ICAO Guide: Collection of Best Practices For Acquisition of Machine Readable Travel Documents Goods and Services

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ICAO TRIP IRAN SEMINAR – Kish Island

ICAO Implementation and Capacity Building Working Group

We help States to implement new ICAO TRIP right.

- Established in May 2008, chaired by David Philp, NZ
- Our targeted outcomes for 2014-2016 are:
  - Documents can be easily used and validated
  - Travellers are effectively linked to secure document that presents a credible and authentic identity; and
  - Investments in MRTD-related technologies balances security with facilitation and drives value

So many points to watch planning an MRTD project!

PKI & PKD?

Secure processes?

RFID chip?

Building security?

Doc 9303 compliance?

Quality assurance?

Project – mgmt?

Our Mandate:

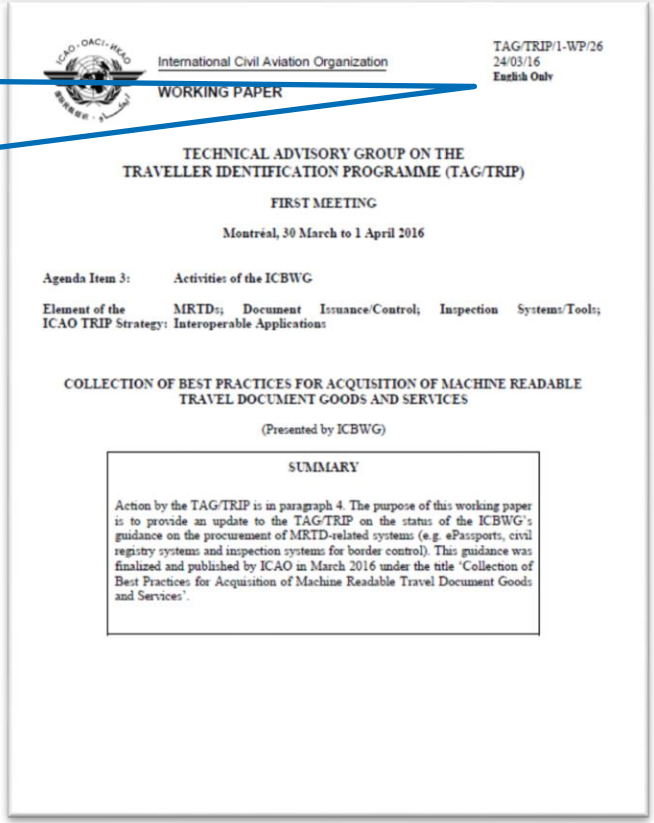
TAG20, WP22 endorsed initiatives to promote good practice in procurement of MRTD related systems.

Finally endorsed by TAG/TRIP1 on 24 March 2016 and approved by ICAO Secretariat to be published on ICAO Website

Documents

Enrolment & Issuance systems

Border Control



International Civil Aviation Organization

WORKING PAPER

TAG/TRIP/1-WP/26
24/03/16
English Only

TECHNICAL ADVISORY GROUP ON THE TRAVELLER IDENTIFICATION PROGRAMME (TAG/TRIP)

FIRST MEETING

Montréal, 30 March to 1 April 2016

Agenda Item 3: Activities of the ICBWG

Element of the ICAO TRIP Strategy: MRTDs; Document Issuance/Control; Inspection Systems/Tools; Interoperable Applications

COLLECTION OF BEST PRACTICES FOR ACQUISITION OF MACHINE READABLE TRAVEL DOCUMENT GOODS AND SERVICES

(Presented by ICBWG)

SUMMARY

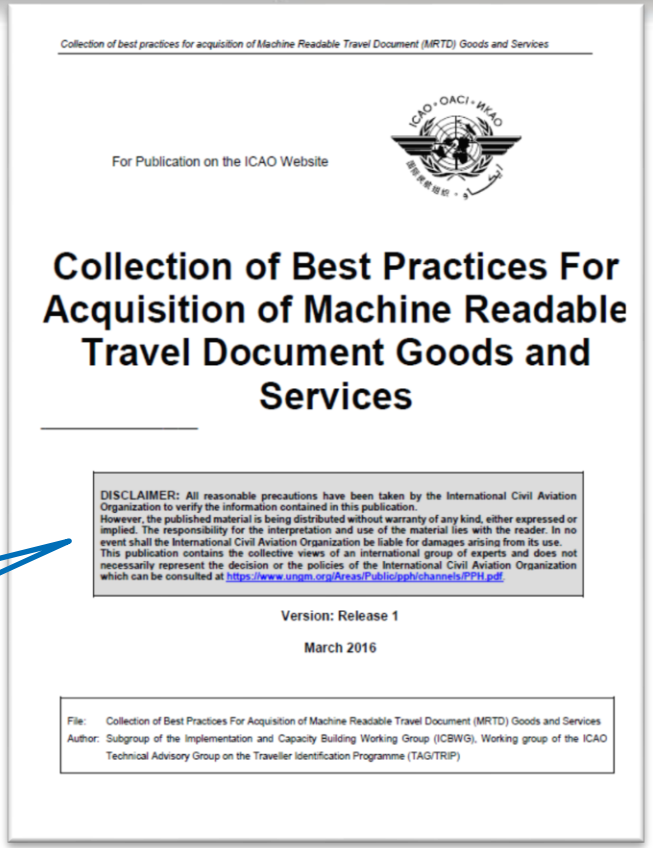
Action by the TAG/TRIP is in paragraph 4. The purpose of this working paper is to provide an update to the TAG/TRIP on the status of the ICBWG's guidance on the procurement of MRTD-related systems (e.g. ePassports, civil registry systems and inspection systems for border control). This guidance was finalized and published by ICAO in March 2016 under the title 'Collection of Best Practices for Acquisition of Machine Readable Travel Document Goods and Services'.

Our Sub-Group:

- Janet Curran, Australia
- Tony Dean, ISO UK
- Markus Hartmann, ISO Germany, (Chair)
- Fons Knopjes, The Netherlands
- Neo Corneliah Lepang, Botswana
- Dwight MacManus, ISO Canada
- William F. Seaman, USA

Disclaimer:

- This publication contains the collective views of an international group of experts and does not necessarily represent the decisions or the policies of the ICAO



Collection of best practices for acquisition of Machine Readable Travel Document (MRTD) Goods and Services

For Publication on the ICAO Website

Collection of Best Practices For Acquisition of Machine Readable Travel Document Goods and Services

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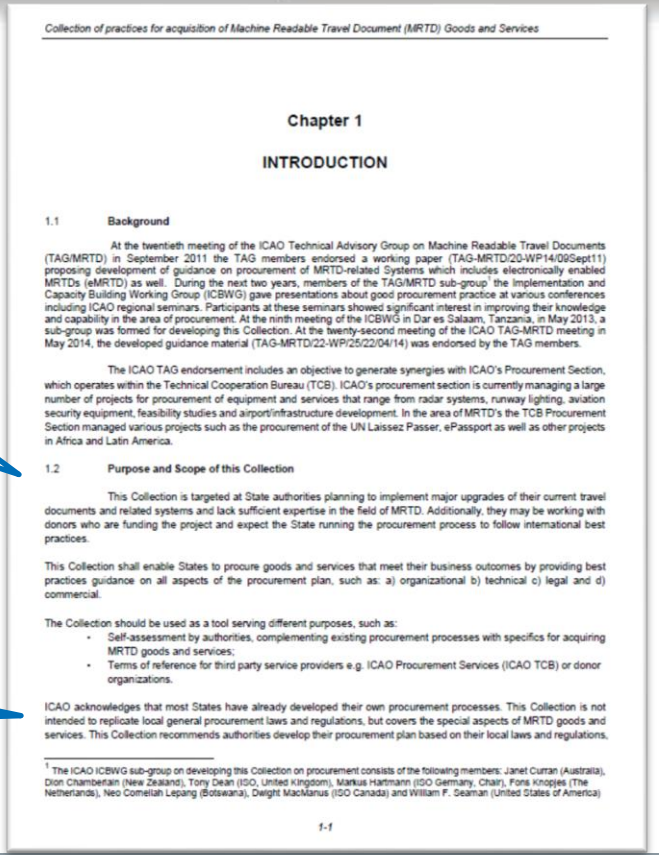
Author: Subgroup of the Implementation and Capacity Building Working Group (ICBWG), Working group of the ICAO Technical Advisory Group on the Traveller Identification Programme (TAG/TRIP)

Purpose of the Guide:

- Self-Assessment Tool for States planning procurement
- Reference paper for donors, supporting States in need
- Identify synergies with ICAO Procurement Section, Technical Cooperation Bureau (TCB)

We have NO intention to:

- Provide technical specifications
- Provide legal contracts
- Making reference to vendors or products



Collection of practices for acquisition of Machine Readable Travel Document (MRTD) Goods and Services

Chapter 1

INTRODUCTION

1.1 **Background**

At the twentieth meeting of the ICAO Technical Advisory Group on Machine Readable Travel Documents (TAG/MRTD) in September 2011 the TAG members endorsed a working paper (TAG-MRTD/20-WP14/09Sept11) proposing development of guidance on procurement of MRTD-related Systems which includes electronically enabled MRTDs (eMRTD) as well. During the next two years, members of the TAG/MRTD sub-group[1] the Implementation and Capacity Building Working Group (ICBWG) gave presentations about good procurement practice at various conferences including ICAO regional seminars. Participants at these seminars showed significant interest in improving their knowledge and capability in the area of procurement. At the ninth meeting of the ICBWG in Dar es Salaam, Tanzania, in May 2013, a sub-group was formed for developing this Collection. At the twenty-second meeting of the ICAO TAG-MRTD meeting in May 2014, the developed guidance material (TAG-MRTD/22-WP/25/22/04/14) was endorsed by the TAG members.

The ICAO TAG endorsement includes an objective to generate synergies with ICAO's Procurement Section, which operates within the Technical Cooperation Bureau (TCB). ICAO's procurement section is currently managing a large number of projects for procurement of equipment and services that range from radar systems, runway lighting, aviation security equipment, feasibility studies and airport/infrastructure development. In the area of MRTD's the TCB Procurement Section managed various projects such as the procurement of the UN Laissez Passer, ePassport as well as other projects in Africa and Latin America.

1.2 **Purpose and Scope of this Collection**

This Collection is targeted at State authorities planning to implement major upgrades of their current travel documents and related systems and lack sufficient expertise in the field of MRTD. Additionally, they may be working with donors who are funding the project and expect the State running the procurement process to follow international best practices.

This Collection shall enable States to procure goods and services that meet their business outcomes by providing best practices guidance on all aspects of the procurement plan, such as: a) organizational b) technical c) legal and d) commercial.

The Collection should be used as a tool serving different purposes, such as:

- Self-assessment by authorities, complementing existing procurement processes with specifics for acquiring MRTD goods and services;
- Terms of reference for third party service providers e.g. ICAO Procurement Services (ICAO TCB) or donor organizations.

ICAO acknowledges that most States have already developed their own procurement processes. This Collection is not intended to replicate local general procurement laws and regulations, but covers the special aspects of MRTD goods and services. This Collection recommends authorities develop their procurement plan based on their local laws and regulations,

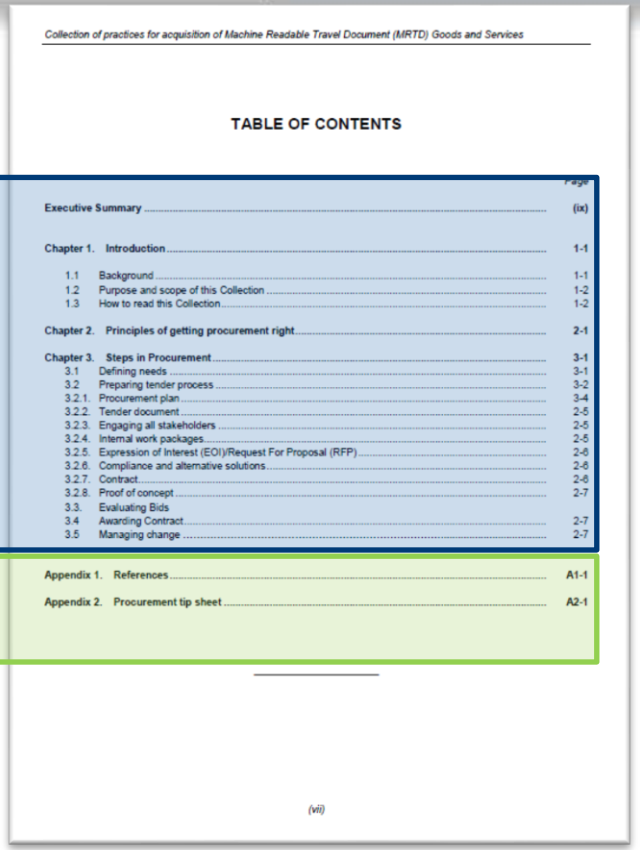
[1] The ICAO ICBWG sub-group on developing this Collection on procurement consists of the following members: Janet Curran (Australia), Dion Chamberlain (New Zealand), Tony Dean (ISO, United Kingdom), Markus Hartmann (ISO Germany, Chair), Fons Knopjes (The Netherlands), Neo Comellah Lepang (Botswana), Dwight MacManus (ISO Canada) and William F. Seaman (United States of America)

1-1

Structure of the Guide

Part 1: Outlines the steps of good procurement

Part 2: References to other guidance materials and “Procurement Tip Sheet”



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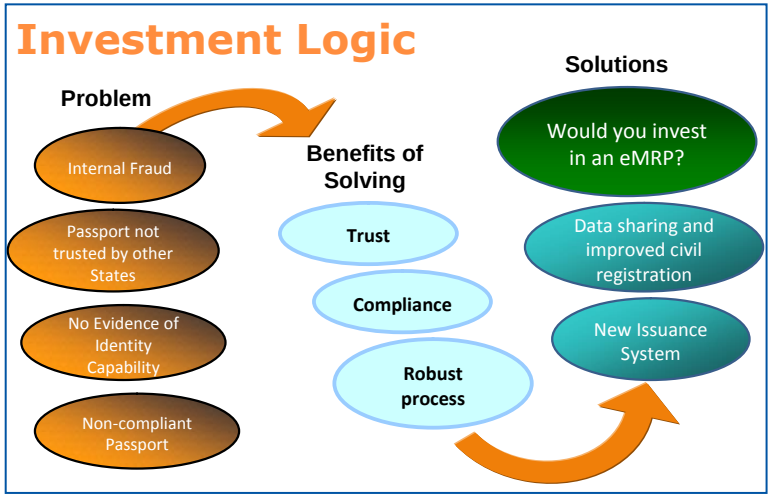
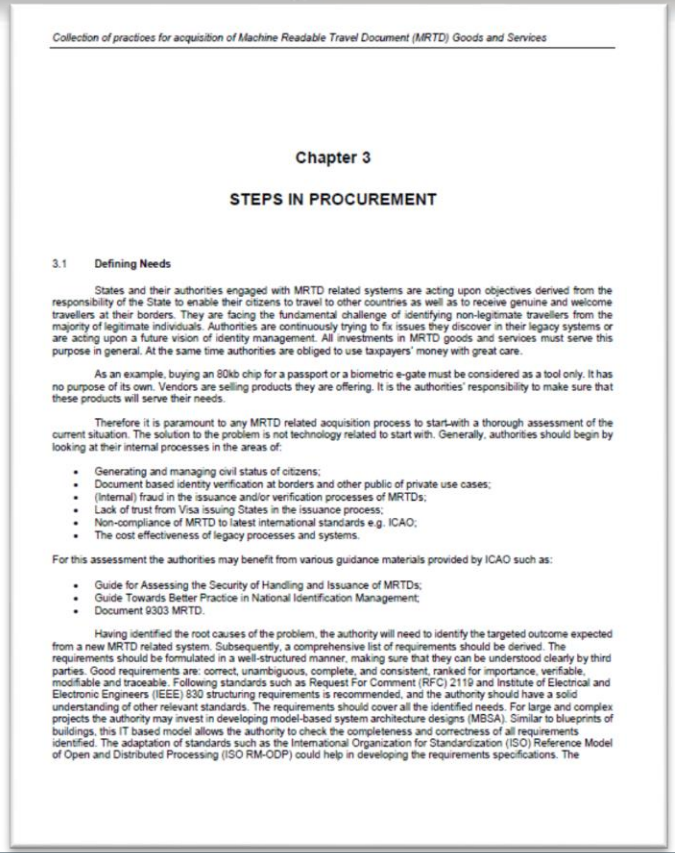
Step 1: Defining Needs

- Start with thorough self-assessment of current situation, asking the right questions, using other ICAO guidance materials





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Chapter 3

STEPS IN PROCUREMENT

3.1 **Defining Needs**

States and their authorities engaged with MRTD related systems are acting upon objectives derived from the responsibility of the State to enable their citizens to travel to other countries as well as to receive genuine and welcome travellers at their borders. They are facing the fundamental challenge of identifying non-legitimate travellers from the majority of legitimate individuals. Authorities are continuously trying to fix issues they discover in their legacy systems or are acting upon a future vision of identity management. All investments in MRTD goods and services must serve this purpose in general. At the same time authorities are obliged to use taxpayers' money with great care.

As an example, buying an 80kb chip for a passport or a biometric e-gate must be considered as a tool only. It has no purpose of its own. Vendors are selling products they are offering. It is the authorities' responsibility to make sure that these products will serve their needs.

Therefore it is paramount to any MRTD related acquisition process to start with a thorough assessment of the current situation. The solution to the problem is not technology related to start with. Generally, authorities should begin by looking at their internal processes in the areas of:

- Generating and managing civil status of citizens;
- Document based identity verification at borders and other public of private use cases;
- (Internal) fraud in the issuance and/or verification processes of MRTDs;
- Lack of trust from Visa issuing States in the issuance process;
- Non-compliance of MRTD to latest international standards e.g. ICAO;
- The cost effectiveness of legacy processes and systems.

For this assessment the authorities may benefit from various guidance materials provided by ICAO such as:

- Guide for Assessing the Security of Handling and Issuance of MRTDs;
- Guide Towards Better Practice in National Identification Management;
- Document 9303 MRTD.

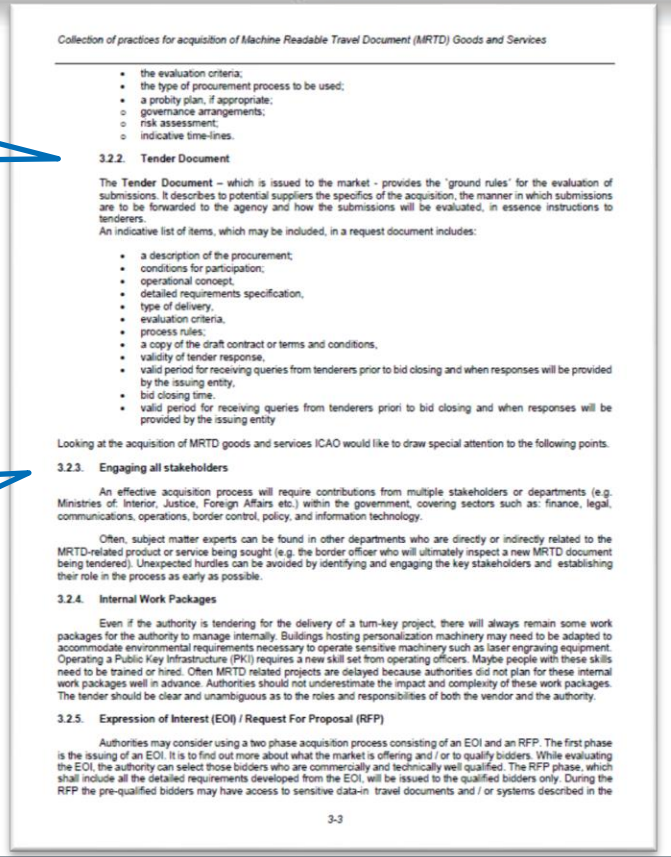
Having identified the root causes of the problem, the authority will need to identify the targeted outcome expected from a new MRTD related system. Subsequently, a comprehensive list of requirements should be derived. The requirements should be formulated in a well-structured manner, making sure that they can be understood clearly by third parties. Good requirements are: correct, unambiguous, complete, and consistent, ranked for importance, verifiable, modifiable and traceable. Following standards such as Request For Comment (RFC) 2119 and Institute of Electrical and Electronic Engineers (IEEE) 830 structuring requirements is recommended, and the authority should have a solid understanding of other relevant standards. The requirements should cover all the identified needs. For large and complex projects the authority may invest in developing model-based system architecture designs (MBSA). Similar to blueprints of buildings, this IT based model allows the authority to check the completeness and correctness of all requirements identified. The adaptation of standards such as the International Organization for Standardization (ISO) Reference Model of Open and Distributed Processing (ISO RM-ODP) could help in developing the requirements specifications. The

2. Step: Preparing Tender Process

- Procurement Plan,
  for internal project planning
- Tender Document,
  to be issued to the market

Drawing attention to MRTD related aspects:

- Engaging all stakeholders
- Internal Work Packages
- EOI/RFP
- Compliance and alternative solutions
- Contract
- Proof of Concept



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- the evaluation criteria;
- the type of procurement process to be used;
- a probity plan, if appropriate;
  - governance arrangements;
  - risk assessment;
  - indicative time-lines.

3.2.2. Tender Document

The **Tender Document** – which is issued to the market - provides the 'ground rules' for the evaluation of submissions. It describes to potential suppliers the specifics of the acquisition, the manner in which submissions are to be forwarded to the agency and how the submissions will be evaluated, in essence instructions to tenderers.
An indicative list of items, which may be included, in a request document includes:

- a description of the procurement;
- conditions for participation;
- operational concept,
- detailed requirements specification,
- type of delivery,
- evaluation criteria,
- process rules;
- a copy of the draft contract or terms and conditions,
- validity of tender response,
- valid period for receiving queries from tenderers prior to bid closing and when responses will be provided by the issuing entity,
- bid closing time.
- valid period for receiving queries from tenderers priori to bid closing and when responses will be provided by the issuing entity

Looking at the acquisition of MRTD goods and services ICAO would like to draw special attention to the following points.

3.2.3. Engaging all stakeholders

An effective acquisition process will require contributions from multiple stakeholders or departments (e.g. Ministries of: Interior, Justice, Foreign Affairs etc.) within the government, covering sectors such as: finance, legal, communications, operations, border control, policy, and information technology.

Often, subject matter experts can be found in other departments who are directly or indirectly related to the MRTD-related product or service being sought (e.g. the border officer who will ultimately inspect a new MRTD document being tendered). Unexpected hurdles can be avoided by identifying and engaging the key stakeholders and establishing their role in the process as early as possible.

3.2.4. Internal Work Packages

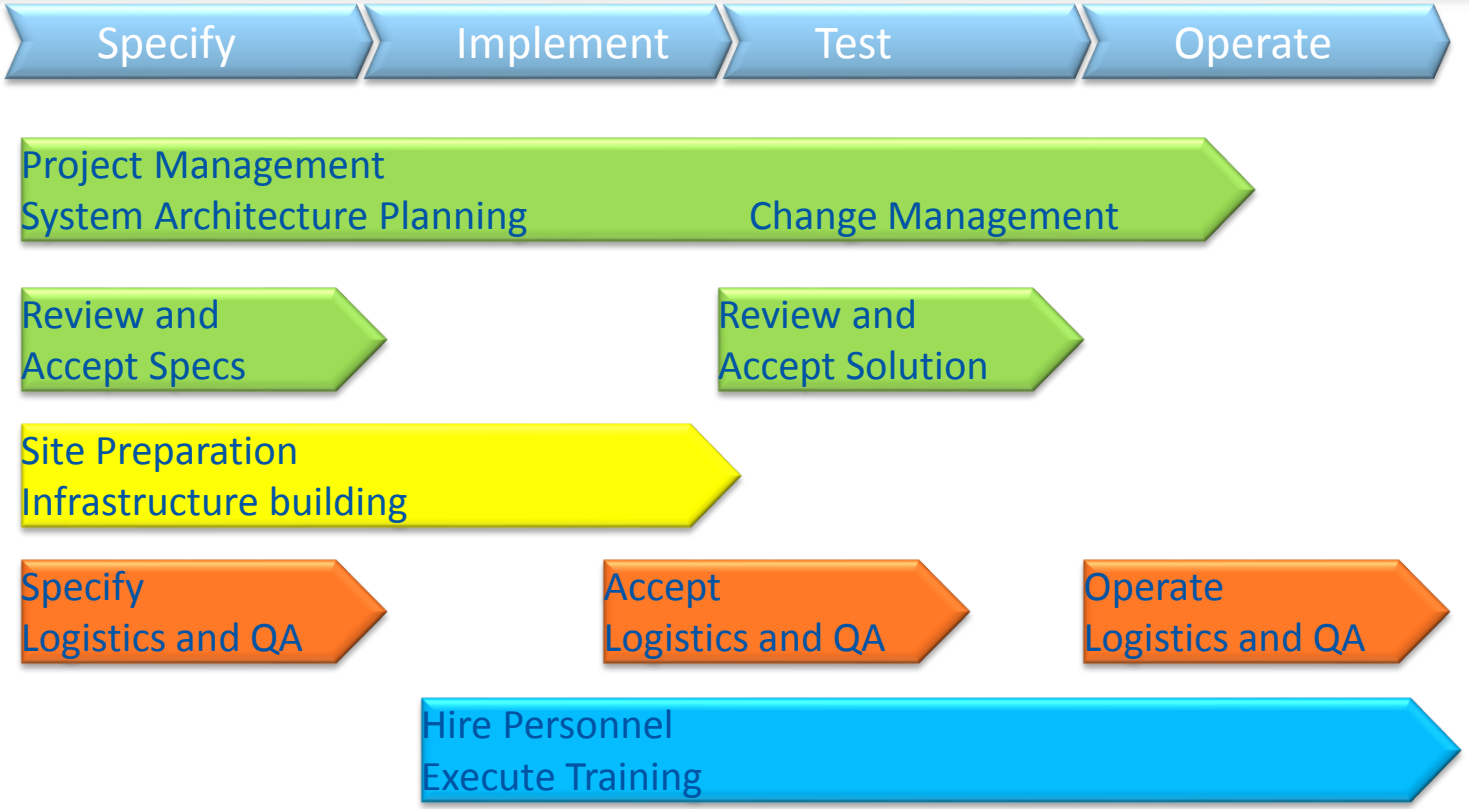
Even if the authority is tendering for the delivery of a turn-key project, there will always remain some work packages for the authority to manage internally. Buildings hosting personalization machinery may need to be adapted to accommodate environmental requirements necessary to operate sensitive machinery such as laser engraving equipment. Operating a Public Key Infrastructure (PKI) requires a new skill set from operating officers. Maybe people with these skills need to be trained or hired. Often MRTD related projects are delayed because authorities did not plan for these internal work packages well in advance. Authorities should not underestimate the impact and complexity of these work packages. The tender should be clear and unambiguous as to the roles and responsibilities of both the vendor and the authority.

3.2.5. Expression of Interest (EOI) / Request For Proposal (RFP)

Authorities may consider using a two phase acquisition process consisting of an EOI and an RFP. The first phase is the issuing of an EOI. It is to find out more about what the market is offering and / or to qualify bidders. While evaluating the EOI, the authority can select those bidders who are commercially and technically well qualified. The RFP phase, which shall include all the detailed requirements developed from the EOI, will be issued to the qualified bidders only. During the RFP the pre-qualified bidders may have access to sensitive data-in travel documents and / or systems described in the

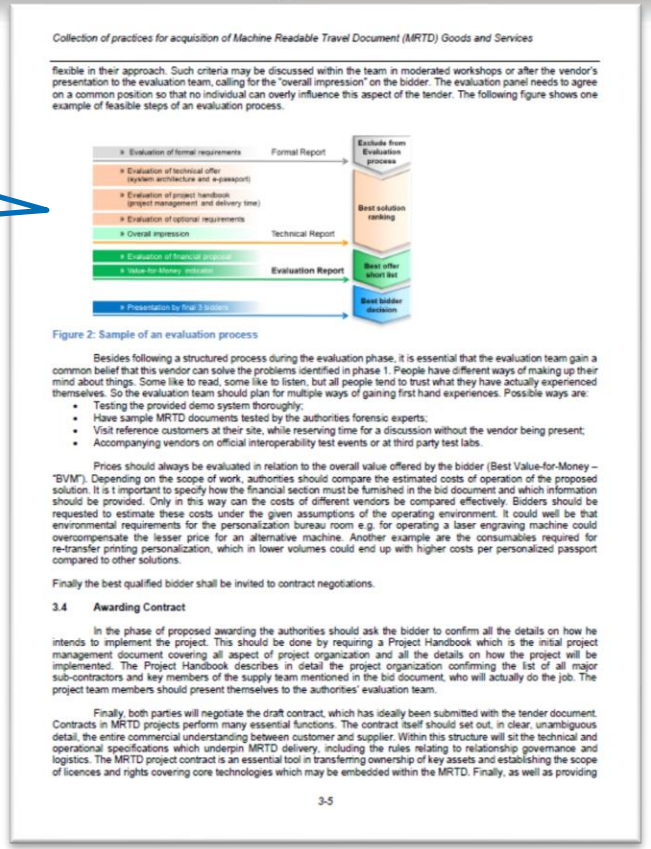
3-3

Points to watch: Internal Work Packages



3. Step: Evaluating Bids

- By multidisciplinary team, balanced in terms of hierarchy and ranks
- Types of criteria: ranked and weighted
- Proposing alternative sequence of evaluation steps
- Promoting ICAO events & test schemes for validating vendors' capabilities



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flexible in their approach. Such criteria may be discussed within the team in moderated workshops or after the vendor's presentation to the evaluation team, calling for the "overall impression" on the bidder. The evaluation panel needs to agree on a common position so that no individual can overly influence this aspect of the tender. The following figure shows one example of feasible steps of an evaluation process.

Figure 2: Sample of an evaluation process

Besides following a structured process during the evaluation phase, it is essential that the evaluation team gain a common belief that this vendor can solve the problems identified in phase 1. People have different ways of making up their mind about things. Some like to read, some like to listen, but all people tend to trust what they have actually experienced themselves. So the evaluation team should plan for multiple ways of gaining first hand experiences. Possible ways are:

- Testing the provided demo system thoroughly;
- Have sample MRTD documents tested by the authorities forensic experts;
- Visit reference customers at their site, while reserving time for a discussion without the vendor being present;
- Accompanying vendors on official interoperability test events or at third party test labs.

Prices should always be evaluated in relation to the overall value offered by the bidder (Best Value-for-Money – "BVM"). Depending on the scope of work, authorities should compare the estimated costs of operation of the proposed solution. It is t important to specify how the financial section must be furnished in the bid document and which information should be provided. Only in this way can the costs of different vendors be compared effectively. Bidders should be requested to estimate these costs under the given assumptions of the operating environment. It could well be that environmental requirements for the personalization bureau room e.g. for operating a laser engraving machine could overcompensate the lesser price for an alternative machine. Another example are the consumables required for re-transfer printing personalization, which in lower volumes could end up with higher costs per personalized passport compared to other solutions.

Finally the best qualified bidder shall be invited to contract negotiations.

3.4 Awarding Contract

In the phase of proposed awarding the authorities should ask the bidder to confirm all the details on how he intends to implement the project. This should be done by requiring a Project Handbook which is the initial project management document covering all aspect of project organization and all the details on how the project will be implemented. The Project Handbook describes in detail the project organization confirming the list of all major sub-contractors and key members of the supply team mentioned in the bid document, who will actually do the job. The project team members should present themselves to the authorities' evaluation team.

Finally, both parties will negotiate the draft contract, which has ideally been submitted with the tender document. Contracts in MRTD projects perform many essential functions. The contract itself should set out, in clear, unambiguous detail, the entire commercial understanding between customer and supplier. Within this structure will sit the technical and operational specifications which underpin MRTD delivery, including the rules relating to relationship governance and logistics. The MRTD project contract is an essential tool in transferring ownership of key assets and establishing the scope of licences and rights covering core technologies which may be embedded within the MRTD. Finally, as well as providing

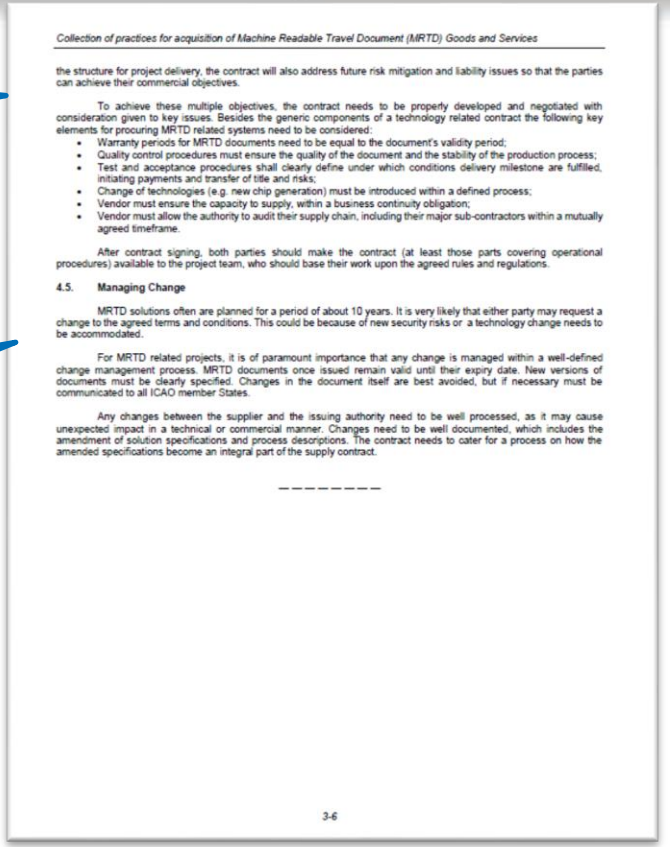
3-5

4. Step: Awarding Contract

- Main legal aspects to be covered
- Focus on MRTD related processes e.g. Quality control, Acceptance testing,

5. Step: Managing Change

- Publish change of the MRTD document
- Process change of the MRTD system



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the structure for project delivery, the contract will also address future risk mitigation and liability issues so that the parties can achieve their commercial objectives.

To achieve these multiple objectives, the contract needs to be properly developed and negotiated with consideration given to key issues. Besides the generic components of a technology related contract the following key elements for procuring MRTD related systems need to be considered:

- Warranty periods for MRTD documents need to be equal to the document's validity period;
- Quality control procedures must ensure the quality of the document and the stability of the production process;
- Test and acceptance procedures shall clearly define under which conditions delivery milestone are fulfilled, initiating payments and transfer of title and risks;
- Change of technologies (e.g. new chip generation) must be introduced within a defined process;
- Vendor must ensure the capacity to supply, within a business continuity obligation;
- Vendor must allow the authority to audit their supply chain, including their major sub-contractors within a mutually agreed timeframe.

After contract signing, both parties should make the contract (at least those parts covering operational procedures) available to the project team, who should base their work upon the agreed rules and regulations.

4.5. Managing Change

MRTD solutions often are planned for a period of about 10 years. It is very likely that either party may request a change to the agreed terms and conditions. This could be because of new security risks or a technology change needs to be accommodated.

For MRTD related projects, it is of paramount importance that any change is managed within a well-defined change management process. MRTD documents once issued remain valid until their expiry date. New versions of documents must be clearly specified. Changes in the document itself are best avoided, but if necessary must be communicated to all ICAO member States.

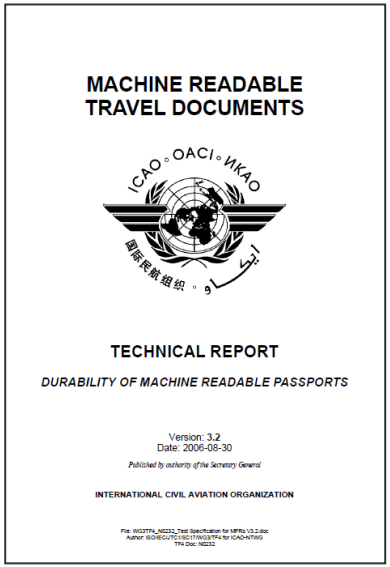
Any changes between the supplier and the issuing authority need to be well processed, as it may cause unexpected impact in a technical or commercial manner. Changes need to be well documented, which includes the amendment of solution specifications and process descriptions. The contract needs to cater for a process on how the amended specifications become an integral part of the supply contract.

3-6

Points to Watch: Connect Test Plan with your Contract

Test Plan and Test Specifications

Test Report



MACHINE READABLE TRAVEL DOCUMENTS

TECHNICAL REPORT

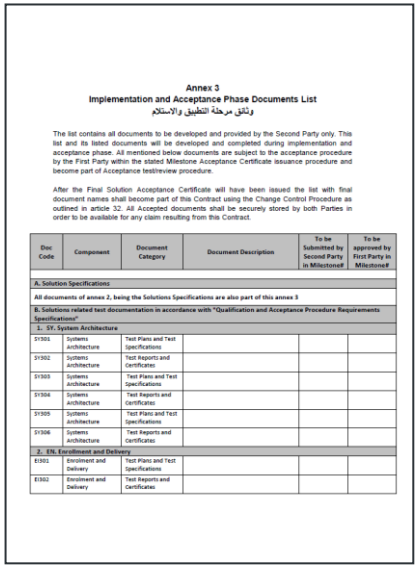
DURABILITY OF MACHINE READABLE PASSPORTS

Version: 3.2
Date: 2006-08-30

Published by authority of the Secretary General

INTERNATIONAL CIVIL AVIATION ORGANIZATION

Contract Schedule



Annex 3
Implementation and Acceptance Phase Documents List
وثائق مرحلة التطبيق والاستلام

The list contains all documents to be developed and provided by the Second Party only. This list and its listed documents will be developed and completed during implementation and acceptance phase. All mentioned below documents are subject to the acceptance procedure by the First Party within the stated Milestone Acceptance Certificate issuance procedure and become part of Acceptance test/review procedure.

After the Final Solution Acceptance Certificate will have been issued the list with final document names shall become part of this Contract using the Change Control Procedure as outlined in article 32. All Accepted documents shall be securely stored by both Parties in order to be available for any claim resulting from this Contract.

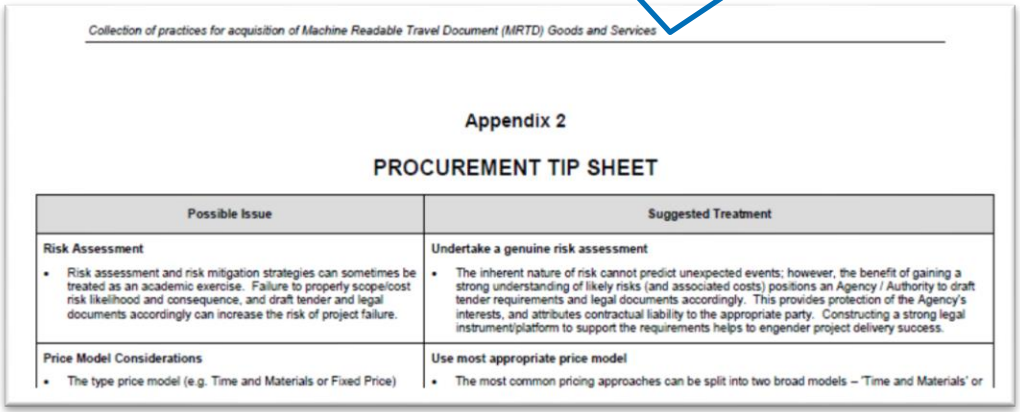
Doc Code	Component	Document Category	Document Description	To be Submitted by Second Party in Milestone#	To be approved by First Party in Milestone#
A. Solution Specifications					
All documents of annex 2, being the Solutions Specifications are also part of this annex 3					
B. Solutions related test documentation in accordance with "Qualification and Acceptance Procedure Requirements Specifications"					
1. SY. System Architecture					
SY001	Systems Architecture	Test Plans and Test Specifications			
SY002	Systems Architecture	Test Reports and Certificates			
SY003	Systems Architecture	Test Plans and Test Specifications			
SY004	Systems Architecture	Test Reports and Certificates			
SY005	Systems Architecture	Test Plans and Test Specifications			
SY006	Systems Architecture	Test Reports and Certificates			
2. EN. Enrollment and Delivery					
EI001	Enrolment and Delivery	Test Plans and Test Specifications			
EI002	Enrolment and Delivery	Test Reports and Certificates			

Appendix 5.2

- References to other Guidance Materials

Appendix 5.1

- Tip Sheet:
  to be extended list of points to watch



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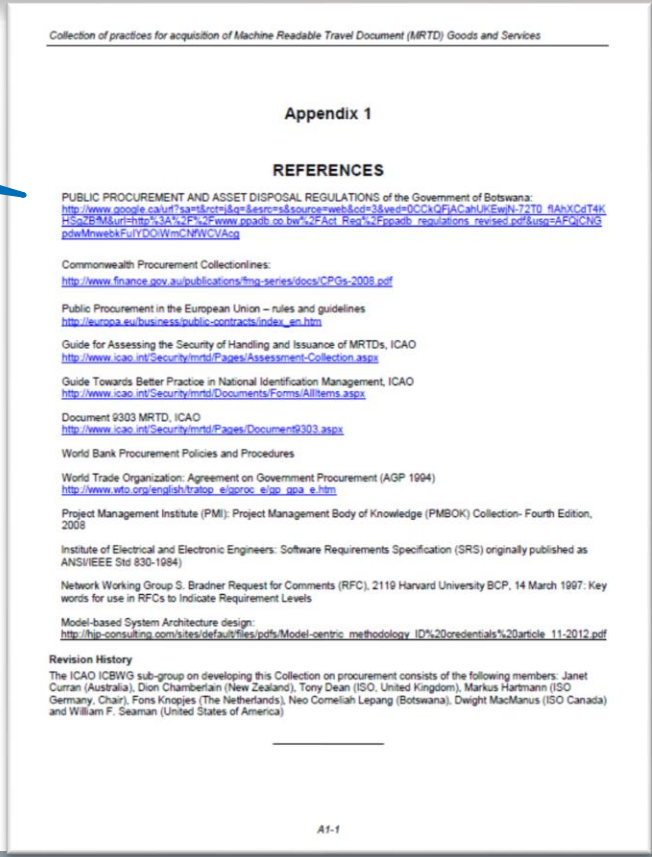
Appendix 2

PROCUREMENT TIP SHEET

Possible Issue	Suggested Treatment
Risk Assessment • Risk assessment and risk mitigation strategies can sometimes be treated as an academic exercise. Failure to properly scope/cost risk likelihood and consequence, and draft tender and legal documents accordingly can increase the risk of project failure.	**Undertake a genuine risk assessment** • The inherent nature of risk cannot predict unexpected events; however, the benefit of gaining a strong understanding of likely risks (and associated costs) positions an Agency / Authority to draft tender requirements and legal documents accordingly. This provides protection of the Agency's interests, and attributes contractual liability to the appropriate party. Constructing a strong legal instrument/platform to support the requirements helps to engender project delivery success.
Price Model Considerations • The type price model (e.g. Time and Materials or Fixed Price)	**Use most appropriate price model** • The most common pricing approaches can be split into two broad models – 'Time and Materials' or



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Appendix 1

REFERENCES

PUBLIC PROCUREMENT AND ASSET DISPOSAL REGULATIONS of the Government of Botswana:
http://www.google.ca/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&ved=0CCkQFjACahUKEwiN-72T0_fIAhXCdT4KHSqZBMM&url=http%3A%2F%2Fwww.ppadb.co.bw%2FAct_Reg%2Fppadb_regulations_revised.pdf&usg=AFQjCNGpdwMnwebkFuIYDOiWmCNfWCVAcg

Commonwealth Procurement Collectionlines:
http://www.finance.gov.au/publications/fmg-series/docs/CPGs-2008.pdf

Public Procurement in the European Union – rules and guidelines
http://europa.eu/business/public-contracts/index_en.htm

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Revision History

The ICAO ICBWG sub-group on developing this Collection on procurement consists of the following members: Janet Curran (Australia), Dion Chamberlain (New Zealand), Tony Dean (ISO, United Kingdom), Markus Hartmann (ISO Germany, Chair), Fons Knopjes (The Netherlands), Neo Comeliah Lepang (Botswana), Dwight MacManus (ISO Canada) and William F. Seaman (United States of America)

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- The Guide is available for free download here:
- States are are welcome to contribute to enhance the guide with us!

http://www.icao.int/Security/mrtd/Pages/Guides.aspx

Thank you for your attention

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