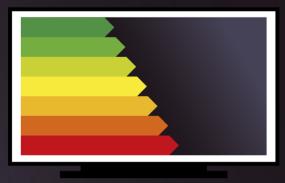
COMPLIANTV

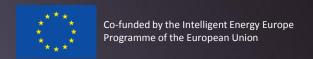


with Energy Label and Ecodesign Requirements

Compliance of TVs

FINAL

WP3
In-store Shop Inspections
1st Round
Results & Analysis

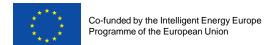


Stewart Muir and Tom Lock
17 September 2014
Energy Saving Trust

Contents

- Project Summary
- Deliverables
- Method
- Sampling
- Reporting of Data
- Results
- Commentary and Analysis
- Outputs and Next Steps



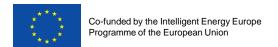


Project summary

The ComplianTV project aims at providing a fully-fledged and detailed methodological guidance to allow European Union (EU) Member State (MS) Market Surveillance Authorities (MSAs) to face the new legislative and market challenges for TV sets in an effective and cost-efficient way (with a support of aligned concerted testing and the development of a database). The project has the objective of:

- Analysing the implication of the new Energy Labelling Directive (labelling declarations, Commission Delegated Regulation (EU) No 1062/2010) and Ecodesign Directive (Commission Regulation (EC) No 642/2009 defining the minimum ecodesign requirements) on the market surveillance activities by carrying out ad-hoc surveys.
- Assessing the compliance of TV sets in the framework of the new Energy Labelling and Ecodesign regulations, through verification procedures.
- Improving the know-how and testing capability of laboratories with regard to the new and complex measurement method for measuring energy efficiency of TVs. This capacity building action will be carried out through harmonisation and coordination between laboratory partners of this project and other laboratories.
- Evaluating the outcomes of the product tests carried out and proposing corrective approaches to manufacturers and retailers.





COMPLIANTV



Compliance of TVs

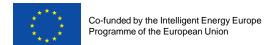
with Energy Label and Ecodesign Requirements

Deliverables

Summary of Deliverables (1/2)

- **D3.1:** In-store monitoring report on the 100 stores visited and assessed, 2 visits per shop
- **D3.2:** Online survey report on the [at least] 100 e-stores visited and assessed, 2 visits per e-store
- **D3.3:** Product testing results on the 201 products 126 TVs and 75 monitors
- **D3.4:** Report on discussions with manufacturers and retailers and remedy actions

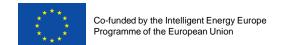




Summary of Deliverables (2/2)

Deliverable	Туре	Format	Owner	Diss.	When
D3.1 (Task 3.1.1)	Publication	Electronic / Printed.	EST	PU	M18, September 2014
D3.2 (Task 3.1.2)	Publication	Electronic / Printed.	TUB	PU	M12, March 2014
D3.3 (Task 3.2)	Publication	Electronic / Printed. EN	EST	PU	M15, June 2014
D3.4 (Task 3.4)	Publication	Electronic / Printed.	DE	PU	M18, September 2014





Vertical View of Partners & Tasks

Partner	Tasks for Organisation
EST	WP management; lead & deliver shop visits (T3.1.1); lead on purchase and testing products (T3.2); lead on evaluation of shop/online results (T3.3); support discussions with manufacturers (T3.4)
TUB	Lead and deliver web shop visits (T3.1.2); deliver shop visits (T3.1.1); support product purchasing & testing (T3.2); lead on evaluation of product tests (T3.3.3); support evaluation of shop (T3.1.1) and online results (T3.3.2); support discussions with manufacturers (T3.4)
DE	Lead on discussions with manufacturers (T3.4)
BIOIS, AEA, SEVEn	deliver shop visits (T3.1.1); deliver web shop visits (T3.1.2); support evaluation of shop (T3.3.1), online (T3.3.2) and product tests (T3.3.3)
ECOS	deliver web shop visits (T3.1.2); support evaluation of shop (T3.3.1), online (T3.3.2) and product tests (T3.3.3); support discussions with manufacturers (T3.4)
IPI, Re/genT, VDE	Support on purchase and testing of products (T3.2); support evaluation of product test results (T.3.3.3)

COMPLIANTV



Compliance of TVs

with Energy Label and Ecodesign Requirements

Method

Shop Inspections (1/6)

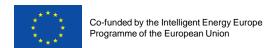
Shop visits – Partners – Lead by EST

Who?

EST	BIOIS	TUB	AEA	SEVEn
UK	France	Germany	Austria	Czech R.

- What? Each partner inspects 20 stores for Energy Label display. Return to those 20 stores to repeat the exercise; assess change
- When? 2 phases November / December 2013 and October 2014. Deliverable 3.1 now due end of 2014
- Which? Strategy for shop selection decided by individual partners, but within a framework provided by the Project Team



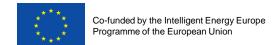


Shop Inspections (2/6)

Shop visits – Shop Types

- Classifications
 - Supermarket
 - Department Store
 - Electronic Specialist
 - Electronic Superstore



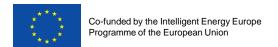


Shop Inspections (3/6)

Shop visits – Selection Criterion

- Shop Selection the strategy for shop selection was decided by partners, but within an agreed framework
- Focus the focus was on small shops or shops with less products in, compared to superstores
- Framework a minimum of 12 of the 20 shops inspected should come from electronic specialists, supermarkets and department stores
- Minimum to qualify, a shop should be selling a minimum of 6 TVs
- Superstores at least 2 superstores should be included in the sample



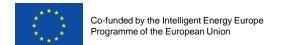


Shop Inspections (4/6)

Shop visits – Inspecting Products

- All televisions on display for sale in the shop were included in the inspection. That included:
 - boxed (single and multiple TVs available for purchase); and
 - unboxed (usually single display models)
- If multiple boxed TVs were seen with no label present, only one representative boxed model needed to display the label for all identical models present to be deemed compliant
- Therefore if 10 boxed TVs were present, with no representative labelled TV or any individual TVs displaying the label, this was counted as 10 non-compliant TVs
- Non-compliance of boxed TVs was relatively high due to instances of high numbers of the same model not displaying the label





Example

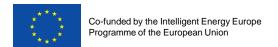
multiple boxed TVs all of same model number, no energy label present

- If 1 representative TV is labelled, all boxed TVs are considered compliant (counted as 1 compliance for figures in this report)
- If no representative TV, or any of the individual boxed models are labelled
- = x non-compliances (where x is total number of boxed TVs)

Example of representative TV





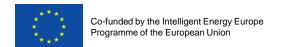


Shop Inspections (5/6)

Shop visits – Reporting & Classification

- All partners wrote up their results from the inspections following a standardised formatted spreadsheet
- Those TVs which were not correctly labelled were classified according to the following:
 - Missing: no label was found
 - Format: label does not fit the colour, size or format required
 - Not visible: label was found but not clearly visible
 - Apply: label does not relate to the TV or model





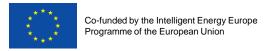
Label missing











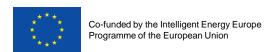
Label missing











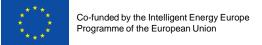
Format







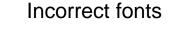




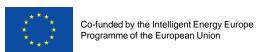
Format



Format error; label must be in colour









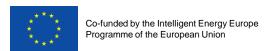
Not visible









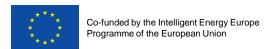


Not visible







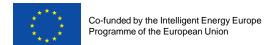


Shop Inspections (6/6)

Shop visits – Process

- The delivery of the inspections was divided into two phases, to allow an assessment and verification of the reporting tool.
- The phases were:
 - Pilot phase 5 stores
 - Pilot phase evaluation
 - Final phase 15 stores
 - Evaluation of all results





COMPLIANTV



Compliance of TVs

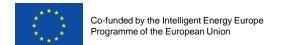
with Energy Label and Ecodesign Requirements

Sampling

Shop types inspected, by country

Country	Total	Department Store	Electronic Specialist	Electronic Superstore	Supermarket
Germany	20	3	8	4	5
Austria	20	1	12	6	1
France	20	2	9	5	4
UK	20	3	7	4	6
Czech Republic	20	1	9	7	3
Total	100	10	45	26	19





COMPLIANTV



Compliance of TVs

with Energy Label and Ecodesign Requirements

Reporting of data

Compliance rate of boxed TVs

The 'model' and 'unit' approach

- For calculating compliance rates of boxed TVs, ComplianTV has used a methodology where if x multiple boxed TVs of the same model were present and none were labelled, this was counted as x non-compliances (see slide 13)
- This is in line with the wording in Regulation 1062/2010 which states:

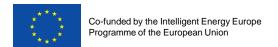
Article 4

Responsibilities of dealers

Dealers shall ensure that:

- (a) each television, at the point of sale, bears the label provided by suppliers in accordance with Article 3(1) on the front of the television, in such a way as to be clearly visible;
- For this exercise, 967 individual boxed TV 'units' at the point of sale were seen to be non-compliant.
- This figure came from 251 individual 'models'





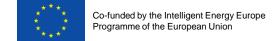
Compliance rate of boxed TVs

- The figure of 967 non-compliant units appears high; by measuring on a 'unit' basis, as described in bullet point 1. of slide 28, 77% of all boxed TVs were noncompliant
- However, a retailer can easily correct the non-compliance where it is seen for multiple boxed models simply by ensuring a representative TV is labelled (see slide 13)
- Measuring the non-compliance rate on a 'model' basis, 251 were non-compliant out of a total of 541 boxed models seen
- This gives an alternative figure for the boxed non-compliance rate of 46%
- Therefore, both the 'unit' and 'model' non-compliance rate will be reported to retailers, with best practice advice on how to ensure labelling is correct

Labelling this TV ensures all others accompanying it are compliant



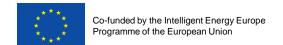




Note on reporting metrics

- The 'unit' and 'model' approaches report varying degrees of labelling compliance
- Unit level measurement is more stringent than model level and is considered to be the correct interpretation of the regulation; for this exercise, unit level measurement counted multiple compliant TV models as 1 compliance, but multiple non-compliant TV models as multiple non-compliances (see bullet point 1 slide 28)
- Unit level reporting could also be expanded to count multiple correctly labelled units as multiple compliances, although in practice this was rarely seen in round 1 (see bullet point 2 slide 28)

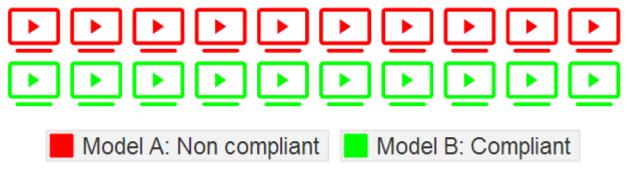




Note on reporting metrics

Example:

Shop selling 10 boxed units of TV model A (non-compliant) and 10 of B (compliant)



1. Unit approach (used in this reporting): Non-compliance counted as multiple, but compliance counted as 1:

Compliance rate =
$$1/11 = 9\%$$

2. Unit approach with multiple compliant models counted:

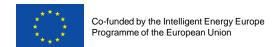
3. Model approach (used in this reporting): Non-compliance and compliance both counted as 1:



Recommendations for round 2

- 'Model' level reporting may be more useful for retailers in helping them understand how to correct labelling errors.
- It is also recommended that in round 2, further data is captured to record
 the number of boxed compliant units of a particular model, counted
 as multiple and not as 1 compliance (option 2, slide 28), to match better
 the approach of counting multiple units of non-compliant boxed TVs
- However using the 'unit' approach in round 1 still gives a strong picture of overall compliance
- A relatively low number of boxed TVs were seen in inspections of German and Austrian shops, so this had no great effect on results
- Low compliance of boxed TVs in general was seen in UK shops; where multiple boxed TVs were present, often none of these were found to be labelled – therefore there was no issue with failing to count multiple units of compliant TVs (as this scenario was rarely seen)





COMPLIANTV



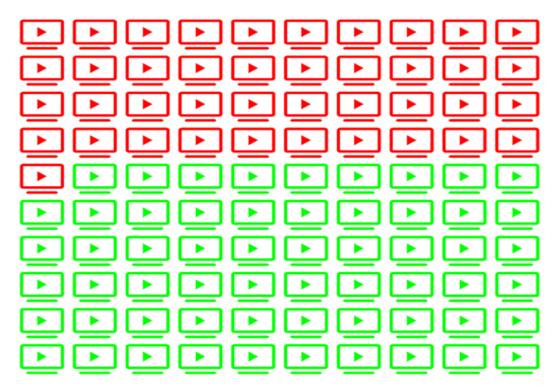
Compliance of TVs

with Energy Label and Ecodesign Requirements

Top level results – by unit and model

All TVs (by unit)

TVs on sale	Compliant	Non-compliant
5890	3503	2387



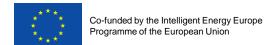
Overall non-compliance rate:

41%



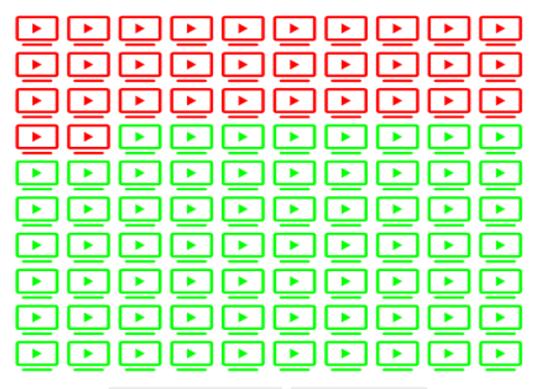






All TVs (by model)

TV models on sale	Compliant	Non-compliant
5128	3503	1625



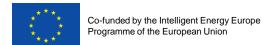
Overall non-compliance rate:

32%









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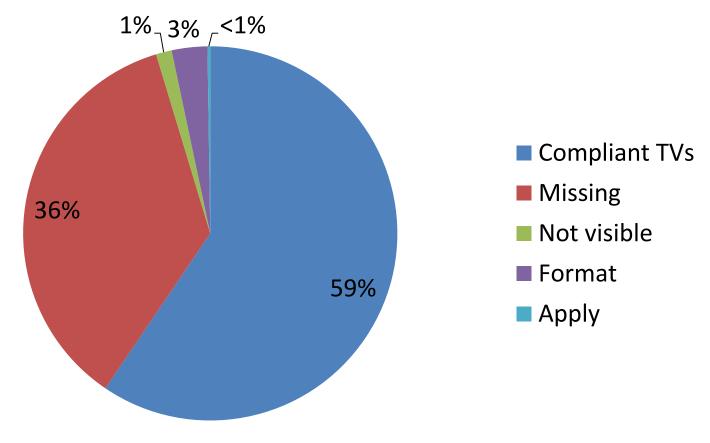
Compliance of TVs

with Energy Label and Ecodesign Requirements

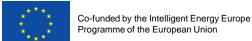
Detailed results – by unit

Overall compliance

- Missing: no label was found
- Not visible: label was found but not clearly visible
- Format: label does not fit the colour, size or format required
- Apply: label does not relate to the TV or model



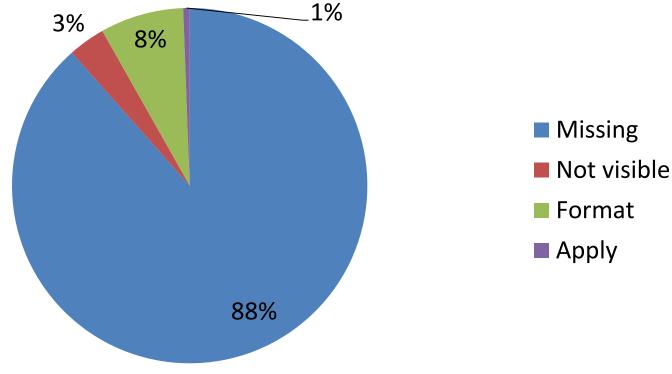




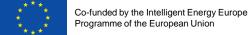
Failure Classification

~9/10 non-compliant TVs were due to a missing label

Total non- compliant TV units	Missing	Not visible	Format	Apply
2387	2109	80	184	14





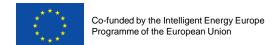


TV units seen

Non-compliance rate by country

Country	TV units seen	Compliant TVs	Non-compliant %
Germany	995	811	18%
Austria	923	605	34%
France	1307	588	55%
UK	1017	448	56%
Czech Rep	1648	1051	36%

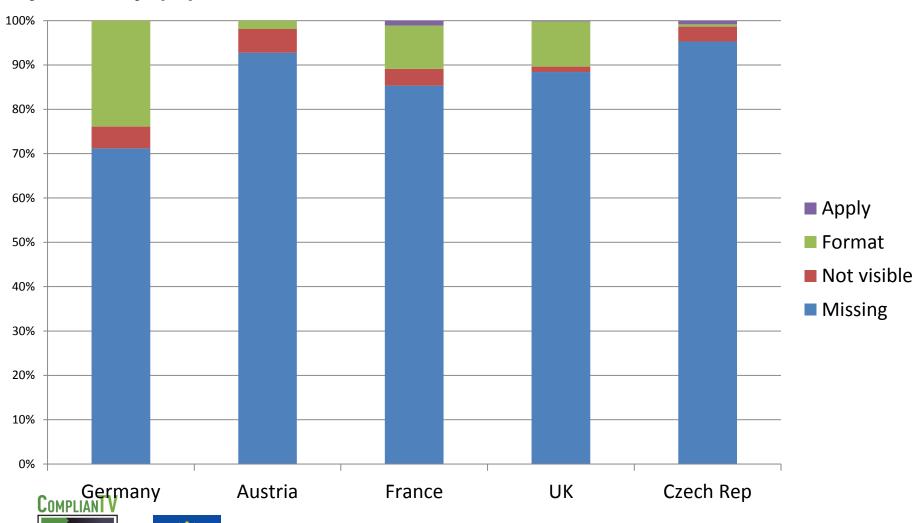




Failure classification

Co-funded by the Intelligent Energy Europe Programme of the European Union

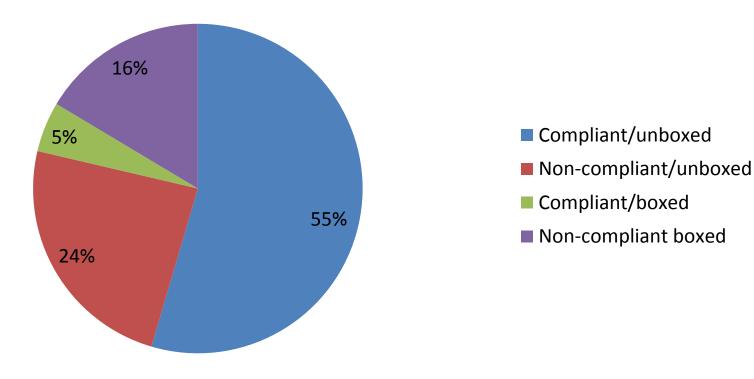
By country (%)



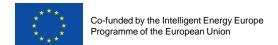
All TV units

Unboxed v boxed

Total	Unboxed		Boxed	
TVs	Compliant	Non-compliant	Compliant	Non-compliant
5890	3213	1420	290	967

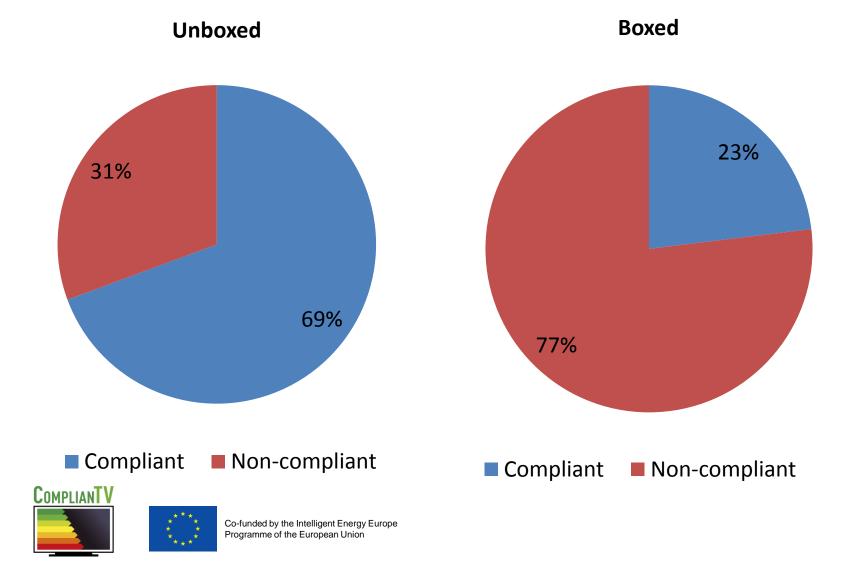






Compliance rate

Unboxed v boxed

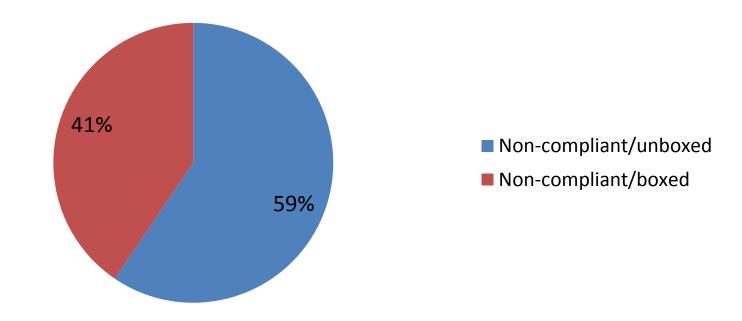


Non-compliant units

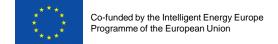
Unboxed v boxed

Non-compliant TVs	Non-compliant/unboxed	Non-compliant/boxed
2387	1420	967

41% of all non-compliances were due to boxed TVs



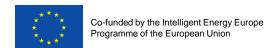




TV distribution per shop type

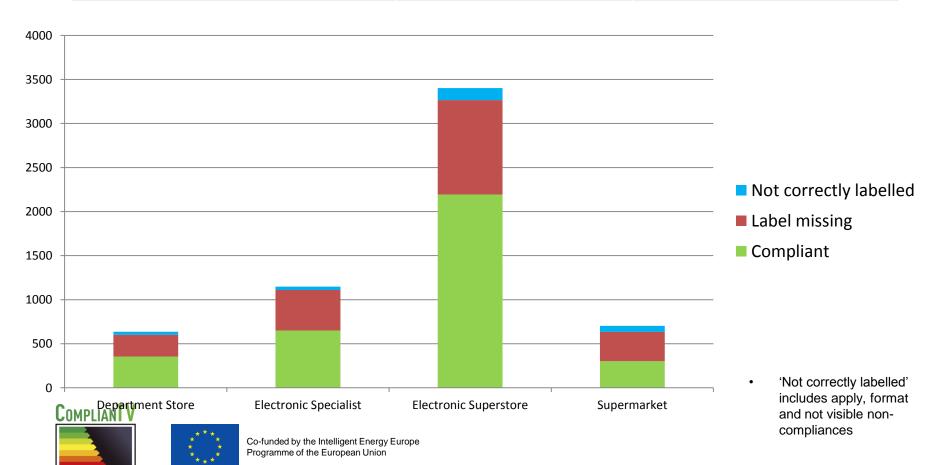
Total	Department Store	Electronic Specialist	Electronic Superstore	Supermarket
No. shops inspected	10	45	26	19
No. TVs seen	637	1149	3401	703
Unboxed	499	1064	2624	446
Boxed	138	85	777	257
Average TVs seen per shop type	64	26	131	37
No. non-compliant	282	498	1203	401
Average non-compliant TVs per shop type	28	11	46	21





Compliance rate and failure type

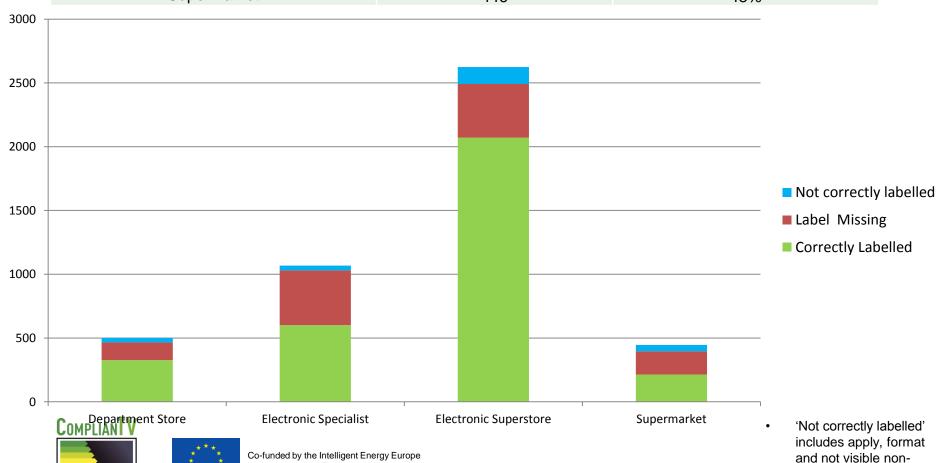
Shop Type	TVs on sale	% compliant
Department Store	637	56%
Electronic Specialist	1149	57%
Electronic Superstore	3401	65%
Supermarket	703	43%



Unboxed TVs by shop type

Programme of the European Union

Shop Type	Unboxed TVs on sale	% compliant
Department Store	499	66%
Electronic Specialist	1064	56%
Electronic Superstore	2624	79%
Supermarket	446	48%



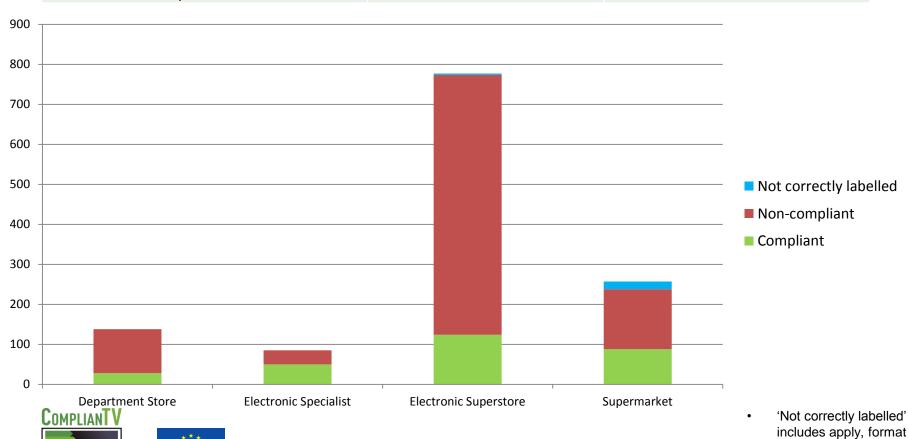
compliances

Boxed TVs by shop type

Co-funded by the Intelligent Energy Europe

Programme of the European Union

Shop Type	Boxed TVs on sale	% compliant
Department Store	138	20%
Electronic Specialist	85	59%
Electronic Superstore	777	16%
Supermarket	257	34%

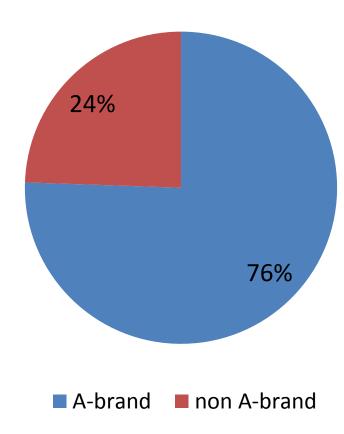


and not visible non-

compliances

Non-compliance by brand type

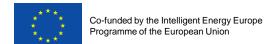
(A brand, non-A brand)



Brand	No. TVs	Non-compliance split		
Туре	non- compliant	Unboxed	Boxed	
Α	1803	60%	40%	
Non-A	584	59%	41%	
Total	2387	60%	40%	

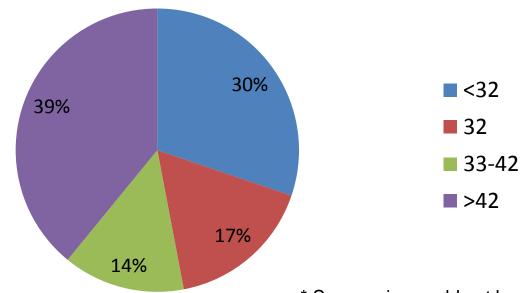
- Brands of compliant TVs were not recorded
- A brands were much more widespread than non-A brands
- A brands: Samsung, Panasonic, LG, Sony, Toshiba, Philips, Thomson, TCL, Sharp
- For comparison, the Amazon bestseller split of these brands was higher at 92.2% (see fig. 6, D2.2 final report)
- No real trend was identified for compliance rate by brand type or between boxed and unboxed TVs by brand type



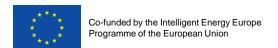


By screen size

Screen size (inches)	Amazon Sales market share (Q2, 2013)	EU-24 market share by screen size (Michel et al, 2013)	No. non-compliant in ComplianTV shop inspections
<32	32%	30%	470 (30%)
32	23%	29%	261 (17%)
33-42	28%	28%	216 (14%)
>42	17%	13%	607 (39%)







* Screen size could not be determined for 833 models. Percentages are for all TVs with known screen size. Screen size of compliant models was not recorded as part of inspections.

COMPLIANTV



Compliance of TVs

with Energy Label and Ecodesign Requirements

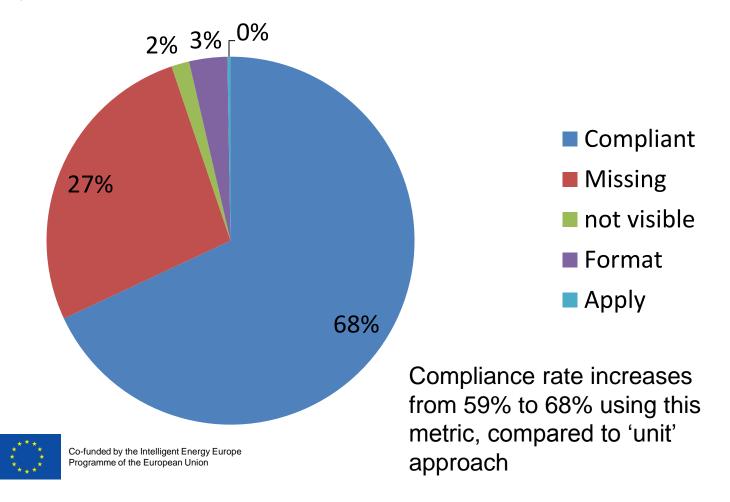
Detailed results – by model

Overall compliance

Missing: no label was found

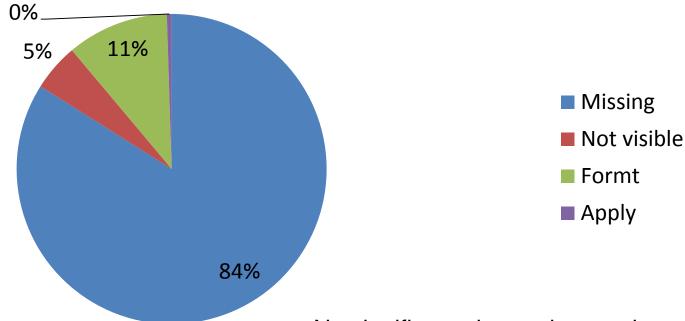
COMPLIANTV

- Not visible: label was found but not clearly visible
- Format: label does not fit the colour, size or format required
- Apply: label does not relate to the TV or model

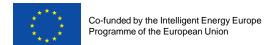


Failure Classification

Total non- compliant TV models	Missing	Not visible	Format	Apply
1625	1359	80	172	14







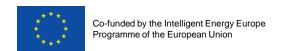
No significant change is seen here compared to the 'unit' approach; 'missing' is still the most common non-compliance

TV models seen

Non-compliance rate by country

Country	TV models seen	Compliant TV models	Non-compliant %
Germany	988	811	18%
Austria	923	605	34%
France	1038	588	43%
UK	791	448	43%
Czech Rep	1388	1051	24%





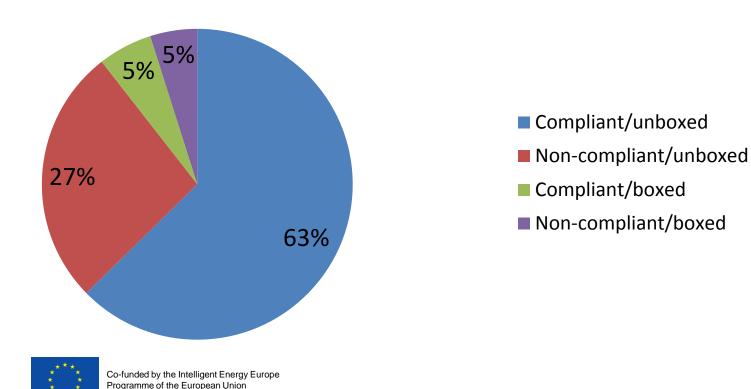
The split of failure types by country does not differ greatly between the unit and model approach

All TV models

Unboxed v boxed

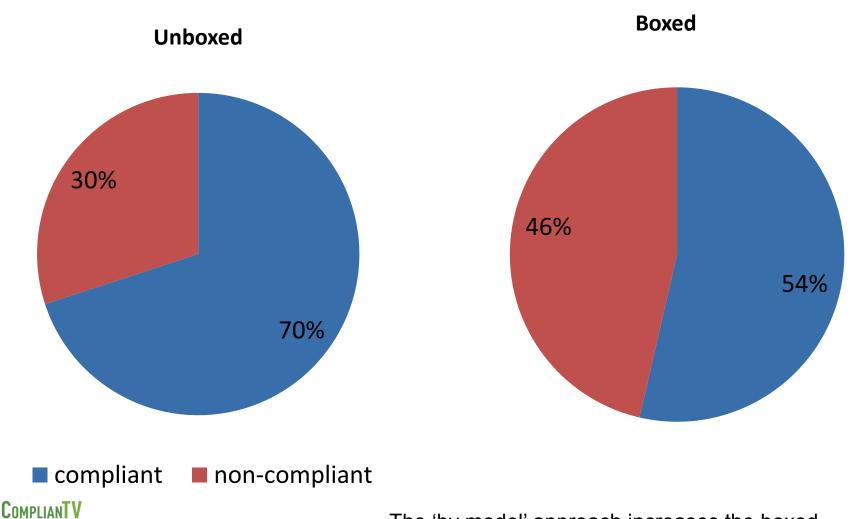
COMPLIANTV

Total	Unboxed		Boxed	
TV models	Compliant	Non-compliant	Compliant	Non-compliant
5128	3213	1374	290	251



Compliance rate

Unboxed v boxed



Co-funded by the Intelligent Energy Europe Programme of the European Union

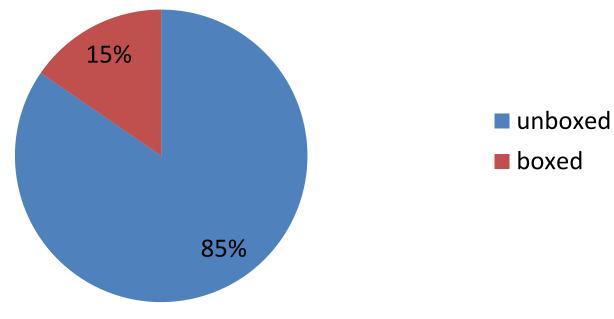
The 'by model' approach increases the boxed compliance rate significantly. Unboxed compliance rate stays almost the same.

Non-compliant models

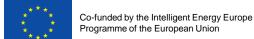
Unboxed v boxed

Non-compliant TVs	Non-compliant/unboxed	Non-compliant/boxed
1625	1374	251

Boxed TVs form a much lower percentage of the total non-compliance using the model approach: 15% compared with 40% when all units considered

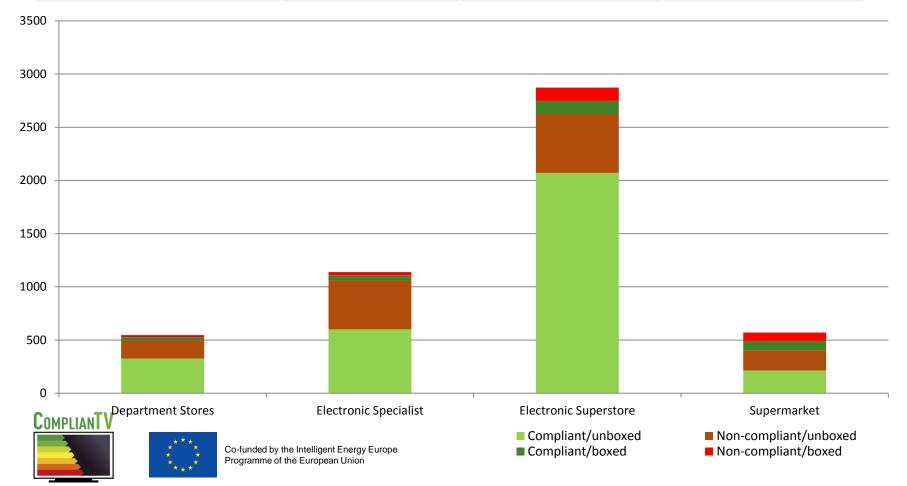






Compliance rate and failure type

Shop Type	TV models on sale	% compliant by model	% compliant by unit
Department Store	547	65%	56%
Electronic Specialist	1139	57%	57%
Electronic Superstore	2872	76%	65%
Supermarket	570	53%	43%

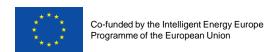


By shop type

Unboxed/boxed comparison (model/unit)

Shop type	Unboxed % compliant (model)	Unboxed % compliant (unit)	Boxed % compliant (model)	Boxed % compliant (unit)
Department Store	66%	66%	58%	20%
Electronic Specialist	57%	56%	63%	59%
Electronic Superstore	79%	79%	50%	16%
Supermarket	53%	48%	53%	34%





Using the 'model' approach significantly increases the compliance percentage in department stores, electronic specialists and supermarkets

COMPLIANTY



Compliance of TVs

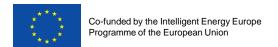
with Energy Label and Ecodesign Requirements

Commentary and Analysis

Key findings: Shop Types (figures by unit)

- Overall, electronic superstores came out on top for labeling of all TVs at 65%, with supermarkets lowest at 43%
- Electronic superstores were the best at ensuring unboxed TVs were labelled (79% compliant)
- However, electronic superstores also had the lowest percentage of correctly labelled boxed TVs (16%). This is likely to be due to the sheer number on sale. The average electronic superstore inspected sold 131 TVs (department stores were next highest with an average of 64 per shop, see slide 41)
- Boxed TVs in supermarkets were seen to be labelled correctly around twice as often as in department stores, where there were a similar number of boxed TVs per store (average 13 in each)
- Electronic specialists were the 2nd worst labelers of unboxed TVs (56%), but highest on boxed TVs (possibly due a relatively low number on average <2 boxed TVs per shop)

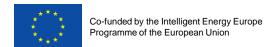




Key findings: Shop Types – recommendations for improvement

- **Electronic superstores** comparatively strong labelling of unboxed models, but issues seen with large numbers of boxed TVs not displaying the label
- Electronic specialists on average, only just over half of unboxed TVs were correctly labelled, suggesting this is the main area to improve in and a low level of engagement with labelling. Generally few boxed TVs were seen for sale in this shop type.
- Department stores correct labelling of unboxed TVs second highest, but possibly less engaged and knowledgeable on labelling than electronic superstores. Boxed TV labelling relatively low, but generally fewer boxed were TVs seen than in superstores, likely due to size of store
- Supermarkets lowest rate of unboxed labelling and there were individual examples where no labelling of unboxed TVs was seen at all (eg 3 UK supermarkets).
 Second highest at labelling boxed TVs, but still only a 1 in 3 success rate.
- Assessing the compliance rate by model showed that department stores, electronic superstores and supermarkets could make quick, significant improvements by rectifying the issue of missing labels on multiple numbers of boxed TVs

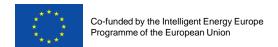




Key findings: Boxed TVs

- The non-compliance rate due to boxed TVs was relatively high compared to unboxed TVs (unit level - 77% non-compliant - see slide 39). This was significantly lower at the model level (49% non-compliant, slide 54), suggesting that improvement could be made quite easily by an engaged retailer. However, even at model level, this was still high when compared to unboxed TVs (30% non-compliant, slide 52)
- The 967 non-compliances seen were from a total of 251 individual models;
 this is an average of 3.8 TV units for sale for each non-compliant boxed model
- The highest number of multiple non-compliances seen from one boxed TV model in a shop was 40.
- There were 15 instances of individual TV models being displayed with 10 or more further boxes of the same model which were also counted as noncompliant (this does not include 5 models viewed by Seven (CZ) where a total of 165 unlabeled boxed TVs were seen, but due to pressure from shop staff, the exact number per model could not be ascertained)



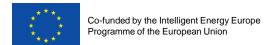


Key findings: Failure Classification

- By far the most common cause of noncompliance was a missing label; this was the reason for 88% of non-compliances (by unit)
- Of the 181 'format' errors, the reason recorded for 132 TVs was the instance where the 'hard-off' symbol on the label did not contain a tick. This could be considered one of the less important categories of labeling non-compliance (right)



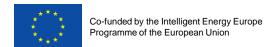




Key findings: by country

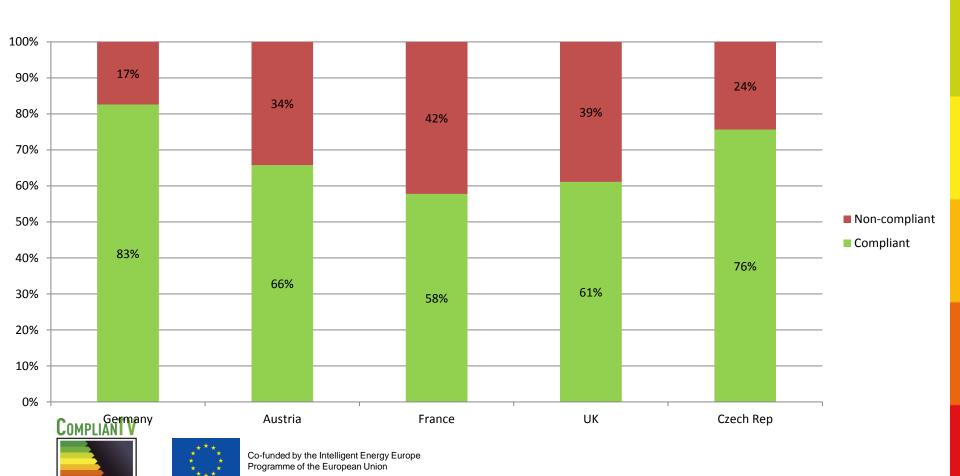
- Germany was seen to have the highest overall compliance rate.
 Each country did however inspect a different split of shop types, and for countries inspecting more electronic superstores, non-compliance rates were higher due to instances where large numbers of boxed TVs were not labelled.
- Partners from France, UK and the Czech Republic inspected stores
 with more boxed TVs than Germany and Austria; hence when
 considering the 'unit' approach their compliance rates were affected
 more by multiple non-compliances of the same boxed model.





Key findings: by country

- An interesting comparison to assess retailers' engagement on labelling is the compliance rate of unboxed TVs by country.
- Shops in Germany saw the highest levels of correctly labelled unboxed models (83%), with shops in France lowest (58%)



Other key findings:

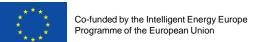
- No strong trends were observed from the analysis of compliance rate by screen size. However the split of non-compliance seen does give useful insights whether the market share of larger TVs is increasing, and whether this is a barrier to labelling.
- Screen size data is only held for non-compliant TVs from shop visits

TVs >42" accounted for 39% of all non-compliances. When compared to the 2013 Amazon
market share of TVs >42" (17%) and the 2012 EU-24 figure (13%), this suggests a greater
proportion of larger screen sizes in physical shops than online, as retailers are more keen to

display larger sets.

- It is possible that retailers may be less inclined to label larger TVs as energy labelling may be deemed to detract from the presentation of large TV performance information
- The split of screen sizes from ComplianTV shop inspections may also suggest the market share of TVs of size > 42" is generally increasing.







Unlabelled 85" TV seen in UK department store

COMPLIANTV



Compliance of TVs

with Energy Label and Ecodesign Requirements

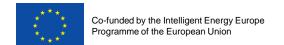
Outputs & Next Steps

Communicating the Results

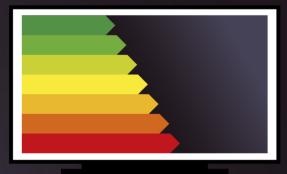
Procedure:

- Outputs of the Shop Inspections to be provided to shops and retail associations, issuing any corrective actions, and providing advice
- Inform the MSA of the outputs / actions agreed to be undertaken by the shop in case of non-compliance.
- If non-compliance persists, recommended MSA formally inspects
- Template letters and tracking tools have been implemented





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Compliance of TVs

with Energy Label and Ecodesign Requirements

Thank you for your attention.

Contact and more information:

ComplianTV project www.compliantv.eu

Stewart Muir & Tom Lock Energy Saving Trust +44 (0) 207 222 0101 tom.lock@est.org.uk stewart.muir@est.org.uk

