EDA – OCCAR CONFERENCE
THROUGH-LIFE MANAGEMENT
THE KEY TO EFFECTIVE COOPERATION

BRUXELLES, 16 NOVEMBER 2010

Applying TLM in Industry:
a “Quantum Leap”

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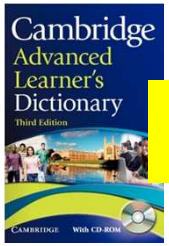
Chairman OCCAR - OILSP

Issues

- Europe: Market, Industries and segments
- European MoDs concepts and trends
- Major European Programs
- OCCAR approach: the ISS Catalog
- Industry transformation: the “quantum leap”
- Way forward



quantum leap noun [usually singular]
a great improvement or important development in something

Budgets and forecasts

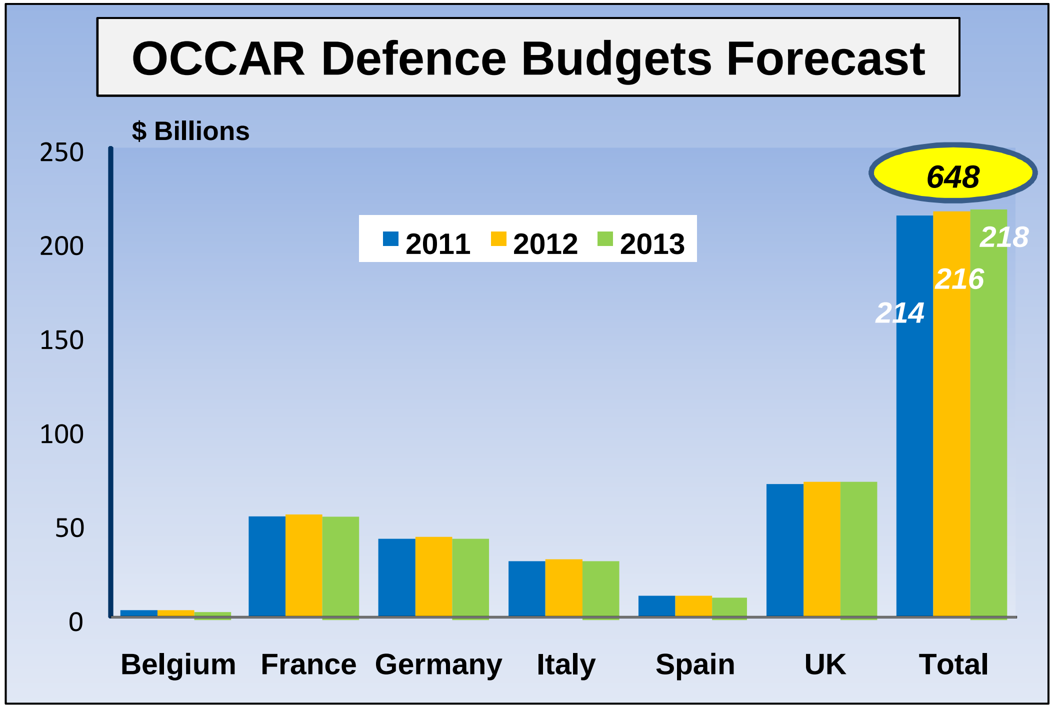
All EDA Countries

Source: EDA Website

European Defence Expenditure						
€ BLN	**2006**	% on total	**2007**	% on total	**2008**	% on total
PERSONNEL	110	55%	106	52%	106,2	53%
INVESTMENT	38,8	19%	41,8	20%	41,9	21%
O&M	**43,3**	22%	**47**	23%	**43,3**	22%
OTHER	8,9	4%	9,2	5%	8,6	4%
Total	**201**	**100%**	**204**	**100%**	**200**	**100%**

O&M seems to be around to 20 % of Total Budget

Market trends for the next years



Source: TEAL Group

TOTAL DEFENCE

OCCAR Nations Defence Budget represents the 70% of European Defence Budget which is estimated to increase from 300 B$ in 2011 to 307 B$ in 2013

Operations & Maintenance estimated volume out of total

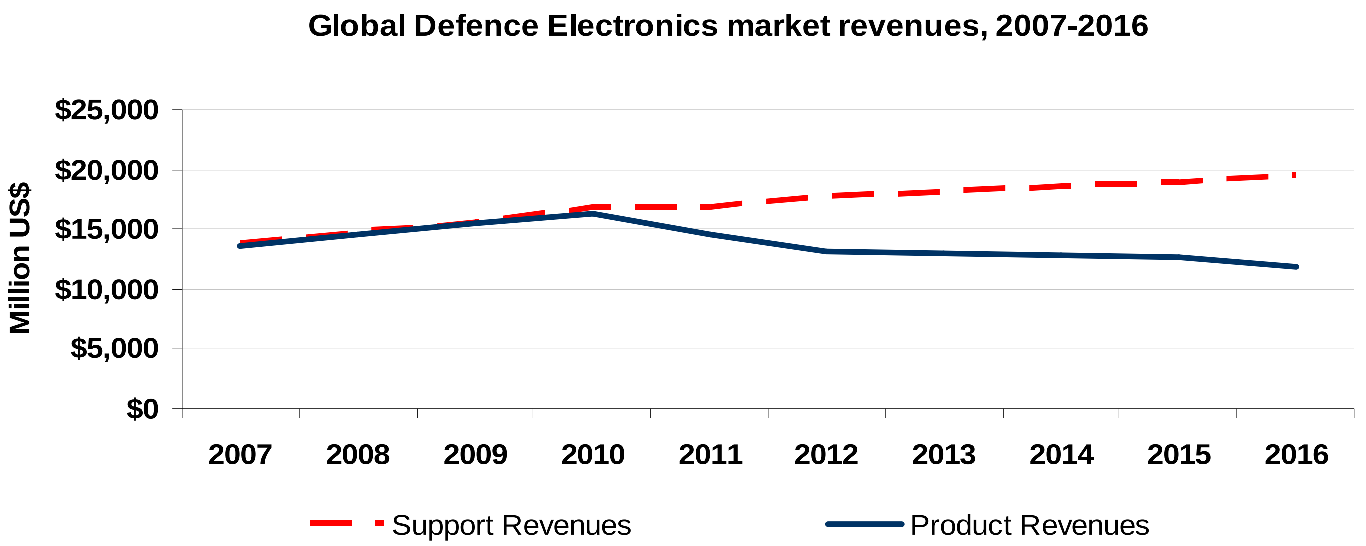
(From EDA Website: European Defence Expenditure)

20%

ILS estimated market is more than 40 B$ per year for the six nations

Market trends for the next years

- Support Services will be the core focus of procurement models until 2020 and beyond
- Emerging business models for defence procurement will be lead by Contracting for Availability or outsourcing for maintenance
- Support & Services Revenues likely to overtake OE revenues in the long run



Source: Frost & Sullivan

Programmes managed by OCCAR in 2010

Source: OCCAR Business Plan 2010

A400M

Tactical and Strategic Airlifter

Phases
Development, Production and Initial Support

Programme Cost
20,330 M€
XX M€

Overall Timescale
Development, Production and Initial Support: 2003 - 2021

Participating States

OCCAR-EA is undertaking a range of preparatory activities for the In-Service Support Phase

COBRA

Counter Battery RAdar

Phases
Industrialisation & Production
In Service

Programme Cost
564 M€
145 M€[1]

Overall Timescale
Industrialisation & Production: 1998 - 2009
In Service: 2004 - 2010 (2012)[2]

Participating States

FREMM

Multi – Mission Frigates

Phases
Development and Production

Programme Cost
10,478 M€
XX M€

Overall Timescale
Development and Production: 2006 - 2022

Participating States

Phase 2 of the Programme comprises the definition, development, production and in service support of 21 ships

FSAF-PAAMS

Anti Missile Systems

Phases
Development and Production

Programme Cost[3]
2,294 M€ (FSAF – phase 3)
540 M€ (PAAMS Munition)

Overall Timescale
Phase 3: 2003 - 2016
I ISS Phase (1st step): 2010 - 2015

Participating States
FSAF
PAAMS Munitions

This Phase will be effectively launched with the signature of the Integrated-ISS contract/s expected in 2010.

TIGER

Helicopters

Phases
Development and Production
In Service Support

Programme Cost
7,300 M€ (Development & Production including cost pre-OCCAR legal status)
440 M€ (In Service Support)

Overall Timescale
Development: 1988 - 2009 (HAP/UHT)
2005 - 2011 (HAD)
Production: 1997 - 2015 (HAP/UHT)
2007 - 2015 (HAD)
In Service Support: 2007 - 2013[4]

Participating States

Industry

Major European Defence Players

BAE SYSTEMS is a global company engaged in the development, delivery and **support** of advanced defence, security and aerospace systems

THALES offers an extensive and constantly expanding array of **value-added services** for the civil aviation market, from user training to outsourced management of infrastructure, IT systems and service engineering.

HDW unites submarine competence from basic research and development to design, manufacture, outfitting, testing and **"in-service-support"**.

INDRA offers its clients a process chain for the design, execution, and **maintenance of solutions and services**.

AGUSTA WESTLAND and its dedicated operations and logistic support organization provides "turnkey" service to rationalize logistic support and optimize cost-effectiveness. **Logistic support is a product in its own right**

Segmentation

From Captive to...

	CAPTIVE	SEMI-CAPTIVE	NON-CAPTIVE
Definitions	Activities and Services directly related to Systems/Equipment Operability	Activities and Services related to the Management of Systems/Equipment	Activities and Services related to Systems' Support Infrastructures
Services	• Spares • Technical Documentation • Initial Training • Engineering •	• Configuration Mgmt • Repairs • Follow-on Training • Maintenance Services • Post Design Services • Technical Event Mgmt • ……	• Infrastructures Mgmt • Transports • Warehousing Mgmt • ……
Contractual Models	The responsibility of Systems/Equipment efficiency is fully on Customer	The responsibiliy of Services related to Systems /Equipment Management is on Industry	The responsibility and Management of Infrastructures is on Industry

TLM Development for OEMs

MoDs

New Requirements from Customers

Defence Industrial Strategy
Defence White Paper

Although we are in the middle of a substantial transformation, involving a series of major new platforms (including the future aircraft carriers, Type 45 Destroyers, new medium-weight armored fighting vehicles, and the A400M, Typhoon and Joint Combat Aircraft), we expect these platforms to have very long service lives. This means the **future business for the defence industry in many sectors will be in supporting and upgrading** these platforms, rapidly inserting technology to meet emerging threats, fulfill new requirements and respond to innovative opportunities, not immediately moving to design the next generation.

December 2005

The **Strategic Defence and Security Review** will set out how we intend to sort out the mess we inherited:

- to ensure our forces in Afghanistan have the equipment they need;
- to begin to bring the defence programme **back into balance**; and
- to enable Britain to retain the best and most versatile Armed Forces in the world – better equipped to protect our security in an age of uncertainty.

October 2010

MoDs

New Requirements from Customers

Défense et Sécurité nationale

LE LIVRE BLANC

L'**Agence Européenne de Défense** (AED), qui anime cette démarche et au sein de laquelle les États se portent volontaires pour participer à des projets en coopération, jouera un rôle déterminant dans les choix à réaliser à court et long terme sur la base de ces analyses. La France s'engagera pour le renforcement de l'action de l'AED, qui devra se traduire par une augmentation de son budget opérationnel et par une clarification de son articulation avec d'autres structures européennes, en premier lieu **l'Organisation Conjointe de Coopération en Matière d'Armement** (OCCAr). Celle-ci doit constituer un organe privilégié de conduite des programmes, eux-mêmes décidés à partir des objectifs de capacités définis par les ministres européens de la Défense dans le cadre d'une planification commune.

La France encouragera, par ailleurs, *la mise en place de règles communes pour le marché des équipements de défense. La création de ce* marché suppose aussi la suppression complète des obstacles au transfert d'équipements et de technologies entre États membres concernés et l'encouragement à un effort de recherche mieux coordonné.

June 2008

DCNS enjoys the status of a State-owned company governed by private law.

MoDs

New Requirements from Customers

NIILS

Joint Directive for Integrated Logistic Support (ILS)

The Directive and its Product Data Model are meant to promote a high level of integration between the Logistic Acquisition process and the overall Acquisition process and to establish a sound support for SLCM (System Life Cycle Management) requirements to be applied to the development of the entire Operational System (OS), consisting of the Primary System (e.g.: weapon system) and its Logistic Support System.

The Directive defines the Logistic Acquisition process as a sub-process of the overall Acquisition process and adopts the System Life Cycle Management (SLCM) strategy developed by NATO AC/327 “LCM Group” as described in NATO AAP-48, for the provisioning of Weapon Systems. The SMD-L-001 and SMD-L-019 Directives represent the national vision of such strategy. SLCM strategy mandates a **Operational System lifetime management capable to assure the integrated management of all product requirements, from the project research and definition to the in-service and disposal phases.** It mandates also the integrated through-life management of all product and logistic data and information necessary for System support.

July 2009

MoDs

New Requirements from Customers

Participación en programas de desarrollo internacional

España cuando participa en programa de desarrollo internacional lo hace a través de distintos ámbitos y organizaciones, tales como:

- OTAN: con programas como Sostar, Naew, Accs y Mids
- Unión Europea: en programas como Euclid.
- Organización Conjunta de Cooperación en Materia de Armamento (**OCCAR**): con programas como Tigre y A-400M.
- Colaboración bilateral o multilateral: con ejemplos como Eurofighter, Meteor, Helios, Pléiades y Vulcano.

Política de Armamento y Material

Objetivos de la cooperación industrial

Los principales objetivos de la política de cooperación industrial son:

- La obtención de la autosuficiencia necesaria para apoyar los sistemas adquiridos durante su **ciclo de vida**, tanto en las Fuerzas Armadas como en la industria.
- ...

October 2010

MoDs

Europe and EDA

EUROPEAN ARMAMENTS CO-OPERATION STRATEGY

STRATEGIC AIM 1 - GENERATE, PROMOTE AND FACILITATE COOPERATIVE PROGRAMMES TO MEET CAPABILITY NEEDS

The subsequent programmes are generally carried out by appropriate executive agencies after the corresponding decisions have been taken by the interested pMS.

We must seek to maximise the opportunities to use armaments co-operation and ensure the option to co-operate is considered in our defence planning and in our procurement decisions. This should not be exclusively for co-operative development but consider also the potential advantages of co-operating on in-service support or upgrading of existing assets and other lines of capability development.

STRATEGIC AIM 3 - IMPROVE THE EFFECTIVENESS AND THE EFFICIENCY OF EUROPEAN ARMAMENTS CO-OPERATION DEVELOPING THE RIGHT TOOLS TO ACHIEVE THE ENDS

Opportunities to cooperate must be identified and considered early in the life cycle to be most effective.

A through-life approach is needed from the onset so that co-operative programmes are best placed to progress effectively through-life. Thus, the working interfaces between the pMS, the EDA and the relevant executive agencies documented accordingly must be smooth, flexible and avoid duplication of effort as much as possible.

MoDs

EDA and OCCAR

3.4 Strategic Initiatives

Expand OCCAR-EA approach to Through Life Management

Description/Purpose:

To further develop and promote Business Development in the ISS area as a significant opportunity in the framework of the OCCAR-EA's Through Life Management (TLM) approach, to maximise the benefit of collaborative TLM for the Nations and improve efficiency and effectiveness of TLM services, including ISS offered by OCCAR-EA for the satisfaction of the customers

Promote and Develop Co-operation with other European Defence Actors

Description/Purpose:

Further establish mutually beneficial working relationships with actors within the European defence framework (focusing on EDA relationships), in accordance with the OCCAR-EA corporate strategy

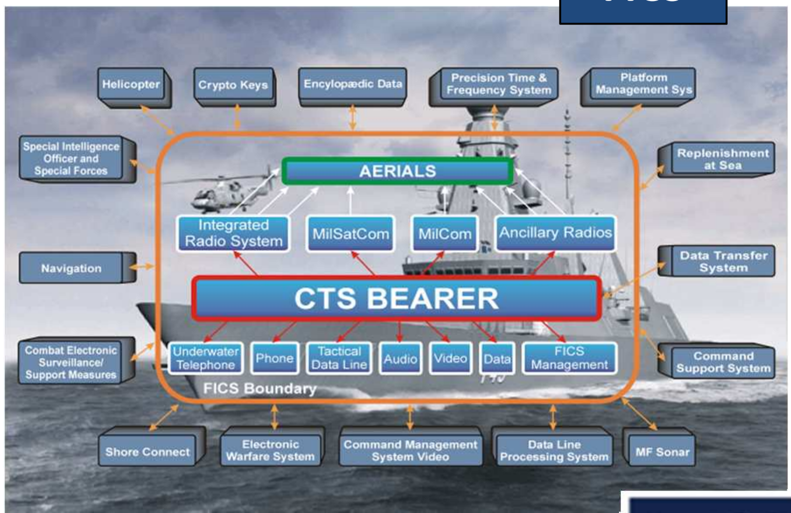
TPLS
Third Party Logistics Support

Major Programs

Type 45

- Prime Contract - BVT
- Sub-contractor for FICS - Thales
- Sub-sub-contractor for elements of FICS - Selex Communications
- Thales – Selex Comms 50/50 partnering agreement

FICS



ROYAL NAVY

ISS

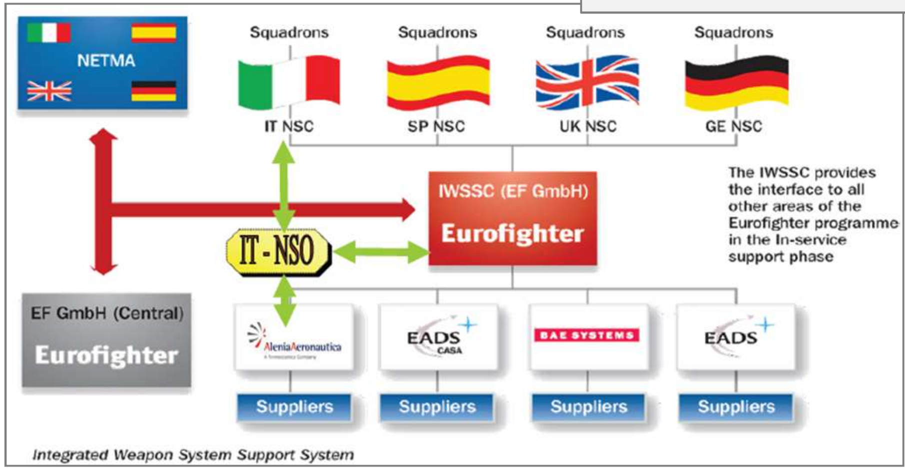
- July 2006 - PCO issued RFQ against Contract for Availability
- Feb 2007 - MoD Investigate Estimates from all major suppliers
- April 2007 - IPT present to Main Gate
- Oct 2007 - HMG State Unaffordable, Require 50% reduction
- Jan 2008 - Joint Working Party formed to identify savings
- July 2008 - Re-quotation against JWP guidelines
- Oct 2008 - MoD re-investigate Estimates
- Dec 2008 - Contract award of Mobilisation Phase
- June 2009 - Contract award for 7 year support
- Dec 2008 - 1st ship (HMS Daring) Delivered to RN
- 2009 – ISD for HMS Darling

Duration of Contract

- Mobilisation May 2009 (was Oct 2008)
- Support Dec 2009
- Completion Dec 2016
- Contract for Availability
- Price = Mobilisation Fee + Class Fee + Ship Fee for each ship

Major Programs

EFA: ISCMS-AMC



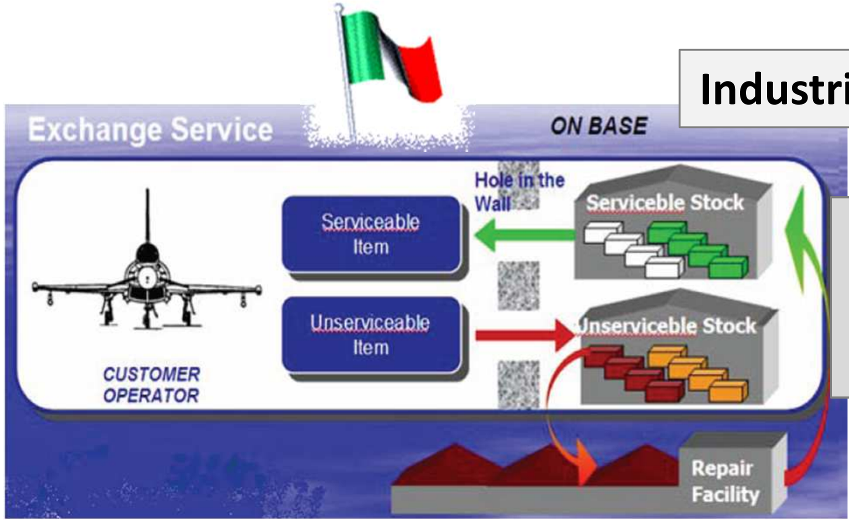
Technical Support

Eurofighter Program
Integrated Supply Chain Management Service

with

AleniaAeronautica – A Finmeccanica Company
SELEX GALILEO
SELEX Communications – A Finmeccanica Company
FATA Logistic Systems – a Finmeccanica Company

Industrial Exchange Repair Service



- **Avionics Maintenance Center**
- General Systems: Repair of Repairables and Purchasing
- AGE: Calibration and Scheduled Maintenance
- Consumables: Standards and Chemicals Supply

The Change

OCCAR ISS Catalog and Guide: suggestions

S1000D
S2000M
S3000L
S4000M
S5000F
S1003X
ASD-STE100 SIMPLIFIED TECHNICAL ENGLISH
DEX1A&D
DEX3A&D

These are "European" standards
They should be considered as OCCAR standards

PIs
KPIs

They should be:
- ✓ initially defined
- ✓ agreed
- ✓ flexible
- ✓ program taylored
- ✓ Industry taylored
- ✓ Nations taylored

Understanding, time saving, cost savings, better budgeting
BETTER TLM for Long Term Contracts

The Change

OCCAR ISS Catalog and Guide: suggestions

Today Programs

→ Future Programs

Big Programs

Only one ISS solution ?

Small Programs

ESSOR

Today Programs

→ Future Programs

The Change

OCCAR ISS Catalog and Guide: suggestions

MMAé
Mission de modernisation du MCO des matériels aéronautiques de la défense

NIILS
Joint Directive for Integrated Logistic Support (ILS)

Bundeswehr

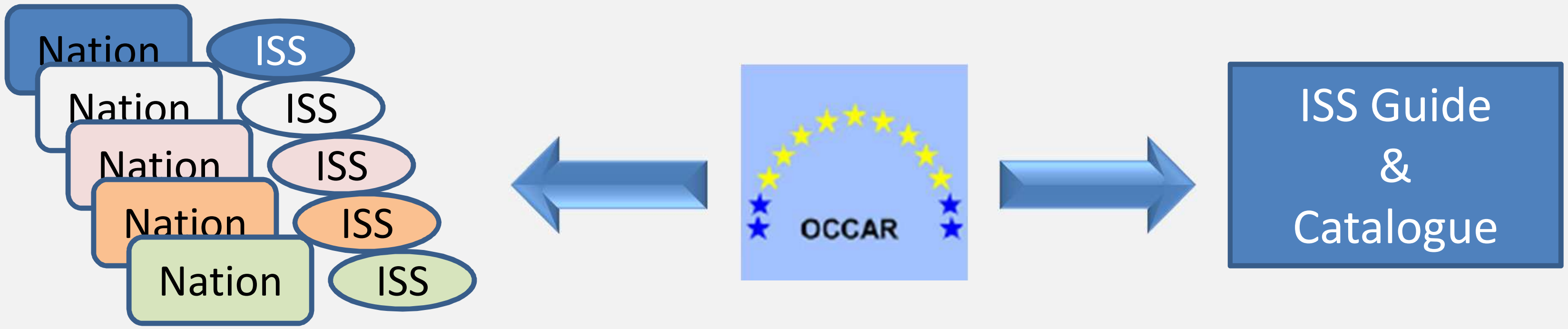
HIL
Eine Kooperation zwischen Bundeswehr & Wirtschaft

de&s
IMOS

NATO OTAN NAMSA

NATO C3 AGENCY

Only one ISS solution ?



Time for OCCAR

Having considered all of the above issues and examples:

- has OCCAR already tuned all internal administrative, technical and regulatory issues ?
- how long that will take ?

- has OCCAR already built up the internal organization to withstand the challenges ?
- how long that will take ?

- has OCCAR already defined the relations with others international bodies ?
- how long that will take ?

- has OCCAR already decided how to implement ISS Guide and Catalogue ?
- how long that will take ?

When and for which program Industry will be asked to provide ISS activities to OCCAR ?

Transformation

Time for Industry

Having considered all of the above issues and examples:

- has Industry considered partnerships and alliances in view of OCCAR decisions ?
- how long that will take ?

- has Industry the will to support in its own and national environment the OCCAR Vision ?
- how long that will take ?

- has Industry the flexibility, costwise, to adapt itself to both OCCAR and national programs ?
- how long that will take ?

When and for which program Industry will be asked to provide ISS activities to OCCAR ?

Transformation

The “quantum leap”

quantum leap noun [usually singular]
a great improvement or important development in something

Whith the previous questions duly evaluated and settled, a pilot case should be promoted which is:

- ✓ attentive to all stakeholders’ requirements: Nations, OCCAR, Industries;
- ✓ performance based;
- ✓ appealing for Industry;
- ✓ affordable and sustainable;
- ✓ flexibly designed and engineered;

with

OCCAR in the role of ensuring Customers’ value for money

and

Industries achieving added value in know-how and in commercial margins.

Thanks for your attention

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