

Italian Defense General Staff C4I Systems and Transformation Division



***SOFTWARE DEFINED RADIO
PROGRAMME DIVISION***

Lt.Col. (Army) Alfonso Aiello

Madrid, May 23rd 2018

SDR Tactical Communications Workshop

The ITALIAN SDR Programme

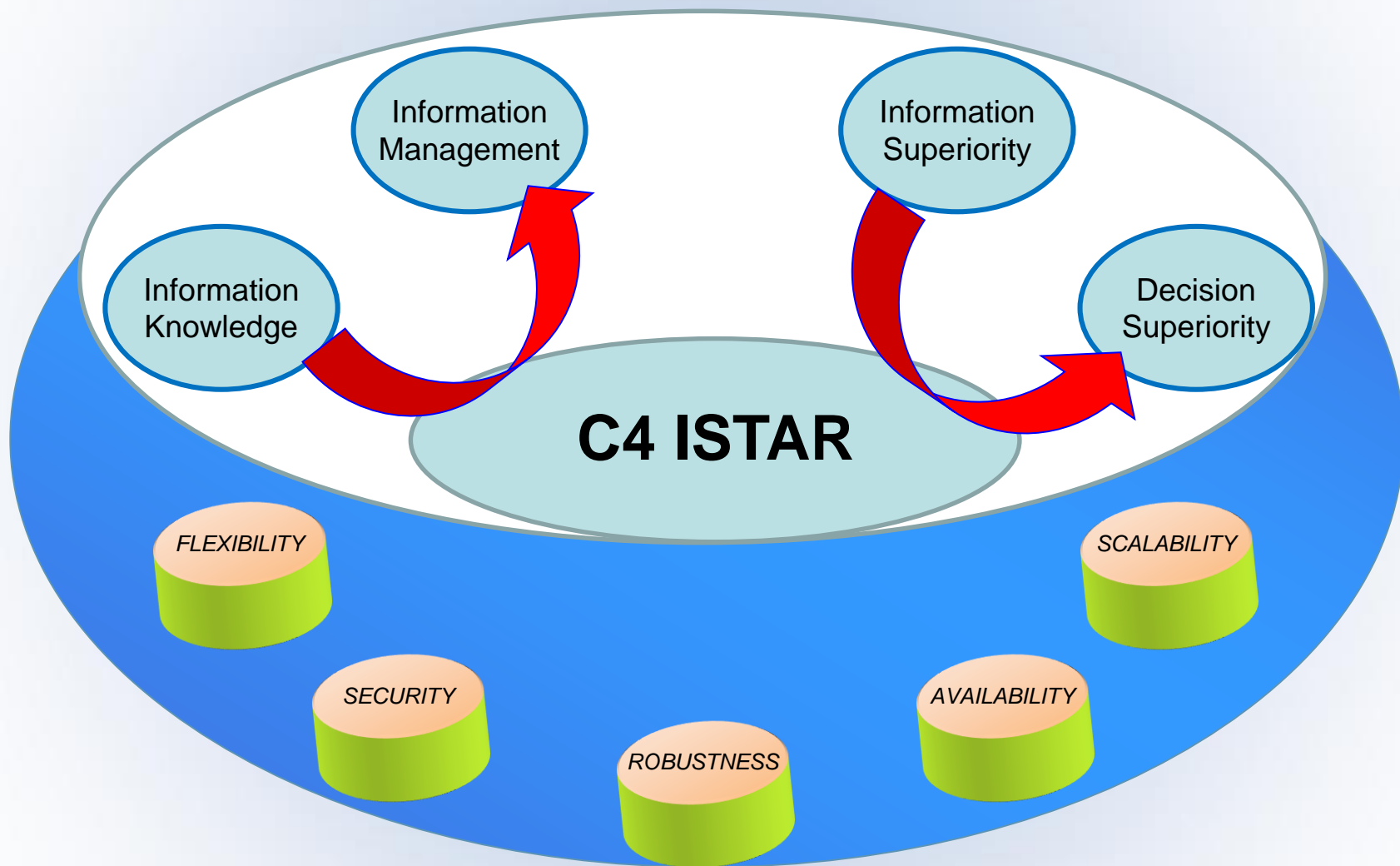


National vision on future
Operational Scenarios

- ❖ **Introduction**
- ❖ **National Operational Requirement**
- ❖ **National SDR Projects**
- ❖ **International SDR Cooperation**

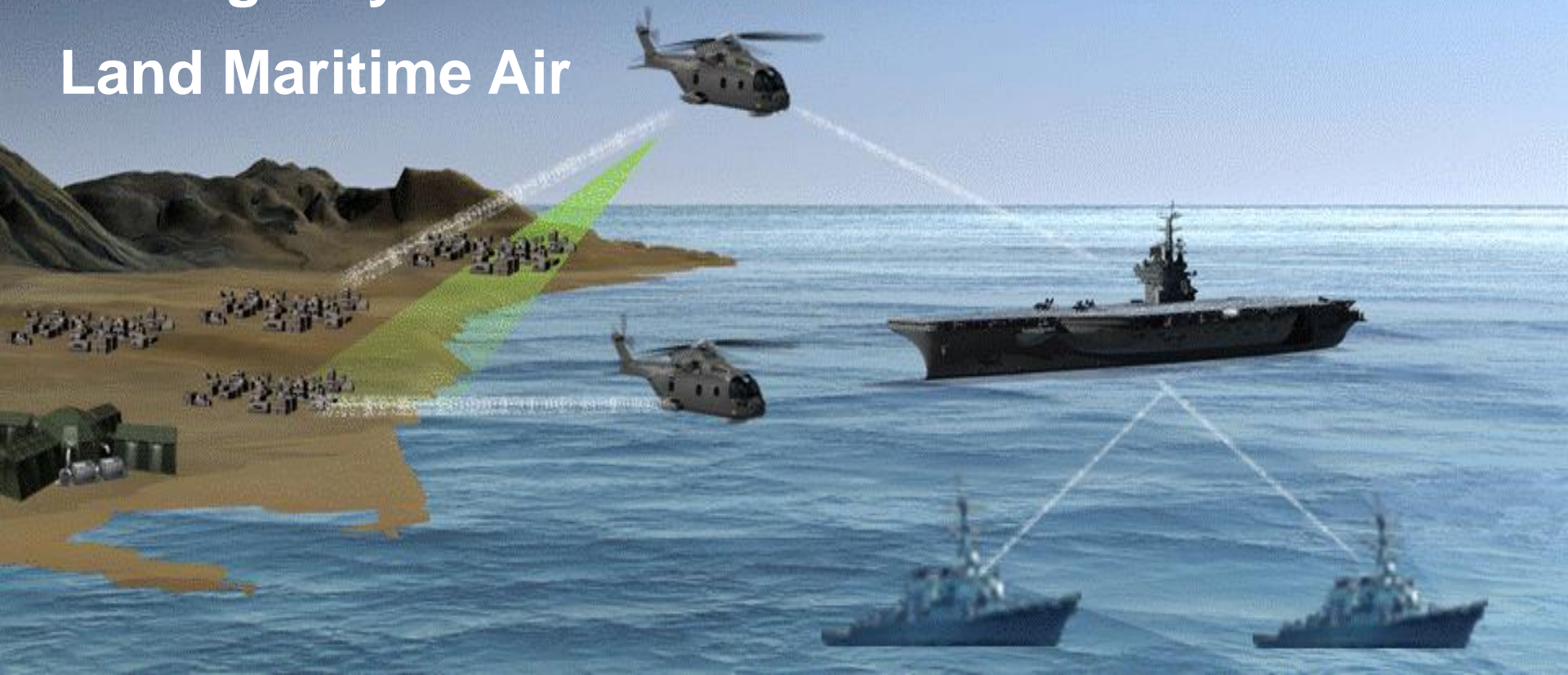
- ❖ **Introduction**
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INTRODUCTION

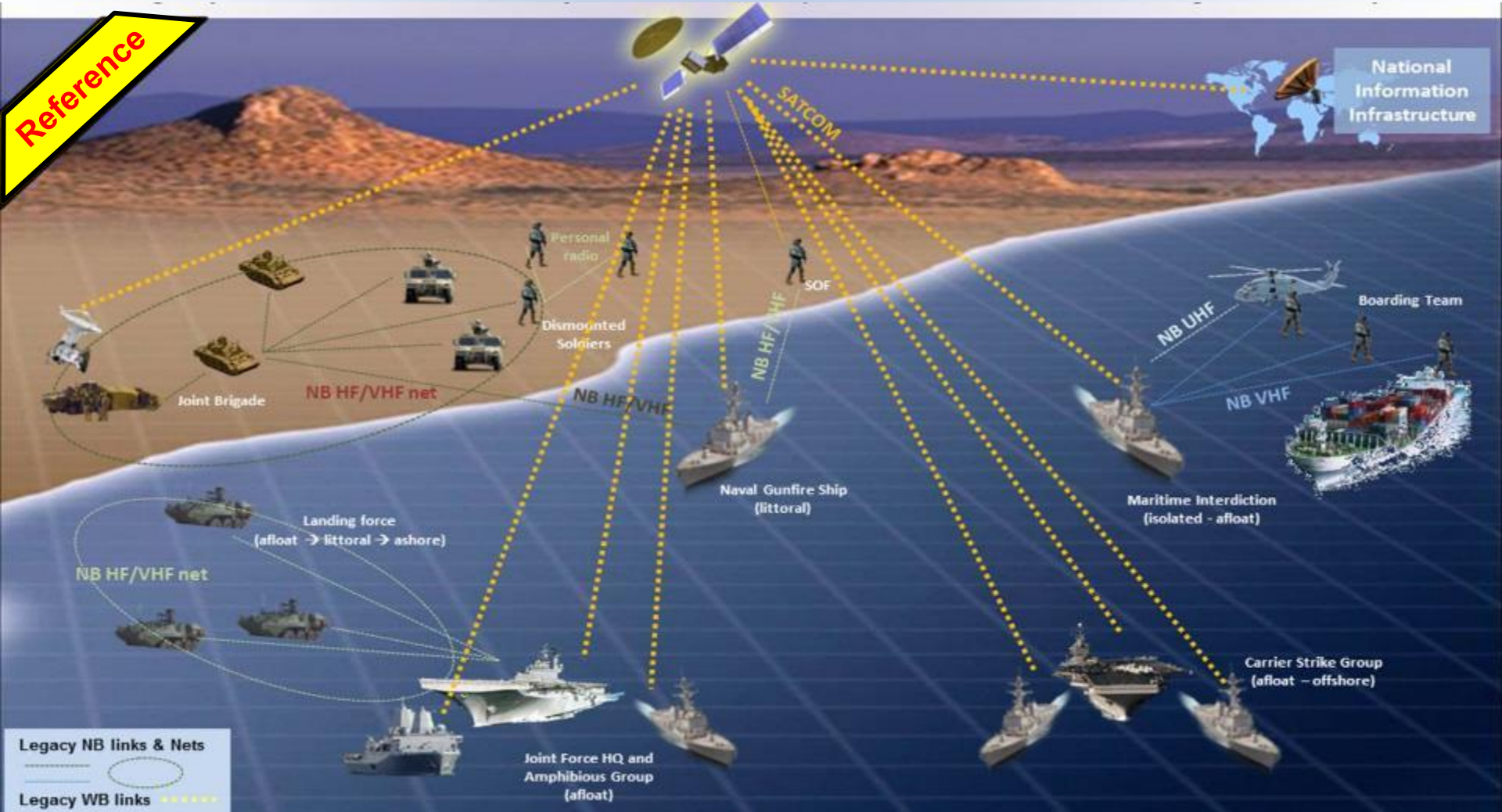


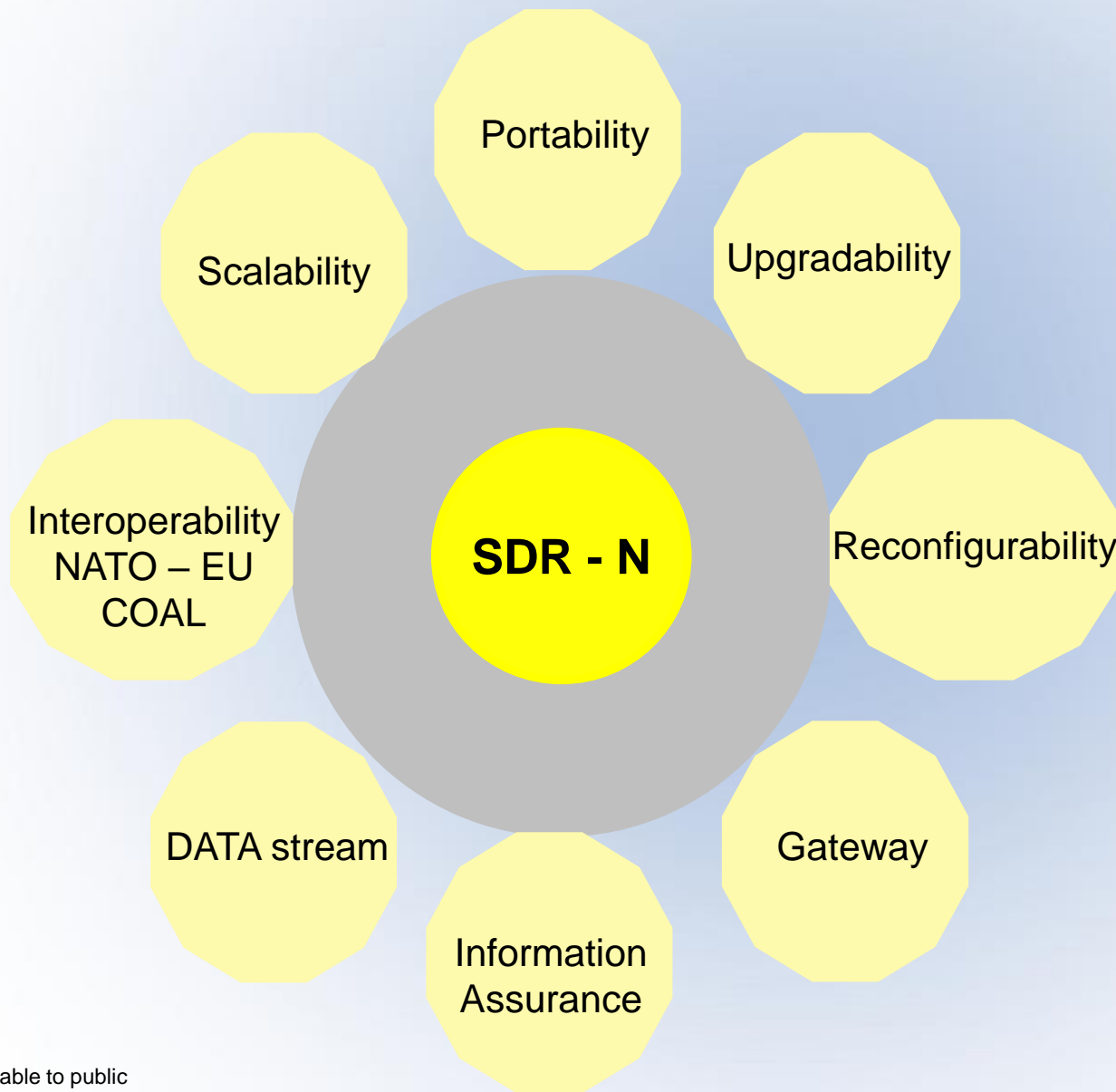
- ❖ Introduction
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Joint & Multinational
Projection of the assets
Interagency
Land Maritime Air



Littoral Environment

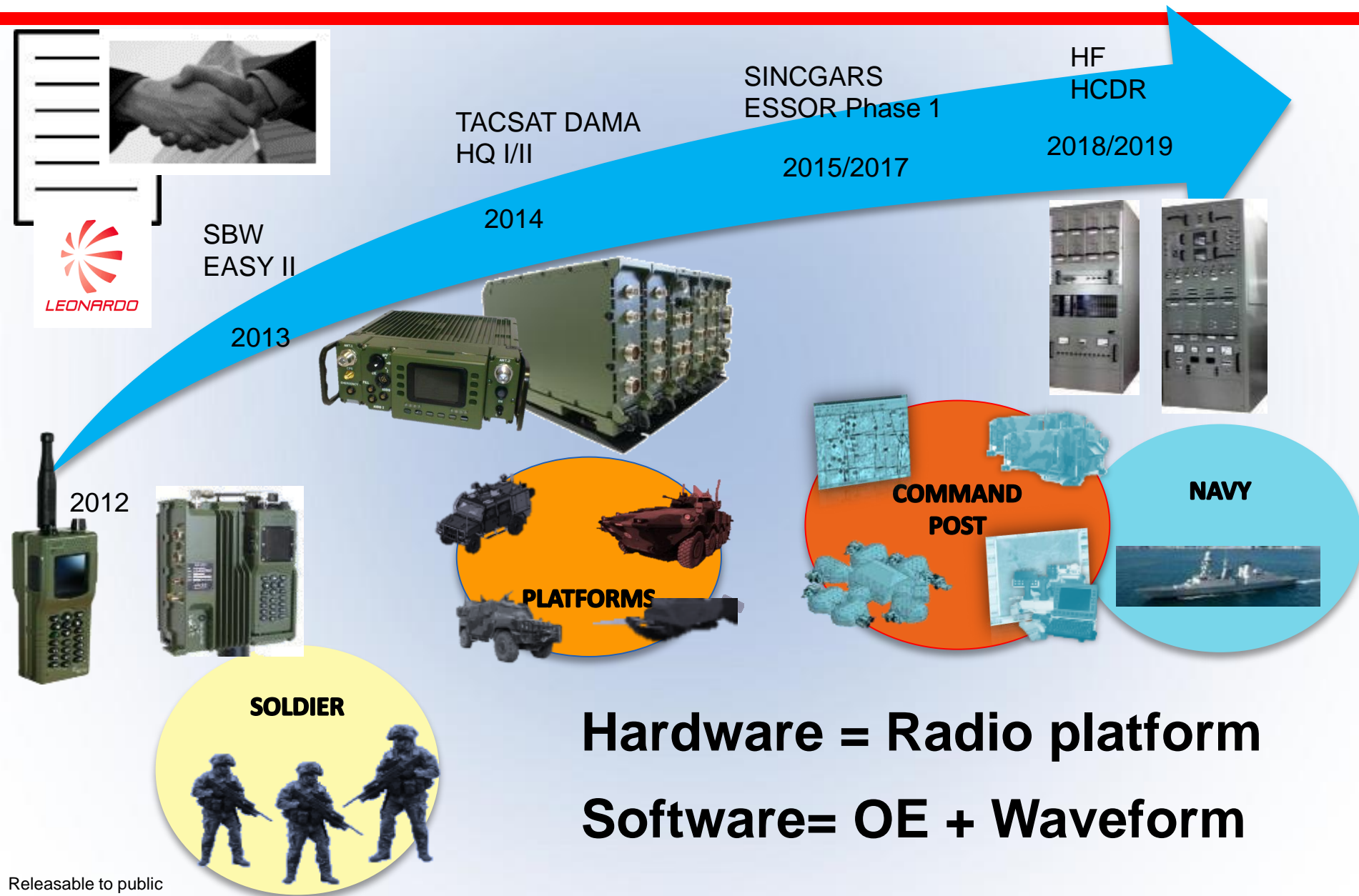




flexibility

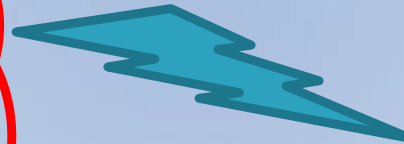
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- ❖ International SDR Cooperation

National SDR Projects



legacy & future

Future Soldier



VHF-UHF



HF WF
ESSOR HDR WF
HCDR WF



SWB WF
VLOS WF
SINGARS WF
HQ I/II WF
TACSAT WF



SWB WF
VLOS WF

F NEC





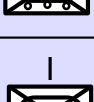
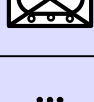
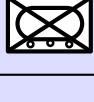
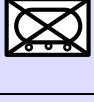





Legacy

			<p>SINGGARS 635/V</p>		<p>HCDR</p>		<p>CNR 2000</p>		<p>SRT-651</p>		<p>AN/PRC -148 AN/PRC-152</p>		<p>TSM 305</p>			
			<p>SINGGARS 634/V</p>				<p>RH4/RH5</p>				<p>TST-211B</p>					
	<p>PRR</p>		<p>IPR</p>		<p>SINGGARS 633/P</p>											
	Tipo		Dismounted		Vehicular				G-A-G		SATCOM					
	Band		UHF		VHF		UHF		HF		UHF		UHF		X - Ku	



F NEC



     							 		
									 MANPACK 2 CH
	 DISMOUNTED SOLDIER								
	Tipo	Dismounted		Vehicular			G-A-G	SATCOM	
	Band	UHF	VHF	VHF	UHF	HF	UHF	UHF	X - Ku

Naval Program

OSV



LSS



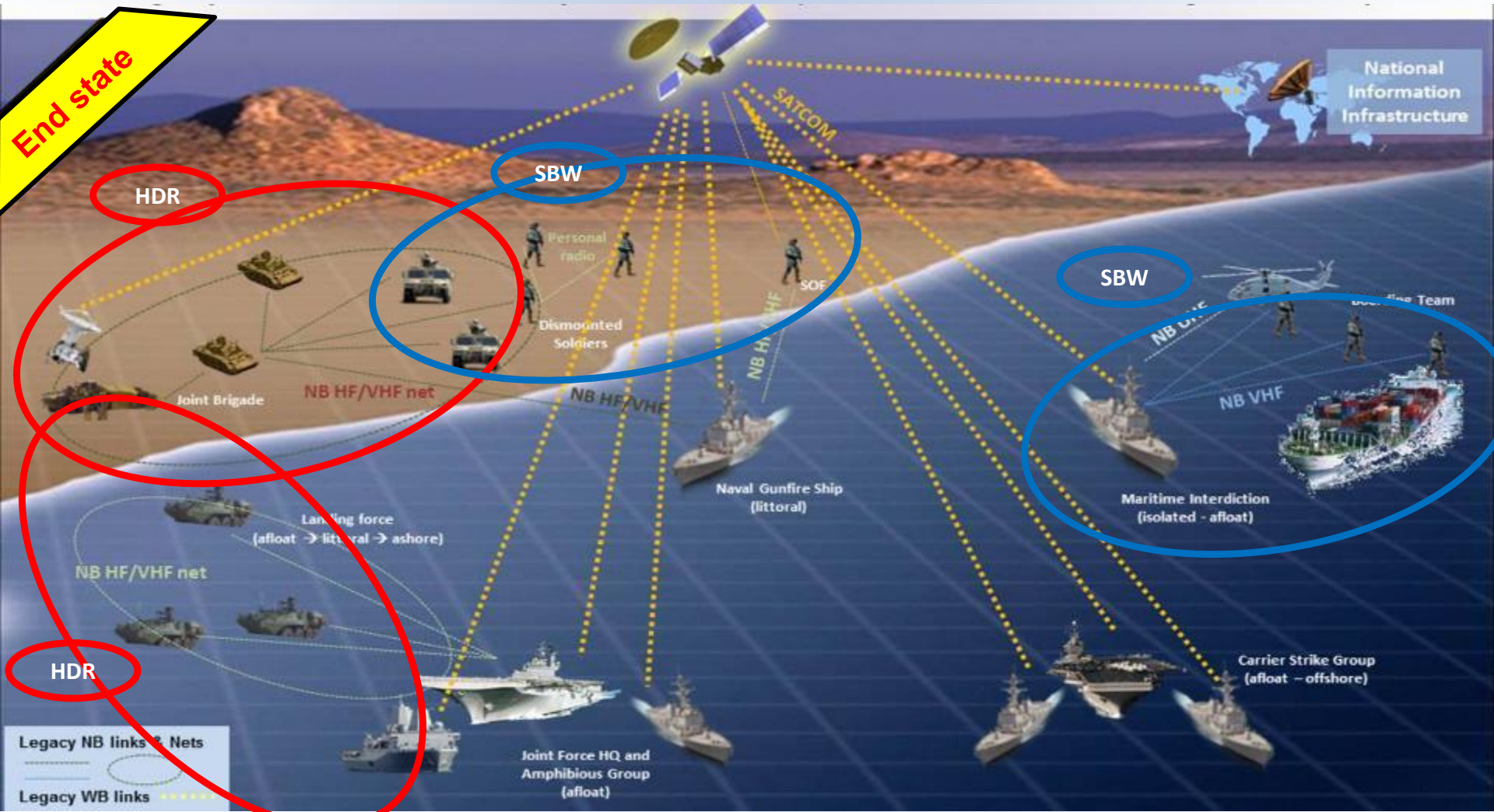
LHD



Navy **new naval programs** foresee full deployment of SDR technology:

- Unique Naval SDR HW platform (*external COMSEC*) for:
 - “HF house” (voice/data with 2G & 3G ALE)
 - VHF: fixed frequency voice / data
 - UHF: LOS fixed freq., EPM (Have Quick / Saturn), **Wideband** (SBW, future HDR)
- Land SDR HW platform

Littoral Environment



safeguard legacy systems

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European Secure SOfware defined Radio *interoperability through portability*



PHASE 1

HDR WF (R&D)

PHASE 2

HDR WF

(Operational Capability 1)

waveform interoperability



approach

NBWF/WBWF



ESSOR HDR WF

Soldier Wide Band (SBW) WF
(national solution)

legacy (SINCGARS)

**new waveform in
cooperation**

European Union



**ITA is part of the EU
PESCO initiative leading 4
different Project out of 17**

**ITA is actively participating
in the ESSOR PESCO
Project**

Certification and Standardization



ITA is supporting the standardization and certification of the SDR software architecture (based on the ESSOR Architecture) in order to:

- **Assure interoperability**
- **Improve WF portability**
- **Safeguard SDR investment**

Italian National Vision



Thanks for
your attention

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