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# Benefits of Employing People with Autism: The Dandelion Employment Program

## **Abstract**

This report identifies benefits of the Dandelion Employment Program, an initiative by DXC Technology in collaboration with the Australian Government Department of Human Services, Department of Defence, and Department of Immigration and Border Protection aimed at increasing employment opportunities for people with autism.

## **Keywords**

autism, employment, DXC Technology, Dandelion Employment Program

## **Comments**

### **Suggested Citation**

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# BENEFITS OF EMPLOYING PEOPLE WITH AUTISM: THE DANDELION EMPLOYMENT PROGRAM

This report identifies benefits of the Dandelion Employment Program, an initiative by DXC Technology in collaboration with the Australian Government Department of Human Services, Department of Defence, and Department of Immigration and Border Protection aimed at increasing employment opportunities for people with autism

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## INTRODUCTION

The *Dandelion Employment Program*, an initiative by DXC Technology in collaboration with the Australian Government Department of Human Services, Department of Defence, and Department of Immigration and Border Protection, is aimed at increasing employment opportunities for people with autism. This report identifies the potential benefits of the *Dandelion Employment Program* by drawing on anecdotal information provided by the Dandelion trainees, their family members, support staff, and co-workers. These individuals participated in focus groups and interviews as part of an ongoing research study conducted by the Olga Tennison Autism Research Centre (OTARC). Where possible, quantitative data is included to provide additional supporting information. Potential benefits were categorised into benefits to the:

- **Individual**
- **Organisation**
- **Family and carers**
- **Work productivity and performance**
- **Innovation**

We also outline the potential financial savings to the Australian Federal Government based on the transition of 100 individuals from unemployment to 3 years of full-time employment in the *Dandelion Employment Program*, and also apply the modelling to the DHS implementation incorporating actual parameters such as the number of individuals who have been employed within the program and their previous work histories.

## BACKGROUND

The Australian Bureau of Statistics estimates there are 164,000 Australians living with autism [1]. Despite the ABS identifying participation in the workforce as important for social inclusion and economic independence, adults with autism face significant challenges entering the workforce [1] and, unsurprisingly, autism is associated with high rates of unemployment and underemployment [2-5]. In Australia, it is estimated that only 40.8% of the 75,200 working age (15–64 years) adults with autism are engaged in the labour market, which compares poorly against individuals with other disabilities (53.4%) and individuals without disabilities (83.2%) [1, 6]. Furthermore, many individuals with autism face difficulties maintaining employment, find it difficult to adjust to new work settings, are more likely to change jobs, and earn less than their peers with equivalent qualifications and experience [2, 7-9].

Increasing work participation among individuals with autism (as well as amongst those with other disabilities) leads to significant and broad economic benefits [10-12]. A report commissioned by the Network on Disability suggested that a one third reduction in the difference between employment rates for people with and without disabilities would result in an AUD \$43 billion increase, and long term rise of 0.85% in Australia's GDP [13]. In Australia, the total annual cost of autism is estimated to be between AUD \$8.1 billion and AUD \$11.2 billion [14]. Moreover, it is estimated that 36% of the costs of autism are attributable to lost employment for both the individuals with autism and their family members [12].

**“This report includes an analysis of the potential Federal Government savings resulting from 3 years of full-time participation in the Dandelion Employment Program.”**

Employment is not only important from an economic standpoint, it is vital to one’s health, demonstrating positive impacts on general well-being [15-17]. Independence, self-esteem, community engagement, and social status are also related to an individual’s capacity to work; employment is likely to positively impact physical and mental health [15-17] and, compared to the unemployed, employed individuals are likely to experience a better quality of life [8, 18, 19]. However, job interviews, complex work environments, challenging social dynamics, communication requirements, and need for flexibility, all present significant challenges for people with autism entering the workforce and maintaining employment, if appropriate supports are not available [2, 4, 9, 20]. Therefore, providing appropriate supports to people with autism to facilitate both entry into the workforce and to assist them in maintaining employment, may positively impact on their quality of life, health, and well-being.

**“The Dandelion Employment Program provides supports during the selection process, and extensive ongoing support within the workplace for 3 years.”**

The challenges to gaining and maintaining successful employment faced by individuals with autism are well described [8, 21-23], and there is increasing acknowledgement that the experiences and viewpoints of people with autism should be included as part of practice based evidence to support the development of policy and programs aimed at improving employment outcomes for this population [24-26].

## **THE DANDELION EMPLOYMENT PROGRAM**

The *Dandelion Employment Program* targets individuals with autism for employment in technology roles within the Australian Government sector. Roles include testing, analytics, and cyber security. DXC Technology have revised human resource protocols, such as reducing reliance on candidates' past experience and interpersonal skills during recruitment and selection. Individuals are selected for the program following a unique 4 week selection process, which includes relevant training (e.g., SCRUM, AGILE). Successful candidates are supported in the program technically by DXC Technology, and also in terms of autism specific needs by a support worker with autism expertise who is placed within each team. DXC Technology also provide workplace awareness programs for the broader workforce at each location where the program is to be implemented. Staff at each site are encouraged to attend these awareness sessions, which are typically held at the beginning of each implementation. The program has a 3 year structure that focuses on job awareness and training (year 1), self-advocacy and increasing autonomy (year 2), and transition to an unsupported work environment and career (year 3).

## AIMS

This report is aimed at identifying the benefits of the *Dandelion Employment Program*, which is designed to specifically target and improve employment outcomes for adults with autism. It does so by focusing on potential benefits to the individual, the organisation, the family, and the broader economy.

**“This report reflects on the impact of the program on the individuals involved, their colleagues, and their family members.”**

## METHOD

A series of focus groups and one-to-one interviews were conducted with trainees and co-workers from Australian Government Department of Human Services (DHS) implementations of the DXC Technology *Dandelion Employment Program* between August 2015 and July 2017. Questions differed between groups, but relevant topics related to: Personal impact, support, perceptions and expectations, value of organisational involvement, relationships, workload, and integration. Family members of the trainees also participated in the focus groups. Relevant topics included: Expectations, impact to self and family member, and benefits to family. Participation was voluntary. Interview and focus group data were transcribed, de-identified, and reviewed by the authors. Consistent with the aims of this report, statements that suggested a potential benefit of the program were identified. We also conducted an employee survey at DHS sites in Adelaide, Brisbane, and a small select group from ACT who work remotely with the Dandelion trainees, and present some of these data here.



## PARTICIPANTS

Seventy-six individuals participated in focus groups or interviews lasting from 60 to 90 minutes. Twenty-one trainees participated in focus groups ( $n = 11$  participants) or one-to-one interviews ( $n = 10$  participants). Forty-two DHS co-workers participated in focus groups ( $n = 40$  participants), one-to-one interviews ( $n = 1$  participants), or responded to the interview questions using written responses ( $n = 1$ ). Six family members and seven DXC Technology support staff also participated in focus groups. The DHS co-workers included people who interacted both regularly and rarely with trainees. Their roles within DHS included service desk technician, software test manager, software developer, test engineer, system analyst, programme director, executive assistant, and team leader. In addition, DHS employees ( $n = 188$ ) from Adelaide, Brisbane, and Canberra, participated in an anonymous *Employee Engagement Survey* aimed at evaluating co-worker perceptions of the *Dandelion Employment Program*.

## RESULTS

For the purposes of this report focus group, interview and survey data were reviewed for information suggestive of potential benefits of the *Dandelion Employment Program*. Information was organised into pre-defined categories including benefit to the individual, family, organisation, innovation, productivity and performance, and the broader economy. Responses from some of the questions in the engagement survey are included here as they provide insights into the organisational impact of the program.

## INDIVIDUAL BENEFITS

Productivity, defined as having something meaningful to do [27], is a strong predictor of well-being [28]. Meaningful employment, which provides an opportunity for individuals to develop personally, contribute to their own needs and to those of their family, and to feel that they belong and are contributing meaningfully to society, can therefore impact well-being and quality of life [28]. Moreover, employment may offset risk of poor outcomes in people with autism, including depression and suicidality [28]. There is some evidence to suggest that participation in the *Dandelion Employment Program* gives trainees a sense of purpose and meaning in their lives. Supporting statements are provided below.

### *Sense of purpose and meaning in life*

*"For me it provides a, the job provides a purpose [...] a challenge, it's a positive challenge like the puzzle that's continually ahead of you [...] you're looking forward to getting up in the morning to go to work. You're sort of like, let's see what today brings, it's not "oh god got to get to work", it is challenging yes, sometimes stressful, but now I've been able to cope with a lot larger work load with minimal stress but in the end I know that I've done good."*

### *Empowerment and contribution*

*"The positives are the empowering reward realizing that he can be a contributing member to the household [...] it's massive to his self-esteem and his ability to say he can better himself, and that he has more potential than he realizes [...] he has got a very positive out-look about his future now..."*

Financial resources are crucial to an individual's quality of life [29]. Financial independence is often seen as a mark of adulthood and is a desired goal for many young people with autism [30, 31]. Dandelion trainees became financially independent, some for the first time. They discussed the impact being employed had on themselves and on their family, and how it reduced the feeling of being a burden to others.

### *Financial independence*

*"It's the financial independence because [in my] previous job I was getting paid the minimum wage [...] which wasn't much, barely enough to live on. I was barely able to keep my car serviced [...] but this one I was able to have a lot more money to become more independent"*

*"I'm probably a lot more independent, financially so I don't need my parents to buy me clothes, food. I still live at home with my parents but I'm not as much as a financial burden as I was before."*

*"Well, I bought a house"*

### *Supporting family*

*"I still live with my mum because [...] she's not in a very well paid job so she wouldn't be able to afford the house. So I actually, instead of becoming a financial burden, I actually became a significant augmentation to the house income."*

Self-belief, which includes an understanding of personal strengths and weaknesses, and self-actualization, are important for individuals to succeed in workplaces and careers, in education and transitioning into adulthood [32, 33], and is linked to increased quality of life amongst youth with disabilities [34]. Dandelion trainees spoke of how previous negative employment experiences had made them doubt their self-worth or made them feel undervalued, and conversely the positive impact of being able to utilise their skills in more meaningful work.

### *Self-belief*

*"It has shown that I can do anything, anything regardless of my diagnosis [...] the Dandelion Program's given me a lot of things to believe in [...] anything is possible and I can do anything and that I can always show my skills, always good to put them into practice. "*

### *Self-esteem*

*"With me, the change for me has been [to] greatly increase [my] self-esteem relating to other people."*

## *Pride*

*"It has certainly been great to have a cool job that you can talk about with all your friends and associates rather than [...] the alternatives there being that you're [...] on unemployment benefits and stuff like that."*

## **FAMILY BENEFITS**

Employment offers a pathway to personal independence [15, 35], which not only contributes significantly to the health and well-being of the individual [36, 37], but can influence the well-being and quality of life of family members and caregivers [38, 39]. Family members of participants spoke of the increased financial and personal independence of their son or daughter following their involvement in the *Dandelion Employment Program*. This may reflect new skills in adaptive functioning that can result in improved quality of life at home, and reduced reliance on the family system for support.

## *Financial independence*

*"He has bought a house and moved out of home..."*

### *Adaptive skills*

*“He has now realized he’s quite more capable of going places, getting himself to places, jumping on the transport and just going to town, and going to wherever he wants ...”*

### *Motivation*

*“He sets two alarms because he likes to stay in bed but I don't get him up by quarter-to, he does get himself up, which is a good thing because he never used to be able to do that before, he used to rush and be late for the shifts at the pizza place....”*

Siblings and family members of individuals with autism report feelings of loneliness and isolation [40, 41], lower perceived quality of parent-child interactions [42, 43], and lower levels of intimacy, prosocial behaviour and increased negative perceptions in sibling relationships [41, 44]. Stress of transition to adulthood for young people with autism can additionally strain the parent-child relationship [45]. Family members of Dandelion trainees reported an increase in positive communication between their son or daughter with autism and other family members, suggesting the potential for a positive impact on family relationships and dynamics. Supporting statements are provided below.

### *Communication*

*“He would come home from work here and would talk to his sister, which was a big thing. Before when he came home [...] we got the grunt and the moan, and that sort of stuff. Now [...] that he's moved out, yes he comes randomly to talk to his sister [...] that's a big win, communication level has gone beyond the grunt and to an actual conversation [...] he will actually ask questions about what you've been doing, what his sister's been doing...”*

### *Relationships*

*“When he comes home for dinner or whatever I get a hug and I get a hug and a kiss before he leaves again [...] he'd just come up to the kitchen and give me a hug, it's just lovely”*

### *Quality of life*

*“At one point [...] we hardly had ever gone [out] on our own [...] we were at the point of actually cancelling our wedding anniversary [...] and the kids were at a point where we weren't sure if we were actually going to be able to go [...] we are able to now and we would be more comfortable in doing so now if we choose to...”*

## ORGANISATIONAL BENEFITS

Many individuals with autism exhibit atypical or high intellectual ability [46], or display specific skills and interests that may help them thrive in particular occupations and roles [47]. Research also suggests that employees with autism tend to be reliable, trustworthy and conscientious [48, 49], and typically complete work to a high standard [48]. Thus, both organisations and individuals with autism may benefit from the employment of individuals with autism. However, there is a significant gap in research examining employer and employee attitudes and concerns regarding employment of individuals with autism and the provision of workplace supports for them [15].

### *Co-worker employee engagement survey*

To gauge the impact of the *Dandelion Employment Program* on co-workers and the organisation, a survey was widely distributed to staff at DHS sites in the ACT, SA, and QLD. Staff were *not* required to have direct knowledge of the program to participate in the survey, and no identifying information was collected, ensuring participation was both voluntary and anonymous and thus encouraging honest responses.

Two questions ascertained participant level of knowledge and interaction with *the Dandelion Employment Program*. On a 1–7 scale ranging from ‘no knowledge’ to ‘high knowledge’, average knowledge of the program was  $M = 4.56$ , indicating fair to good knowledge of the program overall. On a 1–5 scale ranging from ‘never’ to ‘more than once a day’, an average response of  $M = 2.20$  indicated that most respondents had at least some level of interaction with the Dandelion trainees.



Figures 1 and 2 provide summary statistics based on responses to questions concerning co-workers perceptions of the program and the impact on their work. Responses to the questions were on a 7-point scale ranging from 'strongly disagree' to 'strongly agree'. For the purposes of this report, responses from the bottom three ('disagree') and top three ('agree') categories were combined. Co-workers overwhelmingly agreed that the program served an important purpose and was a good strategy to the organisation, and believed the program was valuable (Figure 1). Most co-workers reported that the implementation of the program had not significantly increased their workload, and they had not taken on additional responsibilities (Figure 2).

Figure 1.

Co-worker perceptions of the value of the *Dandelion Employment Program* to the organisation (n = 188 responses)

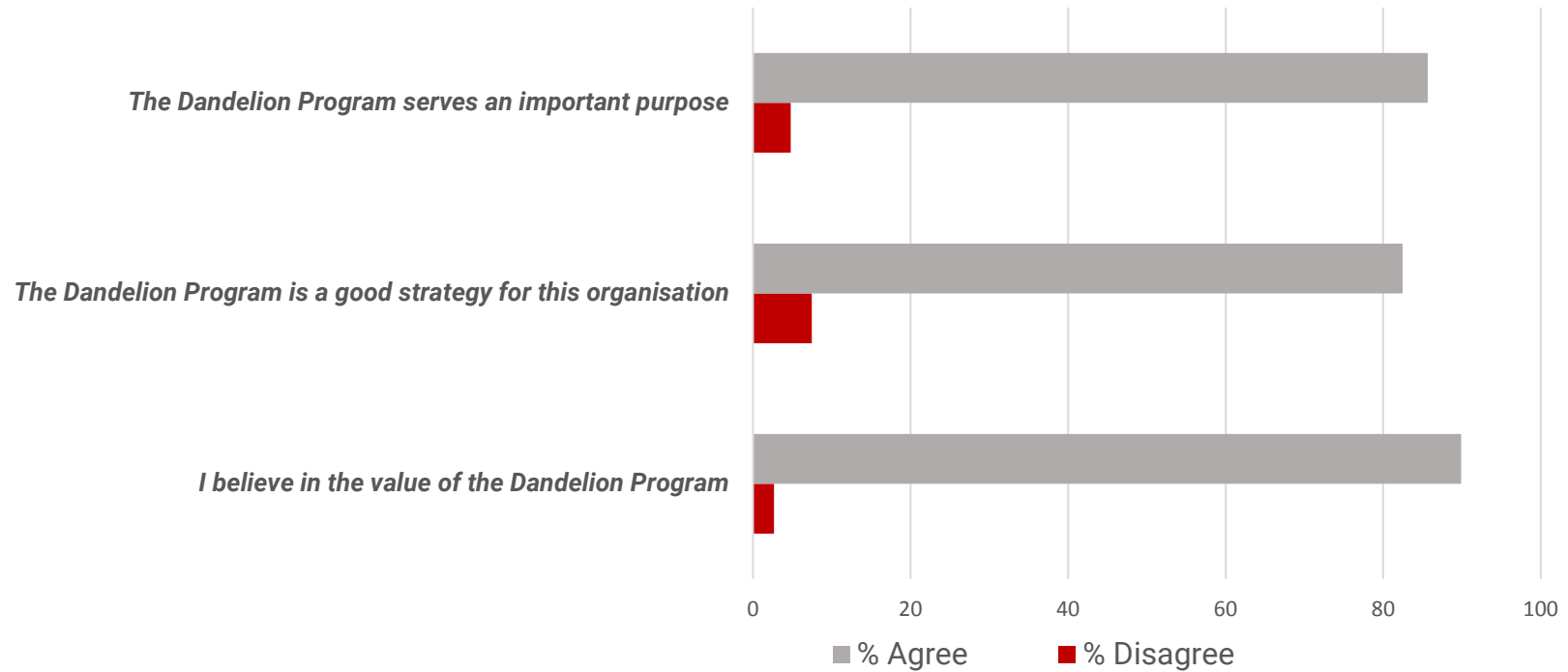
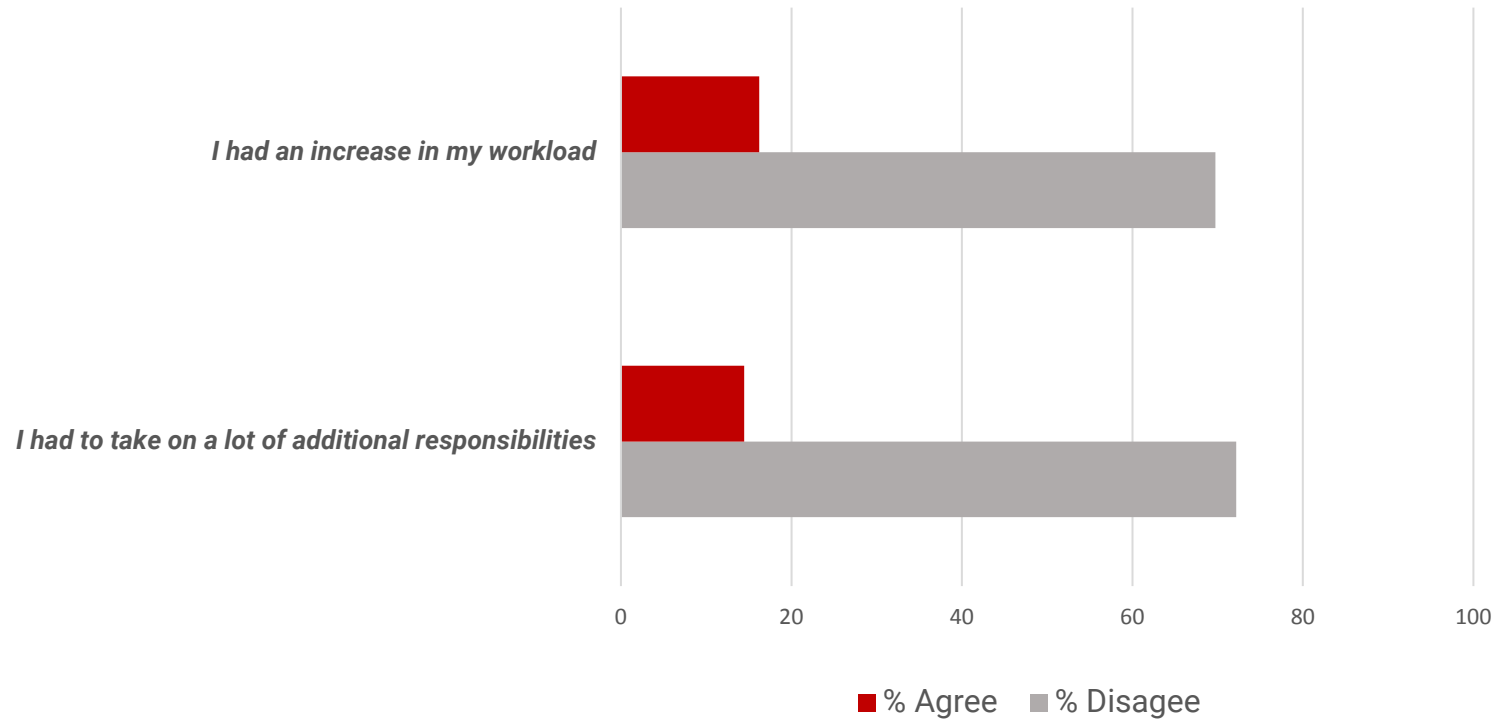


Figure 2.

Co-worker perceptions regarding impact on their own work resulting from implementation of the *Dandelion Employment Program*

(*n* = 187 responses)



## *DHS employee perspectives*

DHS employees recognised that the program provided opportunities for individuals who may not have had the same employment opportunities otherwise, and also recognised the need for the support model. They also felt that inclusion was an important facet of work culture within the organisation, and identified beneficial contributions by the Dandelion trainees. A number of supportive statements from DHS employees concerning the program are provided below.

*"Talking to other staff I've heard only good things. I think it's a great program..."*

*"I'm a massive supporter of the Dandelion project. It fits with our culture of inclusivity and diversity. I would say from an overall perspective I rate it quite highly."*

*"I've always known that DHS is a supporter of diversity and our culture is of inclusivity. To me personally I'm very happy that the Dandelions are here. They give us an extra length and breadth."*

*"I like what its vision is, I guess for the future [...] it's a great opportunity for the men and women that have been involved..."*

*"It's good that we're engaging them in the workforce. It's good they're providing quality outcomes for DHS. The more it makes DHS look better by engaging down the line [...] I feel like I'm working for a happier place."*

*"I'm always proud to say that I work in an organisation that accepts diversity and in fact looks at it as an advantage."*

*"They've actually helped sharpen up some of the thought processes amongst the teams. They'll ask questions where others fear to tread..."*

*"It never has really affected the work at all in a negative way [I] just see him as a co-worker and I'd probably say he's better than most..."*

*"It's good to have them in workspace [...] they can work, they shouldn't be isolated. They have talents, and it's great to work with them..."*

Finally, two individuals spoke proudly about sharing their involvement in the program, both internally (in the context of a colleague who had not heard about the program) and externally. These provide examples of "good news stories" that are communicated willingly by employees, and therefore might be considered particularly honest reflections of organisational values in action.

**"Good news stories about the Dandelion Program are communicated willingly by employees, both internally and externally, and represent organisational values in action."**

*"It was a bit sad though that I was in [redacted for confidentiality] and I was talking to one of the team leaders and I just mentioned Dandelion and she's like "what's that?" Even though it's been advertised on the intranet and all that she had no clue. Turns out she has a daughter on the spectrum and she was really interested in the whole thing and what it was. So I spent 20 minutes telling her all about what I'd done with the team and all that and she was blown away. But she works for the department, she had no idea it even existed. So I guess that's the only downside, they're so busy she doesn't have time to read intranet stories about it or the hub or whatever."*

*"I've mentioned it socially, I've talked to friends about it. It's something that's cool about DHS [...] I don't want to complain, no, but it's an easy go-to when people say "what do you do?" and "what do they do?" and "do you like it?" and you say there's something really likable."*

## **INNOVATION, PRODUCTIVITY, AND PERFORMANCE**

It has been argued that employees with autism often complete work tasks to a high standard [48], and it is beneficial for organisations to hire people with autism who can bring innovation to the workplace due to a unique way of viewing the world and solving problems [50]. Some co-workers identified specific innovations attributed to the Dandelion trainees that have saved time. They further describe them as deeply engaged with their work, and capable of producing work to a high standard, thereby supporting the aforementioned claims.

*"...much of the process is quite repetitive and some of the Dandelion staff have actually built tools that we can use whilst we're performing our job and that's actually made my job easier."*

*"It helps you understand the system better because you're working with people who really do have a high degree of interest in achieving an outcome."*

One DHS manager spoke at length about the quality of work returned by the Dandelion trainees, including referencing comparative work performance data which indicated the work produced by the employees with autism was of very high comparative standard.

*"...in terms of one of the projects that we delivered the quality of the work that that team did for testing was absolutely fantastic [...] they would be great to have as a test team come in and work on other projects. Focused, driven, competitive in a good way. Yes the flip side is that our developers get annoyed. But from my point of view as a manager, that's a good thing. They should get annoyed about the quality of their work. Too bad. That's [...] in a good way. But I think, so on that level absolutely outstanding. I have some comparative data to be able to compare that to in terms of previous projects and testing results that we've achieved. It was very, very good quality."*

Finally, a trainee talked about how he aimed to continuously improve the efficiency of the work process. This theme extends observations by DHS co-workers who similarly remarked how the trainees with autism thought deeply about the job task, attempted to understand how systems worked, and produced a product of excellent quality.

*"I found if it was something repetitive [...] instead of just doing the easy task, I would often try to find a way to make the process more efficient. Like get something that does part of the task for me or something. So that process was challenging. It stopped me from being bored during the easier times."*

*"There was an already existing code that used to do a basic form of it. It didn't work because the system changed over time. So I went in and fixed that with my knowledge, and then added a bunch of features to it. Then that—I think word got around to other teams about—like I was discussing with one of the people I was working with, who was a DHS staff, and word spread from there and other teams requested it. Sometimes they even came back to me, to get me to update it when the system changed, and they needed their test data. [...] It was a success. It's something that's used by other teams now even."*



## GOVERNMENT SAVINGS

Few participants in the *Dandelion Employment Program* were engaged in full-time employment prior to beginning the program.

Approximately 30% were previously unemployed, and the median number of hours worked per week by those who had some employment was 12 hours. This rate is similar to ABS estimates of low labour force engagement in people with autism [6, 51].

A high rate of unemployment places a significant financial burden on the government. For example, unemployed individuals with autism are likely to be eligible for a disability pension [52], receiving AUD \$412.80 a fortnight (lowest rate), with a yearly income of AUD \$10,732. Full time employment, with a salary comparable to the average graduate wage (AUD \$55,000), therefore provides substantial financial benefit to the individual. Furthermore, employment results in a considerable boost of funds back into the economy [13]. Additionally, employed individuals will return funds to the government through taxes, make payments on educational (HECS/ HELP-FEE) loans, and no longer access employment services. They may also have reduced health care costs.

Based on our analysis of government savings, for every 100 individuals previously unemployed and on welfare who participate in the 3 year *Dandelion Employment Program* full-time, we estimated the program will generate AUD \$2,826,600 in tax benefits, save AUD \$3,219,840 in welfare payments, and potentially save AUD \$600,000 in reduced use of employment services. This estimate is an upper estimate, as not all Dandelion trainees are employed full-time, and the figure would need to be adjusted to account for “other than full-time employment”. Although these estimates suggest the program has the potential to generate significant government savings in the long run, these calculations do not

factor in the costs associated with the implementation and running of this model, including the additional support staff, work and environmental adjustments. However, these costs are absorbed by the employer, not the government.

**“Full-time employment of 100 previously unemployed individuals in the Dandelion Employment Program over 3 years would result in potential Federal Government savings of more than AUD \$6 million.”**

## **GOVERNMENT SAVINGS BASED ON CURRENT DHS IMPLEMENTATION**

Using the same modelling as described above, we were able to estimate savings to the government based on current DHS implementations of the *Dandelion Employment Program* in South Australia (Adelaide), the Australian Capital Territory (Canberra), and Queensland (Brisbane). Of the 38 individuals who started the program, 30 individuals (79%) with autism remain in the program at the time of writing. Of those who are no longer in the program, two moved to graduate programs within DHS, one was employed by a third party, one returned to study and one did not pass the probation period. The remainder cited personal reasons for leaving the program. A survey of the trainees' previous employment history prior to entering the program revealed that most individuals worked part-time, for a median of 12 work hours a week. In comparison, Dandelion trainees typically work more than 30 hours per week.

Factoring in the non-completion rate, current average working hours, and previous employment and education history, we first modelled the potential government savings of the DHS implementation, over the 3 years of the program. The model assumes that Dandelion trainees

receive an average graduate salary and are not accessing any welfare payments or unemployment services whilst employed in the program. Our brief employment history survey for this report returned much higher than expected employment engagement rates prior to starting the program. We therefore opted to use the ABS figure of 0.58% unemployment for individuals with autism [1], as this rate is consistent with figures obtained in broader research. The overall savings would be reduced if lower rates of candidate unemployment were substituted, thereby emphasising the importance of determining the most appropriate parameters for the model. Nonetheless, as we were unable to obtain pre-program employment data for the entire cohort, we believe the use of ABS data is appropriate in this instance.

Compared to the 3 years prior to implementation, the current implementation of the DHS *Dandelion Employment Program*, based on the employment of 38 individuals (including factoring in those who left the program prior to completion) will potentially generate AUD \$550,592.64 in welfare savings, AUD \$712,868.65 in tax gains (including study loan repayments), and save \$102,600.00 in access to unemployment services. This results in a potential government saving of AUD \$1.4 million dollars over 3 years.

**“The DHS implementation of the Dandelion Employment Program will result in potential savings to the Australian Federal Government of AUD \$1.4 million.”**

## IMPLICATIONS AND RECOMMENDATIONS

Overall, the *Dandelion Employment Program* was predominantly viewed positively by participants, family, and DHS co-workers, and was seen as an important program that provides employment opportunities to select individuals with autism. Several benefits were identified through interviews, focus groups, and survey methodology. Across sites, one main area that was identified as an area for improvement was better and earlier integration of Dandelion trainees into the broader work environment. Co-workers were also concerned about the ability of some individuals to continue to thrive at work once the program concludes or they no longer had access to the same level of support provided by DXC Technology.

*"I felt like some of them were very secluded. It was like you are the Dandelion team, you're just going to sit here, do your work and that's it kind of thing, that's what I felt."*

*"I definitely feel the same way. They're sort of, at least from where they're sitting and where I'm on ... they're very isolated to where we are. It would be good to see some sort of either event where they mingle with the other people that they'll be talking about, either testing defects or interacting with on a daily basis, and just have that flow of communication rather than "yeah they're the Dandelion team and they're in that corner there". Rather have them spread out and intermingle with everyone else."*

*"I do think though that while they do need the support to get in, they've maybe been a little bit too supported, a bit too isolated from the general DHS [employees], once the project runs out I don't know how well some of them will go, once the support ends in a year or whatever it is..."*

While it was acknowledged that trainees should ideally be fully integrated into the broader workforce, it was also acknowledged that the support provided was critical for their success and for the transition process. Trainees acknowledged they had sufficient opportunities for social integration, but also identified they felt inadequately prepared for leaving the supported environment.

*"Maybe one thing I would've liked is perhaps more, I guess, opportunity to work outside of the team for a little while, so that I'd have that experience before moving on. So working - not - like being able to work in a team that doesn't have all this support right next to me. So that I'd be able - I'd still have them as an option to go to but I'd have the experience of not relying on them [the DXC Technology support team]."*

*"I guess our team is just – seems pretty isolated [...] in the Dandelion team, we'd all [...] stayed to ourselves, I guess. We wouldn't really talk to other people, other than the people that work directly with us. Though [working in a DHS team] I talk to other people on the floor and bounce ideas off them, and things [but in the Dandelion team] I'm like "who do I contact about something?" or "Is it okay to contact them?" [...] Should I be contacting them, or should I be asking my support person stuff?"*

Thus, although the supported environment provides an important role in the transition to work, and the model is viewed positively, there is a need for a formalised plan that leads to trainees being fully integrated into regular work teams and, at the same time, for reducing their reliance on the support system. This can be achieved by ensuring trainees are taught, and have plenty of opportunity for practicing, the skills required to be fully integrated into the workforce. We consider seeking feedback from trainees, and also their co-workers in the wider workforce, to be critical in ensuring trainees are provided every opportunity to excel both within and externally to, the supported environment. Furthermore, it will be critical that managers, team leaders, and supervisors are equipped with the skills and tools to support these individuals at work, and upper level management must clearly communicate its support to those individuals who work with, or who are managers and supervisors of employees with autism. We believe that the *Dandelion Employment Program* provides a unique opportunity to 'up skill' existing personnel who are interested and motivated to work with neurodiverse employees who often bring a unique set of talents and skills to the workforce, but who may also need some additional supports in place in order to be successful in the workforce.

## **CONCLUDING REMARKS**

There is no straightforward way to assess the impact of employment diversity programs such as the *Dandelion Employment Program*. Potential impacts exist on multiple systemic and inter-related dimensions, including the individual, family, organisation, and community. Each employee with autism also brings both a unique set of skills, and possibly also unique challenges, to the workforce. We suggest they also bring unique opportunities to the organisation, particularly in terms of supporting and encouraging diversity at work. Through interviewing individuals

involved, this study identified six distinct areas where the program, which provides a pathway to employment for people with autism, is likely to have an impact.

This report provides a framework for future research assessing the benefits of similar programs aimed at increasing employment opportunities for people with autism. While every effort was taken to remain objective in our interpretation of our results, there are several limitations that need to be acknowledged. First, our analysis of financial savings to the government did not include the cost-benefit ratio for the *Dandelion Employment Program*. This will be essential in determining the overall feasibility and sustainability of the program. Second, the study was reliant on information provided by individuals who willingly volunteered their time in order to participate. For this reason, the study sample must be considered as biased. It is possible that individuals with less than positive experiences of the program chose not to participate in the study, thereby resulting in an overly positive outlook. In addition, there were a small number of trainees who had left the program, either voluntarily or through dismissal, who did not participate in the study. It would be beneficial to follow-up with these individuals to learn about their experience with the program, but unfortunately these individuals chose not to participate in the research or had left the program by the time the focus groups or interviews were conducted. Third, we did not, for the purposes of this report, complete systematic coding of transcripts and our method would be considered a “top-down” approach where we looked for information that fit pre-defined categories. This is important because it is often easy to find information that supports one’s perspectives, and the narrative that one wishes to communicate. Furthermore, our analysis was aimed at identifying benefits of the program and we therefore did not discuss negative findings. For example, the fact that not all individuals complete the program, potential stress of the work environment on the individual and support staff, the challenges of integrating and supporting employees with autism, and the long-term economic sustainability of the program, are all areas that need further discussion and investigation.

While every attempt was made to present information accurately and honestly, readers are referred to our published articles which have been subject to peer review and where data analysis is consistent with standard recommendations for qualitative research. Finally, the potential benefits identified within this report need to be studied using comprehensive, quantitative methods. We are currently engaged in some of this work, but due to the longitudinal data collection, will only be able to provide updates as these data become available.

In conclusion, several potential benefits were identified to the individual, their family, the organisation, and in terms of savings to the government. More work is required to determine the most appropriate model for the program, and a comprehensive cost-benefit analysis is required. The effects of ongoing changes to the program also need to be assessed to ensure that any changes do not negatively impact on the benefits described here. We found that the program was well supported by family, co-workers, and the individuals with autism. At this stage it provides a “good news story” for the organisation and creates new opportunities for people with autism that were not previously available to them.



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## **ETHICAL APPROVAL**

The research was approved by La Trobe University Human Ethics Committee No. 14-101 and the Australian Defence Human Research Ethics Committee No. 825-16. Informed consent was obtained from all individual participants included in the study.

## DISCLAIMER

Some of the information provided here has been reported previously in the following publications:

1. Hedley, D., et al., *Transition to work: Perspectives from the Autism Spectrum*. Autism, 2017. Advance online publication. doi: 10.1177/1362361316687697
2. Hedley, D., et al., *Employment programmes and interventions targeting adults with autism spectrum disorder: A systematic review of the literature*. Autism, 2016. Advance online publication. doi: 10.1177/1362361316661855
3. Hedley, D., Uljarević, M., & Hedley, D. F. E. (2017). Employment and living with Autism: Personal, social and economic impact. In S. Halder & L. C. Assaf (Ed.), *Inclusion, Disability and Culture: An Ethnographic Perspective Traversing Abilities and Challenges*. New York: Springer. doi: 10.1007/978-3-319-55224-8\_19

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## REFERENCES

1. ABS, 4430.0: *Disability, Ageing and Carers, Australia: Summary of Findings, 2015*. 2017, Australian Bureau of Statistics: Canberra: ACT.
2. Baldwin, S., D. Costley, and A. Warren, *Employment activities and experiences of adults with high-functioning autism and Asperger's Disorder*. *J Autism Dev Disord*, 2014. **44**: p. 2440-9.
3. Roux, A.M., et al., *Postsecondary employment experiences among young adults with an autism spectrum disorder*. *J Am Acad Child Adolesc Psychiatry*, 2013. **52**: p. 931-9.
4. Shattuck, P.T., et al., *Postsecondary education and employment among youth with an autism spectrum disorder*. *Pediatrics*, 2012. **129**: p. 1042-9.
5. Taylor, J.L., N.A. Henninger, and M.R. Mailick, *Longitudinal patterns of employment and postsecondary education for adults with autism and average-range IQ*. *Autism*, 2015. **19**: p. 785-793.
6. ABS, 4428.0: *Autism in Australia, 2012*, in *Labour Force Participation*. 2014, Australian Bureau of Statistics: Canberra.
7. Barnhill, G.P., *Outcomes in adults with Asperger syndrome*. *Focus Autism Other Dev Disabl*, 2007. **22**: p. 116-126.
8. Hendricks, D., *Employment and adults with autism spectrum disorders: Challenges and strategies for success*. *Journal of Vocational Rehabilitation*, 2010. **32**: p. 125-134.
9. Roux, A.M., et al., *National Autism Indicators Report: Transition into Young Adulthood*. 2015, Life Course Outcomes Research Program, A.J. Drexel Autism Institute, Drexel University: Philadelphia, PA.

10. Buescher, A.V.S., et al., *Costs of Autism Spectrum Disorders in the United Kingdom and the United States*. JAMA Pediatr, 2014: p. E1-E8.
11. Kemper, A., et al., *Releasing constraints: Projecting the economic impacts of increased accessibility in Ontario*. 2009, Martin Prosperity Institute: Toronto, ON.
12. Knapp, M., R. Romeo, and J. Beecham, *Economic cost of autism in the UK*. Autism, 2009. **13**: p. 317-336.
13. Deloitte Access Economics, *The Economic Benefits of Increasing Employment for People with Disability*. 2011, Author: Canberra, ACT.
14. Synergies Economic Consulting, *Economic Costs of Autism Spectrum Disorder in Australia*. 2011, Author: Brisbane, QLD.
15. Chen, J.L., et al., *Trends in employment for individuals with Autism Spectrum Disorder: A review of the research literature*. Review Journal of Autism and Developmental Disorders, 2015. **2**: p. 115-127.
16. Creed, P.A. and S.R. Macintyre, *The relative effects of deprivation of the latent and manifest benefits of employment on the well-being of unemployed people*. J Occup Health Psychol, 2001. **6**: p. 324-331.
17. Feather, N.T. and G.E. O'Brien, *A longitudinal study of the effects of employment and unemployment on school-leavers*. Journal of Occupational and Organizational Psychology, 1986. **59**: p. 121-144.
18. Chiang, H.M., et al., *Factors associated with participation in employment for high school leavers with autism*. J Autism Dev Disord, 2013. **43**: p. 1832-42.
19. Mavranouzouli, I., et al., *The cost-effectiveness of supported employment for adults with autism in the United Kingdom*. Autism, 2014. **18**: p. 975-984.
20. Richards, J., *Examining the Exclusion of Employees with Asperger Syndrome from the Workplace*. Personnel Review, 2012. **41**: p. 630-646.

21. Muller, E., et al., *Meeting the vocational support needs of individuals with Asperger Syndrome and other autism spectrum disabilities*. Journal of Vocational Rehabilitation, 2003. **18**: p. 163-175.
22. Scott, M., et al., *Viewpoints on Factors for Successful Employment for Adults with Autism Spectrum Disorder*. PLoS One, 2015. **10**: p. e0139281.
23. Howlin, P., *Social disadvantage and exclusion: Adults with Autism lag far behind in employment prospects* J Am Acad Child Adolesc Psychiatry, 2013. **52**: p. 897-899.
24. Johnson, T.D. and A. Joshi, *Dark clouds or silver linings? A stigma threat perspective on the implications of an autism diagnosis for workplace well-being*. J Appl Psychol, 2016. **101**: p. 430-449.
25. Nicholas, D.B., et al., *Vocational support approaches in autism spectrum disorder: A synthesis review of the literature*. Autism, 2015. **19**: p. 235-245.
26. Shattuck, P.T., et al., *Services for adults with an autism spectrum disorder*. Can J Psychiatry, 2012. **57**: p. 284-91.
27. Cummins, R.A., *The domains of life satisfaction: An attempt to order chaos*. Social Indicators Research, 1996. **38**: p. 303-328.
28. Lai, J.K.Y., E. Rhee, and D. Nicholas, *Suicidality in Autism Spectrum Disorder: A Commentary*. Advances in Neurodevelopmental Disorders, 2017.
29. Ross, C.E. and M. Van Willigen, *Education and the subjective quality of life*. J Health Soc Behav, 1997. **38**: p. 275-97.
30. Beresford, B., et al., *Transition to adult services and adulthood for young people with Autistic Spectrum Conditions*. 2013, University of York: UK.

31. Henninger, N.A. and J.L. Taylor, *Outcomes in Adults with Autism Spectrum Disorders: A Historical Perspective*. Autism, 2013. **17**: p. 103-116.
32. Field, S., *Self-determination instructional strategies for youth with learning disabilities*. J Learn Disabil, 1996. **29**: p. 40-52.
33. Field, S., et al., *Self-determination for persons with disabilities: A position statement of the division on career development and transition*. Career Development for Exceptional Individuals, 1998. **21**: p. 113-128.
34. Nota, L., et al., *Self-determination, social abilities and the quality of life of people with intellectual disability*. J Intellect Disabil Res, 2007. **51**: p. 850-65.
35. Kober, R. and I.R.C. Eggleton, *The effect of different types of employment on quality of life*. J Intellect Disabil Res, 2005. **49**: p. 756-760.
36. Gabriel, Z. and A.N.N. Bowling, *Quality of life from the perspectives of older people*. Ageing and Society, 2004. **24**: p. 675-691.
37. Wehmeyer, M. and M. Schwartz, *The relationship between self-determination and quality of life for adults with mental retardation*. Education and Training in Mental Retardation and Developmental Disabilities, 1998. **33**: p. 3-12.
38. Bainbridge, H.T.J. and T.R. Broady, *Caregiving responsibilities for a child, spouse or parent: The impact of care recipient independence on employee well-being*. Journal of Vocational Behavior, 2017. **101**: p. 57-66.
39. Mactavish, J.B., et al., *Family caregivers of individuals with intellectual disability: Perspectives on life quality and the role of vacations*. Journal of Leisure Research, 2007. **39**: p. 127.
40. Bagenholm, A. and C. Gillberg, *Psychosocial effects on siblings of children with autism and mental retardation: a population-based study*. J Ment Defic Res, 1991. **35**: p. 291-307.

41. Quintero, N. and L.L. McIntyre, *Sibling Adjustment and Maternal Well-Being: An Examination of Families With and Without a Child With an Autism Spectrum Disorder*. Focus Autism Other Dev Disabl, 2010. **25**: p. 37-46.
42. Hoppes, K. and S.L. Harris, *Perceptions of child attachment and maternal gratification in mothers of children with Autism and Down Syndrome*. Journal of Clinical Child Psychology, 1990. **19**: p. 365-370.
43. Podjarny, G., *Perceptions of parent-child relationship quality in parents of children with and without autism*. 2007, Carleton University: Ontario.
44. Kaminsky, L. and D. Dewey, *Siblings relationships of children with autism*. J Autism Dev Disord, 2001. **31**: p. 399-410.
45. Taylor, J.L. and M.M. Seltzer, *Changes in the mother-child relationship during the transition to adulthood for youth with Autism Spectrum Disorders*. J Autism Dev Disord, 2011. **41**: p. 1397-1410.
46. Happe, F. and U. Frith, *The weak coherence account: detail-focused cognitive style in autism spectrum disorders*. J Autism Dev Disord, 2006. **36**: p. 5-25.
47. Donovan, S., *Conversation with Thorkil Sonne*. Harvard Business Review, 2008 : p. 32-32.
48. Hagner, D. and B.F. Cooney, *"I Do That for Everybody": Supervising Employees With Autism*. Focus Autism Other Dev Disabl, 2005. **20**: p. 91-97.
49. Hillier, A., et al., *Two-year evaluation of a vocational support program for adults on the autism spectrum*. Career Development for Exceptional Individuals, 2007. **30**: p. 35-47.

50. Austin, R.D. and T. Sonne, *The Dandelion Principle: Redesigning work for the innovation economy*. MIT Sloan Management Review, 2014.  
55: p. 67-72.
51. ABS, 6202.0: *Labour Force, Australia*, in *Australia's unemployment rate increased to 6.4 per cent in January 2015*. 2015, Australian Bureau of Statistics Canberra.
52. DHS. *Disability Support Pension: Centrelink payments*. 2017 [cited July 31, 2017]; Available from:  
<https://www.humanservices.gov.au/customer/services/centrelink/disability-support-pension>.