ASD-STAN

European Standards for Aerospace & Defence

EDA Materiel Standardisation Conference –
Evolution of the European Standardisation system for Defence

12 March 2014

ASD-STAN is part of ASD Community

ASD Members

ASD-STAN Standardization

ASD-CERT Certification of Aerospace Standard Products

eaqg EUROPEAN AEROSPACE QUALITY GROUP

- Austria: AAI, WKO
- Belgium: AGORIA, BSDI
- Bulgaria: BDIA
- Czech Republic: ALV
- Denmark: FAD
- Finland: AFDA
- France: GIFAS, CIDEF
- Germany: BDLI, BDSV
- Greece: HASDIG
- Ireland: FAEI
- Italy: AIAD
- The Netherlands: NAG, NIDV
- Norway: FSI
- Poland: SPPL
- Portugal: DANOTEC
- Spain: INDRA
- Sweden: SAI, SOFF
- Switzerland: SWISSMEM
- Turkey: SaSaD
- United Kingdom: ADS

more:
www.asd-europe.org

Additional ASD Company Members

Agusta Westland

Airbus Group

Airbus Defence & Space

Airbus Helicopters

BAE Systems

Dassault

Diehl

EADS

Finmeccanica

MBDA

Rheinmetall

Rolls Royce

Saab

Thales

ASD Mission

ASD's overall mission is to enhance the competitive development of the Aeronautics, Space, Defence and Security Industry in Europe in partnership with European Institutions and Member associations.

Liaison between ASD-STAN and ASD

- ASD-STAN represents all of ASD in the field of Standardization, although active membership in ASD-STAN is by a limited number of ASD members

- ASD-STAN is entitled to use the “ASD” acronym as part of its company name, considering its particular support to the ASD community

- In return ASD-STAN accepts
  - political and strategic advice from ASD
  - ASD liaison representation at the ASD-STAN Board

- Above is laid down in the:
  - ASD-STAN Statutes
  - ASD Rules of Procedure

ASD-STAN General

ASD-STAN is ...

… an international association constituted according to Belgian law

… a non-profit association "ASBL"

… part of the European Standardization System implemented by CEN*

… an affiliated company to ASD for development and publication of standards

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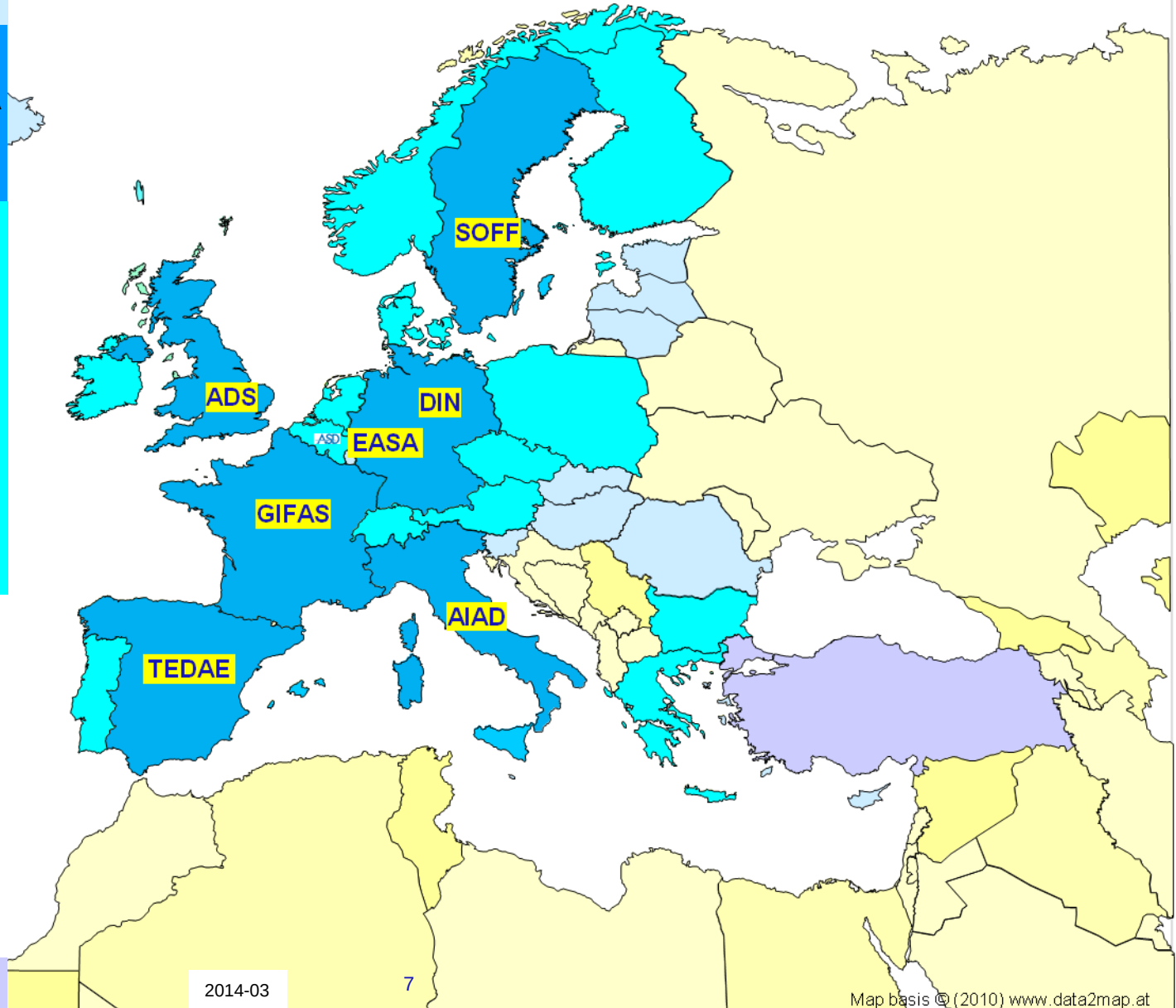
* CEN = Comité Européen de Normalisation, European Committee for Standardization

ASD-STAN Members

ASD-STAN Industry EASA	ASD (coop.)
France Germany Italy Spain Sweden United Kingdom	ASD-STAN Industry+EASA +ASD
Austria Belgium Bulgaria Czech Republic Denmark Finland Greece Ireland Netherlands Norway Poland Portugal Switzerland	ASD-STAN EASA +ASD
Cyprus Estonia Hungary Iceland Latvia Liechtenstein Lithuania Luxembourg Malta Romania Slovakia Slovenia	ASD-STAN EASA
Turkey	ASD



European Standardization Organizations

recognized by the European Commission

CEN CENELEC ETSI

Protocol ASD-STAN “Associated Body” to CEN

ASD-STAN

all ASD-STAN published prEN are transformed into EN for subsequent national publication by the CEN members

ASD-STAN Cooperation with CEN

Cooperation with CEN since 1973 (AECMA CN → AECMA-STAN → ASD-STAN)

- **1986 ASD-STAN recognised by CEN as "Associated Body" and "Sole Provider of Aerospace Standards"**
- **2005 streamlined process implemented, saving 3,5 months production time**
- **2011 implementation of CEN Livelink software supporting ASD-STAN Standards development processes / communication and improving transparency of ASD-STAN processes to CEN members**

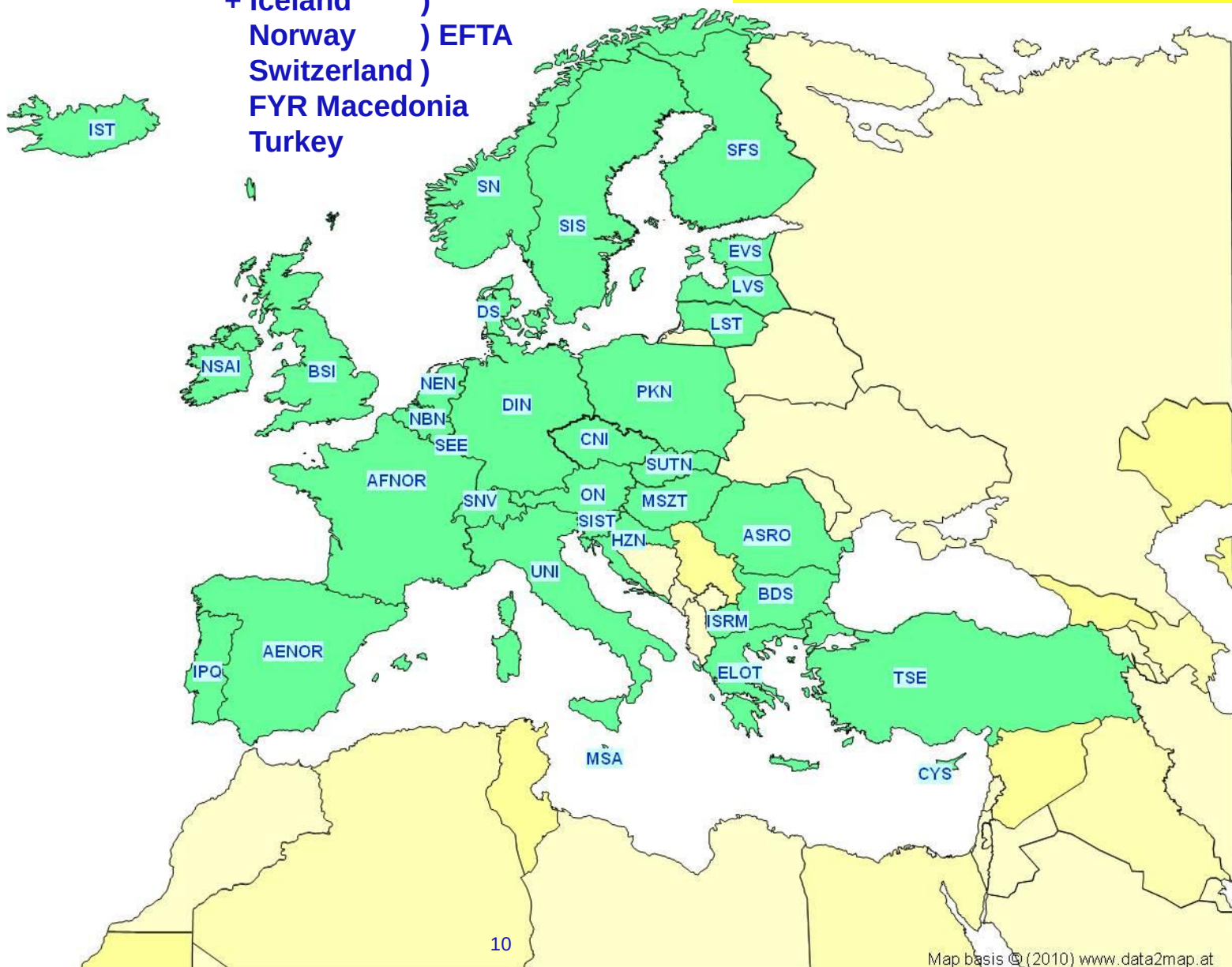
- **>2000 currently published European Standards originate from ASD-STAN**
- **about 700 ASD-STAN originating Standards currently in progress toward EN**
- **100-120 new ASD-STAN Standards per year contribute about 10% to the total CEN production**

33 CEN Members

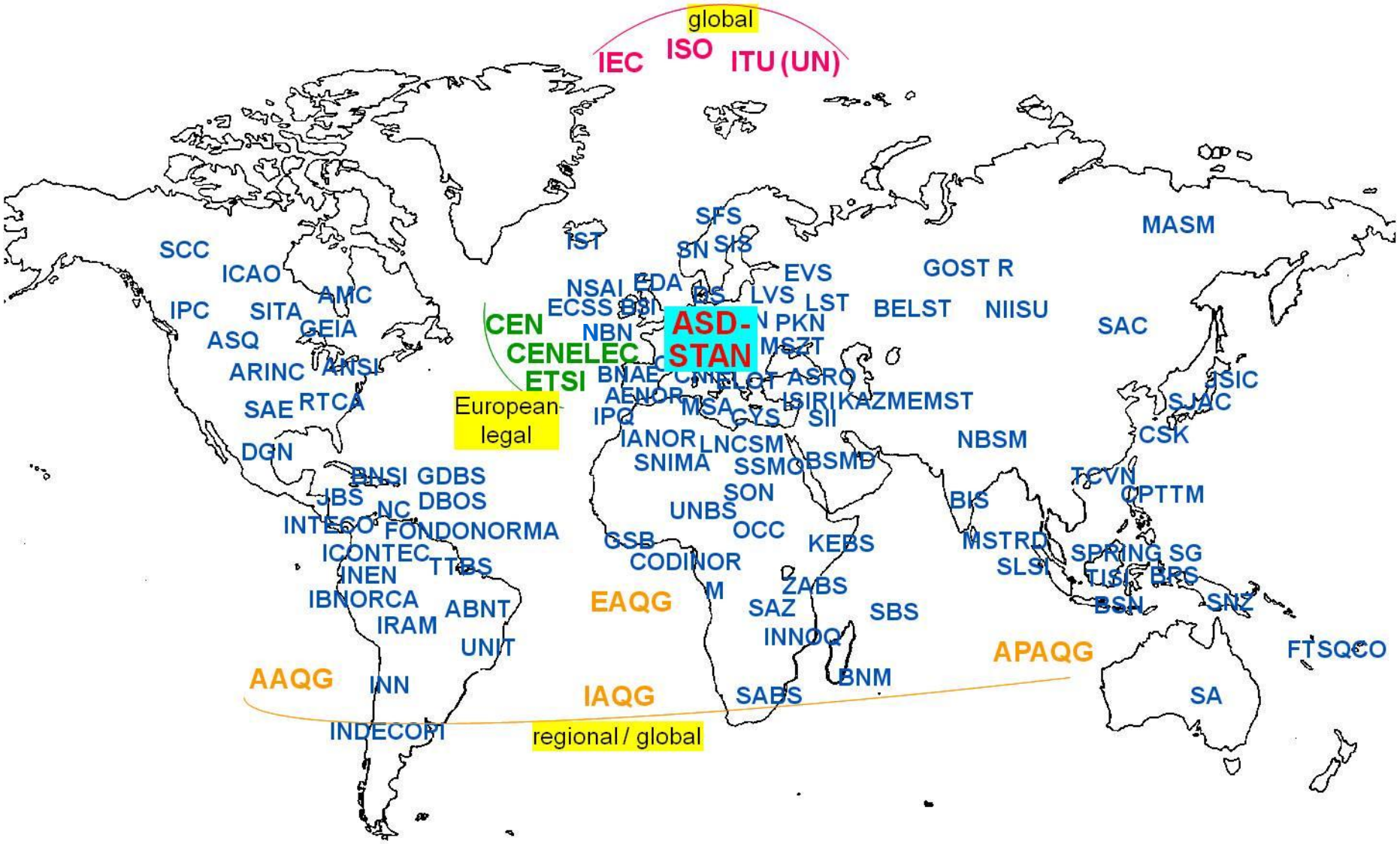
all involved in ASD-STAN standardization process

Austria
Belgium
Bulgaria
Croatia
Cyprus
Czech Republic
Denmark
Estonia
Finland
France
FYR of Macedonia
Germany
Greece
Hungary
Iceland
Ireland
Italy
Latvia
Lithuania
Luxembourg
Malta
The Netherlands
Norway
Poland
Portugal
Romania
Slovakia
Slovenia
Spain
Sweden
Switzerland
Turkey
United Kingdom

= European Union (28)
+ Iceland)
Norway) EFTA
Switzerland)
FYR Macedonia
Turkey



Hundreds of Aerospace & Defence Standardization Organizations



ASD-STAN Integration & Cooperation

European Standards System

ETSI

EN

CENELEC

transform prEN to EN

prEN

esa

EUROPEAN COOPERATION FOR SPACE STANDARDIZATION

3-party agreement transfer "space standards"
except: - standards common to space & aeronautics
- standards for parts & materials

Protocol with CEN as "Associated Body"

ASD-STAN

Cooperation Europe

EASA

EUROCONTROL

EUROCAE

ASD

ASD cooperation agreements

Cooperation worldwide

SAE INTERNATIONAL

ISO

AIA AEROSPACE INDUSTRIES ASSOCIATION

Airlines for America We Connect the World

Cooperation Defence

EDA

MSG/MSHT

JMC Joint Maintenance Committee on EDSTAR, European Defence Standards Reference System

NATO OTAN

Technical Cooperation Agreement

NSA/CSMWG (civil std.)

AC/327 WG2 (LCM-Quality)

Cooperation expected

Union of the Aviation Industry of Russia (UAI)

UAC UNITED AIRCRAFT CORPORATION

iaqg INTERNATIONAL AEROSPACE QUALITY GROUP

eaqg EUROPEAN AEROSPACE QUALITY GROUP

aaqg AMERICAS AEROSPACE QUALITY GROUP

apaqg ASIA-PACIFIC AEROSPACE QUALITY GROUP

ASD-STAN = IAQG SML Standardization Management Leader = worldwide management of development and publication processes for IAQG AeroSpace & Defence Quality Standards

ASD-STAN

Technical Organization

Secretariat

Board & General Assembly

Strategic Council

Technical Authority

9 Technical Domains

General

LOTAR **LO**ng **T**erm **A**rchiving & retrieval of digital technical product data
MoU with AIA ProSTEP, PDES

MOAA **M**odular & **O**pen **A**vionics **A**rchitecture

Aircraft Cabin Air
EU Projects

RPAS **R**emote **P**iloted **A**ir **S**ystems

RFID **R**adio **F**requency **ID**entification

Programme management & systems engineering

Seats & in-flight entertainment

Built-In tests

Electrical

Electrical network

Cables & stripping tools

Elements of connection

Relays

Protection devices

Lighting

Batteries

Installation technologies

Data bus

Optical

IMA **I**ntegrated **M**odul**A**r Packaging
EU PRIMAE project

Mechanical

Parts of mechanical systems

Fasteners

Fluids systems

Metallic & Non-Metallic Material

Aluminium

Titanium

Steels

Welding/brazing

Test Methods

Surface treatments metallic

Elastomers/sealants

Composite material

Adhesives / honeycomb

Paints/varnishes & Surface treatment non-metallic

Super alloy

Textiles

Ceramics

Quality

Support to EAQG/IAQG
MoU with SAE, Service Agreement 'SML' with IAQG

Non-Destructive Testing Personnel
MoU with AIA

Environment

Environmental aspects in standardization

Chemical substances declaration Standards (REACH)
MoU with SAE

E-Standards

SSG **S**trategic **S**tandards **G**roup for E-Business (BoostAero, STEP, LOTAR ebXML, etc.)
MoU with AIA

Product Support

cooperation with ASD PSC & STEMG

training on ASD-STE100 **S**implified **T**echnical **E**nglish
MoU with Italian UNINETTUNO University

Space

ASD-STAN aspects are covered by Eurospace Standardization Panel

42 Sectors

Secretarial support to Domains & Sectors by ASD-STAN member associations experienced with particular rules for standards development and publication

Domains in preparation:

- Industry/EDA support to EUROCONTROL "Action Plan for SESAR (**S**ingle **E**uropean **S**ky **A**TM [Air Traffic Management] **R**esearch) deployment phase, civil-military standards development"
- Support to EASA – standards for referencing in EASA Acceptable Means of Compliance, Guidance Material, Certification Specifications

ASD-STAN Liaison Representation in ISO

• ISO/TC 20	Aircraft and space vehicles
• ISO/TC 20/SC 1	Aerospace electrical requirements
• ISO/TC 20/SC 4	Aerospace fastener systems
• ISO/TC 20/SC 14	Space systems and operations
• ISO/TC 79	Light metals and their alloys
• ISO/TC 155	Nickel and nickel alloys
• ISO/TC 155/SC 2	Wrought and cast nickel and nickel alloys
• ISO/TC 184	Automation systems and integration
• ISO/TC 184/SC 1	Physical device control
• ISO/TC 184/SC 4	Industrial data
• ISO/TC 184/SC 5	Key performance indicators for manufacturing operations management

ASD-STAN

iaqg INTERNATIONAL AEROSPACE QUALITY GROUP

International Aerospace Quality Group

IAQG General Assembly → Supplier Forums

aaqg (Americas)

21 AAQG members

SAE INTERNATIONAL

eaqg (Europe)

33 EAQG members

ASD-STAN

apaqg (Asia Pacific)

13 APAQG members

(SJAC)

JAQG 航空宇宙品質センター Japan Aerospace Quality Group

regional support towards standards development and implementation

ASD-STAN acts as IAQG Standardization Management Leader, coordinating all processes for IAQG Quality Standards development

IAQG Strategic Focus

Relationship Growth Strategy

- Civil Authorities - Production
- Space
- Defense
- Maintenance, Repair & Overhaul
- Trade Associations

Improvement Strategy

- Requirements
- People Capability
- Product & Supply Chain Improvement
- Performance

IAQG Operating Management System
IAQG Other Party Management Team
Integration Team

ASD-STAN

IAQG Members

Americas

- Aerojet
- ATK
- Ball Aerospace
- Boeing
- Bombardier
- Cessna Textron
- Eaton
- Embraer
- GE Aviation
- General Dynamics/Gulfstream
- Honeywell
- Lockheed Martin
- Moog
- Northrop Grumman
- Parker Aerospace
- Raytheon
- Rockwell Collins
- Rolls-Royce North America
- Spirit AeroSystems
- Triumph Group
- UTC

Europe

- Advanced Electronics Company
- AgustaWestland
- Airbus Group
- Airbus Defence & Space
- Airbus Helicopters
- Alenia Aermacchi
- Astrium
- Avio
- BAE Systems
- Dassault Aviation
- EADS
- ELBIT Systems
- FACC
- Fokker Aerospace
- GKN Aerospace
- HEGAN
- Israel Aerospace Industries
- MBDA
- Meggitt
- Messier-Bugatti-Dowty
- MTU Aero Engines
- PFW
- RAFAEL
- Rolls-Royce
- SAAB Aerospace
- SAFRAN
- SAGEM
- SNECMA
- SONACA
- THALES
- Turbomeca
- United Aircraft Corporation
- Zodiac Aerospace

Asia Pacific

- AIDC
- AVIC
- COMAC
- DSO National Laboratories
- EGAT
- Fuji Heavy Industries
- Indonesian Aerospace
- IHI
- Kawasaki Heavy Industries
- KAL-ASD
- Korea Aerospace Industries
- Mitsubishi Heavy Industries
- SMIC

IAQG Quality Standards for Aerospace & Defence

Oversight of Certification Scheme

9104-1 (organization) | 9104-2 (surveillance/certs) | 9104-3 (auditors)

Certification Scheme QMS Standards

- 9100 (General) Quality Management System
- 9110 (Maintenance)
- 9120 (Distributors)

9101 Audit Process

ICOP Certification Scheme

				9115 Software	9137 AQAP align.					91XX APQP/PPAP
9102 FAI	9103 Key Char	9107 DDA	9114 Direct ship	9131 N/C Doc	9132 Marking	9133 Sup.Qual.	9138 Stat Prod Ac	9162 Self Ver		

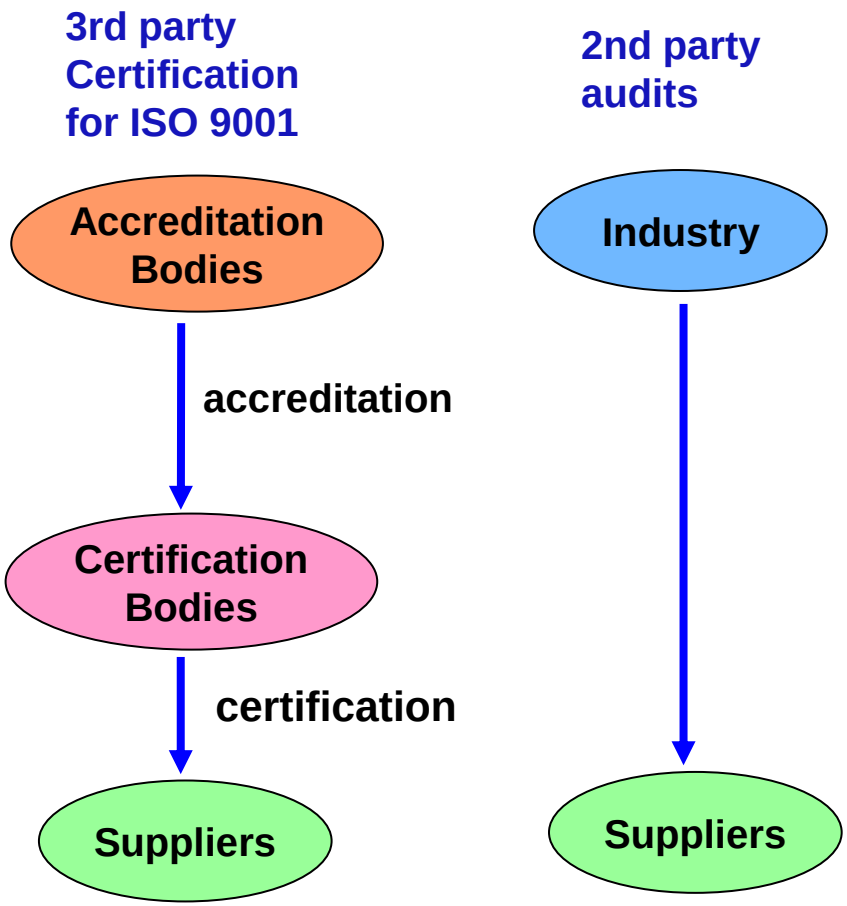
Supply Chain Management Handbook (SCMH)

1	2	3	4	5	6	7	8	9	10	11
Sales & Scheduling	Requirement Flow down	Design & Developm't	Sourcing selection	Plant, skills & planning	Order Mgt & logistics	Manufact. & Inspection	Supplier Mgt.	Control of N/C mat'l C/A & P/A	Customer Support	Business Processes

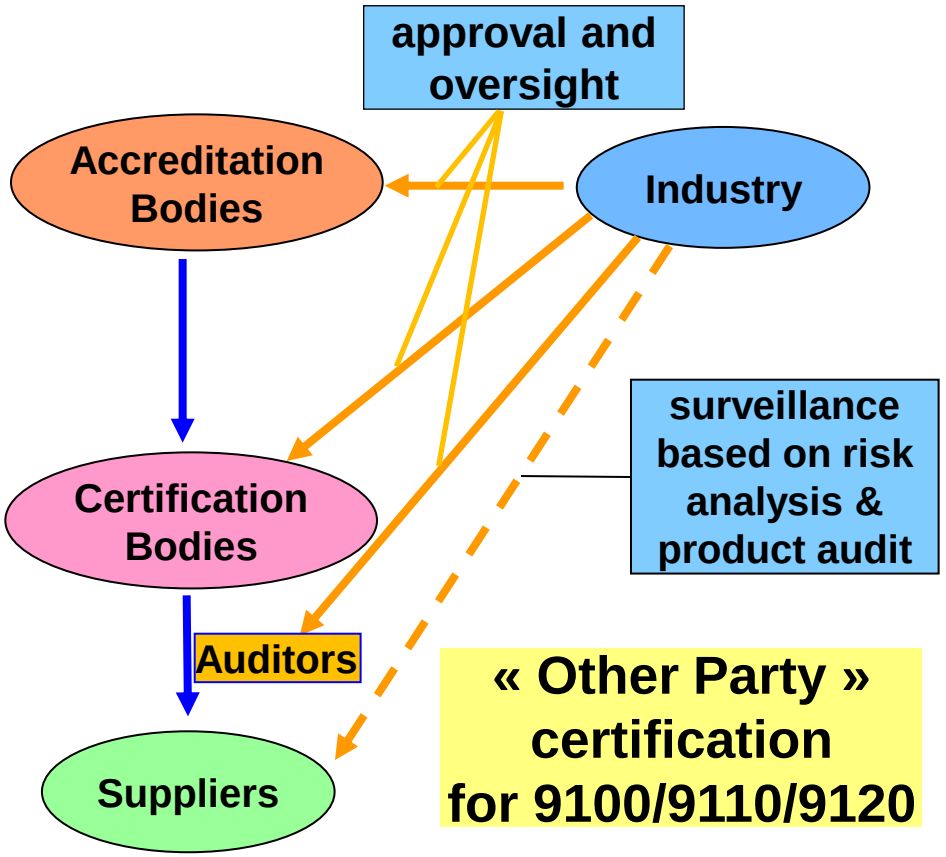
ASD-STAN

IAQG ICOP Industry Controlled Other Party scheme

"traditional" scheme



"ICOP" scheme



« Other Party » certification for 9100/9110/9120

Registration of Certificates in OASIS data base
www.sae.org/oasis

ASD-STAN

Conclusion

ASD-STAN, Industrial Standardization Organization recognized by CEN

- **develops Standards for Aerospace & Defence products**
- **cooperates with European and International Standardization Organizations**
- **coordinates the worldwide processes for Aerospace & Defence Quality Standards development**
- **cooperates with EDA and NATO in respect of application of civil standards in defence environment**
- **supports the assignment of standards as Best Practice Standards in EDA EDSTAR**
- **strongly supports the application of civil standards in defence environment**

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ASD-STAN Standards for Industry from Industry