

Institution: University of the West of England, Bristol		
Unit of Assessment: 17		
Title of case study: Providing support through a mentoring scheme for professional women in the aviation and aerospace industry		
Period when the underpinning research was undertaken: 2014 – 2015		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Professor Susan Durbin	Professor in Human Resource Management	2000 – present
Dr Ana Lopes	Senior Lecturer	2013 – 2016
Stella Warren	Research Fellow	1997 - present
Period when the claimed impact occurred: 2015 – 2020		
Is this case study continued from a case study submitted in 2014? No		
1. Summary of the impact		
<p>Based on research led by Professor Susan Durbin at UWE, a women's mentoring scheme ('alta') was developed and implemented across the UK aviation and aerospace industry to address the under-representation of women in professional roles, in the context of a chronic industry skills shortage. The first scheme of its kind operating in the industry, alta has been embedded within the Royal Aeronautical Society's (RAeS) careers service to meet its commitment to achieving gender equality. Alta is part of the mentoring 'offer' and has been adopted by companies such as Airbus, GKN and Collins Aerospace. It has seen over 400 women sign up as mentors and mentees across the industry, with more than 100 since the start of the Covid-19 pandemic.</p>		
2. Underpinning research		
<p>This case study is underpinned by research led by Professor Susan Durbin and supported by Dr Ana Lopes and Stella Warren, between November 2014 and November 2015 at the University of the West of England (UWE). The research was funded by the ESRC Knowledge Exchange Fund (GBP64,861) (G1), with an additional contribution of GBP16,000 from UWE. The industry partners match funded this with a contribution of GBP80,000 through both financial and in-kind contributions.</p> <p>The research sought to address the persistent and chronic skills shortage, and under-representation of women in the industry. Women comprise just 4% of pilots and 10% of engineers and hold a paucity of leadership positions (R1, R2, R3). The underpinning research led to the design and launch of an on-line, industry-wide mentoring scheme for women. It included the development of algorithms to match female professional mentors and mentees in the industry via an on-line platform.</p> <p>Research was designed to identify current provision, levels of need, and to support the design of appropriate interventions. During 2015, a survey, interviews and focus groups with <i>circa</i> 250 professional women, employers and HR directors, were conducted across the industry. At this time, none of the founding partners (Airbus, the Royal Air Force and the Royal Aeronautical Society (RAeS) or industry employers, specifically provided mentoring support</p>		

for professional women. As a result, a mentoring scheme was designed, based upon women's and employers' expressed needs for mentoring support.

The research explored some of the frustrations, limitations and challenges women experienced in the industry whilst building their careers (R4, R5). This included a lack of access to mentors, especially female mentors, who could guide less experienced women through their career challenges, become a source of advice and support, and share experiences; especially women who had maintained their careers after having families (R6). Findings indicated that an industry-wide focus would be especially attractive to women, as this would enable them to connect with women outside of their own organisations. The research revealed that mentoring was not available to the majority of women and that there was a need for a women-only mentoring scheme. The research discovered that informal mentoring was more common but this tended to be *ad hoc*, more available to senior women, and not sufficient for structured career mentoring. Mentoring was seen as especially valuable to women because it could help with issues that specifically impact women, such as maternity leave and return to work, work-life balance and childcare issues. [Alta](#) was ultimately designed as an on-line mentoring platform which ensured that the mentoring scheme was as widely available as possible to women across the industry. This also sought to improve women's representation whilst addressing gender inequalities.

Designing the research in this way was a unique approach, fully supported by the founding partners, industry employers and the women we contacted across the industry. The persistent problem of the under-representation of women and the opportunity to develop a potential solution through working with academia, gave the project a sense of urgency. It also demonstrated that the women who represented the founding partners were personally committed to increasing gender equality in their organisations.

The organisations themselves become involved, as there was a clear business case to recruit and retain more women in an industry with a chronic skills shortage. This was recognised as a shared industry problem that would entail a shared response (R1).

A key finding was the need to incorporate mentoring training into *alta*. This was considered to be vital, leading to the design and launch of a bespoke and distinctive training package. The data highlighted the importance of appropriately matching mentors and mentees. This led to a prolonged piece of work on the design of bespoke mentor and mentee matching questions, jointly produced by UWE researchers and the founding partners, and built in to the algorithm for matching. The research reflected the initial design of *alta* from the participant perspective (R1, R2).

3. References to the research

R1 Durbin, S., Lopes, A. and Warren, S. (2020) 'Challenging male dominance through the substantive representation of women: the case of an on-line women's mentoring platform,' *New Technology, Work and Employment*, 35, 3, 215-231. <https://doi.org/10.1111/ntwe.12166>

R2 Durbin, S., Lopes, A. and Warren, S. (2017) 'Will the head of engineering please stand up? The under-representation of women in engineering', in K. Broadbent, G. Healy and G. Strachan (eds.) *Gender and the Professions*. London: Routledge. Available on request.

<https://www.routledge.com/Gender-and-the-Professions-International-and-Contemporary-Perspectives/Broadbent-Strachan-Healy/p/book/9781138680579>

Impact case study (REF3)

R3 Durbin, S. (2015) *Women who succeed: strangers in paradise?* London: Palgrave Macmillan. Available on request. <https://uwe-repository.worktribe.com/output/802704>

R4 Tomlinson, J. and Durbin, S. (2010) 'Female part-time managers: work-life balance, aspirations and career mobility', *Equality, Diversity and Inclusion*, 29, 3, 255-270. <https://doi.org/10.1108/02610151011028859>

R5 Durbin, S. (2010) 'SET Women and Careers: a case study of senior female scientists in the UK', in A. Cater-Steel and E. Cater (eds.) *Women in Engineering, Science and Technology: education and career challenges*. IGI Global. <https://doi.org/10.4018/978-1-61520-657-5.ch011>

R6 Durbin, S and Tomlinson, J. (2014) 'Female part-time managers: careers, mentors and role models', *Gender, Work and Organization*, 21, 4, 308-320. <https://doi.org/10.1111/gwao.12038>

Evidence of the quality of the supporting research

G1 Durbin, S: *Building a Mentoring Scheme to Support Professional Women in Aviation and Aerospace*, ESRC, 2014-15, £64,864

4. Details of the impact

According to industry leaders, the alta mentoring scheme, derived from UWE research, has brought about significant change in aviation and aerospace industry practice. It is, '*the only industry-wide, women-to-women mentoring scheme of its kind, anywhere in the world*' (**S1**). Alta is bringing together competitor companies who have joined forces to offer otherwise scarce mentoring support to their female professionals through building a network that is industry wide and has become '*a significant influencer for culture change in the aviation industry*' (**S2**).

Impact on the industry, the professional body (RAeS) and employers

The professional body, the Royal Aeronautical Society (RAeS) represents corporations of all sizes across the industry. After witnessing a lack of progress over the past 20-30 years, and its role as a 'thought leader' in this area, in 2016 it committed GBP50,000 towards promoting gender diversity and brought alta in-house, embedding it into its careers service and web page publications (**S3**, **S4**). Alta represented the RAeS commitment to the Women in Aviation and Aerospace Charter for gender equality (**S5**). Prior to alta, there was no mentoring support available to RAeS female members or as part of its careers service (**S4**).

A number of high-profile employers have made financial contributions to support alta events (the RAeS, Airbus, Collins Aerospace, GKN, Boeing). There has been business collaboration, sharing of best practice and development of in-house support schemes for women professionals building on alta. Alta is becoming strategically significant within the industry and plays a key role in making the business case for gender diversity amongst aerospace organisations. Industry feedback indicates that it is:

'putting in place a mechanism that complements internal mentoring schemes, recruitment and retention processes and career progression opportunities' (**S1**).

One industry insider noted that for the first time a global study (2019's *Soaring Through the Glass Ceiling*) had been released which validates the data behind the need for women to be in leadership positions and also endorses the need for formal and informal mentoring (**S1**).

Airbus, one of the most significant employers in the industry, was involved in alta from the beginning (as a founding partner), helping to over-see its pilot phase. It promoted alta as a support platform via the Aerospace Growth Partnership (AGP), an advisory group backed by

industry and the government on aviation and aerospace (**S6**). The AGP identified alta as a key tool to maintaining and growing the industry's skills and capability.

Building on alta, the in-house Airbus Women's Network went from being a UK scheme to a global, multi-national company-wide initiative. Airbus sees alta at the forefront of organisational culture change:

'It has forced the industry to have a debate about why a women only mentoring scheme was needed in the first place with the topic no longer seen as taboo' (S6).

Impact on alta mentors and mentees

Alta has made a significant contribution in enabling professional women to access mentoring support that would otherwise not have been available to them. It has enabled women to support one another when such support for women in male dominated industries is scarce (**S7**). The on-line nature of alta has also enabled women to come together irrespective of location and has '*created a community of women in an industry of men*' (**S6**).

From the beginning, a growing critical mass of women became involved in the design of alta, emphasising its grounding in research and evidence base and its ability to address the expressed mentoring and support needs not previously available to women:

'It has given women a safe space to speak to other like-minded women who have had similar experiences and share concerns' (S7).

By the end of 2020, only 18 months after its official launch on International Women's Day 2019, 460 individual female mentors and mentees, from a range of organisations in the industry, had joined alta. The majority of mentors are executive/board members, senior managers, squadron leaders and middle managers, indicating high-level support from more experienced women in the industry. Alta is also seen as a means by which women could step forward and become mentors to women who most need their experience and support.

This membership is predicted to grow significantly and globally:

'The fact that the RAeS is an international membership organisation means women anywhere in the world can access alta, thereby giving it a global reach and also providing the potential for the replication of the model across the world' (S1).

Sixty women have joined as mentors, over 300 as mentees, with almost 100 joining as both, representing organisations from within the industry, both within and outside the UK (**S8**). The Civil Aviation Authority, Rolls Royce, Collins Aerospace, Babcock and Airbus UK are alta's five largest contributors. Other notable users of alta include: Ministry of Defence, BAE Systems, Safran Landings System, the RAF, Airbus China, Boeing UK, Eurowings, Gatwick Airport, Sydney Metro Airports, easyJet, Virgin Atlantic, Qatar Airways, Cathay Pacific and the Met Police (**S8**).

From the mentee perspective, alta has given women a 'voice' and the confidence to seek support from other women in their industry (**S3**). It is a vehicle to share experiences and mutual support and a platform for members to be vocal about the challenges they are facing, as well as being seen by organisations as a retention and recruitment tool. Alta's approach is based on the concept of 'empowerment', its aim being to raise women's levels of confidence and self-esteem. By enabling female professionals to share experiences, alta has sought to break down isolation and enable women to actively develop networks. As one mentee commented:

'my journey within the aerospace industry has been challenging. In this respect, alta has been invaluable and confidence boosting' (S9).

The majority of women also expressed a preference for a female mentor who could offer 'high value' mentoring that cannot be achieved through formal training. Another mentee commented on the significant value of:

'having the benefit of an independent female who may have trodden the path before you and can support you in negotiating the challenges and opportunities of professional life' (S10).

Alta and Covid-19

As a blended face-to-face/on-line mentoring platform, alta has become especially important in the current Covid-19 crisis. The scheme transcends organisational and geographical boundaries, making it widely accessible and of continuing and increased benefit to women in the industry (S11). The value of on-line mentoring has never been so vital, with mentors able to offer help to those women who may be feeling isolated (many women have been working from home, or have been furloughed or made redundant).

Since the onset of the pandemic in early 2020, over 100 new mentors/mentees have joined alta:

'The online support, help with imaginative thinking around career choices and options and harnessing the power of the network has played a crucial role in supporting women in the industry during the pandemic' (S2).

One industry expert and alta mentor, with over thirty years' experience in securing large scale aerospace funding, and a current advisor to local and national government agencies, concluded that:

'after years of well-intentioned but limited impact initiatives, the aerospace and aviation community is embracing gender equality initiatives, within a broader drive to improve diversity and inclusion. Alta is, without doubt, an instrumental aspect of this journey' (S1).

5. Sources to corroborate the impact

- S1** Testimonial from founder of Yew Research & Consultancy and aerospace specialist
- S2** Testimonial from alta Founding Partner, CEO, Little Blue Private Jets and former Chair of the Royal Aeronautical Society's Women in Aviation and Aerospace Committee
- S3** [alta mentoring platform for women](#): update from the Women in Aviation and Aerospace Charter
- S4** [alta mentoring platform for women in aerospace and aviation launched to help reduce gender inequality in the industry](#): update from the RAeS careers service
- S5** [Getting the Balance Right](#): Katherine Bennett, Airbus, on the Women in Aviation and Aerospace Charter progress
- S6** Testimonial from Airbus Operations Limited
- S7** Testimonial from the Head of Careers, Royal Aeronautical Society
- S8** Email from Head of Careers, Royal Aeronautical Society, 15th February 2021
- S9** Testimonial from an Avionics Safety Consultant, Atkins
- S10** Testimonial from the UK Head of Category-Metal Procurement, BAE Systems
- S11** [alta: free mentoring available for women in the aerospace and Aviation Industry](#): ADS Group (industry trade body) communication to members