



BEHAVIOUR DETECTION STUDY GROUP STRATEGY AND IMPLEMENTATION PLAN FOR PERIOD 2021-2025

Introduction

1. In 2011, the European Civil Aviation Conference established the Behaviour Detection Study Group (BDSG) (formerly the Study Group on Behaviour Detection in Aviation Security). Its aim was to facilitate the exchange of programmatic information, validation results, and best practice among states with active anomalous behaviour detection (BD) programmes operating within civil aviation environments.
2. While applied methodologies, practices, and processes still vary within each state's programme, all share similar characteristics as an optimised, flexible, tool that has been integrated into its current aviation security regime.
3. As the largest forum for states with active operations, the BDSG continues to be uniquely positioned to optimise BD approaches, and advise policymakers on innovative BD developments with potential application to the wider aviation security environment and beyond. Furthermore, the BDSG serves as a platform for scientific cooperation between experts, as well as a space for active states to harmonise policies.
4. Through collaboration, the BDSG has successfully produced common materials and tools intended to influence international dialogue on BD techniques and improve existing national capabilities.
5. The ECAC Behaviour Detection Model Programme (BDMP), and relevant Research and Development (R&D) initiatives conducted by BDSG members, continue to contribute to a more successful implementation of these techniques at airports around the world. The BDSG has produced guidance material on the use of BD that offers numerous deployment options within a range of environments including landside, airside, and security checkpoints. Moreover, BD can be retooled for different purposes such as enhancing patrolling and surveillance operations, improving security culture, and reducing insider risk vulnerabilities.
6. The value of BD, within aviation security environments, is now fully acknowledged by ICAO in Annex 17 of the Chicago Convention¹. Further, the need for continued investment in the research, and use, of BD by the BDSG is underscored by: the ongoing threat landscape; the EU regulation² for identifying suspicious behaviour; the forthcoming EU regulation³ in respect of the insider threat and security culture; and, the interest of several (non)-ECAC Member States to use BD within their airport environment.

¹ ICAO Annex 17 definition: *Behaviour detection: within an aviation security environment, the application of techniques involving the recognition of behavioural characteristics, including but not limited to physiological or gestural signs indicative of anomalous behaviour, to identify persons who may pose a threat to civil aviation.*

² Regulation EC 300/2008, 1.5 There shall be surveillance, patrols and other physical controls at airports and, where appropriate, in adjacent areas with public access, in order to identify suspicious behaviour of persons, to identify vulnerabilities which could be exploited to carry out an act of unlawful interference and to deter persons from committing such acts.

³ Regulation EC 2019/103, 11.1.11 In order to address the insider threat, and notwithstanding the respective staff training contents and competences listed in paragraph 11.2, the security programme of operators and entities referred to in Articles 12, 13 and 14 of Regulation (EC) No 300/2008 shall include an appropriate internal policy and related measures enhancing staff awareness and promoting security culture.

7. The work of the Group continues to provide the opportunity for robust exchange and collaboration. However, given the overall industry shift towards a more risk-based approach to screening, and taking into account other relevant developments (e.g. the impact of COVID-19), the BDSG has refocused its strategy in order to maintain its momentum and guide future collaboration.

8. As an aside, when reviewing its previous strategy and Implementation Plan (2016 - 2020), the BDSG considered a number of lessons learned which it was keen to incorporate into its future activity. These matters, together with the conclusions reached, are set out below. It is hoped that these discussions, primarily in respect the group's governance and processes, will aid future members in their decision making, and planning, going forward.

9. This new strategy and Implementation Plan look to align itself to the BDSG's original mandate, setting out the proposed strategic activity for the period 2021-2025, whilst providing more granularity on individual projects and initiatives for Year 1 (2021).

Review of BDSG Mandate (Terms of Reference) and Primary Goals

10. It was agreed that the BDSG's activity needed to reflect the Group's Terms of Reference (ToRs). These were located within the 2015 version of ECAC's ToRs for the Security Programme Management Group (SPMG). That said, it was acknowledged that this mandate was now nine years old and, furthermore, the Group was also considering a new strategy and Implementation Plan for the forthcoming period.

11. As a result, the BDSG felt that this provided an opportunity to review its existing ToRs to consider whether they were still 'fit for purpose'. Notwithstanding changes to the security landscape and the impact of COVID-19, members felt that the original terms were sufficiently flexible to accommodate its proposed activity for 2021 - 2025. That said, the Group proposed a slightly amended ToRs to reflect some additional factors.

12. The Group also decided that the ToRs would need to be formally reviewed, and agreed, at least every four years (i.e. prior to drafting a new strategy and Implementation Plan) or sooner if exceptional circumstances arose.

13. With reference to its primary goals for the next four years, the BDSG agreed that the existing priorities were still 'fit for purpose' however required a slight amendment as follows:

- a) to facilitate the further incorporation and application of BD as a security technique within (inter) national policies and regulations;
- b) to optimise and improve BD through advancement of
 - (i) best practices; and,
 - (ii) cutting-edge research;
- c) to stimulate the use of BD programmes among civil aviation stakeholders worldwide; and,
- d) to ensure consistency between BD programmes within the ECAC Member States, partner States, and beyond.

Selection, Prioritisation, and Review of Projects and Initiatives

14. Having agreed the primary goals for the next four years, the BDSG then discussed the selection, and prioritisation, of projects and initiatives. In doing so, it was agreed that there needed to be a cogent rationale for its choices, however it was felt that there was currently no clear process to follow.

15. In addition to this, it was felt that the existing management, and review, process had become too complex to administer and, as a result, the Group was continually seeking last minute updates to meet formal deadlines.

16. Taking this into account, the BDSG agreed that it would adopt the following process:

- (i) **Selection** - this would be based upon projects and initiatives which were; (a) deemed to be 'standing agenda items' (e.g. mentoring, arranging networking events, continually reviewing the BDMP to ensure that it reflected the work undertaken); (b) any outstanding items from the previous IP/Work Plan; (c) projects/initiatives identified by the Research Gap Analysis; and, (d) any other project which the Group, as a whole, felt was worth considering.
- (ii) **Prioritisation** - this would be ultimately be a decision for the BDSG but would require adoption by the Security Programme Management Group. In reaching its conclusion, the Group would need to be satisfied that, *taking into account the available resources*, an activity was achievable within an agreed time limit and was, primarily, driven by a policy/operational need. Having said this, the Group agreed that, whilst the majority of its work would be based upon existing requirements and challenges, there would still be scope to undertake a degree of forward leaning research (the '75%:25% rule').
- (iii) **Review** - each project/initiative would require clear milestones which would be subject to a 'light touch' review at every meeting. At the end of the year, the entire programme would be subject to a formal review and each project/initiative (if programmed in for more than 12 months) would require a 'Go/No Go' decision based upon: continued resource availability; continued relevance; and, the likelihood of 'success'.

17. Finally, it was agreed that this process would need to be slick, and not over bureaucratic, due to the fact that the BDSG meets three times a year. It was also felt that this administrative function was a vital element to the group's success so one member would need to have this as a dedicated role.

Other Considerations

18. The BDSG acknowledged some of the ongoing legal challenges, within the European Union, in respect of, inter alia, discrimination, bias, and invasion of privacy. Although it was agreed that these should not, in themselves, curtail continued research in respect of BD, consideration of the current legal positions would need to be taken into account before embarking upon any project/initiative.

19. In addition to this, the BDSG acknowledged the severe impact of COVID-19 upon the aviation sector and accepted that it would probably be some time before the industry had made a complete recovery. With this in mind, it was agreed that the Group would need to consider how to support stakeholders in providing the same levels of security with fewer resources (i.e. sweating its assets).

20. Finally, it was felt that the BDSG needed to develop more effective links with other ECAC security groups to improve the sharing of knowledge and best practice and reduce the prospect of duplication.

Implementation Plan 2021 – 2025

21. Using the ToRs, primary goals, processes, and considerations set out above, the BDSG proposes the following workstreams for the next four years:

Project/Initiative	Owner	Milestones	Source
(a) Facilitate the further incorporation and application of BD as a security technique within (inter) national policies and regulations			
Review of BDMP	TBA	TBA	Standing Item
Develop On-line training methodology for BD	France/Romania	TBA	New Item
Promote the use of BD beyond the pure deployment of BDOs (e.g. raising awareness and improving security culture across the workforce)	TBA	TBA	New Item
(b) Optimise and improve BD through advancement of: (i) best practices; and, (ii) cutting-edge research			
Research best practices for red-teaming in the field of BD	Netherlands/Romania	TBA	From previous IP
Develop methodology for assessing effectiveness of BD	TBA	TBA	From previous IP
Research potential for deployment of countermeasures in respect of BD	Spain/Poland	TBA	New Item
Research Use of AI (ML) within BD	Poland	TBA	New Item
Research impact of unconscious bias in respect of BD	TBA	TBA	New Item
(c) To stimulate the use of BD programmes among civil aviation stakeholders worldwide			
Undertake Mentoring Activities (incl. coordinating work with CASE 2 Project)	All	TBA	Standing Item
Host BD Events and Biennial Workshops (COVID-19 Permitting)	All	TBA	Standing Item
(d) To align BD programmes within the ECAC Member States, partner States, and beyond			
Consider Options around Promoting BD as part of ICAO Year of Security Culture	TBA	TBA	New Item
Research existing BD Guidance from other entities (e.g. ICAO, ACI, AIRPOL, other CACs)	TBA	TBA	New Item
Organise event(s) to determine Synergies (COVID-19 permitting)	TBA	TBA	New Item

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