

TAF - TSI Regional Meeting Bucharest 7-8 March 2018

TAF / TAP - TSI implementation in Greece:
*Design and development of scalable TAF / TAP -
TSI systems*

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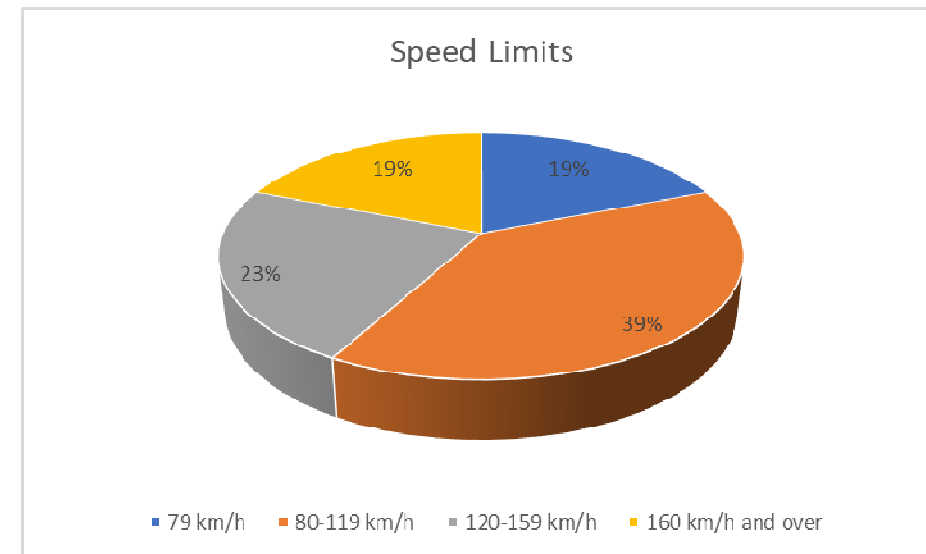
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Present situation in Greece



- The current network amount to 2,265 km (lines in operation), 80% of which is standard gauge, as is the standard in Europe and internationally
- The network connects Greece with FYROM (Gevgelija), Bulgaria (Kulata), Turkey (Uzunkopru) and the rest of the world through the port of Piraeus



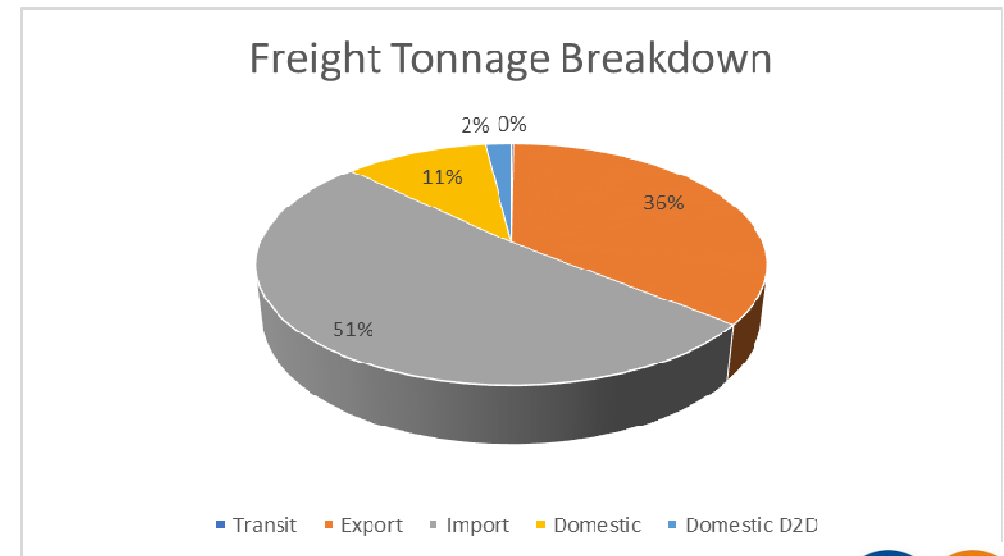
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Present situation in Greece



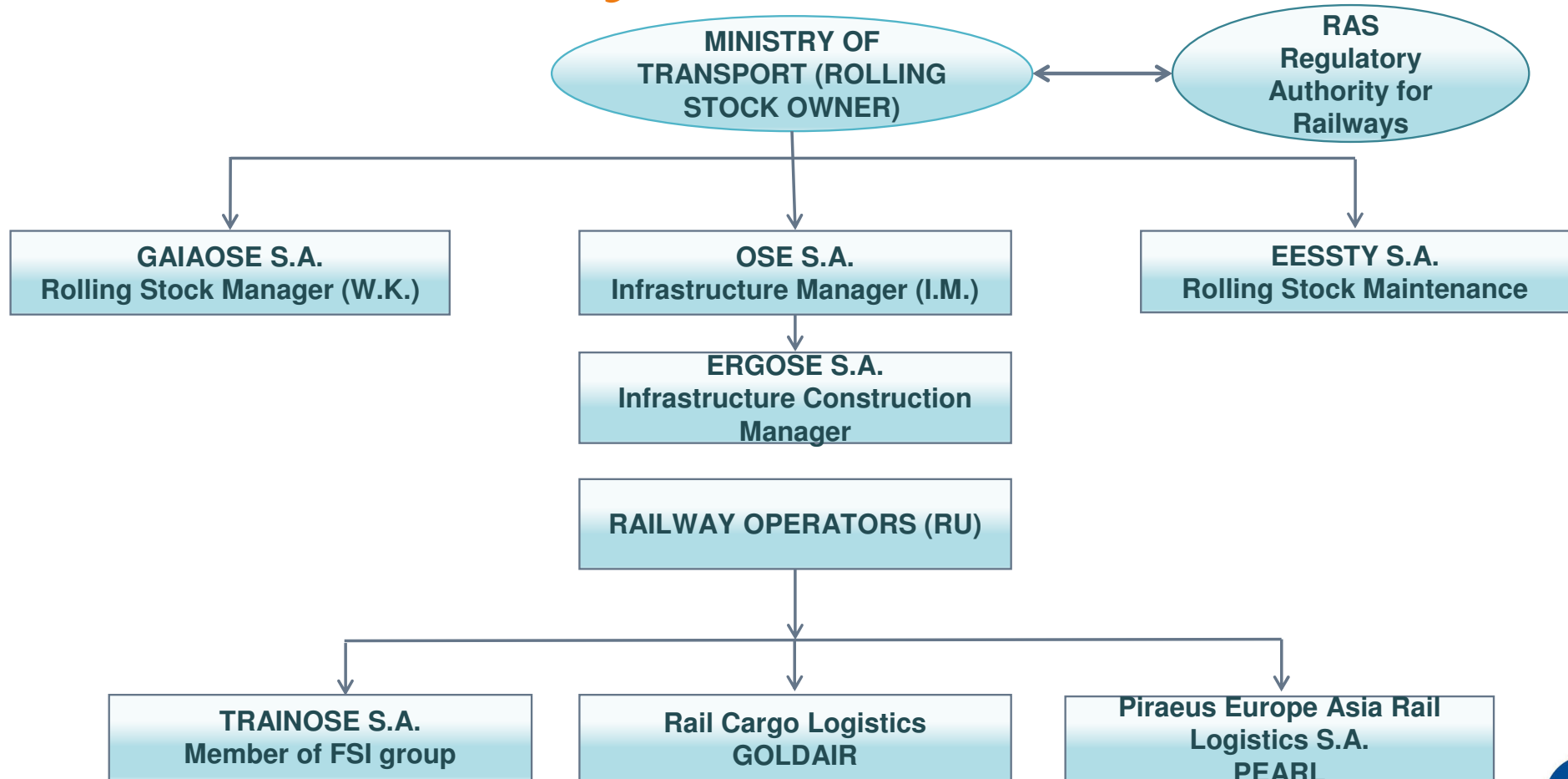
- In 2017, the overall freight tonnage exceeded 1.3 M tonnes
- Most freight carried was Imports (51%) and Exports (36%).
- Freight tonnage was increased by 21.5% compared to 2016



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Greek Railway Authorities



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Greek Railway Authorities (*RAS*)

The **Regulatory Authority for Railways**, established in November 2010, is responsible for:

- Regulating the railway transport (*Regulatory Body*)
- Granting licenses to Railway Undertakings (*Licensing Body*)
- Implementing the EU Regulation 1371/2007 (*National Enforcement Body*)
- Ensuring safety and interoperability (*National Safety Authority*)
- Certifying freight wagons (*Certification Body of ECM*)
- Implementing the Regulations of the International Carriage of Dangerous Goods by Rail (RID) (*Competent Authority*)

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Greek Railways IM (OSE)

OSE SA was founded in 1970 and is wholly owned by the Greek State; it is a public utility based in Athens and operates with full administrative, legal and financial independence under the supervision of the State.

Subsidiary

- **ERGOSE SA**, which manages the bulk of ongoing and under consideration modernization works of railway infrastructure, co-financed by European Union funds or solely from national funds.

Greek Railways IM (OSE)

Vision

- Develop modern infrastructure for railway transport services
- Promote the Greek national railway network as an essential part of trans-European networks, satisfying the needs of citizens and other stakeholders for fast, secure, convenient and economical passengers and freight transport
- Create conditions for further development of the network in order to serve national needs

Objectives

- Enable the railway to become the main mode of transportation for passengers and freight
- Maximize the socio-economic efficiency of the available resources in order to provide high-quality railway transport services in the largest part of the country
- To facilitate a harmonious cooperation between Greek financial, business and social agents

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Greek Railway (*ErgOSE-ICM*)

ERGOSE SA manages the railway infrastructure projects of OSE that are co-financed by the ERDF, ESF, Cohesion Fund and the TEN-T budget. It's operation has been expanded to include provision of services for planning, development, support, management, design, supervision and construction to all types of projects to third parties within Greece and abroad.

The main **objectives** of the company are:

- Revitalization and modernization of Greek Railways
- Improvement of the level of service, in terms of time distance, comfort and quality
- Promotion of intermodality and combined transport operations - increase rail connectivity between nodal points (ports, industrial areas, etc.)
- Increase rail safety
- Provision of connectivity with the EU Rail Network, under the concept of interoperability

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Greek Railway WK (*GaiaOSE*)

On 05 December 2012 it was decided that the Greek rolling stock would be transferred from OSE to the Greek state who would become the new owner. On 17 December 2014, **GAIAOSE SA** was appointed by the Greek state, as sole manager of this rolling stock

The main **objectives** of the company are:

- Rolling stock effective management
- Detailed registration and assessment of this rolling stock towards discerning useful from useless material
- Registration of all available rolling stock to a data base to facilitate data flow and integration of the rolling stock to the RINF DATA BASE as per TSI requirements
- Sale / Lease of available rolling stock to both local and foreign customers
- Participation to related EU Bodies in view of claiming a role in the

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Greek Railways RU (*TrainOSE*)

On 14 September 2017, the sale and transfer of 100% of the shares of **TRAINOSE SA** to Ferrovie dello Stato Italiane Group (FSI) were completed and it joined the Italian group

The main **objectives** of the company are:

- The development, organization and operation of the urban, suburban, regional, intercity and international passenger and freight railway transportation, as well as all kinds of transportation
- The development, organization and operation of multimodal transportation
- The provision of logistics and related services
- The organization, provision and operation of sleeping cars and catering services to passengers
- The provision of consulting services relevant to the scope of activities of the Company

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Greek Railways RU (*PEARL*)

Piraeus Europe Asia Rail Logistics S.A. (PEARL) is a Supply Chain Management company and was founded in June 2015 by the sole shareholder the English company Piraeus Europe Asia Rail Logistics Limited (shareholding of COSCO)

- The main **goal** of PEARL is the provision of transportation and logistics services for freights through the port of Piraeus and other Greek ports towards the global market
- PEARL's **vision** together with its strategic partners and rail transportation companies in the Balkans is:
 - To become the coordination center and the main entry point for logistics and freight transportation in southeast Europe
 - To efficiently serve the global supply chain from Asian countries towards the Balkans and Central Europe through Greece

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Greek Railways RU (*Rail Cargo*)

Rail Cargo Logistics is one of the leading rail transportation and Logistics companies in Greece.

- Joint venture between:
 - Austrian Rail Cargo Group, a colossal rail transportation companies in Europe
 - Goldair Group, one of the biggest transportation and logistics companies in Greece, extends in 16 countries and plays a key role in Europe's rail transportation system
- Rail Cargo Logistics finds the perfect rail logistics solution for all industries
 - Individual services to customer-specific complete solutions
 - It is notable that transportation through rail network, achieves 18 times less emission of carbon dioxide compared to road transportation

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Implementation of the TEN-T Network

- Recently, OSE has granted a fund by INEA-CEF for the design and implementation of the TAF/TAP-TSI system in Greece
 - **Call:** CEF-Transport-2016-MAP-Cohesion
 - **Priority:** Rail interoperability
 - **Sub-Priority:** Interoperability of the rail system
 - **Title:** TAF/TAP–TSI implementation in Greece: Design and development of scalable TAF/TAP – TSI systems
 - **Grant Agreement:** CEF Funding Action n° 2016-EL-TMC-0232-M
 - **Starts:** 1.10.2017 – **Ends:** 31.12.2020
 - **Total Budget:** 3,526,120 euros, **Funding:** 2,997,202 euros (85%)

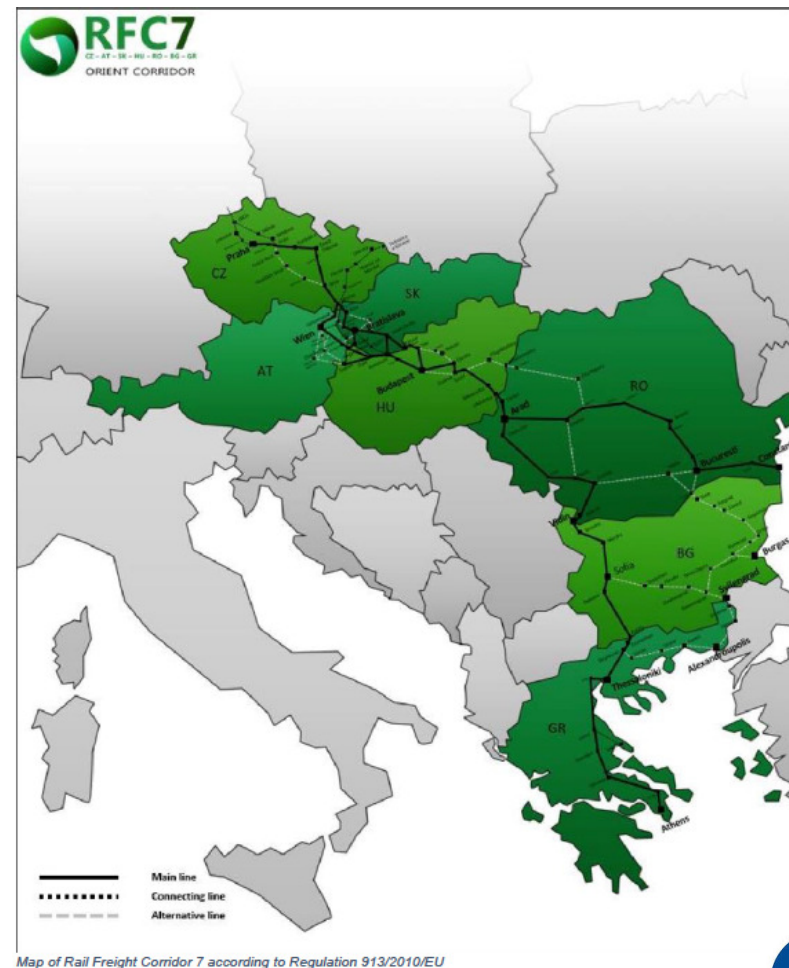
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Implementation of the TEN-T Network

The implementation of the TAF/TAP-TSI refers to:

- Corridor(s) Orient/East-Med
- Pre-identified section(s) on the core network corridor(s)
 - Athens - Patras
 - Vidin - Sofia - Burgas / TR border Sofia - Thessaloniki - Athens / Piraeus
- Region(s) (using the NUTS2 nomenclature):
 - Attiki (EL30)
 - Kentriki Makedonia (EL12)
 - Sterea Ellada (EL24)
 - Thessalia (EL14)
 - Dytiki Ellada (EL23)
 - Peloponnisos (EL25)



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Scope and Objectives

Current situation

- The Greek railways constitute a bottleneck due to the lack of compliance with TAF/TAP-TSI

Main Objective

- Achievement of interoperability in the Orient/East Med (OEM) Corridor to

Secondary Objectives

facilitate

- Rail processes
- Opening of the passenger and freight rail market

The Action concerns the parts

- Athens - Larisa - Thessaloniki - Promachonas (Frontier Station leading to Sofia, Bulgaria)
- Athens - Patras / Igoumenitsa, of the OEM Corridor

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Scope and Objectives

It will **plan and develop** a platform system integrating applications, services, internal procedures and functions

1. Path Request (*Rail Network Europe - RNE, Path Coordination System - PCS, RINF database*)
2. Train Preparation
3. Train Running Forecast (*RNE Train Information System - TIS*)
4. Service Disruption Information (*RNE TIS, RINF database*)
5. Train Location (*RNE TIS, RINF database*)
6. Interchanging Reporting
7. Data Exchange for Quality Improvement
8. Rolling Stock Reference Database (Wagon Keeper)
9. Information in Stations
10. Passenger and Passenger with Reduced Mobility (PRM) services in stations
11. Rail Freight Customers (*RNE Common Components System (CCS)*)
12. Information Security Management System (ISMS) Tool

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Contribution

- Accelerate the implementation of TAF/TAP-TSI in Greece
- Facilitate RUs to develop their own systems and connect with OSE's TAF/TAP-TSI
- Support small and medium size RUs operating in Greece in TAP implementation by adopting well-defined formats
- Result in a fully interoperable set of interfaces between any
 - IM (OSE)
 - WK (GAIAOSE)
 - RU (TrainOSE, PEARL, Rail Cargo)
- Improve safety due to
 - better control of train running
 - maintenance of the wagons, machines, lines and electromechanical parts
- Ensure quality management of timetable and tariff data for TAP-TSI applications
- Ensure cross-border continuity with Bulgaria
- Meet the Greek obligations under the regulation covering Freight Corridor VII and cross border operational requirements to and from other EU countries

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Readiness - Technical Maturity

The **high technical maturity** stems from the fact that OSE has:

- Completed studies regarding TAF/TAP - TSI in the context of Directive EC 2008/57/EU in cooperation with the University of the Aegean and University of Athens (Preparation of RFP)
- Monitored the best practices in the field (RNE applications, Raildata consignment, HitRail Network and other applications)
- INEA-CEF Funding
- Recorded the latest EC Directives and Regulations and their implication
- Taken into consideration the impact of TAF/TAP - TSI on its structure and operation
- Participated in JSG's reports and monitored the development of TAF - TSI each semester
- Regularly attended EURA's meetings and workshops through the Greek NCP

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Activities

A1: Impact on operation, proposed restructuring and TAF/TAP-TSI exploitation

A2: Common Interface

A3: Telematics Platform

A4: Register of Infrastructure Database

A5: Internal path request application

A6: Internal Train Preparation, Disruption, Location and Running Forecast Information System

A7: Rolling Stock Reference Database

A8: Wagon and Intermodal Unit Operating Database

A9: Databases related to passenger and passengers with reduced mobility services

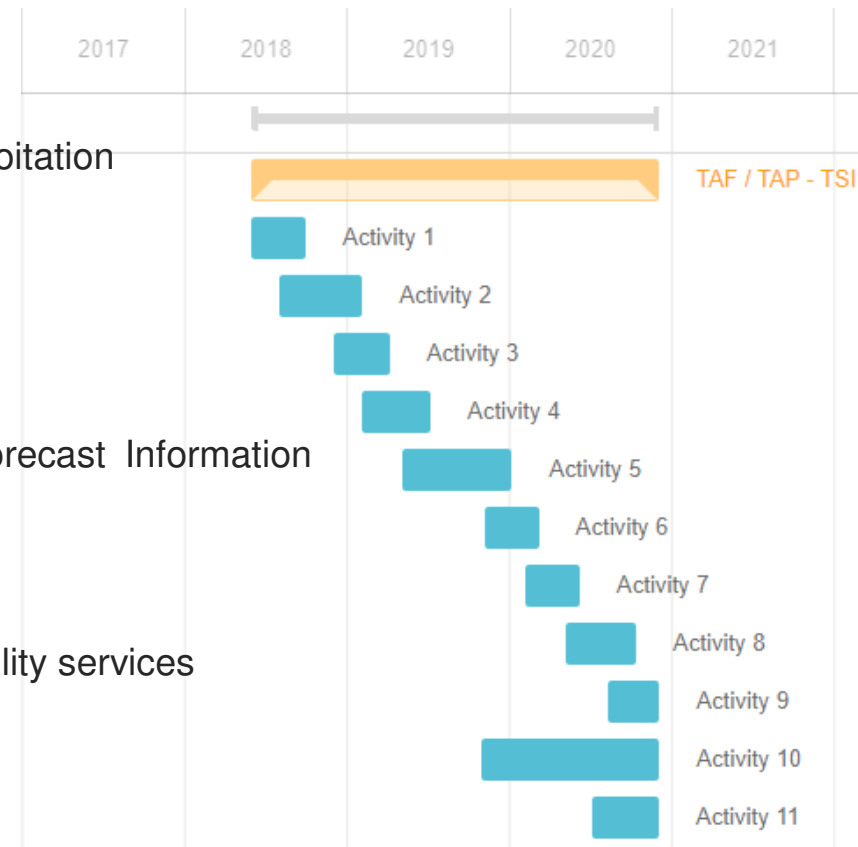
A10: Reporting and Contract Server

A11: Documentation and support

A12: Information Security Management System

A13: Project management

A14: Communication & Dissemination



**Indicative Duration of Activities.
Project should be completed until
31.12.2020**

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Thank you for your attention!

**Any
Questions?**

