



AAECA-Net

Arab-African e-Certification Authorities Network
الشبكة العربية - الأفريقية لهياكل التصديق الإلكتروني

PKI Frameworks & Use Cases in the Arab and African regions

International Symposium - 2019

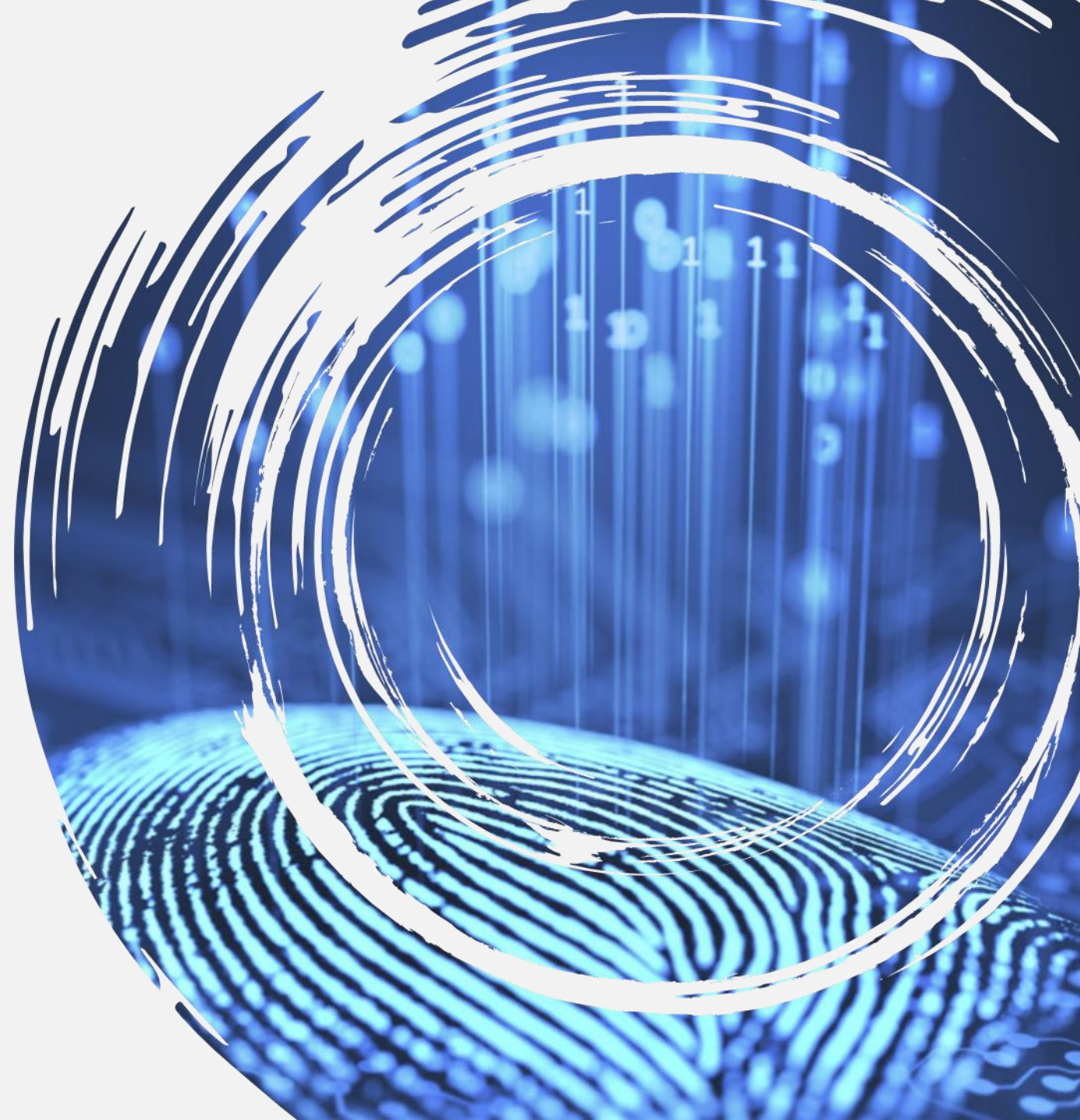
Asia PKI Consortium | India PKI Forum

05-December-2019 | Mumbai, India



Nada LAABIDI

Project & program Manager [AICTO]
International coordinator of the AAECA-Net



PKI Frameworks & Use Cases in the Arab and African regions

- 01 About AAECA-Net
- 02 Study : State of the Art and prospects
- 03 The way forward



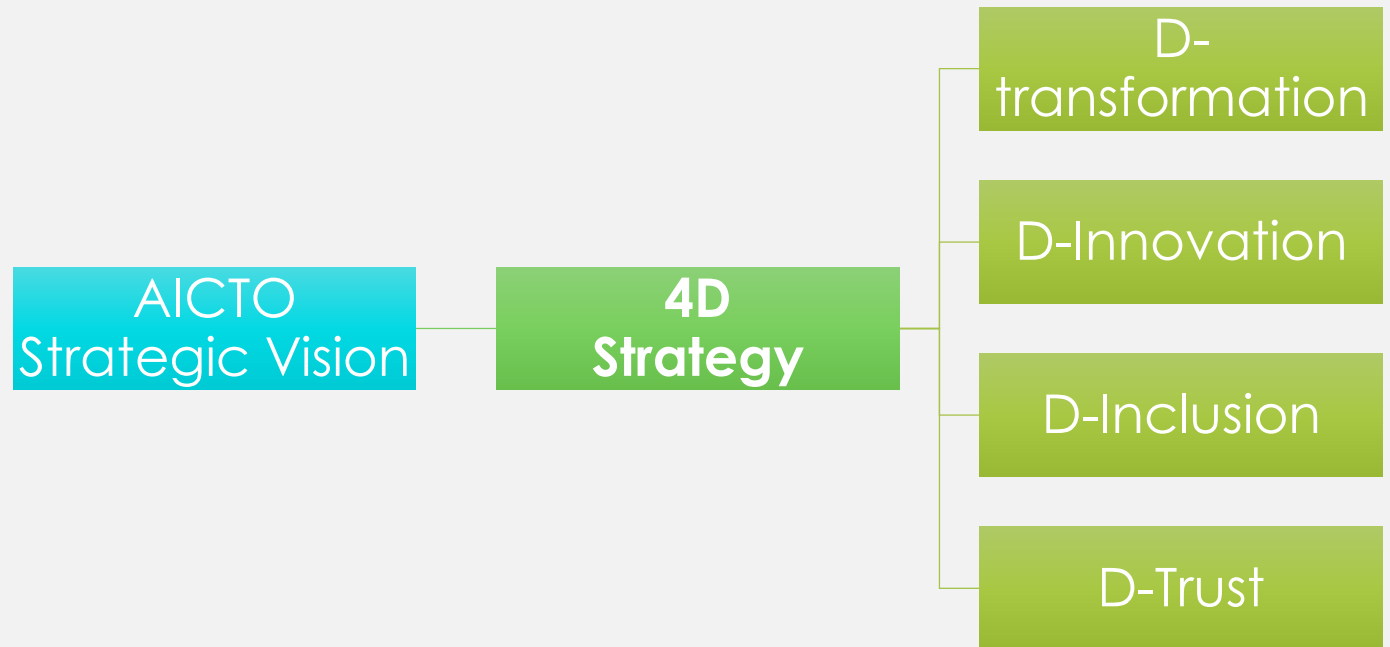
ARAB INFORMATION AND COMMUNICATION
TECHNOLOGIES ORGANIZATION

About AICTO

The Arab ICT Organization «AICTO» is a specialized Arab governmental organization working under the aegis of the league of Arab States, located in Tunis, and has been operational since the 1st of January 2008.

Strategic Vision

Towards a Unified Arab digital society based on the creativity and innovation, boosting the Arab-Interregional complementarity and contributing efficiently to the development of the global sustainable digital economy





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About

An Interregional Multistakeholder Network for Digital trust in the Arab & African Regions having the specificity to be open internationally to all interested stakeholders.



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Vision

Better interregional collaboration
on e-Trust for better trustworthy
digital economies based on **Laws
Harmonization** & Digital Trust
services **Interoperability**



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Objectives



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Arab-African e-Certification Authorities Network
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AAECA-Net OBJECTIVES

**Common
Interregional
Multistakeholder
Network**

Gathering the Arab and African PKI/e-certification authorities within a common network with all relevant parties (Public and Private sector, Academia,...) to exchange the related experiences and expertise.

**Laws
convergence**

Unifying and Harmonizing the interregional laws related to e-transactions and e-trust services based on international experiences

**Standardization
development**

Harmonizing positions in the field of standardization and propose norms/standards in PKI field and Digital Trust

**Interoperability
and Mutual
Recognition**

Working on the interoperability and the mutual recognition between the Arab and African e-certification authorities, as a first step, and between the countries of the two regions with the rest of the world in a further step

**Interregional &
International
cooperation**

Establishing Interregional (Multilateral) conventions ensuring the Interoperability & the mutual recognition of the e-trust services between the countries of the two regions and with other foreign countries.

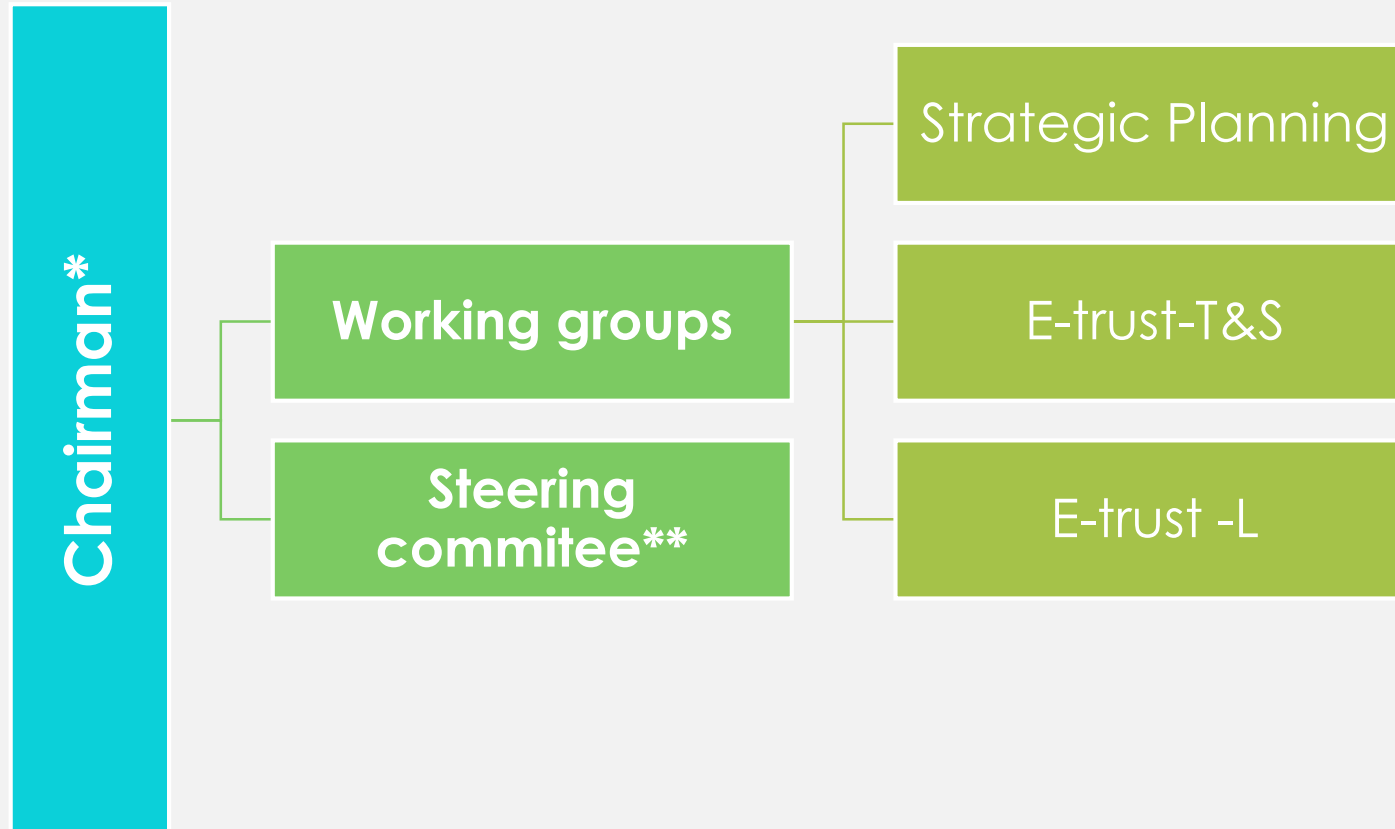




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ORGANIZATION



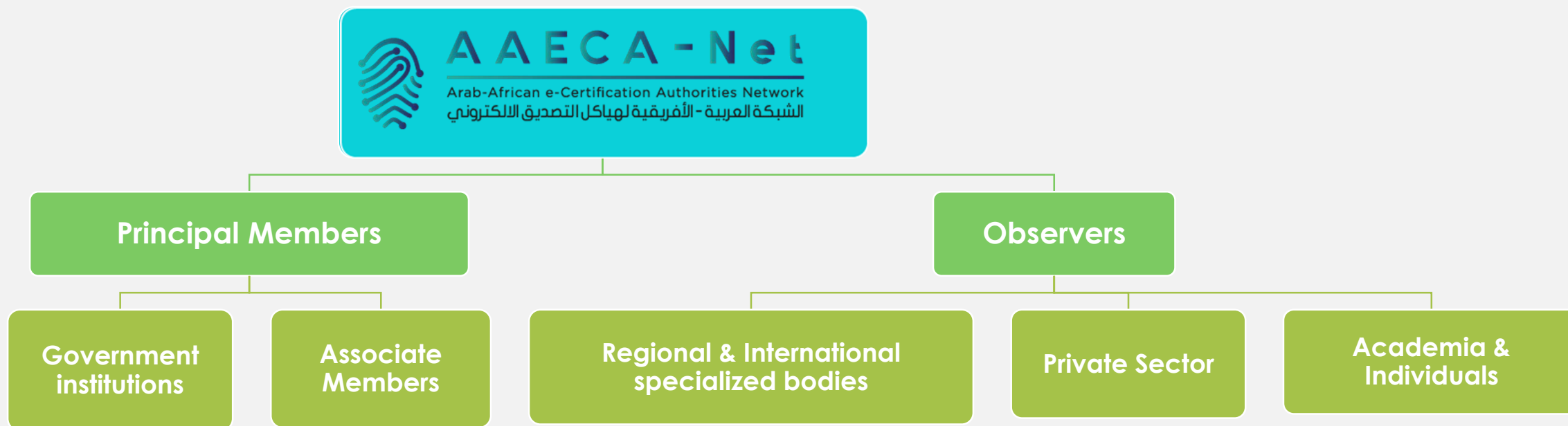
* The AAECA-Net shall have a Chairperson from its members for a period of at least one year (renewable)

** Steering Committee is composed of representatives of AAECA-Net members and chaired by the SG of AICTO



AAECA-Net
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Membership



AAECA-NET Members

2017

5 Arab countries (Oman, Sudan, Iraq, Tunisia, Palestine)

2019 (first semester)

4 new countries have joined the network :
Djibouti, Niger, Mauritania, Burkina Faso

Ongoing process :

The following countries are expected to officially join the AAECA-Net by the end of this year :
Nigeria, Algeria, Cameroun, Jordan + (GCC countries)

End 2019

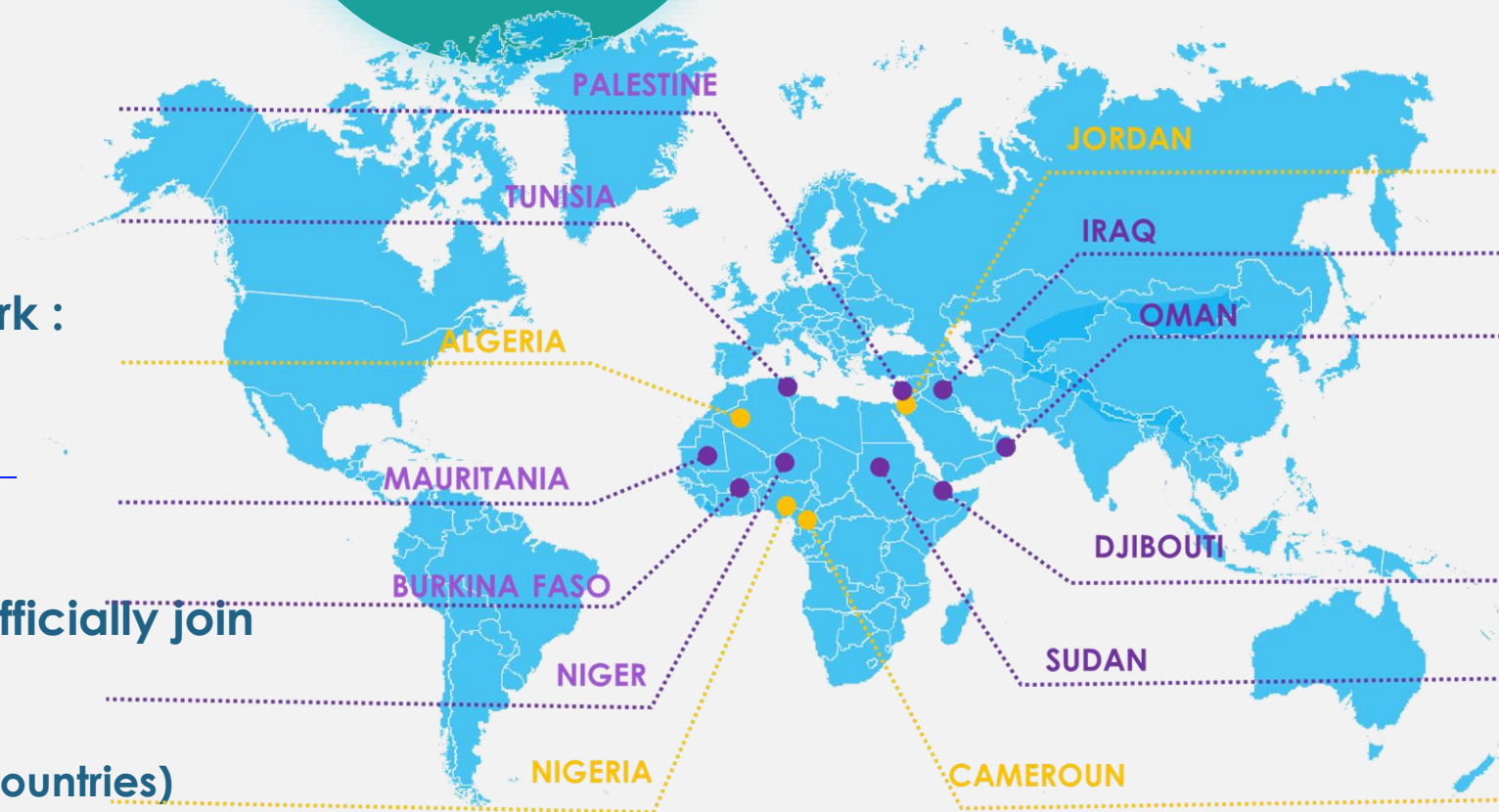
15+

Countries/
members

25+

Countries/
Members

End 2020





AAECA-NET Working Groups

AAECA-Net WG1: Strategic Planning

AAECA-Net WG2: E-trust-T&S

[Technical Aspects & Standardization]

AAECA-Net WG3 : E-trust -L

[Legal frameworks Harmonization]

AAECA-Net WG1: Strategic Planning

- **Working methods** : Membership charter (Member's categories, Conditions, advantages, rights and obligations....
- **Interregional strategy: Developing “Arab-African strategy” to encourage Arab and African countries to create and enhance their local e-certification authorities and to set up the mutual recognition mechanisms, thus developing a secure platform for cross-border e-transactions and e-commerce between them and with the rest of the world**

“Arab-African Strategy” for digital trust & PKI implementation

AAECA-Net WG2: E-trust-T&S

[Technical Aspects & Standardization]

- Study the economic benefits and impacts of introducing PKI and E-Trust services in the two regions
- Investigate the ecosystem in the two regions
- Perform a gap analysis between the existing services and what is required
- Undertake an assessment of the benefits and lessons learned of the implementations of existing PKI and trust services both on regional and international levels
- Harmonize positions in the field of standardization and work on proposing standards in PKI field and Digital Trust services
- **Lead Capacity building program & Technical assistance**

**Bridging the
gap and
prepare for
the mutual
recognition**

AAECA-Net WG3 : E-trust -L

[Legal frameworks Harmonization]

This group will deal with regulatory issues related to public keys and e-trust services management

- The Main objective of this group is to develop a regulatory framework of reference
- Assessment of the existing legal frameworks in both regions (weakness)
- Taking into account real needs and specific characteristics of both regions a first tentative of a harmonized legal framework should be developed by this working group. (General guidelines)



**Common
regulatory
framework**

ACTIVITIES

- Awareness activities : Forum & Technical conferences
- Capacity Building : Practical workshops and training sessions
- International exhibitions
- Studies and reports
- Technical assistance
- International cooperation

ACHIEVEMENTS

- *White book : PKI implementation in the Arab and African regions*
- Capacity building/training sessions
- Technical assistance mission
- “Interregional Standardization Forum for Pki & e-trust”
Forum (2 editons)
Region Reports (As IS) – *first edition of the study of the State of Art and Prospects of e-trust services in the two regions*

1st edition

“Interregional Standardization Forum for PKI & e-trust”

“Towards Bridging the Standardization Gap (BSG) in the Hyper-connected world

Venue : Muscat – Sultanate of Oman – Date 11& 12 December 2017

المنتدى الإقليمي الأول للتقييس في التصديق الإلكتروني والثقة الرقمية

”تحو سد فجوة التقييس في عالم شديد الترابط“

١٢ - ١٣ ديسمبر ٢٠١٧



2nd edition

“Interregional Standardization Forum for PKI & e-trust” “Boosting interregional collaboration for better trustworthy digital economies”

Venue : Republic of Tunisia – Date 04 & 05 April 2019



Study : “State of Art and Prospects of e-trust services in the two regions – Technical & Legal levels”

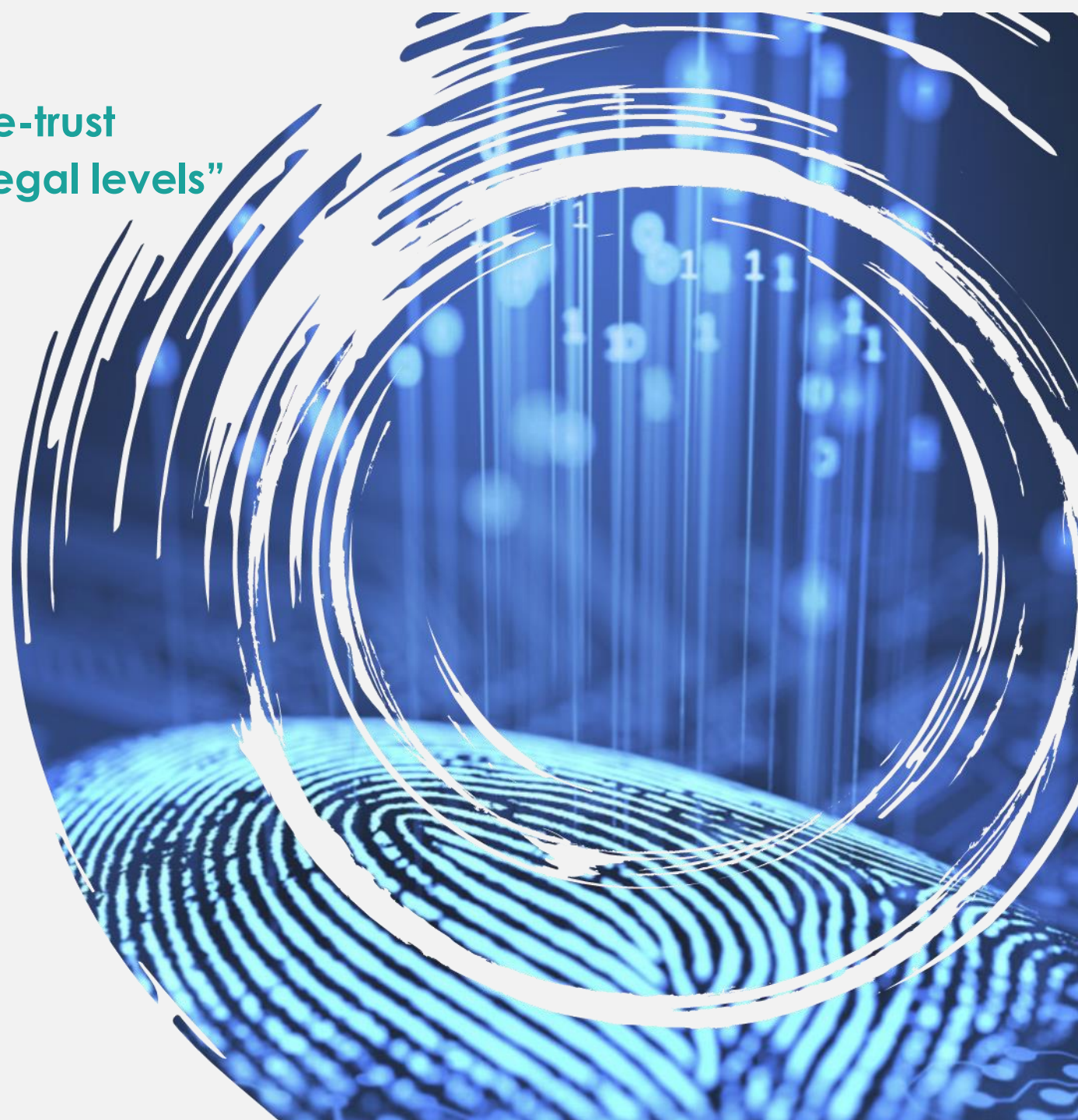
AICTO has launched a survey among Arab & African countries about e-certifications Authorities and digital trust :

- Collect data about e-certification and PKI authorities in Arab and African countries, e-signature, and the available legal and regulatory frameworks governing the e-transactions.
- Give a clear vision about the state of the art and future needs of these countries in the field of digital trust



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Study : “State of Art and Prospects of e-trust services in the two regions – Technical & Legal levels”

01



02

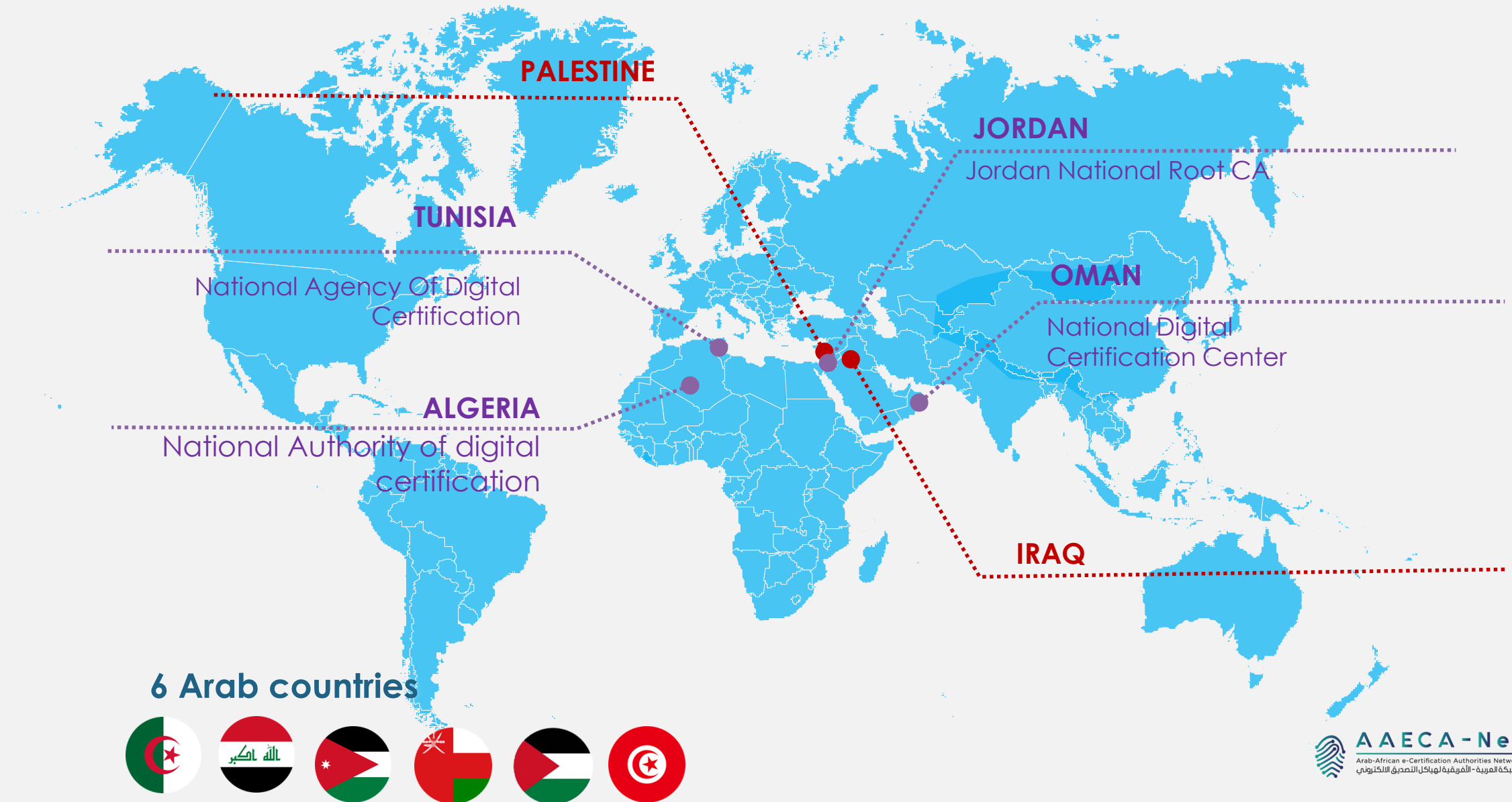
TECHNICAL

- E-certification authorities/ Root certification authorities
- Available e-trust services
 - 2.1 : E-signature
 - 2.2 : Time stamping
 - 2.3 : Electronic seal
 - 2.4 : Electronic delivery
 - 2.5 : Website authentication
- National "Trusted list"
- Are e-IDs available in your country ?
- Is e-passport available in your country ?

LEGAL

- Legal framework for E-transactions (General)
- Legal framework defining and organizing the work/tasks for e-Certification providers
- Legal framework for personal data protection
- Legal framework for e-trust services

Root certification authorities in the Arab Region



E-certification Authorities Timeline

2000



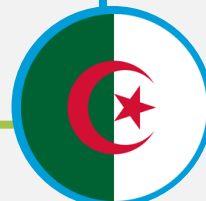
National Agency
Of Digital
Certification
www.certification.tn

2013



National Digital
Certification Center
(NDCC)
<http://oman.om/tam>

2015



National E-
certification Authority

2016

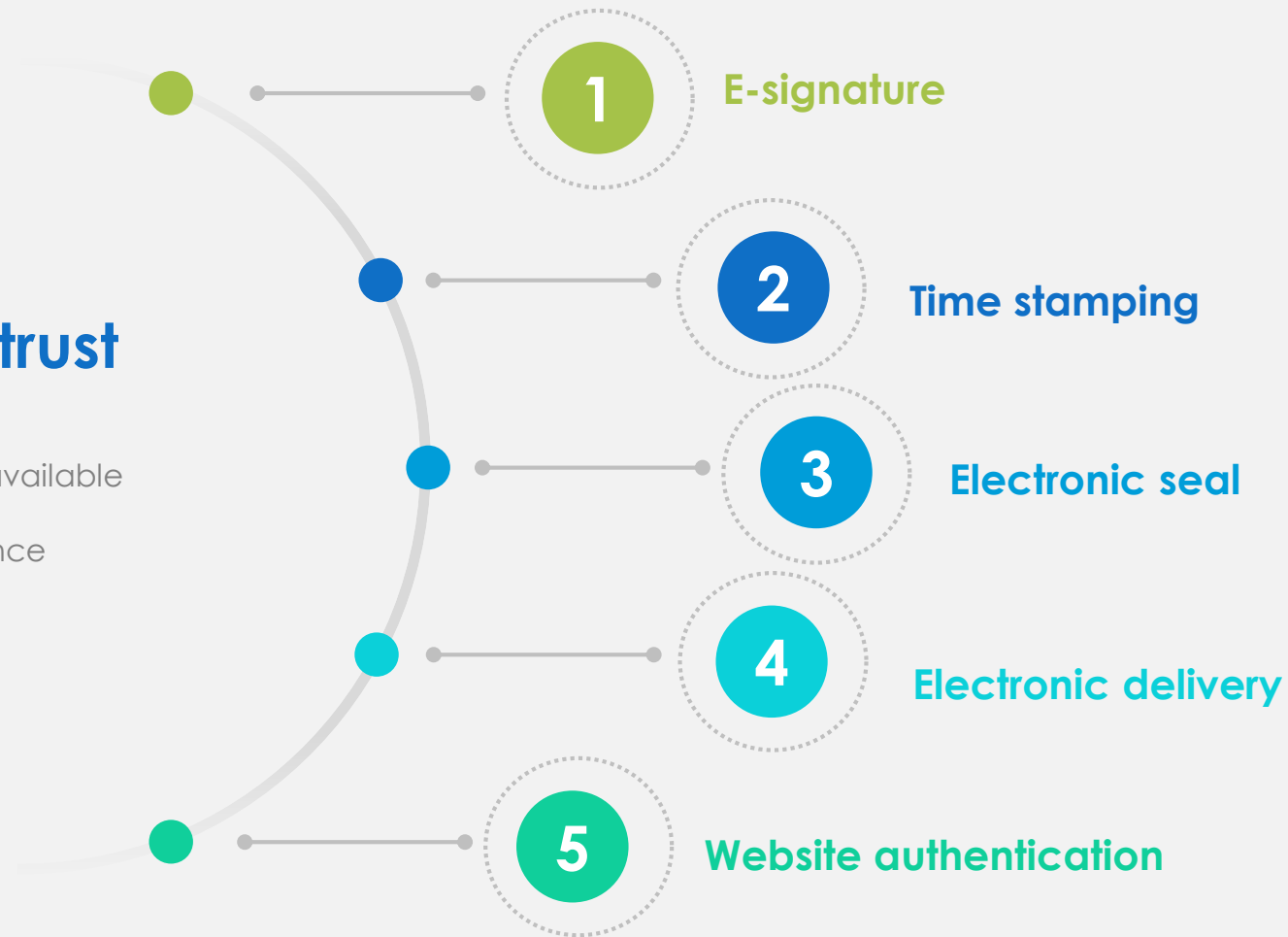


Jordan National
Root CA
<http://www.pki.jo>

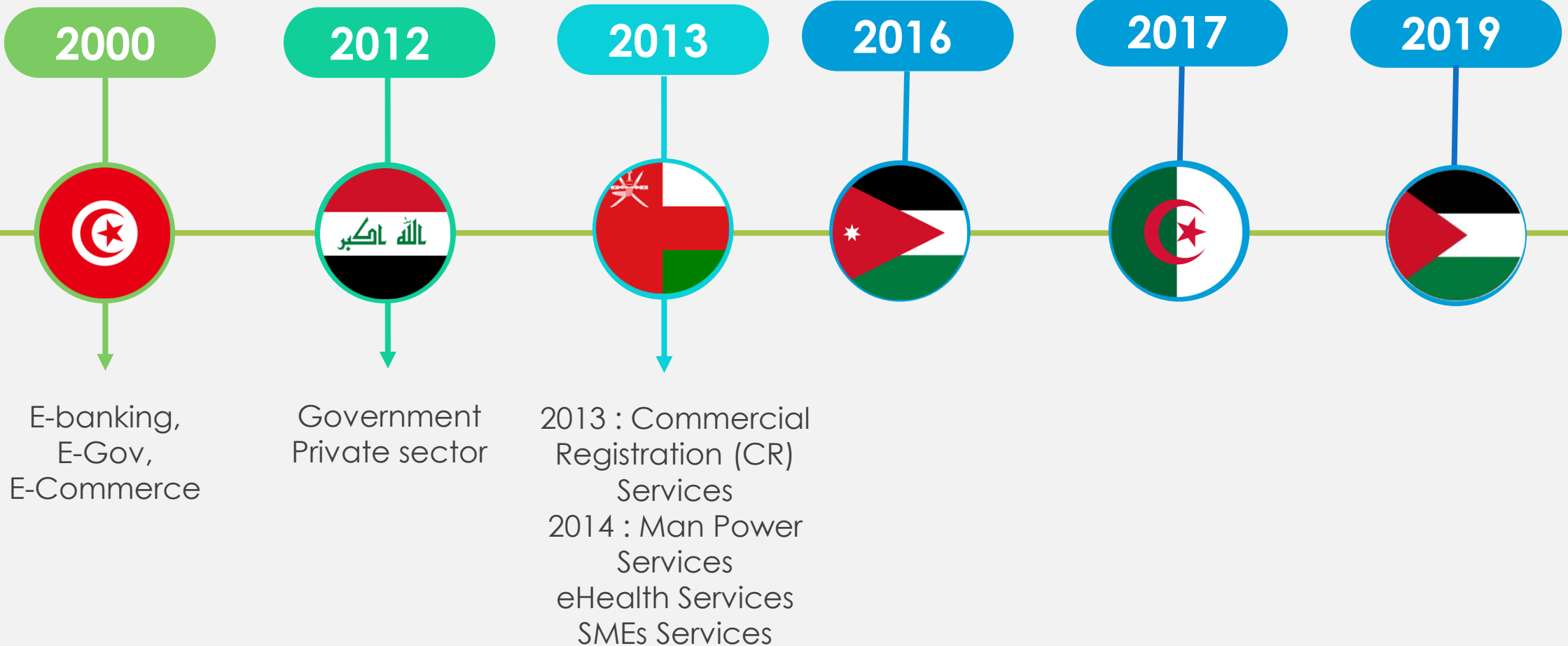
Study : “State of Art and Prospects of e-trust services in the two regions – Technical & Legal levels”

Available e-trust services

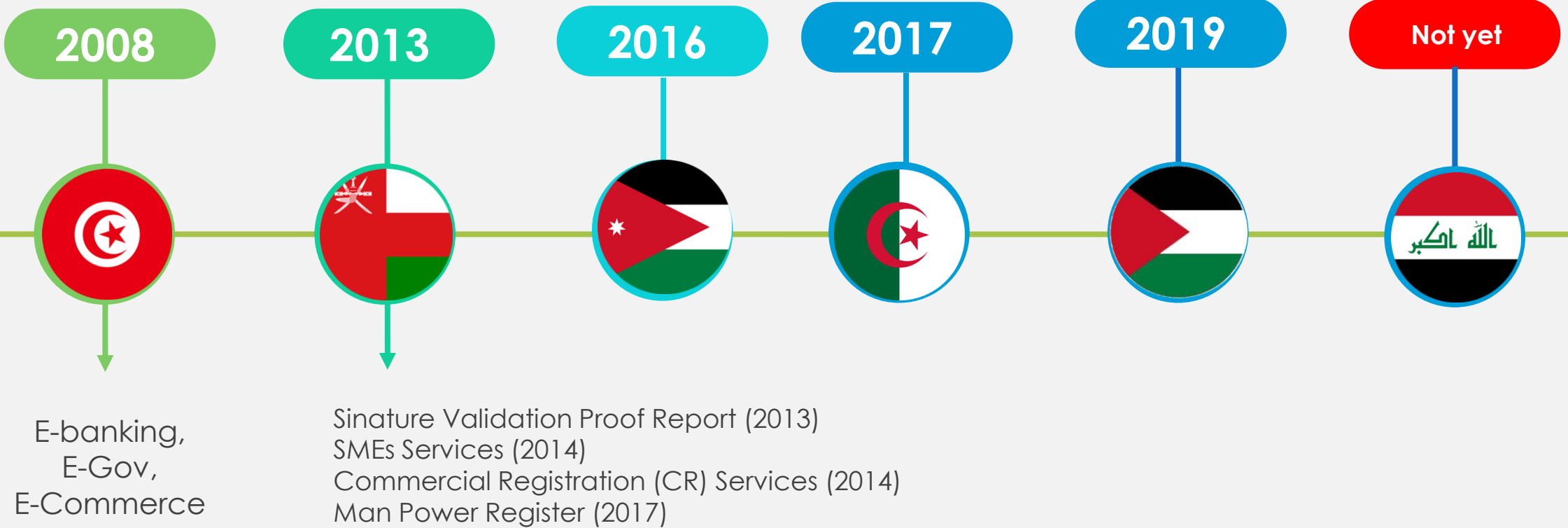
Available | Date | Not available
| Planned | Date
Fields of application | Since



E-signature



Time stamping



Electronic seal

2013



2017



2019



2019



Not yet



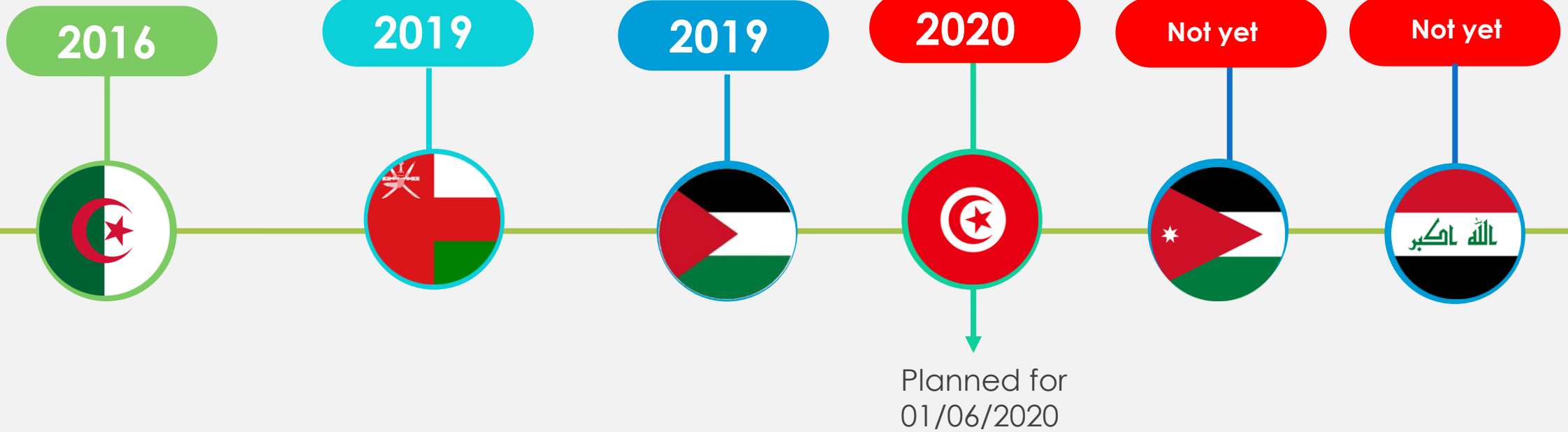
Not yet



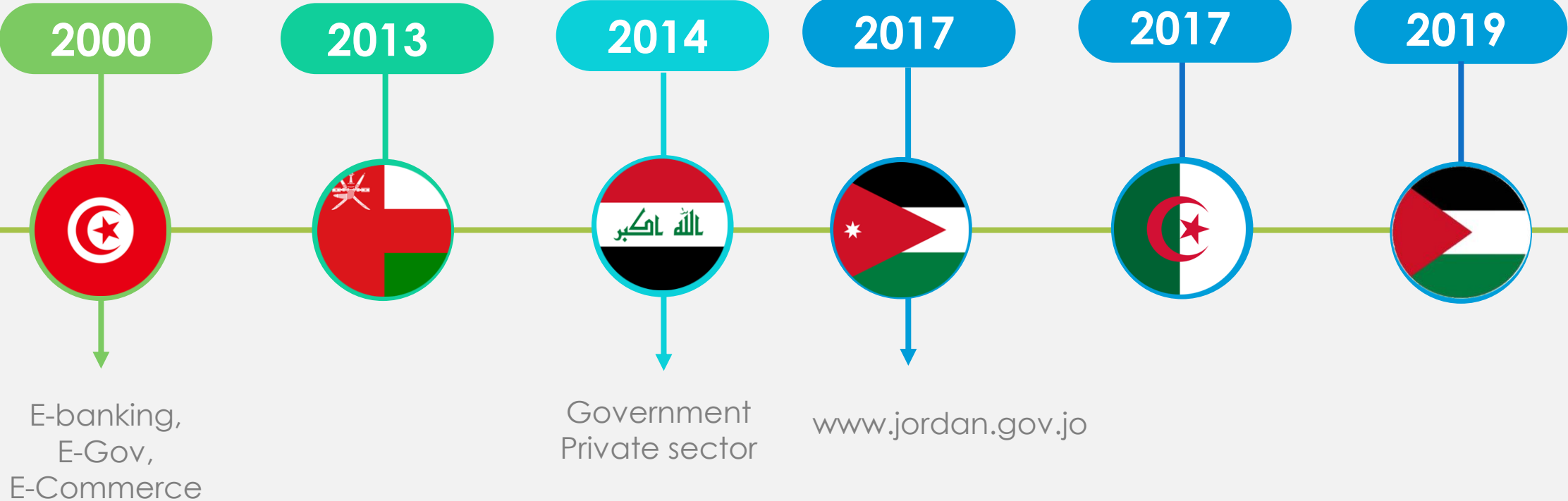
- Sinature Validation Proof Report (2013)
- SMEs Services (2014)
- Commercial Registration (CR) Services (2014)
- Man Power Register (2017)

E-GOV

Electronic delivery

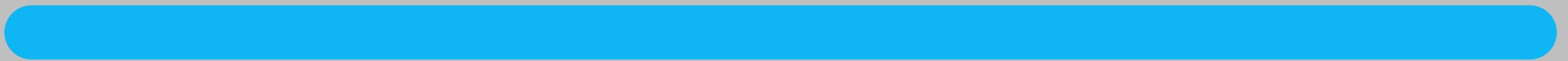
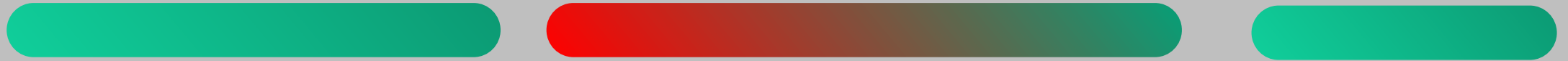
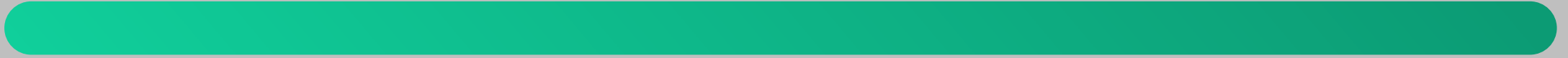


Website authentication

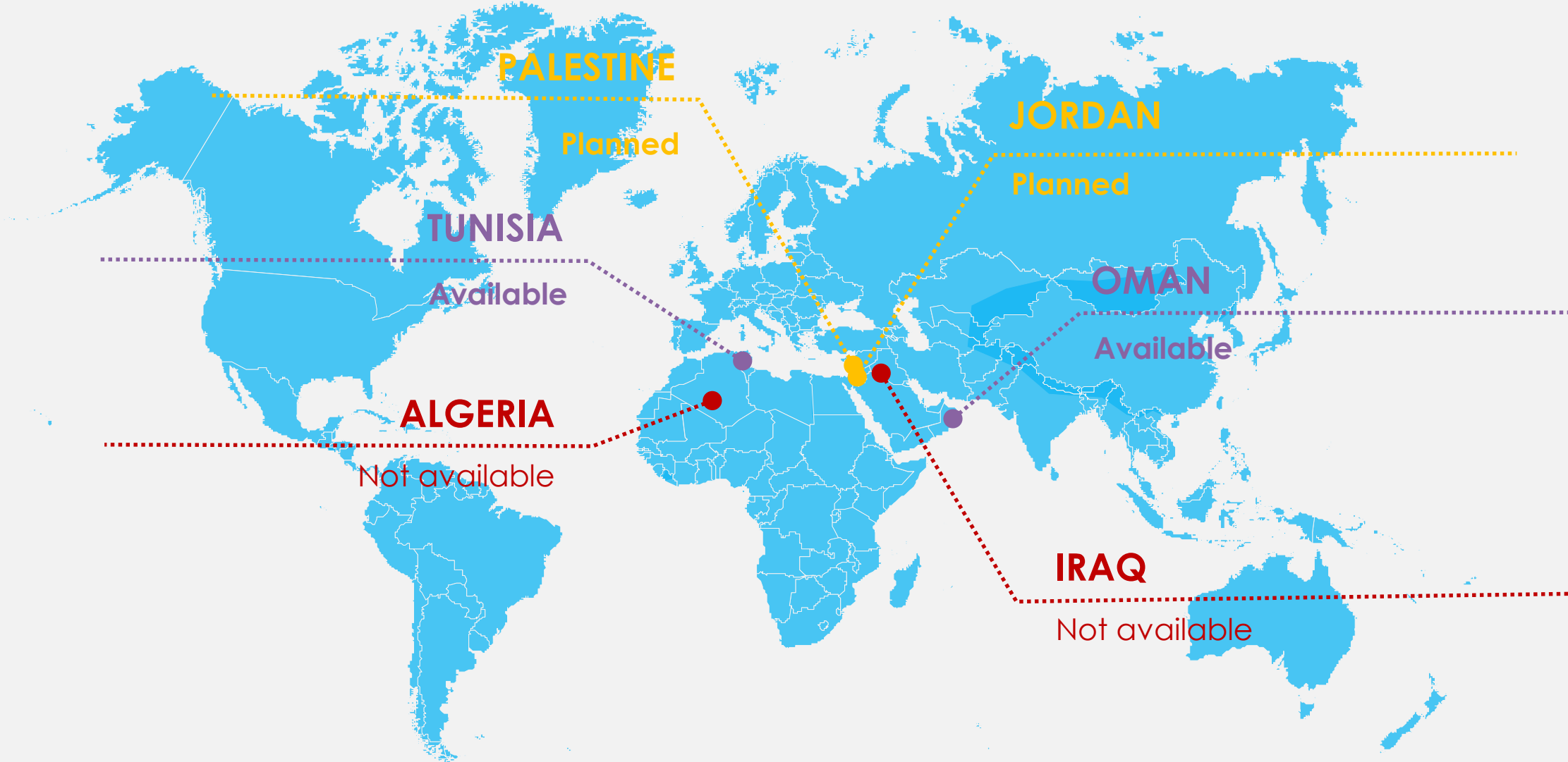


Available E-trust services

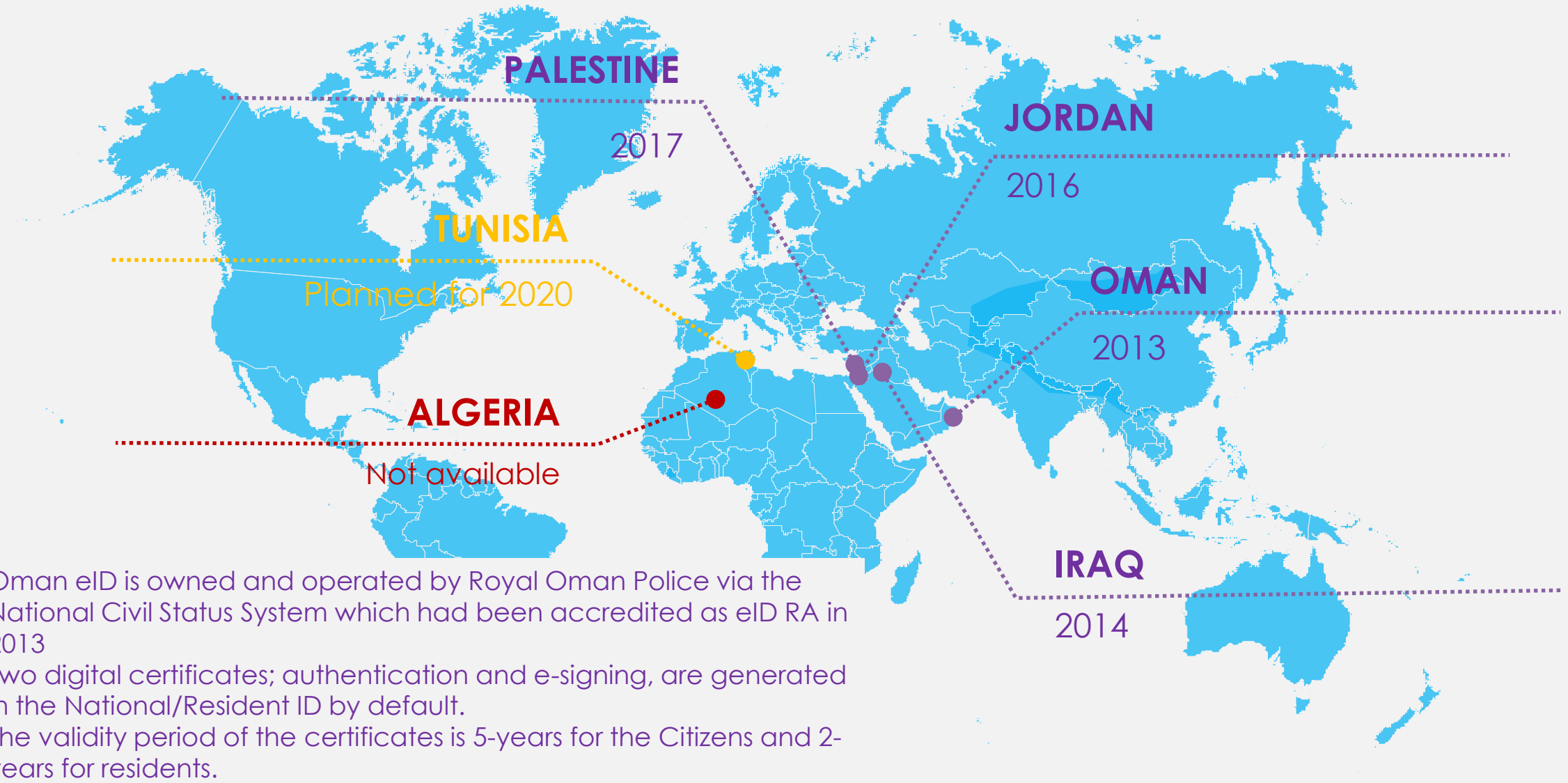
E-signature | Time stamping | Electronic seal | Electronic delivery | Website authentication



National "Trusted list"



Are e-IDs available in your country ?

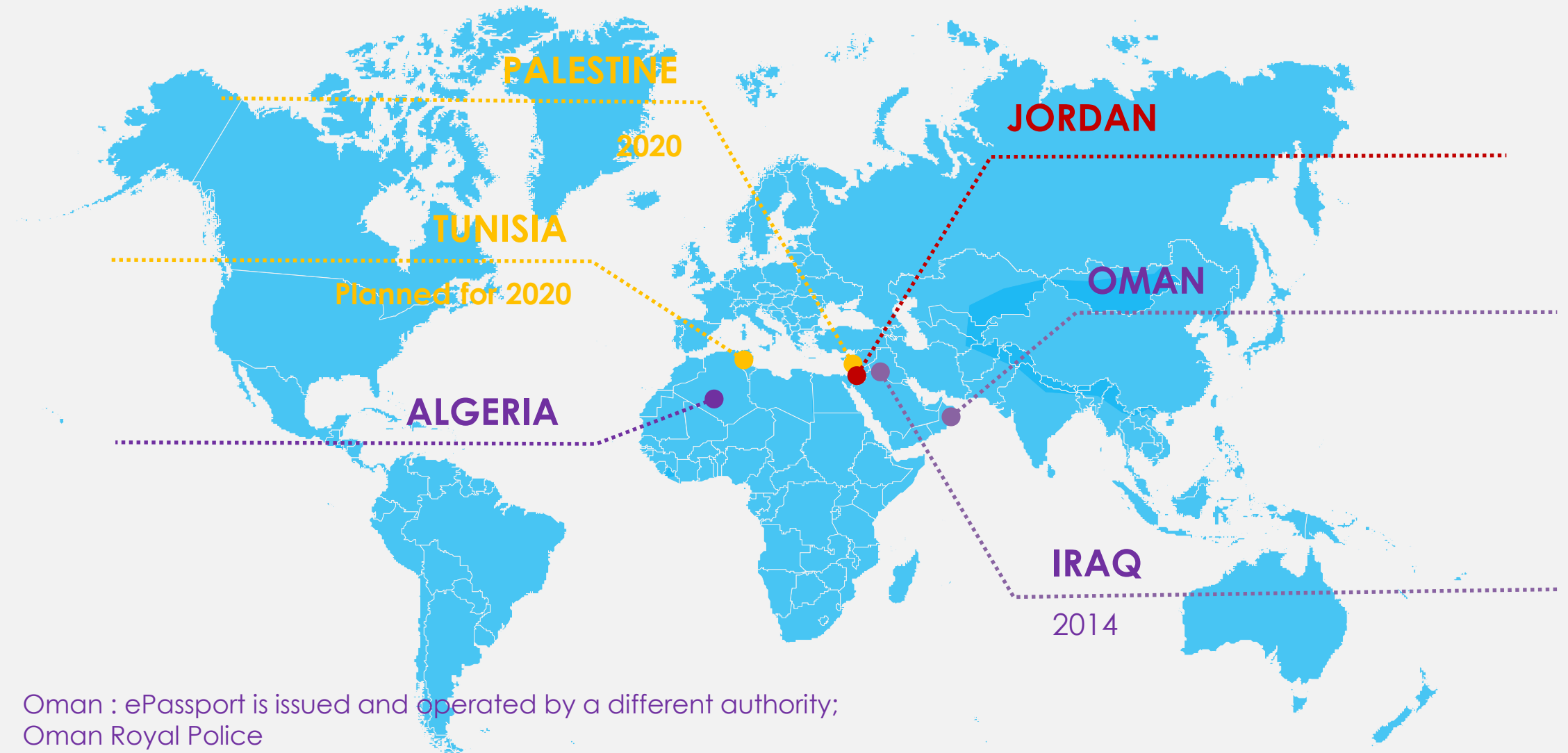


Oman eID is owned and operated by Royal Oman Police via the National Civil Status System which had been accredited as eID RA in 2013

Two digital certificates; authentication and e-signing, are generated in the National/Resident ID by default.

The validity period of the certificates is 5-years for the Citizens and 2-years for residents.

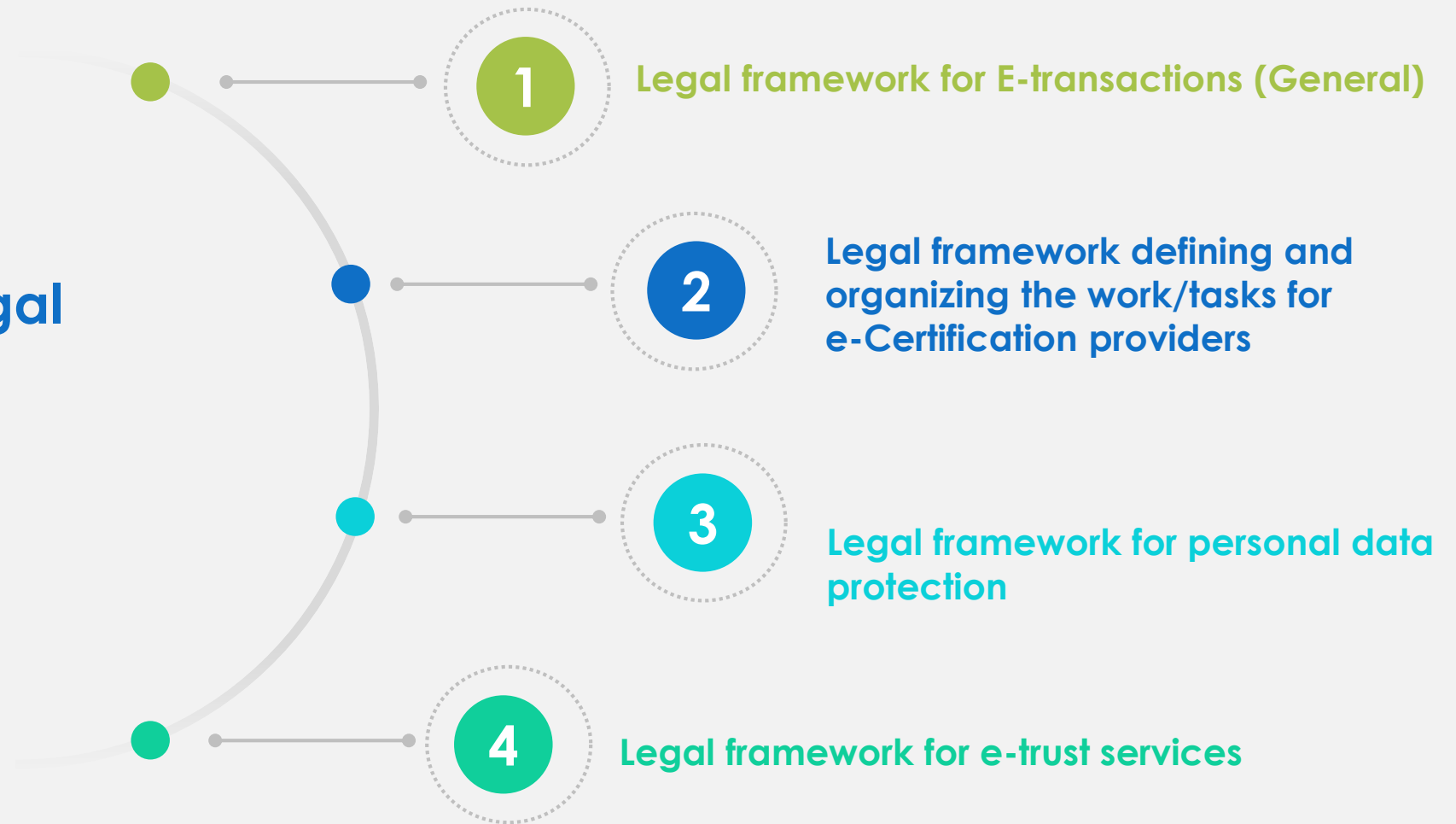
Is e-passport available in your country ?



Oman : ePassport is issued and operated by a different authority;
Oman Royal Police

Study : “State of Art and Prospects of e-trust services in the two regions – Technical & Legal levels”

Part Two: Legal frameworks



Legal framework for E-transactions (General)

2000



09/08/2000

Law n° 2000-83, for
e-transactions and
e-commerce

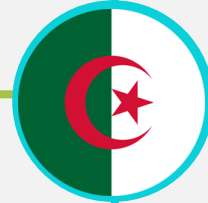
2008



17/05/2008

Oman Electronic
Law 69/2008

2015



02/01/2015

Law 15-04 :
General rules for
e-signature and
e-certification

2015



01/01/2015

E-transactions
Law

Legal framework defining and organizing the work/tasks for e-Certification providers

2001



17/07/2001

Decree n ° 2001-1667 dated 17 July 2001, approving the specifications relating to the exercise of the activity of the electronic authentication services provider.

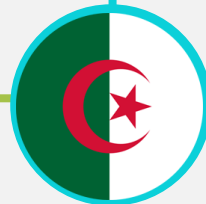
2008



17/05/2008

Oman Electronic Law 69/2008

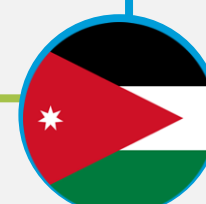
2015



02/01/2015

Law 15-04 :
General rules for
e-signature and
e-certification

2015



01/01/2015

E-transactions
Law

Legal framework for personal data protection

2001



27/07/2001
Law n° 63-2004

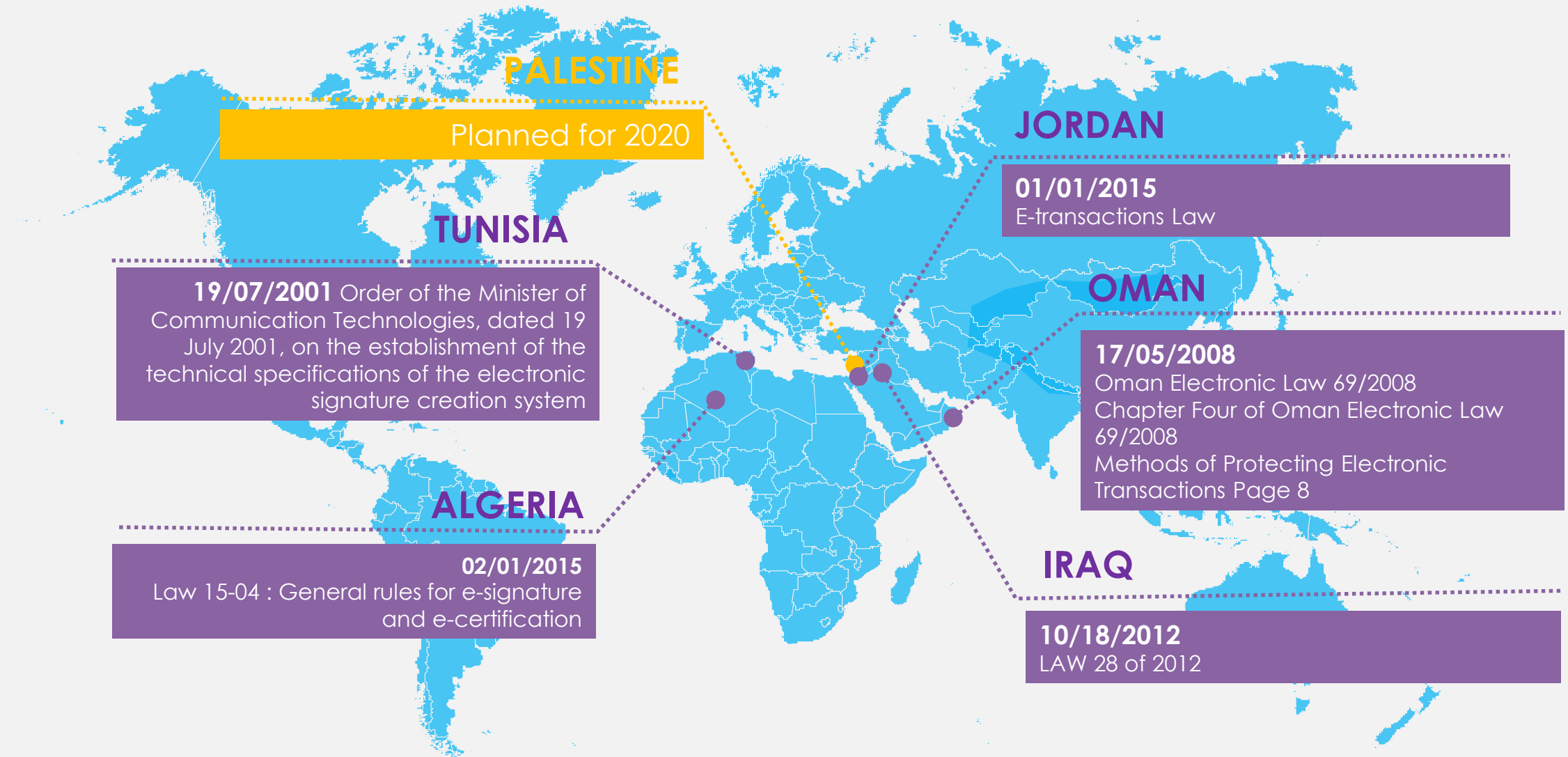
Law No. 2004-63 of July 27, 2004,
on the protection of personal data

2008



17/05/2008
Oman Electronic Law 69/2008
Chapter Seven of Oman Electronic
Law 69/2008
Protection of Private Data Page 14

Legal framework for e-trust services : E-signature



PALESTINE

Planned for 2020

JORDAN

01/01/2015
E-transactions Law

TUNISIA

19/07/2001 Order of the Minister of Communication Technologies, dated 19 July 2001, on the establishment of the technical specifications of the electronic signature creation system

OMAN

17/05/2008
Oman Electronic Law 69/2008
Chapter Four of Oman Electronic Law 69/2008
Methods of Protecting Electronic Transactions Page 8

ALGERIA

02/01/2015
Law 15-04 : General rules for e-signature and e-certification

IRAQ

10/18/2012
LAW 28 of 2012

Legal framework for e-trust services : **Electronic Seal**

2008

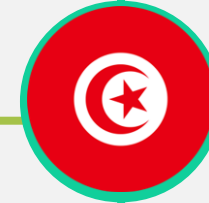


17/05/2008

Oman Electronic Law 69/2008

- Chapter Three of Oman Electronic Law 69/2008
Electronic Transactions and Contract Formation (Article 17 page 7)
- Chapter Four of Oman Electronic Law 69/2008
Methods of Protecting Electronic Transactions Page 8

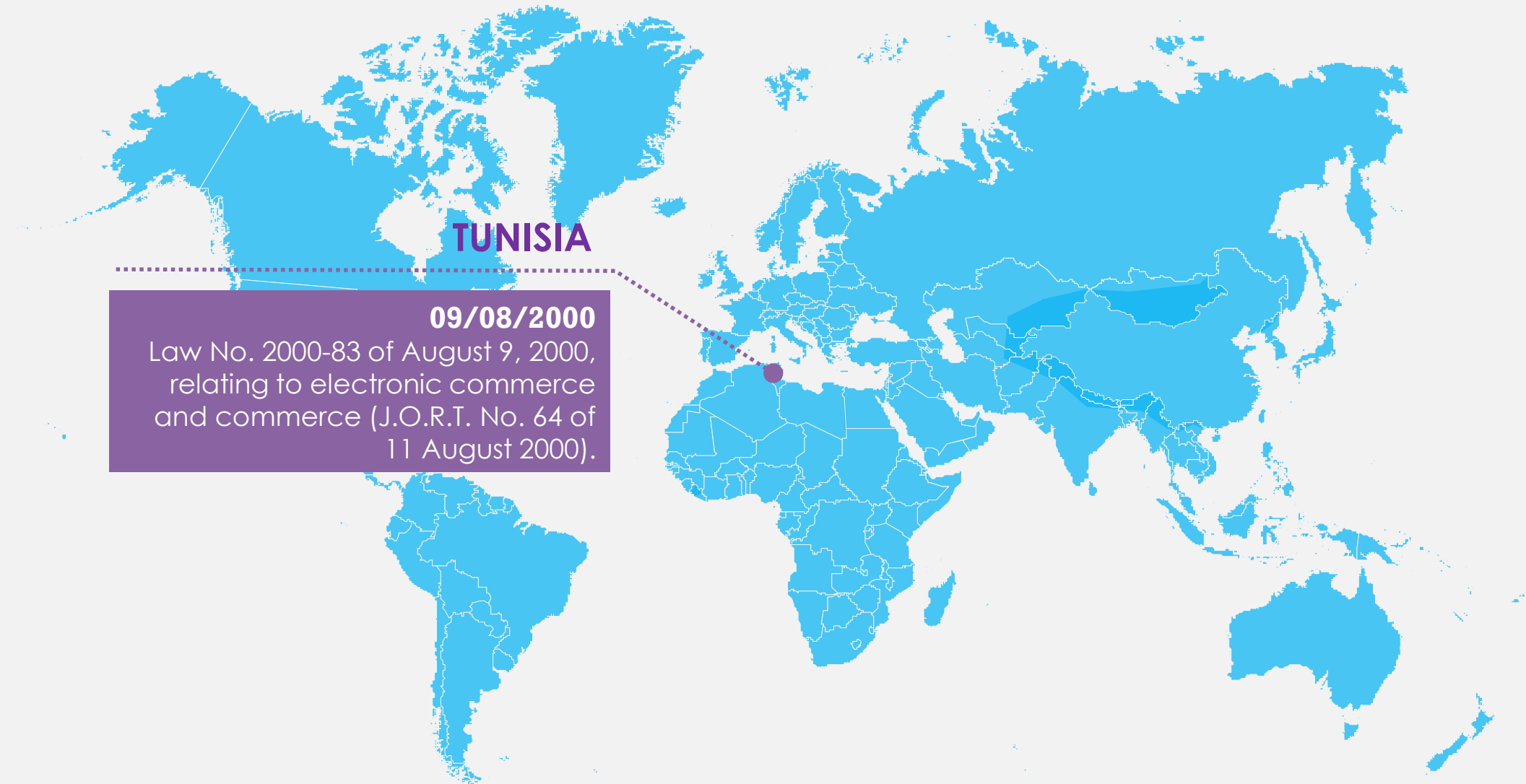
2018



21/02/2018

Order of the Minister of Communication Technologies and Digital Economy dated 21 February 2018, amending and completing the order dated 19 July 2001, fixing the technical specifications of the electronic signature events system by legalizing TN CEV 2D-Doc.

Legal framework for e-trust services : **Electronic delivery**

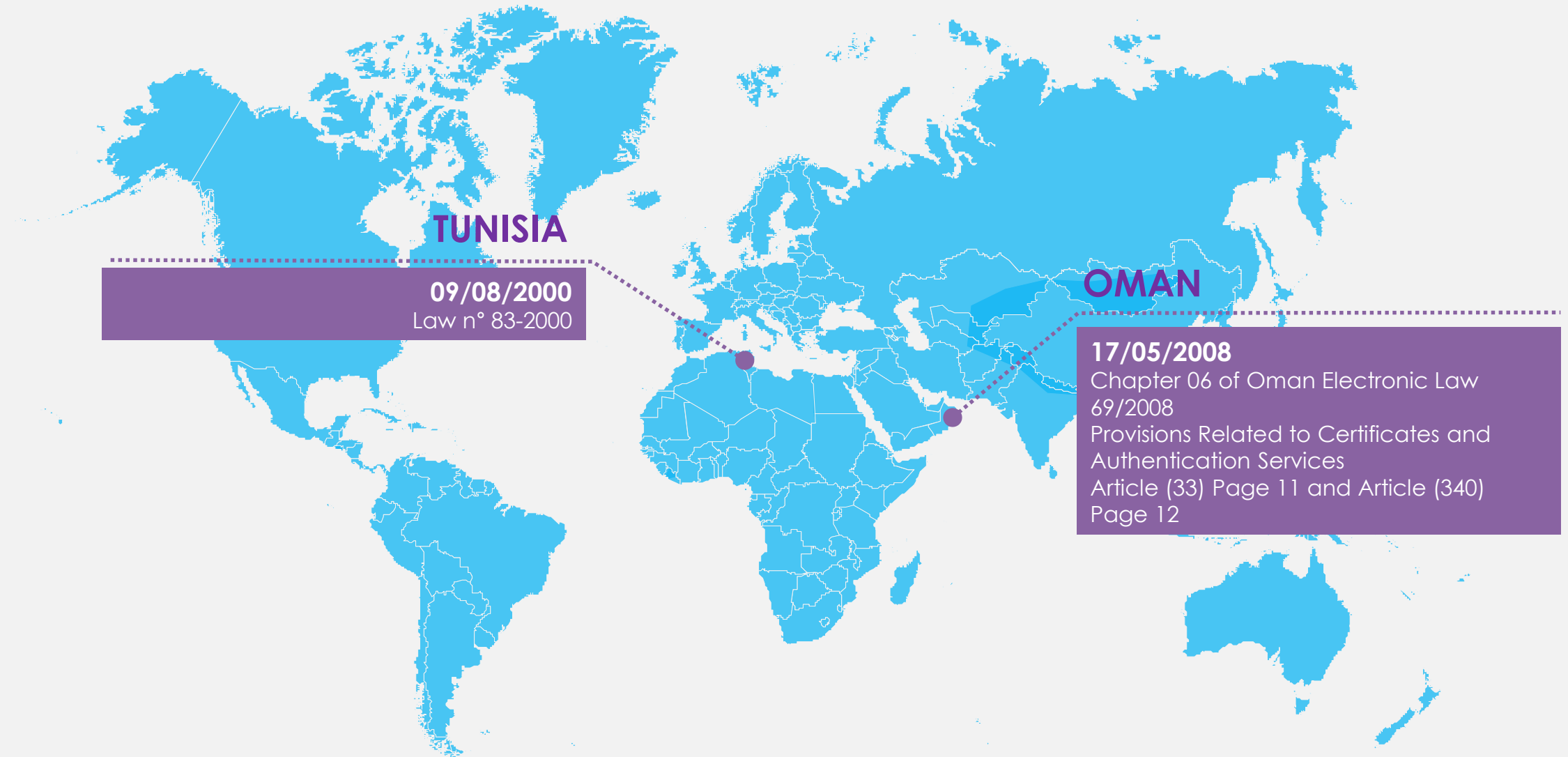


TUNISIA

09/08/2000

Law No. 2000-83 of August 9, 2000,
relating to electronic commerce
and commerce (J.O.R.T. No. 64 of
11 August 2000).

Legal frameworks for Website authentication



TUNISIA

09/08/2000
Law n° 83-2000

OMAN

17/05/2008
Chapter 06 of Oman Electronic Law
69/2008
Provisions Related to Certificates and
Authentication Services
Article (33) Page 11 and Article (340)
Page 12

Agreement on interoperability & mutual recognition

Tunisia



Agreements :
SOUDAN
BURKINA FASO

Oman



Interoperability has been successfully
done between Oman, Qatar, UAE and
Kuwait in IDP of eIDs in Staging
Environments

Expectations from AAECA-Net

- 1 SHARING** 3/6
Exchange of successful experiences/best practices & the transfer of expertise between Arab and African countries in the field of e-certification and e-trust services
- 2 LAW HARMONIZATION** 4/6
Regional & Interregional Law Harmonization of e-transactions' regulations between Arab and African countries
- 3 Regional/global trusted lists** 2/6
Regional/global trusted lists of Certification Service Providers
- 4 Inter-regional mutual recognition** 4/6
Inter-regional mutual recognition and Interoperability of e-trust services

Recommendations

- Joint agreements between all Arab countries instead of signing bilateral agreements
- Technical and legal committees from the member countries to study and develop the common legal and technical framework
- Activation of Electronic Commerce among Member States
- Recommendations, instructions and technical rules for global applications in the areas of electronic signature, encryption and secure electronic transactions
- Establish an Arab entity to approve applications operating in the fields of electronic signature, encryption and secure electronic transactions
- Strengthening electronic trust services in business within as well as between countries of the two regions



Four main categories :

In the progress in setting up a secured infrastructure to develop digital services:



Technical & Legal

1 Countries that have already established their legal frameworks and already use the e-services in different fields such as Tunisia, Egypt,

Technical

2 Countries that use only technical solutions without finishing the related legal framework such as Morocco, ...

Legal

3 Countries that have only legal frameworks with technical solutions not yet established such as Iraq, ...

4 Countries that have neither elaborated their legal frameworks nor set up the technical solutions such as Mauritania, Yemen,...

AAECA-Net MISSION



Sharing

Sharing global experiences , activities, initiatives, best practices in matter of e-transactions and e-trust services both for technical and legal frameworks.

AICTO provides an open and flexible platform for an effective communication and fruitful cooperation between members.



Coordination

Coordinating efforts and actions between all AAECA-Net members towards reducing the technical and legal gaps and to come up with global solutions

This coordination will make actions easier and more effective.



Convergence

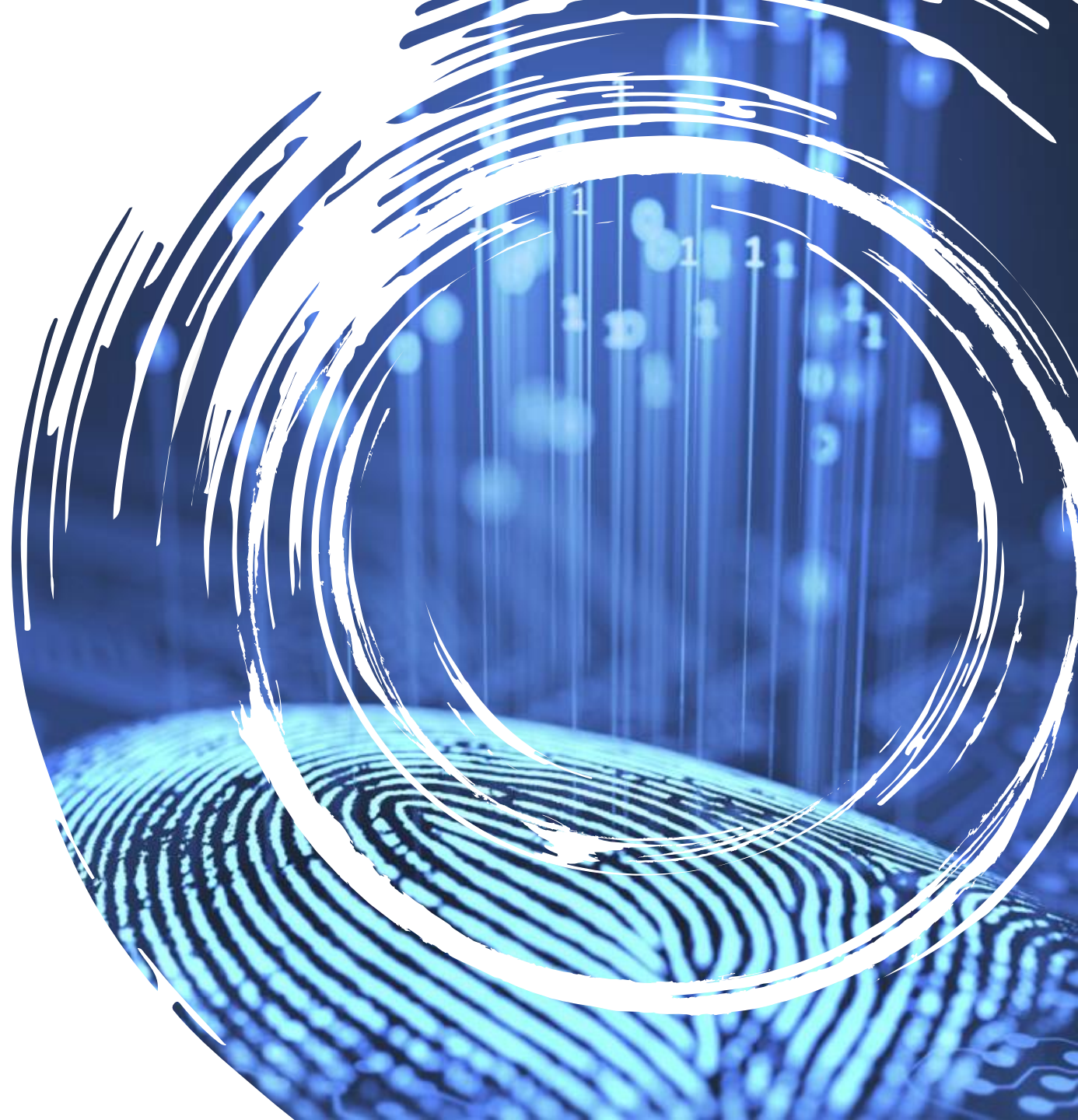
Building an upward convergence Framework to bring closer all stakeholders having the same vision and ambitions in matter of enhancing digital trust and encouraging cross-border e-transactions; within a common and holistic framework.

The way forward

Multilateral Sustainable Solutions

Digital Trust is a major priority and it requires strong Cooperation relationships at the regional and international levels in order to create collaborative approach with inputs from all key stakeholders in order to promote an open, free, and secure cyberspace for everyone everywhere

www.etrustnet.org





Join AAECA-Net
Alone, we go faster,
Together we go further
www.etrustnet.org



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