

The Dandelion Program

2016 in Review

Vision

The Dandelion Program is an initiative to build valuable Information Technology, life, and executive functional skills to help establish careers for people on the autism spectrum. The implementation and assessment of Dandelion pods concentrates on identifying and supporting individuals on the autism spectrum with the potential to excel in testing, data science, and cyber security roles. Over the course of 2016, the program continued to grow at a rapid rate, and achieved a large number of significant milestones. This report will cover some of the most significant developments over the course of the last year.

Work Experience Program

2016 saw the first pilot Dandelion Work Experience Program in the Adelaide Regional Delivery Centre. Five university students on the autism spectrum worked as a team to deliver two 3-week projects under an Agile framework using the Aldebaran NAO H25 robot.

Candidates balanced learning skills and techniques used to develop software applications and manage project work in a team environment with information sessions from subject matter experts in a number of IT roles and practical project work. This culminated in the delivery of robotics applications that provided real value to a local school that works with children on the autism spectrum.

Representatives from the partner school highlighted the amazing level of attention that the students were giving to the robot ("Dandy"), blown away by the ease with which it could develop engagement with children who would otherwise refuse to be involved in classroom activities.

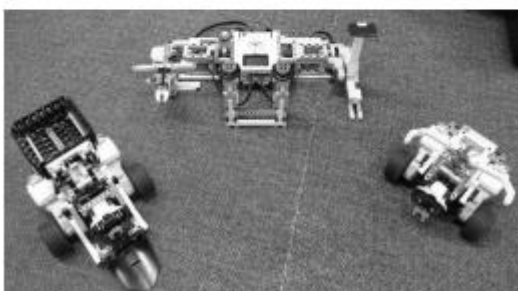
Candidates from the Adelaide Work Experience Program were extremely successful in their project work and demonstrated a high level of skill, and as such have been placed on a shortlist for consideration in recruitment for future Dandelion Assessment Programs.

Block 1 Outcomes: Agile Framework

- Sprint Planning, Daily Scrum, Sprint Reviews, and Sprint Retrospectives
- 2 Sprints of 1.5 weeks
- 19 User Stories from the Heights school
- 38 Tasks (25 Original + 13 Additional during sprints)
- 62% of effort spent on work done for Original Stories
- 33% of effort on additional changes with 5% rework.
- Continuous visibility of project status using Sprint Backlog and Burndown charts



"We could not believe the positive impact the robot made on the children - we haven't seen them engage like that in school, and it was immediate." - Russell Max, Teaching Coordinator, Heights School.



Department of Immigration and Border Protection

Exciting opportunities for growth were seen in Canberra, with a pod of 11 Dandelion members at the Department of Immigration and Border Protection in Canberra starting February 2017 as Software Test Analysts. This follows a successful assessment program in late 2016, where candidates on the autism spectrum who applied for the program demonstrated their skills and talents in an autism friendly environment.

During the four week assessment period for the pod, some remarkable and creative projects were developed using the Lego Mindstorm robotics kits. The first three weeks involved both individual and group challenges using the programmable robotics kits. The challenges require participants to create innovative solutions to address their understanding of a theme ('national security') using the robots. Each week culminated in the individuals presenting in front of a panel of judges and peers, often including executives from DXC and DIBP staff. During the fourth week, candidates were exposed to real-world challenges that mirrored tasks associated with the role of a Software Test Analyst.

While 11 of the 14 assessment program attendees were recruited to form the DIBP pod, the remaining three participants were successfully assisted in finding alternative employment and support opportunities by Specialisterne, highlighting the positive effect that the program has on the autism community as a whole.

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Department of Human Services

The Dandelion Program pod at the Department of Human Services in Adelaide is now in its third year. Seven out of the ten members are now working full-time, and the standout milestones include some members who have moved out of home, purchased their first houses, married, and one is expecting their first child. Two members have achieved internationally recognised testing accreditations, with two more studying to sit the exam in the near future. All members have become more resilient, developed their communication and social skills, made new friendships, and significantly benefitted from the routine of a stable and productive job. They have become versatile, adaptable, and highly skilled employees.



Australian Government
Department of Human Services

The Dandelion team at DHS Brisbane is partway through year two of the program, and the twelve team members have been progressing well with their software testing activities. Over the past year they have moved between major DHS testing projects, and have transitioned well into each new opportunity. Nine of the team members have passed their ISTQB professional qualification for software testing, with the balance currently studying to take it this year. Five members have now travelled overseas, two have purchased new cars, and one has bought their first house.

The DHS Canberra Dandelion team are now completing their first year of operation. The team is split into two functional areas, Business Information and Data Services in software services, and Monitoring and Automation in the IT infrastructure area. Both teams are progressing well in these diverse disciplines and working towards certifications relevant to their areas of specialisation.



Australian Government
Department of Defence

Department of Defence

September saw the start of a new Dandelion@Defence project; a Dandelion team at the Department of Defence. This is the fourth Dandelion implementation, and the first instance of a team providing Cyber Security services through the Dandelion model. Throughout June and July, a team of nine very talented individuals on the autism spectrum were selected for the pod through a rigorous assessment that not only saw participation in robotics design but also complex software development and data analysis tasks.

La Trobe Research Report

La Trobe University has published an Annual Research Report examining the Dandelion Program over the course of 2016. The research, conducted by the Olga Tennison Autism Research Centre (OTARC) for the Dandelion Program and the Department of Human Services (DHS), commenced with an assessment of the impact of participation in employment on adults who are on the autism spectrum, their families, support staff, and their co-workers.



A systematic review by OTARC revealed little published research examining quantitative outcomes of employment transition or programs for adults on the autism spectrum. The centre thus identified an urgent need for empirical evaluation of employment interventions. The Dandelion Program is a unique, innovative, and collaborative program which is aimed at building careers, resilience and independence for individuals who are on the autism spectrum. The research design incorporates quantitative and qualitative methodology in order to develop a rich and empirically based body of knowledge concerning the Dandelion Program, and also the impact of employment more generally on people on the autism spectrum.

Moreover, the goal is to document and report on the broad impact of what is a rather unique collaboration between industry, government, and academia that is aimed at solving a problem affecting a significant portion of the Australian population. Specifically, the research incorporates extensive longitudinal assessments of psychological health, well-being, and job satisfaction, along with focus group or individual interviews.

The broad aims of the research are to understand the social impact of participating in employment on adults on the autism spectrum and their families, the impact that transitioning to work has on trainees in the Dandelion Program, the support staff, and the organisation. Additionally, it aims to determine key criteria for measuring success, and identify potential barriers to success to enable continuous improvements of the program.

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Harvard Business School Case Study

A case study on the Dandelion Program has been published by the Harvard Business School, examining how diversity - in particular, neurodiversity - can be transformed into a competitive advantage in modern organisations. It questions how people who were previously considered not suitable for employment can and have become key to an in-demand service offering. Thus, this important case study provokes a discussion about the advantages of diversity, and also how some existing procedures might keep other organisations from realising these advantages too.



Cornell University Partnership

The Dandelion Program methodology is being open-sourced through Cornell University - Institute on Employment and Disability - to allow other organisations to leverage our knowledge and organisational management tools to further breakdown the employment barriers for people with autism. The Dandelion Program aims to build careers, resilience, and self-confidence across the wider autism community. Information from our research indicated that the employment churn rate for people on the spectrum is extremely high - around 50% within three months. The aim is not just to provide immediate jobs; we aim to make the program sustainable, with the hope that in the future the program itself would not be needed, as an organisation's fabric and culture would be able to support and promote neurodiversity from recruitment to onboarding, development, and job progression.

Three Year Program Structure

The Dandelion Program Plan is a three year structured roadmap of transformation initiatives based on business and IT priorities, effort, and learnings. It is intended as a plan of attack to improve the comfort and abilities of Dandelion pod members in a number of key areas. This new and revamped structure integrates feedback from the trainees, autism spectrum consultants, support employees, and new evidence based research.

Year one is focused on job awareness, comprising onboarding content, introduction into the role, internal training modules, and establishing a pipeline of work with stakeholders. Year two progresses on from a job awareness focus to be concentrated on self advocacy, intending to cultivate independence and confidence. Dandelion pod members complete certifications and training relevant to their role and keep a record of systems and projects worked on, to build a strong IT resume. 'Self determination' is developed, encouraging an understanding of one's own strengths, weaknesses, preferences, learning styles, and needs. Work experience programs are held to create a talent pool that can be drawn upon for Dandelion pod positions. Year three has a focus on transition, with pod members developing to be career ready. Members may transition out of the Dandelion pod when ready, and numbers can be replenished through successful work experience program members. This year is about setting the trainee up to be capable of holding a career outside of the support structure.



Certification of Training - ISTQB

The ISTQB (International Software Testing Qualifications Board) Certification is an internationally recognised testing certification aimed at professionals who need to demonstrate practical knowledge of the fundamental concepts of software testing. The foundation level 'certified tester' exam has been passed on the first attempt by nine members of the Brisbane team and two members of the Adelaide team, with more successful attempts expected in the near future. Attaining certifications is an important part of preparing the Dandelion Program trainees for a career outside of the support structure, and an excellent way to improve skills in the relevant area.

Financial Training

As part of developing executive functioning or 'life' skills, a financial training package is being developed with National Australia Bank. A large number of people on the autism spectrum can be tremendously talented in some areas, but have extreme difficulty with personal finance and maintaining a budget. By promoting development in these areas, the Dandelion trainees can achieve financial independence for what might be the first time in their lives.



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Work Performance Questionnaire Pilot

The Work Performance Questionnaire (WPQ) is a questionnaire originally developed by Beit Ekstein (A disability education organisation in Israel) to evaluate work performance in people on the autism spectrum. The WPQ was selected for use in the Dandelion Program because of a need to critically assess work performance in people on the spectrum, and because of the significant evaluation and peer review process that the WPQ has gone through.

To facilitate use in Dandelion, OTARC has initiated development of a 'stand-alone' WPQ application. The application will provide for electronic data entry. Output will include reports of individual scores and summaries, and a separate report of comments and notes. A prototype of the application has been developed and is close to completion. It is anticipated the WPQ will be implemented at all Dandelion Program sites, assisted by OTARC.



SAP Partnership

At the United Nations World Autism Day in 2016, a collaboration was announced with SAP to work on removing some of the barriers to employment and creating greater inclusion and acceptance for people on the autism spectrum. The collaboration will focus on the creation of information assets that will help raise awareness of the value of neurodiversity in the workplace, developing cross-company training curriculums to hire and retain people with autism, an exchange of experience in the area, and participation in information sharing sessions at the World Economic Forum and United Nations events.



"SAP is a company that embraces diversity in all its forms – racial, ethnic, gender, cultural and neurodiversity. We empower people to be who they are and to use the special magic that is unique to them as an individual. Our 'Autism at Work' program is a point of pride for us because we're able to help lead a global movement that lifts people up and creates opportunity. With this partnership with DXC [previously HPE] and Specialisterne, we're focused on building a broader culture where all are welcome and respected. It's not about disability, it's about ability." Bill McDermott, SAP CEO

Focuses for 2017

Rollout of Work Performance Questionnaire
Development and delivery of a Mental Health Framework
Further rollout of the Work Experience Program

Further rollout of Nutrition and Financial Awareness Training
Development of a Travel Awareness package with Adelaide Airport

"The job provides a purpose ... you're looking forward to getting up in the morning, to going to work ... it is challenging yes, sometimes stressful ... but in the end I know that I've done good." Dandelion Program Trainee

"I'm a great believer that with knowledge comes understanding, and therefore acceptance will hopefully follow. If you educate people about autism, and you expose them to people with autism who are very, very skilled and lovely people to be with, eventually you break down those stereotypes and negative stigma that has been attached to the label of autism." Cathryn Masters, Autism Spectrum Consultant

"It has been a huge year and a great team effort from all involved in the program and our partners. We are really focused on removing the barrier to employment, and creating sustainable work environments and careers for the individuals involved in the program. Thank you." Michael Fieldhouse, DXC Dandelion Program Executive and Adam Easterbrook, DXC Dandelion Delivery Executive