



About the project, 2021 ©



Towards a knowledge base for MNPLs risk assessment

01 __ Science-based policy making

The ultimate purpose of PLASTICHEAL is **to inform regulations in order to provide better protection from plastics exposure** to citizens and the environment. The generated risk characterization will contribute to the determination of MNPLs “acceptable” levels for human health. It will also help identifying the main sources of MNPLs human exposure.

EU funded project **PLASTICHEAL** aims at developing innovative tools to study the short and long-term impact and mode of action of micro and nanoplastics (MPNLs) on human health.

It will contribute to develop **new methodologies and evidence** by combining the use of breakthrough research and reliable test methods **to set the knowledge basis for adequate risk assessment of MNPLs.**

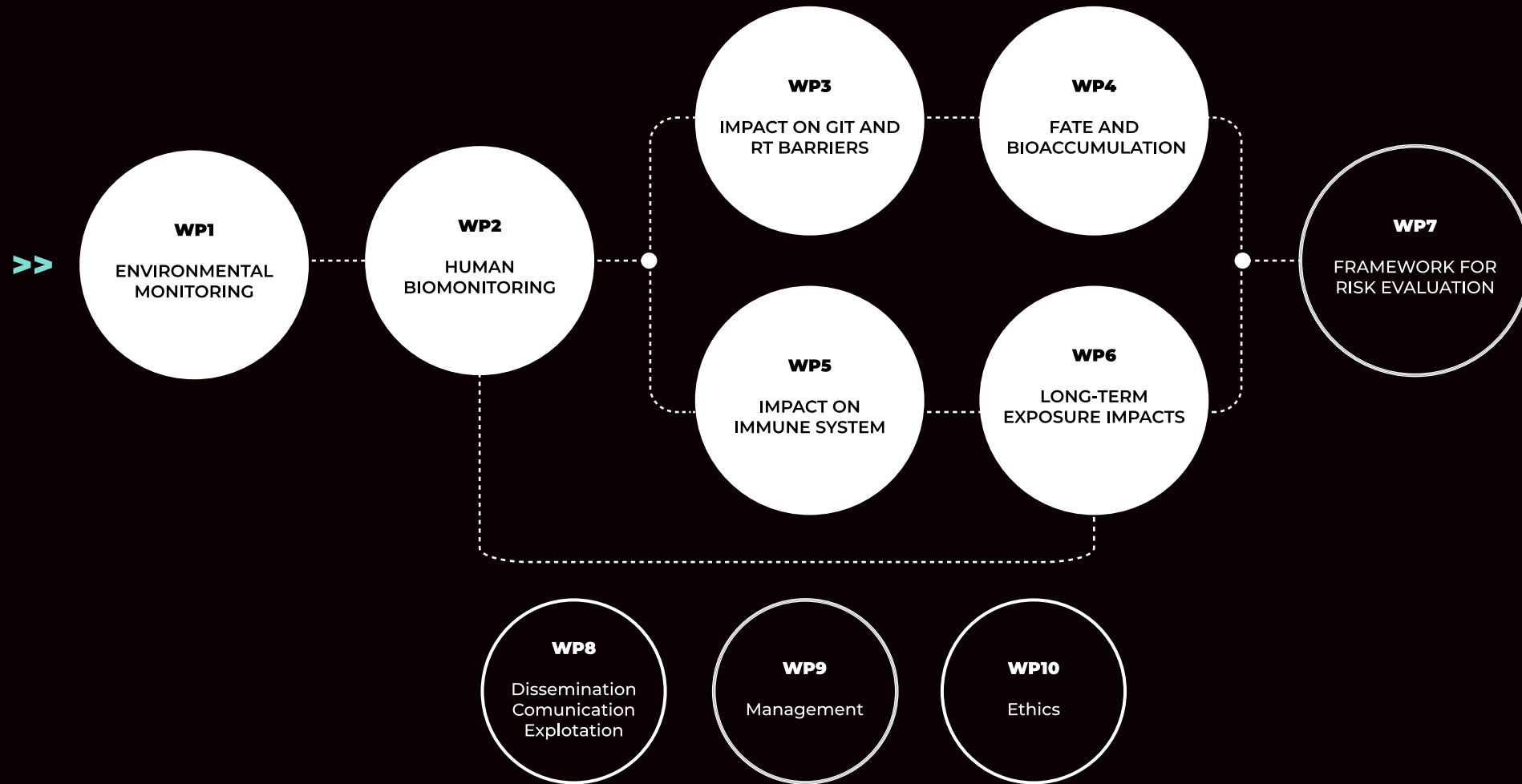


02 ____ Innovative approach

PLASTICHEAL will first **generate human exposure estimates** after identification, measurement, and characterization of MNPLs present in the environmental air, drinking water and food sources, as well as in human biological samples of population groups with potential high MNPLs exposure levels. A variety of complementary experimental models and methodologies will be applied to screen for several potential MNPLs-induced effects. In vitro, in vivo and in silico models will be applied **to develop a MNPLs predictive toxicology**: the combined advanced analytical and computational methods will allow to **decipher cellular responses** and **identify critical pathways** relevant to key traits or conditions, as well as to retrieve a highly informative set of features to predict toxicity.

Workpackages

| | |
|--|----|
| External human exposure | 01 |
| Human biomonitoring | 02 |
| Impact on biological barriers | 03 |
| Fate, evolution & effects at tissue level in model organisms | 04 |
| Impact on the immune system | 05 |
| Long-term exposure impacts | 06 |
| Framework for risk evaluation | 07 |
| Communication and dissemination | 08 |
| Management | 09 |
| Ethics requirements | 10 |



**Autonomous University
of Barcelona.**

WP1 / WP2 / WP3 / WP4 / WP5 / WP6 /
WP7 / WP8 / WP9 / WP10

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**Wageningen
University.**

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WP7 / WP8 / WP9

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**French Alternative
Energies and Atomic
Energy Commission.**

WP5 / WP8 / WP9

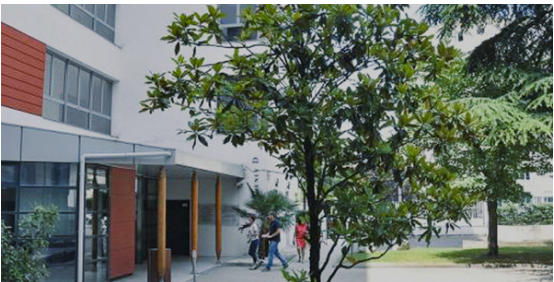
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**National Institute
of Health and Medical
Research.**

WP6 / WP8 / WP9

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**Finnish Institute of
Occupational Health.**

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WP8 / WP9

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**Technical University
of Denmark.**

WP7 / WP8 / WP9

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**Foundation for Health
Training and Research
of the Region of Murcia.**

WP2 / WP5 / WP8 / WP9

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**Helmholtz Centre for
Environmental Research.**

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WP8 / WP9

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Plastics Technology Centre.

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WP8 / WP9

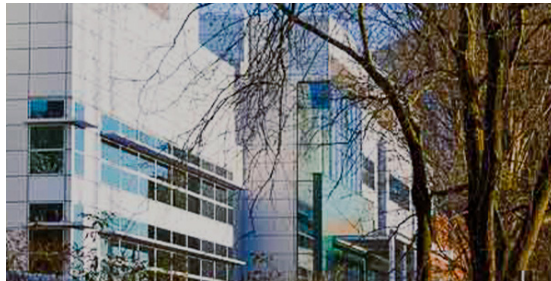
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University of Manchester.

WP3 / WP4 / WP8 / WP9

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Leipzig University.

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