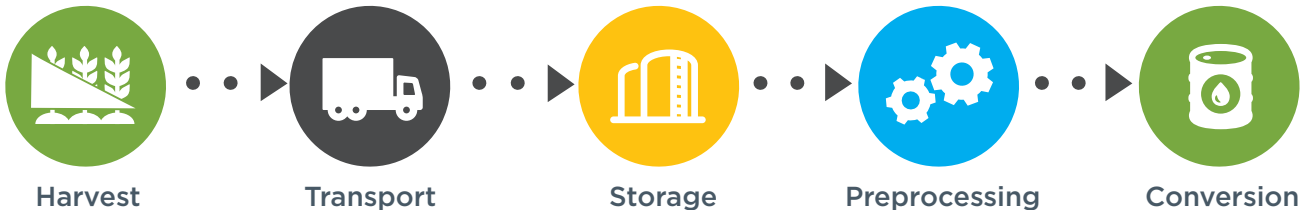


# FEEDSTOCK-CONVERSION INTERFACE CONSORTIUM

The Feedstock-Conversion Interface Consortium (FCIC) is a Bioenergy Technologies Office-funded collaboration of industry advisors and researchers at nine U.S. Department of Energy (DOE) national laboratories. The FCIC uses first-principles-based science to de-risk biorefinery scale-up and deployment by understanding, quantifying, and mitigating the impacts of feedstock variability on biomass conversion processes.

## FCIC APPROACH

FCIC researchers work to address feedstock variability issues across the biomass value chain, from biomass harvest to conversion:











## FCIC: DE-RISKING BIOREFINERY SCALE-UP

The goal of FCIC's research and development (R&D) activities is to reduce the scale-up risk of pioneer biorefineries caused by feedstock and process variability. This is accomplished by understanding the physical, mechanical, and chemical attributes of biomass, and how variability in these attributes impacts different parts of the overall biomass value chain.

FCIC researchers share the results from these R&D projects through peer-reviewed articles, technical presentations at scientific conferences, and techno-economic analysis (TEA) and lifecycle analysis (LCA) case studies highlighting the potential economic and sustainability impacts of feedstock variability.

# R&D TASKS TO DEVELOP BIOREFINERY TOOLS AND KNOWLEDGE

FCIC’s technical approach is organized into complementary tasks that span the biomass value chain.

PROCESS AREAS	FEEDSTOCK HANDLING	PREPROCESSING	CONVERSION
R&D TASKS	Feedstock Variability 	Preprocessing 	High-Temperature Conversion 
	Material Handling 		Low-Temperature Conversion 
ENABLING TASKS	Materials of Construction 		
	Crosscutting Analysis 		
	Data Integration 		

## OUTCOMES

Some of the outcomes developed by the FCIC for use by biorefinery industry stakeholders include experimentally-validated modeling tools to describe and predict the behavior of biomass feedstock transport and flow, comminution, high-temperature and low-temperature conversion, and equipment wear.

## INDUSTRY PARTNERSHIPS

The FCIC Industry Advisory Board provides regular feedback on all FCIC activities. FCIC researchers regularly attend and present at industry conferences. The FCIC has released Cooperative R&D Agreement calls to work directly with industry partners on specific projects addressing critical feedstock variability issues.

Learn more about the FCIC, its partners, and its impact on the bioeconomy at [energy.gov/fcic](https://energy.gov/fcic).

## NATIONAL LABORATORIES AFFILIATED WITH FCIC



U.S. DEPARTMENT OF ENERGY | Office of ENERGY EFFICIENCY & RENEWABLE ENERGY  
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DOE/EE-2831 • March 2024  
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