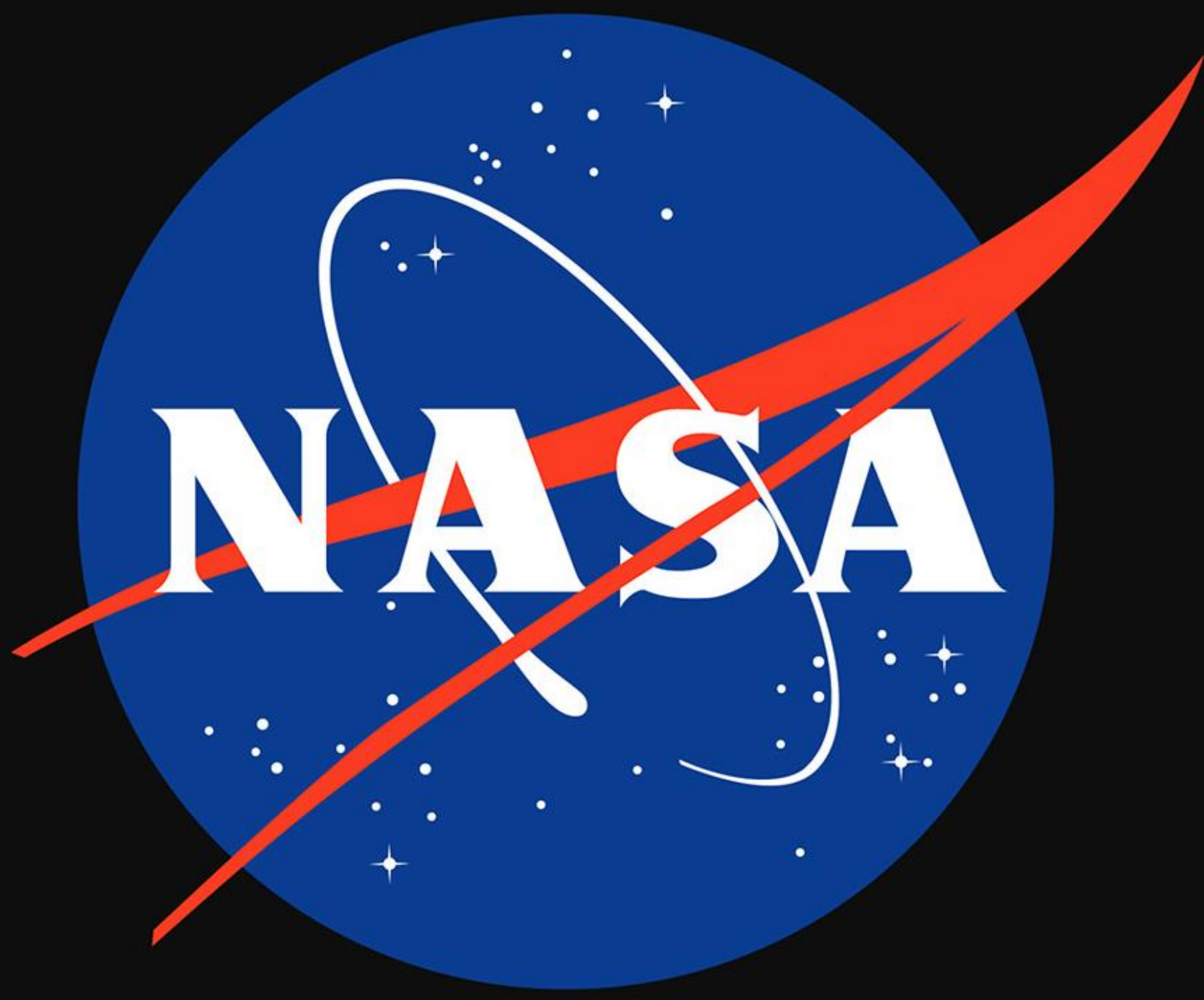
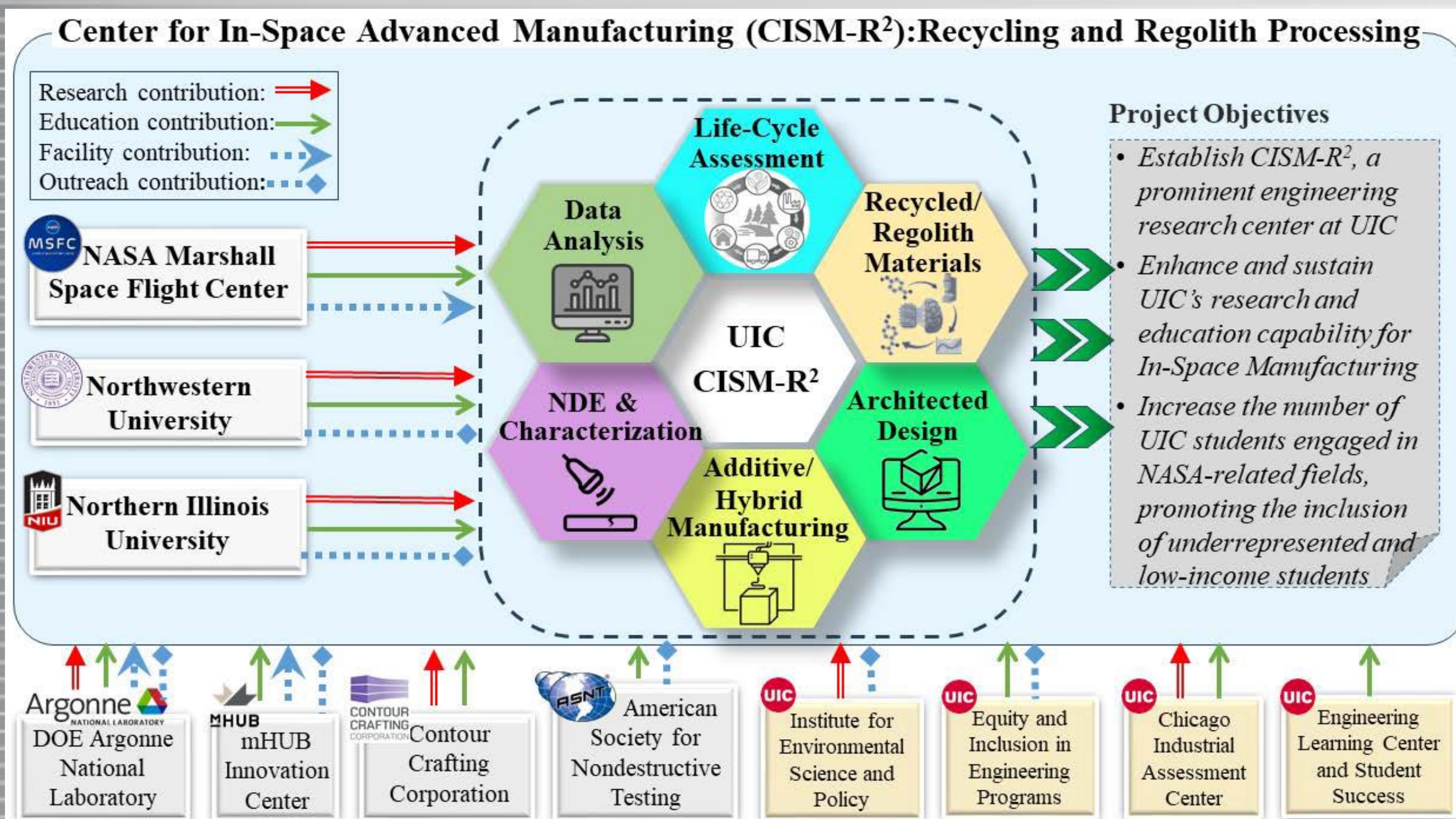




NASA MIRO CISM-R² CENTER FOR IN-SPACE MANUFACTURING RECYCLING AND REGOLITH PROCESSING

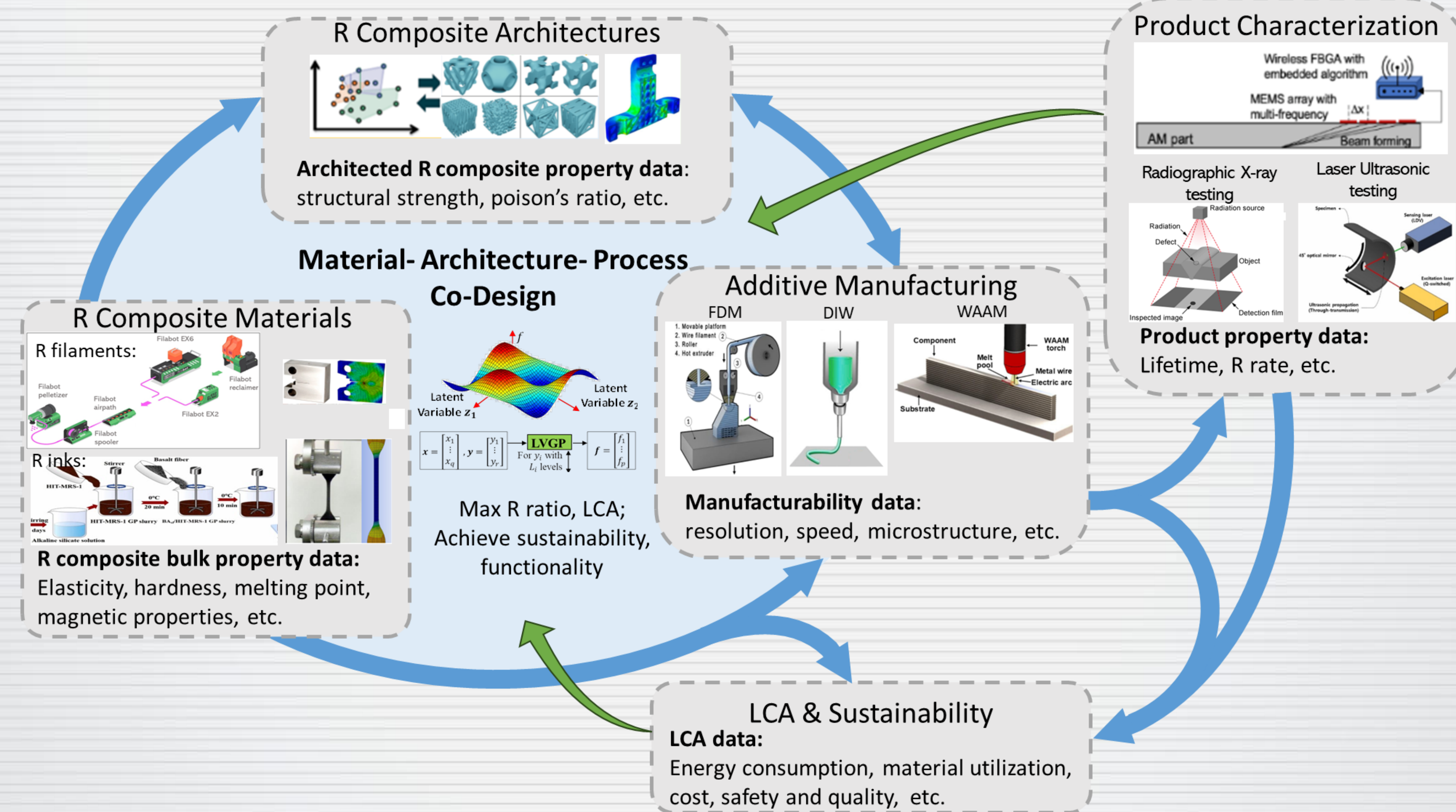
UIC

Introduction

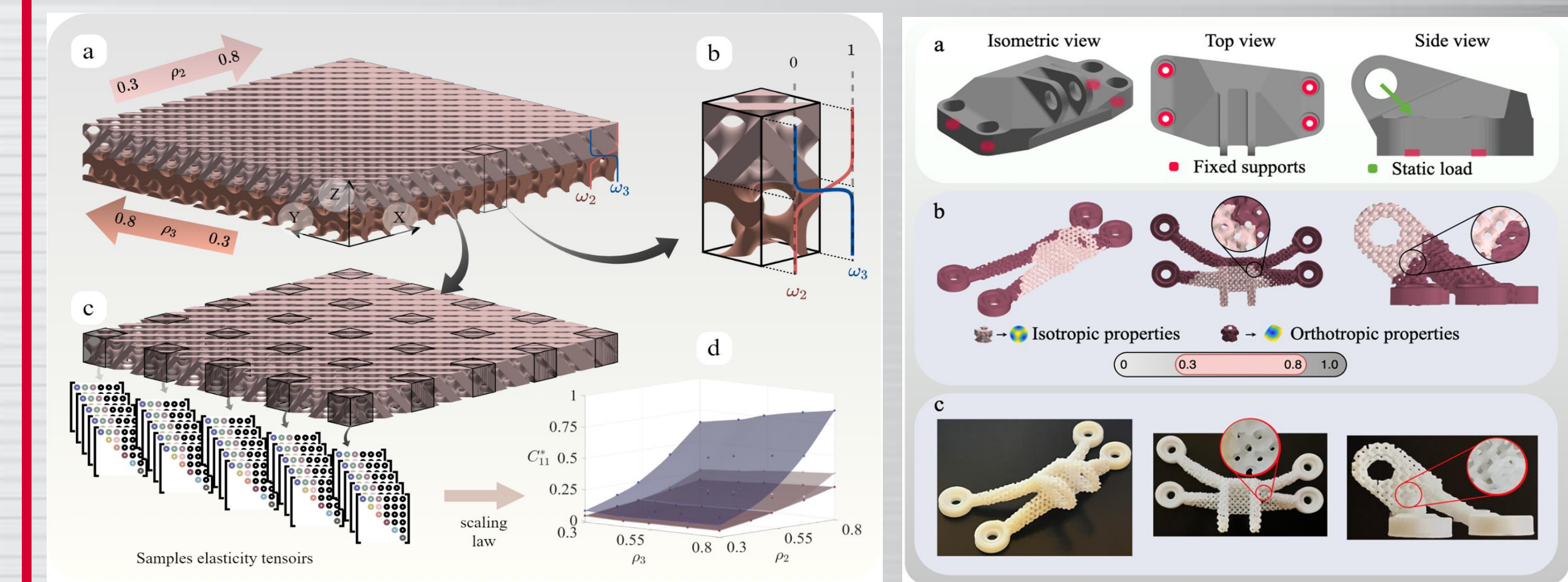


A significant challenge in space exploration is the scarcity of materials. The University of Illinois Chicago (UIC) will lead the Center CISM-R² to address this limitation. CISM-R² is a prominent engineering research center at UIC, specializing in the advancement of In-Space Manufacturing (ISM) techniques for recycling and regolith utilization.

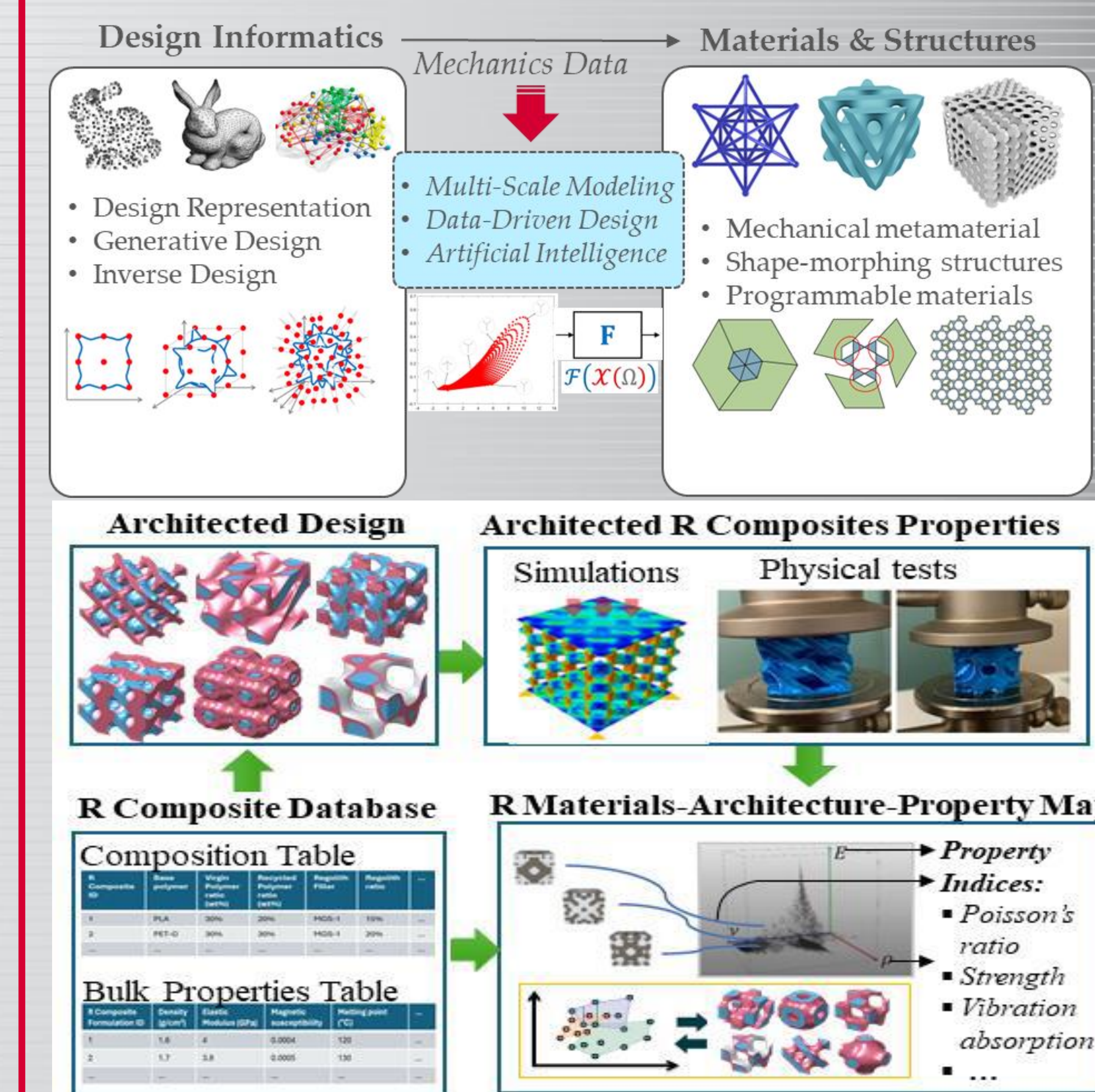
Research Theme



Exemplar Research

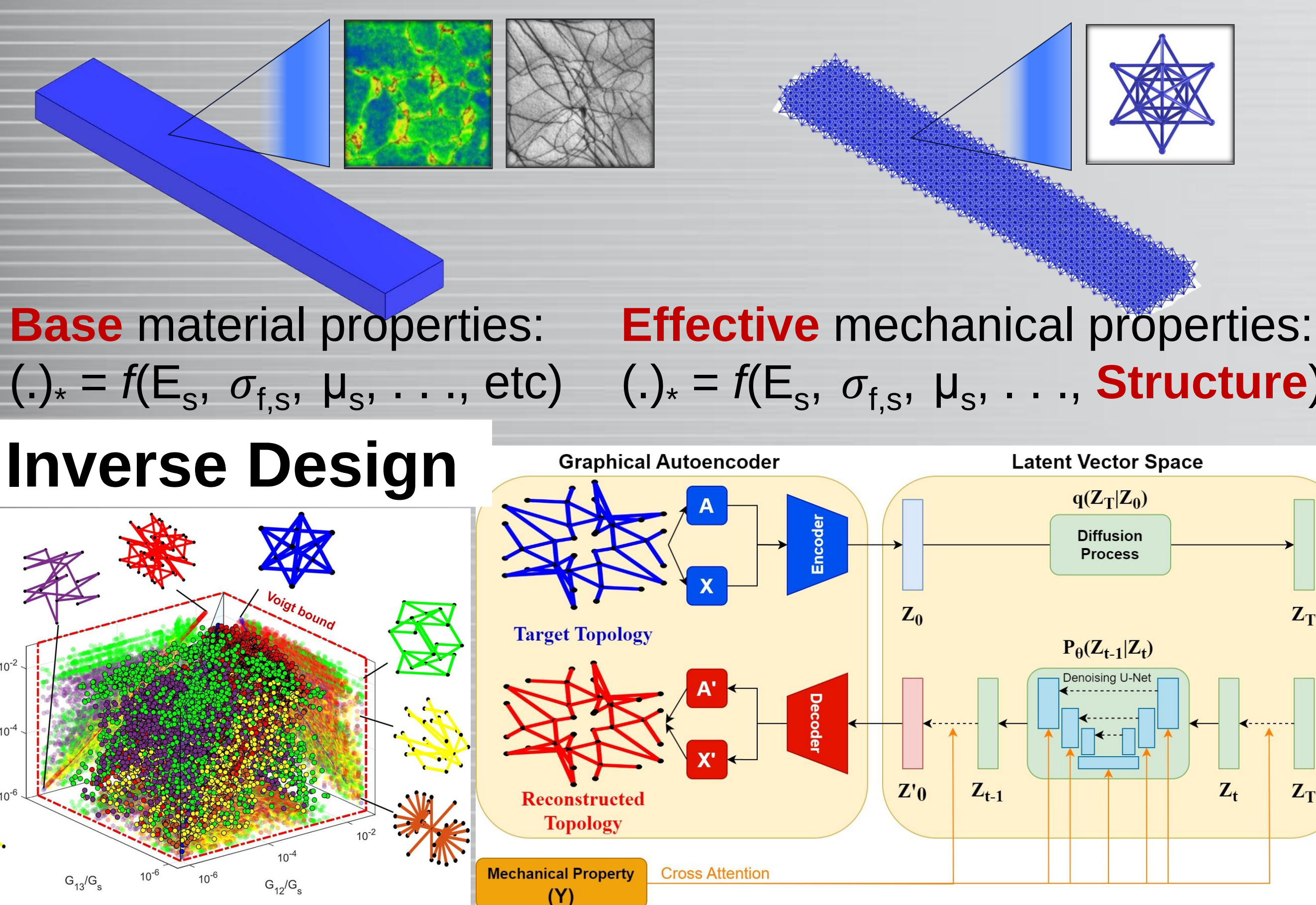


Exemplar Research



Exemplar Research

Architected cellular materials are materials with precisely engineered microstructures designed to exhibit unique properties not achievable in traditional materials due to their reliance on the structures in addition to the base material properties.



CISM-R² Mission

MIRO Objectives	Project Objectives	Activities	Short-term Results	Long-term Results
Objective 1.1	(1) Build a UIC Center: CISM-R ²	Center space creation	Center website and facility	Increase in UIC COE's research expense
Objective 3.1		Equipment & materials purchase	Admin staff, personnel for center research activities	
Objective 3.3		Staff & students hiring	Increased collaborative proposal submissions	Increase in the number of students that matriculate to UIC COE
Objective 1.2	(2) Enhance UIC's education and research capacity for In-Space Manufacturing	Research collaborations in T1-T6	Publications, presentations, Patents, et.	
Objective 2		UIC-MSFC collaboration	Increased number of students trained in NASA related fields	Increase in the number of students that graduated with a job related to Space fields.
Objective 3.1		Advisory board meetings	Increased cooperative agreements and grants from NASA	
Objective 3.2			New curricula related to NASA	Increase aerospace STEM workforce from UIC
Objective 3.3	(3) Increase the number of UIC students engaged in NASA related fields, promoting the inclusion of underrepresented and low-income students	E1. Curriculum Development	Increased cooperative agreements and grants from NASA	
Objective 4		E2. CISM-R ² Certificate, assistantships, and NASA internships	Increase in student learning outcomes	Increase number of low-income Hispanic, black students pursuing STEM careers in the Greater Chicago area
Objective 3.1			Increased collaborative proposal submissions	
Objective 3.2		E3 Outreach activities, summer workshop, annual MSFC visits	Exposure to NASA research to High School students	

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