



What are normative and informative provisions and what do they mean in practice

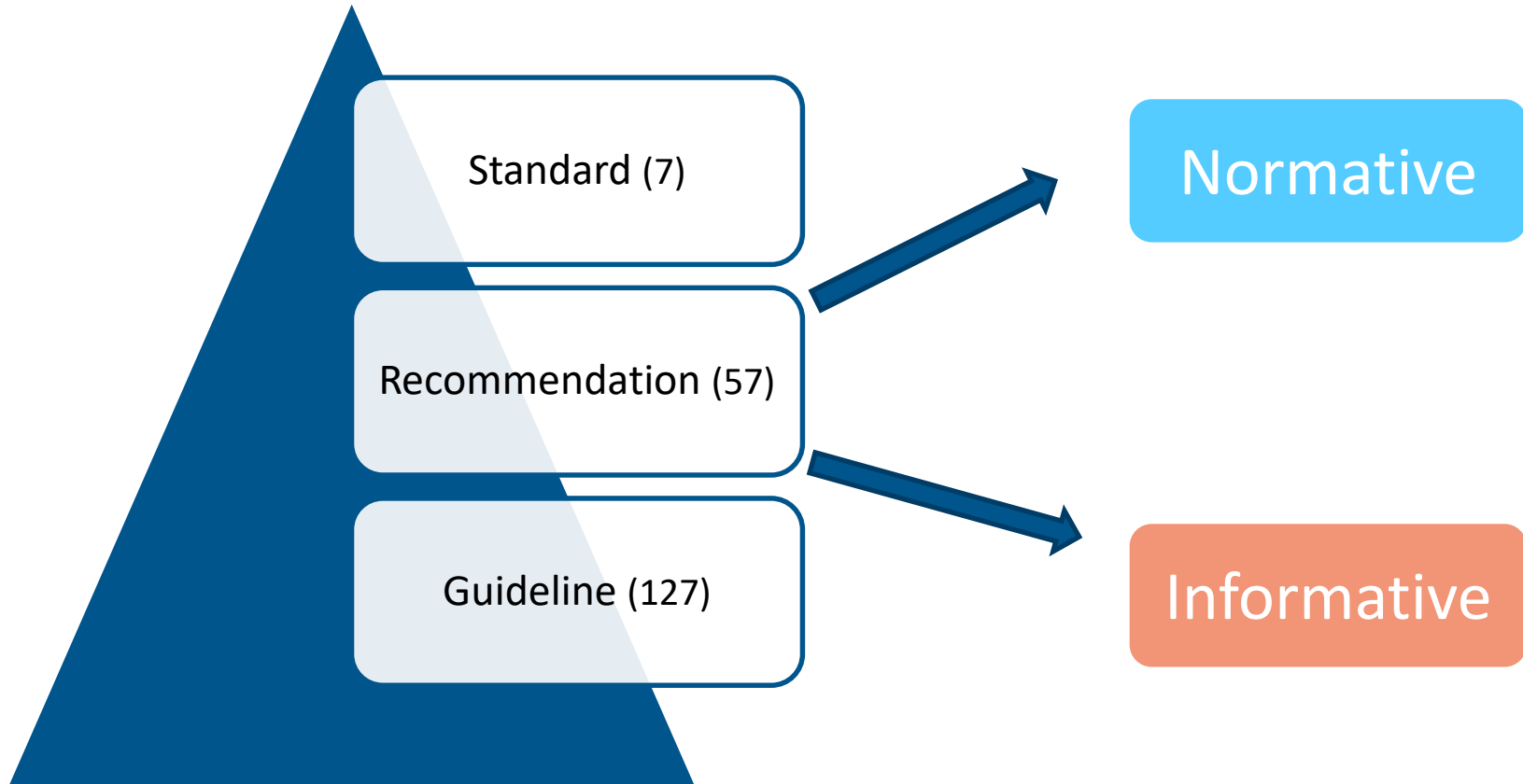
Minsu JEON, Technical Operations Manager



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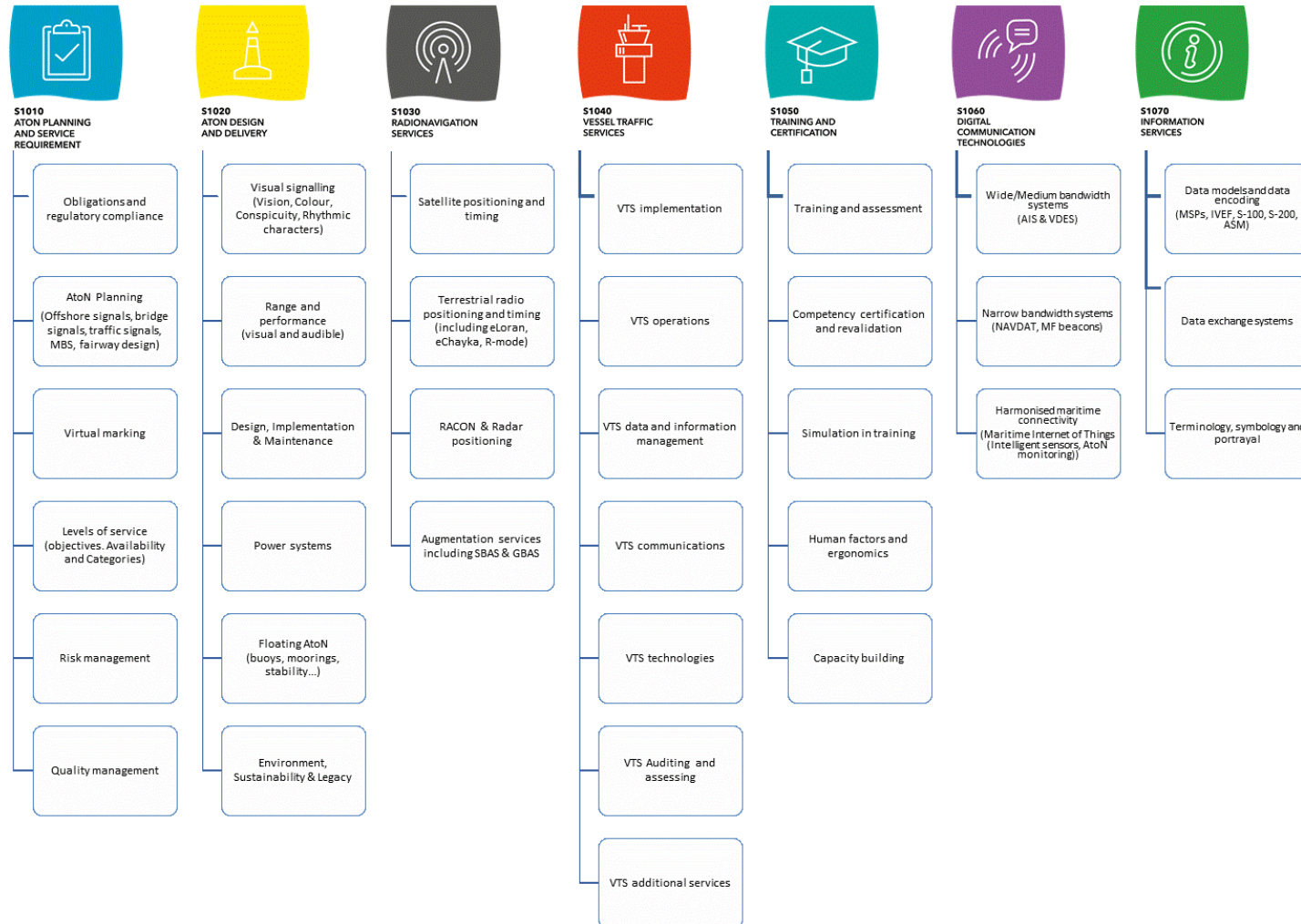
- Structure of technical guidance documents
 - IALA Standards
 - IALA Recommendations
 - IALA Guidelines
 - Committee Work Programme
 - Normative and Informative
 - Standards 1010-1070
-

Structure of technical guidance documents





IALA Standards





IALA Recommendations

MBS (Maritime Buoyage System)



IALA RECOMMENDATION

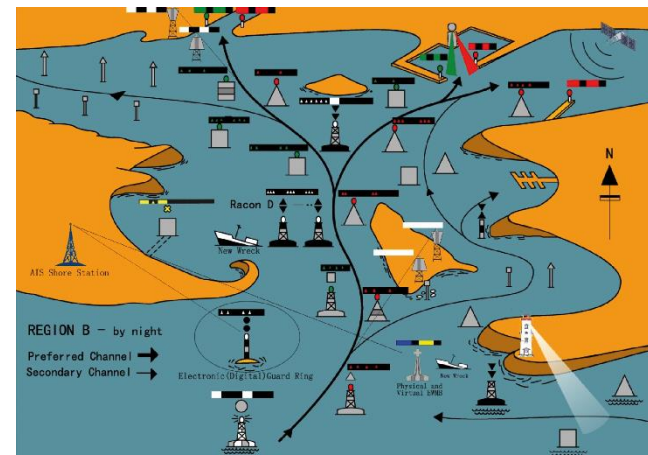
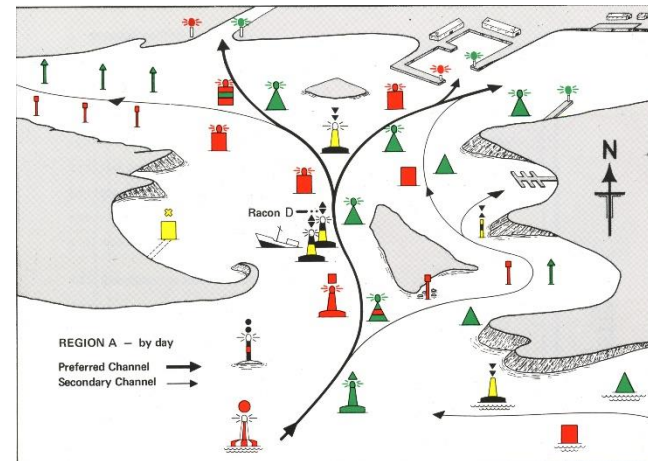
R1001

THE IALA MARITIME BUOYAGE SYSTEM

Edition 1.0

June 2017

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Association Internationale de Signalisation Maritime





IALA Guidelines



IALA GUIDELINE

G1004
LEVEL OF SERVICE

Edition 3.0
June 2017

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IALA GUIDELINE

1005
CONTRACTING OUT AIDS TO NAVIGATION
SERVICES

Edition 2.0
December 2005

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Committee “Work Programme”

- 4 Committees work items for 2018-2022
- Approved by Council
- Showing required new and amended Recommendations
 - To put the Standards-Recommendations hierarchy in acceptable order
 - And also showing what new or amended Guidelines were needed

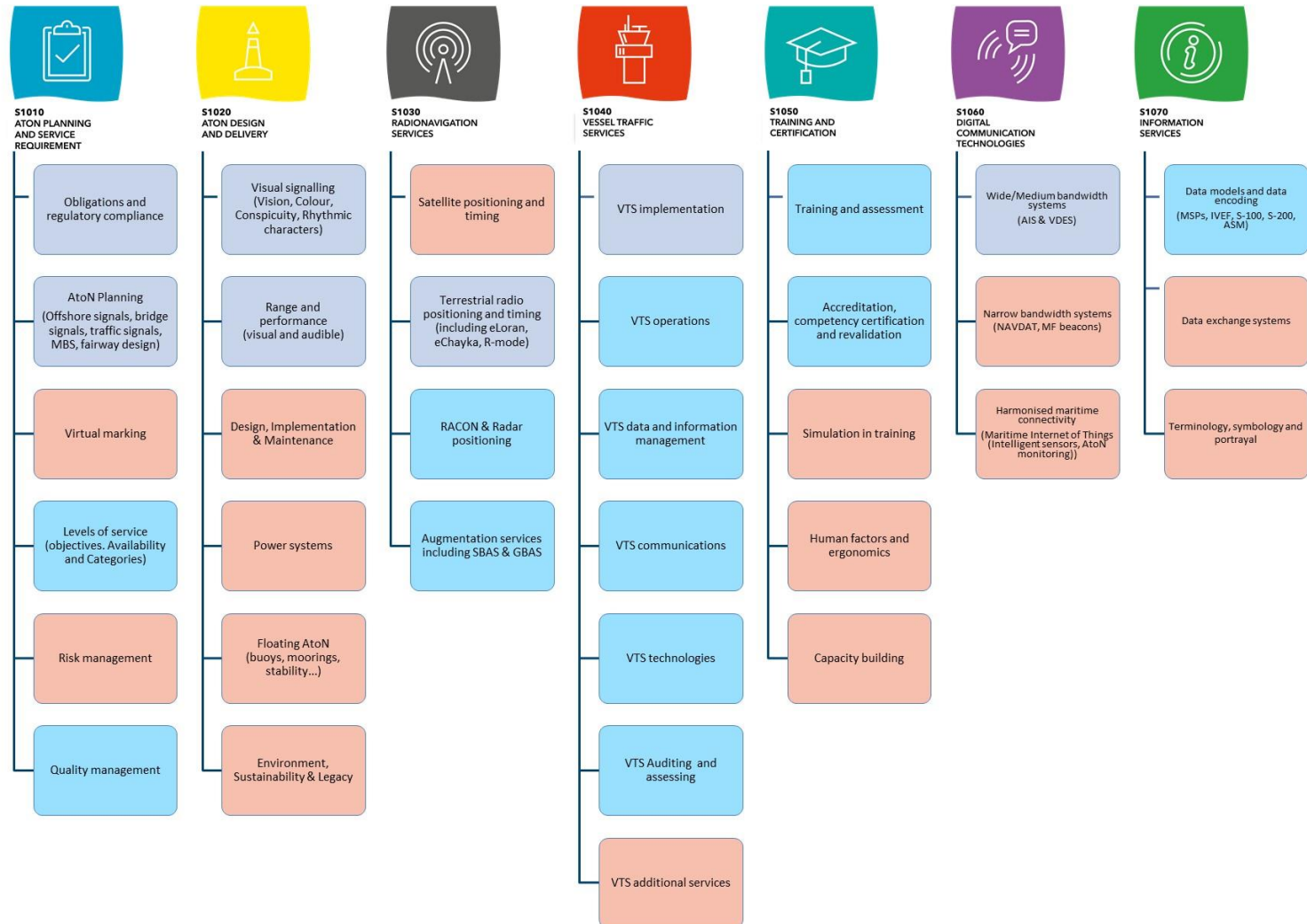
Standard	Scope	Recommendation					Guideline				Remarks
		Ref.	Title	TC	Nor/Inf	Work/Status	Ref.	Title	TC	Work/Status	
IALA1010 AtoN Planning and Service Requirements	1.1 Aids to Navigation planning	R1001	The IALA Maritime Buoyage System	ARM	Nor		[G]1078	The Use of AtoN in the Design of Fairways (June 2011)	ARM	planned	Revision and gap analysis of related documents
							New	Develop guidance for navigators on the use of AtoN	ARM	planned	
		R0111 (E-111)	Port Traffic Signals	ENG	Nor		New	Guideline on Port Traffic Signals	ENG		
		R0113 (O-113)	The Marking of Fixed Bridges and Other Structures over Navigable Waters	ARM	Nor			No document			
		R0139 (O-139)	The Marking of Man-Made Offshore Structures	ARM	Nor	planned	new	o meet the identified need of competent authorities, administrations, licence providing organizations and for general and/or detailed guidance on marking requirements of man-made offshore structures o provide potential solutions for marking, taking into account various local or regional circumstances o lead to a worldwide harmonized marking of these structures benefit the safe and efficient navigation of vessels visiting the mentioned areas and the protection of the marine environment.	ARM	planned	



Recommendations - Normative and Informative

- **Normative provision** are those with which it is necessary to conform in order to claim compliance with the Standards
 - **Informative provisions** are those which specify additional desirable practices but with which it is not necessary to conform in order to claim compliance with the Standards
-

IALA Standards (Normative and Informative)





51010



Marine AtoN planning and service requirements

Obligations and
regulatory
compliance

AtoN Planning

Levels of service

Quality management

Risk management

Virtual marking

Normative

R1001	IALA MBS and other AtoN
E-111	Port Traffic Signals
O-113	The Marking of Fixed Bridges and Other Structures over Navigable Waters
O-139	The Marking of Man-Made Offshore Structures
R0130(O-130)	Categorisation and Availability Objectives for Short Range AtoN
O-132	Quality Management for AtoN Authorities
O-118	The Recording of AtoN Positions
R1002	Risk Management for Marine AtoN and Related Services
R1015	Marking of Hazardous Wrecks
R1016	Mobile Marine Aids to Navigation (MAtoN)

Informative

R1010	The Involvement of Maritime Authorities in Marine Spatial Planning
O-143	Provision of Virtual AtoN
R1003	Maritime Data Sharing for Risk Assessment and Analysis
O-138	The Use of GIS and Simulation by AtoN Authorities
R1009	Disaster Recovery



Marine AtoN design and delivery

Visual signalling

Range and
performance

Design,
Implementation &
Maintenance

Power systems

Floating AtoN

Environment,
Sustainability &
Legacy

Normative

R0108(E-108)	The Surface Colours used as Visual Signals on AtoN
E-110	Rhythmic Characters of Lights on AtoN
R0201(E200-1)	Marine Signal Lights – Colours
R0106(E-106)	The Use of Retroreflecting Material on Marine Aids to Navigation Marks within the IALA MBS
O-104	Off Station Signals for Major Floating Aids
R0202(E-200-2)	Marine Signal Lights - Calculation, Definition and Notation of Luminous Range
E-200-3	Marine Signal Lights – Terms of Measurement
R0204(E-200-4)	Marine Signal Lights – Determination and Calculation of Effective Intensity

Informative

E-109	The Calculation of the Range of a Sound Signal
A-126	The use of the Automatic Identification System (AIS) in AtoN
E-107	Moorings for Floating AtoN
R1005	Conserving the Built Heritage of Lighthouses and other AtoN
R1004	Environmental Management in the Provision of AtoN



Radionavigation services

RACON & Radar
positioning

Augmentation
services including
SBAS & GBAS

Satellite
positioning and
timing

Terrestrial radio
positioning and
timing

Normative

R-101	Marine Radar Beacons (racons)
R-115	The Provision of Maritime Radionavigation Services in the Frequency Band 283.5-315 kHz in Region 1 and 285-325 kHz in Region 2 and 3
R-121	The Performance and Monitoring of DGNSS Services in the Frequency Band 283.5 - 325 kHz

Informative

R-129	GNSS Vulnerability and Mitigation Measures
R-150	DGNSS service provision upgrade and future use



Vessel traffic services

VTS implementation

VTS operations

VTS data and
information
management

VTS communications

VTS technologies

VTS Auditing and
assessing

VTS additional
services

Normative

V-119	The Implementation of Vessel Traffic Services
V-127	Operational Procedures for Vessel Traffic Services
V-125	The Use and Presentation of Symbolology at a VTS Centre
R1014	Portrayal of VTS Information
R1012	VTS Communications
V-128	Operational and Technical Performance of VTS Systems
R1013	Auditing and Assessing Vessel Traffic Services

Informative

V-102	The Application of the 'User Pays' Principle to Vessel Traffic Services
V-120	Vessel Traffic Services in Inland Waters



Training and certification

Training and
assessment

Accreditation,
competency
certification and
revalidation

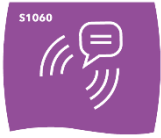
Simulation in training

Human factors and
ergonomics

Capacity building

Normative

R0141(E-141)	Training and Certification of AtoN Personnel
R0103(V-103)	Training and Certification of VTS Personnel
O-149	Accreditation of Training Organisations



Digital communication technologies

Wide/Medium
bandwidth systems
(AIS & VDES)

Harmonised
maritime
connectivity

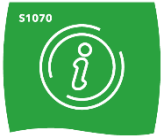
Narrow bandwidth
systems
(NAVDAT, MF
beacons)

Normative

R1007	VDES for Shore Infrastructure
A-123	The Provision of the Shore Based Automatic Identification System (AIS)

Informative

A-124	The AIS Service
e-NAV-140	The Architecture for Shore-based Infrastructure 'fit for e-Navigation'
e-NAV-148	The Need to Implement Regional e-Navigation Solutions Based on International Standards



Information services

Data models and data encoding

Data exchange systems

Terminology, symbology and portrayal

Normative

e-NAV-144	Harmonised Implementation of Application Specific Messages (ASM)
R0147(e-NAV-147)	Product Specification Development and Management
V-145	The Inter-VTS Exchange Format (IVEF) Service

IALA Standards (Normative and Informative)

