UEGE PRIZE ANNUAL REPORT 2023



WEGE PRIZE: COLLABORATIVE BY DESIGN

Wege Prize grew out of a collaboration between Kendall College of Art and Design of Ferris State University (KCAD) and The Wege Foundation. As the retired chairman of the West Michigan office furniture giant Steelcase, Peter M. Wege (pronounced WEG-ee) had a passion for protecting the environment, an interest that inspired him to start The Wege Foundation in 1967. Throughout his life, Wege leveraged that passion and his business acumen to become the champion of "economicology," the merging of economy with ecology.

When KCAD expanded into the Historic Federal Building in Grand Rapids in 2012, the foundation played a key role in establishing the Wege Center for Sustainable Design on the building's fourth floor. Envisioned as a resource for both students and the community, the center empowers people to use art and design as vehicles for solving problems and telling stories of a sustainable community.

In 2013, the college and the foundation teamed up again to create the Wege Prize competition. This annual event invites students to collaborate on teams of five that connect members across institutional, disciplinary and cultural boundaries, using design thinking principles to develop economically feasible circular solutions for complex environmental problems while contending for cash prizes.



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FROM THE WEGE PRIZE TEAM

On the heels of our publication, <u>Wege Prize: Where Education</u> <u>Meets Action, 2014-2022</u>, and the culmination of our tenth year of competition, we developed this report to summarize and highlight our most impactful year yet. While year over year growth has been and will always be an important measure of success, Wege Prize is an ever-evolving experiment at its core, with each year bringing new opportunities to pursue, new ideas to test, and new challenges to overcome. We thank those involved in making our annual process possible and never cease to be amazed by the students and ideas that come to the table.

This is the first of hopefully many annual reports as the growth of Wege Prize and the influence of the circular economy continues. We hope you enjoy reflecting on where we've been and join us in looking forward to where we can go next!

Sincerely,



MARTHA STACKHOUSE

Wege Prize Program Coordinator, KCAD



GAYLE DEBRUYN

Professor and Sustainability Officer, KCAD



JILL ARMSTRONG

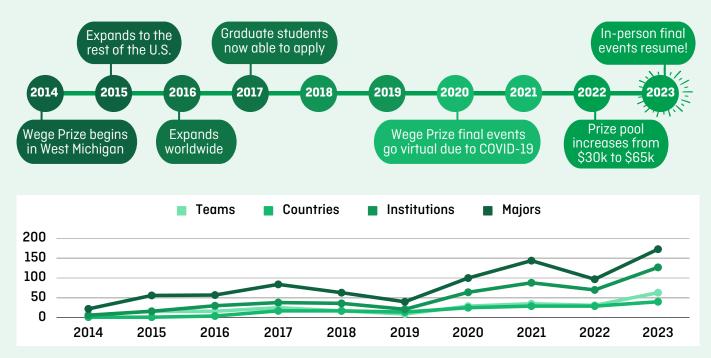
Project Consultant, Armstrong Marketing LLC



KYLE AUSTIN

Content Coordinator, KCAD Communications

BY THE NUMBERS 10 Years of Competition



A Closer Look at 2023...

In our tenth anniversary year, we had our largest application pool yet, as well as our most diverse by all metrics.



2023 JUDGES



Preliminary Judges

Meet our Preliminary Judges: local, distinguished professionals in various fields, who help review the initial applications and move teams through to Phase 2.



JANNAN COTTO Former Anishinaabe Curator, Grand Rapids Public Museum



MICHELLE SEPPALA GIBBS Director, Office of Sustainability, Hope College



JOHN KINCH Strategic Operations, Michigan Energy Options



MARY ELLEN M Director of Sustainability, ergy Steelcase Inc.



MARY ELLEN MIKA LISA OLIVER-KING Director of Executive Director.

Executive Director, Our Kitchen Table



WENDY OGILVIE Director of Environmental

Programs, Grand

Valley Metro Council



STEPHANIE OGREN VP of Science and Education, Grand Rapids Public Museum



DAVID RINARD Former Director of Global Environmental Performance, Steelcase Inc.

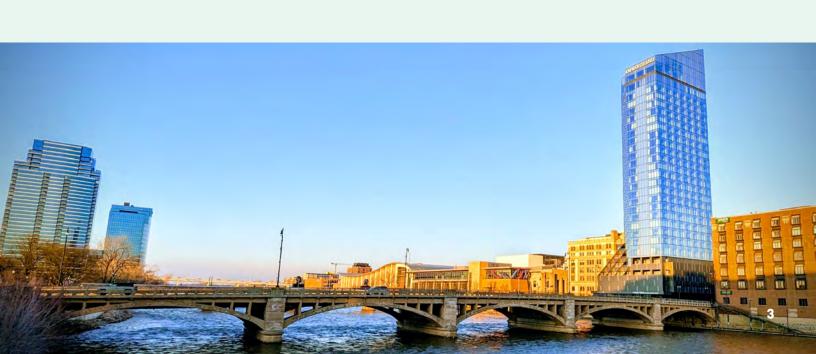


WENDY SCHLETT Managing Director, Foresight Management



KRISTEN WIELAND Senior Consultant, Resource Recycling

Systems



Core Judges

Meet our Core Judges: Experts from around the world in a variety of fields who provide valuable and constructive feedback on teams' submissions from Phase 2 onward, adding important insights to improve their work and ultimately determining the winners at our live finals event.





DEONNA ANDERSON Editorial Director, Next City

CHRISTOPHER CARTER Educator, Artist, Wege Foundation Trustee



ALYSIA GARMULEWICZ Educator,

Founder/Co-CEO of Materiom



MERITXELL Martín i Pardo

Educator, Co-Founder of Cascade Collective for Cultural Sustainability



TOM NEWHOUSE Owner/Principal of Thomas J Newhouse Design



NATHAN SHEDROFF

Professor at California College of the Arts, Entrepreneur, and Author



B.K. SINGH Co-Founder of Green Roots Consultants,

Former Professor



BILL STOUGH

Owner, Bill Stough LLC, Founder of Sustainable Research Group



COLIN WEBSTER

Learning Content Manager, Ellen MacArthur Foundation



JO WILLIAMS Circular Economy

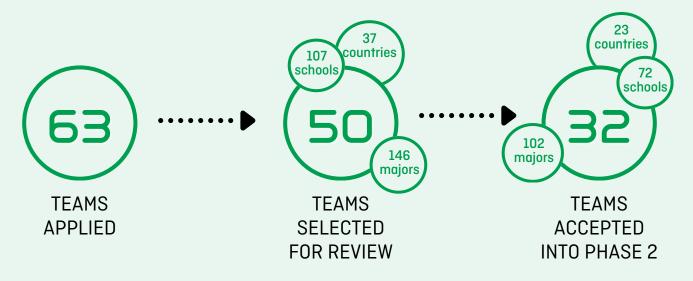
Learning Consultant and Educator



COMPETITON PHASES

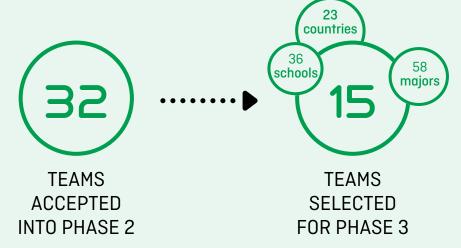
Phase 1: Application

Those accepted into Phase 1 have their research plans reviewed by our 10 Preliminary Judges who decide which teams will move on to Phase 2.



Phase 2: Project Summary First Draft

Teams accepted into Phase 2 begin to develop their Project Summary, which includes a solution summary, impact assessment, prototyping, and barrier acknowledgment. After submitting, the 10 Core Judges review, provide feedback, and determine the semifinalist teams (Phase 3). They then continue to review and support teams through the final event in May.



Phase 3: Semifinalists

Making it through to the semifinals is a huge accomplishment as these teams have been selected as the top 15 in the competition. In the third phase, teams are provided feedback and revise their Project Summaries to include additional sections: a detailed material analysis and a detailed economic analysis. These sections help to prove their idea's feasibility beyond Wege Prize and their potential to become real-world solutions. Not including the 5 Finalists, these are the 2023 Semifinalist teams...

U = Undergraduate G = Graduate PG = Postgraduate

BIOEASE

Redesigning the biogas digester to be more affordable, effective, efficient, and low maintenance



BONIFACE NSENGIYUMVA U - Electrical and Electronics Engineering Ashesi University Ghana. Africa



DELPHINE MIZERO U/G - Medicine and Surgery/Global Health Delivery University of Global Health Equity Rwanda, Africa



EDDY KUBWIMANA U - Computer Science Ashesi University Ghana, Africa



SOLANGE IRANKUNDA U - General Nursing University of Rwanda Rwanda, Africa



ALINE NURERWANAYO U - Business Administration Ashesi University Ghana, Africa

COUNTER PLAS TECH

Weather-resistant engineered wood processed from the polymer of plastic and biomass wasted during timber processing



KELLY RUTAYISIRE U - International Economics and Trade China Pharmaceutical University China, East Asia



CLEMENT (YVES) NIYIBIZI U - Forest Engineering and Wood Technology Rwanda Polytechnic/IPRC Kitabi *Rwanda, Africa*



KELLEN MUTESI U - Hospitality Management/Food and Beverage Service Rwanda Polytechnic/IPRC Ngoma Rwanda, Africa

.





PASCAL NIYOMUREMYI U - Business Management and Entrepreneurship Davis College/Akillah

PROVIDENCE IRADUKUNDA

Telecommunications Technology

Integrated Polytechnic Regional

U - Electronics and

College Kigali

Rwanda, Africa

Rwanda, Africa

CROWN MULTIVERSE

Safe, affordable, environmentally sound briquettes reducing the consumption of wood-based counterparts



WINFRED NZIKU

U - Agriculture Sciences and Natural **Resources Management** EARTH University Costa Rica, Central America



TENNYSON NKHOMA U - Agriculture Sciences and Natural Resources Management EARTH University Costa Rica, Central America



FRANCIS MTOFU **U** - Agriculture Sciences and **Natural Resources Management EARTH University** Costa Rica, Central America



EVELYN NSIKU U - Education Business Studies Malawi University of Business and Applied Science Malawi, Africa



BESSIE KANDAYA U - Renewable Energy Mzuzu University

Malawi, Africa

GSOLAIRE

Solar concentrators made from scrap metal to replace carbon-emitting energy sources with clean and affordable power



CASTROL WASWAYA NZYOOMA U - Mechanical Engineering Marwadi University India, South Asia



FISTON IRADUKUNDA U - Chemical Engineering Marwadi University India, South Asia



MUTANGO (BRANCH) SAMAKAYI **U** - Commerce Marwadi University India, South Asia



GASPARD UKWIZAGIRA U - Mechanical Engineering Marwadi University India, South Asia



YOUSEF NABHAN PG - Information and Communication Technology Marwadi University India, South Asia

HUUZAGRO

Converting food waste from restaurants, food processing plants, and households into biodegradable plastic packaging material



ERIC TUYISHIME U - Crop Science University of Rwanda Rwanda, Africa



SECONDE UMWALI **U** - Environmental Civil Engineering University of Rwanda Rwanda, Africa



BLAISE SHEMA U - Conservation Agriculture Rwanda Institute for **Conservation Agriculture** Rwanda, Africa

KELLIA GABRINO KAZENEZA U - Law University of Wroclaw Rwanda, Africa



EMELINE UWIMBABAZI U - Software Engineering African Leadership University Rwanda, Africa

KENDA

Addressing malnutrition in Kenya by reviving the cultivation and consumption of African Indigenous Vegetables



ABIGAEL SIMALOI PERTET

G - Global Food Security and Nutrition The University of Edinburgh *Scotland, United Kingdom*



PHENNY OMONDI G - International Development

The University of Edinburgh Scotland, United Kingdom



FAITH MUKAMI G - Carbon Management The University of Edinburgh Scotland, United Kingdom



GERARD NDAYISHIMIYE

G - Agri-enterprises Development Gulu University Uganda, Africa



LAETITIA MUKUNGU G - Plant Science University of Manitoba Canada, North America

MUDDY TREASURE Anaerobic digestion to process sewage sludge

Anaerobic digestion to process sewage sludge and organic waste into an organic substrate. liquid fertilizer, and animal feed supplement



ALFREDO BOZA MATA U - Chemical Engineering Universidad de Costa Rica Costa Rica, Central America



ALDO IZQUIERDO VÁZQUEZ U - Agronomy Universidad de Costa Rica Costa Rica, Central America



AMANDA NARANJO RETANA U - Agricultural Economics Universidad de Costa Rica Costa Rica, Central America



DIEGO MORA GONZÁLEZ U - Biosystems Engineering Universidad de Costa Rica Costa Rica, Central America



PAULA BERMÚDEZ GRANADOS U - Agronomy Universidad de Costa Rica Costa Rica, Central America

RETHREAD

Turning crop residue into biodegradable fabric, reducing water usage, CO2 emissions, and eutrophication while supporting farmers



GRACE KAMAU U - Petroleum Engineering University of Nairobi Kenya, Africa



CHARLES OYAMO U - Development Communication University of Nairobi Kenya, Africa

VINCENT MOMANYI U - Analytical Chemistry University of Nairobi Kenya, Africa



CHRISTINE WANJIKU U - Public Relations University of Nairobi Kenya, Africa



MITESH VARSANI U - Economics & Statistics University of Nairobi Kenya, Africa

TEAM GREEN ENERGY

Upcycling plastic into 3D graphene nanosheets for highly efficient HTM-free perovskite solar to be used as a renewable energy



ARCADE GASANA

U - Environmental Civil Engineering University of Rwanda Rwanda, Africa



SERGE NDIZERA U - Environmental Civil Engineering University of Rwanda Rwanda, Africa



BIENVENU MUHORANA U - Environmental Civil Engineering University of Rwanda



NAOMI MUHOZA CECILE

U - Civil Engineering Institute of Applied Sciences Ruhengeri *Rwanda, Africa*

ESPERANCE UMWALI

.

U - Biomedical Laboratory Sciences Institute of Applied Sciences Ruhengeri *Rwanda, Africa*

TEAM PURPLE

Incentive-based upcycling that exchanges cloth for money, encourages clothes donations, and discourages cloth dumping in rivers and canals

Rwanda, Africa



NAPHTALI UKAMWA G - International Human Rights Law Lund University Sweden, Europe



AYOMIDE AKINBODE G - International Law Oxford Brookes University England, United Kingdom



ITOHOWO UDOFIA G - Computer Science Middlesex University England, United Kingdom



PROMISE OKEZIE U - Legal Studies University of Lagos Nigeria, Africa



OLUWATOMI LAWAL G - Business, Law and Politics University of Hull England, United Kingdom

SEMIFINALISTS' INSTITUTION LOCATIONS



Phase 4: Finalists

Meet the 5 teams selected by the judges after Phase 3 review who went on to the final phase and presented their complete project and ideas live at the Wege Prize Awards...

AGRI THINKTANK

Utilized black soldier flies and food waste to make compost and livestock feed to reduce environmental contamination and improve living standards. Products are accessed and sold through an app, which identifies when waste is available to collect and connects users to the resulting compost and feed products.



BONHEUR NSHUTI U - Conservation Agriculture

Rwanda Institute for **Conservation Agriculture** Rwanda, Africa



PATRICK RUGAMBA

U - Conservation Agriculture **Rwanda Institute for** Conservation Agriculture, Rwanda, Africa

SYLVESTRE KARORERO

U - Conservation Agriculture Rwanda Institute for **Conservation Agriculture** Rwanda, Africa



JAMES MUHUZA

U - Business Administration & **Management Studies** East African University Rwanda, Africa

INES RACHEL ATOSHA

U - Communication & Business Management Kepler University Rwanda, Africa

UN Sustainable Development Goals supported:



BANANA LEATHER

An alternative leather material from banana plants that is made from banana crop waste sourced from India. The process not only helps with agricultural waste, but provides an additional source of income for farmers. Unlike other vegan leather alternatives, Banofi (Banana-fibre leather) aims to become a 100% biobased and biodegradable product.



JINALI MODY G - Business and the Environment Yale University Connecticut, United States



MAGGIE THOMPSON G - Energy and Business





KENDALL LAWS G - Business Administration Yale University Connecticut, United States



ISOBEL CAMPBELL G - Industrial Ecology and Green Chemistrv Yale University Connecticut, United States

KYLE RICHMOND-CROSSET

G - Energy Access Yale University Connecticut, United States

UN Sustainable Development Goals supported:

6 CLEAN WATER AND SANITATION





CELLUCOAT

Developing a compostable, biodegradable, and customizable bacterial cellulose-based plastic alternative suitable for food packaging that is also antimicrobial, prolonging produce shelf life. Cellucoat also utilizes fruit waste from grocery stores and consumer homes for their bacterial cellulose growth media, helping to mitigate produce waste issues.



ZAINAB HAKIM U - Biomedical Sciences University of Calgary Alberta, Canada



MARIAN GRELL U - Biomedical Sciences University of Calgary Alberta, Canada



DANIELLE KORSRUD U - Biomedical Sciences University of Calgary Alberta, Canada



EBUNOLUWA (EBUN) MAKINDE U - Computer Sciences

University of Calgary Alberta, Canada

UN Sustainable Development Goals supported:



CATHERINE KO U - Biomedical Engineering University of Calgary Alberta, Canada





GREEN POULTRY FARM

Addresses environmental pollution associated with poultry farming in Mozambique, with a biodigester system that converts poultry waste into biogas and biofertilizers. Biogas is converted into usable energy for poultry production and the biofertilizer is used to grow feed for the poultry, promoting maximum use of resources and keeping materials in loop.



VASCO COSSA U - Physics Eduardo Mondlane University Mozambique, Africa



ERASMO SIQUE U - Agronomic Engineering Eduardo Mondlane University Mozambique, Africa



ODAVIA NAFTAL U - Environmental Chemistry Eduardo Mondlane University Mozambique, Africa



CARLA MAVILA U - Environmental Chemistry Eduardo Mondlane University Mozambique, Africa



ABEL JUNGA U - Electronic Engineering Eduardo Mondlane University Mozambique, Africa

UN Sustainable Development Goals supported:



UNWASTEWATER

By utilizing MES, a novel method of biochemical carbon capture and utilization to synthesize chemical products, they aim to valorize domestic wastewater for use in organic chemical feedstocks and ultimately protect the environment, improve human health, regenerate nature, and close the circle between the production and disposal of pharmaceutical chemicals.



KELVIN GREEN U - Civil and Environmental Engineering **Princeton University** New Jersey, United States



ZAMAN KHAN U - Mathematics and Computer Science Hamilton College New York, United States



TIMOTHY REDPATH U - Biochemistry **University of St Andrews** Scotland, United Kingdom



ANDREW LINZ U/G - Biochemistry University of St Andrews Scotland, United Kingdom



CHARLOTTE CHEN U - Materials Science and Engineering; Biology University of Connecticut Connecticut, United States

UN Sustainable Development Goals supported:





FINALISTS' INSTITUTION LOCATIONS



2023 WEGE PRIZE AWARDS

Presenters from each on the finalist teams shared their ideas with the judges and a live audience in **Grand Rapids**, **Michigan on May 17th at KCAD**.



year's finalist to





After review and deliberation, the judges came to a consensus and the teams' placements were announced live and awards were presented.



FINALIST INTERVIEWS

After the awards are announced, each team was interviewed about their Wege Prize experience. Here are some of the things they had to say...

66 It's inspiring because it gives us a new way of looking at problems...it's difficult because these problems are very tough, but at the same time you think about how you can put this concept of circular economy into this problem and then generate a solution, so it's inspiring and it's a lot of work of course but at the end. it works. - Vasco Cossa The feedback from the judges took our initial proposals to the next level. It inspired us to go out and improve our ideas by checking out different business models, doing site visits, and finding out how we could actually implement our technologies.

The opportunity to come together with really unique people with really unique expertise and backgrounds and ideas, and getting to be in a room where all of that's coming together, I think that's a really special opportunity to have.

"The difference with the Wege Prize feedback is it's a lot more thoughtful. Someone has read your materials every month for 3 months, and they've seen how it has transitioned...that kind of feedback is very different from general 'Oh this is great'

> or 'these are the things you can do better'. **It's very useful, very tactical, very thoughtful.**" - Jinali Mody

Coming here has provided me with networking in my field, about my project, and what we're doing. Before, we didn't have the chance to meet experts in different fields. They can help you to generate ideas about any kind of concept you want to develop. So **it's a great thing to have met up with these people**

- Andrew Linz



and to build the network between ourselves and the other finalists so you can keep in touch and share opportunities in the future." - Bonheur Nshuti



CELEBRATION RECEPTION

Following the awards event, the celebration continued at the **Grand Rapids Public Museum** with finalists, judges, and esteemed guests such as leadership from The Wege Foundation, Ferris State University, the City of Grand Rapids, and more.



Finalists discussing their ideas with Ferris State University President, Dr. Bill Pink



Jinali Mody chatting with former Grand Rapids Mayor, George Heartwell



Wege Prize staff and judges reviewing the day's experiences and sharing ideas





Team UnWastewater chatting with Michigan State Representative, Carol Glanville



Jinali Mody and Wege Foundation President and CEO, James Logan



Finalists and reception guests exchanging ideas



Students enjoying the Fashion and Nature exhibit at the Grand Rapids Public Museum

JUDGES' FORUM

The morning after the Wege Prize Awards, **finalists and judges continue the conversation** about their experience, where to go from here, and the circular economy.



"Never lose your ability for agility." - Jo Williams



"It's a lot easier to get our heads around thinking about ourselves as embedded in a regional system, that is embedded in a larger global system. It creates a context that you can understand and design for." - Alysia Garmulewicz





"You've got to situate yourself in the right place at the right time by listening, by being flexible, by all of those things, but also being gentle with the system. The system cannot feel attack or it will attack you." - Txell Martin i Pardo



WATCH THE

SESSION ON YOUTUBE

"The benchmark I always use is if you're doing something, it may not be perfect, but is it adding regenerative quality or health back to the overall biosphere?" - Bill Stough



"You have to identify with it. You have to go get a feel for it, and then you will have drive to solve it. On the path, you can find the right people to help you out, but the drive has to be yours." - B.K. Singh



"Storytelling is huge in order to shift how people think and what people care about." - Deonna Anderson



"If we all as designers, as entrepreneurs, policymakers, and so on, if we all think in that circular way, then we move much closer to a world where we are using these resources the way we should be using them." - Colin Webster

PARTICIPANTS IN THE NEWS

Exciting updates ahead!

Since the 2023 awards, Wege Prize participants and alumni have been busy growing their roles, ideas, and positive influence in the world.



BANOFI LEATHER WINS HULT PRIZE

Team members from the Wege Prize 2023 winning team, Banana Leather, recently competed in the Hult Prize Global Finals event in Paris and WON! They will receive \$1 million in support from the Hult Foundation to continue to develop their business, Banofi Leather. Watch the livestream.



NANA WASTE LEATHER AIMS TO APPEAL TIA GARMULEWICZ, PHD waste through alternative leather", Sept. 19, 2023





NBC NEWS FEATURE

Jinali Mody, and core judge, Alysia Garmulewicz were recently featured in an NBC News Daily! In a video about Banofi Leather, Jinali takes us behind the scenes of her company in India. Big thanks to our staff and P.R. partners, C.C. Sullivan LLC, who connected them with this opportunity! Watch the video online.

WEGE ALUM SERVES AS HULT PRIZE JUDGE

Emiliano Iturriaga of the 2018 Wege Prize winning team, Circular Tourism Mexico, served as one of the judges at the Hult Prize Global Finals. Emiliano is CEO and Co-Founder of Rutopia, developed through and after Wege Prize, which went on to win the Hult Prize in 2019.

PUBLISHED IN WASTEWATER DIGEST

Kelvin Green of the Wege Prize 2023 third place team, UnWastewater, recently published an article in Wastewater Digest about their project and the future of wastewater treatment. Read the full article online.



GREEN POULTRY FARM KEEPS COMPETING

As they continue to grow their business, using Wege Prize funds to purchase materials leading to their first customer, Green Poultry Farm has placed **first in the 2023 ClimateLaunchpad - Mozambique,** led by EIT Climate-KIC and the European Union, and will continue on to the African Regional semi-finals. They are also **finalists in the Youth4Climate global competition**, a global youth competition co-led by Italy and the United Nations Development Program, and will be showcasing their solution in Rome, Italy in mid-October, 2023. Additionally, they are **finalists in the Third Hengqin Scientific and Technological Entrepreneurship International Competition**, in Macau, China.



CNN, "Kigali's inspiring skyline", Oct. 2022

GREEN PROMOTERS - CNN NEWS FEATURE

Three members from 2022's winning team, Green Promoters, were recently part of a CNN Inside Africa feature on innovation in Kigali. The students and their company, Green Poultry Farm, were included among the featured Rwanda Institute of Conservation Agriculture (RICA) student innovations. <u>Watch the video</u>.

Stay connected to Wege Prize through our social media to keep up to date on important dates, participant news, and more!

Follow KCAD Wege Center for Sustainable Design on:



Follow @wegeprize on:

WHAT'S NEXT FOR WEGE PRIZE

2024 is on its way!

New teams from around the world are working through the phases, competing for the opportunity to present at the 2024 Wege Prize Awards. SAVE THE DATE: May 17, 2024

	Judges' Feedback due on Accepted Phase 1 Submissions OCTOBER 29		Judges' Feedback due on Phase 2 Submissions JANUARY 10		Judges' Feedback due on Phase 3 Submissions MARCH 17		FINAL PRESENTATION AND AWARDS EVENT MAY 17
2023 2024							
PH/	TOBER 8 ASE 1 DEADLINE m Application	DECEMBI PHASE 2 DE Project Sum First Draft	ADLINE	FEBRUAR PHASE 3 DE Project Sum Second Draf	ADLINE: SEMIFINALISTS mary	PH Fin	AY 12 ASE 4 DEADLINE: FINALISTS nal Project Summary d Presentation Materials

To stay connected and follow along with Wege Prize 2024, sign up for our newsletter at WEGEPRIZE.ORG/CONNECT



Thank you to the Wege Foundation for their continued financial support, making Wege Prize possible.

Wege Prize 2023 has been featured by...



