

| SMS Best Practice/Good Practice Submission | | | |
|--|--|----------------------|------------|
| State whether this is a Best or Good Practice: | | Good Practice | |
| ANSP | NAV Portugal | Date of submission | 2025-07-11 |
| Contact Details | | | |
| SoE Study Area | 4 – SMS Documentation; 6 – Safety Risk Management; 11 – Management of Change | | |
| BP/GP title | MARIA – Model of ATM Reality In Action | | |
| In use since | 2018 | | |
| ANSPs using this practice (for BP specifically) | NAV Portugal Limited use in BULATSA and HUNGAROCNTRAL | | |
| Key Words | Functional System, Model, Change management, Risk, Documentation, Impact, Interactions | | |
| <p>1. Brief description of the Safety Management practice (Good Practice) Model of ATM Reality In Action (MARIA) is a Knowledge-Based Safety and Impact Assessment Model. It is a tool developed by NAV Portugal to support the safety assessment of changes to the Air Traffic Management system.</p> <p>2. Justification for GP classification MARIA qualifies as a Good Practice (GP) because it maintains all features presented last year that were recognized as a Best Practice (BP):</p> <ul style="list-style-type: none"> • Provides a sound basis for safety analysis: By describing the entire ATM system and its interdependencies, MARIA facilitates the identification of potential risks associated with system changes. • Reduces the risk associated with implementing changes: The use of an explicit model avoids misunderstandings and gaps in the analysis of interdependencies, leading to safer implementations. • Makes assessments systematic and reproducible: MARIA's associated processes, developed by NAV Portugal, provide clear guidelines on what should be analyzed, ensuring complete and consistent assessments. • Increases the efficiency and clarity of documentation: The model facilitates the creation of clear and concise documentation, with graphical support, improving communication with the (NSA). • It is continuously evolving, as well as the associated processes. <p>3. Resources required for Practice Development</p> <ul style="list-style-type: none"> • The development of MARIA started in 2012, and the model is constantly evolving. • NAV reviewed (improved) its safety processes using the model. • More than 100 people have had the introductory training. • The development team involved interviews and observations with operational and technical staff. More than 50 people were involved in the interviews and validation activities. • There are no specific HW costs and the SW was developed in house. It already took more than 7000 p/h to develop the software. <p>4. Motivation for Practice Development MARIA was developed to:</p> <ul style="list-style-type: none"> • Meet European regulation: Ensure compliance with European regulation in the safety assessment of changes to the ATM system. • Reduce the risk associated with changes: Minimize the risks associated with implementing new functionalities or changes to the ATM system. • Improve the efficiency of the assessment process: Make the safety assessment process more systematic, efficient, and reproducible. <p>5. Impact of the Practice on Safety</p> <ul style="list-style-type: none"> • Reduced risk associated with changes. The use of the model allows for a more comprehensive analysis of system interdependencies, minimizing the risk of unsafe implementations. • Improved quality of safety assessments. The model provides clear and systematic guidelines for analysis, ensuring complete and consistent assessments. • Increased efficiency of the assessment process. Reduces the time and effort required to conduct safety assessments. • Improved communication with the NSA. Clear and concise documentation, based on the model, facilitates communication with the National Supervisory Authority. <p>The Model of ATM Reality In Action (MARIA) and the associated processes demonstrate themselves to be an effective tool to support safety management in the context of ATM system changes. The use of MARIA contributes to risk</p> | | | |

reduction, improves the quality of assessments, and increases the efficiency of the process. The extension to UTM, to that we initially foresaw to start using by the end of 2024, beginning of 2025, is still in this years horizon to be used to assess its impact on ATM.

For these reasons, we believe that MARIA qualifies as a Good Practice (GP) in Safety Management.

By submitting this document, your organisation is willing for the proposed Best or Good Practice to be shared with other ANSPs.

For Best Practices, this document should be sent together with the SoE in SMS questionnaire, to: soe_2025@eurocontrol.int **by 15th July, 2025 at the latest.**

Submissions for consideration as Good Practices may be sent by the above date. They may also be identified during the survey interview sessions with the assessment team, following which a Good Practice submission document will be requested.