are important, but that the country needs to take an active role in developing skills. Research from the early 1990s illustrates the effect practice can have on skill development (Ericsson et al., 1993: 363). With the help of professors from the Music Academy of West Berlin, researchers separated violinists into three groups: 'the best violinists', 'the good violinists' and those who were likely to become teachers rather than performers, whom they called the 'music teachers'. The researchers wanted to know how much practice each of the violinists had done throughout their career. The violinists had all begun playing at approximately five years of age, practising for two to three hours per week. However, by the time they were eight, the best violinists were practising more than the other two groups, until by the age of twenty they were practising over thirty hours per week, far more than the other two groups. By this age, the best violinists had totalled 10,000 hours of practice (ibid.: 363–400). The emerging picture from this and other similar studies is that 10,000 hours is the amount of time necessary to achieve expertise in any domain, including composing, playing basketball, writing fiction, ice skating, and playing concert piano or chess. This 10,000-hour rule roughly equates to ten years of practice (Levitin, 2006: 193).

The 10,000-hour rule suggests that talent is not simply an innate gift, but that it can be nurtured and developed. This is relevant for New Zealanders looking to create talent that can drive the country's economy. However, the development of expertise is still difficult; it involves early access to good instructors, parental and environmental support, the avoidance of obstacles and a strong motivation and commitment to practising (Ericsson et al., 1993: 400). Further, not just any type of practice, but deliberate practice is required for 10,000 hours. When practising deliberately, the student identifies a task or knowledge that is out of their zone of current achievement and therefore strives to achieve better and higher standards in the future. It is also a solitary activity that takes intense concentration and targeting of difficulties (Cain, 2012: 81). This is further discussed by Patrick McCarthy in his book *Relax: Say Goodbye to Anxiety and Panic*:

Taking on challenges which are outside of your current ability is thought to increase not only skill level but also self-esteem. This process of having multiple attempts at a task before mastery is important, but we have to be careful in the language that we use around this process. The word 'try' is not thought to be well understood by the subconscious. Although we think of trying as something positive, we never use the word try when somebody is successful. Instead, we reserve the word try for failure, or the possibility of failure and this is what the subconscious recognises when the word is used. So it is important to practice deliberately, and to do, rather than try to do. By doing, rather than trying, people are more likely to succeed. (McCarthy, 2012: 64–82)

The realisation that talent can be carefully fostered through 10,000 hours of practice has large implications for parents, teachers, businesses and others. The more the country views talent as building capacity over time and not as an innate gift, the more it can facilitate its development.

4.6 Don't think hierarchy, think mana

Increasingly, successful companies are adopting work environments that don't revolve around a rigid hierarchy. Michael O'Donnell ('MOD'), head of operations at Trade Me, describes how his office has eliminated a hierarchical structure. Instead, an employee's standing tends to be dictated by their overall contribution to their colleagues.

On Trade Me people trade on their brands and their feedback record and internally in Trade Me people trade on their brands as well. People whose brands are around executing and being reliable and giving a damn and reaching out and supporting their colleagues go a long way. (Interview between Michael O'Donnell and Charlotte Greenfield, 1 May 2013)

O'Donnell describes how this focus on the mana of an employee rather than the name of their position allows attention and respect to be given where it is due rather than to whoever has the most impressive title.

So we've got a young lady, she might be 21 or 22, and yet if she says something or if she gives her opinion on something, that's going to stand in more stead than anyone in the business and likewise there are certain developers and certain people in customer support whose brand and integrity and values are such that if they say something people think 'that's significant if they say that'. (ibid.)

4.7 Get enough sleep; tired people are not talented

In December 2010, Arianna Huffington commented, 'The way to a more productive, more inspired, more joyful life is getting enough sleep' (Huffington, 2010). She went on to discuss the common misconception that sleep deprivation is a sign of productivity and a character trait that should be desired. This phenomenon sees individuals boasting about the minimal hours of sleep they have had the previous night as a demonstration of a perceived positive personality trait. However, research has shown that this is not the case. A study conducted at the American College of Occupational and Environmental Medicine looked at the relationship between lack of sleep and an employee's work performance. The results showed that sleep deprivation decreases work productivity and performance and leads to high levels of loss for companies. It also leads to decreases in attention, social and interpersonal functioning, and communication skills (Rosekind et al., 2010: 96).

If we are seeking talent within the workplace, an important factor will be removing the positive reputation that sleep deprivation holds in today's society. It is a myth that sleep deprivation signifies an individual's capability to manage large workloads in both their career and their personal life – sleep deprivation should be seen as an inhibitor of productivity. Individuals who are talented are not necessarily those who work long hours and have minimal hours of sleep. Employees who are tired are unable to think strategically and visualise the larger issues they may face. Those who can respond to the bigger picture are those who increase their productivity by cultivating an effective work-life balance that allows them to excel at the personal level. In the words of Arianna Huffington:

The essence of leadership is being able to see the iceberg before it hits the Titanic ... what is good for us on a personal level, what is going to bring us more joy, gratitude, effectiveness in our lives, and be the best for our careers, is also what is best for the world. So I urge you to shut your eyes and discover the great ideas that lie inside, to shut your engines and discover the power of sleep. (Huffington, 2010)

5. What Next?

Up to this point, this working paper has explored the nature of talent, existing surveys, and practical tools and initiatives for facilitating talent in the workplace. This section provides an overview of the key questions our research has raised. Firstly, what research and information is missing that might help decisionmakers make progress toward realising Sir Paul's vision of 'a place where talent wants to live'. Secondly, how can New Zealand propel itself forward and work toward achieving this vision.

5.1 What research is missing?

Effective evidence-based solutions are important. In the process of writing this working paper, we have developed seven research questions that identify what key information is needed to help build a full picture of where we are now and how we can best move forward.

1. *What are the 'domain-specific' skills New Zealand businesses require?*

Surveys on skills mismatches in New Zealand suggest that people are lacking domain-specific skills, but they do not specify what these skills are. Identifying these domain-specific skills is an extensive task, but it needs to be completed so that people can be effectively trained in these precise areas. Further, there is a distinction between skills and occupations; listing the occupations that are in demand does not enable educators to identify exactly which skills need to be taught.

2. *What needs to be done to foster these skills? On-the-job training? Better education? What are the expectations in these different sectors?*

There are multiple organisations that are capable of developing talent, including schools, tertiary institutions and workplaces. We need to understand the expectations both within and beyond each of these sectors in relation to their roles in developing talent. We then need to assess where these expectations align and where they diverge so that we can identify where the responsibilities for developing talent should lie.

3. *What jobs and skills are becoming redundant?*

The twentieth century saw increased mechanisation cause many jobs and skills to become redundant, and now algorithms are doing the same for many traditionally white-collar jobs. Today a routine job can be codified, turned into a set of machine-readable instructions, then replicated millions of times (Brynjolfsson, 2013). We need to know which jobs and skills can be effectively completed by algorithms and which jobs and skills are best completed by people.

4. *What is the state of IT literacy in New Zealand? What is the state of IT teacher training? Is the traditional education model appropriate for IT education?*

We need a better understanding of the present deficiencies in IT education and where we can target resources to improve IT; it may be that traditional models are not appropriate. If a 12-year-old is interested in app development is our current system able to foster this?

Generations X and Y are often described as ‘digital natives’, somewhat unhelpfully implying that being technologically savvy is innate, not acquired. While it is true that many members of generations X and Y use technology extensively and proficiently, they often have little understanding of how this technology works. Professor Mitch Resnick has explained this problem particularly well:

... young people today have lots of experience and lots of familiarity with interacting with new technologies, but a lot less so of creating with new technologies and expressing themselves with new technologies. It's almost as if they can read but not write. (Resnick, 2012)

IT is a quickly changing sector and educators struggle to keep up. We need to find out how to develop lifelong learners who will be adaptable and able to upskill, changing and growing along with the IT industry.

5. *What about gender? What about Māori and Pasifika? What is the current demographic profile of the knowledge sector (e.g. industries such as engineering and IT)?*

We need to know more about the demography of the sectors where skills are in demand. For example, why are some of these sectors highly gendered and/or unrepresentative of New Zealand’s ethnic diversity. Barriers that prevent more New Zealanders from choosing to develop these skills need to be identified and addressed.

6. *What is the connection between practice, personality and character? How do these interact? Are New Zealand businesses aware of this interaction?*

We’ve discussed the importance of the need to practise, along with character and personality, but we want to know more about the unique ways in which these factors combine and interact. Are businesses aware of this interaction, and how can they can best recognise and utilise their employees’ unique characteristics?

7. *What trends are emerging?*

We want to know more about the emerging trends for the future of talent. Some trends, such as ‘white-collar algorithms’, the ‘globalised auction of jobs’ and an ‘amplification of freelancing’ have already been identified internationally (Peng et al., 2013: 21). Investigating how trends such as these could affect New Zealand will be crucial in informing and developing any strategies that need to be implemented in the future.

5.2 What strategic questions remain?

The countries that actively identify and work to resolve talent mismatches and youth unemployment are far more likely to be the places where talent will want to live in the future. This means that all stakeholders, whether they be decisionmakers, educators, policy analysts, entrepreneurs, employers, employees or unionists, must embrace a culture of experimentation, scrutiny, research, critical thinking, analysis and review. We need to embrace small, innovative ideas and track them – learn what works and what doesn’t. A country that either doesn’t accept that a problem exists or only considers old tools or frameworks as solutions will be left behind.

Making sure New Zealand is the place where talent wants to live is fundamental to Sir Paul’s vision. In this country we often hear about the ‘brain drain’. We need to alter this thinking and talk more about the ‘brain exchange’. Sam Morgan has described this as a conveyor belt – getting talented people out

of the country to upskill, explore and make connections, then giving them a reason to come back and contribute to New Zealand's prosperity. We need to be capable of both shipping out our talent and attracting it back.

Sir Paul put forward a vision; it is now time to put that vision into action. We end this working paper with seven strategic questions that have the capacity to drive this conversation forward:

1. How do we define and measure talent?
2. How do we utilise the untapped talent we already have?
3. How do we develop the skill sets needed to move New Zealand toward a more sustainable and prosperous future? How do we foster skills that technology can't match?
4. How do we grow, attract and retain talent? How do we strengthen connections to our sense of place?
5. How do we instil confidence and ambition in young people, and make them more resilient and adaptable?
6. How do we recognise and support more non-traditional career paths?
7. How do we support groups who have traditionally not participated in the knowledge economy (e.g. women/Māori/Pasifika)?

In his book *The Rise of the Creative Class, Revisited* urban studies theorist Richard Florida describes how we feel stuck and frustrated 'amid the ruins of the old order' (Florida, 2011: 400). The challenge ahead has never been put more eloquently:

Sooner or later, some city or nation is going to figure out what it takes to fully engage the full creative potential of its people. If we want to gain the advantages of precedence, we need to accelerate that process. Our future prosperity depends upon it. Our time, as they say, is now. (ibid.)

Appendix 1: Seven Surveys on Talent

Employment Skills Survey: December 2006

Source: Victoria University, 2006

Contact: Elizabeth Medford, liz.medford@vuw.ac.nz

Purpose: The Employment Skills Survey sought to find out what skills and attributes are desirable for employers who commonly recruit university graduates.

Businesses Surveyed: The survey was sent to a sample of businesses that were actively recruiting or had recently recruited university graduates. It was sent to 346 businesses in total, with a response rate of 33%, which represented 113 businesses; 79 respondents were from the private sector, while 34 were from the government sector. (Of the 113 responses, 5 were considered ineligible either because skills were not ranked, or were all ranked equally.)

Key Findings: The businesses were asked to rank a list of skills and attributes in order of importance to them. The top ten skills and attributes were:

1. Strong interpersonal skills;
2. Strong verbal communication skills;
3. Strong written communication skills;
4. Flexible and adaptable 'can do' attitude;
5. Sound academic achievement;
6. Self-motivated/self-starter;
7. Team player;
8. Energy and enthusiasm;
9. Problem-solving skills, and
10. Analytical and conceptual skills.

Since the 2000 and 2003 versions of the survey, the demand for strong written communication skills and a flexible and adaptable 'can do' attitude has risen, while the demand for sound academic achievement, self-motivated/self-starter and problem-solving skills has fallen.

Skills and Training Survey 2007

Source: Business NZ & Industry Training Federation, 2008

Contact: Steve Summers, summers@businessnz.org.nz

Purpose: Business NZ and its predecessor, the New Zealand Employers' Federation, have been conducting surveys investigating businesses' training practices and motivations since the 1990s. The 2007 survey provides a snapshot of how and why New Zealand businesses train their staff.

Businesses Surveyed: This survey had 536 respondents, 65% of whom were private limited liability companies; a further 8.6% of respondents were self-employed or sole proprietors. The respondents were spread across industry sectors, with the largest number of responses coming from businesses in the retail, agriculture, forestry and fishery, and manufacturing sectors.

Key Findings: The key findings that relate to creating and retaining talent in New Zealand workplaces were:

- 99% of businesses provide training for their staff;
- Larger firms are more likely to provide staff training – 72% of businesses with up to five employees reported providing training compared to 100% of businesses with 100 or more staff;
- The top reasons for training employees were to improve their specific technical and trade skills (73%), health and safety skills (54%), computing skills (43%) and management skills (40%);
- The most important skills for companies were technical and trade skills. These are specific skills. The other skills businesses thought were important were communication skills (67%) and literacy and numeracy skills (49%).

Workplace training is an important factor in creating and retaining talented employees. Where some skills mismatches result in businesses not being able to hire new employees, others are less significant mismatches, which can be remedied with effective training.

Business Operations Survey: 2008

Source: Statistics New Zealand, 2009

Contact: info@stats.govt.nz

Purpose: The annual Business Operations Survey collects information about a wide variety of New Zealand businesses to better understand how business practices and behaviours impact on business performance. Each year, the survey is conducted around a different theme. In 2008 the survey focused on skill shortages.

Businesses Surveyed: The survey collected information from a wide cross-section of private New Zealand businesses that had more than six employees, turnover of more than \$30,000 and had been operating for at least a year. The businesses surveyed fell within many specific codes of the Australian and New Zealand Standard Industrial Classification – New Zealand Version 2006 (ANZSIC06) list. A list of these codes can be found in the survey. This list included an estimated 36,075 businesses. The survey sampled a selection of these businesses, taking ANZSIC codes and business size into account. The survey achieved an 81.1% response rate, which represented 5543 businesses.

Business Operations Survey: 2008

Key Findings: The survey found that 77% of the businesses surveyed had had at least one staff vacancy in the past financial year, and that 47% of these businesses had found some of the vacancies hard to fill. The primary reasons given for the difficulty in filling these vacancies related to the applicants rather than the specific job or workplace.

The top three reasons for finding vacancies hard to fill were:

1. Applicants lack desired attitude, motivation or personality;
2. Applicants lack work experience, and
3. Applicants lack qualifications or skills.

The survey also explored the skills and attributes that the current employees of these businesses were lacking. Although there was some variation between industries, the top ten skills and attributes that businesses thought their existing staff members lacked were:

1. Customer service/sales;
2. Team working;
3. Oral communication;
4. Management/supervisory;
5. Trade related;
6. Written communication;
7. Computer;
8. Professional/technical;
9. Numeracy, and
10. Marketing.

Interestingly, businesses thought that job applicants and existing staff members lacked qualities from each of the three categories of talent: character, personality, and skills.

Do We Have the Skills?

Source: Competenz, 2011

Contact: info@competenz.org.nz

Purpose: This survey sought to find out what on-the-job training and skills are needed now and in the future within the New Zealand engineering and metal manufacturing (EMM) and the food manufacturing (FM) sectors.

Businesses Surveyed: Competenz is owned by companies in the engineering, manufacturing, baking, and food and beverage manufacturing industries. It surveyed a random selection of these companies and had 270 respondents.

Key Findings: The survey found that:

- 97% of EMM and 99% of FM companies give their staff training;
- 53% of EMM and 52% of FM companies agreed that their businesses had skill shortages;
- 64% of EMM and 53% of FM companies believed that they would need even more skilled staff in 2012 and 2013.

Of these EMM companies, 53% said they would try to hire ready trained staff. However, staff turnover for 92% of all surveyed EMM companies is less than 10%, so finding an adequate supply of ready trained staff will be unlikely. Accordingly, the recruitment expectations are mismatched with the actual supply of skilled workers.

Ministry of Science and Innovation Demand Study 2012

Source: Deloitte, 2012

Contact: www.deloitte.co.nz

Purpose: This survey was commissioned by the Ministry of Science and Innovation (MSI), now the Ministry of Business, Innovation and Employment. The survey sought to identify the demand for research and development (R&D) and technological innovation services within New Zealand's HVMS sector.

Businesses Surveyed: The study included interviews with 44 businesses identified by MSI and Deloitte as being part of the HVMS sector. The survey was completed by 344 of the 2000 businesses approached.

Key Findings: A key finding in terms of talent was that three of the top five barriers to innovation for businesses within the HVMS sector related to human capital.

The top five barriers to innovation for companies in the HVMS sector were:

- High costs;
- Unable to access funding;
- Lack of in-house knowledge;
- Lack of management resources, and
- Unable to find expertise.

New Kiwis Employers' Survey

Source: Immigration New Zealand & Auckland Chamber of Commerce, 2012

Contact: Valerie Maskell, ymaskell@chamber.co.nz

Purpose: This survey was designed to find out about employers' experiences when recruiting and employing migrants.

Businesses Surveyed: The survey was distributed to employers who had used the www.newkiwis.co.nz website, members of the Auckland Regional Chamber of Commerce and businesses that responded to marketing relating to the Chamber's employment services. There were 592 respondents.

Key Findings: The survey uncovered findings about the difficulties of filling vacancies, reasons for recruiting migrants and the barriers companies face in relation to hiring migrants.

- 35% of respondents had trouble filling roles within their businesses. The industries experiencing the greatest difficulty in filling vacancies were the trades, sales, IT, engineering and health industries.
- 70% of respondents 'occasionally' recruit employees from overseas. However, 64% of this group indicated that they would never extend an offer of employment until they had met the applicant in person.
- In surveys completed between 2009 and 2011, the primary reason employers considered hiring migrants was to get the best person for the job, however in this survey the primary reason to consider hiring migrants related to skills and availability.
- 74% of employers rated migrants as good, very good or excellent, though there were some difficulties associated with hiring migrants. The most common of these were some migrants' insufficient ability to communicate in English (63%) and difficulty in adjusting to New Zealand workplace norms (36%).

If New Zealand cannot create a sufficient supply of talent, businesses will need to consider attracting talented migrants. However, there do appear to be some barriers in hiring and working with migrants including the ability to meet applicants in person before hiring them, and language and cultural barriers.

Talent Edge New Zealand – 2013: Addressing Worrying Gaps

Source: Deloitte, 2013

Contact: Richard Kleinert, rkleinert@deloitte.co.nz

Purpose: The purpose of this survey was to determine the types of talent challenges that New Zealand organisations are facing today, what impact these gaps have on business performance, what types of talent are in short supply, what people management practices are most important for successful businesses, and where the mismatches are between what is important and what is effective. Deloitte has conducted similar surveys in 2011 and 2012.

Businesses Surveyed: The survey had 310 respondents, which represented a good cross-section of New Zealand businesses in terms of industry, size, gender, age and position within the organisation. The survey targeted a broad range of businesses. The industry groups with the highest number of responses were the public sector, manufacturing, professional services, wholesale/retail and financial services.

Key Findings: In terms of current talent gaps, 83% of the 310 organisations surveyed felt that they were currently experiencing talent shortages, which were impacting on their business performance. The most common skills that businesses said were lacking were critical thinking and problem-solving skills, general management skills, initiative and drive. Businesses predicted that operations employees would be the type of worker in the shortest supply in the future, and that jobs will increasingly demand higher skill levels.

The top challenges that businesses felt they currently face were:

- Skills;
- Performance culture;
- Engagement;
- Productivity, and
- Costs.

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