
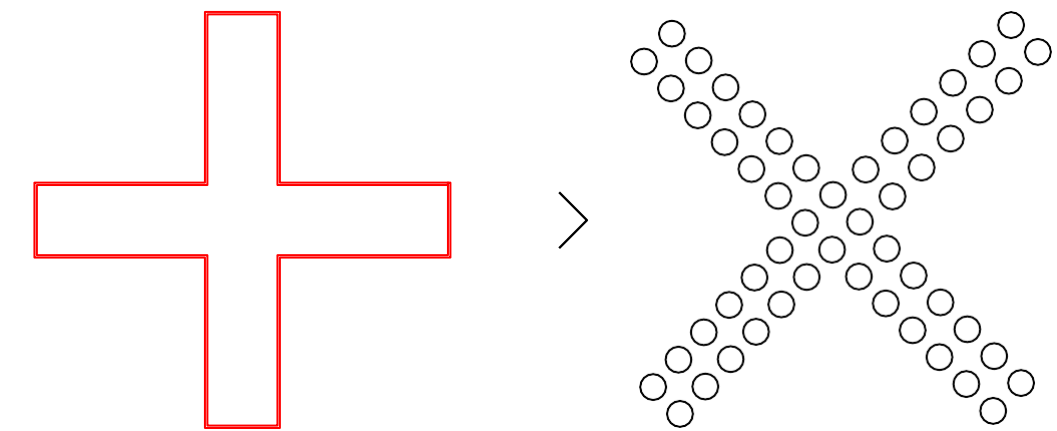




MONDRAGON	 HUMANITY AT WORK	Finance Industry Retail Knowledge
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PROYECTO DE COLABORACIÓN ESPAÑA-MALASIA

**AEROGARDE “RECUBRIMIENTO AISLANTE TÉRMICO CON BASE AEROGEL
ECOLÓGICO PARA APLICACIONES INDUSTRIALES”**



ADDING TO MULTIPLY



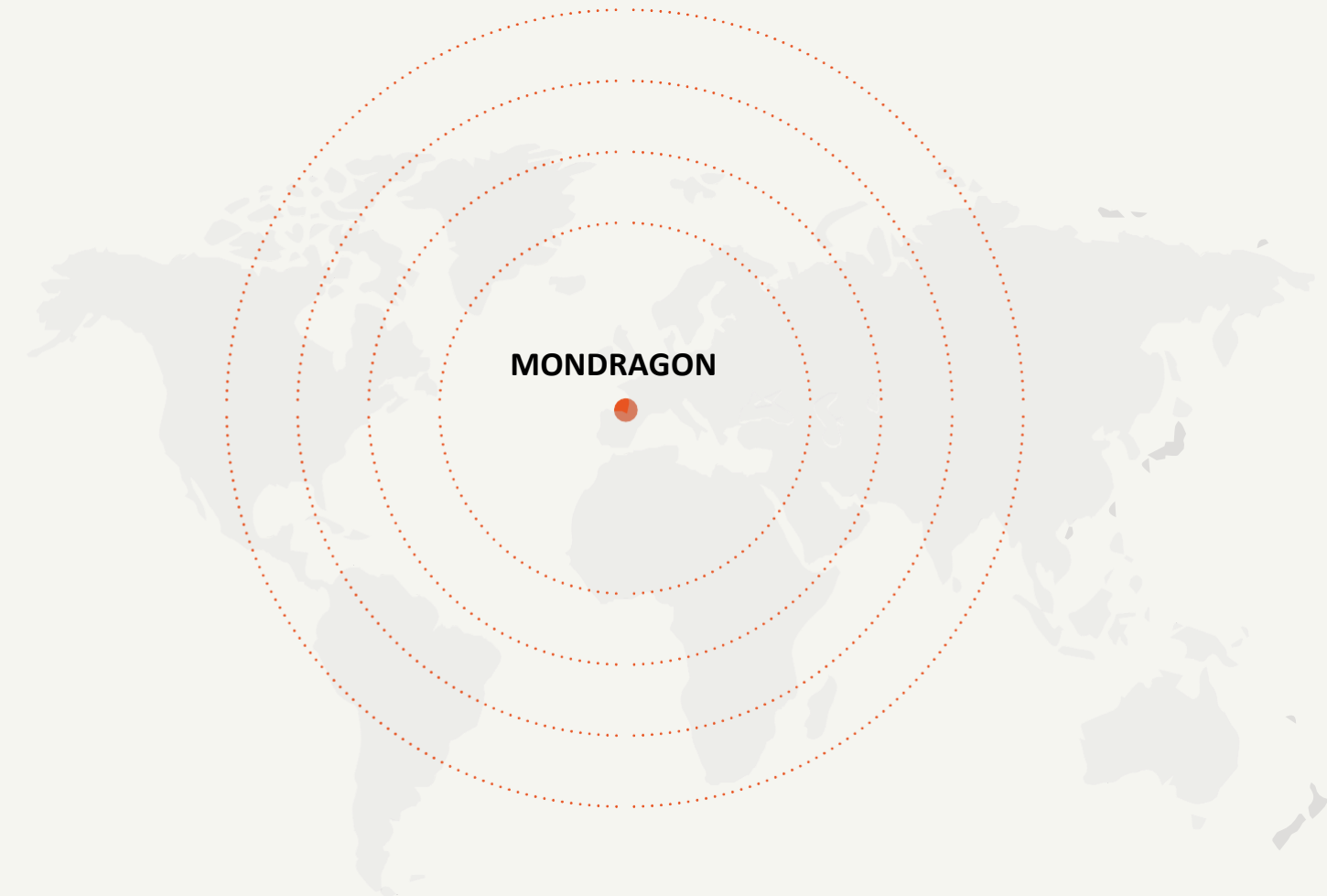


AND THAT'S HOW

MONDRAGON

CAME TO BE

MEN AND WOMEN WORKING TOGETHER AND JOINING FORCES AND DEDICATION. PEOPLE UNITED TO ACHIEVE GREAT THINGS. TO MULTIPLY RESULTS AND **ACHIEVE MORE.**



A GLOBAL PROJECT

WITH DEEP CULTURAL ROOTS IN THE BASQUE COUNTRY AND A CONSOLIDATED PRESENCE INTERNATIONALLY

MONDRAGON COMPONENTES

A Division of the Industry Area of the MONDRAGON GROUP, which object is among others, to provide innovative solutions the domestic appliances sector.



MDA KNOWLEDGE

TECHNOLOGICAL CAPABILITIES

MONDRAGON COMPONENTS

SALES

661

MILL.USD

PERSONNEL

5,212

PRODUCTION
PLANTS

25



SALES

120

MILL.USD

PERSONNEL

1000

PRODUCTION
PLANTS

3-4

WHO WE ARE

REFERENCE SUPPLIER
of the main brands

**ELECTROLUX – BSH - WHIRLPOOL
GE – SAMSUNG – HAIER - BEKO**

World Leaders in
Market Share

> 48%

COOKING SHARE

Present

> 200 Mill.

Households worldwide

TECHNOLOGICAL REFERENCE
IN RADIANT DEVICES AND
ELECTRONIC CONTROL FOR
GAS-RADIANT-INDUCTION

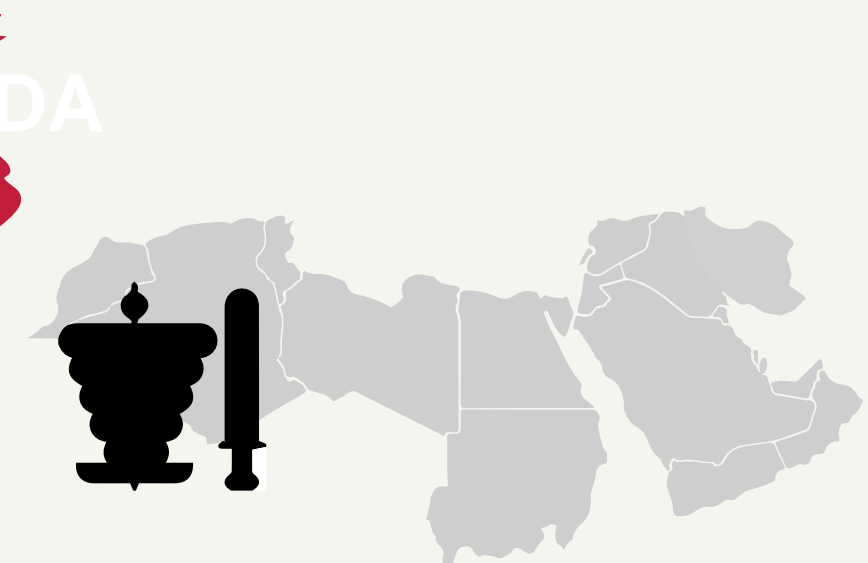


WE EQUIP MORE THAN



80.000

COOKING APPLIANCES PER DAY



Desglos de ver DA

COMPLETE SYSTEMS FOR ELECTRIC COOKING



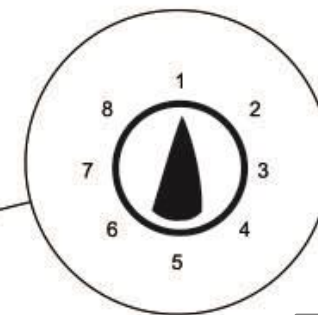
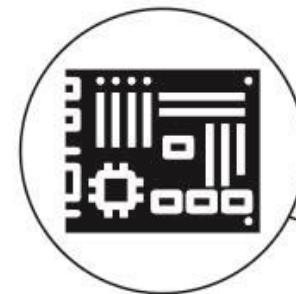
ELECTRONIC CONTROLS



ELECTRONIC TIMER



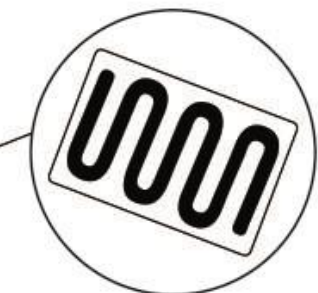
RADIANT HEATERS



ELECTRIC  **eknob**TM THERMOSTATS



TUBULAR HEATING ELEMENTS



HIDDEN BAKE

CUSTOMERS
ALL OVER THE WORLD



PROYECTO BILATERAL ESPAÑA-MALASIA

AUSPICIADO Y COORDINADO POR CDTI



AEROGARDE “RECUBRIMIENTO AISLANTE TÉRMICO CON BASE AEROGEL ECOLÓGICO PARA APLICACIONES INDUSTRIALES”.

AeroGarde™

Consortium Agreement

Partner 1: EIKA S.COOP



Partner 2: UNIVERSITI PUTRA MALAYSIA



Partner 3: MAJU SAINTIFIK SDN BHD



Colaboración Empresa-Universidad-Centro tecnológico

COMO FUE LA PROPUESTA PROYECTO BILATERAL ESPAÑA-MALASIA

MIGHT y CDTI colaboraron con cada socio local y conjuntamente



AEROGARDE “RECUBRIMIENTO AISLANTE TÉRMICO CON BASE AEROGEL ECOLÓGICO PARA APLICACIONES INDUSTRIALES”.

Una vez ratificado el interés en colaborar de las partes, y tras firmar los acuerdos pertinentes de consorcio, se formula o completa la aplicación bilateral y la local, que son muy sencillas de apenas 5 folios, más una pequeña memoria técnica que justifica la necesidad de llevar a cabo el proyecto.

MYSIP
Malaysia-Spain Innovating Programme

1.1 Acronym	AeroGarde™
1.2 Title	An Ecological Aerogel-based Thermal Insulating Coating for Industrial Applications
1.3 Summary	This project proposes the development and commercialisation (from TRL 5 to TRL 9) of an ecological aerogel-based coating to address the energy efficiency needs in heavy industries, to reduce significantly heat loss whilst also ensuring safety by making the hot surface a safe-touch one. It uses silica aerogel as the performance ingredient in the coating, which is the world's best thermal insulator.

CATEGORY: ADVANCED MANUFACTURING & MATERIALS

1.4 Budget and	Duration (nº months): 24 Start Date: 01-10-2021	1 st Year	2 nd Year	TOTAL



MEMORIA TÉCNICA COMPLETA

EMPRESA: EIKA, S. COOP.

TITULO DEL PROYECTO: “RECUBRIMIENTO AISLANTE TÉRMICO CON BASE AEROGEL ECOLÓGICO PARA APLICACIONES INDUSTRIALES”.

ACRÓNIMO: AEROGARDE™

Co-signatures

- EIKA, S.COOP**
 - Having its principal place of business Urresolo 47, E-48277 Etxebarria (Bizkaia) SPAIN
 - Represented by Mr. Aitor Soria
 - CEO / Director general
 - Date : 11 March 2021
 - Place: Spain
- UNIVERSITI PUTRA MALAYSIA**
 - Having its principal place of business JALAN UNIVERSITI 1 Serdang, 43400 Seri Kembangan, Selangor, Malaysia
 - Represented by Prof. Ir. Ts. Dr. Abd Rahim Abu Talib
 - Professor, Principal Investigator
 - Signature: To be signed by the VC of UPM
 - Date : 11 March 2021
 - Place: Malaysia
- MAJU SAINTIFIK SDN BHD**
 - Having its principal place of business No.35G, Jalan Mutiara Subang 1, Taman Mutiara Subang, 47500 Subang Jaya, Selangor Darul Ehsan, Malaysia
 - Represented by Mr. Rahimi L. Mahamud
 - Managing Director
 - Signature:
 - Stamp:
 - Date : 11 March 2021
 - Place: Malaysia

EIKA Etxebarria

Co No : 477090 K

Colaboración Empresa-Universidad-Centro tecnológico

DESARROLLO DEL PROYECTO BILATERAL ESPAÑA-MALASIA

CON LA SUPERVISIÓN CON EIKA DE CDTI EN LA PERSONA DE RICARDO RUBIANES



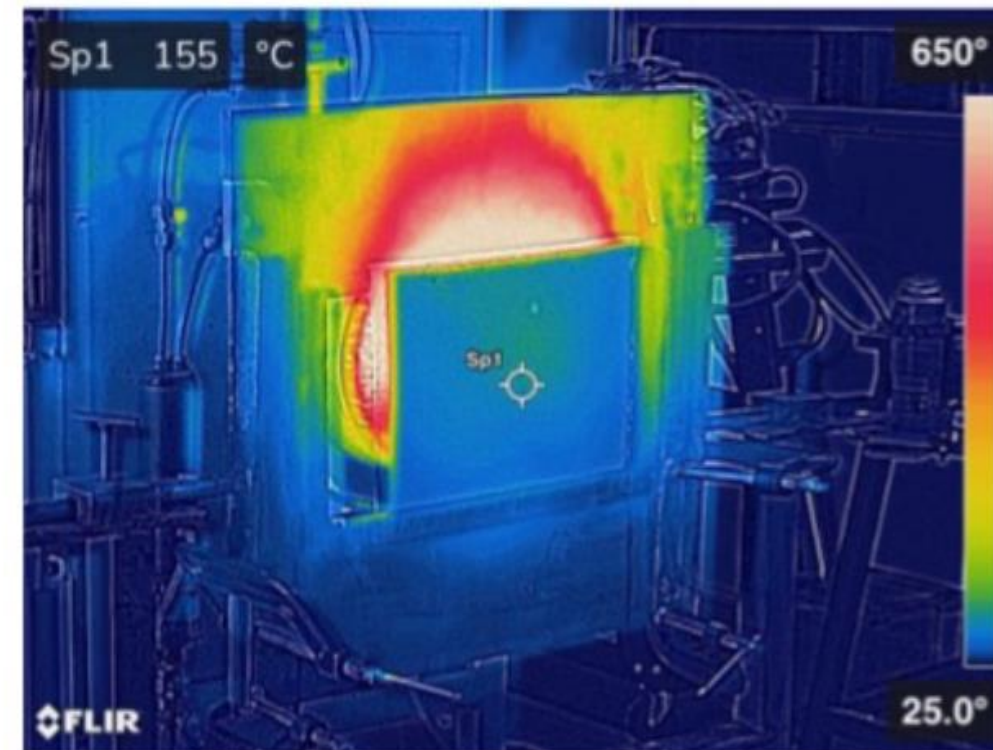
MINISTRY OF HIGHER EDUCATION



AEROGARDE “RECUBRIMIENTO AISLANTE TÉRMICO CON BASE AEROGEL ECOLÓGICO PARA APLICACIONES INDUSTRIALES”.

High Temperature Test – ISO Nud (10mm)

Panels	Condition	Temperature (°C)			Time (s)	Observation
		5 mins	10 mins	15 mins		
ISO-NUD	No Coating	80	128	146	>900	Fireproof
	1% Aerowder	121	169	172	>900	Fireproof
	3% Aerowder	130	175	182	>900	Fireproof
	5% Aerowder	98.8	140	155	>900	Fireproof



5% Aerowder

Colaboración Empresa-Universidad-Centro tecnológico

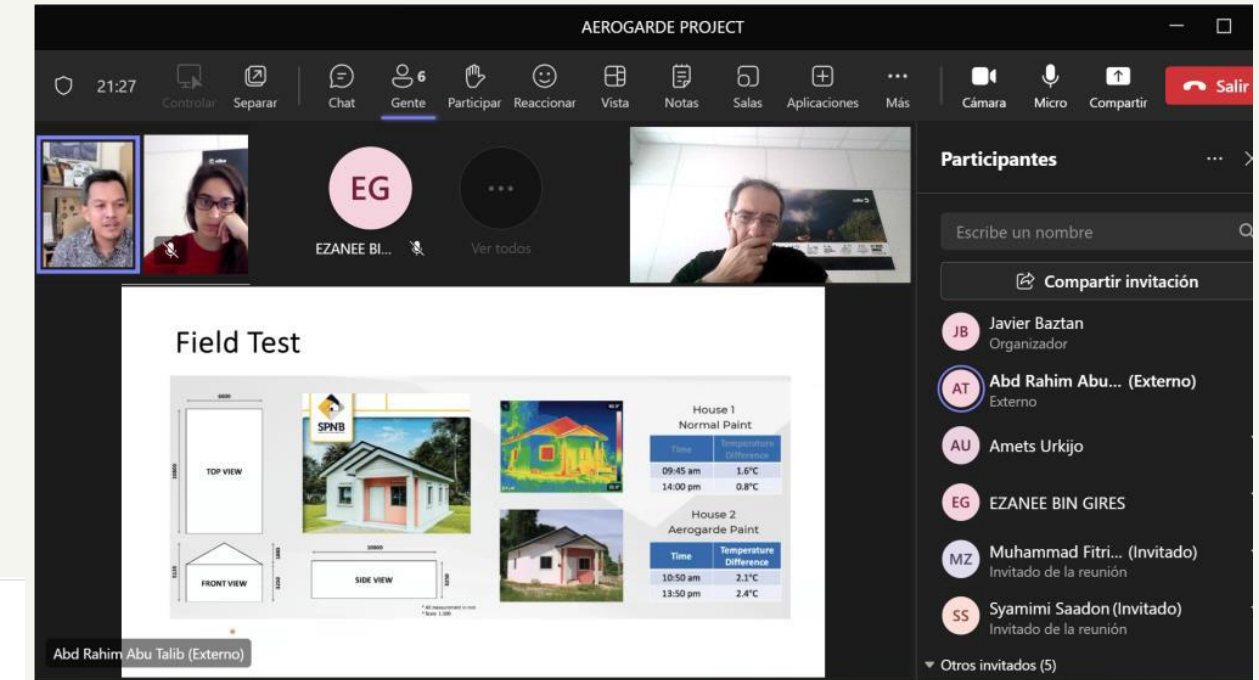
EXPERIENCIA CONTRAPARTE DE PROYECTO

CON LA SUPERVISIÓN CON EIKA DE CDTI EN LA PERSONA DE RICARDO RUBIANES



AEROGARDE “RECUBRIMIENTO AISLANTE TÉRMICO CON BASE AEROGEL ECOLÓGICO PARA APLICACIONES INDUSTRIALES”.

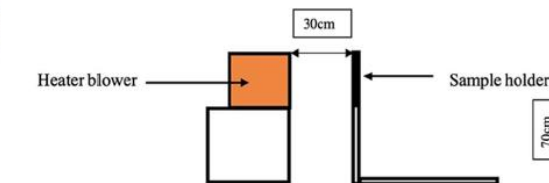
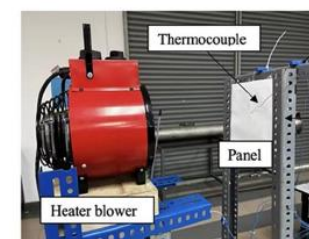
1. Gestión cotidiana gracias a Videoconferencias, en principio de carácter mensual y más regulares en función de avances y necesidades.
2. Gran flexibilidad por ambas partes.
3. Intercambio de contactos, datos y partners de interés mutuo.
4. Una visita del Líder tecnológico Malayo (UPM- Dr. Rahim) en el ecuador de proyecto.
5. Visita de supervisión de nuestro gestor de CDTI a Malasia.
6. Experiencia satisfactoria y sencilla



	MEETING MINUTES			Finanzas Industrial Retail Knowledge
Subject	management and control of Project progress	Author:	Equipo NNAA	
Place	TEAMS	Date:	2023_10_12	
Attendees:	UPM: Prof. Rahim, ezanee ben Gires, uhammad Fitri, Syamimi Saadon MAJU: Dr. Rahimi EIKA: Amets, Javier	Rev.	01	

Equipment and results of low temperature test of ISOLEIKA's panels:

Low Temperature Test



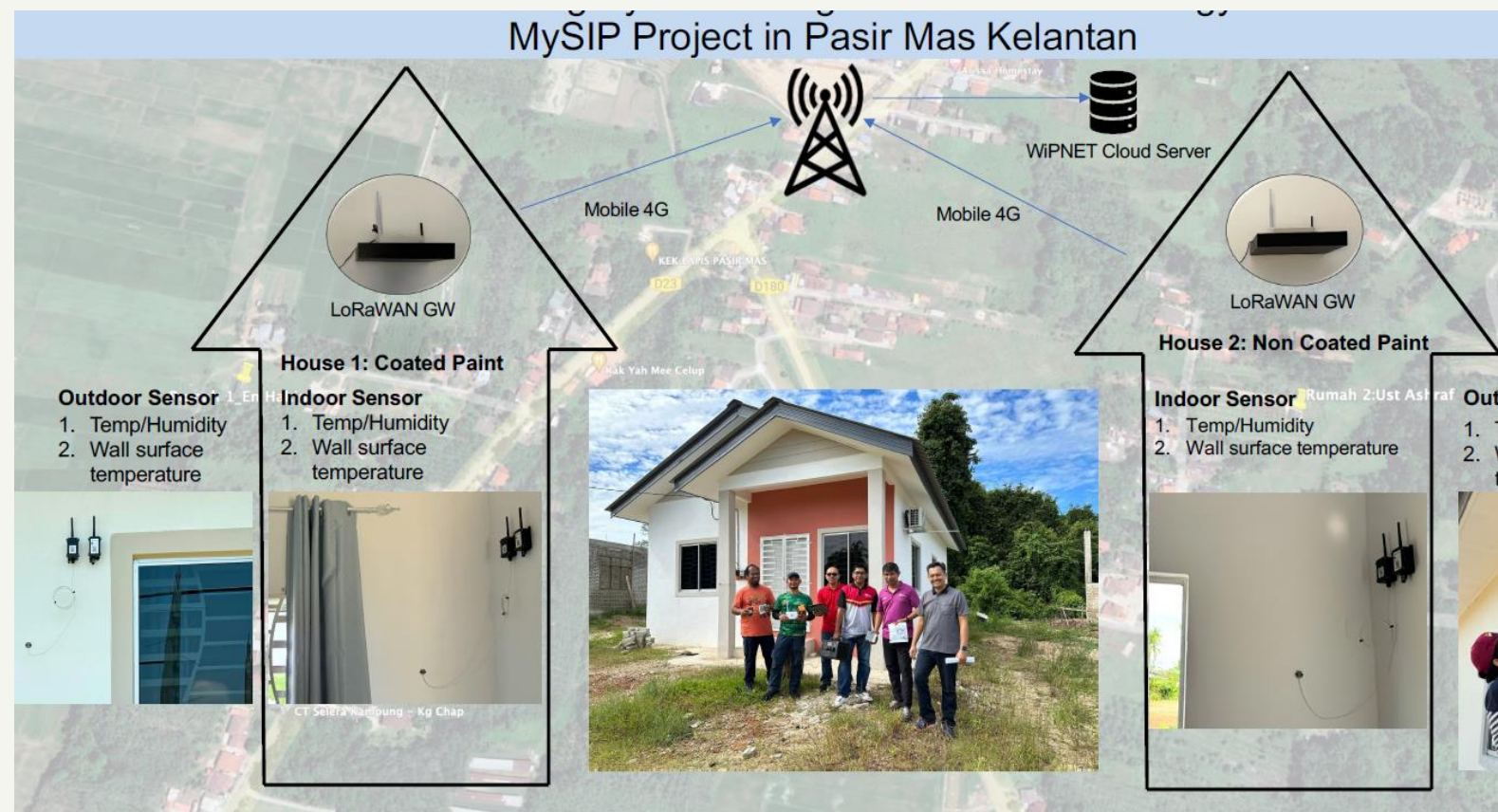
Schematic drawing of low temperature experimental set up

Low Temperature Test – ISO AL (10mm)

Coating	Temperature after 30 minutes (°C)		Average Temperature of Heater Blower (°C)	Temperature Difference (°C)	
	Frontside of panel	Backside of panel		Frontside of panel	Backside of panel
1%	37.15	30.65	50.29	10.02	19.37
5%	37.77	33.87	50.25	10.02	16.25
10%	38.26	35.02	50.02	10.26	15.02
15%	38.60	33.17	50.49	10.02	17.48

Low Temperature Test – ISO Fleece (10mm)

Coating	Temperature after 30 minutes (°C)		Average Temperature of Heater Blower (°C)	Temperature Difference (°C)	
	Frontside of panel	Backside of panel		Frontside of panel	Backside of panel
1%	34.26	30.56	50.24	10.00	13.69
5%	37.28	30.88	50.20	10.00	16.40
10%	37.48	31.21	49.41	10.00	16.27
15%	38.20	31.61	49.80	10.00	16.60



We work together to develop and improve our country.

Thanks for your attention



Eika, S. Coop.

Javier Baztan

Dibertsifikazio eta Negozio Berriak Arduraduna
Gestor Diversificación y Nuevos Negocios
Diversification and New Business Manager



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