

# Work And Budget Plan FP1405 Grant Agreement Period 2

01/05/2016 to 30/04/2017

#### **Section I: Action Profile**

#### **Action General Information**

Action Code	FP1405	MC Chair	Ms Sanne Tiekstra
Action Title	FP1405 - Active and intelligent fibre-based packaging - innovation and market introduction (ActInPak)		
MOU	099/14	Draft MOU	oc-2014-1-18987
CSO Approval Date	2014-11-13		
Action Start Date	2015-03-20	Action End Date	2019-03-19
Science Officer	Dr Fatima Bouchama	Administrative Officer	Ms Cassia Azevedo

#### **Participating COST Member Countries and Cooperating State:**

	ITC		Non-ITC		Total
Cost Countries having accepted the MOU	Number	15	Number	16	31
	% of all ITCs		% of all non- ITCs	51.61%	
Number of MC Members	27		31		58

Country and Acceptance Date				
AT 17/12/2014	EL 16/02/2015	RO 30/01/2015		
BE 10/02/2015	HU 28/11/2014	RS 20/02/2015		
BA 26/02/2016	IE 07/04/2015	SK 15/03/2015		
BG 10/12/2014	IL 18/12/2015	SI 24/11/2014		
HR 12/01/2015	IT 30/01/2015	ES 10/12/2014		
CY 25/05/2016	LT 13/04/2015	SE 26/01/2015		
CZ 16/02/2015	LU 08/12/2014	CH 16/03/2015		
DK 05/12/2014	NL 24/11/2014	TR 16/03/2015		
FI 09/12/2014	NO 23/03/2015	UK 18/11/2014		
FR 03/12/2014	PL 05/12/2014			
DE 05/12/2014	PT 04/02/2015			

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# **International cooperation**

	NNC	IPC	Specific Organis ation	Total
Number of entities formally approved to join Action	0	5	0	5
Number of countries	0	5	0	5

#### **Working Groups**

	WG Title	WG Leader	Number of Members
WG1	Development/Innovation	Prof Selçuk Yildirim	85
WG2	Industrialisation/Market introduction	Dr Johanna Lahti	40
WG3	LCA/Sustainability issues, health and safety	Mr Grzegorz Ganczewski	30
WG4	Knowledge transfer and dissemination	Dr David Ravnjak	27



# Section II: MoU objectives and Grant Agreement Period Goals and Activities

## **Action Objectives from MoU**

Aim/primary Objective	The main objective of the Action is to develop a knowledge-based network on sustainable, active and intelligent fibre-based packaging in order to overcome current technological, industrial, and social limitations that hinder the wide deployment of existing and newly developed solutions in market applications.	
Secondary objectives	<ul> <li>To direct future innovations and contribute to existing development efforts into scientific/technical research into fibre-based materials, new additives and techniques for active and intelligent functions.</li> <li>To identify market demands, possibilities and any obstacles to market introduction of active and intelligent fibre-based packaging.</li> <li>Identify the technical limits and opportunities for development of active and intelligent fibre-based packaging.</li> <li>Identify market demands and supply chain challenges to ensure easy introduction of smart packaging.</li> <li>Identify sustainability, health and safety issues.</li> <li>Disseminate knowledge to industry and society.</li> </ul>	



# **Grant Agreement Period**

Grant Agreement Period Start	01/05/2016	Grant Agreement Period End	30/04/2017
Date		Date	

### **Grant Agreement Period Goals**

Number	Grant Agreement Period Goal	MoU Objective(s) it relates to
GAPG 1	Exhaustive understanding of current situation in research and development (WG1, WG2, WG3)	<ul> <li>Aim/Primary objective</li> <li>Secondary objective 1</li> <li>Secondary objective 2</li> <li>Secondary objective 3</li> <li>Secondary objective 4</li> </ul>
GAPG 2	To increase awareness about active and intelligent packaging through whole value chain (WG4)	<ul><li>Aim/Primary objective</li><li>Secondary objective 6</li></ul>
GAPG 3	Preliminary analysis of three demonstrator cases focusing on properties to be reached (WG1).	<ul><li>Aim/Primary objective</li><li>Secondary objective 1</li><li>Secondary objective 3</li></ul>
GAPG 4	Preliminary analysis of three demonstrator cases focusing on sustainability and safety issues (WG3).	<ul><li>Aim/Primary objective</li><li>Secondary objective 1</li><li>Secondary objective 5</li></ul>
GAPG 5	Preliminary analysis of three demonstrator cases focusing on successful market introduction (WG2).	<ul><li>Aim/Primary objective</li><li>Secondary objective 1</li><li>Secondary objective 2</li><li>Secondary objective 4</li></ul>



# Section IV: Work and Budget Plan for the Grant Agreement Period

# **Work and Budget Plan Summary**

A. COST Networking Tools	EUR
(1) Meetings	89,310.00
(2) Training Schools	16,560.00
(3) Short Term Scientific Missions (STSM)	15,000.00
(4) COST Action Dissemination	1,500.00
(5) Other Expenses Related to Scientific Activities (OERSA)	200.00
B. Total Science Expenditure (sum of (1) to (5))	122,570.00
C. Financial and Scientific Administration and Coordination (FSAC) (max. of 15% of B)	18,385.50
D. Total Expenditure (B+C)	140,955.50



# Meetings

#### Overview

Meeting Title	Meeting Type	Dates	Location	ITC	Total Cost(EUR)
COST WG1 session in Nanotec conference	Workshops/Conf erences	26/09/2016 - 26/09/2016	Valencia (Spain)	No	7,650.00
SG meeting	Core Group Meeting	04/10/2016 - 04/10/2016	Amsterdam (Netherlands)	No	5,610.00
MCM3 / WGs	Management Committee Meeting, Working Group Meeting, Worksh ops/Conferences		Bled (Slovenia)	Yes	60,750.00
WG3 meeting	Working Group Meeting	12/12/2016 - 12/12/2016	Warsaw (Poland)	Yes	7,650.00
WG2 meeting	Working Group Meeting	20/02/2017 - 20/02/2017	Budapest (Hungary)	Yes	7,650.00
				Total	89,310.00

#### Details

Meeting Type	Workshops/Conferences	
Title of the Meeting	COST WG1 session in Nanotec conference	
Grant Period Goal(s) it will address	Exhaustive understanding of current situation in research and development (WG1, WG2, WG3), Preliminary analysis of three demonstrator cases focusing on properties to be reached (WG1).	
Description	Co-organised COST session during the Nanotec conference (http://www.nanotec2016.com/, 26-27 September 2016), dedicated to Working Group 1, with the goal to present and discuss technologies and to get feedback from the attending industry to incorporate in review papers as decided during the last GP1 meeting. This session will be completely integrated and advertised within the conference (so not a parallel session) to get as many industrial and other external participants as possible for the purpose of the feedback to Working Group 1. At time of writing, COST Action number and title are not yet advertised on the website of the conference as the program is not final yet, but the organisation will do so as soon as possible. ActInPak is already involved and represented by several MC members in the Scientific Committee of the Nanotec conference (Chair and the WG1 Leader). ActInPak participants that wish to attend the Nanotec conference will benefit from a reduced fee, and are aware that COST does not sponsor this fee. Reimbursement from COST is only eligible in case ActInPak participants are active in the Workshop as described. Presentation during Nanotec is not mandatory for reimbursement, but an added value.	
Output(s)	Draft of review papers giving an up-to-date report of the research in the different areas of active and intelligent fibre-based packaging.	



Location	Valencia (Spain)	ITC	No
Start Date	2016-09-26 13:00:00	End Date	2016-09-26 17:00:00
Duration	1 day		
Number of expected total participants	50	Number of participants to be reimbursed from COST funds	15
Average reimbursement(per participant)(EUR)	510.00	Total Reimbursement costs (EUR)	7,650.00
Local Organiser Support (EUR)	0.00		
Total cost of the meeting (EUR)	7,650.00		

Meeting Type	Core Group Meeting			
Title of the Meeting	SG meeting			
Grant Period Goal(s) it will address	Exhaustive understanding of current situation in research and development (WG1, WG2, WG3),To increase awareness about active and intelligent packaging through whole value chain (WG4),Preliminary analysis of three demonstrator cases focusing on properties to be reached (WG1).,Preliminary analysis of three demonstrator cases focusing on sustainability and safety issues (WG3).,Preliminary analysis of three demonstrator cases focusing on successful market introduction (WG2).			
Description	Steering Group meeting to prepare the next joint meeting planned for November 2016. If this is not necessary in person, this meeting will be moved towards the start of 2017 to evaluate GP2 and draft the WBP for GP3.			
Output(s)	Joint meeting in November	2016 // GP3 WBP draft // E	Evaluation of GP2	
Location	Amsterdam (Netherlands)	Amsterdam (Netherlands) ITC No		
Start Date	2016-10-04 09:00:00 End Date 2016-10-04 17:00:00			
Duration	1 day	1 day		
Number of expected total participants	Number of participants to be reimbursed from COST funds		11	
Average reimbursement(per participant)(EUR)	510.00 Total Reimbursement 5,610.00 costs (EUR)			
Local Organiser Support (EUR)	0.00			
Total cost of the meeting (EUR)	5,610.00			

0 3.	Management Committee Meeting, Working Group Meeting, Workshops/Conferences
Title of the Meeting	MCM3 / WGs
Grant Period Goal(s) it	Exhaustive understanding of current situation in research and development



will address	(WG1, WG2, WG3),To increase awareness about active and intelligent packaging through whole value chain (WG4),Preliminary analysis of three demonstrator cases focusing on properties to be reached (WG1).,Preliminary analysis of three demonstrator cases focusing on sustainability and safety issues (WG3).,Preliminary analysis of three demonstrator cases focusing on successful market introduction (WG2).			
Description	21-11 from 13:00 to 17:00 workshop (invited speakers or presentations from partners to be decided) // 22-11 from 9:00 to 12:00 Management Committee Meeting // 22-11 from 13:00 to 17:00 Working Group Meetings (we could also start 22-11 with working groups, and then have the MC meeting in between, so that WG members can continue the work) // 23-11 from 9:00 to 15:00 Working Group Meetings // 23-11 from 15:00 to 18:00 COST session during Paper conference (see below). Reason for this venue and date is the co-organisation with Paper conference in Bled, Slovenia at 23-24 November 2016, see a.o. https://www.papermakerswiki.com/events/43rd-international-symposium-ditp-november-23-24-2016-bled-slovenia. This conference will join up with ActInPak for the Wednesday afternoon with a session consisting of ~6 presentations from ActInPak participants (no conference fee) to paper industry participants from Slovenia and Austria. All other ActInPak participants will be invited to join the Paper conference for highly reduced fee (for which COST reimbursement is not used). ActInPak benefits from this co-organisation by highly reduced prices for the location and hotel as it is the same location as the paper conference. Furthermore, WG4 will be able to valorise the results and disseminate to a very interested public related to the core of the Action: fibre-based industry. Details need to be agreed upon.			
Output(s)	Final drafts of review papers for WG1, WG2, WG3 and plan of approach for publication // Experiences and results from the 5 STSM researchers from GP1 // Valorisation of GP1 knowledge into action plans per Working Group and publishable results for the benefit of industry, by means of eg the review papers // Publication/dissemination of virtual showroom // Workshop and conference presentations and proceedings (in electronic format), preferably // Awareness amongst industry //			
Location	Bled (Slovenia)	ITC	Yes	
Start Date	2016-11-21 13:00:00	End Date	2016-11-23 18:00:00	
Duration	3 days			
Number of expected total participants	100 Number of participants to be reimbursed from COST funds			
Average reimbursement(per participant)(EUR)	750.00 Total Reimbursement costs (EUR) 56,250.00			
Local Organiser Support (EUR)	4,500.00			
Total cost of the meeting (EUR)	60,750.00			

Meeting Type	Working Group Meeting		
Title of the Meeting	WG3 meeting		





Grant Period Goal(s) it will address	Exhaustive understanding of current situation in research and development (WG1, WG2, WG3), Preliminary analysis of three demonstrator cases focusing on sustainability and safety issues (WG3).				
Description	Full day meeting for Working Group 3 members to work on actions beyond the review papers as decided during the last GP1 meeting.				
Output(s)	Draft of LCA analysis and three demonstrators.	corresponding publication o	n the -in GP1 chosen-		
Location	Warsaw (Poland)	Warsaw (Poland) ITC Yes			
Start Date	2016-12-12 09:00:00 End Date 2016-12-12 17:00:00				
Duration	1 day				
Number of expected total participants	Number of participants to be reimbursed from COST funds				
Average reimbursement(per participant)(EUR)	Total Reimbursement 7,650.00 costs (EUR)				
Local Organiser Support (EUR)	0.00				
Total cost of the meeting (EUR)	7,650.00				

Meeting Type	Working Group Meeting			
Title of the Meeting	WG2 meeting			
Grant Period Goal(s) it will address	Exhaustive understanding of current situation in research and development (WG1, WG2, WG3), Preliminary analysis of three demonstrator cases focusing on successful market introduction (WG2).			
Description	, ,	ng Group 2 members to worduring the last GP1 meeting	,	
Output(s)	Draft of publication based on the executed questionnaire, as started in GP1, for the benefit of the industry as a route for action within ActInPak // Draft of workshop for industry including brainstorm towards challenges for the market implementation of active and intelligent packaging.			
Location	Budapest (Hungary) ITC Yes			
Start Date	2017-02-20 09:00:00 End Date 2017-02-20 17:00:00			
Duration	1 day			
Number of expected total participants	Number of participants to be reimbursed from COST funds			
Average reimbursement(per participant)(EUR)	510.00 Total Reimbursement 7,650.00 costs (EUR)			
Local Organiser Support (EUR)	0.00			
Total cost of the meeting (EUR)	7,650.00			





# **Training Schools**

#### Overview

Title of the Training School	Dates	Location	ITC	Total Cost(EUR)
Printing of functional applications		Swansea (United Kingdom)	No	16,560.00
			Total	16,560.00

#### Details

Title of the Training School	Printing of functional applications			
Grant Period Goal(s) it will address	Exhaustive understanding of current situation in research and development (WG1, WG2, WG3),To increase awareness about active and intelligent packaging through whole value chain (WG4)			
Description	5 days training school. This course brings together leading speakers from academia across Europe and Industry to deliver an introduction to printable electronics. The summer school takes place at the magnificent new 65 acre Bay Campus in Swansea and is located right on the beach on the eastern approach to Swansea City and is the home to the Welsh Centre for Printing and Coating based within the College of Engineering. The summer school is hosted by the Welsh Centre for Printing and Coating (WCPC), using its new comprehensively equipped laboratories. The course will cover: Design and applications, All major printing processes (flexo, screen, gravure, pad, offset and inkjet), Inks, Substrates, Curing technology, Characterisation technologies, Practical sessions. http://wcpcswansea.com/events/summer-school/2016/			
Output(s)	For trainees: better understanding of printed electronics (intelligent packaging) and how it works in industry. For the Action: awareness amongst and cooperation with industry participants.			
Location	Swansea (United Kingdom)	ITC	No	
Start Date	2016-07-11 09:00:00	End Date	2016-07-15 13:00:00	
Number of trainers	10	Number of trainees	30	
Number of trainers to be reimbursed	Number of trainees to be reimbursed			
Average trainer Reimbursement(EUR)	740.00 Average reimbursement 700.00 per trainee(EUR)			
Total trainer Reimbursement(EUR)	4,440.00 Total trainee Grant(EUR) 10,500.00			
Local Organiser Support (EUR)	1,620.00			
Total cost of the Training School(EUR)	16,560.00			



## **Short Term Scientific Missions (STSM)**

Number	Average cost per STSM(EUR) Total cost(EUR)		
6	2,500.00	15,000.00	
Grant Period Goal(s) it will address	Exhaustive understanding of current situation in research and development (WG1, WG2, WG3),To increase awareness about active and intelligent packaging through whole value chain (WG4),Preliminary analysis of three demonstrator cases focusing on properties to be reached (WG1).,Preliminary analysis of three demonstrator cases focusing on sustainability and safety issues (WG3).,Preliminary analysis of three demonstrator cases focusing on successful market introduction (WG2).		
Description	At least 6 STSMs should be executed by the end of GP2, preferably from science to industry or v.v. and focused towards the three demonstrators as decided during the last meeting in GP1. The STSMs will be supported by the launch of a student contest in which students are invited to work on either a design or a business case.		
Output(s)	Contribution of experience in the analysis of state-of-the-art, boundary conditions, and most promising scientific developments // Initiation of collaboration between laboratories // Reports on the STSM activities, in the form of a presentation during the next meeting and a video to be uploaded on the Action website, LinkedIn page and other social media. //		

#### **COST Action Dissemination**

Title		Туре	Publisher/provider	Expected date of Release	Cost(EUR)
Website update		Action Website	University of Ljubljana	30/04/2017	1,500.00
Grant Period Goal(s) it will address	To increase awareness about active and intelligent packaging through whole value chain (WG4)			ough whole	
Description	to be added				
Output(s)	to be added				

Total Disseminations	1,500.00
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#### Other Expenses Related to Scientific Activities (OERSA)

Item	Cost(EUR)
Bank costs	200.00



# **WORKPLAN**

# Annex A - Work And Budget plan FP1405

Active and intelligent fibre-based packaging - innovation and market introduction (ActInPak) Grant Period from 01/05/2016 to 30/04/2017

## **Summary Budget**

Instrument	Quant.	Budget	
Meetings	5	89310.00 EUR	
Training Schools	1	16560.00 EUR	
Short Term Scientific Missions (STSM)	6	15000.00 EUR	
COST Action Dissemination	1	1500.00 EUR	
Other Expenses Related to Scientific Activities (OERSA)	1	200.00 EUR	
	SCIENCE EXPENDITURE : 122570.00 EUR		

Financial and Scientific Administration and Coordination (FSAC) - MAX. 15% 15% 18385.50 EUR

**TOTAL EXPENDITURE: 140955.50 EUR** 

Signature :			

Date : \_\_\_\_\_



#### Indicative Information

#### **Details for Meetings**

Meeting 1

Type: Workshops/Conferences

Title: COST WG1 session in Nanotec conference

**Location**: Valencia (Spain)

**Date:** 26/09/2016 - 26/09/2016

**Total Participants**: 50 **Total Reimbursed**: 15

Travel Costs: 7650.00 EUR Local Organiser Support: 0.00 EUR

Meeting 2

Type: Core Group Meeting

Title: SG meeting

**Location :** Amsterdam (Netherlands) **Date :** 04/10/2016 - 04/10/2016

Total Participants: 11
Total Reimbursed: 11

**Travel Costs:** 5610.00 EUR **Local Organiser Support:** 0.00 EUR

Meeting 3

**Type:** Management Committee Meeting, Working Group Meeting,

Workshops/Conferences

Title: MCM3 / WGs Location: Bled (Slovenia)

**Date:** 21/11/2016 - 23/11/2016

**Total Participants**: 100 **Total Reimbursed**: 75

**Travel Costs:** 56250.00 EUR **Local Organiser Support:** 4500.00 EUR

Meeting 4

Type: Working Group Meeting

Title :WG3 meetingLocation :Warsaw (Poland)

**Date:** 12/12/2016 - 12/12/2016

**Total Participants**: 15 **Total Reimbursed**: 15

**Travel Costs:** 7650.00 EUR **Local Organiser Support:** 0.00 EUR



Meeting 5

Type: Working Group Meeting

 Title :
 WG2 meeting

 Location :
 Budapest (Hungary)

 Date :
 20/02/2017 - 20/02/2017

Total Participants: 15
Total Reimbursed: 15

Travel Costs: 7650.00 EUR Local Organiser Support: 0.00 EUR

#### **Details for Training Schools**

Training School 1

Title:Printing of functional applicationsLocation:Swansea (United Kingdom)Date:11/07/2016 - 15/07/2016

**Number Of Trainers**: 10 **Number Of Trainees**: 30

Travel Costs Trainers: 4440.00 EUR
Travel Costs Trainees: 10500.00 EUR
Local Organiser Support: 1620.00 EUR

#### Details for Short Term Scientific Missions (STSM)

STSM Summary

Number Of STSMs: 6

Amount Per STSM: 2500.00 EUR
Total Budget For STSMs: 15000.00 EUR

## **Details for COST Action Dissemination**

Item 1

Title: Website update Expected Release Date: 30/04/2017

Publisher Or Supplier: University of Ljubljana

Type: Action Website
Amount: 1500.00 EUR

#### Details for Other Expenses Related to Scientific Activities (OERSA)

Expense 1

Title: Bank costs
Amount: 200.00 EUR

