

ANAC - TCCA Validation Improvement Roadmap

2022 – 2027



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AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL

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Original signed by:

Roberto José Silveira Honorato
Superintendent, Airworthiness Department

Original signed by:

Stacey Mason
Director, Standards

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Preamble:

This Validation Improvement Roadmap (Roadmap) was developed under the sponsorship of ANAC's Superintendent of Airworthiness and TCCA's Director Standards. This Roadmap outlines the goals and expectations of ANAC and TCCA in their intended governance of their bilateral relationship and their respective airworthiness procedures. It is also intended that this Roadmap implement the joint commitments by ANAC and TCCA to implement the CMT Collaboration Strategy described in the following section.

The first issue of this Roadmap was approved on 18 September 2018. ANAC and TCCA reviewed its implementation and updated the goals and expectations in this Issue 2 of the Roadmap approved on 24 October 2022

Introduction:

In May 2016, the Certification Management Team (CMT) comprising the Civil Aviation Authorities of Brazil (Agência Nacional de Aviação Civil - ANAC), Canada (TCCA), European Union (European Aviation Safety Agency - EASA) and, the United States of America (FAA), agreed to a Collaboration Strategy.

The CMT's vision in the Collaboration Strategy is to exercise active confidence building initiatives among the Partners (ANAC, EASA, FAA, and TCCA) so as to enable maximum reliance on the Certifying Authority (CA) to the greatest extent practicable, allowing in the future for the reduction or elimination of technical involvement by the Validating Authority (VA) in validating aeronautical products and articles.

The Collaboration Strategy established the CMT's strategic objectives as divided in four strategic focus areas, namely:

- Partnership Leveraging;
- Continued Confidence Building;
- Global Leadership; and
- Certification Policy Alignment.

The CMT Partners agreed to include the CMT vision and strategic objectives in their respective roadmaps and Implementation Procedures.

Roadmap Vision and Objective

The ANAC and TCCA Roadmap vision is to optimize their respective validation procedures by increasing acceptance of the Certifying Authority (CA) approvals and findings of compliance, involving minimal or no further technical review by the Validating Authority (VA), thereby maximizing reliance on the CA to the greatest extent practicable.

ANAC and TCCA recognize that while the ultimate objective under the risk-based approach to validation is to achieve full acceptance by the VA, with reduced or no further technical review or additional issuance of validation approvals, there remain challenges within their respective organizations and regulatory frameworks. Therefore, both Authorities are committed to functionally applying this approach and taking progressive steps to reduce, if not eliminate, in-depth technical involvement by the VA based on level of risk.

This Roadmap aims to accomplish this by developing and applying risk-based validation principles that enable reduction of the level of technical involvement in validation. This will result in the optimization of ANAC and TCCA certification resource expenditures while assuring each other a high degree of safety and promotion of regulatory cooperation and harmonization between Brazil and Canada.

Roadmap Strategic Focus Areas

The Roadmap will apply a risk-based approach to reduce, if not eliminate, the VA level of involvement in validation activities to the greatest extent practicable. The risk-based approach seeks to achieve validation approvals in three categories:

1. **Acceptance of Certificates and Approvals:** This category involves acceptance of an approval in the system of one Authority as constituting a valid approval in the other Authority's system without any technical involvement or issuance of equivalent approval by the VA as the importing Authority.

For those design approvals or products that benefit from Acceptance, a mechanism should be in place to ensure maintenance of confidence in the acceptance. This mechanism should be based on general performance of CA's certification system and developed in coordination between ANAC and TCCA.

2. **Streamlined Validation of Certificates and Approvals:** An issuance of an approval in the system of one Authority leads to issuance by the VA of an equivalent approval without technical review.

For those design approvals of products and articles that benefit from Streamlined Validation, a mechanism should be in place to ensure maintenance of confidence in this approach. ANAC and TCCA shall coordinate the development of this oversight mechanism and support each other when conducting verification of the agreed mechanism.

3. **Technical Validation:** The level of involvement by the VA is established based on a set of risk-based criteria mutually agreed to between the ANAC and TCCA, rather than on a comprehensive review by the VA of compliance findings already made by the CA. The validation activity involves use of a work plan that incorporates active management oversight to ensure CMT principles and procedures are applied to maximize reliance on the CA's findings.

Design approvals or products that are not eligible under Acceptance or Streamlined Validation must go through a Technical Validation process and utilize a work plan. For an effective implementation of this process, there should be a maintenance of confidence mechanism in place to allow the VA to minimize their level of involvement based on the degree of confidence with the CA. As with Streamlined Validation, ANAC and TCCA shall also coordinate the development of this oversight mechanism and support each other when conducting verification of the agreed mechanism.

As the Authorities continuously strive to align their certification policies and conduct the maintenance of confidence mechanisms, it is the mutual desire of ANAC and TCCA that their

respective current validation procedures evolve from Technical Validation to Streamlined Validation to the greatest extent practicable, and where feasible to Acceptance.

Although this Roadmap intends to define progressive steps towards more acceptance and simplification of validation procedures, ANAC and TCCA currently don't have technical implementation procedures in place, therefore, no validation procedure are formally applied. To make this Roadmap's objectives feasible, ANAC and TCCA are committed to implement the initial issue of the Technical Agreement.

Since the approval of Issue 1 of this Roadmap, ANAC and TCCA have engaged in bilateral meetings to develop the initial issue of the Technical Arrangement and are on track to have a Technical Agreement signed by the end of Q2 2023. This Issue 2 of the Roadmap amends the timelines for the goals set at Issue taking into account the progress made in developing the initial issue of the Technical Arrangement, and sets additional goals to be implemented in the next 5 years following approval of the initial issue of the Technical Arrangement.

Table A below identifies the key focus areas and associated initiatives that will be addressed in the initial issue of the proposed Technical Implementation Procedures for Airworthiness (IPA) between ANAC and TCCA as well as goals to be implemented after the initial issue of the IPA.

Table A – ANAC - TCCA Roadmap Focus Areas

Focus Areas	Initiative Description	Timeline	Desired Outcome
Validation Principles	Implement validation principles on airworthiness procedures based on TCCA Validation White Paper (CMT) by introducing the following validation streams <ul style="list-style-type: none"> • Acceptance • Streamlined Validation • Technical Validation 	IPA Issue 1 (Q2 2023)	Optimize reliance on CA determination of compliance and approvals when conducting validation. Implement risk-based principles that allow partnership to evolve as further confidence is gained.
Acceptance of Design and Other Approvals	Acceptance of OTP/CAN-TSO design approvals, including design changes	IPA Issue 1 (Q2 2023)	An approval under the system of one Authority constitutes a valid approval under the other Authority's system with no technical review nor issuance of approval by the VA. All TSOs by the CA are accepted by the VA.
	Acceptance of repair design approvals	IPA Issue 1 (Q2 2023)	An approval under the system of one Authority constitutes a valid approval under the other Authority's system with no technical review nor issuance of approval by the VA. Repair design approvals are accepted on all products, regardless of SoD.

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	Acceptance of replacement parts	IPA Issue 1 (Q2 2023)	An approval under the system of one Authority constitutes a valid approval under the other Authority's system with no technical review nor issuance of approval by the VA.
	Acceptance of all minor design changes	IPA Issue 1 (Q2 2023)	An approval under the system of one Authority constitutes a valid approval under the other Authority's system with no technical review nor issuance of approval by the VA.
Streamlined Validation of Design and Other Approvals (No VA technical review))	Define and implement criteria for Streamlined Validation of design changes for all validated products (STC, amended TC, and other CA approvals)	IPA Issue 1 (Q2 2023)	Increase the number of design changes that can be accepted by the VA with no technical review and, therefore, are accepted with no further showing. Introduce the Basic and Non-Basic criteria in validation procedures on a continuing basis.
	Define and implement criteria for Streamlined Validation of product design approvals (TC approvals)	IPA Issue 2 (no later than 2027)	Establish criteria for product design approvals that can be accepted by the VA with no technical review and, therefore, are accepted with no further showing.
Technical Validation of Design Approvals (Use of Workplan)	Define and harmonize risk-based validation criteria for products that are not eligible for Acceptance and Streamlined Validation	IPA Issue 1 (Q2 2023)	Common set of risk-based validation criteria that establishes levels of involvement that is equitable, but at the same time allows the VA to fulfil its inherent responsibility for familiarity with imported type designs.
	Develop harmonized policy on the implementation of a common validation work plan, applying risk-based criteria to show VA level of technical involvement.	IPA Issue 1 (Q2 2023)	The level of technical involvement by the VA is determined by a set of common risk-based criteria rather than by a comprehensive review of compliance findings made by the CA.

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Continuing Airworthiness	Develop procedures for the acceptance by the VA of airworthiness directives issued by the CA for their SoD products	IPA Issue 1 (Q2 2023)	<p>An airworthiness directive issued by the CA for their SoD products is automatically applicable to the VA fleet without the need for the VA to issue a corresponding document, except where there is disagreement on the AD action.</p> <p>Notes</p> <p>1) For TCCA, foreign SoD airworthiness directives are automatically applicable per CAR 605.84.</p> <p>2) For ANAC, foreign SoD airworthiness directives are automatically applicable per RBAC 39.5-1.</p>
	Develop procedures for the acceptance by the VA of alternative means compliance (AMOC) granted by the CA to a design approval holder on their SoD products.	IPA Issue 1 (Q2 2023)	<p>An AMOC granted by the SoD to their design approval holder is automatically accepted by the other Authority, except where there is disagreement on the AMOC.</p> <p>Note: TCCA and ANAC already have this procedure in place.</p>
Regulatory Cooperation and Harmonization	Streamlined operational validation process by optimizing reliance on the CA system (MMEL).	IPA Issue 1 (Q2 2023)	Enhance the harmonization of technical standards and policies to further streamline the acceptance of approvals and determinations of compliance with the ultimate goal of CA certification basis being acceptable to the VA with no additional technical conditions.
	Acceptance of Maintenance Review/Type Board Report.	IPA Issue 2 (no later than 2027)	An approval under the system of one Authority constitutes a valid approval under the other Authority's system with no technical involvement nor issuance by the VA.
	Operational Evaluation	IPA Issue 2 (no later than 2027)	An approval under the system of one Authority constitutes a valid approval under the other Authority's system with no technical involvement nor issuance by the VA.

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Training	ANAC-TCCA jointly develop and deliver TIP training and refresher courses.	IPA Issue 1 (Q2 2023)	Joint training on the implementation of the IPA is conducted setting common expectations across the technical community. This will further promote and enhance acceptance of approvals.
Obligations of Design Approval Holders	Fulfilling foreign Design Approval Holders responsibilities through the SoD under RBAC 21/CAR 521 regulations	IPA Issue 1 (Q2 2023)	VA will rely on CA oversight system to ensure compliance with holder obligations of both CA and VA where the regulations are the same. <u>Info:</u> Foreign DAHs holding validation approvals have holder obligations under the VA regulations.
Production and Surveillance Activities	Acceptance of products or articles produced in Brazil or Canada	IPA Issue 2 (no later than 2027)	Establishment of procedures regarding production aspects and surveillance over Production Approval Holders.
Export Airworthiness	Acceptance of Export Certificates of Airworthiness issued by ANAC or TCCA	IPA Issue 2 (no later than 2027)	Develop procedures for export of civil aeronautical products and articles, identifying responsibilities and required documents.

Recognition of Non-Certificated Products	Light Sport Category Aircraft (LSA)	IPA Issue 2 (no later than 2027)	An approval under the system of one Authority constitutes a valid approval under the other Authority's system with no technical involvement nor issuance by the VA.
	Remotely Piloted Aircraft System (RPAS)	IPA Issue 2 (no later than 2027)	An approval under the system of one Authority constitutes a valid approval under the other Authority's system with no technical involvement nor issuance by the VA.
Maintenance of Confidence	Develop detailed procedures for ensuring the Authorities remain capable of carrying out the obligations established on the IPA, based on previous validation projects and considering the resources available to this process.	IPA Issue 2 (no later than 2027)	Establishment of detailed procedures for Maintenance of Confidence.