

Economic Assessment of ECM Certification: A Report by UIP Topical Committee Economic Evaluation

1. Background

In its Final Report “*Economic Impact of New Rules and Regulations*”¹ (November 2011) UIP identified several cost drivers having significant impact on the wagon Keepers’ business and as such on rail freight competitiveness.

Amongst them, costs for the ECM Certification, required under the Commission Regulation (EU) 445/2011, also known as ECM Regulation, contribute to a considerable part of the increased costs for Wagon Owner / Keepers.

When drafting the Final Report in 2011, UIP assumed that Keepers with less than 1'000 wagons and / or few employees will most likely enter into service agreements with third party ECM rather than undergoing the whole and complex process of certification themselves. However, at that time information regarding the costs for such agreements was not available, therefore cost estimates were based on the following assumptions (Table 1):

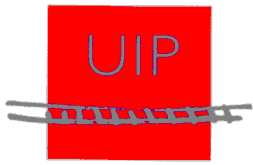
ECM Certification	Frequency	Size Reference	Quantity	Costs	One off costs	Recurring costs per annum
Initial Certification including IT setup	1	-	-	-	50'000 € to 100'000 €	-
Surveillance (by Certification Body)	yearly	-	-	-	-	2'500 € to 6'000 €
Renewal (by Certification Body)	every 4 years	-	-	5'000 € to 10'000 €	-	1'250 € to 2'500 €
Additional employees (ECM / SMS)	-	Full-Time Equivalent - FTE	1 – 3	75'000 €	-	75'000 € to 225'000 €

Table 1: Cost estimates for ECM Certification (November 2011)

Based on these assumptions UIP estimated the average annual costs for ECM Certification as shown below:

- ≥ 1'000 wagons: 78'750 €, i.e. 0,22 € per wagon and day;
- ≥ 5'000 wagons: 155'875 €, i.e. 0,09 € per wagon and day;
- ≥10'000 wagons: 233'500 €, i.e. 0,06 € per wagon and day.

¹ The Report is available for download:
[http://www.uiprail.org/userfiles/UIP%20WG%20EI%20-%20Final%20report%20-%20V%206%200%20%202011_11_21\(2\).pdf](http://www.uiprail.org/userfiles/UIP%20WG%20EI%20-%20Final%20report%20-%20V%206%200%20%202011_11_21(2).pdf)



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2. Questionnaire for Keepers

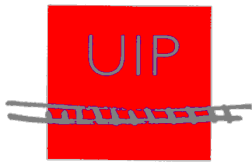
Since the implementation of the ECM Regulation, UIP wanted to re-assess its economic impact in order to validate the underlying assumptions and the cost estimates relating to the ECM Certification. With this objective, the UIP Topical Committee Economic Evaluation (TC EE) developed in October 2013 an “ECM Questionnaire”. Based on the facts that every freight wagon must have been allocated to a certified ECM by no later than May 31st 2013 and that each Keeper/ECM would know the real costs of the Certification, the TC EE proposed to ask each Keeper who is a member of a National Association (NA) to answer the Questionnaire.

As the requested data was considered to be of sensitive matter, a two-step approach was developed:

- Step 1: Each keeper being a member of a NA received a template called “Questionnaire for Keepers” and returned it completed to its NA.
- Step 2: The NA consolidated the individual templates into another template called “Companies Consolidated”. Each NA returned the consolidated data to the UIP Secretariat who then forwarded it to the TC EE for further evaluation and assessment.

The ECM Questionnaire consisted of five questions:

- **Q1:** Your Company function according to MoU ECM OR Article 5 of the Regulation EU/445/2011?
 - The Questionnaire did not differentiate between Certificates obtained under the provisions of the ECM MoU or the Regulation EU/445/2011.
 - Each Keeper was asked to indicate with an “x” any of the 4 functions he obtained in his ECM Certificate.
- **Q2:** How many wagons do you manage as an ECM?
 - A keeper may be responsible as an ECM for his own wagons and in addition for wagons allocated to other keepers. Therefore, he should differentiate between the number of his own wagons and the number of the “third party” wagons he provides ECM services for.
- **Q3:** Additional staff employed because of ECM requirements?
 - In order to validate the assumptions in its Final Report for both, the amount of additional staff employed and the associated costs, the keeper should provide respective information on the total internal cost of employment.
- **Q4:** External costs for certification (invoiced by Certification Body) according to MoU ECM or Regulation EU/445/2011?
 - Each ECM having obtained a certificate (ECM or MoU) should inform about the amount invoiced by the Certification Body for the initial certification.
 - In cases where no yearly surveillance was carried out at the time when the Questionnaire was completed by the company, cost for yearly surveillance should be estimated or based on concrete offers from the Certification Body.
- **Q5:** In case your company outsourced ECM function(s)
 - Question 5 addresses keepers having outsourced one or more ECM functions (according to their answers to question Q1).
 - The amount of wagons and related cost invoiced by one (or more) third parties (ECMs) should be filled in for each applicable function.



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It should be noted that in some instances ECMs managing both own wagons and as a service provider third-party wagons may compensate some of their fixed cost (i.e. FTEs and cost for the certification and surveillance) through the management fee imposed on the Keepers who decided to outsource ECM functions. However, this aspect is not considered in this report.

Based on the calculation method used in its Final Report the TC EE requested from the NAs when consolidating the answers from the Keepers to consider the amount of wagons declared by each Keeper. Depending on the number of wagons the following four Clusters were identified and used for the report:

- Cluster 1: less than 1'000 wagons
- Cluster 2: more than 1'000 but less than 5'000 wagons
- Cluster 3: more than 5'000 but less than 10'000 wagons
- Cluster 4: more than 10'000 wagons

3. Assessment of the Questionnaires: results and interpretations

3.1. Participation

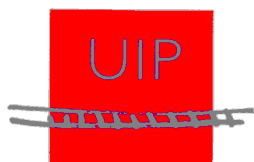
11² from total of 14 NAs provided consolidated Questionnaires for 74 Keepers / ECM's³: in total:

NA (by Country)	Answers
AT	4
CH	14
CZ	7
DE	12
ES	3
FR	4
HU	2
IT	2
PL	4
SK	18
UK	4

Table 2: Overview of participation

² The Belgium, Dutch and Swedish NA did not provide consolidated Questionnaires.

³ No information with regard to the number of disseminated Questionnaires to individual companies is available.



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3.2. Overall Comparison (ECM Questionnaire 2014 / Final Report 2011)

Even though the underlying assumptions used in the Final Report differ from the more detailed questions in the Questionnaire, the results - average cost per wagon and day – could be compared to a certain level:

Comparison Questionnaire / Final Report	Cluster 1	Cluster 2	Cluster 3	Cluster 4
Wagons (average):	221	2'698	6'000	20'364
Additional Staff (w.a. ⁴):	2,5	2,7	3,0	5,5
Cost 1 FTE (w.a.):	31'177	53'026	50'000	74'636
Cost initial Certification – 5 years validity of Certificate (w.a.):	13'829	23'343	3'600	31'388
Cost initial certification per year (20% of above figure):	2'766	4'669	720	6'278
Surveillance per year (w.a.):	4'600	7'047	2'250	21'550
Cost Staff per year:	77'423	143'929	150'000	410'500
Total Cost per year:	84'789	155'644	152'970	438'328
Total cost per wagon and year:	384	58	25	22
Total Cost per wagon and day (average):	1,05	0,16	0,07	0,06
Final Report (November 2011)	1'000 wagons	5'000 wagons	10'000 wagons	
Total cost per year:	78'750	155'875	233'500	
Total cost per day:	0,22	0,09	0,06	

Table 3: Comparison ECM Questionnaire 2014 / Final Report November 2011

The following sections present a more detailed report of the results for each question.

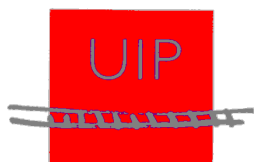
3.3. Breakdown of results for Question 1 – Functions provided as ECM

Functions provided as ECM	Cluster 1		Cluster 2		Cluster 3		Cluster 4		Total	
	Y	N	Y	N	Y	N	Y	N	Y	N
ECM Management	46	9	14		1		4		65	9
Maintenance Development	44	11	12	2	1		4		61	13
Fleet management	46	9	14		1		4		65	9
Maintenance Delivery	15	40	1	13		1	1	3	17	57

Table 4: Breakdown of results for Question 1

As previously estimated in the Final Report, the result of this assessment confirms that only Keepers managing / owning fleets up to 1'000 wagons outsourced the main ECM function.

⁴ w.a. = weighted average



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3.4. Breakdown of results for Question 2 – Wagons managed as ECM

Wagons managed as ECM	As Keeper	As Service Provider	Average Keeper	Average Service Provider
Cluster 1	10'163	2'948	221	n/a
Cluster 2	37'770	8'644	2'698	n/a
Cluster 3	6'000	1'300	6'000	1'300
Cluster 4	81'454	0	20'364	n/a
Total	135'387	12'892	2'464	n/a
	148'279			

Table 5: Breakdown Question 2

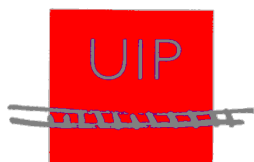
Except for Cluster 3 it was not possible to deduct the average amount of wagons allocated to an “ECM Service Provider” because the final consolidation was based on data already consolidated at national level by the 11 NAs.

3.5. Breakdown of results for Question 3 – Additional staff employed

Additional staff employed	On average	Average yearly cost FTE (€)	FTE Min (€)	FTE Max(€)
Cluster 1	2,5	31'200	5'500	84'000
Cluster 2	2,7	53'000	20'000	82'000
Cluster 3	3	50'000	50'000	50'000
Cluster 4	5,5	74'600	70'000	80'000
Total (weighted average)	2,7	41'700	n/a	n/a

Table 6: Breakdown of results for Question 3

Compared to the Final Report, the number of additional staff employed because of ECM Certification could be confirmed as initially estimated for Clusters 1, 2 and 3 (at the high end as shown in Table 1) while ECMs covering a larger fleet (i.e. above 10'000 wagons) need 5.5 additional employees on average (between 3 and 10 FTE). The larger ECMs have weighted average cost for one Full-Time Equivalent in the magnitude of 74'600 € which is very close to the estimated 75'000 € in the Final Report. One explanation for the lower weighted average costs in Clusters 1, 2 and 3 is the geographical coverage of these ECMs (31 from CZ, HU, PL and SK), while the 4 larger ECMs are domiciled in western European countries where labour cost are higher.



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3.6. Breakdown of results for Question 4 – External cost for ECM Certification and annual surveillance

External cost for ECM Certification (invoiced by the Certification Body) (in €)	Average Initial cost	Min / Max	Average cost yearly surveillance	Min / Max
Cluster 1	13'300	4'000 / 43'500	4'600	700 / 17'000
Cluster 2	23'350	5'000 / 31'600	7'050	400 / 18'000
Cluster 3	3'600	3'600 / 3'600	2'250	2'250 / 2'250
Cluster 4	31'400	12'100 / 42'500	21'600	3'700 / 42'500
Total (weighted average)	16'800	-	6'200	-

Table 7: Breakdown of results for Question 4

The ECM certification and the annual surveillance can be carried out by an Accredited Body, a Recognised Body, or NSA acting as a certification body. As a result it is likely that there may be differences in fees invoiced to the applicant. However, it was observed that the large differences between the minimum and maximum costs for both, the initial certification and the annual surveillance in Clusters 1, 2 and 4, resulted from the different responses from 11 different countries. It should be also noted that some companies certified under the MoU were more likely to experience lower costs than those certified under the ECM Regulation.

It was not possible to compare the above results with the estimates of initial costs for certification given in the Final Report, because the estimates of the latter included the internal costs for setup as well (e.g. IT systems).

The average costs for annual surveillance confirmed the estimated costs in the Final Report; however, despite this average, significant differences in the costs in each cluster in different countries were observed.

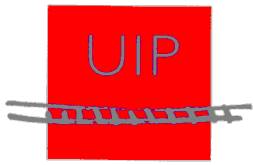
3.7. Breakdown of results for Question 5 – Costs related to outsourced ECM functions

Analyses of the consolidated questionnaires showed that the Question and the accompanying explanatory note were not well understood by some NAs and/or companies. Therefore, only plausible responses from the NAs were integrated in the breakdown and should not be taken as representative basis for further assessments.

Companies having outsourced the **ECM Management Function** are solely represented in Cluster 1. 3 companies having outsourced the **ECM Maintenance Development Function** are in Cluster 2 only.

ECM functions outsourced and related costs	Amount of wagons	Average cost per wagon and year	Minimum	Maximum
ECM Management	751	419 €	57 €	1'800 €
Maintenance Development	7'308	52 €	52 €	52 €
Fleetmanagement			n/a	
Maintenance Delivery			n/a	

Table 8: Breakdown of results for Question 5



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4. Conclusion

The purpose of this report was to examine and (re-)assess the cost impact from the implementation of the ECM Regulation and identify the main cost drivers affecting the Keeper's business. UIP Topical Committee Economic Evaluation launched a questionnaire taking into account the number of wagons, the ECM functions, the internal and external costs, and outsourcing ECM functions.

The response rate was sufficient enough to provide an overview and draw a number of interpretations and conclusions. The amount of wagons reported in the 74 Individual Questionnaire responses (either managed by the ECM itself or outsourced by a "service provider") covers nearly 85% of the fleet managed / owned by companies which are represented through their National Associations members of UIP.

Because of the two-step approach explained above, the results for questions 2, 3 and 4 are based on weighted average for the 4 clusters and therefore could serve as indicative figures only.

It can be concluded that the real cost for each ECM depends largely on 1) the costs for additional staff employed which range on a European scale between 5'500 € and 84'000 € per month for one Full-Time employee (FTE) , 2) the costs for the initial certification which range on a European scale between 3'600 € and 43'500 €, and 3) the costs for annual surveillance, which range on a European Scale between 700 € and 42'500 € respectively.