



PROPOSAL SUBMISSION FORMS UNDER THE

RESTART 2016 – 2020 PROGRAMMES

RESEARCH, TECHNOLOGICAL DEVELOPMENT AND INNOVATION OF THE

RESEARCH PROMOTION FOUNDATION

Programme	Development and Promotion of Internationally Competitive Innovative Products and Services from Existing Enterprises
RPF Proposal Number	INNOVATE/0719/0011
Proposal Acronym	NanoPro



General Profile of the Project Proposal

Project Title	Industrial Production and Commercialization of NanoWeld - Enhanced Technical Fabrics		
Project Title in Greek	Βιομηχανική Παραγωγή και Εμπορευματοποίηση τεχνικών υφασμάτων ενισχυμένων με την τεχνολογία NanoWeld		
Science and Technology areas	Composites		
Classification of Socio-Economic Objectives	Industrial production and technology		
S3CY Areas	Primary: Development of Innovative and Smart Construction Materials		
Project Duration	24.00		
Total Budget	1.455.880,00 €	Requested RPF Funding	941.822,00 €
Has this Proposal (or a similar one with minor deviations regarding the content and / or participants) been submitted under any other Programme of the RESTART 2016 - 2020 PROGRAMMES?			No
Coordinator	Vasileios Drakonakis		

Consortium Table

Organisation	Partner Name	Organisation Category
HO	AMDM - Advanced Materials Design & Manufacturing Limited	Enterprises(Small Enterprise)
PA 1	Phoebe Research and Innovation Ltd	Enterprises(Small Enterprise)
PA 2	Cyprus University of Technology	Research Organisations(University)
PA 3	Cyprus International Institute of Management, CIIM	Research Organisations(Research Institute)

Foreign Research Organisations (FRO) Table

Partner Code	Participant Name	Country	Cost
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Proposal Evaluation Recommendations

#	Evaluators' Scientific Fields of Expertise
1	Advanced Manufacturing
2	Polymer Composite Materials
3	Polymers Processing

Specific Evaluators that you would prefer to be excluded from the evaluation procedure of this proposal (if applicable)

Title	Name/Surname	Organisation
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Organisations Profile Tables

HO Profile Table

Organisation Name	AMDM - Advanced Materials Design & Manufacturing Limited			
Organisation Category	Enterprises(Small Enterprise)			
Year	2014	2015	2016	2017
Annual RTD Expenditure Please indicate the expenses for Research, Technological Development and Innovation per year	0,00 €	482,00 €	9.060,00 €	43.862,00 €
Number of Employees	3	3	4	4
Annual Turnover	0,00 €	200,00 €	14.552,00 €	50.364,00 €

PA1 Profile Table

Organisation Name	Phoebe Research and Innovation Ltd	
Organisation Category	Enterprises(Small Enterprise)	
Year	2016	2017
Annual RTD Expenditure Please indicate the expenses for Research, Technological Development and Innovation per year	3.000,00 €	24.000,00 €
Number of Employees	3	3
Annual Turnover Applicable only for Enterprises	8.500,00 €	28.000,00 €

PA2 Profile Table

Organisation Name	Cyprus University of Technology		
Organisation Category	Research Organisations(University)		
Year	2013	2014	2015
Annual RTD Expenditure Please indicate the expenses for Research, Technological Development and Innovation per year	9.412.717,00 €	5.253.425,00 €	3.944.517,00 €
Number of Employees	648	876	799
Annual Turnover Applicable only for Enterprises	50.260.926,00 €	41.647.748,00 €	38.840.850,00 €

PA3 Profile Table

Organisation Name	Cyprus International Institute of Management, CIIM	
Organisation Category	Research Organisations(Research Institute)	
Year	2016	
Annual RTD Expenditure Please indicate the expenses for Research, Technological Development and Innovation per year	225.900,00 €	
Number of Employees	40	
Annual Turnover Applicable only for Enterprises	2.777.235,00 €	

Publishable Project Summary

Project Summary
<p>AmaDema provides technological product solutions for different key points of the advanced composite materials supply chain. AmaDema focuses on the design and manufacturing of advanced intermediate products and materials for the polymer composites industry, such as enhanced technical fabrics/textiles (ex. NanoWeld), in order to cover problems and needs of customers in a variety of industrial applications, such as aviation, defense, sports, automotive, shipping etc., where high strength and reduced weight are demanded. Having extensively worked on the development of NanoWeld, a patented technology, both as a material as well as a processing technology, AmaDema is aiming through the proposed project to reach TRL 8 by scaling up production and facilitating the wider adoption of the technology by the global market as well as matching currently expressed demands from international customers. The proposed work aims to ultimately reach the desired TRL through the following key activities: - To design, develop and certify an industrial prototype machine for processing NanoWeld technical fabrics, with sufficient capacity to meet currently expressed demand; - To design and implement a novel feedback control system with online adaptation and learning capabilities of non-linear process dynamics, for the newly developed machine in order to control: i) temperature, ii) pressure and iii) speed of the line. - To promote and commercialize NanoWeld to the global market in order to increase customer portfolio and attract further investments. - To significantly increase the capacity of production and accelerate the commercialization of NanoWeld textiles both through in house and licensing business models</p>

Project Summary in Greek
<p>Η AmaDema παρέχει τεχνολογικές λύσεις για διάφορα βασικά σημεία της αλυσίδας εφοδιασμού προηγμένων σύνθετων υλικών. Η AmaDema εστιάζει στο σχεδιασμό και την κατασκευή προηγμένων ενδιάμεσων προϊόντων για τη βιομηχανία σύνθετων πολυμερών, όπως τα ενισχυμένα τεχνικά υφάσματα (π.χ. NanoWeld), προκειμένου να καλυφθούν προβλήματα και ανάγκες των πελατών της σε ποικίλες βιομηχανικές εφαρμογές, όπως την αεροπορία, την άμυνα, τον αθλητισμό, την αυτοκινητοβιομηχανία, τη ναυπηγία κ.λπ., όπου απαιτούνται υψηλή ισχύς και μειωμένο βάρος. Έχοντας ασχοληθεί εκτενώς με την ανάπτυξη της τεχνολογίας NanoWeld, μιας τεχνολογίας για την οποία έχει κατατεθεί δίπλωμα ευρεσιτεχνίας, τόσο ως υλικού όσο και ως τεχνολογίας επεξεργασίας, η AmaDema στοχεύει μέσω του προτεινόμενου έργου να φτάσει στο (Ευρωπαϊκό δείκτη τεχνολογικής ετοιμότητας) TRL 8, αυξάνοντας την παραγωγή και διευκολύνοντας την ευρύτερη υιοθέτηση της τεχνολογίας από την παγκόσμια αγορά. Η προτεινόμενη εργασία στοχεύει τελικά στην επίτευξη του επιθυμητού TRL μέσω των ακόλουθων βασικών δραστηριοτήτων: - Στο σχεδιασμό, την ανάπτυξη και την πιστοποίηση μιας νέας βιομηχανικής μηχανής για την επεξεργασία τεχνικών υφασμάτων NanoWeld, με επαρκή ικανότητα να ικανοποιεί τη σημερινή εκτεφρασμένη ζήτηση. - Στο σχεδιασμό και στην εφαρμογή ενός νέου συστήματος ελέγχου ανατροφοδότησης με ηλεκτρονικές δυνατότητες προσαρμογής και εκμάθησης της μη γραμμικής δυναμικής της διαδικασίας, για τη νεο-δημιουργηθείσα μηχανή, προκειμένου να ελεγχθεί: i) η θερμοκρασία, ii) την πίεση και iii) την ταχύτητα της γραμμής. - Στην προώθηση του NanoWeld στην παγκόσμια αγορά, προκειμένου να αυξηθεί το χαρτοφυλάκιο των πελατών και να προσελκυστούν περαιτέρω επενδύσεις. - Στην αύξηση σημαντικά της παραγωγικής ικανότητας για να επιταχυνθεί η εμπορευματοποίηση των προϊόντων NanoWeld τόσο μέσω εσωτερικών επιχειρηματικών μοντέλων όσο και μέσω επιχειρηματικών μοντέλων αδειοδότησης (Licensing)</p>

Declarations

Ethical and Environmental Issue Declarations	
Do you believe that any of the proposed activities or of the expected results (e.g. products) could have negative impact on the environment or might even be considered as an environmental hazard?	No
Do you believe that any part of the project proposal (e.g. methodology, work packages and activities, expected results, products etc) should be assessed and approved by the Cyprus National Bioethics Committee?	No

Project Coordinator Declarations	
The management of each participating Organisation in the Consortium (where applicable) has been informed and has already approved the scientific content of this Project Proposal and has committed to support it in case it receives funding from the Research Promotion Foundation (RPF).	I agree
All the staff members mentioned in this proposal have been informed about its content and have agreed to participate in the proposal abiding by the terms and conditions described in the RESTART 2016 – 2020 PROGRAMMES for Research, Technological Development and Innovation as well as by the terms included in the relevant Call for Proposals.	I agree
I have been authorised by the Host Organisation to undertake any communication between the project's research team and RPF, related to this Project Proposal and the respective Project, in case the Proposal receives funding from RPF.	I agree
I am aware of RPF's Policy for the Protection of Personal Data.	I agree
If any of the information included in this Project Proposal becomes invalid at any stage before the evaluation or until the signature of the relevant Project Contract, I will immediately notify RPF along with explanations on its cause and the time of occurrence.	I agree
No part of the Project Proposal has previously been implemented by or received funding from any other source.	I agree
In case of funding of this Project Proposal by RPF, all participating Organisations undertake the responsibility to adhere to : <ul style="list-style-type: none"> the national legislation and European Commission regulations on the environment, the national legislation and European Commission regulations on gender equality and avoidance of discrimination, the national legislation and European Commission guidelines on employment, as well as the European Commission Directives regarding information dissemination and publicity. 	I agree
All the information provided hereunder in this Project Proposal is true and correct.	I agree

Host Organisation Legal Representative Declaration	
The Project Coordinator is authorised to submit this Project Proposal on behalf of the Host Organisation.	I agree
The Host Organisation has not had a petition or issue of judgement or order for winding up or liquidation or bankruptcy filed against it, has not entered into an arrangement with creditors, has not suspended business activities, is not the subject of proceedings concerning above matters and is in compliance with applicable national legislation.	I agree
The Host Organisation has not been convicted of an offence concerning professional conduct by a judgment of a national competent authority which has the force of res judicata.	I agree

Work Package List

WP Number	WP Title	Start Month	End Month
WP1	Project Management	1	24
WP2	Dissemination and Communication Activities	1	24
WP3	Widening NanoWeld - Product Solutions & Optimization	2	13
WP4	Manufacturing Line Up-Scale Development	5	18
WP5	Control System Development	7	18
WP6	Quality Assurance and Certification	10	22
WP7	Business and Commercialization Plan	8	24

Staff Effort by Partner and by Work Package

Organisation	WP1	WP2	WP3	WP4	WP5	WP6	WP7	Total Person Months
AMDM - Advanced Materials Design & Manufacturing Limited	11.00	14.00	16.00	19.00	5.00	16.00	15.00	96.00
Phoebe Research and Innovation Ltd	0.00	1.00	0.00	0.00	19.00	0.00	0.00	20.00
Cyprus University of Technology	0.00	1.00	8.00	0.00	0.00	9.00	0.00	18.00
Cyprus International Institute of Management, CIIM	0.00	1.00	0.00	0.00	0.00	0.00	9.00	10.00
Totals	11.00	17.00	24.00	19.00	24.00	25.00	24.00	144.00

Additional Aid Intensity

Is Effective Collaboration involved?	No
Are Project Results disseminated?	Yes

Project Budget Overview Table (€)

Organisation	Activity	Direct Costs					Indirect Costs		Subcontracting		Innovation Costs	Other Cost	Budget	Aid Intensity	Maximum Funding	Requested Funding	Final Aid Intensity
		Personnel	Equipment	Travel	Consumables	Other Specific (Direct) Costs	Overhead Rate	Overheads	External Services	Foreign Research Organisations (FRO)							
AMDM- Advanced Materials Design & Manufacturing Limited	Experimental Development	140,000.00	0.00	6,000.00	45,000.00	0.00	20,00%	38,200.00	0.00	0.00	0.00	0.00	229,200.00	60,00%	137,520.00	137,520.00	60,00%
AMDM- Advanced Materials Design & Manufacturing Limited	Feasibility Studies	210,000.00	32,400.00	30,000.00	215,000.00	0.00	20,00%	97,480.00	50,000.00	0.00	0.00	0.00	634,880.00	70,00%	444,416.00	412,732.00	65,01%
AMDM- Advanced Materials Design & Manufacturing Limited	Innovation Activities	0.00	0.00	0.00	0.00	0.00	0,00%	0.00	0.00	0.00	100,000.00	0.00	100,000.00	50,00%	50,000.00	50,000.00	50,00%
AMDM- Advanced Materials Design & Manufacturing Limited	Participation in Fairs	0.00	0.00	0.00	0.00	0.00	0,00%	0.00	0.00	0.00	0.00	30,000.00	30,000.00	50,00%	15,000.00	15,000.00	50,00%
AMDM- Advanced Materials Design & Manufacturing Limited	Other Activities Not Classified	0.00	250,000.00	0.00	0.00	0.00	0,00%	0.00	0.00	0.00	0.00	0.00	250,000.00	100,00%	250,000.00	193,400.00	77,36%
Phoebe Research and Innovation Ltd	Experimental Development	75,000.00	0.00	0.00	0.00	0.00	20,00%	15,000.00	0.00	0.00	0.00	0.00	90,000.00	60,00%	54,000.00	54,000.00	60,00%
Cyprus University of Technology	Experimental Development	65,000.00	0.00	0.00	0.00	0.00	20,00%	13,000.00	0.00	0.00	0.00	0.00	78,000.00	65,00%	50,700.00	50,700.00	65,00%
Cyprus International Institute of Management, CIIM	Experimental Development	36,500.00	0.00	0.00	0.00	0.00	20,00%	7,300.00	0.00	0.00	0.00	0.00	43,800.00	65,00%	28,470.00	28,470.00	65,00%

Total Budget per Activity Table (€)

Activity	Direct Costs					Indirect Costs	Subcontracting		Innovation Costs	Other Cost	Budget	Maximum Funding	Requested Funding	Activity Type Percentage
	Personnel	Equipment	Travel	Consumables	Other Specific (Direct) Costs	Overheads	External Services	Foreign Research Organisations (FRO)						
Experimental Development	316,500.00	0.00	6,000.00	45,000.00	0.00	73,500.00	0.00	0.00	0.00	0.00	441,000.00	270,690.00	270,690.00	28,74%
Feasibility Studies	210,000.00	32,400.00	30,000.00	215,000.00	0.00	97,480.00	50,000.00	0.00	0.00	0.00	634,880.00	444,416.00	412,732.00	43,82%
Innovation Activities	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100,000.00	0.00	100,000.00	50,000.00	50,000.00	5,31%
Participation in Fairs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30,000.00	30,000.00	15,000.00	15,000.00	1,59%
Other Activities Not Classified	0.00	250,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	250,000.00	250,000.00	193,400.00	20,53%

Total Budget Table (€)

Direct Costs					Indirect Costs	Subcontracting		Innovation Costs	Other Cost	Budget	Maximum Funding	Requested Funding
Personnel	Equipment	Travel	Consumables	Other Specific (Direct) Costs	Overheads	External Services	Foreign Research Organisations (FRO)					
526,500.00	282,400.00	36,000.00	260,000.00	0.00	170,980.00	50,000.00	0.00	100,000.00	30,000.00	1,455,880.00	1,030,106.00	941,822.00