



Industrial and tertiary product Testing and Application of Standards

2nd National Focal Point meeting

Milano, 11 maggio 2018, Sala convegni ANIMA, 14:00



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11-05-2018
Milan

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Content

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- INTAS presentation
- Outcome of the 1st NFP meetings
- Outcome of WP3
- Outline of WP4 - WP6
- Questions to be discussed



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- INTAS presentation



About INTAS

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- European project (Horizon 2020 - Energy Efficiency)
- Active from March 2016 to February 2019
- 16 partners
 - 11 national Market Surveillance Authorities (MSAs)
 - 5 cooperating organisations at European level
- Budget: ca. 1,9 million Euros (incl. product testing)

<http://www.intas-testing.eu/about-project/team-and-contacts>



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INTAS key goals

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- Support European Member State **MSAs** deliver compliance for **large industrial products**:
 - Fans
 - Power transformers
- Support the **industry** to be sure of what their obligations are under the Ecodesign Directive and to deliver compliance
- Foster a **common European approach** to the delivery and verification of compliance for these products



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Project partners

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Europe: WIP – Renewable Energies, European Environmental Citizens' Organisation for Standardisation, European Copper Institute, Engineering Consulting and Design, Waide Strategic Efficiency

Austria: Austrian Energy Agency

Belgium: Federal Public Service Health, Food Chain, Safety and Environment

Czech Republic: SEVEN Energy Efficiency Center

Denmark: Danish Technological Institute

Finland: Finnish Safety and Chemicals Agency

Italy: Italian National Agency for New Technologies, Energy and Sustainable Economic Development

Poland: The Polish Foundation for Energy

Portugal: Directorate General of Energy and Geology, Economic and Food Safety Authority

Romania: Romanian Regulatory Authority for Energy

Spain: Foundation for the Promotion of Industrial Innovation



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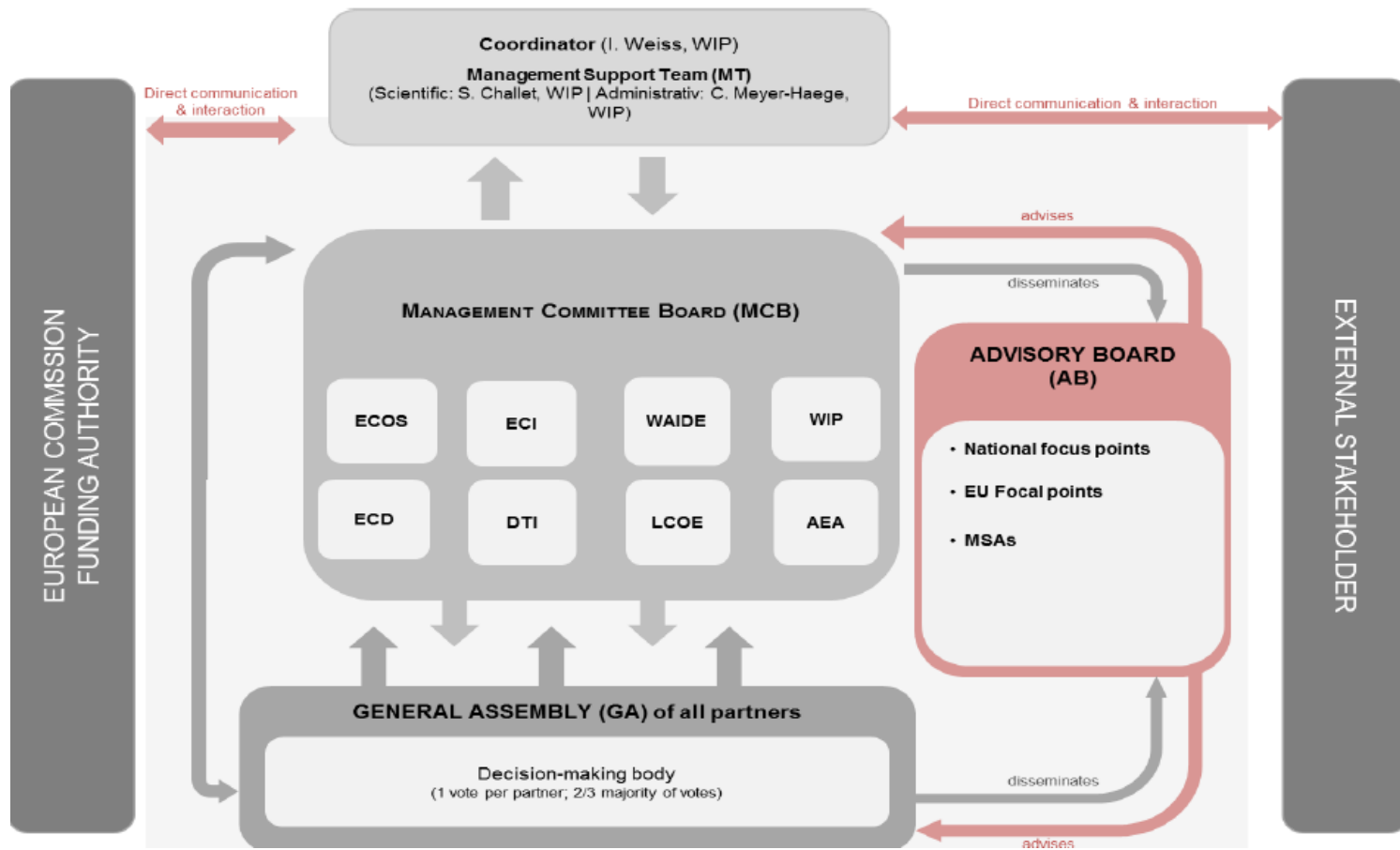


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Management structure

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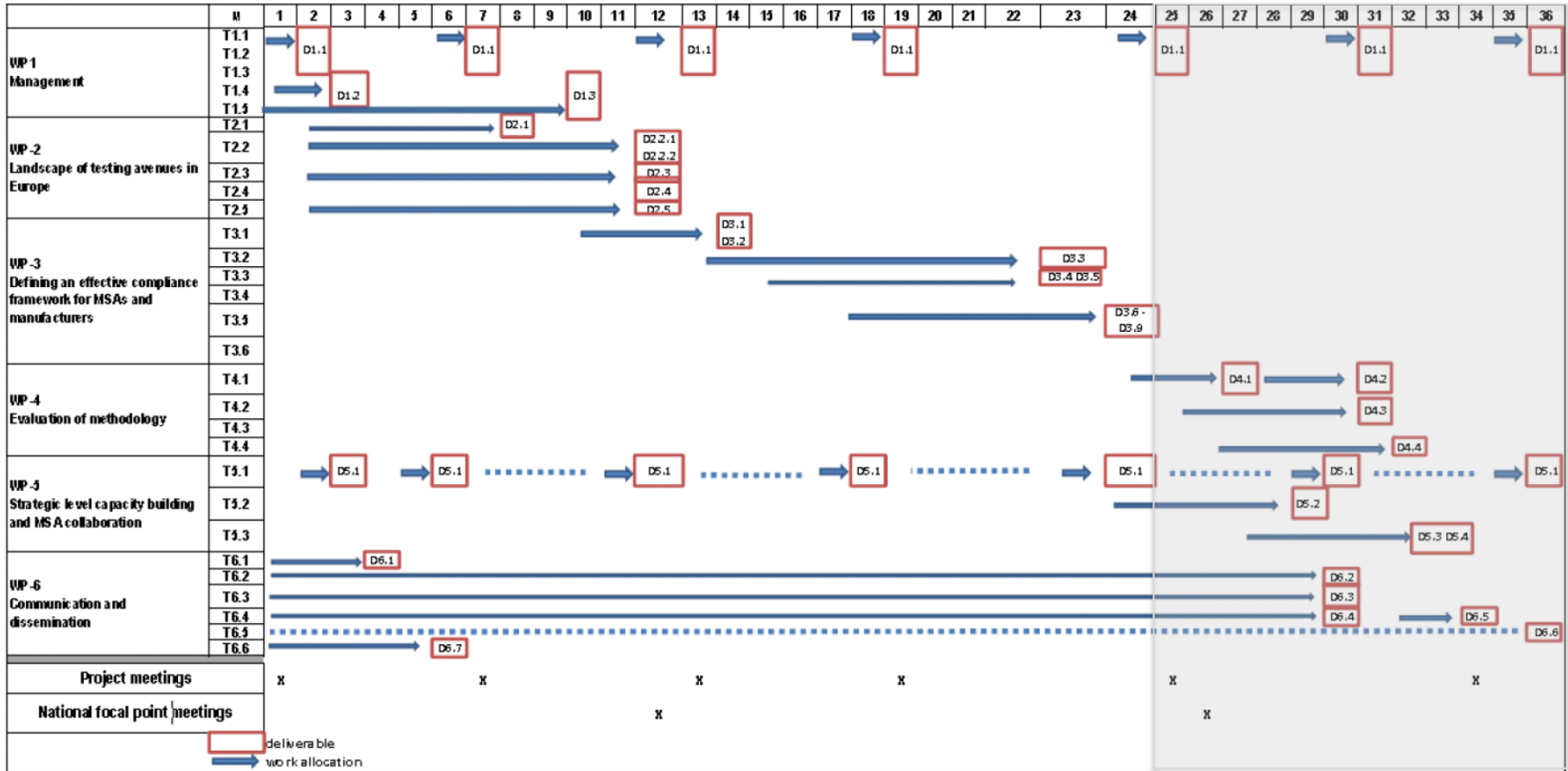


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Management structure

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1st NFP meetings

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- Meetings were organized in 9 Member States (DK, IT, ES, RO, PT, AT, CZ, FI and PO)
- 48 stakeholders provided feedback, which was anonymized
- Deliverable 6.3 will be public after the summer



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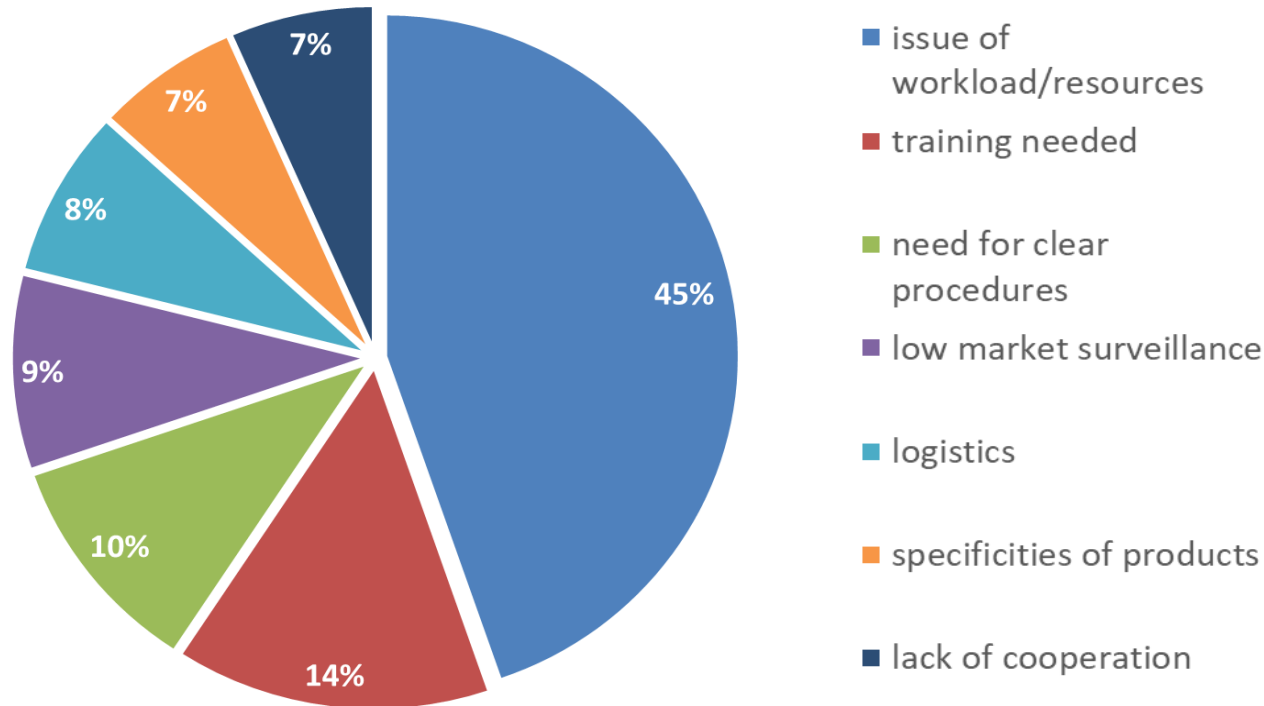
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Question 1

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What are the main concerns regarding the ability of national authorities to perform market surveillance and/or test large products?



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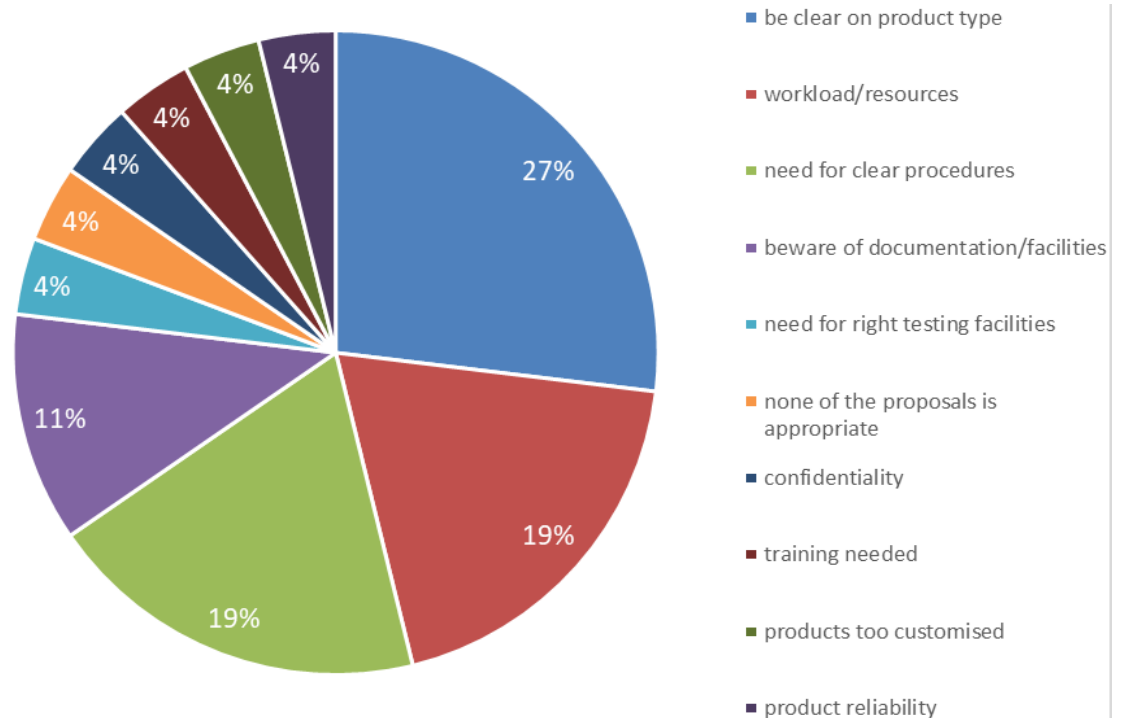
Question 2

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INTAS intends to develop a range of methodologies dependent on the size and functionality of specific products*. What drawbacks, if any, do you see from this approach?

*may include:

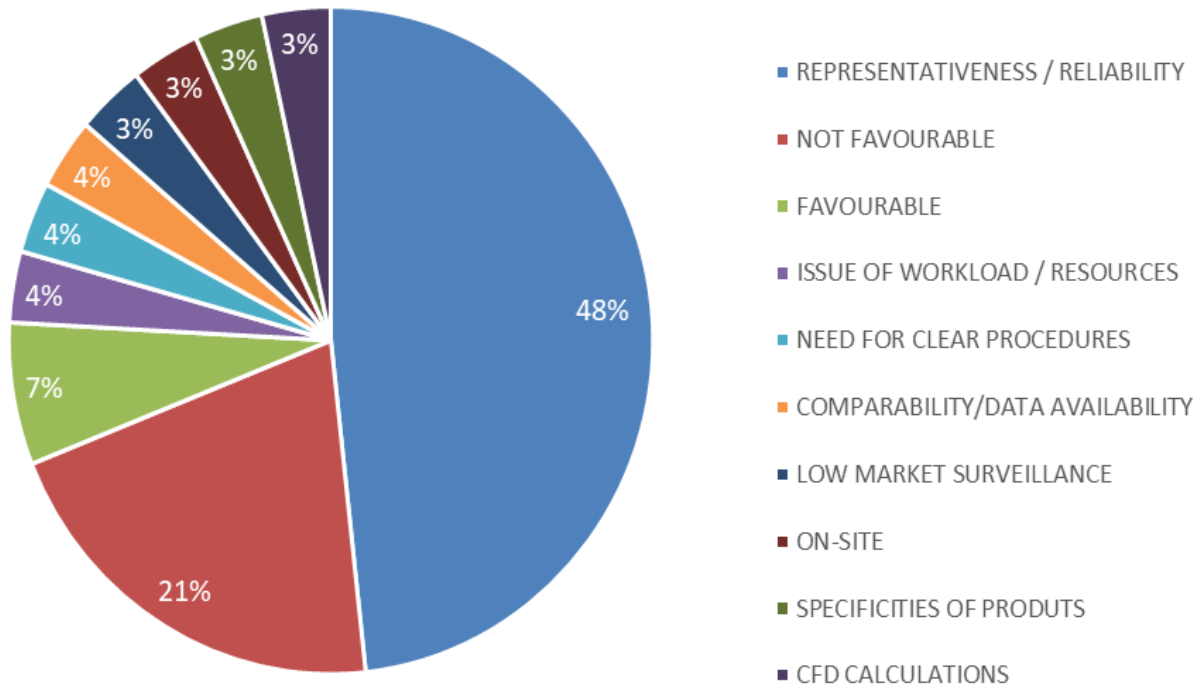
- witness testing at manufacturer or on-site
- using/rent manufacturer's test facilities,
- scale model testing
- part-load testing



Question 3

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It is foreseen that modelling techniques may be used – do you have any experience of this? And what are the most important things we should consider?



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Conclusions (1/4)

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- The undeniable particularity of performing market surveillance and testing of large products was confirmed.
- Specifically looking at the main concerns regarding the ability of national authorities to perform market surveillance and/or test large products, **issues related to workload and resources** were by far the most recurrent, referring to:
 - the lack of financial and human resources
 - the costs of purchasing products to be tested
 - transportation
 - or the unavailability of laboratories.



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Conclusions (2/4)

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- Other obstacles will need to be addressed by INTAS, such as:
 - lack of technically skilled staff
 - low awareness of the requirements
 - need for simple and clear procedures
 - current low market surveillance of large products impeding the level-playing field
 - specificities of these customized products and the related logistic
 - together with the current lack of cooperation among MSA and stakeholders.
- Concerning INTAS intention to **develop a range of methodologies dependent on size and functionality of specific products**, overall stakeholders agree with the approach.



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Conclusions (3/4)

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- Feedback shows:
 - a general reluctance towards on-site testing
 - a clear preference to testing at manufacturers' premises
 - interest in modelling and part-load testing.
- Mixed views about the foreseen use of modelling techniques:
 - several manufacturers already have experience and believe they can be applicable for fans, but not to transformers
 - other stakeholders are generally reluctant to their use, due to the lack of precision of the results of these techniques.
- Consequently INTAS will need to address aspects such as the **representativeness and reliability** of the results to evaluate the adequateness and applicability of such techniques.



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Conclusions (4/4)

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- Although INTAS will not be able to solve all these issues, it is the project intention to propose a **compliance verification methodology** that considers the following aspects:
 - It is cost-effective
 - It is complemented by training and capacity building
 - It comprises simple and clear procedures
 - It strengthens the current low market surveillance
 - It considers the specificities of the products and the logistics of the business models
 - It builds up cooperation at different levels.



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Outcome of WP3: deliverables

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WP3 - Defining an effective compliance framework for MSAs and manufacturers

- D3.1 Report on information and additional requirements related to inspection of fans (Confidential)
- D3.2 Report on information and additional requirements related to inspection of transformers (Confidential)
- D3.3 Evaluation of products in each testing type and unit category (Confidential)
- D3.4 & D3.5 Analysis and report on other applicable regulations on fans (**Public**)
- D3.6 & D3.7 Best practice and experiences of both MSAs and industry regarding testing of fans and transformers (**Public**)
- D3.8 Report about the screening techniques available for product/supplier targeting (**Public**)
- D3.9 Graphical flow chart of the methodological process, taking into account all tasks within WP3 (**Public**)



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Outcome of WP3: D3.9 (1)

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- The methodologies presented in the flowcharts of D3.9 are at an intermediary stage, and are not to be considered final recommendations of the INTAS project.
- The methodologies will undergo a practical validation phase in WP4 during which MSAs participating in the INTAS project will assess their applicability.
- Market actors will also be informed and consulted on this topic at a number of National Focal Point meetings organized in Europe.
- The validation phase will allow for refinements of the methodologies until the end of July 2018.

Visit the INTAS project website for information about the way you can participate to this process.



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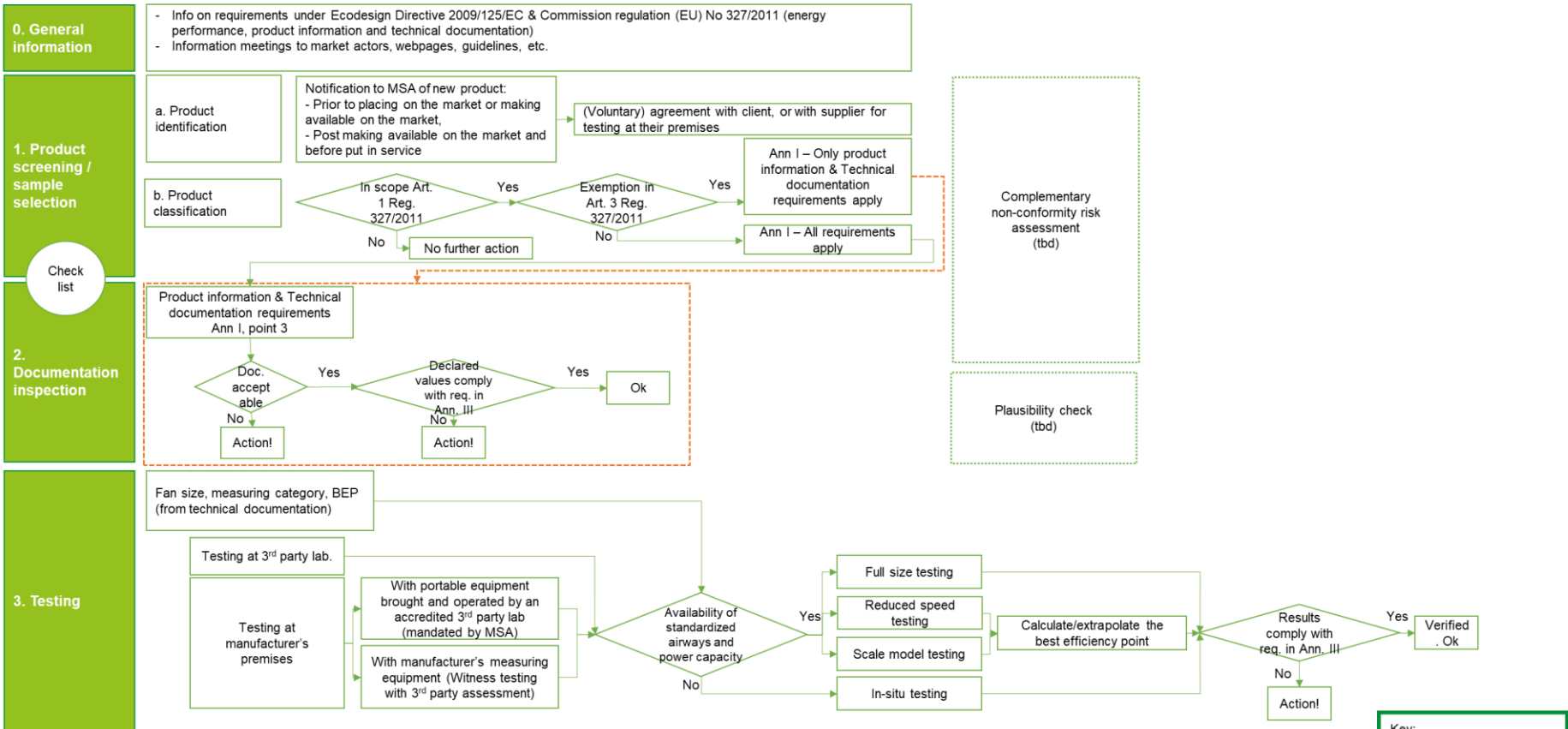
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Outcome of WP3: D 3.9 (2)

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Flow chart for verification of compliance of fans



Note: MSA may decide to perform activities under 1, 2 and 3 in a different order.

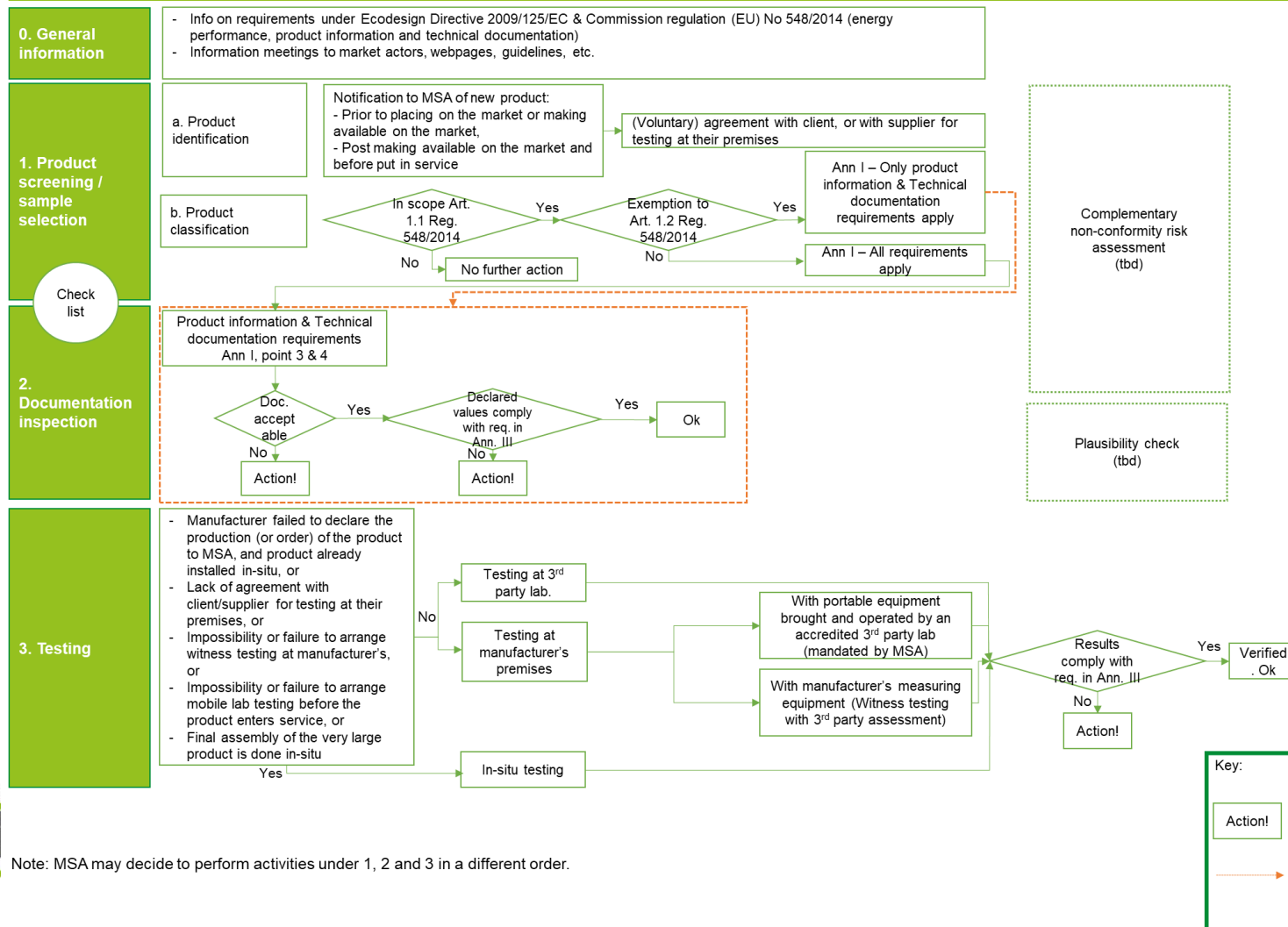
Key:

- Action! MSA to take action! (model fails to comply)
- Req. for fans exempted in Art. 3

Outcome of WP3: D3.9 (3)

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Flow chart for verification of compliance of power transformers



Note: MSA may decide to perform activities under 1, 2 and 3 in a different order.

Outcome of WP3: D3.1

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D3.1 – Report on information and additional requirements related to inspection of FANS

- Annex 1: Checklist template (for documental inspection of Regulation 327/2011)



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Outcome of WP3: D3.1 checklist

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Step	Short description	Reference	Check
1. Identify fan type	In order to check the overall efficiency and the measurement category used to determine the energy efficiency it is necessary to identify the fan type	NWIP on Fans - Procedures and methods to determine and evaluate the energy efficiency Commission Regulation (EU) No 327/2011 FAQ to Commission Regulation (EU) No 327/2011	
2. Check if the fan is exempted	Before selecting a fan, it is important to study if the fan is exempted	Commission Regulation (EU) No 327/2011 FAQ to Commission Regulation (EU) No 327/2011	
3. Check if the fan is only subject to product information	Before searching for energy efficiency requirements of a fan, it is important to study if the fan is only subject to product information	Commission Regulation (EU) No 327/2011 FAQ to Commission Regulation (EU) No 327/2011	
4. Check the fan product information/technical information	If a fan is covered by the Commission Regulation, the fan product information/technical information has to be studied to see if it meets the requirements	Commission Regulation (EU) No 327/2011 FAQ to Commission Regulation (EU) No 327/2011	
5. Check the fan rating plate/product label information	If a fan is covered by the Commission Regulation, the fan rating plate/product label information has to be studied to see if it meets the requirements	Commission Regulation (EU) No 327/2011 FAQ to Commission Regulation (EU) No 327/2011	

6. Identify the electric motor type	In order to check the efficiency it is necessary to identify the motor type	Commission Regulation (EC) No 640/2009 Guidelines accompanying Commission Regulation (EC) No 640/2009	
7. Check if the electric motor is exempted	Before selecting a motor, it is important to study if the motor is exempted	Commission Regulation (EC) No 640/2009 Guidelines accompanying Commission Regulation (EC) No 640/2009	
8. Check the electric motor product information/technical information	If a motor is covered by the Commission Regulation, the motor product information/technical information has to be studied to see if it meets the requirements	Commission Regulation (EC) No 640/2009 Guidelines accompanying Commission Regulation (EC) No 640/2009	
9. Check the electric motor rating plate/product label information	If a motor is covered by the Commission Regulation, the motor rating plate/product label information has to be studied to see if it meets the requirements	Commission Regulation (EC) No 640/2009 Guidelines accompanying Commission Regulation (EC) No 640/2009	

Outcome of WP3: D3.2

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D3.2 – Report on information and additional requirements related to inspection of TRANSFORMERS

- Appendice A: Checklist for documentation inspection accordign to Regulation n. 548/2014



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Outcome of WP3: D3.2 checklist (1)

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1. IDENTIFICATION AND CLASSIFICATION

Trademark:	
Model number:	
Serial number:	
Manufacturer:	
Date of purchase:	
Rated power (S_r):	
Highest voltage for equipment (U_m):	
Final destination (only for tailor-made products)	

Scope		
Power transformers with a power rating ≥ 1 kVA used in 50 Hz electricity transmission and distribution networks or for industrial applications.		
Classification		
Small power transformer	$U_m \leq 1,1\text{kV}$	
Medium power transformer	$1,1\text{ kV} \leq U_m \leq 36\text{ kV}$ and $5\text{ kVA} \leq S_r < 40\text{ MVA}$	
Large power transformer	$U_m > 36\text{ kV}$ and $S_r \geq 5\text{ kVA}$ or $S_r \geq 40\text{ MVA}$	

2. PRODUCT INFORMATION REQUIREMENTS

Annex I. Point 3. Product information requirements		
Requirement	Shall be included in	Verdict
(a) Rated power; S_r	product documentation, free access websites of manufacturers and	

	rating plate	
Load loss; P_k	product documentation, free access websites of manufacturers and rating plate	
No load loss; P_0	product documentation, free access websites of manufacturers and rating plate	
Electrical power of any cooling system required at no load; P_{c0}	product documentation, free access websites of manufacturers and rating plate	
(b) For medium power transformers with $S_r > 3150$ kV, the value of the Peak Efficiency Index (PEI) and the power at which it occurs;	product documentation and free access websites of manufacturers	
For large power transformers, the value of the Peak Efficiency Index (PEI) and the power at which it occurs;	product documentation and free access websites of manufacturers	
(c) for dual voltage transformers, the maximum rated power at the lower voltage, according to Table I.3;	product documentation, free access websites of manufacturers and rating plate	
d) information on the weight of all the main components of a power transformer (including at least the conductor, the nature of the conductor and the core material)	product documentation, free access websites of manufacturers and rating plate	
e) For medium power pole mounted transformers, a visible display 'For pole-mounted operation only'	product documentation and free access websites of manufacturers	

Outcome of WP3: D3.2 checklist (2)

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documentation shall provide the details of how the information is derived from the technical documentation of the other model, e.g. on calculations or extrapolations, including the tests undertaken by the manufacturer to verify the calculations or extrapolations undertaken.

3. DO THE DOCUMENTATION VALUES COMPLY WITH THE ENERGY EFFICIENCY REQUIREMENTS?

(Exemptions to the Regulation apply to this section)

3.1. Minimum energy performance or efficiency requirements for medium power transformers

Annex I. Point 1. 1. Requirements for three-phase medium power transformer with rated power ≤ 3150 kVA			
Requirement	Declared value	Measured value	Verdict
Load loss; P_k			
No load loss; P_0			

Annex I. Point 1. 2. Requirements for medium power transformer with rated power > 3150 kVA			
Requirement	Declared value	Measured value (*)	Verdict
Peak Efficiency Index (PEI)			

(*) PEI calculated with the measured values (values included in the test report)

Annex I. Point 1. 3. for medium power transformers with rated power ≤ 3150 kVA equipped with tapping connections suitable for operation while being energised or on-load for voltage adaptation purposes. Voltage Regulation Distribution Transformers are included in this category			
Requirement	Declared value	Measured value	Verdict
Load loss; P_k			
No load loss; P_0			

Annex I. Point 1. 4. Requirements for medium power pole-mounted transformers			
Requirement	Declared value	Measured value	Verdict
Load loss; P_k			
No load loss; P_0			

3.2. Minimum energy efficiency requirements for large power transformers

Annex I. Point 2. Requirements for large power transformers			
Requirement	Declared value	Measured value (*)	Verdict
Peak Efficiency Index (PEI)			

(*) PEI calculated with the measured values (values included in the test report)



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Outline of WP4

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WP4 - Evaluation of compliance verification methodology

- Task 4.1 & 4.2 Practical evaluation and complete methodology on fans and transformers
 - **step-by-step guide for compliance verification**
 - **supporting Toolbox**
- Task 4.3 Evaluation of costs, benefits and new methods of testing & common issues in large product testing
- Task 4.4 Policy recommendations for future regulation on industrial products



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WP4: The validation exercise

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To be done in each participating country, in Italy by ENEA + ECD:

1. Product screening/sample selection
 - i. List of manufacturers (national)
 - ii. List of main large suppliers with national representation
 - iii. List of main procurers (national)
 - iv. List of main contractors with national representation
2. Theoretical selection of a product from a listed manufacturer
3. Documentation inspection (check-list)
4. Theoretical selection of the most appropriate test method



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WP4: The Guide

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It is a public document, targeting MSAs and industry. Main content:

- Regulation 327/2011 and 548/2014 – What is all about?
- Directive 2009/125/EC – What are the manufacturer obligations?
- Methods for screening products
- Methods for selecting products
- Methods for technical documentation inspection
- Methods for verification testing
- Methods for continuous dissemination activities



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WP4: The Toolbox

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Provisional content:

- Spreadsheet for calculation of target efficiency for both products
- Good conformity assessment (verification ?) procedure
- Performance test report template to be used for witness testing
- Technical documentation: checklist, a guide on scale-model test, reduced speed test and calculation performed by manufacturers
- Plausibility check of design characteristics (EVIA?)



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EVIA proposal: D3.8

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D3.8 - Seven-tiered approach to market surveillance suggested by EVIA

1. Review of the product label
2. An audit of the manufacturer's ecodesign documentation
3. A plausibility check
4. An audit of the manufacturer's design, measurement and production management system
5. A review of the product testing documentation and type testing results
6. A physical verification by witness testing at the manufacturer's facility
7. Purchase a product and third party assess



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Outline of WP6

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WP6 Dissemination and Communication

- Final conference to present the outcomes of the project in Brussels in February 2019
- Possibly, 3rd NFP meetings with conclusions
– se si, dove e quando?



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Questions for participants

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- Looking at the draft methodology proposed D3.9 flowcharts:
 - Q.1 in your view, what are the main obstacles?
 - Q.2 and the main opportunities?
 - Q.3 Would it be feasible in your view to require a regulatory notification to MSA when the product has been placed on the market or it is ready to be placed on the market, or when it is installed?
 - Q.4 Would it be feasible to allow a new way to set a voluntary agreement with client/supplier, e.g. at their premises?
- Regarding the documents to be developed under WP4
 - Q.5 Are there documents listed challenging to find? Which ones?
 - Q.6 Are there other documents for compliance verification?

Risposte entro il 30 maggio



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about the INTAS project
and its results:

www.INTAS-testing.eu

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