



MultiSoil – Multifunctional Soil Biodiversity: Unlocking Potential for Healthy Cropping Systems

IHAR-PIB, Oddział w Młochowie

HORIZON-MISS-2024-SOIL-01-06 (Innovation Action):

Harnessing the multifunctional potential of soil biodiversity for healthy cropping systems

„Wykorzystanie wielofunkcyjnego potencjału bioróżnorodności gleby dla zdrowych systemów uprawowych”



MultiSoil

1 wrzesień 2025 – 28 luty 2030

MultiSoil założenia:

- współtworzyć, testować i demonstrować praktyki, które poprawiają czynniki zdrowia gleby i roślin, a tym samym utrzymują funkcjonalną bioróżnorodność gleby,
- współtworzyć innowacje w 6 europejskich strefach glebowo-klimatycznych w celu uzupełnienia Integrowanych Praktyk Ochrony (IPM), takich jak organiczne dodatki do gleby, szczepionki mikrobiologiczne i zróżnicowane systemy upraw,
- współtworzyć MultiSoil z rolnikami i wdrażać podejście wielopodmiotowe w celu zapewnienia kontynuacji dobrych praktyk po zakończeniu projektu.

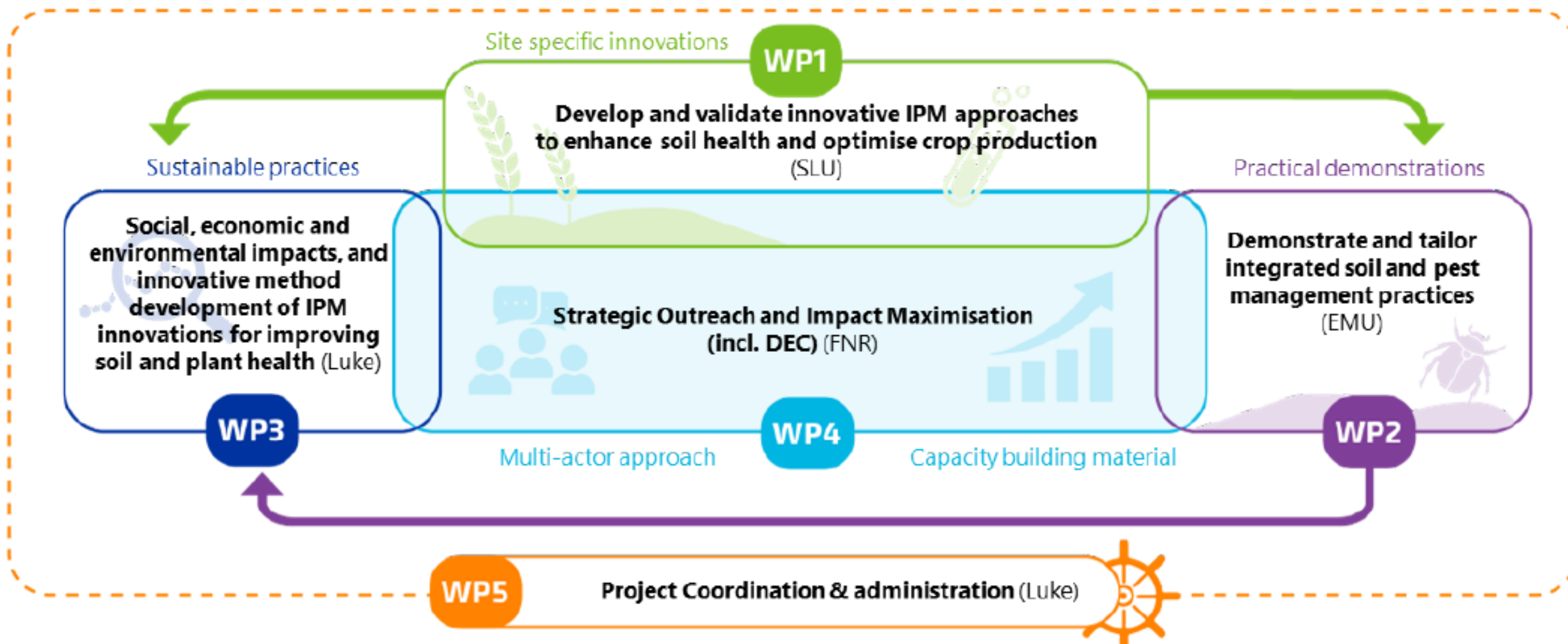
Uczestnicy

No	Short name	Legal name [leadership role(s)] <i>English name</i>		Type	Country
1	<i>Luke</i>	Luonnonvarakeskus [coordinator, WP3 & WP5 lead] <i>Natural Resources Institute Finland</i>		RES	Finland
2	<i>SLU</i>	Sveriges lantbruksuniversitet [WP1 lead] <i>Swedish University of Agricultural Science</i>		UNI	Sweden
3	<i>EMU</i>	Eesti Maaülikool [WP2 lead] <i>Estonian University of Life Sciences</i>	 Eesti Maaülikool Estonian University of Life Sciences	UNI	Estonia
4	<i>METK</i>	Maaelu Teadmuskus [WP2 co-lead] <i>Centre of Estonian Rural Research and Knowledge</i>	 METK Maaelu Teadmuskus	RES	Estonia
5	<i>FNR</i>	Fachagentur Nachwachsende Rohstoffe [WP4 lead] <i>Agency for Renewable Resources</i>		PUB	Germany
6	<i>LYKKAN</i>	Oy Lykkan Ab <i>Lykkan Ltd.</i>		SME	Finland
7	<i>IHAR</i>	Instytut Hodowli i Aklimatyzacji Roślin - Państwowy Instytut Badawczy <i>Plant Breeding and Acclimatization Institute - National Research Institute</i>		RES	Poland

8	JKI	Julius Kühn-Institut- Bundesforschungsinstitut für Kulturpflanzen <i>Julius Kühn-Institute- Federal Research Centre for Cultivated Plants</i>		RES	Germany
9	CSIC	Agencia Estatal Consejo Superior de Investigaciones Científicas <i>The Spanish National Research Council</i>		RES	Spain
10	SJT	Sokerijuurikkaan Tutkimuskeskus <i>Sugar Beet Research Centre</i>		CSO	Finland
11	ENEA	Agenzia Nazionale per le Nuove Tecnologie, L'Energia e lo Sviluppo Economico Sostenibile <i>Italian National Agency for New Technologies, Energy and Sustainable Economic Development</i>		RES	Italy
12	UT	Tartu Ülikool <i>University of Tartu</i>		UNI	Estonia
13	AIT	AIT Austrian Institute of Technology GmbH		RES	Austria
14	CINSA	Consorzio Interuniversitario Nazionale per le Scienze Ambientali <i>Interuniversity National Consortium for Environmental Sciences</i>		RES	Italy
15	CCS AOSTA	Centro Colture Sperimentali Valle D'Aosta SRL <i>Experimental Cultivation Center of Aosta</i>		SME	Italy

Type: UNI: university; RES: research institute; SME: small/medium-sized enterprise; PUB: public organisation; CSO: civil society org.

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CHALLENGES

Regional challenges in soil:

- Poor soil quality
- Crop-associated pests
- Effects of pesticides on biodiversity
- Local adaptation to climate change

OUTPUTS, OUTCOMES AND IMPACTS

- Innovations in IPM-toolbox to improve soil and plant health.
- Increased understanding of how the soil controls pests and how agricultural practices are more sustainable.
- Knowledge sharing of the developed practices across the EU.

MultiSoil's SOLUTIONS

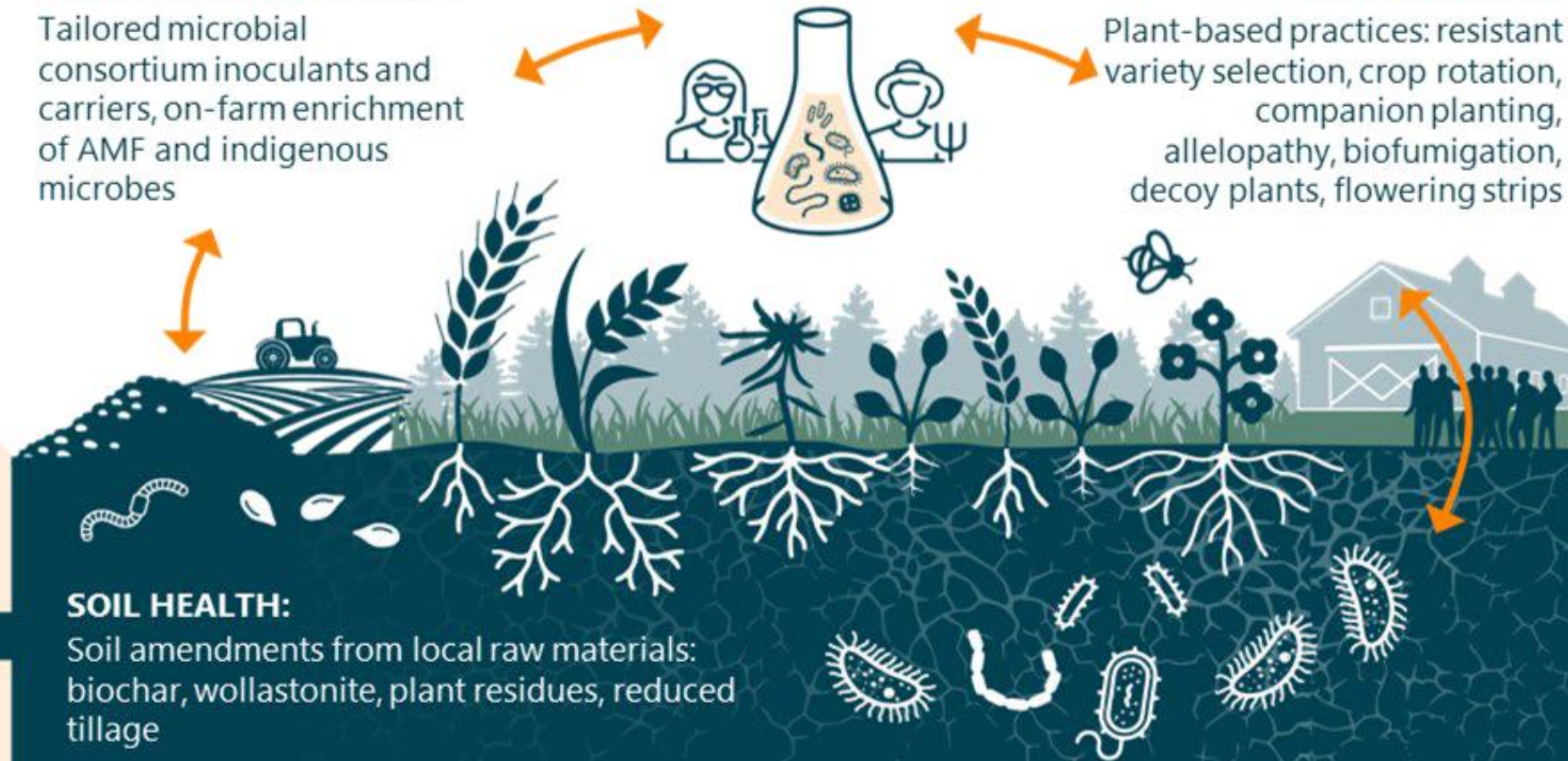
MULTI-ACTOR APPROACH: Co-creation of locally adapted IPM innovations

BENEFICIAL MICROBIOME:

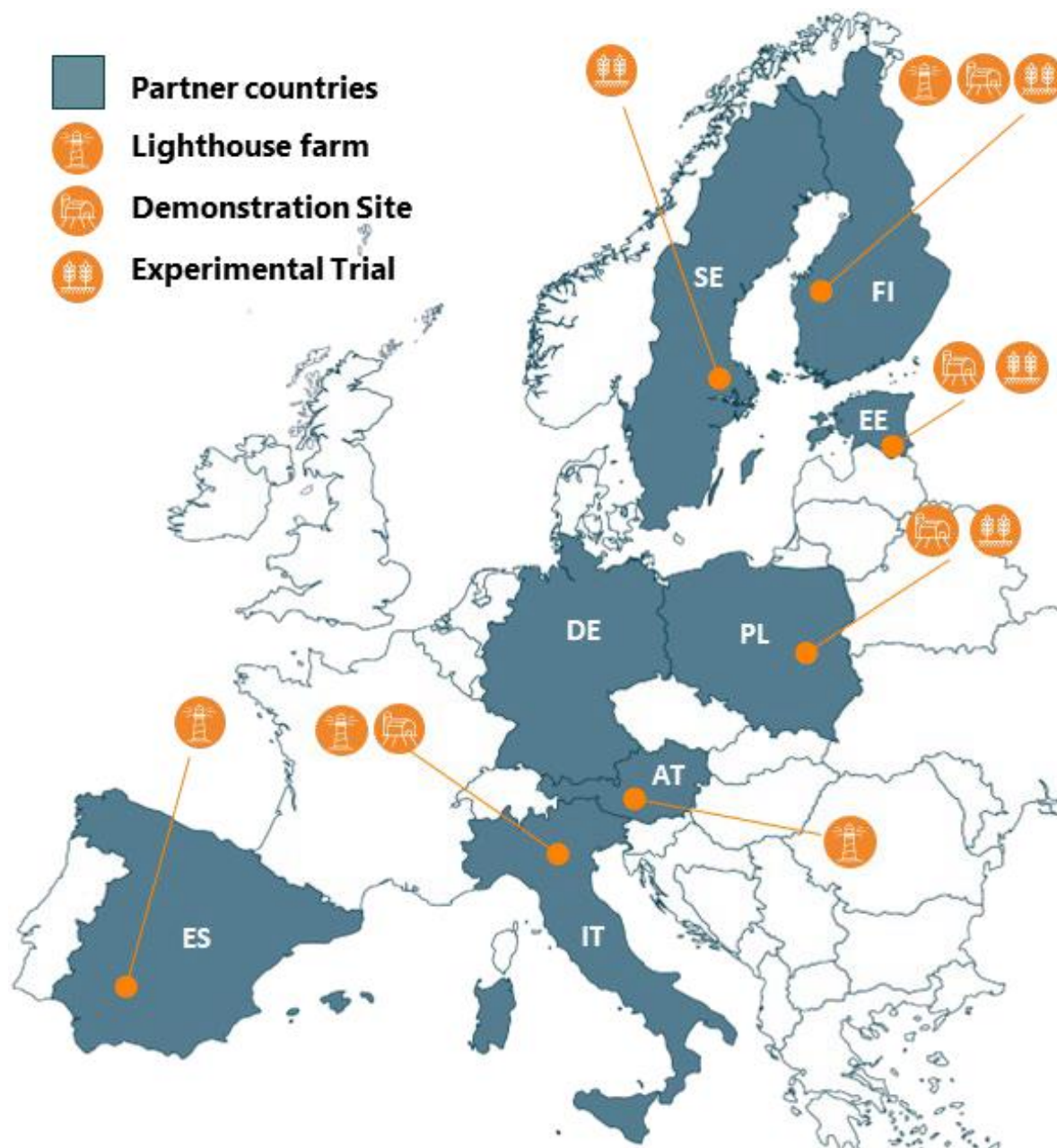
Tailored microbial consortium inoculants and carriers, on-farm enrichment of AMF and indigenous microbes

PLANT HEALTH:

Plant-based practices: resistant variety selection, crop rotation, companion planting, allelopathy, biofumigation, decoy plants, flowering strips



Overview of the challenges motivating MultiSoil, its solutions, expected outcomes & impacts



Zaangażowane ośrodki eksperymentalne i demonstracyjne są rozsiane w 7 krajach w 6 strefach glebowo-klimatycznych w Europie:

- Północny – Finlandia
- Boreal-Nemoral-Continental – Szwecja
- Boreo-nemoral – Estonia
- Północny subkontynentalny– Polska
- Umiarkowany-ciepły – Austria
- Śródziemnomorski – Hiszpania, Włochy

MultiSoil's Podejście wielopodmiotowe i aktywności

	Assessment of needs	Field trials	Co-creation workshop	Capacity building and training	Stakeholder CoP	Continuous stakeholder engagement
CONTENT	Identify and improve understanding of needs, concerns and motivations of stakeholders	New technologies, practices and solutions in actual farm settings	Stakeholders contribute to problem-solving and developing innovations	Promote that stakeholders can adopt and implement the innovations	Provide ongoing input, feedback and strategic direction from a diverse set of stakeholders	Ensure that all relevant stakeholders remain actively involved throughout project lifecycle
WP	WP1 WP4	WP1 WP2	WP2 WP3 WP4	WP4	WP4	WP4
ACTIVITIES	Workshops Help ensure project addresses real-world problem and aligns with stakeholder expectations	Pilot implementations or field trials with farmers Critical to testing real-world applicability of innovations	Workshops Engage farmers in collaborative process where their expertise, experience and perspectives are used	Courses, training programs, workshops, webinars Increase stakeholder knowledge, skills and tools needed to implement innovations	Community of Practice Meet regularly and provide guidance on project progress	Co-creation and collaboration Set up mechanisms for continuous stakeholder feedback throughout project lifecycle.
OUTPUT	A documented list of requirements that guide subsequent tasks in project	A comprehensive set of data and feedback reports capturing performance of the innovation	Workshop report including insights, design concepts, or prototypes tailored to stakeholder needs and expertise.	A set of training and communication materials, including practice abstracts, short videos, professional articles	A documented set of recommendations and insights with a clear action plan on how to incorporate feedback into project	A stakeholder engagement plan with a timeline of planned interactions



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Renata Lebecka
Jarosław Plich
Beata Tatarowska
Dorota Sołtys-Kalina
Anna Grupa-Urbańska

Radzików
05-870 Błonie, Poland
phone number: +48 22 733 45 00
NIP-PL: 5290007029
REGON: 000079480
e-mail: postbox@ihar.edu.pl
www.ihar.edu.pl

Renata Lebecka
IHAR-PIB, O/Młochów
phone number: 22 729 92 48 ext 207
e-mail: r.lebecka@ihar.edu.pl