

Human Resource Management – a key point for SUCCESS project

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Abstract: The theory for Human Resource Management (HRM) follows different aspects of the way that companies or institutions organize their human resources (HR). This theory is also applicable for projects that have, as partners, different public or private organizations. The particularities of projects require a particular HRM, specific actions and different approaches of HR. For multinational projects the activities of HRM differ in content from the classic activities. Activities like planning and integrating HR are the most important ones and by themselves can decide the success of a project. Other important activities for projects' HRM like: creating a communicational frame that supports complex information exchange, an equitable system of retribution for employees with different economic and social background – start defining a new form of HRM. In the case of CIVITAS – SUCCESS HR activities were implemented less based on existing, specific, theory and more based on the experience of previous projects implemented within the European Community. In the science of management most of the time theory is born out of working experience and international projects like CIVITAS SUCCESS demands a new approach of HRM.

Key-words: human resource theory, experience, specific activities, international partner, retribution system

1. Introduction

In order to understand the particularities of Human Resource Management (HRM) at multinational projects level, it is necessary to underline the project's characteristics that determine HRM:

- projects are limited in time;
- projects involved human resources from different countries with different cultural, social and economic environment.

The accurate impact of these characteristics upon HRM can be determined by analyzing each of HRM activities. All HRM activities are calibrated in accordance with project's amplitude and specificities. Differences between HRM at project level and HRM at economic agent level can be enlighten by following HRM at the level of an already implemented project, CIVITAS – SUCCESS [2], project that is a part of Framework Program 6.

CIVITAS is a program developed by the European Community that specifically calls for the use of technologies, which are developed but not yet mainstream and the focus should be on short/medium term alternatives, i.e. innovative bio-fuels and natural gas, including hybrid vehicles that use these fuels.

SUCCESS (Smaller Urban Communities in Civitas for Environmentally Sustainable Solutions) project, as a part of CIVITAS II program, involved 3 European

medium size cities: 2 of them involved as well in CIVITAS I program (La Rochelle, France and Preston, Great Britain), and a new city from south east of Europe (Ploiesti, Romania). SUCCESS project had as major objectives:

- To optimize urban transport in medium sized cities in an integrated manner;
- To demonstrate that clean urban transport is efficient for city activities on a medium term horizon;
- To show that the involvement of all citizens is a major success factor in transport improvement;
- To be accessible to everyone; transport systems must serve the needs of the whole community, not just those with the ability to purchase and maintain a car. They must be in conformity with to regulations to ensure that they can be used by all, irrespective of physical ability, wealth or gender [6].

SUCCESS objectives were met through 12 work packages split into two basic groups [4]:

- eight research and demonstration work packages framed according to CIVITAS measures, which carried out the planning, development and implementation and the local technical evaluation of the project demonstration measures. All research and demonstration of SUCCESS activities were organized in the different work packages.



Fig. 1 Project organization chart

- four added-value work packages – meeting the management, evaluation, dissemination and exploitation objectives of the project; and ensuring the coordination of research activities between partners and the generalization of their results, the integration of demonstrations within and between the sites;

The links between work packages are shown in the below figure (figure 1).

2. Human resources management within CIVITAS-SUCCESS

Practically, the work packages organization determined human resources need. Each work package has a person responsible for its organization, at the project level.

Actually, the first four work packages were built for the project management, in order to follow its design and implementation and to insure its evaluation and dissemination. The first work package concerned the Project Coordination and included HRM. As said above, the SUCCESS project included local authorities, public

and private companies from three cities in three different countries. The management of human resources was built considering the project's activities. A new notion was adopted: **effort in man moths** (MM effort).

A man-hour is the amount of work performed by an average worker in one hour. It is used in written "estimates" for estimation of the total amount of uninterrupted labor required to perform a task. For example, researching and writing a college paper might require twenty man-hours. Preparing a family banquet from scratch might require ten man-hours. Man-hours do not take account of the breaks that people generally require from work, e.g. for rest, eating and other bodily functions. They only count pure labor. Managers count the man-hours and add break time to estimate the amount of time a task will actually take to complete.

Thus, while one college course's written paper might require twenty man-hours to carry out, it almost certainly will not get done in twenty consecutive hours. Its progress will be interrupted by work for other courses, meals, sleep and other type of entertainment. The similar concept of a man-day, man-week, man-month or man-year is used on very large projects. It is

the amount of work performed by an average worker during one day, week, month, or year, respectively. The number of hours worked by an individual during a year varies greatly according to cultural norm(s) and economics. The average annual hours actually worked per person in employment as reported by OECD countries in 2007, for example, ranged from a minimum of 1389 hours (Netherlands) to a maximum of 2316 hours (South Korea) [7].

For project SUCCESS, the average annual hours estimated to be worked was 1680 hours. This effort was divided in 140 hours per month due to two project requirements:

- The project used as time division for measures implementation, months;
- For all project partners, the accountant system normally uses calculation and salary payment on monthly bases.

It can be stated that the overall general management of the project determined the HRM [1], and this statement is valid not only for SUCCESS project but for any project, small or large.

For project SUCCESS, according to the work packages distribution, the organizational chart was built, as showed in figure 2.

Each project city was represented by Local Authorities (City Hall, County Councils), Public

Transport Companies and Educational and Research Institutes. The role of each project partner determined the distribution of HR considering the planned activities and man-months effort forecast.

When the activities' time and budget are planned at project level, these are planned from top management to specific measure level. In Human Resources planning, considering the budget and activities, starts from activities' level to project partner's management and ending with top management needs.

As it can be seen in the project organizational chart (figure 2), for project SUCCESS, the structure of HR is similar for all three cities involved in the project.

This type of organization encourages collaboration between partners situated at the same level but in different cities. This collaboration offers the premises of an efficient implementation, dissemination and evaluation of the project. Each project employee has a double role: first to participate at the success of the project in its city and second, to corroborate its work with the one of persons engaged in similar project activity but in a different location, thus insuring the success of the project itself.

The proportion in which project partners are participated with human resource in project implementation is differed from one city to another and from one work package to other:

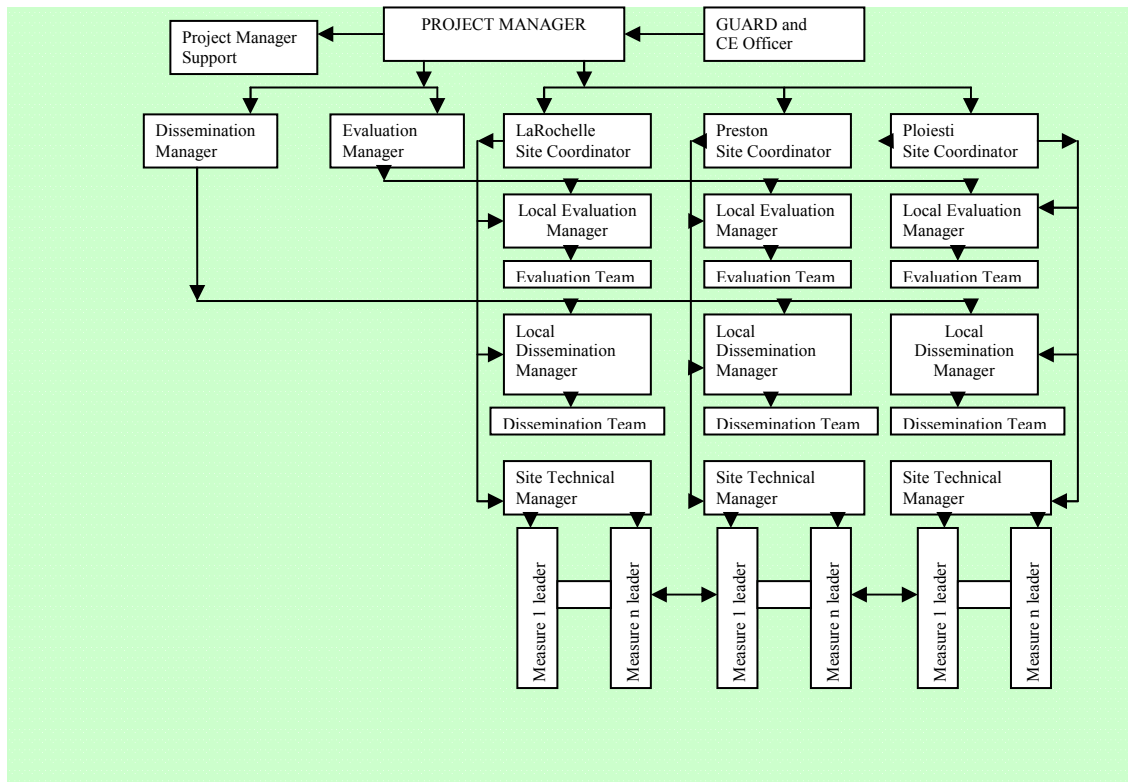


Fig. 2 Project organizational chart

- main reason for these differences is the activities distribution. Each technical work package (from 5 to 12 as figure 1 show) has from 6 to 13 activities, each one had to be implemented only in one of the three cities; more activities for a city in a work package, more persons needed for the measure implementation;
- another reason is the fact that each city and project partners had different roles in implementing the project. For example, in La Rochelle case, CDA-LR (Conseil d'administration de La Rochelle) was the European project responsible which have had mainly management and organizational responsibilities, EIGSI (School engineers in Genius of the Industrial Systems) offered technical and evaluation methodological support for all project, LR-CH (La Rochelle City Hall) offered political support for project implementation and lead measures concerning Access Control.
- the third reason is the fact that every city had different backgrounds for measures implementation: La Rochelle was the coordinator city, because it had more than 8 years of implementing transport projects (he also implemented measures within program CIVITAS I); Preston also implemented successful a set of demonstrative measures in CIVITAS I program and SUCCESS came as a normal continuation; Ploiesti, on the other side, had no experience in

implementing transport measures, but, as many other European medium size cities realized the need of a coherent strategy for transport modes due to increase number of vehicles.

Table 1 shows the human resources distribution, per work packages, cities and partners, counting each person only once even if that person worked during the project's lifetime at more than one measure.

In many cases one person helped not only to the implementation of 2 measures in the same work package, but in different work packages.

This was possible because measures implementation had different periods of implementation. Even if the work packages had almost the same period of implementation, activities within them differed, as is presented in figure 3, for work packages 5, 6, 7 and 8.

As figure 3 shows, in work package 6 case, measures 6.3, 6.4 and 6.5, all implemented in Preston, there was only one person responsible for all three measures and his team was formed of 2 members.

Nevertheless, the number of persons involved in the implementation of a measure was significantly higher when are considering the sub-contractors for each project partner. In the sub-contractor case, the HRM is entirely up to it, the only control of project management is exercise through the measure responsible that programs each activity and sees that the deadlines are respected by the sub-contractor.

Table 1. Human resource distribution for each site per work packages

Cities		La Rochelle (Coordinator City)				Preston			Ploiesti		
Work Packages	Partners	CDA-LR	EIGSI	LR-CH	TTR	LCC	PB	SRBC	PMP	RATP	UPG
	1		3		1		2	-	-	1	1
2		1	1	-	1	2	-	1	-	1	-
3		2	2	-	1	2	-	-	-	-	3
4		1	-	1	2	2	1	-	2	-	2
5		4	2	-	1	2	1	-	2	4	2
6		2	1	1	1	3	-	-	2	-	-
7		2	-	-	1	3	-	1	-	-	-
8		4	-	-	1	3		1	2	-	-
9		1	-	1	-	1	-	-	-	-	-
10		3	2	1	1	2	-	-	1	1	-
11		1	-		1	4	-	1	2	-	2
12		2	2	-	2	3	-	-	-	3	-
Total number of persons		24	10	5	12	27	2	4	12	10	9

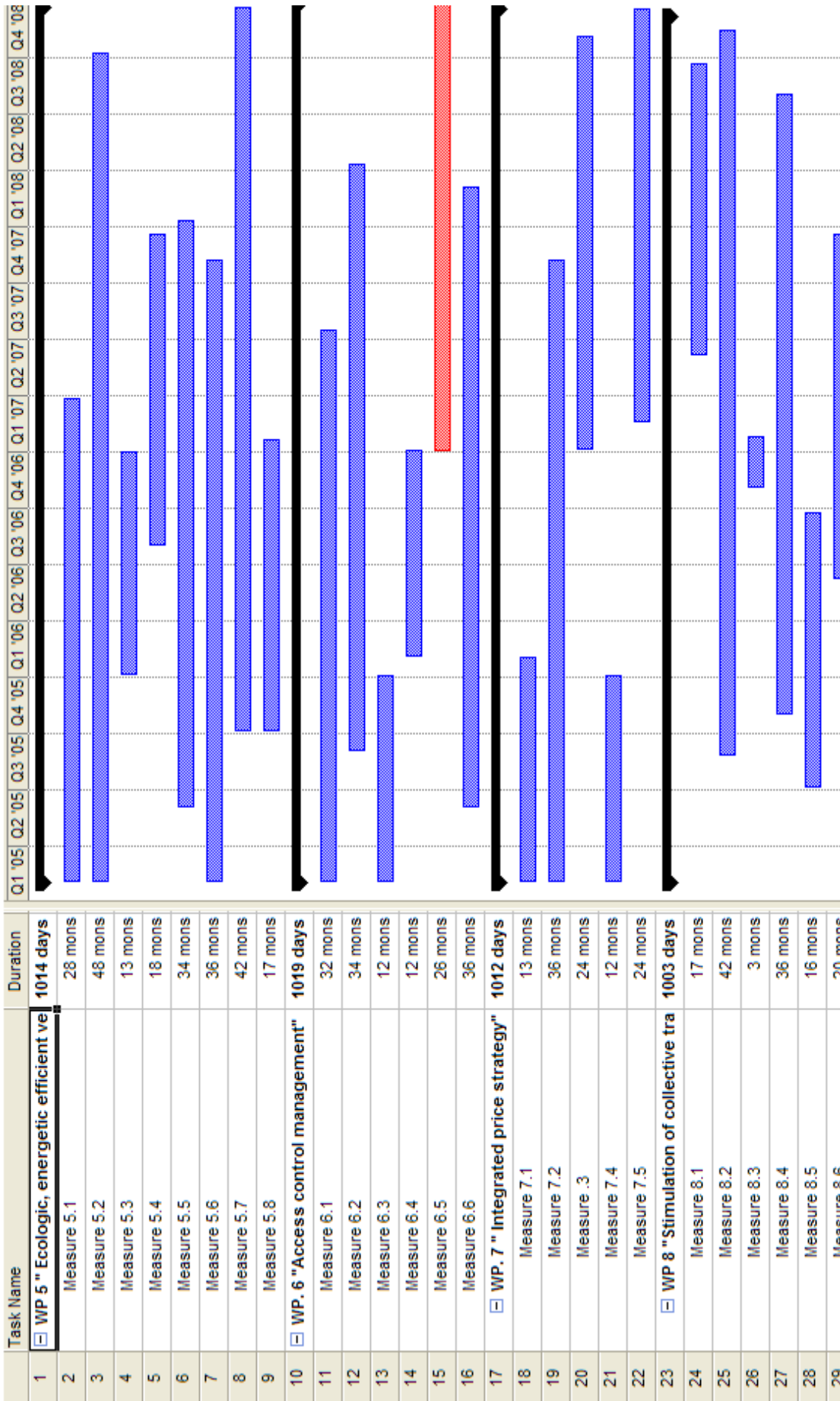


Fig. 3 Gantt chart for work packages 5, 6, 7 and 8

The Gantt chart not only helps for a better organizing the activities but it is also used for resources optimization in general and HR in particular. In La Rochelle case, for the two measures implemented in work package 6 (measures 6.1 and 6.2) there was one measure leader for each measure implemented and he had a common team for both measures. Furthermore, their team was composed of persons working in different institutions from La Rochelle.

This was possible because the project focuses not on the working person but on activity to be made. HRM, at partner level is left in the partner's care. At local level, partners are encouraged to build teams with employees from different institution, each partner having Man Months Effort planned for the achievement of the same measure.

For example, in Ploiesti case, MM Effort for the first 18th months was programmed within every work package, with activities for all partners (see table 2).

Table 2 Ploiesti MM effort planned in first 18 months of the project

IP Activity Type	PMP	RATPP	UPGP	TOTAL ACTIVITIES
RTD/Innovation activities				
WP 2			1,5	1,5
WP 3	18,0	7,5	9,0	34,5
WP 4	14,0	9,0	18,0	41,0
WP 5				0,0
WP 6				0,0
WP 7				0,0
WP 8	0,5	0,5	0,3	1,3
WP 9				0,0
WP 10	0,5			0,5
WP 11	3,0	1,5	12,0	16,5
WP 12				0,0
Total 'research'	36,0	18,5	40,8	95,3
Demonstration activities				
WP 5	8,57	21,43	4,29	34,29
WP 6	6,72	3,36	1,68	11,76
WP 7				0,0
WP 8	3,36	3,36	0,56	7,28
WP 9				0,0
WP 10	5,04	3,36	1,68	10,08
WP 11	10,08		0,56	10,64
WP 12	15,60	27,30	5,20	48,1
Total demonstration	49,37	58,81	13,97	122,15

For the evaluation work package (WP 3), even if UPGP (Petroleum and Gas University of Ploiesti) was assigned as Work package leader, the MM effort was concentrated to the leading partner for Ploiesti (PMP – Ploiesti City Hall), because, in project's first phase WP leader only had to organize evaluation at local level while measure responsible had to do most of the work collecting data for the baseline of its measure.

Even if the total MM effort planned for each activity, staid the same for the entire period of the project, every partner had the right to relocate MM effort not entirely used in a measure or work package, to another measure or work package that needed more time than planned, on different activities. By the end of the project, the actual spent MM effort is showed in table 3.

The possibility to relocate MM effort where was required, permitted the correct retribution of activities sustained in different work packages.

Table 3. Ploiesti MM effort spent in first 18 months of the project

IP Activity Type	PMP	RATPP	UPGP	TOTAL ACTIVITIES
RTD/Innovation activities ¹				
WP 2			1,5	1,5
WP 3	14,0	7,5	12,0	33,5
WP 4	14,0	6,0	16,0	36,0
WP 5				0,0
WP 6			4,0	4,0
WP 7				0,0
WP 8	0,5	0,5	1,3	2,3
WP 9				0,0
WP 10	0,5			0,5
WP 11	7,0	1,5	6,0	14,5
WP 12		3,0		3,0
Total 'research'	36,0	18,0	40,5	95,3
Demonstration activities				
WP 5	8,57	21,43	6,29	36,29
WP 6	6,72	3,36	1,68	11,76
WP 7				0,0
WP 8	6,36	3,36	0,56	10,28
WP 9				0,0
WP 10	5,04	3,36	1,68	10,08
WP 11	10,08		0,56	10,64
WP 12	12,60	27,30	3,20	43,1
Total demonstration	49,37	58,81	13,97	122,15

¹ in green, changes made in MM effort distribution

In CIVITAS SUCCESS project the teams were formed by persons not only from different institutions but from different cities as well, so, from the beginning of the project it was needful a good communication strategy that included elements like: scheduled meeting at partners, use of the latest technologies in communication, solutions for designing and purchasing effective tools for communication and proper translations for documents issuance. Collaboration in real time between project participants situated in different locations (cities) was, not so long ago, very difficult and expensive, but nowadays, due to software and technologies advance, implementation of projects like SUCCESS is not only possible but feasible as well. The European Community encourages use of modern

technologies in order to ensure good cohesion between teams members located in different international locations [8].

The main tool for communication used by project SUCCESS was the intranet which allowed communication and data transfer between partners with maximum speed, minimum costs and in relative high information security. The project manager, because of team dispersion in space, needs to have control of how and when the activities are performed. For this, in projects, the main tool of control and feed-back for managers are the deliverables. Each project partner has the right to choose the project's participants (employees), but once contracted, the participants have to submit to projects deliverables [6].

Table 4: Deliverable List

Del. No. ¹	Deliverable title	WP no.	Lead partner	Estimated indicative person-months	Nature ²	Dissemination level ³	Delivery date ⁴ (project month)
D 1.0	Consortium Agreement	1	CdA-LR	2	R	RE	M0
D 1.1	Memorandum of Understanding	1	CdA-LR	2	R	RE	M6
D 1.2	Inception Report	1	CdA-LR	2	R	RE	M8
D 1.3	Mid-term Report	1	CdA-LR	1	R	RE	M24
D 1.4	Final Publishable Report	1	CdA-LR	2	R	PU	M48
D 3.1	Evaluation Plan	3	TTR	2	R	PP	M18
D 3.2	Final Evaluation Report	3	TTR	3	R	PP	M46
D 4.1	Dissemination and Exploitation Plan	4	PMP	2	R	PP	M8
D 4.2	Project website	4	PMP	4	O	PU	M8
	TOTAL			21,5			

Legend:

1 Deliverable numbers in order of delivery dates: D1 – Dn

2 Nature of the deliverable using one of the following codes:

R = Report

P = Prototype

D = Demonstrator

O = Other

3 Dissemination level using one of the following codes:

PU = Public

PP = Restricted to other programme participants (including the Commission Services).

RE = Restricted to a group specified by the consortium (including the Commission Services).

CO = Confidential, only for members of the consortium (including the Commission Services).

4 Month in which the deliverables will be available. Month 1 marking the start of the project, and all delivery dates being relative to this start date.

Selection of personal working in a project slightly differs from of one at a company level. Practically, in a multinational project, at project partner level, the persons designated to lead the measures/work packages implementation are chosen from the employees of the partner. This does not mean that anyone from the partner organization can be a worker in the project.

It is desired that the eligible person to work in the project:

- has previous experience in projects implementation;
- knows at least one international language (preferable the project's language);
- if the person does not have experience in similar projects implementation, that person should at least have experience in implementing, evaluating or disseminating similar measures as the ones of the project.

Only when in the project partner organization there is no employee qualified to realize a task, the project partner will recruit from outside the organization. The recruiter goal is not to find the best person for the job but to find the most suitable one from inside the organization.

In project SUCCESS case, the actual implementation of most measures was made by sub-contracting, the role of measure leaders being to create the administrative and economic frame of measure implementation by a sub-contractor chosen based on its economic and technical performances.

Technical managers were chosen for each city from the partners that had experience in implementing similar measures.

Partners' structures were the same for all three cities:

- The leading partner in each city was the local authorities (City Council and City Hall), from the leading partner employees was designated the Site Manager (Manager in Projects Implementation Department of the organization);
- Public Transport Companies were the ones that implemented transport measures, and were as well the "suppliers" for measure leaders of transport measures. For example, in Ploiesti, the Technical Manager was designated from the Public Transport Company and five of ten measures implemented at city level were implemented by Public Transport Company and had their Measure Leaders from it;
- Evaluation and dissemination of the measures implemented was left for the specialized public institutions from each city, mainly universities, in collaboration with specialized personnel from the leading partner organization.

The key points of HRM in multinational projects are communication and coordination.

As mentioned above, communication was significantly improved by the accelerated development of software, internet and virtual private networks, thus communication allowing a real time connection between partners and the opportunity to share work, documents and ideas between sites. But this is not all communication needed for a project.

Discussions between partner are vital for the project success, travels can be expensive so video conferences are more cost efficient. This does not exclude face to face meetings between partners; more, these meetings are recommended in order to increase cohesion within the project. These meeting have to be carefully planned and integrated between project activities in order to get the maximum benefit from them [10]. For example it is recommended to have a meeting before a set of deliverables to be delivered.

In SUCCESS project case, meetings were organized twice a year, with the participation of representatives from all project's partners. On this occasion workshops were held for grouped measures in order to exchange gained knowledge and present results.

In these groups different approaches of the measures or work packages were discussed in order to have a common frame for implementing, reporting, evaluating and disseminating measures and their results.

These kinds of meetings have also a motivational role for persons involved in implementing a project and they are as well a way to help professional development of persons working on the project.

Otherwise HRM at projects' level does not include specific activities that concern employees' personal development, professional formation or human capital promotion; those activities are left for the concern of local organizations of the project partners.

Another characteristic of HRM at multinational projects' level is the way that the payment for work in the project is made. In multinational projects salaries are set differential for each type of job and for each economic environment from which the employee comes.

Practically, a salary is set for each type of activity for each site. Normally, the salary for the same position in the project differs from one site to another because when calculating the salary, economic indicators considered differ from one site to another.

The economic indicators considered are:

- average salary for the specific activity, at country level;
- purchasing power.

In project SUCCESS the salaries were set the same for all activities and positions in the project, but they differed from one city to another. For example in Preston, England, 1 man month of effort was valued at 4000 euro, while in Ploiesti, Romania, the same man month of effort was valued at 500 euro. One aspect, not considered in the MM effort value determination was the time factor and connected to it: the currency depreciation.

In Ploiesti case, city in a country that even if it is a member of European Union, the purchasing power of the national currency dropped in the last 2 years of CIVITAS SUCCESS project with around 30% compared to year 2005, when project began [8]. This is why the value of a MM effort was considerable smaller in 2009 than in 2005. This situation did not affect the project's implementation, dissemination or evaluation, still remained as a concern and consisted in a note for future projects' management.

3. Conclusions

An important aspect of HRM at project level is the fact that positions in the project are created with the aim to have the most efficient implementation of the project. They give authority and in the same measure responsibilities to each persons involved in project implementation. Free time, vacations or other social rights are overlooked and the only retribution for a work well done is the value of the man months reported as worked.

The purpose of this paper is to explain the approaching differences connected with bringing in human resources to cover the project teams. That is why it is necessary 'to import' technical knowledge from the project, to transfer good practice procedures among countries, to apply/adapt efficient organizational models, to identify rewarding way corresponding to the activities within the projects and last, but not least, to get comparable results in order to reach the proposed objectives.

The key questions and answers for HRM at multi-national projects level are:

1. *How HR is planned?* In projects case, the human resource is planned from partner's level, to project management level, considering the budget limits imposed by the co-financing institution and the measures to be implemented (importance, volume and complexity).
2. *How is determined the right/ correct number of persons to be involved in different work packages? How those persons are recruited?* The correct number of persons involved in each work package can be determined only after an inventory of HR available at partner's level; as said before it is

custom to mainly recruit form inside the partner's organization, and only when no specialist are available, to recruit from "outside".

3. *How teams can be organized and can work more efficient within a project?* The team organization is based on activity type. A person can be member in more than one team (for example technical team and evaluation team). Every team has a leader responsible for respecting deliverables an milestones deadlines. Team efficiency is increased by its unity built through leadership, face to face meetings and a modern communication system [9].
4. *How the level of involvement/motivation of each member of the project team can be increased?* An important aspect of HRM at projects' level remains motivation. A strong motivation is the fact that working in an international project can be a starting point for promotion in the partner's company. Projects also bring complementary incomes for persons involved. For sciences a project is a mean to test theories, to implement them and to directly benefit from them. Projects also help university teachers to publish papers based on research activities sustained and so to increase their local and international visibility.

Each project has to be evaluated both quantitatively and qualitatively as far as the human resources are concerned, in order to calibrate the resources that have to be used in an optimal manner, in order to reach the predicted results and meeting the deadlines as it is mandatory to keep the former predicted budgets. This is why is recommended to plan wisely HR activity before writing project proposals.

References

- [1] Popescu, C., *Managementul resurselor umane-Aspecte teoretice și practice*, Editura Universității Petrol-Gaze din Ploiești, 2007.
- [2] Ion, L., Omrani, H., Boussier, J.-M., Breuil, D., Popescu, C., Mitu, A., *How to incite the transferability of an innovative project in transport field*, 3rd European Ele-Drive Transportation Conference „On the Way to Sustainable Development and Market Opening”, Regional Policies Track, in cooperation with the International Advanced Mobility Forum, Geneva, Switzerland, March 11-13, 2008.
- [3] Loosemore, M., Dainty, A., Lingard, H., *Human Resources Management in Construction Projects. Strategic and operational approaches*. Spon Press, Taylor & Francis Group, London, 2003.
- [4] Popescu, C., Uta, D., Cucu, T., Mitu, A., Ion, L., *SUCCESS: a demonstrative transportation project for the transferability of sustainable practices*,

- Proceedings of 12th IBIMA Conference on Creating Global Economies through Innovation and Knowledge Management: Theory & Practice, Kuala Lumpur, Malaysia, 29-30 June, 2009, pp.1036-1044.
- [5] Turner, R., Huemann, M., Keegan, A., *Human Resource Management in the Project-Oriented Organization*, Project Management Institute, 2007.
- [6] ***, INTEGRATED PROJECT, Annex 1, "Description of work", *Proposal/Contract no.: 513785*, 2004.
- [7] ***, <http://en.wikipedia.org/wiki/Man-hour>, December, 2009.
- [8] ***, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:200:0005:01:RO:HTML>, April 2010.
- [9] Final Plan for using and disseminating the knowledge – Appendix 1-4, under construction, April 2010.
- [10] Publishable Final Activity report, Project Brochure, Toulouse Conference 11-14 January 2010.