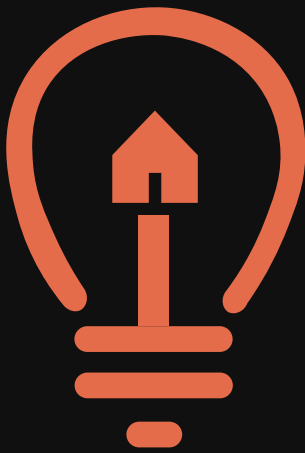


**WORLDWIDE
IMPACT
REPORT
2023
INNOVATIONS**

AS IVORY INNOVATIONS HAS GROWN AND EVOLVED OVER THE PAST FIVE YEARS, OUR MISSION HAS REMAINED THE SAME: CATALYZING INNOVATION IN HOUSING AFFORDABILITY.



IN 2022, WE CONTINUED TO EXPAND WITHIN OUR FOUR MAIN FOCUS AREAS:

CONVENE AND LEARN FROM THE INDUSTRY'S FOREMOST EXPERTS

SOURCE AND SUPPORT THE BEST ENTREPRENEURIAL SOLUTIONS

INSPIRE AND SEEK IDEAS FROM THE NEXT GENERATION

EXPERIMENT AND PUT INNOVATION INTO PRACTICE

Ivory Innovations was founded in 2018 with the goal of revitalizing the housing industry by bringing attention to innovations with the potential to change the lives of the millions affected by the housing affordability crisis.

ADVISORY BOARD

Our 11-person Board of Advisors and Fellows brings a wide range of experience and expertise from organizations including the Joint Center for Housing Studies at Harvard University, the Turner Center for Housing Studies at UC Berkeley, the Urban Institute, HUD, NAHB, Freddie Mac, and others. As Ivory Innovations has grown over the past five years, the guidance and leadership of our Advisory Board has played an increasingly important role.



**KENT COLTON
CLARK IVORY
CHRIS HERBERT**



**CAROL GALANTE
RYAN E. SMITH
LAURIE GOODMAN**

**NATALIE GOCHNOUR
JOHN MCMANUS
KEVIN G. CHAVERS**



**JONATHAN LAWLESS
DEJAN ESKIC**

THE IVORY PRIZE FOR HOUSING AFFORDABILITY

SOURCE AND SUPPORT THE BEST ENTREPRENEURIAL SOLUTIONS



Each year, Ivory Innovations awards three grants to the most promising innovations in housing affordability. One winner is selected for each of our three areas of focus: Construction & Design, Finance, and Policy & Regulatory Reform.

When considering Finalists, the Advisory Board deliberates on three key criteria: innovation, affordability, and scalability. Organizations and models that meet all three are researched diligently by Ivory Innovations student associates as they move through the judging process.

Our work over the past five years has culminated in over 1000 nominees and 17 Ivory Prize winners, with over \$1 million in grants and funding awarded.

PAST WINNERS

Policy & Regulatory Reform

- 2019: The Alley Flat Initiative
- 2020: Symbium
- 2021: Impact Justice's Homecoming Project
- 2022: Build UP

Construction & Design

- 2019: Factory OS
- 2020: Entekra
- 2021: BamCore and Curtis + Ginsberg Architects
- 2022: Volumetric Building Companies

Finance

- 2019: Landed and Home Partners of America
- 2020: Rhino
- 2021: Keep by Framework
- 2022: Blackstar Stability

LEARN MORE ABOUT OUR 2022 WINNERS

CONSTRUCTION & DESIGN: VBC

Volumetric Building Companies is a vertically integrated volumetric modular construction leader headquartered in Philadelphia, PA, with locations across the United States and Europe. The company provides high-quality, sustainably produced buildings across varied market sectors by utilizing its technology-enabled design and engineering model and project proven modular construction expertise.

FINANCE: BLACKSTAR STABILITY

Blackstar Stability expands equitable ownership of affordable single-family homes by attacking predatory lending practices and restructuring distressed debt products. They work with families with land contracts and similar forms of seller financing to refinance their clients' homes with traditional mortgages, improve their properties, and reduce costs.

POLICY & REGULATORY REFORM: BUILD UP

Build UP redefines housing affordability by taking a long-game approach to community-building. Build UP is the first group in Alabama to implement a curriculum designed by the HomeBuilders Institute, another Top 25 finalist. This model results in dignified, affordable homeownership and community retention of talent and wealth, both of which seed stable home and school experiences for generations to come.

"Communities across the country know a great deal about what's not working in terms of stabilizing neighborhoods and combating intergenerational poverty, but without a unified focus on disrupting the status quo in affordable housing, we're unlikely to find - much less scale - dignified solutions. Build UP operates in two spaces, education and housing, that often can't get out of their own way. We are grateful to Ivory Innovations for shining a light on our work and the work of similarly forward-thinking organizations across the country."

Mark Martin, Founder
and CEO of Build UP

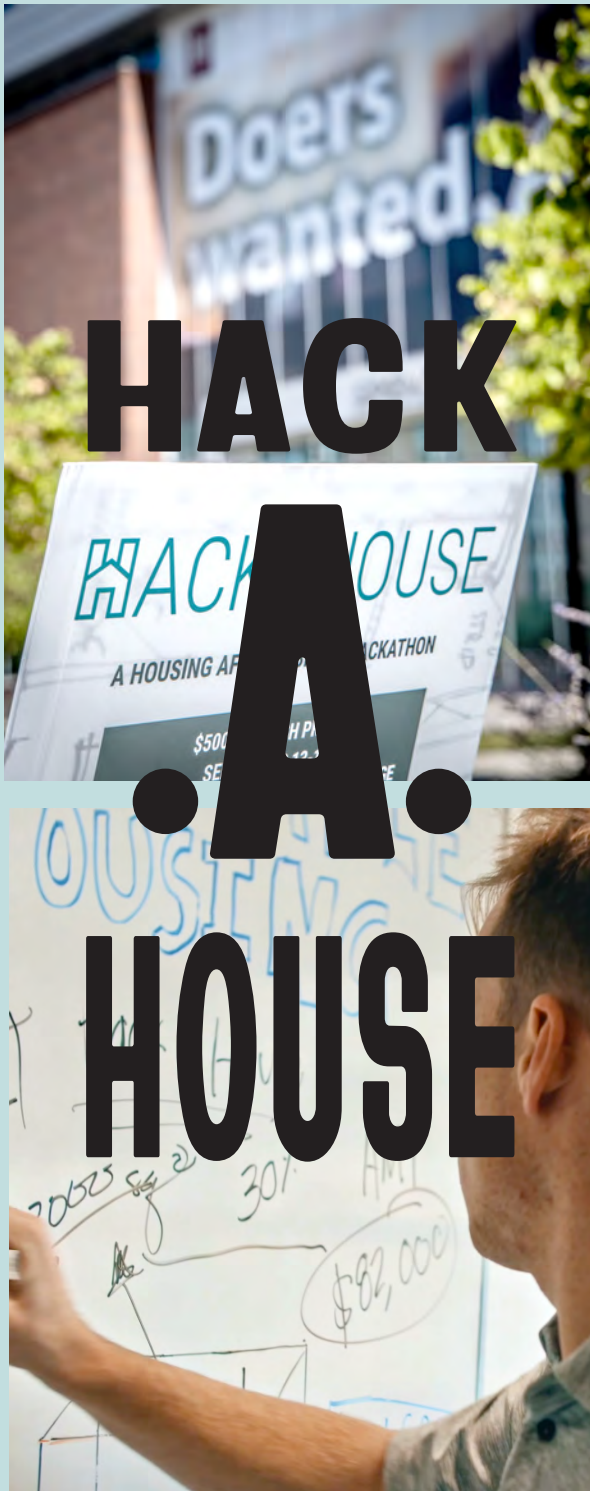
NOTEABLE MENTIONS

Ivory Prize finalists are growing quickly. Acts Housing, for example, was recently recognized in the Wall Street Journal for its work to help home buyers outbid larger investors. ICON, a past Construction & Design finalist, had its 3-D printing technology featured in an article in the New Yorker which discussed the company's growing impact on housing affordability. Scan the QR codes below to check these articles out. (From left: WSJ, New Yorker).



STUDENT ENGAGEMENT

INSPIRE AND SEEK IDEAS FROM THE NEXT GENERATION



HACK A. HOUSE

Our fifth year hosting Hack-A-House brought together 148 students from universities nationwide. After assembling into 36 teams, the students worked for 24 hours to come up with entrepreneurial solutions in the areas of Homelessness, Environmental Challenges & Construction Technology, and Sustainable Renting & Affordable Homeownership. To judge the students' pitches, Ivory assembled a panel of housing industry veterans from various partner organizations and universities. Along with a handful of other subject matter experts, these judges held virtual office hours during the competition to assist the students as they thought through their proposals. Since the first Hack-A-House, over 640 students across 230 teams have competed, winning over \$50k in awards.

After hosting Hack-A-House virtually in 2020 due to COVID, our reach grew significantly. The event is now synchronously hosted virtually and in person at the University of Utah to allow students more flexibility in competing.

In January of 2022, 18 students from top-placing teams were invited to our inaugural Hack-A-House Bootcamp. There, industry experts helped students understand the process of creating and growing a business through sessions like "Validating a Good Idea" and "Hypotheses and Business Models."

Kit Switch, a modular interior construction startup, came up with their "kit of parts" idea at the 2020 Hack-A-House and participated in the Bootcamp in 2022. Kit Switch recently launched their product, with two projects starting in January 2023 with backing from the Wells Fargo Innovation Incubator and the National Renewable Energy Laboratory.

EDUCATION

Our efforts to engage students extend beyond our Hack-A-House competition. One of Ivory Innovations' main goals is to educate students at the University of Utah about housing affordability and help them grow into change-makers in the space. We do this in three distinct ways:



INNOVATIONS IN HOUSING AFFORDABILITY COURSE

Each fall, students in the Master of Science in Finance, Master of Business Administration, Master of City and Metropolitan Planning, Master of Real Estate Development, and undergraduate finance programs have the opportunity to learn from Professor Andra Ghent about the root causes of our country's housing affordability crisis and how solutions to the crisis might be pursued. Ghent, who also holds the Ivory-Boyer Real Estate Chair, is a leading researcher in housing and real estate. Students in her class are actively encouraged to voice their ideas and strive to understand the viewpoints of their peers. Each student sources two nominations for the Ivory Prize, allowing them to gain a better understanding of the importance of innovation as an overarching theme.

IVORY INNOVATIONS STUDENT ASSOCIATE PROGRAM

Ivory Innovations hires Utah-based college and graduate students to source and diligence companies for the Ivory Prize. Student associates build meaningful connections and gain valuable professional experience as they talk to and work with company founders and community leaders over the course of the year. After the academic year concludes, students have exclusive access to paid summer internships with Ivory Prize finalist organizations. Since 2018, Ivory Innovations has employed over 30 student associates with backgrounds ranging from engineering to political science.

SUMMER INTERNSHIPS WITH IVORY PRIZE FINALISTS

In the summer of 2022, student associates took internships with Builders Patch and Blackstar Stability. Two other interns pursued housing affordability focused research projects. Amro Al-Nimri was a student associate from 2021-2022 while a graduate student in the U of U's Master of Real Estate Development program. Upon completing his degree, he was hired by Ivory Homes to implement ideas from the Ivory Prize process in local housing development projects.

BUILDING AN ECOSYSTEM

IVORY INNOVATIONS X MARRINER S. ECCLES INSTITUTE: INNOVATIONS IN HOUSING AFFORDABILITY SUMMIT

The second annual Innovations in Housing Affordability Summit was hosted by the Marriner S. Eccles Institute for Economics and Quantitative Analysis and the Ivory-Boyer Real Estate Center at the University of Utah. The event brought together academics, nonprofits, policymakers, and entrepreneurs to focus on innovation and collaboration in America's housing affordability challenges. A total of 31 speakers were featured.

Our keynote session featured Raven Molloy from the Federal Reserve Board along with Louise Sheiner from The Brookings Institution and Adam Loser from DR Horton. Topics discussed during the summit included barriers to more widespread adoption of factory-built housing, housing provision for vulnerable populations, and implications of promoting homeownership, among others.



IVORY INNOVATIONS X URBAN INSTITUTE: NEXT-GEN INNOVATIONS IN HOUSING AFFORDABILITY

Ivory Innovations and the Urban Institute held a half-day symposium on November 15 to showcase the 2022 Ivory Prize winners and Top 10 Finalists. Alongside researchers, industry experts, and members of our Advisory Board, these Finalists spoke on major challenges in housing affordability and how they are working to address them. In addition to a roundtable discussion, the following panels took place:

Financial Innovations Driving Housing Affordability featured John Green of Blackstar Stability, David Kemper of Trust Neighborhoods, and John Liss of True Footage. Laurie Goodman of the Urban Institute served as moderator.

"I'm trying to focus on what I can control. First, representation in the appraisal industry. Second, all appraisers using data where it is available."

- John Liss, CEO at True Footage

Innovations in Housing Policy and Regulatory Reform featured Cassie Arnaud from the City of Cambridge, Massachusetts, Mark Martin of Build UP, Sam Prater from Los Angeles Room & Board, and Sam Quinney of The Lab @ DC. Chris Herbert of the Harvard Joint Center for Housing Studies served as moderator.

"Part of the magic when we are in crisis is that people are even more innovative. People are willing to do what previously seemed impossible." - Sam Prater, Founder of LA Room & Board

Increasing Housing Supply through Construction and Design Innovation featured Vaughan Buckley of Volumetric Building Companies, Clark Ivory of Ivory Homes, Pavan Iyer of eightvillage, and Greg Leung of Connect Homes. Carol Galante of UC Berkeley's Terner Center for Housing Innovation served as moderator.

"It's not thinking about obstacles to efficiency in construction, it's about changing the workforce overall to make it one that people want to join"

- Vaughan Buckley, CEO at VBC

SHARING OUR EXPERTISE

CONVENE AND LEARN FROM THE INDUSTRY'S FOREMOST EXPERTS



In 2022, Ivory Innovations attended and spoke at 17 conferences and hosted 4 panels. By sharing our expertise and promoting the most promising housing solutions from across the country, we are able to connect innovators from different sectors of the housing industry and help future generations to put these ideas into practice.

Two highlights of the year include our time at Blueprint, a construction and real estate technology conference, and PCBC, a showcase for innovative construction companies, builders, and financiers.

We brought several of our 2022 Ivory Prize Finalists and Winners together to speak on the changing landscape of housing construction as well as the potential of new building innovations to drive down housing costs. In addition to hosting these panels, we gathered groups of housing innovators for three dinners – in San Francisco, Las Vegas, and Los Angeles.

Beyond great food and great conversation, at least two investments came from the connections we fostered at the meals. We look forward to continuing to spread our impact through similar events.



INNOVATION IN PRACTICE

EXPERIMENT AND PUT INNOVATION INTO ACTION

Ivory Innovations is dedicated to putting innovations into practice in Utah. Ivory Innovations established a 501c3 Operating Foundation to accomplish the goal of building innovative, income-restricted, and affordable housing units in the Salt Lake area – and to do so without utilizing traditional public subsidies like Low Income Housing Tax Credit Funding. Here are some of the marquee projects in the works right now:

Lehi, UT | Innovation Park at Holbrook Farms is a 239-townhome development making use of high-density floorplans and integrating an on-site daycare facility in lieu of a clubhouse amenity.

Salt Lake City, UT | Liberty Wells is a development consisting of 26 apartment units, 36 townhomes, and a retrofit gym. The development will be deed-restricted to ensure it is used exclusively for affordable housing purposes in future years.

South Jordan, UT | The South Jordan Senior Center is a 120-unit apartment development containing a recreation facility that was financed with redevelopment funds in place of traditional capital.

Francis, UT | Francis Commons is a mixed-use development consisting of 12 apartments and 16 townhomes. The mixed-use component and integrated daycare facilities will provide residents without personal transport easier access to daily necessities.

Draper, UT | Vista Station is a 200-unit apartment complex that will be built using modular technology rather than traditional building practices. Ivory Innovations plans to work with Volumetric Building Companies, a 2022 Ivory Prize winner, to introduce the volumetric modular development process to Utah. This project could become a model for the State in adopting a modular program.



AERIAL RENDER
BY VOLUMETRIC BUILDING COMPANIES



AERIAL RENDER
BY VOLUMETRIC BUILDING COMPANIES

OUR TEAM



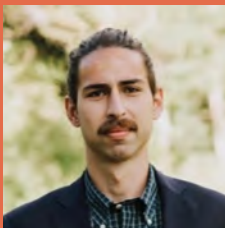
Abby Ivory | Managing Director

Ivory Innovations was born while Abby was working on the Impact Investing team for the Sorenson Impact Center. Prior to her experience in impact investing, she worked as an intern focused on researching Green Bonds with Equilibrium Capital in Portland, Oregon. Her work has been published in the Stanford Social Innovation Review. Abby graduated with a Master's in Business Administration from the University of Utah in 2016 with an emphasis in Sustainability.



Jenna Louie | Director of Strategy & Operations

Jenna began researching urban issues during her undergraduate degree at Harvard University. After graduating, she worked as a diversity and inclusion consultant with Fortune 500 firms and on Hilton's corporate strategy team. She made a career pivot to focus on urban and housing issues during her MBA at Stanford's Graduate School of Business and began working with Ivory Innovations during the second year of her degree. She joined full-time in July 2021 and is passionate about finding and supporting innovative ideas in housing affordability.



Chadwick Reed | Head of Programs & Growth

Chad joined the Ivory Innovations team after winning Hack-A-House as a Master in Urban Planning student at Harvard. He has been interested in housing since college and has worked for several organizations in the sphere. Most recently, Chad worked as a researcher at Harvard's Joint Center for Housing Studies, where he continues to consult on a series of papers focused on manufactured housing. When he's not working, Chad enjoys tinkering with vintage bikes, playing basketball, and watching the Twins.



Amro Al-Nimri | Director of Construction & Design

Amro Al-Nimri is an architect from Jordan with 2 years of experience in design and 4 years of experience in construction in the Middle East. He also has a Master's Degree in Real Estate Development from the University of Utah. Amro is currently working with Ivory Innovations as the Director of Construction and Design. His role includes researching innovative ideas and bringing them to Utah. He also works as a development manager with Ivory Homes to manage the implementation of these ideas.



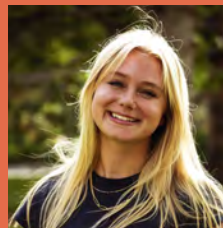
Dejan Eskic | Director of Education & Research

Dejan's career has focused on providing the best information to key decision-makers, from local or state officials to publicly traded REITs. Before joining Ivory Institute, Dejan worked in retail research, evaluating current and future sales performance for retail sites through statistical gravity modeling of market demographics. He has also worked on a number of public-private partnerships relating to Tax Increment Financing, and on numerous real estate market studies and economic development plans.



Mary Schlachter | Marketing & Events Coordinator

Mary is currently a senior at the University of Utah studying marketing with minors in sociology and art technology. Mary grew up around housing projects and has recently become increasingly interested in housing affordability. Mary spent the past two years working at ADThing - a student-staffed advertising agency housed at the Eccles School of Business - and hopes to bring her experience in marketing and design into her role with Ivory. Outside of the office Mary enjoys drawing, spending time with friends and traveling.



Anna Dorn | Student & Venture Programs Coordinator

Anna is currently a senior at the University of Utah studying finance with a minor in management. After becoming interested in real estate, she joined the Ivory Innovations team during her junior year. She became more passionate about affordable housing throughout this time and enjoys being able to connect with companies that are truly making a difference. Anna has interned for Jones Lang LaSalle on their capital markets team in Salt Lake City and worked as a mentor for the Goff Strategic Leadership Center. Outside of school and work, she enjoys cooking, yoga, and hiking.



Darin Haskell | COO

Darin has over 26 years of experience working in residential development and construction, including 17 years at Ivory Homes. His work has focused on multifamily housing, including both for-sale and for-rent projects. Darin's projects at the Ivory Innovations Operating Foundation span every phase of the development process, from land acquisition to property management.

**FIVE NEW MEMBERS JOINED
THE IVORY INNOVATIONS TEAM
IN 2022. IN ADDITION TO OUR
ADVISORY BOARD MEMBERS
AND COLLABORATORS AT
IVORY HOMES, OUR CORE TEAM
NOW HAS SEVEN MEMBERS.**



IVORYINNOVATIONS