



Review of the Head of the Supervisory Board and the Academic
Advisory Board

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Executive Summary

This document represents the personal reflections of Professor Manus Hayne, Lancaster University, of the formal and informal aspects of the training that was delivered to the Early-Stage Researchers (ESRs) during their 36-month doctoral programmes within QUANTIMONY, and some comments on their collective career prospects. It is intended to supplement, D2.6, which is a more formal report on the training activities undertaken within the project.

I. Training Through Research

MSCA doctoral training networks are, quite rightly, expected to deliver a coherent suite of training activities to maximise ESRs' opportunities to develop a range of skills and elevate their employability. However, the bottom line is that all ESRs are enrolled on doctoral degree programmes at leading European universities. Undertaking original research and graduating with a doctorate must therefore be the primary outcomes, although the latter not necessarily within the 36-month period of their contracts. As a consequence, training through research should be central to the ESRs' activities, and should be facilitated, supported and enhanced by the network, not somehow in competition.

As Head of the Supervisory Board (SB) and Academic Advisory Board (AAB) I felt that it was vitally important to never lose sight of this, and that the ESR training activities and review processes were there to support the ESRs and enhance their experience, not as ends in themselves. Throughout the project, the Coordinator, the Network Coordination Office, the AAB and all supervisory teams were fully supportive of this approach, and this contributed substantially to the success of the network. All ESRs, including those recruited by industrial beneficiaries, were placed in excellent and supportive research environments. Nevertheless, despite this, it was the case that one of the original ESRs (ESR2) withdrew as a result of particular circumstances, and a decision to seek a different career path. I was involved throughout that process, and can confirm that the consortium strove to take whatever action was necessary to support them, within its contractual obligations to the European Commission.

It was a great joy to see the intense level of research cooperation and collaboration across the consortium, much of it beyond and in addition to the more structured elements of the formal training programme, such as the secondments, with interactions often instigated by the ESRs themselves. There have already been eleven joint publications between consortium members (see D2.7 for details) and many more are expected in the near future as work is written up.

II. Supervisory Team and Review Structure

The multilevel supervisory structure for ESRs in the consortium is shown in Figure 1. The core supervisory body comprised the main local supervisor; a local assistant supervisor, providing local (in-person) help and support and ensuring compatibility of the QUANTIMONY supervisory structure with those of participating organisations; and an international supervisor to highlight the international

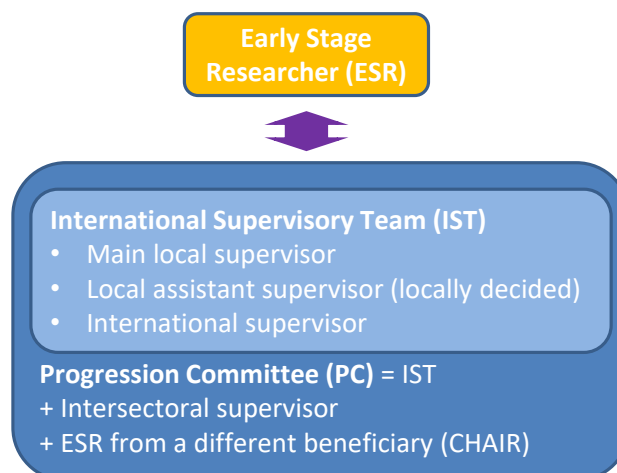


Figure 1- ESR supervision structure

dimension and spread best practice. The review process is described in detail in Section II of D2.6, with Progression Committee (PC) reviews occurring approximately every six months (five in total). The PC was enhanced by the addition of an intersectoral supervisor, to highlight the importance of that dimension of the consortium to all participants, and ESRs in particular. This structure maximised the diversity of the PC, helped to avoid sectoral or disciplinary (WP) silos within the consortium, provided opportunities for collaboration, spread best practice and ensured that ESRs had input and advice from a much wider range of voices than is typical for doctoral students. A very successful innovation was to appoint ESRs from a different beneficiary to chair each PC, amplifying the benefits further: it is unusual for doctoral students to get such an insight into the supervision of their peers, outside of their immediate research group. This formed an important part of their development as future managers/supervisors of others in their own right.

At the end of Year 1 and Year 2, a second level of review of each ESRs progress was taken by the AAB, made up of the technical work package leaders and chaired by myself, as the Head of the SB. As the ESR was not present, the approach was quite different and complimented the PC reviews, with the AAB able to have a frank discussion about each ESR's progress and identify any potential issues or pitfalls. Whilst the main supervisor was not necessarily present, due to the diversity of the PC structure at least one PC member usually was. The discussion was further guided by ESRs PCDPs (see section III of D2.6) and presentations at the Transferable Skills Training and AAB meeting events held prior to the AAB review. Short comments on each ESR and their supervision were returned to each main local supervisor only, *i.e.* in confidence.

My personal reflection is that the combination of these two very different, but fully complimentary, review processes provided a high-quality system which, while actively supporting ESRs in an open, inclusive and diverse way that helped to spread best practice, also had a robust mechanism to ensure checks and balances. Unfortunately, during my career, I have seen multiple instances of issues between supervisor and student that have festered too long due to the close and often obscured nature of the relationship between student and supervisor in traditional models of PhD supervision. Our approach to ESR supervision and its review was further underpinned by the comprehensive nature of the PCDPs, which built up a record of each ESRs activities and their (potentially changing) career aspirations, helping to guide them, their supervisory teams and the individual training received.

III. Training Programme

The training activities are described in considerable detail in Section IV of D2.6, so do not need to be reproduced here. It is evident from that report that the QUANTIMONY training programme was excellent. It had a comprehensive mix of lectures and talks from academic and industry experts covering all of the technical WPs, hands-on lab training and transferrable skills development, organised into four topical and one final workshops, two transferrable skills events (also with external scientific talks), two industry days, a summer school, a winter school and a final open school. Each of those events was held in a different location across Europe, except for the two transferrable skills events in Lancaster, exposing the ESRs to different regions, cultures and languages.

IV. Career Prospects

Since almost all ESRs have been offered the opportunity to remain at the host institution for at least a short period beyond the end of their 36-month contracts it is too early to report on the actual impact

of QUANTIMONY on their careers, but the prospects are excellent. It is known that to be recruited into a MSCA-ITN is a prestigious start to a career, ITN awards and ESR recruitment both being highly competitive processes. This is enhanced by the international mobility requirement of the scheme, and the excellent training that the ESRs have benefitted from. They have been given direct exposure to a range of academic and industrial environments, not only via the intersectoral makeup of the wider consortium, but via invited talks and hands-on training delivered by external academic and industrial organisations. The career prospects of QUANTIMONY ESRs are excellent.

In closing, and directly related to career prospects, it is worth noting the QUANTIMONY proposal stated that, *“Our training goal is to prepare a cohort of researchers for the upcoming transition of III-Sb materials from their current high-performance, high-cost application niches, towards scalable and industrially relevant technologies.”* As a direct result of QUANTIMONY, and assisted by subsequent national funding, IQE is presently intensively developing a new capability for large-scale industrial growth of III-Sb materials, a clear indication that transition is indeed underway, and providing excellent future prospects for our ESRs.