

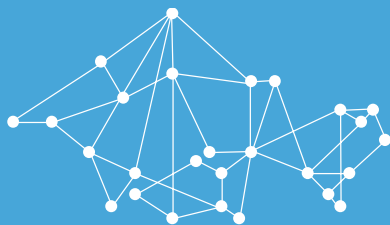


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TASK 1 - FINDINGS FROM A SURVEY OF A SMALL NUMBER OF MEMBER STATE REPRESENTATIVES

1st Stakeholder meeting - June 30th 2016, Brussels

SURVEY NATURE AND OBJECTIVE

Characteristics

- » Nature - a questionnaire was circulated followed up by interviews
- » Purpose - to gain an initial impression of MS representative thoughts on the application of a points system approach
- » 5 Member State representatives have completed this process
- » There is still an opportunity to include 1 or 2 more
- » Chatham House rules apply in processing and presentation of findings

Q1.

Do you think it is necessary to establish a strict definition of what a complex product is in Ecodesign regulatory terms?

» No - “The answer assumes that “strict” means having no loopholes. However, the definition would be used to guide the decision whether for a certain product or system a points -system would be suitable”

“It may be too difficult and not worth the effort”

Q1.

Do you think it is necessary to establish a strict definition of what a complex product is in Ecodesign regulatory terms?

- » “There is a huge variety of (potential) complex products. This makes it difficult to find a very specific and strict definition for complex products. It seems more feasible to define a complex product by its general properties. In the context of the possible application of a points system however, it is necessary to have such a general definition in the sense of a common understanding, for which types of products a point system could be an appropriate regulation scheme and for which not.”

Q2.

How would you define a complex product from an Ecodesign regulatory development perspective?

“A complex product

- does not provide a standard configuration / functional unit
- is often a customised product, adapted to a specific application,
- can have multiple functions,
- can be modular,
- can be finally installed at the user's site,

and/or

- can have different performance levels dependent on the operating conditions at the user's site
- can have functional parameters that are inherently difficult to measure

The definition of a complex product needs to be clearly distinguished from an extended product.”

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Q2.

How would you define a complex product from an Ecodesign regulatory development perspective?

“A product that has one or more of the following characteristics:

- Product / system with more than one function (machine tools, washer driers)
- The performance is too dependent from the duty cycle (pumps, motors)
- Heterogeneous types of products (machine tools)
- Custom made products/systems/installations (machine tools, steam boilers, industrial ovens, large ventilation units, large boilers and heat-pumps, large chillers/heat-pumps)”

“Usually they are typically construction products that have to be installed, products systems e.g. business to business and data centres (enterprise servers), consumer electronics. Large professional products and tertiary lighting products.

When products are not sold as packages but as components”

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Q2.

How would you define a complex product from an Ecodesign regulatory development perspective?

“A complex product is a collection of various parts (modules) that can be assessed separately, that allow for a large number of combinations where each combination of modules constitutes a product that has different functionalities/performances (to suit different needs of end-users).

Note: differentiation between modules could be done by software i.e. potentially diagnostic software could be applied to assess the functionalities and energy/resource efficiency of specific modules in each functional mode and to determine the apportionment of effort/time in each mode

Some further comments:

- 1) A product that can be used in various ways (for which different user profiles exist) need not be a complex product
- 2) A large product need not be a complex product, transformers can be very large but they are not complex products in the above definition.
- 3) A points-system can be oriented on functionalities/performance/efficiency but also on savings options

Q3.

Assuming such a definition were in existence do you think points-based Ecodesign assessment methodologies should only be applied to such products?

- » **No** - not necessarily -perhaps two types of systems e.g. PEF looking across different env. impacts or machine tools looking only at energy impact (mono- impacts) - points based approaches could be applied to more simple products. E.g. a TV could be graded on its material efficiency - i.e. accounting for whether it uses less material, or uses recycled or bio-based materials or whether big plastic parts are labelled and compatible plastics can easily be separated

Q3.

Assuming such a definition were in existence do you think points-based Ecodesign assessment methodologies should only be applied to such products?

- » No - whenever needed, as identified during the preparatory study.
- » Requirements based on a “kind of point systems” are already being applied for electric room heaters (2015/1186) and residential ventilation units (calculation of SEC, table 1 in eco-design requirements (2014/1253))
- » One can consider that requirements for a “not-so-complex-product” are set using points for parameters where a trade-off may exist, i.e. Nox emissions and energy efficiency for a boiler. As requirements on resource efficiency become more common, this kind of point system will become increasingly needed.

Q3.

Assuming such a definition were in existence do you think points-based Ecodesign assessment methodologies should only be applied to such products?

- » Unsure - As it seems that market surveillance can be more difficult in the case of the application of a points system and the environmental performance can't be described accurately and unequivocally, a points system should indeed only be applied if the product can't otherwise be treated under the Ecodesign Directive.
- » On the other hand, there might be aspects, for which manufacturers need a certain design flexibility (e.g. aspects of material efficiency), for which a points system could be applied in a common regulation. When products finally are entering the preparatory study phase, the decision whether to apply a methodology for “complex products” has to be made on a case-by-case basis.

Q3.

Assuming such a definition were in existence do you think points-based Ecodesign assessment methodologies should only be applied to such products?

- » Yes - The words “point-based” seem to point to an evaluation system in between an ordinal system and an interval system: (assuming more is better) a product with 10 points is better than a product with 5 points, but it may not be twice as good
- » Solutions on a ratio scale typically do not involve points. E.g. the efficiency of an electric motor driven unit can be calculated from the efficiency of the supply and control (VSD), the motor, the transmission (if applicable) and the fan or pump or whatever else is driven. In my opinion such a solution - if possible - is to be preferred above a points system

Q4.

In principle do you agree that the Ecodesign characteristics of complex products can be assessed in a modular manner (i.e. individually for each module that performs a specific function)?

- » Unsure - In principle, this will be possible. However, it may be difficult to define the specific function of each module, and the functions will interact with each other. This means that assessment of the modules is possible and can be highly accurate, but may not lead to meaningful information about the complete product. To ensure that, a calculation/weighting method would have to be designed and validated for each product group
- » One needs to consider additionally that the applicability of ecodesign improvement options can in the case of complex customised products depend even more on the application area compared to other product groups regulated so far. E.g. in case of machine tools it has been discussed, that there are customised machine tools intended for production sites where it is known that they will run for 24 hours a day over the year. For such machines the installation of standby software does not provide improvements compared to machine tools which are only partly in use.

Q4.

In principle do you agree that the Ecodesign characteristics of complex products can be assessed in a modular manner (i.e. individually for each module that performs a specific function)?

- » Yes - although this would be a circular argument were a complex product defined as a modular product
- » For MTs could come up with a list of the most used applications that could be done with a certain efficiency. However, one operation might influence another operation (e.g. smoothed edge preforming might avoid a need to trim edges afterwards)
- » In principle yes but with exceptions: one cannot expect that the drying efficiency of a washer dryer to be as high as of a dedicated dryer. Also, a combined washer drier will use less material

Q5.

What issues do you think would be encountered were the Ecodesign characteristics of complex products to be assessed in a modular manner (i.e. individually for each module that performs a specific function)?

- » “unsure how they will combined and could influence each other. Also could be technically difficult to assess independently. Could depend on how modular the software is. V. long processing change (e.g. a machine hall) - have machines from different producers with compatability issues”
- » “To define the modules. To combine the individual assessments to a total assessment”

Q5.

What issues do you think would be encountered were the Ecodesign characteristics of complex products to be assessed in a modular manner (i.e. individually for each module that performs a specific function)?

- » To our understanding for a complex product no single functional unit can be defined. Often the needs of the customer determine which functions can be provided by the product and which modules the product contains. Therefore it seems that a points system needs to be built-up on the possible functions and modules, thereby taking into account that probably lots of variations of the product with regard to modules and functions will exist
- » There can be difficulties to define the specific function of each module, and the functions will interact with each other. Regulating modules may lead to some environmental benefits, but not necessarily to an optimal solution for the complex product

Q6.

Within an Ecodesign context do you think that, at least for some products, it is viable to apportion functional units among modules that perform more than one function, as is done for example in the ISO 14955-1 standard for machine tools or in the "installer" energy labelling requirements for space and water heaters?

- » Yes, It would have to be made if those products should be rated by a points system. However, this may be a difficult task. This approach can give an estimate of energy savings, but this will be inherently imprecise, as pointed out in the study. Therefore, the question may arise whether it is appropriate to set requirements on modules / products with low expected saving potential in this way, as it can be questionable that the outcome is beneficial in the majority of products

Q6.

Within an Ecodesign context do you think that, at least for some products, it is viable to apportion functional units among modules that perform more than one function, as is done for example in the ISO 14955-1 standard for machine tools or in the "installer" energy labelling requirements for space and water heaters?

- » Yes, whenever it is appropriate and needed for the specific product/system
- » Mentioned WM cycles - e.g. display technology - however, a difficult question as most products are mono-functional. Could come up in the lighting systems prep study.

Q7.

Multi-criteria points systems methodologies usually begin by establishing the set of (environmental) impact criteria to be assessed. Do you think any prospective points scheme to be applied to Ecodesign assessment of complex products should focus on key impact criteria first or should it analyse all impact criteria?

- » **All Criteria** - At first, all environmental impacts should be assessed and the most important ones identified. In a second step one needs to decide, which of the important environmental impacts (key criteria) can be addressed separately with specific requirements (e.g. noise emissions) and which need to be treated within a points system, for which then the points system could be established. Another approach could be to define a minimum level for the environmental aspects for which it is possible (must criteria) and to combine this with additional improvement options for which points can be granted

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- » Key Criteria - The “key impacts” should be determined during the preparatory study when applying the MEERP.
- » Other - It would be most interesting to look at everything (e.g. EE, material efficiency, toxicity etc.); however, for energy related products there could be a focus on say energy impacts. However a pragmatic approach is needed. Looking at the PEF -multi-criteria can be difficult - its doing it in the right way but it’s a challenge. Difficult to make the PEF accurate enough - mandate use of PEF for LCA claims but maybe too much to bind into Ecodesign regulations at present

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- » Other - This is an issue that is in my opinion not related to the issue of complex products. Also for simple products this question is valid. Luckily within Ecodesign this has been solved by establishing the MEERp that has selected the (key) environmental criteria used to assess the environmental impact of products
- » So, unless it is the intention to evaluate/change the environmental criteria used in the MEERp (which I would not recommend) this issue is not applicable

Q8.

Multi-criteria points systems approaches often use grouping and weighting of impact (assessment) criteria to derive an overall score: do you think this would be a helpful approach for assessing the Ecodesign of complex products?

- » It depends - I assume that the question relates to various performance criteria, this is only useful if consensus is found on this grouping and weighting.
- » Note that the name “points-system” already points to an indicator that can be used across functionalities. If in such a system a product with functionality A gets 6 points and a product with functionality B gets 6 points, one would assume that these products are equally good.
- » Unsure - PEF has merits but perhaps not when used in a multi-criteria approach. May be better to stay within a single criterion points based approach

Q8.

Multi-criteria points systems approaches often use grouping and weighting of impact (assessment) criteria to derive an overall score: do you think this would be a helpful approach for assessing the Ecodesign of complex products?

- » Yes - Grouping and weighting will be essential for a point scheme. However, care should be taken to ensure proper balancing of the environmental impacts. Otherwise, trade-offs could be used to undermine environment protection levels.
- » Sensitivity analysis of weightings is important: What is the impact of decisions on the environment protection level and of the range of products?
- » Yes - but it may be complemented with other requirements, i.e. it does not have to be the “unique overall score”

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Q9.

If weightings were to be applied, which method for determining the weightings do you think would be most appropriate?

- » Panel method - Panel method works for the moment in the actual practice within CF and RC. Distance to Target
- » It would help a great deal were a consultant to objectivise the discussion by giving some calculations for LLCC points - more difficult for multi-criteria. Material efficiency and waste treatment are key issues design impacts on how difficult it would be to recycle materials - can be assessed in I/O analysis and mass balancing - interesting to see if its possible to derive a LLCC for material efficiency

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- » Panel method - In principle panel method but complemented whenever appropriate

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Q9.

If weightings were to be applied, which method for determining the weightings do you think would be most appropriate?

- » Panel method - The panel method seems to be the most applicable method.
- » Monetisation based on CO2 could be applied if only energy efficiency is tackled. However it seems very difficult to analyse the final improvement potential for complex products and there might be a high uncertainty. This makes the application of monetisation or distance to target methods complicated or in some cases even impossible
- » Other - In principle the weightings can be written in the legislation; on which method the weightings are based is less interesting. The process of getting it in the legislation assumes that various interests are taken into account

Q10.

Do you think it might be appropriate to only apply a weighted-points systems approach for the Ecodesign assessment of complex products to purely energy-related assessments, where the weighting is applied between the various modules that make up the device?

- » No - Why should such a method only be applied to purely energy-related assessments?
- » Weighted points should only be applied when more straightforward metrics are not available or appropriate
- » In principle, each module and each function should achieve requirements and a minimum level. However functions or environmental impacts are not independent from each other - example air conditioners: less noise means less energy efficiency. Then impacts or requirements would have to be weighted. This bears danger of weak requirements due to (unexpected or in-transparent) trade-offs. It may make more sense - if applicable and appropriate - to set requirements for some environmental impacts separately and to use a points system for a single environmental impact only. However there might also be cases, where several environmental impacts can only be treated within a point system

Q10.

Do you think it might be appropriate to only apply a weighted-points systems approach for the Ecodesign assessment of complex products to purely energy-related assessments, where the weighting is applied between the various modules that make up the device?

- » Yes - It is preferable to first consider mono criterion to fit them together to an end score rather than multi-criteria -
- » if the mono-criterion approach works then extend it to multi-criteria in the future

Q10.

Do you think it might be appropriate to only apply a weighted-points systems approach for the Ecodesign assessment of complex products to purely energy-related assessments, where the weighting is applied between the various modules that make up the device?

- » Additional - In general, it might be difficult that a methodological study for a point system in general can foresee all characteristics which can be important for complex products
- » It might be of help if the study develops a kind of procedure and decision tree, which provides clear guidance however also a certain flexibility for preparatory studies in order to be able to deal with the specifics of complex products

Q11.

Multi-criteria assessment processes often use an Analytical Hierarchy Process methodological approach to establish a hierarchy between the criteria. Do you think this could be a viable tool for the Ecodesign assessment of complex products?

- » Unsure - In principle yes, however we are unsure what Analytical Hierarchy Process applied to this context really means
- » Yes - but much of the analysis will be done in the preparatory study and the specific procedure will be written down in the legislation, e.g. What are the possible modules? How are these defined? What characteristics need to be assessed/measured and how these are to be combined?

Q12.

Do you think that a points systems approach has the potential to form a viable methodology for the development of Ecodesign requirements for complex products?

- » Yes - points schemes have been successfully implemented for other purposes. In principle, they can be applied for Ecodesign as well - dependent on the way it is used, of course. The potential is there, the challenge will be in the decision about what parameters to award points for, which number of points to set as a minimum requirement and avoiding the introduction of wrong incentives
- » Whenever a straightforward metric is not available or sufficient
- » A potential but not demanding that it should be developed within 3 years. Study a good initiative but also asked Commission to put thoughts on paper re what a systems approach might be. Were not then talking about a points system but this was hinted at
- » Yes, as points system it has greater flexibility to deal with non-ratio characteristics of products, e.g. the presence of certain features

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Q13.

Do you think a points systems approach might be suited to setting generic Ecodesign requirements?

- » Yes - But generic eco-design requirement so far have not been much used, nor are they very effective
- » But needs a lot of work!
- » Possibly, for example for resource efficiency requirements
- » Requirements need to be as specific as possible in order to allow market surveillance to check if a product meets these requirements
- » To our understanding a points system would establish a kind of third way to set requirements, this means actually one can't treat it precisely with the understanding of specific and generic requirements. It will not be really generic, as e.g. there is a need to set a requirement how many points need to be reached. On the other hand the reached points can't be used to describe the environmental performance of the product in a specific way

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Q14.

Do you think a points systems approach might be suited to setting specific Ecodesign requirements?

- » Yes - Would be the priority and could be developed in the short to medium term e.g. focus on installer for label for heating systems, none energy related aspects on material efficiency
- » Unsure - There is a potential to set specific targets on improvements in a certain parameter using points systems. However, the problem of precision and verification remains with this approach

Q15.

Do you think a points systems approach applied to setting generic Ecodesign requirements for complex products might pose any specific challenges for market surveillance?

- » No - They only thing that market surveillance authorities can check on generic requirements is whether the manufacturer has provided some information.
- » Unsure

Q16.

Do you think a points systems approach applied to setting specific Ecodesign requirements for complex products might pose any specific challenges for market surveillance?

- » Yes - Especially if expert assessment is involved in scoring points, this might decrease reproducibility
- » Market surveillance for a point system of a complex product could be more laborious, as it could be necessary to check the conformity of each module. It all depends on the actual requirement and how it is verified. On the other hand, a specific requirement setting only simple parameters may make market surveillance of the individual modules possible, where the complete product's performance cannot be measured

» No - no explanation

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Q17.

Which other possible issues do you foresee that could pose a problem to the application of a points-systems methodological approach to the setting of generic Ecodesign requirements?

- » “Points systems are meant to make a complex task easier. While the actual requirements are set politically, using points may hide the complexity leading to unintended consequences not being spotted in time. Applying this approach can potentially lead to trivial or unverifiable requirements”
- » “The weighting of impacts but once that is agreed it is ok. Aggregating and normalisation are more technical - need some kind of database with life cycle inventories (technical challenge) and some kind of certified software or one specific software tool to do calculations.
- » Prefer to start with labelling here as its softer and less severe implication if there is a problem with the limits proposed. Step by step approach
- » Might be more appropriate for non-energy related due to differences in energy mixes”

Q18.

Which other possible issues do you foresee that could pose a problem to the application of a points-systems methodological approach to the setting of specific Ecodesign requirements?

- » “Prefer to start with labelling here as its softer and less severe implication if there is a problem with the limits proposed. Step by step approach”
- » “Depending on the complexity of the points system chosen for a product group, the decision problem may not be smaller than in the “traditional” approach. There is a risk of creating regulations to cover all aspects because it seems easy using points”

Q19.

What guidance, advice or possible alternative approaches would you offer for the continuation of this research exercise?

- » “The approach seems appropriate”
- » “For eco-design a points-system does not necessarily need to result in one (overall) score
- » After having read the report, I suggest to spend some more time on analysing what is a complex product (in the framework of eco-design/energy labelling). There is more to say about this than the two criteria that are now mentioned (more than one functional unit, functionality difficult to assess), and these criteria alone do not give much guidance for development of a methodology. I doubt whether it is useful to look more into LCA (type of) methodologies; and you described the problems of these methodologies already quite well”

Q19.

What guidance, advice or possible alternative approaches would you offer for the continuation of this research exercise?

- » “Focus on non-multi criterion approach. On energy efficiency or material efficiency. Keep in mind labelling. Windows, drives/pumps, lighting, taps/showerheads. Building components - that allow evaluation of this maybe”
- » “A flexible approach could make sense, i.e. to apply a points system to one or a number of environmental aspects only and to set classic requirements to other aspects”

THANK YOU FOR YOUR ATTENTION !

