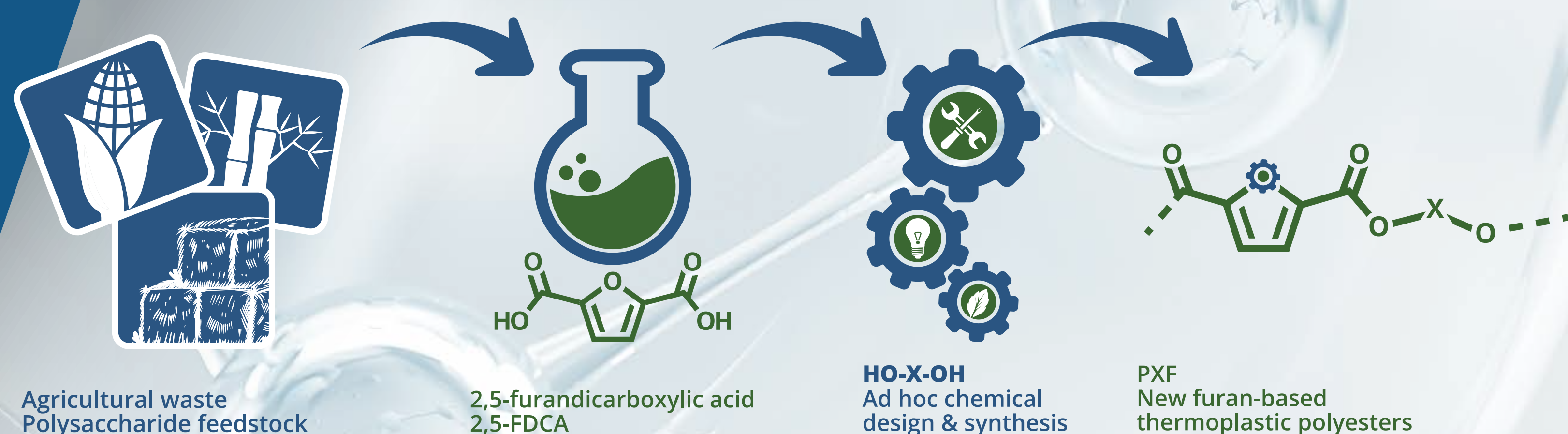


## VERSATILE FURAN-BASED POLYMERS FOR STRICT AND HIGH VALUE APPLICATIONS IN PACKAGING, AUTOMOTIVE AND UNDERWATER ENVIRONMENTS

The replacement of fossil-derived monomers with renewable source-deriving ones is key issue to be addressed, posing difficult challenges in terms of demanding properties that must be achieved by the bio-based polymers.

Researchers are looking into different solutions and the 2,5-furandicarboxylic acid (2,5-FDCA) is considered one of the top value-added chemicals from biomass that can be obtained from sugars.



A group of European researchers, led by the University of Perugia, is now working on the FURIOUS project to advance in the research to obtain furan-based biopolymers to be used in stringent and demanding applications.

FURIOUS project aims to synthesise high-quality and high-demanding furan-based polymers to be applied under severe conditions in three main fields:

# 1

For biomedical and electronic packaging, where resistance to sterilization and high barrier properties are required.

# 2

For the automotive sector, where high transparency, resistance to UV weathering and injection moulding processability are the key characteristics. Intrinsic antibacterial properties and electrospinning processability are also required.

# 3

For the extreme underwater environment, where the photoreactivity and the biodegradability characteristics in seawater are the main properties to be evaluated together with the mouldability of the new polymer formulations by 3D printing technologies.