

An aerial photograph of a university campus, showing various buildings, green spaces, and a paved walkway. In the background, there are rolling hills and mountains under a clear blue sky. The image is split vertically, with the left and right sides showing the campus and the center being white.

IVORY INNOVATIONS

2023 IMPACT REPORT

PRESIDENT'S NOTE

Our team at Ivory Innovations is proud to publish our 2023 Impact Report, showing you what we have accomplished over the past year. In 2023 we tripled the size of our team, set a record for Hack-A-House student participation, and partnered with the Call to Action Foundation to amplify our impact by building 881 affordable housing units in Utah.

We care deeply about housing issues because of how fundamentally they shape communities and impact daily life. Housing affordability issues across the country are pressing, perhaps now more than ever. At Ivory Innovations, we are proud to focus not just on the issues, but on innovators and solutions. These solutions are both broad and bold. They include student entrepreneurs who launched startups from their Hack-A-House pitch ideas, the over 200 organizations we spoke with for the 2023 Ivory Prize for Housing Affordability, and innovative new products we are using in housing developments to drive down costs and increase affordability.

Housing innovations are changing lives and communities around the country.

In 2024, we look forward to continuing work in our core pillars (outlined on the next page) and exploring strategic initiatives to grow our impact. We will champion a new class of Ivory Prize finalists and winners, convene a summit to learn from leading innovators about how to push the industry forward, and deepen our work with students at the University of Utah and across the country.

We are excited and grateful to have you as a partner in our work. Thank you for joining us on this journey.



Abby Ivory, President

A handwritten signature in black ink that reads "Abby Ivory". The signature is fluid and cursive, matching the name of the person in the portrait above.



IVORYINNOVATIONS

Ivory Innovations is a nonprofit organization and applied academic institution at the University of Utah's David Eccles School of Business. Our mission is to catalyze innovation in housing affordability. Established in 2017, our organization was created in response to the escalating challenges within the housing industry. Fueled by a commitment to address these challenges, Ivory Innovations devotes its time, talent, and resources to champion innovation and provide unwavering support to companies striving to alleviate the crisis of housing affordability.

We focus on solutions - finding them and implementing the best ideas in the housing ecosystem - to inspire others to take steps to transform the historically traditional housing space. We follow four pillars of work to fulfill our mission and create outcomes that improve people's lives and communities.

1. Convene and Share

2. Inspire the Next Generation

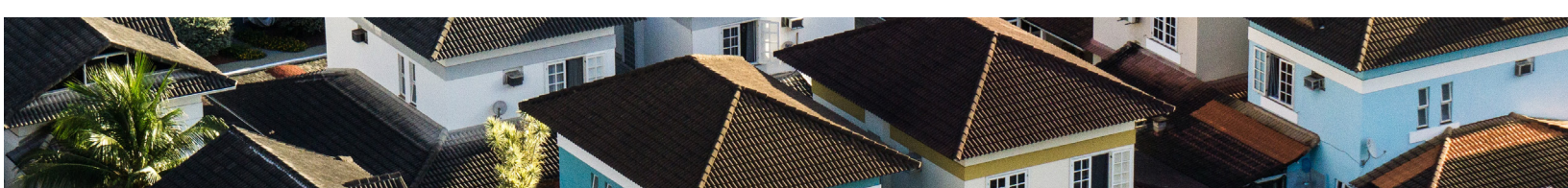
3. Support Entrepreneurs

4. Build

KEY ACCOMPLISHMENTS

This year, Ivory Innovations:

- Awarded \$300,000 in grant money to four Ivory Prize winners who are changing the housing innovation ecosystem, from new construction methodology to new software and financial assistance models.
- Announced a partnership with the Call to Action Foundation to build 881 affordable housing units over the next three years.
- Convened the nation's biggest philanthropic organizations in partnership with Gary Community Ventures and Terner Labs to discuss the best way to productively and collaboratively invest in housing affordability.
- Hosted the third Innovations in Housing Affordability Summit at the University of Utah with housing experts from across the country and 144 attendees.
- Engaged with 230 students from 25 universities and awarded \$12,000 through Hack-A-House, an annual student housing innovation competition.
- Filmed an educational webinar on offsite construction in partnership with the National Association of Home Builders, MOD X, Terner Center for Housing Innovation, and the National League of Cities and Towns. The webinar has had 700+ views.
- Initiated the Utah Zoning Atlas—a project in partnership with the National Zoning Atlas—which documents the impact of zoning laws on Utah residents.
- Sponsored five students with summer internships and provided six pro bono consulting projects with Ivory Prize portfolio organizations.
- Tripled the size of the Ivory Innovations' team to accommodate growing interest and expanding scope.



IVORY INNOVATIONS

IVORY INNOVATIONS PARTNERS

We'd like to say a huge thank you to our partners in housing affordability working with us to make change for all.

FOUNDING PARTNERS



Stokes Foundation Taft & Mary Jane Price

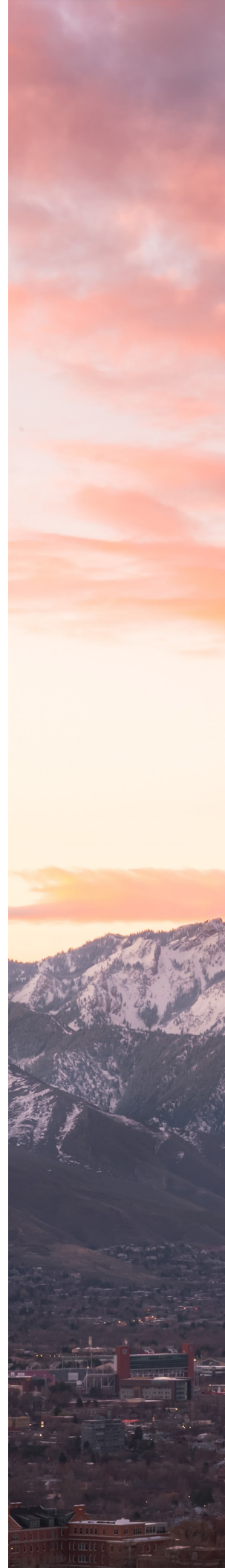
INNOVATION PARTNERS



COLLABORATION PARTNERS



Over the next three years, Ivory Innovations and the Call to Action Foundation plan to build seven new housing developments in Utah resulting in the creation of approximately 881 affordable homes. These townhomes, condos, and apartments will bring stability and security to Utah households.





OUR WORK

CONVENE & SHARE

INNOVATIONS IN HOUSING AFFORDABILITY SUMMIT

In 2023, Ivory Innovations hosted the third Innovations in Housing Affordability Summit, which convenes both industry experts and academics to share and discuss a particular area of focus within housing affordability. This year's focus was on offsite construction, such as offsite building methods or new processes for lowering the cost of housing construction. The Summit drew over 200 registrants, 53 housing experts, and offsite entrepreneurs from across the country to exchange knowledge about the topic.



"It's not just addressing the need in the United States, but also the ability to build with speed." - Zeeshan Mirza, US Modular Capital



"There is a tremendous amount of capital wanting to come into this space if we can get consistent regulation passed nationwide." - Justin Stewart, Synergy Modular

Ivory Innovations chose to focus the summit on offsite construction due to the increased traction it has gained as a solution to the housing affordability crisis. Offsite construction is one of the main innovations with potential to increase housing supply and lower the cost of construction, but often lacks scale due to code and financing restrictions. Ivory Innovations is working diligently with policy experts and government officials to create a more inclusive ecosystem for offsite construction in the state of Utah.



DID YOU KNOW?

In the 1970s, [HUD sponsored Operation Breakthrough](#) to catalyze innovative construction methods. While the program did not ultimately receive funding to complete all phases, the HUD code / manufactured housing code came out of this effort. It is a very interesting blueprint for the work that we, and many other partners, across the country are doing today to support and scale construction innovation.

Learn more at this QR code:



CONVENE & SHARE

PCBC 2023

On May 24th, the Ivory Innovations team, Advisory Board, and the 2023 Top 10 Ivory Prize finalists convened in Anaheim to host the Ivory Prize 2023 Winner Announcement, as well as several panels at the Pacific Coast Builders Conference. Ivory Innovations hosted four panels featuring the work of our portfolio organizations and expertise of our Advisory Board to inform stakeholders about innovative solutions to common areas of interest in the industry:

- Housing Innovation Over the Next Five Years
- Policy Optimization and Regulatory Reform for Housing Innovation
- Building Technologies for Increasing Housing Supply
- Financial Innovations in Housing Affordability

INNOVATIONS IN OFFSITE

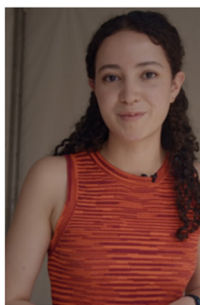
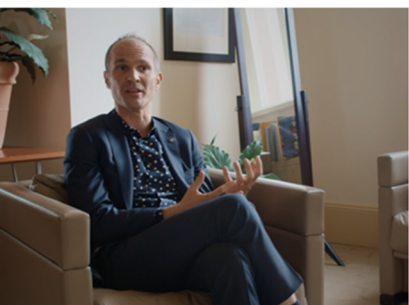
Ivory Innovations and MOD X, along with our partners, hosted a 1-hour webinar about offsite construction and innovative building methods on July 12th. The webinar featured 13 experts and 9 exhibitors from the Innovative Housing Showcase, presented by HUD and NAHB, in Washington DC. The goal was to inform policy makers and leaders in the real estate industry about innovative construction methods and materials and how they might think about bringing these ideas to their town, city, state, or region. 228 attendees registered to watch live, and over 470 people have viewed the webinar to learn more about offsite construction. Learn more at ivoryinnovations.org/offsite

Scan for
video



ASSEMBLE100

Ivory Innovations, Gary Community Ventures and Turner Housing Lab hosted a convening with 120 national philanthropists, innovators, and policymakers to increase funding, scale, and support for the most promising housing ideas across the country. During the event, 23 speakers presented and 12 entrepreneurs pitched their ideas to the audience. The group discussed key issue areas such as supporting unhoused populations, increasing rapid new supply, promoting land use reforms to increase housing development, and enabling wealth and justice through improved renting, buying, and homeownership opportunities. Ivory Innovations is continuing the conversation with many key partners coming out of this event and looks forward to exploring collaborations and sharing our portfolio organizations with potential funders.



OUR WORK

INSPIRE THE NEXT GENERATION

STUDENT ASSOCIATE PROGRAM

Starting with a cohort of six in 2018 and building up to a cohort of 16 in 2023, Ivory Innovations has hired 43 student interns at the University of Utah over the past 6 years to support the Ivory Prize process. The Student Associate Program at Ivory Innovations is a two-semester long internship designed to educate students about the affordable housing crisis while helping them to hone business skills that will carry them through future roles. Students working for Ivory Innovations learn how to source impactful, scalable, and feasible solutions to the housing crisis and have the opportunity to talk to numerous founders making an impact in the space.

Once the Ivory Prize concludes in the Spring semester, students have the chance to intern for one of the Top 25 Ivory Prize finalists that they helped to diligence throughout the process. Ivory Innovations sponsors students during the summer to help early-stage companies secure extra help. In 2023, five interns were placed in internships focused on housing affordability initiatives.



SYDNEY WILLIAMS - DEARFIELD FUND FOR BLACK WEALTH

"Interning for Dearfield has been an amazing opportunity for me, as it has allowed me to harness my skills in finance and real estate, while also helping a team with a mission to help a marginalized population."



EMANUEL GARCIA FLORES - NATIONAL ZONING ATLAS

"Coming from a finance-oriented background, my transition to policy-related work was initially challenging upon joining the NZA. However, the more I immersed myself in their analysis, the more patterns I discerned. This transformative experience has effectively bridged my finance background with the captivating world of policy and data analysis."



JACK O'LEARY - BILT FOUNDATION

"In this dynamic landscape, I was excited to work for a company that blends innovation, social impact, and financial empowerment. I learned about the credit card industry, the importance and scalability of rewards programs, the needs of renters in a post-covid economy, and the growing problem of affordability in rental housing."



NOLAN MARTIN - ARX

"ARX's team dynamics, co-founders, and commitment to excellence have left an indelible impact on me. As I embark on my career journey, the lessons learned at ARX will be my guiding light. The experience has instilled in me the qualities of a great team player, effective communicator, and dedicated problem solver."



JEREMIAH MUNN - IVORY INNOVATIONS OPERATING FOUNDATION

"From working on transformative housing projects to drafting legislative codes, I've gained insights that will undoubtedly shape my future in business and architecture. This experience reinforces my belief that innovations in policy, construction, and finance can create meaningful change in affordable housing."




OUR WORK

INSPIRE THE NEXT GENERATION

HACKAHOUSE

A HOUSING AFFORDABILITY HACKATHON

Ivory Innovation's mission to inform the next generation extends outside the University of Utah. Hack-A-House is a 24-hour hackathon style competition hosted virtually for students from across the country. Students are tasked with coming up with innovative solutions to the housing crisis, which culminates in 3-minute presentations to judges in one of three categories of Finance, Policy & Regulatory Reform, and Construction & Design. Over time, Hack-A-House has engaged with over 825 students from 53 schools and awarded over \$60,000 in prize money to winning teams. Our goal is to inspire students to learn about housing affordability and recognize their own ability to create solutions in the space. In 2023, Hack-A-House saw its largest turnout, with over 230 students from 25 schools registering for the competition.



Hack-A-House also received sponsorship support from Groundbreak Ventures, a venture capital firm out of Canada investing in real estate innovations. With Groundbreak's contribution to Hack-A-House, Ivory Innovations was able to offer an overall prize of \$5,000 to the student team with the best idea.

After Hack-A-House, top teams are presented with the opportunity to explore their ideas further. Teams with viable ideas have the chance to continue to build their idea with support from the Ivory Innovations team and network.



Kit Switch, a modular interior construction startup, came up with their "kit of parts" idea at the 2020 Hack-A-House and participated in a boot camp hosted soon after. They have now completed 5 conversion projects with more in the pipeline and have been accepted into Turner Housing Lab's 2023 cohort.

OUR WORK

INSPIRE THE NEXT GENERATION



The Ivory Prize for Housing Affordability is an annual award recognizing ambitious, feasible, and scalable solutions to housing affordability. The Prize is designed to award innovators for their efforts and provide material support to advance their projects. The search committee looks for solutions in the three categories of Finance, Construction & Design, and Policy & Regulatory Reform.

Over the past 6 years, Student Associates at Ivory Innovations have performed due diligence on over 1,000 nominees and awarded over \$1.2 million in grants and funding to 18 winners. Our portfolio now includes 122 of the most innovative and impactful solutions to the housing affordability crisis from 30 states across the country.



BAMCORE

BLACK STAR
STABILITY



Curtis +
Ginsberg
Architects



ENTEKRA Factory_OS™



IMPACT/JUSTICE
A National Innovation and Research Center



NATIONAL
ZONING
ATLAS

PermitFlow

Rhino

Symbium

VOLUMETRIC
BUILDING COMPANIES



SUPPORT ENTREPRENEURS

2023 IVORY PRIZE WINNERS

In 2023, we spoke with 202 organizations nominated for the Ivory Prize. Through months of due diligence, winners were decided and \$300,000 of grant funds were awarded to four organizations:



CONSTRUCTION & DESIGN - **DIAMOND AGE**

Diamond Age's mission is to get first-time homebuyers into their first home faster, using 3D printing and advanced industrial-scale robotics – AKA – building robots bigger than houses to build houses. Diamond Age is automating new home construction for the production housing industry – solving the massive labor shortage plaguing the home construction industry and bringing more entry-level housing to market to balance demand. Diamond Age is currently building entry-level homes for the 9th largest homebuilder in the U.S.



FINANCE - **DEARFIELD FUND FOR BLACK WEALTH**

Launched by Gary Community Ventures, in partnership with Denver's Black community, The Dearfield Fund for Black Wealth provides up to \$40,000 in down-payment assistance to first-time Black and African American homebuyers to help build generational wealth. The Dearfield Fund for Black Wealth aims to close the racial wealth gap and accelerate Black homeownership by generating an average of \$100K in net worth for 500-600 Black families, leading to \$50-\$75M in wealth creation for the Black community in Denver, CO. The fund seeks to build a community of practice and replication model to assist other cities in deploying this innovative fund model in their markets.

"You need to use existing tools that have been used to create that wealth for a long time but put the families at the center of that design that have been overlooked for centuries." - Catherine Toner on launching the Dearfield Fund



POLICY & REGULATORY REFORM - **NATIONAL ZONING ATLAS**

The National Zoning Atlas is a collaborative of researchers digitizing, demystifying, & democratizing about 30,000 U.S. zoning codes through a first-of-its-kind user-friendly online resource. The Atlas will illuminate zoning laws and unlock research that will reveal how zoning impacts housing availability and affordability, transportation systems, the environment, economic opportunity, educational opportunity, and our food supply.



POLICY & REGULATORY REFORM - **PERMIT FLOW**

PermitFlow is the "TurboTax for construction permitting," providing automation and workflow software that simplifies and accelerates the permitting process. PermitFlow's technology reduces risk and cost associated with construction, creating new paths to build housing affordably.

SUPPORT ENTREPRENEURS

PORTFOLIO MILESTONES & IMPACT

Our 2023 Top 25 finalists have helped create over 2,299 homes, engaged with over 664,146 users on platforms that make housing more accessible, and distributed over \$1.35 billion worth of funding and loans to help individuals afford and repair their homes.

GROWTH

- **Housing Impact Fund** - The Housing Impact Fund has raised and launched a second \$66.8 million fund which will be used to preserve 1,200 units of Naturally Occurring Affordable Housing (NOAH) in Mecklenburg County, NC over the next two years.
- **City of Boston** – The City of Boston has launched innovative new programs such as the Welcome Home program, which utilizes funding from the American Rescue Plan (ARPA) to fast track the production of new affordable homes.
- **Connect Homes** - In October, Connect Homes announced that it would be opening a new factory in Mesa, Arizona. The opening of Connect Homes' second factory will help them to better serve the Mountain West.

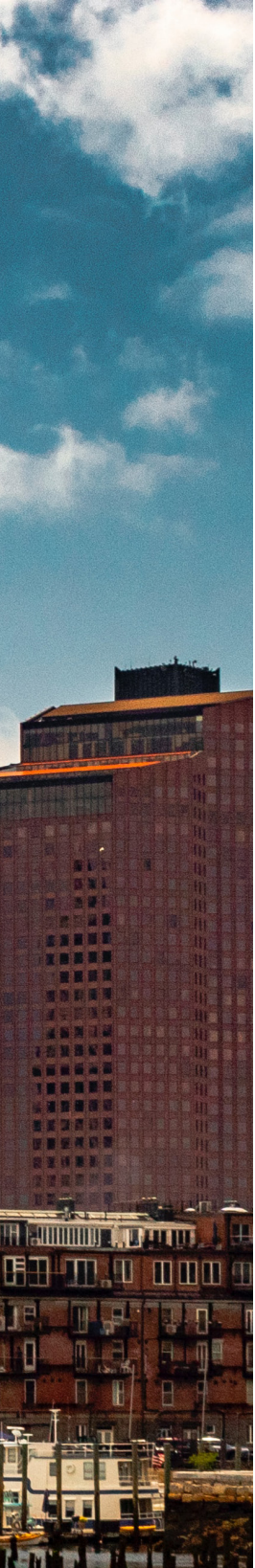
AWARDS & RECOGNITION

- **Module & Build UP** - Module & Build UP were recognized in the Housing Affordability Breakthrough Challenge hosted by Wells Fargo & Enterprise Community Partners. Each organization won \$3 million in funding to continue to grow their efforts. Trust Neighborhoods, HomeStart, the Kelsey, and National Zoning Atlas were recognized as Top 16 Finalists in the Housing Affordability Breakthrough Challenge.
- **Housing Connector** - The Turner Center selected Housing Connector to be a member of the 2023 Housing Lab Cohort.
- **ICON** - ICON was featured on CBS's 60 Minutes to talk about their current projects and was in the movie "Project Home," which documents the stories of two single working mothers who are able to buy their first homes thanks to innovative housing technology.

PRO BONO CAPACITY BUILDING AND SUPPORT

In addition to monetary awards, Ivory Innovations provides Ivory Prize finalists with always-on pro bono capacity building and support.

Scan here to [view projects](#):



OUR WORK

BUILD

Along with sourcing the most innovative solutions to housing affordability, Ivory Innovations integrates these models into developments to serve as a proof of concept for other builders and leaders in the real estate industry. Ivory Innovations currently has 881 units in its pipeline that will utilize innovative financing structures and building techniques.



DEVELOPMENT PROJECTS

Innovation Park at Francis Commons

UNITS: 16 Townhomes
LOCATION: Francis, UT
IMPACT: Creative mixed-use, rural affordability, water-wise

Innovation Park at Holbrook Farms

UNITS: 240 Townhomes
LOCATION: Lehi, UT
IMPACT: Back-to-Back building design, tutoring center, all electric

Innovation Park at Liberty Wells

UNITS: 66 Apartments/Townhomes
LOCATION: Salt Lake City, UT
IMPACT: Repurpose gym for 30 apartments, creative financing to offer "For Sale" units

Innovation Park at Mahogany Ridge

UNITS: 208 Townhomes
LOCATION: Magna, UT
IMPACT: Zipper Towns, 12' wide tandem parked, alternating stairs

Innovation Park at Park City Heights

UNITS: 15 Townhomes
LOCATION: Park City, UT
IMPACT: Utilize newly adopted "Affordable Master Planned Development"

Innovation Park at Vista Station

UNITS: 186 Apartments
LOCATION: Draper, UT
IMPACT: Offsite construction (modular)

South Jordan Senior Housing and Center

UNITS: 138 Apartments
LOCATION: South Jordan, UT
IMPACT: Affordable Senior housing, financing collaboration with RDA

OUR WORK



UTAH ZONING ATLAS

The Utah Zoning Atlas Project is an important initiative addressing the impact of zoning laws on various aspects of life in the state. Zoning regulations, wielded by local governments, significantly influence housing availability, transportation systems, environmental considerations, and economic opportunities for Utah's citizens. The Utah Zoning Atlas aims to demystify these intricate laws by presenting key attributes in an accessible online map. This tool will not only enable comparisons across jurisdictions, revealing regional and statewide trends, but also enhance planning for housing, transportation, and climate response. By closing the knowledge gap between citizens and zoning law experts, the Atlas will empower politicians to better advocate for their constituents' interests, fostering informed decision-making.

The Utah Zoning Atlas Project is powered by a dedicated team of professionals from Ivory Innovations, Libertas Institute, the Kem C. Gardner Policy Institute, and the Salt Lake Municipal Services District. With close coordination, Zoning Code Analysts review and input details into the National Zoning Atlas Editor, laying the foundation for accurate and comprehensive data. Subsequently, Geospatial Analysts take charge of creating an interactive map that transforms gathered information into a user-friendly tool. In leading this initiative, Ivory Innovations aspires to engage policymakers in championing more inclusive zoning policies, ultimately fostering increased housing supply across the state of Utah. Currently making significant progress, the team has completed mapping in eight municipalities, including Salt Lake City, and aims to finalize Salt Lake County and the entire state by the end of 2024, reflecting a commitment to transparency and understanding in zoning matters for the benefit of all stakeholders and the community.

OUR TEAM

Over the past year, Ivory Innovations has grown from a team of four to a team of twelve. As we have continued to position ourselves as a resource within the housing industry, we are working and collaborating on an increasing number of projects and initiatives. Each team member brings unique skills, helping us to be stronger and more capable of addressing the evolving housing landscape. Our growth reflects our commitment to helping find and implement solutions to the housing affordability crisis.



ABBY IVORY
President



DARIN HASKELL
Chief Operating Officer



JENNA LOUIE
Chief Innovation and Strategy Officer



MARY LEHNHOF
Chief of Staff



PORTER OPENSHAW
Director of Finance



HANNAH GABLE
Director of Strategy and Operations



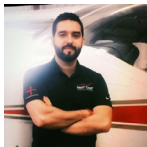
AMRO AL-NIMRI
Director of Construction and Design



DEJAN ESKIC
Director of Research and Education



CHAD REED
Manager of Programs and Growth



MANNY GUNTER
Assistant Controller



ANNA DORN
Student and Program Coordinator



MARY SCHLACHTER
Marketing and Events Coordinator

SPECIAL PROJECTS:

BROOKLYN LINDSEY (Special Projects Analyst) - SAM HAYNIE (Special Projects Analyst) - XANDER JOHNSON (Marketing Specialist)

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OUR PORTFOLIO

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City of Minneapolis: HB 2001
City of Pasadena: Second Unit ADU Program
Cofi
Common
Community Action of Allegan County
Community First! Village
Community Solutions: Built for Zero
Connect Homes
Construction Revolution
CoUrbanize
Curtis+Ginsberg Architects: Park Avenue Green
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Landed
Madelon
Module Housing
National Zoning Atlas
Neighbor
Nesterly
New Story Charity
Next Step
Nico
Novin Development: ProforMap
Outreach Grid
oWow
Panoramic Interests
PermitFlow
Plantd
Point
RenoFi
Rhino
Rhove
ROC USA
Rocket Community Fund: Make It Home
Program
Roots Real Estate
Rural Studio
Silvernest
Small Change
Starcity
Symbium
T-stud
Telluride Foundation
The Kelsey
The State of Oregon
Till
Timber HP
Tiny Home Village Project
Tough Leaf
True Footage
Trust Neighborhoods
Turner Capital
United Dwelling
UNITY Homes
University of Miami: LAND Platform
Utah Housing GAP Coalition
Vantem
Volumetric Building Companies

NOTABLE STUDENT TEAMS

Kit Switch
Alcoved



IVORYINNOVATIONS

