CARBON BASED SMART SYSTEM FOR WIRELESS APPLICATION

Start Date : 01/09/12
Project n°318352 **Duration : 36 months**

Topic addressed : Very advanced nanoelectronic components: design, engineering, technology and manufacturability

WORK PACKAGE 7 : Project management

DELIVERABLE D7.9

Progress Management Reports #1
Covered period: T0 – T0+6

Due date : T0+6 **Submission date : T0+12**

Lead contractor for this deliverable: TRT

Dissemination level : CO – Confidential

WORK PACKAGE 7: Project management

PARTNERS ORGANISATION APPROVAL

	Name	Function	Date	Signature
Prepared by:	S.Xavier		05/08/13	
Approved by:	Afshin Ziaei		05/08/13	

DISTRIBUTION LIST

QUANTITY	ORGANIZATION		NAMES

CHANGE RECORD SHEET

REVISION LETTER	DATE	PAGE NUMBER	DESCRIPTION
Template			

CONTENTS

1 JUSTIFICATION OF MAJOR COST ITEMS AND RESSOURCES

1.1 BRIEF DESCIPTION OF WORK, MAJOR COST ITEMS AND RESSOURCES

1.1.1 TRT

Brief description of work

WP 1	TRT has participated to the establishment of the main requirements (frequency, bandwidth), the detailed elementary components specifications and also to the definition of the 1st and second demonstrators
WP 2	TRT has partipated to the design definition for the microwave CNT amplifier, CNT switch the graphène devices
WP 3	TRT has been involved in the characterisation of CNT and graphene materials It has also developed a process flow of the RF switch based on the CNT and the first fabrication run was started Contribution the knowledge of CNT growth for filter fabrication
WP 6	TRT has put a lot of work on the construction of the Nano-RF website. The public area of the website describes the stakes of the project, the partners, the main lines of the project and links it to relevant references. The private area includes confidential information and allows the partners to exchange safely voluminous data.
WP 7	TRT has been strongly involved in the establishment of the Grant Agreement and has driven the negotiations to find a commitment of all partners on a Consortium Agreement. As coordinator, TRT has launched the project with a successful Kick-Off Meeting organised in Paris area. Since, it closely manages the evolution of the project by following the costs, the delays of the deliverables, and by establishing correcting actions when necessary. Redaction of progress activity and management reports.

Major Cost Items

- Personal costs : 4.77 person-months

Tables of costs

Period 1 (T0 - T0+6)		Budget	Type of Activity				TOTAL	% Spent	Remaining budget
			RTD	DEM	MGT	OTHER			
TRT	Personnel costs	726 809	22 300	0	9 147	0	31 447	4,33%	695 362
	subcontracting	9 000	0	0	0	0	0	0,00%	9 000
	other direct costs	151 814	6 600	0	8 800	0	15 400	10,14%	136 414
	indirects costs	848 041	25 200	0	10 337	0	35 537	4,19%	812 504
	total	**1 735 664**	**54 100**	**0**	**28 284**	**0**	**82 384**	**4,75%**	**1 653 280**

Table 1 : TRT Table of costs

Table of Human Resourcess

Partner	WP	Planned PM	Actual Person-Months							% Total	Remaining PM
			Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total		
TRT	WP 1	7,00	0,50						0,50	7%	6,50
	WP 2	16,00	2,50						2,50	16%	13,50
	WP 3	26,00	1,00						1,00	4%	25,00
	WP 4	13,00	0,00						0,00	0%	13,00
	WP 5	14,00	0,00						0,00	0%	14,00
	WP 6	4,00	0,31						0,31	8%	3,69
	WP 7	14,00	0,46						0,46	3%	13,54
	Total	94,00	4,77	0,00	0,00	0,00	0,00	0,00	4,77	5%	89,23

Table 2 : TRT Table of Human Resources

1.1.2 CHALMERS

Brief description of work

WP 1	Specification of dimension requirements (diameter, aspect ratio, pitch).
WP 2	
WP 3	CNT growth, TCVD graphene Growth and transfer of CNT bundles into TSVs for 3D interconnection Contribute knowledge about graphene growth for RF devices
WP 6	
WP 7	

Major Cost Items

- Personal costs : 3,50 person-months

Tables of costs

Period 1 (T0 - T0+6)		Budget	Type of Activity				TOTAL	% Spent	Remaining budget
			RTD	DEM	MGT	OTHER			
CHALMERS	Personnel costs	350 000	21 441				21 441	6	328 559
	subcontracting	0	0					0	0
	other direct costs	172 825	19 241				19 241	11	153 584
	indirects costs	313 695	24 409				24 409	8	289 286
	total	836 520	65 091	0	0	0	65 091	8	771 429

Table 3 : CHALMERS Table of costs

Table of Human Resources

Partner	WP	Planned PM	Actual Person-Months							% Total	Remaining PM
			Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total		
CHALMERS	WP 1	4,00	3,50						3,50	88%	0,50
	WP 2	0,00	0,00						0,00	0%	0,00
	WP 3	36,00	0,00						0,00	0%	36,00
	WP 4	16,00	0,00						0,00	0%	16,00
	WP 5	5,00	0,00						0,00	0%	5,00
	WP 6	0,00	0,00						0,00	0%	0,00
	WP 7	9,00	0,00						0,00	0%	9,00
	Total	70,00	3,50	0,00	0,00	0,00	0,00	0,00	3,50	5%	66,50

Table 4: CHALMERS Table of Human Resources

1.1.3 FORTH

Brief description of work

WP 1	Participation to the definition of the measurement techniques.
WP 2	
WP 3	fabrication of supporting structures for the FET develop fabrication modules for graphene devices, fabricate Schottky
WP 6	
WP 7	

Major Cost Items

- Personal costs : 7,90 person-months

Tables of costs

Period 1 (T0 - T0+6)		Budget	Type of Activity				TOTAL	% Spent	Remaining budget
			RTD	DEM	MGT	OTHER			
FORTH	Personnel costs	215 000	13 055	0	0	0	13 055	6,07%	201 945
	subcontracting	3 000	0	0	0	0	0	0,00%	3 000
	other direct costs	90 000	12 618	0	0	0	12 618	14,02%	77 382
	indirects costs	204 250	10 835	0	0	0	10 835	5,30%	193 415
	total	512 250	**36 508**	**0**	**0**	**0**	**36 508**	**7,13%**	**475 742**

Table 5 : FORTH Table of costs

Table of Human Resources

Partner	WP	Planned PM	Actual Person-Months							% Total	Remaining PM
			Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total		
FORTH	WP 1	2,00	2,00						2,00	100%	0,00
	WP 2	0,00	0,00						0,00	0%	0,00
	WP 3	58,00	5,90						5,90	10%	52,10
	WP 4	3,00	0,00						0,00	0%	3,00
	WP 5	4,00	0,00						0,00	0%	4,00
	WP 6	0,00	0,00						0,00	0%	0,00
	WP 7	5,00	0,00						0,00	0%	5,00
	Total	72,00	7,90	0,00	0,00	0,00	0,00	0,00	7,90	11%	64,10

Table 6: FORTH Table of Human Resources

1.1.4 LAAS

Brief description of work

WP 1	Participation to the specifications of the main requirements (frequency, bandwidth) Participation in the detailed elementary components specifications
WP 2	Design power switch Design CNTfilter/oscillator Design LNA
WP 3	RF graphene properties characterization employing graphene loaded CPW structure

WP 6	
WP 7	

Major Cost Items

- Personal costs : 5,94 person-months

Tables of costs

Period 1 (T0 - T0+6)		Budget	Type of Activity				TOTAL	% Spent	Remaining budget
			RTD	DEM	MGT	OTHER			
LAAS	Personnel costs	237 600	27 200	0	0	0	27 200	11	210 400
	subcontracting	0	0	0	0	0	0	0	0
	other direct costs	90 000	450	0	0	0	450	1	89 550
	indirects costs	196 560	16 590	0	0	0	16 590	8	179 970
	total	**524 160**	**44 240**	**0**	**0**	**0**	**44 240**	**8**	**479 920**

Table 7: LAAS Table of costs

Table of Human Resources

Partner	WP	Planned PM	Actual Person-Months							% Total	Remaining PM
			Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total		
LAAS	WP 1	6,00	5,94						5,94	99%	0,06
	WP 2	0,00	0,00						0,00	0%	0,00
	WP 3	24,00	0,00						0,00	0%	24,00
	WP 4	12,00	0,00						0,00	0%	12,00
	WP 5	1,00	0,00						0,00	0%	1,00
	WP 6	0,00	0,00						0,00	0%	0,00
	WP 7	3,00	0,00						0,00	0%	3,00
	Total	46,00	5,94	0,00	0,00	0,00	0,00	0,00	5,94	13%	40,06

Table 8: LAAS Table of Human Resources

1.1.5 UPMC

Brief description of work

WP 1	
WP 2	Design the CNT antenna
WP 3	RF material test structures for classical material parameters (epsilon, mu, sigma and resistance/inductance/capacitance) characterisation
WP 6	
WP 7	

Major Cost Items

- Personal costs : 2,60 person-months

Tables of costs

Period 1 (T0 - T0+6)		Budget	Type of Activity				TOTAL	% Spent	Remaining budget
			RTD	DEM	MGT	OTHER			
UPMC	Personnel costs	144 100	1 416	0	0	0	1 416	0,98%	142 684
	subcontracting	39 200	0	0	0	0	0	0,00%	39 200
	other direct costs	23 000	0	0	0	0	0	0,00%	23 000
	indirects costs	100 260	0	0	0	0	0	0,00%	100 260
	total	**306 560**	**1 416**	**0**	**0**	**0**	**1 416**	**0,46%**	**305 144**

Table 9 : UPMC Table of costs

Table of Human Resources

Partner	WP	Planned PM	Actual Person-Months							% Total	Remaining PM
			Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total		
UPMC	WP 1	0,00	2,60						2,60	0%	-2,60
	WP 2	17,00	0,00						0,00	0%	17,00
	WP 3	6,00	0,00						0,00	0%	6,00
	WP 4	15,00	0,00						0,00	0%	15,00
	WP 5	1,00	0,00						0,00	0%	1,00
	WP 6	0,00	0,00						0,00	0%	0,00
	WP 7	0,00	0,00						0,00	0%	0,00
	Total	39,00	2,60	0,00	0,00	0,00	0,00	0,00	2,60	7%	36,40

Table 10: UPMC Table of Human Resources

1.1.6 IMT

Brief description of work

WP 1	Participation to the identifications of T/R modules specifications (both CNT and graphene based)
WP 2	Design the CNT transistor Design capacitive CNT switch Design the parameters of the CNT array Design graphene antenna Design graphène FET, and graphène mixer/oscillator
WP 3	Contribute to technology nodes (opto litho mask fabrication)
WP 6	
WP 7	

Major Cost Items

- Personal costs : 6,00 person-months

Tables of costs

Period 1 (T0 - T0+6)		Budget	Type of Activity				TOTAL	% Spent	Remaining budget
			RTD	DEM	MGT	OTHER			
IMT	Personnel costs	219 300	25 701	0	697	0	26 398	12,04%	192 902
	subcontracting	0	0	0	0	0	0	0,00%	0
	other direct costs	58 000	7 717	0	989	0	8 706	15,01%	49 294
	indirects costs	55 460	6 684	0	337	0	7 021	12,66%	48 439
	total	**332 760**	**40 101**	**0**	**2 023**	**0**	**42 124**	**12,66%**	**290 636**

Table 11 : IMT Table of costs

Table of Human Resources

Partner	WP	Planned PM	Actual Person-Months							% Total	Remaining PM
			Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total		
IMT	WP 1	2,00	0,00						0,00	0%	2,00
	WP 2	25,00	4,90						4,90	20%	20,10
	WP 3	5,00	1,00						1,00	20%	4,00
	WP 4	15,00	0,00						0,00	0%	15,00
	WP 5	2,50	0,00						0,00	0%	2,50
	WP 6	0,00	0,00						0,00	0%	0,00
	WP 7	1,50	0,10						0,10	7%	1,40
	Total	51,00	6,00	0,00	0,00	0,00	0,00	0,00	6,00	12%	45,00

Table 12: IMT Table of Human Resources

1.1.7 GI

Brief description of work

WP 1	
WP 2	
WP 3	Provide exfoliated graphene & transfer 2D material to arbitrary substrates or over apertures
WP 6	
WP 7	

Major Cost Items

- Personal costs : 2,00 person-months

Tables of costs

Period 1 (T0 - T0+6)		Budget	Type of Activity				TOTAL	% Spent	Remaining budget
			RTD	DEM	MGT	OTHER			
GI	Personnel costs	118 000	6 323	0	1 814	0	8 137	6,90%	109 863
	subcontracting	0	0	0	0	0	0	0,00%	0
	other direct costs	40 000	39	0	770	0	809	2,02%	39 191
	indirects costs	90 000	4 094	0	14 536	0	18 630	20,70%	71 370
	total	**248 000**	**10 456**	**0**	**17 120**	**0**	**27 576**	**11,12%**	**220 424**

Table 13 : GI Table of costs

Table of Human Resources

Partner	WP	Planned PM	Actual Person-Months							% Total	Remaining PM
			Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total		
GI	WP 1	0,00	0,00						0,00	0%	0,00
	WP 2	0,00	0,00						0,00	0%	0,00
	WP 3	19,00	1,50						1,50	8%	17,50
	WP 4	1,00	0,00						0,00	0%	1,00
	WP 5	1,00	0,00						0,00	0%	1,00
	WP 6	0,00	0,00						0,00	0%	0,00
	WP 7	0,00	0,50						0,50	0%	-0,50
	Total	21,00	2,00	0,00	0,00	0,00	0,00	0,00	2,00	10%	19,00

Table 14: GI Table of Human Resources

1.1.8 TAS

Brief description of work

WP 1	Specifications of the main requirements (frequency, bandwidth) Identifications of T/R modules specifications (both CNT and graphene based) Specification of high frequency performance requirements. Definition of the 1st and second demonstrators
WP 2	Provide antenna parameters and help at graphene antenna design Provide graphène parameters and design test devices to find graphene properties to be used in the design
WP 3	
WP 6	
WP 7	

Major Cost Items

- Personal costs : 0,00 person-months

Tables of costs

Period 1 (T0 - T0+6)		Budget	Type of Activity				TOTAL	% Spent	Remaining budget
			RTD	DEM	MGT	OTHER			
TAS	Personnel costs	30 000	0	0	0	0	0	0	30 000
	subcontracting	0	0	0	0	0	0		0
	other direct costs	3 000	0	0	0	0	0	0	3 000
	indirects costs	37 000	0	0	0	0	0	0	37 000
	total	**70 000**	**0**	**0**	**0**	**0**	**0**	**0**	**70 000**

Table 15 : TAS Table of costs

Table of Human Resources

Partner	WP	Planned PM	Actual Person-Months							% Total	Remaining PM
			Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total		
TAS	WP 1	2,00	0,00						0,00	0%	2,00
	WP 2	1,00	0,00						0,00	0%	1,00
	WP 3	0,00	0,00						0,00	0%	0,00
	WP 4	0,00	0,00						0,00	0%	0,00
	WP 5	2,00	0,00						0,00	0%	2,00
	WP 6	0,00	0,00						0,00	0%	0,00
	WP 7	2,00	0,00						0,00	0%	2,00
	Total	7,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0%	7,00

Table 16: TAS Table of Human Resources

1.1.9 SHT

Brief description of work

WP 1	
WP 2	
WP 3	optimization of PECVD growth process of single CNTs on conductive & non-conductive substrates Contribution the knowledge of CNT growth Growth of CNTs for filter fabrication PECVD growth of CNTs for antenna fabrication

	Contribution of knowledge on graphene growth
WP 6	
WP 7	

Major Cost Items

- Personal costs : 4.7 person-months

Tables of costs

Period 1 (T0 - T0+6)		Budget	Type of Activity				TOTAL	% Spent	Remaining budget
			RTD	DEM	MGT	OTHER			
SHT	Personnel costs	155 000	20 703	0	0	0	20 703	13,36%	134 297
	subcontracting	0	0	0	0	0	0	0,00%	0
	other direct costs	115 562	5 505	0	0	0	5 505	4,76%	110 057
	indirects costs	162 337	15 725	0	0	0	15 725	9,69%	146 612
	total	**432 899**	**41 933**	**0**	**0**	**0**	**41 933**	**9,69%**	**390 966**

Table 17 : SHT Table of costs

Table of Human Resources

Partner	WP	Planned PM	Actual Person-Months							% Total	Remaining PM
			Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total		
SHT	WP 1	1,00	0,60						0,60	60%	0,40
	WP 2	0,00	0,00						0,00	0%	0,00
	WP 3	29,00	3,50						3,50	12%	25,50
	WP 4	4,00	0,00						0,00	0%	4,00
	WP 5	0,00	0,00						0,00	0%	0,00
	WP 6	0,00	0,30						0,30	0%	-0,30
	WP 7	4,00	0,30						0,30	8%	3,70
	Total	38,00	4,70	0,00	0,00	0,00	0,00	0,00	4,70	12%	33,30

Table 18: SHT Table of Human Resources

1.1.10 UNIVPM

Brief description of work

WP 1	Multiphysics simulation of CNT transistor Multiphysics design of CNT NEMS switch Design the graphene detector
WP 2	
WP 3	
WP 6	
WP 7	

Major Cost Items

- Personal costs : 4,00 person-months

Tables of costs

Period 1 (T0 - T0+6)		Budget	Type of Activity				TOTAL	% Spent	Remaining budget
			RTD	DEM	MGT	OTHER			
UNIVPM	Personnel costs	109 617	14 463	0	0	4 821	19 284	17,59%	90 333
	subcontracting	1 000	0	0	0	0	0	0,00%	1 000
	other direct costs	44 000	10 113	0	0	0	10 113	22,98%	33 887
	indirects costs	92 170	0	0	0	0	0	0,00%	92 170
	total	**246 787**	**24 576**	**0**	**0**	**4 821**	**29 397**	**11,91%**	**217 390**

Table 19 : UNIVPM Table of costs

Table of Human Resources

Partner	WP	Planned PM	Actual Person-Months							% Total	Remaining PM
			Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total		
UNIVPM	WP 1	0,00	0,00						0,00	0%	0,00
	WP 2	24,00	3,00						3,00	13%	21,00
	WP 3	0,00	0,00						0,00	0%	0,00
	WP 4	10,00	0,00						0,00	0%	10,00
	WP 5	0,00	0,00						0,00	0%	0,00
	WP 6	5,00	1,00						1,00	20%	4,00
	WP 7	0,00	0,00						0,00	0%	0,00
	Total	39,00	4,00	0,00	0,00	0,00	0,00	0,00	4,00	10%	35,00

Table 20: UNIVPM Table of Human Resources

1.1.11 LiU

Brief description of work

WP 1	
WP 2	Provide physical properties of graphene on SiC wafer and help at graphène antenna design Will help to the design to all graphène devices to complay the graphene on wafer characterstics
WP 3	Graphene growth by high temperature decomposition of SiC
WP 6	
WP 7	

Major Cost Items

- Personal costs : 1,0 person-months

Tables of costs

Period 1 (T0 - T0+6)		Budget	Type of Activity				TOTAL	% Spent	Remaining budget
			RTD	DEM	MGT	OTHER			
LiU	Personnel costs	120 000	7 499	0	0	0	7 499	6,25%	112 501
	subcontracting	0	0	0	0	0	0	0,00%	0
	other direct costs	50 000	4 674	0	0	0	4 674	9,35%	45 326
	indirects costs	102 000	7 304	0	0	0	7 304	7,16%	94 696
	total	**272 000**	**19 477**	**0**	**0**	**0**	**19 477**	**7,16%**	**252 523**

Table 21 : LiU Table of costs

Table of Human Resources

Partner	WP	Planned PM	Actual Person-Months							% Total	Remaining PM
			Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total		
Liu	WP 1	0,00	0,00						0,00	0%	0,00
	WP 2	2,00	0,00						0,00	0%	2,00
	WP 3	20,00	1,00						1,00	5%	19,00
	WP 4	1,00	0,00						0,00	0%	1,00
	WP 5	1,00	0,00						0,00	0%	1,00
	WP 6	0,00	0,00						0,00	0%	0,00
	WP 7	0,00	0,00						0,00	0%	0,00
	Total	24,00	1,00	0,00	0,00	0,00	0,00	0,00	1,00	4%	23,00

Table 22: LiU Table of Human Resources

1.1.12 ICN

Brief description of work

WP 1	
WP 2	Design resistive switch
WP 3	CNT: Micro-Raman and Brillouin scattering for structural and study of frequency ranges. Near-field optical/thermal microscope and 3-omega to study thermal loss mechanisms. Pump-and-probe experiments to study lifetimes of phonon and phonon dynamics affecting switching.
WP 6	
WP 7	

Major Cost Items

- Personal costs : 4,00 person-months

Tables of costs

Period 1 (T0 - T0+6)		Budget	Type of Activity				TOTAL	% Spent	Remaining budget
			RTD	DEM	MGT	OTHER			
ICN	Personnel costs	138 653	3 408	0	2 376	0	5 784	4,17%	132 869
	subcontracting	1 499	0	0	0	0	0	0,00%	1 499
	other direct costs	70 350	2 507	0	1 404	0	3 911	5,56%	66 439
	indirects costs	125 399	3 549	0	2 268	0	5 817	4,64%	119 582
	total	**335 901**	**9 464**	**0**	**6 048**	**0**	**15 512**	**4,62%**	**320 389**

Table 23 : ICN Table of costs

Table of Human Resources

Partner	WP	Planned PM	Actual Person-Months							% Total	Remaining PM
			Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total		
UNIVPM	WP 1	0,00	0,00						0,00	0%	0,00
	WP 2	24,00	3,00						3,00	13%	21,00
	WP 3	0,00	0,00						0,00	0%	0,00
	WP 4	10,00	0,00						0,00	0%	10,00
	WP 5	0,00	0,00						0,00	0%	0,00
	WP 6	5,00	1,00						1,00	20%	4,00
	WP 7	0,00	0,00						0,00	0%	0,00
	Total	39,00	4,00	0,00	0,00	0,00	0,00	0,00	4,00	10%	35,00

Table 24: ICN Table of Human Resources

1.1.13 Tyndall

Brief description of work

WP 1	
WP 2	
WP 3	High k oxide and dielectric technology implementation
WP 6	
WP 7	

Major Cost Items

- Personal costs : 4,50 person-months

Tables of costs

	Period 1 (T0 - T0+6)	Budget	Type of Activity				TOTAL	% Spent	Remaining budget
			RTD	DEM	MGT	OTHER			
Tyndall	Personnel costs	189 109	26 752	0		0	26 752	14,15%	162 357
	subcontracting	0	0	0	0	0	0	0,00%	0
	other direct costs	58 200	1 992	0	0	0	1 992	3,42%	56 208
	indirects costs	148 385	17 246	0	0	0	17 246	11,62%	131 139
	total	**395 694**	**45 990**	**0**	**0**	**0**	**45 990**	**11,62%**	**349 704**

Table 25 : Tyndall Table of costs

Table of Human Resources

Partner	WP	Planned PM	Actual Person-Months							% Total	Remaining PM
			Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total		
Tyndall	WP 1	0,00	0,00						0,00	0%	0,00
	WP 2	0,00	0,00						0,00	0%	0,00
	WP 3	20,00	4,50						4,50	23%	15,50
	WP 4	14,00	0,00						0,00	0%	14,00
	WP 5	2,00	0,00						0,00	0%	2,00
	WP 6	0,00	0,00						0,00	0%	0,00
	WP 7	8,50	0,00						0,00	0%	8,50
	Total	44,50	4,50	0,00	0,00	0,00	0,00	0,00	4,50	10%	40,00

Table 26: Tyndall Table of Human Resources

1.2 TABULAR OVERVIEW OF BUDGETED AND ACTUAL COSTS

Partner	Total Budget	Actual cost							% Total	Remaining Budget
		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total		
TRT	1 735 664,00	82 384,00	0,00	0,00	0,00	0,00	0,00	82 384,00	4,75%	1 653 280,00
CHALMERS	836 520,00	65 091,00	0,00	0,00	0,00	0,00	0,00	65 091,00	7,78%	771 429,00
FORTH	512 250,00	36 507,93	0,00	0,00	0,00	0,00	0,00	36 507,93	7,13%	475 742,07
LAAA	524 160,00	44 240,00	0,00	0,00	0,00	0,00	0,00	44 240,00	8,44%	479 920,00
UPMC	306 560,00	1 416,40	0,00	0,00	0,00	0,00	0,00	1 416,40	0,46%	305 143,60
IMT	332 760,00	42 124,21	0,00	0,00	0,00	0,00	0,00	42 124,21	12,66%	290 635,79
GI	248 000,00	27 576,00	0,00	0,00	0,00	0,00	0,00	27 576,00	11,12%	220 424,00
TSA	70 000,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00%	70 000,00
SHT	432 899,00	41 933,00	0,00	0,00	0,00	0,00	0,00	41 933,00	9,69%	390 966,00
UNIVPM	246 787,00	29 396,98	0,00	0,00	0,00	0,00	0,00	29 396,98	11,91%	217 390,02
LiU	272 000,00	19 476,92	0,00	0,00	0,00	0,00	0,00	19 476,92	7,16%	252 523,08
ICN	335 901,00	15 511,63	0,00	0,00	0,00	0,00	0,00	15 511,63	4,62%	320 389,37
Tyndall	395 694,00	45 990,40	0,00	0,00	0,00	0,00	0,00	45 990,40	11,62%	349 703,60
Total Cost	6 249 195,00	451 648,47	0,00	0,00	0,00	0,00	0,00	451 648,47	7,23%	5 797 546,53

Table 27 Tabular overview of budgeted and actual costs

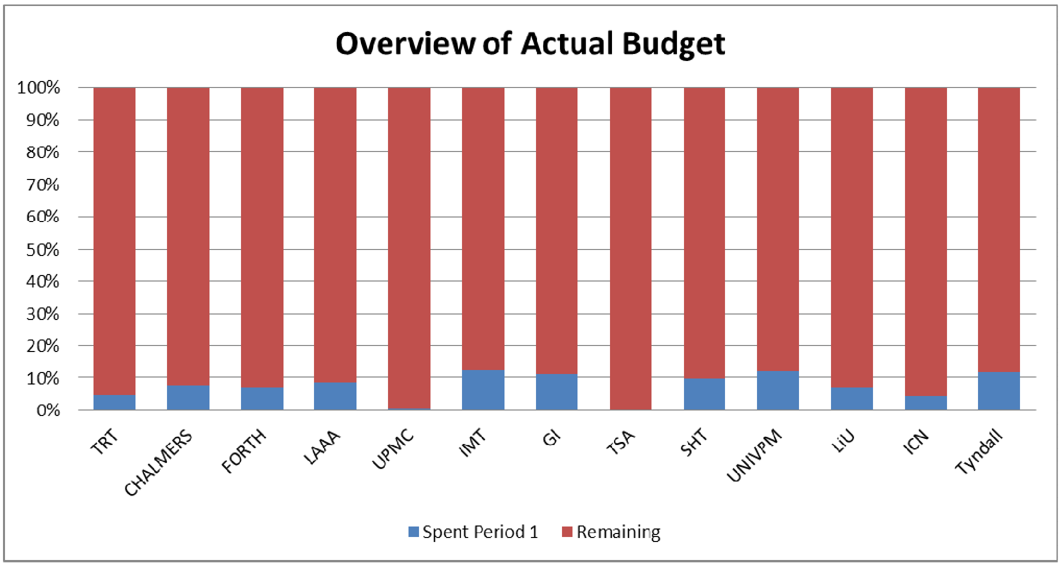

Figure 1 : Actual spent budget vs planned total budget for each partner

1.3 TABULAR OVERVIEW OF PLANNED AND ACTUAL HUMAN RESOURCES

Partner	Planned PM	Actual Person-Months							% Total	Remaining PM
		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total		
TRT	94,00	4,77	0,00	0,00	0,00	0,00	0,00	4,77	5,07%	89,23
CHALMERS	70,00	3,50	0,00	0,00	0,00	0,00	0,00	3,50	5,00%	66,50
FORTH	72,00	7,90	0,00	0,00	0,00	0,00	0,00	7,90	10,97%	64,10
LAAS	46,00	5,94	0,00	0,00	0,00	0,00	0,00	5,94	12,91%	40,06
UPMC	39,00	2,60	0,00	0,00	0,00	0,00	0,00	2,60	6,67%	36,40
IMT	51,00	6,00	0,00	0,00	0,00	0,00	0,00	6,00	11,76%	45,00
GI	21,00	2,00	0,00	0,00	0,00	0,00	0,00	2,00	9,52%	19,00
TSA	7,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00%	7,00
SHT	38,00	4,70	0,00	0,00	0,00	0,00	0,00	4,70	12,37%	33,30
UNIVPM	39,00	4,00	0,00	0,00	0,00	0,00	0,00	4,00	10,26%	35,00
LiU	24,00	1,00	0,00	0,00	0,00	0,00	0,00	1,00	4,17%	23,00
ICN	31,50	1,02	0,00	0,00	0,00	0,00	0,00	1,02	3,24%	30,48
Tyndall	44,50	4,50	0,00	0,00	0,00	0,00	0,00	4,50	10,11%	40,00
Total	577,00	47,93	0,00	0,00	0,00	0,00	0,00	47,93	8,31%	529,07

Table 28 : Overview of planned and actual human resources per partner

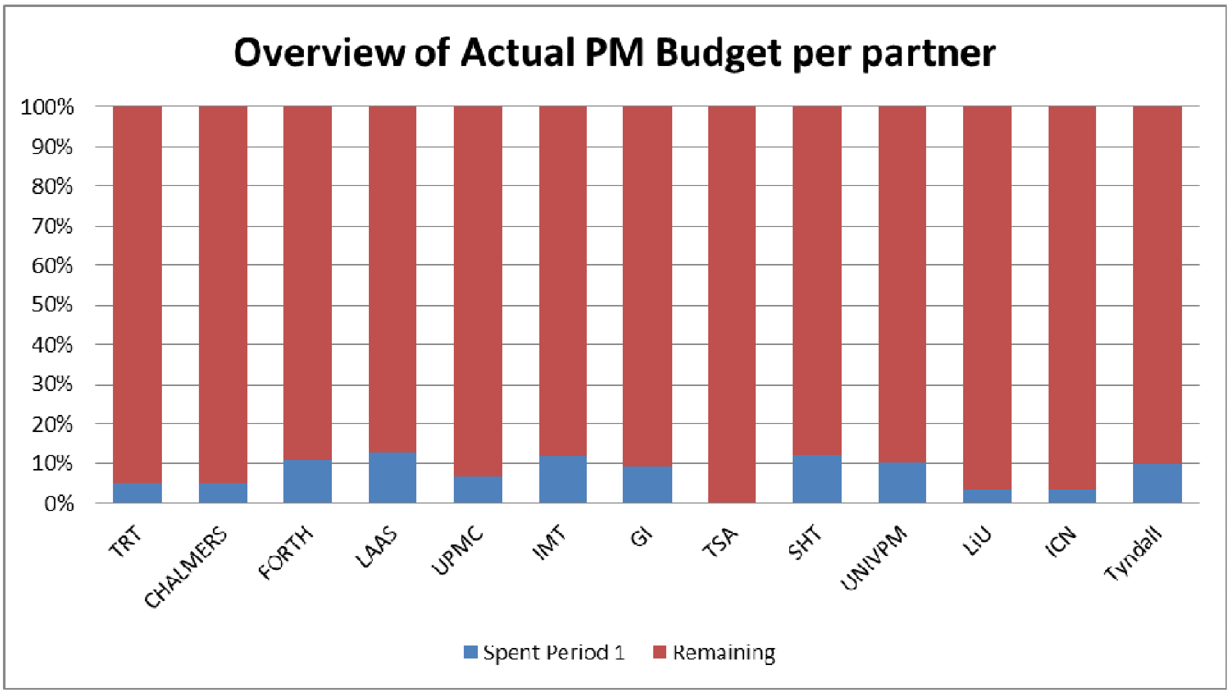

Figure 2 : Actual spent PM vs total budgeted PM for each partner

Partner	Planned PM	Actual Person-Months							% Total	Remaining PM
		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total		
WP1	24,00	15,14	0,00	0,00	0,00	0,00	0,00	15,14	63,08%	8,86
WP2	86,00	10,40	0,00	0,00	0,00	0,00	0,00	10,40	12,09%	75,60
WP3	261,00	19,15	0,00	0,00	0,00	0,00	0,00	19,15	7,34%	241,85
WP4	104,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00%	104,00
WP5	43,50	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00%	43,50
WP6	10,50	1,61	0,00	0,00	0,00	0,00	0,00	1,61	15,33%	8,89
WP7	48,00	1,53	0,00	0,00	0,00	0,00	0,00	1,53	3,19%	46,47
Total	**577,00**	**47,83**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**47,83**	**8,29%**	**529,17**

Table 29 : overview of planned and actual human resources per Workpackage

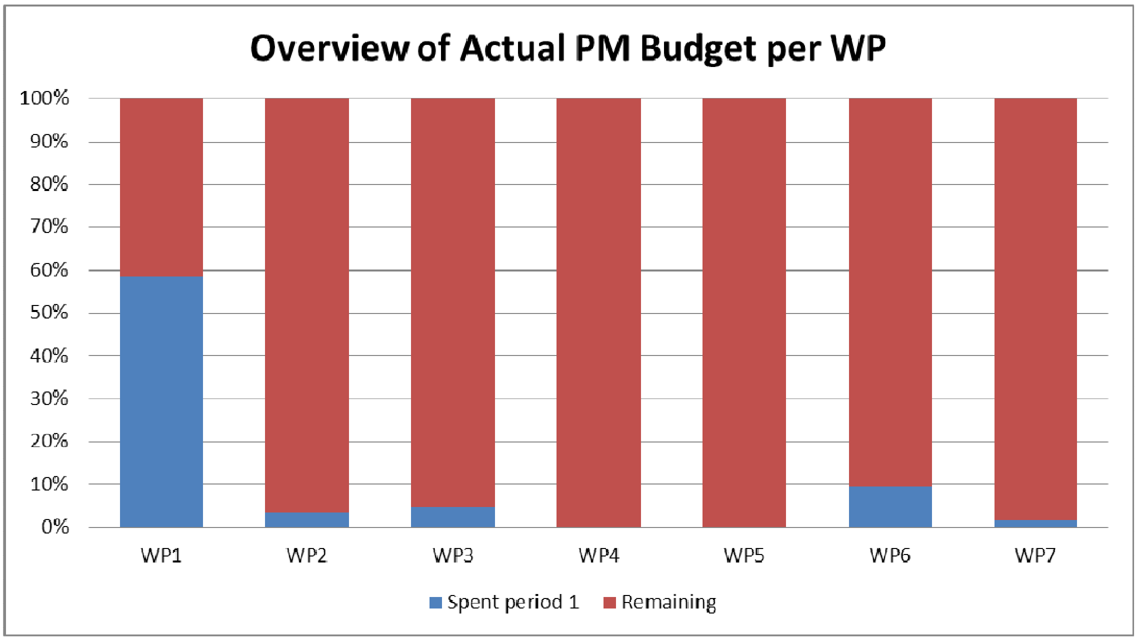

Figure 3 : Actual spent PM vs total budgeted PM for each workpackage

1.4 MAJOR DEVIAVTIONS

At this stage of the project, no major deviation has occurred in term of cost or human resources.

	Planned	Actual							% Total	Remaining
		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total		
Cost	6 249 195,00	451 648,47	0,00	0,00	0,00	0,00	0,00	451648,47	7,23%	5 797 546,53
PM	577,00	47,93	0,00	0,00	0,00	0,00	0,00	47,93	8,31%	529,07

Table 30 : Summary of planned and actual costs and PM expenses

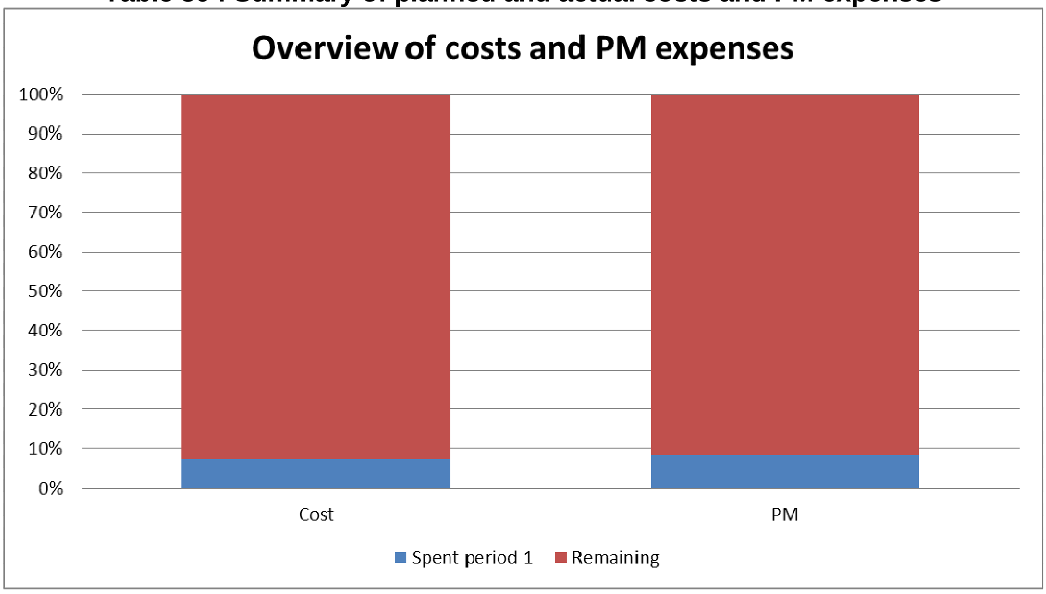

Figure 4 : Overview of cost and PM expenses